CITY OF SOUTH PASADENA
CITY COUNCIL AND THE HOUSING AUTHORITY - BOARD OF DIRECTORS

AMENDED AGENDA

REGULAR COUNCIL MEETING
WEDNESDAY, NOVEMBER 6, 2024 AT 7:00 PM

AMEDEE O. "DICK" RICHARDS JR. COUNCIL CHAMBERS
1424 MISSION STREET, SOUTH PASADENA, CALIFORNIA

NOTICE ON PUBLIC PARTICIPATION & ACCESSIBILITY

The South Pasadena City Council Meeting will be conducted in-person from the Amedee O. "Dick" Richards, Jr. Council Chambers, located at 1424 Mission Street, South Pasadena, CA 91030.

Public participation may be made as follows:

- In-Person – Council Chambers, 1424 Mission Street, South Pasadena, CA 91030
- Live Broadcast via the City website – http://www.spectrumstream.com/streaming/south_pasadena/live.cfm
- Via Zoom – Meeting ID: **825 9999 2830**
- Written Public Comment – written comment must be submitted by 12:00 p.m. the day of the meeting by emailing to ccpubliccomment@southpasadenaca.gov
- Via Phone–+1-669-900-6833 and entering the Zoom Meeting ID listed above.

Meeting may be viewed at:

1. Go to the Zoom website, https://zoom.us/join and enter the Zoom Meeting information; or
2. Click on the following unique Zoom meeting link: https://us06web.zoom.us/j/82599992830 or
3. By calling: +1-669-900-6833 and entering the Zoom Meeting ID listed above; and viewing the meeting via http://www.spectrumstream.com/streaming/south_pasadena/live.cfm

CALL TO ORDER:	Mayor	Evelyn G. Zneimer
ROLL CALL:	Mayor	Evelyn G. Zneimer
	Mayor Pro Tem	Jack Donovan
	Councilmember	Janet Braun
	Councilmember	Michael A. Cacciotti
	Councilmember	Jon Primuth
PLEDGE OF ALLEGIANCE:	Councilmember	Janet Braun

PUBLIC COMMENT GUIDELINES

The City Council welcomes public input. Members of the public may comment on a non-agenda subject under the jurisdiction of the City Council or on an agenda item. Members of the public will have three minutes to address the City Council, however, the Mayor and City Council may adjust the time allotted, as needed.

Public Comments received in writing will not be read aloud at the meeting, but will be part of the meeting record. Written public comments will be uploaded to the City website for public viewing under Additional Documents. When submitting a public comment, please make sure to include the following:
1) Name (optional), and
2) Agenda item you are submitting public comment on.
3) Submit by no later than 12:00 p.m., on the day of the City Council meeting.
Correspondence received after this time will be distributed the following business day.

PLEASE NOTE: The Mayor may exercise the Chair's discretion, subject to the approval of the majority of the City Council, to adjust public comment time limit to less than three minutes, as needed.

Pursuant to State law, the City Council may not discuss or take action on issues not on the meeting agenda, except that members of the City Council or staff may briefly respond to statements made or questions posed by persons exercising public testimony rights (Government Code Section 54954.2).Staff may be asked to follow up on such items.

CLOSED SESSION ANNOUNCEMENTS

1. CLOSED SESSION ANNOUNCEMENTS

PUBLIC COMMENT

2. PUBLIC COMMENT - GENERAL (NON-AGENDA ITEMS)

General Public Comment will be limited to 30 minutes at the beginning of the agenda. If there are speakers remaining in the queue, they will be heard at the end of the meeting. Only Speakers who submit a Public Comment card within the first 30 minutes of Public Comment period will be queued up to speak.

CHANGES TO THE AGENDA

3. REORDERING OF, ADDITIONS, OR DELETIONS TO THE AGENDA

CONSENT CALENDAR

OPPORTUNITY TO COMMENT ON CONSENT CALENDAR

Items listed under the Consent Calendar are considered by the City Manager to be routine in nature and will be enacted by one motion unless a public comment has been received or Councilmember requests otherwise, in which case the item will be removed for separate consideration. Any motion relating to an ordinance or a resolution shall also waive the reading of the ordinance or resolution and include its introduction or adoption as appropriate.

4. **CONSIDERATION OF THE APPROVAL OF PREPAID WARRANTS IN THE AMOUNT OF $12,401.26; GENERAL CITY WARRANTS IN THE AMOUNT OF $682,609.04; ONLINE PAYMENTS IN THE AMOUNT OF $228,147.85; VOIDS IN THE AMOUNT OF $0; PAYROLLING IN THE AMOUNT OF $1,945,118.96**

Recommendation
It is recommended that the City Council approve the Warrants as presented.

5. **CONSIDERATION OF APPROVAL OF THE SPECIAL CITY COUNCIL MEETING MINUTES FOR APRIL 24, 2024, SPECIAL JOINT CITY COUNCIL AND FINANCE COMMISSION MEETING MINUTES FOR APRIL 24, 2024, SPECIAL CITY COUNCIL MEETING MINUTES FOR JULY 31, 2024, SPECIAL JOINT CITY COUNCIL AND FINANCE COMMISSION MEETING MINUTES FOR JULY 31, 2024, AND REGULAR CITY COUNCIL MEETING MINUTES FOR OCTOBER 16, 2024**

Recommendation
It is recommended that the City Council consider the approval of the minutes for the Special City Council Meeting for April 24, 2024, Special Joint City Council and Finance Commission Meeting for April 24, 2024, Special City Council Meeting for July 31, 2024, Special Joint City Council and Finance Commission Meeting for July 31, 2024, and the Regular City Council Meeting Minutes for October 16, 2024.

6. **CONSIDERATION OF APPROVAL OF THE 2025 CITY COUNCIL MEETING SCHEDULE**

Recommendation
It is recommended that the City Council approve the City Council meeting schedule for the 2025 calendar year.

7. **CONSIDERATION OF ADOPTION OF A RESOLUTION ADOPTING AN UPDATED CITY CONFLICT OF INTEREST CODE AS REQUIRED BY THE POLITICAL REFORM ACT**

Recommendation
It is recommended that the City Council adopt a resolution adopting an updated City Conflict of Interest Code.

8. **CONSIDERATION OF ADOPTION OF A RESOLUTION APPROVING THE LIBRARY SPECIAL TAX ANNUAL REPORT AND AUTHORIZING THE COLLECTION OF THE TAX FOR FISCAL YEAR 2024-2025**

Recommendation
It is recommended that the City Council consider adoption of a resolution approving the Library Special Tax Annual Report and authorizing the collection of the Tax by the County of Los Angeles at the Fiscal Year 2024-2025 rates.

9. **CONSIDERATION OF ENTERING INTO A MILLS ACT CONTRACT (CASE NO. MIL24-0001) FOR THE PROPERTY LOCATED AT 203 OAKLAWN AVE (APN: 5317-014-015)**

Recommendation

It is recommended that the City Council find that the project qualifies for an exemption under the California Environmental Quality Act (CEQA) Guidelines Section 15308, Class 8 and approve and authorize the entering into a Mills Act contract with the property owners of 203 Oaklawn Avenue.

10. CONSIDERATION OF ENTERING INTO A MILLS ACT CONTRACT (CASE NO. MIL24-0002) FOR THE PROPERTY LOCATED AT 1209 INDIANA AVENUE (APN: 5314-010-061)

Recommendation

It is recommended that the City Council find that the project qualifies for an exemption under the California Environmental Quality Act (CEQA) Guidelines Section 15308, Class 8 and approve and authorize the entering into a Mills Act contract with the property owners of 1209 Indiana Avenue.

11. CONSIDERATION OF APPROVAL OF THE THIRD AMENDMENT TO AN AGREEMENT WITH HDL SOFTWARE, LLC FOR BUSINESS LICENSE PROCESSING SERVICES TO EXTEND THE AGREEMENT TERM AND APPROPRIATION OF FUNDS

Recommendation

It is recommended that the City Council consider:

1. Approving the Third Amendment to the Professional Services Agreement with HdL Software, LLC (HdL) for business license processing services through October 31, 2026;
2. Approve the appropriation of $122,300 from General Fund to cover the contract amendment expenses for the extension through October 31, 2025.

12. CONSIDERATION OF AN AWARD OF A CONSTRUCTION CONTRACT WITH COMMERCIAL DOOR COMPANY, INC. IN AN AMOUNT NOT TO EXCEED $ 208,294 FOR THE FIRE STATION BAY APPARATUS DOOR REPLACEMENT PROJECT; AND FIND THAT THE PROJECT IS CATEGORICALLY EXEMPT FROM CEQA (SECTION 15301)

Recommendation

It is recommended that the City Council consider:

1. Approve the plans and specifications for the Fire Station Bay Apparatus Door Replacement Project (Project);
2. Find that the Project is categorically exempt from CEQA pursuant to Section 15301 of the State CEQA Guidelines — Class 1, Existing Facilities;
3. Appropriate an additional $73,295 to the Fire Station Bay Apparatus Door Replacement Project from the General Fund 101, increasing the budget from $135,000 to $208,295, for a construction contract of $208,295 which includes the bid price of $198,375, and a 5% construction contingency of $9,920; and
4. Awarding a construction contract to Commercial Door Company, Inc. for construction services for door replacement in an amount not to exceed $208,295, including the proposed bid amount of $198,375 and a 5% contingency of $9,920; and
5. Reject all other bids received.

PUBLIC HEARING

13. CONSIDERATION OF AN APPEAL OF APPLICATION REQUEST OF PROJECT NO. 2500-HDP/DRX/VAR/PM/TRP APPROVED BY THE PLANNING COMMISSION ON AUGUST 13, 2024 FOR A HILLSIDE DEVELOPMENT PERMIT AND DESIGN REVIEW PERMIT TO CONSTRUCT A NEW 3,214-SQUARE-FOOT, TWO-STORY, SINGLE-FAMILY DWELLING; TWO VARIANCES FOR A REDUCED SIDE YARD SETBACK AND AN ATTACHED GARAGE IN FRONT OF THE MAIN STRUCTURE; A PARCEL MERGER APPLICATION FOR A MERGER OF TWO EXISTING LOTS; AND, A TREE REMOVAL PERMIT FOR THE REMOVAL OF SIX (6) TREES AT 4931 HARRIMAN AVENUE (APNS: 5312-016-016 & 5312-016-017)

Recommendation

It is recommended that the City Council hold an appeal hearing, consider evidence, receive public testimony on the project, and then:

1. Adopt a Resolution (Attachment 1) approving the Project and denying the appeal.

ACTION/DISCUSSION

14. CONSIDERATION OF APPROVAL OF AN EXCLUSIVE NEGOTIATING AGREEMENT BETWEEN THE SOUTH PASADENA HOUSING AUTHORITY AND RELATED/SOCAL DEVELOPMENT, LLC CALIFORNIA FOR THE DEVELOPMENT OF AGENCY-OWNED PROPERTY LOCATED AT 1503 AND 1507 EL CENTRO STREET

Recommendation

It is recommended that the City Council, sitting as the Board of Directors of the South Pasadena Housing Authority, consider the approval of an Exclusive Negotiating Agreement with Related/SoCal Development, LLC for the development of an affordable housing project on South Pasadena Housing Authority owned property located at 1503 and 1507 El Centro Street.

15. CONSIDERATION OF AN AWARD OF A CONSTRUCTION CONTRACT WITH MONET CONSTRUCTION, INC. IN AN AMOUNT NOT TO EXCEED $ 2,112,000 FOR THE GREVELIA AND BERKSHIRE POCKET PARKS PROJECT AND AN ADDITIONAL BUDGET APPROPRIATION OF $543,930 FOR CONSTRUCTION AND PROJECT CONSTRUCTION MANAGEMENT; AND APPROVE THE PLANS AND SPECIFICATIONS FOR THE PROJECT

Recommendation

It is recommended that the City Council consider:

1. Approving the plans and specifications for the Grevelia and Berkshire Pocket Parks Project (Project); and
2. Approving a categorical exemption from CEQA for the Project, pursuant to Section 15332 of the State CEQA Guidelines — Class 32, In-Fill Development Projects; and
3. Appropriating an additional $543,930 to the Grevelia and Berkshire Pocket Parks Project, utilizing $100,000 from Park Impact Fees Fund 275 and $443,930 from General Fund 101, increasing the budget from $1,768,070 to $2,312,000, including a construction contract of $2,112,000 and additional construction management funding of $200,000, given current inadequate City staffing resources to support the

Project; and

4. Awarding a construction contract to Monet Construction, Inc. for construction services for park improvements in an amount not to exceed $2,112,000.00, including the proposed bid amount of $1,836,528.80 and a 15% contingency of $275,471.20; and
5. Reject all other bids received; and
6. Authorize the City Manager to execute the contract.

PUBLIC COMMENT - CONTINUED

16. CONTINUED PUBLIC COMMENT - GENERAL

This time is reserved for speakers in the Public Comment queue not heard during the first 30 minutes of Item No. 2. No new speakers will be accepted at this time.

COMMUNICATIONS

17. COUNCILMEMBER COMMUNICATIONS

The time allotted to speak per Councilmember is three minutes. Additional time will be allotted at the end of the City Council meeting agenda, if necessary.

18. CITY MANAGER COMMUNICATIONS

ADJOURNMENT

FOR YOUR INFORMATION

FUTURE CITY COUNCIL MEETINGS

November 20, 2024	Regular City Council Meeting	7:00 P.M.
December 4, 2024	Regular City Council Meeting	7:00 P.M.
December 18, 2024	Regular City Council Meeting	7:00 P.M.
January 15, 2025	Regular City Council Meeting	7:00 P.M.

PUBLIC ACCESS TO AGENDA DOCUMENTS AND BROADCASTING OF MEETINGS

City Council meeting agenda packets, any agenda related documents, and additional documents are available at City Hall and online for public viewing on the City's website: https://www.southpasadenaca.gov/Your-Government/Your-City-Council/City-Council-Agendas

Regular meetings are live streamed via the internet at: http://www.spectrumstream.com/streaming/south_pasadena/live.cfm

AGENDA NOTIFICATION SUBSCRIPTION

If you wish to receive an agenda email notification please contact the City Clerk's Division via email at CityClerk@southpasadenaca.gov or call (626) 403-7230.

ACCOMMODATIONS

The City of South Pasadena wishes to make all of its public meetings accessible to the public. If special assistance is needed to participate in this meeting, please contact the City Clerk's Division at (626) 403-7230 or cityclerk@southpasadenaca.gov. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities. Notification at least 48 hours prior to the meeting will assist staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting (28 CFR 35.102-35.104 ADA Title II).

CERTIFICATION OF POSTING

I declare under penalty of perjury that I posted this notice of agenda for the meeting to be held on November 6, 2024, on the bulletin board in the courtyard of City Hall located at 1414 Mission Street, South Pasadena, CA 91030, and on the City, website as required by law, on the date listed below.

November 4, 2024 /S/

Date Mark Perez, Deputy City Clerk

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 4

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: William Castrillon, Budget and Purchasing Manager

SUBJECT: **CONSIDERATION OF THE APPROVAL OF PREPAID WARRANTS IN THE AMOUNT OF $12,401.26; GENERAL CITY WARRANTS IN THE AMOUNT OF $682,609.04; ONLINE PAYMENTS IN THE AMOUNT OF $228,147.85; VOIDS IN THE AMOUNT OF $0; PAYROLLING IN THE AMOUNT OF $1,945,118.96**

Recommendation

It is recommended that the City Council approve the Warrants as presented.

Executive Summary

Prepaid Warrants:
Warrant # 319968-319970: **$1,163.67**
ACH: **$11,237.59**
Voids: **$0**
General City Warrants
Warrant # 319971-320078: **$452,859.64**
ACH: **$229,749.40**
Voids: $0
Payroll Period Ending 10/11/2024: **$882,006.63**
Payroll Period Ending 10/17/2024: **$211,209.70**
Payroll Period Ending 10/25/2024: **$824,703.44**
Payroll Period Ending 10/31/2024: **$27,199.19**
Wire Transfers Out – To (LAIF): **$0**
Wire Transfers In – From (LAIF): **$0**
Wire Transfers (RSA): $0
Wire Transfers Out – To (Acct # 2413): **$0**
Wire Transfers Out – To (Acct # 1936): **$0**
Online Payments: **$228,147.85**
RSA:
Prepaid Warrants: **$0**
General City Warrants: **$0**

Total: $2,868,277.41

Key Performance Indicators and Strategic Plan

This item is in line with the Finance Department's Key Performance Indicators identified in the Fiscal Year 2024-2025 Budget. The Accounts Payable process is completely digital and

routed via a workflow process. This cuts down staff time significantly, as well as streamlines a previously strenuous process. This process also falls in line with the City's environmental strategies by reducing the amount of paper used.

Explanation of Terms

Warrant – Directs the Finance Department to pay a sum of money out of the City's funds to bearer of claim/invoice (named individual, company) also known as a payable. The warrants (payments) are only released after City Council approval.

Warrant Summary – Summarizes all of the payments prepared during a specific cycle. The beginning of the cycle is the period after the last set of warrants were approved by Council and released as payment. The end of the cycle is the last date of invoice processing. All the warrants for the current cycle are summarized and the detail of warrants provided to Council for review and approval.

Prepaid Warrant List - A Prepaid Warrant directs the Finance Department to pay a sum of money out of the City's funds to bearer of claim/invoice (named individual, company) also known as a payable. The Prepaid Warrants (payments) are released prior to City Council approval, however reported to City Council as a Prepaid. Prepayments are generally time sensitive and would incur additional charges if not paid within a specific time frame.

General City Warrant List – Detailed listing of all payments made for a specific cycle. The beginning of the cycle is the period after the last set of warrants were approved by Council and released as payment. The end of the cycle is the last date of invoice processing.

Online Payments – Payments made online. These are typically for time sensitive utilities, credit card payments, and sometimes require the use of the payee's portal (SCE, So Cal Gas, Amazon, etc.).

Voids – Checks that were issued and voided. Examples of such instances would be lost checks that were mailed out. Checks that were on a warrant that did not get approved by Council.

Payroll – All payments made related to payroll, such as payroll taxes, retirement benefits, CalPERS, Garnishments, payroll etc.

Attachment:
Attachment No.1 - Warrant Summary
Attachment No.2 - Prepaid Warrant List
Attachment No.3 - General Warrants List
Attachment No.4 - Online Payments
Attachment No.5 - Payroll

City of South Pasadena
Demand/Warrant Register

Date 11/6/2024

Attachment No.1

Recap by fund	**Fund No.**	**Amounts**	
		Prepaid	**Written**
General Fund	101	-	434,417.00
Insurance Fund	103	-	96,171.13
Street Improvement Program	104	-	-
Technology Surcharge Fund	106	-	-
Facilities & Equip.Cap. Fund	105	-	-
Programs and Projects	107	-	-
Local Transit Return "A"	205	-	10,337.60
SLFRF Fund	206	-	-
Local Transit Return "C"	207	-	-
TEA/Metro	208	-	-
Sewer Fund	210	-	13,870.43
CTC Traffic Improvement	211	-	-
SB2 Planning Grant	213	-	-
Rogan HR5294 Grant	214	-	-
Street Lighting Fund	215	-	36,482.52
Public, Education & Govt Fund	217	-	-
Clean Air Act Fund	218	-	-
Business Improvement Tax	220	-	-
Gold Line Mitigation Fund	223	-	-
Mission Meridian Public Garage	226	-	-
Housing Authority Fund	228	-	-
State Gas Tax	230	-	14,312.73
County Park Bond Fund	232	-	4,339.91
Measure R	233	-	-
Measure M	236	-	-
Road Maint & Rehab (SB1)	237	-	-
MSRC Grant Fund	238	-	-
Measure W	239	-	-
Measure H	241	-	-
Prop C Exchange Fund	242	-	-
Bike & Pedestrian Paths	245	-	-
BTA Grants	248	-	-
Golden Street Grant	249	-	-
Capital Growth Fund	255	-	-
CDBG	260	-	12,331.50
Asset Forfeiture	270	-	-
Police Grants - State	272	-	-
Homeland Security Grant	274	-	-
Park Impact Fees	275	-	-
Historic Preservation Grant	276	-	-
HSIP Grant	277	-	-
Arroyo Seco Golf Course	295	-	-
Sewer Capital Projects Fund	310	-	-
400 Capital Improvement Program	400	-	22,460.00
Water Fund	500	-	24,286.22
Water Efficiency Fund	503	-	13,600.00
2016 Water Revenue Bonds Fund	505	-	-
SRF Loan - Water	506	-	-
Water & Sewer Impact Fee	510	-	-
Public Financing Authority	550	-	-
Payroll Clearing Fund	700	12,401.26	-
			-
	Column Totals:	12,401.26	682,609.04

Recap by fund	**Fund No.**	**Amounts**	
		Prepaid	**Written**
RSA	227	-	-
	RSA Report Totals:	-	-

City Report Totals:	695,010.30
Payroll Period Ending: 10/11/2024	882,006.93
Payroll Period Ending: 10/17/2024	211,209.70
Payroll Period Ending: 10/25/2024	824,703.44
Payroll Period Ending: 10/31/2024	27,199.19
Wire Transfer Out - To LAIF	-
Wire Transfer In - From LAIF	-
Wire Transfer - RSA	-
Wire Transfer Out - To Acct. # 2413	-
Wire Transfer Out - To Acct. # 1936	-
Online Payments	228,147.85
Voids - Prepaid	-
Voids - General Warrant	
Grand Report Total:	**2,868,277.41**

Evelyn G. Zneimer, Mayor

William Castrillon, Budget and Purchasing Manager

Mark Perez, Deputy City Clerk

Accounts Payable

Check Detail

User: wcastrillon
Printed: 11/04/2024 - 8:51AM

Check Number	Check Date	Amount
CAL0629 - Franchise Tax Board		
319969	10/30/2024	
Inv PR 10.11.24		125.00
319969 Total:		125.00
CAL0629 - Franchise Tax Board Total:		125.00
CEAP7000 - S.P. Public Service Employees Association-PT 700-0000-0000-2249-000		
0	10/30/2024	
Inv PR 10.11.24		144.00
0 Total:		144.00
CEAP7000 - S.P. Public Service Employees Association-PT Total:		144.00
CSD3014 - Ca. State Disbursement Unit		
319968	10/30/2024	
Inv PR 10.11.24		903.69
319968 Total:		903.69
CSD3014 - Ca. State Disbursement Unit Total:		903.69
SCFT0000 - Franchise Tax Board		
319970	10/30/2024	
Inv PR 10.11.24		134.98
319970 Total:		134.98
SCFT0000 - Franchise Tax Board Total:		134.98
SOU5230 - S.P.Firefighters L-3657		
0	10/30/2024	
Inv PR 10.11.24		2,162.42
0 Total:		2,162.42
SOU5230 - S.P.Firefighters L-3657 Total:		2,162.42
SOU5435 - S.P. Police Officers Association 700-0000-0000-2246-000		

Check Number	Check Date	Amount
0	10/30/2024	
Inv PR 10.11.24		6,557.28
0 Total:		6,557.28
SOU5435 - S.P. Police Officers Association Total:		6,557.28
SOU5451 - S.P. Public Service Employees Association 700-0000-0000-2248-000		
0	10/30/2024	
Inv PR 10.11.24		1,318.00
0 Total:		1,318.00
SOU5451 - S.P. Public Service Employees Association Total:		1,318.00
SSDV2018 - Sandoval, Sheila		
0	10/30/2024	
Inv PR 10.11.24		1,055.89
0 Total:		1,055.89
SSDV2018 - Sandoval, Sheila Total:		1,055.89
Total:		12,401.26

Accounts Payable

Check Detail

User: wcastrillon
Printed: 11/04/2024 - 8:52AM

Check Number	Check Date	Amount
ABSO2011 - Absolute Software, Inc		
319971	10/30/2024	
Inv INV01617467		2,500.00
319971 Total:		2,500.00
ABSO2011 - Absolute Software, Inc Total:		2,500.00
ACMT2920 - All City Management Services, Inc.		
319973	10/30/2024	
Inv 95923		13,158.00
319973 Total:		13,158.00
ACMT2920 - All City Management Services, Inc. Total:		13,158.00
ACTI8030 - JC Foodservice Inc		
320020	10/30/2024	
Inv 2159103-00		284.46
320020 Total:		284.46
ACTI8030 - JC Foodservice Inc Total:		284.46
ADHA6116 - Herrera, Adam		
320016	10/30/2024	
Inv 10/09/2024		38.06
320016 Total:		38.06
ADHA6116 - Herrera, Adam Total:		38.06
ALH0179 - Alhambra Car Wash		
319972	10/30/2024	
Inv September 2024		336.00
319972 Total:		336.00
ALH0179 - Alhambra Car Wash Total:		336.00
AMAZONCP - Amazon Capital Services, Inc.		

Check Number	Check Date	Amount
0	10/30/2024	
Inv 14RQ-QJY9-L1XM		150.68
Inv 169Y-76CV-3NPN		152.46
Inv 171F-9M9N-LWMC		358.80
Inv 1DNM-C6RP-JCQG		526.76
Inv 1DRH-L3RL-C41X		16.52
Inv 1H1G-YQ1X-X7YN		17.99
Inv 1HLX-3HYP-9DWX		435.83
Inv 1JYJ-14XY-1TJK		57.37
Inv 1MXC-VKKP-7W34		78.25
Inv 1R3M-9YQV-9QLP		80.54
Inv 1YRH-HPXK-KHQD		11.01
0 Total:		1,886.21
AMAZONCP - Amazon Capital Services, Inc. Total:		1,886.21
AMPM5011 - AMPM Door, Inc.		
0	10/30/2024	
Inv 61320		1,021.91
Inv 61415		715.74
Inv 61509		2,160.00
Inv 61590		580.91
Inv 61677		2,346.17
0 Total:		6,824.73
AMPM5011 - AMPM Door, Inc. Total:		6,824.73
AMTIR4 - The Reinalt-Thomas Corporation DBA		
320063	10/30/2024	
Inv 2093649		685.44
320063 Total:		685.44
AMTIR4 - The Reinalt-Thomas Corporation DBA Total:		685.44
ASCAP - ASCAP		
319976	10/30/2024	
Inv 305004372182		10.58
319976 Total:		10.58
ASCAP - ASCAP Total:		10.58
AT&T5011 - AT&T		
319977	10/30/2024	
Inv 33184107563432		31.57
Inv 62644164973570		1,649.16
319977 Total:		1,680.73

Check Number	Check Date	Amount
AT&T5011 - AT&T Total:		1,680.73
ATCN9011 - AT&T		
319978	10/30/2024	
Inv 000022355298		599.10
319978 Total:		599.10
ATCN9011 - AT&T Total:		599.10
ATFR4011 - Fierro, Anthony		
320009	10/30/2024	
Inv 09/25/2024		37.72
320009 Total:		37.72
ATFR4011 - Fierro, Anthony Total:		37.72
ATGC8530 - CU Technology		
0	10/30/2024	
Inv 11767		25,600.00
0 Total:		25,600.00
ATGC8530 - CU Technology Total:		25,600.00
ATSS6010 - Arakelian Enterprises, Inc.		
0	10/30/2024	
Inv 17488556		978.26
Inv 17697746		978.26
Inv 17697748		2,608.71
Inv 17896361		2,608.71
0 Total:		7,173.94
ATSS6010 - Arakelian Enterprises, Inc. Total:		7,173.94
AVIC4010 - Manukian, Avick		
320031	10/30/2024	
Inv 09/25/2024		23.18
320031 Total:		23.18
AVIC4010 - Manukian, Avick Total:		23.18
BAK0369 - Baker & Taylor Books		
0	10/30/2024	
Inv 2038490471		555.39
Inv 2038500101		554.95
Inv 2038501105		1,663.30

Check Number	Check Date	Amount
Inv 2038513936		559.43
Inv 2038517463		486.52
Inv 2038526382		314.03
Inv 2038532205		565.28
Inv 2038541679		276.44
Inv 2038551670		129.77
0 Total:		5,105.11
BAK0369 - Baker & Taylor Books Total:		5,105.11
BARALPW - Barrera, Alejandro		
319982	10/30/2024	
Inv 10/09/2024		24.12
Inv 10/12/2024		24.12
Inv 10/12/2024 (2)		24.12
319982 Total:		72.36
BARALPW - Barrera, Alejandro Total:		72.36
bkac2013 - Prime Actuarial Consulting, LLC		
320047	10/30/2024	
Inv 30706		5,000.00
320047 Total:		5,000.00
bkac2013 - Prime Actuarial Consulting, LLC Total:		5,000.00
BMIE8264 - BMI		
319983	10/30/2024	
Inv 11564799		435.00
319983 Total:		435.00
BMIE8264 - BMI Total:		435.00
BRBU6011 - Butcher, Brandon		
319986	10/30/2024	
Inv DW0924-02		500.00
319986 Total:		500.00
BRBU6011 - Butcher, Brandon Total:		500.00
BRDE6710 - Bardales Jr., Luis		
319981	10/30/2024	
Inv 10/05/2024		20.23
319981 Total:		20.23

Check Number	Check Date	Amount
BRDE6710 - Bardales Jr., Luis Total:		20.23
BSHL6710 - Base Hill, Inc., dba Jan Point		
0	10/30/2024	
Inv 25072		16,885.00
Inv 25073		448.00
0 Total:		17,333.00
BSHL6710 - Base Hill, Inc., dba Jan Point Total:		17,333.00
BUR4018 - Burro Canyon Shooting Park		
319985	10/30/2024	
Inv 3317		60.00
Inv 3322		120.00
319985 Total:		180.00
BUR4018 - Burro Canyon Shooting Park Total:		180.00
CADPTCSC - California Department of Conservation		
319991	10/30/2024	
Inv 07-09-2024		1,421.47
319991 Total:		1,421.47
CADPTCSC - California Department of Conservation Total:		1,421.47
CAL5236 - CA Linen Services		
319988	10/30/2024	
Inv 2338044		144.69
Inv 2340713		154.86
Inv 2344359		153.20
319988 Total:		452.75
CAL5236 - CA Linen Services Total:		452.75
CAL8012 - Califa Group		
319990	10/30/2024	
Inv 7786		750.00
319990 Total:		750.00
CAL8012 - Califa Group Total:		750.00
CAME2015 - California Maintenance & Environmental		
0	10/30/2024	
Inv 39686		125.00
Inv 39687		125.00

Check Number	Check Date	Amount
0 Total:		250.00
CAME2015 - California Maintenance & Environmental Total:		250.00
CAN0607 - Cantu Graphics Inc.		
319992	10/30/2024	
Inv 60900-2		830.18
Inv 61045-2		58.76
Inv 61427-2		208.37
Inv 61559-5		131.20
Inv 61693-3		36.38
Inv 61717-3		55.07
319992 Total:		1,319.96
CAN0607 - Cantu Graphics Inc. Total:		1,319.96
CAVA8031 - Avalos, Celsa		
319980	10/30/2024	
Inv 09/28/2024		380.00
Inv 102524		500.00
Inv 102524-2		220.00
319980 Total:		1,100.00
CAVA8031 - Avalos, Celsa Total:		1,100.00
CGUSA - Compass Group USA, Inc.		
320001	10/30/2024	
Inv SOC197266		87.59
Inv SOC207936		307.48
320001 Total:		395.07
CGUSA - Compass Group USA, Inc. Total:		395.07
CHA1111 - Chan, Anthony		
319993	10/30/2024	
Inv 10/07-10/08/24		55.25
319993 Total:		55.25
CHA1111 - Chan, Anthony Total:		55.25
CIN4011 - AT&T Mobility		
319979	10/30/2024	
Inv 287288006612		3,557.66
Inv 287312118886		884.43
319979 Total:		4,442.09

Check Number	Check Date	Amount
CIN4011 - AT&T Mobility Total:		4,442.09
CINFIRE - Cintast Corporation No. 2		
319996	10/30/2024	
Inv 0F19695307		823.05
319996 Total:		823.05
CINFIRE - Cintast Corporation No. 2 Total:		823.05
CINTA3 - Cintas Corporation		
319994	10/30/2024	
Inv 1905141276		100.83
Inv 1905166390		1,013.91
Inv 4206025464		380.85
Inv 4206748117		357.32
Inv 4207490893		367.64
Inv 4208202386		367.64
319994 Total:		2,588.19
CINTA3 - Cintas Corporation Total:		2,588.19
CINTAS - Cintas Corporation		
319995	10/30/2024	
Inv 5223278631		15.79
Inv 5225650867		7.88
Inv 5225650872		7.84
Inv 8407027955		7.84
Inv 8407027956		7.88
Inv 8407072268		31.57
Inv 8407072269		119.65
Inv 9286278427		143.88
319995 Total:		342.33
CINTAS - Cintas Corporation Total:		342.33
CLLA6749 - CliftonLarsonAllen LLP		
320000	10/30/2024	
Inv L241597035/7027		2,971.50
320000 Total:		2,971.50
CLLA6749 - CliftonLarsonAllen LLP Total:		2,971.50
COBR7131 - The Advantage Group		
0	10/30/2024	
Inv 176997		282.00
Inv November 2024		16,867.67

Check Number	Check Date	Amount
0 Total:		17,149.67
COBR7131 - The Advantage Group Total:		17,149.67
CPS0551 - CPRS		
320002	10/30/2024	
Inv 2/27/25-3/1/25		990.00
320002 Total:		990.00
CPS0551 - CPRS Total:		990.00
CRDA1021 - Corodata Records Management		
0	10/30/2024	
Inv 7032117		514.82
0 Total:		514.82
CRDA1021 - Corodata Records Management Total:		514.82
CRSGRUND - Gruenewald, Christopher		
320012	10/30/2024	
Inv 09/30-10/01/24		55.25
Inv 10/08/2024		41.18
320012 Total:		96.43
CRSGRUND - Gruenewald, Christopher Total:		96.43
CRSR2010 - Corodata Shredding Inc.		
0	10/30/2024	
Inv DN1489494		160.06
0 Total:		160.06
CRSR2010 - Corodata Shredding Inc. Total:		160.06
CSAC2012 - Public Risk, Innovation, Solutions, and Management		
0	10/30/2024	
Inv 25400952		2,253.48
0 Total:		2,253.48
CSAC2012 - Public Risk, Innovation, Solutions, and Management Total:		2,253.48
CTYELCSP - City Electric Supply Company		
319998	10/30/2024	
Inv PDA/026522		5,881.28
Inv WB4/079236		937.13

Check Number	Check Date	Amount
319998 Total:		6,818.41
CTYELCSP - City Electric Supply Company Total:		6,818.41
CWNC2501 - Carl Warren & Company		
0	10/30/2024	
Inv 2047621-2047650		1,227.15
Inv 2047727		5,092.00
0 Total:		6,319.15
CWNC2501 - Carl Warren & Company Total:		6,319.15
DACA4011 - Calderon, David		
319989	10/30/2024	
Inv 09/23-09/26/24		899.44
Inv 09/30/2024		55.10
Inv 10/11/2024		37.46
319989 Total:		992.00
DACA4011 - Calderon, David Total:		992.00
DDLP8010 - Dr. Detail Ph.D LLC		
0	10/30/2024	
Inv 3168		600.00
Inv 3169		225.00
Inv 3170		90.00
Inv 3184		770.00
0 Total:		1,685.00
DDLP8010 - Dr. Detail Ph.D LLC Total:		1,685.00
DOJ4011 - CA Department of Justice		
319987	10/30/2024	
Inv 761062		32.00
319987 Total:		32.00
DOJ4011 - CA Department of Justice Total:		32.00
DSP0755 - D & S Printing		
320003	10/30/2024	
Inv 1001		4,542.30
Inv 1003		711.11
Inv 9014		897.44
Inv 9015		700.09
320003 Total:		6,850.94

DSP0755 - D & S Printing Total:		6,850.94
DUN1111 - Dunn, Daniel		
320005	10/30/2024	
Inv 10/01/2024		1,924.15
320005 Total:		1,924.15
DUN1111 - Dunn, Daniel Total:		1,924.15
ECHK9 - Echelon K9, LLC		
320006	10/30/2024	
Inv INV-0109		600.00
320006 Total:		600.00
ECHK9 - Echelon K9, LLC Total:		600.00
ELSRTIRE - El Sereno Tire Shop		
320007	10/30/2024	
Inv 3182		636.84
320007 Total:		636.84
ELSRTIRE - El Sereno Tire Shop Total:		636.84
ERCARRYO - Arroyo, Eric Jason		
319975	10/30/2024	
Inv 3511		1,500.00
Inv 3524		1,500.00
319975 Total:		3,000.00
ERCARRYO - Arroyo, Eric Jason Total:		3,000.00
ESCLCEPW - Escalera, Lance		
320008	10/30/2024	
Inv 09/27/2024		30.82
Inv 09/27/2024 (2)		30.82
Inv 10/05/2024		30.82
320008 Total:		92.46
ESCLCEPW - Escalera, Lance Total:		92.46
GAR5011 - Garvey Equipment Co		
320011	10/30/2024	
Inv 163754		499.31

Check Number	Check Date	Amount
320011 Total:		499.31
GAR5011 - Garvey Equipment Co Total:		499.31
GLB4010 - Ganahl Lumber Company		
320010	10/30/2024	
Inv 142009767		4,422.55
Inv 142009767-1		1,583.05
Inv 142009915		1,070.66
320010 Total:		7,076.26
GLB4010 - Ganahl Lumber Company Total:		7,076.26
GOVE2013 - Governmentjobs.com, Inc. DBA NEOGOV		
0	10/30/2024	
Inv INV-39302.1		44,740.78
Inv INV-46887		12,409.54
0 Total:		57,150.32
GOVE2013 - Governmentjobs.com, Inc. DBA NEOGOV Total:		57,150.32
GRA1244 - Woods Maintenance Services, Inc.		
320074	10/30/2024	
Inv SPAS0924		1,692.90
320074 Total:		1,692.90
GRA1244 - Woods Maintenance Services, Inc. Total:		1,692.90
GVFH7010 - Dahl Architects Inc		
320004	10/30/2024	
Inv 3185		206.21
320004 Total:		206.21
GVFH7010 - Dahl Architects Inc Total:		206.21
HDDR9257 - Hood Doctors		
320017	10/30/2024	
Inv 35943		495.00
320017 Total:		495.00
HDDR9257 - Hood Doctors Total:		495.00
HHA5011 - H & H Wholesale Parts		
320014	10/30/2024	

Check Number	Check Date	Amount
Inv 1IN0662858		667.65
320014 Total:		667.65
HHA5011 - H & H Wholesale Parts Total:		667.65
HIRNADA - Nada Bus, Inc.		
320039	10/30/2024	
Inv 52195		1,120.00
320039 Total:		1,120.00
HIRNADA - Nada Bus, Inc. Total:		1,120.00
IMGN8032 - iMagen		
320018	10/30/2024	
Inv 42654-1		307.45
320018 Total:		307.45
IMGN8032 - iMagen Total:		307.45
ISAN8031 - Sanchez, Ingrit		
320053	10/30/2024	
Inv 142-981101		700.00
320053 Total:		700.00
ISAN8031 - Sanchez, Ingrit Total:		700.00
ISGU4011 - Gutierrez, Issac		
320013	10/30/2024	
Inv 10/01/2024		40.00
320013 Total:		40.00
ISGU4011 - Gutierrez, Issac Total:		40.00
ITCR2501 - Intercare Holdings Insurance Services		
0	10/30/2024	
Inv 76-011897		5,098.50
0 Total:		5,098.50
ITCR2501 - Intercare Holdings Insurance Services Total:		5,098.50
JCRS5011 - Jones Coffee Roasters		
320021	10/30/2024	
Inv 67322		204.75

Check Number	Check Date	Amount
320021 Total:		204.75
JCRS5011 - Jones Coffee Roasters Total:		204.75
JHMS8020 - JHM Supply		
0	10/30/2024	
Inv 367111/1		26.31
Inv 367306/1		294.89
Inv 367307/1		249.35
Inv 367602/1		103.24
Inv 367674/1		407.67
Inv 368160/1		7.56
Inv 368211/1		78.13
0 Total:		1,167.15
JHMS8020 - JHM Supply Total:		1,167.15
JMCB6710 - Cipres Bravo, Jose Manuel		
319997	10/30/2024	
Inv 10/05/2024		25.59
319997 Total:		25.59
JMCB6710 - Cipres Bravo, Jose Manuel Total:		25.59
JSAR4011 - Jack's Auto Repair		
320019	10/30/2024	
Inv 19589		66.00
Inv 19592		96.87
Inv 19612		444.99
Inv 19628		66.00
Inv 19629		66.00
320019 Total:		739.86
JSAR4011 - Jack's Auto Repair Total:		739.86
KRAV - Krav Maga Worldwide, Inc.		
320023	10/30/2024	
Inv FTD8462		925.00
320023 Total:		925.00
KRAV - Krav Maga Worldwide, Inc. Total:		925.00
KVMC6710 - Machado, Kelvin		
320030	10/30/2024	
Inv 10/03/2024		22.38
Inv 10/05/2024		22.38

Check Number	Check Date	Amount
Inv 10/05/2024 (2)		22.38
320030 Total:		67.14
KVMC6710 - Machado, Kelvin Total:		67.14
LAC3010 - Los Angeles County Tax Collector		
320029	10/30/2024	
Inv 536300227024000		1,717.70
Inv 536301027024000		332.75
Inv 536302127024000		36.18
Inv 571602127124000		828.39
320029 Total:		2,915.02
LAC3010 - Los Angeles County Tax Collector Total:		2,915.02
LASLLUNG - Lance, Soll & Lunghard LLP		
320024	10/30/2024	
Inv 64612		14,372.43
Inv 64613		4,715.00
Inv 65155		24,180.00
320024 Total:		43,267.43
LASLLUNG - Lance, Soll & Lunghard LLP Total:		43,267.43
LAW6711 - Kim, Harold		
320022	10/30/2024	
Inv 39061		100.00
Inv 44184		198.42
Inv 44185		110.25
320022 Total:		408.67
LAW6711 - Kim, Harold Total:		408.67
LBBM4010 - Long Beach BMW Motorcycles		
320028	10/30/2024	
Inv 50969		142.00
320028 Total:		142.00
LBBM4010 - Long Beach BMW Motorcycles Total:		142.00
LEE1111 - Lee, Richard		
320025	10/30/2024	
Inv 10/02/2024		34.52
320025 Total:		34.52

Check Number	Check Date	Amount
LEE1111 - Lee, Richard Total:		34.52
LEOWEB - Leo Web Protect Inc.		
320026	10/30/2024	
Inv 80658455302		166.66
320026 Total:		166.66
LEOWEB - Leo Web Protect Inc. Total:		166.66
LIFE822 - Life-Assist Inc.		
320027	10/30/2024	
Inv 1516957		1,189.67
Inv 1517220		200.64
320027 Total:		1,390.31
LIFE822 - Life-Assist Inc. Total:		1,390.31
MCM2352 - McMaster Carr Supply Co		
320033	10/30/2024	
Inv 34244237		254.18
320033 Total:		254.18
MCM2352 - McMaster Carr Supply Co Total:		254.18
MDWSTPE - Midwest Tape LLC		
320036	10/30/2024	
Inv 506001391		494.41
Inv 506037523		339.74
Inv 506071181		673.61
Inv 506104774		138.03
320036 Total:		1,645.79
MDWSTPE - Midwest Tape LLC Total:		1,645.79
MERPDRTS - Meridian Rapid Defense Group Rentals LLC		
320034	10/30/2024	
Inv INV-R-5533		10,848.60
320034 Total:		10,848.60
MERPDRTS - Meridian Rapid Defense Group Rentals LLC Total:		10,848.60
MERPLMBN - Merry Plumbing Co., Inc.		
320035	10/30/2024	
Inv 53038092424		3,662.48

Check Number	Check Date	Amount
320035 Total:		3,662.48
MERPLMBN - Merry Plumbing Co., Inc. Total:		3,662.48
MICH4011 - Sanchez, Michael		
320054	10/30/2024	
Inv 10/02/2024		33.09
Inv 10/07-10/08/24		49.63
320054 Total:		82.72
MICH4011 - Sanchez, Michael Total:		82.72
MOR2900 - Morrow & Holman Plumbing Inc		
320037	10/30/2024	
Inv P-10-24356		190.00
320037 Total:		190.00
MOR2900 - Morrow & Holman Plumbing Inc Total:		190.00
MVCH3011 - MV Cheng & Associates Inc.		
320038	10/30/2024	
Inv 9/30/2024A		8,800.00
320038 Total:		8,800.00
MVCH3011 - MV Cheng & Associates Inc. Total:		8,800.00
MYBR2010 - Mayer Brown LLP		
320032	10/30/2024	
Inv 100247161		15,416.00
320032 Total:		15,416.00
MYBR2010 - Mayer Brown LLP Total:		15,416.00
MZVZT - Van Zandt, Maizon		
320070	10/30/2024	
Inv 10/09/2024		4.42
320070 Total:		4.42
MZVZT - Van Zandt, Maizon Total:		4.42
OMEG4011 - Omega Polygraph		
320040	10/30/2024	
Inv 02058		600.00

Check Number	Check Date	Amount
320040 Total:		600.00
OMEG4011 - Omega Polygraph Total:		600.00
OVDR8011 - OverDrive Inc.		
0	10/30/2024	
Inv 01148CO24280373		1,468.05
Inv 01148CO24302485		967.44
Inv 01148CO24302487		1,366.90
Inv 01148DA24281595		225.48
0 Total:		4,027.87
OVDR8011 - OverDrive Inc. Total:		4,027.87
PBGF8031 - Pitney Bowes Global Financial Services LLC		
320046	10/30/2024	
Inv 3106783712		968.10
Inv 3106826384		219.60
320046 Total:		1,187.70
PBGF8031 - Pitney Bowes Global Financial Services LLC Total:		1,187.70
PHS4011 - Pasadena Humane Society		
320042	10/30/2024	
Inv OCT2024SoPas		15,337.33
320042 Total:		15,337.33
PHS4011 - Pasadena Humane Society Total:		15,337.33
POS5265 - Post Alarm Systems		
0	10/30/2024	
Inv 1709714		119.52
Inv 1727516		119.52
0 Total:		239.04
POS5265 - Post Alarm Systems Total:		239.04
PRKWOD - Parkwood Landscape Maintenance, Inc.		
320041	10/30/2024	
Inv 108155		51,894.22
320041 Total:		51,894.22
PRKWOD - Parkwood Landscape Maintenance, Inc. Total:		51,894.22

Check Number	Check Date	Amount
PSLSV802 - Pasadena Live Scan Service		
320043	10/30/2024	
Inv 251		400.00
320043 Total:		400.00
PSLSV802 - Pasadena Live Scan Service Total:		400.00
PSNS7101 - Pasadena Star-News		
320044	10/30/2024	
Inv 900073808		734.79
320044 Total:		734.79
PSNS7101 - Pasadena Star-News Total:		734.79
PTZM4011 - Zamora, Patrick		
320077	10/30/2024	
Inv 09/23-09/26/24		858.46
Inv 094536		50.28
Inv 095504		50.12
Inv 130583		40.27
Inv 9051841		20.35
320077 Total:		1,019.48
PTZM4011 - Zamora, Patrick Total:		1,019.48
PUWA8020 - Pure Water		
0	10/30/2024	
Inv 209593		66.24
0 Total:		66.24
PUWA8020 - Pure Water Total:		66.24
QLET8032 - Quality Entertainment		
320048	10/30/2024	
Inv 103024		275.00
320048 Total:		275.00
QLET8032 - Quality Entertainment Total:		275.00
QUESTICA - Questica Ltd.		
0	10/30/2024	
Inv INV124433		20,475.00
0 Total:		20,475.00

Check Number	Check Date	Amount
QUESTICA - Questica Ltd. Total:		20,475.00
RAMS3041 - Rogers Anderson, Malody & Scott LLP		
0	10/30/2024	
Inv 75988		6,555.00
0 Total:		6,555.00
RAMS3041 - Rogers Anderson, Malody & Scott LLP Total:		6,555.00
RDRKDVS - Davis, Roderick		
0	10/30/2024	
Inv 102524		600.00
0 Total:		600.00
RDRKDVS - Davis, Roderick Total:		600.00
RIAL6501 - Arriola, Richard		
319974	10/30/2024	
Inv 10/04/2024		17.82
Inv 10/05/2024		17.82
319974 Total:		35.64
RIAL6501 - Arriola, Richard Total:		35.64
RIHZ6601 - Hernandez, Ricardo		
320015	10/30/2024	
Inv 10/02/2024		10.59
Inv 10/06/2024		10.59
320015 Total:		21.18
RIHZ6601 - Hernandez, Ricardo Total:		21.18
RIV4011 - Riverside County Sheriff's Dept		
320050	10/30/2024	
Inv BCTC0080160		548.00
320050 Total:		548.00
RIV4011 - Riverside County Sheriff's Dept Total:		548.00
RVCSTLLC - Revenue & Cost Specialist, LLC		
0	10/30/2024	
Inv 9272		12,250.00
0 Total:		12,250.00

Check Number	Check Date	Amount
RVCSTLLC - Revenue & Cost Specialist, LLC Total:		12,250.00
RWGN8160 - Richards, Watson & Gershon		
320049	10/30/2024	
Inv 249888		35,804.90
Inv 249889		8,404.93
Inv 249890		67.50
Inv 249891		269.42
Inv 249892		744.00
320049 Total:		45,290.75
RWGN8160 - Richards, Watson & Gershon Total:		45,290.75
SAN7775 - San Bernardino Sheriff's Dept		
320051	10/30/2024	
Inv EVOC-24-10-011		100.00
320051 Total:		100.00
SAN7775 - San Bernardino Sheriff's Dept Total:		100.00
SAXE2013 - Saxe-Clifford PH.D, Susan		
320055	10/30/2024	
Inv 24-0927-7		450.00
320055 Total:		450.00
SAXE2013 - Saxe-Clifford PH.D, Susan Total:		450.00
SCLC8011 - Southern California Library Cooperative		
320057	10/30/2024	
Inv 1627		2,868.00
320057 Total:		2,868.00
SCLC8011 - Southern California Library Cooperative Total:		2,868.00
SCRBHLDG - Permitium LLC		
320045	10/30/2024	
Inv PER00036037		250.00
320045 Total:		250.00
SCRBHLDG - Permitium LLC Total:		250.00
SGMC2013 - St. George's Medical Clinic		
0	10/30/2024	
Inv 149239		695.00
Inv 149251		175.00

Check Number	Check Date	Amount
Inv 149254		250.00
Inv 149287		175.00
Inv 149388		650.00
Inv 149519		75.00
Inv 149579		75.00
0 Total:		2,095.00
SGMC2013 - St. George's Medical Clinic Total:		2,095.00
SGVMC111 - San Gabriel Valley Medical Center		
320052	10/30/2024	
Inv 928400		48.00
Inv 928481		48.00
320052 Total:		96.00
SGVMC111 - San Gabriel Valley Medical Center Total:		96.00
SHO7777 - Showcases		
0	10/30/2024	
Inv 329429		120.69
0 Total:		120.69
SHO7777 - Showcases Total:		120.69
SOGA6501 - SoCalGAS		
320056	10/30/2024	
Inv 9/1/24-10/1/24		214.55
320056 Total:		214.55
SOGA6501 - SoCalGAS Total:		214.55
SPEC5011 - Spectrum Gas Products		
320058	10/30/2024	
Inv 00863109		54.00
320058 Total:		54.00
SPEC5011 - Spectrum Gas Products Total:		54.00
SPMN3010 - City of South Pasadena		
319999	10/30/2024	
Inv 14044-101624		546.26
Inv 19126-101624		498.33
Inv 19386-101624		510.86
Inv 19387-101624		534.46
319999 Total:		2,089.91

Check Number	Check Date	Amount
SPMN3010 - City of South Pasadena Total:		2,089.91
SRYC5011 - Stericycle Inc.		
320059	10/30/2024	
Inv 8008378043		176.05
320059 Total:		176.05
SRYC5011 - Stericycle Inc. Total:		176.05
SSSS8267 - Round Star West, LLC		
0	10/30/2024	
Inv S.S.S- SEP24		842.40
0 Total:		842.40
SSSS8267 - Round Star West, LLC Total:		842.40
STA5219 - Staples Business Advantage		
0	10/30/2024	
Inv 6002202033		209.25
Inv 6002202034		596.81
Inv 6002202038		144.67
Inv 6002365374		249.97
Inv 6002693373		158.14
Inv 6003347108		41.86
Inv 6003347110		27.65
Inv 6003406607		689.27
Inv 6003797546		307.01
Inv 6003797548		312.36
Inv 6004456043		143.56
Inv 6004456044		22.97
Inv 6004456045		29.08
Inv 6004510220		71.50
Inv 6006871371		798.05
Inv 6008755273		72.75
Inv 6008755274		135.25
Inv 6008755276		22.69
Inv 6008809603		198.39
Inv 6009684757		82.01
Inv 6009684758		231.05
Inv 6011702009		21.69
Inv 6011702011		53.55
Inv 6011702012		48.36
Inv 6011702013		382.34
Inv 6011702014		50.15
Inv 6012043598		267.73
Inv 6012848310		345.26
Inv 6012848312		62.78
Inv 6013476139		45.94
Inv 6013476140		1,256.11
Inv 6013476141		332.26

Check Number	Check Date	Amount
Inv 6013750436		56.18
Inv 6013750437		62.61
Inv 6013821286		39.23
Inv 6013821288		47.75
Inv 6013986813		26.67
Inv 6014108509		180.63
Inv 6014225802		35.88
0 Total:		7,859.41
STA5219 - Staples Business Advantage Total:		7,859.41
STKLINFO - Sterling Infosystems Inc.		
320060	10/30/2024	
Inv 10017240		103.60
320060 Total:		103.60
STKLINFO - Sterling Infosystems Inc. Total:		103.60
STSM1020 - Studio Spectrum, Inc.		
0	10/30/2024	
Inv 192934		2,440.00
0 Total:		2,440.00
STSM1020 - Studio Spectrum, Inc. Total:		2,440.00
SWOR8032 - Swords Fencing Studio		
320061	10/30/2024	
Inv SWFENCING- SEP		1,056.00
320061 Total:		1,056.00
SWOR8032 - Swords Fencing Studio Total:		1,056.00
TAPA8031 - Zalon, Merritt		
320076	10/30/2024	
Inv 11050		375.00
320076 Total:		375.00
TAPA8031 - Zalon, Merritt Total:		375.00
TCGS3012 - The Corporate Gift Service, Inc.		
320062	10/30/2024	
Inv 34004		218.63
320062 Total:		218.63

Check Number	Check Date	Amount
TCGS3012 - The Corporate Gift Service, Inc. Total:		218.63
TIM4011 - Charter Communications Holdings, LLC		
0	10/30/2024	
Inv 187633401101424		375.19
Inv 188597901100124		434.09
Inv 188598001100124		83.95
Inv 188598401100124		391.68
Inv 188598501092124		784.20
Inv 188598901100124		59.31
0 Total:		2,128.42
TIM4011 - Charter Communications Holdings, LLC Total:		2,128.42
TRA5998 - Transtech Engineers, Inc.		
320064	10/30/2024	
Inv 20245402		21,211.51
320064 Total:		21,211.51
TRA5998 - Transtech Engineers, Inc. Total:		21,211.51
TRIOVLLY - Valley Services, Inc.		
320069	10/30/2024	
Inv 2230050248		4,200.00
Inv 2230051966		4,797.00
Inv 2230053507		3,334.50
320069 Total:		12,331.50
TRIOVLLY - Valley Services, Inc. Total:		12,331.50
TRIPEPIS - Tripepi, Smith and Associates, Inc.		
320065	10/30/2024	
Inv 13229		1,350.00
320065 Total:		1,350.00
TRIPEPIS - Tripepi, Smith and Associates, Inc. Total:		1,350.00
TTTC6710 - TT Technologies, Inc.		
320066	10/30/2024	
Inv 256633		2,056.66
320066 Total:		2,056.66
TTTC6710 - TT Technologies, Inc. Total:		2,056.66
TYBL7000 - Borrello, Tyler		

Check Number	Check Date	Amount
319984	10/30/2024	
Inv 10/07/2024		73.97
319984 Total:		73.97
TYBL7000 - Borrello, Tyler Total:		73.97
UND6710 - Underground Service Alert/SC		
320067	10/30/2024	
Inv 24-251146		55.40
Inv 920240708		133.95
320067 Total:		189.35
UND6710 - Underground Service Alert/SC Total:		189.35
UPP7789 - Upper San Gabriel Valley MWD		
320068	10/30/2024	
Inv SoPas-10.10.24		13,100.00
320068 Total:		13,100.00
UPP7789 - Upper San Gabriel Valley MWD Total:		13,100.00
UQMS8010 - Unique Management Services, Inc.		
0	10/30/2024	
Inv 6131135		116.50
0 Total:		116.50
UQMS8010 - Unique Management Services, Inc. Total:		116.50
VERW6711 - Verizon Wireless		
320071	10/30/2024	
Inv 9975217918		52.38
Inv 9975235830		249.61
320071 Total:		301.99
VERW6711 - Verizon Wireless Total:		301.99
VTMS4011 - Vital Medical Services, LLC		
320073	10/30/2024	
Inv 4513		672.00
320073 Total:		672.00
VTMS4011 - Vital Medical Services, LLC Total:		672.00
VUL6601 - Vulcan Materials Company		

Check Number	Check Date	Amount
0	10/30/2024	
Inv 1688529		2,917.02
Inv 1688531		588.53
Inv 1688937		601.90
Inv 1900538		2,676.15
0 Total:		6,783.60
VUL6601 - Vulcan Materials Company Total:		6,783.60
VVDC6011 - Video Voice Data Communications		
320072	10/30/2024	
Inv 21832EVP		22,460.00
320072 Total:		22,460.00
VVDC6011 - Video Voice Data Communications Total:		22,460.00
WES4152 - West Coast Arborists, Inc.		
0	10/30/2024	
Inv 219729		850.00
Inv 220035		5,445.00
0 Total:		6,295.00
WES4152 - West Coast Arborists, Inc. Total:		6,295.00
XRXF5010 - Xerox Financial Services		
320075	10/30/2024	
Inv 6306404		2,965.16
320075 Total:		2,965.16
XRXF5010 - Xerox Financial Services Total:		2,965.16
ZOLL8021 - Zoll Medical Corporation		
0	10/30/2024	
Inv 4062792		1,184.09
0 Total:		1,184.09
ZOLL8021 - Zoll Medical Corporation Total:		1,184.09
Total:		600,109.04

Accounts Payable

Check Detail

User: asargsyan
Printed: 11/04/2024 - 10:08AM

Check Number	Check Date	Amount
JOHNDOWN - DOWNS, JOHN		
320078	10/31/2024	
Inv SETTLEMENT -JPD		82,500.00
320078 Total:		82,500.00
JOHNDOWN - DOWNS, JOHN Total:		82,500.00
Total:		82,500.00

City of
SOUTH PASADENA

Online Payment Log			
Date	**Vendor**	**Amount**	**Description**
9/25/2024	UMPQUA Bank	$13,614.48	Online Payment for August 2024 Citywide Credit Card Expenses.
10/10/2024	So Cal Edison	$23,173.70	Online Payment for Various City Owned Electric Accounts.
10/17/2024	Pitney Bowes	$2,000.00	Postage Meter Pre-Paid Funds (7/19/24-10/17/2024).
10/24/2024	UMPQUA Bank	$24,181.87	Online Payment for September 2024 Citywide Credit Card Expenses.
10/24/2024	So Cal Edison	$23,980.28	Online Payment for City Owned Electric Account # 3859.
10/31/2024	So Cal Edison	$141,197.52	Online Payment for City Owned Electric Account # 1581.
Total:		***$228,147.85***	

Payroll

Payroll Summary Report

Payroll Date:	**10/11/2024**	**Regular**		
Checks			$	894.63
Direct Deposits			$	556,534.53
IRS Payments			$	122,294.43
EDD - State of CA			$	39,064.80
PERS Pension			$	131,329.12
Deferred Comp			$	31,889.12
PERS Health			$	-
		Subtotal:	**$**	**882,006.63**

Payroll Date:	**10/17/2024**	**Off-Cycle**		
Checks			$	2,007.27
Direct Deposits			$	-
IRS Payments			$	239.28
EDD - State of CA			$	65.40
PERS Pension			$	390.85
Deferred Comp			$	24.92
PERS Health			$	208,481.98
		Subtotal:	**$**	**211,209.70**

Payroll Date:	**10/25/2024**	**Regualr**		
Checks			$	1,182.27
Direct Deposits			$	528,932.05
IRS Payments			$	103,402.43
EDD - State of CA			$	32,041.75
PERS Pension			$	128,145.25
Deferred Comp			$	30,999.69
PERS Health			$	-
		Subtotal:	**$**	**824,703.44**

Payroll Date:	**10/31/2024**	**Off-Cycle**		
Checks			$	3,966.74
Direct Deposits			$	12,817.65
IRS Payments			$	5,268.38
EDD - State of CA			$	1,852.01
PERS Pension			$	2,775.24
Deferred Comp			$	519.17
PERS Health			$	-
		Subtotal:	**$**	**27,199.19**
		Grand Total:	**$**	**1,945,118.96**

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 5

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Amber Tardif, Deputy City Clerk

SUBJECT: **CONSIDERATION OF APPROVAL OF THE SPECIAL CITY COUNCIL MEETING MINUTES FOR APRIL 24, 2024, SPECIAL JOINT CITY COUNCIL AND FINANCE COMMISSION MEETING MINUTES FOR APRIL 24, 2024, SPECIAL CITY COUNCIL MEETING MINUTES FOR JULY 31, 2024, SPECIAL JOINT CITY COUNCIL AND FINANCE COMMISSION MEETING MINUTES FOR JULY 31, 2024, AND REGULAR CITY COUNCIL MEETING MINUTES FOR OCTOBER 16, 2024**

Recommendation

It is recommended that the City Council consider the approval of the minutes for the Special City Council Meeting for April 24, 2024, Special Joint City Council and Finance Commission Meeting for April 24, 2024, Special City Council Meeting for July 31, 2024, Special Joint City Council and Finance Commission Meeting for July 31, 2024, and the Regular City Council Meeting Minutes for October 16, 2024.

Executive Summary

Attached for the City Council's consideration and approval are meeting minutes and hereby included as attachments to this staff report.

Background

The City Clerk's Division is responsible for producing meeting minutes for the City Council meetings. Meeting minutes are used as the official record of the actions taken by the City at the direction of the City Council.

Fiscal Impact

There is no fiscal impact anticipated as Division staff is facilitating the work related to this project.

Key Performance Indicators and Strategic Plan

The item aligns with the Management Services Department's Key Performance Indicator to provide quick access to information and accountability, ensuring public transparency.

Attachment:
Attachment No. 1 - April 24, 2024 - Special City Council Meeting Minutes
Attachment No. 2 - April 24, 2024 - Special Joint City Council and Finance Commission Meeting Minutes

Attachment No. 3 - July 31, 2024 - Special City Council Meeting Minutes
Attachment No. 4 - July 31, 2024 - Special Joint City Council and Finance Commission Meeting Minutes
Attachment No. 5 - October 16, 2024 - Regular City Council Meeting Minutes

CITY OF SOUTH PASADENA
SPECIAL CITY COUNCIL MEETING
M I N U T E S
WEDNESDAY, APRIL 24, 2024, AT 5:00 P.M.

CALL TO ORDER:

The South Pasadena Special City Council Meeting was called to order by Mayor Evelyn G. Zneimer on Wednesday, April 24, 2024, at 5:05 P.M. The City Council Chambers are located at 1424 Mission Street, South Pasadena, California.

ROLL CALL:

PRESENT	Mayor	Evelyn G. Zneimer
	Mayor Pro Tem	Jack Donovan
	Councilmember	Janet Braun
	Councilmember	Michael A. Cacciotti
	Councilmember	Jon Primuth
ABSENT	None.	

Tiara Solorzano, Acting Deputy City Clerk, announced a quorum.

CITY STAFF PRESENT:

Arminé Chaparyan, City Manager/Executive Director; Roxanne Diaz, City Attorney; Tiara Solorzano, Acting Deputy City Clerk were present at Roll Call. Other staff members presented reports or responded to questions as indicated in the minutes.

ACTION/DISCUSSION

1. CONSIDERTION OF APPROVAL OF APPOINTMENTS TO CITY COMMISSIONS

Recommendation

It is recommended that the City Council authorize the Mayor's appointments for the following City Boards, Commissions, and Committees:

1. Devin G. Robinson to the Finance Commission to a partial term ending December 31, 2026; and
2. Michelle L. Hammond to the Mobility and Transportation Infrastructure Commission (MTIC) to a partial term ending December 31, 2025.

Mayor Zneimer requested an amendment to the recommendation, removing the recommendation to appoint Devin G. Robinson to the Finance Commission, as he withdrew his application.

COUNCIL MOTION AND ACTION

A motion was made by Councilmember Cacciotti and seconded by Councilmember Braun to approve Item No. 1, as amended by Mayor Zneimer. The motion carried 5-0, by the following vote:

AYES: Braun, Cacciotti, Donovan, Primuth, Mayor Zneimer
NOES: None.
ABSENT: None.
ABSTAINED: None.

2. OATH OF OFFICE – NEWLY APPOINTED COMMISSIONERS

Acting Deputy City Clerk to provide Oath of Office to newly appointed Commissioners.

Michelle L. Hammond provided her Oath and was appointed as a new Commissioner.

3. CONSIDERATION OF THE APPROVAL OF PROFESSIONAL SERVICES AGREEMENTS WITH FM3 RESEARCH AND TRIPEPI SMITH TO CONDUCT A SURVEY AND PREPARE INFORMATIONAL MATERIALS REGARDING THE FRAMING OF A PROPOSED BALLOT MEASURE RELATED TO ALLOWED BUILDING HEIGHTS FOR A TOTAL NOT-TO-EXCEED AMOUNT OF $59,500

Recommendation

It is recommended that the City Council consider the following:

1. Approve a Professional Services Agreement with Fairbank, Maslin, Maullin, Metz, and Associates to conduct a survey regarding the framing of a proposed ballot measure related to allowed building heights in the amount not-to-exceed $29,900 in the form approved by the City Attorney; and
2. Approve a Professional Services Agreement with Tripepi Smith to prepare informational materials related to the framing of a proposed ballot measure related to allowed building heights in the amount not- to-exceed $29,600 in the form approved by the City Attorney.

Community Development Director Angelica Frausto-Lupo presented the item.

Councilmember Braun inquired if the Tripepi Smith educational materials could be used on the city's website. Community Development Director Frausto-Lupo responded that the material can be used on the city's website.

Councilmember Cacciotti expressed support for the item and asked if there would be an option to offer interviews in Cantonese. FM3 representative Richard responded that the Call Center would offer both Mandarin and Cantonese.

Mayor Zneimer mentioned there are many senior registered voters and would like to know if there will be mailers going out to them. Community Development Director Frausto-Lupo confirmed that there will be postcards mailed out to the residents.

In-Person Public Comment:
Bianca Richards commented on this item.

COUNCIL MOTION AND ACTION

A motion was made by Councilmember Braun and seconded by Councilmember Cacciotti to approve Item No. 3. The motion carried 5-0, by the following vote:

AYES: Braun, Cacciotti, Donovan, Primuth, Mayor Zneimer
NOES: None.
ABSENT: None.
ABSTAINED: None.

ADJOURNMENT
There being no further matters, Mayor Zneimer adjourned the meeting of the Special City Council Meeting at 5:34 P.M.

Respectfully submitted:

_____
Amber Tardif
Deputy City Clerk

APPROVED

_____
Evelyn G. Zneimer
Mayor

Attest:

_____
Amber Tardif
Deputy City Clerk

CITY OF SOUTH PASADENA
SAPECIAL JOINT MEETING OF THE CITY COUNCIL
AND THE FINANCE COMMISSION

SPECIAL MEETING – STUDY SESSION

M I N U T E S
WEDNESDAY, APRIL 24, 2024, AT 5:15 P.M.

CALL TO ORDER:

The Special Joint Meeting of the South Pasadena City Council and Finance Commission was called to order by Mayor Evelyn G. Zneimer on Wednesday, April 24, 2024, at 5:34 P.M. The City Council Chambers are located at 1424 Mission Street, South Pasadena, California.

ROLL CALL:

PRESENT	Mayor	Evelyn G. Zneimer
	Mayor Pro Tem	Jack Donovan
	Councilmember	Janet Braun
	Councilmember	Michael A. Cacciotti
	Councilmember	Jon Primuth
	Chair	Peter Giulioni Jr.
	Commissioner	Y-Le Ho
	Commissioner	Cynthia Quade
	Treasurer	Zhen Tao
ABSENT	Vice Chair	Sheila Rossi

Tiara Solorzano, Acting Deputy City Clerk, announced a quorum.

CITY STAFF PRESENT:
Arminé Chaparyan, City Manager/Executive Director; Roxanne Diaz, City Attorney; Tiara Solorzano, Acting Deputy City Clerk were present at Roll Call. Other staff members presented reports or responded to questions as indicated in the minutes.

PUBLIC COMMENT

1. PUBLIC COMMENT

In-Person Public Comment:
Josh Betta commented on Item No. 2.

ACTION/DISCUSSION

2. OVERVIEW OF THE COUNCIL APPROVED CAPITAL IMPROVEMENT (CIP) FOR FISCAL YEARS 2023-2024 AND 2027-2028 (INCLUSIVE OF FISCAL YEAR 2023-2024 MID-YEAR ADJUSTMENTS) AND OVERVIEW OF THE LIGHTING AND LANDSCAPING MAINTENANCE DISTRICT (LLMD) FOR DISCUSSION AND DIRECTION

Recommendation
It is recommended that the City Council and Finance Commission receive and discuss the presentation and provide directions, if any.

Public Works Director Ted Gerber presented this item.

Mayor Zneimer inquired why the Memorial War building cannot be part of the enterprise funds since it is a revenue facility. Finance Director Downs responded that the enterprise funds are structured differently and have different rules to follow.

Councilmember Braun expressed interest in prioritizing a comprehensive street repair program.

Finance Commission Chair Giulioni would like to know how many positions are vacant in the Public Works Department. Public Works Director Gerber discussed the vacancy in the Engineering Division. Acting Deputy City Manager Frausto responded that there are seven full-time vacancies in the Public Works Department.

Councilmember Braun requested clarification on the burden of funds and wants the projects identified and prioritized. Councilmember Primuth agrees that prioritizing the projects is important.

Mayor Zneimer expressed interest in the Fire Department assessment. Public Works Director Gerber recommended replacing the garage door at the Fire Department.

Public Works Director Gerber recommended prioritizing fixing the showers in the Police Department and addressing the issue of the driving range netting replacement.

City Manager Chaparyan recommended beginning the improvements on the snake trail. She recommended the Council create a plan before pursuing a grant for the city

improvements.

Library Director Billings recommended prioritizing the library roof, ADA ramp, cameras, and electronic key access.

Public Works Director Gerber recommended keeping the current transportation projects and reconsidering the future projects.

The City Council agreed to prioritize the following items:

1. Recreation facilities key system.
2. Library northeast ramp lighting and improvement.
3. Library security and safety improvements.
4. All transportation related projects.

Public Works Director Gerber will direct staff on how to prioritize the Customer Care System.

Councilmember Primuth requested options to double the pace of street resurfacing. City Manager Chaparyan committed to have a draft CIP and budget to the City Council based on the feedback received.

Mayor Zneimer and Councilmembers Braun and Primuth expressed their opposition to a ballot measure for the LLMD.

ADJOURNMENT

There being no further matters, Mayor Zneimer adjourned the meeting of the Special Joint City Council and Finance Commission Meeting at 10:10 P.M.

Respectfully submitted:

_____
Amber Tardif
Deputy City Clerk

APPROVED

_____
Evelyn G. Zneimer
Mayor

Attest:

_____
Amber Tardif
Deputy City Clerk

CITY OF SOUTH PASADENA
SPECIAL CITY COUNCIL MEETING

M I N U T E S
WEDNESDAY, JULY 31, 2024, AT 6:00 P.M.

CALL TO ORDER:

The Special Meeting of the South Pasadena City Council was called to order by Mayor Evelyn G. Zneimer on Wednesday, July 31, 2024, at 6:12 P.M. The City Council Chambers are located at 1424 Mission Street, South Pasadena, California.

ROLL CALL:

PRESENT	Mayor	Evelyn G. Zneimer
	Mayor Pro Tem	Jack Donovan
	Councilmember	Janet Braun
	Councilmember	Michael A. Cacciotti
	Councilmember	Jon Primuth
ABSENT	None.	

Mark Perez, Deputy City Clerk, announced a quorum.

CITY STAFF PRESENT:

Don Penman, Interim City Manager; Roxanne Diaz, City Attorney; Mark Perez, Deputy City Clerk were present at Roll Call. Other staff members presented reports or responded to questions as indicated in the minutes.

CLOSED SESSION ANNOUNCEMENTS

1. **CLOSED SESSION ANNOUNCEMENTS**
   CONFERENCE WITH LEGAL COUNSEL: EXISTING LITIGATION
   Government Code Section 54956.9 (d)(1)
   1. Christopher J. Mandala v. City of South Pasadena, Workers Compensation Appeals Board Case No. ADJ18869604 (VNO)

City Attorney Diaz announced that the City Council met in Closed Session to discuss anticipated litigation, and no reportable action was taken.

PUBLIC COMMENT

2. PUBLIC COMMENT

Public comments will be limited to agenda items only and will be heard after the respective item.

PRESENTATIONS

3. PRESENTATION BY LOS ANGELES COUNTY ASSESSOR'S OFFICE ON PROPERTY TAX UPDATE

Los Angeles County Assessor Jeff Prang presented a property tax update.

CONSENT CALENDAR

Mayor Zneimer requested to pull Item No. 5 for separate discussion. A motion was made by Councilmember Cacciotti and seconded by Councilmember Braun to approve Item No. 4. The motion carried a 5-0, by the following vote:

AYES:	Braun, Cacciotti, Donovan, Primuth, Mayor Zneimer
NOES:	None.
ABSENT:	None.
ABSTAINED:	None.

4. CONSIDERATION OF APPROVAL OF THE FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH RCS, LLC., FOR TEMPORARY STAFFING SERVICES, AT A COSE OF $64,800, FOR A NEW TOTAL, NOT-TO-EXCEED AMOUNT OF $94,300

Recommendation

It is recommended that the City Council consider approval of the First Amendment to the Professional Services Agreement with RCS, LLC., in the amount of $64,800, for continued temporary staffing services, and for a new total not-to-exceed amount of $94,300.

5. CONSIDERATION OF THE APPROVAL OF AN AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH TRIPEPI SMITH TO PREPARE ADDITIONAL INFORMATIONAL MATERIALS REGARDING THE UPCOMING NEIGHBORHOOD PRESERVATION AND LOCAL CONTROL BALLOT MEASURE FOR A TOTAL NOT-TO-EXCEED AMOUNT OF $25,000

Recommendation
It is recommended that the City Council consider the approval of an amendment to the Professional Services Agreement with Tripepi Smith to prepare informational materials related to Housing Element Program 2.n. and the upcoming Neighborhood Preservation and Local Control ballot measure in the amount of $25,000, and for a new total not-to-exceed amount of $54,600.

COUNCIL MOTION AND ACTION

Mayor Zneimer requested to pull Item No. 5 for separate discussion. Councilmembers Primuth and Cacciotti expressed support for the item. A motion was made by Mayor Zneimer and seconded by Councilmember Primuth to approve Item No. 5 with the stipulations that staff create an outreach plan for the community and be mindful of the spending of the funds.

The motion carried a 5-0, by the following vote:

AYES:	Braun, Cacciotti, Donovan, Primuth, Mayor Zneimer
NOES:	None.
ABSENT:	None.
ABSTAINED:	None.

ACTION/DISCUSSION

6. CONSIDERATION OF A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA, ORDERING THAT A MEASURE BE SUBMITTED TO THE VOTERS OF THE CITY AT THE GENERAL MUNICIPAL ELECTION TO BE HELD ON NOVEMBER 5, 2024 RELATED TO BUILDING HEIGHTS IN ALL ZONING DISTRICTS OF THE CITY IN ORDER TO PROTECT THE CITY'S RESIDENTIAL CHARACTER, PRESERVE LOCAL CONTROL AND INCREASE HOUSING OPPORTUNITIES, INCLUDING AFFORDABLE HOUSING FOR MIDDLE AND WORKING CLASS FAMILIES, INDIVIDUALS AND SENIORS AS NECESSARY TO IMPLEMENT THE 2021-2029 (6TH CYCLE) HOUSING ELEMENT; AND APPROVE AN APPROPRIATION IN THE AMOUNT OF $5,630

Recommendation
It is recommended that the City Council adopt the Resolution ordering that the measure be submitted to the voters of the city at the General Municipal Election to be held on November 5, 2024, related to building heights in all zoning districts to implement the 2021-2029 (6th Cycle) Housing Element and approve an appropriation in the amount of $5,630.

Community Development Director Angelica Frausto-Lupo and City Attorney Roxanne Diaz presented Item No. 6.

Public Comment:

Anne Bagasao commented in opposition to the item.

Dwight Bond and Gary Coyne commented on the item and provided suggestions on the ballot measure.

Jason Claypool commented in support of the item.

COUNCIL MOTION AND ACTION

A motion was made by Councilmember Braun and seconded by Councilmember Cacciotti to approve Item No. 6 to adopt the Resolution ordering that the measure be submitted to the voters of the city at the General Municipal Election to be held on November 5, 2024, related to building heights in all zoning districts to implement the 2021-2029 (6th Cycle) Housing Element.

The motion carried a 5-0, by the following vote:

AYES:	Braun, Cacciotti, Donovan, Primuth, Mayor Zneimer
NOES:	None.
ABSENT:	None.
ABSTAINED:	None.

ADJOURNMENT
There being no further matters, Mayor Zneimer adjourned the meeting of the City Council and Finance Commission at 8:13 P.M.

Respectfully submitted:

_____
Amber Tardif
Deputy City Clerk

APPROVED

_____
Evelyn G. Zneimer
Mayor

Attest:

_____
Amber Tardif
Deputy City Clerk

CITY OF SOUTH PASADENA
CITY COUNCIL AND FINANCE COMMISSION
SPECIAL JOINT MEETING

M I N U T E S
WEDNESDAY, JULY 31, 2024, AT 8:30 P.M.

CALL TO ORDER:

The Special Joint Meeting of the South Pasadena City Council and Finance Commission was called to order by Mayor Evelyn G. Zneimer on Wednesday, July 31, 2024, at 8:30 P.M. The City Council Chambers are located at 1424 Mission Street, South Pasadena, California.

ROLL CALL:

PRESENT	Mayor	Evelyn G. Zneimer
	Mayor Pro Tem	Jack Donovan
	Councilmember	Janet Braun
	Councilmember	Michael A. Cacciotti
	Councilmember	Jon Primuth
	Chair	Peter Giulioni Jr.
	Vice Chair	Sheila Rossi
	Commissioner	Y-Le Ho
	Commissioner	Cynthia Quade
ABSENT	None.	

Councilmember Cacciotti arrived at 8:31 p.m. at the completion of the roll call.

Mark Perez, Deputy City Clerk, announced a quorum.

CITY STAFF PRESENT:

Don Penman, Interim City Manager; Roxanne Diaz, City Attorney; Mark Perez, Deputy City Clerk were present at Roll Call. Other staff members presented reports or responded to questions as indicated in the minutes.

ACTION/DISCUSSION

1. CONSIDERATION TO REVIEW, DISCUSS, AND PROVIDE DIRECTION REGARDING THE PROPOSED FISCAL YEAR 2024-2025 ANNUAL BUDGET AND THE CAPITAL IMPROVEMENT PROGRAM BUDGET

Recommendation
It is recommended that the City Council review, discuss, and provide specific directions to staff regarding the Proposed Fiscal Year 2024-2025 Annual Budget and the Capital Improvement Program Budget.

Finance Director John Downs presented the item.

The Finance Commission and the City Council expressed their interest in having the Interim City Manager review the budget, along with meeting with the Finance Commissioners regarding the budgeted positions, financial planning challenges, and the accuracy of the budget process. The Council also asked the Interim City Manager to help create a plan on the needs to be addressed to be able to adopt a budget by August 21, 2024.

In-Person Comments:
Josh Betta commented on the item.

COMMUNICATIONS

Councilmember Communications
Councilmember Braun spoke on her ride-a-long with Athens and described how hard all the Athens' crew members work and the different equipment they use throughout their day.

Councilmember Primuth and Mayor Pro Tem Donovan had no reports.

Councilmember Cacciotti stated he would report at the August 21st meeting.

Mayor Zneimer congratulated Community Development for having an approved Housing Element. The Mayor also congratulated Public Works Director Ted Gerber, his team, and Councilmember Cacciotti on a successful Electrification Press Conference.

City Manager Communications
Interim City Manager Penman had no report.

ADJOURNMENT
There being no further matters, Mayor Zneimer adjourned the meeting of the City Council and Finance Commission at 10:25 P.M.

Respectfully submitted:

_____
Amber Tardif
Deputy City Clerk

APPROVED

_____
Evelyn G. Zneimer
Mayor

Attest:

_____
Amber Tardif
Deputy City Clerk

CITY OF SOUTH PASADENA
CITY COUNCIL - REGULAR MEETING

M I N U T E S
WEDNESDAY, OCTOBER 16, 2024, AT 7:00 P.M.

CALL TO ORDER:

The Regular Meeting of the South Pasadena City Council was called to order by Mayor Zneimer on Wednesday, October 16, 2024, at 7:07 P.M. The City Council Chambers are located at 1424 Mission Street, South Pasadena, California.

ROLL CALL:

PRESENT	Mayor	Evelyn G. Zneimer
	Mayor Pro Tem	Jack Donovan
	Councilmember	Jon Primuth
	Councilmember	Michael A. Cacciotti
	Councilmember	Janet Braun
ABSENT	None.	

Mark Perez, Deputy City Clerk announced a quorum.

CITY STAFF PRESENT:

Ted Gerber, Acting City Manager; Roxanne Diaz, City Attorney; Mark Perez, Deputy City Clerk were present at Roll Call. Other staff members presented reports or responded to questions as indicated in the minutes.

PLEDGE OF ALLEGIANCE

The Flag Salute was led by Councilmember Cacciotti.

CLOSED SESSION ANNOUNCEMENTS

1. CLOSED SESSION ANNOUNCEMENTS

A. REAL PROPERTY NEGOTIATIONS
Government Code Section 54956.8

1. Housing Authority Property Address: 1503 El Centro Street, APN: 5315-003-903; 1507 El Centro Street, APN: 5493-038-904; and APN: 5315-003-902
   Agency Negotiator: Ted Gerber, Acting City Manager
   Negotiating Parties:
   - Clifford Beers Housing, Inc., DBA Holos Communities;
   - Homes & Hope, LLC and Develop With Skill, LLC
   - Jamboree Housing Corporation
   - Pacific Southwest Community Development Corporation and Gangi Development Company, Inc.;
   - The Related Companies of California, LLC; and
   - West Hollywood Community Housing Corporation

   Under Negotiation: Price and Terms of Payment

2. Property Address: 913 Meridian Avenue
   Agency Negotiator: Ted Gerber, Acting City Manager
   Negotiating Party: South Pasadena Preservation Foundation, Inc.
   Under Negotiation: Price and Terms of Payment

B. CONFERENCE WITH LEGAL COUNSEL: ANTICIPATED LITIGATION-SIGNIFICANT EXPOSURE TO LITIGATION
Government Code Section 54956.9 (d)(2)
Number of Potential Cases: 2

City Attorney Roxanne Diaz stated that no reportable action was taken during closed session.

PUBLIC COMMENT

2. PUBLIC COMMENT – GENERAL (NON-AGENDA ITEMS)

In Person Public Comments:

Yvonne LaRose spoke regarding “Domestic Violence Awareness Month.”

Tucker Nelson spoke regarding “Shakeout Day.”

Bill Ukropina spoke regarding local buildings for sale.

PRESENTATIONS

3. A PRESENTATION FROM THE OFFICE OF SENATOR ANTHONY PORTANTINO

Senator Anthony Portantino gave a presentation and responded to questions from the City Council.

4. A PROCLAMATION DECLARING THE MONTH OF OCTOBER, AS "COMMUNITY PLANNING MONTH" IN THE CITY OF SOUTH PASADENA

Alison Becker, Acting Community Development Director, read and accepted the Proclamation declaring the month of October, as "Community Planning Month" in the City of South Pasadena.

CHANGES TO AGENDA

5. REORDERING OF, ADDITIONS, OR DELETIONS TO AGENDA

Item No. 3 was heard after Item No. 13.

CONSENT CALENDAR

A motion was made by Mayor Zneimer and seconded by Mayor Pro Tem Donovan to approve Item Nos. 6-9 of the consent calendar with the following modification to Item No. 7:

The second "Consent Calendar" section is amended to read "Action/Discussion" on the October 2, 2024, minutes.

The motion carried 5-0, by the following vote:

AYES: Braun, Cacciotti, Donovan, Primuth, Mayor Zneimer
NOES: None.
ABSENT: None.
ABSTAINED: None.

6. CONSIDERATION OF THE APPROVAL OF PREPAID WARRANTS IN THE AMOUNT OF $1,757,446.34; GENERAL CITY WARRANTS IN THE AMOUNT OF $370,782.27; ONLINE PAYMENTS IN THE AMOUNT OF $136,712.76; VOIDS IN THE AMOUNT OF ($206.21); PAYROLL IN THE AMOUNT OF $985,680.60

Recommendation
It is recommended that the City Council approve the Warrants as presented.

A motion was made to approve the recommendation on the Consent Calendar.

7. CONSIDERATION OF APPROVAL OF THE SPECIAL JOINT CITY COUNCIL MEETING MINUTES WITH THE FINANCE COMMISSION FOR APRIL 17, 2024 AND THE REGULAR CITY COUNCIL MEETING MINUTES FOR OCTOBER 2, 2024

Recommendation
It is recommended that the City Council consider the approval of the minutes for the Special Joint City Council Meeting with the Finance Commission for April 17, 2024 and the Regular City Council Meeting for October 2, 2024.

A motion was made to approve the recommendation on the Consent Calendar.

8. CONSIDERATION OF APPROVAL OF THE PROFESSIONAL SERVICES AGREEMENT WITH MOORE IACOFANO GOLTSMAN, INC. (MIG) FOR CITY ON-CALL GIS SERVICES

Recommendation
Staff recommends that the City Council consider approval of a Professional Services Agreement with Moore Iacofano Goltsman, Inc. (MIG), for On-Call Geographic Information Systems (GIS) services for a term of two years at a not-to-exceed amount of $50,000 for the contract, with the option to extend the contract for up to three (3) one-year extensions for a total maximum contract period of five (5) years.

A motion was made to approve the recommendation on the Consent Calendar.

9. CONSIDERATION OF APPROVAL OF APPROPRIATING $3,805.00 IN FUNDS DISBURSED TO THE LIBRARY BY THE SOUTHERN CALIFORNIA LIBRARY COOPERATIVE IN FISCAL YEAR 2024-2025 TO BE SPENT ON ELECTRONIC RESOURCES FOR THE LIBRARY

Recommendation
It is recommended that the City Council appropriate funds disbursed to the Library by the Southern California Library Cooperative (SCLC) in the amount of $3,805.00 from General Fund Miscellaneous Revenue (101-0000-0000-5505-000) to the Library's Fiscal Year 2024-2025 Electronic Resources account (101-8010-8011-8031-000) to enable the Library to expend the funds as required by SCLC.

A motion was made to approve the recommendation on the Consent Calendar.

ACTION/DISCUSSION

10. CONSIDERATION OF APPROVAL OF A DISCRETIONARY FUNDS REQUEST FROM COUNCILMEMBER CACCIOTTI IN THE AMOUNT OF UP TO $400 FOR THE AVON PLACE ANNUAL HALLOWEEN BLOCK PARTY EVENT

Recommendation

It is recommended that the City Council:

1. Find that the requested allocation of discretionary funds to support the Avon Place Annual Halloween Block Party (Event) serves a public purpose benefitting the City; the expenditure is free from any conflict of interest that arise from the use of the funds; and that the expenditure is not a gift to any individual, corporation or municipality and is only used to benefit the general public of the City; and
2. Based on such findings approve the requested expenditure of discretionary funds of up to $400 to support the Event.

Lucy Hakobian, Community Services Director and Ted Gerber, Acting City Manager responded to questions from the City Council.

COUNCIL MOTION AND ACTION

A motion was made by Councilmember Cacciotti and seconded by Councilmember Braun to approve Item No. 10, as presented. The motion carried 5-0, by the following vote:

AYES: Braun, Cacciotti, Donovan, Primuth, Mayor Zneimer
NOES: None.
ABSENT: None.
ABSTAINED: None.

PUBLIC COMMENT – CONTINUED

11. CONTINUED PUBLIC COMMENT - GENERAL

In-Person Public Comment

Larry Arzoumanian spoke regarding rubbish bins.

Jennifer and Ruben Clingerman spoke regarding Trader Joe's construction.

COMMUNICATIONS

12. COUNCILMEMBERS COMMUNICATIONS

Councilmember Primuth, Councilmember Braun and Mayor Pro Tem Donovan spoke regarding the City's media briefing event with Senator Portantino, Assemblymember Fong and CalTrans related to the City's purchase of the five historic Caltrans surplus homes.

Councilmember Cacciotti spoke regarding his recent attendance at the San Gabriel Valley Council of Governments meeting and the Metro Gold Line Phase II Joint Powers Authority (JPA) meeting.

Mayor Zneimer spoke regarding her recent attendance at the Echo Park Lake Tour Water Quality Features conducted by the Upper Los Angeles River Watershed and the Water Revolution Symposium.

13. CITY MANAGER COMMUNICATIONS

Ted Gerber, Acting City Manager had no comments.

ADJOURNMENT

There being no further matters, Mayor Zneimer adjourned the meeting at 8:10 P.M. to the next Regular City Council meeting scheduled on Wednesday, November 6, 2024.

Respectfully submitted:

_____
Mark Perez
Deputy City Clerk

APPROVED

_____
Evelyn G. Zneimer
Mayor

Attest:

_____
Mark Perez
Deputy City Clerk

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 6

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Mark Perez, Deputy City Clerk

SUBJECT: **CONSIDERATION OF APPROVAL OF THE 2025 CITY COUNCIL MEETING SCHEDULE**

Recommendation

It is recommended that the City Council approve the City Council meeting schedule for the 2025 calendar year.

Executive Summary

The South Pasadena City Council adheres to a bi-monthly meeting schedule as established by Resolution No. 7716, with provisions for schedule adjustments as needed. For 2025, tentative meeting cancellations are identified for January 1, April 2, July 2, and August 6 to accommodate city breaks and significant events, with special sessions to be arranged if required.

Background

In alignment with Resolution No. 7716 of South Pasadena, the City Council meets on the first and third Wednesdays of each month. Closed Session begins at 6:00 p.m., followed by Open Session at 7:00 p.m. This regular schedule supports forward planning for the City Council, municipal staff, and residents year-round. However, the City Council may adjust this schedule as needed, including cancelling or adding meetings based on emerging priorities.

Looking ahead to 2025, the preliminary meeting schedule identifies potential cancellations:

- January 1, 2025: Due to the City's winter recess from Wednesday, December 25, 2024, to January 1, 2025, there will be insufficient time to prepare and distribute a complete agenda. If an urgent meeting is required, staff is prepared to arrange a special session during the second week of January.
- April 2, 2025: The first April meeting is cancelled to observe Spring Break, per City Council direction.
- July 2, 2025: Due to preparations for the Fourth of July events, City staff will not have the capacity to arrange the regular Council meeting. However, if needed, a special meeting will be scheduled for Wednesday, July 9, 2025.
- August 6, 2025: Following the June 19, 2013, City Council guidance, the first meeting in August is designated for cancellation unless pressing City matters arise.

These proposed cancellations ensure efficient city operations while honoring key local events, observances, and council direction. Any schedule adjustments will be communicated promptly.

Fiscal Impact
There is no fiscal impact associated with this item.

Attachment:
Attachment No. 1 - 2025 City Council Meeting Schedule

CITY OF SOUTH PASADENA
2025 REGULAR CITY COUNCIL MEETING SCHEDULE

City Council Meeting Date	Notes
January 1, 2025	**Cancelled: Winter Holiday Closure**
January 15, 2025	
February 5, 2025	
February 19, 2025	
March 5, 2025	
March 19, 2025	
April 2, 2025	**Cancelled: Spring Break**
April 16, 2025	
May 7, 2025	
May 21, 2025	
June 4, 2025	
June 18, 2025	
July 2, 2025	**Cancelled: Fourth of July Holiday**
July 16, 2025	
August 6, 2025	**Cancelled: Council Directive from 6/19/2013 City Council Meeting: No Council Meeting the First Week of August**
August 20, 2025	
September 3, 2025	
September 17, 2025	
October 1, 2025	
October 15, 2025	
November 5, 2025	
November 19, 2025	
December 3, 2025	
December 17, 2025	

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 7

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Mark Perez, Deputy City Clerk

SUBJECT: **CONSIDERATION OF ADOPTION OF A RESOLUTION ADOPTING AN UPDATED CITY CONFLICT OF INTEREST CODE AS REQUIRED BY THE POLITICAL REFORM ACT**

Recommendation

It is recommended that the City Council adopt a resolution adopting an updated City Conflict of Interest Code.

Background

California Government Code Sections 87306 and 87306.5 state the City's local Conflict of Interest Code must be reviewed every two years and amended when circumstances change, such as when new positions are created or duties of existing positions change. The code must be consistent with the minimum requirements of the Political Reform Act. As a result of the current review, staff is recommending that the current list of designated positions be updated to add new positions and disclosure categories, which will require those positions to file Fair Political Practices Commission (FPPC) Form 700 Statement of Economic Interest with the City Clerk's office.

Analysis

The Political Reform Act (California Government Code 81000) controls conflicts of interest of public officials through disclosure of financial interest and prohibitions on participation in the making of decisions in which the official knows or has reason to know he or she has financial interest. Pursuant to California Government Code 87306, each City is required to have a local Conflict of Interest Code, review its code biennially, and make amendments, if necessary. The City is required to designate employees and members of the city's commissions who must disclose certain investments, income, interests in real property, and business positions, and who must disqualify themselves from making or participating in the making of governmental decisions affecting those interests if required by the Political Reform Act.

Fiscal Impact

There is no fiscal impact associated with the biennial review and update of the City's Conflict of Interest Code.

Attachment:
Attachment 1- Proposed Resolution.pdf
Attachment 2- Exhibits to Resolution.pdf

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA, CALIFORNIA, ADOPTING AN UPDATED CITY CONFLICT OF INTEREST CODE AND RESCINDING RESOLUTION NO. 7756

WHEREAS, the Political Reform Act (Government Code Section 81000 et seq.) requires all public agencies to adopt and promulgate a Conflict of Interest Code (Code); and

WHEREAS, the City Council previously amended its Code by adopting Resolution No. 7756 on March 2, 2022, as set forth in Section 18730 of the California Code of Regulations; and

WHEREAS, the Political Reform Act requires that the City Council review its Code biennially to determine whether amendments are required; and

WHEREAS, a staff level review of City's Code reveals that amendments are necessary to the list of Designated Positions and corresponding Disclosure Categories ; and

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA, CALIFORNIA, DOES RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. The City Council does hereby adopt the updated Conflict of Interest Code, a copy of which is attached hereto as "Exhibit A".

SECTION 2. Resolution No. 7756 is hereby rescinded.

SECTION 3. The City Clerk of the City of South Pasadena shall certify to the passage and adoption of this resolution and its approval by the City Council and shall cause the same to be listed in the records of the City.

PASSED, APPROVED AND ADOPTED ON this 6th day of November, 2024.

Evelyn G. Zneimer
Mayor

ATTEST:

Amber Tardif
Deputy City Clerk

APPROVED AS TO FORM:

Roxanne Diaz
City Attorney

I HEREBY CERTIFY the foregoing resolution was duly adopted by the City Council of the City of South Pasadena, California, at a regular meeting held on the 6th day of November 2024, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAINED:

Amber Tardif
Deputy City Clerk

“EXHIBIT A”
CONFLICT OF INTEREST CODE OF THE
CITY OF SOUTH PASADENA, CALIFORNIA
(Adopted November 6, 2024)

The Political Reform Act (Government Code § 81000, et seq.) requires state and local government agencies to adopt and promulgate Conflict of Interest Codes. The Fair Political Practices Commission has adopted regulation 2 California Code of Regulations Section 18730, which contains the terms of a standard Conflict of Interest Code, which can be incorporated by reference in an agency’s code. After public notice and hearing, the standard code may be amended by the Fair Political Practices Commission to conform to amendments in the Political Reform Act. Therefore, the terms of 2 California Code of Regulations Section 18730 and any amendments duly adopted by the Fair Political Practices Commission are hereby incorporated by reference and along with the attached Appendices A and B, designating positions and establishing disclosure categories, shall constitute the Conflict of Interest Code of the City of South Pasadena.

Individuals holding designated positions shall file their statements of economic interests with City Clerk who will make statements available for public inspection and reproduction (Government Code § 81008) during regular business hours, at 1414 Mission Street, South Pasadena, CA 91030.

The City’s Code does not establish any disclosure obligation for Members of the City Council and Planning Commission, City Treasurer, City Manager, and City Attorney, as Government Code Section 87200 et seq., requires disclosure for those positions as a matter of state law.

CONFLICT OF INTEREST CODE
CITY OF SOUTH PASADENA, CALIFORNIA

APPENDIX A
DISCLOSURE CATEGORIES

CATEGORY 1 (Full Disclosure)

Must disclose all investments, business positions in business entities, and sources of income (including gifts, loans, and travel payments); and all interests in real property located in or within two miles of the jurisdiction of the City.

CATEGORY 2 (Disclosure Related to Procurement, Real Property)

Must disclose all investments, business positions in business entities, sources of income (including gifts, loans, and travel payments) if the source is of a type which provides, manufactures, or supplies goods, materials, equipment, machinery, or services (including training or consulting services) of the type utilized by the department in which the person is employed or the department(s) associated with the commission in the case of a commissioner; and all interests in real property located in or within two miles of the jurisdiction of the City.

CATEGORY 3 (Disclosure Related to Procurement)

Must disclose all investments, business positions in business entities, and sources of income (including gifts, loans, and travel payments) if the source is of a type which provides, manufactures, or supplies goods, materials, equipment, machinery, or services (including training or consulting services) of the type utilized by the department in which the person is employed.

CATEGORY 4 (Disclosure Related to Regulatory/Licenses/Permits, Real Property)

Must disclose all investments, business positions in business entities, sources of income (including gifts, loans, and travel payments) if the source is of a type that is subject to the regulatory, permit, or licensing authority of the City; and all interests in real property located in or within two miles of the jurisdiction of the City.

CONSULTANTS

Those consultants that will make, participate in the making, or act in a staff capacity for governmental decisions shall file statements of economic interests and such disclosure requirements shall conform to the range of duties. The City Manager shall make such determinations in writing to be filed with and retained in the same manner as the City's Conflict of Interest Code.

CONFLICT OF INTEREST CODE
CITY OF SOUTH PASADENA, CALIFORNIA

APPENDIX B
LIST OF DESIGNATED POSITIONS

DESIGNATED POSITIONS	**DISCLOSURE CATEGORY**
Government Code Section 87200 Filers	
City Attorney	Govt. Code §87200
City Manager	Govt. Code §87200
City Treasurer	Govt. Code §87200
Members of the City Council	Govt. Code §87200
Members of the Planning Commission	Govt. Code §87200
Boards/Commissions/Committees	
Members of the Cultural Heritage Commission	4
Members of the Design Review Board	4
Members of the Finance Commission	1
Members of the Library Board of Trustees	2
Members of the Mobility, Transportation, and Infrastructure Commission	2
Members of the Public Works Commission	2
Members of Natural Resources and Environmental Commission	2
Members of Public Art Commission	2
City Manager's Office	
Deputy City Manager	1
Assistant to the City Manager	1
Management Analyst	2
Community Development Department	
Community Development Director	1
Deputy Community Development Director	1
Planning Manager	1
Assistant Planner	4
Associate Planner	4
Senior Planner	4
Community Improvement Coordinator	4
Senior Community Improvement Coordinator	4
Senior Management Analyst	4
Film Liaison	4
Planning Interns	4
Building Inspector	4
Building Official	4
Building Supervisor	4
Permit Counter Technician	4

DESIGNATED POSITIONS	DISCLOSURE CATEGORY
Community Services Department	
Community Services Director	1
Community Services Deputy Director	1
Community Services Supervisor	3
Finance Department	
Finance Director	1
Budget & Purchasing Manager	3
Accounting Manager- Controller	3
Finance Manager	3
Fire Department	
Fire Chief	1
Fire Division Chief	1
Fire Captain	3
Fire Inspector	3
Library Services Department	
Director of Library, Arts, and Culture	1
Library Support Services Manager	3
Library Public Services Manager	3
Management Services Department	
Management Services Director	1
Human Resources Manager	1
Chief City Clerk	1
Senior Management Analyst	2
Deputy City Clerk	3
Police Department	
Police Chief	1
Deputy Police Chief	1
Police Sergeant	3
Police Lieutenant	3
Management Analyst	2
Public Works Department	
Public Works Director	1
Deputy Director of Public Works	1
Public Works Operations Manager	2
Water Operations Supervisor	3
Water Operations Manager	2
Environmental Services & Sustainability Manager	2
Facilities and Parks Supervisor	3

Principal Engineer	2
Street Supervisor	3
Senior Civil Engineer	2
Transportation Project Manager	3

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 8

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Cathy Billings, Library Director

SUBJECT: **CONSIDERATION OF ADOPTION OF A RESOLUTION APPROVING THE LIBRARY SPECIAL TAX ANNUAL REPORT AND AUTHORIZING THE COLLECTION OF THE TAX FOR FISCAL YEAR 2024-2025**

Recommendation

It is recommended that the City Council consider adoption of a resolution approving the Library Special Tax Annual Report and authorizing the collection of the Tax by the County of Los Angeles at the Fiscal Year 2024-2025 rates.

Executive Summary

Each year, the City's consultant prepares an Annual Report and the tax levy listing for the Library Special Tax ("Tax"). They submit the levy list to the County of Los Angeles Department of Auditor-Controller, which collects the taxes on the City's behalf. The annual report presents the Tax rates for the new Fiscal Year, and the total amount of the levy, which in Fiscal Year 2024-2025 is $421,214.38, an increase of $13,845.16 over Fiscal Year 2023-2024.

Background

On June 7, 1994, South Pasadena voters established the City of South Pasadena's Library Special Tax. The Tax was renewed by voters in 1999, 2005, 2009, and in 2015, when an annual Consumer Price Index-based increase to the Tax rates was also approved. On November 8, 2022, voters again extended the Tax, maintaining the annual CPI-based increase, and approving the Tax to be levied annually until terminated by a majority vote of the electorate in South Pasadena.

The Library Special Tax rates for property owners are calculated each year by applying any annual increase of the June Los Angeles-Long Beach-Anaheim area All Urban Consumers Consumer Price Index (CPI-U) to the prior year's rates, beginning with the initial base Tax amounts assessed in Fiscal Year 2016-2017. These rates ranged from $16.00 to $128.00, depending on the property's buildable square footage (single family residential), the size of the parcel (non-residential), or number of units (multi-family residential).

Collection of the Special Tax is contingent upon the City adopting an operating budget for the Library Department that meets or exceeds the minimum "Required Amount" set by Section 2.89-5(b)(1) of the South Pasadena Municipal Code (SPMC). The Required Amount must be adequate to provide for all the elements of a "foundation program" of library services, as defined by the State of California Education Code Section 18015. The Required Amount is

calculated each year by applying any annual increase of the June CPI-U to the prior year's Required Amount, beginning with an initial base Required Amount in Fiscal Year 1994-1995 of $760,529.00.

Analysis
The City engaged NBS Government Finance Group to calculate the Fiscal Year 2024-2025 Special Tax rates, prepare and submit the tax levy listing to the County, and prepare an Annual Report (Exhibit "A" of the Resolution). The following summarizes Fiscal Year 2024-2025 Library Special Tax information.

CPI-U
The June 2024 CPI-U number was released in July 2024 by the United States Department of Labor, Bureau of Labor Statistics. The number (332.357), represents an increase of 3.19% over the prior year's CPI-U.

Levy and Revenue
The total levy amount reported to the County is $421,214.38, which is $13,845.16 more than the prior Fiscal Year's levy. The City's Fiscal Year 2024-2025 Adopted Budget specified special tax revenue in the amount of $420,000.00, therefore the actual levy slightly exceeds the budget.

Tax Rates

After applying the 3.19% CPI-U increase, the Tax rates reported to the County range from $21.28 to $170.30, depending on type and/or size of property. This following table shows the Fiscal Year 2024-2025 Tax rates and the amount they increased over the prior fiscal year.

Land Use	FY 2024-2025 Tax Rate	Increase Over Prior FY	Basis
Single Family Resident/Condo >= 2000 SF	$42.56	$1.32	Per Dwelling Unit
Single Family Resident/Condo 2001 to 4000 SF	$63.86	$1.98	Per Dwelling Unit
Single Family Resident/Condo 2001 to 4000 SF	$85.14	$2.64	Per Dwelling Unit
Multi Family Residence	$21.28	$0.66	Per Dwelling Unit
Non-Residential >= 0.25 acre	$42.56	$1.32	Per Parcel
Non-Residential < 0.25 to 0.5 acre	$85.14	$2.64	Per Parcel
Non-Residential < 0.5 to 0.75 acre	$127.72	$3.96	Per Parcel
Non-Residential < 0.75 acre	$170.30	$5.28	Per Parcel

Alternatives (if applicable)
The collection of the Tax is in process. The Fiscal Year 2024-2025 Library Special Tax levy was submitted to the County of Los Angeles by the August 10, 2024, deadline. The Auditor-

Controller has prepared a new tax roll that includes direct assessments submitted by taxing agencies. Corrections to the data submitted by the taxing agencies after the original input deadline are allowed and incur a service charge, however this mechanism is only for changes related to individual parcels, not the levy as a whole.

Fiscal Impact
The Required Amount that the City must allocate to the Library Department's FY 2024-2025 budget in order to collect the Special Tax must equal or exceed $1,632,862.64. The City's Adopted Budget for the Library is $2,143,978, which exceeds the Required Amount by more than $510,000, therefore the City has met the requirement to allow for the collection of the Tax in Fiscal Year 2024-2025.

Key Performance Indicators and Strategic Plan
The Library Special Tax revenue will provide 19.65% of the Library's Fiscal Year 2024-2025 budget.

Commission Review and Recommendation
The Library Board of Trustees was informed of the Special Tax levy for 2024-2025 at a regular meeting. This was a discussion item, and no action was recommended or taken.

Attachment:
Attachment No. 1 - Resolution Approving the Library Special Tax Annual Report and Authorizing the Collection of the Tax at the Fiscal Year 2024-2025 rates.pdf

CITY OF SOUTH PASADENA
RESOLUTION NO. 7878

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA, CALIFORNIA, APPROVING THE ANNUAL LIBRARY SPECIAL TAX REPORT AND AUTHORIZING THE COLLECTION OF THE TAX AT THE FISCAL YEAR 2024-2025 RATES.

WHEREAS, on November 8, 2022, the voters of the City of South Pasadena approved the extension of the Library Special Tax to be levied annually until terminated by a majority vote of the electorate in South Pasadena at a municipal election; and

WHEREAS, that approval also extends Chapter 2, Article VI of the South Pasadena Municipal Code (SPMC) which established procedures for determining the rate and method of apportionment of the Library Special Tax, the maximum rate to be levied, and enabling the collection of such tax; and

WHEREAS, the City Council has caused to be prepared by a government finance consultant an Annual Report entitled "City of South Pasadena Fiscal Year 2024/25 Final Levy Summary Report for Library Special Tax", which is presented to the City Council and attached hereto as Exhibit "A"; and

WHEREAS, the City Council has budgeted and appropriated the required amount to provide all the elements of a foundation program of library services consistent with the California Education Code Section 18015.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA, CALIFORNIA, DOES RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. The City Council has duly considered the Library Special Tax Annual Report, attached hereto as Exhibit "A" and incorporated herein for reference, and hereby approves said report as filed.

SECTION 2. The City Council has adopted the Budget for Fiscal Year 2024-2025 which provides for a total Library Budget in the amount of $2,143,978.00.

SECTION 3. The City Council hereby establishes the tax rates as set forth in the Annual Report for the Fiscal Year commencing July 1, 2024 and ending June 30, 2025.

SECTION 4. The City Council hereby resolves that proceeds from any funds collected from the Library Special Tax shall be expended only for library services in accordance with SPMC Section 2.89-4.

SECTION 5. The City Council hereby declares that the Library Special Tax shall be collected in the same manner and subject to the same penalties as other charges and taxes collected on behalf of the City by the County of Los Angeles.

SECTION 6. The City Clerk of the City of South Pasadena shall certify to the passage and adoption of this resolution and its approval by the City Council and shall cause the same to be listed in the records of the City.

PASSED, APPROVED AND ADOPTED ON this 6th day of November 2024.

_____
Evelyn G. Zneimer, Mayor

ATTEST:

_____
Mark Perez
Deputy City Clerk

APPROVED AS TO FORM:

_____
Roxanne Diaz, City Attorney

EXHIBIT A

Library Special Tax Annual Report

CITY OF SOUTH PASADENA

Fiscal Year 2024/25 Final Levy Summary Report For:

Library Special Tax

October 2024

Prepared by:

NBS
helping communities fund tomorrow

nbsgov.com

Corporate Headquarters
32605 Temecula Parkway, Suite 100
Temecula, CA 92592
Toll free: 800.676.7516

FISCAL YEAR 2024/25 LEVY SUMMARY

The City of South Pasadena (the "City") first levied the City of South Pasadena Library Special Tax (the "Special Tax") after it was approved by registered voters on June 7, 1994. The Special Tax was renewed by voters again in 1999, 2005, 2009, and 2015. Most recently, on November 8, 2022, voters renewed the Special Tax, to be levied annually until terminated by majority vote of the South Pasadena electorate at a municipal election.

The purpose of the Special Tax is to provide funds to the City to pay for maintenance and operation costs of the South Pasadena Public Library.

The following table provides a summary of the Fiscal Year 2024/25 Special Tax levy, prepared in accordance with the Special Tax formula and updated based upon the records of the Los Angeles County Assessor.

Special Tax Category	Parcel/Unit Count [1]	Special Tax Rate Basis	Special Tax Rate [2]	FY 2024/25 Total Levy [3]
Single-Family Residential and Condominiums				
<= 2,000 sf Residence	3,315	per Dwelling Unit	$42.56	$141,086.40
2,001 sf <= 4,000 sf Residence	1,984	per Dwelling Unit	63.86	126,698.24
> 4,000 sf Residence	206	per Dwelling Unit	85.14	17,538.84
Multi-Family Residential	5,420	per Dwelling Unit	21.28	115,372.98
Non-Residential				
<= ¼ acre lot	157	per Parcel	42.56	6,681.92
> ¼ <= ½ acre lot	79	per Parcel	85.14	6,726.06
> ½ <= ¾ acre lot	17	per Parcel	127.72	2,171.24
> ¾ acre lot	29	per Parcel	170.30	4,938.70
Totals:				**$421,214.38**

(1) Unit counts are shown for residential categories and parcel counts are shown for non-residential categories.
(2) Special Tax rates are escalated annually based upon the annual (June to June) change in the Consumer Price Index for All Urban Consumers ("CPI-U") in the Los Angeles-Long Beach-Anaheim area. The Special Tax rates were increased by 3.19% in Fiscal Year 2024/25, based upon the annual change in CPI-U.
(3) Includes installment rounding.

Properties subject to the Special Tax are levied based upon the Special Tax rates identified in the special tax formula, which are escalated annually based upon the change in the Consumer Price Index for All Urban Consumers ("CPI-U") for the Los Angeles area as of June each year. The Fiscal Year 2024/25 Special Tax rates were increased by 3.19% based upon the change in CPI-U.

The following table outlines the historical changes in the CPI-U for the Los Angeles area:

Fiscal Year	June CPI-U Value	Annual CPI-U Increase [(1)]
2016/17	249.789	N/A
2017/18	255.275	2.20%
2018/19	265.522	4.01%
2019/20	274.380	3.34%
2020/21	278.121	1.36%
2021/22	289.218	3.99%
2022/23	314.072	8.59%
2023/24	322.055	2.54%
2024/25	332.357	3.19%

(1) The CPI-U Increase, as displayed in this table, is a rounding of the actual CPI-U Increase. The maximum Special Tax rates are calculated by using the actual CPI-U Increase, not the rounding of the actual CPI-U Increase.

NBS

Corina Chavez, Administrator
Amanda Welker, Project Manager
Tim Seufert, Client Services Director

FISCAL YEAR 2024/25 FINAL BILLING DETAIL REPORT

The Fiscal Year 2024/25 Final Billing Detail Report is provided as a separate document.

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 9

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Alison Becker, Acting Community Development Director
Michael Donovan, Associate Planner

SUBJECT: **CONSIDERATION OF ENTERING INTO A MILLS ACT CONTRACT (CASE NO. MIL24-0001) FOR THE PROPERTY LOCATED AT 203 OAKLAWN AVE (APN: 5317-014-015)**

Recommendation

It is recommended that the City Council find that the project qualifies for an exemption under the California Environmental Quality Act (CEQA) Guidelines Section 15308, Class 8 and approve and authorize the entering into a Mills Act contract with the property owners of 203 Oaklawn Avenue.

Executive Summary

A Mills Act contract is an agreement between the City and a property owner of an historic property that undergoes certain maintenance and/or alteration work as described in Section 2.68 (Historic Preservation Incentives) of the South Pasadena Municipal Code. The contract requires that the property owner complete specific restoration and rehabilitation tasks, as submitted in the proposed Rehabilitation and Restoration Plan reviewed by the Cultural Heritage Commission (CHC). In return, for the duration of 10 years, the property owner receives a reduction in their property tax bill with the agreement that those property tax savings be reinvested into the property and fund the approved improvements. The contract rolls over annually after the 10-year period and the tax benefit continues unless it is revoked by the City.

Background

On February 26, 2024, a letter of intent to file a Mills Act application for the property located at 203 Oaklawn Avenue was filed with the City by the Property Owner, Michael Girvigian.

On April 18, 2024 a Subcommittee composed of Commissioners Scott Severson and William Cross was formed to review the submitted materials for the Mills Act request and to conduct an on-site meeting with the homeowner to inspect the condition of the property.

On May 22, 2024 the subcommittee and the homeowner participated in the virtual tour of the home.

On June 25, 2024, a formal Mills Act application was filed by the Applicant's Representative, Marina Khrustalev.

On September 19, 2024, the Cultural Heritage Commission (CHC) reviewed the proposed Mills Act application and voted 4-0 to recommend that the City Council enter into a Mills Act contract (Attachment 1).

Analysis

The subject property qualifies for a Mills Act contract because the property is a contributor to the Oaklawn Historic District and the proposed Rehabilitation and Restoration Plan for the historic resource is appropriate and meets the criteria for a Mills Act contract as listed in South Pasadena Municipal Code Section 2.68.b.1.c.

The Applicant has provided information regarding the condition of the historic property and a Rehabilitation and Restoration Plan, prepared by Marina Khrustaleva. The following is a list of the proposed work as stated in the Rehabilitation and Restoration Plan:

Proposed Scope of Work	Estimated Cost	Year
1. Repair rotten wood at the main roof, remove cap sheet, install new torch down modified bitumen roofing material with Title 24 rating. Repair flashing around the chimney.	$ 43,000	2025
2. Repair framing members in the attic to address water intrusion around the chimney stack.	$ 5,300	2025
3. Tear off 1350 sq. ft. shingle roof at the southwest patio, repairs to rotten wood, install new composite shingle roofing material.	$ 22,050	2025
4. Tear off 260 sq. ft. rood on the front porch, repairs to damaged framing and gutter system, install new torch down bitumen roofing material.	$ 7,500	2025
5. Repair leaking garage roof.	$ 8,700	2025
6. Repair existing metal gutters to return to normal function.	$ 3,800	2025
7. Repair non-reinforced lime and sand mortar chimney to ensure safety while using the fireplaces.	$ 54,636 (including Line Item No. 14)	2025

8. Obtain the Structural Pest Control report and treat wood structure for termite damage as needed.	$ 11,000	2025
9. Install 85-lineal feet of 4-inch drainpipe to address the visible drainage issues on the property.	$ 13,021	2026
10. Replace damaged cast iron drains in crawl space exterior.	$ 3,200	2026
11. Repair concrete walls with Arroyo stone posts along the northern and western property lines to avoid public hazard.	$ 28,000	2026
12. Replace outdated plumbing with all new waters and drains to six (6) baths (including garage bath) and one (1) kitchen.	$ 58,000	2027
13. Examine sloped/uneven floors on the second floor and repair as needed.	$ 5,200	2028
14. Repair fire boxes and flue systems in three (3) fireplaces to ensure safety, based on the inspection report.	Included in cost for Line Item No. 7	2028
15. Restore 41 existing windows and exterior doors to return normal operation and paint touch up.	$ 12,500	2029
16. Repair a staircase skylight to ensure operability.	$ 1,350	2029
17. Restore plaster on the exterior walls.	$ 35,700	2029
18. Repaint the house using historically appropriate color.	Included in cost for Line Item No. 17.	2029
19. Partially replace foundation at the southwest patio. Repair cracks in the concrete deck and block porch wall.	$ 19,287	2030
20. Repair cracks in exterior concrete steps and clinker brick paving.	$ 15,200	2030

21. Reinforce the garage opening and install a steel beam to ensure seismic stability.	$ 5,640	2031
22. Replace non-original overweight garage door and an outdated opening mechanism with a modern lightweight garage door of historically appropriate design.	Included in cost for Line Item No. 21.	2031
Total:	**$ 353,084**	**2025-2031**

The financial analysis for the project is included in the attached Rehabilitation and Restoration Plan. The total cost of the proposed scope of work is approximately $353,084. The total tax savings benefit from the Mills Act contract over the 10-year period is approximately $198,000, substantially less than the proposed scope of work cost.

Criteria for Mills Act Contract (SPMC Section 2.68.b.1.c.)

As outlined in the Cultural Heritage Ordinance, in considering the merits of a proposed Mills Act Contract, the Commission shall use the following criteria in making a recommendation to the City Council:

(i) Financial Investment. The estimated tax benefit is not expected to exceed the applicant's proposed financial investment in the cultural resource over the first 10 years of the contract.
The applicant is proposing to invest $353,384 in qualified repairs and restoration over the first ten-years of the Mills Act contract. The tax benefit over the same period is expected to be $198,900. Thus, the estimated tax benefit is not expected to exceed the applicant's proposed financial investment in the cultural resource over the first ten years of the contract. Criterion (i) is met.

(ii) Public Benefit. The proposed Mills Act contract features a work plan that will provide a benefit to the public by: rehabilitating the property for continued occupancy or adaptive reuse; improved viability through systems upgrades and structural reinforcement upgrades; preserving and maintaining the character-defining features of the property, and/or restoring character-defining features of the property that have been significantly altered or removed over time.
The home was built in 1911 and shows a number of issues. The main roof and southwest patio show signs of rotten wood, with signs of leakage in the garage roof and second floor of home. Concrete walls along the north and west side property lines show cracks and will be repaired with Arroyo stone posts to ensure safety. The exterior walls and foundation around the home show cracks and will be repaired to ensure stability. Uneven floors are evident on the second floor and the chimney shows signs of deterioration – each to be repaired for stability. The garage opening needs reinforcement and the non-original garage door provides an outdated opening mechanism that is to be replaced with a historically accurate design. System upgrades include replacing outdated plumbing fixtures, repairing gutters, and installing new drain pipes to alleviate problems with drainage around the property and home. Existing windows and exterior doors will also be restored to return to normal operation. Therefore,

Criterion (ii) is met.

(iii) Retroactive Limitations. The estimated tax benefit will not be used for any maintenance or alteration work that was previously completed or initiated before the contract is approved, unless it can be shown that the completed work was necessary in the interest of the public health or safety following involuntary damage or destruction caused by fire, act of nature, or any other casualty.
No work has been or will be conducted prior to approval of the Mills Act contract. The items on the proposed Rehabilitation and Restoration Plan are proposed during the first ten-year period between 2025 and 2032. None of the estimated tax benefit will be used for any maintenance or alteration work that was previously completed or initiated before the contract is approved. Therefore, Criterion (iii) is met.

(iv) Limitations on Maintenance. The estimated tax benefit will not be used for routine maintenance work except for exemplary or exceptional properties that have financially burdensome maintenance requirements.
No maintenance work is proposed; therefore, Criterion (iv) is met.

(v) Limitations on Interior Work. The estimated tax benefit will not be used for work within the interior of a cultural resource unless the commission determines the following exceptions should be made: the interior work is necessary to improve the structural integrity of the property; the interior work is necessary to preserve and maintain character-defining features within the cultural resource that are specifically identified as part of the official landmark nomination; and/or the interior work is necessary to preserve and maintain character-defining features of the property that were discovered subsequent to its landmark designation. The commission must first determine that those interior features are character-defining based on substantial evidence provided by the applicant.
The proposed Rehabilitation and Restoration Plan does include interior work, but these items are necessary to preserve the structural integrity of the property. Furthermore, the expenses included in the workplan are significantly higher than the estimated tax savings. The interior items include foundation drainage along with outdated plumbing features, fireplace repair, and uneven/sloped floors on the second floor. Therefore, Criterion (v) is met.

(vi) Limitations on Landscaping. The estimated tax benefit will not be used for landscaping work unless it will be used for specific landscape features that were identified as part of the official landmark nomination.
No landscaping work is proposed using the estimated tax benefit; therefore, Criterion (vi) is met.

As the property met the criteria, the Commission recommends that the City Council approve the entering into the Mills Act contract with the property owner. If approved, the property owner is required to comply with the terms of the Mills Act contract. In addition, the property owner is subject to certain reporting requirements. Specifically, beginning on the third year of the term, and every third year thereafter, the property owner is required to provide a report to the City describing the preservation tasks that are in progress and the tasks that have been completed.

Alternatives (if applicable)
The City Council may decide not to enter into a Mills Act contract with the property owner.

Fiscal Impact
The estimated tax savings for the property owners is $198,900 over a 10-year period. The total estimated cost to the city as a result of property tax reduction is approximately $51,714 over the first 10-year period of the contract, which amounts to an average of $5,171 annually. The City will continue to receive decreased tax revenue in perpetuity as the contract automatically rolls over each year.

Although the City will see a reduction in property tax revenue, the benefits of the program include economic benefits of conserving resources and reinvestment as well as the important role historic preservation can play in revitalizing older areas, creating cultural tourism, building civic pride, and retaining the sense of place and continuity with the community's past.

Key Performance Indicators and Strategic Plan
On the third year of the term of this Agreement and every third year thereafter, the Property Owner is required to provide a report to the City describing the preservation tasks that are in progress or have been completed pursuant to the Agreement.

Commission Review and Recommendation
On September 19, 2024, the Cultural Heritage Commission (CHC) reviewed the proposed Mills Act application and voted 4-0 to recommend that the City Council enter into a Mills Act contract with the Property Owner at 203 Oaklawn Avenue.

Environmental Analysis
In accordance with the California Environmental Quality Act (CEQA), the project qualifies for an exemption under the California Environmental Quality Act (CEQA) Guidelines Section 15308, Class 8: Actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment.

Attachment:
Attachment No. 1 - Mills Act Contract
Attachment No. 2 - Exhibit A
Attachment No. 3 - Exhibit B
Attachment No. 4 - Exhibit C

RECORDING REQUESTED BY
AND WHEN RECORDED RETURN TO:

CITY OF SOUTH PASADENA
City Clerk
1414 Mission Street
South Pasadena, California 91030

ATTN: City Clerk

Recording Fee: Exempt pursuant to California Govt. Code Section 27383

SPACE ABOVE THIS LINE IS RESERVED FOR RECORDER'S USE

TITLE(S)

MILLS ACT CONTRACT

THIS MILLS ACT CONTRACT ("Agreement") is made and entered into this 6th day of November 2024, by and between the CITY OF SOUTH PASADENA, CALIFORNIA, a municipal corporation ("City"), and Girvigian MR & Bauman K Trust ("Owner").

RECITALS

(i) California Government Code Section 50280 et seq., authorizes cities to enter into contracts with the Owner of qualified historical property to provide for the use, maintenance, and restoration of such historical property so as to retain its characteristics as property of historical significance;

(ii) Owner possesses fee title in and to that certain real property, together with associated structures and improvements thereon, located at 203 Oaklawn Avenue, South Pasadena, California, Assessor's Parcel Number 5317-014-015 ("Historic Property"). A legal description of the Historic Property is attached hereto, marked as "Exhibit A" and is incorporated herein as if fully set forth;

(iii) As set forth in South Pasadena Municipal Code Section 2.68(b)(1)(B), the Historic Property is a contributor to the Oaklawn Historic District. The Oaklawn Historic District represents upper middle-class tract development that occurred throughout Southern California during the early decades of the 20th century. The district's architectural character is a mixture of Craftsman, Colonial Revival, Tudor Revival, and English Revival styles. Several residences also exhibit characteristics of Mediterranean, Mission Revival, and Prairie styles;

(iv) City and Owner, for their mutual benefit, now desire to enter into this Agreement both to protect and preserve the characteristics of historical significance of the Historic Property, and to qualify the Historic Property for an assessment of valuation pursuant to the provisions of

Chapter 3 of Part 2 of Division 1 of the California Revenue and Taxation Code and to carry out the purposes of Article 12 (commencing with Section 50280) of Chapter 1, Part 1, of Division 1 of Title 5 of the California Government Code.

NOW, THEREFORE, City and Owner, in consideration of the mutual covenants and conditions contained herein, do hereby agree as follows:

1. EFFECTIVE DATE AND TERM. The Agreement shall be effective and commence on November 6, 2024 and shall remain in effect for a minimum period of ten (10) years, unless the property owner is issued a notice of non-renewal as provided in Section 2.68(b)(1)(E)(v) of the South Pasadena Municipal Code.

2. AUTOMATIC RENEWAL. Unless a notice of non-renewal is issued, this Agreement shall automatically be extended by one (1) year for each anniversary date of the Agreement unless otherwise specified herein.

3. NON-RENEWAL. If recommended by the Commission and approved by the City Council, a notice of non-renewal may be issued six (6) years into the duration of this Agreement. The procedure for notice of non-renewal by the Owner of the City shall be in accordance with Government Code Section 50282 as it may be amended from time to time.

4. APPEAL OF NOTICE OF NON-RENEWAL. The property owner shall have the right (per Government Code Section 50282) to appeal a notice of non-renewal to the City Council.

5. STANDARDS FOR HISTORIC PROPERTY. During the term of this Agreement, the Historic Property shall be subject to the following conditions, requirements, and restrictions:

a. Owner shall rehabilitate, preserve and maintain the historically significant Characteristics of the Historic Property. Attached hereto, marked as "Exhibit B" and incorporated herein by this reference is a list of those items for rehabilitation, restoration and maintenance planned for preservation of the Historic Property and a timeline for completion, which Owner shall carry out shall apply to such property throughout the term of this Agreement. In addition, Owner shall comply with the applicable provisions of the South Pasadena Municipal Code (See, Article IVH of the South Pasadena Municipal Code) and shall obtain any applicable permits necessary to protect, preserve, restore and rehabilitate the Historic Property so as to maintain its historical significance.

b. Owner shall additionally and where necessary, restore and rehabilitate the property according to the rules and regulations of the City, the State Office of Historic Preservation of the Department of Parks and Recreation, the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings and the State Historical Building Code and shall maintain the entire property according to minimum standards and conditions, attached hereto, marked as "Exhibit C".

6. LIMITATIONS. Under Section 2.68(b)(1)(C)(iii)–(vi), the estimated tax benefit will not be used for: (1) any maintenance or alteration work that was previously completed or

initiated before the Contract is approved, unless it can be shown that the completed work was necessary in the interest of the public health or safety following involuntary damage or destruction caused by fire, act of nature, or any other casualty; (2) routine maintenance work except for exemplary or exceptional properties that have financially burdensome maintenance requirements; (3) work within the interior of a Historic Property unless the Cultural Heritage Commission determines an exception should be made; and (4) landscaping work unless it will be used for specific landscape features that were identified as part of the official landmark nomination.

7. INSPECTIONS. The Owner shall allow reasonable inspections, by prior appointment given a minimum of at least 24 hours in advance, of the interior and exterior of the Historic Property by representatives of the County of Los Angeles Assessor, State Office of Historic Preservation, State Board of Equalization and the City, as may be necessary to determine Owner's compliance with the terms and conditions of this Agreement.

8. PROVISION OF COMPLIANCE INFORMATION. The Owner hereby agrees to furnish the City with any and all information requested by the City which may be reasonable and necessary to determine compliance with the terms and provisions of this Agreement. In addition, the Owner shall agree to provide to the City on the third year of the term of this Agreement and every third year thereafter a report describing the preservation tasks that are in progress and have been completed pursuant to this Agreement.

9. BINDING EFFECT OF AGREEMENT. This Agreement shall be binding on all successors-in interest of the Owner to the benefits and burdens of this Agreement. The Agreement shall stipulate escrow instructions that require a review and re-evaluation of the property every three years.

10. CANCELLATION. City following a duly noticed public hearing as set forth in California Code Section 50280 et seq., may cancel this Agreement if City determines that the Owner has breached any of the conditions or covenants of the Agreement or has allowed the Historic Property to deteriorate to the point that it no longer meets the significance criteria under which it was designated. City may also cancel this Agreement if it determines Owner has failed to restore or rehabilitate the Historic Property in the manner specified in Paragraph 4 of this Agreement. The City may also cancel this Agreement if, upon consultation with the State of California Office of Historic Preservation, the preservation, rehabilitation, or restoration becomes infeasible due to damage caused by natural disaster. City's right to cancel this Agreement pursuant to this paragraph shall in no way limit or restrict its rights or legal remedies arising from City's Cultural Heritage Ordinance and Municipal Code.

11. CANCELLATION FEE. In the event of cancellation, Owner shall be subject to payment of those cancellation fees set forth in California Government Code Section 50280 et seq., described herein. Upon cancellation, Owner shall pay a cancellation fee equal to twelve and one-half percent (12.5%) of the current fair market value of the property as determined by the County Assessor as though the Historic Property were free of the contractual restriction pursuant to this Agreement. The Owner shall pay the cancellation fee to the County Auditor in the time and manner prescribed by the County Auditor.

12. ENFORCEMENT OF AGREEMENT. In lieu of and/ or in addition to any provisions to cancel this Agreement as referenced herein, City may specifically enforce, or enjoin the breach of the terms of this Agreement. In the event of a breach by Owner under the provisions of this Agreement, City shall give written notice to Owner by registered or certified mail to the address stated in this Agreement, which notice shall specifically identify the alleged breach and the proposed action which City recommends to Owner to cure said alleged breach. Owner shall hereafter have sixty (60) days within which to cure such breach to the reasonable satisfaction of the City. Upon completion by Owner of the cure of the breach, City shall withdraw its notice of breach. Should Owner not cure such breach within the time period specified above, then City may, without further notice, declare a default under the terms of this Agreement and may bring any action necessary to specifically enforce the obligations of Owner arising out of the terms of this Agreement, apply to any court, state or federal, for injunctive relief against any violation by Owner or apply for such other relief as may be appropriate. City may at its sole discretion extend the 60-day cure period. Such extension must be in writing.

13. WAIVER. City does not waive any claim or default by Owner if City does not enforce or cancel this Agreement. All other remedies at law or in equity which are not otherwise provided for in this Agreement or in the City's regulations governing historic properties are available to City to pursue in the event there is a breach of this Agreement. No waiver by City of any breach or default under this Agreement shall be deemed to be a waiver of any other subsequent breach thereof or default hereunder.

14. BINDING EFFECT OF AGREEMENT. Owner hereby subjects the Historic Property to the covenants, reservations and restrictions set forth in this Agreement. City and Owner hereby declare their specific intent that the covenants, reservations, and restriction as set forth herein shall be deemed covenants running with the land and shall pass to and be binding upon Owner's successors and assigns in title or interest to the Historic Property. Each and every contract, deed or other instrument hereinafter executed, governing or conveying the Historic Property, or any portion thereof, shall conclusively be held to have been executed, delivered and accepted subject to the covenants, reservations and restriction expressed in this Agreement regardless of whether such covenants, reservations and restrictions are set forth in such contract, deed or other instrument. City and Owner hereby declare their understanding and intent that the burden of the covenants, reservations and restrictions set forth herein touch and concern the land in that it restricts development of the Historic Property. City and Owner hereby further declare their understanding and intent that the benefit of such covenants, reservations and restrictions touch and concern the land by enhancing and maintaining the cultural and historic characteristics and significance of the Historic Property for the benefit of the public and Owner.

15. NOTICE. Any notice required to be given by the terms of this Agreement shall be provided at the address of the respective parties as specified below, by personal delivery or United States mail, postage prepaid, addressed as follows:

City: City of South Pasadena
Community Development Director
1414 Mission Street

South Pasadena, California 91030

Owner: Girvigian M R & Bauman K Trust
c/o Michael Raymond Girvigian, Trustee
203 Oaklawn Avenue
South Pasadena, California 91030

16. EFFECT OF AGREEMENT. None of the terms, provisions or conditions of this Agreement shall be deemed to create a partnership between the parties hereto and any of their heirs, successors or assigns, nor shall such terms, provisions or conditions cause them to be considered joint ventures or members of any joint enterprise.

17. INDEMNITY OF CITY. Owner agrees to protect, defend, indemnify, and shall hold City and its elected officials, officers, agents, and employees harmless from liability for claims, loss, proceedings, damages, causes of action, liability, costs or expense, including reasonable attorney's fees in connection with damage for personal injuries, including death, and claims for property damage which may arise from the direct or indirect use or operations of such Owner or those of its contractor, subcontractor, agent, employee or other person acting on its behalf which relate to the use, operation, capital improvement and/or maintenance of the Historic Property and/or Owner's activities in connection with the Historic Property. Owner hereby agree to and shall defend the City and its elected officials, officers, agents, and employees with respect to any and all actions for damages caused by, or alleged to have been suffered, by reason of the operations referred to in this Agreement regardless of whether or not the City prepared, supplied or approved the plans, specifications or other documents for the Historic Property. This indemnification includes, without limitation, the payment of all penalties, fines, judgments, awards, attorney's fees and related costs or expenses, and the reimbursement of legal expenses and costs incurred by the City, its elected officials, employees or agendas. Owner's obligation to indemnify shall survive the termination, cancellation or expiration of this Agreement.

18. BINDING UPON SUCCESSORS. All of the agreements, rights, covenants, reservations, and restrictions contained in the Agreement shall be binding upon and shall inure to benefit of the parties herein, their heirs, successors, legal representative, assigns and all persons acquiring any part or portion of the Historic Property, whether by operation of law or in any manner whatsoever. A successor in interest shall have the same rights and obligations under the Agreement as the original owner who entered into the Agreement.

19. LEGAL COSTS. In the event legal proceedings are brought by any party or parties to enforce or restrain a violation of any of the covenants, reservations or restrictions contained herein, or to determine the rights and duties of any party hereunder, the prevailing party in such proceeding may recover all reasonable attorney's fees to be fixed by the court, in addition to court costs and other relief ordered by the court.

20. SEVERABILITY. In the event that any of the provisions of this Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, or by subsequent

preemptive legislation, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected thereby.

21. GOVERNING LAW. This Agreement shall be construed and governed in accordance with the laws of the State of California. Venue shall be in Los Angeles County.

22. EMINENT DOMAIN PROCEDURES. Upon the filing of an action in eminent domain by a public agency for the condemnation of the fee title of any land described herein or of less than fee interest which will prevent the portion of land condemned or a portion of it which is the subject of this Agreement from being used for any authorized use, or upon the acquisition in lieu of eminent domain by a public agency for a public improvement, if the City Council determines that the condemnation or acquisition frustrates the purpose of this Agreement, the portions of this Agreement by which Owner agree to preserve and to restrict the use of property described herein shall be canceled and this Agreement shall be deemed null and void upon such filing as to the portion of the land condemned or acquired and to the additional land the use of which for an authorized purpose will be prevented as a result of condemnation or acquisition. In such event, no cancellation fee is imposed as set forth in Government Code Section 50286. If, subsequent to the filing of an action in eminent domain, the proposed condemnation is abandoned by the condemning agency as to all or a portion of the land subject to this Agreement, the restrictions on the use of the property included in this Agreement shall, without further agreement of the parties, be re-instituted and the terms of this Agreement shall be in full force and effect.

23. RECORDATION. No later than twenty (20) days after the parties execute this Agreement, the Owner or Owner's agent shall record this Agreement in the Office of the County Recorder of the County of Los Angeles.

24. AMENDMENTS. This Agreement may be amended, in whole or in part, by a written instrument executed by the parties that is thereafter recorded in the Office of the County Recorder of the County of Los Angeles.

25. NOTICE TO OFFICE OF HISTORIC PRESERVATION. The City shall provide written notice of this Agreement to the State Office of Historic Preservation within 180 days of entering into this Agreement.

[SIGNATURES ON NEXT PAGE]

IN WITNESS THEREOF, City and Owner have executed this Agreement on the day and year first above written.

CITY OF SOUTH PASADENA

_____
Evelyn G. Zneimer, Mayor

ATTEST:

_____
Mark Perez, Deputy City Clerk

APPROVED AS TO FORM

_____
Roxanne Diaz, City Attorney

OWNER: GIRVIGIAN M R & BAUMAN K TRUST

_____
Michael Raymond Girvigian, Trustee

_____
Kathleen Elizabeth Baumann, Trustee

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)

Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)

Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

EXHIBIT A

LEGAL DESCRIPTION

Exhibit "A"

Lot 53 of Tract Number 139 in the City of South Pasadena, County of Los Angeles, State of California as per Map recorded in Book 14, Pages 6 and 7 of Maps, in the Office of the County Recorder of said County.

EXHIBIT B

REHABILITATION PLAN



Mills Act Application Packet

203 Oaklawn Avenue, South Pasadena, CA 91030

- Background
- Rehabilitation Plan, Maintenance List
- Work Plan and Cost Estimate
- Financial Analysis
- Attachments

Prepared for: Michael Girvigian

Prepared by: Marina Khrustaleva

August, 2024

Mills Act Application, 203 Oaklawn Avenue, South Pasadena

Background

The two-story house was designed in 1912 by architect George Lawrence Stimson and built under the supervision of his father, developer George Woodbury Stimson. The cost of the construction was estimated as $18,000. The elder Stimson lived in our house for several years after it was built. The younger lived next door, at 207 Oaklawn Avenue (this house was awarded with a Mill's Act contract, as well as several other properties in the district).

The house represents the Italian Renaissance Revival style. It became a smaller version of the house that George Stimson originally designed for himself at 391 S Orange Grove Boulevard in Pasadena, now known as the Wrigley Mansion or the Tournament of Roses headquarters. That house was under construction from 1906 to 1914; supposedly, Stimson Sr. found it too big for him and sold it to chewing gum magnate William Wrigley Jr. and his wife Ada.



Wrigley Mansion, 1956

The character-defining features of the house at 203 Oaklawn Avenue include symmetrical massing, a flat roof with a balustrade, an overhanging dented cornice, vertical double-hung windows around the house, and smooth stucco. The east (front) elevation features a projecting middle portion. A central window on the second floor is surrounded by a decorative plaster framing with a segmental arch broken pediment. A prominent porch with a balustrade is supported with a combination of massive square posts and Tuscan columns. There are two wide wood entry doors with large glazing and decorative metal grills, and an elevated three-step porch landing. The north (side) elevation features a recessed loggia with a triple arch facing a curved driveway with two approaches from Columbia Street. A two-car garage is facing Fremont Avenue.

The property is abutting Columbia Street on the north and Fremont Avenue on the west. Two sides of the block along Columbia Street and Fremont Avenue are surrounded by a solid wall with massive Arroyo stone posts designed by Charles and Henry Greene. Seventeen of these stone posts belong to the subject property. One of two entry portals serving as pedestrian gates on the west side of Oaklawn Avenue is located on the public right-of-way, outside of the property boundaries.

The interior of the house has been minimally altered and preserved original decorative features: mahogany wood paneling, stairs, fireplace mantels, window shutters, and ceiling beams in the foyer and living room. The dining room is adorned with hand-painted wallpaper by Mildred Bryant Brooks. She was an acclaimed etching artist and lived at 1837 Monterey Road in South Pasadena. She was famous for creating murals in private homes in the 1950s; her other surviving work can be seen at the Blinn House, the headquarters of Pasadena Heritage, at 160 N Oakland Avenue in Pasadena. Most likely, the murals appeared here after 1954 when the previous owner, Willard John Stone Jr., conducted a number of home improvements.

The house has not undergone any major remodel or serious restoration since it was built. Based on the building permits, alterations included:

- 1928 – adding a one-story sun parlor to the north-west corner of the house;
- 1940 – building an interior elevator shaft (elevator later removed);

- 1946 – termite repair;
- 1960 – building an attached wrap-around rear patio along west and south sides of the house; constructing a swimming pool; interior kitchen remodel; partial electrical and plumbing upgrade;
- 1961 – interior remodel of the utility area in the garage (a bathroom and a dressing room); replacing garage doors;
- 1988 – adding a workshop to the garage;
- 1989 – foundation maintenance (seismic retrofit);
- 2005 – building an exterior elevator shaft on the south (side) elevation.

Reroofing work on the house and the garage was done in 1961, 1973, 1978, and 1990.

As a result of the building age, which is 112 years old, there is significant deferred maintenance. Several features require historically accurate renovations to ensure structural stability and authenticity of the house.

Mills Act Application, 203 Oaklawn Avenue, South Pasadena
Section II: Rehabilitation Plan, Maintenance List, and Reporting System

Proposed Scope of Work	***Year***
Repair rotten wood at the main roof, remove cap sheet, install new torch down modified bitumen roofing material with Title 24 rating. Repair flashing around the chimney.	2025
Repair framing members in the attic to address water intrusion around the chimney stack.	2025
Tear off 1350 sq. ft. shingle roof at the southwest patio, repairs to rotten wood, install new composite shingle roofing material.	2025
Tear off 260 sq. ft. roof on the front porch, repairs to damaged framing and gutter system, install new torch down bitumen roofing material.	2025
Repair leaking garage roof	2025
Repair existing metal gutters to return to normal function.	2025
Repair non-reinforced lime and sand mortar chimney to ensure safety while using the fireplaces.	2025
Obtain the Structural Pest Control report and treat wood structure for termite damage as needed.	2025
Install 85-lineal feet of 4-inch drainpipe to address the visible drainage issues on the property.	2026
Replace damaged cast iron drains in crawl space exterior.	2026
Repair concrete walls with Arroyo stone posts along the northern and western property lines to avoid public hazard.	2026
Replace outdated plumbing with all new waters and drains to 6 baths (including garage bath) and 1 kitchen.	2027
Examine sloped/uneven floors on the second floor and repair as needed.	2028
Repair fire boxes and flue systems in 3 fireplaces to ensure safety, based on the inspection report.	2028

Restore 41 existing windows and exterior doors to return normal operation and paint touch up.	2029
Repair a staircase skylight to ensure operability.	2029
Restore plaster on the exterior walls.	2029
Repaint the house using historically appropriate color.	2029
Partially replace foundation at the southwest patio. Repair cracks in the concrete deck and block porch wall.	2030
Repair cracks in exterior concrete steps and clinker brick paving.	2030
Reinforce the garage opening and install a steel beam to ensure seismic stability.	2031
Replace non-original overweight garage door and an outdated opening mechanism with a modern lightweight garage door of historically appropriate design.	2031
Interior features – not a part of the Mill's Act application:	
Replace outdated knob and tube electric wiring and ungrounded three prong receptacles with modern wiring to ensure safety, including new 200 Amp service, 4 sub panels, all new grounded circuits and lighting, arc fault breakers and smoke and carbon dioxide sensors.	2027
Remove 3 gravity furnaces and existing asbestos ducting including asbestos mitigation.	2028
Restore, wax, and touch up interior wood paneling, stairs, fireplace mantels, window shutters, and ceiling beams in the foyer and living room.	2032
Protect hand-painted wallpaper by artist Mildred Bryant Brooks in the dining room and restore cracks.	2032
Repair water-damaged plaster from roof leaks and provide associated painting.	2032

Reporting System:

The property owners of 203 Oaklawn Avenue will provide written updates to the City of South Pasadena every three years, documenting progress and providing updates and photos on the Mills Act work plan.

Certificates of Appropriateness (CoA) will be obtained by property owners if any major exterior work triggers the threshold of by the City of South Pasadena Cultural Heritage Ordinance. Building permits will be obtained all types of work requiring permits.

Progress reports will include detailed work descriptions, photographs of work completed, and copies of permits and CoAs.

Mills Act Application, 203 Oaklawn Avenue, South Pasadena

Section III: Cost Estimate of Rehabilitation/Maintenance Plan

All work efforts described in these plans will be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Architects and/or contractors leading work efforts will have demonstrated historic preservation experience and will meet the *Secretary of the Interior's Professional Qualifications Standards* in their respective fields.

Proposed Scope of Work and Description	***Est. Cost, $***
Repair rotten wood at the main roof, remove cap sheet, install new torch down modified bitumen roofing material with Title 24 rating. Repair flashing around the chimney. *All preparatory work will be undertaken in compliance with the Secretary of Interior's Standards. All surfaces to be treated with the gentlest means possible.*	43,300.00
Repair framing members in the attic to address water intrusion around the chimney stack. *Wood elements shall be restored and may be replaced in-kind only if deteriorated beyond repair.*	5,300.00
Tear off 1350 sq. ft. shingle roof at the southwest patio, repairs to rotten wood, install new composite shingle roofing material.	22,050.00
Tear off 260 sq. ft. roof on the front porch, repairs to damaged framing and gutter system, install new torch down bitumen roofing material.	7,500.00
Repair leaking garage roof	8,700.00
Repair existing metal gutters to return to normal function.	3,800.00

Obtain the Structural Pest Control report and treat wood structure for termite damage as needed (fumigation treatment)	11,000.00
Install 85-lineal feet of 4-inch drainpipe to address the visible drainage issues on the property.	13,021.00
Replace damaged cast iron drains in crawl space exterior.	3,200.00
Repair concrete walls with Arroyo stone posts along the northern and western property lines to avoid public hazard. *Examine existing joints between the stones and block for mortar that has failed or can be expected to fail in the next two years. Remove those blocks, stone and joints with the re-pointing method. Replace blocks with identical sound blocks. Replace missing stones with local Arroyo stones of matching size.*	28,000.00
Replace outdated plumbing with all new waters and drains to 6 baths (including garage bath) and 1 kitchen.	58,000.00
Examine sloped/uneven floors on the second floor and repair as needed. *Ensure structural stability.*	5,200.00
Repair non-reinforced lime and sand mortar chimney to ensure safety while using the fireplaces. Repair fire boxes and flue systems in 3 fireplaces to ensure safety, based on the inspection report.	54,636.00
Restore 41 existing windows and exterior doors to return normal operation and paint touch up. *Windows, entry doors, and hardware need to be adjusted to ensure operability. The hardware may be replaced in-kind only if deteriorated beyond repair.*	12,500.00
Repair a staircase skylight to ensure operability.	1,350.00
Restore plaster on the exterior walls. Repaint the house using historically appropriate color. *Damaged or deteriorated paint shall be removed using the gentlest method possible (preferably hand-scraping or hand-sanding).*	35,700.00
Partially replace foundation at the southwest patio. Repair cracks in the concrete deck and block porch wall. *New concrete shall match original in tone and texture.*	19,287.00

Repair cracks in exterior concrete steps and clinker brick paving. *New concrete shall match original in tone and texture. Level brick paving and use matching salvaged bricks where possible.*	15,200.00
Reinforce the garage opening and install a steel beam to ensure seismic stability. Replace non-original overweight garage door and an outdated opening mechanism with a modern lightweight garage door of historically appropriate design.	5,640.00

Total investment in Rehabilitation and Maintenance: **$353,384**
(without an allowance for potential chimney restoration)

Potential Mills Act Property Tax Savings over a 10-year period[1]: **$198,900**

Potential Cost to the City of South Pasadena over a 10-year period: **$51,714**

[1] This is only a preliminary estimate, final tax adjustments are conducted by the Los Angeles County Assessor's Office.

Mills Act Application, 203 Oaklawn Avenue, South Pasadena

Section IV: Historical Property Tax Analysis[2]

AIN: 5317-014-015

A: DETERMINE ANNUAL INCOME AND ANNUAL OPERATING EXPENCES:

Gross Income (Monthly Rent x 12) Zillow.com Rent Estimate: $13,300/month	$159,600.00
Less 3% Vacancy & Collection Loss	$4,788.00
Effective Annual Income:	$154,812.00
Less Expenses 20% Insurance, Utilities (gas, electricity, water, trash), Maintenance, Management	$30,962.00
Annual Net Income:	$123,850.00

B: DETERMINE CAPITALIZATION RATE:

2024 Interest Component	7.25%
Historical Property Risk Component	4%
Property Tax Rate	1.02%
Amortization Component (50 years) Improvements to Land Value Ratio $1,999,200 / $2,856,000 0.7 x 0.02 = 0.014	0.14%
Total Capitalization Rate:	13.67% (0.1367)

[2] For informational purposes only. This worksheet estimates the tax adjustment possible through the Mills Act Program. This is only a preliminary estimate, the final tax adjustments are conducted by the Los Angeles County Assessor's Office.
The analysis is based on the City of Los Angeles 2022 Historical Property Tax Adjustment Worksheet Guide: https://planning.lacity.gov/odocument/ebe6cf65-af96-4c7e-b950-5239951787a9/Tax_Adjustment_Worksheet_2022.pdf

C: CALCULATE MILLS ACT ASSESSED VALUE:

Annual Net Income / Capitalization Rate	$905,998.53

D: DETERMINE ESTIMATED TAX REDUCTION:

Current Taxes (2023) (Current Assessed Value x 0.0102) $2,856,000 x 0.0102	$29,131.20
Less Mills Act Taxes (Mills Act Value x 0.0102)	$9,241.18
Potential Annual Mills Act Property Tax Savings[3]:	$19,890.02

Annual Cost to the City (26%)	$5,171.40

[3] For informational purposes only. This worksheet estimates the tax adjustment possible through the Mills Act Program. This is only a preliminary estimate, the final tax adjustments are conducted by the Los Angeles County Assessor's Office.

EXHIBIT C

REHABILITATION STANDARDS

The Secretary of the Interior

Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings

The Standards (Department of Interior regulations, 36 CFR 67) pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features and the building's site and environment as well as attached, adjacent, or related new construction. The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and the environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 10

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Alison Becker, AICP, Acting Community Development Director
Robert (Dean) Flores, Senior Planner

SUBJECT: **CONSIDERATION OF ENTERING INTO A MILLS ACT CONTRACT (CASE NO. MIL24-0002) FOR THE PROPERTY LOCATED AT 1209 INDIANA AVENUE (APN: 5314-010-061)**

Recommendation

It is recommended that the City Council find that the project qualifies for an exemption under the California Environmental Quality Act (CEQA) Guidelines Section 15308, Class 8 and approve and authorize the entering into a Mills Act contract with the property owners of 1209 Indiana Avenue.

Executive Summary

A Mills Act contract is an agreement between the City and the property owner of an historic property that undergoes certain maintenance and/or alteration work as described in Section 2.68 (Historic Preservation Incentives) of the South Pasadena Municipal Code. The contract requires that the property owner complete specific restoration and rehabilitation tasks, as submitted in the proposed Rehabilitation and Restoration Plan reviewed by the Cultural Heritage Commission (CHC). In return, for the duration of 10 years, the property owner receives a reduction in their property tax bill with the agreement that those property tax savings be reinvested into the property and fund the approved improvements. The contract rolls over annually after the 10-year period and the tax benefit continues unless it is revoked by the City.

Background

On August 27, 2023, Michael Emerling and Ruth Ballenger, the applicants and homeowners, submitted a letter of intent to file a Mills Act application for the property located at 1209 Indiana Avenue.

On May 16, 2024, a Subcommittee composed of Commissioners Scott Severson and Jeremy Ding was formed to review the submitted materials for the Mills Act request and to conduct an on-site meeting with the homeowner to inspect the condition of the property.

On July 16, 2024, the applicant's representative, Debi Howell-Ardilla, submitted a formal application and work plan for a Mills Act request (Exhibit B of Attachment 1).

On July 17, 2024, the City Council designated the subject property as an Historic Landmark, based on the recommendation provided by the Cultural Heritage Commission.

On July 30, 2024, the subcommittee, City staff, and the homeowners participated in a tour of the home.

On September 19, 2024, the Cultural Heritage Commission (CHC) reviewed the proposed Mills Act application and voted 4-0 to recommend that the City Council enter into a Mills Act contract.

Analysis

Proposed Scope of Work

The Applicant has provided information regarding the condition of the historic property and a Work Plan (pages 5-11 of Exhibit B of Attachment 1). The following is a list of the proposed work as stated in the Work Plan:

Proposed Scope of Work	**Estimated Cost**	**Year**
1. Re-roof, repairs, and carpentry work on the roof/sheathing.	$75,000	2027
2. Repair Exterior Wood – Repairs/carpentry work and repainting of wood elements including shingles, roof eaves, and balcony railing; repainting in period-appropriate palette.	$65,000	2030
3. Geotechnical Evaluation/Report for the site. The retaining wall on the hillside portion of the site shows signs of failure/deterioration.	$50,000	2033
Total	$190,000	2027-2033

The financial analysis for the project is included in the provided Work Plan. The total cost of the proposed scope of work is approximately $190,000. Maintenance expenses do not qualify for consideration of a Mills Act Contract, and therefore the maintenance costs have not been included in overall scope of work. Additionally, the Financial Analysis section of Exhibit B of Attachment 1 (pages 10-11) shows that the total tax savings for a Mills Act Contract over the 10-year period is $186,787 which is less than the proposed scope of work cost of $190,000.

Criteria for Mills Act Contract (SPMC Section 2.68.b.1.c.)

As outlined in the Cultural Heritage Ordinance, in considering the merits of a proposed Mills Act Contract, the Commission shall use the following criteria in making a recommendation to the City Council. Below are the Subcommittee's recommended findings of the project's compliance with each criterion as follows:

(i) Financial Investment. The estimated tax benefit is not expected to exceed the applicant's proposed financial investment in the cultural resource over the first 10 years of the contract.

The applicant is proposing to invest $190,000 in qualified repairs and restoration over the first ten-years of the Mills Act contract. The tax benefit over the same period is expected to be $186,787. Thus, the estimated tax benefit is not expected to exceed the applicant's proposed financial investment in the cultural resource over the first ten years of the contract. Criterion (i) is met.

(ii) Public Benefit. The proposed Mills Act Contract features a work plan that will provide a benefit to the public by: rehabilitating the property for continued occupancy or adaptive reuse; improved viability through systems upgrades and structural reinforcement upgrades; preserving and maintaining the character-defining features of the property, and/or restoring character-defining features of the property that have been significantly altered or removed over time.

The home was built in 1911 and shows several issues. The roof of the home features water leaks and therefore requires a re-roof and repair of the underlying roof system. Additionally, the exterior woodwork features are proposed for repair and replacement (where necessary) of the existing wood shingles. Lastly, the proposed geotechnical evaluation/report is necessary to ensure the integrity of the property is maintained as the existing retaining wall shows signs of failure and disrepair. Therefore, Criterion (ii) is met.

(iii) Retroactive Limitations. The estimated tax benefit will not be used for any maintenance or alteration work that was previously completed or initiated before the contract is approved, unless it can be shown that the completed work was necessary in the interest of the public health or safety following involuntary damage or destruction caused by fire, act of nature, or any other casualty.

No work has been or will be conducted prior to approval of the Mills Act contract. The items on the proposed Work Plan are proposed during the first ten-year period through 2033. None of the estimated tax benefit will be used for maintenance or alteration work that was previously completed or initiated before the contract is approved. Therefore, Criterion (iii) is met.

(iv) Limitations on Maintenance. The estimated tax benefit will not be used for routine maintenance work except for exemplary or exceptional properties that have financially burdensome maintenance requirements.

No routine maintenance of the house will utilize the tax benefit. Therefore, Criterion iv. is met.

(v) Limitations on Interior Work. The estimated tax benefit will not be used for work within the interior of a cultural resource unless the commission determines the following exceptions should be made: the interior work is necessary to improve the structural integrity of the property; the interior work is necessary to preserve and maintain character-defining features within the cultural resource that are specifically identified as part of the official landmark nomination; and/or the interior work is necessary to preserve and maintain character-defining features of the property that were discovered subsequent to its landmark designation. The commission must first determine that those interior features are character-defining based on substantial evidence provided by the applicant.

The proposed Work Plan does not include interior work. Therefore, Criterion (v) is met.

(vi) Limitations on Landscaping. The estimated tax benefit will not be used for landscaping work unless it will be used for specific landscape features that were identified as part of the official landmark nomination.

No landscaping work is proposed using the estimated tax benefit. Therefore, Criterion (vi) is met.

As the property met the criteria, the Commission recommends that the City Council approve the entering into the Mills Act contract with the property owner. If approved, the property owner is required to comply with the terms of the Mills Act contract. In addition, the property owner is subject to certain reporting requirements. Specifically, beginning on the third year of the term, and every third year thereafter, the property owner is required to provide a report to the City describing the preservation tasks that are in progress and the tasks that have been completed.

Alternatives (if applicable)
The City Council may opt to approve the recommendation to enter into a Mills Act contract or may deny the request.

Fiscal Impact
The estimated tax savings for the owners is $186,787 over a 10-year period. The total estimated cost to the city as a result of property tax reduction is approximately $53,199 over the first 10-year period of the contract. This amounts to an average of $5,320 annually. The City will continue to receive decreased tax revenue in perpetuity as the contract automatically rolls over each year.

Although the City will see a reduction in property tax revenue, the benefits of the program include economic benefits of conserving resources and reinvestment as well as the important role historic preservation can play in revitalizing older areas, creating cultural tourism, building civic pride, and retaining the sense of place and continuity with the community's past.

Commission Review and Recommendation
On September 19, 2024, the Cultural Heritage Commission (CHC) reviewed the proposed Mills Act application and voted 4-0 to recommend that the City Council enter into a Mills Act contract with the property owners at 1209 Indiana Avenue.

Environmental Analysis
In accordance with the California Environmental Quality Act (CEQA), the project qualifies for an exemption under the California Environmental Quality Act (CEQA) Guidelines Section 15308, Class 8: Actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment.

Attachment:
Attachment No. 1 - Mills Act Contract MIL24-0002
Attachment No. 2 - Exhibit A - Legal Description
Attachment No. 3 - Exhibit B - Mills Act Work Plan Financial Analysis
Attachment No. 4 - Exhibit C - Rehabilitation Standards

RECORDING REQUESTED BY
AND WHEN RECORDED RETURN TO:

CITY OF SOUTH PASADENA
City Clerk
1414 Mission Street
South Pasadena, California 91030

ATTN: City Clerk

Recording Fee: Exempt pursuant to California Govt. Code Section 27383

SPACE ABOVE THIS LINE IS RESERVED FOR RECORDER'S USE

TITLE(S)

MILLS ACT CONTRACT

THIS MILLS ACT CONTRACT ("Agreement") is made and entered into this 6th day of November 2024, by and between the CITY OF SOUTH PASADENA, CALIFORNIA, a municipal corporation ("City"), and Emerling-Ballenger Revocable Trust ("Owner").

RECITALS

(i) California Government Code Section 50280 et seq., authorizes cities to enter into contracts with the Owner of qualified historical property to provide for the use, maintenance, and restoration of such historical property so as to retain its characteristics as property of historical significance;

(ii) Owner possesses fee title in and to that certain real property, together with associated structures and improvements thereon, located at 1209 Indiana Avenue, South Pasadena, California, Assessor's Parcel Number 5314-010-061 ("Historic Property"). A legal description of the Historic Property is attached hereto, marked as "Exhibit A" and is incorporated herein as if fully set forth;

(iii) As set forth in South Pasadena Municipal Code Section 2.68(b)(1)(B), the Historic Property is a Designated Historic Landmark (No. 60). The property is characterized as an outstanding example of the Craftsman theme/Swiss Chalet subtheme;

(iv) City and Owner, for their mutual benefit, now desire to enter into this Agreement both to protect and preserve the characteristics of historical significance of the Historic Property, and to qualify the Historic Property for an assessment of valuation pursuant to the provisions of Chapter 3 of Part 2 of Division 1 of the California Revenue and Taxation Code and to carry out the purposes of Article 12 (commencing with Section 50280) of Chapter 1, Part 1, of Division 1 of Title 5 of the California Government Code.

NOW, THEREFORE, City and Owner, in consideration of the mutual covenants and conditions contained herein, do hereby agree as follows:

1. EFFECTIVE DATE AND TERM. The Agreement shall be effective and commence on November 6, 2024 and shall remain in effect for a minimum period of ten (10) years, unless the property owner is issued a notice of non-renewal as provided in Section 2.68(b)(1)(E)(v) of the South Pasadena Municipal Code.

2. AUTOMATIC RENEWAL. Unless a notice of non-renewal is issued, this Agreement shall automatically be extended by one (1) year for each anniversary date of the Agreement unless otherwise specified herein.

3. NON-RENEWAL. If recommended by the Commission and approved by the City Council, a notice of non-renewal may be issued six (6) years into the duration of this Agreement. The procedure for notice of non-renewal by the Owner of the City shall be in accordance with Government Code Section 50282 as it may be amended from time to time.

4. APPEAL OF NOTICE OF NON-RENEWAL. The property owner shall have the right (per Government Code Section 50282) to appeal a notice of non-renewal to the City Council.

5. STANDARDS FOR HISTORIC PROPERTY. During the term of this Agreement, the Historic Property shall be subject to the following conditions, requirements, and restrictions:

a. Owner shall rehabilitate, preserve and maintain the historically significant Characteristics of the Historic Property. Attached hereto, marked as "Exhibit B" and incorporated herein by this reference is a list of those items for rehabilitation, restoration and maintenance planned for preservation of the Historic Property and a timeline for completion, which Owner shall carry out shall apply to such property throughout the term of this Agreement. In addition, Owner shall comply with the applicable provisions of the South Pasadena Municipal Code (See, Article IVH of the South Pasadena Municipal Code) and shall obtain any applicable permits necessary to protect, preserve, restore and rehabilitate the Historic Property so as to maintain its historical significance.

b. Owner shall additionally and where necessary, restore and rehabilitate the property according to the rules and regulations of the City, the State Office of Historic Preservation of the Department of Parks and Recreation, the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings and the State Historical Building Code and shall maintain the entire property according to minimum standards and conditions, attached hereto, marked as "Exhibit C".

6. LIMITATIONS. Under Section 2.68(b)(1)(C)(iii)–(vi), the estimated tax benefit will not be used for: (1) any maintenance or alteration work that was previously completed or initiated before the Contract is approved, unless it can be shown that the completed work was necessary in the interest of the public health or safety following involuntary damage or destruction caused by fire, act of nature, or any other casualty; (2) routine maintenance work except for

exemplary or exceptional properties that have financially burdensome maintenance requirements; (3) work within the interior of a Historic Property unless the Cultural Heritage Commission determines an exception should be made; and (4) landscaping work unless it will be used for specific landscape features that were identified as part of the official landmark nomination.

7. INSPECTIONS. The Owner shall allow reasonable inspections, by prior appointment given a minimum of at least 24 hours in advance, of the interior and exterior of the Historic Property by representatives of the County of Los Angeles Assessor, State Office of Historic Preservation, State Board of Equalization and the City, as may be necessary to determine Owner's compliance with the terms and conditions of this Agreement.

8. PROVISION OF COMPLIANCE INFORMATION. The Owner hereby agrees to furnish the City with any and all information requested by the City which may be reasonable and necessary to determine compliance with the terms and provisions of this Agreement. In addition, the Owner shall agree to provide to the City on the third year of the term of this Agreement and every third year thereafter a report describing the preservation tasks that are in progress and have been completed pursuant to this Agreement.

9. BINDING EFFECT OF AGREEMENT. This Agreement shall be binding on all successors-in interest of the Owner to the benefits and burdens of this Agreement. The Agreement shall stipulate escrow instructions that require a review and re-evaluation of the property every three years.

10. CANCELLATION. City following a duly noticed public hearing as set forth in California Code Section 50280 et seq., may cancel this Agreement if City determines that the Owner has breached any of the conditions or covenants of the Agreement or has allowed the Historic Property to deteriorate to the point that it no longer meets the significance criteria under which it was designated. City may also cancel this Agreement if it determines Owner has failed to restore or rehabilitate the Historic Property in the manner specified in Paragraph 5 of this Agreement. The City may also cancel this Agreement if, upon consultation with the State of California Office of Historic Preservation, the preservation, rehabilitation, or restoration becomes infeasible due to damage caused by natural disaster. City's right to cancel this Agreement pursuant to this paragraph shall in no way limit or restrict its rights or legal remedies arising from City's Cultural Heritage Ordinance and Municipal Code.

11. CANCELLATION FEE. In the event of cancellation, Owner shall be subject to payment of those cancellation fees set forth in California Government Code Section 50280 et seq., described herein. Upon cancellation, Owner shall pay a cancellation fee equal to twelve and one-half percent (12.5%) of the current fair market value of the property as determined by the County Assessor as though the Historic Property were free of the contractual restriction pursuant to this Agreement. The Owner shall pay the cancellation fee to the County Auditor in the time and manner prescribed by the County Auditor.

12. ENFORCEMENT OF AGREEMENT. In lieu of and/ or in addition to any provisions to cancel this Agreement as referenced herein, City may specifically enforce, or enjoin the breach of the terms of this Agreement. In the event of a breach by Owner under the provisions

of this Agreement, City shall give written notice to Owner by registered or certified mail to the address stated in this Agreement, which notice shall specifically identify the alleged breach and the proposed action which City recommends to Owner to cure said alleged breach. Owner shall hereafter have sixty (60) days within which to cure such breach to the reasonable satisfaction of the City. Upon completion by Owner of the cure of the breach, City shall withdraw its notice of breach. Should Owner not cure such breach within the time period specified above, then City may, without further notice, declare a default under the terms of this Agreement and may bring any action necessary to specifically enforce the obligations of Owner arising out of the terms of this Agreement, apply to any court, state or federal, for injunctive relief against any violation by Owner or apply for such other relief as may be appropriate. City may at its sole discretion extend the 60-day cure period. Such extension must be in writing.

13. WAIVER. City does not waive any claim or default by Owner if City does not enforce or cancel this Agreement. All other remedies at law or in equity which are not otherwise provided for in this Agreement or in the City's regulations governing historic properties are available to City to pursue in the event there is a breach of this Agreement. No waiver by City of any breach or default under this Agreement shall be deemed to be a waiver of any other subsequent breach thereof or default hereunder.

14. BINDING EFFECT OF AGREEMENT. Owner hereby subjects the Historic Property to the covenants, reservations and restrictions set forth in this Agreement. City and Owner hereby declare their specific intent that the covenants, reservations, and restriction as set forth herein shall be deemed covenants running with the land and shall pass to and be binding upon Owner's successors and assigns in title or interest to the Historic Property. Each and every contract, deed or other instrument hereinafter executed, governing or conveying the Historic Property, or any portion thereof, shall conclusively be held to have been executed, delivered and accepted subject to the covenants, reservations and restriction expressed in this Agreement regardless of whether such covenants, reservations and restrictions are set forth in such contract, deed or other instrument. City and Owner hereby declare their understanding and intent that the burden of the covenants, reservations and restrictions set forth herein touch and concern the land in that it restricts development of the Historic Property. City and Owner hereby further declare their understanding and intent that the benefit of such covenants, reservations and restrictions touch and concern the land by enhancing and maintaining the cultural and historic characteristics and significance of the Historic Property for the benefit of the public and Owner.

15. NOTICE. Any notice required to be given by the terms of this Agreement shall be provided at the address of the respective parties as specified below, by personal delivery or United States mail, postage prepaid, addressed as follows:

City: City of South Pasadena
Community Development Director
1414 Mission Street
South Pasadena, California 91030

Owner: Emerling-Ballenger Revocable Trust

c/o Michael Roy Emerling and Ruth Lorraine Ballenger
1209 Indiana Avenue
South Pasadena, California 91030

16. EFFECT OF AGREEMENT. None of the terms, provisions or conditions of this Agreement shall be deemed to create a partnership between the parties hereto and any of their heirs, successors or assigns, nor shall such terms, provisions or conditions cause them to be considered joint ventures or members of any joint enterprise.

17. INDEMNITY OF CITY. Owner agrees to protect, defend, indemnify, and shall hold City and its elected officials, officers, agents, and employees harmless from liability for claims, loss, proceedings, damages, causes of action, liability, costs or expense, including reasonable attorney's fees in connection with damage for personal injuries, including death, and claims for property damage which may arise from the direct or indirect use or operations of such Owner or those of its contractor, subcontractor, agent, employee or other person acting on its behalf which relate to the use, operation, capital improvement and/or maintenance of the Historic Property and/or Owner's activities in connection with the Historic Property. Owner hereby agree to and shall defend the City and its elected officials, officers, agents, and employees with respect to any and all actions for damages caused by, or alleged to have been suffered, by reason of the operations referred to in this Agreement regardless of whether or not the City prepared, supplied or approved the plans, specifications or other documents for the Historic Property. This indemnification includes, without limitation, the payment of all penalties, fines, judgments, awards, attorney's fees and related costs or expenses, and the reimbursement of legal expenses and costs incurred by the City, its elected officials, employees or agendas. Owner's obligation to indemnify shall survive the termination, cancellation or expiration of this Agreement.

18. BINDING UPON SUCCESSORS. All of the agreements, rights, covenants, reservations, and restrictions contained in the Agreement shall be binding upon and shall inure to benefit of the parties herein, their heirs, successors, legal representative, assigns and all persons acquiring any part or portion of the Historic Property, whether by operation of law or in any manner whatsoever. A successor in interest shall have the same rights and obligations under the Agreement as the original owner who entered into the Agreement.

19. LEGAL COSTS. In the event legal proceedings are brought by any party or parties to enforce or restrain a violation of any of the covenants, reservations or restrictions contained herein, or to determine the rights and duties of any party hereunder, the prevailing party in such proceeding may recover all reasonable attorney's fees to be fixed by the court, in addition to court costs and other relief ordered by the court.

20. SEVERABILITY. In the event that any of the provisions of this Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, or by subsequent preemptive legislation, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected thereby.

21. GOVERNING LAW. This Agreement shall be construed and governed in accordance with the laws of the State of California. Venue shall be in Los Angeles County.

22. EMINENT DOMAIN PROCEDURES. Upon the filing of an action in eminent domain by a public agency for the condemnation of the fee title of any land described herein or of less than fee interest which will prevent the portion of land condemned or a portion of it which is the subject of this Agreement from being used for any authorized use, or upon the acquisition in lieu of eminent domain by a public agency for a public improvement, if the City Council determines that the condemnation or acquisition frustrates the purpose of this Agreement, the portions of this Agreement by which Owner agree to preserve and to restrict the use of property described herein shall be canceled and this Agreement shall be deemed null and void upon such filing as to the portion of the land condemned or acquired and to the additional land the use of which for an authorized purpose will be prevented as a result of condemnation or acquisition. In such event, no cancellation fee is imposed as set forth in Government Code Section 50286. If, subsequent to the filing of an action in eminent domain, the proposed condemnation is abandoned by the condemning agency as to all or a portion of the land subject to this Agreement, the restrictions on the use of the property included in this Agreement shall, without further agreement of the parties, be re-instituted and the terms of this Agreement shall be in full force and effect.

23. RECORDATION. No later than twenty (20) days after the parties execute this Agreement, the Owner or Owner's agent shall record this Agreement in the Office of the County Recorder of the County of Los Angeles.

24. AMENDMENTS. This Agreement may be amended, in whole or in part, by a written instrument executed by the parties that is thereafter recorded in the Office of the County Recorder of the County of Los Angeles.

25. NOTICE TO OFFICE OF HISTORIC PRESERVATION. The City shall provide written notice of this Agreement to the State Office of Historic Preservation within 180 days of entering into this Agreement.

[SIGNATURES ON NEXT PAGE]

IN WITNESS THEREOF, City and Owner have executed this Agreement on the day and year first above written.

CITY OF SOUTH PASADENA

_____
Evelyn G. Zneimer, Mayor

ATTEST:

_____
Mark Perez, Deputy City Clerk

APPROVED AS TO FORM

_____
Roxanne Diaz, City Attorney

OWNER: EMERLING-BALLENGER REVOCABLE TRUST

_____
Michael Roy Emerling, Trustee

_____
Ruth Lorraine Ballenger, Trustee

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)

Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)

Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

EXHIBIT A

LEGAL DESCRIPTION

EXHIBIT B

REHABILITATION PLAN

EXHIBIT C

REHABILITATION STANDARDS

ORDER NO. : 2607148080-56

EXHIBIT A

The land referred to is situated in the County of Los Angeles, City of South Pasadena, State of California, and is described as follows:

Parcel 1:

Those portions of Lots 9 and 10 of Thomas Green's Subdivision of South Pasadena Highlands, in the City of South Pasadena, California of Los Angeles, State of California, as per map recorded in Book 26 Page 1 of Miscellaneous Records, in the office of the County Recorder of said County, described as follows:

Beginning at a point on the east line of said Lot 9, distant northerly thereon 50 feet from the southeast corner of said Lot 9, Thence westerly parallel with the southerly line of Monterey Road 125 feet to the west line of said Lot 10; Thence northerly along said west line 25 feet to a point on said line, distant northerly thereon 75 feet from southwest corner of said Lot 10; Thence easterly in a direct line to the point of beginning.

Parcel 2:

Those portions of Lots 9, 10 and 23 of Thomas Green's subdivision of South Pasadena Highlands, in the City of South Pasadena, County of Los Angeles, State of California, as per Map recorded in Book 26 Page 1 of Miscellaneous Records, in the office of the County Recorder of said county; Also that portion of Belleview Avenue vacated, all described as follows:

Beginning at the intersection of the center line of Belleview Avenue 50 feet wide, as shown on said map, with the easterly prolongation of the south line of said Lot 23; Thence westerly along said prolongation and south line, 150 feet to the southerly prolongation of the west line of said Lot 10; Thence northerly along said prolongation and west line 100 feet to a point on said west line, distant northerly thereon 50 feet from the southwest corner of said Lot 10; Thence easterly parallel with the south line of Monterey Road 150 feet to said center line of Indiana Avenue; Thence southerly along said center line 100 feet to the point of beginning.

Parcel 3:

Those portions of Lots 11 and 23 of Thomas Green's subdivision of South Pasadena Highlands, in the City of South Pasadena, County of Los Angeles, State of California, as per Map recorded in Book 26 Page 1 of Miscellaneous Records, in the office of the County Recorder of said County, described as follows:

Beginning at the southwest corner of said Lot 11; Thence southerly along the southerly prolongation of the west line of said Lot 11, a distance of 50 feet to the south line of said Lot 23; Thence easterly along said south line 50 feet to the southerly prolongation of the east line of said Lot 11; Thence northerly along said prolongation and east line 125 feet to the south line of the land described in the Deed to Carl Block, ET UX., recorded July 29, 1939 as Instrument No. 24, in Book 16793 Page 171 official records of said county; Thence westerly along said

17

south line 50 feet to the west line of said Lot 11; Thence southerly along said west line 75 feet to the point of beginning.



Mills Act Application | C.G. Gates Residence
1209 Indiana Avenue, South Pasadena

Prepared for:
City of South Pasadena
Department of Planning and Building
South Pasadena, CA 91030

Prepared by:
Debi Howell-Ardila, MHP
Michael Emerling and Ruth Ballenger

July 2024

Mills Act Application, C.G. Gates Residence

1209 Indiana Avenue, South Pasadena

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3	Description of Work Plan and Priorities	7
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Appendix A: Owner's Letter of Intent

Appendix B: Original Landmark Nomination

Appendix C: Supporting Documents

1. Legal Description
2. Annual Property Tax Statement
3. Homeowner's Insurance Bill
4. Homeowner's Earthquake Insurance Bill
5. Utility Bill: Southern California Edison, Electric Bill
6. Utility Bill: SoCalGas, Gas Bill
7. Utility Bill: City of South Pasadena, Water Bill

1. Project Background

This Mills Act Historic Property Contract application is for the single-family residence at 1209 Indiana Avenue, South Pasadena (Assessor's Parcel Number 5314-010-061). Located near the base of Monterey Hills, north of Monterey Road, the property was constructed in 1911 for Charles Clark Gates and his family. As noted in the 2014 *City of South Pasadena Citywide Historic Context Statement*, the property is a textbook example of the Craftsman architectural style, Swiss Chalet subtype.[1] Highly intact on the exterior and interior, the Gates Residence meets the eligibility criteria for an individual local landmark as described in the 2014 *City of South Pasadena Citywide Historic Context Statement.*[2]



Roughly square in plan, 1209 Indiana Avenue occupies a slanted, hillside parcel; the home is set back by a raised lawn and berm. Two stories in height, the home rests on a raised concrete foundation and is capped with a prominent, medium-pitched, front-gable roof. As is typical for the Craftsman-Chalet style, much of the decorative detailing of the building centers on the character and detailing of the roof eaves. Features include wide overhanging eaves resting on triangular knee braces with turned, multi-color posts, decoratively carved bargeboards, and a low wood screen displaying perforations forming geometric patterns. The second story extends slightly beyond the first, with banded wood molding and carved faux purlins highlighting the division between second and first stories and emphasizing the horizontal axis. Exterior sheathing materials consist primarily of wood shingles and some horizontal wood siding.

A partial length porch occupies the southern portion of the façade; the porch is elevated on low, concrete steps and sheltered beneath a flat roof with extended eaves, accented with faux purlins/rafter tails and intricately carved bolsters. The porch roof rests on decorative, turned wood columns with square post supports. A low wall with turned posts fronts the patio. Off the patio, a single wood door with one large, central light with metal framing provides access to the residence.

The property's Craftsman-Swiss Chalet style elements are seen in a variety of features, including the mass and scale of the property; the generous use of wood, including in exterior shingles, siding, and decorative accents at the roof eaves and front porch; the prominent, medium-pitched roof form; the roofline treatment (e.g., the use of wide eaves); screen with geometric perforations below the roof gable; grouped, multi-light wood-framed windows, among other features.

The side elevations of the residence mirror the fenestration patterns and materials seen on the façade. The north elevation displays grouped wood-framed windows (including tripartite two-over-three frame casements and three-over-two double-hung windows) and a varied wall plane, with a square two-story

[1] Additional information on the life and local presence of the Gates family is provided in the accompanying landmark nomination application for 1209 Indiana Avenue.

[2] City of South Pasadena, Planning and Building Department. 2014. *South Pasadena Citywide Historic Context Statement*. Available at: https://www.southpasadenaca.gov/government/departments/planning-and-building/planning-division. Accessed 30 April 2021.

projection and a one-story bay window providing depth. Along the concrete foundation of the home on the north elevation are several basement-level openings with simple wood frames.

Similarly, the south elevation wall plane is broken up by a one-story projection with wood-framed windows, capped with decorative wood eaves. The rear elevation exhibits a small, square addition, also clad in wood shingles. A secondary entrance elevated on concrete steps is also located at the rear elevation. In the westernmost portion of the parcel is concrete patio and a concrete-clad retaining wall. Mature landscaping and trees further enhance the property. The property is in good repair overall. Alterations appear to be minimal and include a small, low addition on the rear elevation and potentially a second-story remodel that resulted in the addition of some small windows on the side and rear elevations.

A photographic overview of the property can be viewed in Appendix A, which presents the original landmark nomination for the property.

Summary of Landmark Eligibility

South Pasadena Landmark Criterion 4: Its exemplification of a particular architectural style of an era of history of the City)

As noted in South Pasadena's *Citywide Historic Context Statement*, which utilized a photo of 1209 Indiana Avenue to illustrate the features of the style, the property is an intact, textbook example of the Swiss Chalet/Craftsman architectural style. The property is eligible for local landmark listing under Criterion 4 of the Cultural Heritage Ordinance. The property displays all of the character-defining features identified as key for the Craftsman theme/Swiss Chalet subtheme in the *Citywide Historic Context Statement*:

- Rectangular plan and compact, 2-story massing
- Flat, usually symmetrical primary façade
- Moderately pitched front gable roof with wide, overhanging eaves/rake, and exposed rafter tails
- Wood shingle, horizontal wood siding
- Wide porch, recessed or projecting
- Second-story balcony with plank railing, usually with decorative cut-outs
- Divided light casement or double hung wood windows
- Decorative brackets and bargeboards

In addition, with few visible alterations, the property meets the integrity threshold defined in the *Citywide Historic Context Statement.*

An outgrowth of the Arts and Crafts movement, the Swiss Chalet style is a subtype of the Craftsman architectural style, which dominated residential design in South Pasadena (and beyond) through the early 20th century. As noted in the *Citywide Historic Context Statement*, South Pasadena

> retains intact streets and neighborhoods, along with prominent individual examples, illustrating the importance of Arts and Crafts architecture and the role it played in residential development in the early 20th century. Southern California, and Pasadena in particular, was a center of the American Arts and Crafts movement; the philosophy, aesthetics, and major proponents and practitioners all influenced South Pasadena.[3]

[3] City of South Pasadena, Planning and Building Department. 2014. *South Pasadena Citywide Historic Context Statement*, p. 111.

The *Citywide Historic Context Statement* provides additional context for this variant of the Craftsman style:

> The Swiss Chalet style – constructed primarily of stained wood, in which wide overhanging eaves and balconies helped integrate the outdoors as part of the living space – was compatible with the goals of the Arts and Crafts movement. The Chalet style Craftsman house usually consists of a single, rectangular two-story volume covered by front-facing gable roof. The primary façade is typically symmetrical and frequently features a wide porch topped by a second-story balcony. Porches and balconies usually have plank railings with decorative cutouts. Brackets and bargeboards are usually more decorative than those found in other variations of Craftsman architecture.[4]

During CHC review of the landmark nomination, 1209 Indiana Avenue was found to meet the eligibility standards for local landmark designation under the "Architecture & Design" context, "Craftsman" theme, and "Swiss Chalet style" subtheme of the *Citywide Historic Context Statement*. The nomination was forwarded to City Council for adoption of the designation resolution (presently scheduled for July 2024).

The property's principal character-defining features are as follows:

- Large, hillside lot and setback from the street
- Two-story mass and generally symmetrical design composition
- Complex roof form and detailing, with prominent medium-pitched front gable, with wide overhanging eaves resting on carved triangular knee braces with turned posts and purlins/dentils; roof eaves have uneven rakes, with a lower, longer expanse on the south elevation
- Elevated, partial-length porch with decorative wood posts, vertical, wood-plank ceiling, and low wood railing
- Sheathing materials, such as horizontal wood siding, wood shingles
- Grouped, multi-light wood-frame windows, with three-over-two and fixed panes on façade

As noted in this Mills Act application and the accompanying landmark nomination, the Gates Residence reflects all of these characteristics.

In addition, the home has few exterior or interior alterations, easily retaining its historic integrity in all seven areas: location, design, setting, workmanship, materials, association, and feeling.

[4] City of South Pasadena, Planning and Building Department. 2014. *South Pasadena Citywide Historic Context Statement*, p. 273.

Figure 1 South Pasadena *Citywide Historic Context Statement*, with the Gates Residence at 1209 Indiana Avenue as intact example of Swiss Chalet architectural style

Sub-Theme: Swiss Chalet Style

The Swiss Chalet style - constructed primarily of stained wood, in which wide overhanging eaves and balconies helped integrate the outdoors as part of the living space - was compatible with the goals of the Arts and Crafts movement. The Chalet style Craftsman house usually consists of a single, rectangular two-story volume covered by a front-facing gable roof. The primary façade is typically symmetrical and frequently features a wide porch topped by a second-story balcony. Porches and balconies usually have plank railings with decorative cutouts. Brackets and bargeboards are usually more decorative than those found in other variations of Craftsman architecture.

Character-defining features include:

- Rectangular plan and compact, 2-story massing
- Flat, usually symmetrical primary façade
- Moderately pitched front gable roof with wide, overhanging eaves and rake, and exposed rafter tails
- Wood shingle, horizontal wood siding, or cement plaster exterior wall finish, sometimes in combination
- Wide porch, recessed or projecting
- Second-story balcony with plank railing, usually with decorative cut-outs
- Divided light casement or double hung wood windows, sometimes with diamond-patterned lights
- Decorative brackets and bargeboards

Swiss Chalet: Extant Example



1209 Indiana Avenue, Gates Estate

Source: Historic Resources Group, 2014, City of South Pasadena Citywide Historic Context Statement, p. 273

Summary of Mills Act Application Steps Completed

In January 2024, the property owners prepared and submitted a landmark nomination package to the City of South Pasadena. This landmark nomination was subsequently approved by the Cultural Heritage Commission (CHC) with a recommendation to forward to City Council for approval and addition to the City's Register of Local Landmarks.

In January 2024, the property owners also filed a Letter of Intent to apply for the Mills Act, which was subsequently discussed at the Cultural Heritage Commission (CHC) hearing. The CHC favorably reviewed the Letter of Intent and created a subcommittee for the landmark designation to tour the property and offer input on the proposed landmark nomination and Mills Act workplan items. Commissioners Kris Morrish and Conrado Lopez attended a remote site visit to tour the property and inspect the proposed Mills Act workplan items. In May 2024, a separate CHC subcommittee for the Mills Act application was formed, consisting of commissioners Jeremy Ding and Scott Severson.

With the Gates Residence over 113 years old, a number of critical preservation/rehabilitation and repair projects are needed for the property. The Mills Act property tax abatement would help the owners complete these projects and ensure the long-term preservation of this important property. The proposed Mills Act workplan priorities are:

1. Roof System: repairs to roof structure, to mitigate leaking; re-sheathing 2027
2. Exterior Wood: repairs/carpentry work and repainting of wood elements, including wood siding and shingles, roof eaves, and balcony railing; resealing and repainting in period-appropriate palette 2030
3. Retaining Wall: Geotechnical evaluation and stabilization plan 2033

The application also describes additional projects that will be needed in a long-term preservation plan for the home (but have not been added as capitalized expenses in the Mills Act workplan).

This application reflects all feedback and suggestions provided by the CHC to date. Section 2 provides an overview of the application schedule and reporting system; Sections 3 and 4 present the Description of Work Plan and Priorities and the Financial Analysis.

Appendices include the original Letter of Intent (Appendix A), photographic overview of issues (Appendix B), the original Landmark Nomination (Appendix C), and documentation for the financial analysis (Appendix D).

As the owners of a distinctive historic property, the applicants understand the importance of ensuring that all repair, maintenance and rehabilitation projects follow the City guidelines and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Each project, as well as the corresponding Standards-compliant treatment approach, is described in more detail in this application.

2. Schedule and Reporting System

Project	Completion Year
1. Roof System: repairs to roof structure, to mitigate leaking; re-sheathing	2027
2. Exterior Wood: repairs/carpentry work and repainting of wood elements, including wood siding and shingles, roof eaves, and balcony railing; resealing and repainting in period-appropriate palette	2030
3. Retaining Wall: Geotechnical evaluation and stabilization plan	2033
4. Maintenance: Termite inspections/mitigation	Annual inspection
5. Maintenance: Roof inspections and repairs as needed	Triannual inspection
6. Maintenance: Paint inspection and repairs as needed	Triannual inspection

Noncapitalized Projects

1. Plumbing repairs and modernization
2. HVAC/heating system upgrades

Reporting System

The property owners of 1209 Indiana Avenue will provide bi-annual written updates to the City of South Pasadena in the final quarter of the year, documenting progress and providing updates and photographs on the Mills Act work plan.

Prior to commencement of work efforts, Certificates of Appropriateness (CoA) will be obtained by the property owners as required by the City of South Pasadena Cultural Heritage Ordinance. Progress reports will include detailed work descriptions, photographs of work completed, and copies of permits and CoAs/CHC guidance and input as applicable.

3. Description of Work Plan and Priorities

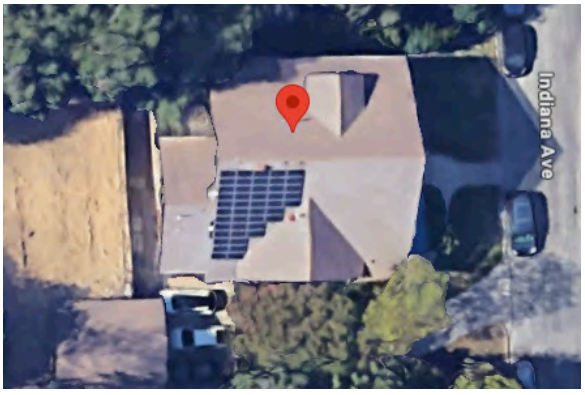
Work efforts described in these plans will comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Proposed Project & Description	Est. Cost	Priority
1. Main Residence, Re-Roof, Repairs, and Carpentry	$75,000	High

Remove/replace composition shingles. Address water leaks in house, repair underlying roof system and structure where needed. Uninstall and re-install solar panels on south elevation. In areas of the roof line with wood features, repairs and carpentry work to address any damaged or deteriorated wood rafters and eaves, fascia, and other wood framing. If needed, replacement of any wood features will be made to match existing in materials, appearance, patterning, finishes/texture, and size/profile. Paint color to either match existing or reflect a period-appropriate palette.

No power-washing will be used for exterior materials or character-defining features. Cracked and peeling paint to be removed with Peel Away, lightly hand-sanded, primed, and set with two coats of paint. *Secretary's Standards* treatment approach: identify, retain, and preserve "the functional and decorative features that are important in defining the overall historic character of the building. This includes the roof's shape, such as hipped, gambrel, and mansard; decorative features such as cupolas…chimneys, and weathervanes; and roofing material such as slate, wood, clay tile, and metal, as well as its size, color, and patterning."

Overview of prominent, low-pitched roof (façade)











Section 3 Description of Work Plan and Priorities (continued)

Proposed Project & Description	Est. Cost	Priority
2. Exterior Wood: repairs/carpentry work and repainting of wood elements including shingles, roof eaves, and balcony railing; repainting in period-appropriate palette	$65,000	High

Original wood shingles and exterior wood features on each elevation are in need of repairs and limited carpentry work. Remove damaged shingle siding where it occurs at all elevations. Spot replace any deteriorated waterproof paper beneath the removed shingles. Install new shingles in a pattern and of a kind to blend the old and new materials. Wash and stain/repaint wood shingles. Where necessary, any replacement of wood shingles and features will be in-kind to match existing in materials, appearance/patterning, finishes/texture, and size/profile. Treatment approach will include the gentlest methods possible—**contractors will not use power-washing or machine sanding** for any character-defining features. Gentlest means possible will be used in prepping for repainting of the exterior.

Overview of wood shingles and features






Section 3 Description of Work Plan and Priorities (continued)

Proposed Project & Description	Est. Cost	Priority
3. Geotechnical Evaluation for Site	$ 50,000	Medium

With its hillside parcel and raised, undeveloped lot directly adjacent to the west, the retaining wall on the western portion of the property shows signs of failure. Settlement and water run-off from the hillside are causing slow-moving damage, including cracks and spalling, to the concrete retaining wall, which is located several feet from the west elevation of the house. Under this item, a geotechnical evaluation will be prepared by a structural engineer meeting the qualifications set forth in the South Pasadena Cultural Heritage Ordinance to recommend a plan for repairs, reinforcement, and/or reconstruction of part or all of the western elevation retaining wall.

The geotechnical evaluation would also propose remediation/mitigation measures to stabilize the site. Any work efforts recommended as a result of the study would be optional or included in the second 10-year Mills Act term for the property.

All work will be completed according to industry standards and applicable building codes; project design and implementation will avoid direct or indirect impacts to character-defining features.

Overview of damaged concrete retaining wall and proximity to west elevation of residence











4. Mills Act Work Plan, Financial Analysis

Proposed Project & Description	Est. Cost	Schedule
1. Roof System: repairs to roof structure; re-sheathing	$ 75,000	2027
2. Exterior Wood: repairs/carpentry work and repainting of wood elements, including wood siding and shingles, roof eaves, and balcony railing; resealing and repainting in period-appropriate palette	$ 65,000	2030
3. Retaining Wall: Geotechnical evaluation and stabilization plan	$ 50,000	2033
Owner's Total Investment in 1209 Indiana Avenue:	**$ 190,000**	
Total Tax Savings for Owners (10-year period)	**$ 186,787**	
Average Annual Cost to the City of South Pasadena:	**$ 4,836**	

4. Mills Act Work Plan, Financial Analysis, 1209 Indiana Avenue (con't)

Mills Act Application, 1209 Indiana Avenue, Financial Analysis

Property Address: 1209 Indiana, South Pasadena, California 91030 **Assessor's ID #:** 5314-010-061
Type: Single-family Residence **Current Assessed Value:** $ 1,835,054
Landmark #: City of South Pasadena Register (City Council Nomination Hearing, 7/17/2024)

REVENUES	**Annual Increase**	**Current Yr 2024**	**Year 1 2025**	**Year 2 2026**	**Year 3 2027**	**Year 4 2028**	**Year 5 2029**	**Year 6 2030**	**Year 7 2031**	**Year 8 2032**	**Year 9 2033**	**Year 10 2034**	
1. Monthly Revenues		6,000.00	6,180.00	6,365.40	6,556.36	6,753.05	6,955.64	7,164.31	7,379.24	7,600.62	7,828.64	8,063.50	
2. Annual Rental Income	3.0%	72,000.00	74,160.00	76,384.80	78,676.34	81,036.63	83,467.73	85,971.77	88,550.92	91,207.45	93,943.67	96,761.98	
ANNUAL EXPENSES													
3. Insurance	5.0%	3,995.15	4,194.91	4,404.65	4,624.89	4,856.13	5,098.94	5,353.88	5,621.58	5,902.66	6,197.79	6,507.68	
4. Utilities	6.0%	6,028.43	6,390.14	6,773.54	7,179.96	7,610.75	8,067.40	8,551.44	9,064.53	9,608.40	10,184.91	10,796.00	**Total Costs**
5. Maintenance	5.0%	14,390.00	15,109.50	15,864.98	16,658.22	17,491.13	18,365.69	19,283.98	20,248.18	21,260.58	22,323.61	23,439.79	$190,045.67
6/7. Management / Other		0.00											
TOTAL EXPENSES													
8. Sum lines 3 through 7		$24,413.58	$25,694.54	$27,043.17	$28,463.07	$29,958.02	$31,532.03	$33,189.30	$34,934.28	$36,771.64	$38,706.31	$40,743.47	
ANNUAL NET INCOME													
9. Line 2 minus line 8		$47,586.42	$48,465.46	$49,341.63	$50,213.28	$51,078.62	$51,935.71	$52,782.46	$53,616.64	$54,435.80	$55,237.36	$56,018.51	
CAPITALIZATION RATE													
10. Interest Component	4.75%												
11. Historic Property Risk Component	4.00%												
12. Property Tax Component	1.016%												
13. Amortization Component (Improvement/Land Value x .03)	0.75%												
14. Total Capitalization Rate	10.52%												
NEW ASSESSED VALUE													
15. Mills Act Assessment (Line 9 divided by Line 14)		$452,514.45	$462,922.29	$473,569.50	$484,461.60	$495,604.21	$507,003.11	$518,664.18	$530,593.46	$542,797.11	$555,281.44	$568,052.92	
TAXES: AMOUNT TO BE PAID													
16. Tax under Mills Act (Line 15 x .01035146)		4,684.19	4,791.92	4,902.14	5,014.88	5,130.23	5,248.22	5,368.93	5,492.42	5,618.74	5,747.97	5,880.18	
17. Current Tax	1.160%	22,510.94	22,772.07	23,036.22	23,303.44	23,573.76	23,847.22	24,123.85	24,403.68	24,686.77	24,973.13	25,262.82	**Total Tax Savings**
18. Tax Savings (Line 17 minus line 16)		17,826.75	17,980.15	18,134.09	18,288.56	18,443.54	18,599.00	18,754.91	18,911.27	19,068.02	19,225.16	19,382.64	$186,787.33
TAXES: COST TO CITY													**Annual Average**
19. Annual Cost to City	26%	$4,634.96	$4,674.84	$4,714.86	$4,755.03	$4,795.32	$4,835.74	$4,876.28	$4,916.93	$4,957.69	$4,998.54	$5,039.49	$4,836.33

Appendix A

Letter of Intent, August 2023

Michael Emerling and Ruth Ballenger

1209 Indiana Avenue
South Pasadena, California 91030
(p) 626.824.1913 (e) mikeE@alumni.caltech.edu

Matt Chang, Planning Manager; Mark Gallatin, Chair, Cultural Heritage Commission
City of South Pasadena Planning & Building Department
1414 Mission Street
South Pasadena, CA 91030

August 27, 2023

Dear Mr. Chang and Mr. Gallatin:

We are writing to express our interest in applying for the Mills Act for our home at 1209 Indiana Avenue, South Pasadena (APN #5314-010-061), an intact Chalet-Craftsman Bungalow constructed in 1911. Our understanding is that our home is listed on the South Pasadena Inventory of Cultural Resources but has not yet been formally designated on the Register of Cultural Resources. This finding of individual landmark eligibility for our property was confirmed in 2015 through the City of South Pasadena Historic Resources Survey update, which assigned a California Historical Resources status code of "5S3" to the property.

Since purchasing the home in 2006, it has served as our family's primary residence. Over the years, we have invested time and resources to maintain our home in good repair. However, several issues have emerged recently that ideally need attention soon, in particular due to the rains we experienced in 2023 (and with the upcoming El Nino weather pattern predicted for 2023/2024). Some of the issues include recent leaks in the roof which were particularly pronounced during the rains this last year. These leaks are evidenced by recent damage in the wood detailing in the front of the structure. Additionally, an existing retaining wall at the west side of our property, separating our house from a sloped, undeveloped hill sitting above the wall, shows signs of cracking and potential failure. During heavy rains, the wall does not prevent all water from passing through to our property, which is concerning for the site overall as well as for the distinctive wood shingles on our exterior walls, which extend down to the concrete foundation.

We understand that our residence needs to be designated on the Register to qualify for the Mills Act program. To complete the landmark nomination, and to make sure our Mills Act workplan meets the City's requirements, we have asked local preservation specialist Debi Howell-Ardila to prepare both applications. She has conducted a site visit and started a literature review for the property; based on this, Debi has shared her opinion that our home qualifies for designation as a distinctive, intact Chalet-Craftsman Bungalow and that, given the repair, rehabilitation, maintenance items needed, our home would be a very strong candidate for a potential Mills Act contract.

We do understand that this Letter of Intent arrives late in the year to submit a Mills Act application (we just learned of the program recently), but we wonder if the City and CHC have discretion to expedite review of our application for this year. The Mills Act would help us address the pressing issues before us (repair/replace the roof to stop the leaks and wood damage, to study the best method for mitigating potential flowing water damage to the structure and address the retaining wall, and to plan for the rehabilitation/repairs and repainting of the wonderful original wood features on the exterior of our house), but we are concerned about waiting another year before being able to address these issues. The Mills Act program and property tax abatement would serve as a great help as we continue to maintain our property and address these time-sensitive issues.

Following this letter, you'll find a brief overview of the existing conditions of the façade of our house, along with a few images of the retaining wall and exterior materials overall. Thank you for your consideration. We look forward to hearing from you on next steps, and whether an expedited application process for 2023 might be possible.

Sincerely,

Michael Emerling and Ruth Ballenger

Figure 1 1209 Indiana Avenue, northeast perspective



Figure 2 1209 Indiana Avenue, southeast perspective



Figure 3 Detail, façade, 1209 Indiana Avenue, southeast perspective



Figure 4 Detail, façade and south elevation, 1209 Indiana Avenue, east perspective



Figure 5 Roof eave treatment and details, façade and south elevation, east perspective



Figure 6 Façade detail, east perspective



Figure 7 Overview of retaining wall, south perspective



Figure 8 Detail of cracks and water penetration in retaining wall, south perspective



Appendix B

Landmark Designation Application, January 2024

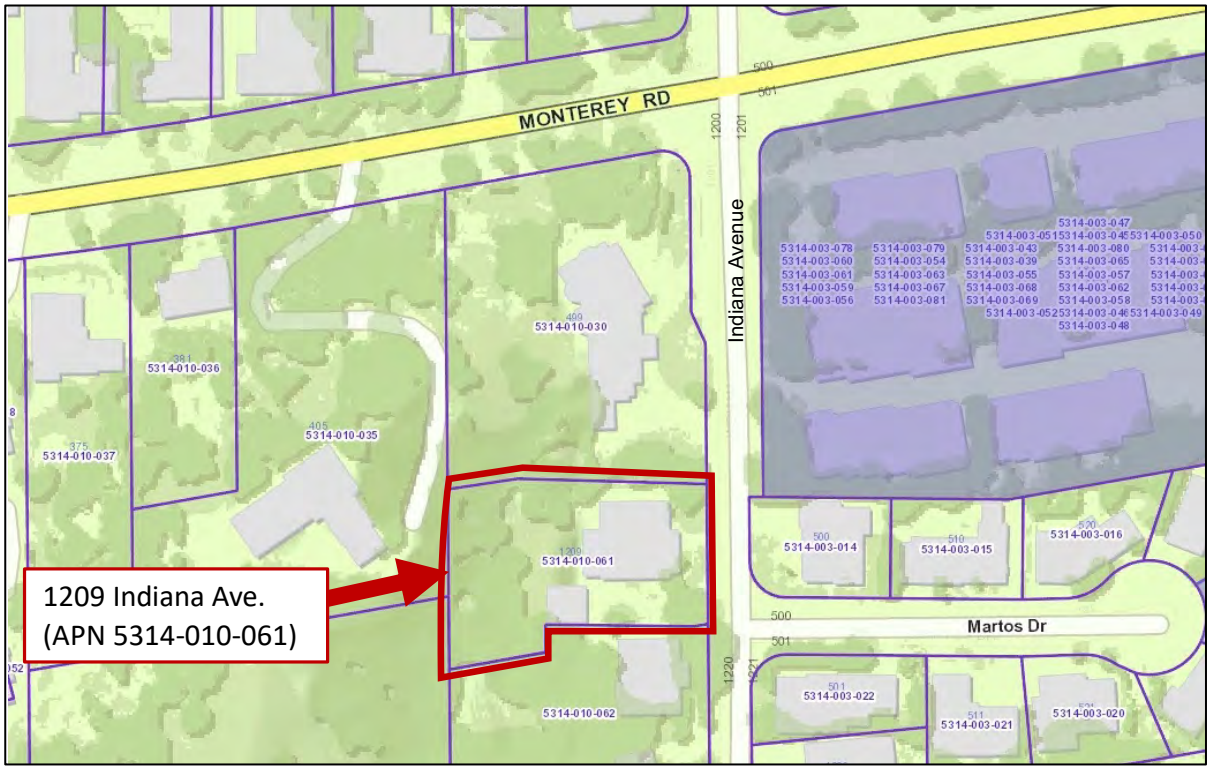
South Pasadena Cultural Heritage Commission

Landmark/Historic District Nomination Form

A. Property Identification

Name of building or site	Gates Residence
Property address	1209 Indiana Avenue, South Pasadena
Current ownership	Michael Emerling and Ruth Ballenger
Owner address	1209 Indiana Avenue, South Pasadena, California
Legal description	Assessor's Parcel Number 5314-010-061
Date of construction	1911 (Source: City of South Pasadena Citywide Historic Resources Survey)
Original Owner	Charles Clark Gates
Architect/Builder	N/A
Original use	Single-family residence
Present use	Single-family residence
Other significant ownership	N/A

Figure 1 Property Location, 1209 Indiana Avenue, South Pasadena



Source: Los Angeles County Tax Assessor Records, modified by author

B. Property Description

Architectural style/period: Craftsman architectural style, Swiss Chalet subtype

Construction materials: Wood-frame construction, sheathed in horizontal wood siding and wood shingles

Historic Status/survey code: (1) **South Pasadena Inventory of Cultural Resources**: "5S3" California Historic Resources Status Code ("appears individually eligible for local listing through survey"); identified as individually eligible in all three City of South Pasadena historic resource surveys, as recently as 2015

Summary of Character-Defining Features:

- Large, hillside lot and setback from the street
- Two-story mass and generally symmetrical design composition
- Complex roof form and detailing, with prominent medium-pitched front gable, with wide overhanging eaves resting on carved triangular knee braces with turned posts and purlins/dentils; roof eaves have uneven rakes, with a lower, longer expanse on the south elevation
- Elevated, partial-length porch with decorative wood posts, vertical, wood-plank ceiling, and low wood railing
- Sheathing materials, such as horizontal wood siding, wood shingles
- Grouped, multi-light wood-frame windows, with three-over-two and fixed panes on façade

Narrative description, including significant exterior and interior architectural features:

Constructed in 1911, 1209 Indiana Avenue is a highly intact, textbook example of a Craftsman-Swiss Chalet style single-family residence in South Pasadena.

Roughly square in plan, 1209 Indiana Avenue occupies a slanted, hillside parcel; the home is set back by a raised lawn and berm. Two stories in height, the home rests on a raised concrete foundation and is capped with a prominent, medium-pitched, front-gable roof. As is typical for the Craftsman-Chalet style, much of the decorative detailing of the building centers on the character and detailing of the roof eaves. Features include wide overhanging eaves resting on triangular knee braces with turned, multi-color posts, decoratively carved bargeboards, and a low wood screen displaying perforations forming geometric patterns. The second story extends slightly beyond the first, with banded wood molding and carved faux purlins highlighting the division between second and first stories and emphasizing the horizontal axis.

Exterior sheathing materials consist primarily of wood shingles and some horizontal wood siding.

A partial length porch occupies the southern portion of the façade; the porch is elevated on low, concrete steps and sheltered beneath a flat roof with extended eaves, accented with faux purlins/rafter tails and intricately carved bolsters. The porch roof rests on decorative, turned wood columns with square post supports. A low wall with turned posts fronts the patio. Off the patio, a single wood door with one large, central light with metal framing provides access to the residence.

The property's Craftsman-Swiss Chalet style elements are seen in a variety of features, including the mass and scale of the property; the generous use of wood, including in exterior shingles, siding, and decorative accents at the roof eaves and front porch; the prominent, medium-pitched roof form; the roofline

treatment (e.g., the use of wide eaves); screen with geometric perforations below the roof gable; grouped, multi-light wood-framed windows, among other features.

The side elevations of the residence mirror the fenestration patterns and materials seen on the façade. The north elevation displays grouped wood-framed windows (including tripartite two-over-three frame casements and three-over-two double-hung windows) and a varied wall plane, with a square two-story projection and a one-story bay window providing depth. Along the concrete foundation of the home on the north elevation are several basement-level openings with simple wood frames.

Similarly, the south elevation wall plane is broken up by a one-story projection with wood-framed windows, capped with decorative wood eaves.

The rear elevation exhibits a small, square addition, also clad in wood shingles. A secondary entrance elevated on concrete steps is also located at the rear elevation. In the westernmost portion of the parcel is concrete patio and a concrete-clad retaining wall.

Mature landscaping and trees further enhance the property. The property is in good repair overall. Alterations appear to be minimal and include a small, low addition on the rear elevation and potentially a second-story remodel that resulted in the addition of some small windows on the side and rear elevations.

The photographs below provide a visual overview of the property and its existing conditions.

Figure 2 Overview of sloped, hillside parcel, façade, northeast perspective



Figure 3 Overview of façade, east perspective



Figure 4 Overview of façade, southeast perspective



Figure 5 North elevation, overview, northwest perspective (shows addition at rear elevation)



Figure 6 South elevation overview, southern perspective (shows roof cross-gable and addition)



Figure 7 North elevation and side yard, west perspective



Figure 8 Swiss Chalet/Craftsman character-defining features on the façade, with decorative wood accents throughout the patio, second-story porch railing with geometric cut-outs, and wide wood roof eaves with decorative detailing, southeast perspective



Figure 9 Detail of roof detailing and entrance porch, east perspective



Figure 10 Detail, northern portion of façade, east perspective



Figure 11 Tripartite wood windows and frames and wood-shingle siding, façade, east perspective



Figure 12 Tripartite wood windows and flared second-story base marked with faux, carved purlins, façade, east perspective



Figure 13 Corner of east and north elevations, northeast perspective



Figure 14 North elevation bay window, wood shingles, and window detailing, north perspective



Figure 15 Detail of wood shingles, south elevation, southwest perspective



Figure 16 Detail of south elevation windows, triangular knee braces, and decorative carved brackets marking division between first and second stories, southwest perspective



Figure 17 Overview of south elevation second story, south perspective



Figure 18 Detail of porch steps, landing, and wood entrance door with side lights, east perspective



Additions/modifications

Based on available data and visual inspection of the property, 1209 Indiana Avenue has few visible alterations and appears highly intact from its 1911 date of construction and period of significance.

Given that 1209 Indiana Avenue originally belonged to a larger parcel facing Monterey Road (499 Monterey Road), a limited number of building permits are available for the property. To date, no primary sources (including building permits or other documentation) have been identified to confirm the original date of construction or original owner; the Los Angeles County Tax Assessor lists a date of 1911 as the date of construction.

Available sources, along with visual observation, indicate the following alterations:

- Pre-1930: Addition of small two-story wing on rear elevation (source, Sanborn Fire Insurance Company map)
- 1939: Construction of two-car garage (extant, noncontributing) (source, building permit #6887)
- 1962: Electrical upgrades (source, building permit #49267)
- 1979: Re-roof (source, building permit, number illegible)
- 1992: Plumbing upgrades (source, building permit #013589)
- 1996: Re-roof (source, building permit #017781)
- 2002: Electrical upgrades/repairs (source, building permit #20555)
- 2008: Mechanical upgrades/repairs (source, building permit #016215)
- 2010: Electrical upgrades/repairs (source, building permit #026379)
- 2014: Electrical upgrades/repairs (source, building permit #034084)
- Unknown date: Some windows on the second story appear nonoriginal and might have been added with an attic conversion (source, visual observations; permits not available)

Ownership History

The original (and longest) owner of 1209 Indiana Avenue was Charles Clark Gates and his wife Pearl, who resided in the home for nearly 40 years, from 1911 until their deaths in 1950 and 1951, respectively. Gates was the nephew of well-known local philanthropist and lumber magnate Peter Goddard Gates, who bought property and settled in South Pasadena with his four brothers in the early 1900s.[1] Wealthy, retired lumber manufacturers, the Gates brothers built a large estate around the area of 1209 Indiana Avenue, along Monterey Road, including a park, orchards, stables, tennis courts, and "even its own fire station."[2] Based out of this large family complex at Monterey Road and "Gates Place" (as Indiana Avenue was named in the early twentieth century), South Pasadena became a summer getaway as well as home base for the extended Gates family members.

Born in Illinois in 1879, Charles Clark Gates and his wife Pearl moved to South Pasadena in 1911 from St. Louis, Missouri.[3] The residence at 1209 Indiana Avenue originally formed part of a larger parcel extending north to 499 Monterey Road, which is still occupied by a large Swiss Chalet-style home originally belonging to members of the Gates family, including Charles Clark Gates' parents, Mr. and Mrs. Albert Hawkins

[1] Apostol, Jane. 1987. "South Pasadena: A Centennial History" (South Pasadena Public Library), p. 57.

[2] City of South Pasadena, Planning and Building Department. 2014. *South Pasadena Citywide Historic Context Statement*, p. 96.

[3] "Society," 28 May 1911, *Los Angeles Times*. Available at ProQuest Historical Newspapers, Los Angeles Times.

Gates.[4] The parcels were divided at an unknown date, after 1950, into separate lots in a configuration that mirrors the present property lines.

Once they arrived in South Pasadena, Charles and Pearl Gates quickly became part of the small, local social scene, with their travels, social engagements, and family milestones amply covered in the local newspapers of the day. Following in the family footsteps, Charles Clark Gates also worked in the lumber industry, as an executive in the family's lumber company, which included mills and branches in Arkansas (specializing in yellow pine and oak), Louisiana, and Alabama. In the obituary for Albert Hawkins Gates, who passed away in South Pasadena in 1914, the *Forrest City Times* of Forrest City, Arkansas, noted that Mr. Gates had been president of the Gates Lumber Company, based in Wilmar, Arkansas, and had accumulated a "fortune in the lumber mills, and had extensive interests on the Pacific coast."[5]

The homes of the Gates estate faced Monterey Road (including 499, 509, and 515 Monterey, among which only 499 Monterey is extant) and extended north along Indiana Avenue (including the extant residences at 1209 and 1215 Indiana Avenue, both of which were constructed in 1911). Until 1924, when the Gates brothers subdivided a large portion of the land extending northward, "Indiana Avenue" was named "Gates Place," as noted above. The home at 1209 Indiana Avenue occupies a parcel that was originally part of a tract known as "Thomas Green's Subdivision of South Pasadena Highlands," filed in 1887. Prior to the Gates family arrival in the early 1900s, Gates Place/Indiana Avenue was known as "Belleview Avenue." (The small cul-de-sac "Gates Place" that survives northeast of 1209 Indiana Avenue continues to reflect the family's early presence in the neighborhood.)

In terms of the family, one of Peter Goddard Gates' best known philanthropic gifts was to the California Institute of Technology, in the form of a $200,000 donation in 1917 to establish the Gates Chemical Laboratories.[6] Peter G. Gates passed away in 1925 at the age of 69; his nephew Charles was among the recipients of bequests made in the elder Gates' will.[7] In reaction to Gates' death, Arthur Fleming, chair of the California Institute of Technology board of trustees, commented that "Pasadena and the California Institute of Technology [have lost] a valuable friend. Ever interested in those things which he believed essential to the welfare of his country, he gave generously to the case of education."[8]

In terms of Charles Clark Gates' career, in addition to his role in the family's lumber manufacturing business, he and two of the Gates relatives, Don S. and Don F., launched an ambitious venture in 1919 in cattle grazing. The acquisition also made the Gates "among the largest holders of cattle grazing acreage in America," with a controlling interest in the Tehachapi Cattle Company, which owned thousands of head of cattle spanning 150,000 acres from Bakersfield to the Tehachapi Mountains.[9] By 1940, Charles Clark Gates had retired. In 1942, he was among a group of business leaders honored as "Quarter Century Boys" in the Rotary Club of Los Angeles.[10] The Gates' had three children, Albert D., Edith E., and Louise, all of whom were residents of 1209 Indiana Avenue during the Gates family tenure in the home.

[4] "November Wedding Is an Outstanding Event," 22 November 1927, *Pasadena Evening Post*.

[5] 5 June 1914, "Death of Albert H. Gates: He Was One of the Pioneer Lumbermen of South Arkansas," *The Forrest City Times* (Forrest City, Arkansas).

[6] "Peter Gates Dead in East: Brother in Pasadena Gates New from New York," 14 July 1925, *Los Angeles Times*. Available at ProQuest Historical Newspapers, Los Angeles Times. See also "Gates Rites to Be Held in Pasadena: Body of Philanthropist to Be Brought Here from New York City," 14 July 1925, *The Pasadena Post*.

[7] "Southland Kin Aided in Gates Will: Thirteen Get Varying Bequests from Estate of Lumber Man," 2 September 1925, *Los Angeles Times*. Available at ProQuest Historical Newspapers, Los Angeles Times.

[8] "Peter Gates Dead in East: Brother in Pasadena Gates New from New York," 14 July 1925, *Los Angeles Times*. Available at ProQuest Historical Newspapers, Los Angeles Times.

[9] "Gates Family in Big New Cattle Deal," 22 September 1919, *The Pasadena Post*.

[10] "Rotary Club Pays Tribute to Its 25-Year Members," 21 March 1942, *Los Angeles Times*. Available at ProQuest Historical Newspapers, Los Angeles Times.

Figure 19 1907 image of 515 Monterey Road, part of Gates family estate and home of retired lumber magnate, Don S. Gates; the residence was demolished in 1968



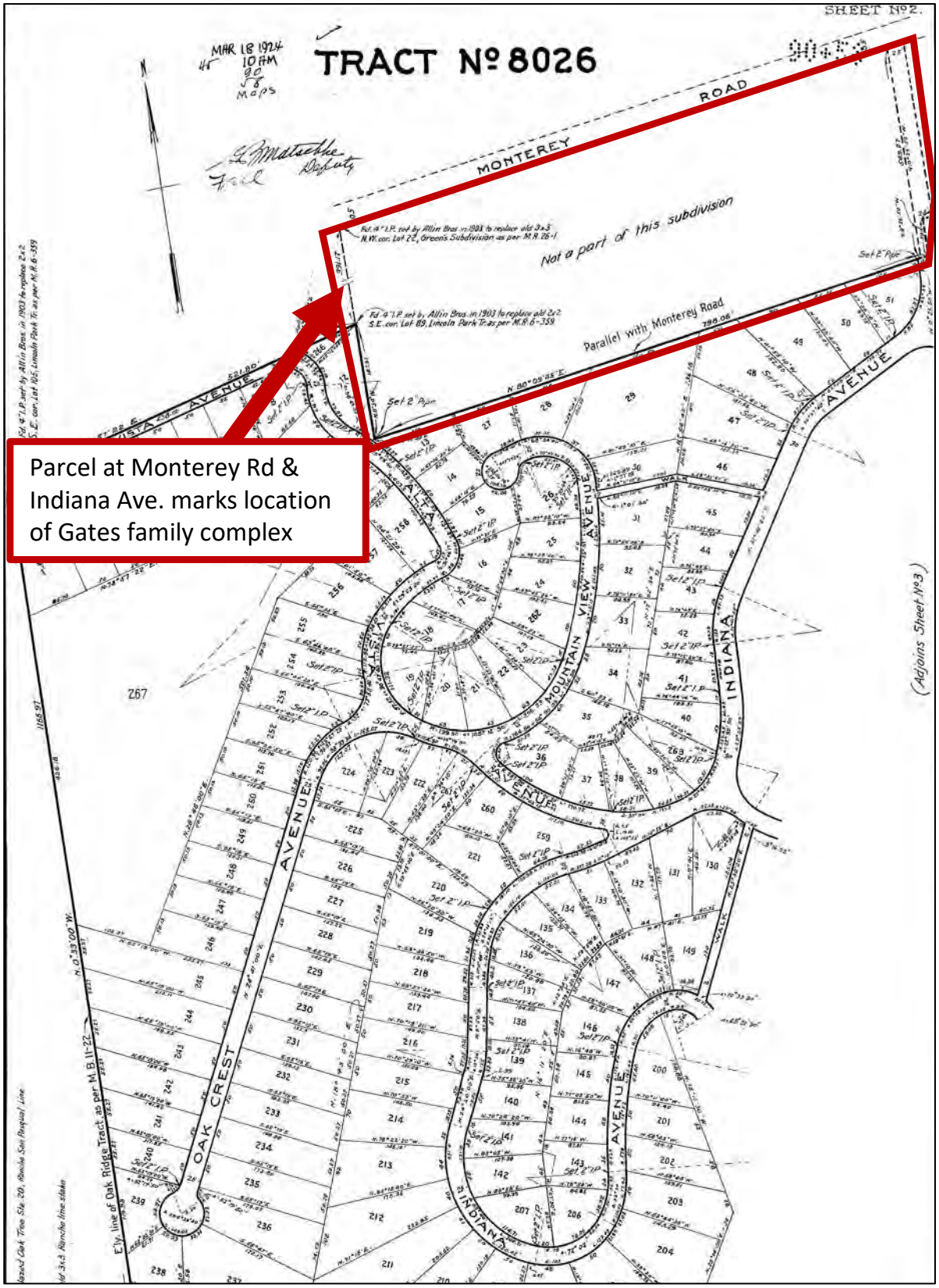
Source: Rick Thomas, 6 December 2018, "Throwback Thursday: Anatomy of a Craftsman Take Down," South Pasadenan

Figure 20 Peter G. Gates residence, 1907, 509 Monterey Road; the residence was demolished in 1968



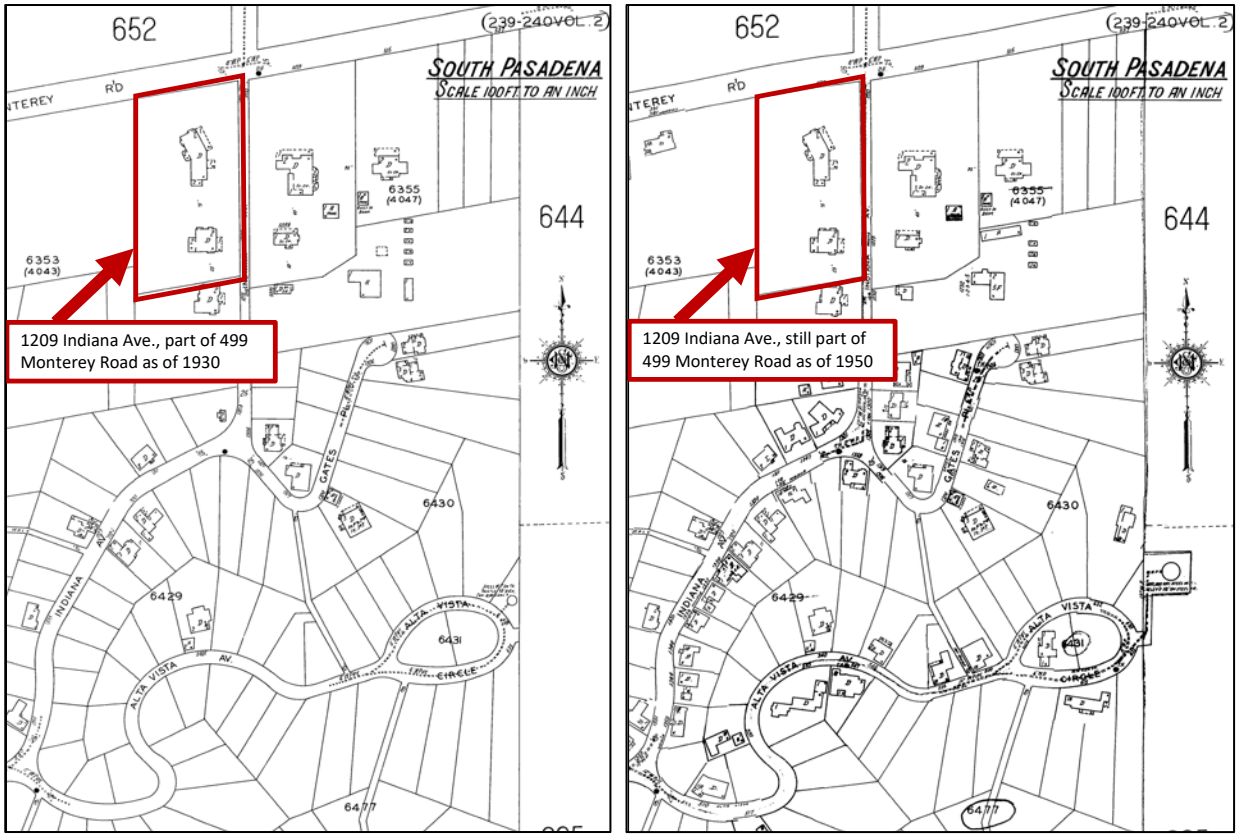
Source: Rick Thomas, 6 December 2018, "Throwback Thursday: Anatomy of a Craftsman Take Down," South Pasadenan

Figure 21 Tract No. 8026, filed by Charles and Fred Gates in 1924, retained the large parcels facing Monterey Road (still part of Gates family estate) and subdivided land extending north



Source: Los Angeles County Public Works Department, Land Records

Figure 22 1209 Indiana Avenue, part of 499 Monterey Road and Gates family estate as of 1930 (left) and 1950 (right); map on right shows increased level of development through postwar era



Source: Los Angeles Public Library, Sanborn Fire Insurance Map Collection; modified by author

Discussion of Criteria 3 and 6

As discussed above, 1209 Indiana Avenue is a surviving remnant of the Gates family estate, which included stately Craftsman-style homes at 499, 509, and 515 Monterey Road, and northward along present-day Indiana Avenue (known until the mid-1920s as "Gates Place"). Until at least 1950, 1209 Indiana Avenue formed part of one unified parcel with 499 Monterey Road. The east side of Indiana Avenue and parcels extending northward also appear to have belonged to the Gates family estate (though no buildings along the east appear extant).

Extant remnants of the Gates family estate include 499 Monterey Road, 1209 Indiana Avenue, and 1215 Indiana Avenue (which was owned by Don F. Gates and constructed in 1911, during a time when most of the surrounding hillside property belonged to the Gates family).

Although the residence at 1209 Indiana Avenue is associated with Charles Clark Gates, and the Gates family was well-known in early twentieth-century South Pasadena, the strength of the association and Gates' own professional achievements are not such that they confer eligibility on 1209 Indiana Avenue itself, as a single property, under Criterion 3 ("identification with a person, persons or groups who significantly contributed to the culture and development of the City, state or United States") or Criterion 6 ("identification as the work of a person or persons whose work has influenced the heritage of the City, the state or the United States"). Research has not indicated that, on his own, Charles Clark Gates, while he was a successful entrepreneur and lumber manufacturer in the family business, "significantly contributed to the culture and development" of South Pasadena or the heritage of the City.

While research on the Gates family and its South Pasadena estate is beyond the present scope, it is recommended that subsequent research consider possible eligibility as an historic district for 1209 and 1215 Indiana Avenue and 499 Monterey Road as the surviving elements of the Gates family estate.

C. Discussion of Designation Criteria

Please indicate rationale for qualification under one or more criteria in Section 2.63(B) of the South Pasadena Cultural Heritage Commission

South Pasadena Landmark Criterion 4: Its exemplification of a particular architectural style of an era of history of the City)

As noted in South Pasadena's *Citywide Historic Context Statement*, which utilized a photo of 1209 Indiana Avenue to illustrate the features of the style, the property is an intact, textbook example of the Swiss Chalet/Craftsman architectural style. The property is eligible for local landmark listing under Criterion 4 of the Cultural Heritage Ordinance. The property displays all of the character-defining features identified as key for the Craftsman theme/Swiss Chalet subtheme in the *Citywide Historic Context Statement*:

- Rectangular plan and compact, 2-story massing
- Flat, usually symmetrical primary façade
- Moderately pitched front gable roof with wide, overhanging eaves/rake, and exposed rafter tails
- Wood shingle, horizontal wood siding
- Wide porch, recessed or projecting
- Second-story balcony with plank railing, usually with decorative cut-outs
- Divided light casement or double hung wood windows
- Decorative brackets and bargeboards

In addition, with few visible alterations, the property meets the integrity threshold defined in the *Citywide Historic Context Statement.*

An outgrowth of the Arts and Crafts movement, the Swiss Chalet style is a subtype of the Craftsman architectural style, which dominated residential design in South Pasadena (and beyond) through the early 20th century. As noted in the *Citywide Historic Context Statement*, South Pasadena

> retains intact streets and neighborhoods, along with prominent individual examples, illustrating the importance of Arts and Crafts architecture and the role it played in residential development in the early 20th century. Southern California, and Pasadena in particular, was a center of the American Arts and Crafts movement; the philosophy, aesthetics, and major proponents and practitioners all influenced South Pasadena.[11]

The *Citywide Historic Context Statement* provides additional context for this variant of the Craftsman style:

> The Swiss Chalet style – constructed primarily of stained wood, in which wide overhanging eaves and balconies helped integrate the outdoors as part of the living space – was compatible with the goals of the Arts and Crafts movement. The Chalet style Craftsman house usually consists of a single, rectangular two-story volume covered by front-facing gable roof. The primary façade is typically symmetrical and frequently features a wide porch topped by a second-story balcony. Porches and balconies usually have plank railings with decorative cutouts. Brackets and bargeboards are usually more decorative than those found in other variations of Craftsman architecture.[12]

[11] City of South Pasadena, Planning and Building Department. 2014. *South Pasadena Citywide Historic Context Statement*, p. 111.

[12] City of South Pasadena, Planning and Building Department. 2014. *South Pasadena Citywide Historic Context Statement*, p. 273.

Figure 23 South Pasadena *Citywide Historic Context Statement*, with the Gates Residence at 1209 Indiana Avenue as intact example of Swiss Chalet architectural style

Sub-Theme: Swiss Chalet Style

The Swiss Chalet style - constructed primarily of stained wood, in which wide overhanging eaves and balconies helped integrate the outdoors as part of the living space - was compatible with the goals of the Arts and Crafts movement. The Chalet style Craftsman house usually consists of a single, rectangular two-story volume covered by a front-facing gable roof. The primary façade is typically symmetrical and frequently features a wide porch topped by a second-story balcony. Porches and balconies usually have plank railings with decorative cutouts. Brackets and bargeboards are usually more decorative than those found in other variations of Craftsman architecture.

Character-defining features include:

- Rectangular plan and compact, 2-story massing
- Flat, usually symmetrical primary façade
- Moderately pitched front gable roof with wide, overhanging eaves and rake, and exposed rafter tails
- Wood shingle, horizontal wood siding, or cement plaster exterior wall finish, sometimes in combination
- Wide porch, recessed or projecting
- Second-story balcony with plank railing, usually with decorative cut-outs
- Divided light casement or double hung wood windows, sometimes with diamond-patterned lights
- Decorative brackets and bargeboards

Swiss Chalet: Extant Example



1209 Indiana Avenue, Gates Estate

Source: Historic Resources Group, 2014, City of South Pasadena Citywide Historic Context Statement, p. 273

In summary, as demonstrated in this nomination, 1209 Indiana Avenue meets the eligibility standards for local landmark designation under the "Architecture & Design" context, "Craftsman" theme, and "Swiss Chalet style" subtheme of the *Citywide Historic Context Statement*.

The property's principal character-defining features are as follows:

- Large, hillside lot and setback from the street
- Two-story mass and generally symmetrical design composition
- Complex roof form and detailing, with prominent medium-pitched front gable, with wide overhanging eaves resting on carved triangular knee braces with turned posts and purlins/dentils; roof eaves have uneven rakes, with a lower, longer expanse on the south elevation
- Elevated, partial-length porch with decorative wood posts, vertical, wood-plank ceiling, and low wood railing
- Sheathing materials, such as horizontal wood siding, wood shingles
- Grouped, multi-light wood-frame windows, with three-over-two and fixed panes on façade

D. Present Condition

Exterior Good/fair

The exterior shows some signs of deteriorated wood sealants and features (such as the porch wall with geometric cut-outs on the second-story balcony), wood shingles and sheathing, in particular at wall joints and in some areas along the building foundation. In addition, the property requires repairs to the roof to remedy leaking. The distinctive carved, decorative features of the roof line, including brackets, bargeboards, purlins, rafters, and porch banister, will require *Secretary's Standards*-compliant treatment and refinishing in the next several years, in order to protect and retain this character-defining feature. Some of the windows need repairs/repainting.

Interior Good/fair

The interior retains original wood-plank floors, pocket doors, and other built-in features.

Site Good/Fair

The west portion of the parcel is marked by a concrete retaining wall, which marks the division of the residence and the undeveloped hillside lot extending west. The concrete retaining wall shows signs of cracking and water penetration and is in need of a geotechnical study and plan for stabilization.

Neighborhood context The residence at 1209 Indiana Avenue represents a highly intact, distinctive example of the Swiss Chalet/Craftsman architectural style. The property is located in the foothills of South Pasadena and originally formed part of the Gates family estate, which spanned Monterey Road, from 499 to 515 Monterey, and extended north on Indiana Avenue.

E. Proponents

Michael Emerling and Ruth Ballenger, owners
Deborah Howell-Ardila, MHP, Historic Preservation Specialist

F. Owner Consent

(Although individual properties may be designated as South Pasadena historic landmarks or parcels within historic districts without owner consent, every effort should be made to inform owners of the advantages and opportunities designate and to secure owner support.) If you, as owners, support the designation of your property as a landmark or a parcel in a historic district, please so signify in the space below:

I/we certify that I/we am/are the owners of the property being hereby nominated for designation as a landmark or as a parcel within a historic district under the Cultural Heritage Ordinance of the City of South Pasadena, California and herby consent to said designation of the property as a landmark or parcel within a historic district.

_____ Dated_____

Appendix C

Supporting Documents

1. Legal Description of Property
2. Los Angeles County Property Tax Statement
3. Homeowner's Insurance Bill
4. Utility Bill: Southern California Edison, Electric Bill
5. Utility Bill: SoCalGas, Gas Bill
6. Utility Bill: City of South Pasadena, Water Bill

ORDER NO. : 2607148080-56

EXHIBIT A

The land referred to is situated in the County of Los Angeles, City of South Pasadena, State of California, and is described as follows:

Parcel 1:

Those portions of Lots 9 and 10 of Thomas Green's Subdivision of South Pasadena Highlands, in the City of South Pasadena, California of Los Angeles, State of California, as per map recorded in Book 26 Page 1 of Miscellaneous Records, in the office of the County Recorder of said County, described as follows:

Beginning at a point on the east line of said Lot 9, distant northerly thereon 50 feet from the southeast corner of said Lot 9, Thence westerly parallel with the southerly line of Monterey Road 125 feet to the west line of said Lot 10; Thence northerly along said west line 25 feet to a point on said line, distant northerly thereon 75 feet from southwest corner of said Lot 10; Thence easterly in a direct line to the point of beginning.

Parcel 2:

Those portions of Lots 9, 10 and 23 of Thomas Green's subdivision of South Pasadena Highlands, in the City of South Pasadena, County of Los Angeles, State of California, as per Map recorded in Book 26 Page 1 of Miscellaneous Records, in the office of the County Recorder of said county; Also that portion of Belleview Avenue vacated, all described as follows:

Beginning at the intersection of the center line of Belleview Avenue 50 feet wide, as shown on said map, with the easterly prolongation of the south line of said Lot 23; Thence westerly along said prolongation and south line, 150 feet to the southerly prolongation of the west line of said Lot 10; Thence northerly along said prolongation and west line 100 feet to a point on said west line, distant northerly thereon 50 feet from the southwest corner of said Lot 10; Thence easterly parallel with the south line of Monterey Road 150 feet to said center line of Indiana Avenue; Thence southerly along said center line 100 feet to the point of beginning.

Parcel 3:

Those portions of Lots 11 and 23 of Thomas Green's subdivision of South Pasadena Highlands, in the City of South Pasadena, County of Los Angeles, State of California, as per Map recorded in Book 26 Page 1 of Miscellaneous Records, in the office of the County Recorder of said County, described as follows:

Beginning at the southwest corner of said Lot 11; Thence southerly along the southerly prolongation of the west line of said Lot 11, a distance of 50 feet to the south line of said Lot 23; Thence easterly along said south line 50 feet to the southerly prolongation of the east line of said Lot 11; Thence northerly along said prolongation and east line 125 feet to the south line of the land described in the Deed to Carl Block, ET UX., recorded July 29, 1939 as Instrument No. 24, in Book 16793 Page 171 official records of said county; Thence westerly along said

17

south line 50 feet to the west line of said Lot 11; Thence southerly along said west line 75 feet to the point of beginning.

2023

ANNUAL SECURED PROPERTY TAX BILL

2023

CITIES, COUNTY, SCHOOLS AND ALL OTHER TAXING AGENCIES IN LOS ANGELES COUNTY

SECURED PROPERTY TAX FOR FISCAL YEAR JULY 1, 2023 TO JUNE 30, 2024

KEITH KNOX, TREASURER AND TAX COLLECTOR

FOR ASSISTANCE, CALL 1(213) 974-2111 OR 1(888) 807-2111, ON THE WEB AT propertytax.lacounty.gov

PROPERTY IDENTIFICATION
ASSESSOR'S ID.NO.: 5314 010 061 23 000

OWNER OF RECORD AS OF JANUARY 1, 2023
SAME AS BELOW

MAILING ADDRESS 000002658 02 AV 0.498
00002658-0002658 SNGL 001 1234-- 569549

EMERLING,MICHAEL CO TR
1209 INDIANA AVE
SOUTH PASADENA CA 91030-3611

Save Money – Save Time – Pay Online
ttc.lacounty.gov

PIN:

SPECIAL INFORMATION

PROPERTY LOCATION AND/OR PROPERTY DESCRIPTION
1209 INDIANA AVE SOUTH PASA
MR 26-1 SEE ASSESSOR'S MAPS POR OF VAC ST AND POR OF LOTS 9 THRU 11 AND 23

ASSESSOR'S REGIONAL OFFICE
REGION #05 INDEX: TRA:09030
EAST DISTRICT OFFICE
1190 DURFEE AVE.
SOUTH EL MONTE CA 91733
(626)258-6001

ACCT. NO.: PRINT NO.: 745793 BILL ID.:

DETAIL OF TAXES DUE FOR 5314 010 061 23 000 53

AGENCY	AGENCY PHONE NO.	RATE		AMOUNT
GENERAL TAX LEVY				
ALL AGENCIES		1.000000	$	18,350.54
VOTED INDEBTEDNESS				
METRO WATER DIST		.003500	$	64.22
COMMNTY COLLEGE		.025101		460.62
UNIFIED SCHOOLS		.128185		2,352.26
DIRECT ASSESSMENTS				
SAFE CLEAN WATER	(833) 275-7297		$	101.69
FLOOD CONTROL	(626) 979-5498			62.75
LIGHT/LANDSCAPE	(626) 403-7240			104.09
MWD STANDBY #15	(866) 807-6864			9.26
LIBRARY TAX	(626) 403-7330			82.50
RPOSD MEASURE A	(833) 265-2600			76.74
SGV MOSQUITO&VCD	(800) 273-5167			16.80
CNTY SAN DIST 16	(562) 908-4288			160.00
SPUSD PARCEL TAX	(800) 676-7516			447.47
USGV MWD CHG	(866) 807-6864			10.00
TRAUMA/EMERG SRV	(866) 587-2862			212.00

VALUATION INFORMATION

ROLL YEAR 23-24	CURRENT ASSESSED VALUE	TAXABLE VALUE
LAND	1,468,047	1,468,047
IMPROVEMENTS	367,007	367,007
TOTAL		1,835,054
LESS EXEMPTION:		
NET TAXABLE VALUE		1,835,054

1ST	2ND	1ST + 2ND
$11,255.47 DUE NOVEMBER 1, 2023 (After December 10, 2023, add 10% penalty)	$11,255.47 DUE FEBRUARY 1, 2024 (After April 10, 2024, add 10% penalty and $10 cost)	$22,510.94 IF PAYING BOTH BY DECEMBER 10, 2023 (Include 1st & 2nd stubs if paying by mail)

ANY RETURNED PAYMENT MAY BE SUBJECT TO A FEE UP TO $50 (I)

SEE REVERSE SIDE FOR MORE INFORMATION

**** REPRINTED FROM THE ARCHIVE. THE ORIGINAL TRANSACTION MAY INCLUDE ADDITIONAL FORMS ****

Safeco Insurance
A Liberty Mutual Company

SAFECO INSURANCE COMPANY OF ILLINOIS

Administrative office: 175 Berkeley St., Boston, MA 02116 (A stock insurance company.)

QUALITY CREST HOMEOWNERS POLICY DECLARATIONS

INSURED:
MICHAEL EMERLING
RUTH BALLENGER
1209 INDIANA AVE
SOUTH PASADENA CA 91030-3611

POLICY NUMBER: [redacted]
POLICY PERIOD FROM: DEC. 20 2023
AT: 12:01 A.M.
TO: DEC. 20 2024

RESIDENCE PREMISES:
Same

AGENT:
E BROOX RANDALL & SONS, INC.
4751 WILSHIRE BLVD #350
LOS ANGELES CA 90010-3849

TELEPHONE: (800) 697-6122

IMPORTANT NOTICES

- Your policy has renewed effective December 20, 2023.
- **THIS POLICY DOES NOT PROVIDE EARTHQUAKE COVERAGE.**
- The limit of liability for this structure (Coverage A) is based on an estimate of the cost to rebuild your home, including an approximate cost for labor and materials in your area, and specific information that you have provided about your home.

COVERAGES	LIMIT	PREMIUM
SECTION I - PROPERTY COVERAGES		
A - Dwelling	$ 1,962,700	$ 4,899.00
B - Other Structures	392,540	
C - Personal Property	1,472,030	
D - Loss of Use	FAIR COST	
SECTION II - LIABILITY COVERAGES		
E - Personal Liability (each occurrence)	1,000,000	55.00
F - Medical Payments (each person)	10,000	
INCLUDED COVERAGES		
Full Value on Personal Property		Included
2085 - Additional Interest		Included
Extended Dwelling Coverage Amount	1,962,700	Included
438-B.F.U.		Included
California Workers Compensation		Included
Building Ordinance or Law Coverage (10%)	196,270	Included

OPTIONS	LIMIT	PREMIUM
Option G - Unscheduled Jewelry, Furs, Fine Arts	$ 50,000	$ 200.00
Option ID - Identity Recovery - $250 deductible	25,000	12.00
Equipment Breakdown Coverage	50,000	24.00

CREDITS	PERCENTAGE	SAVINGS
Account Credit	15%	$ -705.00
Burglar Alarm Credit	10%	-490.00

DEDUCTIBLE(S)	PERCENTAGE	AMOUNT
Section I	N/A	$ 5,000

LICENSE, TAX OR FEE:	PREMIUM
California Seismic Safety Fee	$ .15

**** REPRINTED FROM THE ARCHIVE. THE ORIGINAL TRANSACTION MAY INCLUDE ADDITIONAL FORMS ****

SAFECO INSURANCE COMPANY OF ILLINOIS
QUALITY CREST HOMEOWNERS POLICY DECLARATIONS

POLICY NUMBER: [redacted]

CONTINUED

TOTAL ANNUAL PREMIUM	$ 3,995.15

You may pay your premium in full or in installments. There is no installment fee for the following billing plans: Full Pay, Annual 2-Pay. Installment fees for all other billing plans are listed below. If more than one policy is billed on the installment bill, only the highest fee is charged. The fee is:
$0.00 per installment for recurring automatic deduction (EFT)
$0.00 per installment for recurring credit card or debit card
$2.00 per installment for all other payment methods

INSURABLE INTERESTS

[redacted]

**** REPRINTED FROM THE ARCHIVE. THE ORIGINAL TRANSACTION MAY INCLUDE ADDITIONAL FORMS ****

Safeco Insurance℠
A Liberty Mutual Company

OCTOBER 22, 2023

E BROOX RANDALL & SONS, INC.
4751 WILSHIRE BLVD #350
LOS ANGELES CA 90010-3849

POLICY NUMBER
[redacted]

AGENT TELEPHONE:
(800) 697-6122

MICHAEL EMERLING
RUTH BALLENGER
1209 INDIANA AVE
SOUTH PASADENA CA 91030-3611

EARTHQUAKE COVERAGE OFFER

Your residential property insurance policy does not cover earthquake damage to your home or its contents.

To cover earthquake damage to your home and its contents you need to purchase a separate earthquake insurance policy. The coverage provided by an earthquake insurance policy is different from, and typically more limited than, the coverage provided by your residential property insurance policy.

California law requires insurance companies to offer earthquake insurance in conjunction with a residential property insurance policy. If you do not accept the offer of earthquake insurance below within 30 days of the mailing of this notice, your insurance company shall presume that you have not accepted this offer of earthquake insurance.

You may purchase earthquake insurance coverage on the following terms:

		LIMITS:
A.	**Amount of Dwelling/Building Coverage Limit:**	$ 1,962,700
B.	**Deductible:**	15% / $ 294,405
C.	**Contents Coverage Limit:**	$ 5,000*
D.	**Additional Living Expenses Coverage Limit:**	$ 1,500*
E.	**Estimated Annual Premium:**	$ 3,796.00

The deductible represents the amount of damage your covered property must incur before the earthquake insurance coverage begins. If your covered loss is less than the applicable deductible, you may not receive any payment.

If you choose not to accept this offer within the 30-day period, you may apply for earthquake coverage at a later date.

Your insurance company contracts with the California Earthquake Authority (CEA) to offer earthquake insurance to its customers. For an additional premium, you can choose CEA coverage options such as higher limits for Contents or Additional Living Expenses, increased building code upgrade limits, or a lower deductible. You can also choose to buy certain CEA coverages separately.

Contact your insurance agent or your insurance company to obtain details regarding this offer of earthquake insurance and other coverage options.

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Go paperless at **www.sce.com/ebilling.** It's fast, easy and secure.

For billing and service inquiries
1-866-701-7868
www.sce.com

Your electricity bill

Customer Account
[redacted]

1209 INDIANA AVE
SOUTH PASADENA, CA
91030-3611

Date bill prepared
02/27/24

Amount due $1,067.12
Due by 03/18/24

SETTLEMENT BILL

Your account summary

Credit from previous billing	-$219.54
Payment Received 02/06/24	-$175.00
Credit balance	-$394.54
Your new charges	$1,461.66
Total amount you owe by 03/18/24	**$1,067.12**

This is your 12-month settlement bill

Your 12-month billing period for Net Energy Metering (NEM) is now complete. Your 12-month settlement charges are $1,361.27.

You are billed annually for your energy charges because they can be offset by energy credits over your 12-month billing period. Any charges not offset by credits are due now.

Summary of your billing detail

Service account	Service address	Billing period	Your rate	New charges
8002179852	1209 INDIANA AVE SOUTH PASADENA, CA	01/24/24 to 02/22/24	DOMESTIC (SCE)	$10.24
8002179852	1209 INDIANA AVE SOUTH PASADENA, CA	01/24/24 to 02/22/24	NEM DOMESTIC	$90.15
8002179852 Billing adjustment	1209 INDIANA AVE SOUTH PASADENA, CA	02/23/23 to 02/22/24	DOMESTIC (SCE)	$1,361.27
				$1,461.66

Please return the payment stub below with your payment and make your check payable to Southern California Edison.
If you want to pay in person, call 1-800-747-8908 for locations, or you can pay online at www.sce.com.

(14-574) Tear here — Tear here

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Customer account [redacted]
Please write this number on the memo line of your check. Make your check payable to Southern California Edison.

Amount due by 03/18/24 **$1,067.12**

Amount enclosed $

STMT 02272024 P

EMERLING, MICHAEL R
1209 INDIANA AVE
SOUTH PASADENA CA 91030-3611

P.O. BOX 600
ROSEMEAD, CA 91771-0002

[redacted]

SoCalGas

ACCOUNT NUMBER [redacted]
SERVICE FOR
RUTH L BALLENGER
1209 INDIANA AVE
S PASADENA CA 91030-3611

DATE MAILED Jan 16, 2024

1-800-427-2200 *English*
1-800-342-4545 *Español*
1-800-252-0259 *TTY*
M-F, 7am-8pm Sat, 7am-6pm
24 Hour Emergency Services Available

socalgas.com

H

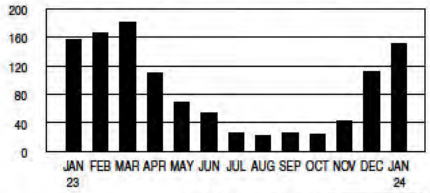
Account Summary

Amount of Last Bill			$236.98
Payment Received	01/04/24	THANK YOU	- 236.98
Current Charges			+ 302.24
Total Amount Due			**$302.24**

This bill reflects modified gas charges due to a rate change.

DATE DUE	Feb 5, 2024
AMOUNT DUE	$302.24

Gas Usage History *(Total Therms used)*



	Jan 23	Dec 23	Jan 24
Total Therms used	156	112	150
Daily average Therms	5.2	3.6	4.8
Days in billing cycle	30	31	31

We can help you manage higher bills this season with energy-saving tips and tools, assistance programs, and more. Learn more at socalgas.com/ManageHigherBills

Current Charges

Rate: GR - Residential **Climate Zone:** 1 **Baseline Allowance:** 50 Therms
Meter Number: 13353686 (*Next scheduled read date Feb 9 2024*) **Cycle:** 9

Billing Period	Days	Meter Number	Current Reading	- Previous Reading	= Difference	x Billing Factor	x BTU Factor	= Total Therms
12/11/23 - 01/11/24	31	13353686	9620	9475	145	1.000	1.035	150

GAS CHARGES			Amount($)
Customer Charge		31 Days x $.16438	5.10
Gas Transportation *(Details below)*		150 Therms	
	Baseline	Over Baseline	
Therms used	50	100	
Rate/Therm	$.88683	$1.32561	
Charge	$44.34	+ $132.56 =	176.90
Gas Commodity		150 Therms x $.53507	80.26
		Total Gas Charges	**$262.26**

TAXES & FEES ON GAS CHARGES		Amount($)
State Regulatory Fee	150 Therms x $.00229	.34
Public Purpose Surcharge	150 Therms x $.12369	18.55
South Pasadena City Users Tax	$281.15 x 7.50%	21.09
	Total Taxes and Fees on Gas Charges	**$39.98**
	Total Current Charges	**$302.24**

SoCalGas' gas commodity cost per therm for your billing period:
Jan. . . . . .$.49299 Dec. . . . . .$.55822

PLEASE KEEP THIS PORTION FOR YOUR RECORDS. (FAVOR DE GUARDAR ESTA PARTE PARA SUS REGISTROS.)
PLEASE RETURN THIS PORTION WITH YOUR PAYMENT. (FAVOR DE DEVOLVER ESTA PARTE CON SU PAGO.)

SoCalGas

Save Paper & Postage
PAY ONLINE
socalgas.com

ACCOUNT NUMBER [redacted]

DATE DUE	Feb 5, 2024
AMOUNT DUE	$302.24

CY 09 6527 0101

Please enter amount enclosed.
$

Write account number on check and make payable to SoCalGas.

RUTH L BALLENGER
1209 INDIANA AVE
S PASADENA CA 91030-3611

SoCalGas
PO BOX C
MONTEREY PARK CA 91756-5111

[redacted]

City of South Pasadena
PO BOX 889328
LOS ANGELES, CA 90088-9328

Utility Statement

On 07/01/23, the City of South Pasadena updated the Credit Card Transaction Fee to 3%. Merchant fees will be 2.99%. For inquires please call Finance at 626-403-7250. Billing inquiries, call 877-583-7933 or email southpasadena@munibilling.com.

PREVIOUS BALANCE	$251.71
PAYMENTS	$251.71
CURRENT CHARGES	$260.07
TOTAL DUE 06/21/2024	$260.07

NBP0520A 238 1 AV 0.507
7000000246 00.0004.0179 238/1

RUTH BALLENGER & MICHAEL EMERLING
1209 INDIANA AVE
SOUTH PASADENA CA 91030-3611

ACCOUNT NUMBER	[redacted]
CUSTOMER	RUTH BALLENGER & MICHAEL EMERLING
SERVICE ADDRESS	1209 INDIANA AVE SOUTH PASADENA CA 91030
BILL DATE	05/22/2024

Meter #	Start Read	End Read	Consumption
3306541	03/20/24 - 3141	05/14/24 - 3159	18

SERVICE	START	END	USAGE	AMOUNT
Water Meter 1"	03/20/2024	05/15/2024		$141.72
Water Consumption (18 @ $3.75) Per	03/20/2024 - 3141	05/14/2024 - 3159	18	$67.50
Efficiency Fee (18 @ $0.14) Per HCF	03/20/2024 - 3141	05/14/2024 - 3159	18	$2.52
Sewer Basic Charge	03/20/2024	05/15/2024		$30.45
Wastewater Discharge Fee	03/20/2024	05/15/2024		$2.00
UTAX				$15.88
Payment 04/26/2024				($251.71)
TOTAL CURRENT CHARGES				$260.07

Please detach below perforation and return with payment

ACCOUNT NUMBER	[redacted]
SERVICE ADDRESS	1209 INDIANA AVE
AMOUNT DUE	$260.07
DUE DATE	06/21/2024
NAME	RUTH BALLENGER & MICHAEL EMERLING
CUSTOMER ID COMPANY ID	1196214 1087

Return this stub. Write your account number on your check in the memo area. To pay by automated phone, call 877-556-7929. Use the code 129711 to sign-up online at https://southpasadena.secure.munibilling.com

City of South Pasadena 2022 Water Quality Report is now available online at https://rebrand.ly/2sknqxt

CITY OF SOUTH PASADENA
PO BOX 889328
LOS ANGELES, CA 90088-9328

[redacted]

Exhibit "C"

Secretary of the Interior's Standards for Rehabilitation

The Secretary of the Interior

Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings

The Standards (Department of Interior regulations, 36 CFR 67) pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features and the building's site and environment as well as attached, adjacent, or related new construction. The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and the environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 11

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: William Castrillon, Budget and Purchasing Manager
Alma Medina, Senior Management Analyst

SUBJECT: **CONSIDERATION OF APPROVAL OF THE THIRD AMENDMENT TO AN AGREEMENT WITH HDL SOFTWARE, LLC FOR BUSINESS LICENSE PROCESSING SERVICES TO EXTEND THE AGREEMENT TERM AND APPROPRIATION OF FUNDS**

Recommendation

It is recommended that the City Council consider:

1. Approving the Third Amendment to the Professional Services Agreement with HdL Software, LLC (HdL) for business license processing services through October 31, 2026;
2. Approve the appropriation of $122,300 from General Fund to cover the contract amendment expenses for the extension through October 31, 2025.

Executive Summary

The City of South Pasadena has been contracting out business license services since Fall 2018. The Finance Department planned to go out for a Request for Proposal (RFP), but this has proven difficult, as the Department has faced staff turnover that has not allowed them to follow through on the RFP. The current contract with HdL expires on October 31, 2024 and this proposed Amendment will extend the contract for two additional years, to allow the City time to plan and go through the proposal process.

Background

In November 2018, the City of South Pasadena entered into an agreement with HdL Software, LLC, to administer business license services for the local business community. Per City municipal code, businesses operating within South Pasadena, including landlords leasing three or more residential units, are required to obtain a current business license. This requirement is part of the City's efforts to monitor and support local businesses, integrate them into Economic Development initiatives, and provide essential public safety and inspection services.

Initially, business license services were handled in-house. However, the previous administration transitioned these responsibilities to HdL to achieve cost savings and streamline service delivery. HdL is a well-established provider working with numerous public agencies nationwide, offering a range of services that include business license management and detailed sales tax data analysis. This collaboration has allowed the City to enhance its business license process through an efficient online portal, improved communication channels, timely notifications, and increased accessibility to account history for business

owners.

City staff, in partnership with HdL representatives, continue to optimize the business license process, focusing on compliance and outreach post-COVID to foster a business-friendly environment. This amendment proposes extending the agreement with HdL, providing continuity for these essential services while allowing the City to plan for future service arrangements.

Analysis
The proposed contract extension with HdL Software, LLC, will allow the City of South Pasadena to maintain streamlined and user-friendly business license services. HdL's comprehensive approach ensures business owners have access to an efficient, online platform where they can apply for, renew, and pay for licenses, reducing administrative burdens and enhancing accessibility. The extended term will also allow City staff to continue refining the system in partnership with HdL, improving features such as user notifications, account history access, and other customer service elements vital to a positive experience.

The HdL platform also helps the City secure accurate business tax data, which is critical for maintaining robust revenue streams and avoiding potential tax losses. With this extended contract, the City can continue using HdL's Prime software system to ensure accurate data collection and reporting, enhancing compliance and revenue tracking without interruption.

The additional time provided by this extension will also allow the Finance Department to prepare for a comprehensive Request for Proposal (RFP) process, ensuring sufficient time to evaluate options thoroughly while preserving the continuity of services to the business community.

Fiscal Impact
This contract extension will cost $122,300 for the first year. The Finance Department is requesting an appropriation of $122,300 for the full cost of the contract extension for the first year in the General Fund Operating budget in account number 101-3010-3011-8170-000, for Fiscal Year 2024-25. Funds for Fiscal Year 2025-26 will be budgeted accordingly.

Key Performance Indicators and Strategic Plan
This item is in line with the Finance Department's Key Performance Indicator of Business License tracking. HdL provides the Finance Department with the number of businesses who are in or out of compliance and helps bring them into compliance.

Commission Review and Recommendation
This item was not reviewed by the Finance Commission.

Attachment:
Attachment No. 1- Proposed Amendment
Attachment No. 2 - Second Amendment
Attachment No. 3 - First Amendment
Attachment No. 4 - Original PSA

THIRD AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT

THIS THIRD AMENDMENT ("Third Amendment") is made and entered into on the 6th day of November, 2024 by and between the CITY OF SOUTH PASADENA ("City") and HdL Software, LLC ("Consultant").

RECITALS

WHEREAS, on November 17, 2018, the City effectuated the Professional Services Agreement with HdL Software, LLC to perform business license administration and software hosting services ("Agreement"); and

WHEREAS, on January 19, 2022, the City and Consultant entered into the First Amendment to the Agreement to extend the Term through October 31, 2023 and amend the compensation;

WHEREAS, on September 27, 2023, the City and Consultant entered into the Second Amendment to the Agreement to extend the Term through October 31, 2024;

WHEREAS, the parties desire to further extend the Term of the Agreement through October 31, 2026; and

NOW THEREFORE, THE CITY AND THE CONSULTANT AGREE AS FOLLOWS:

Section 1. Section 3.5 of the Agreement entitled "Termination Date" is hereby amended to read: "October, 31, 2026"

Section 2. All other terms, conditions, and provisions of the Agreement to the extent not modified by this Amendment, shall remain in full force and effect.

TO EFFECTUATE THIS AMENDMENT, the parties have caused their duly authorized representatives to execute this Amendment on the dates set forth below.

[Signatures on Next Page]

"CITY"
City of South Pasadena

By:_____
Signature

Printed: Donald E. Penman

Title: Interim City Manager

Date:_____

"Consultant"
HdL Software, LLC.

By: _____
Signature

Printed: Robert Gray

Title: CIO

Date:_____

Attest:

By:_____
Mark Perez,
Deputy City Clerk

Date: _____

Approved as to form:

By:_____
Roxanne Diaz, City Attorney

Date: _____

SECOND AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT

THIS SECOND AMENDMENT ("Second Amendment") is made and entered into on the 27th day of September, 2023 by and between the CITY OF SOUTH PASADENA ("City") and HdL Software, LLC ("Consultant").

RECITALS

WHEREAS, on November 17, 2018, the City effectuated the Professional Services Agreement with HdL Software, LLC to perform business license administration and software hosting services ("Agreement"); and

WHEREAS, on January 19, 2022, the City and Consultant entered into the First Amendment to the Agreement to extend the Term through October 31, 2023 and amend the compensation;

WHEREAS, the parties desire to further extend the Term of the Agreement through October 31, 2024; and

NOW THEREFORE, THE CITY AND THE CONSULTANT AGREE AS FOLLOWS:

Section 1. Section 3.5 of the Agreement entitled "Termination Date" is hereby amended to read: "October, 31, 2024"

Section 2. All other terms, conditions, and provisions of the Agreement to the extent not modified by this Amendment, shall remain in full force and effect.

TO EFFECTUATE THIS AMENDMENT, the parties have caused their duly authorized representatives to execute this Amendment on the dates set forth below.

[Signatures on Next Page]

"CITY"
City of South Pasadena

By: DocuSigned by: B0F60358A0F24D7...
Signature

Printed: Arminé Chaparyan

Title: City Manager

Date: 10/2/2023

"Consultant"
HdL Software, LLC.

By: DocuSigned by: Robert Gray D4C862557876418...
Signature

Printed: Robert Gray

Title: CIO

Date: 9/28/2023

Attest:

By: DocuSigned by: Mark Perez 8C28A8A8EFB14A7...
Mark Perez,
Deputy City Clerk

Date: 10/2/2023

Approved as to form:

By: DocuSigned by: Roxanne Diaz A7800E5CA8A241F...
Roxanne Diaz, City Attorney

Date: 9/28/2023

HDL SOFTWARE, LLC
NOVEMBER 2022

CONTRACT APPROVAL COVERSHEET

Project Name: Business License Administration Services		**Approval Authority**
Department: Finance Department		City Manager (< $25,000) ☒ City Council (> $25,000) ☐
Date: 11/8/2022		**City Council Approval Date:** 01/19/2022
Submitted By: Alma Medina	**Ext:** 233	**Agenda Item #:** 9

Contract Approval Routing

	Name	Approval (Initials)	Date
Contracts Coordinator	Alma Medina	AM DS	11/8/2022
Finance Director	Ken Louie	kl DS	11/9/2022
City Manager	Arminé Chaparyan	AC DS	11/9/2022
City Attorney	Andrew Jared	AJ	11/9/2022

Purpose of Contract/Scope of Services

Amendment No. 1 to Professional Services Agreement with HDL Software, LLC., to continue providing the City with specialized business license administration services, for a fee of $15.30 per new registration or processed account, for a term end date of October 31, 2023.

Document Checklist

Insurance Requirements Met? Yes ☒ No ☐ **Additional/Special Insurance or Bond Required:** Yes ☐ No ☐	**FPPC filing required?** Yes ☐ No ☒

Financials

Contract Amount: $15.30 per new registration or processed account with a CPI increase on January 1st of each calendar year	**Contract Term (or Expiration Date):** October 31, 2023
Accounts to Encumber: 101-7010-7011-8170-000	

FIRST AMENDMENT TO AGREEMENT FOR SERVICES

THIS AMENDMENT ("Amendment") is made and entered into on the 19th day of January, 2022 by and between the CITY OF SOUTH PASADENA ("City") and HdL Software, LLC ("Consultant").

RECITALS

WHEREAS, on November 17, 2018, the City effectuated the agreement with HdL Software, LLC to perform business license administration and software hosting services; and

WHEREAS, the Term of the Agreement is through October 31, 2023, with the option to extend upon written agreement of the parties; and

WHEREAS, the Consultant represents that it is fully qualified to perform such professional services by virtue of experience and training; and

WHEREAS, the payment format for services shall remain the same as previous years with the only change in cost reflected in the "cost per transaction processed", as amended; and

WHEREAS, the City and Consultant desire to extend the contract term by 24 months.

NOW, THEREFORE, THE CITY AND THE CONSULTANT AGREE AS FOLLOWS:

1. PARAGRAPH 3.2 "Agreement Administrator" is amended to incorporate the name of the current Interim Director of Finance, Kenneth Louie.

2. PARAGRAPH 3.4 "Commencement Date" is amended to read: "November 1, 2021".

3. PARAGRAPH 3.5 "Termination Date" is amended to read: "October, 31, 2023"

4. EXHIBIT B –COMPENSATION Paragraph 1.1 Compensation shall now read:

1.1. Compensation - HdL's compensation for performing Operations Management Services related to business license is a fee of $15.30 per new registration or processed account. City will be invoiced monthly or quarterly for activity during the prior period. For the purpose of compensation calculation, processed account means any account for which renewals/returns are processed or which were sent a renewal notice.

1.2. CPI Adjustments - Fees will be increased as of January 1st of each calendar year with reference to the 12-month percent change in the most recently published annual Consumer Price Index for All Urban Consumers (CPI-U), West Region, as reported by the U.S. Bureau of Labor Statistics (the "CPI Change"). Each annual increase in the Fees will be equal to the greater of two percent (2%) or the

actual CPI Change and the lesser of ten percent (10%) or the actual CPI Change. For example, if the actual CPI Change is 1.5%, then the annual increase will be 2%, if the actual CPI Change is 3.5%, then the annual increase will be 3.5%, and if the actual CPI Change is 12%, then the annual increase will be 10%.

5. PROVISIONS OF AGREEMENT. All other terms, conditions, and provisions of the Agreement to the extent not modified by this Amendment, shall remain in full force and effect.

TO EFFECTUATE THIS AMENDMENT, the parties have caused their duly authorized representatives to execute this Amendment on the dates set forth below.

"CITY"
City of South Pasadena

By: DocuSigned by: Armine Chaparyan B6F60358A0F24D7... *Signature*

Printed: Arminé Chaparyan

Title: City Manager

Date: 11/9/2022

"Consultant"
HdL Software, LLC.

By: *Signature*

Printed: Robert Gray

Title: CIO

Date: 1/28/2022

Attest:

By: DocuSigned by: Desiree Jimenez, CMC 8C28A8A8EFB14A7...
Desiree Jimenez, CMC
Chief City Clerk

Date: 11/14/2022

Approved as to form:

By: DocuSigned by: Andrew Jared 0E98AF29902B451...
Andrew L. Jared, City Attorney

Date: 11/9/2022

PROFESSIONAL SERVICES AGREEMENT FOR CONSULTANT SERVICES

(City of South Pasadena / HdL Software)

1. IDENTIFICATION

This PROFESSIONAL SERVICES AGREEMENT ("Agreement") is entered into by and between the City of South Pasadena, a California municipal corporation ("City"), and HdL Software, a California LLC ("Consultant").

2. RECITALS

2.1. City has determined that it requires the following professional services from a consultant: Business license administration and software hosting services.

2.2. Consultant represents that it is fully qualified to perform such professional services by virtue of its experience and the training, education and expertise of its principals and employees. Consultant further represents that it is willing to accept responsibility for performing such services in accordance with the terms and conditions set forth in this Agreement.

2.3. Consultant represents that it has no known relationships with third parties, City Council members, or employees of City which would (1) present a conflict of interest with the rendering of services under this Agreement under Government Code Section 1090, the Political Reform Act (Government Code Section 81000 *et seq.*), or other applicable law, (2) prevent Consultant from performing the terms of this Agreement, or (3) present a significant opportunity for the disclosure of confidential information.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions herein contained, City and Consultant agree as follows:

3. DEFINITIONS

3.1. "Scope of Services": Such professional services as are set forth in Exhibit A and incorporated herein by this reference.

3.2. "Agreement Administrator": The Agreement Administrator for this project is Craig Koehler, Finance Director. The Agreement Administrator shall be the principal point of contact at the City for this project. All services under this Agreement shall be performed at the request of the Agreement Administrator. The Agreement Administrator will establish the timetable for completion of services and any interim milestones. City reserves the right to change this designation upon written notice to Consultant.

3.3. "Approved Fee Schedule": Consultant's compensation rates are set forth in the fee schedule attached hereto as Exhibit B and incorporated herein by this reference. This fee schedule shall remain in effect for the duration of this Agreement unless modified in writing by mutual agreement of the parties.

3.4. "Commencement Date": November 1, 2018.

3.5. "Termination Date": October 31, 2021.

4. TERM

The term of this Agreement shall commence at 12:00 a.m. on the Commencement Date and shall expire at 11:59 p.m. on the Termination Date. The term may be extended for two additional two year terms at the option of the City and Consultant, unless otherwise extended by written agreement of the parties or terminated earlier under Section 18 ("Termination") below. Consultant may request extensions of time to perform the services required hereunder. Such extensions shall be effective if authorized in advance by City in writing and incorporated in written amendments to this Agreement.

5. CONSULTANT'S DUTIES

5.1. **Services**. Consultant shall perform the services identified in the Scope of Services. City shall have the right to request, in writing, changes in the Scope of Services. Any such changes mutually agreed upon by the parties, and any corresponding increase or decrease in compensation, shall be incorporated by written amendment to this Agreement.

5.2. **Coordination with City**. In performing services under this Agreement, Consultant shall coordinate all contact with City through its Agreement Administrator.

5.3. **Business License.** Consultant shall obtain and maintain in force a City business license for the duration of this Agreement.

5.4. **Professional Standards.** Consultant shall perform all work to the standards of Consultant's profession and in a manner reasonably satisfactory to City. Consultant shall keep itself fully informed of and in compliance with all local, state, and federal laws, rules, and regulations in any manner affecting the performance of this Agreement, including all Cal/OSHA requirements, the conflict of interest provisions of Government Code § 1090 and the Political Reform Act (Government Code § 81000 et seq.).

5.5. **Avoid Conflicts.** During the term of this Agreement, Consultant shall not perform any work for another person or entity for whom Consultant was not working at the Commencement Date if such work would present a conflict interfering with performance under this Agreement. However, City may consent in writing to Consultant's performance of such work.

5.6. **Appropriate Personnel.** Consultant has, or will secure at its own expense, all personnel required to perform the services identified in the Scope of Services. All such services shall be performed by Consultant or under its supervision, and all personnel engaged in the work shall be qualified to perform such services. Josh Davis, Director of Professional Services, shall be Consultant's project administrator and shall have direct responsibility for management of Consultant's performance under this Agreement. No change shall be made in Consultant's project administrator without City's prior written consent.

5.7. **Substitution of Personnel.** Any persons named in the proposal or Scope of Services constitutes a promise to the City that those persons will perform and coordinate their respective services under this Agreement. Should one or more of such personnel become unavailable, Consultant may substitute other personnel of at least equal competence upon written approval of City. If City and Consultant cannot agree as to the substitution of key personnel, City may terminate this Agreement for cause.

5.8. **Permits and Approvals.** Consultant shall obtain, at its sole cost and expense, all permits and regulatory approvals necessary for Consultant's performance of this Agreement. This includes, but shall not be limited to, professional licenses, encroachment permits and building and safety permits and inspections.

5.9. **Notification of Organizational Changes.** Consultant shall notify the Agreement Administrator, in writing, of any change in name, ownership or control of Consultant's firm or of any subcontractor. Change of ownership or control of Consultant's firm may require an amendment to this Agreement.

5.10. **Records.** Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to City under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to Consultant under this Agreement. All such documents shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of City. In addition, pursuant to Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars, all such documents and this Agreement shall be subject to the examination and audit of the State Auditor, at the request of City or as part of any audit of City, for a period of three (3) years after final payment under this Agreement.

6. SUBCONTRACTING

6.1. **General Prohibition.** This Agreement covers professional services of a specific and unique nature. Except as otherwise provided herein, Consultant shall not assign or

transfer its interest in this Agreement or subcontract any services to be performed without amending this Agreement.

6.2. **Consultant Responsible.** Consultant shall be responsible to City for all services to be performed under this Agreement.

6.3. **Identification in Fee Schedule.** All subcontractors shall be specifically listed and their billing rates identified in the Approved Fee Schedule, Exhibit B. Any changes must be approved by the Agreement Administrator in writing as an amendment to this Agreement.

6.4. **Compensation for Subcontractors.** City shall pay Consultant for work performed by its subcontractors, if any, only at Consultant's actual cost plus an approved mark-up as set forth in the Approved Fee Schedule, Exhibit B. Consultant shall be liable and accountable for any and all payments, compensation, and federal and state taxes to all subcontractors performing services under this Agreement. City shall not be liable for any payment, compensation, or federal and state taxes for any subcontractors.

7. COMPENSATION

7.1. **General.** City agrees to compensate Consultant for the services provided under this Agreement, and Consultant agrees to accept payment in accordance with the Fee Schedule in full satisfaction for such services. Compensation shall not exceed the Maximum Amount. Consultant shall not be reimbursed for any expenses unless provided for in this Agreement or authorized in writing by City in advance.

7.2. **Invoices.** Consultant shall submit to City an invoice, on a monthly basis or as otherwise agreed to by the Agreement Administrator, for services performed pursuant to this Agreement. Each invoice shall identify the Maximum Amount, the services rendered during the billing period, and the amount due for the invoice.

7.3. **Taxes.** City shall not withhold applicable taxes or other payroll deductions from payments made to Consultant except as otherwise required by law. Consultant shall be solely responsible for calculating, withholding, and paying all taxes.

7.4. **Disputes.** The parties agree to meet and confer at mutually agreeable times to resolve any disputed amounts contained in an invoice submitted by Consultant.

7.5. **Additional Work.** Consultant shall not be reimbursed for any expenses incurred for work performed outside the Scope of Services unless prior written approval is given by the City through a fully executed written amendment. Consultant shall not undertake any such work without prior written approval of the City.

7.6. **City Satisfaction as Precondition to Payment.** Notwithstanding any other terms of this Agreement, no payments shall be made to Consultant until City is satisfied that the services are satisfactory.

7.7. **Right to Withhold Payments.** If Consultant fails to provide a deposit or promptly satisfy an indemnity obligation described in Section 11, City shall have the right to withhold payments under this Agreement to offset that amount.

8. PREVAILING WAGES

Consultant is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. Consultant shall defend, indemnify, and hold the City, tis elected officials, officers, employees, and agents free and harmless form any claim or liability arising out of any failure or alleged failure of Consultant to comply with the Prevailing Wage Laws.

9. OWNERSHIP OF WRITTEN PRODUCTS

All reports, documents or other written material ("written products" herein) developed by Consultant in the performance of this Agreement shall be and remain the property of City without restriction or limitation upon its use or dissemination by City except as provided by law. Consultant may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by Consultant.

Proprietary Information of Consultant. The term "proprietary information" means any information that relates to Consultant's computer or data processing programs; data processing applications, routines, subroutines, techniques or systems; or business processes. City shall hold in confidence and shall not disclose to any other party any of Consultant's proprietary information in connection with this Agreement, or otherwise learned or obtained by City in connection with this Agreement, unless disclosure is required under federal or state law, including without limitation the Freedom of Information Act or the Public Records Request Act. Consultant shall retain ownership and rights to all proprietary information. The obligations imposed by this Section shall survive any expiration or termination of this Agreement.

10. RELATIONSHIP OF PARTIES

10.1. **General.** Consultant is, and shall at all times remain as to City, a wholly independent contractor.

10.2. **No Agent Authority.** Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise to act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not represent that it is, or that any of its agents or employees are, in any manner employees of City.

10.3. **Independent Contractor Status.** Under no circumstances shall Consultant or its employees look to the City as an employer. Consultant shall not be entitled to any benefits. City makes no representation as to the effect of this independent contractor relationship on Consultant's previously earned California Public Employees Retirement System ("CalPERS") retirement benefits, if any, and Consultant specifically assumes the responsibility for making such a determination. Consultant shall be responsible for all reports and obligations including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation, and other applicable federal and state taxes.

10.4. **Indemnification of CalPERS Determination.** In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement claims or is determined by a court of competent jurisdiction or CalPERS to be eligible for enrollment in CalPERS as an employee of the City, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for CalPERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

11. INDEMNIFICATION

11.1 **Definitions.** For purposes of this Section 11, "Consultant" shall include Consultant, its officers, employees, servants, agents, or subcontractors, or anyone directly or indirectly employed by either Consultant or its subcontractors, in the performance of this Agreement. "City" shall include City, its officers, agents, employees and volunteers.

11.2 **Consultant to Indemnify City.** To the fullest extent permitted by law, Consultant shall indemnify, hold harmless, and defend City from and against any and all claims, losses, costs or expenses for any personal injury or property damage arising out of or in connection with Consultant's alleged negligence, recklessness or willful misconduct or other wrongful acts, errors or omissions of Consultant or failure to comply with any provision in this Agreement.

11.3 **Scope of Indemnity.** Personal injury shall include injury or damage due to death or injury to any person, whether physical, emotional, consequential or otherwise, Property damage shall include injury to any personal or real property. Consultant shall not be required to indemnify City for such loss or damage as is caused by the sole active negligence or willful misconduct of the City.

11.4 **Attorney's Fees.** Such costs and expenses shall include reasonable attorneys' fees for counsel of City's choice, expert fees and all other costs and fees of litigation. Consultant shall not be entitled to any refund of attorneys' fees, defense costs or expenses in the event that it is adjudicated to have been non-negligent.

11.5 **Defense Deposit.** The City may request a deposit for defense costs from Consultant with respect to a claim. If the City requests a defense deposit, Consultant shall provide it within 15 days of the request.

11.6 **Waiver of Statutory Immunity.** The obligations of Consultant under this Section 11 are not limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives its statutory immunity under such statutes or laws as to City.

11.7 **Indemnification by Subcontractors.** Consultant agrees to obtain executed indemnity agreements with provisions identical to those set forth here in this Section 11 from each and every subcontractor or any other person or entity involved in the performance of this Agreement on Consultant's behalf.

11.8 **Insurance Not a Substitute.** City does not waive any indemnity rights by accepting any insurance policy or certificate required pursuant to this Agreement. Consultant's indemnification obligations apply regardless of whether or not any insurance policies are determined to be applicable to the claim, demand, damage, liability, loss, cost or expense.

12. INSURANCE

12.1. **Insurance Required.** Consultant shall maintain insurance as described in this section and shall require all of its subcontractors, consultants, and other agents to do the same. Approval of the insurance by the City shall not relieve or decrease any liability of Consultant Any requirement for insurance to be maintained after completion of the work shall survive this Agreement.

12.2. **Documentation of Insurance.** City will not execute this agreement until it has received a complete set of all required documentation of insurance coverage. However, failure to obtain the required documents prior to the work beginning shall not waive the Consultant's obligation to provide them. Consultant shall file with City:

- Certificate of Insurance, indicating companies acceptable to City, with a Best's Rating of no less than A:VII showing. The Certificate of Insurance must include the following reference: HdL Software Consulting Services
- Documentation of Best's rating acceptable to the City.
- Original endorsements effecting coverage for all policies required by this Agreement.
- City reserves the right to obtain a full certified copy of any Insurance policy and endorsements. Failure to exercise this right shall not constitute a waiver of the right to exercise later.

12.3. **Coverage Amounts.** Insurance coverage shall be at least in the following minimum amounts:

• Professional Liability Insurance:	$1,000,000 per occurrence, $2,000,000 aggregate
• General Liability:	
• General Aggregate:	$1,000,000
• Products Comp/Op Aggregate	$1,000,000
• Personal & Advertising Injury	$1,000,000
• Each Occurrence	$1,000,000
• Fire Damage (any one fire)	$ 100,000
• Medical Expense (any 1 person)	$ 10,000
• Workers' Compensation:	
• Workers' Compensation	Statutory Limits
• EL Each Accident	$1,000,000
• EL Disease - Policy Limit	$1,000,000
• EL Disease - Each Employee	$1,000,000
• Automobile Liability	
• Any vehicle, combined single limit	$1,000,000

Any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements or limits shall be available to the additional insured. Furthermore, the requirements for coverage and limits shall be the greater of (1) the minimum coverage and limits specified in this Agreement, or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured

12.4. **General Liability Insurance.** Commercial General Liability Insurance shall be no less broad than ISO form CG 00 01. Coverage must be on a standard Occurrence form. Claims-Made, modified, limited or restricted Occurrence forms are not acceptable.

12.5. **Worker's Compensation Insurance.** Consultant is aware of the provisions of Section 3700 of the Labor Code which requires every employer to carry Workers' Compensation (or to undertake equivalent self-insurance), and Consultant will comply with such provisions before commencing the performance of the work of this Agreement. If such insurance is underwritten by any agency other than the State Compensation Fund, such agency shall be a company authorized to do business in the State of California.

12.6. **Automobile Liability Insurance.** Covered vehicles shall include owned if any, non-owned, and hired automobiles and, trucks.

12.7. **Professional Liability Insurance or Errors & Omissions Coverage.** The deductible or self-insured retention may not exceed $50,000. If the insurance is on a Claims-Made basis, the retroactive date shall be no later than the commencement of the work. Coverage shall be continued for two years after the completion of the work by one of the following: (1) renewal of the existing policy; (2) an extended reporting period endorsement; or (3) replacement insurance with a retroactive date no later than the commencement of the work under this Agreement.

12.8. **Claims-Made Policies.** If any of the required policies provide coverage on a claims-made basis the Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work. Claims-Made Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

12.9. **Additional Insured Endorsements.** The City, its City Council, Commissions, officers, and employees of South Pasadena must be endorsed as an additional insured for each policy required herein, other than Professional Errors and Omissions and Worker's Compensation, for liability arising out of ongoing and completed operations by or on behalf of the Consultant. Consultant's insurance policies shall be primary as respects any claims related to or as the result of the Consultant's work. Any insurance, pooled coverage or self-insurance maintained by the City, its elected or appointed officials, directors, officers, agents, employees, volunteers, or consultants shall be non-contributory. All endorsements shall be signed by a person authorized by the insurer to bind coverage on its behalf. General liability coverage can be provided using an endorsement to the Consultant's insurance at least as broad as ISO Form CG 20 10 11 85 or both CG 20 10 and CG 20 37.

12.10. **Failure to Maintain Coverage.** In the event any policy is canceled prior to the completion of the project and the Consultant does not furnish a new certificate of insurance prior to cancellation, City has the right, but not the duty, to obtain the required insurance and deduct the premium(s) from any amounts due the Consultant under this Agreement. Failure of the Consultant to maintain the insurance required by this Agreement, or to comply with any of the requirements of this section, shall constitute a material breach of this Agreement.

12.11. **Notices.** Contractor shall provide immediate written notice if (1) any of the required insurance policies is terminated; (2) the limits of any of the required policies are reduced; (3) or the deductible or self-insured retention is increased. Consultant shall provide no less than 30 days' notice of any cancellation or material change to policies

required by this Agreement. Consultant shall provide proof that cancelled or expired policies of insurance have been renewed or replaced with other policies providing at least the same coverage. Such proof will be furnished at least two weeks prior to the expiration of the coverages. The name and address for Additional Insured Endorsements, Certificates of Insurance and Notices of Cancellation is: City of South Pasadena, Attn: Mariam Lee Ko, Human Resources Manager and Interim Finance Director, South Pasadena, CA 95945.

12.12. **Consultant's Insurance Primary.** The insurance provided by Consultant, including all endorsements, shall be primary to any coverage available to City. Any insurance or self-insurance maintained by City and/or its officers, employees, agents or volunteers, shall be in excess of Consultant's insurance and shall not contribute with it.

12.13. **Waiver of Subrogation.** Consultant hereby waives all rights of subrogation against the City. Consultant shall additionally waive such rights either by endorsement to each policy or provide proof of such waiver in the policy itself.

12.14. **Report of Claims to City.** Consultant shall report to the City, in addition to the Consultant's insurer, any and all insurance claims submitted to Consultant's insurer in connection with the services under this Agreement.

12.15. **Premium Payments and Deductibles.** Consultant must disclose all deductibles and self-insured retention amounts to the City. The City may require the Consultant to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within retention amounts. Ultimately, City must approve all such amounts prior to execution of this Agreement.

City has no obligation to pay any premiums, assessments, or deductibles under any policy required in this Agreement. Consultant shall be responsible for all premiums and deductibles in all of Consultant's insurance policies. The amount of deductibles for insurance coverage required herein are subject to City's approval.

12.16. **Duty to Defend and Indemnify.** Consultant's duties to defend and indemnify City under this Agreement shall not be limited by the foregoing insurance requirements and shall survive the expiration of this Agreement.

13. MUTUAL COOPERATION

13.1. **City Cooperation in Performance.** City shall provide Consultant with all pertinent data, documents and other requested information as is reasonably available for the proper performance of Consultant's services under this Agreement.

13.2. **Consultant Cooperation in Defense of Claims.** If any claim or action is brought against City relating to Consultant's performance in connection with this Agreement,

Consultant shall render any reasonable assistance that City may require in the defense of that claim or action.

14. NOTICES

Any notices, bills, invoices, or reports required by this Agreement shall be deemed received on: (i) the day of delivery if delivered by hand, facsimile or overnight courier service during Consultant's and City's regular business hours; or (ii) on the third business day following deposit in the United States mail if delivered by mail, postage prepaid, to the addresses listed below (or to such other addresses as the parties may, from time to time, designate in writing).

If to City

Craigh Koehler, Finance Director
City of South Pasadena
1414 Mission Street
South Pasadena, CA 91030
Telephone: (626) 403-7240
Facsimile: (626) 403-7241

If to Consultant

Attn: Contracts
HdL Software
120 S. State College Blvd, Suite 200
Brea, CA 92821
Telephone: 714-879-5000

With courtesy copy to:

Teresa L. Highsmith, Esq.
South Pasadena City Attorney
Colantuono, Highsmith & Whatley, PC
790 E. Colorado Blvd. Ste. 850
Pasadena, CA 91101
Telephone: (213) 542-5700
Facsimile: (213) 542-5710

15. SURVIVING COVENANTS

The parties agree that the covenants contained in paragraph 5.11 (Records), paragraph 10.4 (Indemnification of CalPERS Determination), Section 11 (Indemnity), paragraph 12.8 (Claims-Made Policies), paragraph 13.2 (Consultant Cooperation in Defense of Claims), and paragraph 18.1 (Confidentiality) of this Agreement shall survive the expiration or termination of this Agreement, subject to the provisions and limitations of this Agreement and all otherwise applicable statutes of limitations and repose.

16. TERMINATION

16.1. **City Termination.** City may terminate this Agreement for any reason on ten calendar days' written notice to Consultant. Consultant agrees to cease all work under this

Agreement on or before the effective date of any notice of termination. All City data, documents, objects, materials or other tangible things shall be returned to City upon the termination or expiration of this Agreement.

16.2. **Consultant Termination.** Consultant may terminate this Agreement for a material breach of this Agreement upon 30 days' notice.

16.3. **Compensation Following Termination.** Upon termination, Consultant shall be paid based on the work satisfactorily performed at the time of termination. In no event shall Consultant be entitled to receive more than the amount that would be paid to Consultant for the full performance of the services required by this Agreement. The City shall have the benefit of such work as may have been completed up to the time of such termination.

16.4. **Remedies.** City retains any and all available legal and equitable remedies for Consultant's breach of this Agreement.

17. INTERPRETATION OF AGREEMENT

17.1. **Governing Law.** This Agreement shall be governed and construed in accordance with the laws of the State of California.

17.2. **Integration of Exhibits.** All documents referenced as exhibits in this Agreement are hereby incorporated into this Agreement. In the event of any material discrepancy between the express provisions of this Agreement and the provisions of any document incorporated herein by reference, the provisions of this Agreement shall prevail. This instrument contains the entire Agreement between City and Consultant with respect to the transactions contemplated herein. No other prior oral or written agreements are binding upon the parties. Amendments hereto or deviations here from shall be effective and binding only if made in writing and executed on by City and Consultant.

17.3. **Headings.** The headings and captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph thereof at the head of which it appears, the language of the section or paragraph shall control and govern in the construction of this Agreement.

17.4. **Pronouns.** Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

17.5. **Severability.** If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, then such term or provision shall be amended to, and solely to the extent necessary to, cure such invalidity or unenforceability, and shall be enforceable in its amended form. In such event, the remainder of this Agreement, or the application of such term or

provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected, and each term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

17.6. **No Presumption Against Drafter.** Each party had an opportunity to consult with an attorney in reviewing and drafting this agreement. Any uncertainty or ambiguity shall not be construed for or against any party based on attribution of drafting to any party.

18. GENERAL PROVISIONS

18.1. **Confidentiality.** All data, documents, discussion, or other information developed or received by Consultant for performance of this Agreement are deemed confidential and Consultant shall not disclose it without prior written consent by City. City shall grant such consent if disclosure is legally required. All City data shall be returned to City upon the termination or expiration of this Agreement.

18.2. **Conflicts of Interest.** Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. Consultant further agrees to file, or shall cause its employees or subcontractor to file, a Statement of Economic Interest with the City's Filing Officer if required under state law in the performance of the services. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer, or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

18.3. **Non-assignment.** Consultant shall not delegate, transfer, subcontract or assign its duties or rights hereunder, either in whole or in part, without City's prior written consent, and any attempt to do so shall be void and of no effect. City shall not be obligated or liable under this Agreement to any party other than Consultant.

18.4. **Binding on Successors.** This Agreement shall be binding on the successors and assigns of the parties.

18.5. **No Third-Party Beneficiaries.** Except as expressly stated herein, there is no intended third-party beneficiary of any right or obligation assumed by the parties.

18.6. **Time of the Essence.** Time is of the essence for each and every provision of this Agreement.

18.7. **Non-Discrimination.** Consultant shall not discriminate against any employee or applicant for employment because of race, sex (including pregnancy, childbirth, or

related medical condition), creed, national origin, color, disability as defined by law, disabled veteran status, Vietnam veteran status, religion, age (40 and above), medical condition (cancer-related), marital status, ancestry, or sexual orientation. Employment actions to which this provision applies shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; or in terms, conditions or privileges of employment, and selection for training. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, the provisions of this nondiscrimination clause.

18.8. **Waiver.** No provision, covenant, or condition of this Agreement shall be deemed to have been waived by City or Consultant unless in writing signed by one authorized to bind the party asserted to have consented to the waiver. The waiver by City or Consultant of any breach of any provision, covenant, or condition of this Agreement shall not be deemed to be a waiver of any subsequent breach of the same or any other provision, covenant, or condition.

18.9. **Excused Failure to Perform.** Consultant shall not be liable for any failure to perform if Consultant presents acceptable evidence, in City's sole judgment, that such failure was due to causes beyond the control and without the fault or negligence of Consultant.

18.10. **Remedies Non-Exclusive.** Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance from the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any or all of such other rights, powers or remedies.

18.11. **Attorneys' Fees.** If legal action shall be necessary to enforce any term, covenant or condition contained in this Agreement, the prevailing party shall be entitled to an award of reasonable attorneys' fees and costs expended in the action.

18.12. **Venue.** The venue for any litigation shall be Los Angeles County, California and Consultant hereby consents to jurisdiction in Los Angeles County for purposes of resolving any dispute or enforcing any obligation arising under this Agreement.

TO EFFECTUATE THIS AGREEMENT, the parties have caused their duly authorized representatives to execute this Agreement on the dates set forth below.

"City"
City of South Pasadena

By: _____
Signature

Printed: STEPHANIE DE WOLFE

Title: CITY MANAGER

Date: 11/07/2018

"Consultant"
HdL Software LLC

By: _____
Signature

Printed: Robert Gray

Title: President

Date: 11-6-2018

Attest:

By: _____
Evelyn G. Zneimer, City Clerk

Date: 11/07/2018

Approved as to form:

By: _____
Teresa L. Highsmith, City Attorney

Date: 11/07/2018

EXHIBIT A - SCOPE OF SERVICES

BUSINESS LICENSE TAX ADMINISTRATION SERVICES

1. **Business Tax Operations Management**
   - 1.1. **Tax Registration Database Management** – HdL will transfer the City's existing databases as they relate to business license into HdL's internal administration tools. HdL will maintain the data and provide copies of data or reports at the City's request. City will not be required to use or maintain any software in house for managing the business license registry.
   - 1.2. **Renewal Processing** – Send active business license accounts a renewal notice within 30 days of the renewal period end date. Accounts will receive all applicable forms necessary to complete the renewal process.
   - 1.3. **New Account Processing** – HdL will process any new business license applications within two to three business days.
   - 1.4. **Payment Posting/Processing** – HdL will process all payments for new and renewal accounts. License accounts will be updated with payment information and revenues will be remitted to the City net banking and related processing fees by the 15th of the month following the Licensee's date of payment.
   - 1.5. **Business Support Center** – HdL will provide businesses with multiple support options for registering, renewing, making payments and for general inquiries. Businesses will have access to HdL's license specialists Monday through Friday, 8:00am to 5:00pm Pacific, via phone, mail, e-mail, fax, and the Business Support Center On-Line.
   - 1.6. **On-Line Filing & Payment Processing** – HdL will make available options for businesses to visit a website, linked to the City's website, to submit online filing and payment transactions.
2. **Local Tax Compliance Services** – HdL will ensure a level playing field for the business community and maximize revenues to the City. Discovery services will be conducted to identify and register businesses which are subject to licensure or taxation. Audit services will identify under reported tax liability for business and lodging providers. Collections Services will collect known debt from businesses that did not pay in full during the registration or renewal process. All compliance services will be performed by HdL as requested by the City.
   - 2.1. **Discovery** – Discovery services are designed to identify entities subject to licensure/taxation that are not currently registered or otherwise non-compliant.
     - 2.1.1. **Lead Identification** – Develop a list of entities subject to licensure/taxation within the City.
     - 2.1.2. **Exception Resolution** – Compare the list to City registration databases to remove properly registered businesses and identify and remove other potential exceptions.
     - 2.1.3. **Compliance Communication Process** – Initiate contact with confirmed entities through a series of City approved communication methods. HdL will make every effort to simplify the process for taxpayers, utilizing a variety of mediums for communication including mail, telephone, email, and web-site access. Potential non-compliant entities are notified of their options to comply or dispute their non-compliant status. HdL offers extended office hours for support via our Business Support Center available to taxpayers 8:00am – 5:00pm Monday - Friday.
     - 2.1.4. **Document Submission / Processing** – Review Taxpayer submissions such as applications for completion and accuracy prior to processing. Collect additional documentation such as a home occupation permit and forward to other City departments either as a pre-requisite

or as a courtesy for the taxpayer and other departments. All submissions are filed and stored electronically and made available to the City upon request.

2.1.5. **Invoicing** – Once an application has been approved, HdL shall invoice the entity indicating detailed tax calculations and balances owed. Taxpayers are given the opportunity to pay their balances via mail, online, and other methods. HdL will provide Taxpayers continued access to the Business Support Center for any questions or disputes arising from the invoice process.

2.1.6. **Remittance** – Upon collection of all requirements including payment, application and other prerequisites, HdL will prepare a remittance package including payment documentation as well as copies of all taxpayer correspondence and relevant information. Remittances are done on no less than a monthly basis. Remittances packages done electronically via the HdL electronic remittance process will include Applications and other relevant information an electronic format. Revenues received are deposited into an HdL trust account and funds are distributed to the City in one payment net HdL's fees in accordance with Section 1.4.

2.2. **Audit** – Audit services are designed to identify businesses that are registered but not properly reporting or paying the correct amounts. Formal audits will only be performed as requested by the City. Services to be performed may include:

2.2.1. Identify potential underreporting and/or misclassified businesses by comparing City records with HdL business inventories.

2.2.2. Review/audit entities mutually agreed to by City and HdL that are identified as potential underreporting businesses or other entities requiring review.

2.2.3. Submit audit summaries to City staff and meet with staff to review and discuss further actions.

2.2.4. Educate businesses on proper reporting practices.

2.2.5. Invoice and collect identified deficiencies.

2.3. **City's responsibilities**

2.3.1. Data – City will provide its relevant business databases, such as the business license registry (registrations and payments), and any other information necessary for the compliance process or to facilitate HdL's invoicing of services, to HdL according to a schedule acceptable to both HdL and the City. City agrees to provide the data as long as this Agreement is active, and thereafter for so long as HdL's right to invoice for services rendered continues.

2.3.2. City agrees to use reasonable and diligent efforts to collect, or to assist HdL in the collection of, deficiencies identified by HdL pursuant to this Agreement.

EXHIBIT B - COMPENSATION

For performing and completing services pursuant to Exhibit "A" Scope of Services, Consultant shall be compensated by City for its services as follows.

1. **Business Tax Operations Management Services**
   - 1.1. **Compensation** - HdL's compensation for performing Operations Management Services related to business license is a fee of $14 per new registration or processed account for the first year of service, $15 for the second year of service, and then increased by the CPI Adjustment for each year thereafter. City will be invoiced monthly or quarterly for activity during the prior period. For the purpose of compensation calculation, processed account means any account for which renewals/returns are processed or which were sent a renewal notice.
   - 1.2. **CPI Adjustment** – Fees for Operations Management Services are adjusted at the beginning of each fiscal year by the calendar year change in the Consumer Price Index – All Urban Consumers, Los Angeles region, as reported by the Bureau of Labor Statistics. Each annual adjustment will not be less than two percent (2%) or greater than ten percent (10%).
   - 1.3. **Travel Expenses** – Travel and lodging expenses are billed at cost and apply to all meetings; including process, pre-installation, installation, training, and support. HdL is dedicated to conserving public funds, and ensures any travel costs are indeed required and reasonable.
2. **Local Tax Compliance Services**
   - 2.1. **Discovery** – HdL's fee for performing discovery services shall be a contingency fee of 35% of the revenues received as a result of the service. This fee applies to monies received for the current tax/license period and any other prior period collected, including monies received for taxes, penalties, interest, and fees.
     - 2.1.1. **City Discovery Discount** – HdL's fee for following up on accounts that are identified and confirmed as non-compliant by the City shall be a contingency fee of 25% of the revenues received as a result of the service. This fee also applies to delinquent business license tax accounts referred by the City as failing to make payment or properly renew an existing license.
   - 2.2. **Audit** – HdL's fee for performing Audit services shall be a contingency fee of 40% of the revenues received as a result of the service. This fee applies to monies received for the current tax/license period and any other prior period collected, including monies received for taxes, penalties, interest, and fees.
   - 2.3. **Collection** – HdL's fee for performing collections services shall be a contingency fee of 25% of the revenues received as a result of the service. This fee applies to monies received for the current tax/license period and any other prior period collected, including monies received for taxes, penalties, interest, and fees.
   - 2.4. **Option to waive tax recovery** – City may, at its discretion, elect to waive or reduce the tax recovery for a business. Should the City elect to waive all or a portion of the deficiency identified by HdL, HdL shall be entitled to compensation in the amount of one half (1/2) of the compensation HdL would have otherwise earned on the waived/reduced amount. Deficiencies which are uncollectable due to insolvency or dissolution of the customer, or for deficiencies which are otherwise incapable of collection (e.g. statute of limitations or other legal defense) shall not be considered a voluntary election to waive by the City, and thus HdL would not be entitled to compensation for these amounts.

2.5. **Travel Expenses** – Travel and lodging expenses are billed at cost and apply to all meetings; including process, pre-installation, installation, training, and support. HdL is dedicated to conserving public funds, and ensures any travel costs are indeed required and reasonable.

3. **Payment**

HdL will provide detailed invoices for all work completed. City will submit payment to HdL within 30 days of receiving the invoice.

EXHIBIT C – GENERAL TERMS AND CONDITIONS

1. **OWNERSHIP OF MATERIALS, CONFIDENTIALITY.**
   1.1. Software License. If access to any HdL software systems are provided to City as part of this Agreement, HdL hereby provides a license to the City to use HdL's software while the associated service is in effect through this Agreement. The software shall only be used by the City. The City shall not sublet, duplicate, modify, decompile, reverse engineer, disassemble, or attempt to derive the source code of said software. The license granted hereunder shall not imply ownership by City of said software, rights of the City to sell said software, or rights to use said software for the benefits of others. This license is not transferable. City shall not create any derivative work or product based on or derived from the Software or documentation, or modify the Software or documentation without the prior written consent of HdL. In the event of a breach of this provision (And without limiting HdL's remedies), said modification, derivative work or product based on the Software or documentation is hereby deemed assigned to HdL. Upon termination, the software license shall expire, all copies of the software shall be removed from the City's computers and network and all digital copies deleted or otherwise destroyed.
   1.2. Agency Data. HdL acknowledges that the data provided by the City ("Agency Data") during the course of this Agreement is the property of the City. City authorizes HdL to access, import, process and generate reports from the Agency Data with its various proprietary systems. No confidential or otherwise sensitive information will be released. If appropriate, at the termination of this Agreement the Agency Data will be made available to the City in a format acceptable to both the City and HdL.
   1.3. Consultant Proprietary Information. As used herein, the term "proprietary information" means any information which relates to Consultant's software systems, audit processes or related services, techniques, or general business processes. City shall hold in confidence and shall not disclose to any other party any Consultant proprietary information in connection with this Agreement, or otherwise learned or obtained from the Consultant in connection with this Agreement. The obligations imposed by this Paragraph shall survive any expiration or termination of this Agreement. The terms of this section shall not apply to any information that is public information.
2. **OPTIONAL SERVICES.** Optional services beyond the scope of this Agreement are available at HdL's hourly rates in effect at the time service is requested. HdL will provide City a Statement of Work specifying the scope, timeline, and cost for the requested service. Depending on the personnel assigned to perform the work, HdL's standard hourly rates range between $75 and $275 per hour.
3. **MISCELLANEOUS EXPENSES.** HdL will notify the City of any miscellaneous expenses and request authorization to proceed. HdL will not be reimbursed for any miscellaneous expenses unless authorized by the City. Miscellaneous expenses may include travel, lodging and meal expenses, and other expenses which are above and beyond the ordinary expenses associated with performance of this Agreement.
4. **PRICING ADJUSTMENTS.** All pricing listed in this Agreement will be honored during initial implementation of the services. Any additional/optional services needed after services are active will be provided using the pricing currently established at the time the service is requested.
5. **LICENSE, PERMITS, FEES AND ASSESSMENTS.** HdL shall obtain such licenses, permits and approvals (collectively the "Permits") as may be required by law for the performance of the services required by this Agreement. City shall assist HdL in obtaining such Permits, and HdL shall include any direct costs as a City reimbursable expense with the next invoice.

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 12

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: H. Ted Gerber, Public Works Director

SUBJECT: **CONSIDERATION OF AN AWARD OF A CONSTRUCTION CONTRACT WITH COMMERCIAL DOOR COMPANY, INC. IN AN AMOUNT NOT TO EXCEED $208,294 FOR THE FIRE STATION BAY APPARATUS DOOR REPLACEMENT PROJECT; AND FIND THAT THE PROJECT IS CATEGORICALLY EXEMPT FROM CEQA (SECTION 15301)**

Recommendation

It is recommended that the City Council consider:

1. Approve the plans and specifications for the Fire Station Bay Apparatus Door Replacement Project (Project);
2. Find that the Project is categorically exempt from CEQA pursuant to Section 15301 of the State CEQA Guidelines — Class 1, Existing Facilities;
3. Appropriate an additional $73,295 to the Fire Station Bay Apparatus Door Replace ment Project from the General Fund 101, increasing the budget from $135,000 to $208,295, for a construction contract of $208,295 which includes the bid price of $198,375, and a 5% construction contingency of $9,920; and
4. Awarding a construction contract to Commercial Door Company, Inc. for construction services for door replacement in an amount not to exceed $208,295, including the proposed bid amount of $198,375 and a 5% contingency of $9,920; and
5. Reject all other bids received.

Executive Summary

The City's Fiscal Year (FY) 2024-2025 Capital Improvement Program (CIP) includes the construction of six (6) apparatus doors for the Fire Station bay (garage). This item proposes the approval of a construction contract to initiate installation of the doors in FY 2024-2025, among other actions related to the Project.

Background

The City's Public Works Department is responsible for developing and implementing the City's Capital Improvement Program (CIP), including improvements of the City's facility infrastructure. The award of a contract (Attachment 1) to a construction vendor for door replacement is subject to approval by the City Council as a Public Works Contract pursuant to the South Pasadena Municipal Code.

Analysis

The City of South Pasadena Public Works Department solicited bids from commercial garage

door installation contractors through a Notice Inviting Bids posted on the PlanetBids website on September 13th, 2024, which included the Project specifications with engineer's estimate and other contract documents. In addition, the solicitation was advertised on the Dodge Construction Network, Bid America, and Kern County Builders Exchange. Fifty-eight (58) firms were notified of the proposal opportunity through PlanetBids, in addition to the notification that occurred from the other project bid sites. Four (4) prospective bidders expressed interest in participating, and one (1) prospective bidder submitted a proposal during the bid period.

Due to only one bid being received, City staff updated the bid package and re-advertised the project in an attempt to encourage responses from multiple bidders. The readvertised Notice Inviting Bids was posted on the PlanetBids website on October 10th, 2024, and again included the Project specifications with engineer's estimate and other contract documents. In addition, the solicitation was again advertised on the Dodge Construction Network, Bid America, and Kern County Builders Exchange. One-hundred-and-seventy-nine (179) firms were notified of the proposal opportunity through PlanetBids, in addition to the notification that occurred from the other project bid sites. Six (6) prospective bidders expressed interest in participating, and three (3) prospective bidders submitted proposals during the bid period.

The Project work consists of furnishing all materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the specifications and contract documents, consisting of replacement of six (6) bay apparatus (garage) doors located in the Fire Station at 817 Mound Avenue. The Project also includes the necessary hardware, 3-inch tracks, motor operators, and electrical controls and any other equipment necessary for the proper replacement of the doors.

Proposals were received through October 24, 2024 from the following three (3) firms:

Bidder	**Bid Amount**
Commercial Door Company, Inc.	$198,375.00
Action Door Repair Corporation	$199,245.00
Precision Garage Doors & Gates, Inc.	$199,800.00

South Pasadena Municipal Code section 2.99-37 defines the purchasing procedure to award a Public Works Contract to the lowest responsible bidder. Commercial Door Company, Inc. is located in the City of Pomona, and its proposed bid of $198,375.00 is the lowest responsive bid of the three (3) bids proposals. The company has had recent door installation contracts with the City of Beverly Hills and other firms, and is appropriately licensed and qualified to perform the work.

City staff have found that similar project door installations can range from $40,000 to $100,000 per door. This lowest responsive bid at less than $35,000 per door is a reasonable price for the project.

The City's engineer team developed the specifications for the Fire Station Bay Apparatus Door Replacement Project, with input from Fire Department staff. In staff's opinion the Project specifications are reasonable and meet professional engineering standards. Therefore, it is

recommended that the City Council approve the Project specifications which are on file in the Department of Public Works and included as an attachment to this item (Attachments 2 & 3).

Fiscal Impact
Funding for this project has been adopted in the FY 2024-2025 Budget under the General Building & Facilites Fire Station Bay Apparatus Door Replacement CIP Project, with $135,000 appropriated to CIP Account No. 400-9000-9001-9226-000. This account includes a $135,000 transfer from the Facilities & Equipment Replacement Fund 105. An additional $73,295 is needed for the Project budget for a construction contract of $208,295 which includes the bid price of $198,375, and a 5% construction contingency of $9,920. Staff recommend sourcing the additional transfer from the General Fund 101 due to the Project's nexus with public safety needs.

Public Notification
The public was made aware that this item was to be considered this evening by virtue of its inclusion on the legally publicly noticed agenda, posting of the same agenda and reports on the City's website.

Environmental Analysis
Replacement of existing facility doors is a negligible expansion, and is therefore exempt from the California Environmental Quality Act (CEQA) analysis based on State CEQA Guidelines Section requirements under Section 21084 of the Public Resources Code, in accordance with Article 19, Section 15301, Class (1) "existing facilities."

Attachment:
Attachment No. 1 - 20241106 Construction Contract
Attachment No. 2 - Project Specifications
Attachment No. 3 - Addenda

CONTRACT AGREEMENT

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

THIS AGREEMENT ("AGREEMENT") is made and entered into for the above-stated project this _____ day of_____, 20__ *(Council Action Date)*, BY AND BETWEEN the City of South Pasadena, a municipal corporation, hereafter designated as "AGENCY", and _____ a _____
[CONTRACTOR'S BUSINESS NAME] [corporation, partnership, limited liability company, or other business form]

in the State of _____, hereafter designated as "CONTRACTOR."

WITNESSETH that AGENCY and CONTRACTOR have mutually agreed as follows:

1) **Project Name:** Fire Station Garage Door Replacement Project (005178)

2) **Project Scope of Work:** CONTRACTOR shall provide and install:

The work consists of furnishing all materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the Specifications and Contract Documents. The work performed under this contract is summarized in the Notice Inviting Sealed Bids and includes, but is not limited to each bid item listed in the Contractor's Bid Proposal, as covered in the Standard Specifications, and as described in the corresponding items on the following pages. The work in general, to be performed pursuant to these specifications, consists of furnishing and installation of six 14-ft by 14-ft overhead bay garage doors and removal and disposal of the existing six bay garage doors. Product specifications for the garage doors and motor have been provided in Appendix II of this document. The bid price shall include providing and installing all necessary hardware, 3-inch tracks, motor operators, and electrical controls and any other equipment necessary for the new garage doors. Specifically, torsion springs rated for 50,000 cycles shall be included as art of the bid price, and a motor capable of raising the garage doors at 12 inches per second (Liftmaster JHDC HOIST motor or approved equal) shall be required. The work also involves tinting and painting the garage doors with the correct paint number as specified by the fire department, in accordance with the Plans and Specifications entitled Fire Station Garage Door Replacement Project No. 005178. The new doors will match the existing fire station garage doors, which shall include one row of tempered clear glass. The new doors must meet all building codes and fire safety regulations. The contractor will be responsible for disposal of the existing garage doors and coordinating transition to the new garage door system in a manner that will not disrupt fire department staff operations or sacrifice the security of the fire station facility. Additionally, as the work requires close coordination with the fire department to minimize disruption to their operations during the installation process. Upon completion of the garage door installation, the new garage doors must be fully functional and integrate seamlessly with the existing fire station infrastructure. Additionally, the drywall shall be cut back in a straight line to allow adequate space to install the motor and holes

in the drywall from the previous track system shall be patched. The project manager will conduct a final inspection to ensure all installation meets the required standards before approving final completion of the project.
The limits of work include: **817 Mound Ave, South Pasadena, CA 91030**

3) **Contract Documents:** The complete contract and agreement ("AGREEMENT") consists of this Contract Agreement, including all attachments hereto, and:

- Approved Plans and Specifications for City Project No. 005157
- Notice Inviting Sealed Bids
- Instructions to Bidders
- Information for Bidders
- Contractor's Bid Proposal
- Bid Schedule
- Standard Specifications
- Special Provisions
- All reference specifications, plans, details, standard drawings, and appendices
- Bonds, insurance certificates, permits, notices, and affidavits
- Appendices, Addendums, and Memorandums
- And all mutually agreed-upon modifications and amendments thereto.

4) **Compensation:** CITY agrees to pay, and CONTRACTOR agrees to accept in full payment for the Work, the stipulated sum of _____ Dollars, ($_____).
5) **Time of Completion:** _____ Working Days *[see B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE of Section B Instruction to Bidders]*.
6) **Liquidated Damages:** $1,000 for each calendar day delay beyond the Time of Completion *[see 6-9 LIQUIDATED DAMAGES of Section F – Special Provisions]*.
7) **Notices:** Any notices, bills, invoices, or reports required by this Agreement shall be addressed to:

To CITY:

City of South Pasadena
Public Works Department
1414 Mission Street
South Pasadena, CA 91030

To CONTRACTOR:

Contractor's Name _____
Address _____
_____
City, State Zip Code _____

IN WITNESS WHEREOF the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this AGREEMENT to be executed in duplicate by setting hereunto their names, titles, hands, and seals this _____ day of _____, 20__ *(Council Action Date)*

CONTRACTOR: _____
[CONTRACTOR'S BUSINESS NAME]

_____
CONTRACTOR's Sign Name, Title

CONTRACTOR's License No. _____

AGENCY: _____ _____
Don Penman, Interim City Manager — Date
City of South Pasadena

ATTESTED: _____ _____
Mark Perez, Deputy City Clerk — Date
City of South Pasadena

APPROVED AS TO FORM: _____ _____
Roxanne Diaz, City Attorney — Date
City of South Pasadena

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

ATTACHMENT A

ADDITIONAL TERMS AND CONDITIONS OF THE AGREEMENT

ARTICLE I: Contract Documents

The complete contract and agreement ("AGREEMENT") consists of the Contract Documents described on the Contract Agreement, and all terms and conditions of this Attachment are incorporated therein. In the event of conflict between these documents, precedence shall be determined under section 2-5.2 of the Standard Specifications.

All of the provisions of the Contract Documents are made a part hereof as though fully set forth herein.

ARTICLE II: Scope of Work

For and in consideration of the payments and agreements to be made and performed by AGENCY, CONTRACTOR agrees to furnish all materials and equipment and perform all work required for the above-stated project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

AGENCY hereby employs CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices provided herein, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in this AGREEMENT.

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to this AGREEMENT, CONTRACTOR offers and agrees to assign to the AGENCY all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (Section 16700, et seq.) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

ARTICLE III: Compensation

A. CONTRACTOR agrees to receive and accept the prices set forth in the Bid Proposal and Bid Schedule as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. In no event shall the total compensation and costs payable to CONTRACTOR under this Agreement exceed the sum shown on the Contract Agreement, unless specifically approved in advance and in writing by AGENCY.

Such compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements,

unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work. Such unforeseen difficulties or obstructions includes any act of God, the elements, strike, walkout, or any other cause beyond CONTRACTOR's reasonable control that occurs before AGENCY accepts the work as complete.

B. This AGREEMENT is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of CONTRACTORs by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to CONTRACTOR of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This AGREEMENT hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

C. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with AGENCY, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those moneys to CONTRACTOR upon AGENCY's confirmation of CONTRACTOR'S satisfactory completion of this AGREEMENT. At any time during the term of this AGREEMENT CONTRACTOR may, at its own expense, substitute securities for funds otherwise withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

ARTICLE IV: Labor Code

AGENCY and CONTRACTOR acknowledge that this AGREEMENT is subject to the provisions of Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code relating to public works and public agencies and agree to be bound by all the provisions thereof as though set forth fully herein. Full compensation for conforming to the requirements of the Labor Code and with other Federal, State, and local laws related to labor, and rules, regulations and ordinances which apply to any work performed pursuant to this AGREEMENT is included in the price for all contract items of work involved.

This AGREEMENT is further subject to prevailing wage law, including, but not limited to, the following:

A. The CONTRACTOR shall pay the prevailing wage rates for all work performed under the AGREEMENT. When any craft or classification is omitted from the general prevailing wage determinations, the CONTRACTOR shall pay the wage rate of the craft or classification most closely related to the omitted classification. The CONTRACTOR shall forfeit as a penalty to AGENCY $200.00, or any greater penalty provided in the Labor Code for each Calendar Day, or portion thereof, for each worker paid less than the prevailing wage rates for any work done under the AGREEMENT in violation of the provisions of the Labor Code whether such worker is employed in the execution of the work by CONTRACTOR or by any Subcontractor under CONTRACTOR. In addition, CONTRACTOR shall pay each worker the difference between such prevailing wage rates and the amount paid to each worker for each Calendar Day, or portion thereof, for which each worker was paid less than the prevailing wage rate.

B. CONTRACTOR shall comply with the provisions of Labor Code Section 1777.5 concerning the employment of apprentices on public works projects, and further agrees that CONTRACTOR is responsible for compliance with Section 1777.5 by all of its subcontractors.

C. Pursuant to Labor Code § 1725.5, CONTRACTOR and any subcontractor must be registered with the California Department of Industrial Relations for any bid proposal submitted on or after March 1, 2015, and for any contract for public work entered into on or after April 1, 2015. Further, this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

D. Pursuant to Labor Code § 1776, CONTRACTOR and any subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with this AGREEMENT. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following: (1) The information contained in the payroll record is true and correct; and (2) The employer has complied with the requirements of Labor Code §§ 1811, and 1815 for any work performed by his or her employees on the public works project. The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours as required by Labor Code § 1776.

E. This AGREEMENT is further subject to 8-hour workday and wage and hour penalty law, including, but not limited to, Labor Code Sections 1810 and 1813, as follows:

CONTRACTOR shall strictly adhere to the provisions of the Labor Code regarding the 8-hour day and the 40-hour week, overtime, Saturday, Sunday and holiday work and nondiscrimination based on race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, or sexual orientation, except as provided in Section 12940 of the Government Code. Pursuant to the provisions of the Labor Code, eight hours' labor shall constitute a legal day's work. Work performed by CONTRACTOR's employees in excess of eight hours per day, and 40 hours during any one week, must include compensation for all hours worked in excess of eight hours per day, or 40 hours during any one week, at not less than one and one-half times the basic rate of pay. CONTRACTOR shall forfeit as a penalty to AGENCY $25.00, or any greater penalty set forth in the Labor Code for each worker employed in the execution of the work by CONTRACTOR or by any Subcontractor of CONTRACTOR, for each Calendar Day during which such worker is required or permitted to the work more than eight hours in one Calendar Day or more than 40 hours in any one calendar week in violation of the Labor Code.

F. This AGREEMENT is subject to Public Contract Code Section 6109: CONTRACTOR shall be prohibited from performing work on this project with a subcontractor who is ineligible to perform work on the project pursuant to Sections 1777.1 or 1777.7 of the Labor Code.

ARTICLE V: Work Site Conditions

A. In compliance with and pursuant to Government Code Section 4215, AGENCY shall assume the responsibility, as between the parties to this AGREEMENT, for the timely removal, relocation, or protection of existing main- or trunk-line utility facilities located on the site of any construction project that is a subject of this AGREEMENT, if such utilities are not identified by AGENCY in

the plans and specifications made a part of the invitation for bids. The Contract Documents shall include provisions to compensate CONTRACTOR for the costs of locating, repairing damage not due to the failure of CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work. CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project when such delay was caused by the failure of AGENCY or the owner of a utility to provide for removal or relocation of such utility facilities.

B. To the extent that the work requires trenches in excess of five feet (5') and is estimated to cost more than $25,000, prior to any excavation, CONTRACTOR must provide the AGENCY, or a registered civil or structural engineer employed by the AGENCY to whom authority has been delegated to accept such plans, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. Nothing in this section shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders.

C. This AGREEMENT is further subject to Public Contract Code Section 7104 with regard to any trenches deeper than four feet (4') involved in the proposed work as follows:

CONTRACTOR shall promptly, and before the following conditions are disturbed, notify AGENCY, in writing, of any:

(1) Material that CONTRACTOR believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, which is required to be removed to a Class I, Class II, or Class III disposal site in accordance with existing law.

(2) Subsurface or latent physical conditions at the site differing from those indicated by all available information provided prior to the deadline for submission of bids.

(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

AGENCY shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or involve hazardous waste, and cause a decrease or increase in CONTRACTOR's cost of, or the time required for, performance of any part of the work, AGENCY shall issue a change order under the procedures described in this AGREEMENT.

In the event that a dispute arises between AGENCY and CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in CONTRACTOR's cost of, or time required for, performance of any part of the work, CONTRACTOR shall not be excused from any scheduled completion date provided in the AGREEMENT but shall proceed with all work to be performed under the AGREEMENT. CONTRACTOR shall retain any and all

rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

ARTICLE VI: Insurance

A. With respect to performance of work under this AGREEMENT, CONTRACTOR shall maintain, and shall require all of its subcontractors to maintain, insurance as required by Section E "Standard Specifications" of the Contract Documents.

B. This AGREEMENT is further subject to Workers' Compensation obligations, including, but not limited to, California Labor Code Sections 1860 and 1861 as follows:

CONTRACTOR shall take out and maintain, during the life of this contract, Worker's Compensation Insurance for all of CONTRACTOR's employees employed at the site of improvement; and, if any work is sublet, CONTRACTOR shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by CONTRACTOR. CONTRACTOR and any of CONTRACTOR's subcontractors shall be required to provide AGENCY with a written statement acknowledging its obligation to secure payment of Worker's Compensation Insurance as required by Labor Code § 1861; to wit: 'I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.' If any class of employees engaged in work under this AGREEMENT at the site of the Project is not protected under any Worker's Compensation law, CONTRACTOR shall provide and shall cause each subcontractor to provide adequate insurance for the protection of employees not otherwise protected. CONTRACTOR shall indemnify and hold harmless AGENCY for any damage resulting from failure of either CONTRACTOR or any subcontractor to take out or maintain such insurance.

Any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements or limits shall be available to AGENCY as additional insured. Further, the requirements for coverage and limits shall be the greater of (1) the maximum coverage and limits specified in this Agreement, or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured. Insurance provided by CONTRACTOR under this Contract shall not replace or substitute for CONTRACTOR's indemnification obligations in Article VII.

CONTRACTOR's insurance, including all endorsements, shall be primary to any coverage available to AGENCY. Any insurance or self-insurance maintained by AGENCY and/or its officers, employees, agents, or volunteers, shall be excess of CONTRACTOR's insurance and shall not contribute with it.

ARTICLE VII: Indemnification

To the fullest extent permitted by law, CONTRACTOR shall, at its sole cost and expense, fully defend, indemnify and hold harmless AGENCY, its authorized representatives and their respective

subsidiaries, affiliates, members, directors, officers, subcontractors (including governmental agencies), suppliers, employees and agents (collectively, the "Indemnitees") from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses, including but not limited to any fees of accountants, attorneys or other professionals (collectively "Liabilities"), arising out of, in connection with, resulting from or related to, any act, omission, fault or negligence of CONTRACTOR, CONTRACTOR's Representative, or any of its officers, agents, employees, Subcontractors or Suppliers, or any person or organization directly or indirectly employed by any of them (Collectively, the "Indemnitors"), in connection with or relating to or claimed to be in connection with or relating to the work performed under this AGREEMENT. Indemnification includes, but is not limited to, all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses arising out of, in connection with, resulting from or related to changes to the natural environment or environmental harms caused in whole or in part by work performed under this AGREEMENT.

If CONTRACTOR is a joint venture or partnership, each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of CONTRACTOR that are assumed under or arise out of this AGREEMENT. Each of such venturers or partners waives notice of the breach or non-performance of any undertaking or obligation of CONTRACTOR contained in, resulting from, or assumed under this AGREEMENT, and the failure to give any such notice shall not affect or impair such venturer's or partner's joint and several liability hereunder.

AGENCY may request a deposit for defense costs from CONTRACTOR with respect to a claim. If AGENCY requests a defense deposit, CONTRACTOR shall provide it within 15 days of the request.

ARTICLE VIII: Binding Effect

AGENCY and CONTRACTOR each bind itself, its partners, successors, assigns, and legal representatives to the other party hereto and to its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents. This AGREEMENT is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported

assignment or delegation of any of the rights of obligations of either party without the prior written consent of the other shall be void and of no force and effect.

ARTICLE IX: Dispute Resolution

A. All disputes arising out of this AGREEMENT are subject to a mandatory step-by-step claims submission and evaluation process as a precondition to legal action in accordance with Public Contracts Code § 9204.

B. Any court action arising out of this AGREEMENT shall be filed in the Los Angeles County Superior Court. Any alternative dispute resolution proceeding arising out of this AGREEMENT shall be heard in the County of Los Angeles.

C. AGENCY shall have full authority to compromise or otherwise settle any claim relating to this AGREEMENT or any part hereof at any time. AGENCY shall provide timely notification to CONTRACTOR of the receipt of any third-party claim relating to this AGREEMENT. AGENCY shall be entitled to recover its reasonable costs incurred in providing the notification required by this section.

D. This AGREEMENT is further subject to the provisions of Article 1.5 (commencing at Section 20104) of Division 2, Part 3 of the Public Contract Code regarding the resolution of public works claims of less than $375,000. Article 1.5 mandates certain procedures for the filing of claims and supporting documentation by CONTRACTOR, for the response to such claims by the AGENCY, for a mandatory meet and confer conference upon the request of CONTRACTOR, for mandatory nonbinding mediation in the event litigation is commenced, and for mandatory judicial arbitration upon the parties' failure to resolve the dispute through mediation. This AGREEMENT hereby incorporates the provisions of Article 1.5 as though fully set forth herein.

ARTICLE X: Independent CONTRACTOR

CONTRACTOR is and shall at all times remain as to AGENCY, a wholly independent CONTRACTOR. Neither AGENCY nor any of its agents shall have control of the conduct of CONTRACTOR or any of CONTRACTOR's employees, except as herein set forth. CONTRACTOR shall not at any time or in any manner represent that it or any of its agents or employees are in any manner agents or employees of AGENCY.

ARTICLE XI: Taxes

CONTRACTOR is responsible for paying all retail, sales and use, transportation, export, import, special or other taxes and duties applicable to, and assessable against any work, materials, equipment, services, processes, and operations incidental to or involved in this AGREEMENT. The CONTRACTOR is responsible for ascertaining and arranging to pay such taxes and duties. The prices established in this AGREEMENT shall include compensation for any taxes the CONTRACTOR is required to pay by laws and regulations in effect as of the execution of this AGREEMENT.

ARTICLE XII: Notices

All notices and communications shall be sent in writing to the parties at the addresses listed on the Contract Agreement.

ARTICLE XIII: Entire Agreement

This AGREEMENT supersedes any and all other agreements, either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described herein. Each party to this AGREEMENT acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any other agreement, statement or promise not contained in this AGREEMENT shall not be valid or binding. Any modification of this AGREEMENT will be effective only if signed by the party to be charged.

The benefits and obligations of this AGREEMENT shall inure to and be binding upon the representatives, agents, partners, heirs, successors and assigns of the parties hereto. This AGREEMENT shall be construed pursuant to the laws of the State of California.

ARTICLE XIV: Authority to Contract

The signatories hereto represent that they are authorized to sign on behalf of the respective parties they represent and are competent to do so, and each of the parties hereto hereby irrevocably waives any and all rights to challenge signatures on these bases.

ARTICLE XV: General Provisions

A. All reports, documents, or other written material ("written products" herein) developed by CONTRACTOR in the performance of this Agreement shall be and remain the property of AGENCY without restriction or limitation upon its use or dissemination by AGENCY. CONTRACTOR may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by CONTRACTOR.

B. In the performance of this Agreement, CONTRACTOR shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability, medical condition, or any other unlawful basis.

C. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph at the head of which it appears, the section or paragraph hereof, as the case may be, and not such heading, shall control and govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

D. The waiver by AGENCY or CONTRACTOR of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term, covenant, or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term,

covenant or condition of this Agreement shall be deemed to have been waived by AGENCY or CONTRACTOR unless in writing.

E. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any of all of such other rights, powers, or remedies.

F. CONTRACTOR shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to AGENCY under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to CONTRACTOR under this Agreement. All such documents shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of AGENCY. In addition, pursuant to Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars, all such documents and this Agreement shall be subject to the examination and audit of the State Auditor, at the request of AGENCY or as part of any audit of AGENCY, for a period of three (3) years after final payment under the Agreement.

(End of Attachment A)

(ATTACH TO EXECUTED CONTRACT AGREEMENT)

ATTACHMENT B

Plans, Forms, & Specifications

Public Works Project Bid Packet

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
CITY OF SOUTH PASADENA
Public Works Department

Purpose: Construction, repair, improvements etc. of public buildings or property

Value: Under $200,000

Bidding: Informal Bid Process in accordance with South Pasadena Municipal Code (SPMC) Chapter 2 Administration, Article XIII Awarding Public Works Contracts and the Uniform Public Construction Cost Accounting Act (Public Contract Code Section 22000 et seq.)

Required Documents Checklist:

- □ Notice Inviting Sealed Bids
- □ Instruction to Bidders
- □ Proposal Information and Documents
- □ Contract Information and Documents
- □ Standard Specifications
- □ Special Provisions Part 1 through 9
- □ Appendices

Mandatory Forms Checklist:

- □ Bid Proposal
- □ Bid Schedule
- □ Bid Bond & Certificate of Acknowledgment or Bid Guarantee
- □ Bidder Information
- □ Experience Statement
- □ Designation of Suppliers and Subcontractors
- □ Statement Regarding Insurance Coverage
- □ Statement Regarding Contractor's Licensing Laws
- □ Non-Collusion Affidavit

Documents Required Upon Award:

- □ Contract Agreement & Certificate of Acknowledgment
- □ Payment Bond & Certificate of Acknowledgment
- □ Faithful Performance Bond & Certificate of Acknowledgment
- □ Maintenance Bond & Certificate of Acknowledgment
- □ Worker's Compensation Insurance Certificate
- □ Endorsements to Insurance Policy

Approved for use on June 7, 2023
294856.v3

NOTICE INVITING BIDS AND CONTRACT DOCUMENTS

for

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178. IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Prepared and Approved by:
City of South Pasadena
Public Works Department
1414 Mission Street
South Pasadena, CA 91030
(626) 403-7240

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FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

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SECTION A – NOTICE INVITING SEALED BIDS

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178

IN THE CITY OF SOUTH PASADENA, CALIFORNIA

CALENDAR OF EVENTS*

Bid Advertisement	10th day of October, 2024
Bid Package available starting	10th day of October, 2024
Pre-Bid Meeting & Site Visit Walk Through	15th day of October, 2024 at 8:30 a.m.
Questions Regarding the Proposal Due	15th day of October, 2024 at 5:00 p.m.
Addendum Posted on City's Planet Bids system	17th day of October, 2024 at 5:00 p.m.
Bid Due Date and Time	24th day of October, 2024 at 4:00 p.m.
Bid Opening	24th day of October, 2024 at 5:00 p.m.
Bid Results/Contractor Selection	31st day of October, 2024
Council approval of Contract	6th day of November, 2024
New Contract in Effect	7th day of November, 2024
Construction Start Date, not earlier than	12th day of November, 2024
Construction End Date, not later than	31st day of January, 2024

*All dates are subject to change.

NOTICE INVITING SEALED BIDS

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

PUBLIC NOTICE IS HEREBY GIVEN that the City of South Pasadena as AGENCY, invites sealed bids for the above stated project and will receive such bids through the City's online bid management system ("PlanetBids") or as a sealed bid package submitted to City, up to the hour of 4:00 p.m., on Thursday the 24th day of October 2024. After said time, bids will be publicly posted on PlanetBids. The date and time shall be extended by no less than 72 hours if the officer, department, or Project Manager issues any material changes, additions, or deletions to the invitation later than 72 hours prior to the bid closing. Any bids received after the time specified above or any extension due to material changes shall not be considered.

Project Name: *Fire Station Garage Door Replacement Project (005178)*

City PlanetBids Project Bid Opportunities: https://vendors.planetbids.com/portal/44654/bo/bo-search

Project Description: The work consists of furnishing all materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the Specifications and Contract Documents. The work performed under this contract is summarized in the Notice Inviting Sealed Bids and includes, but is not limited to each bid item listed in the Contractor's Bid Proposal, as covered in the Standard Specifications, and as described in the corresponding items on the following pages. The work in general, to be performed pursuant to these specifications, consists of furnishing and installation of six 14-ft by 14-ft overhead bay garage doors and removal and disposal of the existing six bay garage doors. Product specifications for the garage doors and motor have been provided in Appendix II of this document. The bid price shall include providing and installing all necessary hardware, 3-inch tracks, motor operators, and electrical controls and any other equipment necessary for the new garage doors. Specifically, torsion springs rated for 50,000 cycles shall be included as art of the bid price, and a motor capable of raising the garage doors at 12 inches per second (Liftmaster JHDC HOIST motor or approved equal) shall be required. The work also involves tinting and painting the garage doors with the correct paint number as specified by the fire department, in accordance with the Plans and Specifications entitled Fire Station Garage Door Replacement Project No. 005178. The new doors will match the existing fire station garage doors, which shall include one row of tempered clear glass. The new doors must meet all building codes and fire safety regulations. The contractor will be responsible for disposal of the existing garage doors and coordinating transition to the new garage door system in a manner that will not disrupt fire department staff operations or sacrifice the security of the fire station facility. Additionally, as the work requires close coordination with the fire department to minimize disruption to their operations during the installation process. Upon completion of the garage door installation, the new garage doors must be fully functional and integrate seamlessly with the existing fire station infrastructure. Additionally, the drywall shall be cut back in a straight line to allow adequate space to install the motor and holes in the drywall from the previous track system shall be patched. The project manager will conduct a final inspection to ensure all installation meets the required standards before approving final completion of the project.

Engineer's Estimate: $120,000

A bidder may obtain a copies of the plans, specifications, and contract documents from PlanetBids. To the extent required by section 20103.7 of the Public Contract Code, upon request from a contractor plan room service, the City shall provide an electronic copy of the contract documents at no charge to the contractor plan room. Please Note: Prospective bidders who choose to review the contract documents at a plan room

must also register with the City through PlanetBids to obtain the required contract documents if they decide to submit a bid for the Project.

It is the responsibility of each prospective bidder to download and print all contract documents for review and to verify the completeness of contract documents before submitting a bid. Any addenda will be posted on PlanetBids. It is the responsibility of each prospective bidder to check PlanetBids on a daily basis through the close of bids for any applicable addenda or updates. The City does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, downloading or printing of the contract documents. Information on PlanetBids may change without notice to prospective bidders. The contract documents shall supersede any information posted or transmitted by PlanetBids.

In accordance with the provisions of California Public Contract Code § 3300, and Business and Professions Code § 7028.15(e), the AGENCY has determined that the contractor shall possess a valid Class D-28 contractor's license at the time that the contract is awarded. Failure to possess the specified license shall render a bidder's bid as non-responsive and shall bar award of the contract to any bidder not possessing the specified license at the time of the award.

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 2600, SACRAMENTO, CA 95826. At the time the contract is awarded, the contractor shall be properly licensed in accordance with the laws of this state. The first payment for work or material shall not be made unless and until the Registrar of Contractors verifies to the AGENCY that the records of the Contractors' State License Board indicate that the contractor was properly licensed at the time the contract was awarded. Any bidder or contractor not so licensed shall be subject to all legal penalties imposed by law including, but not limited to, any appropriate disciplinary action by the Contractors' State Board. Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder. (Public Contract Code § 20103.5)

CONTRACTORS AND SUBCONTRACTORS ARE ALSO REQUIRED TO BE REGISTERED WITH THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS FOR ANY BID PROPOSAL SUBMITTED ON OR AFTER MARCH 1, 2015, AND FOR ANY CONTRACT FOR PUBLIC WORK ENTERED INTO ON OR AFTER APRIL 1, 2015. A contractor or subcontractor shall not be qualified to bid on, be listed on a bid proposal for, or perform any public work contract unless it is currently registered with the California Department of Industrial Relations as described in Labor Code § 1725.5.

Bids must be prepared on the approved bid forms in conformance with INSTRUCTIONS TO BIDDERS and submitted through PlanetBids or in a sealed bid package to the City.

The bid must be accompanied by a bid guarantee in the amount of 10% of the total bid by THE TIME AND DATE ADVERTISED FOR THE OPENING OF BIDS. More specifically, pursuant to Public Contract Code §§ 20170 and 20171, all bids for the project shall be presented, under sealed cover and shall be accompanied by one of the following forms of bidder's security in the amount of ten percent (10%) of the bid: (a) cash; (b) a cashier's check made payable to the City of South Pasadena; (c) a certified check made payable to the City of South Pasadena; or (d) a bidder's bond executed by an admitted surety insurer, made payable to the City of South Pasadena. Such security shall be forfeited should the successful bidder to whom the contract is awarded fails to timely execute the contract and to deliver the necessary bonds and insurance certificates as specified in the contract documents. The bid guarantee must be submitted in hard copy directly to the City prior to the specified date and time for bid opening as set forth in the Instructions to Bidders.

To the extent applicable, at any time during the term of the Agreement for the proposed project, the successful bidder may, at its own expense, substitute securities equivalent to the amount withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

Pursuant to California Civil Code § 9550, a payment bond is required to be submitted for all projects estimated in excess of $25,000.00.

The AGENCY has determined that the proposed project is a public works project subject to the provisions of Labor Code § 1720 thereby requiring the Contractor to pay the prevailing wage rates for all work performed under the Contract. Accordingly, the proposed project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations.

The AGENCY reserves the right to reject any and all bids and to waive any minor irregularities in the proposal documents.

All questions should be submitted via PlanetBids. City staff will not respond to questions made via phone or email.

CITY OF SOUTH PASADENA

Date: October 10, 2024

By: H. Ted Gerber

H. Ted Gerber
Public Works Director

SECTION B – INSTRUCTIONS TO BIDDERS

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

INSTRUCTIONS TO BIDDERS

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

B1.01 INSPECTION OF SITE OF WORK

Bidders are required to inspect the site of the work in order to satisfy themselves, by personal examination or by such other means as they may prefer, of the location of the proposed work and as to the actual conditions of and at the site of work. If, during the course of his/her examination, a bidder finds facts or conditions which appear to him/her to conflict with the letter or spirit of the contract documents, or with any other data furnished him/her, he/she may apply to the AGENCY in writing in accordance with **B1.04 INTERPRETATION OF CONTRACT DOCUMENTS** for additional information and explanation before submitting his/her bid.

The submission of a proposal by the bidder shall constitute the acknowledgment that, if awarded the contract, he/she has relied and is relying on his/her own examination of (a) the site of the work, (b) the access to the site, and (c) all other data, matters, and things requisite to the fulfillment of the work and on his/her own knowledge of existing services and utilities on and in the vicinity of the site of the work to be constructed under the contract, and not on any representation or warranty of the AGENCY. No claim for additional compensation will be allowed which is based upon a lack of knowledge of these items.

B1.02 EXAMINATION OF CONTRACT DOCUMENTS

Each bidder shall thoroughly examine and be familiar with legal and procedural documents, general conditions, specifications, drawings and addenda (if any). The submission of a proposal shall constitute an acknowledgment upon which the AGENCY may rely that the bidder has thoroughly examined and is familiar with the contract documents. The bidders' attention is directed to the need, if any, for special invoicing for this project. The failure or neglect of a bidder to receive or examine any of the contract documents shall in no way relieve him/her from any obligations with respect to his/her proposal or to the contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any contract document.

B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE

Bidder's attention is called to the provisions set forth in **SECTION E, STANDARD SPECIFICATIONS**, particularly those pertaining to the contract period and liquidated damages for avoidable delays.

The CONTRACTOR shall begin work within fifteen (15) calendar days after the date of material delivery and within the working days established by the Notice to Proceed, and shall diligently prosecute said work to completion before the expiration of **40 WORKING DAYS.** The CONTRACTOR shall pay to the AGENCY liquidated damages in accordance with Section 6-9 of the special Provisions (Section F) for each calendar day, or portion thereof, of delay in finishing the work in excess of the number of working days prescribed above.

B1.04 INTERPRETATION OF CONTRACT DOCUMENTS

No oral interpretations will be made to any bidder as to the meaning of the contract documents. Requests for an interpretation shall be made in writing and submitted to the AGENCY through PlanetBids at least five (5) working days before the time announced for opening the proposals. Interpretations by the AGENCY will be in the form of addenda to the contract documents and, when issued, will be posted on PlanetBids. It

is the responsibility of each prospective bidder to check PlanetBids on a daily basis through the close of bids for any applicable addenda or updates. All such addenda shall become part of the contract.

B1.05 SOIL INFORMATION

Soil reports have not been prepared for this project.

B1.06 PROPOSAL

Proposals shall be made on the forms enclosed in **SECTION C** of these specifications. All proposals shall give the prices proposed, both in words and in numbers, shall give all other information requested herein, and shall be signed by the bidder or his/her authorized representative, with his/her address. If the proposal is made by an individual, his/her name, signature and mailing address must be shown; if made by firm or partnership, the name and mailing address of the firm or partnership and the signature of at least one of the general partners must be shown; if made by a corporation, the proposal shall show the name of the state under the laws of which the corporation is chartered, the name and mailing address of the corporation, and the name and title of the person who signs on behalf of the corporation. If the proposal is made by a corporation, a certified copy of the bylaws or resolution of the board of directors of the corporation shall be furnished demonstrating the authority of the officer signing the proposal to execute contracts on behalf of the corporation.

Each proposal shall be submitted through PlanetBids or as a sealed bid package to the City. Bidders are warned against making erasures or alterations of any kind, and proposals which contain omissions, erasures or irregularities of any kind may be rejected. No oral, telegraphic or telephonic proposals or modifications will be considered.

The Bid Schedule is available on PlanetBids through the "Line Items" tab. Bidders must insert and submit their Bid prices directly through PlanetBids by selecting "Place eBid" under the "Line Items" tab or by submitting the second page of the Bid Schedule form in this package as part of their sealed bid package to the City. The Bid Schedule will be incorporated into the Contract Documents. Failure to submit the Bid Schedule will render a bid nonresponsive. Bidders must provide pricing for every bid item. The costs of any Work shown or required in the Contract Documents, but not specifically identified as a Pay Item are to be included in related Pay Items and no additional compensation shall be due Contractor by virtue of Contractor's compliance with the Contract Documents. The estimated quantities for unit price items are for purposes of comparing bids only and City makes no representation that the actual quantities of Work performed will not vary from the estimates.

In conformance with the Business and Profession Code, § 7028.15, the CONTRACTOR must state clearly his/her license number and expiration date. In addition, he/she shall sign a statement that these representations were made under the penalty of perjury. This statement shall be made on the **EXPERIENCE STATEMENT** in **SECTION C**.

The CONTRACTOR will be required to pay prevailing wage pursuant to California Law, including California Labor Code §§ 1770 et seq. Copies of the prevailing rate of per diem wages are on file at the offices of the AGENCY.

The following Bid Forms shall be completed and signed by the Bidder and uploaded to PlanetBids as a single PDF file or included as separate documents in the sealed bid package provided to the City:

- Bidder Information
- Experience Statement
- Designation of Suppliers and Subcontractors
- Statement Regarding Insurance Coverage

- Statement Regarding Contractor's Licensing Laws
- Non-Collusion Affidavit

B1.07 ADDENDA

Each proposal shall include specific acknowledgment in the space provided on **SECTION C - BID PROPOSAL** of receipt of all addenda issued during the bidding period. Failure to so acknowledge may result in the proposal being rejected as not responsive.

Each prospective Bidder should register with the City through PlanetBids. Addenda will be uploaded to PlanetBids. Please Note: Bidders are responsible for ensuring that they have received any and all Addenda. To this end, each Bidder should visit PlanetBids to verify that it has received all Addenda issued, if any, prior to the Bid opening.

B1.08 BID PRICES

Bid prices shall include everything necessary for the completion of construction and fulfillment of the contract including, but not limited to, furnishing all materials, equipment, tools, plant and other facilities and all management, superintendence, labor and services, except as may be provided otherwise in the contract documents. In the event of a difference between a price quoted in words and a price quoted in numbers for the same quotation, the words shall be the amount bid.

In preparing bid prices, bidder represents that he/she has carefully examined the Contract Documents and the site where the work is to be performed and that he/she has familiarized himself with all local conditions and federal, state and local laws, ordinances, rules, and regulations that may affect the performance of the work in any manner. The bidder further represents that he/she has studied all surveys and investigation reports about subsurface and physical conditions pertaining to the job site, that he/she has performed such additional surveys and investigations as he/she deems necessary to complete the work at his/her bid price, and that he/she has correlated the results of all such data with the requirements of the Contract Documents. The submittal of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, including locality, uncertainty of weather and all other contingencies, and as to the character, quality, quantities, and scope of the work.

The plans and specifications for the work show subsurface conditions or otherwise hidden conditions as the Design Engineer supposes or believes them to exist, but is not intended or to be inferred that the conditions as shown thereon constitute a representation that such conditions are actually existent. Except as otherwise specifically provided in the Contract Documents, the AGENCY, the Design Engineer and their consultants or agents shall not be liable for any loss sustained by the CONTRACTOR as a result of any variance of such conditions as shown on the plans and the actual conditions revealed during the progress of the work or otherwise.

The CONTRACTOR shall perform an independent take-off of the plans and bid accordingly. Quantities listed in the **BID SCHEDULE** in **SECTION C** are intended only as a guide for the CONTRACTOR as to the anticipated order of magnitude of work. CONTRACTOR shall be responsible for verifying all estimated quantities. CONTRACTOR will be reimbursed for the quantity of items actually installed as required by the Contract Documents and shown on the plans to neat line and grade.

The CONTRACTOR will not be reimbursed for unauthorized work performed outside of that required by the Contract Documents.

B1.09 TAXES

No mention shall be made in the proposal of sales tax, use tax, or any other tax, as all amounts bid will be deemed and held to include any such taxes which may be applicable.

B1.10 RECOGNITION OF BONDING COMPANIES

All bonding companies used by the CONTRACTOR in this contract must be recognized by the Federal Government within Circular 570. All proposals or contracts received that include bonds posted by bonding companies not recognized in Circular 570 will result in the disqualification of the bid proposal and forfeiture of the bid bond.

B1.11 QUALIFICATION OF BIDDERS

Each bidder shall be skilled and regularly engaged in the general class or type of work called for under the contract. A statement setting forth his/her experience shall be submitted by each bidder on the **EXPERIENCE STATEMENT** form provided in **SECTION C**.

Each bidder shall possess a valid CONTRACTOR's License issued by the CONTRACTOR's State License Board at the time his/her bid is submitted. The class of license shall be applicable to the work specified in the contract. Each bidder shall also have no less than five (5) years of experience in the magnitude and character of the work bid.

It is the intention of the AGENCY to award a contract to a bidder who furnished satisfactory evidence that he/she has the requisite experience and ability, and that he/she has sufficient capital, facilities, and plant to enable him/her to prosecute the work successfully and properly, and to complete it within the time stated in the contract.

To determine the degree of responsibility to be credited to the bidder, the AGENCY will weigh any evidence that the bidder has performed satisfactorily other contracts of like nature, magnitude and comparable difficulty and comparable rates of progress. If in the opinion of the AGENCY, a bidder is determined to be insufficiently qualified, then that bidder will not be considered for award of the contract.

B1.12 DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS

Each proposal shall have listed on the **DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS** form provided in **SECTION C** the name, California contractor license number, and Department of Industrial Relations registration number, and address of each subcontractor to whom the bidder proposes to sublet portions of the work in excess of one-half of one percent of the total amount of his/her bid. For the purpose of this paragraph, a subcontractor is defined as one who contracts with the CONTRACTOR to furnish materials and labor, or labor only for the performance of work at the site of the work or who will specially fabricate a portion of the work off the site pursuant to detailed drawings in the contract documents.

Public Contract Code § 4104 requires all bidders to list subcontractors and state the license number of all subcontractors who will perform work in excess of one-half of one percent of the total bid, or in the case of streets and highways, one-half of one percent of the total bid or $10,000, whichever is greater.

Public Contract Code § 6109 prohibits a CONTRACTOR from performing work with a subcontractor who is debarred pursuant to Labor Code §§ 1777.1 or 1777.7.

B1.13 PROPOSAL GUARANTEE

The proposal shall be accompanied by a proposal guarantee bond duly completed on the form provided herewith by a guarantee company authorized to carry on business in the State of California for payments to the AGENCY in the sum of at least 10% of the total amount of the bid proposal, or alternatively by a certified or cashier's check payable to the AGENCY, or cash, in the sum of at least 10% of the total amount of the bid proposal. The amount payable to the AGENCY under the proposal guarantee shall be forfeited to the AGENCY in case of failure or neglect of the bidder to furnish, execute and deliver to the AGENCY the required bonds, evidence of insurance and to enter into, execute and deliver to the AGENCY the agreement on the form provided herewith, within ten (10) days after being notified in writing by the AGENCY that the award has been made and the agreement is ready for execution.

The bid security must be submitted in original hard copy directly to the City Clerk's office prior to specified time and date for the Bid opening.

B1.14 MODIFICATION OF PROPOSAL

A modification of a bid proposal already received will be considered only if the modification is received before the time announced for the opening of bids. All modifications shall be made in writing, executed and submitted in the same form and manner as the original bid proposal.

B1.15 WITHDRAWAL OF PROPOSAL

A proposal may be withdrawn through PlanetBids, incurring no penalty, if they are submitted prior to the bid opening hour stipulated in **SECTION A – NOTICE INVITING SEALED BIDS**. Proposals may not be withdrawn after that time without forfeiture of the proposal guarantee, except as authorized by Public Contract Code sections 5100 through 5110. The withdrawal of a proposal will not prejudice the right of the bidder to submit a new proposal, providing there is time to do so.

B1.16 POSTPONEMENT OF BID OPENING

The AGENCY reserves the right to postpone the date and time for opening of bids at any time prior to the date and time announced in **SECTION A–NOTICE INVITING SEALED BIDS**.

B1.17 DISQUALIFICATION OF BIDDERS

If there is reason to believe that collusion exists among the bidders, none of the bids of the participants in such collusion will be considered. In the event that any bidder acting as a prime CONTRACTOR has an interest in more than one proposal, all such proposals will be rejected, and the bidder will be disqualified. This restriction does not apply to subcontractors or suppliers who may submit quotations to more than one bidder, and while doing so, may also submit a formal proposal as a prime CONTRACTOR.

B1.18 REJECTION OF PROPOSALS

The AGENCY reserves the right to reject any and all proposals, to waive any irregularity, and to reject any proposals which are incomplete, obscure or irregular; any proposals which omit a bid on any one or more items on which bids are required; which omit unit prices if unit prices are required; in which unit prices are unbalanced in the opinion of the AGENCY; which are accompanied by insufficient or irregular bid security; or which are from bidders who have previously failed to perform properly or to timely complete contracts of any nature.

B1.19 AWARD OF CONTRACT

The Contract will be awarded, if at all, to the lowest responsible and responsive bidder, whose bid proposal is not rejected for cause by the AGENCY. The basis for establishing the lowest responsible and responsive bidder shall be the amount of the base bid. However, until an award is made, the AGENCY reserves the right to reject any or all bids, and to waive technical errors or discrepancies, if to do so is deemed to best serve the interests of the AGENCY. In no event will an award be made until all necessary investigations are made as to the responsibility and qualifications of the bidder to whom it is proposed to make such an award.

Each bidder's attention is directed to the possibility that the award of the project may be delayed for various reasons. The AGENCY reserves the right to delay the award of the project for 45 calendar days. After 45 calendar days, the low bidder may at any time request release from its bid without penalty.

The acceptance of a proposal will be evidenced by a Notice of Award of Contract in writing, delivered by mail to the bidder whose proposal is accepted. No other act of the AGENCY shall constitute acceptance of a proposal. The award of contract shall obligate the bidder whose proposal is accepted to furnish a performance bond, payment bond and maintenance bond, as well as evidence of insurance and to execute the contract set forth herein.

B1.20 RETURN OF PROPOSAL GUARANTEES

Within ten (10) calendar days after the bids are opened, the AGENCY will release the proposal guarantees accompanying the proposals which are not to be considered in making the award. Proposal guarantees for the two lowest bidders will be held until the contract has been fully executed, after which they will be returned to the respective bidders.

B2.21 EXECUTION OF CONTRACT

The contract agreement shall be executed in duplicate by the successful bidder and returned, together with the contract bonds and evidence of insurance, within ten (10) calendar days after the notification of the contract award by the AGENCY in writing. In case of failure of the successful bidder to execute the contract agreement within ten (10) calendar days after such notice, or any subsequent extension approved by AGENCY, the AGENCY at its option may consider the bidder in default, in which case the bid bond or proposal guarantee accompanying the bid shall become the property of the AGENCY. After execution by the AGENCY, one original contract shall be returned to the CONTRACTOR.

B1.22 FLEXIBILITY OF BID SCHEDULE

It is the intent of the AGENCY to award a contract to the lowest responsible and responsive bidder and the flexibility shown in the bid schedule is necessary to ensure a project within the AGENCY's budget limits and constraints.

SECTION C – PROPOSAL INFORMATION AND DOCUMENTS

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Proposal Information and Documents:

□ Bid Proposal
□ Bid Schedule
□ Bid Bond
□ Bid Guarantee
□ Bidder Information
□ Experience Statement
□ Designation of Suppliers and Subcontractors
□ Statement Regarding Insurance Coverage
□ Statement Regarding Contractor's Licensing Laws
□ Non-Collusion Affidavit

BID PROPOSAL

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

CITY OF SOUTH PASADENA
1414 MISSION STREET
SOUTH PASADENA, CALIFORNIA 91030

HONORABLE MAYOR AND
MEMBERS OF THE CITY COUNCIL:

The undersigned, as bidder, declares that he/she has examined all of the contract documents and specifications contained in this project manual for the above referenced project, and that he/she will contract with the AGENCY on the form of contract provided herewith to do everything necessary for the fulfillment of this contract at the price, and on the terms and conditions therein contained.

The following are included and are to be considered as forming a part of this proposal: **BID PROPOSAL**, **BID SCHEDULE**, **BID BOND, NONCOLLUSION AFFIDAVIT, BID GUARANTEE** (if submitted in lieu of Bid Bond), **BIDDER INFORMATION**, **EXPERIENCE STATEMENT**, **DESIGNATION OF SUPPLIERS & SUBCONTRACTORS**, **BIDDER'S STATEMENT REGARDING INSURANCE COVERAGE**, and **STATEMENT REGARDING CONTRACTOR'S LICENSING LAWS**.

CONTRACTOR acknowledges receipt and inclusion of addenda _____ to _____ into this bid proposal and the contract documents.

Attached is a Bid Bond duly completed by a guarantee company authorized to carry on business in the State of California in the amount of at least 10% of the total amount of this proposal, or alternatively, there is attached a certified or cashier's check payable to the AGENCY or evidence of a cash payment to the AGENCY, in the amount of at least 10% of the total amount of our proposal.

If this proposal is accepted, we agree to sign the contract form and to furnish the Performance Bond and the Payment Bond (each to be 100% of the bid amount), the Maintenance Bond (to be 50% of the bid amount), and the required evidences of insurance within ten (10) calendar days after receiving written Notice of Award of Contract.

We further agree if our proposal is accepted and a contract for the performance of the work is entered into with the AGENCY, to so plan the work and to prosecute it with such diligence that all of the work shall be completed within the time stipulated in **B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE of SECTION B - INSTRUCTION TO BIDDERS**.

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

TELEPHONE NO. _____

STATE CONTRACTOR'S LICENSE NO. _____

STATE OF INCORPORATION:_____

AUTHORIZED SIGNATURE:_____

TITLE:_____

DATE:_____

(If Company is a Corporation, provide corporate resolution per **B1.06 PROPOSAL of SECTION B – INSTRUCTION TO BIDDERS.**)

BID SCHEDULE

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

IMPORTANT:

THE ELECTRONIC BID SCHEDULE MUST BE COMPLETED BY EACH BIDDER AND PROPERLY SUBMITTED ON PLANETBIDS OR IN A SEALED BID PACKAGE TO THE CITY.

FAILURE TO COMPLETE THE BID SCHEDULE WILL RESULT IN AN INCOMPLETE AND NON-RESPONSIVE BID.

THE ELECTRONIC BID SCHEDULE WILL BE INCORPORATED INTO THE CONTRACT DOCUMENTS.

The cost of all labor, services, material, equipment and installation necessary for the completion of the work itemized under this schedule, even though not shown or specified, shall be included in the unit price for the various items shown herein. The AGENCY reserves the right to increase or decrease the quantity of any item or omit items as may be necessary, and the same shall in no way affect or void the contract, except that appropriate additions or deductions from the contract total price will be made at the stipulated unit price in accordance with these Contract Documents.

The AGENCY reserves the right to reject any and all bids, to waive any informality in a bid, and to make awards in the interest of the AGENCY.

The CONTRACTOR shall perform an independent take-off of the plans and bid accordingly. Quantities listed in this Bid Schedule are intended only as a guide for the CONTRACTOR as to the anticipated order of magnitude of work. The CONTRACTOR shall be responsible for verifying all estimated quantities. The CONTRACTOR will be reimbursed for the quantity of items actually installed as required by the Contract Documents, including addenda, and shown on the plans to neat line and grade.

The CONTRACTOR will not be reimbursed for work performed for his convenience, or as required to adapt to field conditions, or for unauthorized work performed outside of that required by the Contract Documents. The proposal schedule shall include all costs for labor, services, material, equipment, and installation associated with completing the work in place per the plans, specifications and details.

NAME OF BIDDER:_____

CONTRACTOR'S LICENSE NO.:_____

AUTHORIZED SIGNATURE:_____

TITLE:_____

DATE:_____

BID SCHEDULE (Continued)
Only required if not submitting on PlanetBids

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

No.	Item Description	Quantity	Unit	Unit Price	Item Amount
1	Furnish and install six 14-ft by 14-ft overhead bay garage doors and remove and dispose of the existing six bay garage doors and any hardware deemed unnecessary. Installation of product specified for the garage doors and motor have been provided in Appendix II of this document. The bid price shall include providing and installing all necessary hardware, 3-inch tracks, motor operators, and electrical controls and any other equipment necessary for the new garage doors including ancillary work described in the scope of work in the bid documents. Specifically, torsion springs rated for 50,000 cycles shall be included as part of the bid price, and a motor capable of raising the garage doors at 12 inches per second (Liftmaster JHDC Hoist motor or approved equal) shall be required.	1	LS		

The CONTRACTOR shall be responsible for calculating and providing unit prices for the schedule. The proposal schedule shall include all costs for services, labor, materials, equipment, and installation associated in completing the work in place per the Specifications and details.

Bid Schedule Total: $_____

Bid Schedule Total (in words):_____

_____

_____

_____ _____
(Company Name of Bidder) (Date)

BID BOND

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

KNOW ALL MEN BY THESE PRESENTS that Bidder _____, as PRINCIPAL, and _____, as SURETY, are held and firmly bound unto the City of South Pasadena as AGENCY, in the penal sum of _____ dollars ($_____), which is ten percent (10%) of the total amount bid by PRINCIPAL to AGENCY for the above stated project, for the payment of which sum, PRINCIPAL and SURETY agree to be bound, jointly and severally, firmly by these presents.

The SURETY, for value received, hereby stipulates and agrees that the obligations of said SURETY and its BOND shall be in no way impaired or affected by any extension of the time within which the AGENCY may accept such Bid; and said SURETY does hereby waive notice of any such extension.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas PRINCIPAL is about to submit a bid to AGENCY for the above stated project, if said bid is rejected, or if said bid is accepted and a contract is awarded and entered into by PRINCIPAL in the manner and time specified, and PRINCIPAL provides the required payment and performance bonds and insurance coverages to AGENCY, then this obligation shall be null and void, otherwise it shall remain in full force and effect in favor of AGENCY.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this ____ day of _____, 20__.

PRINCIPAL* _____

_____

_____

_____

SURETY* _____

_____

_____

_____

*Provide BIDDER and SURETY name, address and telephone number and the name, title, address and telephone number for their authorized representatives. Power of Attorney must be attached.

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)
personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

BID GUARANTEE

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Note: The following statement shall be used if other than a bid surety bond accompanies bid.

"Accompanying this proposal is a money order*, certified check*, cashier's check*, cash*, payable to the order of the City of South Pasadena in the amount of _____ Dollars ($_____) which is at least ten percent (10%) of the total amount of this bid. The proceeds of this bid guarantee shall become the property of the City of South Pasadena provided this bid is accepted by said City, through action of its legally constituted contracting authorities, and the undersigned fails to execute a contract and furnish the required bonds and insurance within the stipulated time. Otherwise, the proceeds of this bid guarantee shall be returned to the undersigned."

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

_____

AUTHORIZED SIGNATURE: _____

TITLE: _____

DATE: _____

(*circle one option)

BIDDER INFORMATION

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

BIDDER certifies that the following information is true and correct:

Name of Bidder:_____

Business Address:_____

Telephone:_____FAX:_____

E-mail: _____

CONTRACTOR's License No.:_____ Date License Issued:_____

License Expiration Date:_____

The following are the names, titles, addresses, and phone numbers of all individuals, firm members, partners, joint venturers, and/or corporate officers having a principal interest in this proposal: (Name / Title / Address / Telephone)

_____

_____

_____

_____

Any voluntary or involuntary bankruptcy judgments against any principal having an interest in this proposal are as follows: (Type of Judgment / Date)

_____

_____

_____

All current and prior DBA's, aliases, and/or fictitious business names for any principal having an interest in this proposal are as follows: (Principal / DBA's / Applicable Dates)

_____

_____

_____

Prior Disqualification

Has your firm ever been disqualified from performing work for any City, County, Public or Private Contracting entity? Yes / No _____. If yes, provide the following information. (If more than once, use separate sheets):

Date: _____ Entity:_____

Location:_____

Reason:_____

Provide Status and any Supplemental Statement:_____

_____

_____

_____

_____

Has your firm been reinstated by this entity? Yes / No _____

Violations of Federal or State Law

A. Has your firm or its officers been assessed any penalties by any agency for noncompliance, violations of Federal or State labor laws and/or business or licensing regulations within the past five (5) years relating to your construction projects?

Yes / No: _____ Federal / State: _____

If "yes", identify and describe, (including status):_____

_____

_____

_____

_____

Have the penalties been paid? Yes / No:_____

B. Does you firm or its officers have any ongoing investigations by any agency regarding violations of the State Labor Code, California Business and Professions Code or State Licensing laws?

Yes / No:_____ Codes / Laws:_____ Section / Article:_____

If "yes", identify and describe (including status):_____

_____

_____

I declare under penalty of perjury under the laws of the State of California that all of the representations made in this **BIDDER INFORMATION** are true and correct. Executed this _____ day of _____, 20__, at _____, California.

Authorized Representative: Signature _____

Title _____

EXPERIENCE STATEMENT

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Pursuant to this **BID PROPOSAL** and **QUALIFICATION OF BIDDERS**, the following is a record of the Bidder's experience in construction of a type similar in magnitude and character to that contemplated under this contract. Included in this section should be a complete list of references for similar projects in terms of scope of work, value of work, and time constraints. The CONTRACTOR must demonstrate that he/she has experience with this type of project and can manage this project effectively. If necessary, additional numbered pages can be attached to this page. The CONTRACTOR must be properly licensed to perform the work in this project as determined by the State CONTRACTOR's License Board.

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

EXPERIENCE STATEMENT (Continued)

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

I declare under penalty of perjury under the laws of the State of California that all of the representations made in this **EXPERIENCE STATEMENT** are true and correct. Executed this _____ day of _____, 20__, at _____, California.

Authorized Representative: Signature _____

Title _____

DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

The following is a list of subcontractors and suppliers, as defined in 2-3 SUBCONTRACTS of the Standard Specifications, who will perform work or provide materials of value in excess of one-half of one percent of the total bid price or $10,000, whichever is greater.

No subcontractor shall perform work in excess of the amount specified in 2-3 SUBCONTRACTS of the Standard Specifications, without the written approval of the AGENCY.

The CONTRACTOR is responsible to ensure that appropriate provisions are to be inserted in all subcontracts to bind subcontractors to the contract requirements as contained herein.

Each subcontractor must agree to comply with all applicable Federal, State, and local requirements.

Name, License No., and Address of Subcontractor	License No.	MBE/ WBE (Y/N)	Work Subcontracted (List Line Items, e.g. #3, #6, etc.)	Portion of Work (% of Contract Price)

Name, License No., and Address of Subcontractor	License No.	MBE/ WBE (Y/N)	Work Subcontracted (List Line Items, e.g. #3, #6, etc.)	Portion of Work (% of Contract Price)

These representations are made under the penalty of perjury under the laws of the State of California. The undersigned hereby certifies that each subcontractor has been notified in writing of its equal opportunity obligations.

NAME OF BIDDER: _____

AUTHORIZED SIGNATURE: _____

Date: _____

STATEMENT REGARDING INSURANCE COVERAGE

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

The undersigned representative of Bidder hereby certifies that he/she has reviewed the insurance coverage requirements specified in **5-4 INSURANCE** of Section E, Standard Specifications and Section F, Special Provisions. Should Bidder be awarded the contract for the work, the undersigned further certifies that Bidder can meet all of these specification requirements for insurance including insurance coverage of his/her subcontractors.

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

_____

AUTHORIZED SIGNATURE: _____

TITLE: _____

DATE: _____

STATEMENT REGARDING CONTRACTOR'S LICENSING LAWS

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

[Business & Professions Code § 7028.15]
[Public Contract Code § 20103.5]

I, the undersigned, certify that I am aware of the following provisions of California law and that I, or the entity on whose behalf this certification is given, hold a currently valid California CONTRACTOR's license as set forth below:

Business & Professions Code § 7028.15:

a) **It is a misdemeanor for any person to submit a bid to a public agency to engage in the business or act in the capacity of a CONTRACTOR within this state without having a license therefor,** except in any of the following cases:

(1)The person is particularly exempted from this chapter.

(2)The bid is submitted on a state project governed by Section 10164 of the Public Contract Code or on any local agency project governed by Section 20104 [now § 20103.5] of the Public Contract Code.

b) If a person has been previously convicted of the offense described in this section, the court shall impose a fine of 20 percent of the price of the contract under which the unlicensed person performed contracting work, or four thousand five hundred dollars ($4,500), whichever is greater, or imprisonment in the county jail for not less than 10 days nor more than six months, or both.

In the event the person performing the contracting work has agreed to furnish materials and labor on an hourly basis, "the price of the contract" for the purposes of this subdivision means the aggregate sum of the cost of materials and labor furnished and the cost of completing the work to be performed.

c) This section shall not apply to a joint venture license, as required by Section 7029.1. However, at the time of making a bid as a joint venture, each person submitting the bid shall be subject to this section with respect to his/her individual licenser.

d) This section shall not affect the right or ability of a licensed architect, land surveyor, or registered professional engineer to form joint ventures with licensed CONTRACTORs to render services within the scope of their respective practices.

e) Unless one of the foregoing exceptions applies, a bid submitted to a public agency by a CONTRACTOR who is not licensed in accordance with this chapter shall be considered nonresponsive and shall be rejected by the public agency. Unless one of the foregoing exceptions applies, a local public agency shall, before awarding a contract or issuing a purchase order, verify that the CONTRACTOR was properly licensed when the CONTRACTOR submitted the bid. Notwithstanding any other provision of law, unless one of the foregoing exceptions applies, the registrar may issue a citation to any public officer or employee of a public entity who knowingly awards a contract or issues a purchase order to a CONTRACTOR who is not licensed pursuant to this chapter. The amount of civil penalties, appeal, and finality of such citations shall be subject to Sections 7028.7 to 7028.13, inclusive. **Any contract awarded to, or any purchase order issued to, as CONTRACTOR who is not licensed pursuant to this chapter is void.**

f) Any compliance or noncompliance with subdivision (e) of this section, as added by Chapter 863 of the Statutes of 1989, shall not invalidate any contract or bid awarded by a public agency during which time that subdivision was in effect.

g) A public employee or officer shall not be subject to a citation pursuant to this section if the public employee, officer, or employing agency made an inquiry to the board for the purposes of verifying the license status of any person or CONTRACTOR and the board failed to respond to the inquiry within three business days. For purposes of this section, a telephone response by the board shall be deemed sufficient.

Public Contract Code § 20103.5:

In all contracts subject to this part where federal funds are involved, no bid submitted shall be invalidated by the failure of the bidder to be licensed in accordance with the laws of this state. However, at the time the contract is awarded, the CONTRACTOR shall be properly licensed in accordance with the laws of this state. The first payment for work or material under any contract shall not be made unless and until the Registrar of CONTRACTORs verifies to the AGENCY that the records of the Contractors' State License Board indicate that the CONTRACTOR was properly licensed at the time the contract was awarded. Any bidder or CONTRACTOR not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the Contractors' State License Board. The AGENCY shall include a statement to that effect in the standard form of pre-qualification questionnaire and financial statement. **Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder.**

CONTRACTOR's License Number: _____

License Expiration Date:_____

Authorized Signature:_____

Date:_____

NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on the ___ day _____, 20__ at _____, California.

_____
CONTRACTOR's Signer's Name

_____
CONTRACTOR's Signer's Title

_____
CONTRACTOR's Business Name

Contractor's Business Address:

_____
Mailing Street Address

_____
City, State, Zip Code

_____
Telephone #

SECTION D – CONTRACT INFORMATION AND DOCUMENTS

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Contract Information and Documents:

□ Contract Agreement and Attachment A
□ Payment Bond
□ Faithful Performance Bond
□ Maintenance Bond
□ Worker's Compensation Insurance Certificate
□ Endorsements to Insurance Policy

CONTRACT AGREEMENT

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

THIS AGREEMENT ("AGREEMENT") is made and entered into for the above-stated project this _____ day of_____, 20__ *(Council Action Date)*, BY AND BETWEEN the City of South Pasadena, a municipal corporation, hereafter designated as "AGENCY", and _____ a _____
[CONTRACTOR'S BUSINESS NAME] [corporation, partnership, limited liability company, or other business form]

in the State of _____, hereafter designated as "CONTRACTOR."

WITNESSETH that AGENCY and CONTRACTOR have mutually agreed as follows:

1) **Project Name:** Fire Station Garage Door Replacement Project (005178)
2) **Project Scope of Work:** CONTRACTOR shall provide and install:

The work consists of furnishing all materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the Specifications and Contract Documents. The work performed under this contract is summarized in the Notice Inviting Sealed Bids and includes, but is not limited to each bid item listed in the Contractor's Bid Proposal, as covered in the Standard Specifications, and as described in the corresponding items on the following pages. The work in general, to be performed pursuant to these specifications, consists of furnishing and installation of six 14-ft by 14-ft overhead bay garage doors and removal and disposal of the existing six bay garage doors. Product specifications for the garage doors and motor have been provided in Appendix II of this document. The bid price shall include providing and installing all necessary hardware, 3-inch tracks, motor operators, and electrical controls and any other equipment necessary for the new garage doors. Specifically, torsion springs rated for 50,000 cycles shall be included as art of the bid price, and a motor capable of raising the garage doors at 12 inches per second (Liftmaster JHDC HOIST motor or approved equal) shall be required. The work also involves tinting and painting the garage doors with the correct paint number as specified by the fire department, in accordance with the Plans and Specifications entitled Fire Station Garage Door Replacement Project No. 005178. The new doors will match the existing fire station garage doors, which shall include one row of tempered clear glass. The new doors must meet all building codes and fire safety regulations. The contractor will be responsible for disposal of the existing garage doors and coordinating transition to the new garage door system in a manner that will not disrupt fire department staff operations or sacrifice the security of the fire station facility. Additionally, as the work requires close coordination with the fire department to minimize disruption to their operations during the installation process. Upon completion of the garage door installation, the new garage doors must be fully functional and integrate seamlessly with the existing fire station infrastructure. Additionally, the drywall shall be cut back in a straight line to allow adequate space to install the motor and holes in the drywall from the previous track system

shall be patched. The project manager will conduct a final inspection to ensure all installation meets the required standards before approving final completion of the project.

The limits of work include:

817 Mound Ave, South Pasadena, CA 91030

3) **Contract Documents:** The complete contract and agreement ("AGREEMENT") consists of this Contract Agreement, including all attachments hereto, and:

- Approved Plans and Specifications for City Project No. 005178
- Notice Inviting Sealed Bids
- Instructions to Bidders
- Information for Bidders
- Contractor's Bid Proposal
- Bid Schedule
- Standard Specifications
- Special Provisions
- All reference specifications, plans, details, standard drawings, and appendices
- Bonds, insurance certificates, permits, notices, and affidavits
- Appendices, Addendums, and Memorandums
- And all mutually agreed-upon modifications and amendments thereto.

4) **Compensation:** CITY agrees to pay, and CONTRACTOR agrees to accept in full payment for the Work, the stipulated sum of _____ Dollars, ($_____).

5) **Time of Completion:** _____ Working Days *[see B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE of Section B Instruction to Bidders]*.

6) **Liquidated Damages:** $1,000 for each calendar day delay beyond the Time of Completion *[see 6-9 LIQUIDATED DAMAGES of Section F – Special Provisions]*.

7) **Notices:** Any notices, bills, invoices, or reports required by this Agreement shall be addressed to:

To CITY:

City of South Pasadena
Public Works Department
1414 Mission Street
South Pasadena, CA 91030

To CONTRACTOR:

Contractor's Name _____
Address _____
_____
City, State Zip Code _____

IN WITNESS WHEREOF the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this AGREEMENT to be executed in duplicate by setting hereunto their names, titles, hands, and seals this _____ day of _____, 20__ *(Council Action Date)*

CONTRACTOR: _____
[CONTRACTOR'S BUSINESS NAME]

_____
CONTRACTOR's Sign Name, Title

CONTRACTOR's License No. _____

AGENCY: _____ _____
Donald Penman, Interim City Manager — Date
City of South Pasadena

ATTESTED: _____ _____
Mark Perez, Deputy City Clerk — Date
City of South Pasadena

APPROVED AS TO FORM: _____ _____
Roxanne Diaz, City Attorney — Date
City of South Pasadena

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

ATTACHMENT A

ADDITIONAL TERMS AND CONDITIONS OF THE AGREEMENT

ARTICLE I: Contract Documents

The complete contract and agreement ("AGREEMENT") consists of the Contract Documents described on the Contract Agreement, and all terms and conditions of this Attachment are incorporated therein. In the event of conflict between these documents, precedence shall be determined under section 2-5.2 of the Standard Specifications.

All of the provisions of the Contract Documents are made a part hereof as though fully set forth herein.

ARTICLE II: Scope of Work

For and in consideration of the payments and agreements to be made and performed by AGENCY, CONTRACTOR agrees to furnish all materials and equipment and perform all work required for the above-stated project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

AGENCY hereby employs CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices provided herein, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in this AGREEMENT.

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to this AGREEMENT, CONTRACTOR offers and agrees to assign to the AGENCY all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (Section 16700, et seq.) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

ARTICLE III: Compensation

A. CONTRACTOR agrees to receive and accept the prices set forth in the Bid Proposal and Bid Schedule as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. In no event shall the total compensation and costs payable to CONTRACTOR under this Agreement exceed the sum shown on the Contract Agreement, unless specifically approved in advance and in writing by AGENCY.

Such compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements,

unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work. Such unforeseen difficulties or obstructions includes any act of God, the elements, strike, walkout, or any other cause beyond CONTRACTOR's reasonable control that occurs before AGENCY accepts the work as complete.

B. This AGREEMENT is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of CONTRACTORs by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to CONTRACTOR of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This AGREEMENT hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

C. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with AGENCY, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those moneys to CONTRACTOR upon AGENCY's confirmation of CONTRACTOR'S satisfactory completion of this AGREEMENT. At any time during the term of this AGREEMENT CONTRACTOR may, at its own expense, substitute securities for funds otherwise withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

ARTICLE IV: Labor Code

AGENCY and CONTRACTOR acknowledge that this AGREEMENT is subject to the provisions of Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code relating to public works and public agencies and agree to be bound by all the provisions thereof as though set forth fully herein. Full compensation for conforming to the requirements of the Labor Code and with other Federal, State, and local laws related to labor, and rules, regulations and ordinances which apply to any work performed pursuant to this AGREEMENT is included in the price for all contract items of work involved.

This AGREEMENT is further subject to prevailing wage law, including, but not limited to, the following:

A. The CONTRACTOR shall pay the prevailing wage rates for all work performed under the AGREEMENT. When any craft or classification is omitted from the general prevailing wage determinations, the CONTRACTOR shall pay the wage rate of the craft or classification most closely related to the omitted classification. The CONTRACTOR shall forfeit as a penalty to AGENCY $200.00, or any greater penalty provided in the Labor Code for each Calendar Day, or portion thereof, for each worker paid less than the prevailing wage rates for any work done under the AGREEMENT in violation of the provisions of the Labor Code whether such worker is employed in the execution of the work by CONTRACTOR or by any Subcontractor under CONTRACTOR. In addition, CONTRACTOR shall pay each worker the difference between such prevailing wage rates and the amount paid to each worker for each Calendar Day, or portion thereof, for which each worker was paid less than the prevailing wage rate.

B. CONTRACTOR shall comply with the provisions of Labor Code Section 1777.5 concerning the employment of apprentices on public works projects, and further agrees that CONTRACTOR is responsible for compliance with Section 1777.5 by all of its subcontractors.

C. Pursuant to Labor Code § 1725.5, CONTRACTOR and any subcontractor must be registered with the California Department of Industrial Relations for any bid proposal submitted on or after March 1, 2015, and for any contract for public work entered into on or after April 1, 2015. Further, this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

D. Pursuant to Labor Code § 1776, CONTRACTOR and any subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with this AGREEMENT. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following: (1) The information contained in the payroll record is true and correct; and (2) The employer has complied with the requirements of Labor Code §§ 1811, and 1815 for any work performed by his or her employees on the public works project. The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours as required by Labor Code § 1776.

E. This AGREEMENT is further subject to 8-hour workday and wage and hour penalty law, including, but not limited to, Labor Code Sections 1810 and 1813, as follows:

CONTRACTOR shall strictly adhere to the provisions of the Labor Code regarding the 8-hour day and the 40-hour week, overtime, Saturday, Sunday and holiday work and nondiscrimination based on race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, or sexual orientation, except as provided in Section 12940 of the Government Code. Pursuant to the provisions of the Labor Code, eight hours' labor shall constitute a legal day's work. Work performed by CONTRACTOR's employees in excess of eight hours per day, and 40 hours during any one week, must include compensation for all hours worked in excess of eight hours per day, or 40 hours during any one week, at not less than one and one-half times the basic rate of pay. CONTRACTOR shall forfeit as a penalty to AGENCY $25.00, or any greater penalty set forth in the Labor Code for each worker employed in the execution of the work by CONTRACTOR or by any Subcontractor of CONTRACTOR, for each Calendar Day during which such worker is required or permitted to the work more than eight hours in one Calendar Day or more than 40 hours in any one calendar week in violation of the Labor Code.

F. This AGREEMENT is subject to Public Contract Code Section 6109: CONTRACTOR shall be prohibited from performing work on this project with a subcontractor who is ineligible to perform work on the project pursuant to Sections 1777.1 or 1777.7 of the Labor Code.

ARTICLE V: Work Site Conditions

A. In compliance with and pursuant to Government Code Section 4215, AGENCY shall assume the responsibility, as between the parties to this AGREEMENT, for the timely removal, relocation, or protection of existing main- or trunk-line utility facilities located on the site of any construction project that is a subject of this AGREEMENT, if such utilities are not identified by AGENCY in

the plans and specifications made a part of the invitation for bids. The Contract Documents shall include provisions to compensate CONTRACTOR for the costs of locating, repairing damage not due to the failure of CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work. CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project when such delay was caused by the failure of AGENCY or the owner of a utility to provide for removal or relocation of such utility facilities.

B. To the extent that the work requires trenches in excess of five feet (5') and is estimated to cost more than $25,000, prior to any excavation, CONTRACTOR must provide the AGENCY, or a registered civil or structural engineer employed by the AGENCY to whom authority has been delegated to accept such plans, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. Nothing in this section shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders.

C. This AGREEMENT is further subject to Public Contract Code Section 7104 with regard to any trenches deeper than four feet (4') involved in the proposed work as follows:

CONTRACTOR shall promptly, and before the following conditions are disturbed, notify AGENCY, in writing, of any:

(1) Material that CONTRACTOR believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, which is required to be removed to a Class I, Class II, or Class III disposal site in accordance with existing law.

(2) Subsurface or latent physical conditions at the site differing from those indicated by all available information provided prior to the deadline for submission of bids.

(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

AGENCY shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or involve hazardous waste, and cause a decrease or increase in CONTRACTOR's cost of, or the time required for, performance of any part of the work, AGENCY shall issue a change order under the procedures described in this AGREEMENT.

In the event that a dispute arises between AGENCY and CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in CONTRACTOR's cost of, or time required for, performance of any part of the work, CONTRACTOR shall not be excused from any scheduled completion date provided in the AGREEMENT but shall proceed with all work to be performed under the AGREEMENT. CONTRACTOR shall retain any and all

rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

ARTICLE VI: Insurance

A. With respect to performance of work under this AGREEMENT, CONTRACTOR shall maintain, and shall require all of its subcontractors to maintain, insurance as required by Section E "Standard Specifications" of the Contract Documents.

B. This AGREEMENT is further subject to Workers' Compensation obligations, including, but not limited to, California Labor Code Sections 1860 and 1861 as follows:

CONTRACTOR shall take out and maintain, during the life of this contract, Worker's Compensation Insurance for all of CONTRACTOR's employees employed at the site of improvement; and, if any work is sublet, CONTRACTOR shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by CONTRACTOR. CONTRACTOR and any of CONTRACTOR's subcontractors shall be required to provide AGENCY with a written statement acknowledging its obligation to secure payment of Worker's Compensation Insurance as required by Labor Code § 1861; to wit: 'I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.' If any class of employees engaged in work under this AGREEMENT at the site of the Project is not protected under any Worker's Compensation law, CONTRACTOR shall provide and shall cause each subcontractor to provide adequate insurance for the protection of employees not otherwise protected. CONTRACTOR shall indemnify and hold harmless AGENCY for any damage resulting from failure of either CONTRACTOR or any subcontractor to take out or maintain such insurance.

Any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements or limits shall be available to AGENCY as additional insured. Further, the requirements for coverage and limits shall be the greater of (1) the maximum coverage and limits specified in this Agreement, or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured. Insurance provided by CONTRACTOR under this Contract shall not replace or substitute for CONTRACTOR's indemnification obligations in Article VII.

CONTRACTOR's insurance, including all endorsements, shall be primary to any coverage available to AGENCY. Any insurance or self-insurance maintained by AGENCY and/or its officers, employees, agents, or volunteers, shall be excess of CONTRACTOR's insurance and shall not contribute with it.

ARTICLE VII: Indemnification

To the fullest extent permitted by law, CONTRACTOR shall, at its sole cost and expense, fully defend, indemnify and hold harmless AGENCY, its authorized representatives and their respective

subsidiaries, affiliates, members, directors, officers, subcontractors (including governmental agencies), suppliers, employees and agents (collectively, the "Indemnitees") from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses, including but not limited to any fees of accountants, attorneys or other professionals (collectively "Liabilities"), arising out of, in connection with, resulting from or related to, any act, omission, fault or negligence of CONTRACTOR, CONTRACTOR's Representative, or any of its officers, agents, employees, Subcontractors or Suppliers, or any person or organization directly or indirectly employed by any of them (Collectively, the "Indemnitors"), in connection with or relating to or claimed to be in connection with or relating to the work performed under this AGREEMENT. Indemnification includes, but is not limited to, all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses arising out of, in connection with, resulting from or related to changes to the natural environment or environmental harms caused in whole or in part by work performed under this AGREEMENT.

If CONTRACTOR is a joint venture or partnership, each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of CONTRACTOR that are assumed under or arise out of this AGREEMENT. Each of such venturers or partners waives notice of the breach or non-performance of any undertaking or obligation of CONTRACTOR contained in, resulting from, or assumed under this AGREEMENT, and the failure to give any such notice shall not affect or impair such venturer's or partner's joint and several liability hereunder.

AGENCY may request a deposit for defense costs from CONTRACTOR with respect to a claim. If AGENCY requests a defense deposit, CONTRACTOR shall provide it within 15 days of the request.

ARTICLE VIII: Binding Effect

AGENCY and CONTRACTOR each bind itself, its partners, successors, assigns, and legal representatives to the other party hereto and to its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents. This AGREEMENT is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported

assignment or delegation of any of the rights of obligations of either party without the prior written consent of the other shall be void and of no force and effect.

ARTICLE IX: Dispute Resolution

A. All disputes arising out of this AGREEMENT are subject to a mandatory step-by-step claims submission and evaluation process as a precondition to legal action in accordance with Public Contracts Code § 9204.

B. Any court action arising out of this AGREEMENT shall be filed in the Los Angeles County Superior Court. Any alternative dispute resolution proceeding arising out of this AGREEMENT shall be heard in the County of Los Angeles.

C. AGENCY shall have full authority to compromise or otherwise settle any claim relating to this AGREEMENT or any part hereof at any time. AGENCY shall provide timely notification to CONTRACTOR of the receipt of any third-party claim relating to this AGREEMENT. AGENCY shall be entitled to recover its reasonable costs incurred in providing the notification required by this section.

D. This AGREEMENT is further subject to the provisions of Article 1.5 (commencing at Section 20104) of Division 2, Part 3 of the Public Contract Code regarding the resolution of public works claims of less than $375,000. Article 1.5 mandates certain procedures for the filing of claims and supporting documentation by CONTRACTOR, for the response to such claims by the AGENCY, for a mandatory meet and confer conference upon the request of CONTRACTOR, for mandatory nonbinding mediation in the event litigation is commenced, and for mandatory judicial arbitration upon the parties' failure to resolve the dispute through mediation. This AGREEMENT hereby incorporates the provisions of Article 1.5 as though fully set forth herein.

ARTICLE X: Independent CONTRACTOR

CONTRACTOR is and shall at all times remain as to AGENCY, a wholly independent CONTRACTOR. Neither AGENCY nor any of its agents shall have control of the conduct of CONTRACTOR or any of CONTRACTOR's employees, except as herein set forth. CONTRACTOR shall not at any time or in any manner represent that it or any of its agents or employees are in any manner agents or employees of AGENCY.

ARTICLE XI: Taxes

CONTRACTOR is responsible for paying all retail, sales and use, transportation, export, import, special or other taxes and duties applicable to, and assessable against any work, materials, equipment, services, processes, and operations incidental to or involved in this AGREEMENT. The CONTRACTOR is responsible for ascertaining and arranging to pay such taxes and duties. The prices established in this AGREEMENT shall include compensation for any taxes the CONTRACTOR is required to pay by laws and regulations in effect as of the execution of this AGREEMENT.

ARTICLE XII: Notices

All notices and communications shall be sent in writing to the parties at the addresses listed on the Contract Agreement.

ARTICLE XIII: Entire Agreement

This AGREEMENT supersedes any and all other agreements, either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described herein. Each party to this AGREEMENT acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any other agreement, statement or promise not contained in this AGREEMENT shall not be valid or binding. Any modification of this AGREEMENT will be effective only if signed by the party to be charged.

The benefits and obligations of this AGREEMENT shall inure to and be binding upon the representatives, agents, partners, heirs, successors and assigns of the parties hereto. This AGREEMENT shall be construed pursuant to the laws of the State of California.

ARTICLE XIV: Authority to Contract

The signatories hereto represent that they are authorized to sign on behalf of the respective parties they represent and are competent to do so, and each of the parties hereto hereby irrevocably waives any and all rights to challenge signatures on these bases.

ARTICLE XV: General Provisions

A. All reports, documents, or other written material ("written products" herein) developed by CONTRACTOR in the performance of this Agreement shall be and remain the property of AGENCY without restriction or limitation upon its use or dissemination by AGENCY. CONTRACTOR may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by CONTRACTOR.

B. In the performance of this Agreement, CONTRACTOR shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability, medical condition, or any other unlawful basis.

C. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph at the head of which it appears, the section or paragraph hereof, as the case may be, and not such heading, shall control and govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

D. The waiver by AGENCY or CONTRACTOR of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term, covenant, or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term,

covenant or condition of this Agreement shall be deemed to have been waived by AGENCY or CONTRACTOR unless in writing.

E. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any of all of such other rights, powers, or remedies.

F. CONTRACTOR shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to AGENCY under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to CONTRACTOR under this Agreement. All such documents shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of AGENCY. In addition, pursuant to Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars, all such documents and this Agreement shall be subject to the examination and audit of the State Auditor, at the request of AGENCY or as part of any audit of AGENCY, for a period of three (3) years after final payment under the Agreement.

(End of Attachment A)

(ATTACH TO EXECUTED CONTRACT AGREEMENT)

PAYMENT BOND

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

WHEREAS, the City of South Pasadena, as AGENCY has awarded to _____, as CONTRACTOR, a contract for the above-stated project;

AND WHEREAS, CONTRACTOR is required to furnish a bond in connection with the contract, to secure the payment of claims of laborers, mechanics, material persons, and other persons as provided by law;

NOW THEREFORE, we, the undersigned CONTRACTOR and SURETY, are held and firmly bound unto AGENCY in the sum of _____, ($_____.____) Dollars, which is one hundred percent (100%) of the total contract amount for the above-stated project, for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION IS SUCH that if CONTRACTOR, its heirs, executors, administrators, successors, assigns or subcontractors, shall fail to pay any of the persons named in Civil Code Section 9100, or amounts due under the Unemployment Insurance Code with respect to work or labor withheld, and to pay over to the Employment Development Department from the wages of employees of the CONTRACTOR and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, that the surety or sureties herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, SURETY will pay reasonable attorneys' fees to the plaintiffs and AGENCY in an amount to be fixed by the court.

This bond shall inure to the benefit to any of the persons named in Civil Code Section 9100 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

The SURETY hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or the specifications accompanying it shall in any manner affect SURETY's obligations on this bond. The SURETY hereby waives notice of any such change, extension, alteration or addition and hereby waives the requirements of Section 2845 of the Civil Code as a condition precedent to any remedies AGENCY may have.

(Continued on Next Page)

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals as of the dates set forth below:

CONTRACTOR*	CONTRACTOR's Signer's Name, Title	_____
	CONTRACTOR's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____
Surety*	Surety Signer's Name / Title	_____
	Surety's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____

*Provide CONTRACTOR and Surety name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney and Notary Acknowledgement must be attached. Seals and dates of signing must also be included.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

FAITHFUL PERFORMANCE BOND

FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

KNOW ALL PERSONS BY THESE PRESENTS That _____, hereinafter referred to as "CONTRACTOR" as PRINCIPAL, and _____, a corporation duly organized and doing business under and by virtue of the laws of the State of California and duly licensed for the purpose of making, guaranteeing, or becoming sole surety upon bonds or undertakings as Surety, are held and firmly bound unto the CITY OF SOUTH PASADENA, CALIFORNIA, hereinafter referred to as the "AGENCY" in the sum of _____, ($_____.____) Dollars, which is one hundred percent (100%) of the total contract amount for the above stated project; lawful money of the United States of America for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, assigns and successors, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that whereas CONTRACTOR has been awarded and is about to enter into a Contract with AGENCY to perform all work required pursuant to the contract documents for the project entitled: FIRE STATION GARAGE DOOR REPLACEMENT PROJECT NO. 005178, CONTRACT which Contract is by this reference incorporated herein, and is required by AGENCY to give this Bond in connection with the execution of the Contract;

NOW, THEREFORE, if CONTRACTOR and his or her Subcontractors shall well and truly do and perform all the covenants and obligations of the Contract on his or her part to be done and performed at the times and in the manner specified herein including compliance with all Contract specifications and quality requirements, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect;

PROVIDED, that any alterations in the work to be done, or in the material to be furnished, which may be made pursuant to the terms of the Contract, shall not in any way release CONTRACTOR or the Surety thereunder, nor shall any extensions of time granted under the provisions of the Contract release either CONTRACTOR or said Surety, and notice of such alterations of extensions of the Contract is hereby waived by said Surety.

In the event suit is brought upon this Bond by AGENCY and judgment is recovered, said Surety shall pay all costs incurred by AGENCY in such suit, including a reasonable attorney's fee to be fixed by the Court.

(Continued on Next Page)

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals as of the dates set forth below:

CONTRACTOR*	CONTRACTOR's Signer's Name, Title	_____
	CONTRACTOR's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____
Surety*	Surety Signer's Name / Title	_____
	Surety's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____

*Provide CONTRACTOR and Surety name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney and Notary Acknowledgement must be attached. Seals and dates of signing must also be included.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

MAINTENANCE BOND

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

KNOW ALL PERSONS BY THESE PRESENTS THAT WHEREAS, the City of South Pasadena, as AGENCY has awarded to _____, as CONTRACTOR, a contract for the above-stated project.

AND WHEREAS, CONTRACTOR is required to furnish a bond in connection with the contract guaranteeing maintenance thereof;

NOW, THEREFORE, we, the undersigned CONTRACTOR and SURETY, are held firmly bound unto AGENCY in the sum of _____, ($_____.____) Dollars, which is fifty percent (50%) of the total contract amount for the above-stated project to be paid to AGENCY, its successors and assigns, for which payment well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if CONTRACTOR shall remedy without cost to AGENCY any defects which may develop during a period of one (1) year from the date of recordation of the Notice of Completion of the work performed under the contract, provided such defects are caused by defective or inferior materials or work, then this obligation shall be void; otherwise, it shall be and remain in full force and effect. In case suit is brought upon this bond, SURETY will pay reasonable attorneys' fees to the AGENCY in an amount to be fixed by the court.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals as of the dates set forth below:

CONTRACTOR*	CONTRACTOR's Signer's Name, Title	_____
	CONTRACTOR's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____
Surety*	Surety Signer's Name / Title	_____
	Surety's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____

*Provide CONTRACTOR and Surety name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney and Notary Acknowledgement must be attached. Seals and dates of signing must also be included.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

WORKERS' COMPENSATION INSURANCE CERTIFICATE

The CONTRACTOR shall execute the following form as required by the California Labor Code, Sections 1860 and 1861:

> I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

Date: _____

_____
CONTRACTOR's Business Name

By:_____
(Signature)

_____
(Title)

Attest:

By:_____
(Signature)

_____
(Title)

NOTE: See Section 5.4 Insurance of the Standard Specifications for insurance carrier rating requirements.

ENDORSEMENTS TO INSURANCE POLICY

Name of Insurance Company:_____

Policy Number:_____

Effective Date:_____

The following endorsements are hereby incorporated by reference into the attached Certificate of Insurance as though fully set forth thereon:

1. The naming of an additional insured as herein provided shall not affect any recovery to which such additional insured would be entitled under this policy if not named as such additional insured, and
2. The additional insured named herein shall not be held liable for any premium or expense of any nature on this policy or any extensions thereof, and
3. The additional insured named herein shall not by reason of being so named be considered a member of any mutual insurance company for any purpose whatsoever, and
4. The provisions of the policy will not be changed, suspended, canceled or otherwise terminated as to the interest of the additional insured named herein without first giving such additional insured twenty (20) days' written notice.
5. Any other insurance held by the additional insured shall not be required to contribute anything toward any loss or expense covered by the insurance, which is referred to by this certificate.
6. **The company provided insurance for this certificate is a company licensed to do business in the State of California with rating of "A" or higher and a Financial Class VII or higher as established by A.M. Best, or higher rating established by Moody's or Standard & Poor's.**

It is agreed that the <u>City of South Pasadena, its officers and employees,</u> are included as Additional Insureds under the contracts of insurance for which the Certificate of Insurance is given.

_____
Authorized Insurance Agent

Date:_____

SECTION E – STANDARD SPECIFICATIONS

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

STANDARD SPECIFICATIONS

INCORPORATION OF GREENBOOK. The 2021 edition of the Standard Specifications for Public Works Construction ("SSPWC" or "Greenbook") shall be incorporated by reference into these Standard Specifications as if fully replicated herein. These Standard Specification shall be supplemented, amended, or replaced by the Special Provision contained in Section F and G herein below. To the extent that anything in the Special Provisions conflicts with the terms or requirements of the SSPWC, the Special Provisions shall control.

SECTION F – SPECIAL PROVISIONS – PART 1

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

SPECIAL PROVISIONS – PART 1. The following provisions supplement, amend, or replaced the requirements of the Standard Specifications for Public Works Construction ("SSPWC" or "Greenbook"). To the extent that anything in these Special Provisions conflicts with the terms or requirements of the SSPWC, these Special Provisions shall control.

SECTION 1 - GENERAL

1-1 GENERAL. Unless otherwise stated, the words *directed, required, permitted, ordered, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory*, or words of like meaning, refer to actions, expressions, and prerogatives of the Engineer.

1-2 TERMS AND DEFINITIONS

Acceptance – The AGENCY's formal written acceptance of a project that has been completed in all respects in accordance with the plans and specifications and any modifications thereof.

AGENCY – The City of South Pasadena.

Agent – Shall include persons and companies, other than the CONTRACTOR, retained by the City to perform design and construction services in relation to the Work.

Board – The City Council of the City of South Pasadena.

City – The City of South Pasadena, California, as the AGENCY and Owner.

City Council – City Council of the City of South Pasadena, California.

Construction Manager – Persons and/or company retained by the City to perform construction management services.

Contract Documents – Including, but not limited to: the Contract, any Addendum and Memorandum (which pertain to the contract documents), Notice Inviting Bids, Instructions to Bidders; Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Contract, the Bonds, the general conditions, permits from other agencies, the Special Provisions, the Plans, Standard Plans, Standard Specifications, Reference Specifications, and all Modifications issued after the execution of the Contract.

Days – Days shall mean consecutive calendar's days unless otherwise specified.

Design Engineer – Persons and/or company retained by the City to perform engineering design services.

Due Notice – A written notification, provided in due time, of a proposed action, where the contract requires such notification within a specified time (usually 48 hours or two working days) prior to the commencement of the contemplated action.

Engineer – The City Engineer of the City of South Pasadena, or his/her authorized representative.

Geotechnical Engineer – Person licensed to practice Soils Engineering or Geotechnical Engineering pursuant to the laws of the State of California and retained by the AGENCY during construction.

Geotextile – Synthetic fiber used in civil engineering applications, serving the primary functions of separation and filtration.

House Sewer – A sewer, wholly within private property, proposed to connect any building to a house connection sewer.

Luminaire Arm – The structural member, bracket, or mast arm, which, mounted on the standard, supports the luminaire.

Owner – City of South Pasadena, California.

Prompt – The briefest interval of time required for a considered reply, including time required for approval by a governing body.

Proposal – See Bid.

Reference Specifications – Those bulletins, standards, rules, methods of analysis or test, codes, and specifications of other agencies, engineering societies, or industrial associations referred to in the Contract Documents. These refer to the latest edition, including amendments in effect and published at the time of advertising the project or issuing the permit, unless specifically referred to by edition, volume, or date.

Standard Plans – "Standard Plans for Public Works Construction" or "SSPWC" – Latest edition of the Southern California Chapter of the American Public Works Association.

State Standard Specifications ("SSS") – Standard Specifications prepared by the State of California, Business and Transportation Agency, Department of Transportation.

State Standard Plans ("SSP") – Standard Plans prepared by State of California, Business and Transportation Agency, Department of Transportation.

Storm Drain – Any conduit and appurtenances intended for the reception and transfer of storm water.

Tonne – Also referred to as "metric ton" — Represents a unit of measure in the International System of Units equal to 1,000 kilograms.

Work – That which is proposed to be constructed or done under the Contract or permit, including the furnishing of all labor, materials, equipment, and services.

Working Days – Any days, except: (1) Saturdays, Sundays, legal holidays on which South Pasadena City Hall is closed for business; (2) days when work is suspended by the Engineer for reasons unrelated to the performance of the CONTRACTOR and provided in Subsection 6-6.1; and (3) days determined to be non-working in accordance with Section 6-3 "Time of Completion."

1-3 ABBREVIATIONS

1-3.3 Institutions. *Add the following:*
These Standard Specifications incorporate by reference the list of commonly used institution terms in the edition of the "Standard Plans for Public Works Construction" (aka the Greenbook) with the following additions:

AGCA	Associated General CONTRACTORs of America
APWA	American Public Works Association
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
NFPA	National Fire Protection Association
SSS	State of California Standard Specifications, latest edition, Department of Transportation
SSP	State of California Standard Plans, latest edition, Department of Transportation.
SSPWC	Standard Specifications for Public Works Construction

1-4 UNITS OF MEASURE

1-4.1 General. *Add the following:*

When U.S. Standard Measures are not included in parenthesis, then the SI units shall control.

1-7 AWARD AND EXECUTION OF CONTRACT. *Add the following:*

1-7.0 Investigation of Site Conditions. Prior to submittal of the bid, Bidders must visit the site of work and complete their own investigations to satisfy themselves as to the existing conditions affecting the work to be done under these specifications. If the bidder chooses not to visit the site or conduct investigations, he will, nevertheless, be charged with the knowledge of conditions which reasonable inspection and investigation would have disclosed.

After the project is awarded, the CONTRACTOR shall carefully study and compare the Contract Documents with each other and with information available to the CONTRACTOR and furnished by the Owner and shall immediately notify the Engineer of errors, inconsistencies or omissions discovered. If the CONTRACTOR performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Engineer, the CONTRACTOR shall assume appropriate responsibility for such performance and may assume responsibility for the full costs for correction.

The CONTRACTOR shall make field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the CONTRACTOR with the Contract Documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported to the Engineer immediately.

When existing conditions are encountered which, in the opinion of the Engineer, require temporary suspension of work for design modifications or for other determinations to be made, the CONTRACTOR shall move to other areas of work until such determinations are made at no cost to the City. No additional compensation will be allowed by reason of such temporary suspension of work, or modifications to work, except as noted in Section 3 of these Standard Specifications ("Changes in Work") for specific items of work not included in the bid. Appropriate extension of item for completion may be allowed where justification in the opinion of the Engineer.

1-7.1 General. *Add the following:*

The City reserves the right to reject any or all proposals.

The Contract will be awarded, if at all, to the lowest responsible and responsive Bidder determined as provided on the Proposal Form, whose proposal complies with all the requirements prescribed. Such award, if made, will be made within the number of days stated in the proposal form. Refusal or failure to deliver the executed contract, bonds, or insurance in the form provided in the Contract and approved by the AGENCY's attorney within the time provided herein shall be cause, at the AGENCY's option, for the annulment of the award and forfeiture of the bid security. In such event, the AGENCY may successively award the Contract to the next lowest responsible and responsive Bidder until a properly executed Contract, bonds, and insurance is obtained, or it may at any time reject all remaining bids and proceed as provided by law. The refusal or failure of a successive lowest responsible and responsive Bidder to execute the Contract may, at the AGENCY's option, result in an annulment of the award to that Bidder and the forfeiture of that Bidder's bid security. The periods of time specified above within which the award of the Contract may be made shall be subject to extension for such further period as may be agreed upon in writing between the AGENCY and the concerned Bidder.

The AGENCY reserves the right to waive any irregularities.

Within ten (10) calendar days after the date of the Notice of Award, the CONTRACTOR shall execute and return the following contract documents to the AGENCY:

Contract Agreement (in duplicate)
Faithful Performance Bond (in duplicate)
Maintenance Bond (in duplicate)
Payment Bond (in duplicate)
Public Liability and Property Damage Insurance Certificate (two originals)
Additionally Insured Endorsement
Workers' Compensation Insurance Certificate (two originals)

A corporation to which an award is made may be required, before the Contract agreement is executed by the AGENCY, to furnish evidence of its corporate existence, of its right to enter into contracts in the State of California, and that the officers signing the contract and bonds for the corporation have the authority to do so.

1-7.2 Contract Bonds. *Add the following:*

The PAYMENT BOND shall remain in force until thirty-five (35) calendar days after the date of recordation of the Notice of Completion. The FAITHFUL PERFORMANCE BOND shall remain

in force until the date of recordation of the Notice of Completion. The MAINTENANCE BOND shall remain in force until one (1) year after the date of recordation of the Notice of Completion.

All bonds must be accompanied by a Power of Attorney.

SECTION 2 - SCOPE OF THE WORK

2-1 WORK TO BE DONE. *Add the following:*

Any plan or method of work suggested by the AGENCY or the Engineer to the CONTRACTOR but not specified or required, if adopted or followed by the CONTRACTOR in whole or in part, shall be used at the risk and responsibility of the CONTRACTOR; and the AGENCY and the Engineer shall assume no responsibility therefore and in no way be held liable for any defects in the work which may result from or be caused by use of such plan or method of work.

2-3 RIGHT-OF-WAY. *Substitute the following:*

Rights-of-way, easements, or rights-of-entry for the Work will be provided by the AGENCY. Unless otherwise provided, the CONTRACTOR shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities temporarily required. The CONTRACTOR shall fully defend, indemnify and hold harmless AGENCY, its authorized representatives and their representative subsidiaries, affiliates, members, director, officer, employees and agents, including parties that AGENCY contracts with (including other governmental agencies such as the California Department of Transportation) (collectively, the "Indemnitees") from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses, including but not limited to any fees of accountants, attorneys or other professionals (collectively "Liabilities"), arising out of, in connection with these actions.

When the CONTRACTOR arranges for additional work areas and facilities temporarily required by him/her, he/she shall provide the AGENCY with proof that the additional work areas and/or facilities have been left in a condition satisfactory to the owner(s) of said work areas and/or facilities prior to acceptance of the work.

2-5 CONTRACTOR'S EQUIPMENT AND FACILITIES.

2-5.1 General. *Add the following:*

The CONTRACTOR shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the Work. Such equipment and facilities shall meet all requirements of applicable ordinances and laws.

A noise level limit of 85 dba at a distance of fifty (50) feet shall apply to all construction equipment on or related to the job, whether owned by the CONTRACTOR or not. The use of excessively loud warning signals shall be avoided except in those cases where required for the protection of personnel.

The CONTRACTOR shall arrange and maintain a secure storage site for all equipment and materials. All equipment and unused materials shall be returned to this site at the end of each workday.

SECTION 3 - CONTROL OF THE WORK

3-3 SUBCONTRACTORS. *Add the following:*

3-3.1 General. Each Bidder shall comply with the Public Contract Code including Sections 4100 through 4113. The following excerpts or summaries of some of the requirements of this Chapter are included below for information:

The Bidder shall set for the in the Bid, as provided in 4104:

> "(a) The name, and location of the place of business, the California contractor license number, and public works contractor registration number issued pursuant to Section 1725.5 of the Labor Code of each subcontractor who will perform work or labor or render service to the prime CONTRACTOR in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime CONTRACTOR, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime CONTRACTOR's total bid, or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime CONTRACTOR's total bid or ten thousand dollars ($10,000), whichever is greater."
>
> "(b) The portion of the work which will be done by each such subcontractor under this act. The prime CONTRACTOR shall list only one subcontractor for each such portion as is defined by the prime CONTRACTOR in his bid."

Subcontracting of more than one-half of one percent of the work for which no Subcontractor was designated in the original Bid will be allowed only in cases of public emergency or necessity and only after the Engineer makes a written finding of circumstances constituting public emergency or necessity.

The CONTRACTOR must obtain written consent of the City to substitute a Subcontractor designated in the original Bid, to permit any subcontract to be assigned or transferred, or to otherwise allow a subcontract to be performed by anyone other than the originally designated Subcontractor.

A violation of any of the above provisions will be considered a violation of the Contract, and the City may cancel the Contract and collect appropriate damages or assess the CONTRACTOR a penalty of not more than ten (10) percent of the subcontract involved.

If subcontracted work is not being performed in a satisfactory manner, the City will notify the CONTRACTOR of the need to take corrective action and the Engineer may report the facts to the City Council. Upon order by City Council and the CONTRACTOR's receipt of written instructions from the Engineer, the Subcontractor shall immediately be removed from the Work and may not again be employed on the Work.

3-3.2 Additional Responsibility. The CONTRACTOR shall perform, with its own organization, Contract work amounting to at least 50 percent of the Contract Price except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the Contract Price before computing the amount required to be performed by the CONTRACTOR with its own organization. "Specialty Items" will be identified by the AGENCY in the Bid or Proposal. Where an entire item is subcontracted, the value

of work subcontracted will be based on the Contract Unit Price. When a portion of an item is subcontracted, the value of work subcontracted will be based on the estimated percentage of the Contract Unit Price. This will be determined from information submitted by the CONTRACTOR, and subject to approval by the Engineer.

3-3.3 Status of Subcontractors. All persons engaged in the Work, including Subcontractors and their employees, will be considered employees of the CONTRACTOR. The CONTRACTOR will be held responsible for their work. The AGENCY will deal directly and solely with the CONTRACTOR and make all payments to the CONTRACTOR.

3-4 AUTHORITY OF BOARD AND THE ENGINEER. *Substitute the following:*

The Board has the final authority in all matters affecting the Work. Within the scope of the Contract, the Engineer has the authority to enforce compliance with the Plans and Specifications. The CONTRACTOR shall promptly comply with instructions from the Engineer or an authorized representative.

The decision of the Engineer is final and binding on all questions relating to: quantities; acceptability of materials, equipment, or work; execution, progress or sequence of work; and interpretation of the Plans, Specifications, or other drawings. This shall be precedent to any payment under the Contract, unless otherwise ordered by the Board.

3-7 CONTRACT DOCUMENTS.

3-7.1 General. *Add the following:*

The CONTRACTOR shall ascertain the existence of any conditions affecting the cost of the Work through a reasonable examination of the Work site prior to submitting the Bid.

Existing improvements visible at the Work site, for which no specific disposition is made on the Plans, but which interfere with the completion of the Work, shall be removed and disposed of by the CONTRACTOR.

The CONTRACTOR shall, upon discovering any error or omission in the Plans or Specifications, immediately call it to the attention of the Engineer.

All final locations determined in the field, and any deviations from the Plans and Specification, shall be marked in red on the documents to show the as-built conditions. CONTRACTOR shall maintain a complete and accurate record of all changes of construction from that shown in these plans and specifications for the purpose of providing a basis for construction record drawings. No changes shall be made without prior written approval of the Engineer. Upon completion of the Project, CONTRACTOR shall deliver this record of all construction changes to the Engineer along with a letter which declares that other than these noted changes “the Project was constructed in conformance with the Contract Documents.” Final payment will not be made until this requirement is met.

As the figured dimensions shown on the drawings and in the specifications of the Contract may not in every case agree with scaled dimensions, the figured dimensions shall be followed in preference to the scaled dimensions, and drawings to a large scale shall be followed in preference to the drawings to a small scale. Should it appear that the work to be performed, or any related matter, are not sufficiently detailed or explained in the Contract documents, the CONTRACTOR shall apply to the Engineer for such further explanations as necessary, and shall conform to such

further explanations provided by the Engineer as part of the Contract to the extent that it is consistent with the terms of the Contract.

Caution: The engineer preparing these plans will not be responsible or liable for unauthorized changes to or uses of these plans. All changes to the plans must be approved in writing by the Engineer.

(a) Records of Construction Changes / As-Builts. CONTRACTOR shall maintain a complete and accurate record of all changes of construction from that shown in these Plans and Specifications for the purpose of providing a basis for construction record drawings. No changes shall be made without prior written approval of the City Engineer.

Upon completion of the Project, CONTRACTOR shall deliver this record of all construction changes to the Engineer along with a letter which declares that other than these noted changes that Project was constructed in conformance with the Contract Documents.

Caution: The engineer preparing these Plans will not be responsible for, or liable for, unauthorized changes to or uses of these Plans. All changes to the Plans must be approved in writing by City Engineer.

3-7.2 Precedence of Contract Documents. *Substitute the following:*

If there is a conflict between any of the Contract Documents, the document highest in precedence shall control. The order of precedence, from highest to lowest, shall be as follows:

1) Permits issued by jurisdictional regulatory agencies.

2) Change Orders and/or Supplemental Agreements; whichever occurs last.

3) Contract/Agreement

4) Addenda.

5) Bid/Proposal.

6) Special Provisions.

7) Plans.

8) Notice Inviting Bids

9) Instructions to Bidders

10) Standard Plans.

11) Standard Specifications.

12) Reference Specifications.

3-12 WORK SITE MAINTENANCE

3-12.1 General. *Add the following:*

The CONTRACTOR shall also abate dust nuisance by cleaning, sweeping and sprinkling with water, or other means as necessary. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other methods.

Materials and equipment shall be removed from the site as soon as they are no longer necessary. Before the final inspection, the site shall be cleared of equipment, unused materials, and rubbish

so as to present a satisfactory clean and neat appearance. All cleanup costs shall be included in the CONTRACTOR's Bid.

Excess excavated material from catch basins or similar structures shall be removed from the site immediately. Sufficient material may remain for use as backfill if permitted by the Specifications. Forms and form lumber shall be removed from the site as soon as practicable after stripping.

3-12.1.1 Vermin Control. *Add the following:*

At the time of acceptance, structures entirely constructed under the Contract shall be free of rodents, insects, vermin, and pests. Necessary extermination work shall be arranged and paid for by the CONTRACTOR as part of the Work within the Contract time, and shall be performed by a licensed exterminator in accordance with requirements of governing authorities. The CONTRACTOR shall be liable for injury to persons or property and responsible for the elimination of offensive odors resulting from extermination operations.

3-12.3 Noise Control. *Add the following:*

CONTRACTOR shall adhere to City noise restrictions at all times. Pursuant to Chapter 19A.13 of the South Pasadena Municipal Code, construction activity is prohibited within a residential zone or within 500 feet thereof on Monday through Friday before 8:00 a.m. and after 7:00 p.m., Saturday before 9:00 a.m. and after 7:00 p.m., and on Sundays and City recognized holidays before 10:00 a.m. and after 6:00 p.m.

3-12.6.3 Storm Water Pollution Prevention Plan (SWPPP). *Add the following:*

CONTRACTOR shall submit to the engineer a completed and signed SWPPP one week prior to the preconstruction meeting. The plan may utilize the practices recommended in the latest edition of the *California Storm Water Best Management Practices Handbook,* available from California Stormwater Quality Association (CSQA), and online at http://www.cabmphandbooks.net/ . The plan shall be consistent with the construction General Permit, issued by the State Water Resources, Control Board, through submittal of the Notice of Intent (NOI).

If construction will occur between October 15 and April 15 (considered as the rainy season per the City of South Pasadena), a wet weather erosion control plan must be submitted. Additionally, Best Management Practices (BMPs) implemented during the AGENCY's rainy season shall include but not be limited to those appropriate for wet weather conditions.

(a) Storm Water Pollution Prevention Measures. All storm water pollution prevention measures shall be in accordance with the submitted SWPPP. In the event circumstances during the course of construction require changes to the original SWPPP, a revised plan shall be promptly submitted to the AGENCY's representative in each instance. No responsibility shall accrue to the AGENCY as a result of the plan or as a result of knowledge of the plan. All work installed by the CONTRACTOR in connection with the SWPPP but not specified to become a permanent part of the project shall be removed and the site restored in so far as practical to its original condition prior to completion of construction or when directed by the AGENCY's representative.

(b) Storm Water Pollution Prevention – Measurement And Payment. Unless otherwise indicated in the Special Provisions, measurement and payment for Storm Water Pollution Prevention Measures, as described herein, shall be included in the items of Work requiring storm water pollution prevention measures as indicated in the project Special Provisions. Such payment

shall be considered full compensation for all labor, materials, tools, and equipment for completion, and implementation and compliance with the SWPPP.

This item shall also include the installation, maintenance and removal of any necessary BMPs for SWPPP purposes throughout the duration of the project. The maximum price for this bid item **shall not exceed 5 percent** of the total contract price at the time of award.

PAYMENT

3-13 COMPLETION, ACCEPTANCE, AND WARRANTY.

3-13.1 Completion. Add the following:

The Work will be inspected by the Engineer for acceptance upon receipt of the CONTRACTOR's written assertion that the Work has been completed.

3-13.3 Warranty. *Add the following:*

All work shall be warranted by the CONTRACTOR against defective workmanship and materials for a period of 1 year from the date the Work was completed. The CONTRACTOR shall replace or repair any such defective work in a manner satisfactory to the Engineer, after notice to do so from the Engineer, and within the time specified in the notice. If the CONTRACTOR fails to make such replacement or repairs within the time specified in the notice, the AGENCY may perform this work and the CONTRACTOR's sureties shall be liable for the cost thereof.

SECTION 4 - CONTROL OF MATERIALS

4-1 GENERAL. *Add the following:*

Used or secondhand materials, parts, and equipment may be used only if permitted by the Specifications.

The CONTRACTOR and all subcontractors, suppliers, and vendors shall guarantee that the entire Work will meet all requirements of this Contract as to the quality of materials, equipment, and workmanship. The CONTRACTOR, at no cost to the AGENCY, shall make any repairs or replacements made necessary by defects in materials, equipment, or workmanship that become evident within one year after the date of recordation of the Notice of Completion. Within this one-year period, the CONTRACTOR shall also restore to full compliance with the requirements of this Contract any portion of the Work which is found not to meet those requirements. The CONTRACTOR shall defend, indemnify, and hold the AGENCY, its officers, agents, and employees harmless from claims of any kind due to injuries or damages arising, directly or indirectly, from said defects or noncompliance.

The CONTRACTOR shall make all repairs, replacements, and restorations within thirty-five (35) days after the date of the Engineers' written notice.

If, in the opinion of the Engineer, the defective work is not of sufficient magnitude or importance to make the work dangerous or undesirable, or if, in the opinion of the Engineer, the removal of such work is impractical or will create conditions which are dangerous or undesirable, the AGENCY shall have the right and authority to retain such work instead of requiring it to be

removed and reconstructed, but will make such deductions thereof in the payments due or to become due to the CONTRACTOR as the AGENCY may deem just and reasonable.

4-2 PROTECTION. *Add the following:*

The CONTRACTOR shall be responsible for the protection of public and private property adjacent to the Work and shall exercise due caution to avoid damage to such property.

The CONTRACTOR shall relocate, repair, replace or reestablish all existing improvements within the project limits (e.g., curbs, sidewalks, catch basins, catch basin screens, driveways, fences, walls, sprinkler systems, signs, utility installations, pavements, structures, survey monuments, landscaping, etc.) that are damaged or removed as a result of the CONTRACTOR's operations or as required by the plans and specifications.

All existing improvements, either within the right-of-way or not, including irrigation lines that are damaged by actions of the CONTRACTOR, shall be restored by the CONTRACTOR to their original or better condition at the CONTRACTOR's expense.

The CONTRACTOR shall mark, as approved by the Engineer, all survey monuments, manholes, valves, substructures, or other items that are visible on the surface and will be covered by his operations. This shall be completed prior to the start of that operation and approved by the Engineer.

Existing traffic striping, pavement markings, and curb markings shall also be considered as existing improvements and the CONTRACTOR shall repaint or replace, at the CONTRACTOR's expense, such striping or markings (except for traffic striping and pavement markings within the limits of the Work) if damaged or if their reflectivity is reduced due to construction operations.

All restoration of existing improvements must occur within the construction completion date, unless directed otherwise by the City Engineer.

Maintenance of street and traffic signal systems that are damaged, temporarily removed or relocated shall be done in conformance with the Contract Documents.

Trees, lawns, and shrubbery that are not to be removed shall be protected from damage or injury. If damaged or removed due to CONTRACTOR's operations, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible. Lawns shall be reseeded and covered with suitable mulch.

The CONTRACTOR shall give reasonable notice to occupants or owners of adjacent property to permit them to salvage or relocate plants, trees, fences, sprinklers, and other improvements, within the right-of-way which are designated for removal and would be destroyed because of the Work.

All costs to the CONTRACTOR for protecting, removing, restoring, relocating, repairing, replacing, or reestablishing existing improvements shall be the responsibility of the CONTRACTOR.

4-6 TRADE NAMES. *Add the following:*

Along with information supplied by the CONTRACTOR regarding equivalency of the proposed item, the CONTRACTOR shall clearly identify all deviations from the specified item. Deviations discovered by the Engineer after acceptance of an "or equal" item which were not identified by the CONTRACTOR with his/her submittal shall be cause for rejection of the "or equal" item. CONTRACTOR shall be due no additional compensation in time or money for acceptance or

rejection of a proposed "or equal" item and subsequent replacement with the item specified. CONTRACTOR shall pay cost to AGENCY for items requiring more than two submittals and analysis of any shop drawing which requires more than a general review of an "or equal" item.

Add the following Section 4-9:

4-9 CONSTRUCTION MATERIALS DISPUTE RESOLUTION (Soils, Rock Materials, Concrete, Mortar and Related Materials, Masonry Materials, Bituminous Materials, Rock Products, and Modified Asphalts). In the interest of safety and public value, whenever credible evidence arises to contradict the test values of materials, the AGENCY and the CONTRACTOR will initiate, an immediate and cooperative investigation. Test values of materials are results of the materials' tests, as defined by these Specifications or by the special provisions, required to accept the Work. Credible evidence is process observations or test values gathered using industry accepted practices. A contradiction exists whenever work acceptance or performance becomes suspect. The investigation shall allow access to all test results, procedures, and facilities relevant to the disputed work and consider all available information and, when necessary, gather new and additional information to determine the validity, the cause, and if necessary, the remedy to the contradiction. If the cooperative investigation reaches any resolution mechanism acceptable to both the AGENCY and the CONTRACTOR, the contradiction shall be considered resolved and the cooperative investigation concluded.

Whenever the cooperative investigation is unable to reach resolution, the investigation may then either conclude without resolution or continue by written notification of one party to the other requesting the implementation of a resolution process by committee. The continuance of the investigation shall be contingent upon recipient's agreement and acknowledged in writing within 3 calendar days after receiving a request. Without acknowledgement, the investigation shall conclude without resolution. The committee shall consist of three State of California Registered Civil Engineers. Within 7 calendar days after the written request notification, the AGENCY and the CONTRACTOR will each select one engineer. Within 14 calendar days of the written request notification, the two selected engineers will select a third engineer. The goal in selection of the third member is to complement the professional experience of the first two engineers. Should the two engineers fail to select the third engineer, the AGENCY and the CONTRACTOR shall each propose 2 engineers to be the third member within 21 calendar days after the written request notification. The first two engineers previously selected shall then select one of the court proposed engineers in a blind draw.

The committee shall be a continuance of the cooperative investigation and will re-consider all available information and if necessary, gather new and additional information to determine the validity, the cause, and if necessary, the remedy to the contradiction. The committee will focus upon the performance adequacy of the material(s) using standard engineering principles and practices and to ensure public value, the committee may provide engineering recommendations as necessary. Unless otherwise agreed, the committee will have 30 calendar days from its formation to complete their review and submit their findings. The final resolution of the committee shall be by majority opinion, in writing, stamped and signed. Should the final resolution not be unanimous, the dissenter may attach a written, stamped, and signed minority opinion.

Once started, the resolution process by committee shall continue to full conclusion unless:

1. Within 7 days of the formation of the committee, the AGENCY and the CONTRACTOR reach an acceptable resolution mechanism; or

2. Within 14 days of the formation of the committee, the initiating party withdraws its written notification and agrees to bear all investigative related costs thus far incurred; or

3. At any point by the mutual agreement of the AGENCY and the CONTRACTOR.

Unless otherwise agreed, the CONTRACTOR shall bear and maintain a record for all the investigative costs until resolution. Should the investigation discover assignable causes for the contradiction, the assignable party, the AGENCY or the CONTRACTOR, shall bear all costs associated with the investigation. Should assignable causes for the contradiction extended to both parties, the investigation will assign costs cooperatively with each party or when necessary, equally. Should the investigation substantiate a contradiction without assignable cause, the investigation will assign costs cooperatively with each party or when necessary, equally. Should the investigation be unable to substantiate a contradiction, the initiator of the investigation shall bear all investigative costs. All claim notification requirements of the contract pertaining to the contradiction shall be suspended until the investigation is concluded.

SECTION 5 - LEGAL RELATIONS AND RESPONSIBILITIES

5-2 SPECIAL NOTICES. *Add the following:*

5-2.1 Mandatory Notification Prior To Excavation. The CONTRACTOR's attention is direct to Section 4215.5 through 4217 of the Government Code of the State of California. This requires that two (2) working days prior to commencing any excavation "Underground Service Alert of Southern California" (USA) ("Digalert") shall be notified by phone, toll free 1-800-422-4133, or 811, for the assignment of an Inquiry Identification Number.

CONTRACTOR shall contact all utility companies at least five (5) working days prior to commencing work and shall verify the location of any known utilities and determine whether or not a representative of each company will be present during excavation.

The known public utilities contacts are:

1.	City of South Pasadena, Public Works Inspection	(626) 403-7240
2.	AT&T	(626) 365-5733
3.	Southern California Edison	(714) 796-9932
4.	Southern California Gas Company	(714) 634-3079
5.	South Pasadena Water Department	(626) 403-7337
6.	Spectrum	(818) 407-3152
7.	South Pasadena Sewer Department	(626) 403-7370
8.	Athens Services	(888) 336-6100

The CONTRACTOR shall coordinate construction with public utility relocation activities.

The existing subsurface utilities shown have been indicated, based on the best available record information. However, to avoid or resolve any interference problems between these existing utilities and the proposed work, the CONTRACTOR shall field verify the vertical and horizontal locations of all utilities, such as water lines and water services, electronic conduits, telephone and television cable, storm drain facilities, and all other facilities and obstructions prior to beginning any excavations. If conflicts exist, revised grades and/or alignments may be established, if

required. **Such field verification shall require exposing these utilities prior to the start of construction**.

Special reference is hereby made to Section 4-2, "Protection," of the Standard Specifications with respect to the protection, repair, and replacement of existing subsurface utilities.

Additionally, the CONTRACTOR shall also notify the following local entities of his/her schedule fourteen (14) days prior to commencing work, including local refuse collectors, street sweepers, the Post Office, Public Schools, and Bus Companies:

City of South Pasadena Attn: H. Ted Gerber, Public Works Director	(626) 403-7240
City of South Pasadena Attn: Anteneh Tesfaye, Deputy Public Works Director	(626) 403-7378
City of South Pasadena, Public Works Operation Division Attn: Michael Vartanians, Public Works Principal Engineer	(626) 403-7245
City of South Pasadena, Public Works Water Division Attn: Victor Magana, Water Operations Manager	(626) 403-7396
Metropolitan Water District Attn: Kevin Johansen, Water Systems Operations Group	(526) 713-0348
AT&T Communications OSP Engineering	(626) 570-5454
Los Angeles County Sanitation Districts Attn: Doug Walton	(310) 638-1161
Los Angeles County Public Works Department Construction Division Attn: Angela George	(626) 458-3109
Los Angeles County Public Works Department Traffic & Lighting Division Attn: Guita Shiek Atten: Robery Gysel	 (626) 458-5905 (626) 458-3122
SBC Attn: Jack Wilson	(626) 373-5960
Southern California Edison Attn: Eddie Lopez	(626) 303-8405
Southern California Gas Company	(714) 634-3079
Spectrum	(818) 407-3152
Underground Service Alert (Dig Alert)	(800) 422-4133

No excavation shall commence unless the CONTRACTOR has obtained the USA Inquiry Identification Number.

5-1.2 Accuracy of Utilities Information. The locations of known existing major utilities, whether above ground or underground, are indicated on the plans. Information and data reflected in the

Contract Documents with respect to underground and above ground utilities at or contiguous to the site is based upon information and data furnished to the City and the Engineer by the owners of such utilities, and the City does not assume responsibility for the accuracy or completeness thereof. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

The CONTRACTOR shall be responsible for determining the location and depth of all underground facilities, including service connections, which may affect or be affected by his/her operations, and he/she shall include the cost to pothole all utilities within the limits of work in his/her bid. If an existing utility line, which has been marked by Underground Service Alert or is shown on the plans, is damaged by the CONTRACTOR, the CONTRACTOR shall repair the line and bear the cost thereof.

CONTRACTOR shall be aware that electrical conduits between street and traffic lights may exist beneath pavement and/or sidewalk in areas where such lights are in place and that said conduits are not shown on these plans.

In the event that the CONTRACTOR damages any existing utility lines that are not shown, shown incorrectly or the locations of which are not made known to the CONTRACTOR prior to excavation, a telephone call and written report shall be made immediately to the Utility owner, the Engineer, and to the City. If directed by the City, the CONTRACTOR shall make repairs under the provisions for changes and extra work contained in **2-7 CHANGES INITIATED BY THE AGENCY** of the Standard Specifications.

5-4 INSURANCE.

5-4.1 General. *Add The following:*

CONTRACTOR and AGENCY agree that AGENCY, its employees, agents and officials should, to the extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys fees, litigation costs, defense costs, court costs or any other cost arising out of or in any way related to the performance of this Agreement, which includes but is not limited to, contracts with other governmental agencies such as the California Department of Transportation, which are necessary for the AGENCY to enact this Agreement or from contracts with other parties or governmental agencies, which are necessary for the AGENCY to enact this Agreement.

CONTRACTOR acknowledges that its obligation pursuant to this section extends to liability attributable to AGENCY, if that liability is less than the sole fault of AGENCY. CONTRACTOR has no obligation under this Agreement for liability proven in a court of competent jurisdiction or by written agreement between the parties to be the sole fault of AGENCY.

The obligations of CONTRACTOR under this or any other provision of this Agreement will not be limited by the provisions of any workers compensation act or similar act. CONTRACTOR expressly waives its statutory immunity under such statutes or laws as to AGENCY, its employees, agents and officials.

CONTRACTOR agrees to obtain executed indemnity agreements with provisions identical to those as set forth here in this section from each and every subcontractor, sub-tier CONTRACTOR or any other person or entity involved by, for, with or on behalf of CONTRACTOR in the performance or subject matter of this Agreement. In the event CONTRACTOR fails to obtain such

indemnity obligations from others as required here, CONTRACTOR agrees to be fully responsible according to the terms of this section.

Failure of AGENCY to monitor compliance with these requirements imposes no additional obligations on AGENCY and will in no way act as a waiver of any rights hereunder. This obligation to indemnify and defend AGENCY as set forth herein is binding on the successors, assigns or heirs of CONTRACTOR and shall survive the termination of this Agreement or this section.

CONTRACTOR agrees to provide insurance in accordance with the requirements as set forth here. If CONTRACTOR uses existing coverage to comply with these requirements and that coverage does not meet the requirements set forth herein, CONTRACTOR agrees to amend, supplement, or endorse the existing coverage to do so. The following coverages will be provided by CONTRACTOR and maintained on behalf of AGENCY and in accordance with the requirements set forth herein.

SECTION 6 - PROSECUTION AND PROGRESS OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK. *Add the following:*

6-1.3 Pre-Construction Meeting and Submittal. A pre-construction meeting will be conducted by the City prior to commencement of construction at a time and place designated by the City. Those attending the meeting shall include, but not be limited to, the following:

a. The CONTRACTORs representative(s)

b. Sub-CONTRACTORs representative(s), if needed

c. City of South Pasadena Director of Public Works

d. City of South Pasadena Public Works Inspectors

One week prior to this meeting the CONTRACTOR shall submit the following:

1. Construction Schedule
2. Emergency Contact List
3. List of Subcontractors
4. Storm Water Pollution Prevention Plan (SWPPP)

6-1.4 Emergency Contact List. The CONTRACTOR shall provide the following information in writing and submit it with the signed contract, contract bonds and certificates of insurance. Failure to comply may result in delays in the processing of the contract documents.

1. Name of authorized representative at the job site.
2. Address and telephone number where the above person can be reached 24 hours a day.
3. Address of the nearest office of the CONTRACTOR, if any, and the name and telephone number of a person at that office who is familiar with the project.

4. Address and telephone number of the CONTRACTOR's main office and the name and telephone number of the person at that office familiar with the project.

6-2 PROSECUTION OF WORK. *Add the following:*

As soon as possible under the provisions of the Specifications, the CONTRACTOR shall backfill all excavations and restore to usefulness all improvements existing prior to the start of the Work.

The CONTRACTOR shall submit monthly progress reports to the Engineer by the tenth day of each month. The report shall include an updated construction schedule. Any deviations from the original schedule shall be explained.

6-2.1 Traffic and Access. The CONTRACTOR's operations shall cause no unnecessary inconvenience. The access rights of the public shall be considered at all times. Unless otherwise authorized, traffic shall be permitted to pass through the Work, or an approved detour shall be provided.

Safe and adequate pedestrian and vehicular access shall be provided and maintained to: fire hydrants; commercial and industrial establishments; churches, schools and parking lots; service stations and motels; hospitals; police and fire stations; and establishments of similar nature. Access to these facilities shall be continuous and unobstructed unless otherwise approved by the Engineer.

Safe and adequate pedestrian zones and public transportation stops, as well as pedestrian crossings of the Work at intervals not exceeding 90 m (300 feet), shall be maintained unless otherwise approved by the Engineer.

Vehicular access to residential driveways shall be maintained to the property lien except when necessary construction precludes such access for reasonable periods of time. If backfill has been completed to the extent that safe access may be provided, and the street is opened to local traffic, the CONTRACTOR shall immediately clear the street and driveways and provide and maintain access.

The CONTRACTOR shall cooperate with the various parties involved in the delivery of mail and the collection and removal of trash and garbage to maintain existing schedules for these services.

Grading operations, roadway excavation and fill construction shall be conducted by the CONTRACTOR in a manner to provide a reasonably satisfactory surface for traffic. When rough grading is completed, the roadbed surface shall be brought to a smooth, even condition satisfactory for traffic.

Unless otherwise authorized, work shall be performed in only one-half of the roadway at one time. One half shall be kept open and unobstructed until the opposite side is ready for use. If one-half a street only is being improved, the other half shall be conditioned and maintained as a detour.

The CONTRACTOR will be required to maintain at least one lane of traffic in each direction through the project area at all times in a manner satisfactory to the Engineer in the form of an engineered traffic control plan. The engineered traffic control plans must be signed by a California registered civil and/or traffic engineer. The plan is a required submittal for review one week prior to the pre-construction meeting.

If traffic control on the project shall be implemented by a sub-contractor, such subcontractor must specialize in Traffic Control and be approved by the City Engineer.

The CONTRACTOR shall include in its Bid all costs for the above requirements.

6-2.1.1 Notification to the Public. Affected properties will be determined by the Engineer and are, in general, those properties that fall within 500 feet of the limits of the work. CONTRACTOR shall remain aware of all adjacent property owners and take all steps necessary to minimize construction impacts and disturbances to all affected property owners. The CONTRACTOR is required to distribute the approved public notice to property owners one week prior to roadway construction. CONTRACTOR shall be responsible for all costs associated with these tasks and responsibilities in the various contract bid items.

The CONTRACTOR is required to notify the City by e-mail that public notices have been distributed. The e-mail shall be addressed to the City representative(s) designated during the pre-construction meeting. The e-mail shall be sent to the City no later than 8 a.m. on the day following distribution of the notices. The e-mail notification to the City shall contain a map showing the limits of distribution and the dates and times distributed. A separate e-mail shall be sent for each distribution. The City will use the information on the e-mails to verify that the distribution has been performed. If the distribution is not verified by the City, the City will e-mail to the CONTRACTOR's representative the locations which must be redistributed with the new information. The CONTRACTOR shall not perform work in the distribution area without e-mail notification of verification by the City of the distribution.

The CONTRACTOR shall submit a sample of a public notice for review and approval by the Engineer. The CONTRACTOR shall provide changes as directed by the City representative and submit final draft for approval.

The CONTRACTOR shall furnish and place "No Parking" signs, 12"x18" minimum size, approved by the Engineer, along the street in front of every residence and/or business affected by the work, two (2) working days in advance of any work. In rural areas, the signs shall be placed at a spacing not exceeding 400 feet. The signs shall include the day and time during which parking is prohibited. Parking restrictions shall be limited to the intervals between 8 a.m. to 5 p.m. to allow parking during the night. The CONTRACTOR shall remove these signs immediately when they are no longer needed.

If the work is delayed or rescheduled for any reason after placement of "No Parking" signs, the CONTRACTOR shall re-date the signs affected and re-notify the residents and businesses of the change via a new "door-knob" notice. If the work is delayed more than five days, the CONTRACTOR shall remove the signs and place re-dated signs two (2) days in advance of the work.

6-2.1.2 Notification to the Public Agencies. The CONTRACTOR shall notify the following Agencies 48 hours prior to working in the area within the City of Pasadena unless otherwise noted:

City of South Pasadena Attn: H. Ted Gerber, Public Works Director	(626) 403-7240
City of South Pasadena Attn: Anteneh Tesfaye, Deputy Public Works Director	(626) 403-7378
City of South Pasadena, Fire Department Attn: Gregory Lloyd, Fire Chief	(626) 403-7306
City of South Pasadena, Public Works Operation Division Attn: Michael Vartanians, Public Works Principal Engineer	(626) 403-7245

6-2.1.3 Parking Restrictions and Posting for Tow Away. No Parking signs, posted by the CONTRACTOR, shall be of heavy card stock and not less than 1.75 square feet of surface area on the face. Background color shall be white and letters shall be printed in red water resistant ink except day, date, and time of restriction may be printed in black water resistant ink. The signs shall be printed with the words "Tow Away" and "No Parking" with a character height of not less than 2.75 inches and a stroke width of not less than 0.5 inches. The day, dated, and time of the particular restriction shall be printed or attached below the above-mentioned wording in characters of not less than 2.0 inches in height and 0.4 inches in stroke width. The day of the week shall be written out or properly abbreviated with three to four letters; date or dates or restriction shall be listed completely; the beginning and ending times shall be clearly listed on the sign.

Signs shall be mounted such that the wording "No Parking" are at an elevation at least three feet above the adjacent flowline. Signs may be tied with string to trees and power poles, taped to existing sign poles, or mounted to stakes or barricades as provided by the CONTRACTOR. The signs shall be placed as needed to control the parking of cars within the construction zone; signs shall be placed at intervals of 75 feet or less along each side of the roadway.

Signs shall be posted and maintained by the CONTRACTOR for a period of 72 hours prior to the restrictions becoming effective. The CONTRACTOR may only post parking restrictions that are effective for the duration of the Work. Upon completion of the Work, the CONTRACTOR shall promptly and completely remove and dispose all signs, stakes, and barricades. The CONTRACTOR shall promptly reset or replace all damaged or defective signs.

The CONTRACTOR shall be fully responsible for the adequate removal of all parked cars. The CONTRACTOR shall coordinate the removal of all vehicles with the Sheriff Department. The CONTRACTOR shall notify the Sheriff Communications Center upon posting of the parking restrictions for a particular street. For removal of parked vehicles, the CONTRACTOR shall notify the Sheriff Communications Center not less than two hours prior to the needed removal, stating the address nearest the parked vehicle, make, model, color and license number. The City shall not be responsible for any delay or additional costs associated with the removal of parked cars that obstruct the construction operation.

If a vehicle owner successfully contests a towing citation in court, and their citation is dismissed for causes related to the CONTRACTOR's failure to perform the requirements of this section, the CONTRACTOR shall reimburse the City for the cost of any claims associated with the towing citation.

DEVIATIONS FROM THE REQUIREMENTS OF THIS SUBSECTION WILL BE PERMITTED ONLY ON PRIOR CONSENT OF THE ENGINEER.

6-2.1.4 Storage of Equipment and Materials in Public Streets. Construction materials shall not be stored in streets, roads, or highways for more than 5 days after unloading. All materials or equipment not installed or used in construction within 5 days after unloading shall be stored elsewhere by the CONTRACTOR at its expense unless authorized additional storage time.

Construction equipment shall not be stored at the Work site before its actual use on the Work nor for more than 5 days after it is no longer needed. Time necessary for repair or assembly of equipment may be authorized by the Engineer.

Excavated material, except that which is to be used as backfill in the adjacent trench, shall not be stored in public streets unless otherwise permitted. After placing backfill, all excess material shall be removed immediately from the site.

6-2.1.5 Street Closures, Detours, Barricades. The CONTRACTOR shall comply with all applicable State, County and City requirements for closure of streets. The CONTRACTOR shall provide barriers, guards, lights, signs, temporary bridges, flag persons, and watchpersons. The CONTRACTOR shall be responsible for compliance with additional public safety requirements which may arise. The CONTRACTOR shall furnish and install signs and warning devices and promptly remove them upon completion of the Work.

At least 48 hours in advance of closing, partially closing or reopening, any street, alley, or other public thoroughfare, the CONTRACTOR shall notify the Police, Fire, Traffic and Engineering Departments, and comply with their requirements. Deviations must first be approved in writing by the Engineer.

The CONTRACTOR shall secure approval, in advance, from authorities concerned for the use of any bridges proposed by it for public use. Temporary bridges shall be clearly posted as to load limit, with signs and posting conforming to current requirements covering "signs" as set forth in the Traffic Manual published by the California Department of Transportation. This manual shall also apply to the street closures, barricades, detours, lights, and other safety devices required.

All traffic control barricades, signs and devices used by the CONTRACTOR shall, as a minimum, conform to the latest edition of the "California Manual on Uniform Traffic Controls Devices" ("MUTCD"). Channelization devices shall be spaced no greater than fifty (50) feet apart. The CONTRACTOR shall take additional precautions as he/she may find necessary under the circumstances.

Should the CONTRACTOR fail to provide adequate traffic control or safety barricades, and in the event a responsible individual cannot be located or refuses to perform, the AGENCY will at its option place needed devices or engage a private firm to place and maintain said barricades, which will be charged to the CONTRACTOR directly.

Full street closures will not be allowed without City Council approval.

All costs involved in the CONTRACTOR'S prosecution of the Work shall be included in the Bid.

6-2.2 Daily Reports. The CONTRACTOR shall complete a Daily Report indicating manpower, work performed, major equipment used and on standby (itemized separately), subcontractors, and similar items involved in the performance of the Work. The Daily Report shall be completed on forms prepared by the CONTRACTOR and acceptable to the Engineer and shall be submitted to the City Inspector weekly.

6-3 TIME OF COMPLETION

6-3.1 General. *Add the following:*

The CONTRACTOR shall complete the Work within the time specified in B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE, or as modified by Change Order or agreement, after the Notice to Proceed.

Add the following:

6-3.3 Working Day. A working day is any day within the period between the start of the Contract time as defined in 6-1.2 and the date provided for completion, or upon field acceptance by the Engineer for all work provided for in the Contract, whichever occurs first, other than:

1. Saturday,
2. Sunday,
3. any day designated as a holiday by the AGENCY,
4. any other day designated as a holiday in a Master Labor Agreement entered into by the CONTRACTOR or on behalf of the CONTRACTOR as an eligible member of a CONTRACTOR association,
5. any day the CONTRACTOR is prevented from working at the beginning of the workday for cause as defined in 6-4.1,
6. any day the CONTRACTOR is prevented from working during the first 5 hours with at least 60 percent of the normal work force for cause as defined in 6-4.1.

The CONTRACTOR's activities involving work which requires street closure, detours, and barricades shall be confined to the hours between 7:30 a.m. and 4:00 p.m. Monday through Friday. In addition, the CONTRACTOR shall not perform any Work on Saturday, Sunday, or on AGENCY-designated holidays. AGENCY-designated holidays are listed in **TABLE 1 – AGENCY-DESIGNATED HOLIDAYS** below. Deviation from these hours will be permitted upon approval of the Engineer, except in emergencies involving immediate hazard to persons or property.

Deviations from these hours will not be permitted without the prior consent of the Engineer, except in emergencies involving immediate hazard to persons or property. In the event of either a requested or emergency deviation, inspection service fees will be charged against the CONTRACTOR. Service fees will be calculated at overtime rates including benefits, overhead, and travel time; and will be deducted from the amounts due the CONTRACTOR.

Failure of the CONTRACTOR to adhere to working day requirements will result in damages being sustained by the City. Such damages are, and will continue to be, impracticable and extremely difficult to determine.

TABLE 1 – AGENCY-DESIGNATED HOLIDAYS

New Year's Day (January 1*)

Martin Luther King, Jr. Day (3rd Monday in January)

President's Day (3rd Monday in February)

Memorial Day (Last Monday in May)

Juneteenth (June 19*)

Independence Day (July 4*)

Labor Day (1st Monday in September)

Veteran's Day (November 11*)

Thanksgiving Day (4th Thursday in November)

Day after Thanksgiving (Friday after Thanksgiving Day)

Christmas Eve (December 24*)

Christmas Day (December 25*)

**If a holiday falls on a Saturday, the previous Friday shall be deemed the holiday. If a Holiday falls on a Sunday, the following Monday shall be deemed the holiday. The City shall close each year from December 25 to January 1.*

6-3.4 Restrictions on closure of traffic lanes:

No contractual work shall be performed in the public Right-of-Way during the first week of school unless approved by the City Engineer.

A. All traffic lanes shall be open for public use on the days and at the times specified below, unless approved otherwise by the City Engineer:

1. Saturdays, Sundays and AGENCY designated holidays: from 12:01 a.m. to 11:59 p.m.
2. Fridays and any days preceding an AGENCY designated holiday: from 3:00 p.m. to 11:59 p.m.
3. Non-construction hours: all hours when the CONTRACTOR's employees are not physically present at the construction site actively performing contract work.

B. On those days and hours when closure of traffic lanes is not prohibited under the provisions of the preceding subparagraph A, no more than one travel lane may be closed at any time during construction hours. During any lane closure, flashing arrow boards shall be used in accordance with the current version of the California MUTCD.

C. Traffic signals shall not be placed in flash operation during the hours that traffic lanes must be kept open as defined in Paragraph A. Under no circumstances shall traffic signal be placed in flash operation without prior approval from the Project Engineer. Traffic signal will be only placed in flash operation by City personnel. CONTRACTOR shall contact the Project Engineer at least two (2) working days in advance to coordinate traffic signal service.

6-4 DELAYS AND EXTENSIONS OF TIME.

6-4.4 Written Notice and Report. *Add the following:*

Whenever the CONTRACTOR foresees any delay in the prosecution of the work, and in any event immediately upon the occurrence of any delay which the CONTRACTOR regards as unavoidable, he/she shall notify the Engineer in writing of the probability of the occurrence of such delay and its cause so that the Engineer may take immediate steps to prevent, if possible, the occurrence or continuance of the delay, or, if prevention is not possible, may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent it will delay the prosecution and completion of the work. It will be concluded that any and all delays which have occurred in the prosecution and completion of the work have been avoidable delays, except such delays as shall have been called to the attention of the Engineer at the time of their occurrence and found by him/her to have been unavoidable. The CONTRACTOR shall make no claims for any delay not called to the attention of the Engineer at the time of its occurrence as an unavoidable delay.

6-7 TERMINATION OF THE CONTRACT FOR DEFAULT.

6-7.1 General. *Add The following:*

If the CONTRACTOR fails to begin delivery of material and equipment, to commence the Work within the time specified, to maintain the rate of delivery of material, to execute the Work in the manner and at such locations as specified, or fails to maintain the Work schedule which will insure the AGENCY's interest, or, if the CONTRACTOR is not carrying out the intent of the Contract, the AGENCY may serve written notice upon the CONTRACTOR and the Surety on its Faithful Performance Bond demanding satisfactory compliance with the Contract.

6-9 LIQUIDATED DAMAGES. *Add the following:*

The CONTRACTOR agrees to forfeit and pay the AGENCY the amount of One Thousand Dollars ($1,000.00) per day for each and every day of unauthorized delay beyond the completion date, which shall be deducted from any monies due the CONTRACTOR. This payment shall be considered liquidated damages. CONTRACTOR agrees that such liquidated damages are reasonable under the circumstances existing at the time of execution of the contract, that such liquidated damages are to compensate AGENCY for losses that are difficult to measure and that such damages are not a penalty.

The AGENCY's agreement to waive a specific time provision or to extend the time for performance shall not constitute a waiver of any other time provision contained in the Contract Documents.

Failure of the CONTRACTOR to complete performance promptly within the additional time authorized in a waiver or extension of time agreement shall constitute a material breach of this Contract entitling the AGENCY to terminate this agreement.

SECTION 7 - MEASUREMENT AND PAYMENT

7-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK.

7-1.1 General. *Add the following:*

The planimeter shall be considered an instrument of precision adapted to measurement of all areas.

7-3 PAYMENT

7-3.1 General. *Add the following:*

The quantities listed in the Bid schedule will not govern final payment. Payment to the CONTRACTOR will be made only for actual quantities of Contract items constructed in accordance with the Plans and Specifications. Upon completion of construction, if the actual quantities show either an increase or decrease from the quantities given the Bid schedule, the Contract Unit Prices will prevail subject to the provisions of 7-3.5.1.

At the expiration of 35 calendar days from the date of acceptance of the Work by the board, or as prescribed by law, the amount deducted from the final estimate and retained by the AGENCY will be paid to the CONTRACTOR except such amounts as are required by law to be withheld by properly executed and filed notices to stop payment, or as may be authorized by the Contract to be further retained.

7-3.2 Partial and Final Payment. *Add the following:*

From each progress estimate, 10 percent will be deducted and retained by the AGENCY, and the remainder less the amount of all previous payments will be paid. After 50 percent of the Work has been completed and if progress on the Work is satisfactory, the deduction to be made from remaining progress estimates and from the final estimate may be limited to $500 or 10 percent of the first half of total Contract amount, whichever is greater.

The closure date for period progress payments will be the twenty-fifth day of each month. Authorization to pay is commonly received on the second Wednesday of the following month. The AGENCY requires four to six weeks to review all progress payments, issue payment checks, present progress payment to Council for approval, and release payment to CONTRACTOR. However, payments will be withheld pending receipt of any outstanding reports required by the Contract Documents. In addition, the final progress payment will not be released until the CONTRACTOR returns the control set of plans and specifications showing the as-built conditions.

The full five (5) percent retention will be deducted from all payments. The final retention will be authorized for payment thirty-five (35) days after the date of recordation of the Notice of Completion.

7-3.6 Stipulated Unit Prices. *Add the following:*

Stipulated Unit Prices are unit prices established by the AGENCY in the Contract Documents.

7-4 PAYMENT FOR EXTRA WORK.

7-4.1 General. *Add The following:*

New or unforeseen work will be classified as "extra work" when the Engineer determines that it is not covered by the Contract Unit Prices or stipulated unit prices.

7-4.2 Basis for Establishing Costs.

7.4.2.4 Other Items. *Add the following:*

Invoices covering all such items in detail shall be submitted with the request for payment.

7-5 PAYMENT FOR CHANGES REQUESTED BY THE CONTRACTOR. *Add the following:*

Changes in the Plans and Specifications, requested in writing by the CONTRACTOR, which do not materially affect the Work, and which are not detrimental to the Work or to the interests of the AGENCY, may be granted by the Engineer. Nothing herein shall be construed as granting a right to the CONTRACTOR to demand acceptance of such changes.

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-6 BASIS OF PAYMENT. *Substitute the following:*

All costs incurred in furnishing, maintaining, servicing, and removing field officers, laboratories, or bathhouse facilities required at the project site shall be included in the bid item for furnishing such facilities. If such facilities are required by the Plans or Specifications and no bid item is provided in the proposal, the costs shall in included in other items for which bids are entered. Such costs incurred in connection with offices and laboratories at plants shall be borne by the plant owners.

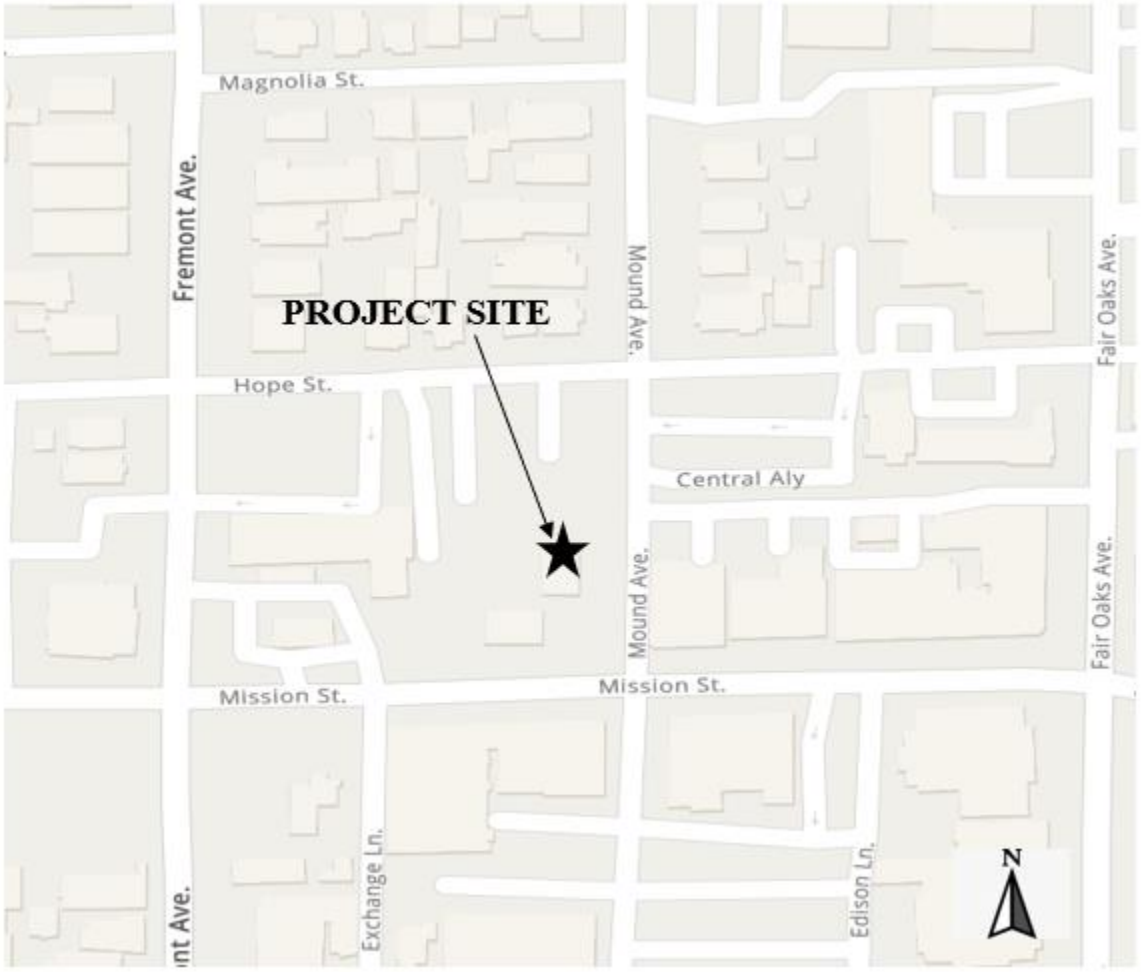
The first progress payment will not be approved until all facilities are in place and fully comply with the Contract Documents.

(End of Section)

APPENDIX I

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Location Map



Approved for use on June 7, 2023
294856.v3

APPENDIX II

FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178)
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Shop Drawings

CLOPAY COMMERCIAL – MODELS 902, 903

architectural series



Model 903 with Insulated Glass and Bottom Insulated Aluminum Panel, Powder-Coated Frame

ALUMINUM FULL-VIEW DOORS

Clopay's Aluminum Full-View doors offer flexibility that allow varying degrees of light while complementing the surrounding structure. A wide selection of standard and custom glazing types make a bold statement in retail, service stations, restaurants and other environments requiring visibility or light.

MAXIMUM DURABILITY

- 2-1/8" thick construction, 6063-T5 extruded aluminum alloy with integral reinforcing fin
- Capped rail construction and tongue-and-groove rail helps seal out the elements

VERSATILITY AND DESIGN FLEXIBILITY

- Numerous glazing options include insulated glass, Low-E glass and polycarbonate panels in various colors
- Wide variety of powder-coated, painted and anodized finish colors

clopaycommercial.com



Frame Detail



Tongue-and-Groove Section



Reinforcing Fin



Approved for use on June 7, 2023

294856.v3

OPTIONS

PANEL OPTIONS



Aluminum Full-View



Solid Aluminum

FRAME/SOLID PANEL COLOR OPTIONS

Clear Aluminum (Anodized)

Standard White (Painted)



Bronze (Painted)



Chocolate (Painted)



Bronze (Anodized)*



Black (Anodized)



Dark Bronze (Anodized)*

** Additional cost and lead time may apply. The use of "Bronze (Painted)" is recommended due to slight color variation that may occur during the anodizing process.*

CUSTOM PAINT OPTIONS

Color Blast® finish paint system or RAL Powder Coating give you thousands of color options for endless upgrades. See your Clopay Dealer for details.

COLOR BLAST | RAL

GLASS/PANEL OPTIONS



Clear Glass



Gray Tinted Glass



Bronze Tinted Glass



Mirrored Glass*



Obscure Glass



White Laminate Glass*



Frosted Glass or Acrylic



Clear Acrylic



Gray Acrylic



White Acrylic



Clear Polycarbonate



Bronze Polycarbonate



Aluminum Panel (Color-matched)

**Glass/acrylic panels may be combined with aluminum panels.*
Custom glass and colors available.

PERFORMANCE OPTIONS

HEAVY-DUTY HARDWARE



Double-end Hinge



3" Track



High Performance Hardware

SPECIALTY PRODUCTS



Center Mullions



Exhaust Port

Exhaust port can be cut into any type of sectional door. Available in solid panel only on select sizes.

OPTIONAL WARRANTY

Extended 8-year hardware warranty includes upgraded industrial hardware. Upgraded hardware includes 3" track and rollers, 11 gauge hinges, heavy duty brackets, solid shaft and more.

Clopay EXTENDED 8-YEAR HARDWARE WARRANTY

WINDCODE®

Design pressures (DP) up to 14 PSF depending on size. Models tested 50% greater than DP.

STANDARD SPECIFICATIONS	
Max Width	24' 2"
Max Height	18' 0"
Exterior/Interior Panel Thickness	2-1/8"
End Stile Thickness	4.5" wide single up to 14' 2" 6.5" wide double over 14' 2"
Emboss	Recessed panel with smooth surface
Panel Style	Full-view or solid aluminum panel
Section Construction	6063-T5 extruded aluminum alloy
Window Style	Full-view

Glass	DSB glass, tempered glass, acrylic, thicknesses of 1/8", 1/4" and 1/2"	
Solid Panels	Insulated and non-insulated aluminum panels	
Wind Load	Non-impact rated	
Springs	10,000 cycle springs Galvanized aircraft cable with minimum 7:1 safety factor	
Tracks	2" angle mount track with standard lift 3" track where applicable	
Hardware	TPE astragal in aluminum retainer Steel step plate and lift handle Inside slide lock for increased security	Commercial 10-ball steel rollers 14 gauge hinges
Warranty	Standard Paint – 5 Years Material and Workmanship – 1 Year	Color Blast® finish – 5 Years Hardware – 1 Year

Clopay

For more information on these and other Clopay products, call **1-800-526-4301** or visit **clopaycommercial.com**

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STEEL ARCAT DASMA IDA www.doors.org

CMDC-903-11_REV0420

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APPENDIX III

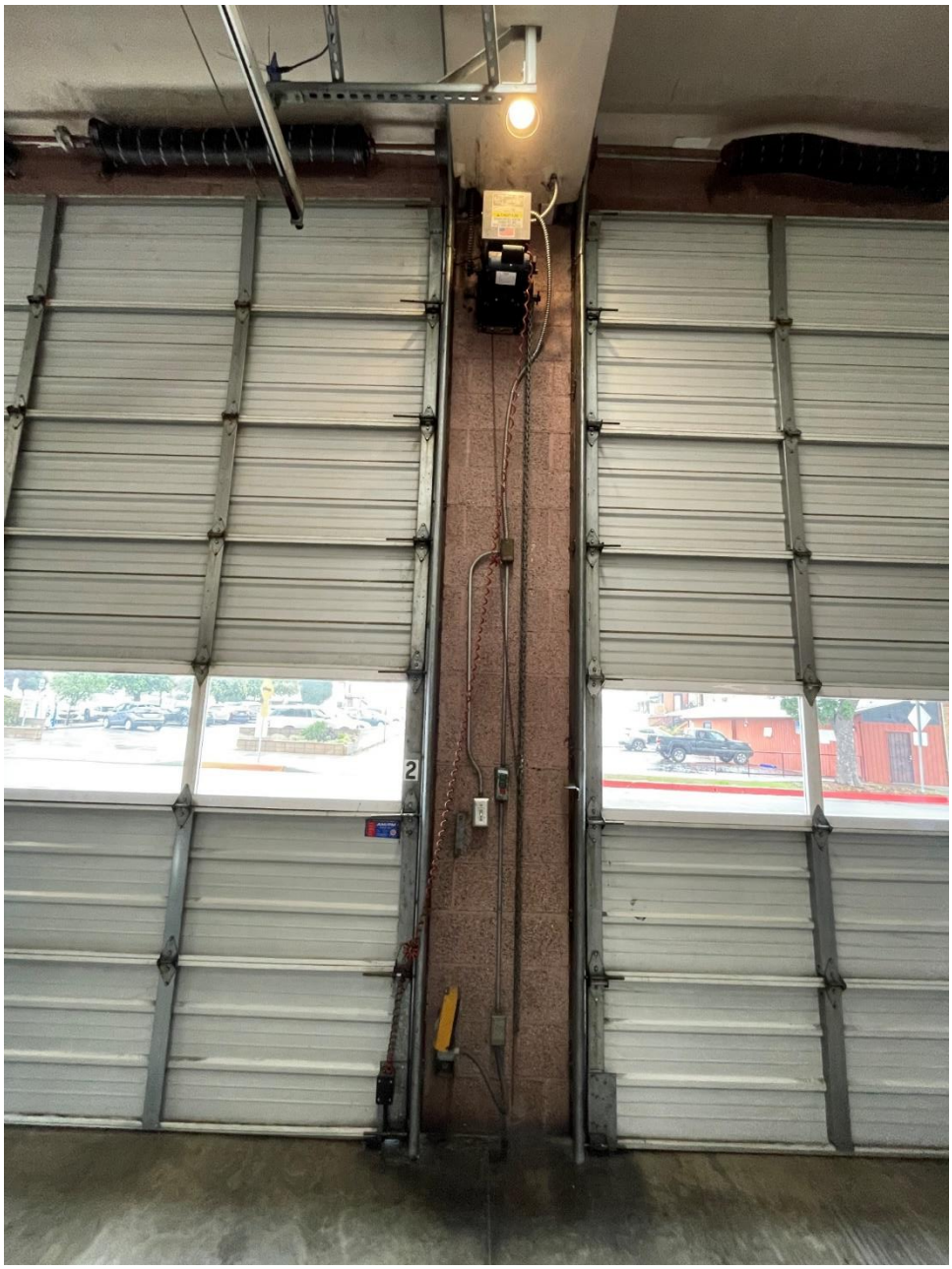
FIRE STATION GARAGE DOOR
REPLACEMENT PROJECT NO. 005178)
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

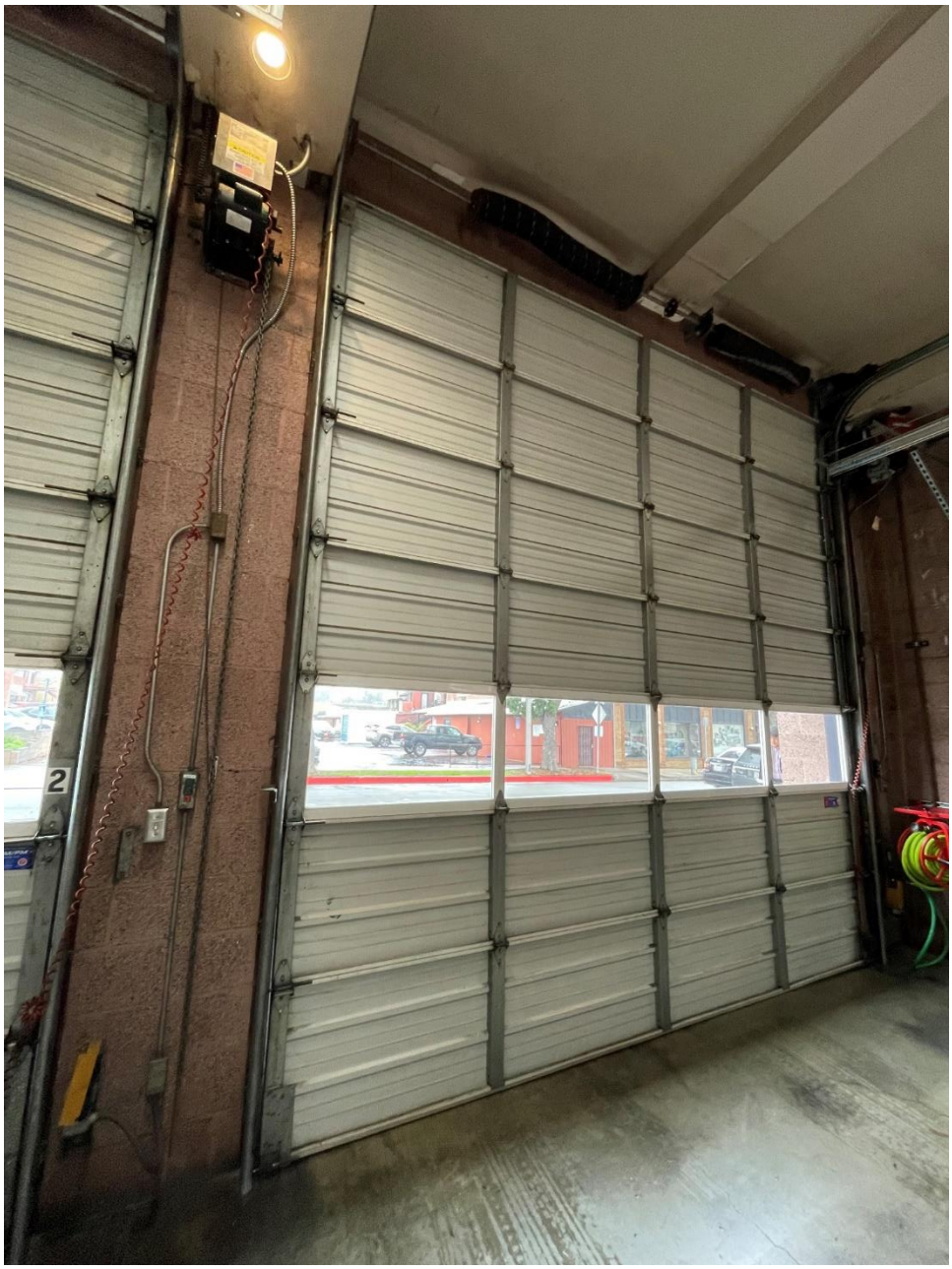
Existing Condition Photos








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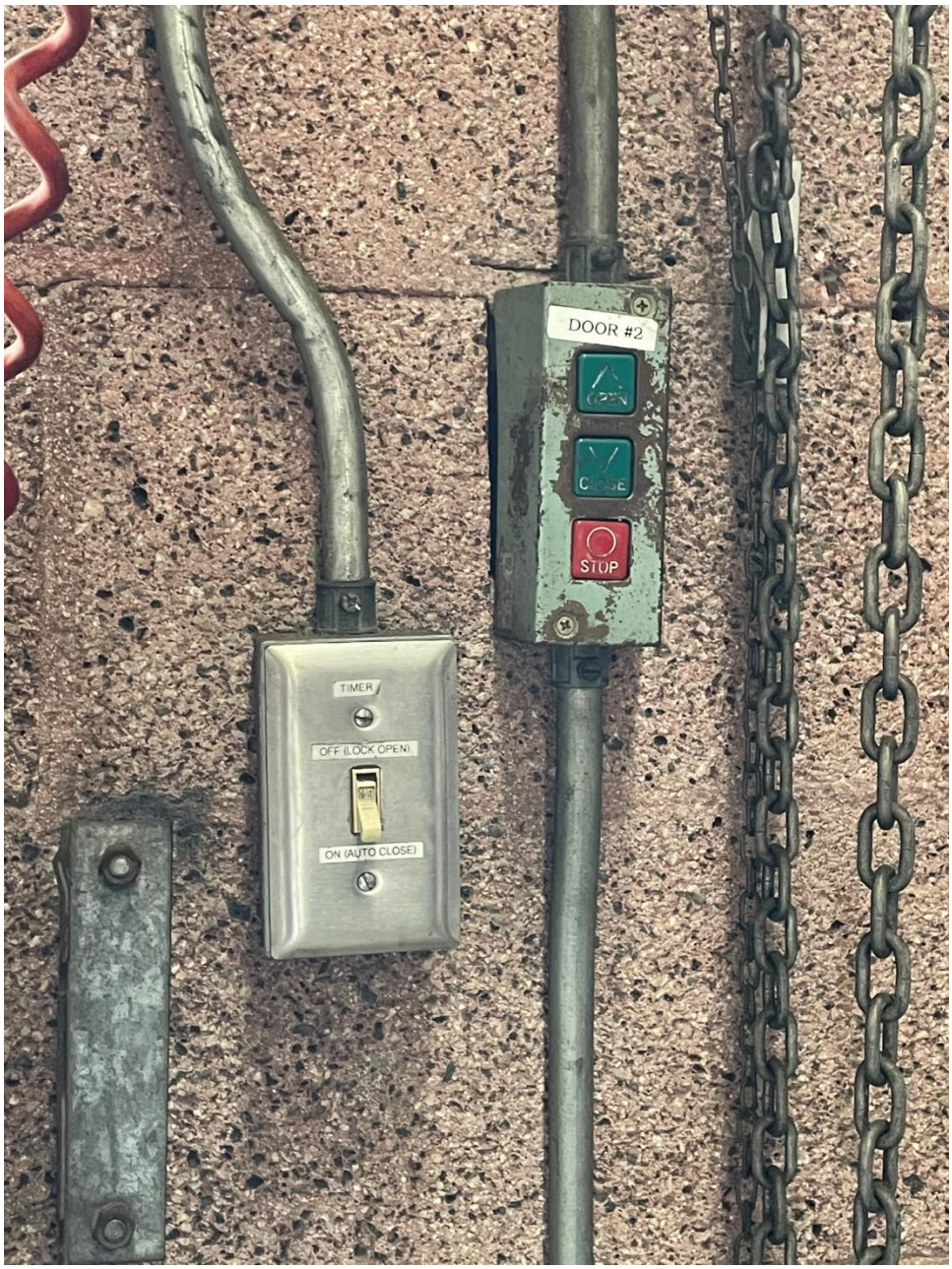

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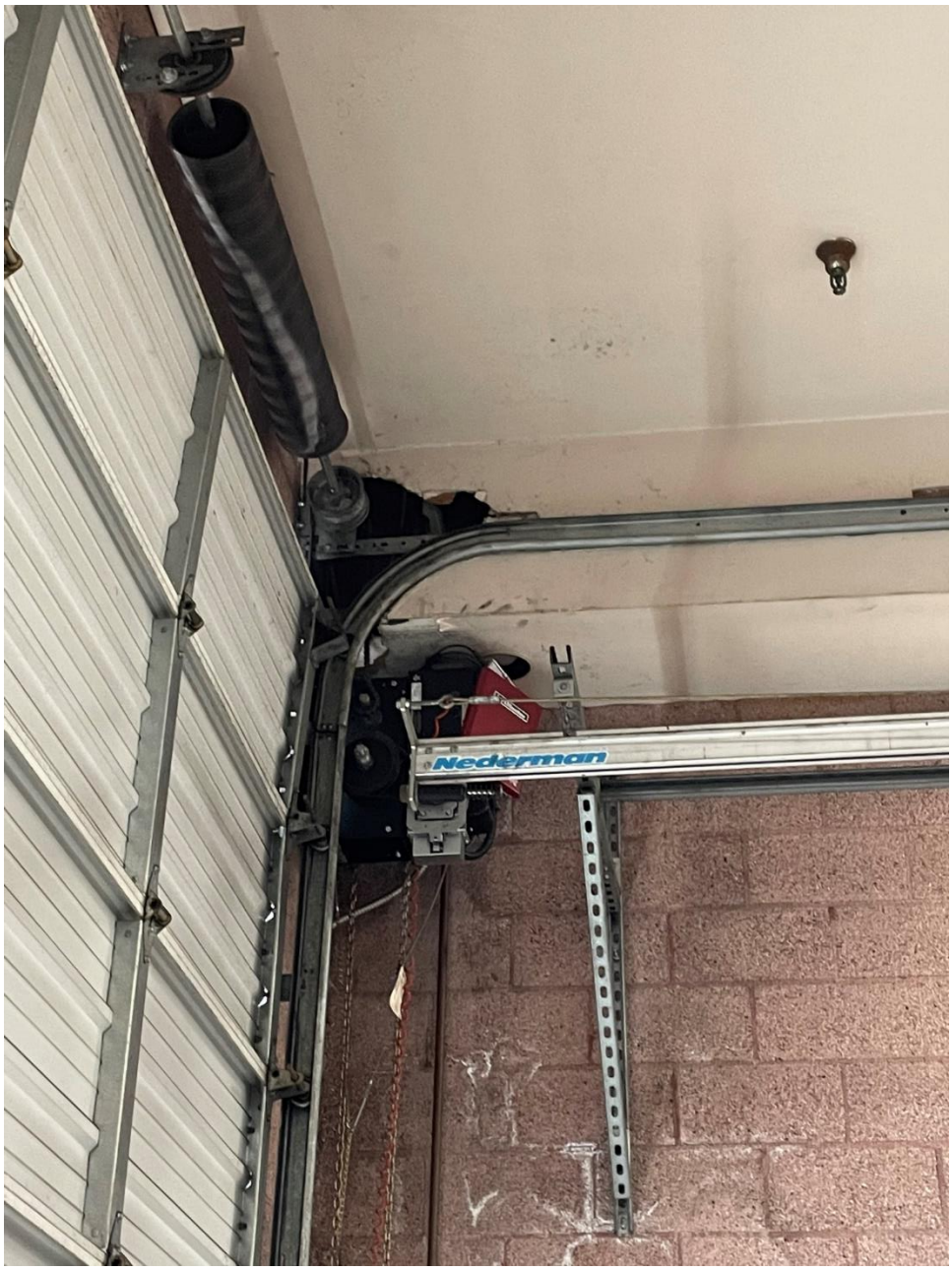

DOOR #2
OPEN
STOP
TIMER
OFF (LOCK OPEN)
ON (AUTO CLOSE)






SPFD


2


Nederman

Firestation Garage Door Replacement Project No. 005…

Closed

Addenda

Send Ack Reminder | View Addenda Acknowledgments

Recall

Oct 17, 2024

01 Addendum No 1 - Revised Appendix II

The standard drawings provided in appendix II of the specifications shall be replaced with the documents in this addendum.
20241015_CIP_FireStationDoorReplacement_Appendix_II.pdf

Recall

Oct 17, 2024

02 Q and A Set 1

Q and A Set 1 has been released for this project.

Email History

Filter List
All

October 17, 2024 1:40 PM (PDT)
Addenda: Addendum Issued for Firestation Garage Door Replacement Project No. 005178, with a bid due date of October 24, 2024 4:00 PM (Pacific)

October 17, 2024 2:46 PM (PDT)

Addenda: Addendum Issued for Firestation Garage Door Replacement Project No. 005178, with a bid due date of October 24, 2024 4:00 PM (Pacific)

CLOPAY COMMERCIAL – MODELS 904, 904U

architectural series



ALUMINUM FULL-VIEW DOORS

Clopay's Model 904 showcases a sleek design with fewer lines and angles to its appearance. With equal stile spacing, rail and stile profiles are more proportional to each other. This design provides an aesthetically pleasing appearance making it ideal in applications such as restaurants, auto dealerships and fire stations. In addition to these features, Model 904U features Intellicore® polyurethane insulated rails and stiles.



Frame Detail



Section Joint Seal



Reinforcing Fin (where applicable)



*Model 904U** *Model 904*

**Model 904U R-value 3.8 with clear insulated glass.*

clopaycommercial.com

OPTIONS

PANEL OPTIONS



Aluminum Full-View



Solid Aluminum

FRAME/SOLID PANEL COLOR OPTIONS

Clear Aluminum (Anodized)

Standard White (Painted)



Bronze (Painted)



Chocolate (Painted)



Bronze (Anodized)*



Black (Anodized)*



Dark Bronze (Anodized)*

** Additional cost and lead time may apply. The use of "Bronze (Painted)" is recommended due to slight color variation that may occur during the anodizing process.*

CUSTOM PAINT OPTIONS

Color Blast® finish paint system or RAL Powder Coating give you thousands of color options for endless upgrades. See your Clopay Dealer for details.

COLOR BLAST® | RAL

Model 904U not available with RAL Powder Coat finish.



GLASS/PANEL OPTIONS



Clear Glass



Gray Tinted Glass



Bronze Tinted Glass



Mirrored Glass*



Obscure Glass



Clear Laminate Impact Rated Glass†



White Laminate Glass*



Black Laminate Glass*



Frosted Glass



Frosted Acrylic



Clear Acrylic



White Acrylic



Clear Polygal™



Bronze Polygal™



Solid Aluminum Panel (Color-matched)

**Glass/acrylic panels may be combined with aluminum panels. Custom glass and colors available.*

†5/16" clear, white, gray and bronze laminate impact rated glass is available only on 904W8/904UW8.

PERFORMANCE OPTIONS

HEAVY-DUTY HARDWARE



Double-end Hinge



3" Track



High Performance Hardware

SPECIALTY PRODUCTS



Center Mullions



Exhaust Port

OPTIONAL WARRANTY

Extended 8-year hardware warranty includes upgraded industrial hardware. Upgraded hardware includes 3" track and rollers, 11 gauge hinges, heavy duty brackets, solid shaft and more.

Clopay EXTENDED 8-YEAR HARDWARE WARRANTY

WINDCODE®

Design pressures (DP) up to 52 PSF depending on configuration. Models tested 50% greater than DP.

STANDARD SPECIFICATIONS	
Max Width	24'2" (Maximum width for Model 904U is 20'2")
Max Height	20'0"
Exterior/Interior Panel Thickness	2-1/8"
Insulation	Intellicore® polyurethane (Model 904U)
R-value	3.8* (Model 904U with clear insulated glass)
U-Factor	0.73† (Model 904U with insulated low-e argon filled glass)
Air Infiltration Rate	0.15cfm/ft²
End Stile Thickness	4.5" wide single up to 14'2" 6.5" wide double over 14'2"
Emboss	Recessed panel with smooth surface
Panel Style	Full-view or solid aluminum panel
Section Construction	6063-T5 extruded aluminum alloy

Window Style	Full view	
Glass	DSB glass, tempered glass, acrylic, thicknesses of 1/8", 1/4" and 1/2"	
Solid Panels	Insulated and non-insulated aluminum panels	
Wind Load	Impact rated (W8 only)	
Joint Seal	Yes	
Springs	10,000 cycle springs Galvanized aircraft cable with minimum 7:1 safety factor	
Tracks	2" angle mount track with standard lift 3" track where applicable	
Hardware	TPE astragal in corrosion-resistant retainer Steel step plate and lift handle Inside slide lock for increased security	Commercial 10-ball steel rollers 14 gauge hinges
Warranty	Standard paint – 5 Years Material and workmanship – 1 Year	Color Blast® finish – 5 Years Hardware – 1 Year

**Calculated door section R-value is in accordance with DASMA TDS-163.*
†Tested door U-Factor is in accordance with DASMA 105.

Clopay®

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MADE IN USA

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CMDC-904-19_REV0824

MAXUM

Next Generation
DC Commercial Door Operator

DATA SHEET

JHDC Hoist Operator
SECTION 08 71 13



Key Features

Standard Application	Recommended for door types including: • Sectional Doors (Standard Lift, High Lift and Full Vertical) • Rolling steel doors/grilles Standard duty cycle and Extended duty cycle applications where a manual hoist is required
Rated Duty Cycle	Standard Duty: Up to 20 cycles per hour and 90 cycles per day Extended Duty: Up to 30 cycles per hour and 150 cycles per day
Operator Speed	Average 12" per second for Sectional doors and 8-9" per second on Rolling Steel doors
Limit Settings	Electronic limits via Floor Level Wall Controller with LCD display
Emergency Disconnect for Manual Operation	Operator includes an Engage rope (Green) and a Disengage rope (red) with manual hoist to electrically disable the operator controls
Emergency Disconnect with Auto - Reconnect	Operator includes an Engage rope (Green) and a Disengage rope (red) with manual hoist to electrically disable the operator controls. Pull the engage (green) rope to operate the door again electrically
Programming	Floor Level Wall Controller with LCD display to program and commission door
Circuit Board	DC Logic Circuit Board
Timer-to-Close	Program through menu on wall controller. Option is available in B2 Mode with two settings. User can select a desired Timer-to-Close (TTC) time duration under that menu
Mid-Stop	Progam setup under System Configuration Operating Mode, Mid-stop
Battery Backup	DC7AH (2): 7 Ah batteries and mounting bracket (optional)
Run Time Protection	Standard: 20 Cycle Count and Cycle 21% within a 60 minute threshold Extended Duty: 30 Cycle Count and Cycle 37% within a 60 minute threshold
Motor Reverse Action Protection	Stop Fast: 250ms ramp Stop Ramp: 500ms-2000ms; Stop button while opening Emergency (Safety-Chain): CTM trigger immediate stop
Motor Operator Wall Controller	Floor Level Wall Controller with LCD screen using 2 wire interface to connect to powerhead

LiftMaster

MAXUM

Next Generation
DC Commercial Door Operator

DATA SHEET

JHDC Hoist Operator

SECTION 08 71 13

Specifications:

Radio Receiver	LiftMaster Security+ 2.0
Voltage Connections	120Vac 1 PH/240Vac 1/3PH; 480Vac 3PH; 208Vac 3PH (via transformer); 600Vac 3PH (via transformer)
Accessory Power	24Vdc, 1A Auxiliary Output
Drive Reduction	65:1 Gearbox with #50 Chain Output
Brake	Dynamic braking standard on all Maxum operators. 2200 series operators include electromechanical holding brake
Construction	NEMA 1 type electrical box, heavy duty 11 gauge steel frame with durable powder coat finish. NEMA 4X type electrical box for NEMA 4X rated units
Warranty	2 years

Installation Features:

Maximum Door Weight	See SKU listing below for maximum door weights allowable by SKU

Connectivity:

Wi-Fi®	Connect to Wi-Fi via Connectivity option on the wall controller
Internet Connectivity	myQ® technology enables remote monitoring and control via smartphone, tablet, computer. myQ Facility technology enables Diagnostics, absolute cycle count, service cycle count, and remote management

Door Weight Chart

SKU	PRODUCT FAMILY	MAX DOOR WEIGHT
JHDC7S1BMC	Hoist	700 lb.
JHDC7S4BMC	Hoist	700 lb.
JHDC12S1BMC	Hoist	1200 lb.
JHDC12S4BMC	Hoist	1200 lb.
JHDC12X1BMC	Hoist	1200 lb.
JHDC12X4BMC	Hoist	1200 lb.
JHDC22X1BMC	Hoist	2200 lb.
JHDC22X4BMC	Hoist	2200 lb.
JHDC12X1N4XMC	Hoist	1200 lb.
JHDC12X4N4XMC	Hoist	1200 lb.
JHDC22X1N4XMC	Hoist	2200 lb.
JHDC22X4N4XMC	Hoist	2200 lb.

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DC Commercial Door Operator

DATA SHEET

JHDC Hoist Operator

SECTION 08 71 13

Sectional Doors

Recommended Door Sprockets

Drum Diameter (Large end of Conical Drum)	Door Sprocket for Desired Speed					
	For 12 inch/sec Door Speed			For 9 inch/sec Door Speed		
	Tooth Count	1 in. Bore 1/4 in. Keyway	1.25 in. Bore 1/4 in. Keyway	Tooth Count	1 in. Bore 1/4 in. Keyway	1.25 in. Bore 1/4 in. Keyway
4"	16-Tooth	71-1550B16LGH	71-1550B16QGH	22-Tooth	71-1550B22LGH	71-1550B22QGH
5.25"	22-Tooth	71-1550B22LGH	71-1550B22QGH	32-Tooth	71-1550B32LGH	71-1550B32QGH
5.75"	24-Tooth	71-1550B24LGH	71-1550B24QGH	34-Tooth	71-1550B34LGH	71-1550B34QGH
6.375"	32-Tooth	71-1550B32LGH	71-1550B32QGH	42-Tooth	71-1550B42LGH	71-1550B42QGH
8"						
8.5"	24-Tooth	71-1550B24LGH	71-1550B24QGH	34-Tooth	71-1550B34LGH	71-1550B34QGH
11"	32-Tooth	71-1550B32LGH	71-1550B32QGH	42-Tooth	71-1550B42LGH	71-1550B42QGH
13.5"	42-Tooth	71-1550B42LGH	71-1550B42QGH	56-Tooth	71-1550B56LGH	71-1550B56QGH
Not Sure*	22-Tooth	71-1550B22LGH	71-1550B22QGH			
	32-Tooth	71-1550B32LGH	71-1550B32QGH	32-Tooth	71-1550B32LGH	71-1550B32QGH
				42-Tooth	71-1550B42LGH	71-1550B42QGH

* 700 & 1200 series operators use 22 & 32 tooth; 2200 series operators use 32 & 42 tooth

Rolling Doors, Uninsulated

Recommended Door Sprockets

Max 20ft Door Height - 8-9 inches/sec Door Speed						
Operator Series	Door Weight	Tooth Count	1 in. Bore 1/4 in. Keyway	1.25 in. Bore 1/4 in. Keyway	1 in. Bore 3/8 in. Keyway	1.25 in. Bore 3/8 in. Keyway
700	up to 450 lbs	50-Tooth	71-1550B50LGH	71-1550B50QGH	71-1550B50LKH	71-1550B50QKH
	450 to 700 lbs	72-Tooth	71-1550B72LGH	71-1550B72QGH	71-1550B72LKH	71-1550B72QKH
1200	700 to 1200 lbs					
2200	1200 to 1800 lbs					
	1800 to 2200 lbs	82-Tooth	71-1550B82LGH	71-1550B82QGH	71-1550B82LKH	71-1550B82QKH

Rolling Doors, Insulated

Recommended Door Sprockets

Max 20ft Door Height - 8-9 inches/sec Door Speed						
Operator Series	Door Weight	Tooth Count	1 in. Bore 1/4 in. Keyway	1.25 in. Bore 1/4 in. Keyway	1 in. Bore 3/8 in. Keyway	1.25 in. Bore 3/8 in. Keyway
700	up to 450 lbs	60-Tooth	71-1550B60LGH	71-1550B60QGH	71-1550B60LKH	71-1550B60QKH
1200	450 to 900 lbs	72-Tooth	71-1550B72LGH	71-1550B72QGH	71-1550B72LKH	71-1550B72QKH
2200	900 to 2000 lbs	82-Tooth	71-1550B82LGH	71-1550B82QGH	71-1550B82LKH	71-1550B82QKH

LiftMaster

MAXUM

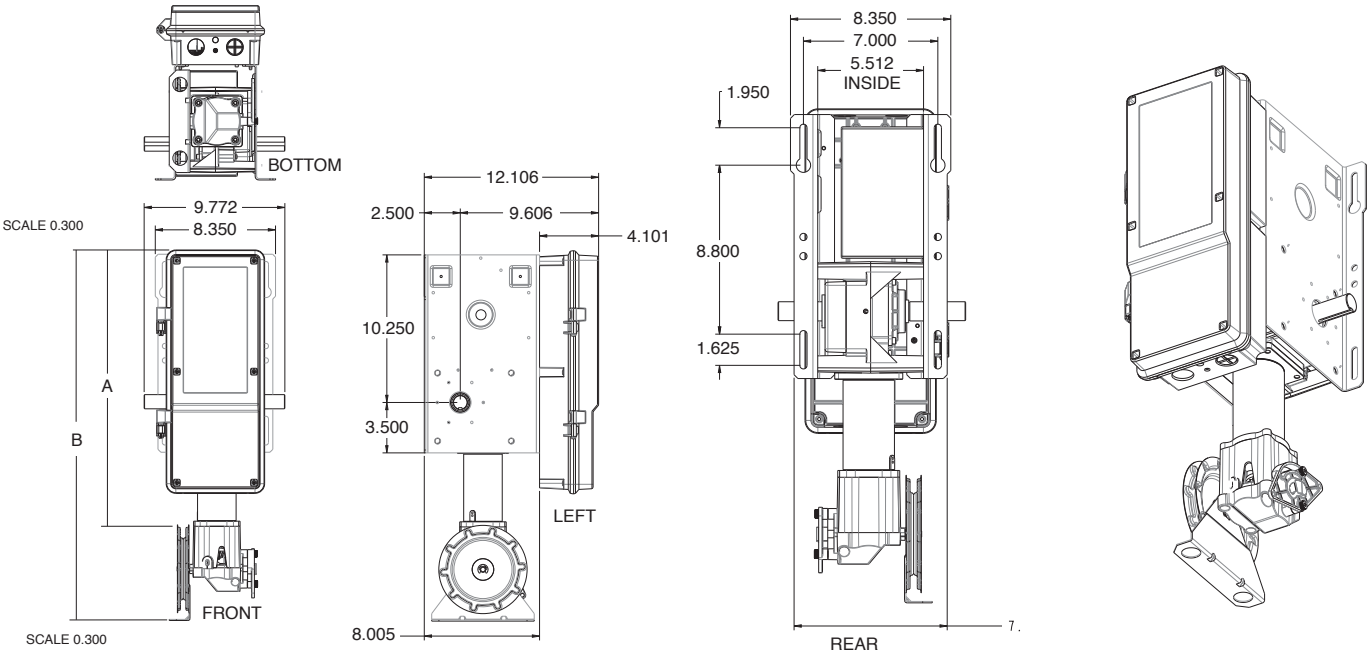
Next Generation
DC Commercial Door Operator

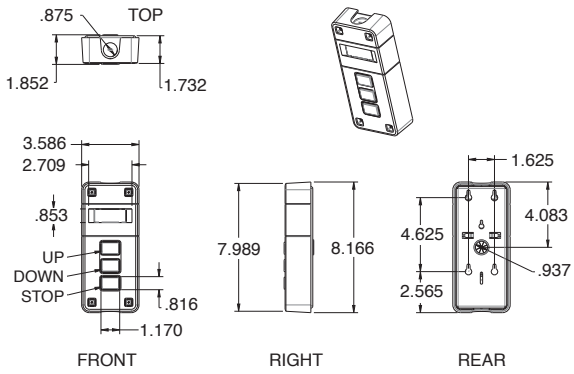
DATA SHEET

JHDC Hoist Operator
SECTION 08 71 13

Dimensions

	A	B
700 lb. Standard	**19.2"**	**25.7"**
1200 lb. Standard	**19.5"**	**26.0"**
2200 lb. Extended	**26.6"**	**33.1"**





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LMCDENDSJHDC 3/24

Firestation Garage Door Replacement Project No. 005…

Closed

Release Q&A | Export

Q&A Deadline *October 15, 2024 5:00 PM (PDT)*

Unreleased Questions

Select All | Select None | Add New | Expand All | Collapse All

Released Questions

Expand All | Collapse All

Set 1 Released via Addendum 02 10/17/2024 2:46 PM (PDT) – 2 questions

1.1 Submitted 10/16/2024 8:35 AM (PDT) Will all six doors be colored?

Vendor	Agency
Question	Will all six doors be colored?
Answer	Yes, all six doors will be powder coated the same color. The exact color RAL number will be coordinated with the City. Contractor will be asked to provide samples of colors for the City to decide which color the contractor is to furnish. All six doors will also have one panel of vision glass. The three doors facing Mound Street will have clear vision glass and the three doors facing the fire department parking lot will be tinted.

1.2 Submitted 10/16/2024 8:35 AM (PDT) What is the extent of the drywall work required for this project?

Vendor	Agency
Question	What is the extent of the drywall work required for this project?
Answer	As described in the notice inviting bids the drywall work will include cutting the drywall back near the existing motors to provide adequate space to install the new motors and to be able to service the new motors in the future. Should the location of the track for the new garage doors change from the location of the existing track the contractor will be asked to patch the holes left in the drywall from the previous track system screws. The contractor may be asked to remove in ceiling recessed lights that are not operational if required to create adequate space to install the new motor. Please see the photos of the existing fire station for reference in the specifications. For bidding purposes, the recessed lights will not need to be reinstalled and contractor will be asked to coordinate with City Electrician to ensure wiring to lights are off and to request City Electrician to conduct electrical isolation.

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 13

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Alison Becker, AICP, Acting Community Development Director
Robert (Dean) Flores, Senior Planner

SUBJECT: **CONSIDERATION OF AN APPEAL OF APPLICATION REQUEST OF PROJECT NO. 2500-HDP/DRX/VAR/PM/TRP APPROVED BY THE PLANNING COMMISSION ON AUGUST 13, 2024 FOR A HILLSIDE DEVELOPMENT PERMIT AND DESIGN REVIEW PERMIT TO CONSTRUCT A NEW 3,214-SQUARE-FOOT, TWO-STORY, SINGLE-FAMILY DWELLING; TWO VARIANCES FOR A REDUCED SIDE YARD SETBACK AND AN ATTACHED GARAGE IN FRONT OF THE MAIN STRUCTURE; A PARCEL MERGER APPLICATION FOR A MERGER OF TWO EXISTING LOTS; AND, A TREE REMOVAL PERMIT FOR THE REMOVAL OF SIX (6) TREES AT 4931 HARRIMAN AVENUE (APNS: 5312-016-016 & 5312-016-017)**

Recommendation

It is recommended that the City Council hold an appeal hearing, consider evidence, receive public testimony on the project, and then:

1. Adopt a Resolution (Attachment 1) approving the Project and denying the appeal.

Executive Summary

Project No. 2500-HDP/DRX/VAR/PM/TRP located at 4931 Harriman Avenue (APNs: 5312-016-016 and 5312-016-017) was approved by the Planning Commission at a duly noticed public hearing on August 13, 2024. An appeal of decision request was filed with the City within the required 15-day appeal period on August 28, 2024 by a local resident. In their appeal letter, they listed various reasons for the City Council to reconsider the Planning Commission decision. City staff recommends that the City Council approve the project and denying the appeal.

Background

On August 13, 2024, the Planning Commission approved project No. 2500-HDP/DRX/VAR/PM/TRP which is a project to construct a 3,214-square-foot, two-story single-family dwelling on two vacant parcels, that when merged, will total 11,270 square feet. The project application also included two Variances - one for the garage located in front of the home and one for a reduced (north) side yard setback. Initially, the proposed side yard setback Variance was proposed to be 5' instead of the required 10% of the width of the lot which is 7'-6". However, after discussion and deliberation, the Planning Commission approved the project with a side yard setback of 6' instead of the requested 5'.

As with all zoning approvals, any member of the public may file an appeal of a decision rendered by the approving body, in this case the Planning Commission, to the City Council within 15 days of the decision date, pursuant to Section 36.610.050 of the South Pasadena Municipal Code (SPMC). On August 28, 2024, Young Jin Lee (appellant), owner of the adjacent property at 4935 Harriman Avenue, filed an appeal application to appeal the aforementioned Planning Commission decision to approve project No. 2500-HDP/DRX/VAR/PM/TRP. Their appeal letter can be found as Attachment 2 of this staff report.

Analysis

In their letter, the appellant cited 6 reasons why the Planning Commission's decision should be reconsidered:

1. Loss of sunlight exposure due to the height obstructing natural light.
2. Decreased privacy due to the project's windows overlooking onto my private property.
3. The City of South Pasadena's code is designed to be equitable for all properties, and we do not understand why a setback reduction should be granted from my property.
4. My property was constructed in compliance with existing codes, and I believe it is unfair to diminish my rights.
5. This reduction is likely to lower the value of my property.
6. I also request that a dust barrier be provided for air conditioning purposes.

Responses to Appeal

The following is staff's response/analysis to each point raised by the appellant.

1. Loss of sunlight exposure due to the height obstructing natural light.

Analysis:

When reviewing a project that includes a Hillside Development Permit and/or Design Review Permit, the decision maker(s) must make the required findings for each. One of the required findings for each is to ensure compliance with the City's applicable development standards such as setbacks, lot coverage, maximum height, etc. As designed, the project complies with the City's maximum height requirement of 28' as the project is providing a maximum height of 27' -9". Additionally, sunlight exposure or natural light is not a criterion that is required to be considered when reviewing Hillside Development Permits or Design Review Permits. The Planning Commission Resolution showing the findings can be found in Attachment 3 of this staff report.

2. Decreased privacy due to the project's windows overlooking onto my private property.

Analysis:

One of the considerations when the project was originally reviewed was the issue of privacy of adjoining properties. The only adjacent property is the property directly north of the subject site. With that in mind, the project is designed so that the primary second story window along the staircase is frosted to limit visibility into the neighboring property. The only other upper floor windows are two small windows in the bedroom which are required for egress in the California Building Code.

3. The City of South Pasadena's code is designed to be equitable for all properties, and we do not understand why a setback reduction should be granted from my property.

Analysis:

Variances are reviewed on a case-by-case basis because, as discussed below, they must be based on special circumstances applicable to the specific property. Section 36.410.080 of the SPMC states, "[t]his Section allows Variances from the development standards of this Zoning Code only when, because of special circumstances applicable to the property, including location, shape, size, surroundings, topography, or other conditions, the strict application of this Zoning Code denies the property owner privileges enjoyed by other property owners in the vicinity and under identical zoning districts." In this case, the Planning Commission made the required Variance findings for the setback request and worked with the applicant to reduce the setback Variance request, as discussed earlier in this staff report, from the requested 5' to 6'. For the reasons set forth in the attached resolution, staff believes the City Council can reach the same conclusion and approve the variances.

4. My property was constructed in compliance with existing codes, and I believe it is unfair to diminish my rights.

Analysis:

As stated above, properties are reviewed on a case-by-case basis, considering the special circumstances applicable to the specific property. As discussed in more detail in the attached resolution, the subject property features various constraints including irregularly-shaped parcels and site topography that with the strict application of the development standards for hillside development, would have rendered the site design infeasible without the requested Variances. While the proposed development will change the area, staff does not believe that the requested variances would materially impact neighboring property rights, and are designed to protect the rights of owners of properties with special circumstances to develop their properties to a similar degree as other similarly situated properties.

5. This reduction is likely to lower the value of my property.

Analysis:

The values of specific properties is not a criterion when reviewing a development project for compliance with the City's zoning/development standards. Therefore, this issue is not within the purview of city staff.

6. I also request that a dust barrier be provided for air conditioning purposes.

Analysis:

Dust barrier requirements are already included as conditions of approval during the construction phase of the project (conditions no. P10 and PW 11).

Alternatives (if applicable)

The City Council has the following options available:

1. The City Council can approve the project and deny the appeal; or
2. The City Council can grant the appeal, providing the project applicant and/or staff with clear recommendations to revise the project accordingly.

Fiscal Impact
There is no fiscal impact on the City's Operational and Capital budgets. The appellant has paid the required application fees as part of the appeal application.

Key Performance Indicators and Strategic Plan
Not applicable. Review and decision of appeal of application requests of Planning Commission decisions are a duty of the City Council pursuant to Section 36.400.020 of the SPMC.

Commission Review and Recommendation
The Planning Commission considered the original project in a duly noticed Public Hearing on August 13, 2024. At the conclusion of the Public Hearing, and after considering the staff report, public testimony, and Commissioner discussion, the Planning Commission, in a 5-0 vote, approved the project.

Public Notification
A public notice for this Public Hearing was originally published in the South Pasadena Review on October 4, 2024. Additionally, public notices were mailed to property owners within a 300' radius of the subject property and throughout the Southwest Monterey Hills notification area. The public was also made aware of the Public Hearing through its inclusion in the legally publicly noticed agenda, posted physically at City Hall and also on the City's website.

Environmental Analysis
Pursuant to the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15303, Class 3 for New Construction or Conversion of Small Structures), the project was originally (and remains) exempt under the Class 3 exemption which includes the construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. Class 3 exemption includes, but is not limited to: one single -family residence, or a second dwelling unit in a residential zone; in urbanized areas, up to three single-family residences may be constructed or converted under this exemption.

Attachment:
Attachment 1 - City Council Resolution
Attachment No. 2 - Appeal Letter
Attachment No. 3 - 8-13-24 P.C. Item 4 - Agenda Packet
Attachment No. 4 - PowerPoint

RESOLUTION NO. ____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA, CALIFORNIA, APPROVING A HILLSIDE DEVELOPMENT PERMIT AND DESIGN REVIEW PERMIT TO CONSTRUCT A NEW 3,214-SQUARE-FOOT, TWO-STORY, SINGLE-FAMILY DWELLING; TWO VARIANCES FOR A REDUCED SIDE YARD SETBACK AND AN ATTACHED GARAGE IN FRONT OF THE MAIN STRUCTURE; A PARCEL MERGER APPLICATION FOR A MERGER OF TWO EXISTING LOTS; AND, A TREE REMOVAL PERMIT FOR THE REMOVAL OF SIX (6) TREES; AND DENYING A RELATED APPEAL FOR THE PROPERTY AT 4931 HARRIMAN AVENUE (APNS: 5312-016-016 & 5312-016-017)

WHEREAS, on August 13, 2024, the City's Planning Commission approved project No. 2500-HDP/DRX/VAR/PM/TRP which is a Hillside Development Permit and Design Review Permit to construct a new 3,214-square-foot, two-story, single-family dwelling; two Variances for a reduced side yard setback and an attached garage in front of the main structure; a Parcel Merger application for a merger of two existing lots; and, a Tree Removal Permit for the removal of six (6) trees at 4931 Harriman Avenue (APNs: 5312-016-016 & 5312-016-017); and

WHEREAS on August 28, 2024, the Young Jin Lee (hereafter the "Appellant") submitted an appeal application to appeal the Planning Commission decision pursuant to Section 36.610 of the South Pasadena Municipal Code (SPMC); and,

WHEREAS, on November 6, 2024, the City Council held a duly noticed Public Hearing, wherein the City Council received a staff presentation; staff report; testimony from the applicant, Appellant and the public; and thereafter considered the matter; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA, CALIFORNIA, DOES HEREBY RESOLVE, DECLARE, DETERMINE, AND ORDER AS FOLLOWS:

SECTION 1: RECITALS. The above recitals are hereby declared to be true and correct and are incorporated herein as findings of the South Pasadena City Council.

SECTION 2: EVIDENCE AND PUBLIC TESTIMONY. Based upon substantial evidence presented to the City Council during the Public Hearing, including public testimony and written and oral staff reports, input from the project applicant and the Appellant, along with the environmental documentation, the City Council finds:

A. A public hearing was conducted, and opportunity provided for Appellant and public testimony and comment have been conducted in compliance with applicable law.

SECTION 3: CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA). The City Council finds that pursuant to the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15303, Class 3 for New Construction or Conversion of Small Structures), the project is exempt under the Class 3 exemption which includes the construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. Class 3 exemption includes, but is not limited to: one single-family residence, or a second dwelling unit in a residential zone; in urbanized areas, up to three single-family residences may be constructed or converted under this exemption.

SECTION 4: FINDINGS. Section 36.610.050.E.4 requires that the appeal body be governed by the same criteria which governed the action being appealed. Based upon the foregoing, the City Council:

A. Finds that the proposed project is consistent with all applicable findings for approval of a Hillside Development Permit pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.065(F), as follows:

1. **The proposed use complies with requirements of Division 36.340 (Hillside Protection) and all other applicable provisions of this Zoning Code.**

   The project uses thoughtful site design which conforms to the hillside development standards and design guidelines. The project is considerate of the character and scale of the existing single-family developments in the vicinity. With the exception of the two variances being requested: 1) to reduce the side yard setback to six feet in lieu of the required seven feet, six inches, and 2) to allow an attached garage in front of the main structure. The project as designed and conditioned, will comply with the Hillside Protection Ordinance and the RS standards in the SPMC.

2. **The proposed use is consistent with the General Plan and any applicable specific plan;**

   The General Plan land use designation of the site is Low Density Residential, which allows for detached single-family units at a density of 3.51 to 6 units per acre. The proposed project does not involve the addition of another dwelling unit; therefore, the project is consistent with the General

Plan. The project is not located within a specific plan.

3. **The establishment, maintenance, or operation of the use would not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of the persons residing or working in the neighborhood of the proposed use;**

   The neighborhood is developed with a mix of hillside homes in both architectural style and scale; as required and conditioned, all construction documents, including grading plans and calculations, would be prepared by professional architects or engineers and must be formally reviewed and approved by the appropriate City departments prior to issuing permits. The proposed use of a single-family residential home is consistent with the SPMC and as designed and conditioned, would not be detrimental to the health and safety or general welfare of persons residing or working in the neighborhood.

4. **The use, as described and conditionally approved, would not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City; and,**

   Prior to commencing construction, the project is required to comply with and obtain all applicable building permits, including those necessary for grading, utilities, public works, and fire prevention. Additionally, the applicant shall provide a construction management plan, as required in the Southwest Monterey Hills Construction Plan area, prior to the issuance of building permits. Accordingly, the project as conditioned would not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City.

5. **The design, location, operating characteristics, and size of the proposed use would be compatible with the existing and future land uses in the vicinity, in terms of aesthetics, character, scale, and view protection.**

   The proposed use of single-family residential is consistent with the established residential neighborhood. The proposed dwelling is set back approximately 30 feet from the street, which will result in a minimal visual impact from the front street view. The scale of the project is appropriate in size, when compared to the surrounding neighborhood and the topography of the land and the configuration of neighboring properties minimizes view impacts. With the exception of the variances requested, the proposed design complies with the City's Hillside Design Guidelines, the Hillside Protection Ordinance, and the SPMC, including but not limited to building mass, scale, respect of the topography, and lot coverage. Accordingly, the design, location, operating characteristics, and size of the project is

compatible with the existing and future land uses in the vicinity, in terms of aesthetics, character, scale, and view protection.

B. Finds that the proposed project is consistent with all applicable findings for approval of a Design Review Permit pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.040(I), as follows:

1. **Is consistent with the General Plan, any adopted design guidelines and any applicable design criteria for specialized areas (e.g., designated historic district or other special districts, plan developments, or specific plans);**

   The General Plan designation for the subject property is Low Density Residential and the project complies with the density of one dwelling and use. With the exception of the two variances being requested by the Applicant, the proposed project complies with the City of South Pasadena's Design Guidelines for Hillside Homes as to architecture, scale, building mass, building height, lot coverage, and compatibility with the neighborhood. The surrounding neighborhood includes a mix multi-story homes and a variety of architectural styles. The proposed single-family dwelling is situated at the bottom of a steep hillside and designed to have minimal view impacts from hilltop homes.

2. **Will adequately accommodate the functions and activities proposed for the site, will not unreasonably interfere with the use and enjoyment of the neighboring, existing, or future developments, and will not create adverse pedestrian or traffic hazards;**

   The proposed project will accommodate the single-family functions and activities proposed for the site. The new home will provide sufficient size and space for residential living, with indoor/outdoor living incorporated into the architectural design. The ground level will accommodate the required covered and off-street parking, the first level of the dwelling will include the living area and one bedroom, the second floor will include two bedrooms, and the basement will include an Accessory Dwelling Unit with one bedroom. The design of the house meets the required height limits, grading percentages of the driveway and required front, rear, and south side yard setbacks. As a single-family residence in an established single-family neighborhood, the house will not interfere with the use and enjoyment of the neighboring, existing, or future developments. With the two requested Variances for a reduced north side yard setback and to allow the attached garage in front of the main structure, the proposed new home is consistent with the design standards. As conditioned, the project's mass, scale, bulk, and temporary construction activities would not unreasonably interfere with the use and enjoyment of the neighboring, existing, or future developments, and will not create adverse pedestrian or traffic hazards. A construction

management plan will be reviewed and approved by staff during the Building and Public Works permitting process.

3. **Is compatible with the existing character of the surrounding neighborhood and that all reasonable design efforts have been made to maintain the attractive, harmonious, and orderly development contemplated by SPMC Section 36.410.040 and the General Plan; and**

   The project site is surrounded by multi-story residential buildings of different architectural styles and sizes. Except for the two variances sought, the project complies with all the development standards for zoning and hillside lots. The proposed project is situated at the bottom of a steep hillside, minimizing the impact to the slope. The project is compatible with the existing character of the neighborhood and the design incorporates a modern aesthetic with an interplay of simple geometric volumes that step down in accordance with the City's Design Guidelines. The project is set back approximately 30 feet from the street and will have minimal street view impacts. The building height, size, and form fits the size of the lot. As proposed, the project complies with requirements contemplated by SPMC Section 36.410.040 and the General Plan.

4. **Would provide a desirable environment for its occupants and neighbors, and is aesthetically of good composition, materials, and texture that would remain aesthetically appealing with a reasonable level of maintenance and upkeep.**

   The proposed project has been designed with consideration to its future occupants and neighbors. The proposed project uses appropriate materials that complement the existing neighborhood's eclectic architectural styles with earth-toned stucco and wood panel cladding. The home features clean straight lines; large windows at the west, east, and south; minimal windows at the north elevation for added privacy with the adjacent property; and a sloped roof that mimics that of the hillside. The proposed project incorporates a composition of high-quality materials that further assists in allowing for the preservation of a desirable and aesthetically appealing presentation with reasonable maintenance.

C. Finds that the proposed project is consistent with all applicable findings to grant a Variance for: A) reduced north side yard setback, and B) the placement of the attached garage in front of the main structure, pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.080, as follows:

1. **There are special circumstances applicable to the subject property (e.g., location, shape, size, surroundings, topography, or other conditions), so that the strict application of this Zoning Code denies**

the property owner privileges enjoyed by other property owners in the vicinity and within the same zoning district, or creates an unnecessary and involuntarily created hardship, or unreasonable regulation which makes it impractical to require compliance with the development standards;

North Side Yard Setback

There are special circumstances applicable to the subject property which consists of an average slope of 41.67 percent. The subject site fronts Harriman Avenue at a curve and turns into Peterson Avenue at an upslope. The property is unique in that it is situated both on the top of a downslope—from south to north—and the bottom of a downslope—from east to west. The subject site contains several mature trees along the southern portion of the property. To minimize grading further into the steep portion of the lot, and to protect the mature trees, the applicant is proposing to construct the new single-family dwelling at the northern portion of the lot.

This variance request to allow a reduced side yard setback of six feet, in lieu of the required 7-foot, 6-inch side yard setback—per the standard in SPMC 36.220.040, a side yard setback shall be 10 percent of the lot width—is common for Hillside Development Permit projects. In order for there to be minimal impact to the slope and to save the mature trees, the applicant is situating the footprint of the new home towards the northern portion of the lot. The steep terrain of the project site, and compatibility with the neighboring side yard setbacks are the driving factors for this Variance.

Attached Garage in Front of Primary Structure

There are special circumstances applicable to the subject property which consists of an average slope of 41 percent and immediately to the south of the proposed single-family dwelling, the topography is steeper. SPMC, Section 36.220.040, Table 2-3, requires that an attached garage be set back a minimum of 10 feet from the front of the main structure. The applicant is proposing to minimize the impact of the natural terrain and, as such, the proposed single-family dwelling is narrow and situated towards the northern portion of the lot, where the topography is not as steep. Placing the garage 10 feet behind the main structure would require that additional trees be removed and would require additional grading on a significant slope.

2. **Granting the Variance would:**

    a. **Be necessary for the preservation and enjoyment of substantial property rights possessed by other property owners in the same vicinity and zoning district, and denied to the subject property owner;**

North Side Yard Setback

The subject site is surrounded by existing single-family residences of varying architectural styles and sizes**.** The existing homes in the neighborhood were built before the City Council's adoption of the current hillside regulations, adopted in 2002, as such several of the neighboring properties do not conform to current development standards. The applicant is proposing a new single-family dwelling with a reduced north side yard setback. The majority of existing homes on the same street have non-confirming side yard setbacks. The granting of the requested Variance to have a six-foot north side yard setback will allow for the preservation and enjoyment of substantial property right for a single-family home that is consistent with the development pattern by other property owners in the same vicinity and zoning district. A denial of the Variance would deny the applicant the similar rights possessed by other property owners.

Attached Garage in Front of Primary Structure

The subject site is surrounded by existing single-family residences of varying architectural styles and sizes**.** The existing homes in the neighborhood were built before the City Council's adoption of the current hillside regulations, adopted in 2002, as such several of the neighboring properties do not conform to current development standards. The applicant is proposing a new single-family dwelling with an attached garage in front of the primary structure. The majority of existing homes on the same street have an attached garage in front of the primary structure. The granting of the requested Variance for the garage placement in front of the primary structure will allow for the preservation and enjoyment of substantial property right for a single-family home that is consistent with the development pattern by other property owners in the same vicinity and zoning district.

b. Be consistent with the General Plan and any applicable specific plan, and the limitations established by the 1983 initiative;

The proposed reduction of the northern side yard setback and placement of the attached garage in front of the primary structure are consistent with the General Plan, the City's adopted Design Guidelines, and the height limit established by the 1983 initiative. The proposed single-family dwelling is designed with consideration of the character and scale of the existing single-family developments in the vicinity.

As conditioned, the project will comply with the Goals and Policies of the General Plan as follows:

Goal 19: "To ensure that new development within hillside areas of South Pasadena does not adversely impact the character of the City."

Policy 19.7: "Discourage Hillside Grading which damages the integrity of hillside areas in order to create views."

The proposed project is situated six feet from the northern side yard setback and the attached garage will be placed in front of the main structure, both of which will reduce grading into the southern steep slope. The documents reviewed by the City include a topographic map, slope analysis, and preliminary grading plan prepared by a Registered Professional Engineer. The applicant will provide a final grading plan prepared by Registered Professional Engineer. As required and conditioned, the final grading plan will be approved by the Public Works Department and the Building Division prior to grading permit issuance. As such, the two requested Variances are intended to reduce the amount of grading necessary to construct the proposed single-family dwelling and would not impact the safety of the site, adjacent properties, or the general safety and welfare of the public.

c. Not constitute a grant of special privileges inconsistent with the limitations on other properties in the vicinity and in the same zoning district; and

The granting of the Variances for the reduced northern side yard setback and attached garage placement in front of the main structure would not constitute a grant of special privileges that are inconsistent with the limitations on other properties in the vicinity and in the same zoning district. The majority of the existing homes on the same street have a reduced side yard setback as well as an attached garage located in front of the main dwelling. The subject site consists of a steep downhill slope and sits at the end of developed parcels in a densely developed residential neighborhood consisting of single-family homes on substandard hillside lots. The subject site has a steep terrain and the placement of footprint of the proposed single-family dwelling at the northern portion of the lot with an attached garage in front of the main structure will minimize additional grading and will reduce the impact to the hillside. The placement of both the footprint of the home and garage along the narrow portion of the lot with a less steep terrain will also result in maintain the mature trees located along the southern portion of the subject property.

d. Not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity and zoning district in which the property is located.

North Side Yard Setback

The excavation into the hillside has been minimized as much as possible, as the proposed single-family dwelling is situated on the northern portion of the subject property, the topography of which is not as steep. Situating the single-family dwelling along the northern portion of the lot is proposed to help maintain the hillside and mature trees; thereby, the request for a Variance for the reduced side yard setback will not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity and zoning district in which the property is locate.

Attached Garage in Front of Primary Structure

The attached garage is positioned in front of the main structure to maintain a narrow footprint, resulting in minimal grading and a reduced impact to the hillside, which will also protect the mature trees; thereby, the request for a Variance to situate the attached garage in front of the primary structure will not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity and zoning district in which the property is locate.

3. The proposed project would be compatible with the existing aesthetics, character, and scale of the surrounding neighborhood, and considers impacts on neighboring properties.

The architectural style of the neighborhood surrounding the project site is mixed with various architectural styles. The majority of existing single-family residences in the neighborhood have non-conforming side yard setbacks and have attached garages in front of the main structure. The requested Variances for the reduced side yard setback and attached garage in front of the main structure are consistent and would be compatible with the existing aesthetics, character and scale of the surrounding neighborhood.

SECTION 5: DETERMINATION. Now therefore, based on the foregoing findings, and based on substantial evidence in the record, the City Council approves the project, subject to the attached conditions of approval, and denies the appeal of the Planning Commission's decision on August 13, 2024 for project No. 2500-HDP/DRX/VAR/PM/TRP.

PASSED, APPROVED, AND ADOPTED on this 6th day of November, 2024.

_____
Evelyn G. Zneimer, Mayor

ATTEST:

_____
Mark Perez, Deputy City Clerk

APPROVED AS TO FORM:

_____
Roxanne Diaz, City Attorney

I HEREBY CERTIFY the foregoing Resolution No. __ was duly adopted by the City Council of the City of South Pasadena, California, at a regular meeting held on the 6th day of November, 2024, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Mark Perez, Deputy City Clerk

Young Jin Lee
4935 Harriman Ave
South Pasadena CA 91030
(818) 288-5698
kimfranco@hotmail.com

28th August 2024

Community Development Department

South Pasadena Planning
1414 Mission st
South Pasadena CA 91030

To whom it may concern,

I hope this letter finds you well. I am writing to you today to formally appeal the decision regarding Project Number 2500-HDP/DRX/VAR/PM/TRP.

I strongly object to the proposed reduction in the side yard setback as my property at 4935 Harriman Ave South Pasadena CA 910303 is immediately adjacent to the subject project, therefore I will experience direct and adverse impacts for the following reasons:

1. Loss of sunlight exposure due to the height obstructing natural light.
2. Decreased privacy due to the project's windows overlooking onto my private property.
3. The City of South Pasadena's code is designed to be equitable for all properties, and we do not understand why a setback reduction should be granted from my property.
4. My property was constructed in compliance with existing codes, and I believe it is unfair to diminish my rights.
5. This reduction is likely to lower the value of my property.
6. I also request that a dust barrier be provided for air conditioning purposes.

I urge you to reconsider this matter, as the proposed changes will have a significant negative effect on my property.

Sincerely,

Young Jin Lee

Planning Commission Agenda Report

ITEM NO. 4

DATE: August 13, 2024

FROM: Angelica Frausto-Lupo, Community Development Director
Matt Chang, Planning Manager

PREPARED BY: Robert (Dean) Flores, Senior Planner

SUBJECT: **Project No. 2500-HDP/DRX/VAR/PM/TRP – A request for a Hillside Development Permit (HDP) and Design Review Permit (DRX) to construct a new 3,214-square-foot, two-story, single-family dwelling; two Variances (VAR) for a reduced side yard setback and an attached garage in front of the main structure; a Parcel Merger (PM) application for a merger of two existing lots; and a Tree Removal Permit (TRP) for the removal of six (6) trees at 4931 Harriman Avenue (Assessor Parcel Numbers: 5312-016-016 & 5312-016-017); making the determination of exemption under the California Environmental Quality Act (CEQA), Section 15303, Class 3 (New Construction or Conversion of Small Structures).**

Recommendation

Staff recommends that the Planning Commission adopt a Resolution (**Attachment 1**) taking the following actions:

1. Finding the project exempt under the California Environmental Quality Act (CEQA) Guidelines, Section 15303, Class 3 (New Construction or Conversion of Small Structures).
2. Approve Project No. 2500-HDP/DRX/VAR/PM/TRP, subject to the recommended Conditions of Approval (**Attachment 1**, **Exhibit "A"**).

Background

Project Timeline

The proposed project for a Hillside Development Permit, Design Review Permit, two Variances, Parcel Merger, and Tree Removal Permit was originally submitted in August of 2022. After various rounds of corrections, the project was brought before the Planning Commission on November 14, 2023 for review. During the meeting, the Planning

Commission recommended a continuance for a variety of recommended changes/clarifications which consisted of the following:

- Additional information regarding the proposed Variance of the side yard setback
- Tentative approval from the Public Works Department for the Tree Removal Permit and tree replacement plan
- Garage door material
- Clarification on the proposed building height in relation to the adjacent neighbor and overall privacy concerns
- Clarification on the roof design in relation to possible photovoltaic (solar panel) requirements

Reponses to each of the above items are discussed in further detail throughout this staff report and can be identified with the subtitle "***Response to Commission***."

Site Characteristics

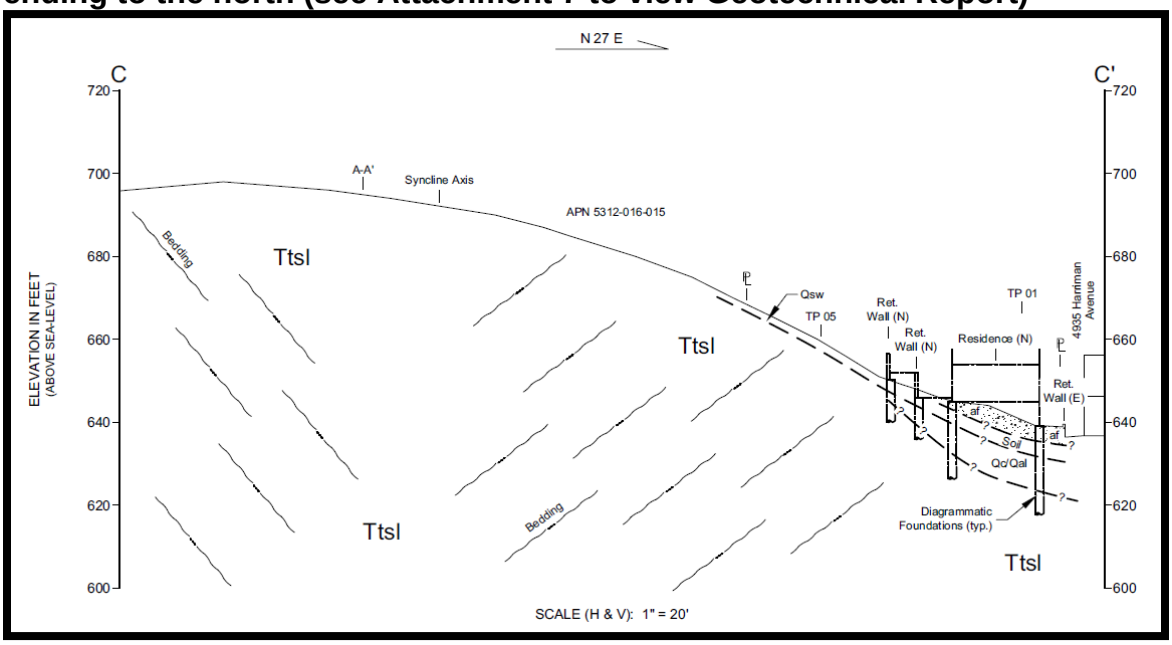
The subject site consists of two undeveloped rectangular-shaped lots located within the Southwest Monterey Hills area and zoned Residential Single-Family (RS). The parcel to the north is 3,757 square feet (APN: 5312-016-017), 25 feet in width and 150 feet in depth. The parcel to the south is 7,513 square feet (APN: 5312-016-016), 50 feet in width and 150 feet in depth. When merged the lot will be 75 feet in width and 150 feet in depth with a combined total of 11,270 square feet. The subject properties are surrounded by single-family residential uses to the north, south, east, and west. The single-family parcels to the south are also undeveloped (see **Figure 1** to view the Aerial). The surrounding neighborhood includes an eclectic mix of architectural styles, including Minimal Traditional, 20th Century Modern, and Ranch-style, amongst others (see **Attachment 2** for Neighborhood Images).

Figure 1: Aerial of subject parcels, highlighted in blue



The subject site fronts Harriman Avenue at a curve and turns into Peterson Avenue at an upslope. The property is unique in that it is situated both on the top of a downslope—from south to north—and the bottom of a downslope—from east to west (see **Figure 2** to view the slope from south to north). The subject site has an average slope of 41.67 percent and contains several mature trees, especially along the southern portion of the property. To minimize the impact on the hillside and the trees, the applicant is proposing to construct the new single-family dwelling at the northern portion of the new lot.

Figure 2: Cross-section of subject property from center starting at the south and ending to the north (see Attachment 7 to view Geotechnical Report)



Project Description

The applicant is requesting approval to construct a 3,214-square-foot, two-story single-family dwelling on two vacant parcels, that when merged, will total 11,270 square feet. The project includes three decks, the first is 435 square feet and positioned over the two-car garage at the front of the property; the second is also 435 square feet and positioned at the rear of the property; the third deck is 420 square feet and is positioned to the rear of the property.

Entitlements:

The applicant is requesting the following entitlement applications for the proposed project:

1. **Hillside Development Permit (HDP)** for the proposed grading and development of a 3,214-square-foot, two-story single-family dwelling on a site with an average

slope of 20 percent or greater. The project includes an attached 405-square-foot, 2-car garage and three decks;

2. **Design Review Permit (DRX)** for the architectural design review of the proposed development;
3. Two **Variance (VAR)** requests to deviate from development standards to allow the project to provide the following:
    a. A reduced north side yard setback to five (5) feet in lieu of the required seven (7) feet, six (6) inches. Per South Pasadena Municipal Code (SPMC), Section 36.220.040, side yard setbacks shall meet 10 percent of the lot width; and,
    b. To allow an attached garage in front of the main structure. Per SPMC, Section 36.220.040, an attached garage shall be set back a minimum of 10 feet from the main structure.
4. **Parcel Merger (PM)** for the merger of two adjacent lots, the first lot (APN: 5312-016-016) is 7,513 square feet, the second lot (APN: 5312-016-017) is 3,757 square feet, when merged will be a total of 11,270 square feet; and,
5. **Tree Removal Permit (TRP)** for the removal of six (6) trees.

Project Analysis

General Plan Consistency

The City has updated its General Plan to be consistent with the 2021-2029 (6th Cycle) Housing Element, which included a new Downtown Specific Plan (DTSP) to replace the Mission Street Specific Plan (MSSP), amendments to the Zoning Code and Zoning Map, the creation of a Mixed-Use Overlay District and development standards. The subject property is not slated to be rezoned, but updated General Plan policy goals will apply throughout the City. The proposed project was deemed complete prior to the General Plan update, as such, the proposed project was subject to the evaluation criteria at the time of submittal.

The General Plan land use designation of the site is Low Density Residential, which allows for detached single-family units at a density of 3.51 to 6 units per acre. The proposed project does not involve the addition of another dwelling unit; therefore, the project is consistent with the General Plan.

Zoning Code Compliance & Development Standards

The subject property is zoned Residential Single-Family (RS), which is intended for the development of detached, single-family homes. A two-story residence is a use anticipated in this zoning district. The purpose of the Residential Design Review process is to ensure that the proposed site layout and building design are suitable and compatible with the City's design standards and guidelines. The proposed project meets the requirements of the City's adopted Design Guidelines for single-family residences on hillside sites. Development standards from SPMC Sections 36.340.050—Hillside Project Development

Standards and 36.220.040—Residential Zoning District General Development Standards for the RS Zone were applied to the project. **Table 1** below provides a breakdown of the proposed project and its compliance with SPMC Section 36.220.040 regulating residential land uses.

Table 1: Residential Single-Family (RS) District General Development Standards

Standard	Requirement	Proposed
Lot Coverage	40% (4,504 SF max. allowed)	21.3% (2,395.83 SF)
Floor Area Ratio (FAR)	35% (3,941 SF max. allowed)	22.2% (2,502.51 SF)
Rear Setback	25’	25’

Hillside Development Permit

Pursuant to SPMC Section 36.340.020, any development on a site with an average slope of 20 percent or greater requires a Hillside Development Permit. The purpose of the Hillside Development Permit is to ensure that developments are designed to preserve the City’s scenic resources, encourage appropriate grading practices, and encourage appropriate design to maintain the hillside in a natural, open character. **Table 2** provides a breakdown of the existing conditions of the proposed project and its compliance with SPMC Section 36.340.050—Hillside Project Development Standards, regulating residential land uses.

Table 2: Hillside Project Development Standards

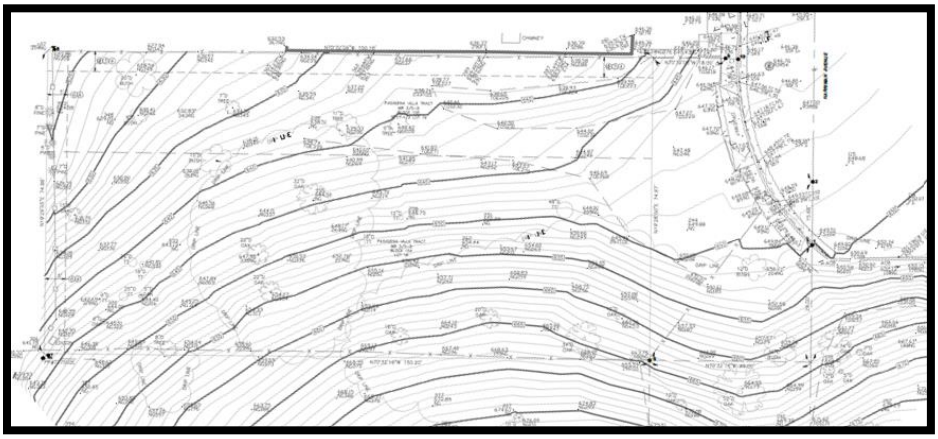
Standard	Requirement	Proposed
Front Setback	10 ft.	Complies: 10’-2”
Side Setback	10% of lot width, min. of 4 ft., max. of 10 ft. Lot Width = 75’ Side Setback Requirement = 7’-6”	**Variance Requested:** North: 5’ Complies: South: 49’-2”
Building Height	Maximum height for structures with a roof pitch of 3:12 or greater is 28 ft. If a roof pitch is less than 3:12, the maximum height is 24 ft.	Complies: 27’-9”
Siting Restrictions	Structures shall not be placed so that they appear silhouetted against the sky when viewed from a public street	Complies
Placement Below Ridgeline	50 ft. between top of the structure and the top of the ridge or knoll	Complies

Standard	Requirement	Proposed
Height of Lowest Floor Level	Vertical distance between the lowest point where foundation meets grade and the lowest floor line of the structure shall not exceed 6 ft.	Complies
Downhill Building Walls	No single building wall on the downhill side of a house shall exceed 15 ft. in height above grade.	Complies
Decks	No portion of the walking surface of a deck with visible underpinnings shall exceed a height of six feet above grade. Decks should be integrated into the architecture of the house, not appearing as an “add-on” to the primary building mass	Complies
Driveways	Driveway shall not have a grade steeper than 5% within 10 ft. of the garage or carport entry. Finished grade of driveways shall not exceed an average of 15%	Complies
Natural State	A minimum of 25% of the lot area plus the percentage figure of the average slope must be remediated to its natural state in terms of slope and vegetation. Natural State Requirement	Complies, applicant to remediate 66%
Height of New Retaining Walls	3 ft. max in front setback, otherwise 6 ft.	Complies
Attached Garage	Attached garage shall be set back a minimum of 10 feet from the main structure	**Variance Requested**

Variance 1: Reduction of Side Yard Setback

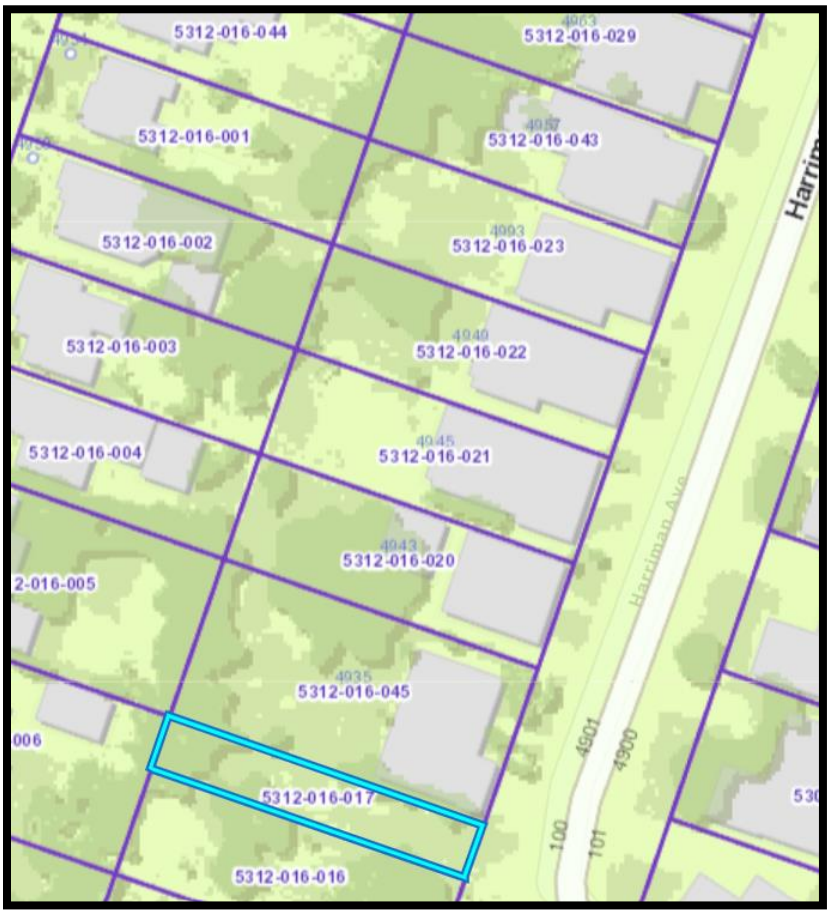
SPMC, Section 36.340.050, requires that structures have a minimum side yard setback of 10 percent of the lot with. The average slope for the property is 41.67 percent. Toward the southern portion of the lot, the slope is more significant (see **Figure 3** below). As such, to reduce the impact on the hillside and to prevent the removal of several mature trees, the applicant is situating the footprint of the single-family dwelling at the northern portion of the lot. To minimize grading the applicant is requesting a Variance to situate the proposed dwelling five feet from the northern side property line, which is less than the required 10 percent of the property width of seven (7) feet, six (6) inches. The steep terrain of the project site, and compatibility with the neighborhood are the driving factors for the Variance. If the proposed project were to meet the 7-foot, 6-inch side yard setback, this would result in additional grading and shoring that can create a significant impact on the steep terrain and surrounding trees.

Figure 3: Site Topography



The subject property is surrounded by existing single-family dwellings built prior to the adoption of the City's Hillside Development Standards. A survey of the existing properties, their footprints, and the parcel lines relative to the existing footprints indicates that the majority of developed parcels on the same block have nonconforming side yard setbacks (see **Figure 4**). As such, the request for a Variance to allow the side yard setback to be reduced by 2 feet, 6 inches, does not set a precedent for the existing neighborhood.

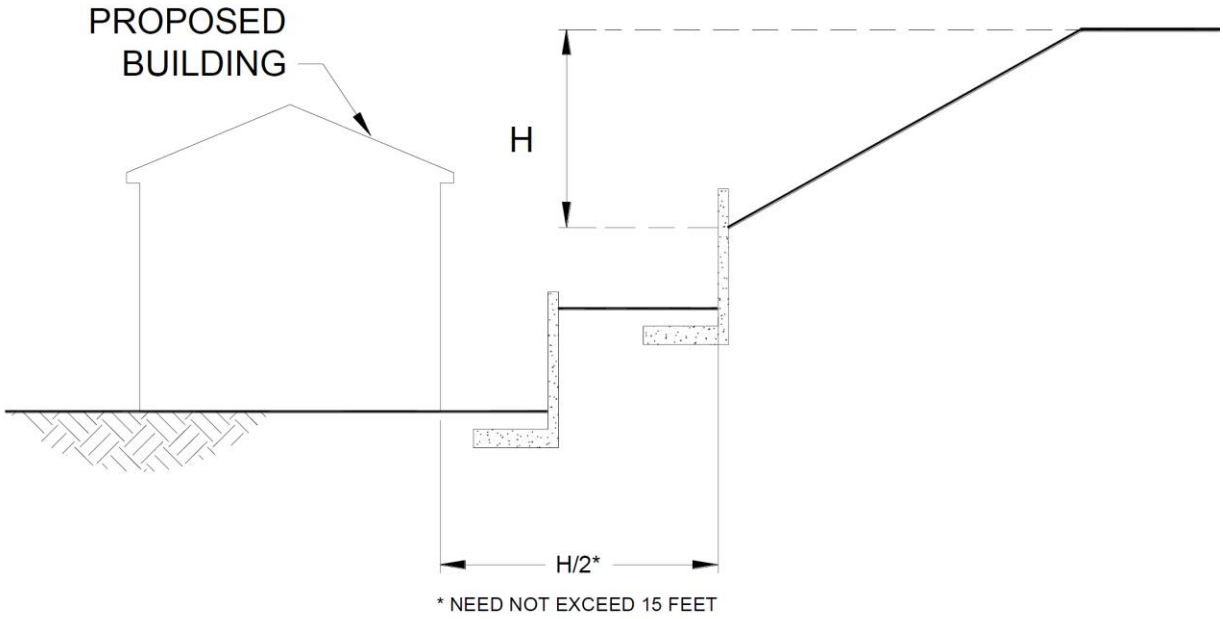
Figure 4: Footprint of Existing Homes on Harriman Avenue



***Response to Commission*:**
Additional justification for the proposed side yard setback Variance was provided by the applicant in response to the Commission's request for additional information. One of the items that was raised during the discussion was an inquiry of the existing (south) side yard setback of the adjacent neighbor at 4935 Harriman Avenue. Upon research, the applicant has demonstrated that the neighbor has a 5.5' setback on a similar 75-foot-wide lot.

The other issue raised by the Commission was further clarification regarding the setback of the building from the toe of the slope. While not under the purview of the Planning Commission, the California Building Code requires a building maintain a setback of 15 feet from the toe of the slope – in this case the slope on the southerly portion of the property. As such, this affects the siting of the building (see **Figure 5** below in relation to the proposed 5' side yard setback.

Figure 5: Toe of Slope Setback

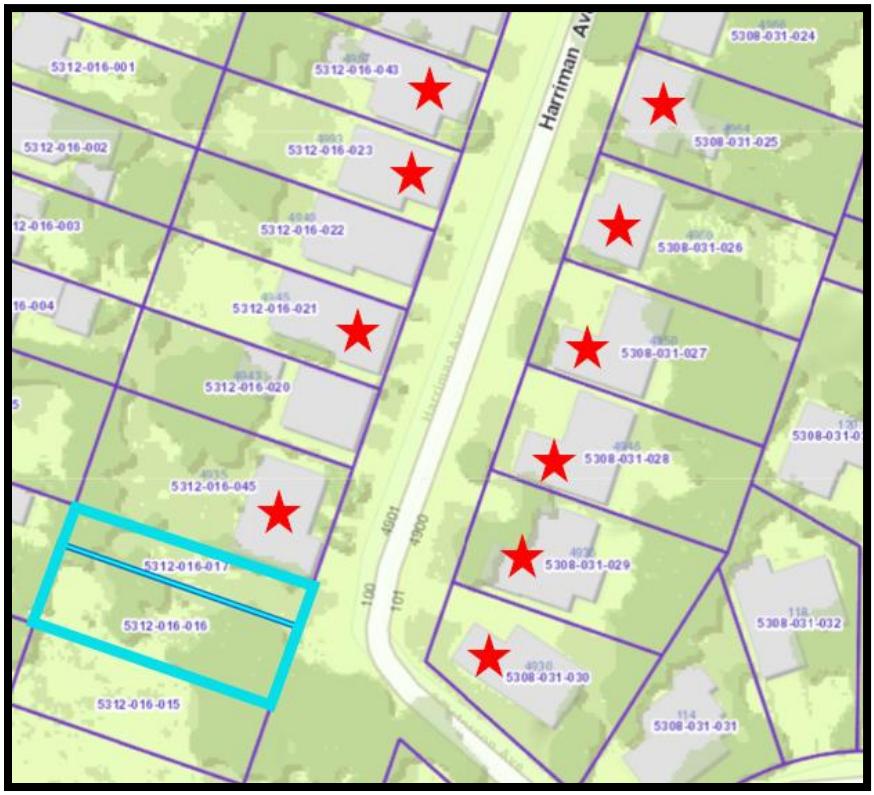


Variance 2: Attached Garage in Front of Primary Structure

SPMC, Section 36.220.040, Table 2-3, requires that an attached garage be set back a minimum of 10 feet from the front of the main structure. The applicant is proposing to minimize the impact of the natural terrain and, as such, the proposed single-family dwelling is narrow and situated towards the northern portion of the lot, where the topography is not as steep. Placing the garage 10 feet behind the main structure would require that a significant portion of the southern lot be excavated, resulting in the removal

of mature trees and substantial grading on a significant slope. As such, the applicant is requesting a Variance to allow an attached garage in front of the main structure. The surrounding neighborhood consists of houses constructed with garages either in front of the primary structure or within line of the front façade. **Figure 6** is a map of the surrounding neighborhood, the red-stared properties are properties that also have the garage placement toward the front of the main structure. As such, the request for a Variance to allow the garage in front of the primary structure does not set a precedent for the existing neighborhood.

Figure 6: Map of surrounding properties with red stars indicates garage placement at the front of the main structure



Tree Removal Permit

The subject property is lined with mature trees. The applicant has carefully designed the proposed project to minimize the removal of trees, as such, the footprint of the home is narrow and situated along the northern portion of the property. Six trees are slated for removal. One of the trees slated for removal is a Coast Live Oak tree with approximately 10 inches in diameter.

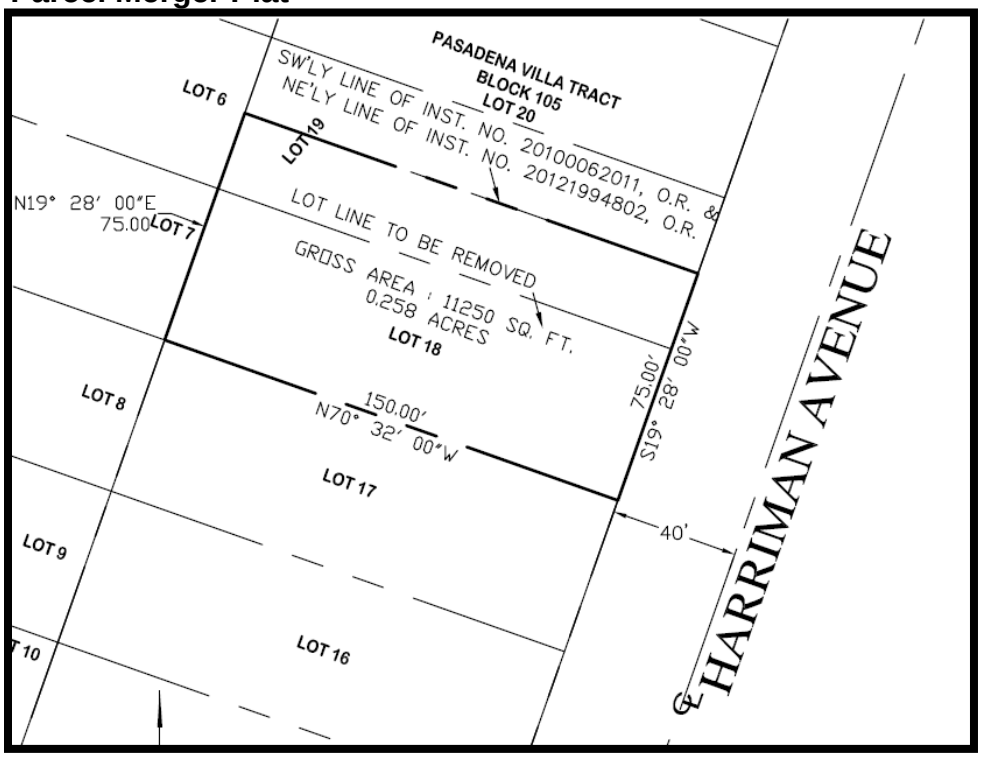
***Response to Commission*:**
The applicant has obtained a tentative approval from the Public Works Department regarding the proposed Tree Removal Permit and tree replacement plan (see **Attachment 5** to view the updated Arborist Report and tree replacement plan). The TRP

and tree replacement plan call for the removal of six trees and replacement of 7 trees on site with an additional 11 trees to be donated to the City.

Parcel Merger

The subject site consists of two undeveloped rectangular-shaped lots located within the Southwest Monterey Hills area and zoned Residential Single-Family (RS). The parcel to the north is 3,757 square feet (APN: 5312-016-017), 25 feet in width and 150 feet in depth. The parcel to the south is 7,513 square feet (APN: 5312-016-016), 50 feet in width and 150 feet in depth. When merged, the lot will be 75 feet in width and 150 feet in depth with a combined total of 11,270 square feet. **Figure 7** is the Parcel Merger Plat for the proposed Parcel Merger.

Figure 7: Parcel Merger Plat



Soils and Grading

The applicant submitted a Geotechnical and Geologic Study of the subject property (**Attachment 7**). According to the report, the subject project is feasible from a geotechnical standpoint provides the recommendations presented in the report are implemented:

A. Groundwater: According to the report, no seepage of groundwater was encountered and due to elevation of the site, water is not expected to be a significant factor during construction of the proposed project.
B. Landslides: According to the report, geologic maps do not depict landslides within or immediately adjacent to the subject property that would adversely affect the stability of the site.
C. Liquefaction: According to the report, the site is not indicated to lie within a zone of identified liquefaction hazard.
D. Faulting: According to the report, the subject site is located within a seismically active region of Southern California, within a zone of influence of several active and potentially active fault systems. Additionally, the site lies approximately one and a quarter mile south of the Raymond fault.
E. Stability Analysis: According to the report, given the favorable bedding of bedrock materials, the hillside strength parameters exceed the minimum of 1.5 and 1.0 for both static and pseudo-static conditions, respectively. A factor of less than 1 generally indicates the slope is or potentially is in a condition of mobilization of slope movement or a landslide.

The subject site is adjacent to approximately 25 feet of public right-of-way towards the front of the property, to gain access the applicant will be constructing a driveway and stairway on the public right-of-way. As part of the project and as conditioned, the applicant shall obtain a Covenant Agreement with the Department of Public Works to grade the property and to construct the driveway and stairs. The applicant is proposing to cut 149 cubic yards and fill 131 cubic yards from the public right-of-way (see **Table 3** for public right-of-way grading summary).

Table 3: Summary of Public Right-of-Way Grading

GRADING SUMMARY - RIGHT OF WAY				
	WITHIN FOOTPRINT	OUTSIDE OF FOOTPRINT	REMOVE AND RECOMPACT	TOTAL
CUT	0 CU.YD.	20.4 CU.YD.	128.9 CU.YD.	149.3 CU.YD.
FILL	0 CU.YD.	2.3 CU.YD.	128.9 CU.YD.	131.2 CU.YD.
			TOTAL	280.5 CU.YD.
			18.1 CU.YD.	EXPORT

The applicant is proposing to cut 1,280 cubic yards of dirt on the subject property and fill 930.1 cubic yards (see **Table 4** to view the property grading summary). The applicant is also proposing several retaining walls that are six feet or under.

Table 4: Grading within Subject Property

GRADING SUMMARY (WITHIN PROPERTY)				
1	WITHIN FOOTPRINT	OUTSIDE OF FOOTPRINT	REMOVE AND RECOMPACT	TOTAL
CUT	252.9 CU.YD.	208.4 CU.YD.	818.7 CU.YD.	1280 CU.YD.
FILL	56.1 CU.YD.	55.3 CU.YD.	818.7 CU.YD.	930.1 CU.YD.
			TOTAL	2210.1 CU.YD.
			349.9 CU.YD.	EXPORT

Design Review

Hillside Design Guidelines

The Hillside Development Design Guidelines in Section 36.340.040 of the SPMC and the City's residential design guidelines for hillside lots apply to the proposed project. To approve the project, the Planning Commission must find that the proposed project is consistent with City's design requirements and must make the findings for approval for Design Review. These guidelines and findings require projects to be compatible within the neighborhood context and surrounding architectural characteristics so as not to adversely impact the character of the City. The City's adopted *Design Guidelines for Residential Single-Family Buildings on Hillside Lots*, state the following:

1. *Neighborhood Compatibility and Character: New hillside homes or additions and alterations to existing hillside homes should be designed with consideration for the character and scale of the existing development in the vicinity. Alterations to existing hillside homes should be designed with consideration for the character and scale of the existing development in the vicinity.*

   The subject site is surrounded by existing single-family residences of varying architectural styles and sizes. The architectural style of the proposed project is described by the applicant as Modern and Minimalist. The proposed project is designed to be compatible with the surrounding neighborhood through its broken form design of separate, but integrated minimalist modern forms that descend the

down-sloping hillside site in an effort to reduce the scale and visual impact of the project.

2. *View Protection: Preservation of views from adjoining hillside lots should be carefully considered in the design of a new home or addition to an existing home on a hillside lot.*

   The proposed project is nestled into the bottom of a hillside to reduce its height and visual impact from adjoining properties. The design of the second story is stepped back 20 feet from the front-facing garage and with additional floor levels occurring downhill and below the street elevation.

3. *Site Planning and Development:*

   a. *Each hillside structure should be located in the most accessible, least visually prominent, most geographically stable portion of the site, and at the lowest feasible elevation. Siting structures in the least prominent locations is important on open hillsides where high visibility should be minimized by placing structures so that they will be screened by existing vegetation, depressions in topography, or other natural features.*

      The applicant is requesting a Variance for a 5-foot side yard setback, the standard is 10 percent of the lot width, which in this case, would be 7 feet, 6 inches. The reduction of the side yard setback will allow the house to be situated on a narrow portion of the property, which has a reduced slope. The reduced side yard setback will reduce the amount of grading and shoring required to construct the house by locating the footprint on the more stable area closer to the street.

   b. *Each structure should be located to take advantage of existing vegetation for screening and should include the installation of additional native plant materials to augment existing vegetation, where appropriate.*

      Six trees are slated for removal; however, the southern portion of the subject property contains seven Coast Live Oak trees that will remain. The new planters created by the six-foot retaining walls will include native plants that are appropriate for dry climates.

   c. *In order to minimize visual impacts where the lots are substantially longer in the direction of the slope than lot width, residences should generally be oriented to present the narrow side of the home to the exposed view rather than the wide side.*

      The orientation of the proposed home follows the orientation of the rectangular site. The site has a curving street frontage and the proposed

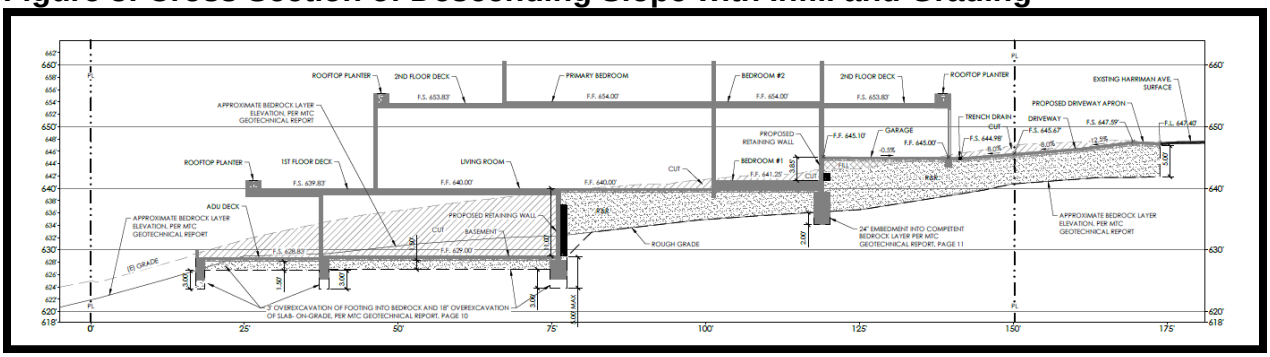
house is narrow at 20 feet, 10 inches. The second-story portion of the proposed house is set back approximately 20 feet from the front property line, when considering the public right-of-way, the required 10-foot front yard setback, and the 20-foot building stepback, the second-story portion of the structure is setback approximately 50 feet from the street, which minimizes the visual impact of the home.

4. *Grading:*

a. *Grading into the hillside to locate a structure and reduce its visual bulk is encouraged. To minimize grading, building designs should step up or down hillsides.*

The proposed house is situated at the bottom of a steep hillside. This design approach will provide a new residence that is more compatible with the existing development patterns of the single-family neighborhood. The bulk of the house has a minimal impact from the street view, as the proposed project will step down the descending downhill slope, thus further reducing its visual impact to the neighborhood (see **Figure 8**).

Figure 8: Cross Section of Descending Slope with Infill and Grading



b. *Wherever possible, garages should be "straight-on" rather than "side-on" designs. The maximum average grade for driveways set by the Zoning Code is 15%. The maximum slope for ramps to garages or carports is 5% within 10 feet of the garage or carport.*

The proposed garage is "straight-on" rather than "side-on" and complies with the development standards for the slope of the driveway.

c. *Retaining walls should be divided into terraces with variations in plane and include landscaping to break up the length of the walls and to screen them from view.*

The proposed retaining walls are located to the south of the proposed footprint of the home. The walls are six feet in height and are terraced to

create planter areas to screen the walls from view.

5. *Scale and Massing:*

   a. *The design of hillside homes should reduce visual mass by incorporating building setbacks, stepbacks, and roof variations.*

      The applicant is requesting a Variance for a reduced side yard setback of 5 feet; this reduction is requested to reduce grading and shoring impacts to the site and to protect the Coast Live Oak trees that are located on the southern portion of the property. Efforts have been taken to reduce the project's visual mass through the use of an interplay of materials, large glazing fenestrations, front and rear yard decks, and containing the proposed home in a series of separate yet integrated minimalist modern forms that will step down the hillside from the street level elevation.

   b. *Massing should be stepped with the slope to avoid large expanses of tall walls. The wall planes at various levels should be articulated and have a variety of solid and void elements.*

      The applicant is proposing a stepped design that descends the downhill slope. Additional design efforts have been made to reduce the mass of the project including an interplay of materials, large glazing fenestration, front and rear decks, and the utilization of separate, yet integrated minimalist modern forms.

   c. *Vertical building walls should not exceed 15 feet in height above grade. Any vertical walls above 15 feet should be stepped back from adjacent lower walls by a minimum distance of ten feet. Flat building walls over one story in height and over 25 feet in horizontal dimension are discouraged to minimize unarticulated wall mass.*

      The applicant is proposing a stepped design that is located at the base of a steep hillside and descends on a downhill slope from the street. The vertical walls sloping down do not exceed 15 feet.

6. *Height and Roof Form: Roof forms will be seen from homes on hillsides above and should present a pleasing roofscape of low-pitched gable and hip roofs. Roof forms and roof lines broken into a series of smaller building components are preferred over long, linear unbroken roof lines.*

   The applicant is proposing a roof slope that mimics that of the hillside, providing ample interior space while maintaining a low profile. At the midpoint of the roof, a visual break lowers the roofline, reducing its visual height.

7. *Façade Treatments: Hillside construction could embrace modernism while maintaining the scale and patterns of building placement in the neighborhood.*

   The applicant is proposing to use high-quality materials that are commonly found in the City including wood panel, smooth stucco, a custom weathered steel garage door, and red clay tile roofing.

8. *Physical Design Components:*

   a. *Contemporary designs are appropriate when they are designed with attention to height, form, massing, proportion, size, scale, and roof form. Consideration should be taken to provide articulated details and careful attention should be given to quality workmanship.*

      The applicant is proposing a minimalist modern design with simplified forms, earth toned materials, and “S” clay tile elements. The home is strategically situated on the existing hillside, presenting a long, narrow rectangular volume that gently steps up and down its length to minimize prominence, both from the street and descending slope. The roof mimics the slope of the hillside and at the midpoint of the roof, a visual break lowers the roofline, reducing its visual height from the street.

   b. *Exterior Cladding and Roofing Materials:*

      i. *Encouraged exterior wall finishes with Modern Aesthetic: stucco (sand or smooth finish and half timbering), wood clapboard siding, wood shingles, wood board and batten, brick.*

         The applicant is incorporating a smooth stucco finish, wood siding, and clay “S” tile roof.

      ii. *Encouraged roofing materials with Modern Aesthetic: membrane roofing (rolled roofing), corrugated or galvanized metal, composition shingles. Exterior materials should be similar in quality to hose typically found in the traditional residential neighborhoods.*

         The applicant is proposing red clay “S” tile roof, which is a material found in the surrounding neighborhood.

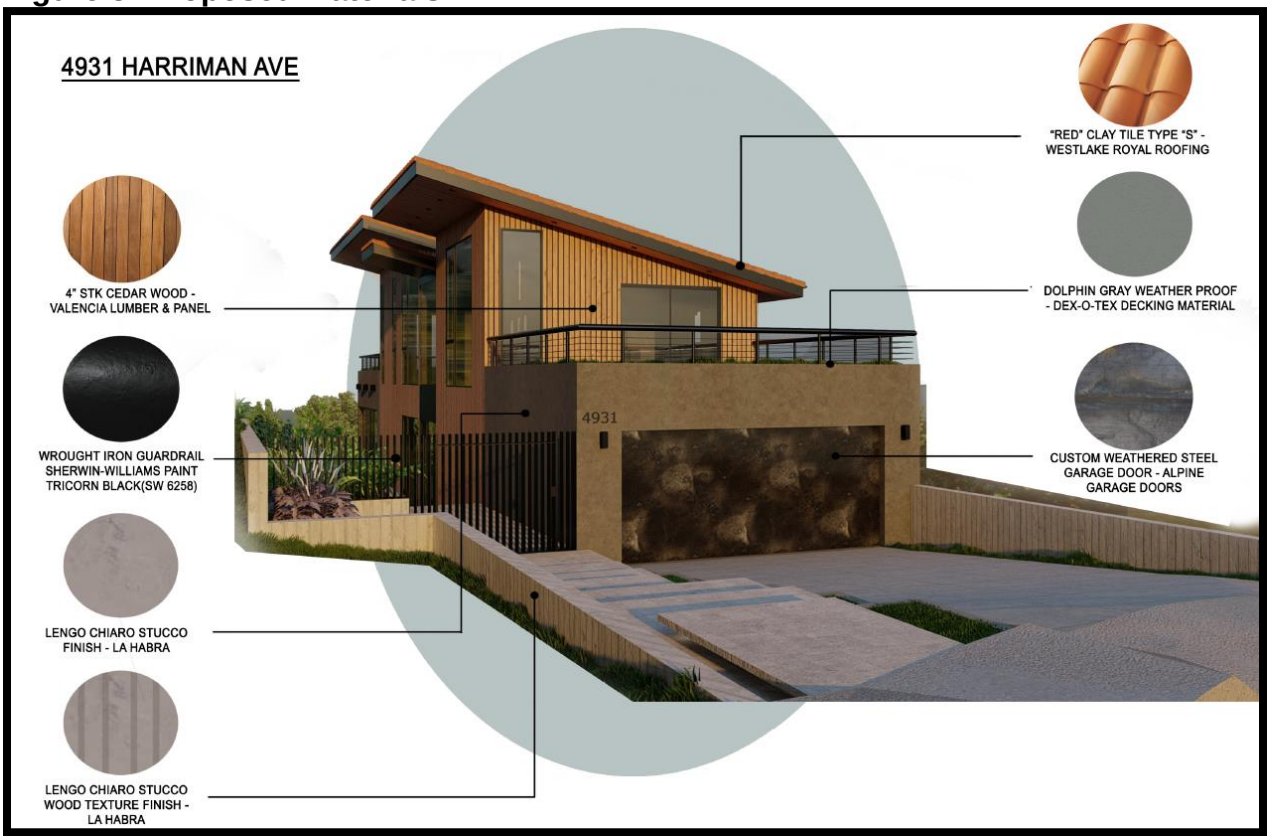
Design Review

The first floor of the proposed single-family dwelling consists of an attached front-facing two-car garage, one bedroom at the entry, one-and-a-half bathrooms, and the kitchen and living area. A deck can be accessed through the living room—this deck also doubles as the patio cover for the basement-level Accessory Dwelling Unit. The second floor

includes two bedrooms and two bathrooms; each bedroom will have access to its own 435-square-foot deck. The basement level includes the ADU, which has one bedroom.

The home is strategically situated at the bottom of an existing hillside. The footprint is long and narrow to minimize grading on the steeper portion of the lot. The residence embodies a minimalist modern aesthetic, which gathers inspiration from neighboring properties. The exterior walls are cladded with earth-toned stucco and wood paneling. The roof includes “S” clay tile roofing, which can also be seen throughout the neighborhood (see **Figure 8** and **Attachment 4** to view the proposed materials).

Figure 8: Proposed Materials



***Response to Commission*:**
In regard to the proposed material of the garage door, the applicant has provided an example of the weathered steel garage door (see **Figure 9** below which shows the proposed and also shows similar garage door materials that can be found in the surrounding neighborhood).

Figure 9: Garage Door Examples



As shown in the photo rendering and front elevations (**Figures 10, 11** and **Attachment 8),** the mass and scale of the proposed project would be well-proportioned and harmonious with the established neighborhood. The applicant is proposing large windows from the west, east, and south elevations, but to address privacy concerns, the applicant has reduced the number of windows and size of windows to the north elevation (see **Figures 12-15** to view elevations and **Attachment 8**). The overall design of the project would result in an attractive and orderly development as intended by the General Plan and design guidelines. As required and conditioned, the final design, materials, and construction documents would be reviewed and approved by the Planning Division and Building Division prior to permit issuance.

Figure 10: Front Rendering

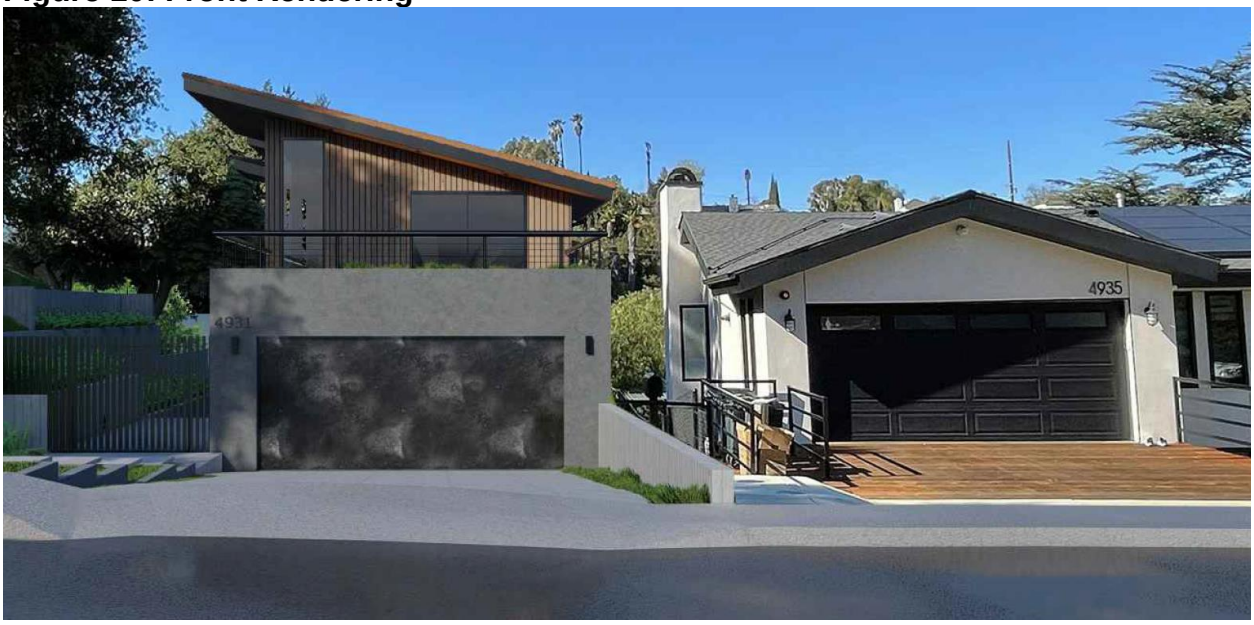


Figure 11: Rendering, as viewed from rear elevation



Figure 12: Proposed East (Front) Elevation

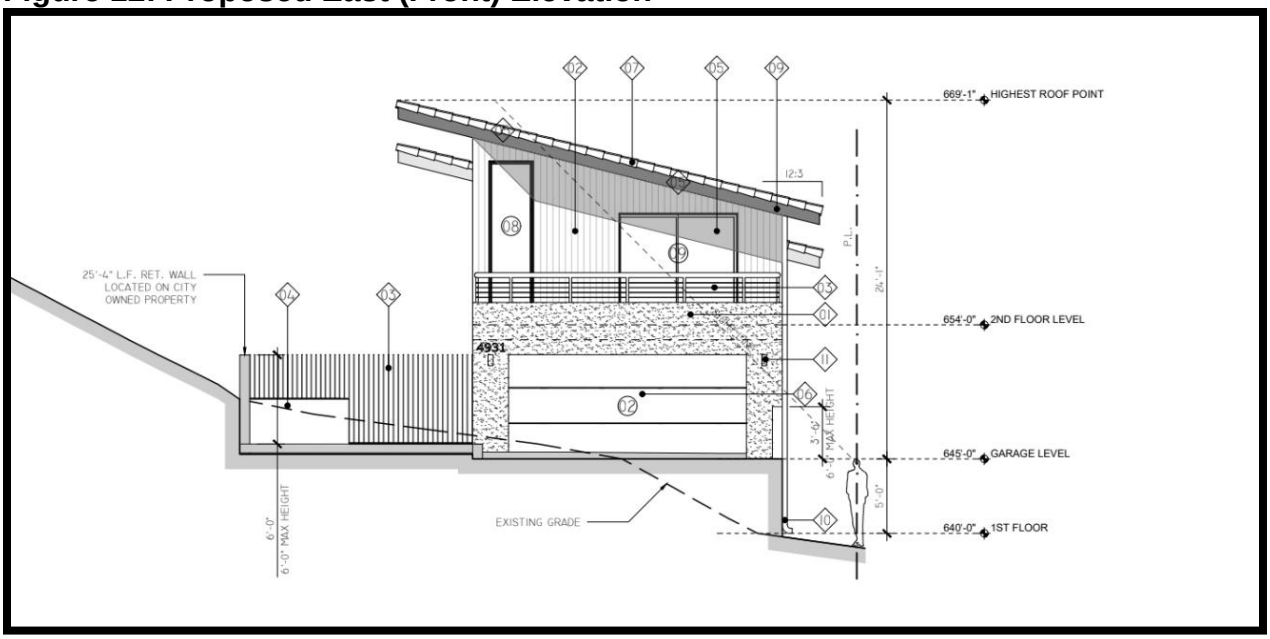


Figure 13: Proposed West (Rear) Elevation

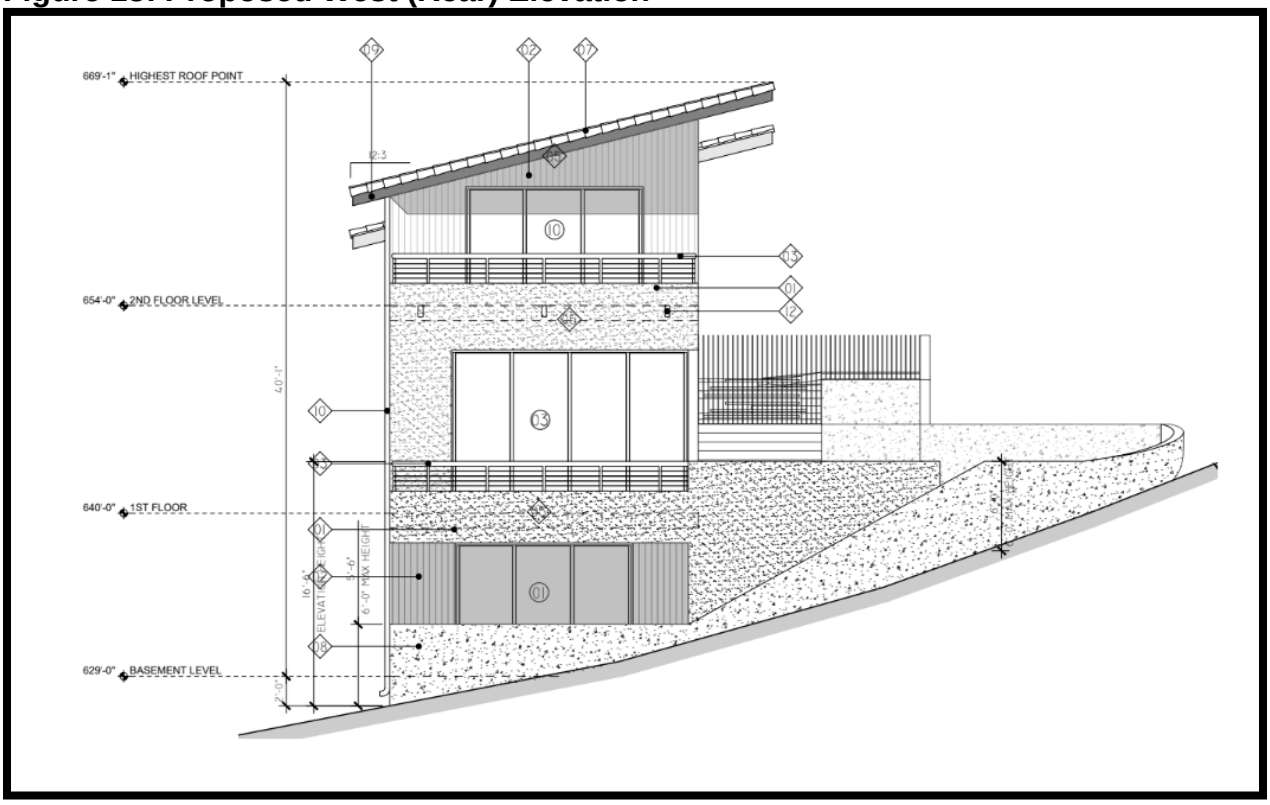


Figure 14: Proposed South (Side) Elevation

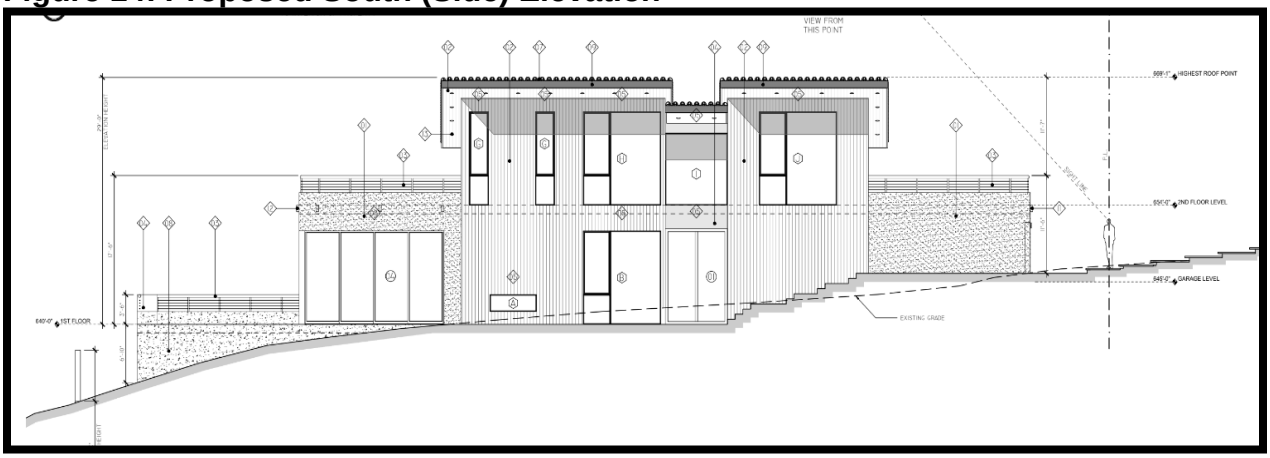
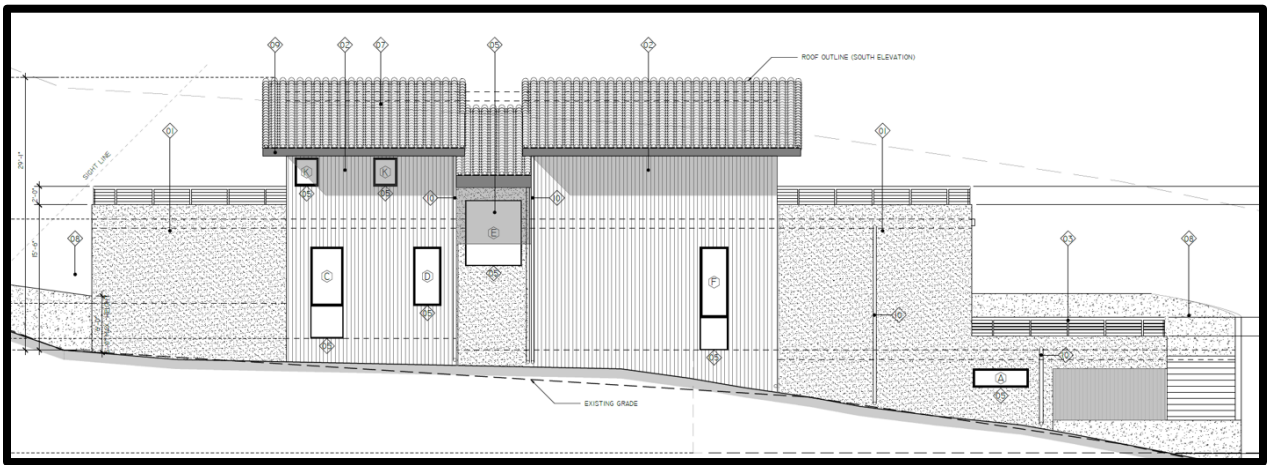


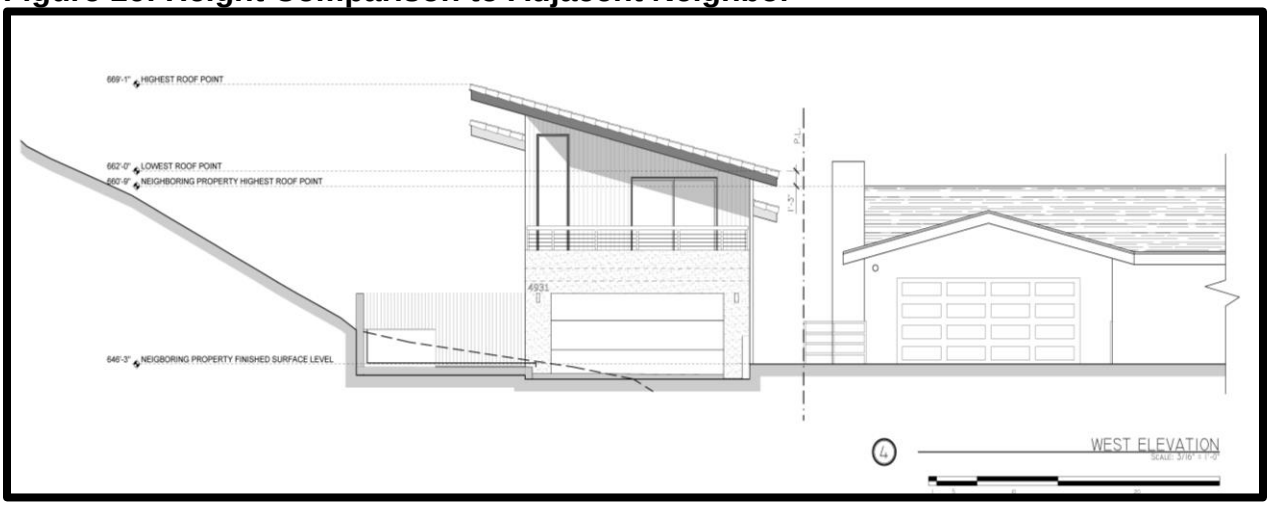
Figure 15: Proposed North (Side) Elevation



***Response to Commission*:**
Regarding the North elevation, the Commission raised potential privacy concerns of the adjacent north neighbor's home. As a response to this concern, the applicant is proposing to provide a reduced window size (Window E) and frosting material to be installed on said window (see Figure 15 above for new window size).

With respect to the height comparison to the adjacent neighbor, the applicant has provided a front elevation comparing to the two structures (see **Figure 16** below). As shown below, the subject property features a slightly lower elevation. However, the heights are similar in height when terrain is taken into consideration as the lowest roof point of the subject property's home is in line with the height of the adjacent neighbor's roof. Additionally, the proposed garage height is lower than the adjacent neighbor's garage.

Figure 16: Height Comparison to Adjacent Neighbor



The last issue raised was regarding the proposed roof design in relation to possible photovoltaic (solar panel) as required by the California Building Code. Upon meeting with the City's Building Division, it was determined that the proposed roof design is exempt from photovoltaic requirements as it is a north facing roof. Additional studies were conducted to verify the Solar Access Roof Areas (SARA) if the roof was flattened (see **Figure 17** below). However, that would have required an increase in the building height which would not have complied with the maximum height requirement for flat roofs. As such, the design as proposed, will comply with the maximum height requirement of 28 feet.

Figure 17: SARA zones



General Standards for Construction

The Public Works Department has reviewed this project and recommended Conditions of Approval (**Attachment 1**, **Exhibit "A"**) to mitigate any potential construction impact during construction. The recommended conditions including, but not limited to, requiring the applicant to submit a construction management plan, advanced notice for any street closures, and prohibiting overnight storage of materials or equipment within the public right-of-way. The proposed project is located within the Southwest Monterey Hills area, as such, an additional condition was added to ensure that the applicant abides by construction regulations.

Findings

In order to approve the project, the Planning Commission shall find that the design and the proposed layout comply with the finding for a Hillside Development Permit, Design Review, and a Variance as stipulated in the South Pasadena Municipal Code. All findings

for the proposed project may found within the Planning Commission Resolution No. ___ (**Attachment 1**).

Environmental Analysis

This item is exempt from California Environmental Quality Act (CEQA) analysis based on State CEQA Guidelines Section 15303, Class 3 – New Construction or Conversion of Small Structures. Class 3 exemption includes the construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. Class 3 exemption includes, but is not limited to: one single-family residence, or a second dwelling unit in a residential zone; in urbanized areas, up to three single-family residences may be constructed or converted under this exemption. The project will not have a significant effect on the environment because the project includes one single-family residence and one accessory dwelling unit; the project is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan; and is not located in an environmentally sensitive area.

Alternatives to Consider

Planning Commission may also consider the following alternatives to this recommendation:

1. The Planning Commission may approve the project with modified/added conditions;
2. The Planning Commission may continue the project to address comments discussed; or
3. The Planning Commission may deny the project.

Public Notification

Hearing notices were sent to all properties within a 300-foot radius of the property and to all properties located within the Southwest Monterey Hills Notification Area on July 31, 2024. A Public Hearing Notice was published on August 2, 2023 in the South Pasadena Review. In addition, the public was made aware that this item was to be considered at a public hearing by virtue of its inclusion on the legally publicly noticed agenda, posting of the same agenda and reports on the City's website.

Public Comments

At the time of writing this report, staff did not receive Public Comment for this item.

Next Steps

If the Planning Commission approves the project, a 15-day appeal period will commence in which any person affected by the decision may appeal the decision for a public hearing by the City Council. Should there be no appeals during this 15-day period, the applicant may proceed through the Plan Check Process with the Building Division and staff will review the construction plans to ensure that all conditions are satisfied.

Attachments:

1. P.C. Resolution with Exhibit “A” – Conditions of Approval
2. Site and Neighborhood Images
3. Project Narrative
4. Link to Materials Board
5. Updated Arborist Report
6. Parcel Merger Exhibit
7. Links to Geotechnical Report & Constraints Analysis
8. Link to Architectural Plans & Renderings

ATTACHMENT 1

P.C. RESOLUTION NO. 24-__

Exhibit A – Conditions of Approval

P.C. RESOLUTION NO. ___

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SOUTH PASADENA APPROVING PROJECT NO. 2500-HDP/DRX/VAR/PM/TRP FOR A HILLSIDE DEVELOPMENT PERMIT AND DESIGN REVIEW PERMIT TO CONSTRUCT A NEW 3,214-SQUARE-FOOT, TWO-STORY, SINGLE-FAMILY DWELLING; TWO VARIANCES FOR A REDUCED SIDE YARD SETBACK AND AN ATTACHED GARAGE IN FRONT OF THE MAIN STRUCTURE; A PARCEL MERGER APPLICATION FOR A MERGER OF TWO EXISTING LOTS; AND, A TREE REMOVAL PERMIT FOR THE REMOVAL OF SIX (6) TREES AT 4931 HARRIMAN AVENUE (APNS: 5312-016-016 & 5312-016-017); AND MAKING A DETERMINATION OF EXEMPTION UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

WHEREAS, on August 2022, Ismail Sawan (the "applicant") submitted applications for the following entitlements:

1. **Hillside Development Permit (HDP)** for the proposed grading and development of a 3,214-square-foot, two-story single-family dwelling on a site with an average slope of 20 percent or greater. The project includes an attached 405-square-foot, 2-car garage, and three decks;
2. **Design Review Permit (DRX)** for the architectural design review of the proposed development;
3. Two **Variance (VAR)** requests to deviate from development standards to allow the project to provide the following:
    a. A reduced north side yard setback of five (5) feet in lieu of the required seven (7) feet, six (6) inches. Per South Pasadena Municipal Code (SPMC), Section 36.220.040, side yard setbacks shall meet 10 percent of the lot width; and,
    b. To allow an attached garage in front of the main structure. Per SPMC, Section 36.220.040, an attached garage shall be set back a minimum of 10 feet from the main structure.
4. **Parcel Merger (PM)** for the merger of two adjacent lots, the first lot (APN: 5312-016-016) is 7,513 square feet, the second lot (APN: 5312-016-017) is 3,757 square feet, when merged will be a total of 11,270 square feet; and,
5. **Tree Removal Permit (TRP)** for the removal of six (6) trees.

The project is located at 4931 Harriman Avenue (APNs: 5312-016-016 & 5312-016-17) within the Southwest Monterey Hills area (the above-referenced applications and requests are referred to herein as the "project" or "proposed project"); and

WHEREAS, the subject property is zoned Residential Single-Family (RS) and has a General Plan land use designation of Low Density Residential; and

WHEREAS, the proposed project is categorically exempt from the California Environmental Quality Act (CEQA), per CEQA Guidelines Section 15303, Class 3 – New

Construction or Conversion of Small Structures. The project will not have a significant effect on the environment because the project falls under a Class 3 – New Construction of Small Structures including "up to three single-family residences" in urban areas; the project is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan; and is not located in an environmentally sensitive area; and

WHEREAS, the Community Development Department evaluated the project for consistency with the City's General Plan, South Pasadena Municipal Code, the City's Design Guidelines, and all other applicable state and local regulations; and

WHEREAS, the South Pasadena Planning Commission originally held a duly noticed public hearing on November 14, 2023, at which time it considered the staff report, oral report, the testimony, and the written evidence submitted by and on behalf of the applicant and by members of the public concerning Project No. 2500-HDP/DRX/VAR/PM/TRP and continued the project to address certain issues raised on the overall design of the project; and

WHEREAS, on July 31, 2024, public hearing notices were mailed to each property owner within a 300-foot radius of the project site and within the Southwest Monterey Hills Notification Area in accordance with the requirements of South Pasadena Municipal Code declaring the project review by the Planning Commission. On August 2, 2024, the City of South Pasadena Planning Division, published a legal notice in the *South Pasadena Review,* a local newspaper of general circulation, indicating the date, time, and location of the public hearing in compliance with state law concerning Project No. 2500-HDP/DRX/VAR/PM/TRP; and

WHEREAS, the South Pasadena Planning Commission held a duly noticed public hearing on August 13, 2024, at which time it considered the staff report, oral report, the testimony, and the written evidence submitted by and on behalf of the applicant and by members of the public concerning Project No. 2500-HDP/DRX/VAR/PM/TRP.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF SOUTH PASADENA DOES HEREBY FIND, DETERMINE, AND RESOLVE AS FOLLOWS:

SECTION 1: ACKNOWLEDGEMENTS

The foregoing recitals are true and correct and are incorporated and made an operative part of this resolution.

SECTION 2: ENVIRONMENTAL REVIEW FINDINGS

The Planning Commission has determined that the proposed project is Categorically Exempt from the provisions of the California Environmental Quality Act (CEQA), under

CEQA Guidelines Section 15303, Class 3 – New Construction or Conversion of Small Structures. Class 3 exemption includes the construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. Class 3 exemption includes, but is not limited to: one single-family residence, or a second dwelling unit in a residential zone; in urbanized areas, up to three single-family residences may be constructed or converted under this exemption. The project will not have a significant effect on the environment because the project includes one single-family residence and one accessory dwelling unit; the project is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan; and is not located in an environmentally sensitive area.

SECTION 3: HILLSIDE DEVELOPMENT PERMIT FINDINGS

Based upon the entire record made available at the August 13, 2024 public hearing, including the public hearing, the staff report, the oral presentation, and related documents submitted to the Planning Commission prior to and at the public hearing, the Planning Commission finds and determines that the proposed project is consistent with all applicable findings for approval of a Hillside Development Permit pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.065(F), as follows:

1. **The proposed use complies with requirements of Division 36.340 (Hillside Protection) and all other applicable provisions of this Zoning Code.**

   The project uses thoughtful site design which conforms to the hillside development standards and design guidelines. The project is considerate of the character and scale of the existing single-family developments in the vicinity. With the exception of the two variances being requested: 1) to reduce the side yard setback to five feet in lieu of the required seven feet, six inches, and 2) to allow an attached garage in front of the main structure. The project as designed and conditioned, will comply with the Hillside Protection Ordinance and the RS standards in the SPMC.

2. **The proposed use is consistent with the General Plan and any applicable specific plan;**

   The General Plan land use designation of the site is Low Density Residential, which allows for detached single-family units at a density of 3.51 to 6 units per acre. The proposed project does not involve the addition of another dwelling unit; therefore, the project is consistent with the General Plan. The project is not located within a specific plan.

3. **The establishment, maintenance, or operation of the use would not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of the persons residing or working in the neighborhood of the proposed use;**

The neighborhood is developed with a mix of hillside homes in both architectural style and scale; as required and conditioned, all construction documents, including grading plans and calculations, would be prepared by professional architects or engineers and must be formally reviewed and approved by the appropriate City departments prior to issuing permits. The proposed use of a single-family residential home is consistent with the SPMC and as designed and conditioned, would not be detrimental to the health and safety or general welfare of persons residing or working in the neighborhood.

4. **The use, as described and conditionally approved, would not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City; and,**

   Prior to commencing construction, the project is required to comply with and obtain all applicable building permits, including those necessary for grading, utilities, public works, and fire prevention. Additionally, the applicant shall provide a construction management plan, as required in the Southwest Monterey Hills Construction Plan area, prior to the issuance of building permits. Accordingly, the project as conditioned would not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City.

5. **The design, location, operating characteristics, and size of the proposed use would be compatible with the existing and future land uses in the vicinity, in terms of aesthetics, character, scale, and view protection.**

   The proposed use of single-family residential is consistent with the established residential neighborhood. The proposed dwelling is set back approximately 30 feet from the street, which will result in a minimal visual impact from the front street view. The scale of the project is appropriate in size, when compared to the surrounding neighborhood and the topography of the land and the configuration of neighboring properties minimizes view impacts. With the exception of the variances requested, the proposed design complies with the City's Hillside Design Guidelines, the Hillside Protection Ordinance, and the SPMC, including but not limited to building mass, scale, respect of the topography, and lot coverage. Accordingly, the design, location, operating characteristics, and size of the project is compatible with the existing and future land uses in the vicinity, in terms of aesthetics, character, scale, and view protection.

SECTION 4: DESIGN REVIEW FINDINGS

Based upon the entire record made available at the August 13, 2024 public hearing, including the public hearing, the staff report, the oral presentation, and related documents submitted to the Planning Commission prior to and at the public hearing, the Planning Commission finds and determines that the proposed project is consistent with all applicable findings for approval of a Design Review Permit pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.040(I), as follows:

1. **Is consistent with the General Plan, any adopted design guidelines and any applicable design criteria for specialized areas (e.g., designated historic district or other special districts, plan developments, or specific plans);**

   The General Plan designation for the subject property is Low Density Residential and the project complies with the density of one dwelling and use. With the exception of the two variances being requested by the Applicant, the proposed project complies with the City of South Pasadena's Design Guidelines for Hillside Homes as to architecture, scale, building mass, building height, lot coverage, and compatibility with the neighborhood. The surrounding neighborhood includes a mix multi-story homes and a variety of architectural styles. The proposed single-family dwelling is situated at the bottom of a steep hillside and designed to have minimal view impacts from hilltop homes.

2. **Will adequately accommodate the functions and activities proposed for the site, will not unreasonably interfere with the use and enjoyment of the neighboring, existing, or future developments, and will not create adverse pedestrian or traffic hazards;**

   The proposed project will accommodate the single-family functions and activities proposed for the site. The new home will provide sufficient size and space for residential living, with indoor/outdoor living incorporated into the architectural design. The ground level will accommodate the required covered and off-street parking, the first level of the dwelling will include the living area and one bedroom, the second floor will include two bedrooms, and the basement will include an Accessory Dwelling Unit with one bedroom. The design of the house meets the required height limits, grading percentages of the driveway and required front, rear, and south side yard setbacks. As a single-family residence in an established single-family neighborhood, the house will not interfere with the use and enjoyment of the neighboring, existing, or future developments. With the two requested Variances for a reduced north side yard setback and to allow the attached garage in front of the main structure, the proposed new home is consistent with the design standards. As conditioned, the project's mass, scale, bulk, and temporary construction activities would not unreasonably interfere with the use and enjoyment of the neighboring, existing, or future developments, and will not create adverse pedestrian or traffic hazards. A construction management plan will be reviewed and approved by staff during the Building and Public Works permitting process.

3. **Is compatible with the existing character of the surrounding neighborhood and that all reasonable design efforts have been made to maintain the attractive, harmonious, and orderly development contemplated by SPMC Section 36.410.040 and the General Plan; and**

   The project site is surrounded by multi-story residential buildings of different architectural styles and sizes. Except for the two variances sought, the project complies with all the development standards for zoning and hillside lots. The proposed project is situated at the bottom of a steep hillside, minimizing the impact

to the slope. The project is compatible with the existing character of the neighborhood and the design incorporates a modern aesthetic with an interplay of simple geometric volumes that step down in accordance with the City's Design Guidelines. The project is set back approximately 30 feet from the street and will have minimal street view impacts. The building height, size, and form fits the size of the lot. As proposed, the project complies with requirements contemplated by SPMC Section 36.410.040 and the General Plan.

4. **Would provide a desirable environment for its occupants and neighbors, and is aesthetically of good composition, materials, and texture that would remain aesthetically appealing with a reasonable level of maintenance and upkeep.**

   The proposed project has been designed with consideration to its future occupants and neighbors. The proposed project uses appropriate materials that complement the existing neighborhood's eclectic architectural styles with earth-toned stucco and wood panel cladding. The home features clean straight lines; large windows at the west, east, and south; minimal windows at the north elevation for added privacy with the adjacent property; and a sloped roof that mimics that of the hillside. The proposed project incorporates a composition of high-quality materials that further assists in allowing for the preservation of a desirable and aesthetically appealing presentation with reasonable maintenance.

SECTION 5: VARIANCE FINDINGS FOR REDUCED NORTH SIDE YARD SETBACK AND THE PLACEMENT OF THE ATTACHED GARAGE IN FRONT OF THE MAIN STRUCTURE

Based upon the entire record made available at the August 13, 2024 public hearing, including the public hearing, the staff report, the oral presentation, and related documents submitted to the Planning Commission prior to and at the public hearing, the Planning Commission finds and determines that the proposed project is consistent with all applicable findings to grant a Variance for: A) reduced north side yard setback, and B) the placement of the attached garage in front of the main structure, pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.080, as follows:

1. **There are special circumstances applicable to the subject property (e.g., location, shape, size, surroundings, topography, or other conditions), so that the strict application of this Zoning Code denies the property owner privileges enjoyed by other property owners in the vicinity and within the same zoning district, or creates an unnecessary and involuntarily created hardship, or unreasonable regulation which makes it impractical to require compliance with the development standards;**

   North Side Yard Setback

   There are special circumstances applicable to the subject property which consists of an average slope of 41.67 percent. The subject site fronts Harriman Avenue at a curve and turns into Peterson Avenue at an upslope. The property is unique in that it is

situated both on the top of a downslope—from south to north—and the bottom of a downslope—from east to west. The subject site contains several mature trees along the southern portion of the property. To minimize grading further into the steep portion of the lot, and to protect the mature trees, the applicant is proposing to construct the new single-family dwelling at the northern portion of the lot.

This variance request to allow a reduced side yard setback of five feet, in lieu of the required 7-foot, 6-inch side yard setback—per the standard in SPMC 36.220.040, a side yard setback shall be 10 percent of the lot width—is common for Hillside Development Permit projects. In order for there to be minimal impact to the slope and to save the mature trees, the applicant is situating the footprint of the new home towards the northern portion of the lot. The steep terrain of the project site, and compatibility with the neighboring side yard setbacks are the driving factors for this Variance.

Attached Garage in Front of Primary Structure

There are special circumstances applicable to the subject property which consists of an average slope of 41 percent and immediately to the south of the proposed single-family dwelling, the topography is steeper. SPMC, Section 36.220.040, Table 2-3, requires that an attached garage be set back a minimum of 10 feet from the front of the main structure. The applicant is proposing to minimize the impact of the natural terrain and, as such, the proposed single-family dwelling is narrow and situated towards the northern portion of the lot, where the topography is not as steep. Placing the garage 10 feet behind the main structure would require that additional trees be removed and would require additional grading on a significant slope.

2. Granting the Variance would:

a. Be necessary for the preservation and enjoyment of substantial property rights possessed by other property owners in the same vicinity and zoning district, and denied to the subject property owner;

North Side Yard Setback

The subject site is surrounded by existing single-family residences of varying architectural styles and sizes**.** The existing homes in the neighborhood were built before the City Council's adoption of the current hillside regulations, adopted in 2002, as such several of the neighboring properties do not conform to current development standards. The applicant is proposing a new single-family dwelling with a reduced north side yard setback. The majority of existing homes on the same street have non-confirming side yard setbacks. The granting of the requested Variance to have a five-foot north side yard setback will allow for the preservation and enjoyment of substantial property right for a single-family home that is consistent with the development pattern by other property owners in the same vicinity and zoning district. A denial of the Variance would deny the applicant the similar rights possessed by other

property owners.

Attached Garage in Front of Primary Structure

The subject site is surrounded by existing single-family residences of varying architectural styles and sizes**.** The existing homes in the neighborhood were built before the City Council's adoption of the current hillside regulations, adopted in 2002, as such several of the neighboring properties do not conform to current development standards. The applicant is proposing a new single-family dwelling with an attached garage in front of the primary structure. The majority of existing homes on the same street have an attached garage in front of the primary structure. The granting of the requested Variance for the garage placement in front of the primary structure will allow for the preservation and enjoyment of substantial property right for a single-family home that is consistent with the development pattern by other property owners in the same vicinity and zoning district.

b. Be consistent with the General Plan and any applicable specific plan, and the limitations established by the 1983 initiative;

The proposed reduction of the northern side yard setback and placement of the attached garage in front of the primary structure are consistent with the General Plan, the City's adopted Design Guidelines, and the height limit established by the 1983 initiative. The proposed single-family dwelling is designed with consideration of the character and scale of the existing single-family developments in the vicinity.

As conditioned, the project will comply with the Goals and Policies of the General Plan as follows:

Goal 19: "To ensure that new development within hillside areas of South Pasadena does not adversely impact the character of the City."

> *Policy 19.7: "Discourage Hillside Grading which damages the integrity of hillside areas in order to create views."*

The proposed project is situated five feet from the northern side yard setback and the attached garage will be placed in front of the main structure, both of which will reduce grading into the southern steep slope. The documents reviewed by the City include a topographic map, slope analysis, and preliminary grading plan prepared by a Registered Professional Engineer. The applicant will provide a final grading plan prepared by Registered Professional Engineer. As required and conditioned, the final grading plan will be approved by the Public Works Department and the Building Division prior to grading permit issuance. As such, the two requested Variances are intended to reduce the amount of grading necessary to construct the proposed single-family

dwelling and would not impact the safety of the site, adjacent properties, or the general safety and welfare of the public.

c. Not constitute a grant of special privileges inconsistent with the limitations on other properties in the vicinity and in the same zoning district; and

The granting of the Variances for the reduced northern side yard setback and attached garage placement in front of the main structure would not constitute a grant of special privileges that are inconsistent with the limitations on other properties in the vicinity and in the same zoning district. The majority of the existing homes on the same street have a reduced side yard setback as well as an attached garage located in front of the main dwelling. The subject site consists of a steep downhill slope and sits at the end of developed parcels in a densely developed residential neighborhood consisting of single-family homes on substandard hillside lots. The subject site has a steep terrain and the placement of footprint of the proposed single-family dwelling at the northern portion of the lot with an attached garage in front of the main structure will minimize additional grading and will reduce the impact to the hillside. The placement of both the footprint of the home and garage along the narrow portion of the lot with a less steep terrain will also result in maintain the mature trees located along the southern portion of the subject property.

d. Not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity and zoning district in which the property is located.

North Side Yard Setback

The excavation into the hillside has been minimized as much as possible, as the proposed single-family dwelling is situated on the northern portion of the subject property, the topography of which is not as steep. Situating the single-family dwelling along the northern portion of the lot is proposed to help maintain the hillside and mature trees; thereby, the request for a Variance for the reduced side yard setback will not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity and zoning district in which the property is locate.

Attached Garage in Front of Primary Structure

The attached garage is positioned in front of the main structure to maintain a narrow footprint, resulting in minimal grading and a reduced impact to the hillside, which will also protect the mature trees; thereby, the request for a Variance to situate the attached garage in front of the primary structure will not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity

and zoning district in which the property is locate.

3. **The proposed project would be compatible with the existing aesthetics, character, and scale of the surrounding neighborhood, and considers impacts on neighboring properties.**

   The architectural style of the neighborhood surrounding the project site is mixed with various architectural styles. The majority of existing single-family residences in the neighborhood have non-conforming side yard setbacks and have attached garages in front of the main structure. The requested Variances for the reduced side yard setback and attached garage in front of the main structure are consistent and would be compatible with the existing aesthetics, character and scale of the surrounding neighborhood.

SECTION 6: RECORD OF PROCEEDING

The documents and other materials that constitute the record of the proceedings upon which the Planning Commission's decision is based, which include, but are not limited to, the staff reports, as well as all materials that support the staff reports for the proposed project, are located in the Community Development Department of the City of South Pasadena at 1414 Mission Street, South Pasadena, CA 91030. The custodian of these documents is the City Clerk of the City of South Pasadena.

SECTION 7: DETERMINATION

Based upon the findings outlined in Sections 2 through 5 above and provided during the public hearing, the Planning Commission of the City of South Pasadena hereby approves Project No. 2500-HDP/DRX/VAR/PM/TRP and the applications for a Hillside Development Permit, Design Review Permit, two Variances, Parcel Merger, and Tree Removal Permit for the proposed single-family dwelling located at 4931 Harriman Avenue (APNs: 5312-016-016 & 5312-016-017), subject to the Conditions of Approval that are attached hereto as “Exhibit A”.

SECTION 8: APPEAL

Any interested person may appeal this decision or any portion of this decision to the City Council. Pursuant to the South Pasadena Municipal Code, any such appeal must befiled with the City, in writing, and with appropriate appeal fee, no later than fifteen (15) days, following the date of the Planning Commission's final action.

SECTION 9: CERTIFICATION OF THE RESOLUTION

The Secretary shall certify that the foregoing Resolution was adopted by the Planning Commission of the City of South Pasadena at a duly noticed regular meeting held on the 13th day of August, 2024.

PASSED, APPROVED, AND ADOPTED this 13th day of August, 2024 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Lisa Padilla, Chair

ATTEST:

_____
Mark Gallatin, Secretary to the Planning Commission

EXHIBIT "A"
CONDITIONS OF APPROVAL
PROJECT NO. 2500-HDP/DRX/VAR/PM/TRP
4931 Harriman Avenue (APNs: 5312-016-016 & 5312-016-017)

The following approvals are granted as described below and as shown on the development plans submitted to and approved by the Planning Commission on August 13, 2024:

1. **Hillside Development Permit (HDP)** for the proposed grading and development of a 3,214-square-foot, two-story single-family dwelling on a site with an average slope of 20 percent or greater. The project includes an attached 405-square-foot, 2-car garage, and three decks;
2. **Design Review Permit (DRX)** for the architectural design review of the proposed development;
3. Two **Variance (VAR)** requests to deviate from development standards to allow the project to provide the following:
    a. A reduced north side yard setback of five (5) feet in lieu of the required seven (7) feet, six (6) inches. Per South Pasadena Municipal Code (SPMC), Section 36.220.040, side yard setbacks shall meet 10 percent of the lot width; and,
    b. To allow an attached garage in front of the main structure. Per SPMC, Section 36.220.040, an attached garage shall be set back a minimum of 10 feet from the main structure.
4. **Parcel Merger (PM)** for the merger of two existing lots, the first lot (APN: 5312-016-016) is 7,513 square feet, the second lot (APN: 5312-016-017) is 3,757 square feet, when merged will be a total of 11,270 square feet; and,
5. **Tree Removal Permit (TRP)** for the removal of six (6) trees.

Note: As a convenience to the applicant, the development requirements from applicable Departments/Agencies are listed herein. These requirements list what the applicant will be required to comply with in order to receive a Building Permit, a Certificate of Occupancy, or other Department-issued entitlement.

PLANNING DIVISION:

P1. Approval by the Planning Commission does not constitute a building permit or authorization to begin any construction. An appropriate permit issued by the South Pasadena Building Division must be obtained prior to construction, enlargement, relocation, conversion or demolition of any building or structure on any of the properties involved with the project.

P2. This Design Review and Hillside Development Permit and Variance and all rights hereunder shall terminate within twelve (12) months of the effective date of the Design Review and Hillside Development Permit unless otherwise conditioned and/or unless action is taken to secure Building Permits and maintain active Building Permits with the Building Division beginning with the submittal of the plans for Plan Check review.

P3. All other requirements of any law, ordinance, or regulation of the State of California, City of South Pasadena, and any other government entity shall be complied with.

P4. Compliance with and execution of all conditions listed herein shall be necessary prior to

obtaining any occupancy inspection clearance and/or prior to obtaining any occupancy clearance.

P5. Any changes to the proposed project shall be submitted for review and approval to the Planning Division.

P6. The applicant and each successor in interest to the property which is the subject of this project approval, shall defend, indemnify and hold harmless the City of South Pasadena and its agents, officers and employees from any claim, action or proceeding against the City or its agents, officers or employees to attack, set aside, void or annul any approval of the City, City Council or Planning Commission concerning this approval. In the event of any claim or lawsuit, the applicant and/or successor shall submit a deposit in such amount as the City reasonably determines necessary to protect the City from exposure to fees, costs or liability with respect to such claim or lawsuit.

P7. The construction site and the surrounding area shall be kept free of all loose materials resembling trash and debris in excess of that material used for immediate construction purposes. Such excess may include, but is not limited to: the accumulation of debris, garbage, lumber, scrap metal, concrete, asphalt, piles of earth, salvage materials, abandoned or discarded furniture, appliances or other household fixtures.

P8. The applicant shall sign the Southwest Monterey Hills Construction Regulations Affidavit prior to submitting a Building Permit Application with the Building Division.

P9. The hours of construction shall be limited to the following: 8:00 am and 7:00 pm Monday through Friday, 9:00 am and 7:00 pm Saturday, and construction on Sundays limited to 10:00 am to 6:00 pm.

P10. During construction, the clearing, grading, earth moving, or excavation operations that cause excessive fugitive dust emissions shall be controlled by regular water or other dust preventive measures using the following procedures:

a. All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferable in the late morning and after work is done for the day;

b. All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust;

c. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust; and

d. Visible dust beyond the property line emanating from the project shall be prevented to the maximum extent feasible.

P11. The applicant shall submit final landscape and irrigation plans showing compliance with state law and the City's Water Efficient Landscape Ordinance (SMPC Section 35.50), for approval by the Community Development Director. The final landscape plans shall provide, but not limited, to the following:

a. Screening of all above ground equipment from public view.

b. Incorporating Tree Removal Permit (TRP) conditions, as recommended by the Department of Public Works.

c. Using California Native plants.

P12. The applicant shall install all landscaping and irrigation per the approved final landscape plans pursuant to the City's Water Efficient Landscape Ordinance (SPMC Section 35.50). The applicant shall provide documentations as required under SPMC Section 35.50, which shall include:

a. A Certification of Completion certifying that landscape and irrigation have been installed per the approved final landscape plans and complies with the City's Water Efficient Landscape Ordinance.

b. A Landscape Irrigation Audit Report from a certified landscape irrigation auditor shall be submitted to the City. The landscape irrigation audit shall not be conducted by the person who designed the landscape plans or installed the landscape irrigation.

P13. The construction plan shall show that all lighting on the site will be directed downward and shielded to prevent off-lighting on adjacent properties.

P14. A construction sign with contact information for the contractor shall be clearly posted on-site during construction.

P15. Any proposed revision to the approved plans shall require review and approval by the Community Development Department prior to construction. The Community Development Department may refer the proposed revision to the Planning Commission or Planning Commission Chair for approval.

BUILDING DIVISION:

B1. The second sheet of building plans is to list all conditions of approval and to include a copy of the Planning Decision letter. This information shall be incorporated into the plans prior to the first submittal for plan check.

B2. Plans prepared in compliance with the code in effect shall be submitted to Building Division for review prior to permit issuance.

B3. Prior to the application of a building or grading permit, a preliminary Geotechnical report that specifically identifies and proposes mitigation measures for any soils or geological problems that may affect site stability or structural integrity shall be approved by the Building Official or his/her designee. The applicant shall reimburse the City for all costs incurred to have the project soils report evaluated by an independent, third-party, peer-level soils and /or geological engineer. Approval letter of the geotechnical report review shall be copied and pasted on the first sheet of building and grading plans.

B4. School Developmental Fees shall be paid to the School District prior to the issuance of the building permit.

B5. Fees shall be paid to the County of Los Angeles Sanitation District prior to issuance of the building permit.

B6. Park Impact Fee to be paid at the time of permit issuance.

B7. Per Chapter 16A of the City of South Pasadena Municipal Code, Growth fee to be paid at the time of permit issuance.

B8. A separate address required. An application to assign address and unit numbers shall be filed with Public Works Department prior to plan check submittal.

B9. Plans shall be prepared under the supervision of an architect licensed in the State of California or a civil or structural engineer registered in the State of California. Each sheet of the plans and the cover sheet of the calculations is to be stamped and signed by the person preparing the plans. 5353 and 6730 of the State Business and Professions Code.

B10. In accordance with paragraph 5538(b) of the California Business and Professions Code, plans are to be prepared and stamped by a licensed architect.

B11. Structural calculations prepared under the direction of an architect, civil engineer or structural engineer shall be provided.

B12. A geotechnical and soils investigation report is required, the duties of the soils engineer of record, as indicated on the first sheet of the approved plans, shall include the following:

a. Observation of cleared areas and benches prepared to receive fill;

b. Observation of the removal of all unsuitable soils and other materials;

c. The approval of soils to be used as fill material;

d. Inspection of compaction and placement of fill;

e. The testing of compacted fills; and

f. The inspection of review of drainage devices.

B13. The geotechnical and soils engineer shall review and approve the project grading and foundation plans to show compliance that their recommendations have been properly implemented.

B14. The owner shall retain the soils engineer preparing the Preliminary Soils and/or Geotechnical Investigation accepted by the City for observation of all grading, site preparation, and compaction testing. Observation and testing shall not be performed by another soils and/or geotechnical engineer unless the subsequent soils and/or geotechnical engineer submits and has accepted by Building Division, a new Preliminary Soils and/or Geotechnical Investigation.

B15. A grading and drainage plan shall be approved prior to issuance of the building permit. The grading and drainage plan shall indicate how all storm drainage including contributory drainage from adjacent lots is carried to the public way or drainage structure approved to receive storm water.

B16. Stormwater Planning Program LID Plan Checklist (MS4-1 Form) completed by Engineer of Record shall be copied on the first sheet of Grading Plans. The form can be found at the following link:

https://www.dropbox.com/s/5p4yf08beipzyot/SP%20MS4-1%20LID%20Determination%20Form.pdf?dl=0

B17. The property shall be surveyed, and the boundaries marked by a land surveyor licensed by the State of California.

B18. Foundation inspection will not be made until the excavation has been surveyed and the setbacks determined to be in accordance with the approved plans by a land surveyor licensed by the State of California. THIS NOTE IS TO BE PLACED ON THE FOUNDATION PLAN IN A PROMINENT LOCATION.

B19. Project shall comply with the CalGreen Residential mandatory requirements.

B20. No form work or other construction materials will be permitted to encroach into adjacent property without written approval of the affected property owner.

B21. Separate plan review and permit is required for each detached retaining wall.

B22. Fire-resistance rating requirements for exterior walls and Maximum area of exterior wall openings and degree of open protection based on fire separation distance 0 feet to 3 feet, dwellings and accessory buildings with automatic residential fire sprinkler protection shall comply with Table R302.1(2). Roof eave projection of less than 2 feet of fire separation distance is not permitted. Whereas roof eave projection of fire separation distance between 2 and 3 feet is required to be fire-resistance rated.

B23. Prior to the issuance of building permit, a written consent shall be obtained from the current easement holder(s) for any proposed development encroaching into existing easement(s).

B24. When required by Fire Department, all fire sprinkler hangers must be designed, and their location approved by an engineer or an architect. Calculations must be provided indicating that the hangers are designed to carry the tributary weight of the water filled pipe plus a 250-pound point load. A plan indicating this information must be stamped by the engineer or the architect and submitted for approval prior to issuance of the building permit. A separate permit is required for Fire Sprinklers.

B25. City records indicate the proposed site is a combination of lots under common ownership. A parcel merger shall be processed prior to issuance of the building permit.

B26. Building permits shall not be issued until the final map has been prepared to the satisfaction of the Building Official.

PUBLIC WORKS DEPARTMENT:

PW1. The applicant shall pay all applicable City and LA County fees, including Public Works Department plan review fee and permit fees per the current adopted Master Fee Schedule which can be found on the City's website. This includes all costs incurred by the City and the Public Works Department for the use of professional services or consultants in the review, investigation, and/or plan check of the public improvement plans. The applicant shall provide receipts of all applicable fees paid prior to submitting plans for review.

PW2. The applicant shall obtain City approval for any modifications or revisions to the approval of this project. Deviations not identified on the plans may not be approved by the City, potentially resulting in the need for the project to be redesigned.

PW3. The applicant shall identify all on-site existing City easements. Any conflict with and/or presence of existing easements must be addressed. The applicant shall provide a Title Report, with effective date within the last 60 days. The applicant shall show all easements (if any) per the Title Report to the satisfaction of the Public Works Department.

PW4. The applicant shall comply with the City of South Pasadena Subdivision Ordinance (SPMC Chapter 36, Article 5) in conjunction with the Subdivision Map Act, Section 66410.

PW5. The applicant shall pay all applicable City and LA County fees, including Public Works Department plan review fee and permit fees per the current adopted Master Fee Schedule which can be found on the City's website. Additional plan check fees shall apply beyond two reviews. This includes all costs incurred by the City and the Public Works Department for the use of professional services or consultants in the review, investigation, and/or plan check of the public improvement plans. The applicant shall provide receipts of all applicable fees paid prior to submitting plans for review.

PW6. The applicant shall provide a deposit of $12,000 for a Deputy Inspector for hillside construction. Whenever the balance drops below $6,000, the applicant shall be required to make an additional deposit of $6,000. Any unused funds will be refunded to the applicant at the completion of the project.

PW7. Harriman Avenue shall be photographed and video recorded before the start of construction and after construction for assessing the damage caused to the street by construction related traffic. The applicant will be responsible to restore the road to its original condition. These video recordings and photographs shall be submitted to the City before the start of the project and immediately upon completion of the project.

PW8. The applicant shall show the existing grade, location, and dimensions of all existing and proposed conditions within the public right-of-way including, but not limited to: curb and gutter, sidewalk, driveway, traffic striping, signage, utilities, storm drain facilities, trees, and all other features.

PW9. If applicable, the applicant shall replace all broken, damaged, or out-of-grade curb and gutter, sidewalk, and driveway and repaint all curb markings along the perimeter of the property to the satisfaction of the City Engineer. In addition, existing sidewalk and driveway approaches that are below current City standards shall be replaced regardless of when or how such condition originally occurred per SPMC Section 31.54. All improvements within the public right-of-way shall conform to the current Standard Specifications for Public Works Construction (SSPWC) and Standard Plans for Public Works Construction (SPPWC).

- The applicant shall remove and replace the existing curb and gutter with/install new curb and gutter conforming to the current Standard Plans for Public Works Construction (SPPWC) Std Plan 120-2, Type A2-6. Concrete shall be class 520-C- 2500 and shall conform to the current Standard Specifications for Public Works Construction (SSPWC). The applicant shall

verify the actual limits of concrete removal with the Public Works Department.

- The applicant shall install new 4" thick sidewalk to the satisfaction of the City Engineer and conforming to the current Standard Plans for Public Works Construction (SPPWC) Std Plan 112-2. Concrete shall be class 520-C-2500 and shall conform to the current Standard Specifications for Public Works Construction (SSPWC).

- The applicant shall remove and replace the existing driveway approach with/install a new driveway approach conforming to the current Standard Plans for Public Works Construction (SPPWC) Std Plan 110-2. Concrete shall be class 520-C-2500 and shall conform to the current Standard Specifications for Public Works Construction (SSPWC). The applicant shall verify the width with the Planning Department and the actual limits of concrete removal with the Public Works Department.

PW10. The applicant shall bring the existing parkway on Harriman Avenue up to current standards per SPMC Section 31.48. (The applicant shall submit a parkway landscape plan for review and the landscape design shall conform to the Model Water Efficient Landscape Ordinance (MWELO) as stipulated in SPMC Chapter 35, Article 3.)

PW11. The applicant shall provide a detailed drainage and grading plan signed and stamped by a CA licensed civil engineer for improvements within the public right-of-way.

- Prior to issuance of a grading permit, for improvements within the public right-of- way, the applicant shall provide an approved erosion control plan for dust control techniques to be implemented during project construction which shall include, but not be limited to, use of appropriate BMPs, plans for daily watering of the construction site, limitations on construction hours, and adherence to standard construction practices such as watering of inactive and perimeter areas.

- If applicable, the applicant shall comply with all requirements of the City of South Pasadena Low Impact Development (LID) Ordinance. The applicant shall include the necessary Best Management Practices (BMP) measures and a Standard Urban Storm Water Mitigation Plan (SUSMP) for construction and post-construction phases as part of the LID plan per SPMC Section 23.14. The applicant shall provide a copy of the approved plan from the Building & Safety Department.

- If applicable, all flood control plans to be reviewed by the City or the Los Angeles County Flood Control District shall be submitted through the City of South Pasadena, unless otherwise directed by the City Engineer. For projects requiring LACFCD review, the developer shall pay the appropriate fees to LACFCD.

PW12. The applicant shall construct a retaining wall along the frontage and adjacent to the property for slope protection and to prevent sloughing of dirt onto the sidewalk.

PW13. The construction of the walkway steps outside of the property shall be permitted per condition PW14.

PW14. The applicant shall provide a covenant for unconditional and indefinite maintenance of any private improvements within the public right-of-way. This covenant shall be reviewed and approved by the Public Works Department and the City Attorney and a fully executed covenant, in recordable form, shall be provided to the City prior to obtaining a permit.

PW15. Provide a 24-hour emergency contact number for the applicant and contact information of all utility agencies involved/impacted/potentially impacted by this project on the title sheet of the plans.

PW16. The applicant shall pay all applicable City sewer and/or water capacity charges per SPMC Section 16B.3.

PW17. Provide a copy of a will-serve letter and receipt for the sewer connection fee from the Los Angeles County Sanitation District (LACSD). A copy of the receipt for any fees to be paid must be submitted before permit issuance.

PW18. Show the location of all existing utilities on adjacent street(s), as well as location and size of all existing or proposed services serving the property. Show all utility points of connection (POC).

PW19. Show the location and area of trench sections for any proposed sewer and water lines connection within the public right-of-way. Provide a trench restoration detail per City standards if any new utility connections are proposed.

PW20. The applicant shall provide a new sewer connection to the property. The proposed sewer lateral shall be a four-inch (4”) diameter vitrified clay pipe (VCP) that connects to the City sewer main within the public right-of-way.

PW21. The applicant shall submit the proposed sewage flow calculations to the City. The proposed sewage flow from the property will be used to create a Hydraulic Analysis Report to determine if the sewer outlet has adequate capacity for the proposed sewage flow from the property. The developer shall be responsible for all sewer improvements to provide adequate capacity for the proposed sewage flow.

PW22. The applicant shall contact the City of South Pasadena Water Division to verify the existing water meter connection is adequate for the proposed structure/fire sprinkler system. Coordinate the size, location, and associated fee for a new water meter connection, as applicable. Please contact the Water Operations Manager at (626) 460-6393 for additional information.

PW23. If applicable, the applicant shall submit a water demand calculation to the City. The demand water calculation will used to create a Hydraulic Analysis Report to determine the water availability for the proposed project.

PW24. If applicable, provide clearance letter from utility companies for any proposed relocation of utility lines that encroach on the properties prior to obtaining permits for the project.

PW25. Improvement plans for underground utilities (i.e. water, sewer, electrical, telecommunications, etc.) to be placed in the public right-of-way or easement that will be owned and maintained by other entities shall be reviewed by the City prior to Utility Agency approval. The City shall have a place on the title sheet to accept the plans with a statement: "The City's acceptance is limited to the placement of utilities relative to public infrastructure clearances, uses, and future plans within the right-of-way.

PW26. If the street light to be relocated, the applicant shall submit a street lighting plan per City standards. The applicant shall upgrade the existing street light heads to LED lighting fronting the property on Harriman Avenue per City standards.

PW27. Provide an arborist report and clear site plan of what trees are being removed. Submit a design narrative with the arborist report explaining why certain trees are being removed and what alternative options were considered to preserve the existing trees.

PW28. Show all existing and proposed trees, including size and species, and indicate their disposition. If any trees (12" in diameter or greater and/or native trees) are to be removed, apply for a tree removal permit with the Public Works Department per City Ordinance No. 2328 amending Section 34.10 of SPMC. See SPMC Section 34.12 for the required information and process for the trees that are proposed to be removed and/or impacted during construction. Replacement trees shall be planted per SPMC Section 34.12-5. If existing trees are to remain on site, the applicant shall note on the plans methods of protecting existing trees during construction.

PW29. The proposed building structure shall not be constructed within critical root zone area of any trees. For native and protected species, use the tree trunk's diameter measured at breast height (DBH) (X5) as the minimum critical root mass. For non-native and protected species, use the tree's DBH (X3) as the minimum critical root mass.

PW30. A preconstruction survey for nesting birds shall be performed by a Designated Biologist no more than 30 days prior to the start of project activities. All native migratory non-game birds, including raptors, and their active nests are protected from "take" by Sections 3503, 3503.5, and 3513 of the California Fish and Game Code and the Migratory Bird Treaty Act (MBTA). If active nests are found, the applicant shall provide a Nesting Bird Management Plan (NBMP) prepared by the Designated Biologist.

PW31. Any construction activity that may require roadway closures will require a traffic control plan prepared by a CA licensed civil or traffic engineer or a C-31 licensed contractor to be submitted for review. At least 48 hours advance notice shall be given to residents for street and lane closures. Safe pedestrian access, including ADA and bicycle, must be maintained at all times. All street closures will require an encroachment permit from the Public Works Department. Street closures are only allowed between 8:30 am and 2:00 pm. Whenever there will be a street closure exceeding thirty minutes in duration, the applicant shall provide written notification about the street closure to all impacted businesses and resident at least 48 hours in advance of the street closure.

PW32. The applicant shall post temporary "No Parking " signs along the entire length of the property prior to the start of any construction. The temporary "No Parking" signs shall be covered at the

end of each working day and uncovered at the start of the following working day prior to any construction activity. If two-way traffic cannot be accommodated, a traffic control plan prepared by a CA licensed civil or traffic engineer or a C-31 licensed contractor depicting the use of flagmen and/or detouring shall be submitted for review.

PW33. No overnight storage of materials or equipment within the public right-of-way shall be permitted.

PW34. Temporary bins (low boy), if used, shall be "roll off" style to be provided by Athens Services. Athens Services has an exclusive agreement with the City for the provision of trash removal services: only Athens dumpsters can be used. Any dumpsters placed on the roadway shall require a protective barrier underneath (such as plywood) to protect the pavement. The applicant shall obtain dumpster permit from the Public Works Department.

PW35. The applicant shall obtain oversize/overload permits from the Public Works Department for any oversized equipment used during the stages of construction, including, but not limited to: demolition; clearing and grubbing; grading; material disposal; drilling for piles and/or caissons; trenching for footings; excavation for retaining walls; core sampling of soils; etc.

PW36. The applicant shall be responsible for posting a project sign at the entrance to the project site displaying the City's construction hours per SPMC Section 19A.13. The project sign shall be 24" x 36" and made of durable weather-resistant material. The applicant shall provide a 24-hour emergency contact number for the designated contact who will be responsible for maintaining the public right-of-way during the all stages of construction until the project is complete.

PW37. The applicant shall obtain an encroachment permit from the Public Works Department for any work proposed within the public right-of-way.

PW38. The applicant shall apply for a change of address permit for the new units prior to final occupancy approval.

FIRE DEPARTMENT:

FD1. Required Code References: Current South Pasadena Municipal Code (SPMC); 2022 California Fire Code (CFC); 2022 California Building Code and NFPA standards.

FD2. The applicant shall update all Code Editions referenced for current project at time of submittal.

FD3. Fire Sprinklers are required. Submit plans to City for approval.

FD4. (CFC 903.1) General. Automatic Sprinkler systems shall comply with this section.

FD5. (CFC 903.2) Where Required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12.

FD6. (CFC 903.2.8) Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

FD7. Fire sprinklers shall not be able to shut off unless the domestic line to the property is shut off. There shall be no other means to turn off water to the sprinkler system. Ensure this sprinkler system is installed by an approved C-16 licensed company. Please provide a drawing of the sprinkler system to the Fire Department prior to beginning of work.

FD8. (CFC 903.3.5) Water Supplies. Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with Health and Safety Code Section 13114.7.

FD9. (CFC 507.1) Required water supply. An approved water supply capable of supplying the required fire flow for fire protection shall be provide to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

FD10. Provide Water Flow Test from City of South Pasadena Water Department along with fire sprinkler submittal.

FD11. Address Identification. New and existing buildings shall have *approved* address numbers, building numbers or *approved* building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (101.6 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address numbers shall be maintained.

FD12. Notwithstanding anything else in this code, or any other code incorporated, herein, by reference any new roof shall be of Class “A” roof material.

FD13. Groups R-2, R-2.1, R-3, R-3.1, and R-4. Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-2.1, R-3, R-3.1 and R-4 regardless of occupant load at all of the following locations:

a. On the Ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms;
b. In each room used for sleeping purposes.
c. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

FD14. Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit in Group R-1, R-2, R-3, R-3.1, or R-4, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed (CFC 907.2.11.3).

FD15. Where required for new construction, an approved carbon monoxide alarm shall be install in dwelling units and in sleeping units within which fuel-burning appliances are installed; and in

dwelling units that have attached garages.

FD16. Power Supply. For new construction, required carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

FD17. Interconnection. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

FD18. (CFC 903.2.18) Group U private garages and carports accessory to Group R-3 occupancies. Carports with habitable space above and attached garages, accessory to Group R-3 occupancies, shall be protected by residential fire sprinklers in accordance with this section. Residential fire sprinklers shall be connected to, and installed in accordance with, and automatic residential fire sprinkler system that complies with Section R313 of the California Residential Code or with NFPA 13D. Fire sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a minimum density of 0.05 /ft^2 (2.04 mm/min) over the area of the garage and/or carport, but not to exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions with respect to sprinkler placement.

FD19. Buildings under construction shall meet the condition of “Chapter 33 Fire Safety During Construction and Demolition” of the 2022 California Fire Code. Structures under construction, alteration or demolition, shall be provide with no less than one 2A10BC fire extinguisher as follows:

a. At each stairway on all floor levels where combustibles materials have accumulated.
b. In every storage and construction shed.
c. Where special hazards exist included, but not limited to, storage and use of combustible and flammable liquids.

FD20. A set of plans must remain on the job site at all times. Appointments for inspectors should be made at least two days in advance of required inspection by calling the Fire Department at (626) 403-7304.

FD21. The applicant shall contact the water department for new meter or meter upgrade at (626) 460 6393.

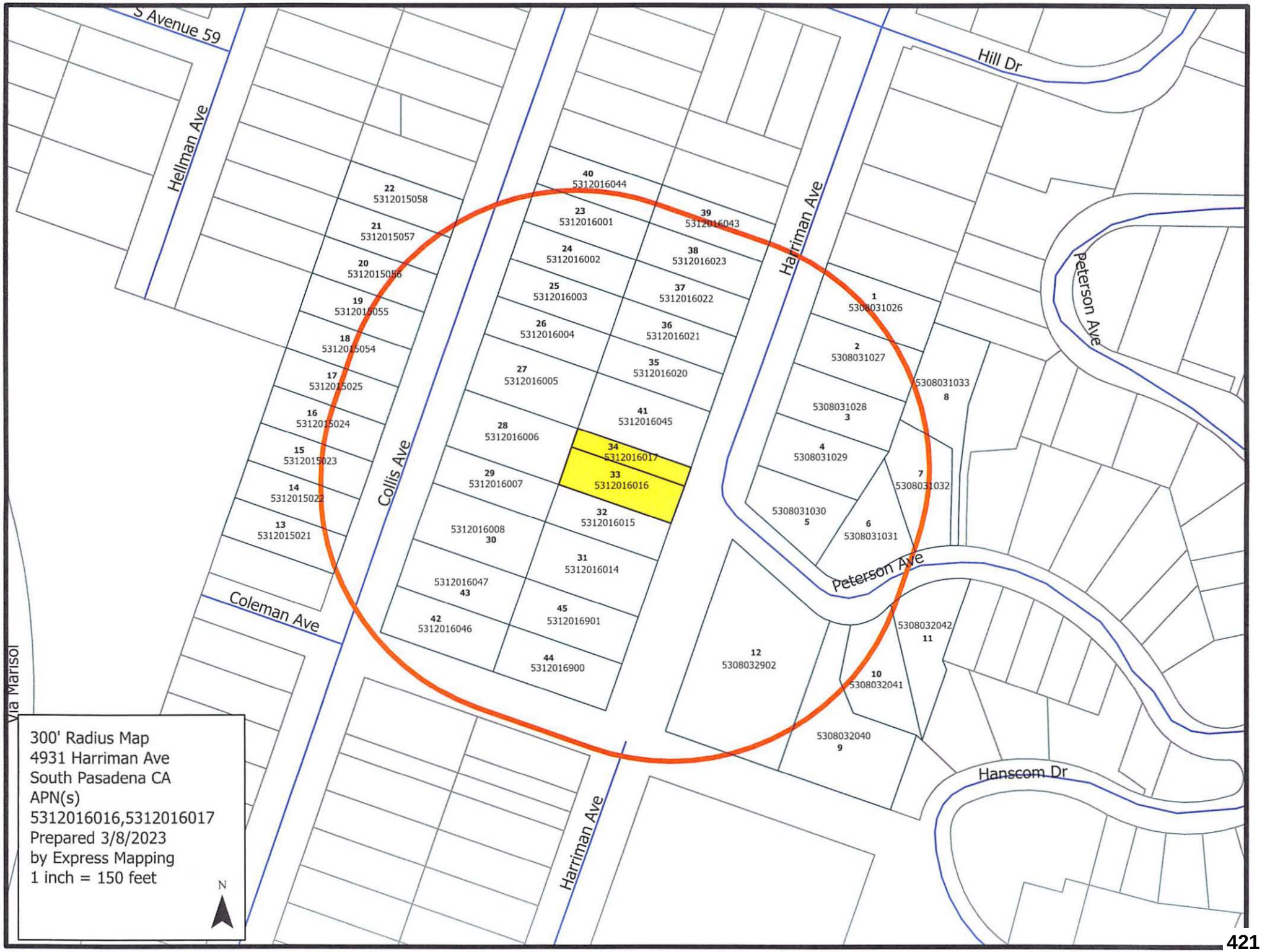
FD22. The City of South Pasadena Fire Department reserves the right to change or otherwise modify requirements based upon receiving additional project information or other unforeseen circumstances.

ATTACHMENT 2

Site & Neighborhood Images

4931 Harriman Ave

Photo survey


S Avenue 59
Hellman Ave
Hill Dr
Harriman Ave
Peterson Ave
Collis Ave
Coleman Ave
Via Marisol
Hanscom Dr
40 5312016044
39 5312016043
23 5312016001
24 5312016002
38 5312016023
25 5312016003
37 5312016022
26 5312016004
36 5312016021
27 5312016005
35 5312016020
41 5312016045
28 5312016006
34 5312016017
33 5312016016
29 5312016007
32 5312016015
5312016008 30
31 5312016014
5312016047 43
45 5312016901
42 5312016046
44 5312016900
22 5312015058
21 5312015057
20 5312015056
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16 5312015024
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14 5312015022
13 5312015021
1 5308031026
2 5308031027
5308031033 8
5308031028 3
4 5308031029
7 5308031032
5308031030 5
6 5308031031
5308032042 11
12 5308032902
10 5308032041
5308032040 9
300' Radius Map
4931 Harriman Ave
South Pasadena CA
APN(s)
5312016016,5312016017
Prepared 3/8/2023
by Express Mapping
1 inch = 150 feet
N



1) 4960 Harriman Ave



2) 4950 Harriman Ave



3) 4946 Harriman Ave



4) 4936 Harriman Ave



5) 4930 Harriman Ave



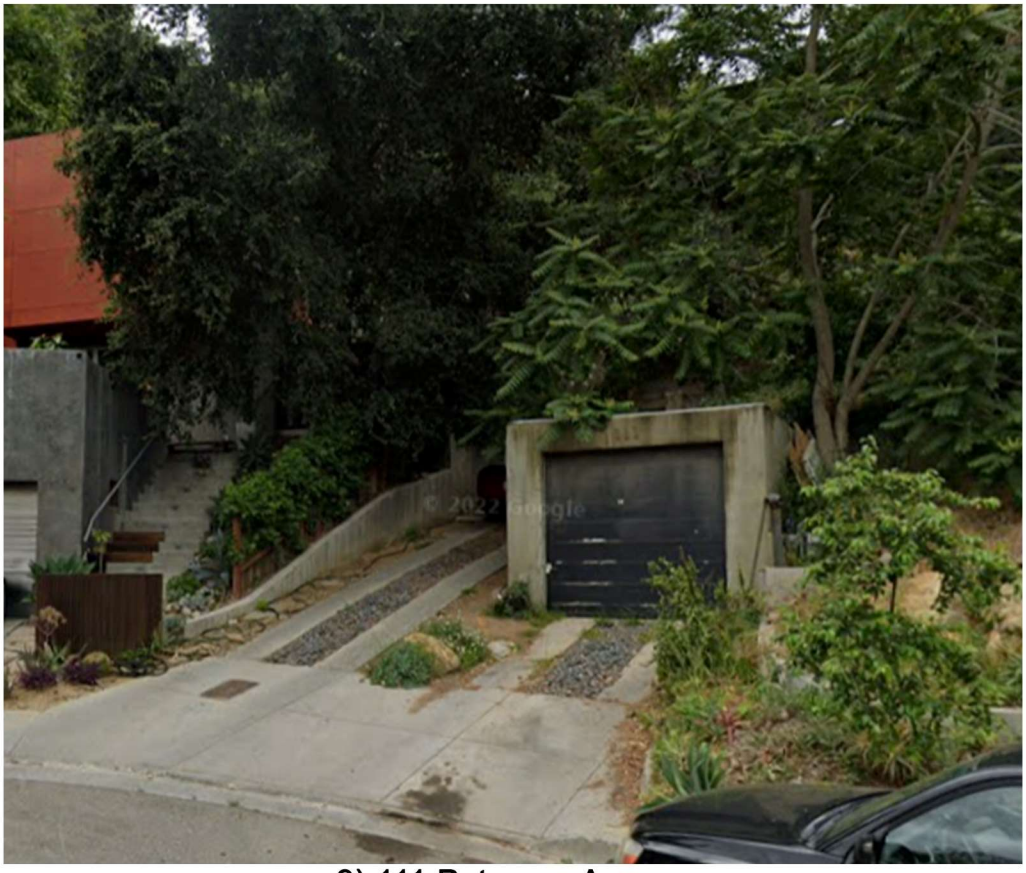
6) 114 Peterson Ave



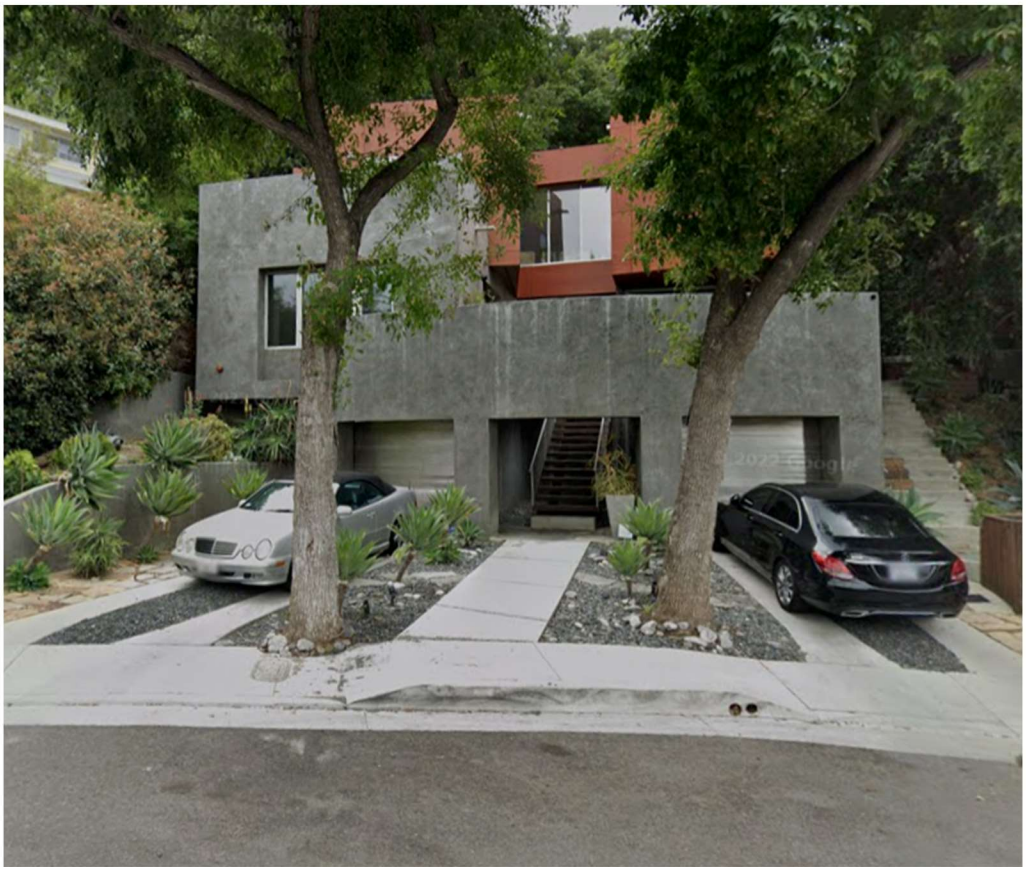
7) 118 Peterson Ave



8) No Address



9) 111 Peterson Ave



10) 115 Peterson Ave

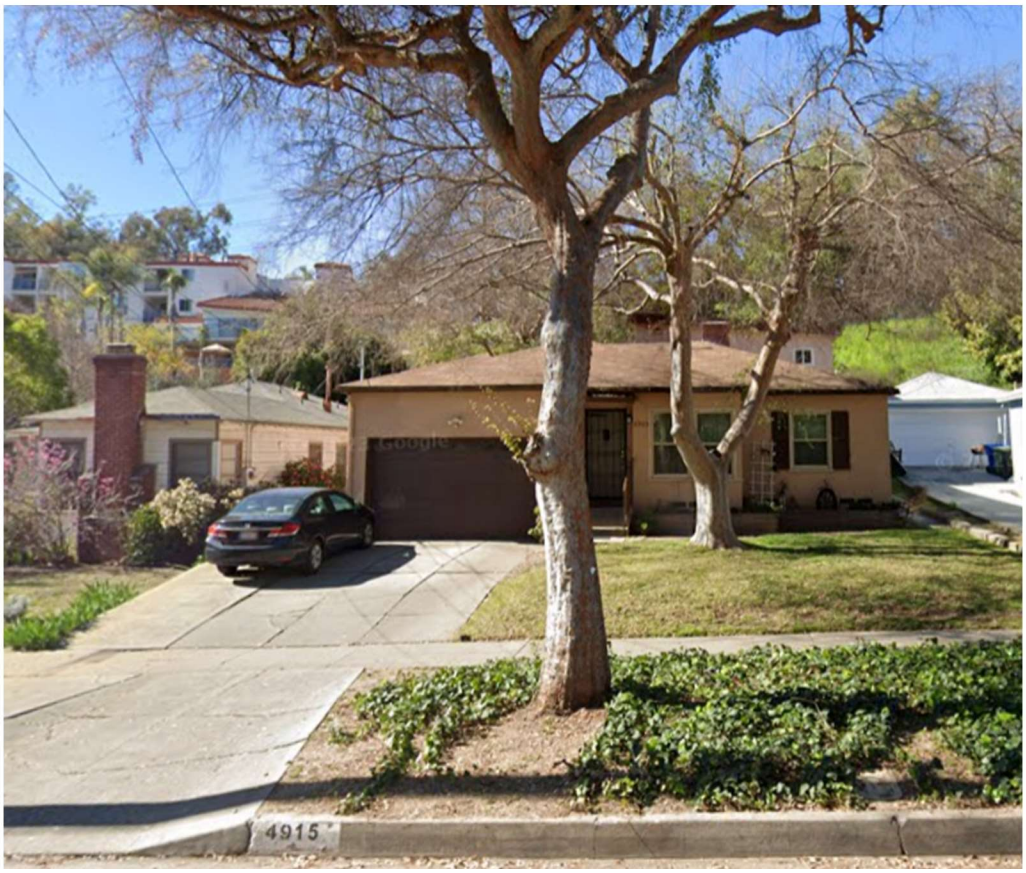


11) 117 Peterson Ave

12) No Address / No Construction



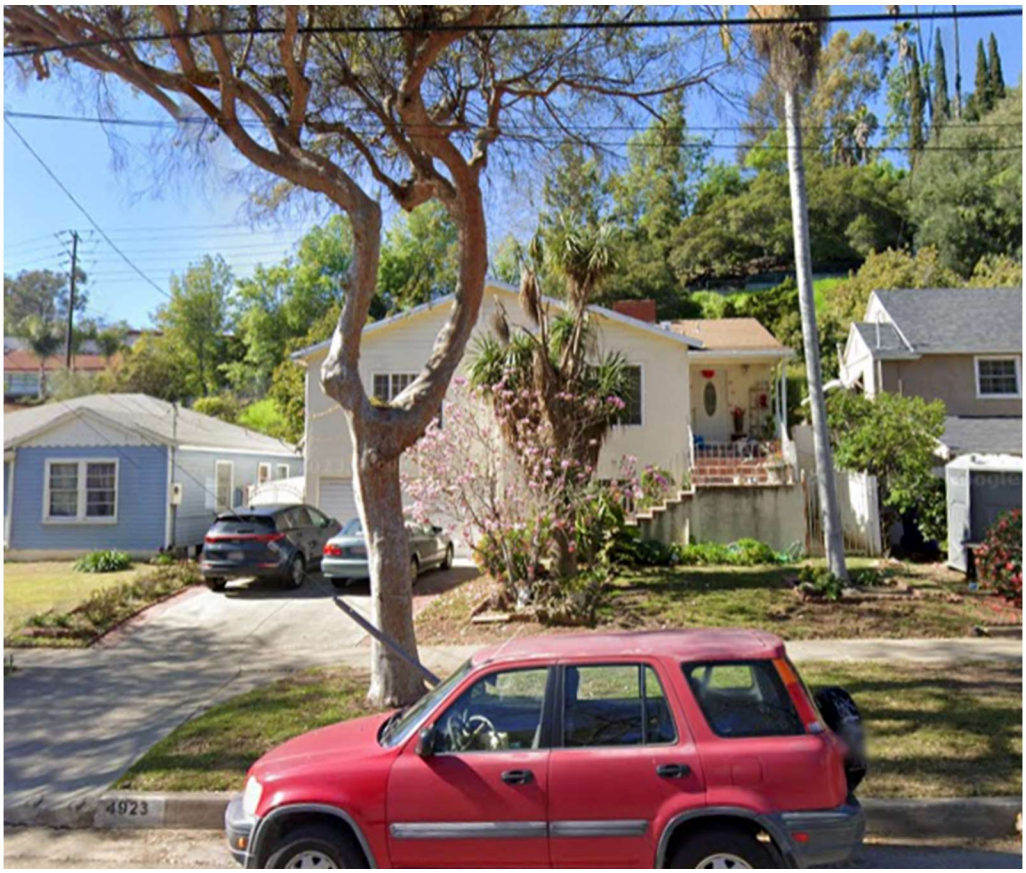
13) 4907 Collis Ave



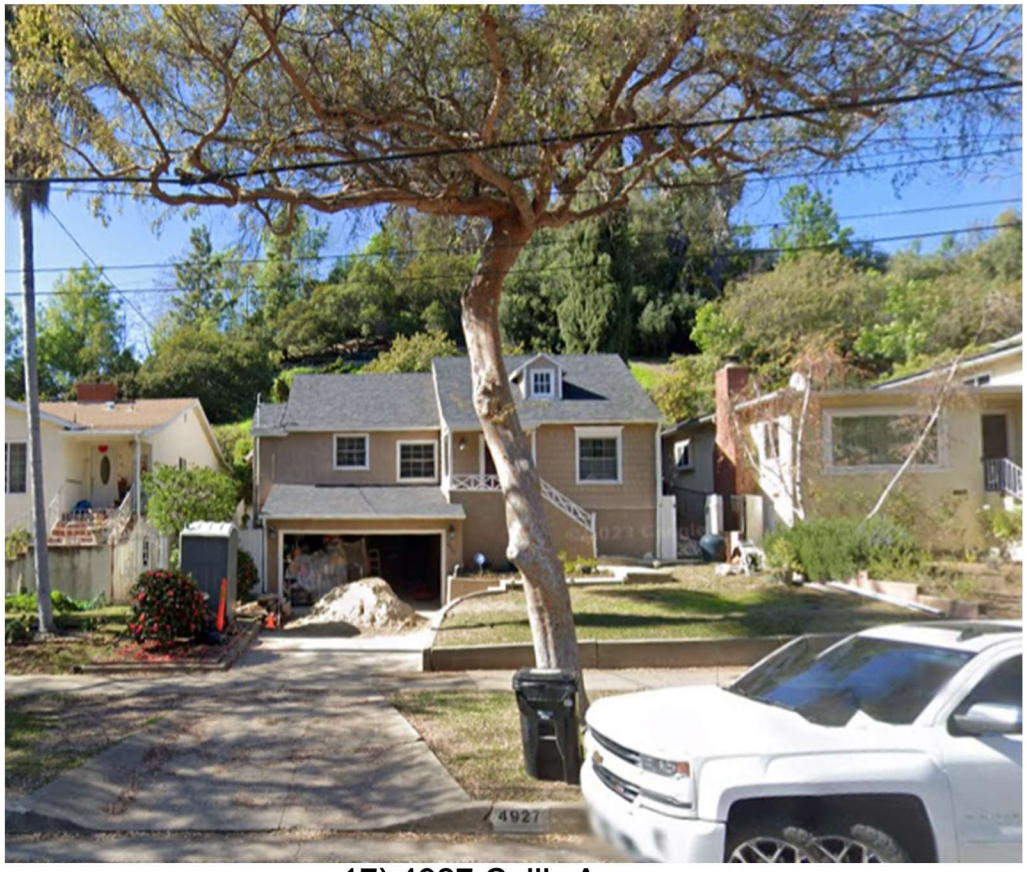
14) 4915 Collis Ave



15) 4917 Collis Ave



16) 4923 Collis Ave



17) 4927 Collis Ave



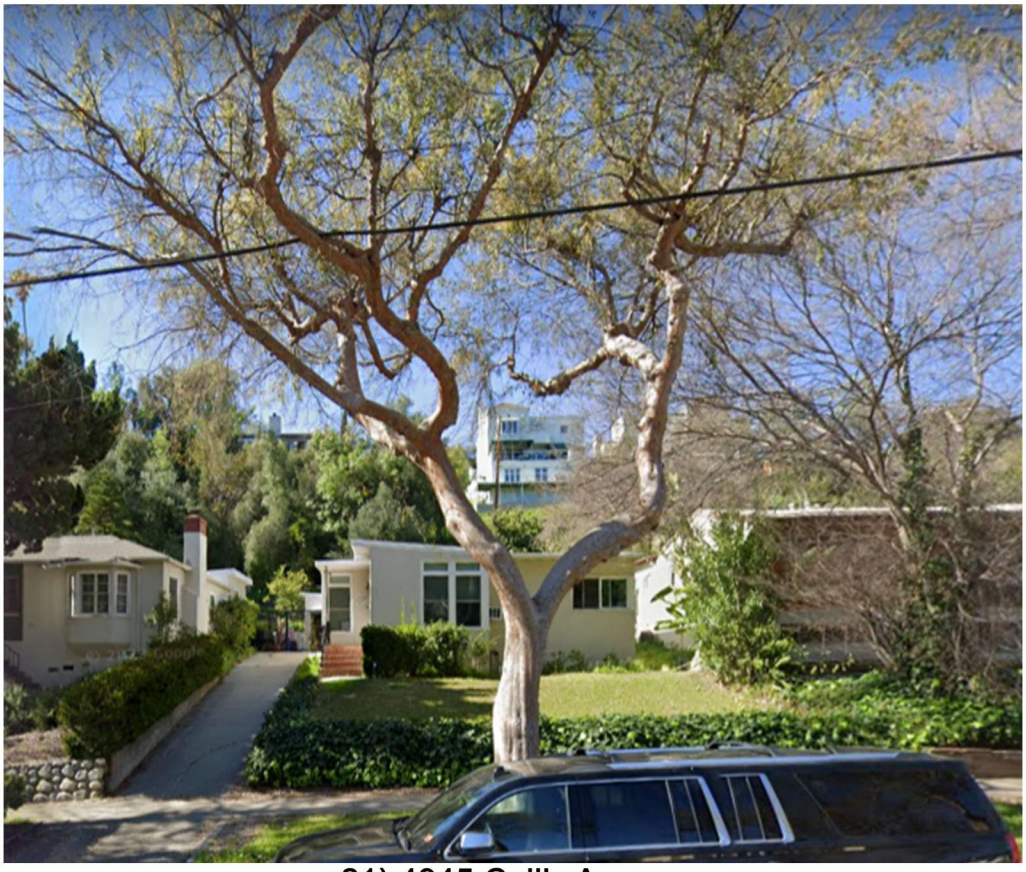
18) 4933 Collis Ave



19) 4937 Collis AveT



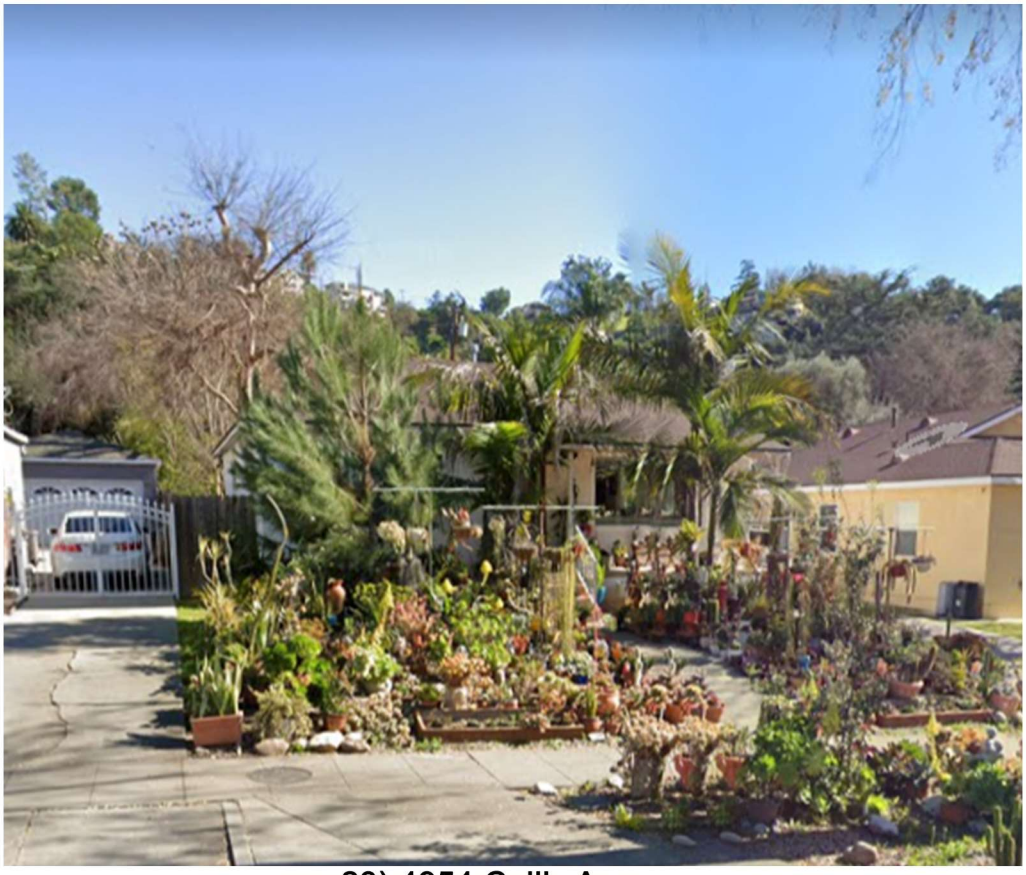
20) 4943 Collis Ave



21) 4945 Collis Ave



22) 4949 Collis Ave



23) 4954 Collis Ave



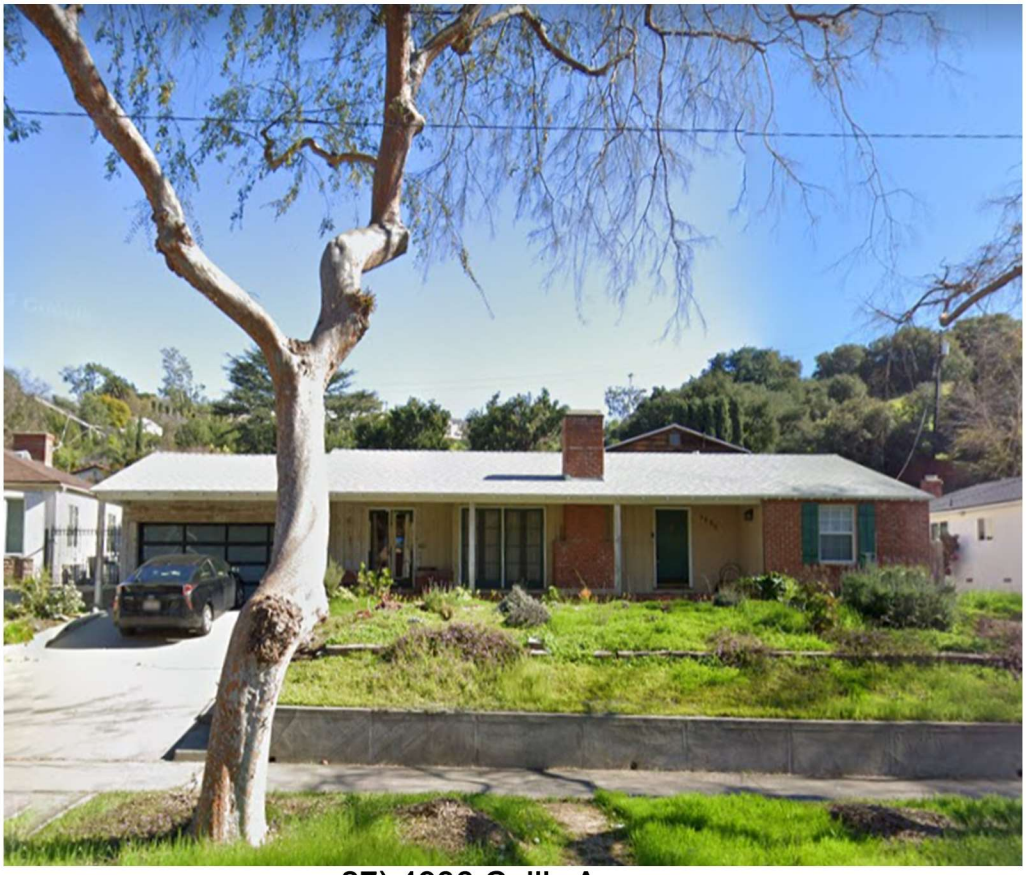
24) 4950 Collis Ave



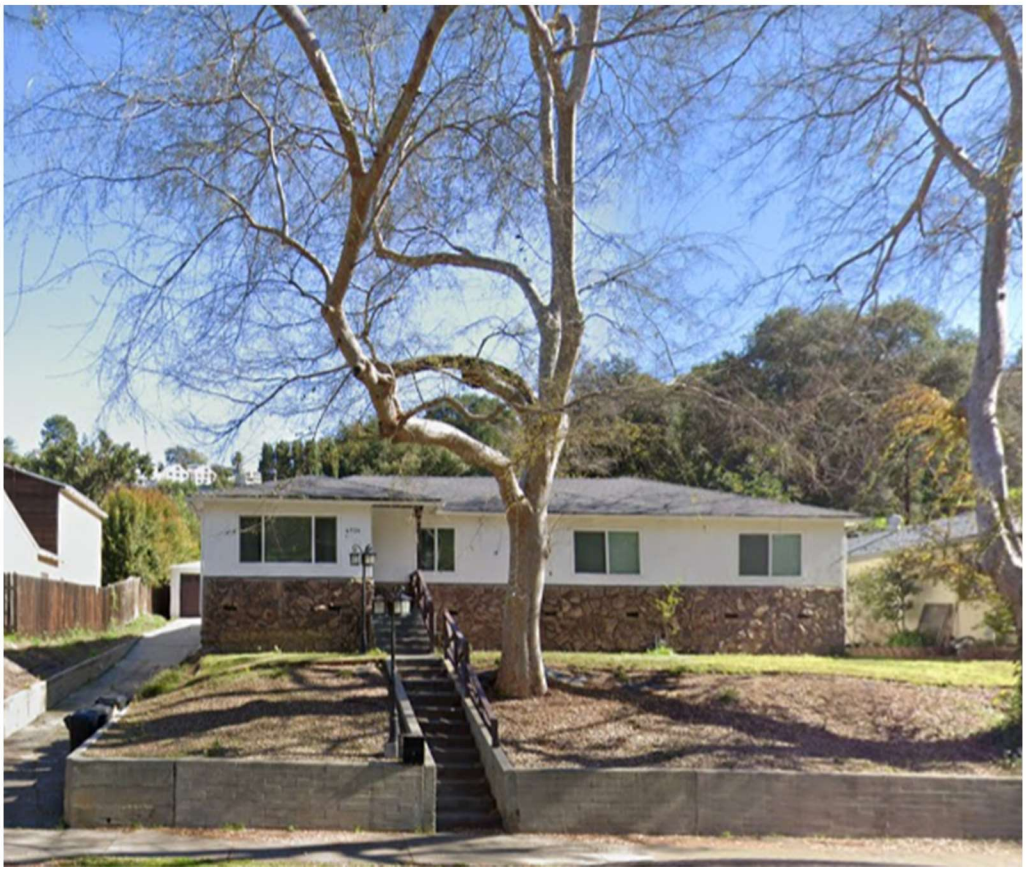
25) 4946 Collis Ave



26) 4942 Collis Ave



27) 4936 Collis Ave



28) 4942 Collis Ave



29) 4920 Collis Ave



30) 4912 Collis Ave

31) No Address / No Construction

32) No Address / No Construction

33) No Address / No Construction

34) No Address / No Construction



35) 4943 Harriman Ave



36) 4945 Harriman Ave



37) 4949 Harriman Ave



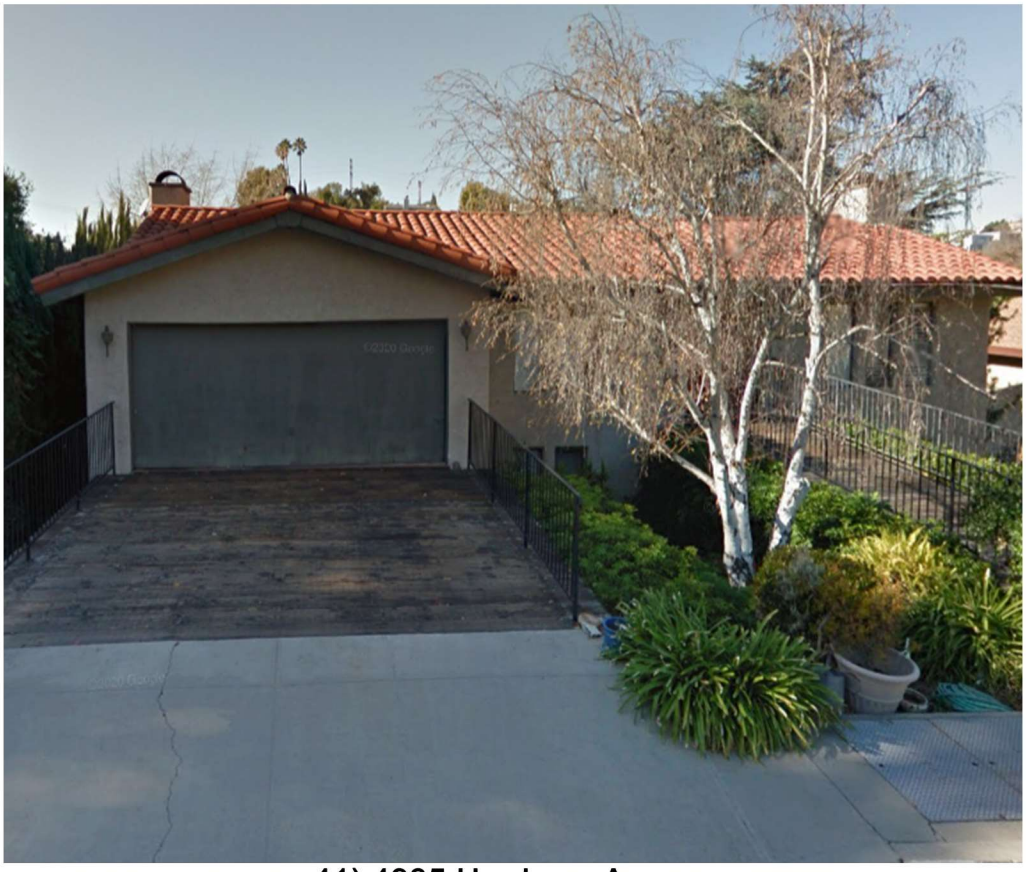
38) 4953 Harriman Ave



39) 4957 Harriman Ave



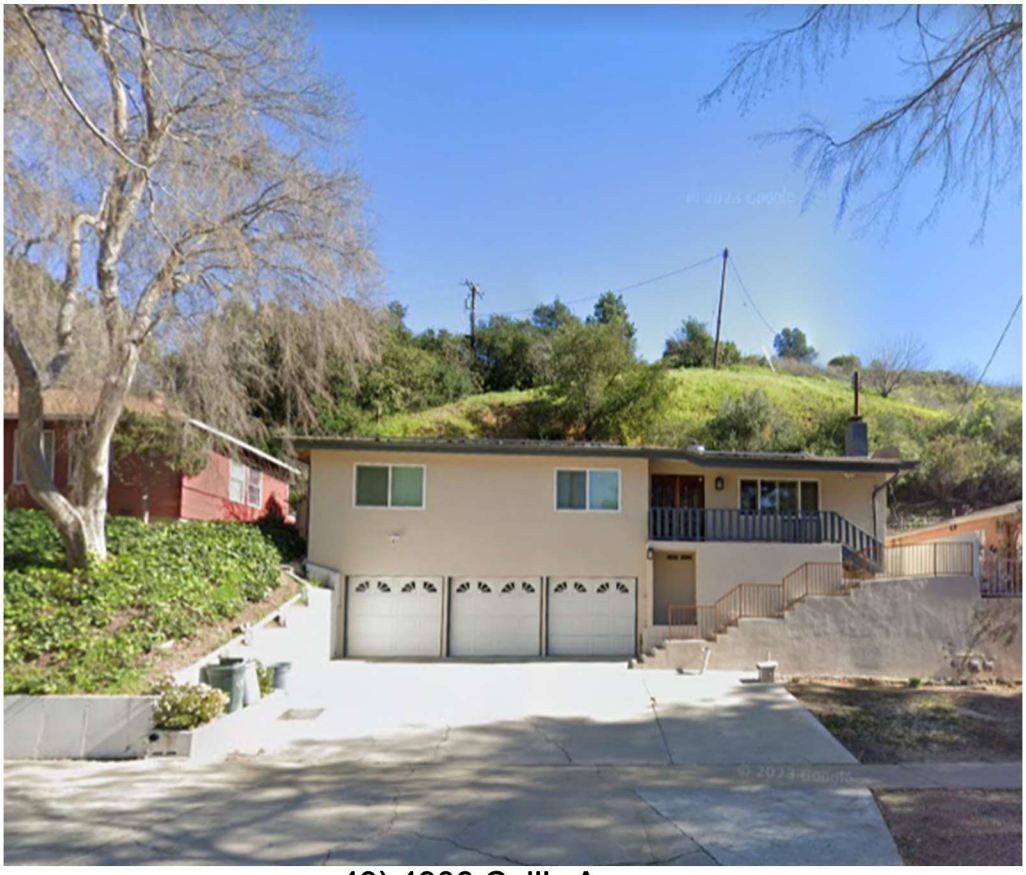
40) 4960 Collis Ave



41) 4935 Harriman Ave



42) 4902 Collis Ave



43) 4906 Collis Ave

44) No Address / No Construction

45) No Address / No Construction

ATTACHMENT 3

Project Narrative

COVAR DESIGNS, INC.

October 31, 2023

Sandra Robles
Associate Planner
City of South Pasadena
Community Development Department

Project Narative

Re: 4931 Harriman Ave. / APN: 5312-016-017 & 5312-016-016

To whom it may concern,

We would like to thank the council for the diligent review of this project. Your careful consideration has played a pivotal role in our design process, shaping the project in a way that not only meets the needs and aspirations of our client, but also respects the neighborhood's character and natural surroundings, while aiming to be minimally disruptive to the community.

The proposed project entails the construction of a two-story single-family dwelling featuring expansive balconies, an attached two-car garage, and a basement level designated for use as an accessory dwelling unit. The structure encompasses a total area of 2,908 square feet dedicated to the single-family dwelling, including the garage areas, and 711 square feet allocated for the accessory dwelling unit. The overall height of the structure stands at 27 feet and 9 inches. In addition to the primary structure, two retaining walls, each measuring 6 feet in height, with a maximum cumulative height of 12 feet, are proposed to ensure compliance with the 15-foot building code separation from the building to the slope's toe.

Upon our client's request, the design of the residence embodies a minimalist modern aesthetic in line with neighboring homes. It incorporates darker earth-toned stucco, wood paneling, and "S" clay tile elements to harmonize with the broader architectural context of the neighborhood and the natural environment of the site.

The home is strategically situated on the existing hillside, presenting a long, narrow rectangular volume that gently steps up and down its length to minimize its prominence, both from the street and the descending slope. It is positioned at the lowest elevation of the lot to maintain a low profile relative to neighboring residences, mitigate the impact of grading activities on the hillside, preserve the natural landscape, and minimize disruption to several mature oak trees on the site. The roof's slope mimics that of the hillside, providing ample interior space while maintaining a low profile relative to the ground below. At the midpoint of the roof, a visual break lowers the roofline, enhancing the overall volume's dynamic character and reducing its visual height when feasible.

From the project's inception, the design's core concept was to embrace the site's natural beauty, allowing the house to embrace the stunning surrounding views. Upon entry, one is greeted by a pathway flanked by planters along the hillside, opening into canyon-like vistas. Majestic mature oak trees provide a canopy, offering shade and a sense of tranquility. These planters serve multiple purposes, facilitating access from the street, extending indoor living spaces outdoors, acting as a buffer between the house and the hillside, and concealing retaining walls with lush landscaping.

Within the house, attention is directed toward the south, where the hillside vista takes center stage, while minimizing windows facing neighboring properties. This quality affords the residence a profound sense of privacy, akin to residing within a small forest. In light of the sloped terrain, a series of balconies are integrated throughout the house, serving as substitute "front yard" and "rear yard" spaces that would typically be found on a level lot. To ensure privacy for occupants and neighboring properties, each balcony is enclosed by planters that provide screening.

In our pursuit of maintaining low overall heights and preserving the site's trees and natural surroundings, we seek a variance for a reduced yard size. This variance would enable us to position the structure as far from the existing trees as possible, while still adhering to the average side yard depths observed in the neighborhood.

Lastly, due to the property's location at a turning point in the existing street, its property limits visually extend further back than neighboring properties from the street. To align with the neighborhood's visual front yard setback standards and minimize grading on the hillside, we are also seeking a variance to partially accommodate two additional off-street parking spaces in the required front yard, partially extending onto public property that is otherwise unoccupied.

In summary, this meticulously designed project not only showcases a remarkable architectural achievement with its minimalist modern aesthetic and careful selection of materials but also stands as a testament to its deep respect for the natural landscape and the preservation of the site's intrinsic beauty. The deliberate positioning of the residence, its minimal impact on mature oak trees, and the harmonious blend of modern elements with the neighborhood's architectural character all contribute. Furthermore, this thoughtfully crafted structure is poised to enhance property values in the area and elevate the aesthetic appeal of the already picturesque street, ensuring that it remains a hallmark of elegance and sophistication in the community.

ATTACHMENT 4

Link to Materials Board

ATTACHMENT 5

Updated Arborist Report

McKinley & Associates (818) 240-1358

Arborist Report

4931 Harriman Avenue
South Pasadena, California

Prepared for:

Mr. Ismail Sawan
1630 Calle Vaquero, Apt. 601
Glendale, CA 91206

Prepared by:

William R. McKinley, Consulting Arborist
American Society of Consulting Arborists
Certified Arborist #WE-4578A
International Society of Arboriculture
1734 Del Valle Avenue
Glendale, CA 91208

March 3, 2024

Mr. Ismail Sawan
1630 Calle Vaquero, Apt. 601
Glendale, CA 91206

Dear Mr. Sawan:

Recently you and Paulo Cova contacted me requesting an updated Arborist Report concerning the proposed construction of a single-family home on a vacant lot located on the property at 4931 Harriman Avenue, South Pasadena. I was asked to inventory all the existing mature trees growing on the vacant lot and prepare an Arborist Report discussing the impact of the construction of the proposed house on the existing trees and to include a tree protection plan designed to protect and preserve the remaining trees. The following Arborist Report summarizes my findings:

Background

An Arborist Report was prepared concerning the proposed construction of a single-family home on a vacant lot at 4931 Harriman Avenue, South Pasadena back on January 25, 2022. On Monday, January 15, 2024 at approximately 2:00 p.m. I arrived at the subject property at 4931 Harriman Avenue, South Pasadena. I was informed that the City questioned the sizes of some of the trees reported in our previous report. They also requested more detail about the distances of the proposed development to the nearby trees and the impact that this would have on tree preservation. We were also asked by the City to provide a tree inventory on all the mature trees on the site. The Tree/Site Inspection Section describes my observations concerning the subject trees.

Tree/Site Inspection

Tree #1 is a Quercus agrifolia or Coast Live Oak. The tree measures 10 inches in diameter at 4 feet above the soil grade. The tree has a dripline, which measures roughly 17 feet from the northeast side of the tree's trunk. The spread of the tree is approximately 17 feet. The height of the tree is estimated to be roughly 10 feet tall. The tree is located near the southeast corner of the subject property vacant lot. The tree's crown has been pruned and raised. The tree is crowded and the crown is suppressed. It bends and leans northeast away from another Oak. The crown is unbalanced and asymmetrical. The foliage size and color appear normal. The crown density is fair. The tree is in poor health and condition. Rating: D

Tree/Site Inspection-Continued

Tree #2 is a Quercus agrifolia or Coast Live Oak. The tree measures 40 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 30 feet from the tree's trunk. The spread of the tree is approximately 60 feet. The height of the tree is estimated to be roughly 45 feet tall. The tree is located uphill and southwest of Tree #1. It is situated on a steep uphill slope. There is a basal cavity on the north side of the tree. The crown has been pruned and raised. The crown is balanced with minor asymmetry. There is a treehouse in the tree. There are dead, stubbed branches. The tree has co-dominant stems and included bark creating weak structure. I would estimate that 20% of the tree's crown is composed of dead wood. The foliage size and color appear normal. The crown density is fair. The tree is in slightly above average health and condition. Rating: C+

Tree #3 is a Quercus agrifolia or Coast Live Oak. The tree measures 9 and 13 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 17 feet from the tree's trunk. The spread of the tree is approximately 34 feet. The height of the tree is estimated to be roughly 35 feet tall. The tree is located west of Tree #2. It is situated on a steep uphill slope. The crown has been pruned and raised. The crown is balanced with minor asymmetry. It has co-dominant stems and included bark creating weak structure. The foliage size and color appear normal. The crown density is fair. I would estimate that approximately 30% of the tree's crown is composed of dead wood. The tree is in slightly below average health and condition. Rating: C-

Tree #4 is a Quercus agrifolia or Coast Live Oak. The tree measures 1, 3, 5, 6, 7 and 16 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 15 feet from the tree's trunk. The spread of the tree is approximately 30 feet. The height of the tree is estimated to be roughly 30 feet tall. The tree is located west of Tree #3 on a steep uphill slope. It is a low-growing specimen. The crown is balanced with minor asymmetry. The foliage size and color appear normal. The crown density is normal. I would estimate that approximately 10% of the tree's crown is composed of dead wood. The tree is in above average health and condition. Rating: B-

Tree #5 is a Quercus agrifolia or Coast Live Oak. The tree measures 3, 5, 8, 9, 10 and 11 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 24 feet from the tree's trunk. The spread of the tree is approximately 48 feet. The height of the tree is estimated to be roughly 45 feet tall. The tree is located downhill, northwest of Tree #4. It is situated on a steep hillside. It is a low-growing specimen. Included bark was observed on some of the branch attachments making the tree structurally weak. The tree is unbalanced and asymmetrical growing more to the north. The foliage size and color appear normal. The crown density is fair. I would estimate that approximately 10% of the tree's crown is composed of dead wood. The tree is in slightly above average health and condition. Rating: C+

Tree/Site Inspection-Continued

Tree #6 is a Quercus agrifolia or Coast Live Oak. The tree measures 10 and 13 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 21 feet from the tree's trunk. The spread of the tree is approximately 42 feet. The height of the tree is estimated to be roughly 45 feet tall. The tree is located uphill, southwest of Tree #5. It is situated on a steep hillside. There is a basal cavity on the west side of the tree. Bark tissue is exfoliating on the stems. It appears to be lightning damage. The tree is a low-growing specimen. The foliage size and color appear normal. The crown density is fair. The crown is balanced with minor asymmetry. The tree is in average health and condition. Rating: C

Tree #7 is a Quercus agrifolia or Coast Live Oak. The tree measures 9 and 13 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 18 feet from the tree's trunk. The spread of the tree is approximately 36 feet. The height of the tree is estimated to be roughly 50 feet tall. The tree is located downhill, north of Tree #6. It is situated on a steep hillside. The tree has 2 co-dominant stems and included bark tissue creating weak structure. The tree has multiple stems. It is a low-growing specimen. The crown is balanced with minor asymmetry. The foliage size and color appear normal. The crown density is fair. The tree is in above average health and condition. Rating: B-

Tree #8 is a Quercus agrifolia or Coast Live Oak. The tree measures 8 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 25 feet from the tree's trunk. The spread of the tree is approximately 25 feet. The height of the tree is estimated to be roughly 17 feet tall. The tree is located toward the middle of the west boundary fence line. The trunk is 5 feet east of the fence. The tree's bark tissue is cracking and exfoliating. The crown has been pruned and raised. The leaves are small and yellow or chlorotic in color. The crown density is sparse. The tree is unbalanced and asymmetrical growing west. The tree is in very poor health and condition. Rating: D-

Tree #9 is a Citrus species or Citrus. The tree measures 1, 1, 2 and 3 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 4 feet from the tree's trunk. The spread of the tree is approximately 8 feet. The height of the tree is estimated to be roughly 8 feet tall. The tree is located northeast of Tree #5, near the northern boundary of the subject property. It is a low-growing, multi-trunk tree. The foliage size and color appear normal. The crown density is normal. The tree is in slightly above average health and condition. Rating: C+

Tree #10 is a Unknown species. The tree measures 2 and 2 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 5 feet from the tree's trunk. The spread of the tree is approximately 10 feet. The height of the tree is estimated to be roughly 12 feet tall. The tree is located west of Tree #9, near the northern boundary of the subject property. The tree is completely dead. Rating: F

Tree/Site Inspection-Continued

Tree #11 is a Diospyros kaki or Persimmon. The tree measures 1, 2, 2 and 3 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 7 feet from the tree's trunk. The spread of the tree is approximately 14 feet. The height of the tree is estimated to be roughly 10 feet tall. The tree is located west of tree #10, near the northern boundary. It is a low-growing, multi-trunk tree. The foliage size and color appear normal. The crown density is normal. The tree is in slightly above average condition. Rating: C+

Tree #12 is a Persea americana or Avocado. The tree measures (6)1 and (3)2 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 7 feet from the tree's trunk. The spread of the tree is approximately 14 feet. The height of the tree is estimated to be roughly 12 feet tall. The tree is located south of tree #11, near the northern boundary. It is a low-growing, multi-trunk tree. It has sprouted from a tree stump. The foliage size and color appear normal. The crown density is normal. The tree is in below average health and condition. Rating: D+

Tree #13 is a Quercus agrifolia or Coast Live Oak. The tree measures 1 and 3 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 4 feet from the tree's trunk. The spread of the tree is approximately 8 feet. The height of the tree is estimated to be roughly 12 feet tall. The tree is located near the southwest corner of the lot. It is a low-growing, multi-trunk tree. The foliage size is small. The foliage color is normal. The crown density is fair. The tree is in slightly below average condition. Rating: C-

Tree #14 is a Fraxinus uhdei or Shamel Ash. The tree measures (4)3, 4, 5, 5 and 7 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 15 feet from the tree's trunk. The spread of the tree is approximately 30 feet. The height of the tree is estimated to be roughly 30 feet tall. The tree is located near the northwest corner of the lot. It is a low-growing, multi-trunk tree. There are numerous epicormic shoots. The foliage size is normal. The foliage color is normal. The crown density is normal. The tree is in slightly below average condition. Rating: C-

Tree #15 is a Quercus agrifolia or Coast Live Oak. The tree measures (6).125 and .75 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 4 feet from the tree's trunk. The spread of the tree is approximately 8 feet. The height of the tree is estimated to be roughly 7 feet tall. The tree is located northeast of Tree #13. It is a low-growing, multi-trunk tree. There is damage at the base of the tree. The foliage size is small. The foliage color is normal. The crown density is fair. The tree is in slightly below average condition. Rating: C-

Tree #16 is a Quercus agrifolia or Coast Live Oak. The tree measures .75, 1 and 1 inches in diameter at 4 feet. The tree has a dripline, which measures roughly 6 feet from the tree's trunk. The spread of the tree is approximately 12 feet. The height of the tree is estimated to be roughly 8 feet tall. The tree is located southeast of Tree #15. It is a low-growing, multi-trunk tree. The foliage size and color is normal. The crown density is normal. The tree is in slightly above average health and condition. Rating: C+

General Observations

The subject property is situated in a single family home residential neighborhood in the City of South Pasadena. The subject property is a vacant hillside lot. The nearby homes in the neighborhood are generally clean, landscaped and well maintained. The proposed project involves the construction of a new single-family, 2-story home with an attached ADU and basement. There are a total of 11 Coast Live Oak trees growing on the subject property. I noted that 2 of these Oaks have a combined trunk diameter of less than 4 inches. The other 5 trees on the site all appear to be non-native, exotic tree species. Tree #12 and Tree #14 are non-native trees whose combined trunk diameters are 12 inches or more making them Significant Trees. Tree #1 Coast Live Oak is 23'3" from the retaining wall. The dripline is 17 feet, therefore Tree #1 will not be impacted by the project. Tree #2 Coast Live Oak is 28'4" from the retaining wall. The dripline measures 30 feet. Tree #2 dripline will be slightly encroached upon by the wall. The impact to the tree is minor. Tree #3 Coast Live Oak is 20 feet from the retaining wall. The dripline is 17 feet. Tree #3 will not be impacted by the project. Tree #4 Coast Live Oak is 24'8" from the retaining wall. The dripline measures 15 feet. Tree #4 will not be impacted by the project. Tree #5 Coast Live Oak is located within the side yard of the project. The yard and house areas will be graded. The trunk is next to the retaining wall. The roots will be cut. The impact to the tree will be severe. Tree #5 Coast Live Oak must be removed. Tree #6 Coast Live Oak is 8'5" and 12'4" from the retaining wall. The dripline measures 21 feet. The proposed retaining wall will encroach upon the dripline of Tree #6. The root cutting for the wall will not make the tree unstable however there will be significant root loss. Tree #7 Coast Live Oak is 17'7" from the retaining wall. The dripline measures 18 feet. Tree #7 will experience minimal root loss. Tree #8 Coast Live Oak is 9'10" from the retaining wall. The dripline is 25 feet on the west side. There is no canopy on the east side. The impact to this tree will be moderate. The work will not make the tree unstable. Tree #9 Citrus is located within the proposed building foundation. The impact to the tree will be severe. Tree #9 must be removed. Tree #10 Unknown tree is located within the proposed building foundation. The impact to the tree will be severe, however it is already dead. Tree #10 must be removed. Tree #11 Persimmon is located in the back yard of the proposed single-family home. The grading in the back yard will destroy the tree's roots. The impact to the tree will be severe. Tree #11 Persimmon must be removed. Tree #12 Avocado is in the back yard and next to the retaining wall on the west side. The grading in the back yard and trenching for the wall footing will destroy the tree's roots. The impact to the tree will be severe. Tree #12 Avocado must be removed. Tree #13 Coast Live Oak is 8'4" from the retaining wall. The dripline is 4 feet. Tree #13 Coast Live Oak will not be impacted by this project. Tree #14 Shamel Ash is 6'10" from the retaining wall. The dripline measures 15 feet. The level of encroachment is significant. The root cutting should not cause the tree to become unstable. The tree will however be significantly impacted by this project. Tree #15 Coast Live Oak is 1'10" from the retaining wall. The dripline measures 4 feet from the trunk. The impact to the tree will be severe. Tree #15 must be removed. Tree #16 Coast Live Oak is 18 feet from the retaining wall. The dripline measures 6 feet. Tree #16 Coast Live Oak will not be impacted.

Tree Protection Plan

Based upon my review of the proposed plans and inspection of the subject property I would recommend that the following tree protection measures be followed:

1) Tree protection fencing should be installed at the dripline of the protected Oak and Significant trees. This tree protection fencing must be 6 foot high chain-link fencing. Orange plastic safety fencing is recommended to be zip-tied to the chain-link fence for added visibility. Maintain tree protection fencing in a vertical upright position throughout the construction period.

2) Tree #5, Tree #9, Tree #10, Tree #11, Tree #12 and Tree #15 must be removed in order for the project to take place. A tree removal permit application must be filled-out and submitted with a copy of this Arborist Report.

3) Prohibit dumping of excess soil, concrete, mortar, stucco, paint and other foreign materials within the dripline of the trees.

4) Parking or storage of vehicles, equipment and building materials within the dripline of the trees is prohibited.

5) Pruning of tree roots and branches must be performed by a licensed tree contractor under the supervision of an I.S.A. Certified Arborist. Pruning of roots and branches must comply with ANSI A-300 Pruning Standards and Best Management Practices. Tree #2, Tree #6, Tree #8 and Tree #14 will be encroached upon by the proposed construction. Root pruning and or branch pruning will be necessary.

6) Roots which are torn or damaged must be pruned with clean, sharp pruning tools back to the edge of the excavation area. The exposed edge of the excavation area where the roots were pruned should be covered with burlap and wetted in the morning and afternoon of each day until the area can be backfilled.

7) Should the City of South Pasadena approve your Tree Removal Permit they will require the planting of replacement trees on the subject property. The size, number and species of the replacement trees will be specified on the permit. Tree #5 Coast Live Oak has a combined trunk diameter of 46 inches therefore 16-24 inch-box size Coast Live Oak trees must be planted. Tree #9 Citrus has a combined trunk diameter of 7 inches. It is not large enough to qualify as a Significant Tree therefore no tree replacement is required. Tree #10 is a dead, unknown tree species. No tree replacement is required. Tree #11 Persimmon has a combined trunk diameter of 8 inches. It is not large enough to qualify as a Significant Tree therefore no tree replacement is required. Tree #12 Avocado has a combined trunk diameter of 12 inches. It is large enough to qualify as a Significant Tree therefore 2-24 inch-box size replacement trees must be planted. Tree #15 Coast Live Oak has a combined trunk diameter of 1.5 inches. It is not large enough to qualify as a protected Oak.

Tree Protection Plan-Continued

8) Trees to be preserved should be monitored during construction by an I.S.A. Certified Arborist to ensure that the tree protection plan is being followed.

Summary/Conclusion

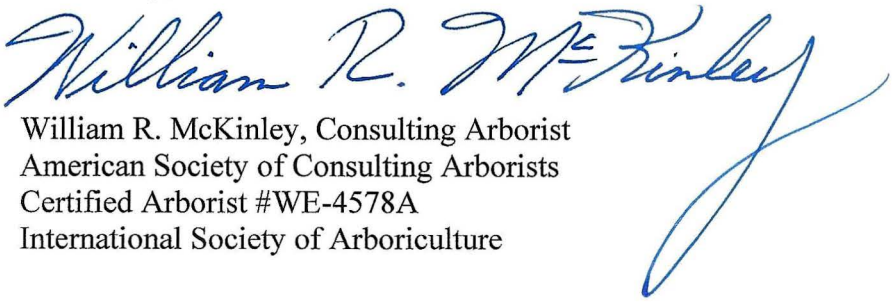
In conclusion, it is my professional opinion that existing site and the planning/zoning requirements place certain restrictions and limitations as to where a single-family home can be built on this property. There is a fairly steep rising hillside slope which covers the southern half of the property. Then there is a somewhat level area at the bottom of the slope. This is followed by a moderate downhill slope area near the northern boundary. Building set-backs and other Planning/Zoning requirements further restrict the size of the project. The building design calls for a basement ADU. There will be significant excavation and grading in the northern half of the lot in order to accommodate the new house, ADU and yard areas. Retaining walls will be necessary. Tree #5, Tree #9, Tree #10, Tree #11, Tree #12 and Tree #15 must be removed in order for the project to take place. Tree #5 Oak and Tree #12 Avocado will require a tree removal permit before they can be removed. Tree #5 will require 16-24 inch-box size Coast Live Oak trees to be planted as replacement trees. Tree #12 will require 2-24 inch-box size replacement trees to be planted on the subject property. The majority of the trees being removed are less than the legal limit and are therefore not protected. The City has expressed concern over the root pruning involved for Tree #6 and Tree #7. In the case of Tree #6 the root pruning will take place 8'5" and 12'4" from the retaining wall. The root loss will be significant but will not result in making the tree unstable. In the case of Tree #7 it is 17'7" from the retaining wall. The dripline measures 18 feet. There is minor encroachment upon the dripline. The root loss will be minimal. The root pruning in these cases should not cause either of these trees to die. If the above stated Tree Protection Plan is followed during construction then the remaining trees can be preserved and will add beauty and value to the subject property as well as the surrounding neighborhood for many years to come.

Limitations

Information contained in this report covers only those areas that were examined and reflects the condition of those areas at the time of inspection. The inspection was limited to visual examination of the accessible areas. Arboriculture is not an exact science and there is much that is still to be learned about trees. Observations and recommendations provided in this report reflect the latest research, knowledge and training available through university and professional research. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees or property in question may not arise in the future.

Thank you for the opportunity to serve you and your environmental and horticultural needs. If you have any further questions, please feel free to contact me during the day on my business cell phone at (818) 426-2432 or you may call and leave a message on my office phone at (818) 240-1358.

Yours truly,



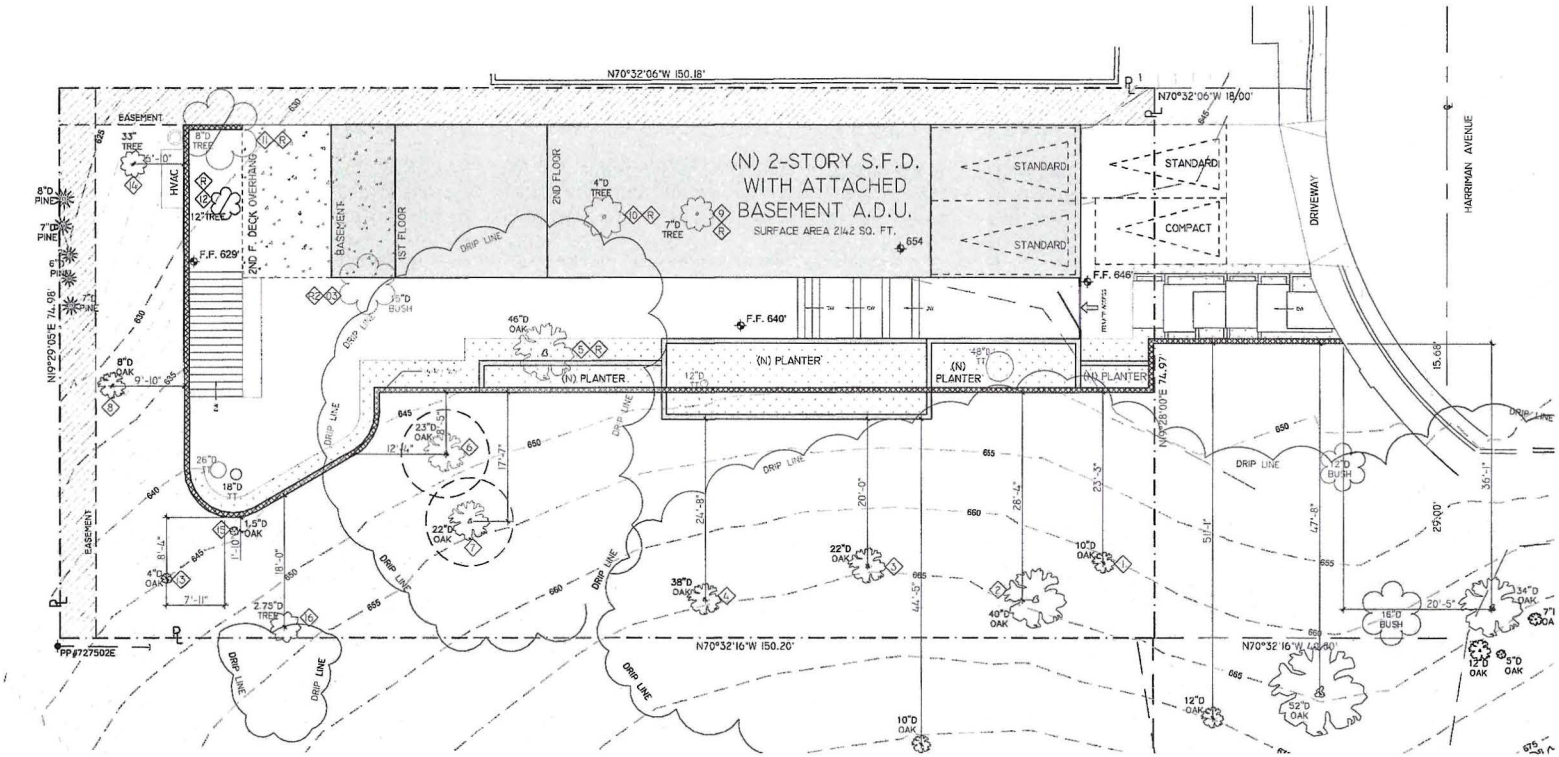
William R. McKinley, Consulting Arborist
American Society of Consulting Arborists
Certified Arborist #WE-4578A
International Society of Arboriculture

KEYNOTES:

- (E) TREE TO BE REMOVED
- (E) PLANT TO BE REMOVED
- TREE NUMBER. SEE ARBORIST REPORT FOR DETAILS.
- NEW BUILDING
- LANDSCAPE PER LANDSCAPE PLANS
- EASEMENT AREA

SYMBOL LEGEND

- KEYNOTE ON SAME SHEET
- GENERAL NOTE ON G002



PROPOSED SITE PLAN - TREE SCHEDULE

SCALE: 1/8" = 1'-0"

COVAR DESIGNS
MAILING ADDRESS:
4100 W. ALAMEDA AVE. SUITE 300. BURBANK, CA 91505
PHONE: 213-296-7668
EMAIL: INFO@COVARDESIGNS.COM

PROJECT # CD21009

PROJECT FOR:
ISMAIL SAWAN

PROJECT DESCRIPTION:
NEW TWO STORY FAMILY DWELLING
WITH ATTACHED BASEMENT A.D.U.

PROJECT ADDRESS:
4931 HARRIMAN AVE, SOUTH PASADENA, CA 91030

PRINT DATE
2/9/2024

REV.	DESCRIPTION	DATE

SHEET:
A101.3

Curriculum Vitae

WILLIAM R. MCKINLEY – MCKINLEY & ASSOCIATES

1734 Del Valle Ave. Email: william@mckinleyarborists.com Work (818) 426-2432
Glendale, CA 91208 Website: http://www.mckinleyarborists.com/ Home (818) 240-1358

SUMMARY of QUALIFICATIONS

Practicing Consulting Arborist. Member of American Society of Consulting Arborists (ASCA). Certified Arborist, International Society of Arboriculture since September 30, 1999. I.S.A. Arborist #WE-4578A. Recognized Oak Tree Expert throughout Southern California. Prepare arborist reports for developers, homeowners and attorneys. Assess the landscape value of trees. Assess and identify hazardous trees in the landscape. Provided hillside and Oak Woodland landscape and irrigation recommendations. Provide expert witness testimony on arboriculture related cases. Public speaker and presenter at community service group meetings, homeowner's association meetings and speaker at professional seminars and conferences. Presenter at Trees, People and Our Urban Environment Seminar, March 2002. Arbor Day Guest Speaker, City of Glendale, March 2005. Tree City USA Award Presenter – Glendale Arbor Day 2010, Tree City USA Award Presenter –Glendale Arbor Day 2012, Arbor Day Guest Speaker, Glendale, March 2014.

FULL TIME EMPLOYMENT HISTORY

City of Glendale, Parks, Recreation & Community Services

Park Services Manager-Contract Administration 2001-present

Performs contract administration for Park Services Section. Manage grounds maintenance for sports fields, community buildings, parks, medians, and historic areas. Administers the City's landscape maintenance contract. Writes contract specifications. Administers the bidding process. Awards contracts to successful bidders. Conducts construction meetings and oversees the construction and inspection for these projects. Performs and assumes all former duties and responsibilities under the former Administrative Analyst position. Writes arborist reports. Hazardous tree assessment. Serves as expert witness in tree related cases.

Administrative Analyst 1988-2001

Administer landscape maintenance contract for medians, reservoirs, pump houses and misc. areas. Administer and supervise the Division's Work Management System involving the scheduling and tracking of work and performance of over 50 full-time employees. Supervise one part-time data entry employee and supervise and coordinate with the California Conservation Corps, Boy Scouts and other community service volunteers in the parks. Supervise, monitor and report water and utility usage in the parks. Administer and supervise all tree planting projects and programs including the Arbor Day and Urban Forest Donation programs. Assist with budget preparation and acquisition of capital equipment. Prepare Capital Improvement Project specifications and assist with administering contracts. Administer the City of Glendale's Indigenous Oak Tree Ordinance. Coordinate with Planning, Permit Services, Engineering, Building, Neighborhood Services and Fire Department to insure the care and protection of trees, both during and after construction. Review grading, construction, landscape and irrigation plans. Modify and approve plans as necessary to protect indigenous trees. Perform field inspections on hazardous trees and make recommendations to park staff and the public. Serve as code enforcement officer and paralegal during Administrative Office Hearings regarding Indigenous Oak Tree Ordinance. Perform tree and landscape appraisals. Served as special show and marketing consultant to the Glendale Rose Pruning and Garden Show Committee.

Assistant Planner-Parks 1983-1988

Assisted in park inventory development and implementation of the Work Management System. Served as guest speaker at the National Parks and Recreation Conference on the subject of computers and their role in park maintenance. Supervised the Capital Improvement Project Construction at Pacific Park and Brand Park. Coordinated with and supervised California Conservation Corps. Crews in planting, staking and tying hundreds of trees as part of the Arbor Day Program. Served as Arbor Day Co-Chairman, Glendale Rose Pruning & Garden Show Co-Chairman and President of Glendale Beautiful. Served as Ways and Means Chairman C.P.R.S. District XIV.

EDUCATION

1983 — California Polytechnic University, Pomona
Bachelor of Science Degree, Park Administration
Graduated Magna Cum Laude, Grade Point Average: 3.57

1983-Present — CEU's-University of California, Landscape Contract Maintenance, Hazardous Tree Identification & Assessment, Specimen Tree Appraisal, Advanced Tree Appraisal Theory and Practice, Tree and Landscape Liability – Trees and the Law, Oak Tree Symposium Graduate, Knowledge of oak tree physiology and native plant habitat, ASCA 2007 Consulting Academy, National Arbor Day Foundation Graduate, Symposiums: Construction Around Trees: Trees and the Law, Recognized Tree Expert: City of Los Angles, County of Los Angeles, City of Pasadena, City of La Canada Flintridge, City of Burbank, City of Calabasas, County of Ventura, City of Santa Clarita.

HONORS & ACTIVITIES

1999 - Present - Certified Arborist-International Society of Arboriculture
1996-1999 - Secretary/Treasurer, C.P.R.S. Park Operations Section
1994-1995 - President, C.P.R.S. District XIV
1994-1995 - Treasurer, Glendale Beautification Advisory Council
1992-1994 - Treasurer, C.P.R.S. District XIV
1993, 1994, 1995 C.P.R.S. Park Operations Scholarship
First, Second and Third Year, Graduate, Pacific Southwest Maintenance Mgmt. School
1988-1990 – President, Glendale Beautiful
1980, 1981 - Twice placed on Dean's Honor List
1982 - Who's Who in American Colleges and Universities
1978 - Recipient of Wayne Striker Memorial Scholarship
1975 - Awarded Eagle Scout Rank, Boy Scouts of America
Member - American Society of Consulting Arborists (ASCA)
Member - International Society of Arboriculture
Member - Western Chapter, International Society of Arboriculture
Member – Glendale Beautiful
Past Member - National Arbor Day Foundation
Past Member - California Oak Foundation

REFERENCES

Randall S. Stamen, Attorney/Arborist	(951) 787-9788
Susan & Gary Sims, Sims Tree Specialists	(951) 685-6662
Peter & Diana Harnisch, Harnisch Tree Care	(626) 444-7997

PROFESSIONAL SERVICE FEE

Site Inspection	-	$100.00 per hour
Consultation	-	$125.00 per hour
Arborist Report	-	$150.00 per hour
Public Hearing	-	$200.00 per hour
Arbitration	-	$225.00 per hour
Deposition	-	$250.00 per hour
Court Witness	-	$350.00 per hour



460

#1

01/16/2024 10:24



462

#3



463

#4



464

#7 #6 #5

#8



466

#9



467

#10



468

#11



#12



470

#13



471

#14



472

#15



#16

ATTACHMENT 6

Parcel Merger Exhibit

EXHIBIT "B"
PARCEL MERGER
LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

LOT 18 TOGETHER WITH THE SOUTHERLY 25 FEET OF LOT 19 BLOCK 105, PASADENA VILLA TRACT, IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 3, PAGE 5 TO 8 OF MAPS FILED IN THE OFFICE OF THE COUNTY RECORDER OF LOS ANGELES COUNTY.

APN: 5312-016-017, 5312-016-016

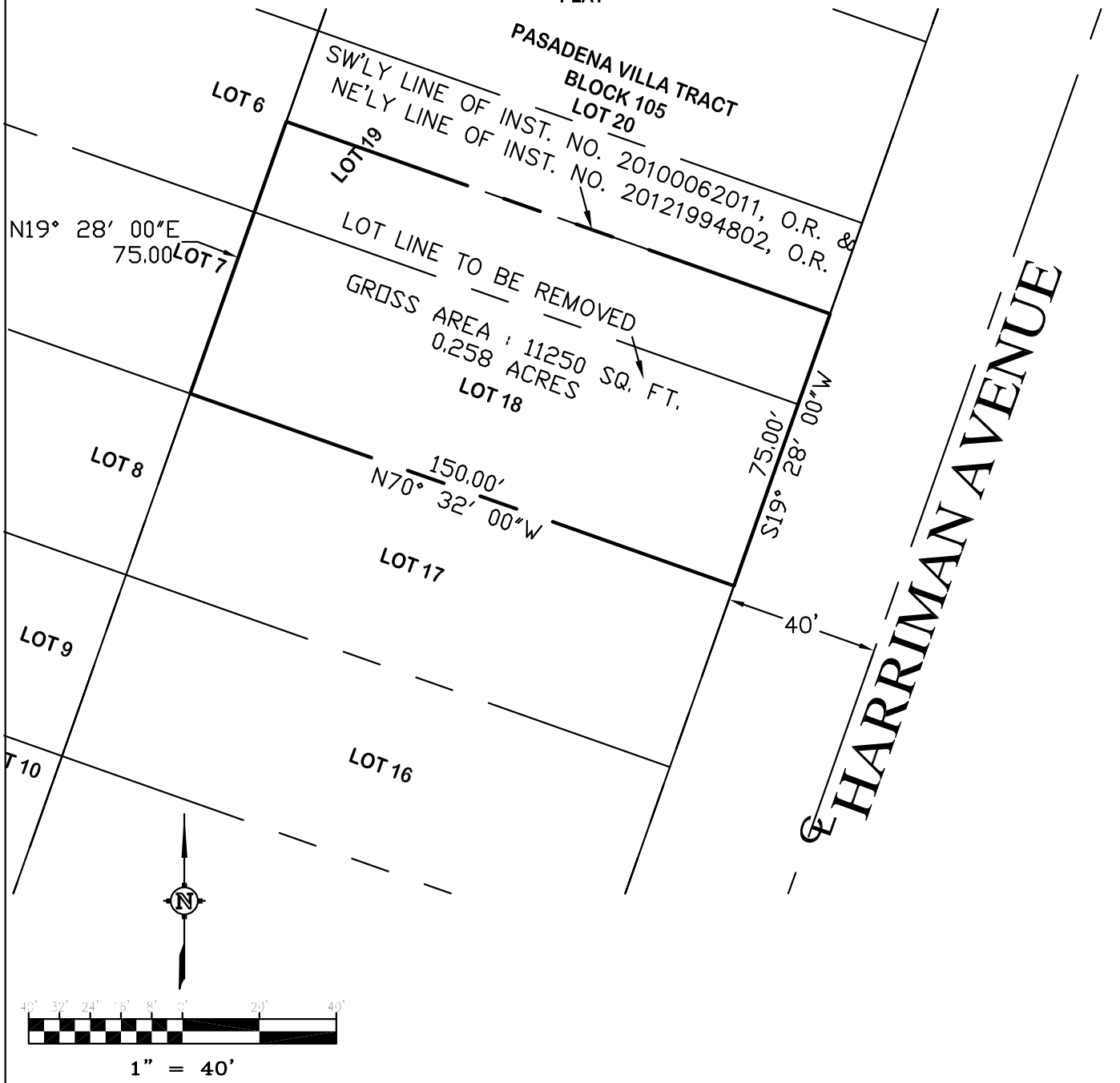


EZR SURVEYING

EZR SURVEYING LLC
LAND SURVEYING SERVICES
HUNTINGTON BEACH, CA
760-710-9800

PREPARED UNDER THE SUPERVISION OF:
ETHAN Z. REMINGTON, L.S. 9220
DATE: FEBRUARY 27, 2020

EXHIBIT "B"
PARCEL MERGER
PLAT



OWNER:
ISIS PROPERTIES, LLC
3237 EAST GUASTI ROAD #220
ONTARIO, CA 91761

MAP REFERENCES:

ALL DATA SHOWN HERE ON IS RECORD PER THE
PASADENA VILLA TRACT – BOOK 3, PAGES 5–8 OF MAPS

PROFESSIONAL LAND SURVEYOR
ETHAN Z. REMINGTON
No. 9220
STATE OF CALIFORNIA

EZR SURVEYING

EZR SURVEYING LLC
LAND SURVEYING SERVICES
HUNTINGTON BEACH, CA
760-710-9800

PREPARED UNDER THE SUPERVISION OF:
ETHAN Z. REMINGTON, L.S. 9220
DATE: FEBRUARY 27, 2020

ATTACHMENT 7

Link to Geotechnical Report

Link to Constraints Analysis

ATTACHMENT 8

Link to Architectural Plans/Renderings

Public Hearing Item
Appeal of Project No. 2500-HDP/DRX/VAR/PM/TRP
4931 Harriman Avenue

November 6, 2024

Prepared By: Dean Flores, Senior Planner

Community Development Department

Background

- **08/13/24: Project approved by the Planning Commission**
- **08/28/24: Appellant submitted a formal Appeal application within 15-day appeal period.**
- **11/6/24: City Council to take action on Appeal application.**

Project Description

A project to construct a 3,214-square-foot, two-story single-family dwelling on two vacant parcels, that when merged, will total 11,270 square feet. The project application also included two Variances - one for the garage located in front of the home and one for a reduced (north) side yard setback. Initially, the proposed side yard setback Variance was proposed to be 5' instead of the required 10% of the width of the lot which is 7'-6". However, after discussion and deliberation, the Planning Commission approved the project with a side yard setback of 6' instead of the requested 5'

Appellant's Appeal Request

1. Loss of sunlight exposure due to the height obstructing natural light.
2. Decreased privacy due to the project's windows overlooking onto my private property.
3. The City of South Pasadena's code is designed to be equitable for all properties, and we do not understand why a setback reduction should be granted from my property.
4. My property was constructed in compliance with existing codes, and I believe it is unfair to diminish my rights.
5. This reduction is likely to lower the value of my property.
6. I also request that a dust barrier be provided for air conditioning purposes.

Responses to Appeal

1. Loss of sunlight exposure due to the height obstructing natural light.

- **City's Response:**
  - *City reviews projects for compliance with certain development standards.*
  - *The project complies with maximum height requirement.*
  - *Sunlight exposure/natural light is not a criterion to be considered.*

Responses to Appeal

2. Decreased privacy due to the project's windows overlooking onto my private property.

- **City's Response:**
  - *Project reviewed/decided with privacy in mind.*
  - *Largest window located along staircase is frosted to limit visibility.*
  - *Other upper floor windows are small and are required for CBC egress requirements.*

Responses to Appeal

3. The City of South Pasadena's code is designed to be equitable for all properties, and we do not understand why a setback reduction should be granted from my property.

- **City's Response:**
  - *Variance requested for reduced (north) side yard setback due to property slope constraints.*
  - *Variances are reviewed on a case-by-case basis.*
  - *Planning Commission approved project with 6' setback instead of the requested 5' setback.*

Responses to Appeal

4. My property was constructed in compliance with existing codes, and I believe it is unfair to diminish my rights.

- **City's Response:**
  - *Variances are reviewed on a case-by-case basis.*
  - *The requested Variances would not materially impact neighboring property rights.*
  - *Subject property features special circumstances to develop to a similar degree of other similarly situated properties.*

Responses to Appeal

5. This reduction is likely to lower the value of my property.

- **City's Response:**
  - *Values of properties not a criterion when reviewing projects.*
  - *Not under purview of City staff.*

Responses to Appeal

6. I also request that a dust barrier be provided for air conditioning purposes.

- **City's Response:**
  - *Dust barrier requirements already included as conditions of approval of project.*

Environmental

- **State CEQA Guidelines (California Code of Regulations, Title 14, Section 15303, Class 3 for New Construction or Conversion of Small Structures), the project was originally (and remains) exempt under the Class 3 exemption which includes the construction of single-family residences.**

Recommendation

It is recommended the City Council hold an appeal hearing, consider evidence, receive public testimony on the project, and then:

Adopt a Resolution approving project No. 2500-HDP/DRX/VAR/PM/TRP and denying the appeal.

Discussion

Questions & Discussion

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 14

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: Alison Becker, AICP, Acting Community Development Director

SUBJECT: **CONSIDERATION OF APPROVAL OF AN EXCLUSIVE NEGOTIATING AGREEMENT BETWEEN THE SOUTH PASADENA HOUSING AUTHORITY AND RELATED/SOCAL DEVELOPMENT, LLC CALIFORNIA FOR THE DEVELOPMENT OF AGENCY-OWNED PROPERTY LOCATED AT 1503 AND 1507 EL CENTRO STREET**

Recommendation

It is recommended that the City Council, sitting as the Board of Directors of the South Pasadena Housing Authority, consider the approval of an Exclusive Negotiating Agreement with Related/SoCal Development, LLC for the development of an affordable housing project on South Pasadena Housing Authority owned property located at 1503 and 1507 El Centro Street.

Executive Summary

To promote the development of permanent affordable housing for low-, very low-, and extremely low-income households, the South Pasadena Housing Authority ("Authority") invited proposals via a formal request for proposals ("RFP") process from qualified developers to develop affordable housing at 1503 and 507 El Centro Street ("Project Site"). The RFP was issued on December 7, 2023, and proposals were accepted via PlanetBids through January 15, 2024. The City received a total of six proposals from developer respondents ("Applicants").

Based on a review of the proposals received against criteria detailed in the RFP, finalist interviews and review by the City Council, sitting as Board of Directors of the Authority, staff recommends Related/SoCal Development, LLC ("Related") to award an Exclusive Negotiating Agreement ("ENA") for the development of the Project Site. The City received technical assistance through the San Gabriel Valley Council of Governments from Harris & Associates ("Harris") for the preparation of the RFP and analysis of the applicant submissions.

Background

The Authority-owned Project Site is comprised of assessor parcel numbers ("APN") 5315-003-902, 5315-003-903, and 5315-003-904, is approximately 17,780 square feet (0.41 acres) and is currently zoned as Fair Oaks Corridor, as defined in the City Downtown Specific Plan ("DTSP"). The Project Site must be developed with housing units affordable and restricted to senior households earning at or below 80% of the Los Angeles County area median income ("AMI") and per Government Code Section 54221(f)(1)(F)(i). Contemplated is that the Project Site would be developed through a ground lease. A building on the site is currently leased to

the South Pasadena Theatre Workshop. The lessee has a month-to-month tenancy with an expiration date of June 30, 2025. The City will require the Applicant to honor the lease agreement.

The City prioritized the following outcomes when reviewing development proposals:

1. Developments that enable fifty-two (52) units to be developed overall that can serve low-income senior households.
2. Developments that are designed to fit within the character of the local community, more specifically, the Fair Oaks Corridor Area as identified in the Downtown Specific Plan.
3. Developments with an AMI unit mix that maximizes the project's competitiveness for funding sources, including but not limited to Low Income Housing Tax Credit ("LIHTC") financing.
4. Developments that achieve the criteria outlined in the RFP within the shortest most feasible, development timeframe.
5. Development that is responsive to the City's Community Housing Needs and achieves the goals identified in the City's 2021-2029 Housing Element.

In addition, this Project Site and the subsequent affordable housing development will be utilized to satisfy the City's requirements under SB 381, which is now AB 1038, related to the City's purchase of surplus Caltrans properties. Pursuant to AB 1038, the City is required to develop three units of affordable housing for every one surplus property purchased from Caltrans.

Analysis

Harris conducted a thorough review of all development proposals received which included technical review of submitted financial materials, financing strategies and ground lease structures. In addition, a selection team of City staff conducted a similar review. The six Applicants were: Clifford Beers Housing, Gangi Development and Pacific Southwest CDC, Homes and Hope, Jamboree, Related California, and West Hollywood Community Housing Corporation.

Top ranking Applicants were invited to formal interviews in March 2024 and a short list of finalists was presented to City Council in closed session on March 20, 2024, and again on May 29, 2024. The finalists were: Clifford Beers Housing, Homes and Hope, Jamboree, and Related California.

Related California was selected from the short list of finalists based on its technical score, interview performance and Council vetting. Related California has demonstrated its financial and organizational capacity to successfully develop high quality affordable housing developments, work collaboratively with community members to formulate successful designs that are compatible with the neighborhood context and operate service-enriched housing communities that become a part of, and an asset to, their neighborhood.

The purpose of the ENA is to establish procedures and standards for the negotiation of a Disposition and Development Agreement ("DDA"), ground lease and regulatory agreement, including achievement of certain predevelopment tasks to determine the feasibility of the development. Additionally, the ENA provides assurances to the Developer that the City desires to enter into a DDA by April 15, 2025. Furthermore, the ENA specifies that the City intends to offer a long-term ground lease for the subject property as a potential source of

funding for the proposed development. However, the ENA does not obligate the City to lease the property, nor does it obligate the parties to undertake any activities or costs, except for the preliminary analysis and negotiations included in the ENA.

Alternatives (if applicable)
The City Council may opt to approve the staff recommendation or provide alternative direction.

Fiscal Impact
The ENA makes no funding commitments and if applicable, funding commitments will be outlined in the forthcoming DDA. Associated staff time is anticipated through the Community Development Departments adopted '24-'25 operating budget.

Key Performance Indicators and Strategic Plan
This action is aligned with Objective 5 in the 2021-2026 Strategic Plan: *Plan for Affordable Housing to Comply with State Mandates.*

Commission Review and Recommendation
This item has not been reviewed by any City Commission.

Public Notification
The public was made aware that this item was to be considered this evening by virtue of its inclusion on the legally publicly noticed agenda, posting of the same agenda and reports on the City's website.

Attachment:
Attachment No. 1 - South Pasadena-Final Exclusive Negotiating Agreement with Related

EXCLUSIVE NEGOTIATING AGREEMENT BETWEEN THE SOUTH PASADENA HOUSING AUTHORITY AND RELATED/SOCAL DEVELOPMENT, LLC REGARDING THE PROPERTY AT THE SOUTHEAST CORNER OF EL CENTRO STREET AND MOUND AVENUE (1503 AND 1507 EL CENTRO STREET)

THIS EXCLUSIVE NEGOTIATING AGREEMENT (this "Agreement" or "ENA") is dated as of November 6, 2024 ("Effective Date") and is entered into by and between the South Pasadena Housing Authority, a public body ("Authority"), and Related/SoCal Development, LLC (the "Developer"). Developer and the Authority are sometimes collectively referred to herein collectively as the "Parties" or individually as the "Party."

RECITALS

A. The Authority owns certain real property in the City of South Pasadena (the "City"), State of California that is located at the Southeast corner of El Centro Street and Mound Avenue, 1503 and 1507 El Centro Street, California, and is more particularly described in Attachment No. 1 (the "Site").

B. On December 7, 2023 and in compliance with the provisions of Government Code Section 54221(f)(1)(F)(i), the Authority released a "Request for Affordable Housing Development Proposals" ("RFP") for the development of an affordable senior housing project on the Site as described in Attachment No. 2 (the "Project"). The RFP contemplated that the Site would be ground leased to a developer for such purpose ("Ground Lease").

C. After extensive evaluation and consideration of the responses, the Authority and Developer desire to proceed with this Agreement between Authority and Developer in order to negotiate on an exclusive basis the terms and conditions of the Ground Lease, a Disposition and Development Agreement ("DDA"), a Regulatory Agreement and other related documents, including compliance with the California Environmental Quality Act ("CEQA"), to the satisfaction of Authority staff regarding the development of the Project on the Site within a reasonable period of time thereafter. It is anticipated that the Project will be eligible for a Class 32 exemption under the CEQA Guidelines.

D. The exact configuration of the number of units and unit types within the Project, will be determined as part of this Agreement. To that end, on September 6, 2023, pursuant to Housing Resolution No. 2023-01 HA the Authority declared the Site to be exempt surplus property based on Government Code Section 54221(f)(1)(F)(i), which defines exempt surplus land to include land that is put out to open, competitive bid by a local agency, provided all entities identified in Government Code Section 54222(a) are invited to participate in the competitive bid process for a housing development that restricts 100 percent of the residential units restricted to persons and families of low or moderate income, with at least 75% of the residential units restricted to lower income households with an affordable rent for a minimum of 55 years;

E. The staff, consultants and attorneys' of the Authority have devoted and will devote substantial time and effort in meeting with the Developer and its representatives to review proposals, plans and reports, and negotiate and prepare the terms of the Ground Lease, DDA, Regulatory Agreement and other related documents.

NOW, THEREFORE, in view of the goals and objectives of Authority and City relating to providing affordable housing in the City, and in consideration of the mutual promises of Authority and Developer set forth in this Agreement, Authority and Developer agree as follows:

1. Exclusive Negotiation; Negotiation of DDA. During the Term (defined in Section 2 below), Authority shall negotiate only with Developer for the lease and development of the Site. Authority and Developer shall negotiate the terms of a Ground Lease, DDA, Regulatory Agreement, and other related documents. However, the Ground Lease, the DDA, Regulatory Agreement and other related documents so negotiated shall be subject to the approval of the City Council of the City sitting as the Board of Directors of the Authority in its sole and absolute discretion. Developer may terminate such negotiations and this ENA, or disapprove the negotiated DDA, Ground Lease, Regulatory Agreement, or related documents and terminate this ENA, by written notice to Authority.

2. Term. The Term of this ENA shall commence on the Effective Date and shall expire twelve (12) calendar months thereafter, unless terminated or extended in writing by the Executive Director pursuant to Section 3 below ("ENA Period").

3. Extension of Term. The Term ENA Period may be extended up to two times by the Executive Director of the Authority ("Executive Director") in the Executive Director's sole discretion, each extension being for a period of three (3) months.

4. Developer Acknowledgments. Developer acknowledges and agrees that: (a) under this Agreement, Authority is not committing itself or agreeing to enter into a Ground Lease or other disposition of the Site, a DDA or other agreement or approve any land use entitlements or any permits or undertake any other acts or activities; (b) no provision of this Agreement shall be deemed to be an offer by the Authority, nor an acceptance by the Authority of any offer or proposal from Developer; (c) Developer has not acquired, nor will acquire, by virtue of the terms of this Agreement, any legal or equitable interest in real or personal property from the Authority; and (d) further efforts by any Party to perform due diligence, arrange or obtain financing, or carry out other acts in contemplation of the possible development of the Site or the Project shall not be deemed evidence of intent by such Party to be bound by any terms, conditions, covenants, restrictions or agreements relating to development of the Site or the Project.

5. Materials and Information. The Developer shall deliver the materials and information identified on Attachment No. 3 attached hereto to the Authority within the times set forth on Attachment No. 3, as such dates may be extended with the mutual agreement of Developer and Authority. Additionally, during the ENA Period (as extended under Section 3, if applicable), Developer shall provide bi-monthly written reports to the Authority describing in reasonable detail the Developer's activities with respect to the Project during the preceding calendar month.

6. Authority Tasks. During the ENA Period (as extended under Section 3, if applicable), the Authority shall use good faith efforts to complete (or cause to be completed) the matters set forth in Attachment No. 5 attached hereto. As part of the negotiations of the DDA with Developer, the Parties shall discuss and determine the Authority's and/or City's contribution to the Project.

7. CEQA. The Authority and Developer acknowledge that all applicable requirements of CEQA must be met in order to execute and deliver the Ground Lease, the DDA,

the Regulatory Agreement, and develop the Site. The Developer will, at its cost, fully cooperate with the Authority to comply with CEQA.

8. Prevailing Wage. The Parties acknowledge and agree that the Project may be subject to Prevailing Wages, if applicable, and if required by law, wage determination will be determined prior to DDA Execution.

9. Developer Indemnity. Developer shall indemnify, defend, and hold the Authority and City and their officers, employees, agents, and contractors harmless from any and all third-party claims, liabilities, losses, damages (actual and direct, but not punitive, speculative, or consequential), costs, and expenses actually suffered or incurred by the Authority and/or City and directly relating to or arising out of this ENA or Developer's failure to perform any obligation of Developer under this ENA (subject to any required notice and applicable cure period under this ENA). Developer's obligations under the preceding sentence shall survive the expiration or earlier termination of this ENA

10. Right of Entry. If requested, the Authority shall use its best efforts to execute and deliver a Right of Entry and Access Agreement in the form attached hereto as Attachment No. 4 (which may be executed by the Executive Director on behalf of the Authority). Developer acknowledges that the Site is subject to a lease and as such, this may limit the Authority's ability to grant Developer access to enter the Site and in all events, such Right of Entry and Access Agreement is subject to any rights of the lessee. If so executed, Developer and its contractors and consultants designated in writing by Developer to Authority shall have the right to enter the Site to inspect the Site, survey the Site and prepare Phase I environmental reports for the Site, and if reasonably approved in writing by the Executive Director, to take soils and groundwater samples as recommended by such a Phase I (for purposes of preparing a Phase II environmental report, if necessary) provided a copy of the Phase I recommending such samples/tests has been provided to the Executive Director.

11. Developer Costs. The Developer shall bear all fees, costs and expenses of any kind related to all activity undertaken for the Project during the ENA Period including but not limited to all, environmental, physical, engineering, financial, and feasibility investigations, reports and analyses and other analyses or activities performed by or for the Developer; provided however, the Developer may seek predevelopment financing at its discretion.

12. Obligations of the Parties. The Parties acknowledge that neither Party is under any obligation whatsoever to enter into a Ground Lease, DDA, Regulatory Agreement, or any other documents pertaining to the Project, and that notwithstanding their approval of this ENA, each Party shall have the right to disapprove any proposed Ground Lease or DDA or Regulatory Agreement or any other document pertaining to the Project in their sole and absolute respective discretion, and in that regard, each Party hereby expressly agrees that the Authority and Developer shall not be bound by any implied covenant of good faith and fair dealing in connection with such approval or disapproval of any proposed Ground Lease or DDA. In the event of the expiration or earlier termination of this ENA in accordance with the terms of this ENA, the Authority shall be free to negotiate with any persons or entities with respect to the Site, including its development.

13. Assignment. This Agreement may not be assigned by the Developer to an entity other than one that is controlled by the Developer or The Related Companies of California, LLC without the prior express written consent of the Authority in its sole and absolute discretion.

14. Termination by Authority. The Executive Director may terminate this ENA by written notice to Developer if Developer is in violation of this ENA, and Developer fails to correct such violation default within thirty (30) days after written notice from the Executive Director describing the nature of the violation.

15. Developer Representations and Warranties. Developer represents and warrants to and for the benefit of Authority, as of the Effective Date and at all times during the ENA Period as follows:

15.1 Valid Existence; Good Standing. Developer is a Limited Liability Corporation duly organized and validly existing under the laws of the State of California. Developer has all requisite power and authority to own its property and conduct their respective business as presently conducted. Developer has made all filings and is in good standing in the jurisdiction of the State of California.

15.2 Authority. Developer has all requisite power and authority to enter into and perform this Agreement.

15.3 Valid Execution. The execution and delivery of this Agreement by Developer has been duly and validly authorized by all necessary action of Developer and others. This Agreement is a legal, valid and binding obligation of Developer, enforceable against Developer in accordance with its terms.

16. Notices. A notice or communication under this Agreement by either Party to the other shall be sufficiently given or delivered, if in writing and delivered by reputable overnight messenger, or certified first class mail with return receipt requested (for U.S. mailings) or when sent by electronic mail ("email") to the appropriate Party at its address as follows:

In the case of a notice or communication to Authority:

South Pasadena Housing Authority
c/o City of South Pasadena
1414 Mission Street
South Pasadena, CA 91030
Attn: Executive Director
Telephone: (626) 403-7210

with a required copy to:

Roxanne M. Diaz
South Pasadena City Attorney
Richards, Watson & Gershon
350 South Grand Avenue, 37th Floor
Los Angeles, CA 90071
Telephone: (213) 626-8484
Facsimile: (213) 626-0078
Email: rdiaz@rwglaw.com

In the case of a notice or communication sent to Developer:

Related/SoCal Development, LLC
c/o The Related Companies of California, LLC
18201 Von Karman Avenue, Suite 900
Irvine, CA 92612
ATTN: Frank Cardone
(949) 660-7272

Any such address may be changed at any time by giving written notice of such change in the manner provided above at least ten (10) days prior to the effective date of the change. Notices by overnight messenger shall be deemed delivered on the next business day, or, if mailed, on the delivery date or attempted delivery date shown on the return receipt or if by email, when sent.

17. General Provisions.

17.1 Amendments. This Agreement may be amended or modified only by a written instrument signed by both Authority and Developer.

17.2 Severability; HCD Comments. If any provision of this Agreement, or its application to any person or circumstance, is held invalid by any court, the invalidity or inapplicability of such provision shall not affect any other provision of this Agreement or the application of such provision to any other person or circumstance, and the remaining portions of this Agreement shall continue in full force and effect.

Without limiting the foregoing, in the event that any HCD comments on the surplus property exemption claimed by the Authority prevents or precludes compliance with any material term of this Agreement, the Parties shall promptly modify, amend or suspend this Agreement, or any portion of this Agreement, to the extent necessary to comply with such comments. However, if such amendment, modification or suspension would deprive Authority or Developer of the substantial benefits derived from this Agreement or make performance unreasonably difficult or expensive, then the affected Party may terminate this Agreement upon written notice to the other Party. In the event of such termination, neither Party shall have any further rights or obligations under this Agreement except as otherwise provided herein.

17.3 Non-Waiver. No waiver made by either Party with respect to the performance, or manner or time of performance, or any obligation of the other Party or any condition to its own obligation under this Agreement will be considered a waiver with respect to the particular obligation of the other Party or condition to its own obligation beyond those expressly waived, to the extent of such waiver, or a waiver in any respect in regard to any other rights of the Party making the waiver or any other obligations of the other Party.

17.4 Non-Liability. No member, official, agent or employee of the Authority or City will be personally liable to Developer in the event of a default by Authority. No director, officer, agent or employee of Developer will be personally liable to Authority or City in an event of default by Developer.

17.5 No Third Party Beneficiary. This Agreement is for the exclusive benefit of the Parties to this Agreement and not for the benefit of any other person and shall not be deemed to have conferred any rights, express or implied, upon any other person.

17.7 Governing Law. Authority and Developer agree that this Agreement shall be governed by, interpreted under, and construed and enforced in accordance with the substantive and procedural laws of the State of California, without application of conflicts or choice of laws principles.

18. Interpretation of Agreement. No inference in favor of or against any Party shall be drawn from the fact that such Party has drafted any part of this Agreement.

19. Entire Agreement. This Agreement (including the attachments) contains the entire agreement between the Parties with respect to the subject matter of this Agreement.

20. Time of the Essence. Time is of the essence with respect to each provision of this Agreement.

21. Counterparts. This Agreement may be signed in multiple counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same instrument. An electronic copy of this Agreement shall be as effective as the original for all purposes.

22. Relationship of the Parties. The subject of this Agreement is a private development with neither Party acting as the agent of the other Party in any respect. None of the provisions in this Agreement shall be deemed to render Authority a partner in Developer's business, or joint venturer or member in any joint enterprise with Developer.

IN WITNESS WHEREOF, Authority and Developer have signed and entered into this Agreement as of the Effective Date by and through the signatures of their respective authorized representative(s).

AUTHORITY:

SOUTH PASADENA HOUSING AUTHORITY
a public body corporate and politic

By: _____
Evelyn Zneimer, President of the Board of Directors

ATTEST:

By: _____
Mark Perez, Authority Secretary

APPROVED AS TO FORM:

By: _____
Roxanne Diaz, Authority Counsel

DEVELOPER:

Related/SoCal Development, LLC

By: _____
Frank Cardone, President

ATTACHMENT NO. 1

PROJECT SITE AND LEGAL DESCRIPTION

The Project Site is 17,780 square feet (0.41 acres) and is composed of three parcels:

APN 5315-003-902 (Southwest Corner of El Centro and Edison Lane)

The Easterly 46 feet, between parallel lines of Lots 5 and 6 in Block "C" of the Raymond Villa Tract No. 1, in the City of South Pasadena, as per map recorded in Book 1, Page 91 of Maps, in the Office of the County Recorder of said County

APN 5315-003-903 (1503 El Centro)

The West 70 feet of Lots 5 and 6 in Block "C" of the Raymond Villa Tract No. 1, in the City of South Pasadena, County of Los Angeles, State of California, as per map recorded in Book 1, Page(s) 91 of Maps, in the Office of the County Recorder of said County

APN 5493-038-904 (1507 El Centro)

The West 46 feet of the East 92 feet of Lots 5 and 6, in Block "C" of the Raymond Villa Tract No.1, in the City of South Pasadena, County of Los Angeles, State of California, as per map recorded in Book 1, Page(s) 91 of Maps, in the Office of the County Recorder of said County

ATTACHMENT NO. 2

AFFORDABLE SENIOR HOUSING PROJECT

The anticipated housing development will be the City's first permanent affordable housing for low, very low-, and extremely low-income households. The project summary is described in the table below:

Project Details	
Target Population: Senior households	**Income Restrictions:** 30% AMI; 40%AMI; 50% AMI; 60%AMI; 80% AMI
Unit Count: Approx. 52 (incl. 1 manager's unit)	**Unit Sizes:** 1 and 2 bedrooms (unit mix TBD)

ATTACHMENT NO. 3

MATERIALS TO BE DELIVERED BY DEVELOPER

Written Status Reports	Every two months, on the 15th day of the month, commencing on the first full month after the Effective Date.
Developer will disclose to Authority the names of primary employee contracts, primary consultants, or representatives anticipated to the directly involved in the Project. Developer shall promptly notify Authority of any changes as they occur.	Within forty-five (45) days after the Effective Date
Developer will conduct due diligence including, but are not limited to, investigative studies, feasibility studies, preliminary title report, etc. Developer will submit to the Authority in writing any and all objections.	Within one-hundred twenty (120) days after the Effective Date
Developer will lead public outreach for the Project in coordination with the Authority. Authority and Developer shall determine the extent and number of outreach meetings appropriate but will be no less than one (1) meeting	Within one-hundred twenty (120) days after the Effective Date
Develop Conceptual Plans for the project identifying the location, building envelope, general configuration, use(s) of the Site, parking and proposed design characteristic of the Project. This will also include a conceptual development program that includes a breakdown of the proposed scope of development by land use square footage, number of parking spaces, approximate number and mix of residential units, proposed amenities, circulation and other general uses.	Between one-hundred fifty (150) days and one-hundred eighty (180) days after the Effective Date
Submit entitlements application. Developer is current contemplating CEQA exemption.	Within two-hundred seventy (270) days after the Effective Date
Draft Preliminary Financing Plan and Preliminary Development Schedule	Within two-hundred seventy (270) days after the Effective Date
Parties negotiate form of Term Sheet for purpose of negotiating DDA and the Form of Ground Lease	Within two-hundred seventy (270) days after the Effective Date
Final Preliminary Financing Plan with anticipated Debt and Equity Financing	Within three-hundred (300) days after the Effective Date
Initial draft DDA including Ground Lease and Regulatory Agreement Exhibit(s)	Within three-hundred sixty days (360) days after the Effective Date

ATTACHMENT NO. 4

FORM OF RIGHT OF ENTRY AND ACCESS AGREEMENT

ATTACHMENT NO. 4

RIGHT OF ENTRY AND ACCESS AGREEMENT

THIS RIGHT OF ENTRY AND ACCESS AGREEMENT (herein called this "**Agreement**") is made and entered into as of _____, 2024, by the SOUTH PASADENA HOUSING AUTHORITY, a public body (herein called "**Grantor**"), and RELATED/SOCAL DEVELOPMENT, LLC, a California limited liability company (herein called "**Grantee**").

W I T N E S S E T H:

WHEREAS, Grantor is the owner of the real property more particularly described on Exhibit A, which exhibit is attached hereto and incorporated herein by reference (herein called the "**Property**");

WHEREAS, Grantor and Grantee contemplate entering into a ground lease ("**Ground Lease**") and disposition and development agreement ("**DDA**") related to the Property as further described in that certain Exclusive Negotiating Agreement of even date herewith by and between the Grantor and Grantee ("**ENA**");

WHEREAS, Grantee has requested the right of entry upon and access to the Property for the purpose of undertaking tests, inspections and other due diligence activities including but not limited to environmental inspections, soil sampling, property condition assessments, and utility mapping (herein called the "**Due Diligence Activities**") in connection with the proposed lease by Grantee of the Property;

WHEREAS, Grantor has agreed to grant to Grantee, and Grantee has agreed to accept from Grantor, this non-exclusive, revocable license to enter upon the Property to perform the Due Diligence Activities in accordance with the terms and provisions of this Agreement;

WHEREAS, Grantor and Grantee desire to execute and enter into this Agreement for the purpose of setting forth their agreement with respect to the Due Diligence Activities and Grantee's entry upon the Property.

NOW, THEREFORE, for and in consideration of the foregoing premises, the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor and Grantee do hereby covenant and agree as follows:

1. Access by Grantee.

(a) Subject to Grantee's compliance with the terms and provisions of this Agreement, the earlier termination or expiration of the ENA, Grantee and Grantee's agents, employees, contractors, representatives and other designees (herein collectively called "**Grantee's Designees**") shall have the right to enter upon the Property for the purpose of conducting the Due Diligence Activities.

(b) Grantee expressly agrees as follows: (i) any activities by or on behalf of Grantee, including, without limitation, the entry by Grantee or Grantee's Designees onto the Property in connection with the Due Diligence Activities shall not materially damage the Property in any manner whatsoever or materially disturb or interfere with the rights or possession of any tenant on the Property, (ii) in the event the Property is materially altered or disturbed in any manner in connection with the Due Diligence Activities, Grantee shall immediately return the Property to substantially the same condition existing immediately prior to the Due Diligence Activities, and (iii) Grantee shall indemnify, defend and hold Grantor harmless from and against any and all claims, liabilities, damages, losses, costs and expenses of any kind or nature whatsoever (including, without limitation, reasonable attorneys' fees and expenses and court costs) suffered, incurred or sustained by Grantor as a result of, by reason of, or in connection with the Due Diligence Activities or the entry by Grantee or Grantee's Designees onto the Property; provided, however, that in no event shall Grantee be liable for any liabilities, damages, losses, costs or expenses of any kind or nature that relate, directly or indirectly, to (y) consequential or punitive damages or (z) matters that are merely discovered, but not exacerbated, by Grantee. Notwithstanding any provision of this Agreement to the contrary, Grantee shall not have the right to undertake any invasive activities or tests upon the Property, or any environmental testing on the Property beyond the scope of a standard "Phase I" investigation, without the prior written approval by the of Grantor of a workplan for such "Phase II" or invasive testing. If Grantor does not respond or reject any workplan within five (5) business days of Grantee's delivery of the written workplan proposal to Grantor pursuant to the notice provisions of this Agreement, then Grantor shall be deemed to have approved the submitted workplan and Grantee may proceed with such testing. If Grantor rejects such proposed workplan in whole or in part, then this Agreement shall become null and void at the sole option of Grantee.

2. Lien Waivers. Upon receipt of a written request from Grantor, Grantee will provide Grantor with lien waivers following completion of the Due Diligence Activities from each and every contractor, materialman, engineer, architect and surveyor who might have lien rights, in form and substance reasonably satisfactory to Grantor and its counsel. Grantee hereby indemnifies Grantor from and against any claims or demands for payment, or any liens or lien claims made against Grantor or the Property by contractors, materialmen, engineers, architects, or surveyors retained by the Grantee as a result of the Due Diligence Activities.

3. Insurance. Grantee shall, and shall cause all of Grantee's Designees performing the Due Diligence Activities to, procure or maintain a policy of commercial general liability insurance issued by an insurer reasonably satisfactory to Grantor covering each of the Due Diligence Activities with a single limit of liability (per occurrence and aggregate) of not less than Two Million Dollars ($2,000,000.00), and to deliver to Grantor a certificate of insurance evidencing that such insurance is in force and effect, and evidencing that Grantor has been named as an additional insured thereunder with respect to the Due Diligence Activities. Such insurance shall be maintained in force throughout the term of this Agreement.

4. Successors. To the extent any rights or obligations under this Agreement remain in effect, this Agreement shall be binding upon and enforceable against, and shall inure to the benefit of, the parties hereto and their respective heirs, legal representatives, successors and permitted assigns.

5. Limitations. Grantor does not hereby convey to Grantee any right, title or interest in or to the Property, but merely grants the specific rights and privileges hereinabove set forth.

6. Survival of Indemnification. The indemnification obligations of Grantee contained in Sections 1 and 2 hereof shall survive the expiration or earlier termination of this Agreement for a period of one (1) year following such expiration or termination.

7. Notices. Whenever any notice, demand, or request is required or permitted under this Agreement, such notice, demand, or request shall be in writing and shall be delivered by hand, be sent by registered or certified mail, postage prepaid, return receipt requested, or shall be sent by nationally recognized commercial courier for next business day delivery, to the addresses set forth below the respective executions of the parties hereto, or to such other addresses as are specified by written notice given in accordance herewith, or shall be transmitted by facsimile to the number for each party set forth below their respective executions hereof, or to such other numbers as are specified by written notice given in accordance herewith. All notices, demands, or requests delivered by hand shall be deemed given upon the date so delivered; those given by mailing as hereinabove provided shall be deemed given on the date of deposit in the United States Mail; those given by commercial courier as hereinabove provided shall be deemed given on the date of deposit with the commercial courier; and those given by facsimile shall be deemed given on the date of facsimile transmittal. Nonetheless, the time period, if any, in which a response to any notice, demand, or request must be given shall commence to run from the date of receipt of the notice, demand, or request by the addressee thereof. Any notice, demand, or request not received because of changed address or facsimile number of which no notice was given as hereinabove provided or because of refusal to accept delivery shall be deemed received by the party to whom addressed on the date of hand delivery, on the date of facsimile transmittal, on the first calendar day after deposit with commercial courier, or on the third calendar day following deposit in the United States Mail, as the case may be.

8. Assignment. This Agreement may not be assigned by Grantee, in whole or in part, except to an entity to which the Grantee has assigned its interest under the ENA in compliance with the provisions of Section 13thereof.

9. Governing Law. This Agreement shall be construed, enforced and interpreted in accordance with the laws of the State of California. Venue shall be in Los Angeles County.

10. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.

11. No Recording of Agreement or Memorandum of Agreement. In no event shall this Agreement or any memorandum hereof be recorded in the Official Records of Los Angeles County, California, and any such recordation or attempted recordation shall constitute a breach of this Agreement by the party responsible for such recordation or attempted recordation.

IN WITNESS WHEREOF, Grantor and Grantee have caused this Agreement to be executed on the day and year first written above.

GRANTEE:

RELATED/SOCAL DEVELOPMENT, LLC
a California limited liability company

By:_____
Name: _____
Title:_____

Address for notices: Related/SoCal Development, LLC

c/o The Related Companies of California, LLC
18201 Von Karman Avenue, Suite 900
Irvine, CA 92612
Attn: Frank Cardone
Phone: (949) 660-7272

(Signatures continued)

GRANTOR:

SOUTH PASADENA HOUSING AUTHORITY,
a California municipal corporation

By:_____
Name: Donald E. Penman
Title: Interim Executive Director

Address for notices: City of South Pasadena
1414 Mission Street
South Pasadena. CA 91030
Attention: City Manager
Telephone: (626) 403-7210

With a copy to: Richards, Watson & Gershon
350 South Grand Avenue, 37th Floor
Los Angeles, California 90071
Attn.: Roxanne M. Diaz, Esq.
Telephone No.: (213) 626-8484
Facsimile No: (213) 626-0078
Email: rdiaz@rwglaw.com

EXHIBIT A

LEGAL DESCRIPTION

APN 5315-003-902 (Southwest Corner of El Centro and Edison Lane)

The Easterly 46 feet, between parallel lines of Lots 5 and 6 in Block "C" of the Raymond Villa Tract No. 1, in the City of South Pasadena, as per map recorded in Book 1, Page 91 of Maps, in the Office of the County Recorder of said County.

APN 5315-003-903 (1503 El Centro)

The West 70 feet of Lots 5 and 6 in Block "C" of the Raymond Villa Tract No. 1, in the City of South Pasadena, County of Los Angeles, State of California, as per map recorded in Book 1, Page(s) 91 of Maps, in the Office of the County Recorder of said County.

APN 5493-038-904 (1507 El Centro)

The West 46 feet of the East 92 feet of Lots 5 and 6, in Block "C" of the Raymond Villa Tract No. 1, in the City of South Pasadena, County of Los Angeles, State of California, as per map recorded in Book 1, Page(s) 91 of Maps, in the Office of the County Recorder of said County.

ATTACHMENT NO. 5

AUTHORITY TASKS

1. City staff will work in good faith with Developer to create the nonbinding terms sheet for the DDA that is described in Attachment 3.

2. City staff shall review the Developer's Site Plan and other submissions.

3. Authority and City shall promptly disclose to Developer all material facts known to the Authority and City regarding the Site that is not known to Developer or observable from a diligent inspection of the Site or title to the Site.

4. City shall diligently process project entitlements and environmental clearances.

5. City staff shall coordinate with Developer in conducting public outreach and public outreach meetings.

6. Developer shall provide an initial draft of the Disposition and Development Agreement including the Ground Lease Exhibit to Authority consistent with the terms sheet and shall thereafter revise it the extent reasonably permitted by negotiations.

City Council and the Housing Authority - Board of Directors Agenda Report

ITEM NO. 15

DATE: November 6, 2024

FROM: Donald Penman, Interim City Manager

PREPARED BY: H. Ted Gerber, Director of Public Works

SUBJECT: **CONSIDERATION OF AN AWARD OF A CONSTRUCTION CONTRACT WITH MONET CONSTRUCTION, INC. IN AN AMOUNT NOT TO EXCEED $2,112,000 FOR THE GREVELIA AND BERKSHIRE POCKET PARKS PROJECT AND AN ADDITIONAL BUDGET APPROPRIATION OF $543,930 FOR CONSTRUCTION AND PROJECT CONSTRUCTION MANAGEMENT; AND APPROVE THE PLANS AND SPECIFICATIONS FOR THE PROJECT**

Recommendation

It is recommended that the City Council consider:

1. Approving the plans and specifications for the Grevelia and Berkshire Pocket Parks Project (Project); and
2. Approving a categorical exemption from CEQA for the Project, pursuant to Section 15332 of the State CEQA Guidelines — Class 32, In-Fill Development Projects; and
3. Appropriating an additional $543,930 to the Grevelia and Berkshire Pocket Parks Project, utilizing $100,000 from Park Impact Fees Fund 275 and $443,930 from General Fund 101, increasing the budget from $1,768,070 to $2,312,000, including a construction contract of $2,112,000 and additional construction management funding of $200,000, given current inadequate City staffing resources to support the Project; and
4. Awarding a construction contract to Monet Construction, Inc. for construction services for park improvements in an amount not to exceed $2,112,000.00, including the proposed bid amount of $1,836,528.80 and a 15% contingency of $275,471.20; and
5. Reject all other bids received; and
6. Authorize the City Manager to execute the contract.

Executive Summary

The City's Fiscal Year (FY) 2024-2025 Capital Improvement Program (CIP) includes the construction of two pocket parks, each located at or near 1107 Grevelia Street and 2006 Berkshire Avenue. This item proposes the approval of a construction contract to initiate construction of both parks in FY 2024-2025, among other actions related to the Project.

Background

The City's Public Works Department is responsible for developing and implementing the City's Capital Improvement Program (CIP), including improvements of the City's park and open space infrastructure. The award of a contract (Attachment 1) to a construction vendor for park improvements is subject to approval by the City Council as a Public Works Contract pursuant to the South Pasadena Municipal Code. As a note, Berkshire Pocket Park has since been

renamed the Dr. Beatriz Solis Memorial Park by the City Council, however, it will be referenced as Berkshire Pocket Park during construction to be consistent with the construction documents (Attachments 2, 3, 4, 5, 6, & 7). Corresponding signage for the name change will be updated during the Project.

Analysis

The City of South Pasadena Public Works Department solicited bids from park improvement contractors through a Notice Inviting Bids posted on the PlanetBids website on August 30th, 2024. In addition, the solicitation was advertised on the Dodge Construction Network, Bid America, and Kern County Builders Exchange. The Notice Inviting Bids was also published in the South Pasadena Review on August 30th, 2024. The advertisement included the project plans, specifications with engineer's estimate, and other contract documents. One-hundred-and-ninety-seven (197) firms were notified of the proposal opportunity through PlanetBids, in addition to the notification that occurred from the other project bid sites. Fourteen (14) prospective bidders expressed interest in participating, and five (5) prospective bidders submitted proposals during the bid period.

Due to several issues revealed after receiving bids for the Project, City Council, based on staff's recommendation, rejected the bids received and re-advertised the Project.

The re-advertised Notice Inviting Bids was posted on the PlanetBids website on October 10th, 2024, and again included the project plans, specifications with engineer's estimate, and other contract documents. In addition, the solicitation was again advertised on the Dodge Construction Network, Bid America, and Kern County Builders Exchange, and published in the South Pasadena Review on October 11th, 2024. Two-hundred-and-nine (209) firms were notified of the proposal opportunity through PlanetBids, in addition to the notification that occurred from the other project bid sites. Twenty-three (23) prospective bidders expressed interest in participating, and six (6) prospective bidders submitted proposals during the bid period.

The Project work consists of furnishing all materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the specifications and contract documents, consisting of construction of two (2) new 'pocket' parks located at or near 1107 Grevelia Street and at or near 2006 Berkshire Avenue. The Project also includes demolition, grading, landscaping, electrical, plumbing, and drainage improvements, as well as installation of equipment and site finishing; traffic control and all appurtenant work thereto necessary for the proper construction of the park improvements.

Proposals were received through October 28th, 2024 from the following six (6) firms:

Bidder No.	Bidder	Bid Amount
1	Ramsa Construction, Inc.	$1,571,753.23
2	ARC Construction, Inc.	$1,717,562.32

3	Bedrock Group, Inc.	$1,788,386.00
4	Monet Construction, Inc.	$1,836,528.80
5	Elegant Construction, Inc.	$1,879,375.00
6	Aneen Construction, Inc.	$2,048,615.55

South Pasadena Municipal Code (SPMC) Chapter 2 Administration, Article XI describes the City's purchasing rules. Specifically, SPMC Section 2.99-39 defines the purchasing procedure to award a Public Works Contract to the lowest responsible bidder. Contracts resulting from competitive bidding are awarded based on the lowest responsible bidder who submitted a bid that was responsive to the solicitation request. A bid is considered to be responsive if it conforms in all material respects to the solicitation requirements, and a bidder is considered to be responsible if they possess the demonstrated ability, capacity, experience and skill to provide the goods and/or services required by the solicitation.

Bidder No. 1 (see above table) did not demonstrate possession of the required Class A General Engineering Contractor license in the submitted bid. Bidder Nos. 2, 3, and 5 submitted bids where the maximum price for mobilization exceeds 5 percent of the total bid price, which is non-responsive to the solicitation requirements. Bidder No. 4, Monet Construction, Inc., is located in the City of Los Angeles Tujunga neighborhood, and its proposed bid of $1,836,528.80 is the lowest responsive bid of the received bid proposals. The company has recent parks, recreation, and/or landscape improvement contracts and is appropriately licensed and qualified to perform the work.

The City’s engineer team and building and safety teams reviewed the design plans and specifications for the Grevalia & Berkshire Pocket Parks Project, and in their opinion the project plans and specifications are reasonable and meet professional engineering standards. Therefore, it is recommended that the City Council approve the Project plans and specifications which are on file in the Department of Public Works and included as an attachment to this item (Attachments 2, 3, 4, 5, 6 & 7).

Upon the rejection of the initial bid advertisement, City Council requested that staff provide a set of lessons learned - with the intent of addressing the multiple delays experienced by the Project. This Project, like other projects in the CIP, have been underway for numerous years - only recently coming under the purview of the Public Works Department. Due to the need to implement these types of projects considering the Public Contracts Code, and other regulatory/codified requirements, it is necessary for future projects to be initiated by the Public Works Department with collaboration of the initiating stakeholder City Department or community group(s). Involvement from initiation also ensures that community intentions are carried though in the Project from inception to delivery. Furthermore, it is essential that design agreements for CIP projects included schedule commitments within the scope of work in order to hold contracted consultants to project milestone timelines. Lastly, considering CIP project

budget constraints, it is important for projects to develop cost estimates throughout the design process, so that features and elements of the project design can be adjusted to stay within the budget prior to the development of advertisement.

Fiscal Impact
Funding for this project has been adopted in the FY 2024-2025 Budget under the Community Services & Parks Grevelia & Berkshire Pocket Parks CIP Project, with $1,768,070 appropriated to CIP Account No. 400-9000-9005-9033-000. This account includes a $1,024,078 transfer from the Fund 275 Park Impact Fees Account, a $550,000 transfer from Fund 250 Los Angeles County Regional Park and Open Space District Measure A, and a $193,992 transfer from Fund 252 Proposition 68 2018 Parks Bond Act Per Capita Grant .

Specifically, per the Measure A grant, $275,000 has been budgeted for each location ($550,000 total), and for the Proposition 68 2018 Parks Bond Act Per Capita Grant 68 funding agreements, two grants in the amounts of $177,952 and $16,040 have been awarded for Berkshire Pocket Park. These funds will be utilized to fund this contract; however, the Project budget requires an additional $343,930 appropriation in order to add a 15% contingency of $275,471.20 to the lowest responsive bid of $1,836,528.80 for a total construction contract budget of $2,112,000.

Further, staffing resources that were planned to be utilized for this project have recently resigned from the City, and therefore staff are recommending utilization of on-call professional services staff to manage construction of the Project, with an additional budget appropriation of $200,000.

The Fiscal Year 2024-2025 projected end-of-year fund balance for Park Impact Fees Fund 275 is $133,383, considering this Project's and other FY 24-25 expenditures on that fund. Staff recommend utilizing $100,000 from Park Impact Fees Fund 275 and $443,930 from General Fund 101 to fund the $543,930 in additional appropriations needed to complete the Project. The total requested budget is $2,312,000, of which $743,992 is grant funded.

Key Performance Indicators and Strategic Plan
This item is related to the pocket parks construction Strategic Plan goal.

Commission Review and Recommendation
The Grevelia and Berkshire Pocket Park Project has been discussed at multiple meetings of the Community Services Commission and the Public Works Commission throughout the development of the Project.

Public Notification
The public was made aware that this item was to be considered this evening by virtue of its inclusion on the legally publicly noticed agenda, posting of the same agenda and reports on the City’s website.

Environmental Analysis
Based on comprehensive initial studies conducted by Michael Baker International (Attachments 6 and 7), the Grevelia and Berkshire Pocket Parks Project meets the requirements of the Class 32 categorical exemption, as it meets the definition of infill development; would be consistent with the applicable General Plan designation and all applicable General Plan policies as well as with the applicable zoning designation and

regulations; occurs within City limits on a Project Site of no more than 5 acres substantially surrounded by urban uses; would be located on a site that has no habitat for endangered, rare, or threatened species; would not result in any significant effects relating to traffic, noise, air quality, or water quality; and could be adequately served by all required utilities and public services. Further, none of the exceptions to the use of a categorical exemption apply to the Project. Finally, there are no features that distinguish the Project from others in the exempt class and thus there are no unusual circumstances. Therefore, the Project is categorically exempt from CEQA pursuant to Section 15332 of the State CEQA Guidelines — Class 32, In-Fill Development Projects.

Attachment:
Attachment No. 1 - 20241106 Construction Contract
Attachment No. 2 - Grevelia Park Plans
Attachment No. 3 - Grevelia Park Plans (Electrical)
Attachment No. 4 - Berkshire Park Plans
Attachment No. 5 - Project Specifications
Attachment No. 6 - Revision Memo
Attachment No. 7 - Addenda
Attachment No. 8 - Grevelia Park CEQA Document
Attachment No. 9 - Berkshire Park CEQA Document

CONTRACT AGREEMENT

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

THIS AGREEMENT ("AGREEMENT") is made and entered into for the above-stated project this _____ day of_____, 20__ *(Council Action Date)*, BY AND BETWEEN the City of South Pasadena, a municipal corporation, hereafter designated as "AGENCY", and _____ a _____
[CONTRACTOR'S BUSINESS NAME] [corporation, partnership, limited liability company, or other business form]

in the State of _____, hereafter designated as "CONTRACTOR."

WITNESSETH that AGENCY and CONTRACTOR have mutually agreed as follows:

1) **Project Name:** Grevelia & Berkshire Pocket Parks Project No. 005157

2) **Project Scope of Work:** CONTRACTOR shall provide and install:

All materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the Specifications and Contract Documents. The work performed under this contract is summarized in the Notice Inviting Sealed Bids and includes, but is not limited to each bid item listed in the Contractor's Bid Proposal, as covered in the Standard Specifications, and as described in the corresponding items on the following pages. The work in general, to be performed pursuant to these specifications, consists of construction of two (2) new 'pocket' parks located on Grevelia Street (Assessor Parcel Number 5315-011-904 at or near 1107 Grevelia Street) and Berkshire Avenue (Assessor Parcel Number 5310-018-901 at or near 2006 Berkshire Avenue). The project also includes demolition, grading, landscaping, electrical, plumbing, and drainage improvements, as well as installation of equipment and site finishing; traffic control and all appurtenant work thereto necessary for the proper construction of the contemplated improvements, in accordance to Plans and Specification entitled as Grevelia & Berkshire Pocket Parks Project No. 005157.

The limits of work include:

- **Assessor Parcel Number 5315-011-904 (at or near 1107 Grevelia Street) and adjacent public right-of-way**
- **Assessor Parcel Number 5310-018-901 (at or near 2006 Berkshire Avenue) and adjacent public right-of-way**

3) **Contract Documents:** The complete contract and agreement ("AGREEMENT") consists of this Contract Agreement, including all attachments hereto, and:

- Approved Plans and Specifications for City Project No. 005157
- Notice Inviting Sealed Bids
- Instructions to Bidders
- Information for Bidders
- Contractor's Bid Proposal
- Bid Schedule
- Standard Specifications
- Special Provisions
- All reference specifications, plans, details, standard drawings, and appendices
- Bonds, insurance certificates, permits, notices, and affidavits
- Appendices, Addendums, and Memorandums
- And all mutually agreed-upon modifications and amendments thereto.

4) **Compensation:** CITY agrees to pay, and CONTRACTOR agrees to accept in full payment for the Work, the stipulated sum of _____ Dollars, ($_____).
5) **Time of Completion:** _____ Working Days *[see B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE of Section B Instruction to Bidders]*.
6) **Liquidated Damages:** $4,200 for each calendar day delay beyond the Time of Completion *[see 6-9 LIQUIDATED DAMAGES of Section F – Special Provisions]*.
7) **Notices:** Any notices, bills, invoices, or reports required by this Agreement shall be addressed to:

To CITY:

City of South Pasadena
Public Works Department
1414 Mission Street
South Pasadena, CA 91030

To CONTRACTOR:

Contractor's Name _____
Address _____
_____
City, State Zip Code _____

IN WITNESS WHEREOF the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this AGREEMENT to be executed in duplicate by setting hereunto their names, titles, hands, and seals this _____ day of _____, 20__ *(Council Action Date)*

CONTRACTOR: _____
[CONTRACTOR'S BUSINESS NAME]

_____
CONTRACTOR's Sign Name, Title

CONTRACTOR's License No. _____

AGENCY: _____ _____
Don Penman, Interim City Manager — Date
City of South Pasadena

ATTESTED: _____ _____
Mark Perez, Deputy City Clerk — Date
City of South Pasadena

APPROVED AS TO FORM: _____ _____
Roxanne Diaz, City Attorney — Date
City of South Pasadena

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

ATTACHMENT A

ADDITIONAL TERMS AND CONDITIONS OF THE AGREEMENT

ARTICLE I: Contract Documents

The complete contract and agreement ("AGREEMENT") consists of the Contract Documents described on the Contract Agreement, and all terms and conditions of this Attachment are incorporated therein. In the event of conflict between these documents, precedence shall be determined under section 2-5.2 of the Standard Specifications.

All of the provisions of the Contract Documents are made a part hereof as though fully set forth herein.

ARTICLE II: Scope of Work

For and in consideration of the payments and agreements to be made and performed by AGENCY, CONTRACTOR agrees to furnish all materials and equipment and perform all work required for the above-stated project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

AGENCY hereby employs CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices provided herein, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in this AGREEMENT.

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to this AGREEMENT, CONTRACTOR offers and agrees to assign to the AGENCY all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (Section 16700, et seq.) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

ARTICLE III: Compensation

A. CONTRACTOR agrees to receive and accept the prices set forth in the Bid Proposal and Bid Schedule as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. In no event shall the total compensation and costs payable to CONTRACTOR under this Agreement exceed the sum shown on the Contract Agreement, unless specifically approved in advance and in writing by AGENCY.

Such compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements,

unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work. Such unforeseen difficulties or obstructions includes any act of God, the elements, strike, walkout, or any other cause beyond CONTRACTOR's reasonable control that occurs before AGENCY accepts the work as complete.

B. This AGREEMENT is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of CONTRACTORs by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to CONTRACTOR of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This AGREEMENT hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

C. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with AGENCY, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those moneys to CONTRACTOR upon AGENCY's confirmation of CONTRACTOR'S satisfactory completion of this AGREEMENT. At any time during the term of this AGREEMENT CONTRACTOR may, at its own expense, substitute securities for funds otherwise withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

ARTICLE IV: Labor Code

AGENCY and CONTRACTOR acknowledge that this AGREEMENT is subject to the provisions of Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code relating to public works and public agencies and agree to be bound by all the provisions thereof as though set forth fully herein. Full compensation for conforming to the requirements of the Labor Code and with other Federal, State, and local laws related to labor, and rules, regulations and ordinances which apply to any work performed pursuant to this AGREEMENT is included in the price for all contract items of work involved.

This AGREEMENT is further subject to prevailing wage law, including, but not limited to, the following:

A. The CONTRACTOR shall pay the prevailing wage rates for all work performed under the AGREEMENT. When any craft or classification is omitted from the general prevailing wage determinations, the CONTRACTOR shall pay the wage rate of the craft or classification most closely related to the omitted classification. The CONTRACTOR shall forfeit as a penalty to AGENCY $200.00, or any greater penalty provided in the Labor Code for each Calendar Day, or portion thereof, for each worker paid less than the prevailing wage rates for any work done under the AGREEMENT in violation of the provisions of the Labor Code whether such worker is employed in the execution of the work by CONTRACTOR or by any Subcontractor under CONTRACTOR. In addition, CONTRACTOR shall pay each worker the difference between such prevailing wage rates and the amount paid to each worker for each Calendar Day, or portion thereof, for which each worker was paid less than the prevailing wage rate.

B. CONTRACTOR shall comply with the provisions of Labor Code Section 1777.5 concerning the employment of apprentices on public works projects, and further agrees that CONTRACTOR is responsible for compliance with Section 1777.5 by all of its subcontractors.

C. Pursuant to Labor Code § 1725.5, CONTRACTOR and any subcontractor must be registered with the California Department of Industrial Relations for any bid proposal submitted on or after March 1, 2015, and for any contract for public work entered into on or after April 1, 2015. Further, this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

D. Pursuant to Labor Code § 1776, CONTRACTOR and any subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with this AGREEMENT. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following: (1) The information contained in the payroll record is true and correct; and (2) The employer has complied with the requirements of Labor Code §§ 1811, and 1815 for any work performed by his or her employees on the public works project. The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours as required by Labor Code § 1776.

E. This AGREEMENT is further subject to 8-hour workday and wage and hour penalty law, including, but not limited to, Labor Code Sections 1810 and 1813, as follows:

CONTRACTOR shall strictly adhere to the provisions of the Labor Code regarding the 8-hour day and the 40-hour week, overtime, Saturday, Sunday and holiday work and nondiscrimination based on race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, or sexual orientation, except as provided in Section 12940 of the Government Code. Pursuant to the provisions of the Labor Code, eight hours' labor shall constitute a legal day's work. Work performed by CONTRACTOR's employees in excess of eight hours per day, and 40 hours during any one week, must include compensation for all hours worked in excess of eight hours per day, or 40 hours during any one week, at not less than one and one-half times the basic rate of pay. CONTRACTOR shall forfeit as a penalty to AGENCY $25.00, or any greater penalty set forth in the Labor Code for each worker employed in the execution of the work by CONTRACTOR or by any Subcontractor of CONTRACTOR, for each Calendar Day during which such worker is required or permitted to the work more than eight hours in one Calendar Day or more than 40 hours in any one calendar week in violation of the Labor Code.

F. This AGREEMENT is subject to Public Contract Code Section 6109: CONTRACTOR shall be prohibited from performing work on this project with a subcontractor who is ineligible to perform work on the project pursuant to Sections 1777.1 or 1777.7 of the Labor Code.

ARTICLE V: Work Site Conditions

A. In compliance with and pursuant to Government Code Section 4215, AGENCY shall assume the responsibility, as between the parties to this AGREEMENT, for the timely removal, relocation, or protection of existing main- or trunk-line utility facilities located on the site of any construction project that is a subject of this AGREEMENT, if such utilities are not identified by AGENCY in

the plans and specifications made a part of the invitation for bids. The Contract Documents shall include provisions to compensate CONTRACTOR for the costs of locating, repairing damage not due to the failure of CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work. CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project when such delay was caused by the failure of AGENCY or the owner of a utility to provide for removal or relocation of such utility facilities.

B. To the extent that the work requires trenches in excess of five feet (5') and is estimated to cost more than $25,000, prior to any excavation, CONTRACTOR must provide the AGENCY, or a registered civil or structural engineer employed by the AGENCY to whom authority has been delegated to accept such plans, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. Nothing in this section shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders.

C. This AGREEMENT is further subject to Public Contract Code Section 7104 with regard to any trenches deeper than four feet (4') involved in the proposed work as follows:

CONTRACTOR shall promptly, and before the following conditions are disturbed, notify AGENCY, in writing, of any:

(1) Material that CONTRACTOR believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, which is required to be removed to a Class I, Class II, or Class III disposal site in accordance with existing law.

(2) Subsurface or latent physical conditions at the site differing from those indicated by all available information provided prior to the deadline for submission of bids.

(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

AGENCY shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or involve hazardous waste, and cause a decrease or increase in CONTRACTOR's cost of, or the time required for, performance of any part of the work, AGENCY shall issue a change order under the procedures described in this AGREEMENT.

In the event that a dispute arises between AGENCY and CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in CONTRACTOR's cost of, or time required for, performance of any part of the work, CONTRACTOR shall not be excused from any scheduled completion date provided in the AGREEMENT but shall proceed with all work to be performed under the AGREEMENT. CONTRACTOR shall retain any and all

rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

ARTICLE VI: Insurance

A. With respect to performance of work under this AGREEMENT, CONTRACTOR shall maintain, and shall require all of its subcontractors to maintain, insurance as required by Section E "Standard Specifications" of the Contract Documents.

B. This AGREEMENT is further subject to Workers' Compensation obligations, including, but not limited to, California Labor Code Sections 1860 and 1861 as follows:

CONTRACTOR shall take out and maintain, during the life of this contract, Worker's Compensation Insurance for all of CONTRACTOR's employees employed at the site of improvement; and, if any work is sublet, CONTRACTOR shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by CONTRACTOR. CONTRACTOR and any of CONTRACTOR's subcontractors shall be required to provide AGENCY with a written statement acknowledging its obligation to secure payment of Worker's Compensation Insurance as required by Labor Code § 1861; to wit: 'I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.' If any class of employees engaged in work under this AGREEMENT at the site of the Project is not protected under any Worker's Compensation law, CONTRACTOR shall provide and shall cause each subcontractor to provide adequate insurance for the protection of employees not otherwise protected. CONTRACTOR shall indemnify and hold harmless AGENCY for any damage resulting from failure of either CONTRACTOR or any subcontractor to take out or maintain such insurance.

Any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements or limits shall be available to AGENCY as additional insured. Further, the requirements for coverage and limits shall be the greater of (1) the maximum coverage and limits specified in this Agreement, or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured. Insurance provided by CONTRACTOR under this Contract shall not replace or substitute for CONTRACTOR's indemnification obligations in Article VII.

CONTRACTOR's insurance, including all endorsements, shall be primary to any coverage available to AGENCY. Any insurance or self-insurance maintained by AGENCY and/or its officers, employees, agents, or volunteers, shall be excess of CONTRACTOR's insurance and shall not contribute with it.

ARTICLE VII: Indemnification

To the fullest extent permitted by law, CONTRACTOR shall, at its sole cost and expense, fully defend, indemnify and hold harmless AGENCY, its authorized representatives and their respective

subsidiaries, affiliates, members, directors, officers, subcontractors (including governmental agencies), suppliers, employees and agents (collectively, the "Indemnitees") from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses, including but not limited to any fees of accountants, attorneys or other professionals (collectively "Liabilities"), arising out of, in connection with, resulting from or related to, any act, omission, fault or negligence of CONTRACTOR, CONTRACTOR's Representative, or any of its officers, agents, employees, Subcontractors or Suppliers, or any person or organization directly or indirectly employed by any of them (Collectively, the "Indemnitors"), in connection with or relating to or claimed to be in connection with or relating to the work performed under this AGREEMENT. Indemnification includes, but is not limited to, all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses arising out of, in connection with, resulting from or related to changes to the natural environment or environmental harms caused in whole or in part by work performed under this AGREEMENT.

If CONTRACTOR is a joint venture or partnership, each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of CONTRACTOR that are assumed under or arise out of this AGREEMENT. Each of such venturers or partners waives notice of the breach or non-performance of any undertaking or obligation of CONTRACTOR contained in, resulting from, or assumed under this AGREEMENT, and the failure to give any such notice shall not affect or impair such venturer's or partner's joint and several liability hereunder.

AGENCY may request a deposit for defense costs from CONTRACTOR with respect to a claim. If AGENCY requests a defense deposit, CONTRACTOR shall provide it within 15 days of the request.

ARTICLE VIII: Binding Effect

AGENCY and CONTRACTOR each bind itself, its partners, successors, assigns, and legal representatives to the other party hereto and to its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents. This AGREEMENT is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported

assignment or delegation of any of the rights of obligations of either party without the prior written consent of the other shall be void and of no force and effect.

ARTICLE IX: Dispute Resolution

A. All disputes arising out of this AGREEMENT are subject to a mandatory step-by-step claims submission and evaluation process as a precondition to legal action in accordance with Public Contracts Code § 9204.

B. Any court action arising out of this AGREEMENT shall be filed in the Los Angeles County Superior Court. Any alternative dispute resolution proceeding arising out of this AGREEMENT shall be heard in the County of Los Angeles.

C. AGENCY shall have full authority to compromise or otherwise settle any claim relating to this AGREEMENT or any part hereof at any time. AGENCY shall provide timely notification to CONTRACTOR of the receipt of any third-party claim relating to this AGREEMENT. AGENCY shall be entitled to recover its reasonable costs incurred in providing the notification required by this section.

D. This AGREEMENT is further subject to the provisions of Article 1.5 (commencing at Section 20104) of Division 2, Part 3 of the Public Contract Code regarding the resolution of public works claims of less than $375,000. Article 1.5 mandates certain procedures for the filing of claims and supporting documentation by CONTRACTOR, for the response to such claims by the AGENCY, for a mandatory meet and confer conference upon the request of CONTRACTOR, for mandatory nonbinding mediation in the event litigation is commenced, and for mandatory judicial arbitration upon the parties' failure to resolve the dispute through mediation. This AGREEMENT hereby incorporates the provisions of Article 1.5 as though fully set forth herein.

ARTICLE X: Independent CONTRACTOR

CONTRACTOR is and shall at all times remain as to AGENCY, a wholly independent CONTRACTOR. Neither AGENCY nor any of its agents shall have control of the conduct of CONTRACTOR or any of CONTRACTOR's employees, except as herein set forth. CONTRACTOR shall not at any time or in any manner represent that it or any of its agents or employees are in any manner agents or employees of AGENCY.

ARTICLE XI: Taxes

CONTRACTOR is responsible for paying all retail, sales and use, transportation, export, import, special or other taxes and duties applicable to, and assessable against any work, materials, equipment, services, processes, and operations incidental to or involved in this AGREEMENT. The CONTRACTOR is responsible for ascertaining and arranging to pay such taxes and duties. The prices established in this AGREEMENT shall include compensation for any taxes the CONTRACTOR is required to pay by laws and regulations in effect as of the execution of this AGREEMENT.

ARTICLE XII: Notices

All notices and communications shall be sent in writing to the parties at the addresses listed on the Contract Agreement.

ARTICLE XIII: Entire Agreement

This AGREEMENT supersedes any and all other agreements, either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described herein. Each party to this AGREEMENT acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any other agreement, statement or promise not contained in this AGREEMENT shall not be valid or binding. Any modification of this AGREEMENT will be effective only if signed by the party to be charged.

The benefits and obligations of this AGREEMENT shall inure to and be binding upon the representatives, agents, partners, heirs, successors and assigns of the parties hereto. This AGREEMENT shall be construed pursuant to the laws of the State of California.

ARTICLE XIV: Authority to Contract

The signatories hereto represent that they are authorized to sign on behalf of the respective parties they represent and are competent to do so, and each of the parties hereto hereby irrevocably waives any and all rights to challenge signatures on these bases.

ARTICLE XV: General Provisions

A. All reports, documents, or other written material ("written products" herein) developed by CONTRACTOR in the performance of this Agreement shall be and remain the property of AGENCY without restriction or limitation upon its use or dissemination by AGENCY. CONTRACTOR may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by CONTRACTOR.

B. In the performance of this Agreement, CONTRACTOR shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability, medical condition, or any other unlawful basis.

C. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph at the head of which it appears, the section or paragraph hereof, as the case may be, and not such heading, shall control and govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

D. The waiver by AGENCY or CONTRACTOR of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term, covenant, or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term,

covenant or condition of this Agreement shall be deemed to have been waived by AGENCY or CONTRACTOR unless in writing.

E. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any of all of such other rights, powers, or remedies.

F. CONTRACTOR shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to AGENCY under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to CONTRACTOR under this Agreement. All such documents shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of AGENCY. In addition, pursuant to Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars, all such documents and this Agreement shall be subject to the examination and audit of the State Auditor, at the request of AGENCY or as part of any audit of AGENCY, for a period of three (3) years after final payment under the Agreement.

(End of Attachment A)

(ATTACH TO EXECUTED CONTRACT AGREEMENT)

ATTACHMENT B

Plans, Forms, & Specifications

GREVELIA STREET PARK

1107 GREVELIA ST, SOUTH PASADENA, CA 91030

GENERAL NOTES

1. ELEVATIONS SHOWN HEREON ARE IN FEET ABOVE THE U.S.G.S. DATUM PLANE.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION), CITY OF SOUTH PASADENA STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND APPLICABLE STANDARD PLANS AND SPECIFICATIONS.
3. UTILITIES ARE SHOWN ACCORDING TO RECORDS IN THE OFFICE OF THE CITY ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND THEIR SERVICE CONNECTIONS.
4. CONTRACTOR MUST MAINTAIN ALL TRAFFIC SIGNS IN ERECT POSITIONS AND SET SAME FRAME IN PROPER POSITION AT CLOSE OF THE JOB.
5. SANITARY SEWER, STORM DRAIN, WATER VAULT AND WATER MANHOLE FRAME AND COVER SETS SHALL BE ADJUSTED TO THE NEW FINISHED SURFACE GRADE BY THE CONTRACTOR. THE USE OF CAST IRON RAISING RINGS WILL NOT BE ACCEPTED.
6. NO LONGER THAN 48 HOURS SHALL ELAPSE BETWEEN THE TIME A MANHOLE IS DUG OUT FROM THE NEWLY LAID ASPHALT AND THE TIME THAT THE FINISHED SURFACE OF ASPHALT IS PLACED AROUND THE FRAME SET TO FIT THE NEW STREET SECTION.
7. PLANTED AREAS ADJACENT TO THE PROPOSED WORK WHICH ARE DISTURBED BY THE CONTRACTOR SHALL BE PLANTED WITH SOD OR GROUND COVER TO MATCH EXISTING.
8. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED IN PLANS.
9. THE CONTRACTOR SHALL REMOVE THE EXISTING PAVEMENT, CURB, GUTTER, AND SIDEWALK WHERE NEW IMPROVEMENTS ARE REQUIRED.
10. UPON CONSULTING THE CITY PUBLIC WORKS DEPARTMENT AND CITY ARBORIST, THE CONTRACTOR SHALL REMOVE ANY TREE ROOTS WHICH HAVE DAMAGED EXISTING PAVEMENTS AND CURBS AND WHICH MAY POTENTIALLY DAMAGE NEW IMPROVEMENTS. ROOTS WITHIN 12 INCHES FROM PAVEMENT, BOTH HORIZONTALLY AND VERTICALLY, SHALL BE REMOVED PRIOR TO THE COMPACTION OF THE SUBGRADE. WHERE THIS REMOVAL MAY DAMAGE THE TREE'S ROOT SYSTEM, THE EXTENT OF REMOVAL SHALL BE DETERMINED BY THE CITY ARBORIST AND CITY ENGINEER. CONTRACTOR IS REQUIRED TO PROTECT TREES IN ACCORDANCE WITH SPMC CHAPTER 34.
11. UNDERGROUND UTILITIES ARE SHOWN SCHEMATICALLY ON THE PLANS. THE CONTRACTOR SHALL OBTAIN FROM THE RESPECTIVE OWNERS THE EXACT LOCATION OF THESE UTILITIES PRIOR TO ANY EXCAVATION WORK. LOCATION OF UTILITIES WITHIN THE PROJECT ARE ON FILE IN THE CITY ENGINEER'S OFFICE FOR REFERENCE. THE CONTRACTOR SHALL ALSO NOTE THAT FIELD MARKINGS MADE BY VARIOUS UTILITIES USING UNDERGROUND SERVICE ALERT (USA) SHALL BE CONSIDERED AS IDENTIFIED UTILITIES EVEN WHEN THEY ARE NOT SHOWN ON PLANS.
12. CONTRACTOR SHALL NOTIFY RESIDENTIAL PROPERTY OWNERS 72 HOURS AND BUSINESS ESTABLISHMENTS 96 HOURS PRIOR TO ANY CLOSURE OF THEIR EXISTING DRIVEWAYS.
13. ALL TREES SHALL REMAIN IN PLACE AND SHALL BE ADEQUATELY PROTECTED DURING CONSTRUCTION UNLESS OTHERWISE SPECIFIED IN PLANS.
14. ALL CONCRETE FOR REMOVAL SHALL BE SAW CUT STRAIGHT AND TRUE WITH A POWER SAW PER STANDARD SPECIFICATIONS.
15. ASPHALT CONCRETE PAVEMENT SHALL BE CONSTRUCTED JOINING GUTTER WITH ½" LIP.
16. THE COMPLETED ASPHALT PAVEMENT SHALL BE THOROUGHLY COMPACTED TO BE FREE FROM BUMPS, DEPRESSION OR IRREGULARITIES. ANY RIDGES, INDENTATIONS OR OTHER OBJECTIONABLE MARKS LEFT ON THE SURFACE OF THE NEW PAVEMENT SHALL BE ELIMINATED BY ROLLER OR OTHER MEANS.
17. LOCATIONS OF SURVEY WELL MONUMENTS WILL BE IDENTIFIED IN THE FIELD BY THE ENGINEER. CONTRACTOR TO GIVE 72 HOURS NOTICE TO THE ENGINEER.
18. ALL NEW SIDEWALKS SHALL HAVE WEAKENED PLANE JOINTS OR SCORELINES THAT MATCH EXISTING ADJACENT SIDEWALKS. IN LOCATIONS WHERE THERE ARE NO SIDEWALKS, THE WEAKENED PLANE JOINTS OR SCORELINES SHALL BE CONSTRUCTED AT REGULAR 10 FT INTERVALS IN ACCORDANCE TO APWA STANDARD PLANS.
19. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGES IMPOSED, INTENTIONALLY OR ACCIDENTALLY, TO EXISTING UTILITIES, BUILDINGS, OR OTHER AMENITIES, DUE TO THE ACTIONS OF THE CONTRACTORS, CONTRACTOR'S EMPLOYEES AND/OR CONTRACTOR'S SUBCONTRACTORS.
21. CONSTRUCTION AND INSTALLATION OF ALL ITEMS WITHIN THESE DOCUMENTS SHALL REQUIRE CLOSE COORDINATION BETWEEN TRADES INVOLVED IN UNDERGROUND AND UTILITY INSTALLATION, AND TREE LOCATION. THE CONTRACTOR'S WORK FORCE SHALL CONSIST OF PERSONS SKILLED IN THEIR TRADE COVERED BY THIS SCOPE OF WORK, APPRENTICES AND/OR UNSKILLED LABORERS SHALL BE UNDER THE DIRECT SUPERVISION OF SKILLED TRADESMEN AT ALL TIMES. REFER TO SPECIFICATIONS.
22. THE CONTRACTOR SHALL KEEP THE PREMISES CLEAN AND FREE OF EXCESS EQUIPMENT, MATERIALS AND RUBBISH INCIDENTAL TO HIS WORK. ALL RUBBLE, TRASH, DEBRIS OR UNWANTED MATERIALS RESULTING FROM DEMOLITION OR CONSTRUCTION SHALL BE DISPOSED OF IN A LEGAL AND LAWFUL MANNER TO AN APPROVED DISPOSAL SITE. IF DEBRIS REMAINS ON SITE FOR MORE THAN 12 HOURS, UNLESS PRE-APPROVED BY THE CITY, SUCH DEBRIS SHALL BE REMOVED BY THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
23. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL IN-FIELD LAYOUT, DIMENSIONING OF WORK, GRADES AND ELEVATIONS, AND WORK SCHEDULES UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL CAREFULLY INSPECT THE SITE AND SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH ANY WORK UNDER THIS CONTRACT, ANY DISCREPANCIES IN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL NOT WILLFULLY IMPLEMENT ANY WORK DESCRIBED IN THESE DOCUMENTS WHICH IS OBVIOUSLY IN ERROR, INTERFERES WITH EXISTING SITE FEATURES, OR CAUSES PROJECT COMPLICATION OR HARM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE SCALE OF THE DRAWING. WRITTEN DIMENSIONS TAKE PREFERENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY ALL PROPERTY LINES, LOT LINES, AND EASEMENTS PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERSONALLY VERIFYING WITH THE ENGINEER THAT ALL COPIES OF THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS ARE CURRENT AND APPROVED FOR CONSTRUCTION.
24. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND AGENCY INSPECTIONS PRIOR TO THE COMMENCEMENT OF WORK. ANY PERMITS, FEES, AND AGENCY INSPECTIONS REQUIRED SHALL BE PAID BY THE CONTRACTOR. IN THE EVENT THAT THE CITY HAS OBTAINED PERMITS, LICENSES OR OTHER AUTHORIZATIONS APPLICABLE TO THE WORK, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF SAID PERMIT, LICENSES AND OTHER AUTHORIZATIONS APPLICABLE TO THE WORK. THE CONTRACTOR SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROSECUTION OF THE WORK FOR THIS PROJECT. THE CONTRACTOR SHALL ALSO ACQUIRE ALL NECESSARY RIGHT-OF-WAY ENCROACHMENT PERMITS REQUIRED FOR TRAFFIC CONTROL AND LANE CLOSURES FROM THE CITY OF GLENDALE. ENCROACHMENT PERMIT SHALL BE OBTAINED BY THE CONTRACTOR IN SUFFICIENT TIME TO PREVENT DELAYS TO THE WORK NECESSARY TO THE WORK NECESSARY TO COMPLETE THIS PROJECT. THE CONTRACTOR ACKNOWLEDGES THAT HE HAS VISITED THE SITE AND IS FAMILIAR WITH AND HAS PROVIDED FOR THE CONDITIONS THAT EXIST HEREIN AND THAT HE HAS CHECKED WITH THE APPROPRIATE GOVERNING AGENCIES AND HAS MADE PROVISIONS FOR ANY AND ALL REQUIREMENTS OF THOSE AGENCIES.
25. THE CONTRACTOR SHALL AT ALL TIMES PROTECT HIS WORK FROM DAMAGE AND THEFT AND REPLACE ALL DAMAGED OR STOLEN PARTS AT HIS EXPENSE UNTIL THE WORK IS ACCEPTED IN WRITING BY THE CITY. CONTRACTOR IS LIABLE FOR ALL DAMAGE OR INJURY CAUSED BY ANY WORK OR STORAGE OF MATERIALS ON THE SITE.
26. IT IS THE CONTRACTORS RESPONSIBILITY TO CLEAN OUT AND MAINTAIN THE EXISTIN DRAINAGE SYSTEM DURING THE COURSE OF CONSTRUCTION.
27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERSONALLY VERIFYING THAT ALL COPIES OF THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS ARE CURRENT AND APPROVED FOR CONSTRUCTION.
28. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE AS REQUESTED BY THE CITY. THE CONTRACTOR SHALL ADHERE TO THE SCHEDULE AS INCORPORATED INTO THE CITY ENGINEER'S (OR HIS REPRESENTATIVES) MASTER SCHEDULE. THE CONTRACTOR SHALL ADHERE TO THE CONSTRUCTION SEQUENCE UNLESS NOTIFIED IN WRITING BY THE CITY ENGINEER.
29. ALL UNDERGROUND UTILITIES SHALL HAVE WARNING TAPES PLACED 6" BELOW FINISHED BURIED SURFACE OF ALL TRENCHES IN A CONTINUOUS LENGTH OF THE ENTIRE UTILITY RUN.
30. REPLACE ALL TURF GRASS WITH SOD WHERE TRENCHING FOR UTILITY LINES HAS OCCURED.
31. ALL UTILITY LIDS TO BE CONCRETE COMPOSITE LIDS.
32. ANY AC PAVING DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER AT NO ADDITIONAL COST.
33. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY TOILET FACILITIES. (GLENDALE BUILDING CODE 118)

APPROVED*

SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PASADENA PLANNING DIVISION. THIS PROJECT SUBSTANTIALLY CONFORMS TO THE PLANNING AND ZONING STANDARDS FOR THE CITY.

PLANNER: Matt Chang DATE: 7/3/24

NOTES: Grevelia Park

*PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING-APPROVED PLANS AND CONDITIONS OF APPROVAL. MODIFICATIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.

GOVERNING CODES

THESE PLAN COMPLY WITH THE FOLLOWING:

SOUTH PASADENA MUNICIPAL CODE (SPMC)

THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE, TITLE 24 (CBC) AND LA CO AMENDMENTS

STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREENBOOK" LASTEST EDITION

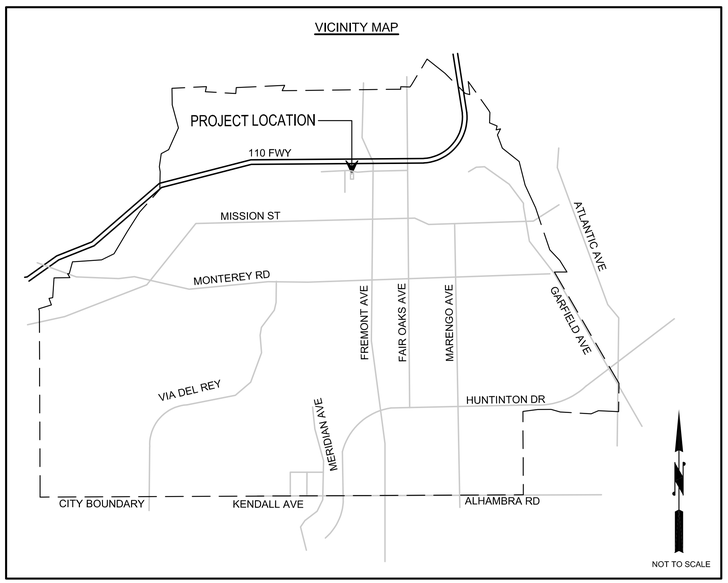
THE 2022 CALIFORNIA ELECTRIC CODE, TITLE 24 (UBC)

THE 2022 EDITION OF THE NATIONAL ELECTRICAL CODE (NEP)

AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM)

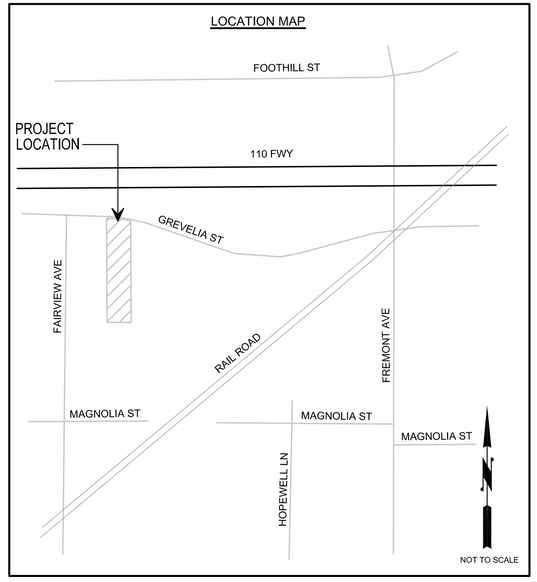
AMERICAN WITH DISABILITY ACT, 1990 (ADA)

VICINITY MAP



NOT TO SCALE

LOCATION MAP



NOT TO SCALE

OWNER:
CITY OF SOUTH PASADENA
1414 MISSION STREET
SOUTH PASADENA, CA 91030
PHONE: (626) 403-7240
CONTACT: PUBLIC WORKS

LANDSCAPE ARCHITECT:
DAVID VOLZ DESIGN
151 KALMUS DRIVE, SUITE M8
COSTA MESA, CA 92626
PHONE: (714) 641-1300
CONTACT: GARY VASQUEZ RLA# 3993

CIVIL ENGINEER:
DMS CONSULTANTS, INC
12371 S LEWIS ST #203
GARDEN GROVE, CA 92840
PHONE: (714) 740-8840
CONTACT: SURRENDER DEWAN

ELECTRICAL ENGINEER:
DESIGN WEST ENGINEERING
275 WEST HOSPITALITY LANE, SUITE 100
SAN BERNARDINO, CA 92408
PHONE: (909) 890-3700
CONTACT: ROY MORALES

GEOTECHNICAL ENGINEER:
GLOBAL GEO-ENGINEERING, INC
3 CORPORATE PARK # 270, IRVINE, CA 92606
PHONE: (949) 221-0900
GEOTECHNICAL REPORT DATED 10/28/2021
GEOTECHNICAL ENGINEER: MOHAN B. UPASANI RGE # 2301

ABBREVIATIONS

AC	ASPHALT CONCRETE	INV	INVERT	DWG	DRAWING	SF	SQUARE FOOT
ALT	ALTERNATE	LB	POUND	EA	EACH	SPEC	SPECIFICATIONS
APC	ADJACENT TO POURED CONCRETE	LF	LINEAR FOOT	EDC	EDGE OF CURB	SDMH	SEWAGE DRAIN MANHOLE
BF	BOTTOM OF FOOTING	LT	LIGHT POLE	EL	ELEVATION	STA	STATION
BM	BENCH MARK	LS	LUMP SUM	EJ	EXPANSION JOINT	STRD	STANDARD
BS	BOTTOM OF STEP	MAX	MAXIMUM	EXIST	EXISTING	SW	SIDEWALK
B/W	BACK OF WALL	MH	MANHOLE, MAINTENANCE HOLE	FG	FINISHED GRADE	SY	SQUARE YARD
CB	CATCH BASIN	MISC	MISCELLANEOUS	FH	FIRE HYDRANT	TC	TOP OF CURB
CF	CUBIC FOOT	NAT	NATIVE	FL	FLOW LINE	TD	TOP OF PLAY EQ. DECK
CHLK	CHAINLINK	NIC	NOT IN CONTRACT	FS	FINISHED SURFACE	TEL	TELEPHONE
CL	CENTER LINE	N.T.S.	NOT TO SCALE	FW	FACE OF WALL	TF	TOP OF FOOTING
CLF	CHAIN LINK FENCE	OC	ON CENTER	G	GRADE	TG	TOP OF GRATE
CLR	CLEARANCE	OD	OUTSIDE DIAMETER	GALV	GALVANIZED	TS	TOP OF STEP
CNC	CONCRETE	PA	PLANTING AREA	GB	GRADE BREAK	T. SW	TOP OF SEATWALL
CO	CLEANOUT	PCC	PORTLAND CEMENT CONCRETE	H	HIGH OR HEIGHT	TW	TOP OF WALL
CONC	CONCRETE	PE	PAD ELEVATION	HC	HANDICAPPED	TYP	TYPICAL
CY	CUBIC YARD	PL	PROPERTY LINE	HP	HIGH POINT	USA	UNDERGROUND SERVICE ALERT
DEG	DEGREE	PSI	POUNDS PER SQUARE INCH	ID	INSIDE DIAMETER	UGCABLE	UNDERGROUND CABLE
DN	DOWN	PVC	POLYVINYL CHLORIDE	R	RADIUS	VERT	VERTICAL
INV	INVERT	DG	DECOMPOSED GRANITE	R/W	RIGHT-OF-WAY	W	WIDTH
LB	POUND	DIA	DIAMETER	RCV	REMOTE CONTROL VALVE	WM	WATER METER
						WMV	WATER VALVE

CONTACT INFO:

FOR EMERGENCIES AND FOR NON-BUSINESS HOURS PLEASE USE THE CONTACT INFO BELOW.

PUBLIC WORKS ENGINEERING/INSPECTION ASSISTANCE (626) 403-7240
CITY NON-EMERGENCY ASSISTANCE/POLICE DISPATCH (626) 403-7270
FOR EMERGENCY ASSISTANCE, PLEASE CALL 911

BUILDING AND SAFETY APPROVED

REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.

VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.

6/13/2024, 11:04:41 AM
SP-B54562

APPROVED BY: _____

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 811

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4	G.1	GRADING PLAN
5	G.2	GRADING DETAILS
6	EC.1	EROSION CONTROL PLAN
7	HC.1	HORIZONTAL CONTROL PLAN
8	LC.1	CONSTRUCTION PLAN
9	CD.1	CONSTRUCTION DETAILS
10	CD.2	CONSTRUCTION DETAILS
11	LI.1	IRRIGATION PLAN
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13	LI.3	IRRIGATION DETAILS
14	LI.4	IRRIGATION NOTES AND CALCULATIONS
15	LP.1	PLANTING PLAN
16	LP.2	PLANTING DETAILS
17	E0.1	ELECTRICAL LEGENDS AND NOTES
18	E0.2	LUMINAIRE SCHEDULE & TITLE 24
19	E0.3	SINGLE LINE DIAGRAM
20	E1.1	ELECTRICAL SITE LIGHTING PLAN
21	E1.2	SITE PHOTOMETRIC PLAN
22	E3.1	ELECTRICAL TITLE 24 FORMS
23	E4.1	ELECTRICAL DETAILS
24	AC.1	ACCESSIBILITY PLAN

AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, I HAVE READ AND UNDERSTAND THE REQUIREMENTS TO CONTROL STORM WATER POLLUTION FROM SEDIMENTS, EROSION, AND CONSTRUCTION MATERIALS, AND I CERTIFY THAT I WILL COMPLY WITH THESE REQUIREMENTS. I, OR MY REPRESENTATIVE, CONTRACTOR, DEVELOPER, OR ENGINEER WILL MAKE CERTAIN THAT ALL BMP SHOWN ON THIS PLAN WILL BE FULLY IMPLEMENTED, AND ALL EROSION CONTROL DEVICES WILL BE KEPT CLEAN AND FUNCTIONING. PERIODIC INSPECTIONS OF THE BMPS WILL BE CONDUCTED AND A CURRENT LOG, SPECIFYING THE EXACT NATURE OF THE INSPECTION AND ANY REMEDIAL MEASURES WILL BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES AND WILL BE AVAILABLE FOR THE REVIEW BY THE BUILDING OFFICIAL. AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, "I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/OR INACCURATE INFORMATION, FAILING TO UPDATE THE LOCAL SWPPP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/OR ADEQUATELY IMPLEMENT THE LOCAL SWPPP MAY RESULT IN REVOCATION OF GRADING
AND/OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW."

SURENDER DEWAN, RCE 34559 — 5-22-24
NAME OF SIGNER — SIGNATURE OF SIGNER — DATE

AS ENGINEER OR ARCHITECT OF THE PROJECT, I HAVE REVIEWED THE LOW IMPACT DEVELOPMENT (LID) STANDARDS MANUAL BY COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS, AND HAVE PROPOSED THE IMPLEMENTATION OF THE PERMANENT BEST MANAGEMENT PRACTICES (BMPS) APPLICABLE TO EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THE PROJECT'S STORM WATER RUNOFF. THE SELECTED BMPS WILL BE INSTALLED PER THE APPROVED PLANS AND AS RECOMMENDED BY THE PRODUCT MANUFACTURER AS APPLICABLE. AS THE ARCHITECT/ENGINEER OF RECORD, I HAVE SELECTED APPROPRIATE BMPS TO EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THIS PROJECTS CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE PROJECT OWNER AND CONTRACTOR ARE AWARE THAT THE SELECTED BMPS MUST BE INSTALLED, MONITORED, AND MAINTAINED TO ENSURE THEIR EFFECTIVENESS. THE BMPS NOT SELECTED FOR IMPLEMENTATION ARE REDUNDANT OR DEEMED NOT APPLICABLE TO THE PROPOSED CONSTRUCTION ACTIVITY."

SURENDER DEWAN, RCE 34559 — 5-22-24
NAME OF SIGNER — SIGNATURE OF SIGNER — DATE

SCOPE OF WORK

NEW PARK IN A CITY OWNED LOT. WORK INCLUDES CONSTRUCTION OF NEW CONCRETE PLAZA AND PATHWAYS, INSTALLATION OF BOLLARDS, PERIMETER FENCING, ENTRY COLUMN, SEATING AREAS, SMALL CHILDREN'S PLAY AREA, DRINKING FOUNTAIN, PEDESTRIAN LIGHTING, DECORATIVE BOULDERS, GRASS AREA, SHRUB PLANTING, TREES, AND IRRIGATION. THERE WILL BE MINIMAL GRADING WORK AND INSTALLATION OF AN UNDERGROUND STORMWATER INFITRATION SYSTEM.

LEGAL DESCRIPTION

LOT 2 OF THE RAAB TRACT AS SHOWN ON MISCELLANEOUS RECORDS BOOK 7 PAGE 65, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CALIFORNIA.

SURVEY INFORMATION

BASIS OF BEARINGS

THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W.35 EPOCH.

BENCHMARK NOTE

BENCHMARK ELEV = 698.82'

SITE BENCHMARK
FOUND "+" ON TOP OF CURB

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

REGISTERED PROFESSIONAL ENGINEER SURENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA

DMS CONSULTANTS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT GARY M. VASQUEZ NO. 3993 SIGNATURE Exp. Feb. 2025 6/3/24 DATE STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions	By

Project :

GREVELIA STREET PARK

Owner:

City of South Pasadena

Project No :
Drawn By : PC / LP
Checked By : GV / ES
Date : SEPTEMBER 2023
Scale : AS SHOWN
Drawing Title :

TITLE SHEET

Drawing No :

T.1

SHEET 1 OF 24

Form A - (Both Form A and Form. B Required)

ACCEPTANCE OF EMPLOYMENT BY CONSULTANTS

INSTRUCTIONS: This document must be completed and filed by the owner with the City together with an *Acknowledgment to Employ Consultants* form before the grading permit can be issued.

SITE ADDRESS	1107 Grevelia Street
ASSESSOR PARCEL NUMBER	
BOOK 5315 PAGE 011 PARCEL 904	
TRACT NUMBER/LEGAL DESCRIPTION	LOT 2 OF THE RAAB TRACT, IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN MAP BOOK 7 AT PAGE 185
OWNER'S NAME	City of South Pasadena
STREET ADDRESS	1414 Mission Street
CITY / STATE / ZIP CODE	South Pasadena / CA / 92030
DAYTIME PHONE NUMBER	(626) 403-7200
EVENING PHONE NUMBER	(626) 403-7200

The consultants identified in the adjacent column verify by signature(s) that they have been retained as consultant(s) and agree to notify the City within 48 hours if such employment is terminated. Each consultant/field engineer also agrees to complete the following forms, as appropriate: Foundation Excavation, Soil Compaction, Initial Engineering Geology, Final Engineering Geology, Rough Grading, and Finish Grading.

FIELD ENGINEER

FIELD ENGINEER'S NAME	Surender Dewan
LICENSE NUMBER	RCE 23559
STREET ADDRESS	12371 Lewis St., #203
CITY / STATE / ZIP CODE	Garden Grove / CA / 92840
DAYTIME PHONE NUMBER	(714) 740-8840
EVENING PHONE NUMBER	(714) 740-8840
SIGNATURE	

SOILS ENGINEER

SOIL ENGINEER'S NAME	Mohan B. Upasani
LICENSE NUMBER	2301
FIRM NAME	Global Geo-Engineering Inc.
STREET ADDRESS	3 Corporate Pl., #270
CITY / STATE / ZIP CODE	Irvine / CA / 92606
DAYTIME PHONE NUMBER	949 221-0900 x 101
EVENING PHONE NUMBER	same
SIGNATURE	

ENGINEERING GEOLOGIST

ENGINEERING GEOLOGIST'S NAME	
LICENSE NUMBER	
FIRM NAME	
STREET ADDRESS	
CITY / STATE / ZIP CODE	
DAYTIME PHONE NUMBER	
EVENING PHONE NUMBER	
SIGNATURE	

V20200831

Form B - (Both Form A and Form B Required)
ACKNOWLEDGMENT TO EMPLOY CONSULTANT

INSTRUCTIONS: This document must be completed and filed by the owner with the City, together with *an Acceptance of Employment by Consultants* form before the grading permit can be issued.

The owner of the property described below hereby acknowledges by signature that, as a condition of the grading permit and during all work authorized by said permit, registered civil engineer(s) will be retained to perform the duties of the Design Engineer and Field Engineer in accordance with the requirements of Appendix J of the current Building Code, and further, that a soil engineer and/or engineering geologist (when required) will be employed to make tests, investigations, and file the reports that may be required for compliance with said Code.

SITE ADDRESS	1107 Grevelia Street
ASSESSOR PARCEL NUMBER	
BOOK 5315 PAGE 011 PARCEL 904	
TRACT NUMBER/LEGAL DESCRIPTION	LOT 2 OF THE RAAB TRACT, IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN MAP BOOK 7 AT PAGE 185
OWNER'S NAME	City of South Pasadena
STREET ADDRESS	1414 Mission Street
CITY / STATE. / ZIP CODE	South Pasadena / CA / 92030
DAYTIME PHONE NUMBER	(626) 403-7200
EVENING PHONE NUMBER	(626) 403-7200
OWNER'S SIGNATURE	Sheila Pautsch

FIELD ENGINEER

FIELD ENGINEER'S NAME	Surender Dewan
LICENSE NUMBER	RCE 23559
FIRM NAME	DMS Consulting
STREET ADDRESS	12371 Lewis St., #203
CITY / STATE / ZIP CODE	Garden Grove / CA / 92840
DAYTIME PHONE NUMBER	(714) 740-8840
EVENING PHONE NUMBER	(714) 740-8840

SOILS ENGINEER

SOIL ENGINEER'S NAME	Mohan B. Upasani
LICENSE NUMBER	2301
FIRM NAME	Global Geo-Engineering inc.
STREET ADDRESS	3 Corporate Pl., #270
CITY / STATS / ZIP CODE	Irvine / CA / 92606
DAYTIME PHONE NUMBER	949-221-0900 x101
EVENING PHONE NUMBER	Same as day

ENGINEERING GEOLOGIST

ENGINEERING GEOLOGIST'S NAME	
LICENSE NUMBER	
FIRM NAME	
STREET ADDRESS	
CITY / STATE / ZIP CODE	
DAYTIME PHONE NUMBER	
EVENING PHONE NUMBER	

V20200831

GENERAL GRADING NOTES

GENERAL

1. CALIFORNIA TITLE 24 COMPLIANCE. ALL WORK SHALL CONFORM TO ALL REQUIREMENTS OF STATE OF CALIFORNIA TITLE 24 REGARDLESS OF THE INFORMATION INDICATED ON THESE PLANS. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL SUPERVISING THE CONSTRUCTION TO ENSURE THAT THE WORK IS DONE IN ACCORDANCE WITH CODE REQUIREMENTS PRIOR TO REQUESTING INSPECTION.
2. BUILDING OFFICIAL'S AUTHORITY. THE ISSUANCE OF A PERMIT BASED OR APPROVAL OF PLANS BY THE BUILDING OFFICIAL SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ANY DISCOVERED ERRORS OR FROM PREVENTING ANY VIOLATION OF ANY CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR OTHER REGULATIONS.
3. WORKERS' COMPENSATION. AT TIME OF PERMIT ISSUANCE, CONTRACTOR SHALL SHOW THEIR VALID WORKERS' COMPENSATION INSURANCE CERTIFICATE.
4. SEPARATE PERMITS. SEPARATE APPROVAL AND PERMIT IS REQUIRED FROM THE CITY PUBLIC WORKS DEPARTMENT FOR ALL WORK LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY.
5. CONSTRUCTION FENCING. CONSTRUCTION FENCING SHALL BE MAINTAINED AROUND THE PERIMETER OF THE SITE AT ALL TIMES UNLESS THE CITY BUILDING DIVISION APPROVES THE USE OF 24 HOUR SECURITY PATROLS.
6. PERMITTED WORK. THE ISSUANCE OF THE GRADING PERMIT ASSOCIATED WITH THESE PLANS SHALL CONSTITUTE AN AUTHORIZATION TO DO ONLY THE WORK WHICH IS DESCRIBED ON THE PERMIT AND PLANS AS APPROVED BY THE BUILDING OFFICIAL.
7. NOTIFICATION TO ADJACENT PROPERTY OWNERS. OWNERS OF PROPERTY ADJACENT TO THE WORK SITE SHALL BE NOTIFIED OF ANY PROPOSED EXCAVATIONS IN ACCORDANCE WITH CALIFORNIA CIVIL CODE SECTION 832.
8. ADDITIONAL AUTHORITIES. PERMITS ISSUED UNDER THE PROVISIONS OF THE CURRENT BUILDING CODE SHALL NOT RELIEVE THE OWNER OF THE RESPONSIBILITY FOR SECURING PERMITS, APPROVALS, AND/OR LICENSES THAT MAY BE REQUIRED FROM OTHER AGENCY HAVING AUTHORITY TO REGULATE ANY PORTION OF THE WORK.
9. MODIFICATIONS. ANY MODIFICATIONS OF OR CHANGES TO THE APPROVED GRADING PLANS SHALL BE APPROVED BY THE CITY. OWNER ASSUMES ALL RISK FOR ANY CHANGED WORK PERFORMED PRIOR TO APPROVAL BY THE CITY.
10. ADDITIONAL REPORTS. IN ACCORDANCE WITH LOS ANGELES COUNTY BUILDING CODE SECTIONS 111, 113, J104.3, AND J105.2, THE BUILDING OFFICIAL MAY REQUIRE INVESTIGATIONS AND REPORTS BY AN APPROVED SOIL TESTING AGENCY, GEOTECHNICAL ENGINEER AND/OR ENGINEERING GEOLOGIST, AND FIELD ENGINEER. INSPECTION REPORTS SHALL BE PROVIDED WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL.
11. CHANGE OF OWNERSHIP. UNLESS OTHERWISE REQUIRED BY THE BUILDING OFFICIAL, WHEN A GRADING PERMIT HAS BEEN ISSUED ON A SITE AND THE OWNER SELLS THE PROPERTY PRIOR TO FINAL GRADING APPROVAL, THE NEW PROPERTY OWNER SHALL BE REQUIRED TO OBTAIN A NEW GRADING PERMIT.
12. DUST CONTROL. GRADING CONTRACTOR SHALL EXERCISE EXTRA CARE TO MINIMIZE THE EFFECTS FROM DISTURBED EARTH AND/OR DUST. DUST SHALL BE CONTROLLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AND APPLICABLE COUNTY AND STATE LAWS. AT A MINIMUM, CONTINUOUS WETTING SHALL BE PERFORMED WHILE ANY EARTHWORK IS BEING PERFORMED. IF THE WATER IS TO BE OBTAINED FROM THE LOCAL MUNICIPAL WATER SUPPLY SYSTEM, THE GRADING CONTRACTOR SHALL FIRST OBTAIN APPROVAL FROM THE APPROPRIATE WATER PROVIDER.

INSPECTION

1. OBLIGATION TO INSPECT. GRADING OPERATION FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY THE CITY IN ACCORDANCE WITH BUILDING CODE SECTIONS 108 AND J105. IN ADDITION, PROFESSIONAL INSPECTION OF GRADING OPERATIONS SHALL BE PERFORMED BY THE FIELD ENGINEER, GEOTECHNICAL ENGINEER AND THE ENGINEERING GEOLOGIST RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH THIS SECTION FOR ENGINEERED GRADING (DEFINED IN SECTION J104.2.3), AND AS REQUIRED BY THE BUILDING OFFICIAL FOR REGULAR GRADING (DEFINED IN SECTION J104.2.2).
2. SPECIAL INSPECTION. THE SPECIAL INSPECTION REQUIREMENTS OF BUILDING CODE SECTION 1704.7 SHALL APPLY TO WORK PERFORMED UNDER A GRADING PERMIT. IN ADDITION TO THE CALLED INSPECTIONS SPECIFIED IN SECTION J105.7, THE BUILDING OFFICIAL MAY MAKE SUCH OTHER INSPECTIONS AS MAY BE DEEMED NECESSARY TO DETERMINE THAT THE WORK IS BEING PERFORMED IN CONFORMANCE WITH THE REQUIREMENTS OF THIS CODE. THE BUILDING OFFICIAL MAY REQUIRE CONTINUOUS INSPECTION OF DRAINAGE DEVICES BY THE FIELD ENGINEER IN ACCORDANCE WITH THIS SECTION WHEN THE BUILDING OFFICIAL DETERMINES THAT THE DRAINAGE DEVICES ARE NECESSARY FOR THE PROTECTION OF EXISTING STRUCTURES AND/OR ADJACENT PROPERTY. IN ADDITION TO THE SPECIAL INSPECTION REQUIREMENTS OF 1704.7, SPECIAL INSPECTION SHALL BE PROVIDED FOR: A. DRIVEN DEEP FOUNDATIONS AND CONNECTION GRADE BEAMS IN ACCORDANCE WITH SECTION 1704.8; B. CAST-IN-PLACE DEEP FOUNDATIONS AND CONNECTION GRADE BEAMS IN ACCORDANCE WITH SECTION 1707.9.
3. FIELD ENGINEER. THE FIELD ENGINEER SHALL PROVIDE PROFESSIONAL INSPECTION OF THOSE PARTS OF THE GRADING PROJECT WITHIN SUCH ENGINEER'S AREA OF TECHNICAL SPECIALTY, OVERSEE AND COORDINATE ALL FIELD SURVEYS, SET GRADE STAKES, AND PROVIDE SITE INSPECTIONS DURING GRADING OPERATIONS TO ENSURE THE SITE IS GRADED IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND THE APPROPRIATE REQUIREMENTS OF THE CURRENT BUILDING CODE. DURING SITE GRADING, AND AT THE COMPLETION OF BOTH ROUGH GRADING AND FINAL GRADING, THE FIELD ENGINEER SHALL SUBMIT STATEMENTS AND REPORTS AS REQUIRED BY SECTIONS J105.11 AND J105.12. IF REVISED GRADING PLANS ARE REQUIRED DURING THE COURSE OF THE WORK, THEN THEY SHALL BE PREPARED BY A CIVIL ENGINEER AND APPROVED BY THE BUILDING OFFICIAL.
4. GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE PROFESSIONAL INSPECTION OF THOSE PARTS OF THE GRADING PROJECT WITHIN SUCH ENGINEER'S AREA OF TECHNICAL SPECIALTY, WHICH SHALL INCLUDE OBSERVATION DURING GRADING AND TESTING FOR REQUIRED COMPACTION. THE GEOTECHNICAL ENGINEER SHALL PROVIDE SUFFICIENT OBSERVATION DURING THE PREPARATION OF THE NATURAL GROUND AND PLACEMENT AND COMPACTION OF THE FILL TO VERIFY THAT SUCH WORK IS BEING PERFORMED IN ACCORDANCE WITH THE CONDITIONS OF THE APPROVED PLAN AND THE APPROPRIATE REQUIREMENTS OF THIS CHAPTER. IF CONDITIONS DIFFERING FROM THE APPROVED GEOTECHNICAL ENGINEERING AND ENGINEERING GEOLOGY REPORTS ARE ENCOUNTERED DURING GRADING, THE GEOTECHNICAL ENGINEER SHALL PROVIDE REVISED RECOMMENDATIONS TO THE PERMITTEE, THE BUILDING OFFICIAL AND THE FIELD ENGINEER.
5. ENGINEERING GEOLOGIST. THE ENGINEERING GEOLOGIST SHALL PROVIDE PROFESSIONAL INSPECTION OF THOSE PARTS OF THE GRADING PROJECT WITHIN SUCH ENGINEER' S AREA OF TECHNICAL SPECIALTY, WHICH SHALL INCLUDE PROFESSIONAL INSPECTION OF THE BEDROCK EXCAVATION TO DETERMINE IF CONDITIONS ENCOUNTERED ARE IN CONFORMANCE WITH THE APPROVED REPORT. IF CONDITIONS DIFFERING FROM THE APPROVED ENGINEERING GEOLOGY REPORT ARE ENCOUNTERED, THE ENGINEERING GEOLOGIST SHALL PROVIDE REVISED RECOMMENDATIONS TO THE GEOTECHNICAL ENGINEER.
6. SOILS ENGINEER OF RECORD. THE DUTIES OF THE SOILS ENGINEER OF RECORD SHALL INCLUDE THE FOLLOWING:

a. OBSERVATION OF CLEARED AREAS AND BENCHES PREPARED TO RECEIVE FILL;
b. OBSERVATION OF THE REMOVAL OF ALL UNSUITABLE SOILS AND OTHER MATERIALS;
c. THE APPROVAL OF SOILS TO BE USED AS FILL MATERIAL;
d. THE INSPECTION OF PLACEMENT AND COMPACTION OF FILL MATERIALS; AND
e. THE TESTING OF ALL COMPLETED FILLS.

7. COMPACTION TESTING. COMPACTION TEST SHALL NOT BE PERFORMED BY INDIVIDUALS OTHER THAN THE SOILS ENGINEER OF RECORD UNLESS REQUESTED BY THE SOILS ENGINEER OF RECORD AND APPROVED BY THE CITY BUILDING DIVISION.
8. PERMITTEE. THE PERMITTEE SHALL BE RESPONSIBLE FOR ENSURING THAT THE GRADING IS PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE. THE PERMITTEE SHALL ENGAGE PROJECT CONSULTANTS, IF REQUIRED UNDER THE PROVISIONS OF THIS CODE, TO PROVIDE PROFESSIONAL INSPECTIONS ON A TIMELY BASIS. THE PERMITTEE SHALL ACT AS A COORDINATOR BETWEEN THE PROJECT CONSULTANTS, THE CONTRACTOR AND THE BUILDING OFFICIAL. IN THE EVENT OF CHANGED CONDITIONS, THE PERMITTEE SHALL BE RESPONSIBLE FOR INFORMING THE BUILDING OFFICIAL OF SUCH CHANGE AND SHALL PROVIDE REVISED PLANS FOR APPROVAL.
9. THE PERMITTEE SHALL CALL FOR AN INSPECTION BY THE BUILDING OFFICIAL AT THE FOLLOWING VARIOUS STAGES OF WORK AND SHALL OBTAIN THE APPROVAL OF THE BUILDING OFFICIAL PRIOR TO PROCEEDING TO THE NEXT STAGE OF WORK:

a. PRE-GRADE. BEFORE ANY CONSTRUCTION OR GRADING ACTIVITIES OCCUR AT THE SITE. PERMITTEE SHALL SCHEDULE A PREGRADE INSPECTION WITH THE BUILDING OFFICIAL. THE PERMITTEE SHALL ENSURE THAT ALL PROJECT CONSULTANTS ARE PRESENT AT THE PRE-GRADE INSPECTION.
b. INITIAL. WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNAPPROVED FILL AND HAS BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL. NO FILL SHALL HAVE BEEN PLACED PRIOR TO THIS INSPECTION.
c. ROUGH. WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED, DRAINAGE TERRACES, SWALES AND OTHER DRAINAGE DEVICES NECESSARY FOR THE PROTECTION OF THE BUILDING SITES FROM FLOODING HAVE BEEN INSTALLED, BERMS HAVE BEEN INSTALLED AT THE TOP OF THE SLOPES, AND THE STATEMENTS REQUIRED BY SECTION 1105.12 HAVE BEEN RECEIVED.
d. FINAL. WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES NECESSARY TO DRAIN THE BUILDING PAD HAVE BEEN INSTALLED, SLOPE PLANTING HAS BEEN ESTABLISHED, IRRIGATION SYSTEMS HAVE BEEN INSTALLED, AND THE AS-BUILT PLANS AND REQUIRED STATEMENTS AND REPORTS HAVE BEEN SUBMITTED.

10. ROUTINE FIELD INSPECTIONS AND REPORTS. UNLESS OTHERWISE DIRECTED BY THE BUILDING OFFICIAL, THE FIELD ENGINEER FOR ALL ENGINEERED GRADING PROJECTS SHALL PREPARE ROUTINE INSPECTION REPORTS AND SHALL FILE THESE REPORTS WITH THE BUILDING OFFICIAL AS FOLLOWS:

a. BI-WEEKLY DURING ALL TIMES WHEN GRADING OF 400 CUBIC YARDS OR MORE PER WEEK IS OCCURRING ON THE SITE;
b. MONTHLY, AT ALL OTHER TIMES; AND
c. AT ANY TIME WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL.

SUCH REPORTS SHALL CERTIFY TO THE BUILDING OFFICIAL THAT THE FIELD ENGINEER HAS INSPECTED THE GRADING SITE AND RELATED ACTIVITIES AND HAS FOUND THEM IN COMPLIANCE WITH THE APPROVED GRADING PLANS AND SPECIFICATIONS, THE BUILDING CODE, ALL GRADING PERMIT CONDITIONS, AND ALL OTHER APPLICABLE ORDINANCES AND REQUIREMENTS. THE REPORTS SHALL CONFORM TO A STANDARD "REPORT OF GRADING ACTIVITIES" FORM WHICH SHALL BE PROVIDED BY THE BUILDING OFFICIAL.

11. ROUGH AND FINAL GRADING CERTIFICATIONS. CONSULTANT CERTIFICATIONS AND/OR CONTRACTOR CERTIFICATIONS SHALL BE DELIVERED TO THE CITY ON FORMS PROVIDED BY THE CITY BASED ON THE ACTUAL PROJECT WORK. NO RELEASE OF ANY GRADING SECURITY WILL BE GIVEN UNTIL REQUIRED ROUGH GRADING CERTIFICATIONS HAVE BEEN PROVIDED TO AND APPROVED BY THE BUILDING DIVISION.
12. NOTIFICATION OF NONCOMPLIANCE. IF, IN THE COURSE OF FULFILLING THEIR RESPECTIVE DUTIES UNDER THIS CHAPTER, THE FIELD ENGINEER, THE GEOTECHNICAL ENGINEER OR THE ENGINEERING GEOLOGIST DETERMINES THAT THE WORK IS NOT BEING DONE IN CONFORMANCE WITH THIS CHAPTER OR THE APPROVED GRADING PLANS, THE FIELD ENGINEER, GEOTECHNICAL ENGINEER OR THE ENGINEERING GEOLOGIST SHALL IMMEDIATELY REPORT, IN WRITING, THE DISCREPANCIES AND THE RECOMMENDED CORRECTIVE MEASURES TO THE PERMITTEE AND TO THE BUILDING OFFICIAL.
13. TRANSFER OF RESPONSIBILITY. IF THE FIELD ENGINEER, THE GEOTECHNICAL ENGINEER, OR THE ENGINEERING GEOLOGIST OF RECORD IS CHANGED AT ANY TIME AFTER THE GRADING PLANS REQUIRED PURSUANT TO SECTION J104.2.2 OR J104.2.3 HAVE BEEN APPROVED BY THE BUILDING OFFICIAL, THE PERMITTEE SHALL IMMEDIATELY PROVIDE WRITTEN NOTICE OF SUCH CHANGE TO THE BUILDING OFFICIAL. THE BUILDING OFFICIAL MAY STOP THE GRADING FROM COMMENCING OR CONTINUING UNTIL THE PERMITTEE HAS IDENTIFIED A REPLACEMENT AND THE REPLACEMENT HAS AGREED IN WRITING TO ASSUME RESPONSIBILITY FOR THOSE PARTS OF THE GRADING PROJECT THAT ARE WITHIN THE REPLACEMENT'S AREA OF TECHNICAL COMPETENCE.

COMPLETION OF WORK

1. UPON COMPLETION OF THE ROUGH GRADING WORK AND AT THE FINAL COMPLETION OF THE WORK, THE FOLLOWING REPORTS AND DRAWINGS AND SUPPLEMENTS THERETO ARE REQUIRED FOR ENGINEERED GRADING OR WHEN PROFESSIONAL INSPECTION IS OTHERWISE REQUIRED BY THE BUILDING OFFICIAL:

a. AN "AS-BUILT" GRADING PLAN PREPARED BY THE FIELD ENGINEER RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH SECTION J105.3 SHOWING ALL PLAN REVISIONS AS APPROVED BY THE BUILDING OFFICIAL. THIS SHALL INCLUDE ORIGINAL GROUND SURFACE ELEVATIONS, AS-BUILT GROUND SURFACE ELEVATIONS, LOT DRAINAGE PATTERNS, AND THE LOCATIONS AND ELEVATIONS OF SURFACE DRAINAGE FACILITIES AND THE OUTLETS OF SUBSURFACE DRAINS. AS-BUILT LOCATIONS, ELEVATIONS AND DETAILS OF SUBSURFACE DRAINS SHALL BE SHOWN AS REPORTED BY THE GEOTECHNICAL ENGINEER.

THE AS-BUILT GRADING PLAN SHALL BE ACCOMPANIED BY A CERTIFICATION BY THE FIELD ENGINEER THAT TO THE BEST OF HIS OR HER KNOWLEDGE, THE WORK WITHIN THE FIELD ENGINEER'S AREA OF RESPONSIBILITY WAS DONE IN ACCORDANCE WITH THE FINAL APPROVED GRADING PLAN.

b. A REPORT PREPARED BY THE GEOTECHNICAL ENGINEER RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH SECTION J105.4, INCLUDING LOCATIONS AND ELEVATIONS OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY TESTS, OTHER SUBSTANTIATING DATA, AND COMMENTS ON ANY CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE APPROVED SOILS ENGINEERING INVESTIGATION REPORT.

THE REPORT SHALL INCLUDE A CERTIFICATION BY THE GEOTECHNICAL ENGINEER THAT, TO THE BEST OF HIS OR HER KNOWLEDGE, THE WORK WITHIN THE GEOTECHNICAL ENGINEER'S AREA OF RESPONSIBILITY IS IN ACCORDANCE WITH THE APPROVED SOILS ENGINEERING REPORT AND APPLICABLE PROVISIONS OF THIS CHAPTER. THE REPORT SHALL CONTAIN A FINDING REGARDING THE SAFETY OF THE COMPLETED GRADING AND ANY PROPOSED STRUCTURES AGAINST HAZARD FROM LANDSLIDE, SETTLEMENT, OR SURFACE.

c. A REPORT PREPARED BY THE ENGINEERING GEOLOGIST RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH SECTION J105.5, INCLUDING A FINAL DESCRIPTION OF THE GEOLOGY OF THE SITE AND ANY NEW INFORMATION DISCLOSED DURING THE GRADING AND THE EFFECT OF SUCH NEW INFORMATION, IF ANY, ON THE RECOMMENDATIONS INCORPORATED IN THE APPROVED GRADING PLAN.

THE REPORT SHALL CONTAIN A CERTIFICATION BY THE ENGINEERING GEOLOGIST THAT, TO THE BEST OF HIS OR HER KNOWLEDGE, THE WORK WITHIN THE ENGINEERING GEOLOGIST'S AREA OF RESPONSIBILITY IS IN ACCORDANCE WITH THE APPROVED ENGINEERING GEOLOGY REPORT AND APPLICABLE PROVISIONS OF THIS CHAPTER. THE REPORT SHALL CONTAIN A FINDING REGARDING THE SAFETY OF THE COMPLETED GRADING AND ANY PROPOSED STRUCTURES AGAINST HAZARD FROM LANDSLIDE, SETTLEMENT, OR SLIPPAGE. THE REPORT SHALL CONTAIN A FINAL AS-BUILT GEOLOGIC MAP AND CROSS-SECTIONS DEPICTING ALL THE INFORMATION COLLECTED PRIOR TO AND DURING GRADING.

d. THE GRADING CONTRACTOR SHALL CERTIFY, ON A FORM PRESCRIBED BY THE BUILDING OFFICIAL, THAT THE GRADING CONFORMS TO SAID AS-BUILT PLAN AND THE APPROVED SPECIFICATIONS.

2. NOTIFICATION OF COMPLETION. THE PERMITTEE SHALL NOTIFY THE BUILDING OFFICIAL WHEN THE GRADING OPERATION IS READY FOR FINAL INSPECTION. FINAL APPROVAL SHALL NOT BE GIVEN UNTIL ALL WORK, INCLUDING INSTALLATION OF ALL DRAINAGE FACILITIES AND THEIR PROTECTIVE DEVICES, AND ALL EROSION-CONTROL MEASURES HAVE BEEN COMPLETED IN ACCORDANCE WITH THE FINAL APPROVED GRADING PLAN, AND ALL REQUIRED REPORTS HAVE BEEN SUBMITTED AND APPROVED.

EARTHWORK SHORING

1. THE PERMITTEE SHALL BE SOLELY RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY AND NO PERSON SHALL EXCAVATE ON LAND SUFFICIENTLY CLOSE TO THE PROPERTY LINE TO BE ENDANGER AN ADJOINING PUBLIC STREET, SIDEWALK, ALLEY, OR OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, CRACKING OR OTHER DAMAGE WHICH COULD RESULT.
2. SHORING SUPPORTING ADJACENT CITY OR OTHER PUBLICLY OWNED PROPERTY, OR SUPPORTING ANY PUBLIC UTILITY SHALL BE SPECIFICALLY APPROVED BY THAT AGENCY PRIOR TO IMPLEMENTATION. IN THE CASE OF PROPERTY OWNED BY THE CITY, SPECIFIC APPROVAL OF ANY PROPOSED SHORING METHOD SHALL BE OBTAINED FROM THE PUBLIC WORKS DEPARTMENT.
3. DESIGN OF SHORING SUPPORTING PRIVATE PROPERTY IS THE SOLE RESPONSIBILITY OF THE PERMITTEE.
4. ALL SHORING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT AND GENERALLY ACCEPTED ENGINEERING PRACTICES.

TEMPORARY EARTH AND STORMWATER PROTECTIVE MEASURES

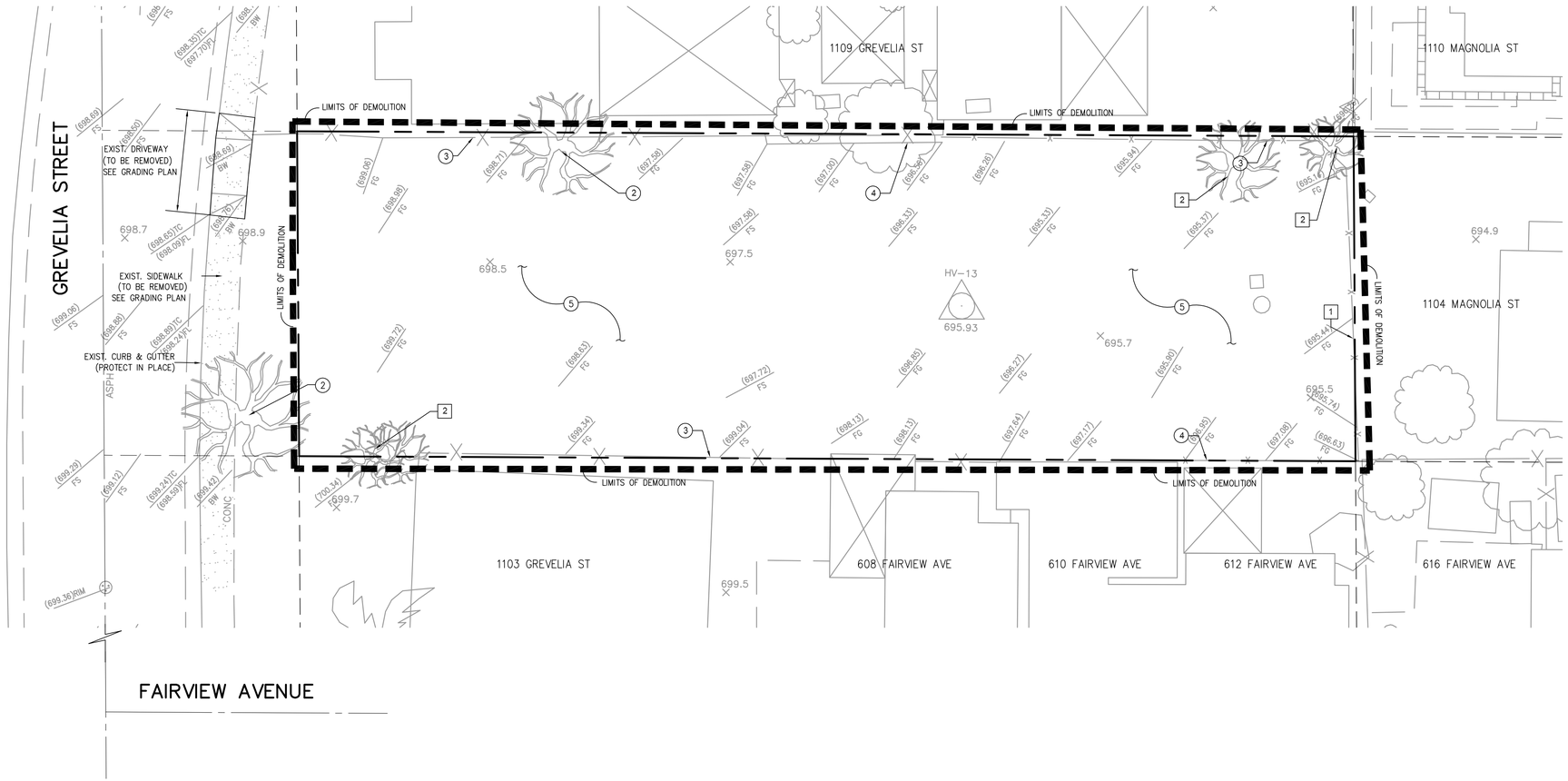
1. NPDES COMPLIANCE. IN COMPLIANCE WITH THE COUNTY OF LOS ANGELES NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) - CONSTRUCTION GENERAL PERMIT, TITLE 12.80 -ENVIRONMENTAL PROTECTION CODE, AND THE LOS ANGELES COUNTY BUILDING CODE, ALL CONSTRUCTION SITES ARE REQUIRED TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPS) TO CONTROL EROSION, DEBRIS, AND CONSTRUCTION-RELATED POLLUTANTS.
2. LACO BMP REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES ("BMPS") APPLY TO ALL PERMITS AND REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING THAT MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES REGARDLESS OF ALL SIZE:

a. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
b. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
c. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
d. NON-STORMWATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.
e. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
f. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
g. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
h. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

3. MAINTENANCE OF PROTECTIVE MEASURES. THE OWNER OR ANY PERSON OR AGENT IN CONTROL OF THIS PROPERTY SHALL MAINTAIN IN GOOD CONDITION AND REPAIR ALL DRAINAGE STRUCTURES AND TEMPORARY EARTH, POLLUTANT AND STORMWATER PROTECTIVE MEASURES INCLUDING RODENT CONTROL AS SHOWN ON THE APPROVED GRADING PLANS. ALL MEASURES SHALL BE MAINTAINED TO THE SATISFACTION OF THE CITY UNTIL FINAL GRADING APPROVAL HAS BEEN GRANTED BY THE BUILDING OFFICIAL AND ALL PERMANENT DRAINAGE AND EROSION CONTROL SYSTEMS, IF REQUIRED, ARE IN PLACE. ALL STRUCTURAL BEST

MANAGEMENT PRACTICES ("BMPS") SHALL BE ACCESSIBLE FOR INSPECTION AND MAINTENANCE

4. INSTALLATION. THE PERMITTEE SHALL PUT INTO EFFECT AND MAINTAIN ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT ADJACENT WATER COURSES AND PUBLIC OR PRIVATE PROPERTY FROM DAMAGE BY EROSION, FLOODING AND DEPOSITION OF MUD OR DEBRIS ORIGINATING FROM THE PREMISES DESCRIBED ON THESE PLANS PRIOR TO THE START OF ANY GRADING OPERATIONS.
5. PHASED OPERATIONS. AS GRADING OPERATIONS PROGRESS, ALL PROTECTIVE MEASURES SHALL BE UPDATED AS NECESSARY TO PREVENT EROSION AND TO CONTROL CONSTRUCTION RELATED POLLUTANTS FROM DISCHARGING FROM THE SITE. ALL BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED IN GOOD WORKING ORDER TO THE SATISFACTION OF THE BUILDING OFFICIAL. FAILURE TO COMPLY WITH THIS. SECTION IS SUBJECT TO "NONCOMPLIANCE PENALTIES" PURSUANT TO SECTION J 11 0.8.5. PAYMENT OF A PENALTY SHALL NOT RELIEVE ANY PERSONS FROM FULLY COMPLYING WITH THE REQUIREMENTS OF THIS CODE IN THE EXECUTION OF THE WORK.
6. FAILURE TO PROVIDE EITHER SWPPP OR WWECP. SHOULD THE OWNER FAIL TO SUBMIT THE SWPPP OR THE WWECP AS REQUIRED BY SECTION J110.8 OR FAILS TO INSTALL ALL REQUIRED PROTECTIVE MEASURES, IT SHALL BE DEEMED THAT A DEFAULT HAS OCCURRED UNDER THE CONDITIONS OF THE GRADING PERMIT SECURITY. THE BUILDING OFFICIAL MAY THEREAFTER ENTER THE PROPERTY FOR THE PURPOSE OF INSTALLING, BY CITY FORCES OR BY OTHER MEANS, THE DRAINAGE, EROSION CONTROL AND OTHER DEVICES OR PROTECTIVE MEASURES SHOWN ON THE APPROVED PLANS, OR IF THERE ARE NO APPROVED PLANS, AS THE BUILDING OFFICIAL MAY DEEM NECESSARY TO PROTECT ADJOINING PROPERTY FROM THE EFFECTS OF EROSION, FLOODING OR THE DEPOSITION OF MUD, DEBRIS OR CONSTRUCTED RELATED POLLUTANTS.
7. FINES. THE BUILDING OFFICIAL SHALL ALSO HAVE THE AUTHORITY TO IMPOSE AND COLLECT THE PENALTIES IMPOSED BY SECTION J110.8.5. PAYMENT OF A PENALTY SHALL NOT RELIEVE ANY PERSONS FROM FULLY COMPLYING WITH GRADING OPERATION REQUIREMENTS OF THE CURR



SCALE: 1"=10'

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	LIMITS OF DEMOLITION REMOVE AND DISPOSE OF ALL EXISTING BUILDINGS, STRUCTURES, TURF AND SITE DEBRIS, UNLESS OTHERWISE NOTED.

ITEMS TO PROTECT IN PLACE, ADJUST OR REMOVE AND RELOCATE

1. EXISTING WOOD FENCE
2. EXISTING TREE

DEMOLITION

REMOVE AND DISPOSE OF THE FOLLOWING ITEMS:

1. CONCRETE FLATWORK/WALKWAYS/CONC. SWALES/MOW CURBS
2. EXISTING TREE
3. EXISTING CHAINLINK FENCE
4. EXISTING WOOD FENCE
5. UNDESTORY VEGETATION, UNLESS OTHERWISE NOTED

NOTE:
CONTRACTOR TO PROTECT IN PLACE AND INFORM CITY'S CONTRACT ADMINISTRATOR OF ANY UTILITY BOXES/METERS LOCATED IN FIELD PRIOR/DURING DEMOLITION TO DETERMINE ITS DISPOSITION.

LEGAL DESCRIPTION:

LOT 2 OF THE RAAB TRACT AS SHOWN IN MISCELLANEOUS RECORDS BOOK 7 PAGE 65, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CALIFORNIA.

BENCHMARK:

BENCHMARK ELEV = 698.82'

SITE BENCHMARK
FOUND "+" IN TOP OF CURB

BASIS OF BEARINGS:

THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W, 1991.35 EPOCH.

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

DMS CONSULTANTS, INC.
CIVIL ENGINEERS
12371 Lewis St. #203 Garden Grove CA. 92840 P. 714-740-8842 F. 714-740-8842

UNDER THE SUPERVISION OF
SURRENDER M. DEMIAN RCE 34559 05/31/23 EXP. 9/30/23

Seal:
REGISTERED PROFESSIONAL ENGINEER SURRENDER M. DEMIAN NO. 34559 Exp.9/30/23 CIVIL STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions:

No.	Date	Revision	By

BUILDING AND SAFETY APPROVED
REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
~~VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.~~
6/13/2024, 11:04:41 AM
SP-B54562

Project :
Grevelia Street Park
1107 Grevelia Street
South Pasadena, CA 91030

Owner:
South Pasadena

Project No :	
Drawn By :	NC
Checked By :	SD
Date :	September 14, 2022
Scale :	AS SHOWN

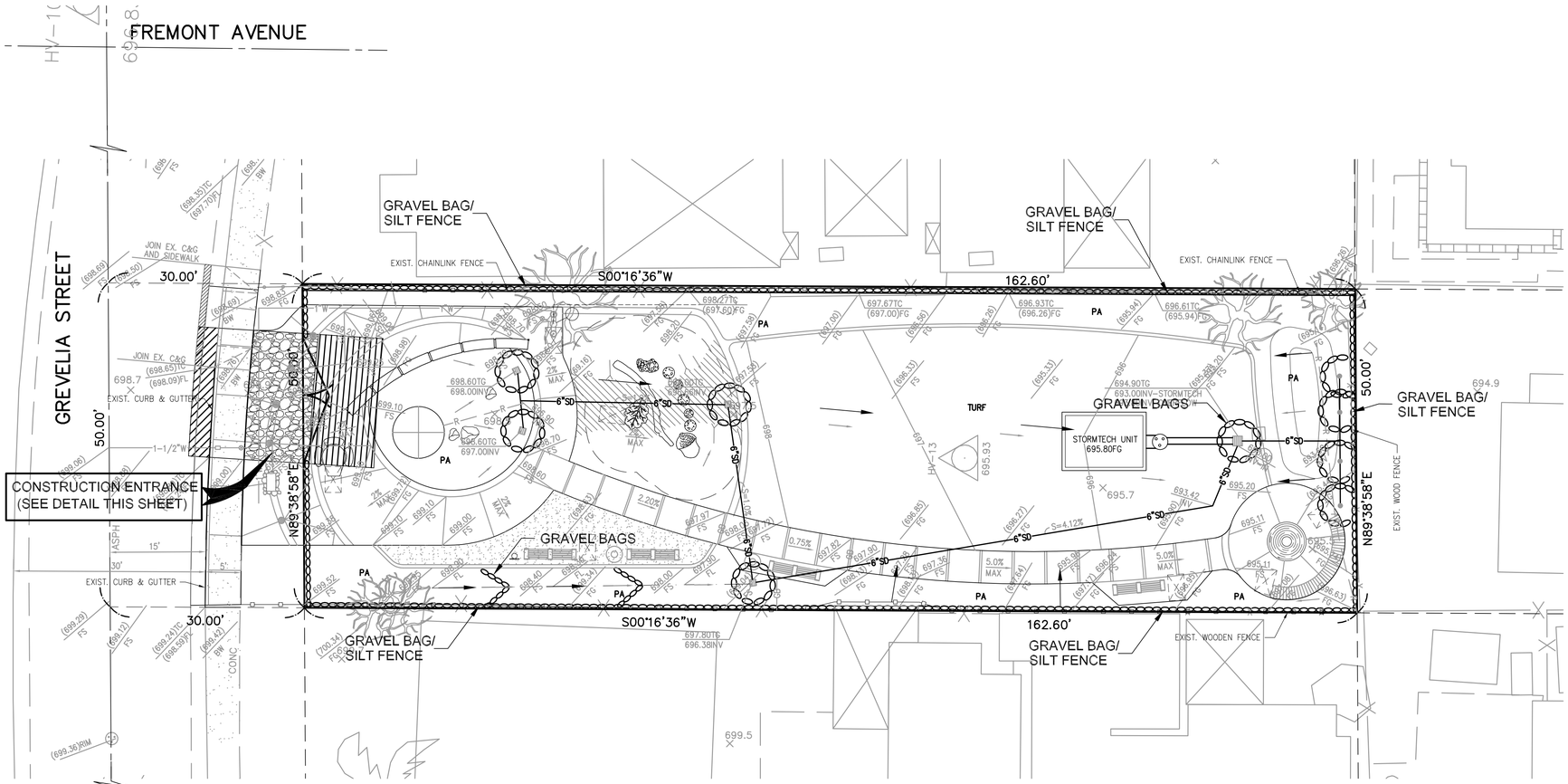
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DEMOLITION PLAN

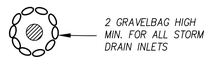
Drawing No :

D.1

SHEET 3 OF 24



SCALE: 1"=10'



2 GRAVELBAG HIGH MIN. FOR ALL STORM DRAIN INLETS

GRAVELBAG AT STORM DRAIN INLET DETAIL
NTS

EROSION CONTROL NOTES

A) IN CASE OF EMERGENCY CALL SOUTH PASADENA POLICE DISPATCH AT (626) 403-7270

B) THE UNDERSIGNED CIVIL ENGINEER WILL REVIEW EROSION CONTROL WORK AND CERTIFY THAT WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.

MR SURENDER DEWAN RCE 34559 — 02/02/24 DATE

C) A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. (OCTOBER 15–APRIL 15) NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN RAIN IS IMMINENT.

D) DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY INSPECTOR.

E) ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY

F) AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING BASINS AND THE BASINS PUMPED DRY. A GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING A RAINSTORM SHALL ALSO BE IMMEDIATELY REPAIRED.

G) FILL SLOPES AT THE TRACT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.

H) A GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN ANY DEVICES EXCEED TWO FEET.

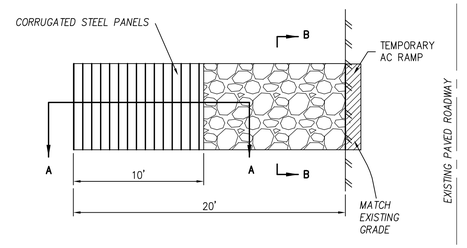
I) PLACEMENT OF DEVICES TO REDUCE EROSION DAMAGE WITHIN THE TRACT MUST BE SHOWN ON THE PLAN.

J) THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.

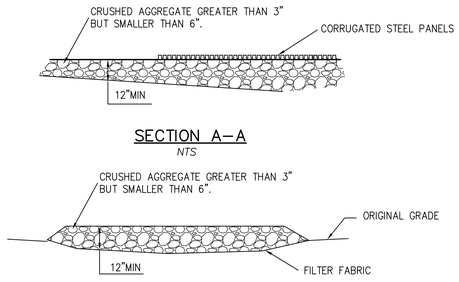
K) ALL LOOSE SOIL AND DEBRIS WHICH MAY CREATE A POTENTIAL HAZARD TO OFFSITE PROPERTY SHALL BE REMOVED FROM THE SITE AS DIRECTED BY THE INSPECTOR.

L) THE UNDERSIGNED CIVIL ENGINEER ACCEPTS RESPONSIBILITY FOR PROFESSIONAL INSPECTION

MR SURENDER DEWAN RCE 34559 — 02/02/24 DATE

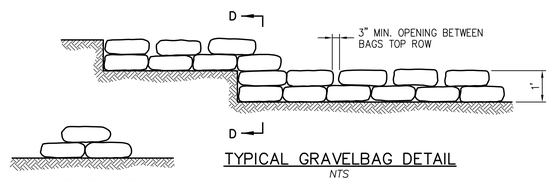


STABILIZED CONSTRUCTION ENTRANCE DETAIL
NTS



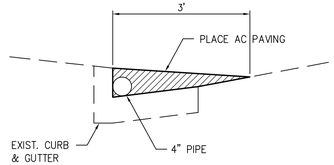
SECTION A–A
NTS

SECTION B–B
NTS

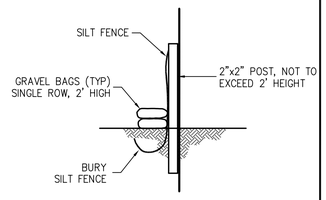


TYPICAL GRAVELBAG DETAIL
NTS

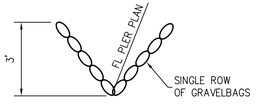
SECTION D–D



TEMPORARY AC RAMP
NTS



SILT FENCE DETAIL
NTS



"V" ALIGNMENT DETAIL
NTS

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
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e-mail: drawings@dvolzdesign.com
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Subconsultant:

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UNDER THE SUPERVISION OF
SURENDER M. DEWAN RCE 34559 02/06/2024 EXP. 9/30/25

Seal:
REGISTERED PROFESSIONAL ENGINEER SURENDER M. DEWAN NO. 34559 Exp.09/30/25 CIVIL STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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Revisions

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6/13/2024, 11:04:41 AM
SP-B54562

Project :
Grevelia Street Park
1107 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

Project No :	
Drawn By :	NC
Checked By :	SD
Date :	September 14, 2022
Scale :	AS SHOWN

Drawing Title :
EROSION CONTROL PLAN

Drawing No :
EC.1

SHEET 4 OF 24

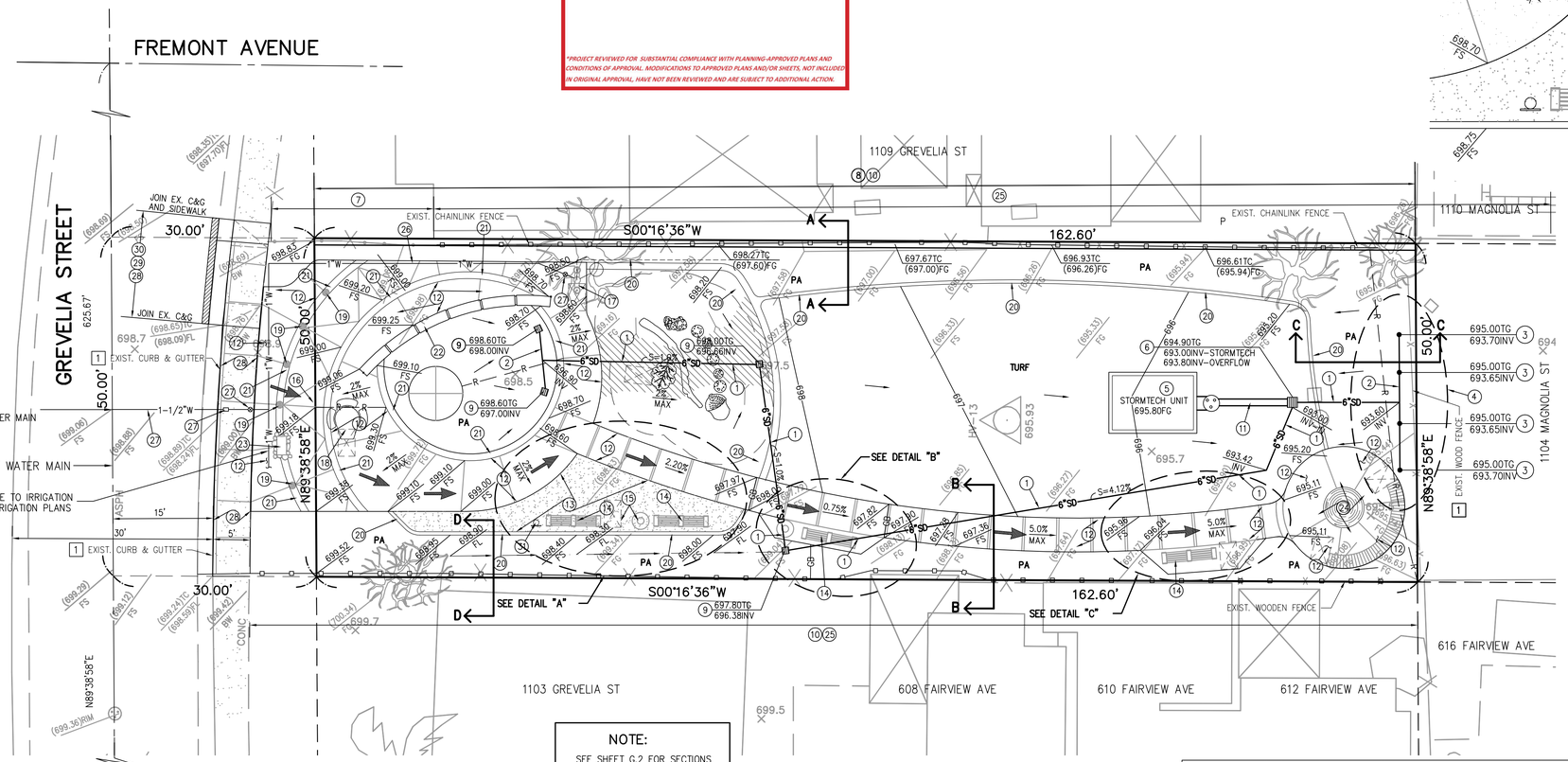
APPROVED*

SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PASADENA PLANNING DIVISION. THIS PROJECT SUBSTANTIALLY CONFORMS TO THE PLANNING AND ZONING STANDARDS FOR THE CITY.

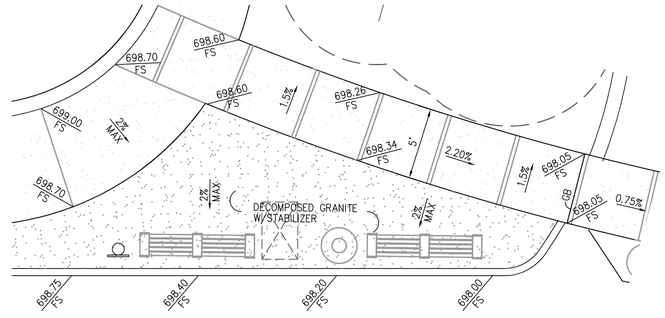
PLANNER: Matt Chang **DATE:** 7/3/2024

NOTES: Grevelia Park

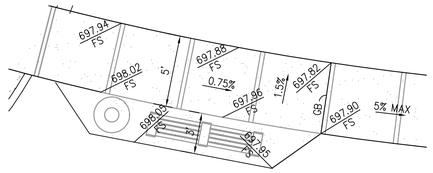
*PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING-APPROVED PLANS AND CONDITIONS OF APPROVAL. MODIFICATIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.



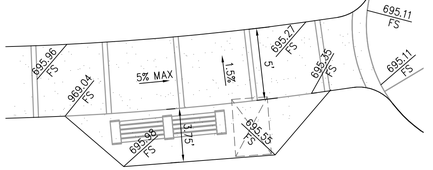
NOTE:
SEE SHEET G.2 FOR SECTIONS A–A, B–B, C–C & D–D



DETAIL "A"
NTS



DETAIL "B"
NTS



DETAIL "C"
NTS

LEGEND:

ACCESSIBLE PATH OF TRAVEL

CONSTRUCTION NOTES

1. CONSTRUCT 6"ø PVC (SDR35) DRAIN PIPE
2. CONSTRUCT 4"ø PVC (SDR35) DRAIN PIPE
3. CONSTRUCT DRAIN INLET PER DETAIL ON SHEET G.2
4. CONSTRUCT BUBBLE UP DRAINAGE SYSTEM PER DETAIL ON SHEET G.2
5. INSTALL MC–3500 STORMTECH SYSTEM WITH 24" NYLOPLAST MANHOLE AND ISOLATOR ROW FOR MAINTENANCE (SIZE AND SPECIFICATIONS PER TABLE AND DETAIL ON SHEET ON SHEET G.2
6. CONSTRUCT OVERFLOW DRAIN INLET STRUCTURE PER DETAIL ON SHEET G.2
7. CONSTRUCT 36" WOOD FENCE. REFER TO DETAIL 1, SHEET CD.2
8. CONSTRUCT 8" CURB (12" WIDE). REFER TO DETAIL 3C, SHEET CD.2
9. CONSTRUCT NDS 900 SQUARE POLYPROPYLENE CATCH BASIN WITH 9" ATRIUM SQUARE GRATE PER DETAIL ON SHEET G.2
10. REMOVE EXISTING CHAINLINK FENCE/WOOD FENCE.
11. CONSTRUCT 12"ø PVC (SDR35) DRAIN PIPE.
12. CONSTRUCT 4" THICK CONCRETE FLATWORK. REFER TO DETAIL 1, SHEET CD.1.
13. INSTALL 3" THICK DECOMPOSED GRANITE W/STABILIZER. FOR MODEL AND DETAIL REFER TO CONSTRUCTION PLAN, SHEET LC.1.
14. INSTALL PRECAST PARK BENCH WITHOUT BACKREST PER MANUFACTURER'S SPECIFICATIONS.
15. INSTALL TRASH & RECYCLE RECEPTACLE PER MANUFACTURER'S SPECIFICATIONS.
16. INSTALL PRECAST CONCRETE PICNIC TABLE & BENCHES PER MANUFACTURER'S SPECIFICATIONS.
17. INSTALL DRINKING FOUNTAIN W/SUMP. REFER TO DETAIL 13, SHEET CD.1.
18. INSTALL PRECAST CONCRETE CAFE TABLE PER MANUFACTURER'S SPECIFICATIONS.
19. INSTALL DECORATIVE BOLLARDS PER MANUFACTURER'S SPECIFICATIONS.
20. CONSTRUCT 6" WIDE CONCRETE HEADER. REFER TO DETAIL 5, SHEET CD.1.
21. CONSTRUCT 12" WIDE CONCRETE BAND. REFER TO DETAIL 6, SHEET CD.1.
22. INSTALL PRECAST CONCRETE SEATWALL PER MANUFACTURER'S SPECIFICTIONS.
23. INSTALL MONUMENT SIGN PER DETAIL 2, SHEET CD.2.
24. INSTALL TREE BENCH PER MANUFACTURER'S SPECIFICTIONS.
25. CONSTRUCT 6' HIGH WOOD FENCE. REFER TO DETAIL 3, SHEET CD.2.
26. INSTALL 1" COPPER WATER SERVICE TO DRINKING FOUNTAIN W/SHUT–OFF VALVE.
27. INSTALL 1–1/2" WATER SERVICE WITH A BACKFLOW PREVENTER DEVICE IN CAGE ENCLOSURE, WATER METER AND GATE VALVE PER CITY OF SOUTH PASADENA WATER DEPARTMENT STANDARDS.
28. REMOVE AND RECONSTRUCT EXISTING SIDEWALK PER APWA STD. PLAN 113–2.
29. REMOVE EXIST. DRIVEWAY AND CONSTRUCT CURB & GUTTER (8"CF) PER APWA STD. 102–3, TYPE A2–8(200).
30. CONSTRUCT FULL DEPTH AC (1' WIDE X 1' DEEP).
31. INSTALL DOG WASTE DISPENSER PER MANUFACTURER'S SPECIFICATIONS.

DISPOSITION NOTE

[1] PROTECT IN PLACE

LEGAL DESCRIPTION:

LOT 2 OF THE RAAB TRACT AS SHOWN IN MISCELLANEOUS RECORDS BOOK 7 PAGE 65, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CALIFORNIA.

BENCHMARK:

BENCHMARK ELEV = 698.82'

SITE BENCHMARK
FOUND "+" IN TOP OF CURB

STORMWATER PLANNING PROGRAM LID DETERMINATION FORM

City of SOUTH PASADENA — MS4-1 FORM

Project Name: GREVELIA STREET PARK	Owner Name: CITY OF SOUTH PASADENA	Developer Name: CITY OF SOUTH PASADENA
Project Address: 1107 GREVELIA STREET, SOUTH PASADENA, CA 91030	Owner Address: 1414 MISSION STREET, SOUTH PASADENA, CA 91030	Developer Address: 1414 MISSION STREET, SOUTH PASADENA, CA 91030
Plan Check #: SP-B54562	Owner Phone: 626-403-7200	Developer Phone: 626-403-7200

TYPE OF PROJECT

Does the proposed project fall into one of the following categories? Please check Yes/No	YES	NO
PRIORITY PROJECTS		
1. Development[1] of a new project equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious[2] surface area[3]	☐	☒
2. Development[1] of a new industrial park with 10,000 square feet or more of surface area[3]	☐	☒
3. Development[1] of a new commercial mall with 10,000 square feet or more surface area[3]	☐	☒
4. Development[1] of a new retail gasoline outlet with 5,000 square feet or more of surface area[3]	☐	☒
5. Development[1] of a new restaurant (SIC 5812) with 5,000 square feet or more of surface area[3]	☐	☒
6. Development[1] of a new parking lot with either 5,000 square feet or more of impervious surface area[3] or with 25 or more parking spaces	☐	☒
7. Development of streets and road construction of 10,000 square feet or more of impervious surface area (see Green Streets[4])	☐	☒
8. Development[1] of a new automotive service facility (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) with 5,000 square feet or more of surface area[3]	☐	☒
9. Projects located in or directly adjacent to, or discharging directly to a Significant Ecological Area (SEA)[5], where the development will: a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and b. Create 2,500 square feet or more of impervious surface area[3]	☐	☒
10. Single-family hillside homes	☐	☒
11. Development of any project of 2,500 square feet or more in disturbed area where any portion of the disturbed area includes either or both an existing earth (native or otherwise) surface or a man-made surface (whether impervious or not) with an existing slope that is equal to or greater than 25% when calculated in accordance with the methods prescribed by the current Zoning Code.	☐	☒
12. Redevelopment[1] of 5,000 square feet or more of impervious surface area[3] in one of the categories listed above	☐	☒
13. Redevelopment[1] of 10,000 square feet or more of impervious surface area[3] to a Single-Family Home, without a change in land use.	☐	☒

If any of the boxes 1-10 are checked YES, this project will require the preparation of a Low Impact Development (LID)[7] Plan with a Maintenance Agreement[7]

[1] Defined on back.

SURENDER DEWAN — Applicant Name
PRESIDENT — Applicant Title
SURENDER DEWAN — Applicant Signature (Digitally signed by SURENDER DEWAN, Date: 2023.05.30 09:57:55 -07'00')
05/30/2023 — Date

V202005

LID DETERMINATION FORM

TOTAL DISTURBED AREA : 8,130 SF

BASIS OF BEARINGS:

THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W, 1991.35 EPOCH.

SCALE: 1"=10'

EARTHWORK QUANTITY

CUT – 110 CY
FILL – 140 CY
IMPORT – 30 CY

PRE–DEVELOPMENT

PERVIOUS AREA: 8,048 SF

IMPERVIOUS AREA: 82 SF

POST–DEVELOPMENT

PERVIOUS AREA: 6,257 SF

IMPERVIOUS AREA: 1,873 SF

Landscape Architect:

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

DMS CONSULTANTS, INC.
CIVIL ENGINEERS
12371 Lewis St. #203 Garden Grove CA. 92840 P. 714-740-8862 F. 714-740-8842

UNDER THE SUPERVISION OF
SURENDER M. DEWAN — RCE 34559 — 02/06/2024 — EXP. 9/30/25

Seal:

REGISTERED PROFESSIONAL ENGINEER — SURENDER M. DEWAN — NO. 34559 — Exp.9/30/25 — CIVIL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES IN THE AREA OF WORK AND TO THE POSSIBILITY THAT THEY MAY NOT BE SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions

BUILDING AND SAFETY APPROVED
REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED. DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.

6/13/2024, 11:04:41 AM
SP-B54562

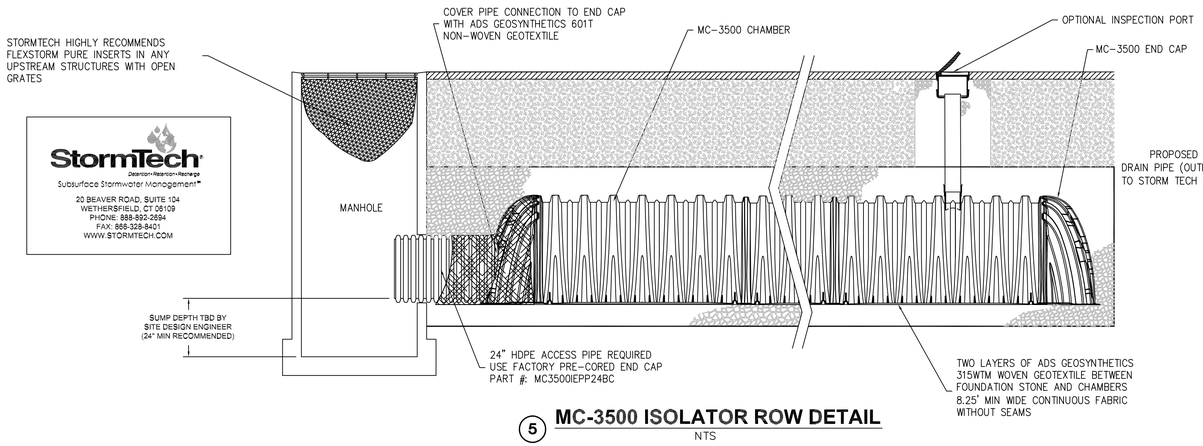
Project :
Grevelia Street Park
1107 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

Project No :	
Drawn By :	NC
Checked By :	SD
Date :	September 14, 2022
Scale :	AS SHOWN

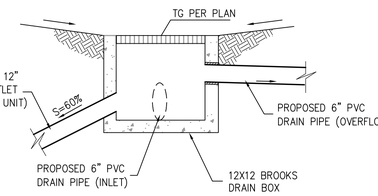
Drawing Title :
GRADING PLAN

Drawing No :
G.1

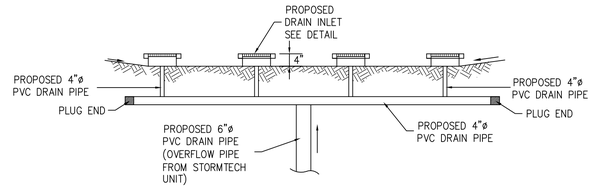
SHEET 5 OF 24



5 MC-3500 ISOLATOR ROW DETAIL
NTS



6 DRAIN INLET DETAIL
BROOKS DRAIN BOX
NTS



4 BUBBLE UP DRAINAGE DETAIL
NTS

STORMTECH GENERAL NOTES

1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST MC-3500 INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.

2. STORMTECH OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICE DEPARTMENT OR LOCAL STORMTECH REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL **860-529-8188** TO SPEAK TO A TECHNICAL SERVICE REPRESENTATIVE OR VISIT **WWW.STORMTECH.COM** TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.

3. STORMTECH REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 24" [610 mm] NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 6.5' [1.98 m] INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 30" [762 mm], MAXIMUM COVER IS 6.5' [1.98 m].

4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH THE BEARING CAPACITY OF THE CHAMBER FOUNDATION MATERIALS TO THE DESIGN ENGINEER.

5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.

6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH MC-3500 INSTALLATION INSTRUCTIONS.

7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH MC-3500 INSTALLATION INSTRUCTIONS.

8. THE CONTRACTOR MUST REFER TO STORMTECH MC-3500 INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE ON THE STORMTECH WEBSITE: **WWW.STORMTECH.COM**. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.

9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

10. **STORMTECH PRODUCT WARRANTY IS LIMITED.** CONTACT STORMTECH FOR WARRANTY INFORMATION.

MC-3500 STORMWATER CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500 OR APPROVED EQUAL.

2. CHAMBERS SHALL BE MADE FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.

3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.

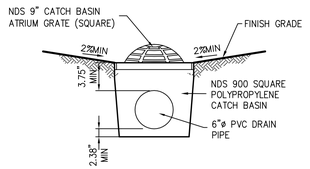
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

5. ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:

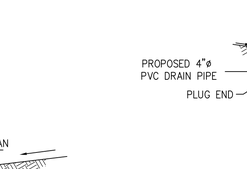
-- A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET.

-- STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL CROSS SECTION IS BASED.

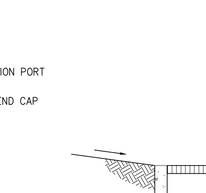
6. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.



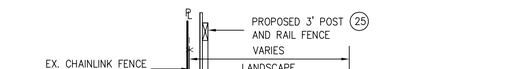
9 DRAIN INLET
NTS



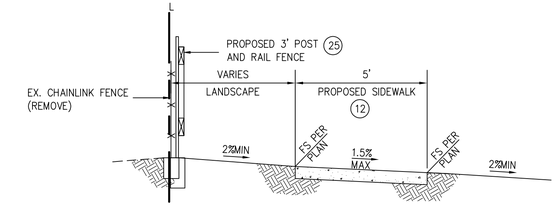
3 DRAIN INLET
NTS



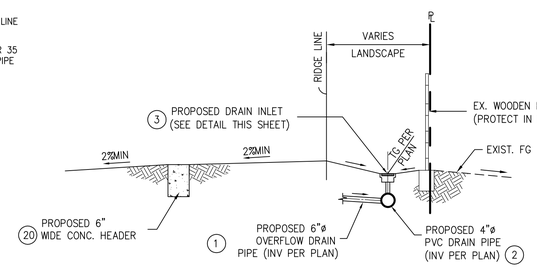
STORM DRAIN/CATCH BASIN STENCILING DETAIL
NOT TO SCALE



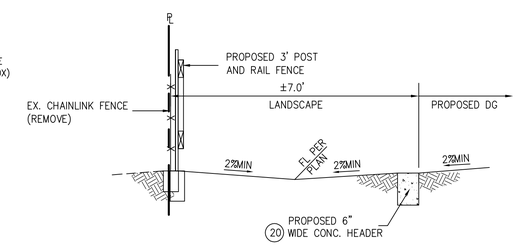
SECTION A-A
NTS



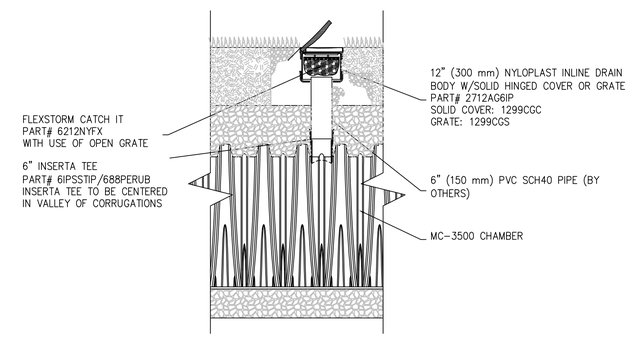
SECTION B-B
NTS



SECTION C-C
NTS



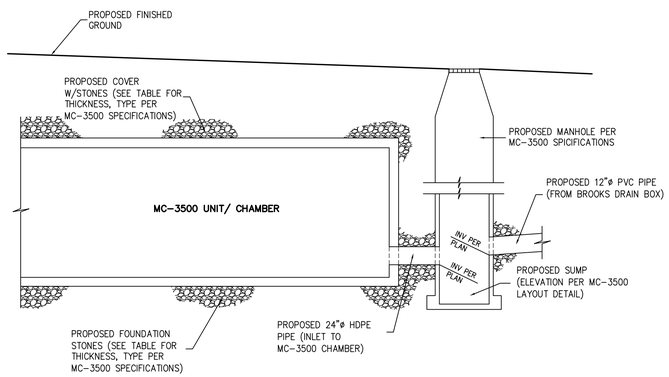
SECTION D-D
NTS



MC-3500 6" INSPECTION PORT DETAIL
NTS

STORMTECH SYSTEM	
MAX. LENGTH	12.92 FT.
MAX. WIDTH	8.42 FT.
EACH CHAMBER SIZE	77"x45"
NO. OF CHAMBERS	1
NO. OF END CAPS	2
CHAMBER ROWS	1
BED SIZE	108 SF
STORAGE VOLUME (REQ.)	200 CF
STORAGE VOLUME (PROVIDED)	323 CF
PROPOSED ELEVATIONS	
TOP OF STONE	691.65
TOP OF CHAMBER	690.65
BOTTOM OF CHAMBER	686.90
BOTTOM OF STONE	686.15
INVERT AT END CAP	686.90
INVERT AT MANHOLE	687.00

MC-3500 STORMTECH SYSTEM DATA
NOT TO SCALE



SEE STORMTECH SYSTEM DATA TABLE FOR SIZE, ELEVATIONS, ETC.

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

DMS CONSULTANTS, INC.
CIVIL ENGINEERS
12371 Lewis St. #203 Garden Grove CA. 92840 P. 714-740-8862 F. 714-740-8862

UNDER THE SUPERVISION OF
SURRENDER M. DERAN RCE 34559 02/06/2024 EXP. 9/30/25

Seal:
REGISTERED PROFESSIONAL ENGINEER SURRENDER M. DERAN NO. 34559 Exp.9/30/25 CIVIL STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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Revisions
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6/13/2024, 11:04:41 AM
SP-B54562

Project :
Grevelia Street Park
1107 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

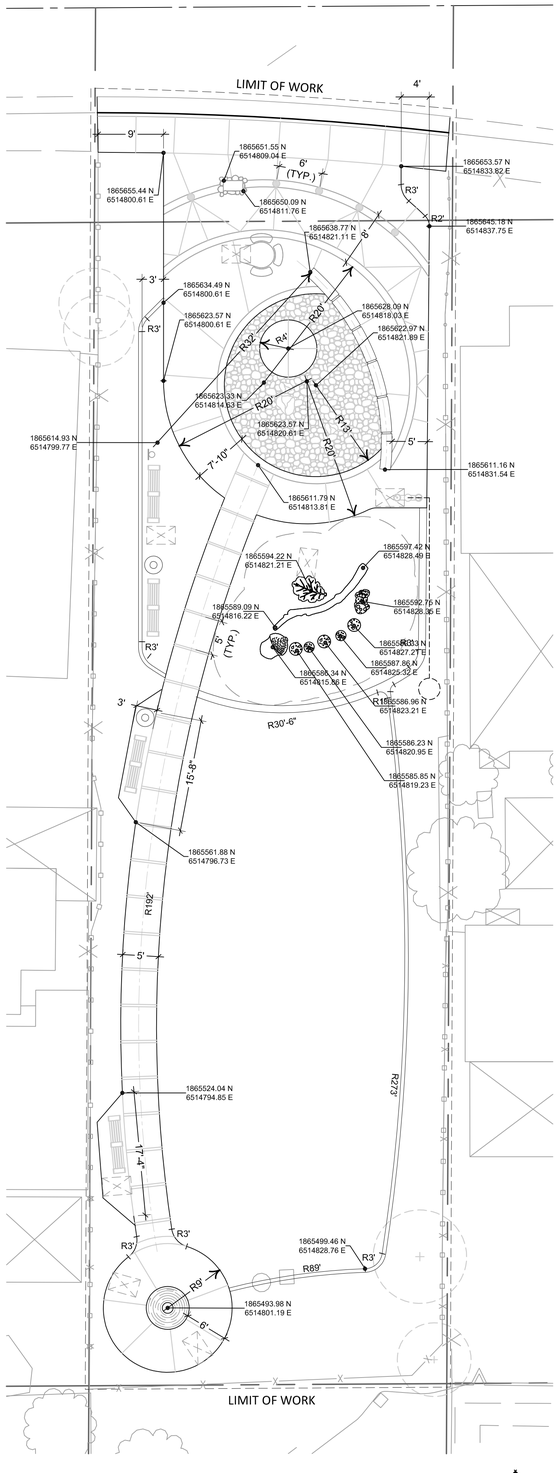
Project No :	
Drawn By :	NC
Checked By :	SD
Date :	September 14, 2022
Scale :	AS SHOWN

Drawing Title :
GRADING DETAILS

Drawing No :
G.2

SHEET 6 OF 24

GREVELIA STREET



NOTE:

1. THE FINAL PLACEMENT OF THE SITE FURNISHINGS, PLAYGROUND & FITNESS EQUIPMENT SHALL BE REVIEWED & APPROVED BY THE LANDSCAPE ARCHITECT. THE SITE FURNISHINGS INCLUDE LITTER RECEPTACLES, PICNIC TABLES, BENCHES, BIKE RACKS AND DRINKING FOUNTAINS. REFER TO THE CONSTRUCTION MATERIALS SCHEDULE ON SHEET LC.4 FOR ADDITIONAL CONSTRUCTION AND/OR PRODUCT INFORMATION.
2. THE CONTRACTOR WILL COORDINATE WITH THE LANDSCAPE ARCHITECT TO DETERMINE THE FINAL PLACEMENT AND ALIGNMENT OF EACH BOULDER. REFER TO THE LANDSCAPE BOULDER SCHEDULES ON SHEETS LC.1 & LC.2.

BENCHMARK:
BENCHMARK ELEV = 698.82'
SITE BENCHMARK
FOUND "+" IN TOP OF CURB

BASIS OF BEARINGS:
THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BEETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W, 1991.25 EPOCH.

N

Scale: 1" = 10'-0"
0 5' 10' 20'

REFER TO TITLE SHEET FOR GENERAL NOTES

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
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Phone: (714) 641-1300
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e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

DMS

REGISTERED PROFESSIONAL ENGINEER
SURENDER M. DEWAN
NO. 34559
Exp. 9/30/25
CIVIL
STATE OF CALIFORNIA

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT
GARY M. TASQUE
NO. 3803
SIGNATURE
EXP. Feb. 2025
6/3/24
DATE
STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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Revisions:

No.	Date	Revisions	By

BUILDING AND SAFETY APPROVED
REVIEW FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS. **VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.**
6/12/2024, 11:04:41 AM
SP-B54562

Project :

GREVELIA STREET PARK

Grevelia St, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN

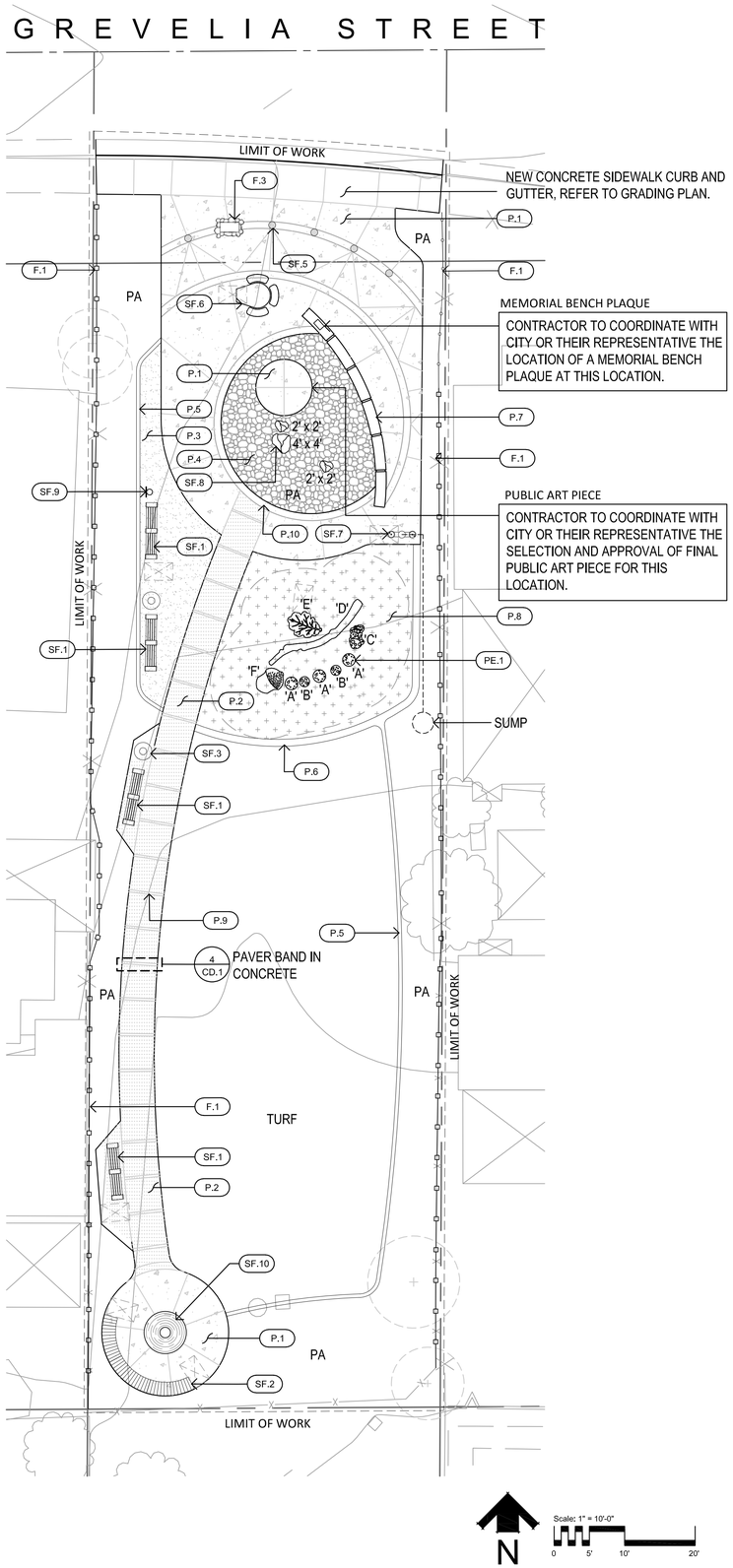
Drawing Title :

HORIZONTAL CONTROL PLAN

Drawing No :

HC.1

SHEET 7 OF 24



P - PAVING AND HARDSCAPE

KEY	DESCRIPTION	MANUFACTURER/ SUPPLIER	MODEL NO.	FINISH/ TEXTURE	COLOR	DETAIL SHEET NO.
P.1	CONCRETE FLATWORK (4")	DAYTON SUPERIOR PHONE: (909) 961-7007	—	TOPCAST 05 SAND BLAST	DAVIS COLORS CLIFFSIDE BROWN #6804	DETAIL 1, SHEET CD.1
P.2	CONCRETE FLATWORK (4") w/ HAND SEEDED AGGREGATE FINISH	DAYTON SUPERIOR PHONE: (909) 961-7007	AGGREGATE: 1/4" PATAGONIA PEBBLE, SOUTHWEST BOULDER & STONE: (877) 792-7625	INTEGRAL COLOR WITH HAND SEEDED AGGREGATE	DAVIS COLORS GREEN SLATE #3685	DETAIL 1, SHEET CD.1
P.3	STABILIZED DECOMPOSED GRANITE (3")	GRANITECRETE 408-858-9635	SONORA ADOBE	—	TAN/GOLD	DETAIL 3, SHEET CD.1
P.4	ROCK COBBLE (4" to 8" DIA.)	SOUTHWEST BOULDER & STONE) PHONE: (877) 792-7625	ARIZONA RIVER ROCK	—	TAN/PINK/GRAY	DETAIL 8, SHEET CD.1
P.5	CONCRETE HEADER (6" WIDE)	DAYTON SUPERIOR PHONE: (909) 961-7007	—	TOPCAST 05 SAND BLAST	DAVIS COLORS CLIFFSIDE BROWN #6804	DETAIL 5, SHEET CD.1
P.6	CONCRETE BAND (12" WIDE) AT PLAYGROUND	DAYTON SUPERIOR PHONE: (909) 961-7007	—	TOPCAST 05 SAND BLAST	DAVIS COLORS CLIFFSIDE BROWN #6804	DETAIL 10, SHEET CD.1
P.7	SEATWALL	REFER TO DETAIL 7, SHEET CD.1				
P.8	POUR IN PLACE TPV RUBBER SURFACING	ROBERTSON RECREATIONAL SURFACES (800) 858-0519	TOTTURF TPV SUPREME		TBD	DETAIL 9, SHEET CD.1
P.9	PAVER BAND	BELGARD (877) 235-4273	DUBLIN COBBLE, 6" X 9", 6" X 6" 2-3/8" THICK	—	VICTORIAN	DETAIL 4, SHEET CD.1
P.10	WARNING CURB	DAYTON SUPERIOR PHONE: (909) 961-7007	—	TOPCAST 05 SAND BLAST	DAVIS COLORS CLIFFSIDE BROWN #6804	DETAIL 6, SHEET CD.1

SF - SITE FURNITURE

KEY	DESCRIPTION	MANUFACTURER/ SUPPLIER	MODEL NO.	FINISH/ TEXTURE	COLOR	DETAIL SHEET NO.
SF.1	PARK BENCH WITH BACK REST	VESTRE CONTACT: CHIP BEYT, (323) 975-2751	617 VROOM SEAT STRAIGHT END	POWDER COATED & LINSEED OIL PROOFED NORDIC PINE	RAL 6013 REED GREEN	INSTALL BENCH TO CONCRETE AS RECOMMENDED BY MANUFACTURER
SF.2	RADIUS BENCH	LANDSCAPE FORMS (818) 541-6691	LINK PIANO KEY 96" RADIUS WITH OUTSIDE RADIUS BACK, 3 SEGMENTS, & CONNECTOR/END METAL SUPPORTS	POWDER COATED, WOOD TYPE: DOMESTICALLY SOURCED THERMALLY MODIFIED ASH	SAGE	INSTALL PER MANUFACTURER'S INSTRUCTIONS
SF.3	WASTE CONTAINER	WAUSAU TILE (800) 388-8728	MF3202 FLAT STEEL TRASH RECEPTACLE WITH ALUMINUM FUNNEL TOP & SIDE DOOR	POWDER COATED	126 CHARCOAL	INSTALL PER MANUFACTURER'S INSTRUCTIONS
SF.4	NOT USED	—	—	—	—	—
SF.5	DECORATIVE BOLLARD	RELIANCE FOUNDARY 703-3434	R-7539 DECORATIVE BOLLARD	POWDER COATED	STATUARY BRONZE	INSTALL PER MANUFACTURER'S INSTRUCTIONS
SF.6	CAFE TABLE	WAUSAU TILE (800) 388-8728	MF1061 SQUARE 3-BENCH INGROUND MOUNT ADA COMPLIANT TABLE	POWDER COATED	126 CHARCOAL	INSTALL PER MANUFACTURER'S INSTRUCTIONS
SF.7	DRINKING FOUNTAIN (W/ BOTTLE FILLER & PET FOUNTAIN)	MDF (901) 867-0039	10145 SM OR SMSS W/ PET FOUNTAIN	TEXTURED	TEXTURED PYRITE	DETAIL 13, SHEET CD.1
SF.8	BOULDER	SOUTHWEST BOULDER & STONE) PHONE: (877) 792-7625	KINO BLUE	—	WINE-RED/TEAL /BROWN	DETAIL 11, SHEET CD.1
SF.9	DOG WASTE BAG DISPENSOR	DOGIPOT PHONE: (800) 364-7681	DOGIEPOT PET STATION, MODEL #1003-L	POWDER COATED	FOREST GREEN	INSTALL PER MANUFACTURES INSTRUCTIONS
SF.9	RPOSD SIGN	—	—	—	—	DETAIL 4, SHEET CD.2
SF.10	TREE GRATE	IRON AGE DESIGNS (877) 418-3568	SPIN 6' DIA. HEEL PROOF WITH CUSTOM FRAME, ADA COMPLIANT, MODEL SPX72DIAI99TGHP	CAST IRON	—	INSTALL PER MANUFACTURERS INSTRUCTIONS

PE - PLAY EQUIPMENT

KEY	DESCRIPTION	MANUFACTURER/ SUPPLIER	MODEL NO.	DETAIL SHEET NO.
PE.1	PLAY PIECES	UPC PARKS (530) 229-7965 CONTACT: ROB FRYHOFF (800) 264-7225 MIRACLE PLAYGROUND SALES	'A' - MUSHROOM STEPPER MED 'B' - MUSHROOM STEPPER SMALL 'C' - MUSHROOM CLUSTER 'D' - OAK BRANCH 'E' - LEAF 'F' - ACORN SMALL CRAWLTHROUGH	INSTALL PER MANUFACTURES INSTRUCTIONS

F - FENCES & COLUMNS

KEY	DESCRIPTION	DETAIL SHEET NO.
F.1	POST & RAIL FENCE - 3' TALL	SEE DETAIL 1, SHEET LC.2
F.2	WOOD FENCE - 6' TALL	SEE DETAIL 3, SHEET LC.2
F.3	MONUMENT SIGN	SEE DETAIL 2, SHEET LC.2

REFER TO TITLE SHEET FOR GENERAL NOTES

APPROVED*

SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PASADENA PLANNING DIVISION. THIS PROJECT SUBSTANTIALLY CONFORMS TO THE PLANNING AND ZONING STANDARDS FOR THE CITY.

PLANNER: Matt Chang DATE: 7/3/2024

NOTES: Grevelia Park

*PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING-APPROVED PLANS AND CONDITIONS OF APPROVAL. MODIFICATIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

REGISTERED PROFESSIONAL ENGINEER SURENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA
DMS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT GARY M. TASQUE NO. 3883 SIGNATURE EXP. Feb. 2025 6/3/24 DATE STATE OF CALIFORNIA

811 DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions

BUILDING AND SAFETY APPROVED
REVIEW FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.
6/13/2024, 11:04:11 AM
SP-BS4562

Project :

GREVELIA STREET PARK

Grevelia St, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN

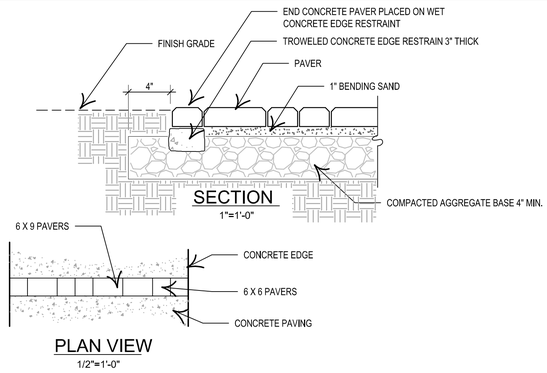
Drawing Title :

CONSTRUCTION PLAN

Drawing No :

LC.1

SHEET 8 OF 24



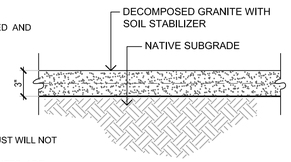
4 PAVERS IN CONCRETE FLATWORK

CONSTRUCTION NOTES

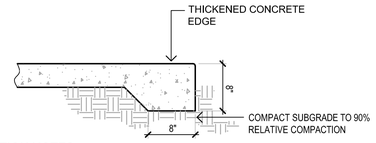
1. THE DECOMPOSED GRANITE SHALL BE SCREENED AND MEET CALTRANS 202 REQUIREMENTS

SIEVE SIZE	PERCENT PASSING
1"	100
3/4"	90-100
No.4	50-100
No.30	25-50
No.100	10-20
No.200	5-18

2. THE BLENDING OF COURSE SAND WITH ROCK DUST WILL NOT BE CONSIDERED AS AN EQUIVALENT PRODUCT.
3. SPREAD DECOMPOSED GRANITE EVENLY IN 1 1/2" LIFTS, ADD MOISTURE AND COMPACT AS RECOMMENDED BY THE DECOMPOSED GRANITE/SOIL STABILIZER SUPPLIER.
4. SOIL STABILIZER. A SOIL STABILIZER WILL BE MIXED ACCORDINGLY WITH THE DECOMPOSED GRANITE MATERIAL AS RECOMMENDED BY THE MANUFACTURER, MARLOC-SS LIQUID SOIL STABILIZER AND SEALER SHALL BE MIXED AND APPLIED TO THE DECOMPOSED GRANITE AT A RATE OF 1 GALLON PER 120 SF. SUBMIT ANY SOIL STABILIZER SUBSTITUTES TO THE CITY, FOR REVIEW AND APPROVAL, PRIOR TO D.G. MATERIAL DELIVERED TO THE JOB SITE.



3 STABILIZED DECOMPOSED GRANITE

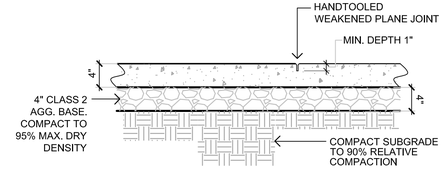


CONSTRUCTION NOTES

1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC. 1.
2. ALL CONCRETE FLATWORK SHALL NOT EXCEED A (5%) SLOPE IN THE DIRECTION OF TRAVEL OR (2%) CROSS SLOPE.

2 THICKEN CONCRETE EDGE 1"=1'-0"

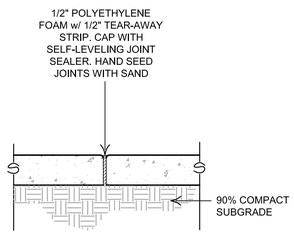
NOTE: UNLESS OTHERWISE SHOWN ON PLANS, THE CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL WEAKEN PLANE AND EXPANSION JOINTS WITH THE LANDSCAPE ARCHITECT. A WEAKENED PLANE JOINT WILL BE REQUIRED FOR EVERY 50 SF OF CONCRETE AND AN EXPANSION JOINT FOR EVERY 150 SF OF CONCRETE.



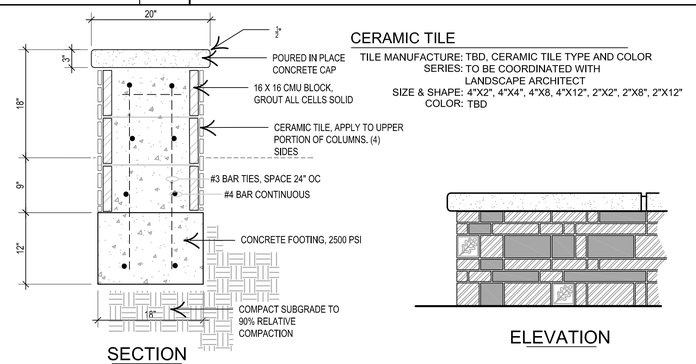
CONSTRUCTION NOTES

1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC. 1.
2. ALL CONCRETE FLATWORK SHALL NOT EXCEED A (5%) SLOPE IN THE DIRECTION OF TRAVEL OR (2%) CROSS SLOPE.
3. CONCTRUCT A THICKENED CONCRETE EDGE AROUND THE CONCRETE FLATWORK'S PERIMETER. REFER TO DETAIL 2, THIS SHEET.

1 CONCRETE FLATWORK (4") 1"=1'-0"



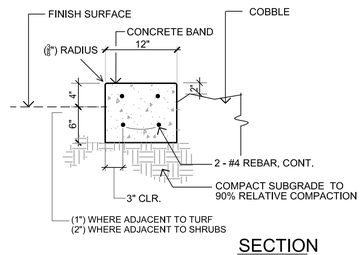
8 EXPANSION JOINT



CERAMIC TILE

TILE MANUFACTURE: TBD, CERAMIC TILE TYPE AND COLOR SERIES: TO BE COORDINATED WITH LANDSCAPE ARCHITECT
SIZE & SHAPE: 4"X2", 4"X4", 4"X8, 4"X12", 2"X2", 2"X8", 2"X12"
COLOR: TBD

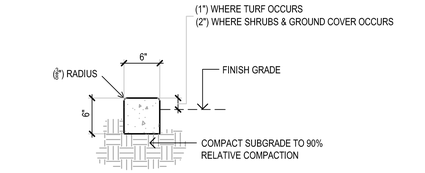
7 SEATWALL 1"=1'-0"



CONSTRUCTION NOTES

1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC.1
2. CONSTRUCT A WEAKENED PLANE JOINT EVERY 8' O.C. AND A CONSTRUCTION JOINT EVERY 24' O.C

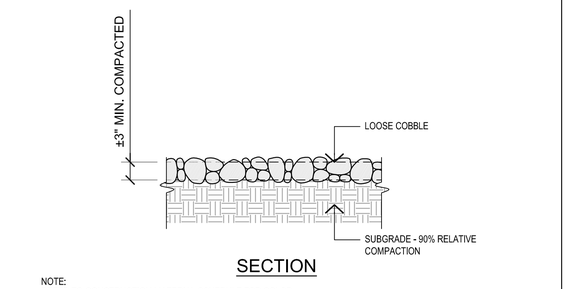
6 WARNING CURB 1"=1'-0"



CONSTRUCTION NOTES

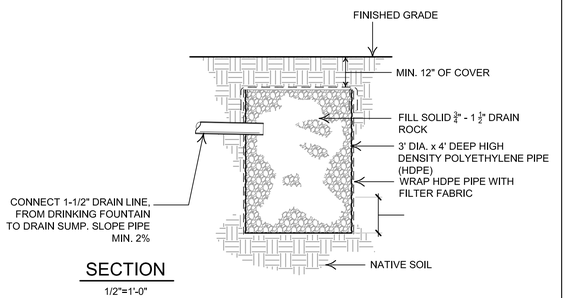
1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC.1
2. PRIOR TO POURING CONCRETE, ALL FORMING SHALL BE REVIEW AND APPROVED BY A CITY REPRESENTATIVE OR LANDSCAPE ARCHITECT.
3. CONSTRUCT A WEAKENED PLANE JOINT (SAW-CUT TO A DEPTH OF 1") AT EVERY 8' O.C. OR AS DIRECTED BY THE LANSCAPE ARCHITECT TO PREVENT RANDOM CRACKING.

5 CONCRETE HEADER (6") 1"=1'-0"

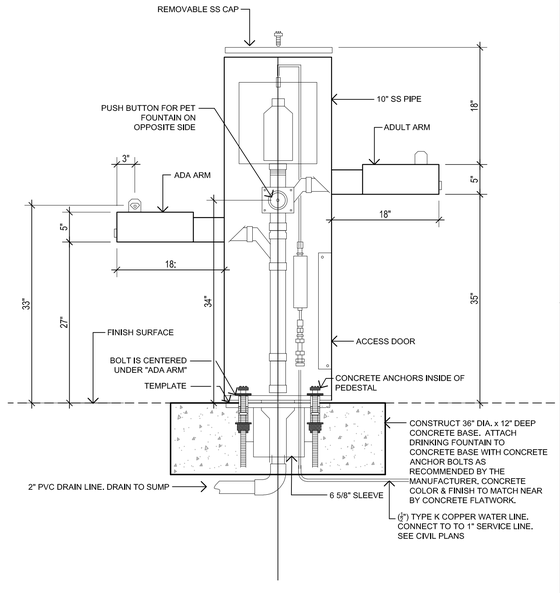


NOTE:
REFER TO CONSTRUCTION MATERIAL SCHEDULE FOR COLOR.

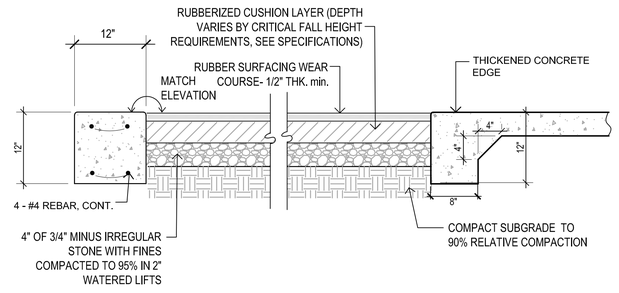
14 ROCK COBBLE



15 SUMP



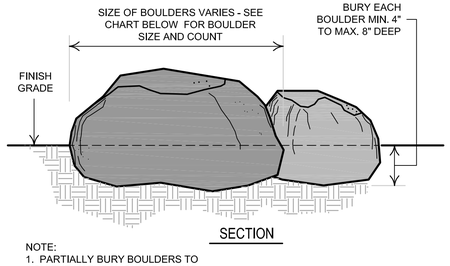
13 DRINKING FOUNTAIN



NOTE: VERIFY WITH MANUFACTURER'S DETAIL/SPECS

10 TPV POUR IN PLACE RUBBER SURFACING NTS

12 NOT USED



NOTE:
1. PARTIALLY BURY BOULDERS TO ACHIEVE NATURAL OUTCROPPING EFFECT.

2. COORDINATE FINAL BOULDER PLACEMENT WITH THE LANDSCAPE ARCHITECT.

11 BOULDER NTS

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning
Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323
e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:
REGISTERED PROFESSIONAL ENGINEER SURRENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA
DMS
6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:
REGISTERED LANDSCAPE ARCHITECT GARY M. TASQUE NO. 3883 SIGNATURE EXP. Feb. 2025 6/3/24 DATE STATE OF CALIFORNIA

811 DIGALERT
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BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

BUILDING AND SAFETY APPROVED
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6/13/2024 11:04:11 AM
SP-B54562

Project :

GREVELIA STREET PARK

Owner:

City of South Pasadena

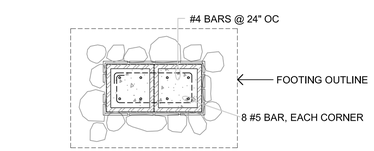
Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN
Drawing Title :	

CONSTRUCTION DETAILS

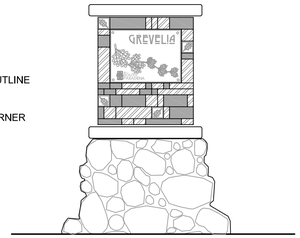
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CD.1

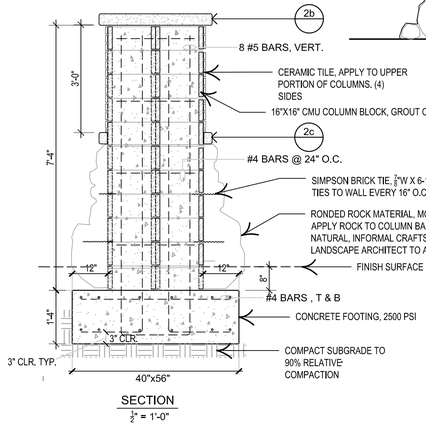
SHEET 9 OF 24



PLAN
1/2" = 1'-0"



ELEVATION
1/2" = 1'-0"



SECTION
1/2" = 1'-0"

BRONZE PLAQUE (18"x24"). MOUNT TO COLUMN



2d PARK SIGN
1" = 1'-0"

ROCK MATERIAL

SOURCE: SOUTHWEST BOULDERS & STONE
ROCK: ARIZONA RIVER ROCK
SIZE: 25% - 12"-18"
25% - 8"-10"
50% - 4"-6"
PHONE: (714) 882-1010

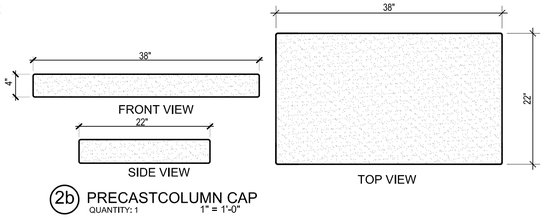
CERAMIC TILE

TILE MANUFACTURE: TBD, CERAMIC TILE TYPE AND COLOR SERIES: TO BE COORDINATED WITH LANDSCAPE ARCHITECT
SIZE & SHAPE: 4"X2", 4"X4", 4"X8, 4"X12", 2"X2", 2"X8", 2"X12"
COLOR: TBD

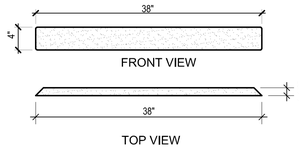
PRECAST COLUMN CAP

SOURCE: QCP
PHONE: (866) 703-3434
MATERIAL: SRC
FINISH: STRADA
COLOR: BUNGALOW

SHOP DRAWINGS: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY ENGINEER FOR REVIEW AND APPROVAL



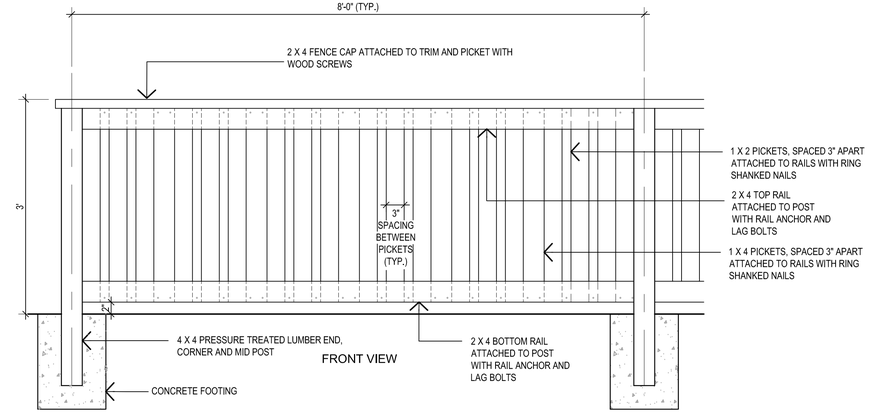
2b PRECASTCOLUMN CAP
QUANTITY: 1 1" = 1'-0"



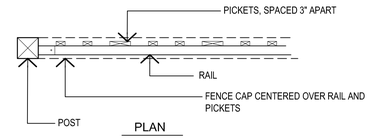
2c PRECASTCOLUMN TRIM
QUANTITY: 4 1" = 1'-0"

2a MONUMENT COLUMN SIGN

2 | MONUMENT SIGN



FRONT VIEW



PLAN

CONSTRUCTION NOTES

A. FENCE PICKET AND TRIM: WOOD FENCE BOARDS TO BE SELECT TK CEDAR, ROUGH.

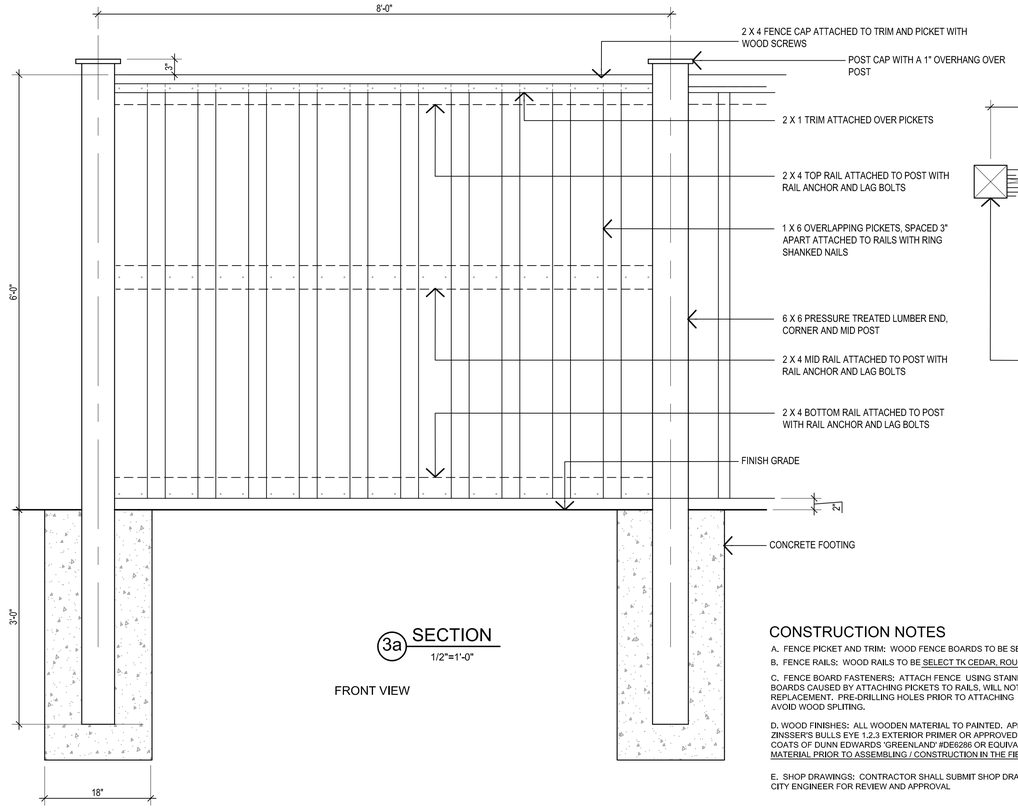
B. FENCE RAILS: WOOD RAILS TO BE SELECT TK CEDAR, ROUGH.

C. FENCE BOARD FASTENERS: ATTACH FENCE USING STAINLESS STEEL FASTENERS. SPLIT BOARDS CAUSED BY ATTACHING PICKETS TO RAILS, WILL NOT BE ACCEPTED AND WILL REQUIRE REPLACEMENT. PRE-DRILLING HOLES PRIOR TO ATTACHING BOARDS MAYBE NECESSAY TO AVOID WOOD SPLITING.

D. WOOD FINISHES: ALL WOODEN MATERIAL TO PAINTED. APPLY ONE (1) PRIMER COAT OF ZINSSER'S BULLS EYE 1,2,3 EXTERIOR PRIMER OR APPROVED EQUIVALENT AND TWO (2) COLOR COATS OF DUNN EDWARDS 'GREENLAND' #DE6286 OR EQUIVALENT. APPLY PAINT TO WOOD MATERIAL PRIOR TO ASSEMBLING / CONSTRUCTION IN THE FIELD.

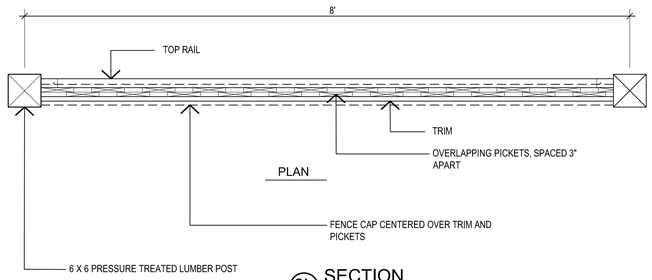
E. SHOP DRAWINGS: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY ENGINEER FOR REVIEW AND APPROVAL

1 | 3' TALL WOOD FENCE



3a SECTION
1/2"=1'-0"

FRONT VIEW



PLAN

3b SECTION
1/2"=1'-0"

CONSTRUCTION NOTES

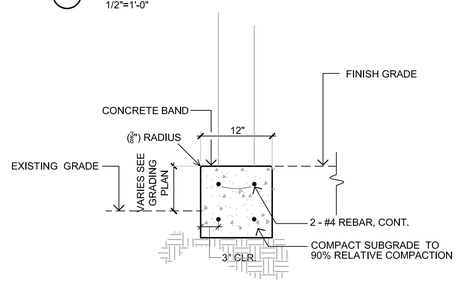
A. FENCE PICKET AND TRIM: WOOD FENCE BOARDS TO BE SELECT TK CEDAR, ROUGH.

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D. WOOD FINISHES: ALL WOODEN MATERIAL TO PAINTED. APPLY ONE (1) PRIMER COAT OF ZINSSER'S BULLS EYE 1,2,3 EXTERIOR PRIMER OR APPROVED EQUIVALENT AND TWO (2) COLOR COATS OF DUNN EDWARDS 'GREENLAND' #DE6286 OR EQUIVALENT. APPLY PAINT TO WOOD MATERIAL PRIOR TO ASSEMBLING / CONSTRUCTION IN THE FIELD.

E. SHOP DRAWINGS: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY ENGINEER FOR REVIEW AND APPROVAL

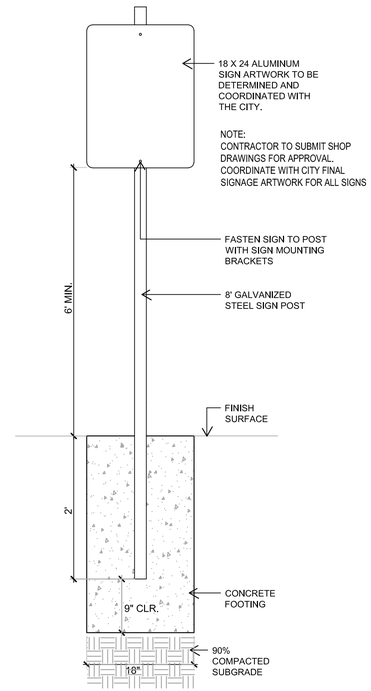


CONSTRUCTION NOTES

1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC.1
2. CONSTRUCT A WEAKENED PLANE JOINT EVERY 8' O.C. AND A CONSTRUCTION JOINT EVERY 24' O.C

3c 12" WIDE CONCRETE CURB AT FENCING

3 | 6' TALL WOOD FENCE



4 | RPOSD SIGN

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
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e-mail: drawings@dvolzdesign.com
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Consultant:

REGISTERED PROFESSIONAL ENGINEER SURENDER M. DEWAN NO. 34559 EXP. 9/30/25 STATE OF CALIFORNIA CIVIL

DMS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT MARY M. TASQUE NO. 6803 SIGNATURE EXP. Feb. 2025 DATE 6/3/24 STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO LOCATE AND PROTECT ALL OF THE ABOVE UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND FACILITIES BY CONTACTING THE UNDERGROUND SERVICE ALERT, DIAL 811.

Revisions:

No.	Date	Revisions	By

BUILDING AND SAFETY APPROVED
REVIEW FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS. **VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.**

6/13/2024, 11:04:11 AM
SP-BS4562

Project :

GREVELIA STREET PARK

Grevelia St, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN
Drawing Title :	

CONSTRUCTION DETAILS

Drawing No :

CD.2

SHEET 10 OF 24

IRRIGATION POINT OF CONNECTION

1" DOMESTIC WATER SERVICE WITH A 1" SERVICE LINE, REFER TO CIVIL PLANS.

CONTRACTOR TO INSTALL BACKFLOW PREVENTER, MASTER VALVE AND FLOW SENSOR, REFER TO IRRIGATION LEGEND. LINK NEW COMPONENTS TO CONTROLLER 'A' WITH 14 GA. CONTROL WIRES TO BE INSTALLED IN 1-1/4" CONDUIT. CONTRACTOR TO INSTALL NEW MAINLINE AND ALL NECESSARY FITTINGS FROM THE WATER METER.

IRRIGATION WATER METER INFORMATION

DOMESTIC WATER 'M' SIZE.....1-1/2"
WATER METER ADDRESS..... TBD
STATIC PRESSURE.....65 PSI
DESIGN WATER PRESSURE.....61.8 PSI
MAXIMUM DEMAND.....13.7 GPM

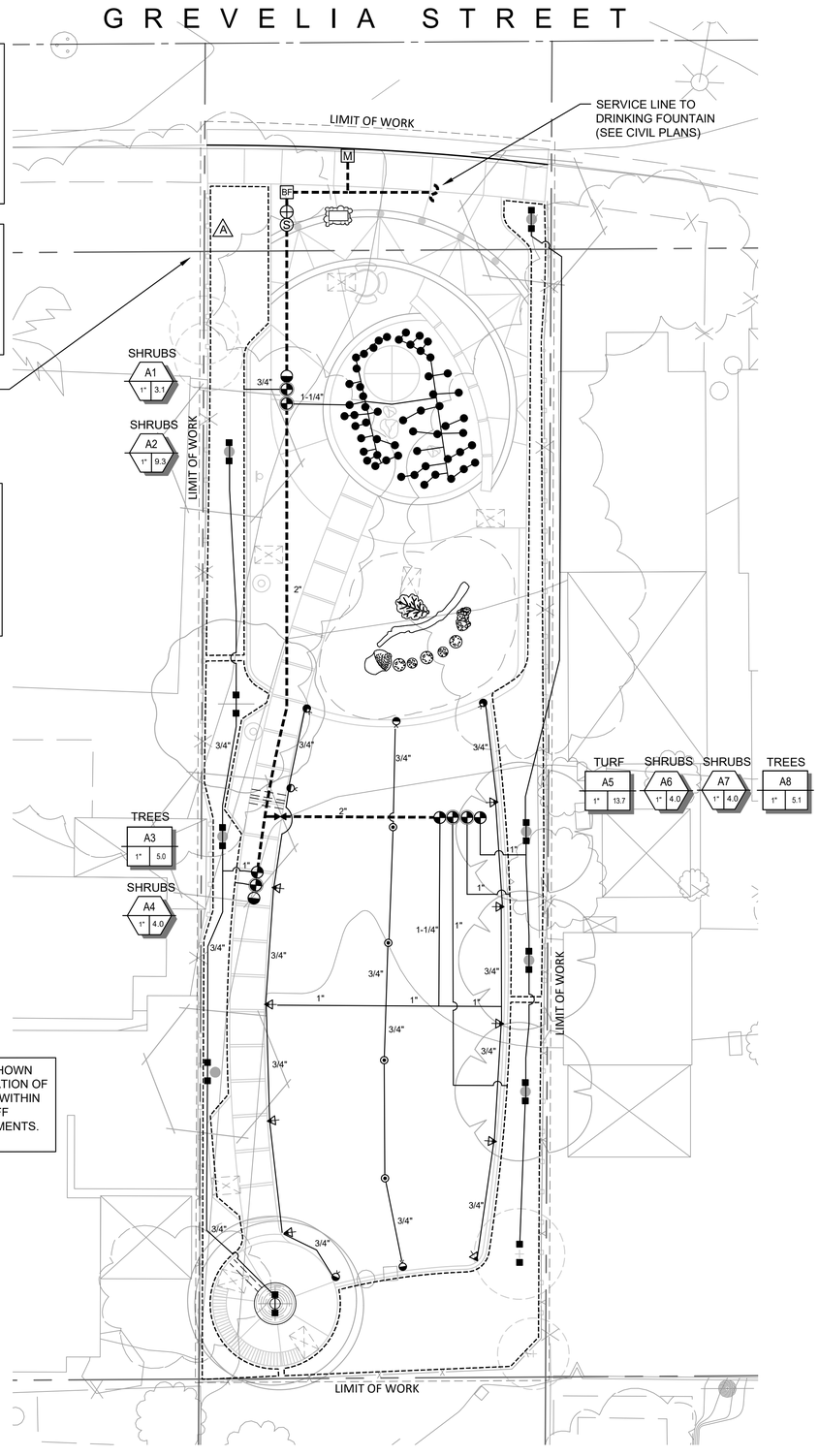
CONTROLLER 'A'

(8) STATION IRRIGATION CONTROLLER,
REFER TO IRRIGATION LEGEND.
REFER TO ELECTRICAL PLANS FOR POWER SUPPLY.

NOTE

VERIFY THE ACTUAL LOCATION, SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. IF ANY OF THE P.O.C. INFORMATION SHOW ON THESE DRAWINGS IS FOUND TO BE DIFFERENT THAN THE ACTUAL P.O.C. INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE P.O.C. INFORMATION ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

MAINLINE AND IRRIGATION EQUIPMENT ARE SHOWN DIAGRAMMATIC WITHIN PAVING. ACTUAL LOCATION OF MAINLINE AND IRRIGATION EQUIPMENT TO BE WITHIN THE PLANTER AREAS, AT A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER SITE ELEMENTS. DO NOT INSTALL VALVES IN TURF.



IRRIGATION LEGEND

IN-LINE DRIP

SYMBOL	MANUFACTURER/ DESCRIPTION	NOZZLE	RAD.	HOUSING	FLOW	PSI	PRECIP. RATE
	RAINBIRD DRIP LINE TUBING AREA PERIMETER	XFS-06-12	N/A	INSTALL 4" BELOW FINISH GRADE. REFER TO DETAILS FOR TUBING LAYOUT.	0.6 GPH	30	N/A

POINT SOURCE DRIP EMITTERS

SYMBOL	MANUFACTURER/ DESCRIPTION	NOZZLE	RAD.	HOUSING	FLOW	PSI	PRECIP. RATE
●	RAINBIRD DRIP EMITTER	PCT-10 GREEN	N/A	1/2" SCH. 80 PVC THREADED RISER	10.0 GPH	30	N/A

TREE AND PALM TREE STREAM BUBBLERS

SYMBOL	MANUFACTURER/ DESCRIPTION	NOZZLE	RAD.	HOUSING	FLOW	PSI	PRECIP. RATE
■	RAINBIRD 6" POP-UP SPRAY BODY WITH HUNTER NOZZLE	MSBN-50Q STREAM BUBBLER	1.5 FT	1806-SAM-PRS (2 EA.) BUBBLERS PER TREE	0.5 GPM	30	1.5 IN/HR

ROTARY NOZZLES

SYMBOL						MANUFACTURER/ DESCRIPTION	NOZZLE	RAD.	HOUSING	GPM					PSI	PRECIP. RATE
360°	210°	180°	90°	45°						360°	210°	180°	90°	45°		
		◓	◔			RAINBIRD 6" POP-UP HUNTER NOZZLE	MP1000	14'	1806-SAM-P45			0.44	0.23		45	0.51 IN/HR
◉			◔	◔		RAINBIRD 6" POP-UP HUNTER NOZZLE	MP2000	19'	1806-SAM-P45	1.48		0.77	0.43		45	0.46 IN/HR

SYMBOL	MANUFACTURER/ DESCRIPTION	MODEL	HOUSING	COMMENTS
◓	RAINBIRD REMOTE CONTROL VALVE	PEB	CARSON #1419 W/ FLUSH COVER AND L-BOLT LOCK	SIZE PER PLAN
◓	RAINBIRD REMOTE CONTROL DRIP ZONE KIT	XCZ-100-PRB-COM 120 MESH	CARSON #1220 W/ FLUSH COVER AND L-BOLT LOCK	SIZE PER PLAN
◑	RAINBIRD 1" QUICK COUPLING VALVE	44LRC	CARSON # 910 W/ T-COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
⋈	NIBCO GATE VALVE	T-113-K	CARSON # 910 W/ T-COVER AND L-BOLT LOCK	VALVE SIZE TO MATCH LINE SIZE
N/A	NETAFIM LINE FLUSHING VALVE	TL050MFV-1	CARSON # 910 W/ T-COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
N/A	RAINBIRD AIR RELIEF VALVE KIT	ARV050	CARSON #910 W/ T-COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
M	1" DOMESTIC WATER METER WITH 1" COPPER TYPE "K" SERVICE LINE	REFER TO CIVIL PLANS FOR NEW WATER SERVICE		
BF	1" FEBCO BACKFLOW PREVENTER	LF825Y (LEAD FREE)	STRONG BOX SBBC-45SS	INSTALL PER MANUFACT. SPECIFICATIONS
⊕	SUPERIOR 1" MASTER VALVE (NORMALLY OPEN)	3100	CARSON #1419 W/ FLUSH COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
Ⓢ	GPI FLOWMEC ULTRASONIC 1" FLOW SENSOR	QS200-10	CARSON #1419 W/ FLUSH COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
Ⓐ	CALSENSE (8) STATION IRRIGATION CONTROLLER SITEONE CONTROLLER ASSEMBLY	CA6-CS5-8/ CS3-GR / GR-STUBBY / COMM 5YR		INSTALL PER MANUFACT. SPECIFICATIONS.

PIPING

SYMBOL	MANUFACTURER/ DESCRIPTION	MODEL	COMMENTS
----------	PRESSURE MAINLINE	USE PVC CLASS 315 FOR SIZES 2" AND LARGER AND PVC SCH.40 FOR SIZES 1-1/2" AND SMALLER.	INSTALL PER DETAILS
————	NON-PRESSURE LATERAL LINE	SCHEDULE 40 PVC	SIZE PER PLAN INSTALL PER DETAILS
= = = = = = = = =	SLEEVING	SCHEDULE 40 PVC	REFER TO IRRIGATION NOTES ON SHEET LI.4. INSTALL PER DETAILS

REMOTE CONTROL DRIP ZONE KIT

VALVE SIZE — A2 1" 7.0 — CONTROLLER STATION — GALLONS PER MINUTE

REMOTE CONTROL VALVE

VALVE SIZE — A1 1" 9.0 — CONTROLLER STATION — GALLONS PER MINUTE

REFER TO SHEETS LI.2 AND LI.3 FOR IRRIGATION DETAILS
REFER TO SHEET LI.4 FOR IRRIGATION NOTES AND CALCULATIONS

Landscape Architect:
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Landscape Architecture & Park Planning

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Consultant:
DMS

SURRENDER M. DEWAN NO. 34559 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA CIVIL Exp. 9/30/25

6/3/24
SURRENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

GARY M. TASQUEZ NO. 6883 REGISTERED LANDSCAPE ARCHITECT SIGNATURE EXP. Feb. 2025 DATE 6/3/24 STATE OF CALIFORNIA

811 DIGALERT
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Revisions:

No.	Date	Revisions	By

Project :

GREVELIA STREET PARK

Grevelia St, South Pasadena, CA, 91030

Owner:

City of South Pasadena

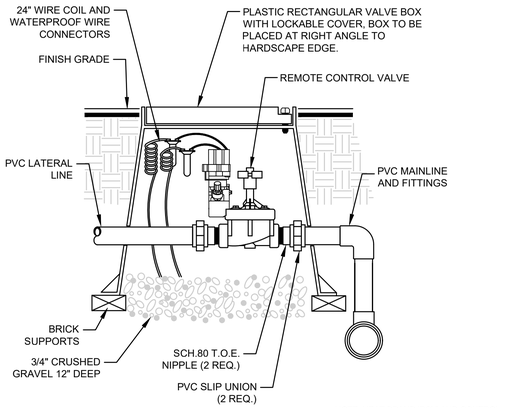
Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN
Drawing Title :	

IRRIGATION PLAN

Drawing No :

LI.1

SHEET 11 OF 24

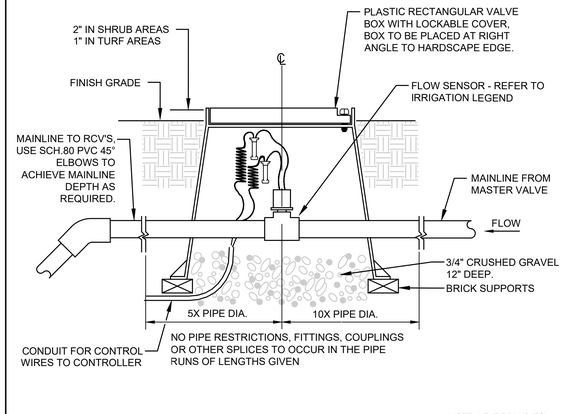


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

D | REMOTE CONTROL VALVE

NOT TO SCALE

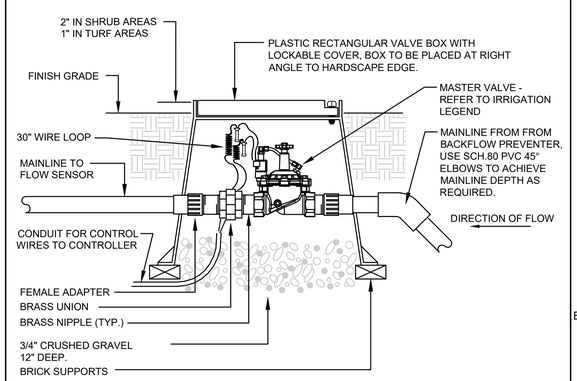


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

C | FLOW SENSOR

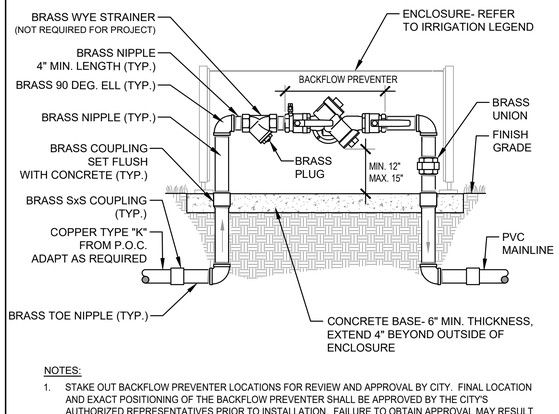
NOT TO SCALE



NOTE:
1. HEAT BRAND 'MV' ON LID IN 2" LETTERS
2. USE ALL BRASS PIPING ON DISCHARGE SIDE OF MASTER VALVE

B | MASTER VALVE

NOT TO SCALE

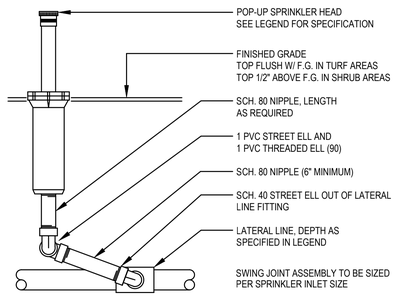


NOTES:

1. STAKE OUT BACKFLOW PREVENTER LOCATIONS FOR REVIEW AND APPROVAL BY CITY. FINAL LOCATION AND EXACT POSITIONING OF THE BACKFLOW PREVENTER SHALL BE APPROVED BY THE CITY'S AUTHORIZED REPRESENTATIVES PRIOR TO INSTALLATION. FAILURE TO OBTAIN APPROVAL MAY RESULT IN RELOCATION OF BACKFLOW PREVENTER PER CITY'S DIRECTION AT NO ADDITIONAL COST TO OWNER.
2. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

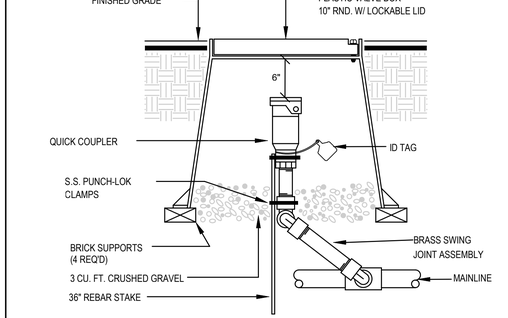
A | BACKFLOW PREVENTER

NOT TO SCALE



H | SLEEVE INSTALLATION

NOT TO SCALE

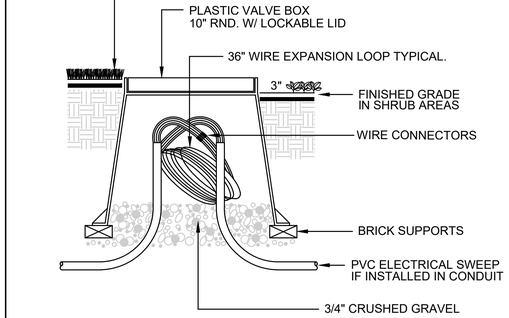


NOTES:

1. TAPE CONTROL WIRES EVERY 10'
2. IN ROCKY SOILS INSTALL PIPING IN SAND BED
3. 24" DEPTH REQUIRED FOR ALL DOMESTIC MAINLINES

G | PIPE INSTALLATION

NOT TO SCALE



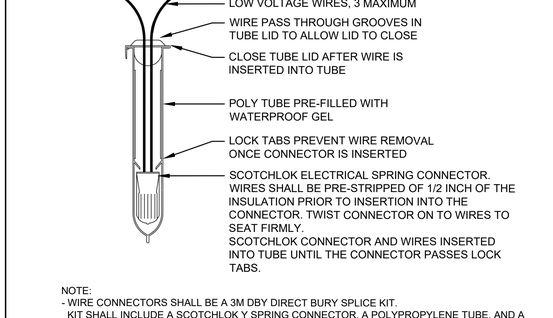
NOTE: HEAT BRAND 'GV' ONTO LID IN 2" LETTERS

NOTES:

1. BOX TO BE INSTALLED TO ALL FOR PROPER OPERATION OF GATE VALVE

F | GATE VALVE

NOT TO SCALE



NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

E | REMOTE CONTROL DRIP ZONE KIT

NOT TO SCALE

L | POP-UP SPRAY HEAD

NOT TO SCALE

NOTE: HEAT BRAND 'QC' ONTO LID IN 2" LETTERS

K | QUICK COUPLING VALVE

NOT TO SCALE

NOTE: HEAT BRAND 'PB' ONTO LID IN 2" LETTERS

J | PULL BOX

NOT TO SCALE

NOTE:
- WIRE CONNECTORS SHALL BE A 3M DBY DIRECT BURY SPLICE KIT. KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR, A POLYPROPYLENE TUBE, AND A WATERPROOF - SEALING GEL. TUBE SHALL BE SUPPLIED PRE-FILLED WITH GEL. SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2-3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES.
- LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

I | WIRE CONNECTIONS

NOT TO SCALE

Landscape Architect:

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Revisions:

No.	Date	Revisions	By

Project :

GREVELIA STREET PARK

Owner:

City of South Pasadena

Project No :	
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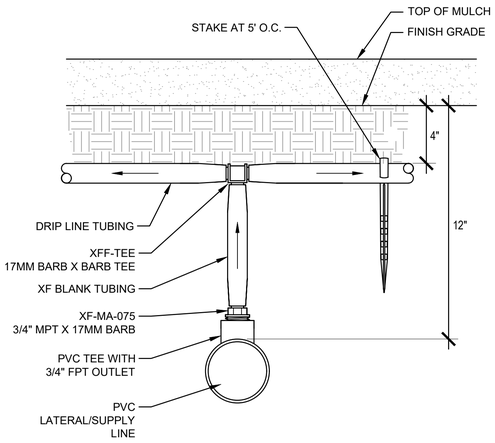
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IRRIGATION DETAILS

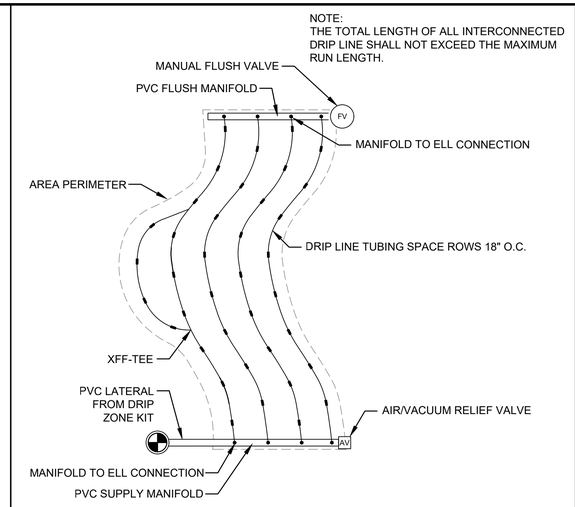
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LI.2

SHEET 12 OF 24

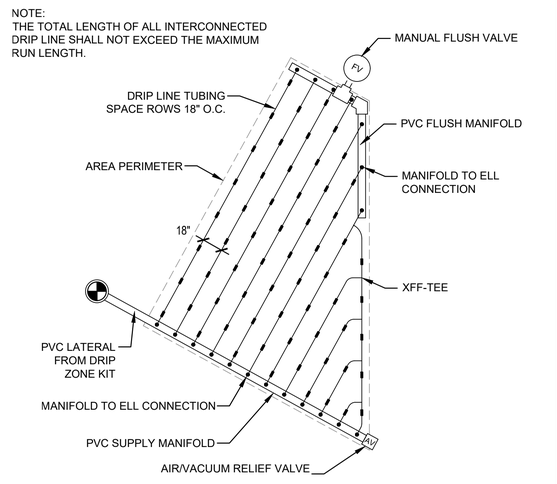


D | DRIP LINE MANIFOLD TO TEE CONNECTION



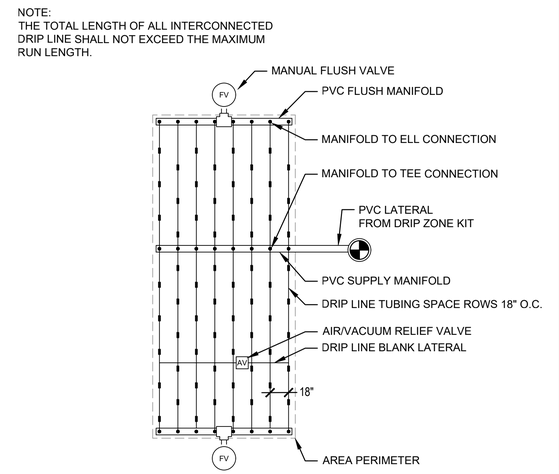
C | DRIP LINE IRREGULAR LAYOUT

NOT TO SCALE



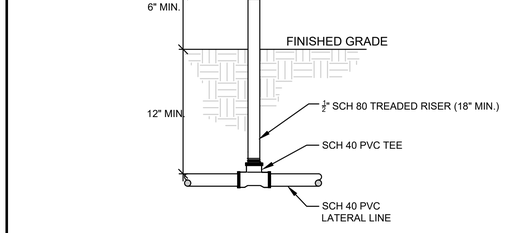
B | DRIP LINE TRIANGULAR LAYOUT

NOT TO SCALE



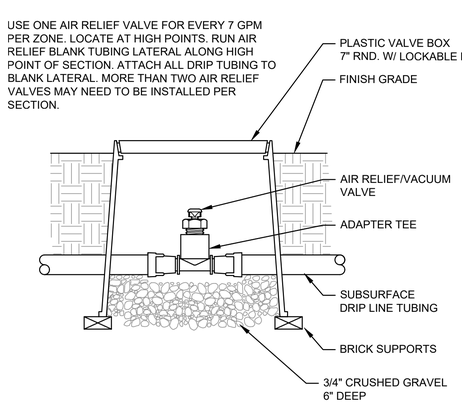
A | DRIP LINE LAYOUT

NOT TO SCALE



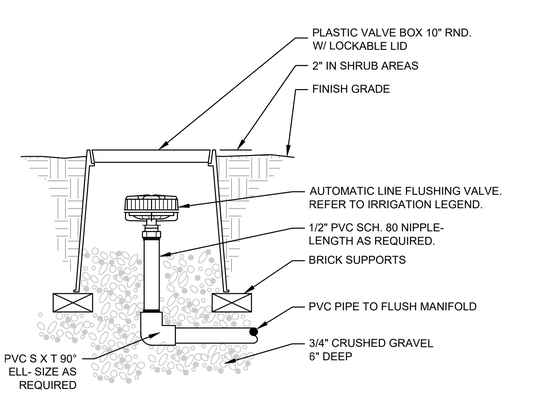
H | POINT SOURCE DRIP EMITTER

NOT TO SCALE



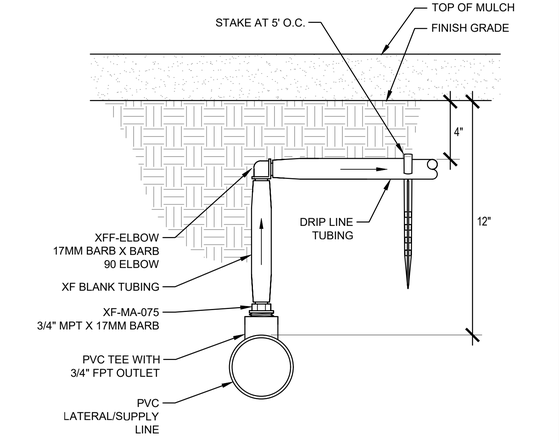
G | DRIP AIR RELIEF VALVE

NOT TO SCALE



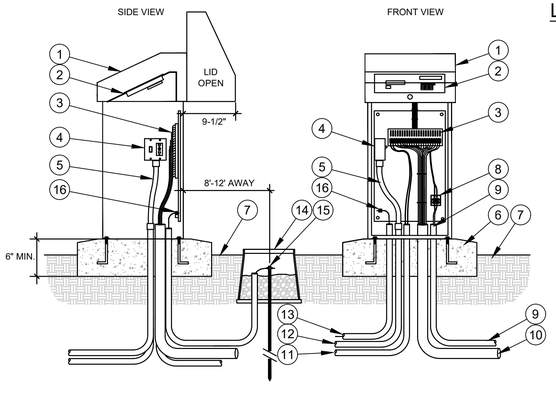
F | LINE FLUSHING VALVE

NOT TO SCALE



E | DRIP LINE MANIFOLD TO ELL CONNECTION

NOT TO SCALE

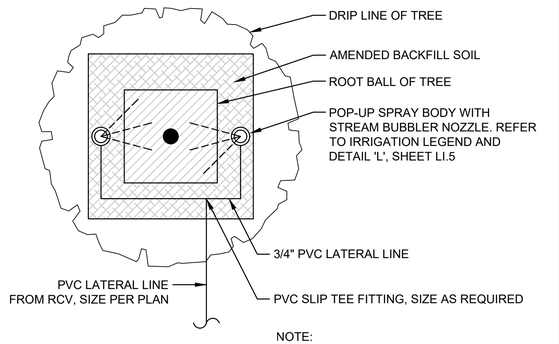


LEGEND

1. STRONG BOX STAINLESS STEEL NEMA 3R RAINPROOF ENCLOSURE (UL LISTED).
2. CONTROLLER ASSEMBLY. ASSEMBLED IN ENCLOSURE BY JOHN DEERE GREEN TECH.
3. TERMINAL STRIP FOR VALVE WIRES.
4. POWER SWITCH/GFCI RECEPTACLE.
5. ELECTRICAL FLEX CONDUIT FOR POWER.
6. 6" MIN. THICK, CONCRETE PAD WITH ANCHOR BOLTS PER MANUFACTURER RECOMMENDATIONS.
7. FINISHED GRADE.
8. FLOW SENSOR TERMINAL BOARD.
9. 1" CONDUIT AND SWEEP ELL WITH FLOW SENSOR CABLE.
10. 3" CONDUIT AND SWEEP ELL FOR LEAD WIRES.
11. 1" CONDUIT AND SWEEP ELL FOR MASTER VALVE WIRES.
12. 1" CONDUIT AND SWEEP ELL FOR 110 VAC POWER LINE.
13. 1" CONDUIT AND SWEEP ELL FOR GROUND WIRE.
14. 10" ROUND VALVE BOX AROUND GROUND ROD. FILL WITH ¾" CRUSHED ROCK.
15. ⅝" X 8' GROUND ROD WITH #6 GROUND WIRE AND CLAMP. LOCATE 8'-12' FROM ENCLOSURE.
16. #6 GROUND WIRE SECURED TO BACKBOARD GROUNDING TERMINAL.

J | CONTROLLER ASSEMBLY

NOT TO SCALE



NOTE:
ADJUST THE NOZZLE STREAMS TO WET THE ROOT BALL WITHOUT HITTING THE TRUNK OF THE TREE.

FOR EXISTING TREES LOCATE SPRAY BODIES NEAR DRIP LINE OF TREE TO EFFECTIVELY WATER THE ROOT ZONE.

I | TREE STREAM BUBBLER

NOT TO SCALE

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Landscape Architecture & Park Planning

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SURRENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT
GARY M. TASQUE
NO. 3883
SIGNATURE
EXP. Feb. 2025
6/3/24
DATE
STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND UTILITIES WHICH MAY REQUIRE A CERTAIN DIFFERENT KIND THAT IS NOT SHOWN, OR IS SHOWN ON THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT. DIAL 811

Revisions:

No.	Date	Revisions	By

Project :

GREVELIA STREET PARK

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN
Drawing Title :	

IRRIGATION DETAILS

Drawing No :

LI.3

SHEET 13 OF 24

PRESSURE LOSS CALCULATION

LANDSCAPE IRRIGATION WATER METER					
STATION	GPM DEMAND	STATIC PRESSURE	IRRIGATION TYPE		IRRIGATING
C46	13.7	65.0	SPRAY		TURF
QTY	SIZE	MATERIAL	DESCRIPTION	GPM	PSI LOSS
36 FT	1-1/2"	COPPER	SERVICE LINE	13.7	0.65
1 EA	1-1/2"	DISC	WATER METER	13.7	0.01
1 EA	1"	BRONZE	BACKFLOW	13.7	11.00
1 EA	1"	BRASS	MASTER VALVE	13.7	2.00
1 EA	1"	PVC	FLOW SENSOR	13.7	1.00
1 EA	1"	PVC	BALL VALVE	13.7	1.00
130 LF	2"	SCH 40 PVC	MAINLINE	13.7	1.04
1 EA	1"	PVC	CONTROL VALVE	13.7	2.50
26 FT	1-1/4"	SCH 40 PVC	LATERAL	13.7	0.28
25 FT	1"	SCH 40 PVC	LATERAL	4.2	0.21
42 FT	3/4"	SCH 40 PVC	LATERAL	1.44	0.18
				SUB-TOTAL	19.87
			MISC. FITTINGS ALLOWANCE (10% OF TOTAL)		1.98
			TOTAL COMPONENT LOSSES		21.85
			MINIMUM PRESSURE REQUIRED BY HEAD		40.00
			TOTAL PRESSURE REQUIRED TO OPERATE		61.85
			ELEVATION LOSS (0.00')		+0.00
			ELEVATION GAIN (0.00')		-0.00
			RESIDUAL PRESSURE		3.15

GENERAL IRRIGATION NOTES

1. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALL, RETAINING WALLS, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL REPAIR OR REPLACE, AT NO ADDITIONAL COST TO THE CITY, ALL ITEMS DAMAGED BY HIS WORK. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS, UNDER ROADWAYS AND PAVING, ETC.

2. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE AREA DIMENSION EXIST THAT MIGHT NOT HAVE BEEN ADDRESSED IN THE DESIGN OF THE IRRIGATION SYSTEM. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY ALTERATIONS TO THE WORK.

3. THE CONTRACTOR SHALL OBTAIN, COORDINATE, AND PAY FOR ANY AND ALL INSPECTIONS AS REQUIRED.

4. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY ENCROACHMENT INTO ADJACENT PROPERTY, R.O.W.'S EASEMENTS SETBACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.

5. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE SPECIFIED. INSTALL ALL HEADS WITH DOUBLE SWING JOINTS AS PER DETAIL. ALL HEADS ADJACENT TO PARKING LOTS, WALKS, ROADS, OR OTHER PAVED AREAS SHALL BE INSTALLED WITH POP-UP BODIES.

6. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE WITH MINIMAL MISTING AND/OR OVER SPRAY ONTO WALKS, STREETS, WALLS, ETC. SUBSTITUTION OF NOZZLE PATTERN OR RADIUS AS REQUIRED TO ACHIEVE OPTIMUM COVERAGE IS RESPONSIBILITY OF CONTRACTOR.

7. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

8. TRENCHING WITHIN THE DRIPLINE OF LARGE EXISTING TREES SHALL BE PERFORMED BY HAND, AND WITH EXTREME CARE NOT TO SEVER ROOTS 1-1/2" IN DIAMETER AND LARGER. WHERE ROOTS 1-1/2" IN DIAMETER AND LARGER ARE ENCOUNTERED, THE CONTRACTOR SHALL TUNNEL UNDER SAID ROOTS. EXPOSED ROOTS THAT HAVE BEEN TUNNELED UNDER SHALL BE WRAPPED IN WET BURLAP AND KEPT MOIST WHILE THE TRENCH IS OPEN.

9. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.

IRRIGATION SYSTEM LAYOUT

DUE TO THE SCALE OF THESE DRAWINGS THE CONTRACTOR SHOULD BE AWARE OF THE POSSIBILITY THAT THE NEED FOR MINOR ADJUSTMENTS TO THE IRRIGATION SYSTEM MAY BE NECESSARY TO PROVIDE PROPER COVERAGE. THESE ADJUSTMENTS COULD INCLUDE NOZZLE CHANGES AND/OR ADDITION OR DELETION OF INDIVIDUAL HEADS TO COMPENSATE FOR CHANGES MADE ON THE SITE. FURTHERMORE, THE IRRIGATION DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATIONS ONLY AND SHALL BE INSTALLED IN **SHRUB** AREAS WHEREVER POSSIBLE.

EXISTING CONDITIONS

THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY EXISTING DAMAGED ITEMS DURING CONSTRUCTION INCLUDING HARDSCAPE, LIGHTING, DRAINAGE, IRRIGATION EQUIPMENT, TREES, SHRUBS, TURF AND GROUNDCOVER. THE CONTRACTOR SHALL REPLACE ANY AND ALL DAMAGED ITEMS TO THE SATISFACTION OF THE ENGINEER.

EQUIPMENT BOXES

ALL REMOTE CONTROL VALVES, GATE VALVES, QUICK COUPLERS, ETC. SHALL BE INSTALLED IN SPECIFIED **TAN** SUBGRADE VALVE BOXES AS SHOWN IN IRRIGATION LEGEND COMPLETE WITH LOCKING COVERS. VALVE BOXES SHALL BE CARSON BROOKS OR APPROVED EQUAL AND SHALL BE MARKED 'G.V.' FOR GATE VALVES, 'R.C.V.' FOR REMOTE CONTROL VALVES, 'Q.C.' FOR QUICK COUPLERS, ETC. REMOTE CONTROL VALVE BOXES ARE ALSO TO BE HEAT BRANDED WITH THE CONTROLLER AND STATION NUMBER. ALL MARKINGS SHALL BE 2" LETTERS AND NUMBERS.

REMOTE CONTROL VALVE LABELS

ALL VALVES ARE TO BE FASTENED WITH CHRISTY'S VALVE IDENTIFICATION TAGS IDENTIFYING STATION # AND APPROPRIATE CONTROLLER IDENTIFICATION INFORMATION.

SLEEVING

SLEEVES SHALL BE PLACED UNDER ALL DRIVEWAYS AND WALKS WHERE IRRIGATION LATERAL, MAINLINE, AND WIRE WILL CROSS. SLEEVES SHALL BE PVC SCH. 40, MINIMUM BURY 36" DEEP. MINIMUM DISTANCE PAST EDGE OF DRIVEWAY OR CONCRETE WALK SHALL BE 24". WATER AND WIRE SHALL NOT BE PLACED IN THE SAME SLEEVE. SLEEVES TO BE TWICE THE DIAMETER OF THE PIPE BEING SLEEVED. WIRE SLEEVES TO BE 2" DIA.

POLYVINYL CHLORIDE PIPE CEMENT

IPS WELD-ON PVC 721 BLUE MEDIUM-BODIED (USE WITH 1/2" TO 1-1/2" PVC PIPE)
IPS WELD-ON PVC 711 GRAY HEAVY-BODIED (USE WITH 2" AND LARGER PVC PIPE AND ALL MAIN LINES)

POLYVINYL CHLORIDE PIPE PRIMER

IPS WELD-ON P-70 PRIMER PURPLE (USE WITH ALL PVC CONNECTIONS)

DETECTABLE MARKING TAPE

'CHRISTY'S' UNDERGROUND MARKING TAPE SHALL BE RUN WITH ALL MAINLINES AND MUST BE INSTALLED AT LEAST 6" ABOVE TOP OF PIPE.

DIRECT BURIAL CONTROL WIRES

(SOLID COPPER, 600 VOLT, TYPE UF)

COMMON WIRES:
WHITE (#12 AWG)

STATION WIRES:
(#14 AWG) COLOR-CODED REQUIREMENTS PER CITY STANDARD. SPARE WIRES MUST BE RUN TO THE FARTHEST VALVE MANIFOLD FROM THE CONTROLLER.

WIRE SPLICES/ CONNECTORS ARE TO BE 3M DBY DIRECT BURY SPLICE KIT. USE EXTRA SEALANT INSIDE CONNECTORS.

PVC PIPE FITTINGS

ALL FITTINGS CONNECTING PVC TO PVC SHALL BE SPEARS 'EverTUFF TURF FITTINGS' COLORED BLUE OR APPROVED EQUAL. ALL PVC FITTINGS TO BRASS VALVES SHALL BE REINFORCED WITH STAINLESS STEEL COLLAR.

STATIC PRESSURE

THE IRRIGATION SYSTEM DESIGN IS BASED ON A STATIC PRESSURE OF **65** PSI AT THE STREET MAINLINE. THE CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE ENGINEER.

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Landscape Architecture & Park Planning

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6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

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GARY M. TASQUEZ
NO. 6883
SIGNATURE
EXP. Feb. 2025
6/3/24
DATE
STATE OF CALIFORNIA

811 DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES IN THE AREA SHOWN ON THESE PLANS OR DESCRIBED IN THE SPECIFICATIONS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions	By

Project :

GREVELIA STREET PARK

Owner:

City of South Pasadena

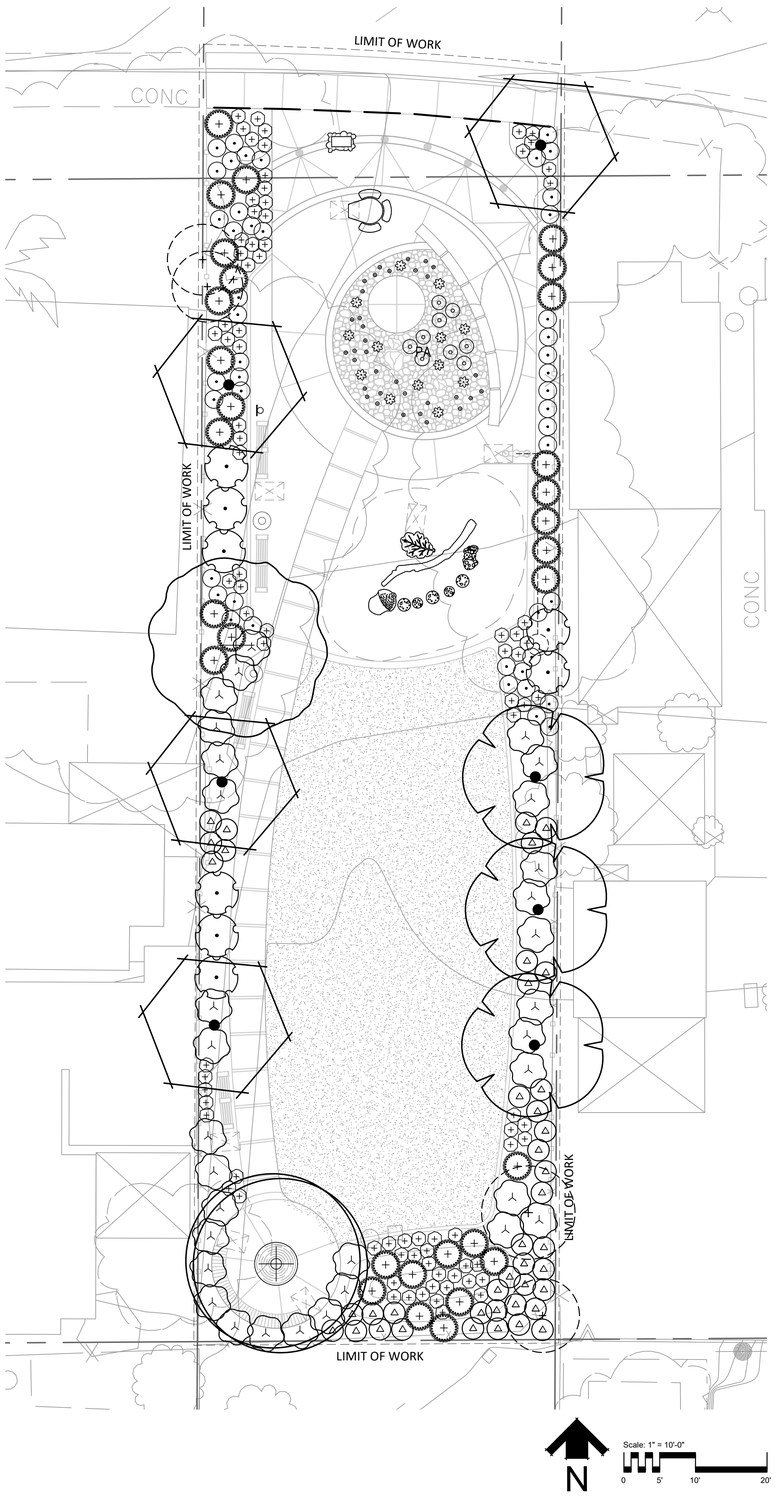
Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN

Drawing Title :

IRRIGATION NOTES AND CALCULATIONS

Drawing No :

LI.4



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	WUCOLS	QTY	REMARKS
TREES						
	ARB MUL	Arbutus x 'Marina' Marina Strawberry Tree Multi-Trunk	24"box	MED	3	STANDARD TRUNK
	CER FOR	Cercis canadensis 'Forest Pansy' Forest Pansy Eastern Redbud	24"box	MED	4	STANDARD TRUNK
	QUE AGR	Quercus agrifolia Coast Live Oak	36"box	LOW	1	STANDARD TRUNK
	QUE SUB	Quercus suber Cork Oak	36"box	LOW	1	STANDARD TRUNK
SHRUBS						
	ACH MOO	Achillea x 'Moonshine' Moonshine Yarrow	5 gal	LOW	46	
	AEO ZWA	Aeonium arboreum 'Zwartkop' Zwartkop Tree Aeonium	5 gal	LOW	9	
	AGA BLG	Agave x 'Blue Glow' Blue Glow Agave	5 gal	LOW	13	
	DOD PUR	Dodonaea viscosa 'Purpurea' Purple Hopseed Bush	15 gal	MEDIUM	8	
	ECH AFT	Echeveria x 'Afterglow' Afterglow Echeveria	5 gal	LOW	34	
	LEO LIO	Leonotis leonurus Lion`s Tail	15 gal	LOW	32	
	MUH RIG	Muhlenbergia rigens Deer Grass	5 gal	MEDIUM	30	
	SAL MEL	Salvia mellifera Black Sage	5 gal	LOW	41	
	TEU PR2	Teucrium x lucidrys prostratum Germander	5 gal	MEDIUM	86	

TURF

SYMBOL	TURF TYPE	COMMENTS	WATER USE
	SOD: BANDERA BERMUDA *SOD ROLLS: REGULAR ROLLS, 24"x60"* *GROWER: WEST COAST TURF* *CONTACT: (760) 340-7300*	FOLLOW WEST COAST TURF SPECIFICATIONS FOR SOD INSTALLATION, ESTABLISHMENT AND MAINTENANCE. AMEND SOIL PER SOIL REPORT RECOMMENDATIONS.	HIGH

EXISTING TREES

EXISTING TREE TO PROTECT IN PLACE.

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811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF SUCH FACILITIES AND SHALL BE SOLELY AND TRULY RESPONSIBLE FOR ANY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions	By

Project :

GREVELIA STREET PARK

Grevelia St, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN

Drawing Title :

PLANTING PLAN

Drawing No :

LP.1

SHEET 15 OF 24

PLANTING NOTES

1. ALL LOCAL, MUNICIPAL, COUNTY AND STATE LAWS, RULES, AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE PART OF THE PROJECT PLANS AND SPECIFICATIONS; AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR. ADDITIONALLY, ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE APWA, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, ("GREEN BOOK"), AND THE PROJECT SPECIFICATIONS.

WHENEVER SPECIAL REQUIREMENTS CONFLICT ON ANY SUBJECT MATTER, THE CITY ENGINEER, OR HIS/HER DESIGNATED REPRESENTATIVE, WILL DETERMINE WHICH SPECIAL REQUIREMENTS AND/OR CODES SHALL GOVERN.

2. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA (DIG ALERT) AT LEAST TWO (2) WORKING DAYS BEFORE DIGGING, EXCAVATING, OR CONSTRUCTION. PHONE 1-800-422-4333 OR 811.

3. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES, OR DISCREPANCIES IN AREA CONFIGURATION OR SIZES, OR IN DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN ENGINEERING. SUCH OBSTRUCTIONS, OR DIFFERENCES, SHOULD BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER, OR HIS DESIGNATED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AND SHALL PERFORM SUCH REVISIONS AT HIS OWN EXPENSE.

4. FINISH GRADE ALL PLANTING AREAS TO ACHIEVE A MINIMUM 2% DRAINAGE AND SMOOTH AND EVEN CONDITION, MAKING SURE THAT NO WATER POCKETS OR IRREGULARITIES REMAIN. REMOVE AND DISPOSE OF ALL SURFACE STONES, ROOTS, WEEDS, DEBRIS, FOREIGN MATERIALS, CLODS, AND ROCKS OVER (1) INCH IN DIAMETER SO THAT AFTER CONDITIONING AND PLANTING THE GRADE IS TWO INCHES (2") BELOW ADJACENT HARDSCAPE EXCEPT ALONG CURB CUT AREAS. CONTRACTOR IS TO ENSURE SMOOTH TRANSITION FROM EXISTING TO NEW GRADE.

5. ALL INSPECTIONS HEREIN SPECIFIED SHALL BE MADE BY THE CITY ENGINEER, OR HIS/HER DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL REQUEST INSPECTION AT LEAST 48 HOURS IN ADVANCE OF THE TIME THE INSPECTION IS REQUIRED.

6. ALL EXISTING LANDSCAPED AREAS DAMAGED DURING CONSTRUCTION MUST BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. RESTORATION OF EXISTING LANDSCAPE AREAS SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER.

7. ALL PLANT MATERIAL SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE CITY ENGINEER, OR HIS/HER DESIGNATED REPRESENTATIVE, BEFORE PLANTING. ALL PLANT MATERIAL DELIVERED ON-SITE WILL BE INSPECTED FOR SIZE AND CONDITION OF ROOT GROWTH, INSECTS, INJURIES, AND DEFECTS. PLANTS NOT APPROVED ARE TO BE REMOVED FROM THE SITE IMMEDIATELY AND REPLACED WITH SUITABLE PLANTS. THE CITY ENGINEER RESERVES THE RIGHT TO REJECT ENTIRE LOTS OF PLANTS REPRESENTED BY DEFECTIVE SAMPLES. ALL PLANT MATERIAL SHALL HAVE NURSERY TAGS WHEN DELIVERED TO THE SITE.

8. STAKE TREES AS INDICATED PER TREE PLANTING DETAIL.

9. FINAL LOCATION OF ALL PLANT MATERIAL IS SUBJECT TO THE APPROVAL OF THE CITY ENGINEER PRIOR TO PLANTING.

10. THE CONTRACTOR IS RESPONSIBLE FOR COUNT VERIFICATION AND IS TO SUPPLY THE QUANTITIES DELINEATED GRAPHICALLY ON PLANS.

11. PLANT ESTABLISHMENT AND MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER INSPECTION AND ACCEPTANCE OF THE WORK BY THE CITY ENGINEER, OR HIS DESIGNATED REPRESENTATIVE. PLANT ESTABLISHMENT AND MAINTENANCE PERIOD SHALL BE FOR A DURATION STATED IN THE SPECIFICATIONS. PLANT ESTABLISHMENT AND MAINTENANCE SHALL BE PERFORMED PER THE PROJECT SPECIFICATIONS.

12. SUPPLEMENTAL HAND WATERING MAY BE REQUIRED DURING THE MAINTENANCE PERIOD TO ESTABLISH PLANT MATERIAL.

13. PLACE WOOD CHIP MULCH IN ALL PLANTED AREAS AT A MINIMUM DEPTH OF 3". DO NOT INSTALL MULCH WITHIN A 6" DIA. OF ANY TREE OR SHRUB TRUNK. CONTRACTOR TO PROVIDE A SAMPLE MULCH FOR THE REVIEW AND APPROVAL OF THE CITY ENGINEER PRIOR TO INSTALLATION. REFER TO SPECIFICATIONS.

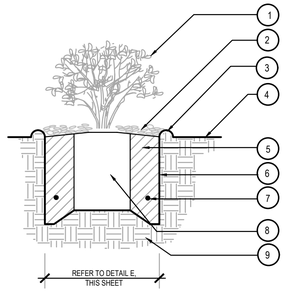
14. CONTRACTOR TO ENSURE THAT PROJECT SITE WILL REMAIN WEED FREE AND FREE OF DEBRIS AND LITTER AT ALL TIMES DURING CONSTRUCTION AND ESTABLISHMENT PERIOD. CONTRACTOR WILL MAINTAIN THE ENTIRETY OF STREET MEDIANS AND PARKWAYS DURING THE DURATION OF PROJECT AND ESTABLISHMENT PERIOD.

WEED ABATEMENT NOTES:

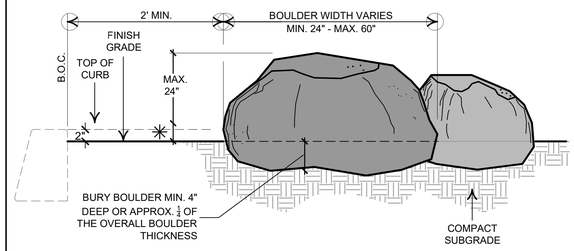
1. REFER TO WEED ABATEMENT REQUIREMENTS IN THE SPECIFICATIONS. ALL WEED ABATEMENT AND RELATED SECTIONS WILL BE ENFORCED INCLUDING TIME PERIOD REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FOR ALL WATER USED FOR IRRIGATION DURING THE WEED ABATEMENT PERIOD.
3. THE WEED ABATEMENT PERIOD SHALL PROCEED UPON THE COMPLETION OF THE IRRIGATION SYSTEM AND AFTER ALL WEEDS AND GROWTH HAS BEEN REMOVED FROM THE PLANTING AREAS PER THE SPECIFICATIONS.
4. SOIL CONDITIONERS AND FERTILIZERS SHALL BE MIXED INTO THE TOP SOIL AT QUANTITIES AND TYPE RECOMMENDED PER THE AGRONOMIC SOILS REPORT PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD
5. FINISHED GRADING SHALL BE COMPLETED AND ACCEPTED BY THE CITY'S DESIGNATED REPRESENTATIVE PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD.
6. ALL EXPOSED PROJECT AREAS SHALL BE FREE OF UNWANTED INSECTS, RODENTS, CLODS, ROCKS, AND LITTER PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD.
7. ALL UNWANTED GRASSES AND WEEDS SHALL BE KILLED BY SPRAYING AND REMOVED PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD.

LEGEND

1. 1 OR 5 GALLON SHRUB
2. LAYER OF MULCH - REFER TO PLANTING NOTES. TAPER MULCH AT BASE OF PLANT.
3. 3 INCH WATER BASIN
4. FINISH GRADE
5. AMENDED SOIL FOR PLANTING - REFER TO SOILS REPORT
6. PLANT PIT EXCAVATION - SEE DETAIL E, THIS SHEET.
7. PLANTING TABLETS - SEE SPECIFICATION FOR QUANTITIY PER SHRUB
8. ROOTBALL
9. NATIVE SOIL



B SHRUB PLANTING DETAIL — NTS



✳ EQUALS 3" WHERE WOOD MULCH OCCURS
EQUALS 1/2" WHERE DECOMPOSED GRANITE OCCURS

NOTE:
1. ALL BOULDERS TO BE SET PARTIALLY BURIED TO ACHIEVE NATURAL OUTCROPPING APPEARANCE.

2. BOULDERS IN CLUSTER ARE TO BE SET AT VARIOUS HEIGHTS.

3. CONTRACTOR TO KEEP BOULDERS 2' MINIMUM CLEAR FROM BACK OF CURB.

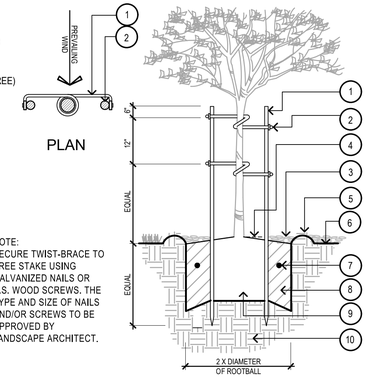
4. REFER TO SHEET LP.1 FOR BOULDER SIZES, QUANTITIES AND SOURCE.

E LANDSCAPE BOULDER INSTALLATION — NTS

LEGEND

1. TREATED LODGE POLE PINE TREE STAKE (3 inch dia. x 10 feet long for 36" box tree) (3 inch dia. x 10 feet long for 24" box tree) (2 inch dia. x 10 feet long for 15 gal. tree)
2. TWIST-BRACE BY V.I.T. PRODUCTS (2 PER TREE) (TB36 for 36" box tree) (TB24 for 15 gal. & 24" box tree)
3. MULCH PER GENERAL PLANTING NOTES
4. SET TOP OF ROOT BALL 1 INCH ABOVE FINISH GRADE
5. CONSTRUCT WATER BASIN - 3" HIGH
6. FINISH GRADE
7. PLANT TABS - PLACE IN TOP 12" OF PLANTING HOLE. SEE SPECIFICATIONS FOR QUANTITY PER TREE
8. AMENDED BACKFILL PER SOILS REPORT
9. ROOTBALL
10. NATIVE SUBGRADE

NOTE:
SECURE TWIST-BRACE TO TREE STAKE USING GALVANIZED NAILS OR S.S. WOOD SCREWS. THE TYPE AND SIZE OF NAILS AND/OR SCREWS TO BE APPROVED BY LANDSCAPE ARCHITECT.

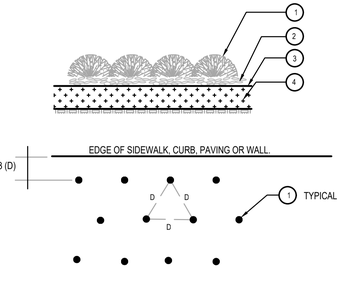


A TREE STAKING AND PLANTING DETAIL — NTS

LEGEND

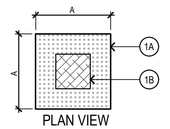
1. PLANT MATERIAL
2. MULCH LAYER - REFER TO PLANTING NOTES
3. FINISH GRADE
4. PREPARED BACKFILL (SEE SPECIFICATIONS FOR TYPE AND DEPTH)

NOTE:
LOCATE PLANTS SPACED EQUAL DISTANCE (D) FROM EACH OTHER AS SHOWN. REFER TO THE PLANT LEGEND FOR DISTANCE (D).



D TRIANGULAR SPACING DETAIL — NTS

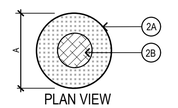
CONTAINER/BOX SIZE	"A" WIDTH/DIAMETER	DEPTH
1 GALLON	12 INCHES	12 INCHES
5 GALLON	26 INCHES	22 INCHES
15 GALLON	36 INCHES	24 INCHES
24 INCH BOX	48 INCHES	28 INCHES
30 INCH BOX	54 INCHES	33 INCHES
36 INCH BOX	66 INCHES	44 INCHES
48 INCH BOX	84 INCHES	60 INCHES



BOX TREES

1A — PLANT PIT TO BE SQUARE, SEE CHART ABOVE FOR THE PLANT PIT DIMENSIONS.

1B — ROOTBALL



CONTAINER PLANTS

2A — PLANT PIT TO BE ROUND, SEE CHART ABOVE FOR THE PLANT PIT DIMENSIONS.

2B — ROOTBALL

F PLANT PIT DIMENSIONS — NTS

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Consultant:

REGISTERED PROFESSIONAL ENGINEER — SURRENDER M. DEWAN — NO. 34559 — Exp. 9/30/25 — CIVIL — STATE OF CALIFORNIA — DMS

6/3/24
SURRENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT — GARY M. TASQUE — NO. 3883 — SIGNATURE — EXP. Feb. 2025 — 6/3/24 — DATE — STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT SHOWN ON THESE PLANS. REFER TO THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT, DIAL 811.

Revisions:

No.	Date	Revisions	By

Project :

GREVELIA STREET PARK

Owner:

City of South Pasadena

Project No :
Drawn By : PC / LP
Checked By : GV / ES
Date : SEPTEMBER 2023
Scale : AS SHOWN
Drawing Title :

PLANTING DETAILS AND NOTES

Drawing No :

LP.2

SHEET 16 OF 24

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
3. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
5. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
6. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
7. FURNISH PULL STRING IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
8. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, PROVIDE SEPARATE CONDUIT FOR EACH HOMERUN INDICATED ON THE DRAWING, UNLESS INDICATED OTHERWISE.
9. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH N.E.C. REQUIREMENTS.
10. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16') SHALL BE WEATHERPROOF TYPE, NEMA 3R.
11. NO CONDUIT RUNS SHALL BE ALLOWED IN CONCRETE SLABS. ALL CONDUITS WILL BE PLACED ABOVE ACCESSIBLE CEILING SPACES UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
12. ALL ELECTRICAL POWER LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
13. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
14. CONTACT UTILITY COMPANIES FOR SCOPE OF WORK PRIOR TO SUBMITTING BID; INCLUDE UTILITY CHARGES IF ANY.
15. ALL DISTRIBUTION AND CONTROL EQUIPMENT (SUCH AS CB's, SWITCHES, CONTACTORS, ETC.), TERMINATIONS SHALL BE FULLY RATED PER UL AS FOLLOWS:

    a. 125A OR LESS : 60°C OR MORE.
    b. MORE THAN 125A : 75°C OR MORE.
16. ANY ERRORS, OMISSIONS, OR DESIGN DISCREPANCIES ON PLANS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER FOR CLARIFICATION OR CORRECTION PRIOR TO CONSTRUCTION AND PREPARATION OF SUBMITTAL PACKAGES.
17. CONDUCTORS SHALL HAVE UNDERWRITER'S LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW OR ELSEWHERE IN THE SPECIFICATIONS. CONDUCTORS SHALL BE COPPER.

    1. BRANCH CIRCUITS - LIGHTING AND POWER.

    a. #10 AWG AND SMALLER, SOLID WIRE TYPE THW OR THHN/THWN, THHW(THHN FOR DRY LOCATION ONLY).
    b. #8 AWG TO #2 AWG, STRANDED TYPE THW OR THHN/THHW.
    c. #1 AWG AND LARGER, STRANDED TYPE XHHW.

    2. FEEDERS : TYPE THW OR THHN/THWN, OR XHHW.
18. PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN EACH RACEWAY INCLUDING CONDUITS, PLUG STRIPS, WIREMOLD. SIZE OF GROUNDING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.
19. WIRING METHOD SHALL BE EMT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION. USE RIGID WHEN ENCASED IN CONCRETE OR SUSCEPTIBLE TO DAMAGE.
20. UNLESS OTHERWISE INDICATED, SHARING OF NEUTRAL/GROUNDED CONDUCTORS AMONG SINGLE PHASE BRANCH CIRCUITS OF DIFFERENT PHASES INSTALLED IN THE SAME RACEWAY IS NOT PERMITTED. PROVIDE DEDICATED NEUTRAL/GROUNDED CONDUCTOR FOR EACH INDIVIDUAL BRANCH CIRCUIT.

ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME RATING (CIRCUIT BREAKER)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE RATING (FUSE)
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH RATING (FUSE)
AT	AMPERE TRIP RATING (CIRCUIT BREAKER)
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CFSD	COMBINATION FIRE SMOKE DAMPER
CO	CONDUIT ONLY
CONC	CONCRETE
CT	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
DISC	DISCONNECT
DSBN	DISTRIBUTION SECTION
DN	DOWN
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EXIST, (E)	EXISTING
EXO	EXTERNAL OPERABLE DISCONNECT
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FLA	FULL LOAD CURRENT
FLUOR	FLUORESCENT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HV	HIGH VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED/INSULATED GROUND
INCAND	INCANDESCENT
ISC	SHORT CIRCUIT CURRENT AVAILABLE IN RMS SYMMETRICAL AMPERES
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
KV	KILO VOLT
KVA	KILO VOLT-AMPERE
LDC	LOCAL DISTRIBUTION CABINET
LDF	LOCAL DISTRIBUTION FRAME
LCL	LONG CONTINUOUS LOAD
LTG	LIGHTING
LV	LOW VOLTAGE
MFR	MANUFACTURER
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MH	MANHOLE / METAL HALIDE
M/M	METER AND MAIN SECTION
MULTI	MULTI-METER SECTION
MV	MEDIUM VOLTAGE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NEW (N)	NEW, TO BE FURNISHED AND INSTALLED BY CONTRACTOR
NF	NON-FUSED
NIC	NOT IN CONTRACT
N/L	NIGHT LIGHT
NO	NUMBER, NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PNL	PANEL
POC	POINT OF CONNECTION
PP	POWER POLE
PWR	POWER
PVC	POLYVINYL CHLORIDE
QUAD	QUADRUPLEX
QTY	QUANTITY
REQD	REQUIRED
REQMT	REQUIREMENT
RGS	RIGID GALVANIZED STEEL
RMC	RIGID METALLIC CONDUIT
RM	ROOM
RNC	RIGID NONMETALLIC CONDUIT
SHT	SHEET
SN	SOLID NEUTRAL
SPEC	SPECIFICATIONS
SPDT	SINGLE POLE, DOUBLE THROW
SPST	SINGLE POLE, SINGLE THROW
SW	SWITCH
SWBD	SWITCHBOARD
TC	TIME CLOCK
TEL	TELEPHONE
TERM	TERMINAL
TP	TEMPORARY POLE
TYP	TYPICAL
UGPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORY
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V	VOLT, VOLTAGE
VA	VOLT-AMPERE
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WH	WATT-HOUR
WP	WEATHERPROOF
WT	WEATHERTIGHT
WW	WIREWAY
XP	EXPLOSION PROOF
Z	IMPEDANCE
4W	FOUR-WIRE
3W	THREE-WIRE
5S	JUNCTION BOX (4 11/16" SQUARED X2 1/8" DEEP)
Ø	DIAMETER, PHASE
#	NUMBER
°C	DEGREE CELSIUS
(E)	EXISTING DEVICE TO REMAIN
(R)	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
(RL)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
(NL)	NEW LOCATION OF RELOCATED DEVICE

APPLICABLE CODES

1. 2022 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2. 2022 CALIFORNIA BUILDING CODE (CBC),PART 2, TITLE 24 C.C.R. (IBC WITH AMENDMENTS)
3. 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)
4. 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (UMC WITH AMENDMENTS)
5. 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (UPC WITH AMENDMENTS)
6. 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (IFC WITH AMENDMENTS)
7. 2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
8. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
9. 2022 CALIFORNIA ENERGY CODE (PART 6, TITLE 24 C.C.R.)
10. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSG), PART 11, TITLE 24 C.C.R.
11. 2023 COUNTY OF LOS ANGELES BUILDING CODE (TITLE 26)
12. 2023 COUNTY OF LOS ANGELES ELECTRICAL CODE (TITLE 27)
13. 2023 COUNTY OF LOS ANGELES PLUMBING CODE (TITLE 28)
14. 2023 COUNTY OF LOS ANGELES MECHANICAL CODE (TITLE 29)
15. 2023 COUNTY OF LOS ANGELES RESIDENTIAL CODE (TITLE 30)
16. 2023 COUNTY OF LOS ANGELES GREEN BUILDING STANDARDS CODE (TITLE 31)
17. 2023 COUNTY OF LOS ANGELES EXISTING BUILDING CODE (TITLE 33)

NOTE TO CONTRACTOR

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

LIGHTING LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
S# 2	POLETOP LED FIXTURE. S# INDICATES LUMINAIRE TYPE - REFER TO LUMINAIRE SCHEDULE, TYPICAL. SUBSCRIPT 2 REFERS TO CIRCUIT DESIGNATION.
	BOLLARD LED FIXTURE.
	MONUMENT PARK SIGN FIXTURE

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
WP	WEATHERPROOF DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS, GFCI TYPE) MOUNTED ON PEDESTAL AT 20" A.F.G. CONFIRM EXACT MOUNTING HEIGHT WITH PEDESTAL MANUFACTURER.
J	ABOVE CEILING, CONCEALED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
KJ	RECESSED WALL MOUNTED JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
OR	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (SURFACE MOUNTED)
	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (RECESSED MOUNTED)
	MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING ENCLOSURE, (SEE SINGLE LINE DIAGRAM AND LOAD SUMMARY)
+96" OR 7'-6" AFF	MOUNTING HEIGHT FROM FINISHED FLOOR TO BOTTOM LINE OF OUTLET OR EQUIPMENT. FOR LIGHT FIXTURES, IT IS TO BOTTOM OF FIXTURE.
	CONDUIT TURNED DOWN, 3/4" UON
	CONDUIT TURNED UP, 3/4" UON
	CONDUIT STUBBED AND CAPPED, 3/4" UON
	RACEWAY CONCEALED IN WALLS OR ABOVE CEILING, 3/4" UON
	CONDUIT CONCEALED IN OR UNDER FLOOR, 3/4" UON, COORDINATE WITH G.C.: OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
DETAIL No. SHEET No.	DETAIL REFERENCE
EQUIPMENT ID. No.	EQUIPMENT REFERENCE
PR	ELECTRICAL UTILITY PRIMARY
SC	ELECTRICAL UTILITY SECONDARY
T	UTILITY TELEPHONE
OH	OVERHEAD UTILITY CABLING
A-1,3	3/4" UON HOMERUN TO CIRCUITS #1 AND #3 IN PANEL "A". (CROSSMARKS INDICATE NUMBER OF PHASES AND NEUTRAL. PROVIDE GROUND WIRE.)
	3/4" CONDUIT WITH 2 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 3 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 4 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 5 #12 & 1 #12 GND WIRES
#10	3/4" CONDUIT WITH 2 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 3 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 4 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 5 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	1" CONDUIT WITH 6 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)

CONCEALED IN WALL OR CEILING

	GROUND WELL
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT
	TELEPHONE BACKBOARD 2'X4'X3/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.
	MOLDED CASE CIRCUIT BREAKER
	SWITCH AND FUSE ASSEMBLY
	UTILITY COMPANY PULL SECTION LUGS
	GROUNDING CONNECTION TO MAIN BUILDING GROUND SYSTEM U.O.N.
N G	GROUNDING CONNECTION AT SWITCHGEAR/DISTRIBUTION BOARD WITH NEUTRAL BONDING.
M	IN-LINE UTILITY COMPANY METER
M	UTILITY METER WITH CIRCUIT TRANSFORMERS (CT'S) METER
200-B	CONDUIT WIRING DESCRIPTION PER FEEDER SCHEDULE ON OTHER PLAN
PB	CONCRETE ELECTRICAL PULL BOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION. LID SHALL BE LABELED "ELECTRICAL" OR "COMM" ACCORDING TO USE.

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E0.1	ELECTRICAL LEGENDS AND NOTES
E0.2	LUMIANIRE SCHEDULE & TITLE 24
E0.3	SINGLE LINE DIAGRAM
E1.1	ELECTRICAL SITE LIGHTING PLAN
E1.2	SITE PHOTOMETRIC PLAN
E3.1	ELECTRICAL TITLE 24 FORMS
E4.1	ELECTRICAL DETAILS

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DESIGN WEST ENGINEERING
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Seal:

REGISTERED PROFESSIONAL ENGINEER — No. E19480 — ELECTRICAL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT SHOWN ON THESE PLANS. IN ADDITION TO THE SPECIAL PROVISIONS, THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No.:
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

ELECTRICAL LEGENDS AND NOTES

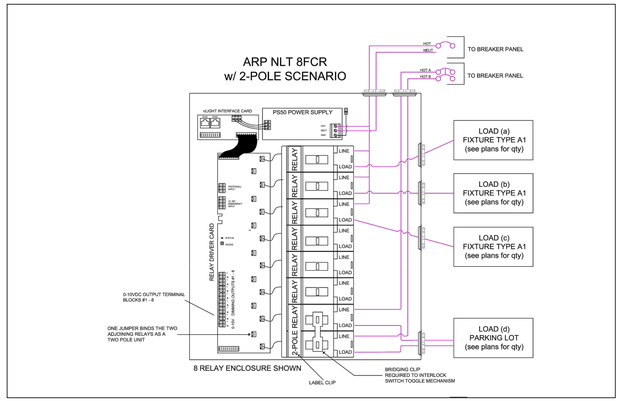
Drawing No :

E0.1

SHEET 17 OF 24

21-333

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E.RNTSHT - 2023-09-26 - JESUS MANZO



LIGHTING CONTROL WIRING DETAIL | 1

LUMINAIRE SCHEDULE

TYPE	VOLTS	WATTAGE	LUMENS	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MFR.	CATALOG #	NOTES	SYMBOL
S1	240	32	1,181	LED 4000K	IN-GRADE	8" LED BOLLARD LIGHT FIXTURE. MOUNT AT +3'-6" A.F.G.	ANP LIGHTING	BL6031-CL-A032LD8-T3-40K	COORDINATE COLOR OF FINISH WITH ARCHITECT	⊙
S2	120	20	2,591	LED 4000K	IN-GRADE	IN-GRADE VANDAL RESISTANT LED FLOODLIGHT FIXTURE.	LIGMAN	UKWH-30001-20W-T2-W40-120	COORDINATE COLOR OF FINISH WITH ARCHITECT	▽

LUMINAIRE SCHEDULE NOTES

1. EQUALS SHALL BE CONSIDERED UPON SUBMITTAL REVIEW AND APPROVAL. PLEASE NOTE THAT IF AN ALTERNATE IS CONSIDERED:
   a. THE CONTRACTOR IS COMPLETELY AND SOLELY RESPONSIBLE FOR ALL ASPECTS OF THE SUBSTITUTION INCLUDING UPDATING CONSTRUCTION DOCUMENTS, OBTAINING APPROVALS AND PERMITS FROM LOCAL AUTHORITY, AND COORDINATING WITH ALL TRADES TO ENSURE CHANGES TO AFFECTED BUILDING SYSTEM ARE ACCOUNTED FOR AND ACCEPTABLE TO THE ENGINEERING TEAM. CONTRACTOR SHALL ENSURE SUBSTITUTED EQUIPMENT MEETS OR EXCEEDS DESIGN INTENT REGARDING RATINGS, PERFORMANCE, DIMENSIONAL CLEARANCES, PHYSICAL DIMENSIONS (MAX/MIN), WEIGHT LIMITATIONS, AND OTHER ASPECTS, PROVING SUBSTITUTION IS SUITABLE TO THE APPLICATION. ENGINEERS WILL REVIEW THE RATING AND PERFORMANCE OF SUBSTITUTED EQUIPMENT ONLY AND WILL NOT ASSUME RESPONSIBILITY FOR SUBSTITUTION AT ANY LEVEL.
   b. IF CONTRACTOR CANNOT MAKE SUBSTITUTED EQUIPMENT WORK IN THIS PROJECT, CONTRACTOR SHALL REVERT TO REQUIREMENTS OF PERMITTED CONSTRUCTION DOCUMENTS AT THEIR EXPENSE.
   c. IT IS UNDERSTOOD BY ALL PARTIES THAT ANY SUBSTITUTIONS OF SPECIFIED PRODUCTS ARE DONE FOR THE PURPOSE OF COST SAVINGS TO THE OWNER. THEREFORE, ANY MATERIAL SUBSTITUTION OR DEVIATIONS PROPOSED BY THE CONTRACTOR SHALL BE INCLUDED WITH THE INITIAL BID AND SHALL SHOW A LINE ITEMS CREDIT TO THE OWNER FOR EACH SUBSTITUTION IN LIEU OF SPECIFIED PRODUCTS.
2. THE FIXTURE SCHEDULE INDICATES GENERAL DESCRIPTION OF LIGHTING FIXTURES AND MANUFACTURERS CATALOG NUMBERS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE CORRECT CEILING CONFIGURATION AND PROVIDE THE FIXTURES WITH ALL NECESSARY TRIMS AND MOUNTING HARDWARE SO THAT BOTH THE CEILING SYSTEM AND THE FIXTURE CONSTRUCTION MATCHES. PROVIDE SEISMIC HANGERS AS REQUIRED.
3. IT SHALL BE CONTRACTORS RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND TYPE OF CEILING WITH ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL ELEVATION DRAWING FOR MOUNTING HEIGHTS OF WALL MOUNTED FIXTURES.
4. PROVIDE ALL REQUIRED MOUNTING HARDWARE ANCHORAGE AND SUPPORTS TO INSTALL LIGHTING FIXTURES.
5. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERABLE LIGHTING SYSTEM AS PART OF THIS BUILDING CONTRACT.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE FIXTURE BALLAST OR DRIVER VOLTAGE MATCHES THE CIRCUIT VOLTAGE SUPPLYING FIXTURE PRIOR TO ORDERING.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY BALLAST/DRIVER DIMMING CONFIGURATION IS COMPATIBLE WITH CONTROLS BEING PROVIDED PRIOR TO ORDERING FIXTURES. EX. 2 WIRE, 3 WIRE, 4 WIRE, 0-10V, CAT 5, ETC.
8. LED LIGHT FIXTURES SHALL BE IN ACCORDANCE WITH IES, NFPA, UL, AS SHOWN ON THE DRAWINGS, AND AS SPECIFIED.
9. LED LIGHT FIXTURES SHALL BE REDUCTION OF HAZARDOUS SUBSTANCES (ROHS)-COMPLIANT.
10. LED DRIVERS SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - MINIMUM EFFICIENCY: 85% AT FULL LOAD.
    - MINIMUM OPERATING AMBIENT TEMPERATURE: -20 DEG C. (-4 DEG F.)
    - INPUT VOLTAGE: 120 - 277V (±10%) AT 60 HZ., UNLESS OTHERWISE INDICATED.
    - INTEGRAL SHORT CIRCUIT, OPEN CIRCUIT, AND OVERLOAD PROTECTION.
    - POWER FACTOR: >=0.95.
    - TOTAL HARMONIC DISTORTION: <=20%.
    - COMPLY WITH FCC 47 CFR PART 15.
12. LED MODULES SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - COMPLY WITH IES LM-79 AND LM-80 REQUIREMENTS.
    - MINIMUM CRI 80 AND COLOR TEMPERATURE 4000K UNLESS OTHERWISE SPECIFIED IN LUMINAIRE SCHEDULE.
    - MINIMUM RATED LIFE: 50,000 HOURS PER IES L70.
    - LIGHT OUTPUT LUMENS AS INDICATED IN THE LUMINAIRE SCHEDULE.
13. ALL FIXTURES MOUNTED OUTDOORS SHALL BE UL LISTED FOR WET LOCATION.

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Landscape Architecture & Park Planning

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Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia
Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No.:
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

LUMIANIRE SCHEDULE & DETAILS

Drawing No :

E0.2

SHEET 18 OF 24

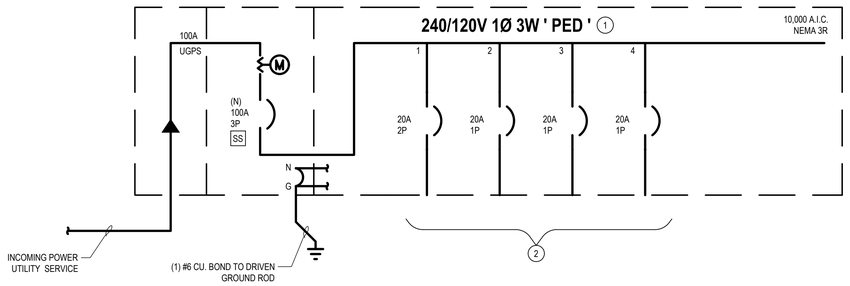
21-333

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E LUMSCHD - 2023-09-26 - JESUS MANZO

600V FEEDER SCHEDULE 1Ø 3W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
20-B	20A-3W	1	2 # 12	1 # 12	1 # 12	3/4"
30-B	30A-3W	1	2 # 10	1 # 10	1 # 10	3/4"
40-B	40A-3W	1	2 # 8	1 # 10	1 # 10	1"
50-B	50A-3W	1	2 # 6	1 # 6	1 # 10	1"
60-B	60A-3W	1	2 # 6	1 # 6	1 # 10	1"
70-B	70A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
80-B	80A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
90-B	90A-3W	1	2 # 2	1 # 2	1 # 8	1-1/4"
100-B	100A-3W	1	2 # 1	1 # 1	1 # 8	1-1/2"
125-B	125A-3W	1	2 # 1	1 # 1	1 # 6	1-1/2"
150-B	150A-3W	1	2 # 1/0	1 # 1/0	1 # 6	1-1/2"
175-B	175A-3W	1	2 # 2/0	1 # 2/0	1 # 6	2"
200-B	200A-3W	1	2 # 3/0	1 # 3/0	1 # 6	2"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).



VOLTAGE DROP - CKT PED-1,3

RUN #	QTY	VOLTS	PHASE	VA FIXT	AMPS	WIRE SIZE	RES.	DIST.	VOLT DROP	%
PED - LTG	7	240	1	32	0.93	#10	1.2000	165	0.37	0.15
LTG - LTG	6	240	1	32	0.80	#10	1.2000	150	0.29	0.12
LTG - LTG	5	239	1	32	0.67	#10	1.2000	127	0.20	0.09
LTG - LTG	4	239	1	32	0.54	#10	1.2000	102	0.13	0.05
LTG - LTG	3	239	1	32	0.40	#10	1.2000	76	0.07	0.03
LTG - LTG	2	239	1	32	0.27	#10	1.2000	48	0.03	0.01
LTG - LTG	1	239	1	32	0.13	#10	1.2000	22	0.01	0.00
TOTALS								690	1.10	0.46

SINGLE LINE DIAGRAM 1

MOUNTING: PEDESTAL
FED FROM: UTILITY
NEMA: 3R
AIC RATING: 10,000

PANEL PED (NEW)

LOCATION: PEDESTAL

VOLTAGE: 120/240V 1PH 3W
BUS: 100 A
MAIN: 100 A
FEEDER: 100 -B

NOTE	DESCRIPTION	A	B	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %	CONDUIT		PHASE		CONDUIT	V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	DESCRIPTION	NOTE
1	BOLLARD LTS	208		L	2	20					1	A -	2					20	1	L	20		MONUMENT PARK SIGN	1
	- - - - -		208	L	-	- -					3	- B	4					20	1				SPARE	
	PEDESTAL REC	360		R	1	20					5	A -	6					20	1				SPARE	
	LTS CONTROLS		500	C	1	20					7	- B	8					20	1				SPARE	
	SPARE				1	20					9	A -	10					20	1				SPARE	
	SPACE										11	- B	12										SPACE	
	SPACE										13	A -	14										SPACE	
	SPACE										15	- B	16										SPACE	
	SPACE										17	A -	18										SPACE	
	SPACE										19	- B	20										SPACE	
	SUBTOTALS	568	708																		20	0		

CEC LOAD CALC:	CONNECTED	DEM. FACT.	DEM. VA	DEMAND AMPS
LOAD TYPE	VA			
(L) LIGHTING	436	1.25	545	2
(R) RECEPTACLE	360	220.44	360	2
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	500	1.25	625	3
(N) NON-CONTINUOUS	0	1.00	0	0
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	1296		1530	

TOTAL AMPS CONNECTED AT 120/240V 1PH 3W WITH LCL 6 A

SUBTOTALS:	PHASE
588 VA	A
708 VA	B
1296 VA	TOTAL
6	AMPS

NOTES:
1. ROUTE CIRCUIT VIA LIGHTING CONTROL PANEL

PANEL SCHEDULE 2

GENERAL NOTES

1. REFER TO 'GENERAL NOTES' ON ELECTRICAL LEGENDS AND NOTES SHEET FOR WIRING METHODS, MATERIALS, AND REQUIREMENTS.
2. ALL CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER.
3. CONTRACTOR SHALL UPDATE ALL MODIFIED PANEL DIRECTORIES OR CREATE A NEW TYPED DIRECTORY, IF ONE DOES NOT EXIST, IDENTIFYING EACH CIRCUIT AND INSTALLED CIRCUIT LOADS, MOUNTED IN GLASS OR PLASTIC INSIDE DOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING DIRECTORIES TO INDICATE ALL NEW CIRCUITS AND ACTUAL AREA SERVED WHICH IS NOT NECESSARILY THE DESCRIPTION INDICATED ON THE BID DOCUMENTS. USE A COMPUTER OR TYPEWRITER TO CREATE DIRECTORY; HANDWRITTEN DIRECTORIES ARE NOT ACCEPTABLE.
4. SERVICE EQUIPMENT, WHICH HAS BEEN MODIFIED, SHALL BE FIELD MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT PER CEC 110.24(B). THE FIELD MARKING(S) SHALL INCLUDE THE DATE THE FAULT-CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. THE MAXIMUM AVAILABLE FAULT CURRENT SHALL BE VERIFIED OR RECALCULATED AS NECESSARY TO ENSURE THE SERVICE EQUIPMENT RATINGS ARE SUFFICIENT FOR THE MAXIMUM AVAILABLE FAULT CURRENT AT THE LINE TERMINALS OF THE EQUIPMENT.
5. EQUIPMENT DATA AND CONFIGURATIONS SHOWN ON THE SINGLE LINE DIAGRAM PROVIDE GENERAL EQUIPMENT INFORMATION. CONTRACTOR SHALL REVIEW ELECTRICAL PLANS AND SPECIFICATIONS TO VERIFY ALL EQUIPMENT ASSOCIATED DESIGN INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY COMPONENTS REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. ANY DISCREPANCIES BETWEEN DESCRIPTIONS, SPECIFICATIONS, AND EXISTING CONDITIONS ARE TO BE PRESENTED TO THE ENGINEER OF RECORD PRIOR TO COMPLETION OF THE BID PROCESS FOR CLARIFICATION. NO EQUIPMENT SHALL BE ORDERED UNTIL DISCREPANCIES ARE RESOLVED THROUGH A FORMAL RFI PROCESS.
6. ELECTRICAL CONTRACTOR TO INCLUDE IN BID ALL ASSOCIATED COSTS FOR THIRD PARTY TESTING OF ELECTRICAL EQUIPMENT, GROUND FAULT, CONDUCTORS, ETC.

CONSTRUCTION NOTES

1. PROVIDE NEW ELECTRICAL SERVICE AS SHOWN.
2. REFER TO PANEL SCHEDULE FOR FEEDER INFORMATION.

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Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia
Street Park
1106 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

Project No.: 21-333
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

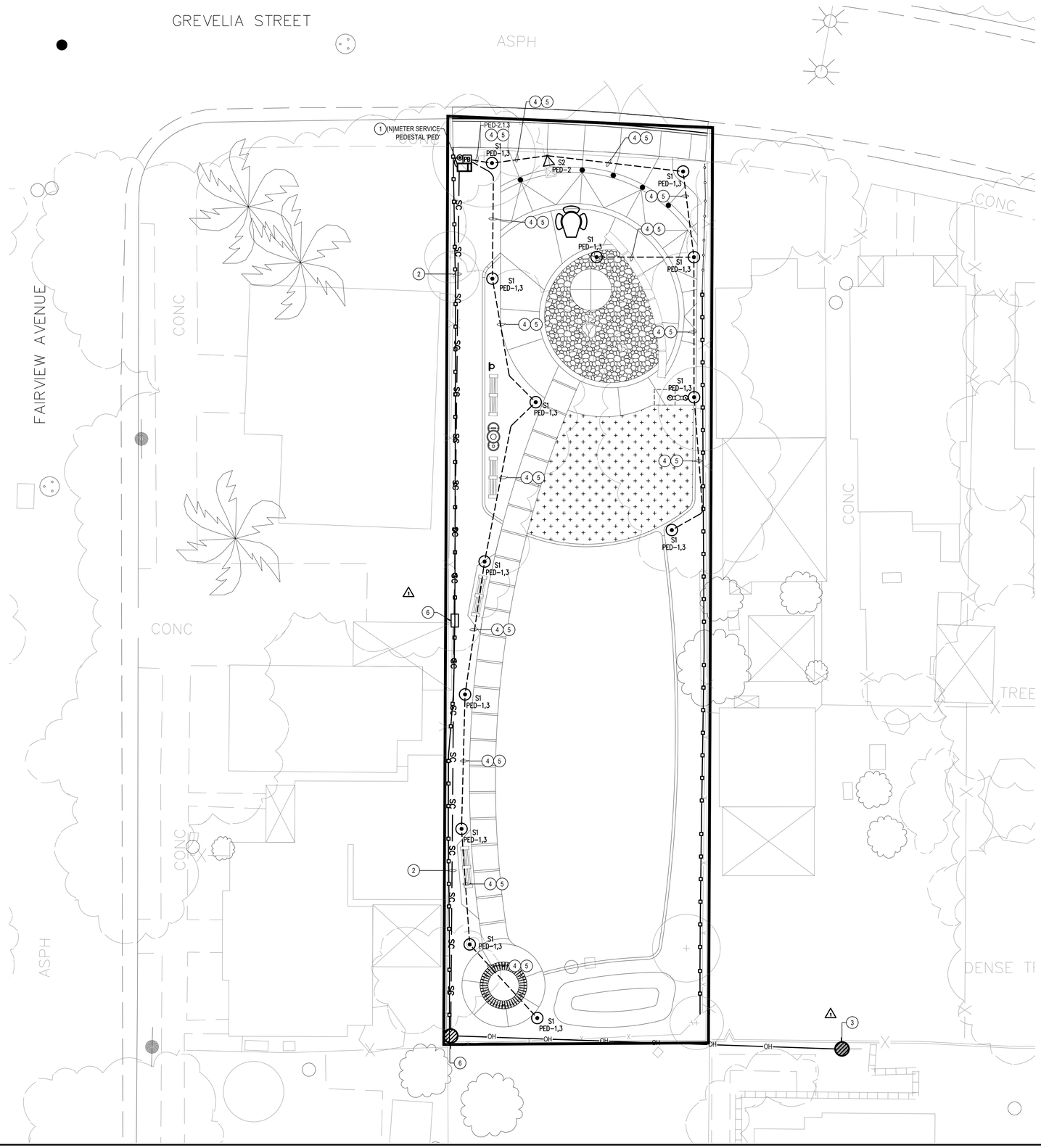
SINGLE LINE DIAGRAM

Drawing No :

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SHEET 19 OF 24

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E SLD - 2023-09-26 - JESUS MANZO



GENERAL NOTES

1. ALL UTILITY SERVICES SHALL BE INSTALLED PER THE UTILITY COMPANY REQUIREMENTS. VERIFY FINAL CONSTRUCTION REQUIREMENTS WITH UTILITY COMPANY SERVICE PLANNERS.
2. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS PRIOR TO INSTALLATION OF UTILITY SERVICES.
3. COORDINATE TRENCH ROUTING AND EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS AND NEW WORK.
4. UTILITY SERVICE INFORMATION SHOWN IS FOR BIDDING PURPOSES ONLY. ACTUAL CONSTRUCTION DOCUMENTS SHALL BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANY REPRESENTATIVE.
5. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY REPRESENTATIVE TO ESTABLISH PRE-CONSTRUCTION COORDINATION, OBTAIN ALL NECESSARY METERS AND/OR APPROVALS, AND SCHEDULE UTILITY WORK TO COORDINATE WITH THE CONSTRUCTION SCHEDULE.
6. ALL SITE BRANCH CIRCUIT WIRING SHALL BE #10 AWG. OR LARGER.
7. CONTRACTOR SHALL VERIFY EXISTING BUILDING FOOTING PRIOR TO INSTALLATION OF STUB-UP CONDUITS FOR NEW WALL MOUNTED JUNCTION BOX TO AVOID ANY INTERFERENCE.
8. CONTRACTOR SHALL UTILIZE 'GPR GROUND PENETRATING RADAR TO SURVEY AND TRACE ALL EXISTING UNDERGROUND UTILITY LINES IN AREAS WHERE NEW TRENCHING IS PLANNED. CONTRACTOR TO SUBMIT "GPR" REPORT TO PROJECT MANAGER FOR REVIEWING PRIOR TO TRENCHING.
9. ALL POWER UTILITY WORK SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REQUIREMENTS OF THE SERVING UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE SERVING UTILITY TO RECEIVE COMPLETE INFORMATION ON THEIR REQUIREMENTS PRIOR TO THE SUBMISSION OF THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND THE CONTRACT DOCUMENTS.
10. ALL SITE UNDERGROUND CONDUIT TO BE 1" MIN. UNLESS OTHERWISE NOTED.
11. SUPPORT CONDUIT(S) EVERY 10'-0" AND WITHIN 3'-0" OF ANY JUNCTION BOX OR TERMINATION.
12. CONTACT INFORMATION FOR UTILITY COMPANIES ARE AS FOLLOWS:

    POWER
    SCE

13. CONTRACTOR IS TO CONTACT UTILITY INSPECTOR (LISTED ON FINAL UTILITY APPROVED PLANS) TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO ALL UTILITY CONSTRUCTION.

CONSTRUCTION NOTES

1. NEW METER PEDESTAL PER POWER UTILITY SERVICE REQUIREMENTS. SEE SINGLE LINE DIAGRAM(S) FOR FURTHER INFORMATION. PROVIDE MINIMUM CLEARANCES AS REQUIRED BY THE SERVICE COMPANY.
2. POWER UTILITY SECONDARY CONDUITS. PROVIDE 3" CONDUITS FOR SERVICE CAPACITY PLUS SPARE CONDUIT AS SPECIFIED BY UTILITY COMPANY, UNLESS NOTED OTHERWISE. VERIFY SIZE AND QUANTITY OF CONDUITS REQUIRED WITH UTILITY COMPANY PRIOR TO BID. ALL WORK TO BE DONE FROM UTILITY CO. APPROVED PLANS.
3. POINT OF CONNECTION TO POWER UTILITY COMPANY AT EXISTING POLE (#401995E). VERIFY EXACT LOCATION WITH UTILITY SERVICE PLANNER AND IN FIELD.
4. PROVIDE (2) #10, (1) #10 GND. IN 1" CONDUIT.
5. ROUTE CIRCUIT VIA LIGHTING CONTROL PANEL.
6. PROVIDE 17"X30"X15" UTILITY APPROVED HAND HOLE FOR UTILITY CABLING. VERIFY EXACT LOCATION WITH UTILITY SERVICE PLANNER IN FIELD.
7. NEW UTILITY POWER POLE PER UTILITY PLANS.

ELECTRICAL SITE LIGHTING PLAN | SCALE: 1" = 10'-0" | 1

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2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :	
Drawn By :	JM/MR
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Drawing Title :

ELECTRICAL SITE LIGHTING PLAN

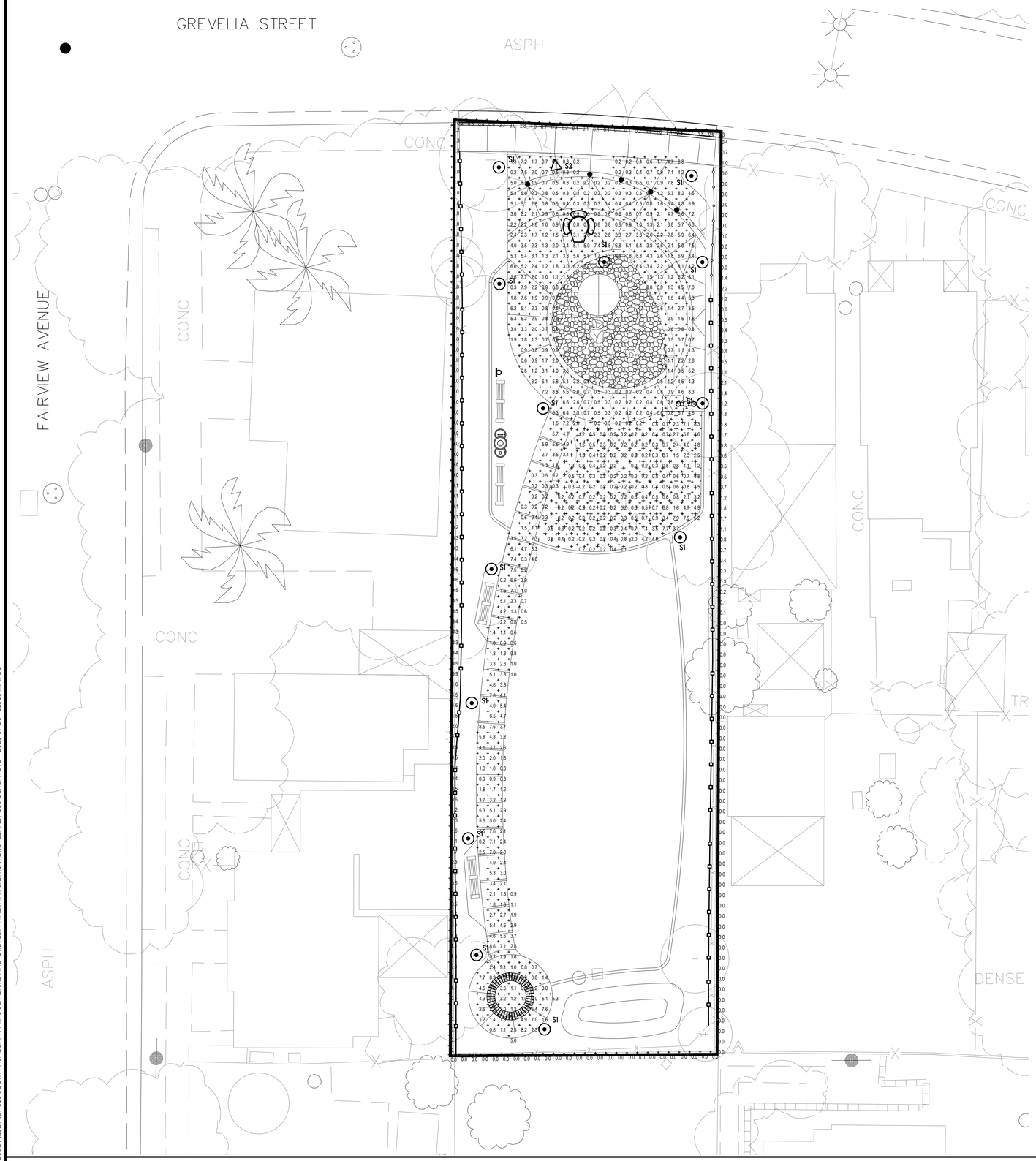
Drawing No :

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SHEET 20 OF 24

21-333

R:_PROJECTS\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E-SITELTG - 2023-09-26 - JESUS MANZO



LIGHTING FIXTURE SCHEDULE							
SYMBOL	LABEL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	NUMBER LAMPS	LUMENS PER LAMP	LIGHT LOSS FACTOR
⊙	S1	ANP LIGHTING	BL6031CLA032LD8T340	BL6031 BOLLARD W/ FLAT TOP RINGS & DECORATIVE CAST RINGS - CLEAR ACRYLIC LENS - 8.00" OD X 42.00" H	1	1178	0.91

STATISTICS SCHEDULE						
DESCRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
PATHWAY	+	2.7 FC	9.1 FC	0.2 FC	45.5:1	13.5:1
PLAY AREA	+	1.1 FC	8.3 FC	0.2 FC	41.5:1	5.5:1
PROPERTY LINE	+	0.4 FC	3.0 FC	0.0 FC	N/A	N/A

SITE PHOTOMETRIC PLAN | SCALE: 1" = 10'-0" | 1

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E-SITEPHOTO - 2023-09-26 - JESUS MANZO

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Owner:

South Pasadena

Project No :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

SITE PHOTOMETRIC PLAN

Drawing No :

E1.2

SHEET 21 OF 24

21-333

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.		
Project Name: Grevelia Street Park	**Report Page:**	**(Page 1 of 7)**
Project Address: 1106 Grevelia St.	**Date Prepared:**	9/26/2023

A. GENERAL INFORMATION

01	Project Location (city)	South Pasadena	04	Total Illuminated Hardscape Area (ft²)	9363
02	Climate Zone	9			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
● All Other Occupancies					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒	New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6	
☐	Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes ○ No
03		04	05
% of Existing Luminaires Being Altered[1]		Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10%	☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:**	**(Page 2 of 7)**
	Date Prepared:	9/26/2023

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv													Compliance Results		
01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
437	+	---	+	---	+	---	+	---	OR	---	=	437	≥	436	COMPLIES
Shielding Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	9/26/2023

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
S1	Bollard LED	☐ Linear	32	Mfr. Spec	13	New	☐	416	NA: < 6200 lumens	☐	☐
S2	In-Grade Flood LED	☐ Linear	20	Mfr. Spec	1	New	☐	20	NA: < 6200 lumens	☐	☐
							Total Design Watts:	436			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:**	**(Page 4 of 7)**
	Date Prepared:	9/26/2023

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
Walkway	Astronomical Timer	Provided	NA: Each Luminaire <= 40 Watts	☐	☐

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:**	**(Page 5 of 7)**
	Date Prepared:	9/26/2023

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)				
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M	

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Walkway	9363	0.019	177.9	396	0.2	59.4	237
Initial Wattage Allowance for Entire Site (Watts):							200
Instances of Initial Wattage Allowance (LZ 0 only)[1]							
Total General Hardscape Allowance (Watts):							437

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:**	**(Page 6 of 7)**
	Date Prepared:	9/26/2023

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Walkway;

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:**	**(Page 7 of 7)**
Project Address: 1106 Grevelia St.	**Date Prepared:**	9/26/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Maya	Documentation Author Signature:
Company: Design West Engineering	Signature Date: 2023-09-26
Address: 412 East Vanderbilt Way	CEA/ HERS Certification Identification (if applicable): E19480
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Leonard Maya	Responsible Designer Signature:
Company: Design West Engineering	Date Signed: 2023-09-26
Address: 412 E. Vanderbilt Way	License: E19480
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

Landscape Architect:

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning
Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323
e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:
412 E. Vanderbilt Way
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
Email: cadd@designwesteng.com
DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:
REGISTERED PROFESSIONAL ENGINEER
LEONARD MAYA
No. E19480
ELECTRICAL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1<800>422<4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

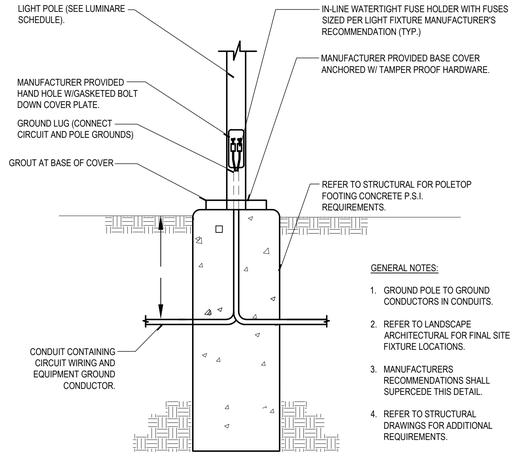
Project :
Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

Project No :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :
ELECTRICAL TITLE 24 FORMS

Drawing No :
E3.1
SHEET 22 OF 24
21-333

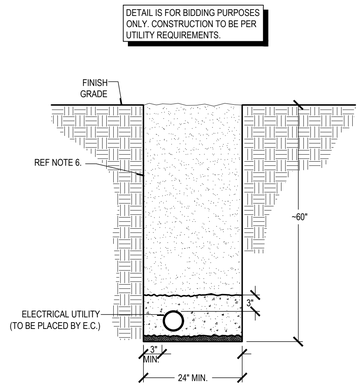
R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA \21-333 E T24 - 2023-09-26 - JESUS MANZO



GENERAL NOTES:

1. GROUND POLE TO GROUND CONDUCTORS IN CONDUITS.
2. REFER TO LANDSCAPE ARCHITECTURAL FOR FINAL SITE FIXTURE LOCATIONS.
3. MANUFACTURERS RECOMMENDATIONS SHALL SUPERCEDE THIS DETAIL.
4. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

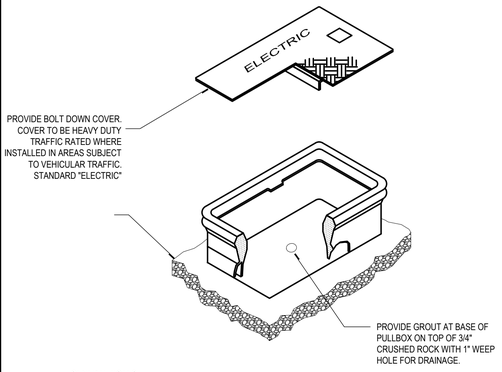
- | 9 | **FLUSH GRADE POLETOP LIGHTING** | 6



NOTES:

1. THIS DETAIL IS FOR FOR ASSISTANCE IN BIDDING. DRY UTILITY REPRESENTATIVES ARE AVAILABLE TO PROV. ADDITIONAL INFORMATION. REF SINGLE LINE DIAGRAM FOR NAME AND PHONE NUMBER OF INVOLVED DRY UTILITY REPRESENTATIVES. REF NOTE BELOW.
2. VERIFY EXACT LOCATION AND ROUTING OF TRENCH WITH UTILITY COMPANY.
3. COMPACT TO 90%, OR TO ELECTRICAL UTILITY STANDARDS.
4. ELECTRICAL CONTRACTOR TO COORDINATE QUANTITY, SIZE AND TYPE OF CONDUIT(S), PULLROPES, BURIAL DEPTHS, ETC. WITH INFORMATION PROVIDED BY UTILITIES.
5. IT IS ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO CONTACT DRY UTILITIES AND OBTAIN A COMPLETE LIST OF UTILITY REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO INCLUDE IN HIS BID PRICE, ALL COSTS, INVOLVED IN BRINGING DRY UTILITIES TO THE SITE. OWNER WILL PAY COSTS ASSOCIATED WITH APPLYING FOR NEW DRY UTILITY SERVICE. IF E.C. IS UNABLE TO CONTACT ANY DRY UTILITY, HE IS TO CONTACT THE ELECTRICAL ENGINEER, PRIOR TO BID, FOR DIRECTION.
6. EDISON: FULL ENCASEMENT REQUIRED FOR MORE 4 CONDUITS. SEMI ENCASEMENT REQUIRED FOR 3 OR 4 CONDUITS.
7. TRENCHING TO BE 2' BACK FROM CURB.
8. MINIMUM TRENCH WIDTH TO BE 24".

UTILITY SERVICE TRENCH DETAIL | 4



GENERAL NOTES:

1. PULLBOX TO BE SIZED PER NEC, U.O.N.
2. PROVIDE COVER LABELED WITH "POWER" OR "DATA" DESIGNATION.

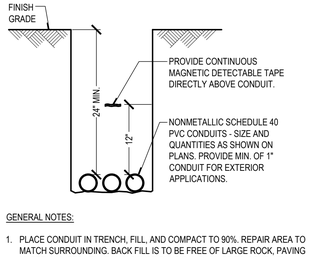
PULLBOX INSTALLATION | 1



GENERAL NOTES:

1. PROVIDE LIGHTING CONTROL PANEL nLIGHT MODEL # ARP-INTENC08-NLT-8FCRR-MVOLT-SC-SM-DTC-ARPA-PC.

- | 10 | LIGHTING CONTROL DIAGRAM | 7

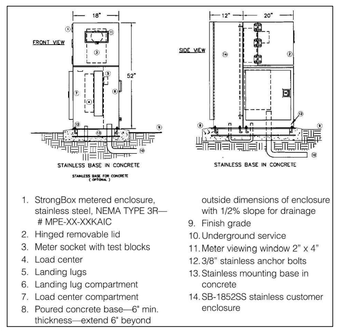


GENERAL NOTES:

1. PLACE CONDUIT IN TRENCH, FILL, AND COMPACT TO 90%. REPAIR AREA TO MATCH SURROUNDING. BACK FILL IS TO BE FREE OF LARGE ROCK, PAVING MATERIALS, ETC., THAT MAY CAUSE PHYSICAL DAMAGE TO CONDUIT. PROVIDE GRANULAR MATERIAL WITH A SAND EQUIVALENT (SE) GREATER THAN 30.
2. PROVIDE 30" MINIMUM COVER WHERE CONDUIT IS PLACED UNDER STREETS, HIGHWAYS, ROADS, ALLEYS, DRIVEWAYS, AND PARKING LOTS.
3. CONDUITS PLACED UNDER OR IN STRUCTURAL FOOTINGS SHALL BE GALVANIZED RIGID METAL (RMC) WRAPPED WITH 20 MIL PVC TAPE. THE COUPLINGS CONNECTED TO THE RMC ELBOW SHALL BE GALVANIZED MATERIAL.
4. MINIMUM TRENCH WIDTH TO BE 24".

BRANCH CIRCUIT CONDUIT BURIAL | 2

- | 11 | - | 8

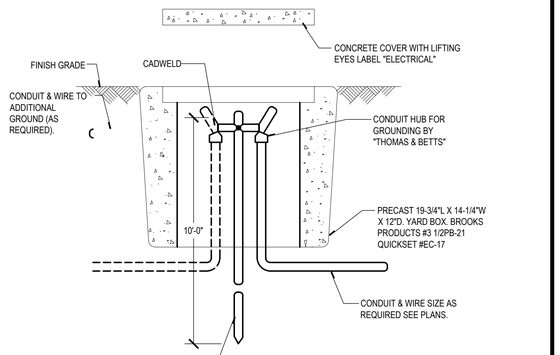


1. StrongBox metered enclosure, stainless steel, NEMA TYPE 3R— # MPE-XX-XXKAIC
2. Hinged removable lid
3. Meter socket with test blocks
4. Load center
5. Landing lugs
6. Landing lug compartment
7. Load center compartment
8. Poured concrete base—6" min. thickness—extend 6" beyond outside dimensions of enclosure with 1/2% slope for drainage
9. Finish grade
10. Underground service
11. Meter viewing window 2" x 4"
12. 3/8" stainless anchor bolts
13. Stainless mounting base in concrete
14. SB-1852SS stainless customer enclosure

GENERAL NOTES:

1. PEDESTAL TO BE IN NEMA 3R CABINET WITH HASP.
2. ORDERING INFORMATION ON SWITCHGEAR MAY BE OBTAINED FROM STRONGBOX. PEDESTAL MODEL #----- AND IS TO BE SUPPLIED WITH MAIN & BRANCH CIRCUIT BREAKERS AS INDICATED ON A.C. BREAKER ASSIGNMENTS.
3. REFER BREAKER ASSIGNMENTS FOR INFO ON MAIN CIRCUIT BREAKER, INTERIOR SPACES AND OTHER INFO.
4. PROVIDE WITH PAD - 2000PSI CONCRETE 8" THICK, 4" ABOVE GROUND, 4" BELOW. EXTEND 4" BEYOND SWITCHGEAR ON ALL SIDES.
5. PEDESTAL TO BE SECURED TO PAD WITH 5/8" X 5" ANCHOR BOLTS AT EACH CORNER.
6. PROVIDE 3' LEVEL & CLEAR WORKING SPACE IN FRONT OF PEDESTAL.
7. ENCLOSURE SHOWN IS TO HAVE SUFFICIENT SPACE FOR MOUNTING OF THE LIGHTING CONTROL PANEL SEPARATE FROM LIVE EXPOSED ELECTRICAL PARTS. ALTERNATE SUBMITTAL WILL ONLY BE CONSIDERED IF ALL EQUIPMENT CAN BE MOUNTED IN THE ONE ENCLOSURE.
8. PROVIDE DUPLEX GFCI RECEPTACLE TO BE MOUNTED INSIDE PANELBOARD.
9. FINISH OF PEDESTAL TO BE STAINLESS STEEL.
10. MANUFACTURER IS TO PROVIDE PHOTOCELL WINDOW FACING EAST. PROVIDE WITH PHOTOCELL MODEL # ARPA-PC.

METER PEDESTAL 'PED' | 5



NOTES:

1. SIZE OF CONDUCTORS SHALL COMPLY W/CEC 250.66.
2. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS W/CONDUCTORS AS SHOWN. SEPARATE AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (CEC 250.56)

GROUND ROD DETAIL | 3

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

412 E. Vanderbilt Way
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
Email: cadd@designwesteng.com

DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER — No. E19480 — ELECTRICAL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES BEFORE COMMENCING WORK, AND FOR DAMAGE SUCH FACILITIES OR INTERFERE WITH THEM SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1+800+422+4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :	
Drawn By :	JM /MR
Checked By :	RM
Date :	November 12, 2021
Scale :	AS SHOWN

Drawing Title :

ELECTRICAL DETAILS

Drawing No :

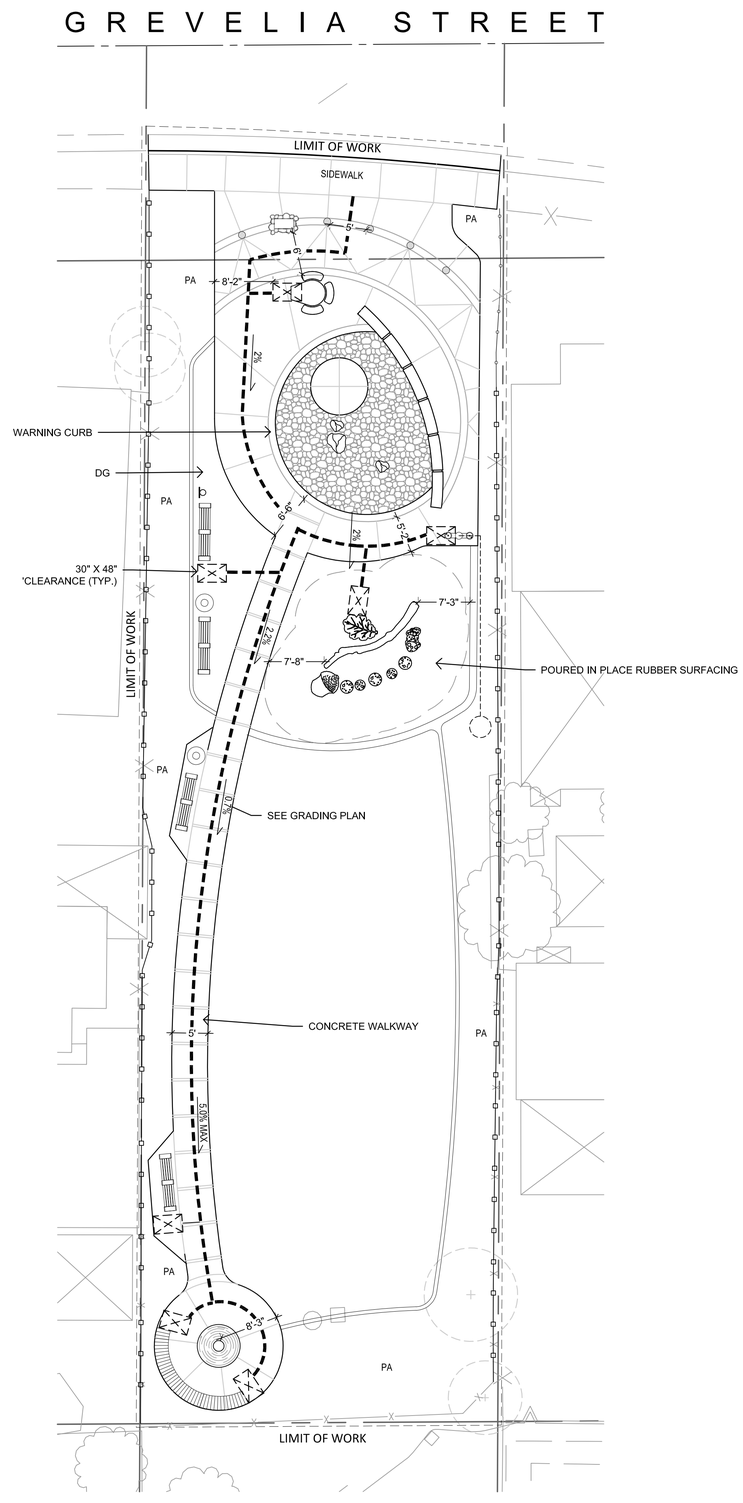
E4.1

SHEET 23 OF 24

21-333

554

R:_PROJECT\ 2021\ 21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_ GREVELIA\ 21-333 E-DETAILS - 2023-09-26 - JESUS MANZO



ACCESSIBLE ROUTE OF TRAVEL

- WALKWAYS TO BE A MINIMUM 48" WIDE.
- WALKWAYS AND RAMPS SHALL NOT EXCEED 2% CROSS SLOPE.
- RAMPS WITHOUT HANDRAIL SHALL NOT EXCEED 5% SLOPE IN THE DIRECTION OF TRAVEL.
- RAILING SHALL BE PROVIDED FOR ALL RAMPS GREATER THAN 5%.
- 8.333% MAXIMUM GRADE ON RAMPS WITH RAILS.
- LANDING AT THE TOP OF RAMPS SHALL BE A MINIMUM OF 60" X 60" WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- INTERMEDIATE LANDINGS SHALL BE PROVIDED ON RAMPS AND SHALL BE A MINIMUM OF 60" IN LENGTH WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- LANDINGS SHALL BE PROVIDED AT THE BOTTOM OF RAMPS AND SHALL BE 72" IN LENGTH WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- RAMPS WITH TURNING PLATFORMS SHALL HAVE LANDINGS 72" IN LENGTH WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- CURB RAMPS SHALL HAVE A MINIMUM 4' LANDING AS WIDE AS THE RAMP AND WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- ALL DRINKING FOUNTAINS SHALL BE ACCESSIBLE AND LOCATED OUT OF THE PATH OF TRAVEL.

N

Scale: 1" = 10'-0"
0 5' 10' 20'

REFER TO TITLE SHEET FOR GENERAL NOTES

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

REGISTERED PROFESSIONAL ENGINEER
SURENDER M. DEWAN
NO. 34559
Exp. 9/30/25
CIVIL
STATE OF CALIFORNIA

DMS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT
GARY M. TASQUE
NO. 3883
SIGNATURE
EXP. Feb. 2025
6/3/24
DATE
STATE OF CALIFORNIA

811 DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND FACILITIES BY CONTACTING THE UNDERGROUND SERVICE ALERT, DIAL 811.

Revisions:

No.	Date	Revision	No.

BUILDING AND SAFETY APPROVED
REVIEW FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.
6/13/2024, 11:04:41 AM
SP-BS4562

Project :

GREVELIA STREET PARK

Grevelia St, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER 2023
Scale :	AS SHOWN

Drawing Title :

ACCESSIBILITY PLAN

Drawing No :

AC.1

SHEET 24 OF 24

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
3. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
5. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
6. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
7. FURNISH PULL STRING IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
8. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, PROVIDE SEPARATE CONDUIT FOR EACH HOMERUN INDICATED ON THE DRAWING, UNLESS INDICATED OTHERWISE.
9. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH N.E.C. REQUIREMENTS.
10. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16') SHALL BE WEATHERPROOF TYPE, NEMA 3R.
11. NO CONDUIT RUNS SHALL BE ALLOWED IN CONCRETE SLABS. ALL CONDUITS WILL BE PLACED ABOVE ACCESSIBLE CEILING SPACES UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
12. ALL ELECTRICAL POWER LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
13. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
14. CONTACT UTILITY COMPANIES FOR SCOPE OF WORK PRIOR TO SUBMITTING BID; INCLUDE UTILITY CHARGES IF ANY.
15. ALL DISTRIBUTION AND CONTROL EQUIPMENT (SUCH AS CB's, SWITCHES, CONTACTORS, ETC.), TERMINATIONS SHALL BE FULLY RATED PER UL AS FOLLOWS:

    a. 125A OR LESS : 60°C OR MORE.
    b. MORE THAN 125A : 75°C OR MORE.
16. ANY ERRORS, OMISSIONS, OR DESIGN DISCREPANCIES ON PLANS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER FOR CLARIFICATION OR CORRECTION PRIOR TO CONSTRUCTION AND PREPARATION OF SUBMITTAL PACKAGES.
17. CONDUCTORS SHALL HAVE UNDERWRITER'S LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW OR ELSEWHERE IN THE SPECIFICATIONS. CONDUCTORS SHALL BE COPPER.

    1. BRANCH CIRCUITS - LIGHTING AND POWER.

    a. #10 AWG AND SMALLER, SOLID WIRE TYPE THW OR THHN/THWN, THHW(THHN FOR DRY LOCATION ONLY).
    b. #8 AWG TO #2 AWG, STRANDED TYPE THW OR THHN/THHW.
    c. #1 AWG AND LARGER, STRANDED TYPE XHHW.

    2. FEEDERS : TYPE THW OR THHN/THWN, OR XHHW.
18. PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN EACH RACEWAY INCLUDING CONDUITS, PLUG STRIPS, WIREMOLD. SIZE OF GROUNDING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.
19. WIRING METHOD SHALL BE EMT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION. USE RIGID WHEN ENCASED IN CONCRETE OR SUSCEPTIBLE TO DAMAGE.
20. UNLESS OTHERWISE INDICATED, SHARING OF NEUTRAL/GROUNDED CONDUCTORS AMONG SINGLE PHASE BRANCH CIRCUITS OF DIFFERENT PHASES INSTALLED IN THE SAME RACEWAY IS NOT PERMITTED. PROVIDE DEDICATED NEUTRAL/GROUNDED CONDUCTOR FOR EACH INDIVIDUAL BRANCH CIRCUIT.

ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME RATING (CIRCUIT BREAKER)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE RATING (FUSE)
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH RATING (FUSE)
AT	AMPERE TRIP RATING (CIRCUIT BREAKER)
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CFSD	COMBINATION FIRE SMOKE DAMPER
CO	CONDUIT ONLY
CONC	CONCRETE
CT	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
DISC	DISCONNECT
DSBN	DISTRIBUTION SECTION
DN	DOWN
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EXIST, (E)	EXISTING
EXO	EXTERNAL OPERABLE DISCONNECT
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FLA	FULL LOAD CURRENT
FLUOR	FLUORESCENT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HV	HIGH VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED/INSULATED GROUND
INCAND	INCANDESCENT
ISC	SHORT CIRCUIT CURRENT AVAILABLE IN RMS SYMMETRICAL AMPERES
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
KV	KILO VOLT
KVA	KILO VOLT-AMPERE
LDC	LOCAL DISTRIBUTION CABINET
LDF	LOCAL DISTRIBUTION FRAME
LCL	LONG CONTINUOUS LOAD
LTG	LIGHTING
LV	LOW VOLTAGE
MFR	MANUFACTURER
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MH	MANHOLE / METAL HALIDE
M/M	METER AND MAIN SECTION
MULTI	MULTI-METER SECTION
MV	MEDIUM VOLTAGE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NEW (N)	NEW, TO BE FURNISHED AND INSTALLED BY CONTRACTOR
NF	NON-FUSED
NIC	NOT IN CONTRACT
N/L	NIGHT LIGHT
NO	NUMBER, NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PNL	PANEL
POC	POINT OF CONNECTION
PP	POWER POLE
PWR	POWER
PVC	POLYVINYL CHLORIDE
QUAD	QUADRUPLEX
QTY	QUANTITY
REQD	REQUIRED
REQMT	REQUIREMENT
RGS	RIGID GALVANIZED STEEL
RMC	RIGID METALLIC CONDUIT
RM	ROOM
RNC	RIGID NONMETALLIC CONDUIT
SHT	SHEET
SN	SOLID NEUTRAL
SPEC	SPECIFICATIONS
SPDT	SINGLE POLE, DOUBLE THROW
SPST	SINGLE POLE, SINGLE THROW
SW	SWITCH
SWBD	SWITCHBOARD
TC	TIME CLOCK
TEL	TELEPHONE
TERM	TERMINAL
TP	TEMPORARY POLE
TYP	TYPICAL
UGPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORY
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V	VOLT, VOLTAGE
VA	VOLT-AMPERE
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WH	WATT-HOUR
WP	WEATHERPROOF
WT	WEATHERTIGHT
WW	WIREWAY
XP	EXPLOSION PROOF
Z	IMPEDANCE
4W	FOUR-WIRE
3W	THREE-WIRE
5S	JUNCTION BOX (4 11/16" SQUARED X2 1/8" DEEP)
Ø	DIAMETER, PHASE
#	NUMBER
°C	DEGREE CELSIUS
(E)	EXISTING DEVICE TO REMAIN
(R)	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
(RL)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
(NL)	NEW LOCATION OF RELOCATED DEVICE

APPLICABLE CODES

1. 2022 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2. 2022 CALIFORNIA BUILDING CODE (CBC),PART 2, TITLE 24 C.C.R. (IBC WITH AMENDMENTS)
3. 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)
4. 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (UMC WITH AMENDMENTS)
5. 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (UPC WITH AMENDMENTS)
6. 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (IFC WITH AMENDMENTS)
7. 2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
8. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
9. 2022 CALIFORNIA ENERGY CODE (PART 6, TITLE 24 C.C.R.)
10. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSG), PART 11, TITLE 24 C.C.R.
11. 2023 COUNTY OF LOS ANGELES BUILDING CODE (TITLE 26)
12. 2023 COUNTY OF LOS ANGELES ELECTRICAL CODE (TITLE 27)
13. 2023 COUNTY OF LOS ANGELES PLUMBING CODE (TITLE 28)
14. 2023 COUNTY OF LOS ANGELES MECHANICAL CODE (TITLE 29)
15. 2023 COUNTY OF LOS ANGELES RESIDENTIAL CODE (TITLE 30)
16. 2023 COUNTY OF LOS ANGELES GREEN BUILDING STANDARDS CODE (TITLE 31)
17. 2023 COUNTY OF LOS ANGELES EXISTING BUILDING CODE (TITLE 33)

NOTE TO CONTRACTOR

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

LIGHTING LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
S# 2	POLETOP LED FIXTURE. S# INDICATES LUMINAIRE TYPE - REFER TO LUMINAIRE SCHEDULE, TYPICAL. SUBSCRIPT 2 REFERS TO CIRCUIT DESIGNATION.
	BOLLARD LED FIXTURE.
	MONUMENT PARK SIGN FIXTURE

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
WP	WEATHERPROOF DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS, GFCI TYPE) MOUNTED ON PEDESTAL AT 20" A.F.G. CONFIRM EXACT MOUNTING HEIGHT WITH PEDESTAL MANUFACTURER.
J	ABOVE CEILING, CONCEALED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
KJ	RECESSED WALL MOUNTED JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
OR	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (SURFACE MOUNTED)
	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (RECESSED MOUNTED)
	MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING ENCLOSURE, (SEE SINGLE LINE DIAGRAM AND LOAD SUMMARY)
+96" OR 7'-6" AFF	MOUNTING HEIGHT FROM FINISHED FLOOR TO BOTTOM LINE OF OUTLET OR EQUIPMENT. FOR LIGHT FIXTURES, IT IS TO BOTTOM OF FIXTURE.
	CONDUIT TURNED DOWN, 3/4" UON
	CONDUIT TURNED UP, 3/4" UON
	CONDUIT STUBBED AND CAPPED, 3/4" UON
	RACEWAY CONCEALED IN WALLS OR ABOVE CEILING, 3/4" UON
	CONDUIT CONCEALED IN OR UNDER FLOOR, 3/4" UON, COORDINATE WITH G.C.: OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
DETAIL No. SHEET No.	DETAIL REFERENCE
EQUIPMENT ID. No.	EQUIPMENT REFERENCE
PR	ELECTRICAL UTILITY PRIMARY
SC	ELECTRICAL UTILITY SECONDARY
T	UTILITY TELEPHONE
OH	OVERHEAD UTILITY CABLING
A-1,3	3/4" UON HOMERUN TO CIRCUITS #1 AND #3 IN PANEL "A". (CROSSMARKS INDICATE NUMBER OF PHASES AND NEUTRAL. PROVIDE GROUND WIRE.)
	3/4" CONDUIT WITH 2 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 3 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 4 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 5 #12 & 1 #12 GND WIRES
#10	3/4" CONDUIT WITH 2 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 3 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 4 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 5 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	1" CONDUIT WITH 6 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)

CONCEALED IN WALL OR CEILING

	GROUND WELL
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT
	TELEPHONE BACKBOARD 2'X4'X3/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.
	MOLDED CASE CIRCUIT BREAKER
	SWITCH AND FUSE ASSEMBLY
	UTILITY COMPANY PULL SECTION LUGS
	GROUNDING CONNECTION TO MAIN BUILDING GROUND SYSTEM U.O.N.
N G	GROUNDING CONNECTION AT SWITCHGEAR/DISTRIBUTION BOARD WITH NEUTRAL BONDING.
M	IN-LINE UTILITY COMPANY METER
M	UTILITY METER WITH CIRCUIT TRANSFORMERS (CT'S) METER
200-B	CONDUIT WIRING DESCRIPTION PER FEEDER SCHEDULE ON OTHER PLAN
PB	CONCRETE ELECTRICAL PULL BOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION. LID SHALL BE LABELED "ELECTRICAL" OR "COMM" ACCORDING TO USE.

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E0.1	ELECTRICAL LEGENDS AND NOTES
E0.2	LUMIANIRE SCHEDULE & TITLE 24
E0.3	SINGLE LINE DIAGRAM
E1.1	ELECTRICAL SITE LIGHTING PLAN
E1.2	SITE PHOTOMETRIC PLAN
E3.1	ELECTRICAL TITLE 24 FORMS
E4.1	ELECTRICAL DETAILS

BUILDING AND SAFETY APPROVED
REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY
SUBJECT TO FURTHER REVIEW AND CORRECTIONS
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.

10/12/2023, 1:38:35 PM
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MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER — No. E19480 — ELECTRICAL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT SHOWN ON THESE PLANS. PURSUANT TO THE SPECIAL PROVISIONS, THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

Project No.:
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

ELECTRICAL LEGENDS AND NOTES

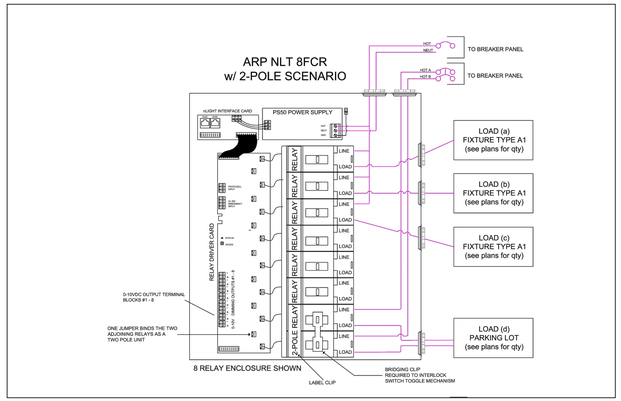
Drawing No :

E0.1

SHEET OF -

21-333

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E PRINTSHT - 2023-09-26 - JESUS MANZO



LIGHTING CONTROL WIRING DETAIL | 1

LUMINAIRE SCHEDULE

TYPE	VOLTS	WATTAGE	LUMENS	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MFR.	CATALOG #	NOTES	SYMBOL
S1	240	32	1,181	LED 4000K	IN-GRADE	8" LED BOLLARD LIGHT FIXTURE. MOUNT AT +3'-6" A.F.G.	ANP LIGHTING	BL6031-CL-A032LD8-T3-40K	COORDINATE COLOR OF FINISH WITH ARCHITECT	⊙
S2	120	20	2,591	LED 4000K	IN-GRADE	IN-GRADE VANDAL RESISTANT LED FLOODLIGHT FIXTURE.	LIGMAN	UKWH-30001-20W-T2-W40-120	COORDINATE COLOR OF FINISH WITH ARCHITECT	▽

LUMINAIRE SCHEDULE NOTES

1. EQUALS SHALL BE CONSIDERED UPON SUBMITTAL REVIEW AND APPROVAL. PLEASE NOTE THAT IF AN ALTERNATE IS CONSIDERED:
   a. THE CONTRACTOR IS COMPLETELY AND SOLELY RESPONSIBLE FOR ALL ASPECTS OF THE SUBSTITUTION INCLUDING UPDATING CONSTRUCTION DOCUMENTS, OBTAINING APPROVALS AND PERMITS FROM LOCAL AUTHORITY, AND COORDINATING WITH ALL TRADES TO ENSURE CHANGES TO AFFECTED BUILDING SYSTEM ARE ACCOUNTED FOR AND ACCEPTABLE TO THE ENGINEERING TEAM. CONTRACTOR SHALL ENSURE SUBSTITUTED EQUIPMENT MEETS OR EXCEEDS DESIGN INTENT REGARDING RATINGS, PERFORMANCE, DIMENSIONAL CLEARANCES, PHYSICAL DIMENSIONS (MAX/MIN), WEIGHT LIMITATIONS, AND OTHER ASPECTS, PROVING SUBSTITUTION IS SUITABLE TO THE APPLICATION. ENGINEERS WILL REVIEW THE RATING AND PERFORMANCE OF SUBSTITUTED EQUIPMENT ONLY AND WILL NOT ASSUME RESPONSIBILITY FOR SUBSTITUTION AT ANY LEVEL.
   b. IF CONTRACTOR CANNOT MAKE SUBSTITUTED EQUIPMENT WORK IN THIS PROJECT, CONTRACTOR SHALL REVERT TO REQUIREMENTS OF PERMITTED CONSTRUCTION DOCUMENTS AT THEIR EXPENSE.
   c. IT IS UNDERSTOOD BY ALL PARTIES THAT ANY SUBSTITUTIONS OF SPECIFIED PRODUCTS ARE DONE FOR THE PURPOSE OF COST SAVINGS TO THE OWNER. THEREFORE, ANY MATERIAL SUBSTITUTION OR DEVIATIONS PROPOSED BY THE CONTRACTOR SHALL BE INCLUDED WITH THE INITIAL BID AND SHALL SHOW A LINE ITEMS CREDIT TO THE OWNER FOR EACH SUBSTITUTION IN LIEU OF SPECIFIED PRODUCTS.
2. THE FIXTURE SCHEDULE INDICATES GENERAL DESCRIPTION OF LIGHTING FIXTURES AND MANUFACTURERS CATALOG NUMBERS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE CORRECT CEILING CONFIGURATION AND PROVIDE THE FIXTURES WITH ALL NECESSARY TRIMS AND MOUNTING HARDWARE SO THAT BOTH THE CEILING SYSTEM AND THE FIXTURE CONSTRUCTION MATCHES. PROVIDE SEISMIC HANGERS AS REQUIRED.
3. IT SHALL BE CONTRACTORS RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND TYPE OF CEILING WITH ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL ELEVATION DRAWING FOR MOUNTING HEIGHTS OF WALL MOUNTED FIXTURES.
4. PROVIDE ALL REQUIRED MOUNTING HARDWARE ANCHORAGE AND SUPPORTS TO INSTALL LIGHTING FIXTURES.
5. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERABLE LIGHTING SYSTEM AS PART OF THIS BUILDING CONTRACT.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE FIXTURE BALLAST OR DRIVER VOLTAGE MATCHES THE CIRCUIT VOLTAGE SUPPLYING FIXTURE PRIOR TO ORDERING.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY BALLAST/DRIVER DIMMING CONFIGURATION IS COMPATIBLE WITH CONTROLS BEING PROVIDED PRIOR TO ORDERING FIXTURES. EX. 2 WIRE, 3 WIRE, 4 WIRE, 0-10V, CAT 5, ETC.
8. LED LIGHT FIXTURES SHALL BE IN ACCORDANCE WITH IES, NFPA, UL, AS SHOWN ON THE DRAWINGS, AND AS SPECIFIED.
9. LED LIGHT FIXTURES SHALL BE REDUCTION OF HAZARDOUS SUBSTANCES (ROHS)-COMPLIANT.
10. LED DRIVERS SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - MINIMUM EFFICIENCY: 85% AT FULL LOAD.
    - MINIMUM OPERATING AMBIENT TEMPERATURE: -20 DEG C. (-4 DEG F.)
    - INPUT VOLTAGE: 120 - 277V (±10%) AT 60 HZ., UNLESS OTHERWISE INDICATED.
    - INTEGRAL SHORT CIRCUIT, OPEN CIRCUIT, AND OVERLOAD PROTECTION.
    - POWER FACTOR: >=0.95.
    - TOTAL HARMONIC DISTORTION: <=20%.
    - COMPLY WITH FCC 47 CFR PART 15.
12. LED MODULES SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - COMPLY WITH IES LM-79 AND LM-80 REQUIREMENTS.
    - MINIMUM CRI 80 AND COLOR TEMPERATURE 4000K UNLESS OTHERWISE SPECIFIED IN LUMINAIRE SCHEDULE.
    - MINIMUM RATED LIFE: 50,000 HOURS PER IES L70.
    - LIGHT OUTPUT LUMENS AS INDICATED IN THE LUMINAIRE SCHEDULE.
13. ALL FIXTURES MOUNTED OUTDOORS SHALL BE UL LISTED FOR WET LOCATION.

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Landscape Architect:

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DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

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1-800-422-4133
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No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia
Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No.:
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

LUMIANIRE SCHEDULE & DETAILS

Drawing No :

E0.2

SHEET OF -

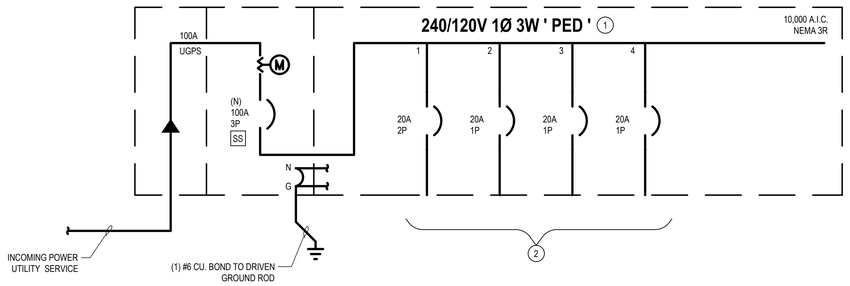
21-333

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E LUMSCHD - 2023-09-26 - JESUS MANZO

600V FEEDER SCHEDULE 1Ø 3W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
20-B	20A-3W	1	2 # 12	1 # 12	1 # 12	3/4"
30-B	30A-3W	1	2 # 10	1 # 10	1 # 10	3/4"
40-B	40A-3W	1	2 # 8	1 # 10	1 # 10	1"
50-B	50A-3W	1	2 # 6	1 # 6	1 # 10	1"
60-B	60A-3W	1	2 # 6	1 # 6	1 # 10	1"
70-B	70A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
80-B	80A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
90-B	90A-3W	1	2 # 2	1 # 2	1 # 8	1-1/4"
100-B	100A-3W	1	2 # 1	1 # 1	1 # 8	1-1/2"
125-B	125A-3W	1	2 # 1	1 # 1	1 # 6	1-1/2"
150-B	150A-3W	1	2 # 1/0	1 # 1/0	1 # 6	1-1/2"
175-B	175A-3W	1	2 # 2/0	1 # 2/0	1 # 6	2"
200-B	200A-3W	1	2 # 3/0	1 # 3/0	1 # 6	2"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).



VOLTAGE DROP - CKT PED-1,3

RUN #	QTY	VOLTS	PHASE	VA FIXT	AMPS	WIRE SIZE	RES.	DIST.	VOLT DROP	%
PED - LTG	7	240	1	32	0.93	#10	1.2000	165	0.37	0.15
LTG - LTG	6	240	1	32	0.80	#10	1.2000	150	0.29	0.12
LTG - LTG	5	239	1	32	0.67	#10	1.2000	127	0.20	0.09
LTG - LTG	4	239	1	32	0.54	#10	1.2000	102	0.13	0.05
LTG - LTG	3	239	1	32	0.40	#10	1.2000	76	0.07	0.03
LTG - LTG	2	239	1	32	0.27	#10	1.2000	48	0.03	0.01
LTG - LTG	1	239	1	32	0.13	#10	1.2000	22	0.01	0.00
TOTALS								690	1.10	0.46

SINGLE LINE DIAGRAM 1

GENERAL NOTES

1. REFER TO 'GENERAL NOTES' ON ELECTRICAL LEGENDS AND NOTES SHEET FOR WIRING METHODS, MATERIALS, AND REQUIREMENTS.
2. ALL CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER.
3. CONTRACTOR SHALL UPDATE ALL MODIFIED PANEL DIRECTORIES OR CREATE A NEW TYPED DIRECTORY, IF ONE DOES NOT EXIST, IDENTIFYING EACH CIRCUIT AND INSTALLED CIRCUIT LOADS, MOUNTED IN GLASS OR PLASTIC INSIDE DOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING DIRECTORIES TO INDICATE ALL NEW CIRCUITS AND ACTUAL AREA SERVED WHICH IS NOT NECESSARILY THE DESCRIPTION INDICATED ON THE BID DOCUMENTS. USE A COMPUTER OR TYPEWRITER TO CREATE DIRECTORY; HANDWRITTEN DIRECTORIES ARE NOT ACCEPTABLE.
4. SERVICE EQUIPMENT, WHICH HAS BEEN MODIFIED, SHALL BE FIELD MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT PER CEC 110.24(B). THE FIELD MARKING(S) SHALL INCLUDE THE DATE THE FAULT-CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. THE MAXIMUM AVAILABLE FAULT CURRENT SHALL BE VERIFIED OR RECALCULATED AS NECESSARY TO ENSURE THE SERVICE EQUIPMENT RATINGS ARE SUFFICIENT FOR THE MAXIMUM AVAILABLE FAULT CURRENT AT THE LINE TERMINALS OF THE EQUIPMENT.
5. EQUIPMENT DATA AND CONFIGURATIONS SHOWN ON THE SINGLE LINE DIAGRAM PROVIDE GENERAL EQUIPMENT INFORMATION. CONTRACTOR SHALL REVIEW ELECTRICAL PLANS AND SPECIFICATIONS TO VERIFY ALL EQUIPMENT ASSOCIATED DESIGN INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY COMPONENTS REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. ANY DISCREPANCIES BETWEEN DESCRIPTIONS, SPECIFICATIONS, AND EXISTING CONDITIONS ARE TO BE PRESENTED TO THE ENGINEER OF RECORD PRIOR TO COMPLETION OF THE BID PROCESS FOR CLARIFICATION. NO EQUIPMENT SHALL BE ORDERED UNTIL DISCREPANCIES ARE RESOLVED THROUGH A FORMAL RFI PROCESS.
6. ELECTRICAL CONTRACTOR TO INCLUDE IN BID ALL ASSOCIATED COSTS FOR THIRD PARTY TESTING OF ELECTRICAL EQUIPMENT, GROUND FAULT, CONDUCTORS, ETC.

CONSTRUCTION NOTES

1. PROVIDE NEW ELECTRICAL SERVICE AS SHOWN.
2. REFER TO PANEL SCHEDULE FOR FEEDER INFORMATION.

PANEL PED (NEW)

MOUNTING: PEDESTAL
FED FROM: UTILITY
NEMA: 3R
AIC RATING: 10,000
LOCATION: PEDESTAL
VOLTAGE: 120/240V 1PH 3W
BUS: 100 A
MAIN: 100 A
FEEDER: 100 -B

NOTE	DESCRIPTION	A	B	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %	CONDUIT		PHASE		CONDUIT	V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	DESCRIPTION	NOTE
1	BOLLARD LTS	208		L	2	20					1	A -	2					20	1	L	20		MONUMENT PARK SIGN	1
	- - - - -		208	L	-	- -					3	- B	4					20	1				SPARE	
	PEDESTAL REC	360		R	1	20					5	A -	6					20	1				SPARE	
	LTS CONTROLS		500	C	1	20					7	- B	8					20	1				SPARE	
	SPARE				1	20					9	A -	10					20	1				SPARE	
	SPACE										11	- B	12										SPACE	
	SPACE										13	A -	14										SPACE	
	SPACE										15	- B	16										SPACE	
	SPACE										17	A -	18										SPACE	
	SPACE										19	- B	20										SPACE	
	SUBTOTALS	568	708																		20	0		

CEC LOAD CALC:	CONNECTED	DEM. FACT.	DEM. VA	DEMAND AMPS
LOAD TYPE	VA			
(L) LIGHTING	436	1.25	545	2
(R) RECEPTACLE	360	220.44	360	2
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	500	1.25	625	3
(N) NON-CONTINUOUS	0	1.00	0	0
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	1296		1530	

TOTAL AMPS CONNECTED AT 120/240V 1PH 3W WITH LCL 6 A

SUBTOTALS:	PHASE
588 VA	A
708 VA	B
1296 VA	TOTAL
6	AMPS

NOTES:
1. ROUTE CIRCUIT VIA LIGHTING CONTROL PANEL

PANEL SCHEDULE 2

Landscape Architect:

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning
Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
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412 E. Vanderbilt Way
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MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER
No. E19480
ELECTRICAL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES BEFORE COMMENCING WORK TO AVOID DAMAGE SUCH FACILITIES OR INTERFERENCE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1-800/422-4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia
Street Park
1106 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

Project No.:
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

SINGLE LINE
DIAGRAM

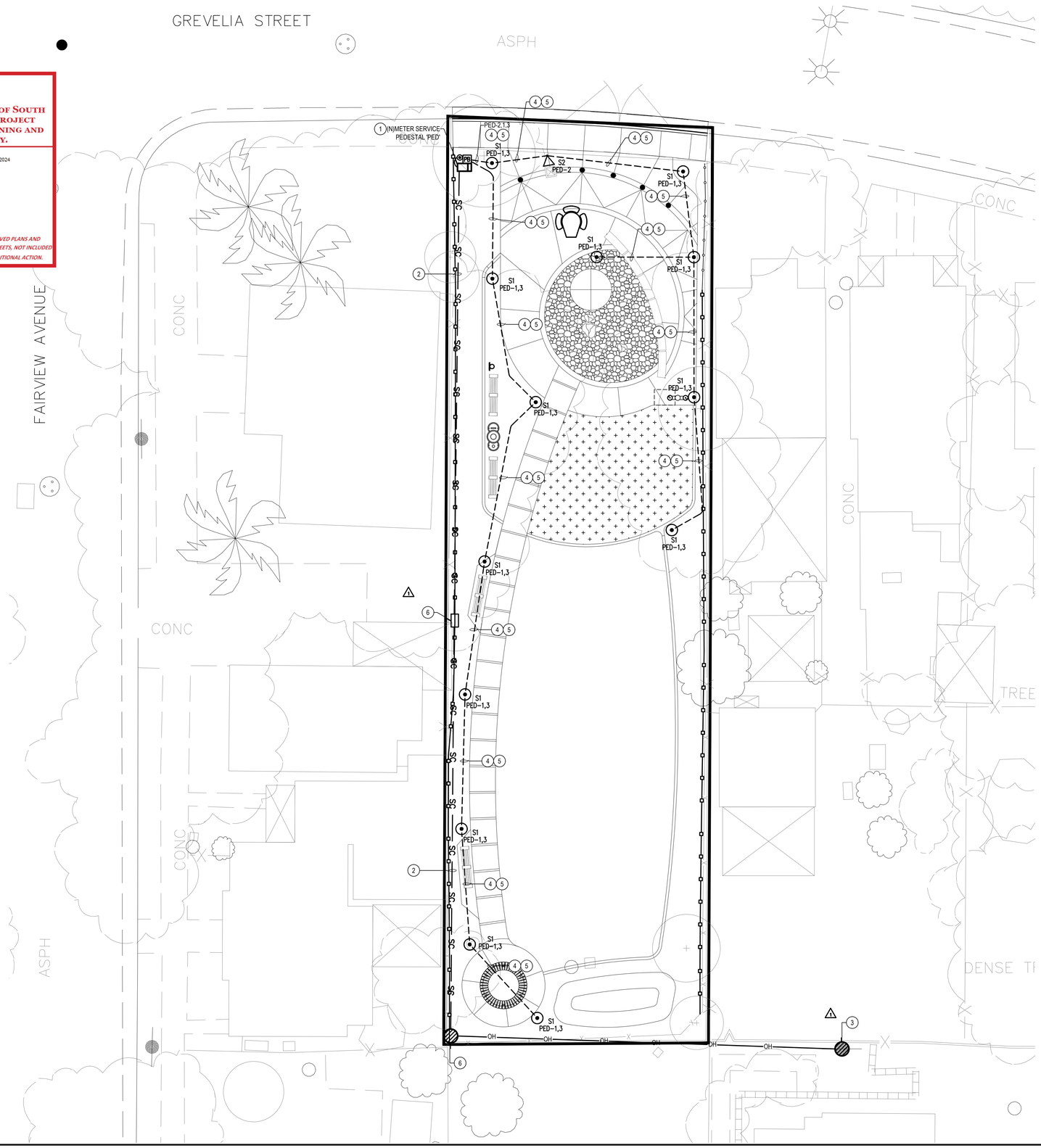
Drawing No :

E0.3

SHEET OF -

21-333

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E SLD - 2023-09-26 - JESUS MANZO



APPROVED*

Subject to the Approval of the City of South Pasadena Planning Division. This project substantially conforms to the Planning and Zoning Standards for the City.

Planner: Matt Chang **Date:** 7/8/2024

Notes: Grevelia Park

**PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING-APPROVED PLANS AND CONDITIONS OF APPROVAL. MODIFICATIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.*

GENERAL NOTES

1. ALL UTILITY SERVICES SHALL BE INSTALLED PER THE UTILITY COMPANY REQUIREMENTS. VERIFY FINAL CONSTRUCTION REQUIREMENTS WITH UTILITY COMPANY SERVICE PLANNERS.
2. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS PRIOR TO INSTALLATION OF UTILITY SERVICES.
3. COORDINATE TRENCH ROUTING AND EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS AND NEW WORK.
4. UTILITY SERVICE INFORMATION SHOWN IS FOR BIDDING PURPOSES ONLY. ACTUAL CONSTRUCTION DOCUMENTS SHALL BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANY REPRESENTATIVE.
5. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY REPRESENTATIVE TO ESTABLISH PRE-CONSTRUCTION COORDINATION, OBTAIN ALL NECESSARY METERS AND/OR APPROVALS, AND SCHEDULE UTILITY WORK TO COORDINATE WITH THE CONSTRUCTION SCHEDULE.
6. ALL SITE BRANCH CIRCUIT WIRING SHALL BE #10 AWG. OR LARGER.
7. CONTRACTOR SHALL VERIFY EXISTING BUILDING FOOTING PRIOR TO INSTALLATION OF STUB-UP CONDUITS FOR NEW WALL MOUNTED JUNCTION BOX TO AVOID ANY INTERFERENCE.
8. CONTRACTOR SHALL UTILIZE 'GPR GROUND PENETRATING RADAR TO SURVEY AND TRACE ALL EXISTING UNDERGROUND UTILITY LINES IN AREAS WHERE NEW TRENCHING IS PLANNED. CONTRACTOR TO SUBMIT "GPR" REPORT TO PROJECT MANAGER FOR REVIEWING PRIOR TO TRENCHING.
9. ALL POWER UTILITY WORK SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REQUIREMENTS OF THE SERVING UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE SERVING UTILITY TO RECEIVE COMPLETE INFORMATION ON THEIR REQUIREMENTS PRIOR TO THE SUBMISSION OF THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND THE CONTRACT DOCUMENTS.
10. ALL SITE UNDERGROUND CONDUIT TO BE 1" MIN. UNLESS OTHERWISE NOTED.
11. SUPPORT CONDUIT(S) EVERY 10'-0" AND WITHIN 3'-0" OF ANY JUNCTION BOX OR TERMINATION.
12. CONTACT INFORMATION FOR UTILITY COMPANIES ARE AS FOLLOWS:

    POWER
    SCE

13. CONTRACTOR IS TO CONTACT UTILITY INSPECTOR (LISTED ON FINAL UTILITY APPROVED PLANS) TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO ALL UTILITY CONSTRUCTION.

CONSTRUCTION NOTES

1. NEW METER PEDESTAL PER POWER UTILITY SERVICE REQUIREMENTS. SEE SINGLE LINE DIAGRAM(S) FOR FURTHER INFORMATION. PROVIDE MINIMUM CLEARANCES AS REQUIRED BY THE SERVICE COMPANY.
2. POWER UTILITY SECONDARY CONDUITS. PROVIDE 3" CONDUITS FOR SERVICE CAPACITY PLUS SPARE CONDUIT AS SPECIFIED BY UTILITY COMPANY, UNLESS NOTED OTHERWISE. VERIFY SIZE AND QUANTITY OF CONDUITS REQUIRED WITH UTILITY COMPANY PRIOR TO BID. ALL WORK TO BE DONE FROM UTILITY CO. APPROVED PLANS.
3. POINT OF CONNECTION TO POWER UTILITY COMPANY AT EXISTING POLE (#401995E). VERIFY EXACT LOCATION WITH UTILITY SERVICE PLANNER AND IN FIELD.
4. PROVIDE (2) #10, (1) #10 GND. IN 1" CONDUIT.
5. ROUTE CIRCUIT VIA LIGHTING CONTROL PANEL.
6. PROVIDE 17"X30"X15" UTILITY APPROVED HAND HOLE FOR UTILITY CABLING. VERIFY EXACT LOCATION WITH UTILITY SERVICE PLANNER IN FIELD.
7. NEW UTILITY POWER POLE PER UTILITY PLANS.

ELECTRICAL SITE LIGHTING PLAN | SCALE: 1" = 10'-0" | 1

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
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DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER
No. E19480
ELECTRICAL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT SHOWN ON THESE PLANS. IN ADDITION TO THE SPECIAL PROVISIONS, THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No. :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

ELECTRICAL SITE LIGHTING PLAN

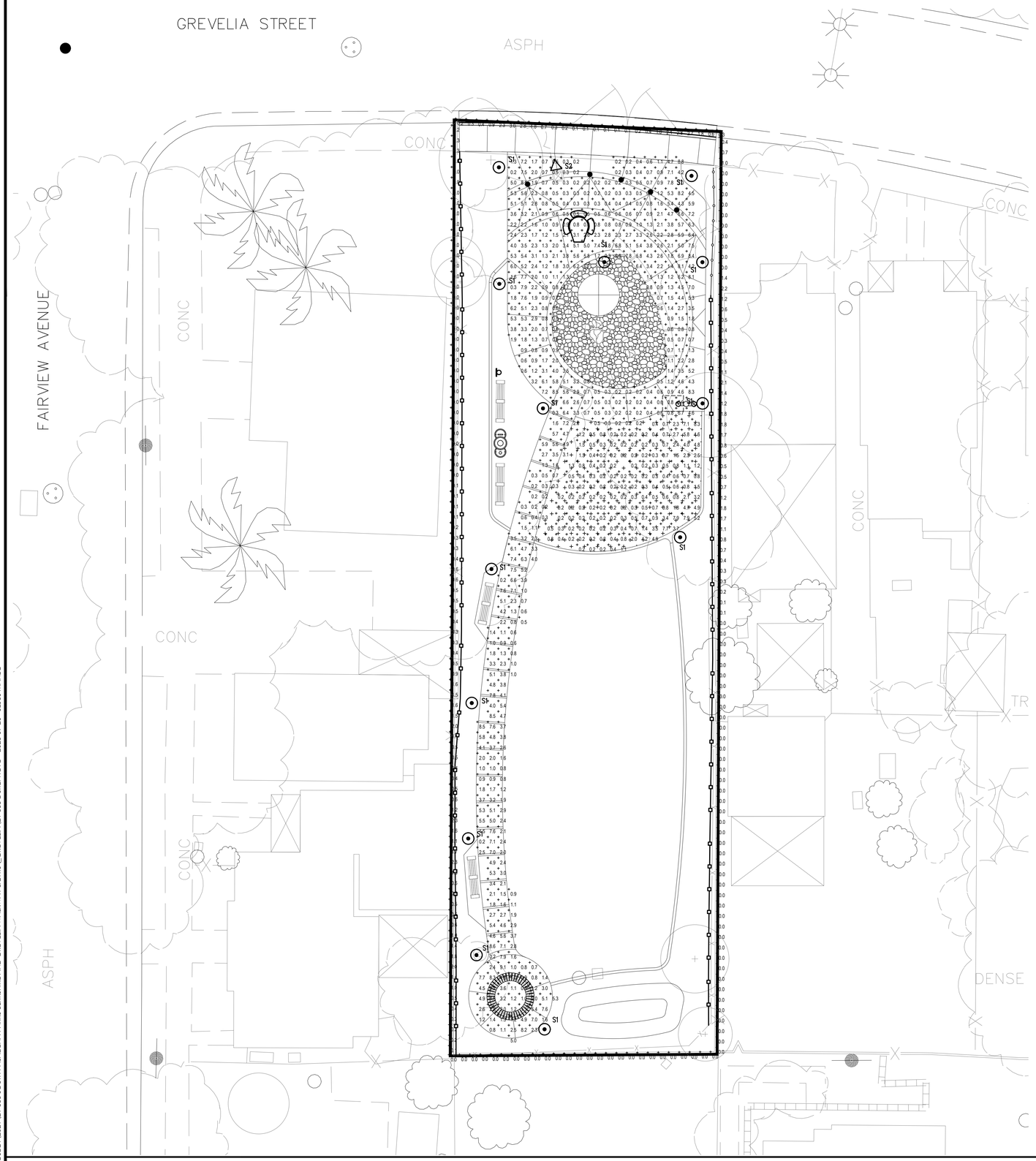
Drawing No :

E1.1

SHEET OF -

21-333

R:_PROJECTS\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E-SITELTG - 2023-09-26 - JESUS MANZO



LIGHTING FIXTURE SCHEDULE							
SYMBOL	LABEL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	NUMBER LAMPS	LUMENS PER LAMP	LIGHT LOSS FACTOR
⊙	S1	ANP LIGHTING	BL6031CLA032LD8T340	BL6031 BOLLARD W/ FLAT TOP RINGS & DECORATIVE CAST RINGS - CLEAR ACRYLIC LENS - 8.00" OD X 42.00" H	1	1178	0.91

STATISTICS SCHEDULE						
DESCRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
PATHWAY	+	2.7 FC	9.1 FC	0.2 FC	45.5:1	13.5:1
PLAY AREA	+	1.1 FC	8.3 FC	0.2 FC	41.5:1	5.5:1
PROPERTY LINE	+	0.4 FC	3.0 FC	0.0 FC	N/A	N/A

APPROVED*

SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PASADENA PLANNING DIVISION. THIS PROJECT SUBSTANTIALLY CONFORMS TO THE PLANNING AND ZONING STANDARDS FOR THE CITY.

PLANNER: Matt Chang **DATE:** 7/8/2024

NOTES: Grevelia Park

**PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING-APPROVED PLANS AND CONDITIONS OF APPROVAL. MODIFICATIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.*

SITE PHOTOMETRIC PLAN | SCALE: 1" = 10'-0" | 1

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA\21-333 E-SITEPHOTO - 2023-09-26 - JESUS MANZO

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

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DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER — No. E19480 — ELECTRICAL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1+800+422+4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

SITE PHOTOMETRIC PLAN

Drawing No :

E1.2

SHEET OF -

21-333

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: Grevelia Street Park	**Report Page:** (Page 1 of 7)
Project Address: 1106 Grevelia St.	**Date Prepared:** 9/26/2023

A. GENERAL INFORMATION

01	Project Location (city)	South Pasadena	04	Total Illuminated Hardscape Area (ft²)	9363
02	Climate Zone	9			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
● All Other Occupancies					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ○ No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:** (Page 2 of 7)
	Date Prepared: 9/26/2023

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv												Compliance Results		
01		02		03		04		05		06		07	08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
437	+	---	+	---	+	---	+	---	OR	---	=	437	≥	436	COMPLIES

Shielding Compliance (See Table G for Details)	N/A
Controls Compliance (See Table H for Details)	COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:** (Page 3 of 7)
	Date Prepared: 9/26/2023

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
S1	Bollard LED	☐ Linear	32	Mfr. Spec	13	New	☐	416	NA: < 6200 lumens	☐	☐
S2	In-Grade Flood LED	☐ Linear	20	Mfr. Spec	1	New	☐	20	NA: < 6200 lumens	☐	☐
							Total Design Watts:	436			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:** (Page 4 of 7)
	Date Prepared: 9/26/2023

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
Walkway	Astronomical Timer	Provided	NA: Each Luminaire <= 40 Watts	☐	☐

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:** (Page 5 of 7)
	Date Prepared: 9/26/2023

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)				
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M	

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Walkway	9363	0.019	177.9	396	0.2	59.4	237

Initial Wattage Allowance for Entire Site (Watts):	200
Instances of Initial Wattage Allowance (LZ 0 only)[1]	
Total General Hardscape Allowance (Watts):	437

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:** (Page 6 of 7)
	Date Prepared: 9/26/2023

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Walkway;

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Grevelia Street Park	**Report Page:** (Page 7 of 7)
Project Address: 1106 Grevelia St.	**Date Prepared:** 9/26/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Maya	Documentation Author Signature:
Company: Design West Engineering	Signature Date: 2023-09-26
Address: 412 East Vanderbilt Way	CEA/ HERS Certification Identification (if applicable): E19480
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Leonard Maya	Responsible Designer Signature:
Company: Design West Engineering	Date Signed: 2023-09-26
Address: 412 E. Vanderbilt Way	License: E19480
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

Landscape Architect:

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

412 E. Vanderbilt Way
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
Email: cadd@designwesteng.com

DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER
LEONARD MAYA
No. E19480
ELECTRICAL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1<800>422<4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :
Grevelia Street Park
1106 Grevelia Street
South Pasadena, CA 91030
Owner:
South Pasadena

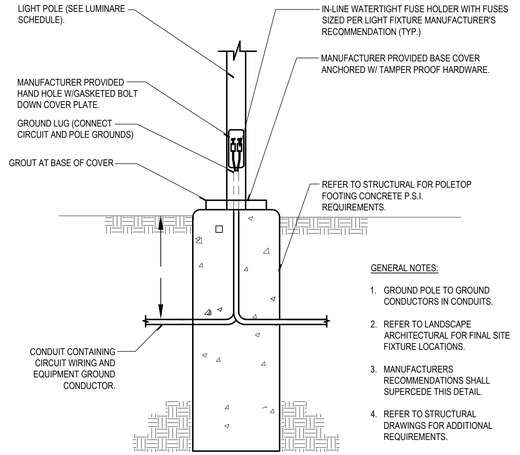
Project No :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :
ELECTRICAL TITLE 24 FORMS

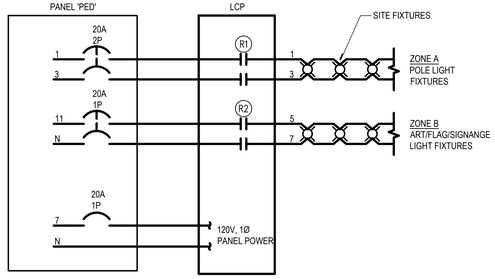
Drawing No :
E3.1
SHEET OF -

21-333

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_GREVELIA \21-333 E T24 - 2023-09-26 - JESUS MANZO



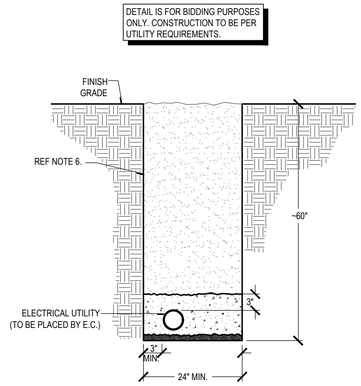
-	9	FLUSH GRADE POLETOP LIGHTING	6



GENERAL NOTES:

1. PROVIDE LIGHTING CONTROL PANEL nLIGHT MODEL # ARP-INTENC08-NLT-8FCRR-MVOLT-SC-SM-DTC-ARPA-PC.

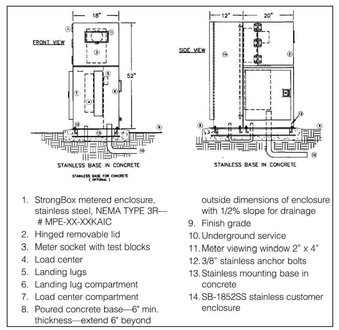
-	10	LIGHTING CONTROL DIAGRAM	7



NOTES:

1. THIS DETAIL IS FOR FOR ASSISTANCE IN BIDDING. DRY UTILITY REPRESENTATIVES ARE AVAILABLE TO PROV. ADDITIONAL INFORMATION. REF SINGLE LINE DIAGRAM FOR NAME AND PHONE NUMBER OF INVOLVED DRY UTILITY REPRESENTATIVES. REF NOTE BELOW.
2. VERIFY EXACT LOCATION AND ROUTING OF TRENCH WITH UTILITY COMPANY.
3. COMPACT TO 90%, OR TO ELECTRICAL UTILITY STANDARDS.
4. ELECTRICAL CONTRACTOR TO COORDINATE QUANTITY, SIZE AND TYPE OF CONDUIT(S), PULLROPES, BURIAL DEPTHS, ETC. WITH INFORMATION PROVIDED BY UTILITIES.
5. IT IS ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO CONTACT DRY UTILITIES AND OBTAIN A COMPLETE LIST OF UTILITY REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO INCLUDE IN HIS BID PRICE, ALL COSTS, INVOLVED IN BRINGING DRY UTILITIES TO THE SITE. OWNER WILL PAY COSTS ASSOCIATED WITH APPLYING FOR NEW DRY UTILITY SERVICE. IF E.C. IS UNABLE TO CONTACT ANY DRY UTILITY, HE IS TO CONTACT THE ELECTRICAL ENGINEER, PRIOR TO BID, FOR DIRECTION.
6. EDISON: FULL ENCASEMENT REQUIRED FOR MORE 4 CONDUITS. SEMI ENCASEMENT REQUIRED FOR 3 OR 4 CONDUITS.
7. TRENCHING TO BE 2' BACK FROM CURB.
8. MINIMUM TRENCH WIDTH TO BE 24".

-	8	UTILITY SERVICE TRENCH DETAIL	4

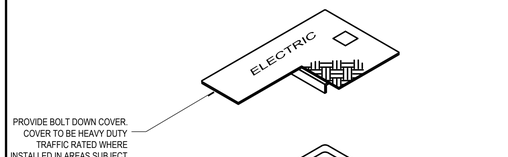


1. StrongBox metered enclosure, stainless steel, NEMA TYPE 3R— # MPE-XX-XXKAIC
2. Hinged removable lid
3. Meter socket with test blocks
4. Load center
5. Landing lugs
6. Landing lug compartment
7. Load center compartment
8. Poured concrete base—6" min. thickness—extend 6" beyond outside dimensions of enclosure with 1/2% slope for drainage
9. Finish grade
10. Underground service
11. Meter viewing window 2" x 4"
12. 3/8" stainless anchor bolts
13. Stainless mounting base in concrete
14. SB-1852SS stainless customer enclosure

GENERAL NOTES:

1. PEDESTAL TO BE IN NEMA 3R CABINET WITH HASP.
2. ORDERING INFORMATION ON SWITCHGEAR MAY BE OBTAINED FROM STRONGBOX. PEDESTAL MODEL #----- AND IS TO BE SUPPLIED WITH MAIN & BRANCH CIRCUIT BREAKERS AS INDICATED ON A.C. BREAKER ASSIGNMENTS.
3. REFER BREAKER ASSIGNMENTS FOR INFO ON MAIN CIRCUIT BREAKER, INTERIOR SPACES AND OTHER INFO.
4. PROVIDE WITH PAD - 2000PSI CONCRETE 8" THICK, 4" ABOVE GROUND, 4" BELOW. EXTEND 4" BEYOND SWITCHGEAR ON ALL SIDES.
5. PEDESTAL TO BE SECURED TO PAD WITH 5/8" X 5" ANCHOR BOLTS AT EACH CORNER.
6. PROVIDE 3' LEVEL & CLEAR WORKING SPACE IN FRONT OF PEDESTAL.
7. ENCLOSURE SHOWN IS TO HAVE SUFFICIENT SPACE FOR MOUNTING OF THE LIGHTING CONTROL PANEL SEPARATE FROM LIVE EXPOSED ELECTRICAL PARTS. ALTERNATE SUBMITTAL WILL ONLY BE CONSIDERED IF ALL EQUIPMENT CAN BE MOUNTED IN THE ONE ENCLOSURE.
8. PROVIDE DUPLEX GFCI RECEPTACLE TO BE MOUNTED INSIDE PANELBOARD.
9. FINISH OF PEDESTAL TO BE STAINLESS STEEL.
10. MANUFACTURER IS TO PROVIDE PHOTOCELL WINDOW FACING EAST. PROVIDE WITH PHOTOCELL MODEL # ARPA-PC.

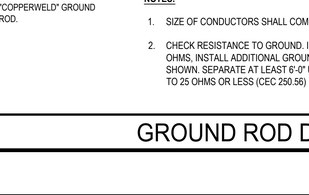
-	11	METER PEDESTAL 'PED'	5



GENERAL NOTES:

1. PULLBOX TO BE SIZED PER NEC, U.O.N.
2. PROVIDE COVER LABELED WITH "POWER" OR "DATA" DESIGNATION.

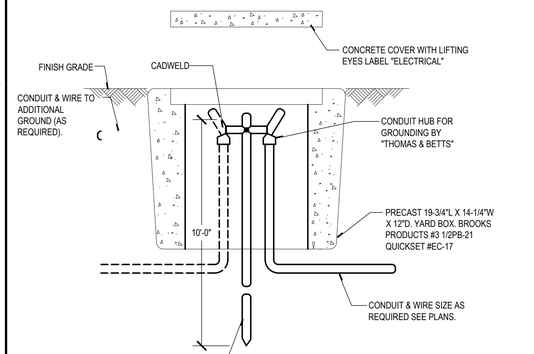
PULLBOX INSTALLATION	1



GENERAL NOTES:

1. PLACE CONDUIT IN TRENCH, FILL, AND COMPACT TO 90%. REPAIR AREA TO MATCH SURROUNDING. BACK FILL IS TO BE FREE OF LARGE ROCK, PAVING MATERIALS, ETC., THAT MAY CAUSE PHYSICAL DAMAGE TO CONDUIT. PROVIDE GRANULAR MATERIAL WITH A SAND EQUIVALENT (SE) GREATER THAN 30.
2. PROVIDE 30" MINIMUM COVER WHERE CONDUIT IS PLACED UNDER STREETS, HIGHWAYS, ROADS, ALLEYS, DRIVEWAYS, AND PARKING LOTS.
3. CONDUITS PLACED UNDER OR IN STRUCTURAL FOOTINGS SHALL BE GALVANIZED RIGID METAL (RMC) WRAPPED WITH 20 MIL PVC TAPE. THE COUPLINGS CONNECTED TO THE RMC ELBOW SHALL BE GALVANIZED MATERIAL.
4. MINIMUM TRENCH WIDTH TO BE 24".

BRANCH CIRCUIT CONDUIT BURIAL	2



NOTES:

1. SIZE OF CONDUCTORS SHALL COMPLY W/CEC 250.66.
2. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS W/CONDUCTORS AS SHOWN. SEPARATE AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (CEC 250.56)

GROUND ROD DETAIL	3

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

412 E. Vanderbilt Way
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
Email: cadd@designwesteng.com

DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER — No. E19480 — ELECTRICAL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1+800+422+4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Grevelia
Street Park
1106 Grevelia Street
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :	
Drawn By :	JM /MR
Checked By :	RM
Date :	November 12, 2021
Scale :	AS SHOWN

Drawing Title :

ELECTRICAL DETAILS

Drawing No :

E4.1

SHEET OF -

21-333

562

R:_PROJECT\ 2021\ 21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_ GREVELIA\ 21-333 E-DETAILS - 2023-09-26 - JESUS MANZO

BERKSHIRE AVENUE PARK

2006 BERKSHIRE AVE, SOUTH PASADENA, CA 91030

GENERAL NOTES

1. ELEVATIONS SHOWN HEREON ARE IN FEET ABOVE THE U.S.G.S. DATUM PLANE.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION), CITY OF SOUTH PASADENA PROJECT SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND APPLICABLE STANDARD PLANS AND SPECIFICATIONS NO. 3160.
3. UTILITIES ARE SHOWN ACCORDING TO RECORDS IN THE OFFICE OF THE CITY ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND THEIR SERVICE CONNECTIONS.
4. CONTRACTOR MUST MAINTAIN ALL TRAFFIC SIGNS IN ERECT POSITIONS AND SET SAME FRAME IN PROPER POSITION AT CLOSE OF THE JOB.
5. SANITARY SEWER, STORM DRAIN, WATER VAULT AND WATER MANHOLE FRAME AND COVER SETS SHALL BE ADJUSTED TO THE NEW FINISHED SURFACE GRADE BY THE CONTRACTOR. THE USE OF CAST IRON RAISING RINGS WILL NOT BE ACCEPTED.
6. NO LONGER THAN 48 HOURS SHALL ELAPSE BETWEEN THE TIME A MANHOLE IS DUG OUT FROM THE NEWLY LAID ASPHALT AND THE TIME THAT THE FINISHED SURFACE OF ASPHALT IS PLACED AROUND THE FRAME SET TO FIT THE NEW STREET SECTION.
7. PLANTED AREAS ADJACENT TO THE PROPOSED WORK WHICH ARE DISTURBED BY THE CONTRACTOR SHALL BE PLANTED WITH SOD OR GROUND COVER TO MATCH EXISTING.
8. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED IN PLANS.
9. THE CONTRACTOR SHALL REMOVE THE EXISTING PAVEMENT, CURB, GUTTER, AND SIDEWALK WHERE NEW IMPROVEMENTS ARE REQUIRED.
10. THE CONTRACTOR SHALL REMOVE ANY TREE ROOTS WHICH HAVE DAMAGED EXISTING PAVEMENTS AND CURBS AND WHICH MAY POTENTIALLY DAMAGE NEW IMPROVEMENTS. ROOTS WITHIN 12 INCHES FROM PAVEMENT, BOTH HORIZONTALLY AND VERTICALLY, SHALL BE REMOVED PRIOR TO THE COMPACTION OF THE SUBGRADE. WHERE THIS REMOVAL MAY DAMAGE THE TREE'S ROOT SYSTEM, THE EXTENT OF REMOVAL SHALL THEN BE DETERMINED BY CITY ARBORIST AND THE CITY ENGINEER. CONTRACTOR IS REQUIRED TO PROTECT TREES IN ACCORDANCE WITH SPMC CHAPTER 34.
11. UNDERGROUND UTILITIES ARE SHOWN SCHEMATICALLY ON THE PLANS. THE CONTRACTOR SHALL OBTAIN FROM THE RESPECTIVE OWNERS THE EXACT LOCATION OF THESE UTILITIES PRIOR TO ANY EXCAVATION WORK. LOCATION OF UTILITIES WITHIN THE PROJECT ARE ON FILE IN THE CITY ENGINEER'S OFFICE FOR REFERENCE. THE CONTRACTOR SHALL ALSO NOTE THAT FIELD MARKINGS MADE BY VARIOUS UTILITIES USING UNDERGROUND SERVICE ALERT (USA) SHALL BE CONSIDERED AS IDENTIFIED UTILITIES EVEN WHEN THEY ARE NOT SHOWN ON PLANS.
12. CONTRACTOR SHALL NOTIFY RESIDENTIAL PROPERTY OWNERS 72 HOURS AND BUSINESS ESTABLISHMENTS 96 HOURS PRIOR TO ANY CLOSURE OF THEIR EXISTING DRIVEWAYS.
13. ALL TREES SHALL REMAIN IN PLACE AND SHALL BE ADEQUATELY PROTECTED DURING CONSTRUCTION UNLESS OTHERWISE SPECIFIED IN PLANS.
14. ALL CONCRETE FOR REMOVAL SHALL BE SAW CUT STRAIGHT AND TRUE WITH A POWER SAW PER STANDARD SPECIFICATIONS.
15. ASPHALT CONCRETE PAVEMENT SHALL BE CONSTRUCTED JOINING GUTTER WITH ¼" LIP.
16. THE COMPLETED ASPHALT PAVEMENT SHALL BE THOROUGHLY COMPACTED TO BE FREE FROM BUMPS, DEPRESSION OR IRREGULARITIES. ANY RIDGES, INDENTATIONS OR OTHER OBJECTIONABLE MARKS LEFT ON THE SURFACE OF THE NEW PAVEMENT SHALL BE ELIMINATED BY ROLLER OR OTHER MEANS.
17. LOCATIONS OF SURVEY WELL MONUMENTS WILL BE IDENTIFIED IN THE FIELD BY THE ENGINEER. CONTRACTOR TO GIVE 72 HOURS NOTICE TO THE ENGINEER.
18. ALL NEW SIDEWALKS SHALL HAVE WEAKENED PLANE JOINTS OR SCORELINES THAT MATCH EXISTING ADJACENT SIDEWALKS. IN LOCATIONS WHERE THERE ARE NO SIDEWALKS, THE WEAKENED PLANE JOINTS OR SCORELINES SHALL BE CONSTRUCTED AT REGULAR 10 FT INTERVALS IN ACCORDANCE TO APWA STANDARD PLANS.
19. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGES IMPOSED, INTENTIONALLY OR ACCIDENTALLY, TO EXISTING UTILITIES, BUILDINGS, OR OTHER AMENITIES, DUE TO THE ACTIONS OF THE CONTRACTORS, CONTRACTOR'S EMPLOYEES AND/OR CONTRACTOR'S SUBCONTRACTORS.
21. CONSTRUCTION AND INSTALLATION OF ALL ITEMS WITHIN THESE DOCUMENTS SHALL REQUIRE CLOSE COORDINATION BETWEEN TRADES INVOLVED IN UNDERGROUND AND UTILITY INSTALLATION, AND TREE LOCATION. THE CONTRACTOR'S WORK FORCE SHALL CONSIST OF PERSONS SKILLED IN THEIR TRADE COVERED BY THIS SCOPE OF WORK. APPRENTICES AND/OR UNSKILLED LABORERS SHALL BE UNDER THE DIRECT SUPERVISION OF SKILLED TRADESMEN AT ALL TIMES. REFER TO SPECIFICATIONS.
22. THE CONTRACTOR SHALL KEEP THE PREMISES CLEAN AND FREE OF EXCESS EQUIPMENT, MATERIALS AND RUBBISH INCIDENTAL TO HIS WORK. ALL RUBBLE, TRASH, DEBRIS OR UNWANTED MATERIALS RESULTING FROM DEMOLITION OR CONSTRUCTION SHALL BE DISPOSED OF IN A LEGAL AND LAWFUL MANNER TO AN APPROVED DISPOSAL SITE. IF DEBRIS REMAINS ON SITE FOR MORE THAN 12 HOURS, UNLESS PRE-APPROVED BY THE CITY, SUCH DEBRIS SHALL BE REMOVED BY THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
23. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL IN-FIELD LAYOUT, DIMENSIONING OF WORK, GRADES AND ELEVATIONS, AND WORK SCHEDULES UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL CAREFULLY INSPECT THE SITE AND SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH ANY WORK UNDER THIS CONTRACT. ANY DISCREPANCIES IN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL NOT WILLFULLY IMPLEMENT ANY WORK DESCRIBED IN THESE DOCUMENTS WHICH IS OBVIOUSLY IN ERROR, INTERFERES WITH EXISTING SITE FEATURES, OR CAUSES PROJECT COMPLICATION OR HARM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE SCALE OF THE DRAWING. WRITTEN DIMENSIONS TAKE PREFERENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY ALL PROPERTY LINES, LOT LINES, AND EASEMENTS PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERSONALLY VERIFYING WITH THE ENGINEER THAT ALL COPIES OF THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS ARE CURRENT AND APPROVED FOR CONSTRUCTION.
24. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND AGENCY INSPECTIONS PRIOR TO THE COMMENCEMENT OF WORK. ANY PERMITS, FEES, AND AGENCY INSPECTIONS REQUIRED SHALL BE PAID BY THE CONTRACTOR. IN THE EVENT THAT THE CITY HAS OBTAINED PERMITS, LICENSES OR OTHER AUTHORIZATIONS APPLICABLE TO THE WORK, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF SAID PERMIT, LICENSES AND OTHER AUTHORIZATIONS APPLICABLE TO THE WORK. THE CONTRACTOR SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROSECUTION OF THE WORK FOR THIS PROJECT. THE CONTRACTOR SHALL ALSO ACQUIRE ALL NECESSARY RIGHT-OF-WAY ENCROACHMENT PERMITS REQUIRED FOR TRAFFIC CONTROL AND LANE CLOSURES FROM THE CITY OF GLENDALE. ENCROACHMENT PERMIT SHALL BE OBTAINED BY THE CONTRACTOR IN SUFFICIENT TIME TO PREVENT DELAYS TO THE WORK NECESSARY TO THE WORK NECESSARY TO COMPLETE THIS PROJECT. THE CONTRACTOR ACKNOWLEDGES THAT HE HAS VISITED THE SITE AND IS FAMILIAR WITH AND HAS PROVIDED FOR THE CONDITIONS THAT EXIST HEREIN AND THAT HE HAS CHECKED WITH THE APPROPRIATE GOVERNING AGENCIES AND HAS MADE PROVISIONS FOR ANY AND ALL REQUIREMENTS OF THOSE AGENCIES.
25. THE CONTRACTOR SHALL AT ALL TIMES PROTECT HIS WORK FROM DAMAGE AND THEFT AND REPLACE ALL DAMAGED OR STOLEN PARTS AT HIS EXPENSE UNTIL THE WORK IS ACCEPTED IN WRITING BY THE CITY. CONTRACTOR IS LIABLE FOR ALL DAMAGE OR INJURY CAUSED BY ANY WORK OR STORAGE OF MATERIALS ON THE SITE.
26. IT IS THE CONTRACTORS RESPONSIBILITY TO CLEAN OUT AND MAINTAIN THE EXISTIN DRAINAGE SYSTEM DURING THE COURSE OF CONSTRUCTION.
27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERSONALLY VERIFYING THAT ALL COPIES OF THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS ARE CURRENT AND APPROVED FOR CONSTRUCTION.
28. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE AS REQUESTED BY THE CITY. THE CONTRACTOR SHALL ADHERE TO THE SCHEDULE AS INCORPORATED INTO THE CITY ENGINEER'S (OR HIS REPRESENTATIVE'S) MASTER SCHEDULE. THE CONTRACTOR SHALL ADHERE TO THE CONSTRUCTION SEQUENCE UNLESS NOTIFIED IN WRITING BY THE CITY ENGINEER.
29. ALL UNDERGROUND UTILITIES SHALL HAVE WARNING TAPES PLACED 6" BELOW FINISHED BURIED SURFACE OF ALL TRENCHES IN A CONTINUOUS LENGTH OF THE ENTIRE UTILITY RUN.
30. REPLACE ALL TURF GRASS WITH SOD WHERE TRENCHING FOR UTILITY LINES HAS OCCURED.
31. ALL UTILITY LIDS TO BE CONCRETE COMPOSITE LIDS.
32. ANY AC PAVING DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER AT NO ADDITIONAL COST.
33. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY TOILET FACILITIES, (GLENDALE BUILDING CODE 118)

GOVERNING CODES

THESE PLAN COMPLY WITH THE FOLLOWING:

SOUTH PASADENA MUNICIPAL CODE (SPMC)

THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE, TITLE 24 (CBC) AND LA CO AMMENDMENTS

STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREENBOOK" LASTEST EDITION

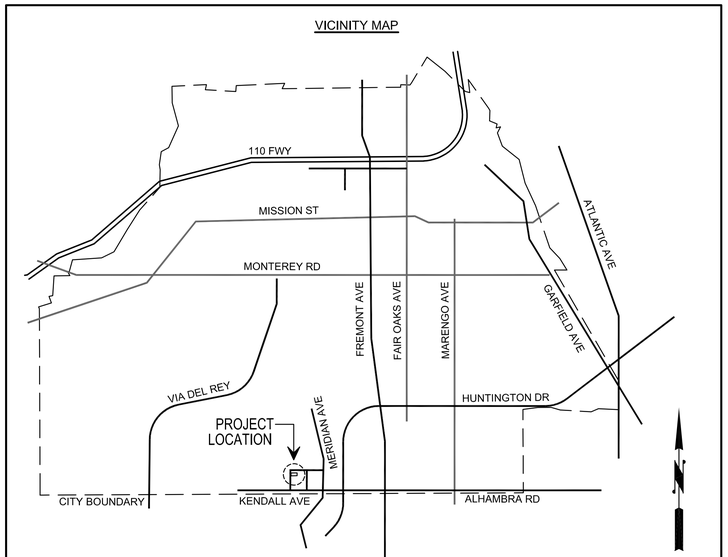
THE 2022 CALIFORNIA ELECTRIC CODE, TITLE 24 (UBC)

THE 2022 EDITION OF THE NATIONAL ELECTRICAL CODE (NEP)

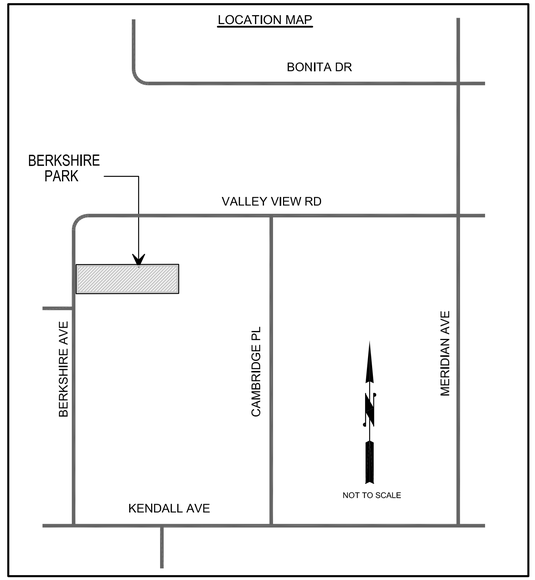
AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM)

AMERICAN WITH DISABILITY ACT, 1990 (ADA)

VICINITY MAP



LOCATION MAP



OWNER:
CITY OF SOUTH PASADENA
1414 MISSION STREET
SOUTH PASADENA, CA 91030
PHONE: (626) 403-7240
CONTACT: PUBLIC WORKS

LANDSCAPE ARCHITECT:
DAVID VOLZ DESIGN
151 KALMUS DRIVE, SUITE M8
COSTA MESA, CA 92626
PHONE: (714) 641-1300
CONTACT: GARY VASQUEZ RLA# 3993

CIVIL ENGINEER:
DMS CONSULTANTS, INC
12371 S LEWIS ST #203
GARDEN GROVE, CA 92840
PHONE: (714) 740-8840
CONTACT: SURRENDER DEWAN

ELECTRICAL ENGINEER:
DESIGN WEST ENGINEERING
275 WEST HOSPITALITY LANE, SUITE 100
SAN BERNARDINO, CA 92408
PHONE: (909) 890-3700
CONTACT: ROY MORALES

GEOTECHNICAL ENGINEER:
GLOBAL GEO-ENGINEERING, INC
3 CORPORATE PARK # 270,
IRVINE, CA 92606
PHONE: (949) 221-0900
GEOTECHNICAL ENGINEER: MOHAN B. UPASANI RGE # 2301
GEOTECHNICAL REPORT DATED 10/28/2021

ABBREVIATIONS

AC	ASPHALT CONCRETE	INV	INVERT	DWG	DRAWING	SF	SQUARE FOOT
ALT	ALTERNATE	LB	POUND	EA	EACH	SPEC	SPECIFICATIONS
APC	ADJACENT TO POURED CONCRETE	LF	LINEAR FOOT	EDC	EDGE OF CURB	SDMH	SEWAGE DRAIN MANHOLE
BF	BOTTOM OF FOOTING	LT	LIGHT POLE	EL	ELEVATION	STA	STATION
BM	BENCH MARK	LS	LUMP SUM	EJ	EXPANSION JOINT	STRD	STANDARD
BS	BOTTOM OF STEP	MAX	MAXIMUM	EXIST	EXISTING	SW	SIDEWALK
B/W	BACK OF WALL	MH	MANHOLE, MAINTENANCE HOLE	FG	FINISHED GRADE	SY	SQUARE YARD
CB	CATCH BASIN	MISC	MISCELLANEOUS	FH	FIRE HYDRANT	TC	TOP OF CURB
CF	CUBIC FOOT	NAT	NATIVE	FL	FLOW LINE	TD	TOP OF PLAY EQ. DECK
CHLK	CHAINLINK	NIC	NOT IN CONTRACT	FS	FINISHED SURFACE	TEL	TELEPHONE
CL	CENTER LINE	N.T.S.	NOT TO SCALE	FW	FACE OF WALL	TF	TOP OF FOOTING
CLF	CHAIN LINK FENCE	OC	ON CENTER	G	GRADE	TG	TOP OF GRATE
CLR	CLEARANCE	OD	OUTSIDE DIAMETER	GALV	GALVANIZED	TS	TOP OF STEP
CNC	CONCRETE	PA	PLANTING AREA	GB	GRADE BREAK	T. SW	TOP OF SEATWALL
CO	CLEANOUT	PCC	PORTLAND CEMENT CONCRETE	H	HIGH OR HEIGHT	TW	TOP OF WALL
CONC	CONCRETE	PE	PAD ELEVATION	HC	HANDICAPPED	TYP	TYPICAL
CY	CUBIC YARD	PL	PROPERTY LINE	HP	HIGH POINT	USA	UNDERGROUND SERVICE ALERT
DEG	DEGREE	PSI	POUNDS PER SQUARE INCH	ID	INSIDE DIAMETER	UGCABLE	UNDERGROUND CABLE
DN	DOWN	PVC	POLYVINYL CHLORIDE	R	RADIUS	VERT	VERTICAL
INV	INVERT	DG	DECOMPOSED GRANITE	R/W	RIGHT-OF-WAY	W	WIDTH
LB	POUND	DIA	DIAMETER	RCV	REMOTE CONTROL VALVE	WM	WATER METER
						WMV	WATER VALVE

CONTACT INFO:

FOR EMERGENCIES AND FOR NON-BUSINESS HOURS PLEASE USE THE CONTACT INFO BELOW.

PUBLIC WORKS ENGINEERING/INSPECTION ASSISTANCE (626) 403-7240
CITY NON-EMERGENCY ASSISTANCE/POLICE DISPATCH (626) 403-7270
FOR EMERGENCY ASSISTANCE, PLEASE CALL 911

BUILDING AND SAFETY APPROVED
REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.
7/17/2024, 3:15:29 PM
SP-B54560

APPROVED*
SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PASADENA PLANNING DIVISION. THIS PROJECT SUBSTANTIALLY CONFORMS TO THE PLANNING AND ZONING STANDARDS FOR THE CITY.
PLANNER: Matt Chang DATE: 7/24/2024
NOTES: Berkshire Park
*PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING APPROVED PLANS AND CONDITIONS OF APPROVAL. REVISIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, SHALL NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.

APPROVED BY: _____

811 DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA
ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 811

SHEET INDEX

1	T.1	TITLE SHEET
2	T.2	GRADING NOTES AND FORMS
3	D.1	DEMOLITION PLAN
4	EC.1	EROSION CONTROL PLAN
5	G.1	GRADING PLAN
6	G.2	GRADING PLAN
7	G.3	WALL DETAILS
8	HC.1	HORIZONTAL CONTROL PLAN
9	LC.1	CONSTRUCTION PLAN
10	CD.1	CONSTRUCTION DETAILS
11	CD.2	CONSTRUCTION DETAILS
12	CD.3	CONSTRUCTION DETAILS
13	LI.1	IRRIGATION PLAN
14	LI.2	IRRIGATION DETAILS
15	LI.3	IRRIGATION DETAILS
16	LI.4	IRRIGATION NOTES AND CALCULATIONS
17	LP.1	PLANTING PLAN
18	LP.2	PLANTING DETAILS AND NOTES
19	E0.1	ELECTRICAL LEGENDS AND NOTES
20	E0.2	LUMINAIRE SCHEDULE & TITLE 24
21	E0.3	SINGLE LINE DIAGRAM
22	E1.1	ELECTRICAL SITE LIGHTING PLAN
23	E1.2	SITE PHOTOMETRIC PLAN
24	E3.1	ELECTRICAL TITLE 24 FORMS
25	E4.1	ELECTRICAL DETAILS
26	AC.1	ACCESSIBILITY PLAN

AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, I HAVE READ AND UNDERSTAND THE REQUIREMENTS TO CONTROL STORM WATER POLLUTION FROM SEDIMENTS, EROSION, AND CONSTRUCTION MATERIALS, AND I CERTIFY THAT I WILL COMPLY WITH THESE REQUIREMENTS. I, OR MY REPRESENTATIVE, CONTRACTOR, DEVELOPER, OR ENGINEER WILL MAKE CERTAIN THAT ALL BMP SHOWN ON THIS PLAN WILL BE FULLY IMPLEMENTED, AND ALL EROSION CONTROL DEVICES WILL BE KEPT CLEAN AND FUNCTIONING. PERIODIC INSPECTIONS OF THE BMPS WILL BE CONDUCTED AND A CURRENT LOG, SPECIFYING THE EXACT NATURE OF THE INSPECTION AND ANY REMEDIAL MEASURES WILL BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES AND WILL BE AVAILABLE FOR THE REVIEW BY THE BUILDING OFFICIAL. AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, "I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/OR INACCURATE INFORMATION, FAILING TO UPDATE THE LOCAL SWPPP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/OR ADEQUATELY IMPLEMENT THE LOCAL SWPPP MAY RESULT IN REVOCATION OF GRADING
AND/OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW."

SURENDER DEWAN, RCE 34559 _____ 5-22-24
NAME OF SIGNER SIGNATURE OF SIGNER DATE

I HAVE REVIEWED THE LOW IMPACT DEVELOPMENT (LID) STANDARDS MANUAL BY COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS, AND HAVE PROPOSED THE IMPLEMENTATION OF THE PERMANENT BEST MANAGEMENT PRACTICES (BMPS) APPLICABLE TO EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THE PROJECT'S STORM WATER RUNOFF. THE SELECTED BMPS WILL BE INSTALLED PER THE APPROVED PLANS AND AS RECOMMENDED BY THE PRODUCT MANUFACTURER AS APPLICABLE. AS THE ARCHITECT/ENGINEER OF RECORD, I HAVE SELECTED APPROPRIATE BMPS TO EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON
STORM WATER QUALITY. THE PROJECT OWNER AND CONTRACTOR ARE AWARE THAT THE SELECTED BMPS MUST BE INSTALLED, MONITORED, AND MAINTAINED TO ENSURE THEIR EFFECTIVENESS. THE BMPS NOT SELECTED FOR IMPLEMENTATION ARE REDUNDANT OR DEEMED NOT APPLICABLE TO THE PROPOSED CONSTRUCTION ACTIVITY."

SURENDER DEWAN, RCE 34559 _____ 5-22-24
NAME OF SIGNER SIGNATURE OF SIGNER DATE

SCOPE OF WORK

NEW PARK IN A SLOPED LOT. WORK INCLUDES CONCRETE FLATWORK, GATES, PERIMETER FENCING, ENTRY COLUMNS, PARK SIGN, SEATING AREAS, FITNESS EQUIPMENT, FOUR-SQUARE COURT, DRINKING FOUNTAIN, PEDESTRIAN LIGHTING, DECORATIVE BOULDERS, GRASS AREA, SHRUB PLANTING, TREES, AND IRRIGATION. THERE WILL BE MODERATE GRADING INCLUDING SOME RETAINING WALLS.

LEGAL DESCRIPTION

LOT 5 OF THE VALLEY VIEW HEIGHTS NO. 2 TRACT AS SHOWN IN MISCELLANEOUS RECORDS BOOK 87 PAGE 113, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CA

SURVEY INFORMATION

BASIS OF BEARINGS
THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W 1995.35 EPOCH.

BENCHMARK NOTE
BENCHMARK ELEV = 580.78'

SITE BENCHMARK
CITY OF SOUTH PASADENA BENCHMARK ON TOP OF CURB AT SR COR OF BERKSHIRE AVE AND VALLEY VIEW RD

Attachment No. 4

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning
Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323
e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:
REGISTERED PROFESSIONAL ENGINEER SURENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA
DMS
7/9/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:
REGISTERED LANDSCAPE ARCHITECT GARY M. VASQUEZ NO. 3993 SIGNATURE EXP. Feb. 2025 7/9/24 DATE STATE OF CALIFORNIA

811 DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA
ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions	By

Project :
BERKSHIRE AVENUE PARK

Owner:
City of South Pasadena

Project No :
Drawn By : PC / LP
Checked By : GV / ES
Date : SEPTEMBER, 2023
Scale : AS SHOWN
Drawing Title :

TITLE SHEET

Drawing No :
T.1
SHEET 1 OF 26

Form A - (Both Form A and Form, B Required)

ACCEPTANCE OF EMPLOYMENT BY CONSULTANTS

INSTRUCTIONS: This document must be completed and filed by the owner with the City together with an *Acknowledgment to Employ Consultants* form before the grading permit can be issued.

SITE ADDRESS: 2006 Berkshire Avenue			
ASSESSOR PARCEL NUMBER:			
BOOK: 5310	PAGE: 018	PARCEL: 901	
TRACT NUMBER/LEGAL DESCRIPTION: LOT 5 OF THE VALLEY VIEW HEIGHTS NO. 2 TRACT AS SHOW IN MISCELLANEOUS RECORDS BOOK 97 PAGE 110, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CA			
OWNER'S NAME: City of South Pasadena			
STREET ADDRESS: 1414 Mission Street			
CITY: South Pasadena	STATE: CA	ZIP CODE: 92030	
DAYTIME PHONE NUMBER: (626) 403-7200	EVENING PHONE NUMBER: (626) 403-7200		

The consultants identified in the adjacent column verify by signature(s) that they have been retained as consultant(s) and agree to notify the City within 48 hours if such employment is terminated. Each consultant/field engineer also agrees to complete the following forms, as appropriate: Foundation Excavation, Soil Compaction, Initial Engineering Geology, Final Engineering Geology, Rough Grading, and Finish Grading.

FIELD ENGINEER

FIELD ENGINEER'S NAME: Surender Dewan		LICENSE NUMBER: RCE 23559
STREET ADDRESS: 12371 Lewis St., #203		
CITY: Garden Grove	STATE: CA	ZIP CODE: 92840
DAYTIME PHONE NUMBER: (714) 740-8840	EVENING PHONE NUMBER: (714) 740-8840	
SIGNATURE:		

SOILS ENGINEER

SOIL ENGINEER'S NAME: Mohan B. Upasani		LICENSE NUMBER: 2301
FIRM NAME: Global Geo-Engineering, Inc.		
STREET ADDRESS: 3 Corporate Pk., # 270		
CITY: Irvine	STATE: CA	ZIP CODE: 92606
DAYTIME PHONE NUMBER: 949 221 0900 x101	EVENING PHONE NUMBER: Same	
SIGNATURE:		

ENGINEERING GEOLOGIST

ENGINEERING GEOLOGIST'S NAME:		LICENSE NUMBER:
FIRM NAME:		
STREET ADDRESS:		
CITY:	STATE:	ZIP CODE:
DAYTIME PHONE NUMBER:	EVENING PHONE NUMBER:	
SIGNATURE:		

Form B - (Both Form A and Form B Required)

ACKNOWLEDGMENT TO EMPLOY CONSULTANT

INSTRUCTIONS: This document must be completed and filed by the owner with the City, together with *an Acceptance of Employment by Consultants* form before the grading permit can be issued.

The owner of the property described below hereby acknowledges by signature that, as a condition of the grading permit and during all work authorized by said permit, registered civil engineer(s) will be retained to perform the duties of the Design Engineer and Field Engineer in accordance with the requirements of Appendix J of the current Building Code, and further, that a soil engineer and/or engineering geologist (when required) will be employed to make tests, investigations, and file the reports that may be required for compliance with said Code.

SITE ADDRESS: 2006 Berkshire Avenue			
ASSESSOR PARCEL NUMBER:			
BOOK: 5310	PAGE: 018	PARCEL: 901	
TRACT NUMBER/LEGAL DESCRIPTION: LOT 5 OF THE VALLEY VIEW HEIGHTS NO. 2 TRACT AS SHOW IN MISCELLANEOUS RECORDS BOOK 97 PAGE 110, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CA			
OWNER'S NAME: City of South Pasadena			
STREET ADDRESS: 1414 Mission Street			
CITY: South Pasadena	STATE: CA	ZIP CODE: 92030	
DAYTIME PHONE NUMBER: (626) 403-7200	EVENING PHONE NUMBER: (626) 403-7200		
OWNER'S SIGNATURE: Sheila Pautsch			

FIELD ENGINEER

FIELD ENGINEER'S NAME: Surender Dewan		LICENSE NUMBER: RCE 23559
FIRM NAME: DMS Consults, Inc.		
STREET ADDRESS: 12371 Lewis St., #203		
CITY: Garden Grove	STATE: CA	ZIP CODE: 92840
DAYTIME PHONE NUMBER: (714) 740-8840	EVENING PHONE NUMBER: (714) 740-8840	

SOILS ENGINEER

SOIL ENGINEER'S NAME: Mohan B. Upasani		LICENSE NUMBER: 2301
FIRM NAME: Global Geo-Engineering inc.		
STREET ADDRESS: 3 Corporate Pk., #270		
CITY: Irvine	STATE: CA	ZIP CODE: 92606
DAYTIME PHONE NUMBER: 949-221-0900 x101	EVENING PHONE NUMBER: Same as day	

ENGINEERING GEOLOGIST

ENGINEERING GEOLOGIST'S NAME:		LICENSE NUMBER:
FIRM NAME:		
STREET ADDRESS:		
CITY:	STATE:	ZIP CODE:
DAYTIME PHONE NUMBER:	EVENING PHONE NUMBER:	

V20200831

GENERAL GRADING NOTES

GENERAL

1. CALIFORNIA TITLE 24 COMPLIANCE. ALL WORK SHALL CONFORM TO ALL REQUIREMENTS OF STATE OF CALIFORNIA TITLE 24 REGARDLESS OF THE INFORMATION INDICATED ON THESE PLANS. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL SUPERVISING THE CONSTRUCTION TO ENSURE THAT THE WORK IS DONE IN ACCORDANCE WITH CODE REQUIREMENTS PRIOR TO REQUESTING INSPECTION.
2. BUILDING OFFICIAL'S AUTHORITY. THE ISSUANCE OF A PERMIT BASED OR APPROVAL OF PLANS BY THE BUILDING OFFICIAL SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ANY DISCOVERED ERRORS OR FROM PREVENTING ANY VIOLATION OF ANY CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR OTHER REGULATIONS.
3. WORKERS' COMPENSATION. AT TIME OF PERMIT ISSUANCE, CONTRACTOR SHALL SHOW THEIR VALID WORKERS' COMPENSATION INSURANCE CERTIFICATE.
4. SEPARATE PERMITS. SEPARATE APPROVAL AND PERMIT IS REQUIRED FROM THE CITY PUBLIC WORKS DEPARTMENT FOR ALL WORK LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY.
5. CONSTRUCTION FENCING. CONSTRUCTION FENCING SHALL BE MAINTAINED AROUND THE PERIMETER OF THE SITE AT ALL TIMES UNLESS THE CITY BUILDING DIVISION APPROVES THE USE OF 24 HOUR SECURITY PATROLS.
6. PERMITTED WORK. THE ISSUANCE OF THE GRADING PERMIT ASSOCIATED WITH THESE PLANS SHALL CONSTITUTE AN AUTHORIZATION TO DO ONLY THE WORK WHICH IS DESCRIBED ON THE PERMIT AND PLANS AS APPROVED BY THE BUILDING OFFICIAL.
7. NOTIFICATION TO ADJACENT PROPERTY OWNERS. OWNERS OF PROPERTY ADJACENT TO THE WORK SITE SHALL BE NOTIFIED OF ANY PROPOSED EXCAVATIONS IN ACCORDANCE WITH CALIFORNIA CIVIL CODE SECTION 832.
8. ADDITIONAL AUTHORITIES. PERMITS ISSUED UNDER THE PROVISIONS OF THE CURRENT BUILDING CODE SHALL NOT RELIEVE THE OWNER OF THE RESPONSIBILITY FOR SECURING PERMITS, APPROVALS, AND/OR LICENSES THAT MAY BE REQUIRED FROM OTHER AGENCY HAVING AUTHORITY TO REGULATE ANY PORTION OF THE WORK.
9. MODIFICATIONS. ANY MODIFICATIONS OF OR CHANGES TO THE APPROVED GRADING PLANS SHALL BE APPROVED BY THE CITY. OWNER ASSUMES ALL RISK FOR ANY CHANGED WORK PERFORMED PRIOR TO APPROVAL BY THE CITY.
10. ADDITIONAL REPORTS. IN ACCORDANCE WITH LOS ANGELES COUNTY BUILDING CODE SECTIONS 111, 113, J104.3, AND J106.2, THE BUILDING OFFICIAL MAY REQUIRE INVESTIGATIONS AND REPORTS BY AN APPROVED SOIL TESTING AGENCY, GEOTECHNICAL ENGINEER AND/OR ENGINEERING GEOLOGIST, AND FIELD ENGINEER. INSPECTION REPORTS SHALL BE PROVIDED WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL.
11. CHANGE OF OWNERSHIP. UNLESS OTHERWISE REQUIRED BY THE BUILDING OFFICIAL, WHEN A GRADING PERMIT HAS BEEN ISSUED ON A SITE AND THE OWNER SELLS THE PROPERTY PRIOR TO FINAL GRADING APPROVAL, THE NEW PROPERTY OWNER SHALL BE REQUIRED TO OBTAIN A NEW GRADING PERMIT.
12. DUST CONTROL. GRADING CONTRACTOR SHALL EXERCISE EXTRA CARE TO MINIMIZE THE EFFECTS FROM DISTURBED EARTH AND/OR DUST. DUST SHALL BE CONTROLLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AND APPLICABLE COUNTY AND STATE LAWS. AT A MINIMUM, CONTINUOUS WETTING SHALL BE PERFORMED WHILE ANY EARTHWORK IS BEING PERFORMED. IF THE WATER IS TO BE OBTAINED FROM THE LOCAL MUNICIPAL WATER SUPPLY SYSTEM, THE GRADING CONTRACTOR SHALL FIRST OBTAIN APPROVAL FROM THE APPROPRIATE WATER PROVIDER.

INSPECTION

1. OBLIGATION TO INSPECT. GRADING OPERATION FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY THE CITY IN ACCORDANCE WITH BUILDING CODE SECTIONS 108 AND J105. IN ADDITION, PROFESSIONAL INSPECTION OF GRADING OPERATIONS SHALL BE PERFORMED BY THE FIELD ENGINEER, GEOTECHNICAL ENGINEER AND THE ENGINEERING GEOLOGIST RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH THIS SECTION FOR ENGINEERED GRADING (DEFINED IN SECTION J104.2.3), AND AS REQUIRED BY THE BUILDING OFFICIAL FOR REGULAR GRADING (DEFINED IN SECTION J104.2.2).
2. SPECIAL INSPECTION. THE SPECIAL INSPECTION REQUIREMENTS OF BUILDING CODE SECTION 1704.7 SHALL APPLY TO WORK PERFORMED UNDER A GRADING PERMIT. IN ADDITION TO THE CALLED INSPECTIONS SPECIFIED IN SECTION J105.7, THE BUILDING OFFICIAL MAY MAKE SUCH OTHER INSPECTIONS AS MAY BE DEEMED NECESSARY TO DETERMINE THAT THE WORK IS BEING PERFORMED IN CONFORMANCE WITH THE REQUIREMENTS OF THIS CODE. THE BUILDING OFFICIAL MAY REQUIRE CONTINUOUS INSPECTION OF DRAINAGE DEVICES BY THE FIELD ENGINEER IN ACCORDANCE WITH THIS SECTION WHEN THE BUILDING OFFICIAL DETERMINES THAT THE DRAINAGE DEVICES ARE NECESSARY FOR THE PROTECTION OF EXISTING STRUCTURES AND/OR ADJACENT PROPERTY. IN ADDITION TO THE SPECIAL INSPECTION REQUIREMENTS OF 1704.7, SPECIAL INSPECTION SHALL BE PROVIDED FOR: A. DRIVEN DEEP FOUNDATIONS AND CONNECTION GRADE BEAMS IN ACCORDANCE WITH SECTION 1704.8; B. CAST-IN-PLACE DEEP FOUNDATIONS AND CONNECTION GRADE BEAMS IN ACCORDANCE WITH SECTION 1707.9.
3. FIELD ENGINEER. THE FIELD ENGINEER SHALL PROVIDE PROFESSIONAL INSPECTION OF THOSE PARTS OF THE GRADING PROJECT WITHIN SUCH ENGINEER'S AREA OF TECHNICAL SPECIALTY, OVERSEE AND COORDINATE ALL FIELD SURVEYS, GRADE STAKES, AND PROVIDE SITE INSPECTIONS DURING GRADING OPERATIONS TO ENSURE THE SITE IS GRADED IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND THE APPROPRIATE REQUIREMENTS OF THE CURRENT BUILDING CODE. DURING SITE GRADING, AND AT THE COMPLETION OF BOTH ROUGH GRADING AND FINAL GRADING, THE FIELD ENGINEER SHALL SUBMIT STATEMENTS AND REPORTS AS REQUIRED BY SECTIONS J105.11 AND J105.12. IF REVISED GRADING PLANS ARE REQUIRED DURING THE COURSE OF THE WORK, THEN THEY SHALL BE PREPARED BY A CIVIL ENGINEER AND APPROVED BY THE BUILDING OFFICIAL.
4. GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE PROFESSIONAL INSPECTION OF THOSE PARTS OF THE GRADING PROJECT WITHIN SUCH ENGINEER'S AREA OF TECHNICAL SPECIALTY, WHICH SHALL INCLUDE OBSERVATION DURING GRADING AND TESTING FOR REQUIRED COMPACTION. THE GEOTECHNICAL ENGINEER SHALL PROVIDE SUFFICIENT OBSERVATION DURING THE PREPARATION OF THE NATURAL GROUND AND PLACEMENT AND COMPACTION OF THE FILL TO VERIFY THAT SUCH WORK IS BEING PERFORMED IN ACCORDANCE WITH THE CONDITIONS OF THE APPROVED PLAN AND THE APPROPRIATE REQUIREMENTS OF CHAPTER J. IF CONDITIONS DIFFERING FROM THE APPROVED GEOTECHNICAL ENGINEERING AND ENGINEERING GEOLOGY REPORTS ARE ENCOUNTERED DURING GRADING, THE GEOTECHNICAL ENGINEER SHALL PROVIDE REVISED RECOMMENDATIONS TO THE PERMITTEE, THE BUILDING OFFICIAL AND THE FIELD ENGINEER.
5. ENGINEERING GEOLOGIST. THE ENGINEERING GEOLOGIST SHALL PROVIDE PROFESSIONAL INSPECTION OF THOSE PARTS OF THE GRADING PROJECT WITHIN SUCH ENGINEER' S AREA OF TECHNICAL SPECIALTY, WHICH SHALL INCLUDE PROFESSIONAL INSPECTION OF THE BEDROCK EXCAVATION TO DETERMINE IF CONDITIONS ENCOUNTERED ARE IN CONFORMANCE WITH THE APPROVED REPORT. IF CONDITIONS DIFFERING FROM THE APPROVED ENGINEERING GEOLOGY REPORT ARE ENCOUNTERED, THE ENGINEERING GEOLOGIST SHALL PROVIDE REVISED RECOMMENDATIONS TO THE GEOTECHNICAL ENGINEER.
6. SOILS ENGINEER OF RECORD. THE DUTIES OF THE SOILS ENGINEER OF RECORD SHALL INCLUDE THE FOLLOWING:
   a. OBSERVATION OF CLEARED AREAS AND BENCHES PREPARED TO RECEIVE FILL;
   b. OBSERVATION OF THE REMOVAL OF ALL UNSUITABLE SOILS AND OTHER MATERIALS;
   c. THE APPROVAL OF SOILS TO BE USED AS FILL MATERIAL;
   d. THE INSPECTION OF PLACEMENT AND COMPACTION OF FILL MATERIALS; AND
   e. THE TESTING OF ALL COMPLETED FILLS.
7. COMPACTION TESTING. COMPACTION TEST SHALL NOT BE PERFORMED BY INDIVIDUALS OTHER THAN THE SOILS ENGINEER OF RECORD UNLESS REQUESTED BY THE SOILS ENGINEER OF RECORD AND APPROVED BY THE CITY BUILDING DIVISION.
8. PERMITTEE. THE PERMITTEE SHALL BE RESPONSIBLE FOR ENSURING THAT THE GRADING IS PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE. THE PERMITTEE SHALL ENGAGE PROJECT CONSULTANTS, IF REQUIRED UNDER THE PROVISIONS OF THIS CODE, TO PROVIDE PROFESSIONAL INSPECTIONS ON A TIMELY BASIS. THE PERMITTEE SHALL ACT AS A COORDINATOR BETWEEN THE PROJECT CONSULTANTS, THE CONTRACTOR AND THE BUILDING OFFICIAL. IN THE EVENT OF CHANGED CONDITIONS, THE PERMITTEE SHALL BE RESPONSIBLE FOR INFORMING THE BUILDING OFFICIAL OF SUCH CHANGE AND SHALL PROVIDE REVISED PLANS FOR APPROVAL.
9. THE PERMITTEE SHALL CALL FOR AN INSPECTION BY THE BUILDING OFFICIAL AT THE FOLLOWING VARIOUS STAGES OF WORK AND SHALL OBTAIN THE APPROVAL OF THE BUILDING OFFICIAL PRIOR TO PROCEEDING TO THE NEXT STAGE OF WORK:
   a. PRE-GRADE. BEFORE ANY CONSTRUCTION OR GRADING ACTIVITIES OCCUR AT THE SITE. PERMITTEE SHALL SCHEDULE A PREGRADE INSPECTION WITH THE BUILDING OFFICIAL. THE PERMITTEE SHALL ENSURE THAT ALL PROJECT CONSULTANTS ARE PRESENT AT THE PRE-GRADE INSPECTION.
   b. INITIAL. WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNAPPROVED FILL AND HAS BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL. NO FILL SHALL HAVE BEEN PLACED PRIOR TO THIS INSPECTION.
   c. ROUGH. WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED, DRAINAGE TERRACES, SWALES AND OTHER DRAINAGE DEVICES NECESSARY FOR THE PROTECTION OF THE BUILDING SITES FROM FLOODING HAVE BEEN INSTALLED, BERMS HAVE BEEN INSTALLED AT THE TOP OF THE SLOPES, AND THE STATEMENTS REQUIRED BY SECTION 1105.12 HAVE BEEN RECEIVED.
   d. FINAL. WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES NECESSARY TO DRAIN THE BUILDING PAD HAVE BEEN INSTALLED, SLOPE PLANTING HAS BEEN ESTABLISHED, IRRIGATION SYSTEMS HAVE BEEN INSTALLED, AND THE AS-BUILT PLANS AND REQUIRED STATEMENTS AND REPORTS HAVE BEEN SUBMITTED.
10. ROUTINE FIELD INSPECTIONS AND REPORTS. UNLESS OTHERWISE DIRECTED BY THE BUILDING OFFICIAL, THE FIELD ENGINEER FOR ALL ENGINEERED GRADING PROJECTS SHALL PREPARE ROUTINE INSPECTION REPORTS AND SHALL FILE THESE REPORTS WITH THE BUILDING OFFICIAL AS FOLLOWS:
   a. BI-WEEKLY DURING ALL TIMES WHEN GRADING OF 400 CUBIC YARDS OR MORE PER WEEK IS OCCURRING ON THE SITE;
   b. MONTHLY, AT ALL OTHER TIMES; AND
   c. AT ANY TIME WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL.

SUCH REPORTS SHALL CERTIFY TO THE BUILDING OFFICIAL THAT THE FIELD ENGINEER HAS INSPECTED THE GRADING SITE AND RELATED ACTIVITIES AND HAS FOUND THEM IN COMPLIANCE WITH THE APPROVED GRADING PLANS AND SPECIFICATIONS, THE BUILDING CODE, ALL GRADING PERMIT CONDITIONS, AND ALL OTHER APPLICABLE ORDINANCES AND REQUIREMENTS. THE REPORTS SHALL CONFORM TO A STANDARD "REPORT OF GRADING ACTIVITIES" FORM WHICH SHALL BE PROVIDED BY THE BUILDING OFFICIAL.

11. ROUGH AND FINAL GRADING CERTIFICATIONS. CONSULTANT CERTIFICATIONS AND/OR CONTRACTOR CERTIFICATIONS SHALL BE DELIVERED TO THE CITY ON FORMS PROVIDED BY THE CITY BASED ON THE ACTUAL PROJECT WORK. NO RELEASE OF ANY GRADING SECURITY WILL BE GIVEN UNTIL REQUIRED ROUGH GRADING CERTIFICATIONS HAVE BEEN PROVIDED TO AND APPROVED BY THE BUILDING DIVISION.
12. NOTIFICATION OF NONCOMPLIANCE. IF, IN THE COURSE OF FULFILLING THEIR RESPECTIVE DUTIES UNDER THIS CHAPTER, THE FIELD ENGINEER, THE GEOTECHNICAL ENGINEER OR THE ENGINEERING GEOLOGIST DETERMINES THAT THE WORK IS NOT BEING DONE IN CONFORMANCE WITH THIS CHAPTER OR THE APPROVED GRADING PLANS, THE FIELD ENGINEER, GEOTECHNICAL ENGINEER OR THE ENGINEERING GEOLOGIST SHALL IMMEDIATELY REPORT, IN WRITING, THE DISCREPANCIES AND THE RECOMMENDED CORRECTIVE MEASURES TO THE PERMITTEE AND TO THE BUILDING OFFICIAL.
13. TRANSFER OF RESPONSIBILITY. IF THE FIELD ENGINEER, THE GEOTECHNICAL ENGINEER, OR THE ENGINEERING GEOLOGIST OF RECORD IS CHANGED AT ANY TIME AFTER THE GRADING PLANS REQUIRED PURSUANT TO SECTION J104.2.2 OR J104.2.3 HAVE BEEN APPROVED BY THE BUILDING OFFICIAL, THE PERMITTEE SHALL IMMEDIATELY PROVIDE WRITTEN NOTICE OF SUCH CHANGE TO THE BUILDING OFFICIAL. THE BUILDING OFFICIAL MAY STOP THE GRADING FROM COMMENCING OR CONTINUING UNTIL THE PERMITTEE HAS IDENTIFIED A REPLACEMENT AND THE REPLACEMENT HAS AGREED IN WRITING TO ASSUME RESPONSIBILITY FOR THOSE PARTS OF THE GRADING PROJECT THAT ARE WITHIN THE REPLACEMENT'S AREA OF TECHNICAL COMPETENCE.

COMPLETION OF WORK

1. UPON COMPLETION OF THE ROUGH GRADING WORK AND AT THE FINAL COMPLETION OF THE WORK, THE FOLLOWING REPORTS AND DRAWINGS AND SUPPLEMENTS THERETO ARE REQUIRED FOR ENGINEERED GRADING OR WHEN PROFESSIONAL INSPECTION IS OTHERWISE REQUIRED BY THE BUILDING OFFICIAL:
   a. AN "AS-BUILT" GRADING PLAN PREPARED BY THE FIELD ENGINEER RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH SECTION J105.3 SHOWING ALL PLAN REVISIONS AS APPROVED BY THE BUILDING OFFICIAL. THIS SHALL INCLUDE ORIGINAL GROUND SURFACE ELEVATIONS, AS-BUILT GROUND SURFACE ELEVATIONS, LOT DRAINAGE PATTERNS, AND THE LOCATIONS AND ELEVATIONS OF SURFACE DRAINAGE FACILITIES AND THE OUTLETS OF SUBSURFACE DRAINS. AS-BUILT LOCATIONS, ELEVATIONS AND DETAILS OF SUBSURFACE DRAINS SHALL BE SHOWN AS REPORTED BY THE GEOTECHNICAL ENGINEER.

   THE AS-BUILT GRADING PLAN SHALL BE ACCOMPANIED BY A CERTIFICATION BY THE FIELD ENGINEER THAT TO THE BEST OF HIS OR HER KNOWLEDGE, THE WORK WITHIN THE FIELD ENGINEER'S AREA OF RESPONSIBILITY WAS DONE IN ACCORDANCE WITH THE FINAL APPROVED GRADING PLAN.
   b. A REPORT PREPARED BY THE GEOTECHNICAL ENGINEER RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH SECTION J105.4, INCLUDING LOCATIONS AND ELEVATIONS OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY TESTS, OTHER SUBSTANTIATING DATA, AND COMMENTS ON ANY CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE APPROVED SOILS ENGINEERING INVESTIGATION REPORT.

   THE REPORT SHALL INCLUDE A CERTIFICATION BY THE GEOTECHNICAL ENGINEER THAT, TO THE BEST OF HIS OR HER KNOWLEDGE, THE WORK WITHIN THE GEOTECHNICAL ENGINEER'S AREA OF RESPONSIBILITY IS IN ACCORDANCE WITH THE APPROVED SOILS ENGINEERING REPORT AND APPLICABLE PROVISIONS OF THIS CHAPTER. THE REPORT SHALL CONTAIN A FINDING REGARDING THE SAFETY OF THE COMPLETED GRADING AND ANY PROPOSED STRUCTURES AGAINST HAZARD FROM LANDSLIDE, SETTLEMENT OR SLIPPAGE.
   c. A REPORT PREPARED BY THE ENGINEERING GEOLOGIST RETAINED TO PROVIDE SUCH SERVICES IN ACCORDANCE WITH SECTION J105.5, INCLUDING A FINAL DESCRIPTION OF THE GEOLOGY OF THE SITE AND ANY NEW INFORMATION DISCLOSED DURING THE GRADING AND THE EFFECT OF SUCH NEW INFORMATION, IF ANY, ON THE RECOMMENDATIONS INCORPORATED IN THE APPROVED GRADING PLAN.

   THE REPORT SHALL CONTAIN A CERTIFICATION BY THE ENGINEERING GEOLOGIST THAT, TO THE BEST OF HIS OR HER KNOWLEDGE, THE WORK WITHIN THE ENGINEERING GEOLOGIST'S AREA OF RESPONSIBILITY IS IN ACCORDANCE WITH THE APPROVED ENGINEERING GEOLOGY REPORT AND APPLICABLE PROVISIONS OF THIS CHAPTER. THE REPORT SHALL CONTAIN A FINDING REGARDING THE SAFETY OF THE COMPLETED GRADING AND ANY PROPOSED STRUCTURES AGAINST HAZARD FROM LANDSLIDE, SETTLEMENT, OR SLIPPAGE. THE REPORT SHALL CONTAIN A FINAL AS-BUILT GEOLOGIC MAP AND CROSS-SECTIONS DEPICTING ALL THE INFORMATION COLLECTED PRIOR TO AND DURING GRADING.
   d. THE GRADING CONTRACTOR SHALL CERTIFY, ON A FORM PRESCRIBED BY THE BUILDING OFFICIAL, THAT THE GRADING CONFORMS TO SAID AS-BUILT PLAN AND THE APPROVED SPECIFICATIONS.
2. NOTIFICATION OF COMPLETION. THE PERMITTEE SHALL NOTIFY THE BUILDING OFFICIAL WHEN THE GRADING OPERATION IS READY FOR FINAL INSPECTION. FINAL APPROVAL SHALL NOT BE GIVEN UNTIL ALL WORK, INCLUDING INSTALLATION OF ALL DRAINAGE FACILITIES AND THEIR PROTECTIVE DEVICES, AND ALL EROSION-CONTROL MEASURES HAVE BEEN COMPLETED IN ACCORDANCE WITH THE FINAL APPROVED GRADING PLAN, AND ALL REQUIRED REPORTS HAVE BEEN SUBMITTED AND APPROVED.

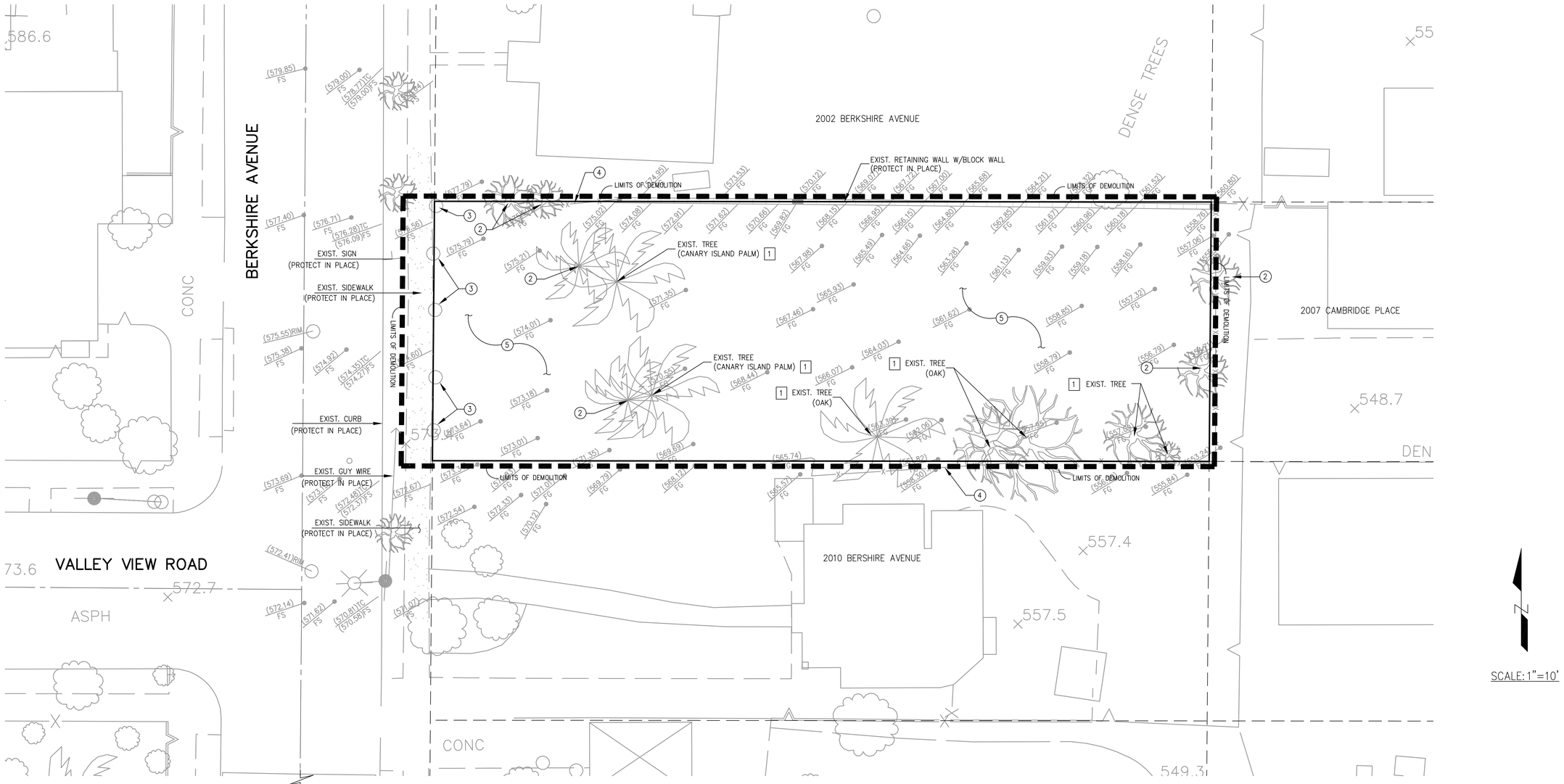
EARTHWORK SHORING

1. THE PERMITTEE SHALL BE SOLELY RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY AND NO PERSON SHALL EXCAVATE ON LAND SUFFICIENTLY CLOSE TO THE PROPERTY LINE TO ENDANGER AN ADJOINING PUBLIC STREET, SIDEWALK, ALLEY, OR OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, CRACKING OR OTHER DAMAGE WHICH COULD RESULT.
2. SHORING SUPPORTING ADJACENT CITY OR OTHER PUBLICLY OWNED PROPERTY, OR SUPPORTING ANY PUBLIC UTILITY SHALL BE SPECIFICALLY APPROVED BY THAT AGENCY PRIOR TO IMPLEMENTATION. IN THE CASE OF PROPERTY OWNED BY THE CITY, SPECIFIC APPROVAL OF ANY PROPOSED SHORING METHOD SHALL BE OBTAINED FROM THE PUBLIC WORKS DEPARTMENT.
3. DESIGN OF SHORING SUPPORTING PRIVATE PROPERTY IS THE SOLE RESPONSIBILITY OF THE PERMITTEE.
4. ALL SHORING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT AND GENERALLY ACCEPTED ENGINEERING PRACTICES.

TEMPORARY EARTH AND STORMWATER PROTECTIVE MEASURES

1. NPDES COMPLIANCE. IN COMPLIANCE WITH THE COUNTY OF LOS ANGELES NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) - CONSTRUCTION GENERAL PERMIT, TITLE 12.80 -ENVIRONMENTAL PROTECTION CODE, AND THE LOS ANGELES COUNTY BUILDING CODE, ALL CONSTRUCTION SITES ARE REQUIRED TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPS) TO CONTROL EROSION, DEBRIS, AND CONSTRUCTION-RELATED POLLUTANTS.
2. LACO BMP REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES ("BMPS") APPLY TO ALL PERMITS AND REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING THAT MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES REGARDLESS OF ALL SIZE:
   a. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
   b. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
   c. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
   d. NON-STORMWATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.
   e. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
   f. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
   g. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
   h. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
   i. MAINTENANCE OF PROTECTIVE MEASURES. THE OWNER OR ANY PERSON OR AGENT IN CONTROL OF THIS PROPERTY SHALL MAINTAIN IN GOOD CONDITION AND REPAIR ALL DRAINAGE STRUCTURES AND TEMPORARY EARTH, POLLUTANT AND STORMWATER PROTECTIVE MEASURES INCLUDING RODENT CONTROL AS SHOWN ON THE APPROVED GRADING PLANS. ALL MEASURES SHALL BE MAINTAINED TO THE SATISFACTION OF THE CITY UNTIL FINAL GRADING APPROVAL HAS BEEN GRANTED BY THE BUILDING OFFICIAL AND ALL PERMANENT DRAINAGE AND EROSION CONTROL SYSTEMS, IF REQUIRED, ARE IN PLACE. ALL STRUCTURAL BEST

   MANAGEMENT PRACTICES ("BMPS") SHALL BE ACCESSIBLE FOR INSPECTION AND MAINTENANCE
3. INSTALLATION. THE PERMITTEE SHALL PUT INTO EFFECT AND MAINTAIN ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT ADJACENT WATER COURSES AND PUBLIC OR PRIVATE PROPERTY FROM DAMAGE BY EROSION, FLOODING AND DEPOSITION OF MUD OR DEBRIS ORIGINATING FROM THE PREMISES DESCRIBED ON THESE PLANS PRIOR TO THE START OF ANY GRADING OPERATIONS.
4. PHASED OPERATIONS. AS GRADING OPERATIONS PROGRESS, ALL PROTECTIVE MEASURES SHALL BE UPDATED AS NECESSARY TO PREVENT EROSION AND TO CONTROL CONSTRUCTION RELATED POLLUTANTS FROM DISCHARGING FROM THE SITE. ALL BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED IN GOOD WORKING ORDER TO THE SATISFACTION OF THE BUILDING OFFICIAL. FAILURE TO COMPLY WITH THIS SECTION IS SUBJECT TO "NONCOMPLIANCE PENALTIES" PURSUANT TO SECTION J 11 0.8.5. PAYMENT OF A PENALTY SHALL NOT RELIEVE ANY PERSONS FROM FULLY COMPLYING WITH THE REQUIREMENTS OF THIS CODE IN THE EXECUTION OF THE WORK.
5. FAILURE TO PROVIDE EITHER SWPPP OR WWECP. SHOULD THE OWNER FAIL TO SUBMIT THE SWPPP OR THE WWECP AS REQUIRED BY SECTION J110.8 OR FAILS TO INSTALL ALL REQUIRED PROTECTIVE MEASURES, IT SHALL BE DEEMED THAT A DEFAULT HAS OCCURRED UNDER THE CONDITIONS OF THE GRADING PERMIT SECURITY. THE BUILDING OFFICIAL MAY THEREAFTER ENTER THE PROPERTY FOR THE PURPOSE OF INSTALLING, BY CITY FORCES OR BY OTHER MEANS, THE DRAINAGE, EROSION CONTROL AND OTHER DEVICES OR PROTECTIVE MEASURES SHOWN ON THE APPROVED PLANS, OR IF THERE ARE NO APPROVED PLANS, AS THE BUILDING OFFICIAL MAY DEEM NECESSARY TO PROTECT ADJOINING PROPERTY FROM THE EFFECTS OF EROSION, FLOODING OR THE DEPOSITION OF MUD, DEBRIS OR CONSTRUCTED RELATED POLLUTANTS.
7. FINES. THE BUILDING OFFICIAL SH



DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	LIMITS OF DEMOITION REMOVE AND DISPOSE OF ALL EXISTING BUILDINGS, STRUCTURES, TURF AND SITE DEBRIS, UNLESS OTHERWISE NOTED.

ITEMS TO PROTECT IN PLACE, ADJUST OR REMOVE AND RELOCATE

1 EXISTING TREE

DEMOLITION

REMOVE AND DISPOSE OF THE FOLLOWING ITEMS:

1. CONCRETE FLATWORK/WALKWAYS/CONC. SWALES/MOW CURBS
2. EXISTING TREE
3. EXISTING BOLLARD, INCLUDING FOOTING
4. EXISTING CHAINLINK FENCE
5. UNDERSTORY VEGETATION, UNLESS OTHERWISE NOTED

NOTE:
CONTRACTOR TO PROTECT IN PLACE AND INFORM CITY'S CONTRACT ADMINISTRATOR OF ANY UTILITY BOXES/METERS LOCATED IN FIELD PRIOR/DURING DEMOLITION TO DETERMINE ITS DISPOSITION.

LEGAL DESCRIPTION:

LOT 5 OF THE VALLEY VIEW HEIGHTS NO. 2 TRACT AS SHOWN IN MISCELLANEOUS RECORDS BOOK 87 PAGE 113, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CALIFORNIA.

BENCHMARK:

BENCHMARK ELEV = 580.78'

CITY OF SOUTH PASADENA BENCHMARK ON TOP OF CURB AT SR COR OF BERKSHIRE AVE AND VALLEY VIEW RD

BASIS OF BEARINGS:

THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W, 1991.35 EPOCH.

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
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www.dvolzdesign.com

Subconsultant:

DMS CONSULTANTS, INC.
CIVIL ENGINEERS
12371 Lewis St. #203 Garden Grove CA. 92840 P. 714-740-8842 F. 714-740-8842

UNDER THE SUPERVISION OF

SURRENDER M. DEMIAN RCE 34559 05/31/23 EXP. 9/30/23

Seal:

REGISTERED PROFESSIONAL ENGINEER
SURRENDER M. DEMIAN
NO. 34559
Exp. 9/30/23
CIVIL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions:

No.	Date	Revisions	By

BUILDING AND SAFETY APPROVED
REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED. DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.
7/17/2024, 3:15:29 PM
SP-B54560

Project :

Berkshire Avenue Park

2006 Berkshire Avenue
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :	
Drawn By :	GV/DT
Checked By :	ES
Date :	September 14, 2022
Scale :	AS SHOWN

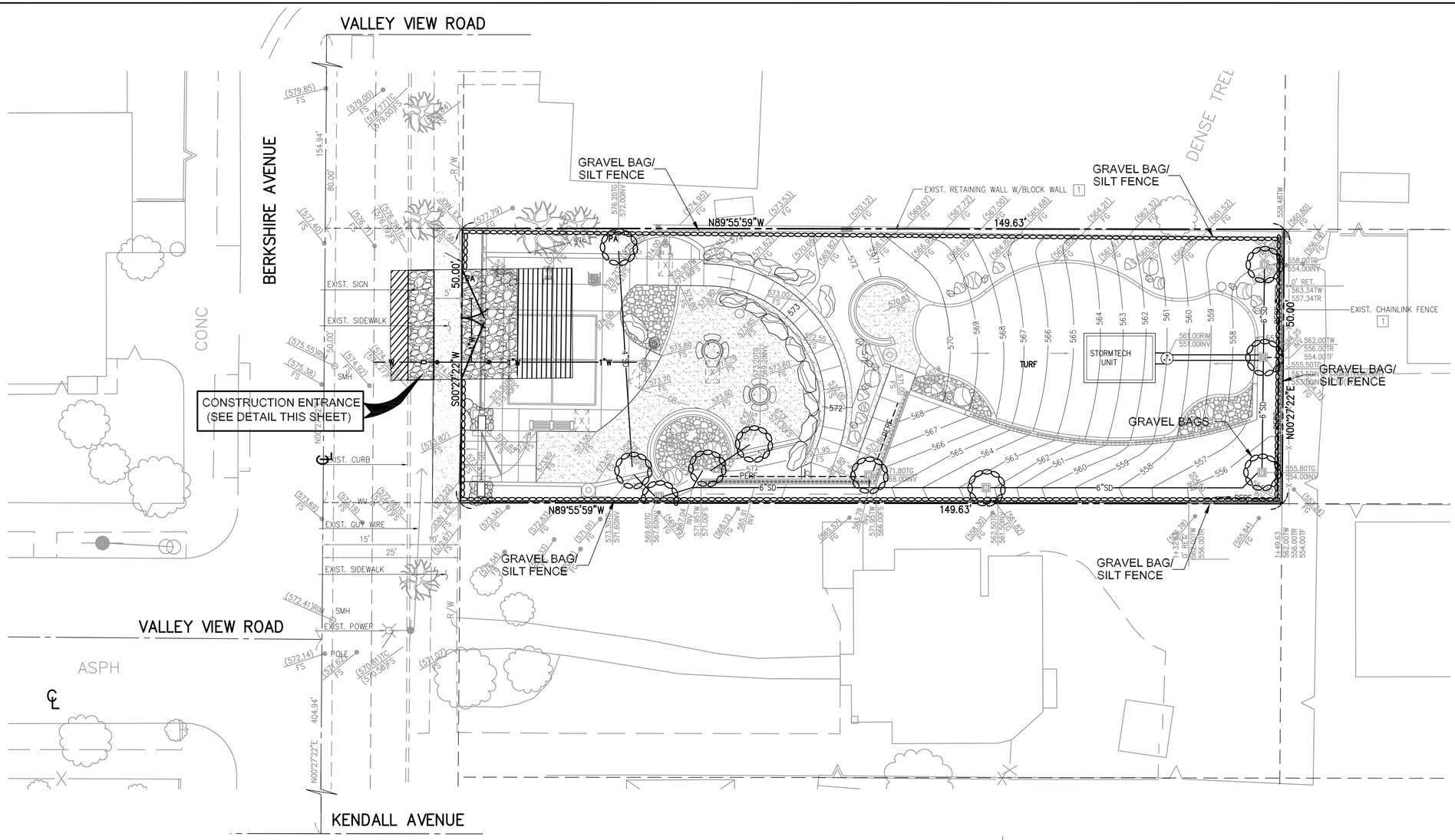
Drawing Title :

DEMOLITION PLAN

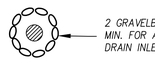
Drawing No :

D.1

SHEET 3 OF 25



SCALE: 1"=10'



2 GRAVELBAG HIGH MIN. FOR ALL STORM DRAIN INLETS

GRAVELBAG AT STORM DRAIN INLET DETAIL
NTS

EROSION CONTROL NOTES

A) IN CASE OF EMERGENCY CALL SOUTH PASADENA POLICE DISPATCH AT (626) 403-7270

B) THE UNDERSIGNED CIVIL ENGINEER WILL REVIEW EROSION CONTROL WORK AND CERTIFY THAT WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.

MR SURENDER DEWAN RCE 34559 02/02/24 DATE

C) A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. (OCTOBER 15-APRIL 15) NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN RAIN IS IMMINENT.

D) DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY INSPECTOR.

E) ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY

F) AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING BASINS AND THE BASINS PUMPED DRY. A GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING A RAINSTORM SHALL ALSO BE IMMEDIATELY REPAIRED.

G) FILL SLOPES AT THE TRACT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.

H) A GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN ANY DEVICES EXCEED TWO FEET.

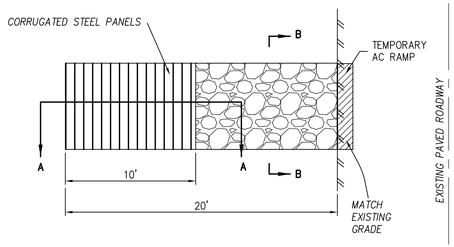
I) PLACEMENT OF DEVICES TO REDUCE EROSION DAMAGE WITHIN THE TRACT MUST BE SHOWN ON THE PLAN.

J) THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.

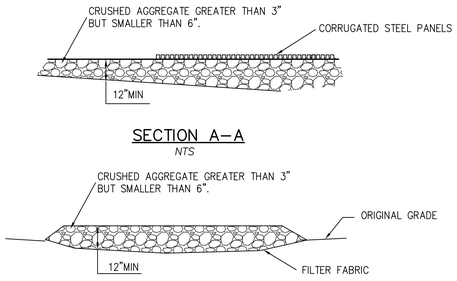
K) ALL LOOSE SOIL AND DEBRIS WHICH MAY CREATE A POTENTIAL HAZARD TO OFFSITE PROPERTY SHALL BE REMOVED FROM THE SITE AS DIRECTED BY THE INSPECTOR.

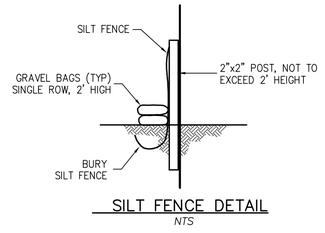
L) THE UNDERSIGNED CIVIL ENGINEER ACCEPTS RESPONSIBILITY FOR PROFESSIONAL INSPECTION

MR SURENDER DEWAN RCE 34559 02/02/24 DATE

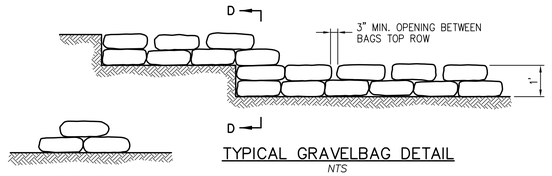


STABILIZED CONSTRUCTION ENTRANCE DETAIL
NTS

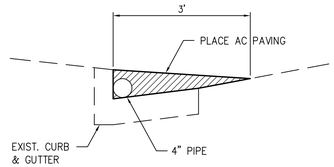




SILT FENCE DETAIL
NTS



TYPICAL GRAVELBAG DETAIL
NTS



TEMPORARY AC RAMP
NTS

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

DMS CONSULTANTS, INC.
CIVIL ENGINEERS
12371 Lewis St. #203 Garden Grove CA, 92840 P. 714-740-8862 F. 714-740-8862

UNDER THE SUPERVISION OF
SURENDER M. DEWAN RCE 34559 02/02/24 EXP. 9/30/25

Seal:
REGISTERED PROFESSIONAL ENGINEER SURENDER M. DEWAN NO. 34559 Exp.9/30/25 CIVIL STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES BEFORE COMMENCING WORK AND MAY BE HELD RESPONSIBLE FOR THE PROTECTION OF SUCH FACILITIES AND FOR ANY DAMAGE SUCH FACILITIES SUFFER, WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133

Revisions

~~BUILDING AND SAFETY APPROVED~~
~~REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.~~
~~VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED. DESPITE CONTENTS OF THESE PLANS, ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.~~
~~DATE~~
7/17/2024, 3:15:29 PM
SP-B54560

Project :
Berkshire Avenue Park
2006 Berkshire Avenue
South Pasadena, CA 91030
Owner:
South Pasadena

Project No :	
Drawn By :	GV/DT
Checked By :	ES
Date :	September 14, 2022
Scale :	AS SHOWN

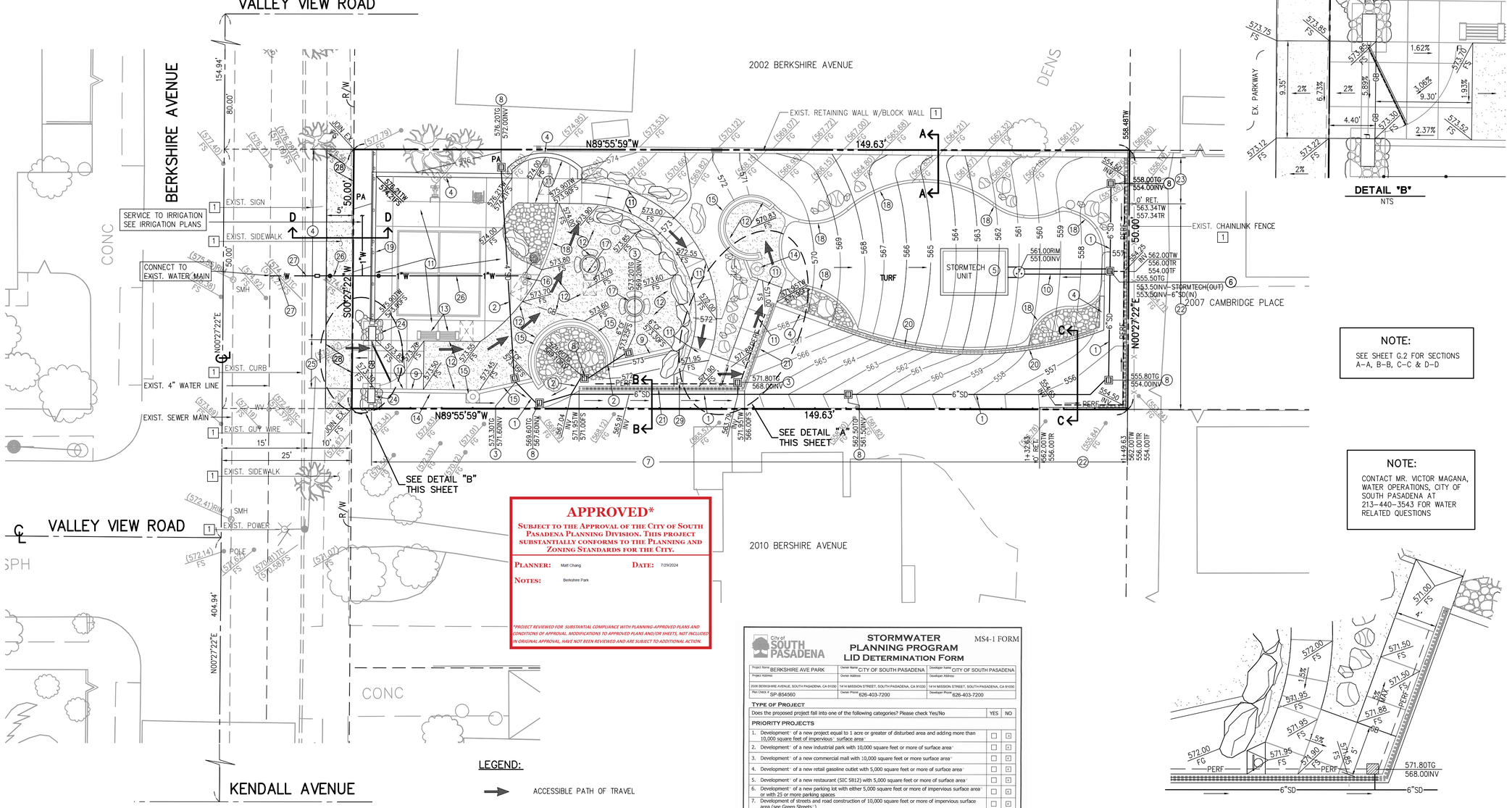
Drawing Title :

EROSION CONTROL PLAN

Drawing No :

EC.1

SHEET OF



APPROVED*

SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PASADENA PLANNING DIVISION. THIS PROJECT SUBSTANTIALLY CONFORMS TO THE PLANNING AND ZONING STANDARDS FOR THE CITY.

PLANNER: Matt Chang DATE: 7/29/2024

NOTES: Berkshire Park

*PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING-APPROVED PLANS AND CONDITIONS OF APPROVAL. MODIFICATIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.

LEGEND:

ACCESSIBLE PATH OF TRAVEL

NOTE:
SEE SHEET G.2 FOR SECTIONS A–A, B–B, C–C & D–D

NOTE:
CONTACT MR. VICTOR MAGANA, WATER OPERATIONS, CITY OF SOUTH PASADENA AT 213–440–3543 FOR WATER RELATED QUESTIONS

CONSTRUCTION NOTES

1. CONSTRUCT 6"ø PVC (SDR35) DRAIN PIPE
2. CONSTRUCT 4"ø PVC (SDR35) DRAIN PIPE
3. CONSTRUCT DRAIN INLET PER DETAIL ON SHEET G.2
4. CONSTRUCT WALL "A". REFER TO DETAIL 10, SHEET CD.1.
5. INSTALL MC–3500 STORMTECH SYSTEM WITH 24" NYLOPLAST MANHOLE AND ISOLATOR ROW FOR MAINTENANCE, SIZE AND SPECIFICATIONS PER TABLE AND DETAIL ON SHEET G.2
6. CONSTRUCT OVERFLOW DRAIN INLET STRUCTURE PER DETAIL ON SHEET G.2
7. CONSTRUCT WOOD FENCE. REFER TO DETAIL 1, SHEET CD.3.
8. CONSTRUCT NDS 900 SQUARE POLYPROPYLENE CATCH BASIN WITH 9" ATRIUM SQUARE GRATE PER DETAIL ON SHEET G.2
9. CONSTRUCT 6" CONC. CURB PER DETAIL 5, SHEET CD.1.
10. CONSTRUCT 12"ø PVC (SDR35) DRAIN PIPE.
11. CONSTRUCT 4" THICK CONCRETE FLATWORK. REFER TO DETAIL 1, SHEET CD.1.
12. INSTALL 3" THICK DECOMPOSED GRANITE W/STABILIZER. REFER TO DETAIL 3, SHEET CD.2.
13. INSTALL PARK BENCH, REFER TO CONSTRUCTION PLAN, SHEET LC.1.
14. INSTALL WASTE & RECYCLE CONTAINER. REFER TO CONSTRUCTION PLAN, SHEET LC.1.
15. CONSTRUCT WALL "C" (CONCRETE PLANTER WALL). REFER TO DETAIL 5, SHEET CD.2.
16. INSTALL DRINKING FOUNTAIN. REFER TO CONSTRUCTION PLAN, SHEET LC.1.
17. INSTALL TABLE PER MANUFACTURER'S SPECIFICATIONS.
18. CONSTRUCT 6" WIDE CONCRETE HEADER. REFER TO DETAIL 4, SHEET CD.1.
19. CONSTRUCT WALL "B" W/POST AND RAIL BARRIER. REFER TO DETAIL 8, SHEET CD.1.
20. CONSTRUCT SEAT WALL "F". REFER TO DETAIL 2, SHET CD.3.
21. CONSTRUCT RETAINING WALL W/POST AND RAIL BARRIER PER DETAIL ON SHEET G.3
22. CONSTRUCT RETAINING WALL W/6' HIGH BLOCK WALL PER DETAIL ON SHEET G.3
23. CONSTRUCT 6' HIGH BLOCK WALL PER DETAIL ON SHEET G.3
24. INSTALL ENTRY COLUMN. REFER TO DETAIL 4, SHEET CD.2.
25. INSTALL DOUBLE GATE. REFER TO DETAIL 4, SHEET CD.2.
26. INSTALL 1" COPPER WATER SERVICE TO DRINKING FOUNTAIN W/SHUT–OFF VALVE.
27. INSTALL 1–1/2" WATER SERVICE WITH A BACKFLOW PREVENTER DEVICE IN CAGE ENCLOSURE, WATER METER AND GATE VALVE PER CITY OF SOUTH PASADENA WATER DEPARTMENT STANDARDS.
28. REMOVE AND RECONSTRUCT EXISTING SIDEWALK PER APWA STD. PLAN 113–2.
29. INSTALL DOG WASTE STATION PER CONSTRUCTION PLAN.

City of SOUTH PASADENA

STORMWATER PLANNING PROGRAM LID DETERMINATION FORM MS4-1 FORM

Project Name: BERKSHIRE AVE PARK	Owner Name: CITY OF SOUTH PASADENA	Developer Name: CITY OF SOUTH PASADENA
Project Address: 2006 BERKSHIRE AVENUE, SOUTH PASADENA, CA 91030	Owner Address: 1414 MISSION STREET, SOUTH PASADENA, CA 91030	Developer Address: 1414 MISSION STREET, SOUTH PASADENA, CA 91030
Plan Check #: SP-B54560	Owner Phone: 626-403-7200	Developer Phone: 626-403-7200

TYPE OF PROJECT

Does the proposed project fall into one of the following categories? Please check Yes/No	YES	NO
PRIORITY PROJECTS		
1. Development[1] of a new project equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious[1] surface area[1]	☐	☒
2. Development[1] of a new industrial park with 10,000 square feet or more of surface area[1]	☐	☒
3. Development[1] of a new commercial mall with 10,000 square feet or more surface area[1]	☐	☒
4. Development[1] of a new retail gasoline outlet with 5,000 square feet or more of surface area[1]	☐	☒
5. Development[1] of a new restaurant (SIC 5812) with 5,000 square feet or more of surface area[1]	☐	☒
6. Development[1] of a new parking lot with either 5,000 square feet or more of impervious surface area[1] or with 25 or more parking spaces	☐	☒
7. Development of streets and road construction of 10,000 square feet or more of impervious surface area (see Green Streets[1])	☐	☒
8. Development[1] of a new automotive service facility (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) with 5,000 square feet or more of surface area[1]	☐	☒
9. Projects located in or directly adjacent to, or discharging directly to a Significant Ecological Area (SEA)[1], where the development will: a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and b. Create 2,500 square feet or more of impervious surface area[1]	☐	☒
10. Single-family hillside homes	☐	☒
11. Development of any project of 2,500 square feet or more in disturbed area where any portion of the disturbed area includes either or both an existing earth (native or otherwise) surface or a man-made surface (whether impervious or not) with an existing slope that is equal to or greater than 25% when calculated in accordance with the methods prescribed by the current Zoning Code.	☐	☒
12. Redevelopment[1] of 5,000 square feet or more of impervious surface area[1] in one of the categories listed above	☐	☒
13. Redevelopment[1] of 10,000 square feet or more of impervious surface area[1] to a Single-Family Home, without a change in land use.	☐	☒

If any of the boxes 1-10 are checked YES, this project will require the preparation of a Low Impact Development (LID)[1] Plan with a Maintenance Agreement[1]

[1] Defined on back.

SURENDER DEWAN — Applicant Name
PRESIDENT — Applicant Title
SURENDER DEWAN — Applicant Signature (Digitally signed by SURENDER DEWAN, Date: 2023.05.30 10:31:06 -07'00')
05/30/2023 — Date

V202005

LID DETERMINATION FORM

TOTAL DISTURBED AREA : 7,482 SF

BENCHMARK:

BENCHMARK ELEV = 580.78'

CITY OF SOUTH PASADENA BENCHMARK ON TOP OF CURB AT SR COR OF BERKSHIRE AVE AND VALLEY VIEW RD

BASIS OF BEARINGS:

THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W, 1991.35 EPOCH.

LEGAL DESCRIPTION:

LOT 5 OF THE VALLEY VIEW HEIGHTS NO. 2 TRACT AS SHOWN IN MISCELLANEOUS RECORDS BOOK 87 PAGE 113, LOS ANGELES COUNTY, IN THE CITY OF SOUTH PASADENA, CALIFORNIA.

EARTHWORK QUANTITY

CUT – 31 CY
FILL – 555 CY
IMPORT – 524 CY

PRE–DEVELOPMENT

PERVIOUS AREA: 7,407 SF

IMPERVIOUS AREA: 75 SF

POST–DEVELOPMENT

PERVIOUS AREA: 6,162 SF

IMPERVIOUS AREA: 1,320 SF

SCALE: 1"=10'

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

DMS CONSULTANTS, INC.
CIVIL ENGINEERS
12371 Lewis St. #203 Garden Grove CA. 92840 P. 714-740-8862 F. 714-740-8863

UNDER THE SUPERVISION OF

SURENDER M. DEWAN — RCE 34559 — 02/06/2024 — EXP. 9/30/25

Seal:

REGISTERED PROFESSIONAL ENGINEER — SURENDER M. DEWAN — NO. 34559 — Exp.9/30/25 — CIVIL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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7/17/2024, 3:15:29 PM
SP-B54560

Project :

Berkshire Avenue Park

2006 Berkshire Avenue
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :	
Drawn By :	GV/DT
Checked By :	ES
Date :	September 14, 2022
Scale :	AS SHOWN

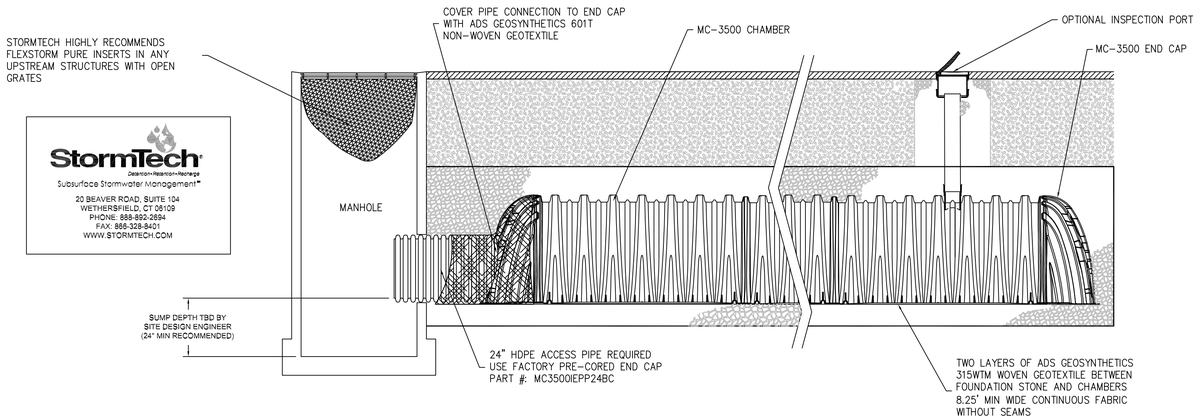
Drawing Title :

GRADING PLAN

Drawing No :

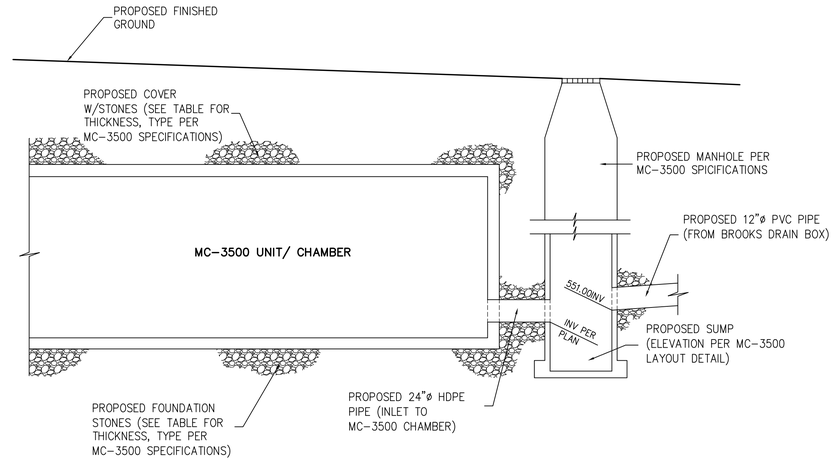
G.1

SHEET OF



StormTech
Detention • Retention • Recharge
Subsurface Stormwater Management™
20 BEAVER ROAD, SUITE 104
WETHERSFIELD, CT 06109
PHONE: 888-892-2694
FAX: 866-328-8401
WWW.STORMTECH.COM

5 MC-3500 ISOLATOR ROW DETAIL
NTS



STORMTECH GENERAL NOTES

1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST MC-3500 INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.

2. STORMTECH OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICE DEPARTMENT OR LOCAL STORMTECH REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL **860-529-8188** TO SPEAK TO A TECHNICAL SERVICE REPRESENTATIVE OR VISIT **WWW.STORMTECH.COM** TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.

3. STORMTECH REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 24" [610 mm] NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 6.5' [1.98 m] INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 30" [762 mm], MAXIMUM COVER IS 6.5' [1.98 m].

4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH THE BEARING CAPACITY OF THE CHAMBER FOUNDATION MATERIALS TO THE DESIGN ENGINEER.

5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.

6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH MC-3500 INSTALLATION INSTRUCTIONS.

7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH MC-3500 INSTALLATION INSTRUCTIONS.

8. THE CONTRACTOR MUST REFER TO STORMTECH MC-3500 INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE ON THE STORMTECH WEBSITE: **WWW.STORMTECH.COM**. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.

9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

10. **STORMTECH PRODUCT WARRANTY IS LIMITED.** CONTACT STORMTECH FOR WARRANTY INFORMATION.

MC-3500 STORMWATER CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500 OR APPROVED EQUAL.

2. CHAMBERS SHALL BE MADE FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.

3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.

4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

5. ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:

-- A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET.

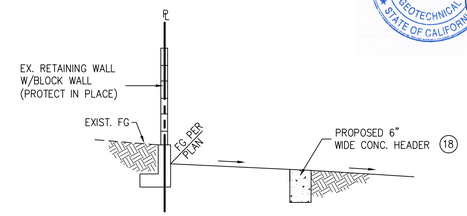
-- STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL CROSS SECTION IS BASED.

6. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.

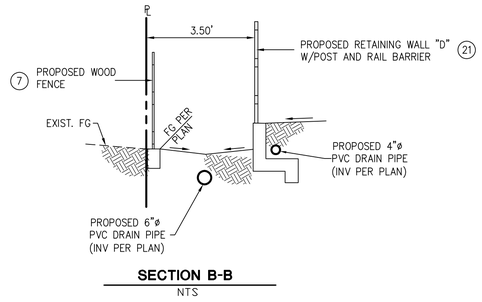
STORMTECH SYSTEM	
MAX. LENGTH	12.92 FT.
MAX. WIDTH	8.42 FT.
EACH CHAMBER SIZE	77"x45"
NO. OF CHAMBERS	1
NO. OF END CAPS	2
CHAMBER ROWS	1
BED SIZE	108 SF
STORAGE VOLUME (REQ.)	100 CF
STORAGE VOLUME (PROVIDED)	323 CF
PROPOSED ELEVATIONS	
TOP OF STONE	555.65
TOP OF CHAMBER	554.65
BOTTOM OF CHAMBER	550.90
BOTTOM OF STONE	550.15
INVERT AT END CAP	550.90
INVERT AT MANHOLE	551.00

MC-3500 STORMTECH SYSTEM DATA
NOT TO SCALE

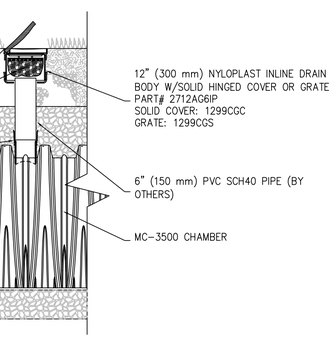
SEE STORMTECH SYSTEM DATA TABLE FOR SIZE, ELEVATIONS, ETC.



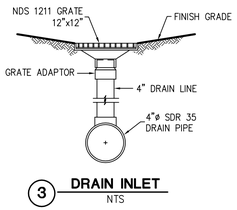
SECTION A-A
NTS



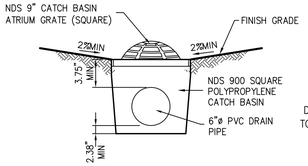
SECTION B-B
NTS



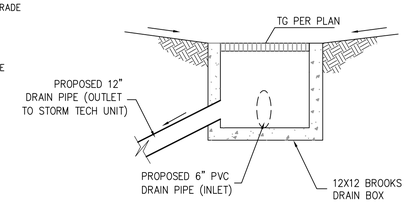
MC-3500 6" INSPECTION PORT DETAIL
NTS



3 DRAIN INLET
NTS



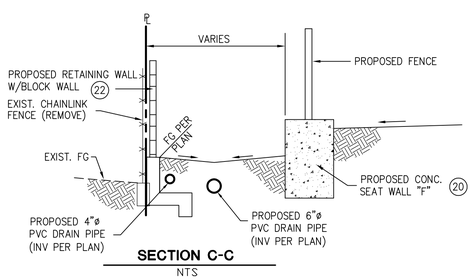
8 DRAIN INLET
NTS



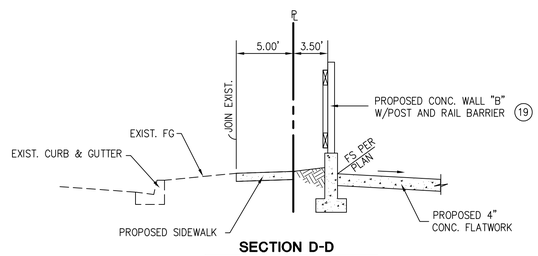
6 DRAIN INLET DETAIL
BROOKS DRAIN BOX
NTS



STORM DRAIN/CATCH BASIN STENCILING DETAIL
NOT TO SCALE



SECTION C-C
NTS



SECTION D-D
NTS

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
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Berkshire Avenue Park
2006 Berkshire Avenue
South Pasadena, CA 91030
Owner:
South Pasadena

Project No :	
Drawn By :	GV/DT
Checked By :	ES
Date :	September 14, 2022
Scale :	AS SHOWN

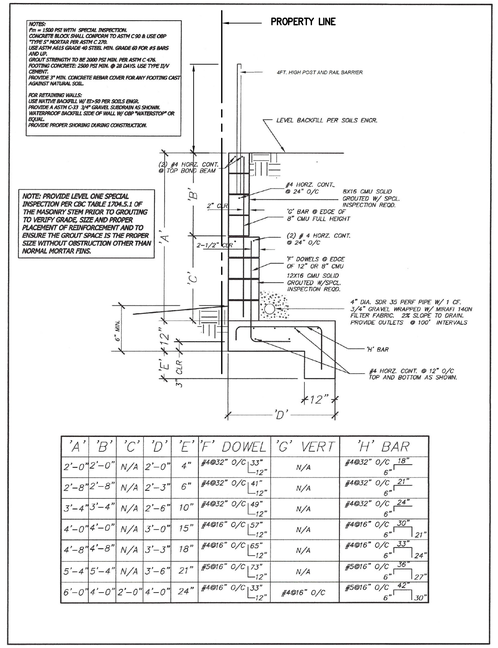
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GRADING PLAN

Drawing No :

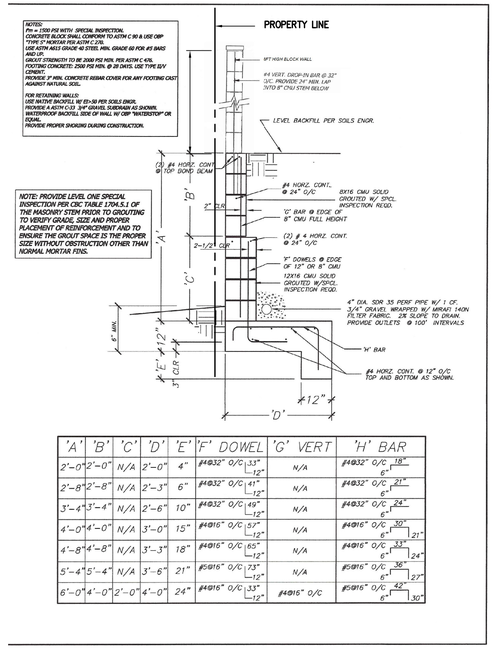
G.2

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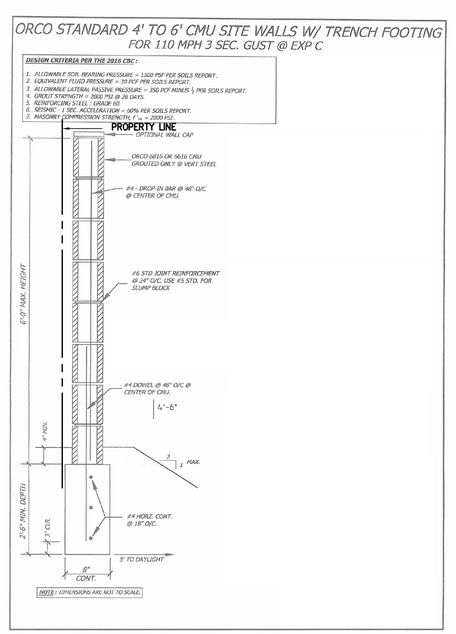
'A'	'B'	'C'	'D'	'E'	'F' DOWEL	'G' VERT	'H' BAR
2'-0"	2'-0"	N/A	2'-0"	4"	#4@32" O/C 33" 12"	N/A	#4@32" O/C 18" 6'
2'-8"	2'-8"	N/A	2'-3"	6"	#4@32" O/C 41" 12"	N/A	#4@32" O/C 21" 6'
3'-4"	3'-4"	N/A	2'-6"	10"	#4@32" O/C 49" 12"	N/A	#4@32" O/C 24" 6'
4'-0"	4'-0"	N/A	3'-0"	15"	#4@16" O/C 57" 12"	N/A	#4@16" O/C 30" 6' 21"
4'-8"	4'-8"	N/A	3'-3"	18"	#4@16" O/C 65" 12"	N/A	#4@16" O/C 33" 6' 24"
5'-4"	5'-4"	N/A	3'-6"	21"	#5@16" O/C 73" 12"	N/A	#5@16" O/C 36" 6' 27"
6'-0"	4'-0"	2'-0"	4'-0"	24"	#4@16" O/C 33" 12"	#4@16" O/C	#5@16" O/C 42" 6' 30"

21 RETAINING WALL DETAIL W/POST AND RAIL BARRIER
NTS

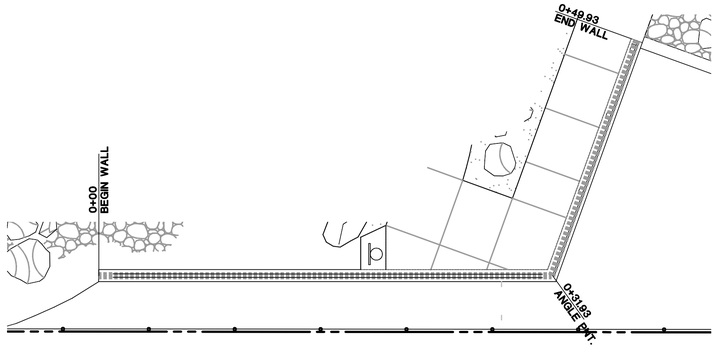


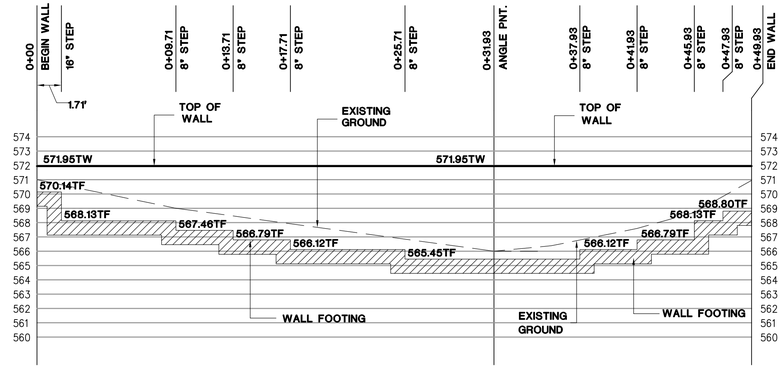
'A'	'B'	'C'	'D'	'E'	'F' DOWEL	'G' VERT	'H' BAR
2'-0"	2'-0"	N/A	2'-0"	4"	#4@32" O/C 33" 12"	N/A	#4@32" O/C 18" 6'
2'-8"	2'-8"	N/A	2'-3"	6"	#4@32" O/C 41" 12"	N/A	#4@32" O/C 21" 6'
3'-4"	3'-4"	N/A	2'-6"	10"	#4@32" O/C 49" 12"	N/A	#4@32" O/C 24" 6'
4'-0"	4'-0"	N/A	3'-0"	15"	#4@16" O/C 57" 12"	N/A	#4@16" O/C 30" 6' 21"
4'-8"	4'-8"	N/A	3'-3"	18"	#4@16" O/C 65" 12"	N/A	#4@16" O/C 33" 6' 24"
5'-4"	5'-4"	N/A	3'-6"	21"	#5@16" O/C 73" 12"	N/A	#5@16" O/C 36" 6' 27"
6'-0"	4'-0"	2'-0"	4'-0"	24"	#4@16" O/C 33" 12"	#4@16" O/C	#5@16" O/C 42" 6' 30"

22 RETAINING WALL DETAIL W/BLOCK WALL
NTS



23 BLOCK WALL DETAIL
NTS





WALL PROFILE

MOHAN B. UPASANI
REGISTERED PROFESSIONAL ENGINEER
Exp. Date 03/31/25
2301
GEOTECHNICAL
STATE OF CALIFORNIA

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

DMS CONSULTANTS, INC.
CIVIL ENGINEERS
1371 Lewis St. #30 Garden Grove CA, 92843 P. 714-740-8842 F. 714-740-8842

UNDER THE SUPERVISION OF

SURRENDER M. UPANI RCE 34559 02/06/2024 EXP. 9/30/25

Seal:

REGISTERED PROFESSIONAL ENGINEER
SURRENDER M. UPANI
NO. 34559
Exp.9/30/25
CIVIL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN, OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions:

BUILDING AND SAFETY APPROVED
REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED. DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.
7/17/2024, 3:15:29 PM
SP-B54560

Project :

Berkshire Avenue Park

2006 Berkshire Avenue
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :
Drawn By : GV/DT
Checked By : ES
Date : September 14, 2022
Scale : AS SHOWN

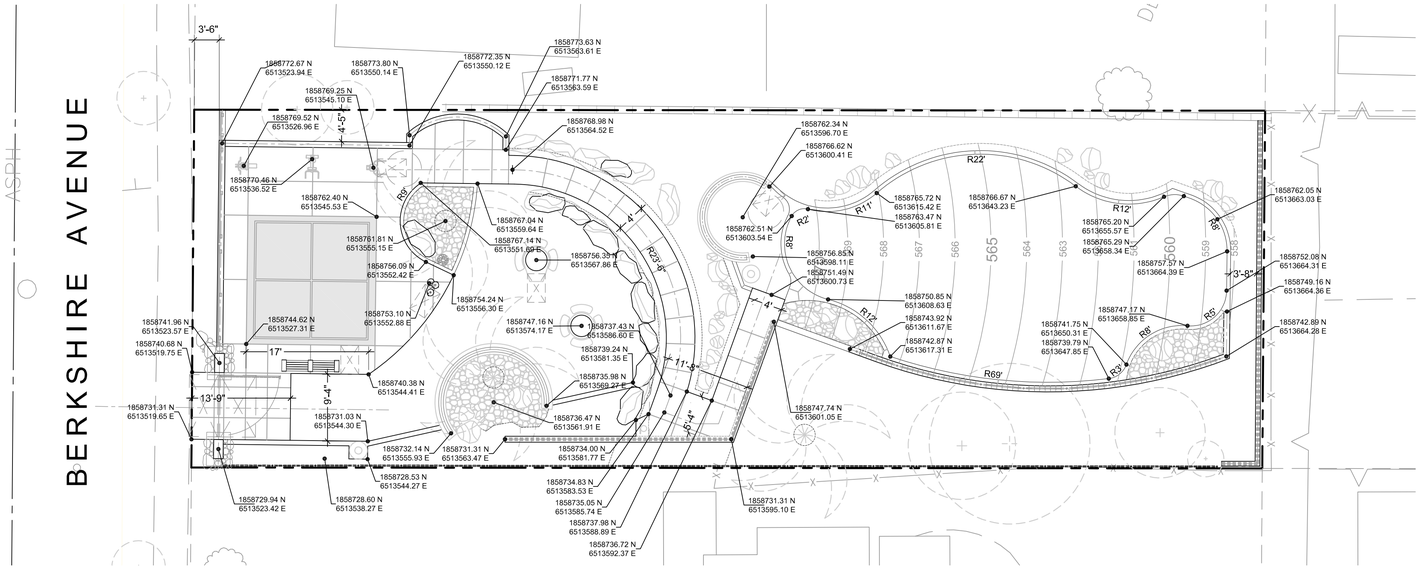
Drawing Title :

WALL DETAILS

Drawing No :

G.3

SHEET OF



NOTE:

1. THE FINAL PLACEMENT OF THE SITE FURNISHINGS, PLAYGROUND & FITNESS EQUIPMENT SHALL BE REVIEWED & APPROVED BY THE LANDSCAPE ARCHITECT. THE SITE FURNISHINGS INCLUDE LITTER RECEPTACLES, PICNIC TABLES, BENCHES, BIKE RACKS AND DRINKING FOUNTAINS. REFER TO THE CONSTRUCTION MATERIALS SCHEDULE ON SHEET LC.1 FOR ADDITIONAL CONSTRUCTION AND/OR PRODUCT INFORMATION.
2. THE CONTRACTOR WILL COORDINATE WITH THE LANDSCAPE ARCHITECT TO DETERMINE THE FINAL PLACEMENT AND ALIGNMENT OF EACH BOULDER.

BENCHMARK:
BENCHMARK ELEV = 580.78'
CITY OF SOUTH PASADENA BENCHMARK ON TOP OF CURB AT SR COR OF BERKSHIRE AVE AND VALLEY VIEW RD

BASIS OF BEARINGS:
THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD83), ZONE 5 DATUM, BASED LOCALLY ON A LINE BETWEEN NGS CONTROL POINTS EV3794 AND EV 3841, BEING N84°35'29"W, 1991.35 EPOCH.

REFER TO TITLE SHEET FOR GENERAL NOTES

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

REGISTERED PROFESSIONAL ENGINEER
SURRENDER M. DEWAN
NO. 34559
Exp. 9/30/25
CIVIL
STATE OF CALIFORNIA

DMS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT
GARY M. TASQUEZ
NO. 3803
SIGNATURE
EXP. Feb. 2025
DATE
6/3/24
STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

BUILDING AND SAFETY APPROVED

No.	Date	Revisions	By

REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.

7/17/2024 3:15:20 PM
SP-B54560

Project :

BERKSHIRE AVENUE PARK

Berkshire Ave, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER, 2023
Scale :	AS SHOWN

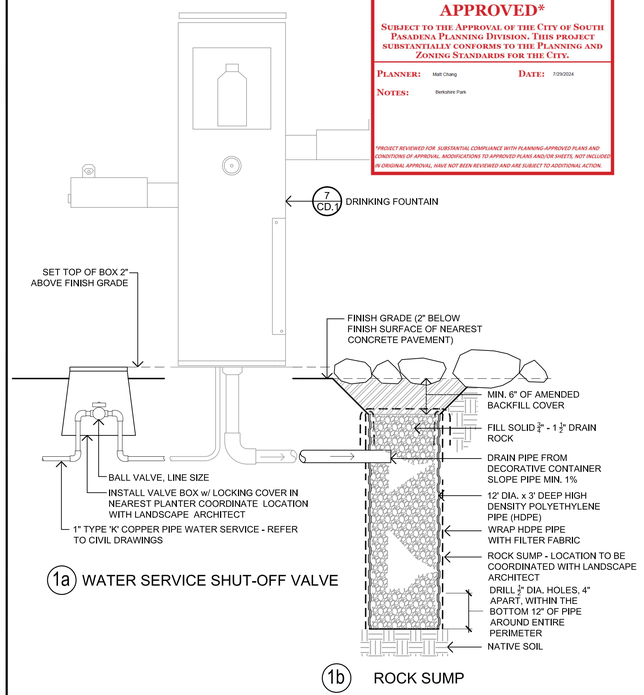
Drawing Title :

HORIZONTAL CONTROL PLAN

Drawing No :

HC.1

SHEET 8 OF 26



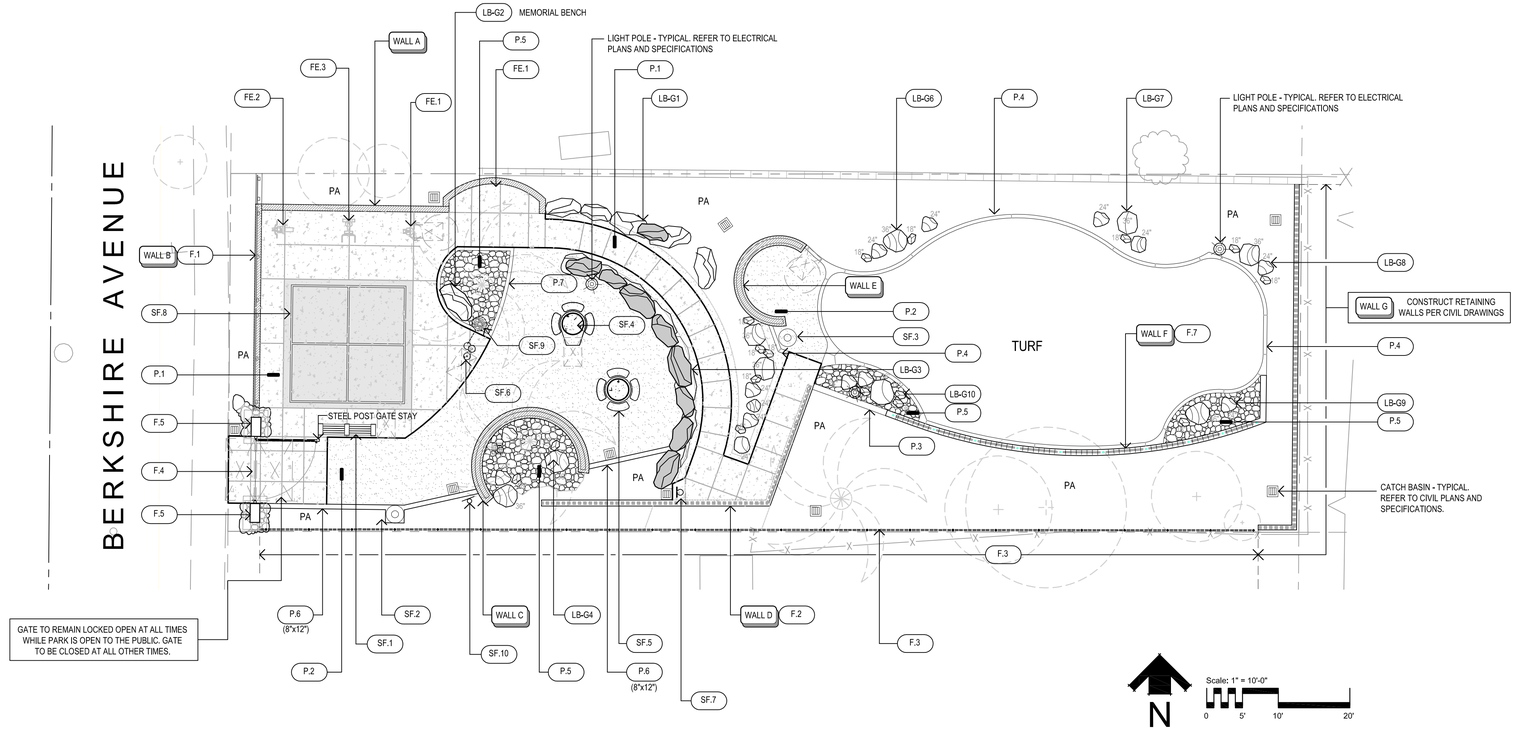
APPROVED*

SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PASADENA PLANNING DIVISION. THIS PROJECT SUBSTANTIALLY CONFORMS TO THE PLANNING AND ZONING STANDARDS FOR THE CITY.

PLANNER: Matt Chang DATE: 7/29/2024

NOTES: Berkshire Park

*PROJECT REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH PLANNING-APPROVED PLANS AND CONDITIONS OF APPROVAL. MODIFICATIONS TO APPROVED PLANS AND/OR SHEETS, NOT INCLUDED IN ORIGINAL APPROVAL, HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO ADDITIONAL ACTION.



P - PAVING & HARDSCAPE

KEY	DESCRIPTION	MANUFACTURER/ SUPPLIER	FINISH/ TEXTURE	COLOR	DETAIL SHEET NO.	NOTE
P.1	4" CONCRETE FLATWORK OVER 4" AGG. BASE		DAYTON SUPERIOR TOP-CAST 05 SAND BLAST	DAVIS COLORS DUNE #6058	DETAIL 1 & 2, SHEET CD.1	—
P.2	PERMEABLE STABILIZED DECOMPOSED GRANITE (4" THK OVER 6" AGGREGATE BASE)	GRANITECRETE 408-858-9635 OR APPROVED EQUAL	—	SONORA ADOBE	DETAIL 3, SHEET CD.2	—
P.3	CONCRETE BAND - 10 Inch	—	DAYTON SUPERIOR TOP-CAST 05 SAND BLAST	DAVIS COLORS DUNE #6058	DETAIL 3, SHEET CD.1	—
P.4	CONCRETE HEADER - 6 inch	—	DAYTON SUPERIOR TOP-CAST 05 SAND BLAST	DAVIS COLORS DUNE #6058	DETAIL 4, SHEET CD.1	—
P.5	CRUSHED ROCK MULCH BAJA CUEST RUBBLE (6"-12")	SOUTHWEST BOULDER & STONE (877) 792-7625	NATURALROCK	RUST-RED w/ BRONZE	—	—
P.6	CONCRETE CURB (8"x12")		ACID WASH	DAVIS COLORS DUNE #6058	DETAIL 5, SHEET CD.1	—
P.7	WARNING CURB (8"x8")		ACID WASH	DAVIS COLORS DUNE #6058	DETAIL 5, SHEET CD.1	—

SF - SITE FURNITURE

KEY	DESCRIPTION	MANUFACTURER/ SUPPLIER	FINISH/ TEXTURE	COLOR	DETAIL SHEET NO.	NOTE
SF.1	PARK BENCH W/ BACKREST 617 VROOM SEAT STRAIGHT END	VESTRE CONTACT: CHIP BEYT, (323) 975-2751	POWDER COATED & LINSEED OIL PROOFED NORDIC PINE	RAL 6013 REED GREEN	——	A
SF.2	WASTE CONTAINER MF3202 FLAT STEEL TRASH RECEPTACLE WITH ALUMINUM FUNNEL TOP & SIDE DOOR	WAUSAU TILE (800) 388-8728	POWDER COATED	126 CHARCOAL	——	A
SF.3	WASTE CONTAINER MF3202 FLAT STEEL TRASH RECEPTACLE WITH ALUMINUM FUNNEL TOP & SIDE DOOR	WAUSAU TILE (800) 388-8728	POWDER COATED	126 CHARCOAL	——	A
SF.4	ACCESSIBLE CAFE TABLE MF1061 SQUARE 3-BENCH INGROUND MOUNT ADA COMPLIANT TABLE	WAUSAU TILE (800) 388-8728	POWDER COATED	126 CHARCOAL	——	B
SF.5	CAFE TABLE MF1060 SQUARE 4-BENCH INGROUND MOUNT TABLE	WAUSAU TILE (800) 388-8728	POWDER COATED	126 CHARCOAL	——	B
SF.6	DRINKING FOUNTAIN 10145 SM W/ PET FOUNTAIN	MDF (901) 867-0039	POWDER COATED	TEXTURED PYRITE	DETAIL 7, SHEET CD.1	A
SF.7	DOGIEPOT PET STATION MODEL #1003-L,	DOGIPOT (800) 364-7681	POWDER COATED	FOREST GREEN	——	C
SF.8	FOUR-SQUARE COURT				DETAIL 3, SHEET CD.3	
SF.9	SHUT-OFF VALVE & ROCK SUMP (DRINKING FOUNTAIN)				DETAIL1, THIS SHEET	
SF.10	RPOSD SIGN				DETAIL2, THIS SHEET	

LB - LANDSCAPE BOULDERS

KEY	DESCRIPTION	SOURCE & INFORMATION	DETAIL SHEET NO.
LB-G1	G.1 - 'BENCH' - ROCK GROUPING QUANTITY: 6 SET FIVE (5) LARGE ROCKS ON GRADE. STACK THE REMAINING ROCK OVER PREVIOUS PLACED ROCKS. COORDINATE PLACEMENT WITH LANDSCAPE ARCHITECT	'BENCH' ROCK SOURCE: SOUTHWEST BOULDER & STONE TYPE OF STONE: ARIZONIA BUFF BENCH BOULDER SIZE: 4', 5' & 6' LENGTHS, BENCH FORM PHONE: (877) 792-7625 NOTE: THE CONTRACTOR SHALL COORDINATE FINAL PLACEMENT AND ALIGNMENT OF EACH BOULDER WITH THE LANDSCAPE ARCHITECT.	DETAIL 9, SHEET CD.1
LB-G2	G.2 - 'MEMORIAL BENCH' QUANTITY: 1 MEMORIAL BENCH - PLACE 'SELECT' ROCK, FLAT SIDE UP, SET SURFACE APPROX. 18"-20" ABOVE FINISH GRADE. ATTACH A MEMORIAL PLAQUE, PROVIDED BY CITY, TO SURFACE OF ROCK . PLAQUE LOCATION AND METHOD OF ATTACHMENT TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FINAL ROCK PLACEMENT & ALIGNMENT TO BE COORDINATED WITH LANDSCAPE ARCHITECT.		
LB-G3	G.3 - 'BENCH' - ROCK GROUPING QUANTITY: 17 SET NINE (9) ROCKS, ON GRADE, END TO END, FOLLOWING RADIUS OF WALKWAY. STACK EIGHT (8) ROCKS, END TO END, ON THE PREVIOULSY PLACED ROCKS AND TO RETAIN SOIL ABOVE.		

KEY	DESCRIPTION	SIZE & QUANTITY
LB-G4	G.4 - 'ROUNDED' - ROCK GROUPING INSTALL THE FOLLOWING BOULDERS (SIZES & QUANTITIES) IN THIS AREA.	SIZE QUANTITY 36" —— 2 24" —— 2 18" —— 2
LB-G5	G.5 -'ROUNDED' - ROCK GROUPING INSTALL THE FOLLOWING BOULDERS (SIZES & QUANTITIES) IN THIS AREA.	SIZE QUANTITY 36" —— 4 24" —— 3 18" —— 5
LB-G6	G.6 - 'ROUNDED' - ROCK GROUPING INSTALL THE FOLLOWING BOULDERS (SIZES & QUANTITIES) IN THIS AREA.	SIZE QUANTITY 36" —— 1 24" —— 2 18" —— 2
LB-G7	G.7 - 'ROUNDED' - ROCK GROUPING INSTALL THE FOLLOWING BOULDERS (SIZES & QUANTITIES) IN THIS AREA.	SIZE QUANTITY 36" —— 1 24" —— 2 18" —— 1

KEY	DESCRIPTION	SIZE & QUANTITY
LB-G8	G.8 - 'ROUNDED' - ROCK GROUPING INSTALL THE FOLLOWING BOULDERS (SIZES & QUANTITIES) IN THIS AREA.	SIZE QUANTITY 36" —— 2 24" —— 2 18" —— 2
LB-G9	G.9 -'ROUNDED' - ROCK GROUPING INSTALL THE FOLLOWING BOULDERS (SIZES & QUANTITIES) IN THIS AREA.	SIZE QUANTITY 36" —— 4 24" —— 3 18" —— 5
LB-G10	G.10 - 'ROUNDED' - ROCK GROUPING INSTALL THE FOLLOWING BOULDERS (SIZES & QUANTITIES) IN THIS AREA.	SIZE QUANTITY 36" —— 1 24" —— 2 18" —— 2
SOURCE: SOUTHWEST BOULDER & STONE TYPE: TOPANGA PHONE: (877) 792-7625 NOTE: FINAL BOULDER PLACEMENT SHALL BE COORDINATED THE LANDSCAPE ARCHITECT.		REFER TO DETAIL 2, SHEET CD.2 FOR BOULDER & ROCK INSTALLATION.

WALLS & SEATWALLS

KEY	DESCRIPTION	COLOR	WALL FINISH (VERTICAL SIDES)	WALL FINISH (HORIZONTAL CAP)
WALL A	CONCRETE SEAT WALL - REFER TO DETAIL 10, SHEET CD.1	DAVIS COLORS DUNE #6058	ACID WASH	ACID WASH
WALL B	CONCRETE WALL w/ BARRIER - REFER TO DETAIL 4a, SHEET CD.3	DAVIS COLORS DUNE #6058	HORIZONTAL BOARD "WOOD GRAIN" FINISH	LIGHT BROOM
WALL C	CONCRETE PLANTER/SEATWALL WALL - REFER TO DETAIL 5, SHEET CD.2	NATURAL GREY	RIVER ROCK	CUSTOM PRECAST WALL CAP
WALL D	CONSTRUCT RETAINING WALL (CMU BLOCK) - REFER PLANS & SPECIFICATIONS	SEE CIVIL DWGS.	SEE CIVIL DWGS.	SEE CIVIL DWGS.
WALL E	CONCRETE SEAT WALL - REFER TO DETAIL 6, SHEET CD.1	DAVIS COLORS DUNE #6058	ACID ACID	ACID WASH
WALL F	CONCRETE WALL w/ 42" H. FENCE - REFER TO DETAIL 2, SHEET CD.3	DAVIS COLORS DUNE #6058	ACID WASH	ACID WASH
WALL G	CONSTRUCT WALL (RETAINING & BLOCK WALL) - REFER CIVIL PLANS & SPECIFICAITONS	SEE CIVIL DWGS.	SEE CIVIL DWGS.	SEE CIVIL DWGS.

F - FENCES, GATES & COLUMNS

KEY	DESCRIPTION
F.1	BARRIER ON WALL 'B' - REFER TO DETAIL 4a, SHEET CD.3
F.2	BARRIER ON WALL 'D' - REFER TO DETAIL 4b, SHEET CD.3
F.3	6' H. WOOD FENCE (ALONG SOUTHERN PARK BOUNDARY) - REFER TO DETAIL 1, SHEET CD.3
F.4	ENTRY GATE - REFER TO DETAIL 4, SHEET CD.2
F.5	ENTRY COLUMN -REFER TO DETAIL 4, SHEET CD.2
F.6	NOT USED
F.7	42" H. WOOD FENCE ON WALL 'F' - REFER TO DETAIL 2, SHEET CD. 3

FE - FITNESS EQUIPMENT

KEY	DESCRIPTION	MANUFACTURER/ SUPPLIER	NOTE
FE.1	ACCESSIBLE VERTICAL PRESS MODEL #UBX247W	GREENFIELDS OUTDOOR FITNESS (888) 315-9037	C
FE.2	PRO-SERIES ADJUSTABLE ROWER MODEL #UBX290	GREENFIELDS OUTDOOR FITNESS (888) 315-9037	C
FE.3	PRO-SERIES BACK EXTENSION PRO MODEL #UBX221	GREENFIELDS OUTDOOR FITNESS (888) 315-9037	C

NOTES

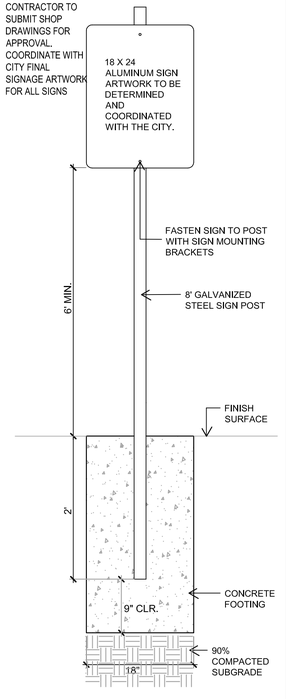
KEY DESCRIPTION

A — SURFACE MOUNT TO CONCRETE SLAB USING ANCHORING METHOD RECOMMENDED BY THE MANUFACTURE.

B — CONSTRUCT CONCRETE SLAB (6" THICK x 36"), COLOR AND FINISH TO MATCH CONCRETE FLATWORK.

C — IN-GROUND MOUNT POST (S) IN CONCRETE FOOTING AS RECOMMENDED BY THE MANUFACTURER.

NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL. COORDINATE WITH CITY FINAL SIGNAGE ARTWORK FOR ALL SIGNS



REFER TO TITLE SHEET FOR GENERAL NOTES

1 WATER SERVICE SHUT-OFF VALVE & ROCK SUMP NTS

2 RPOSD SIGN NTS

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning
Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323
e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

REGISTERED PROFESSIONAL ENGINEER SURRENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA

DMS

6/3/24

SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT MARY M. TASQUEZ NO. 5883 SIGNATURE EXP. Feb. 2025 6/3/24 DATE STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE PUBLIC RECORDS. IT IS THE CONTRACTOR'S DUTY AND RESPONSIBILITY TO BE FULLY CONVERSANT WITH ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No	Date	Revisions	By
		BUILDING AND SAFETY APPROVED	
		REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.	
		VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.	
	7/17/2024, 3:15:03 PM		
	SP-B54560		

Project :

BERKSHIRE AVENUE PARK

Berkshire Ave, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER, 2023
Scale :	AS SHOWN

Drawing Title :

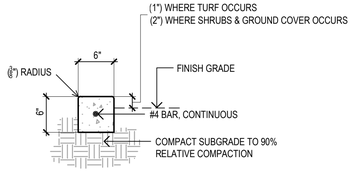
CONSTRUCTION PLAN

Drawing No :

LC.1

SHEET 9 OF 26

571

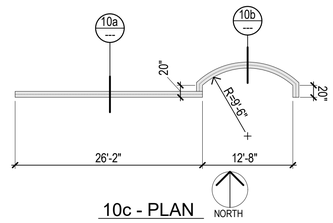


SECTION

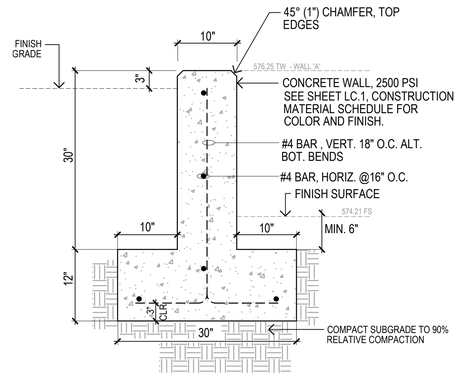
CONSTRUCTION NOTES

1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC.1
2. PRIOR TO POURING CONCRETE, ALL FORMING SHALL BE REVIEW AND APPROVED BY A CITY REPRESENTATIVE OR LANDSCAPE ARCHITECT.
3. CONSTRUCT A WEAKENED PLANE JOINT (SAW-CUT TO A DEPTH OF 1") EVERY 8' O.C. OR AS DIRECTED BY THE LANSCAPE ARCHITECT TO CONCROL RANDOM CRACKING.

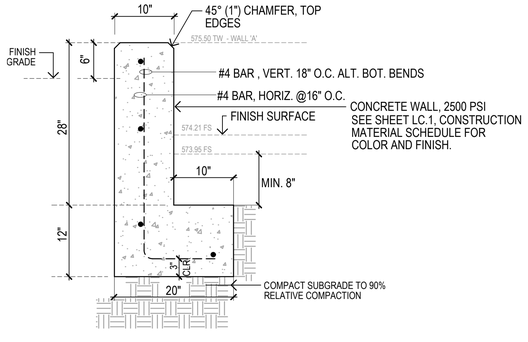
4 CONCRETE HEADER (6") 1"=1'-0"



10c - PLAN

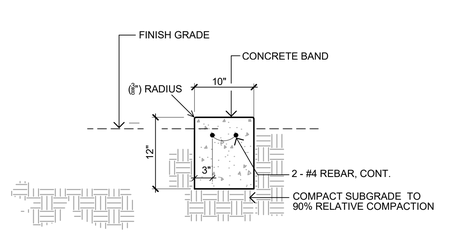


10a - SECTION



10b - SECTION

10 CONCRETE WALL 'A' 1"=1'-0"

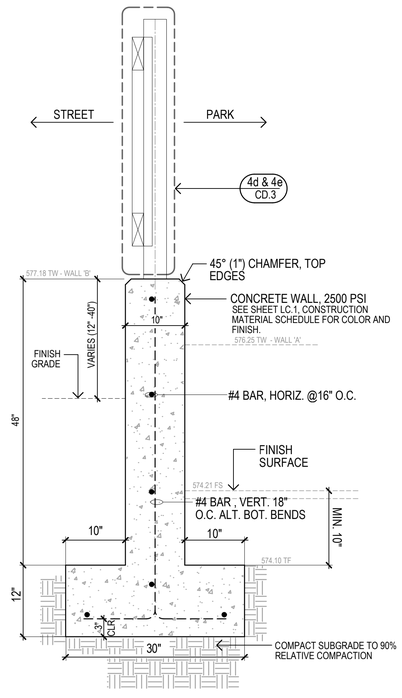


SECTION

CONSTRUCTION NOTES

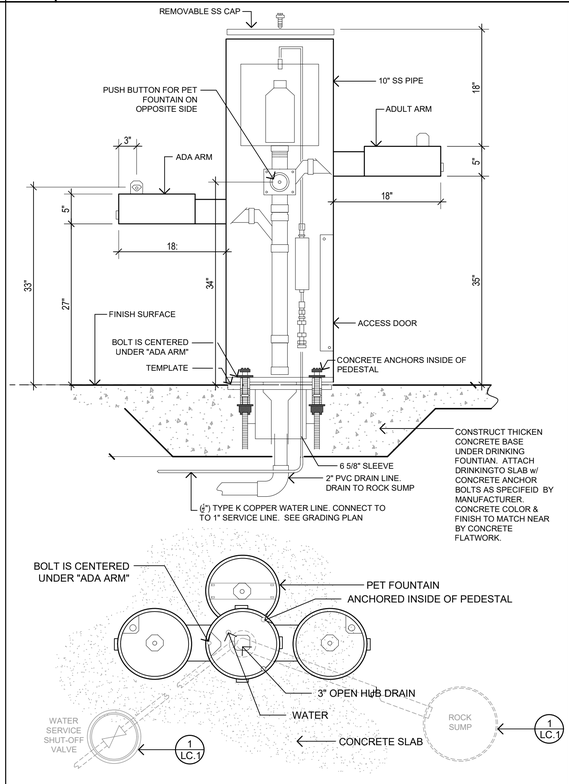
1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC.1
2. CONSTRUCT A WEAKENED PLANE JOINT EVERY 8' O.C. AND A CONSTRUCTION JOINT EVERY 24' O.C

3 CONCRETE BAND (10") 1"=1'-0"



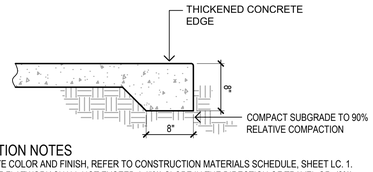
SECTION

8 CONCRETE WALL 'B'



7 DRINKING FOUNTAIN w/ PET BOWL

NOTE: UNLESS OTHERWISE SHOWN ON PLANS, THE CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL WEAKEN PLANE AND EXPANSION JOINTS WITH THE LANDSCAPE ARCHITECT. A WEAKENED PLANE JOINT WILL BE REQUIRED FOR EVERY 50 SF OF CONCRETE AND AN EXPANSION JOINT FOR EVERY 150 SF OF CONCRETE.

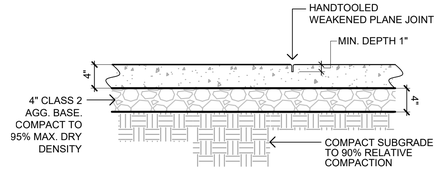


CONSTRUCTION NOTES

1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC. 1.
2. ALL CONCRETE FLATWORK SHALL NOT EXCEED A (5%) SLOPE IN THE DIRECTION OF TRAVEL OR (2%) CROSS SLOPE.

SECTION

2 THICKEN CONCRETE EDGE 1"=1'-0"

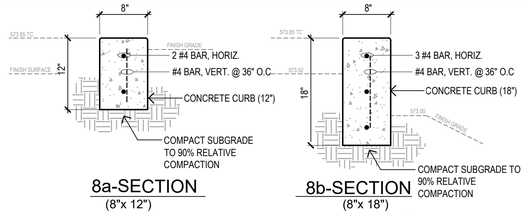


SECTION

CONSTRUCTION NOTES

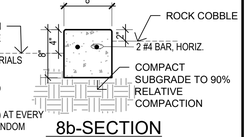
1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC. 1.
2. ALL CONCRETE FLATWORK SHALL NOT EXCEED A (5%) SLOPE IN THE DIRECTION OF TRAVEL OR (2%) CROSS SLOPE.
3. CONCTRUCT A THICKENED CONCRETE EDGE AROUND THE CONCRETE FLATWORK'S PERIMETER. REFER TO DETAIL 2, THIS SHEET.

1 CONCRETE FLATWORK (4") 1"=1'-0"

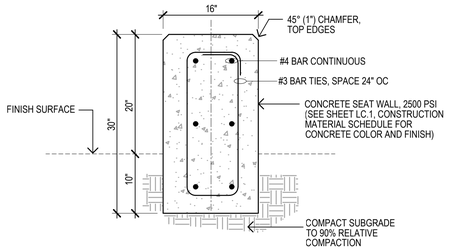


CONSTRUCTION NOTES

1. FOR CONCRETE COLOR AND FINISH, REFER TO CONSTRUCTION MATERIALS SCHEDULE, SHEET LC.1
2. PRIOR TO POURING CONCRETE, ALL FORMING SHALL BE REVIEW AND APPROVED BY A CITY REPRESENTATIVE OR LANDSCAPE ARCHITECT.
3. CONSTRUCT A WEAKENED PLANE JOINT (SAW-CUT TO A DEPTH OF 1") AT EVERY 8' O.C. OR AS DIRECTED BY THE LANSCAPE ARCHITECT TO PREVENT RANDOM CRACKING.

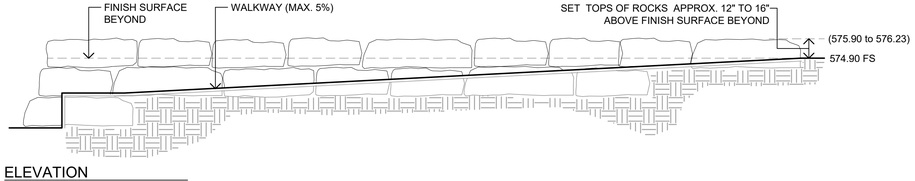


5 CONCRETE EDGE 1"=1'-0"

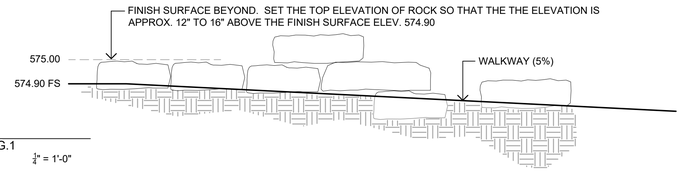


SECTION

6 CONCRETE SEAT WALL - WALL 'E' 1"=1'-0"

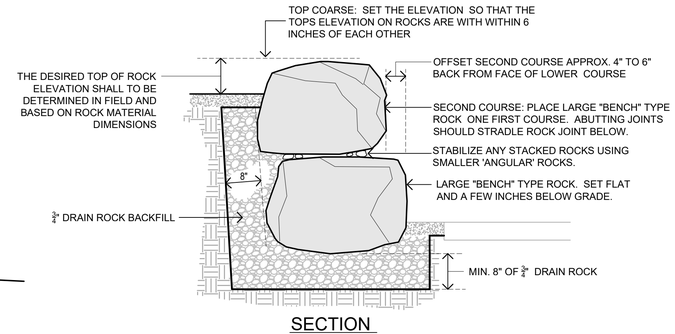


ELEVATION
ROCK GROUPING G.3
¾" = 1'-0"



ELEVATION
ROCK GROUPING G.1
¾" = 1'-0"

9 'BENCH' ROCK - GROUPING G.1 & G.3



SECTION
1"=1'-0"

11 'BENCH' ROCK - GROUPING G.2

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

REGISTERED PROFESSIONAL ENGINEER SURRENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA

DMS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT GARY M. TASUE NO. 3883 SIGNATURE EXP. Feb. 2025 6/3/24 DATE STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES IN THE AREA OF WORK AND TO THE DIFFERING FORM THAT MAY BE ENCOUNTERED IN THE FIELD OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT. DIAL 811

Revisions:

No.	Date	Revisions	By
		BUILDING AND SAFETY APPROVED	
		REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.	
		VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.	
		3/17/2025, 3:15:20 PM	
		SP-B54560	

Project :

BERKSHIRE AVENUE PARK

Berkshire Ave, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER, 2023
Scale :	AS SHOWN
Drawing Title :	

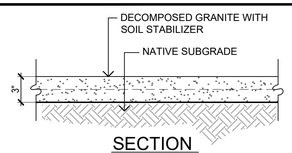
CONSTRUCTION DETAILS

Drawing No :

CD.1

SHEET 10 OF 26

572



SECTION

CONSTRUCTION NOTES

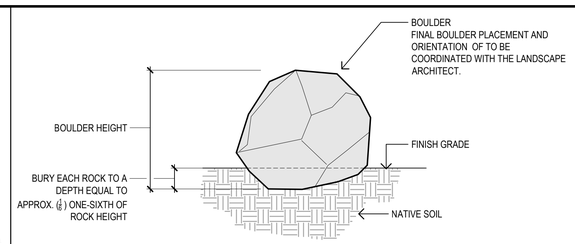
1. THE DECOMPOSED GRANITE SHALL BE SCREENED AND MEET CALTRANS 202 REQUIREMENTS

SIEVE SIZE	PERCENT PASSING
1"	100
¾"	90-100
No.4	50-100
No.30	25-50
No.100	10-20
No.200	5-18

2. THE BLENDING OF COURSE SAND WITH ROCK DUST WILL NOT BE CONSIDERED AS AN EQUIVALENT PRODUCT.
3. SPREAD DECOMPOSED GRANITE EVENLY IN 1 ½" LIFTS, ADD MOISTURE AND COMPACT AS RECOMMENDED BY THE DECOMPOSED GRANITE/SOIL STABILIZER SUPPLIER.
4. SOIL STABILIZER. A SOIL STABILIZER WILL BE MIXED ACCORDINGLY WITH THE DECOMPOSED GRANITE MATERIAL AS RECOMMENDED BY THE MANUFACTURER. MARLOC-SS LIQUID SOIL STABILIZER AND SEALER SHALL BE MIXED AND APPLIED TO THE DECOMPOSED GRANITE AT A RATE OF 1 GALLON PER 120 SF. SUBMIT ANY SOIL STABILIZER SUBSTITUTES TO THE CITY, FOR REVIEW AND APPROVAL, PRIOR TO D.G. MATERIAL DELIVERED TO THE JOB SITE.

3 DECOMPOSED GRANITE

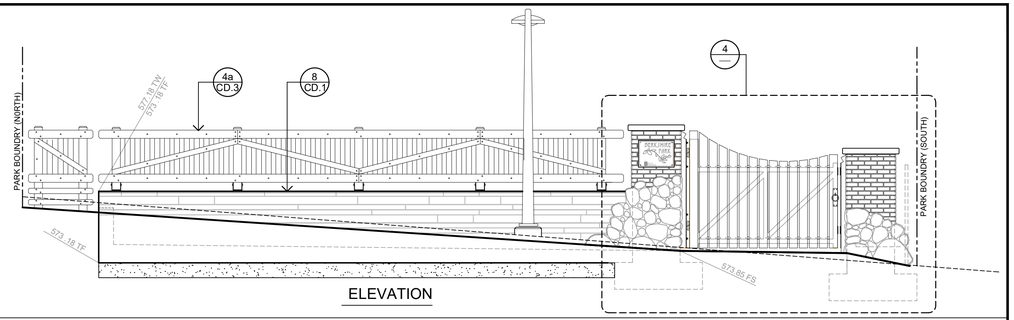
1 ½" = 1'-0"



SECTION

NOTE:
1. REFER TO CONSTRUCTION MATERIAL SCHEDULE, SHEET LC.1 FOR ROCK AND BOULDER TYPE, SIZE & COUNT.
2. THE CONTRACTOR WILL COORDINATE WITH THE LANDSCAPE ARCHITECT TO DETERMINE THE FINAL PLACEMENT AND ALIGNMENT OF EACH BOULDER.

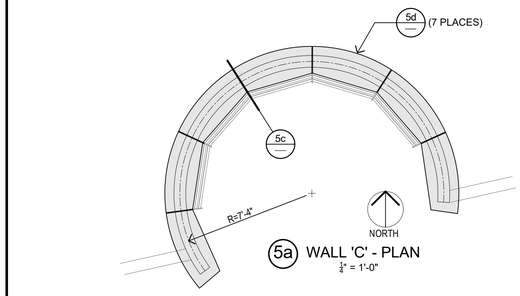
2 LANDSCAPE BOULDER



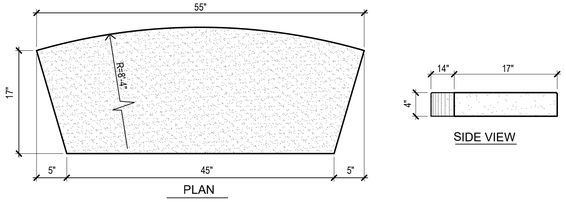
ELEVATION

1 ENTRY COLUMNS & WALL 'B' w/ POST/RAIL FENCE

¾" = 1'-0"

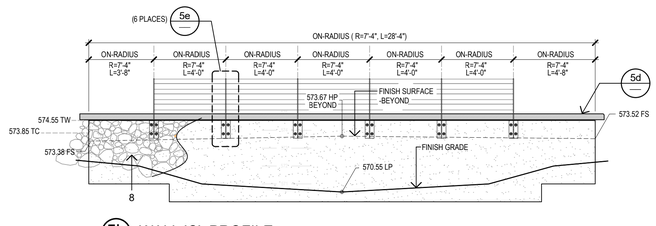


5a WALL 'C' - PLAN
¾" = 1'-0"

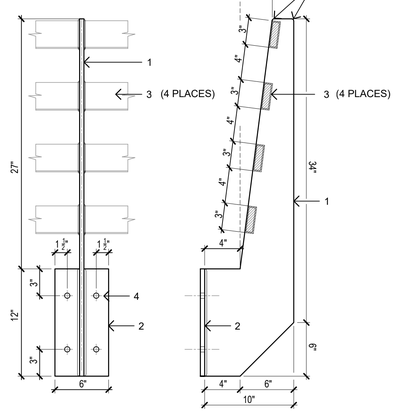


5d CUSTOM PRECAST CAP
QUANTITY: 7 PIECES
1" = 1'-0"

SIDE VIEW

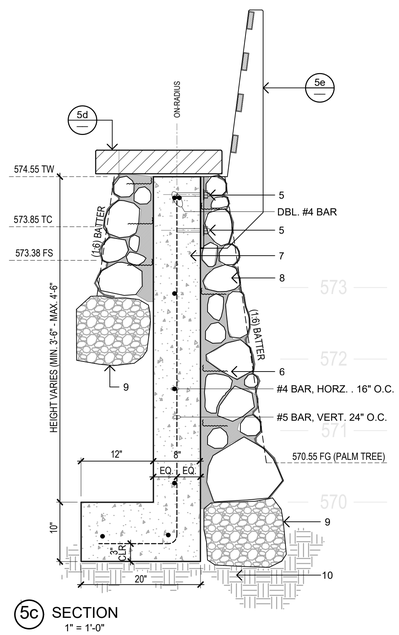


5b WALL 'C' PROFILE
¾" = 1'-0"



SIDE VIEW SIDE VIEW

5e BACKREST SUPPORT
QUANTITY: 6
1 ½"-1'-0"



5c SECTION
1" = 1'-0"

LEGEND

1 — ¾" THK. STEEL PLATE, WELD BACK SUPPORT TO FLAT PLATE
2 — 6" x 12" x ¾" THK. STEEL FLAT PLATE. WELD BACK SUPPORT TO PLATE
3 — 3"x1" BACKREST SLATES (HORIZONTAL) - RECTANGULAR STL. TUBING (WALL THICKNESS =.120). CUT, FIT AND WELD SLATES TO VERTICAL SUPPORTS.
4 — ⅝" DIA. HOLE (4 PLACES PER SUPPORT)
5 — ⅝" x 5" LONG CONCRETE ANCHOR BOLT (4 BOLTS PER SUPPORT)
6 — SIMPSON BRICK TIE, ⅜"W x 6 ⅝" L, 22 GA. GALV. ANCHOR TIES TO WALL EVERY 16" OC.
7 — CONCRETE WALL, 2500 PSI
8 — RIVER ROCK (4"-8"). MORTAR ROCK IN PLACE, GROUT AND FILL VOIDS SOLID. APPLY ROCK FINISH TO FRONT AND BACK OF WALL SET ROCKS MIN. 6" BELOW THE FINISH SURFACE/GRADE.
9 — ¾" DRAIN ROCK. INSTALL 1 CF. OF DRAIN ROCK FOR EVERY LINEAL FOOT (LF)
10 — COMPACT SUGRADE TO 90% RELATIVE COMPACTION

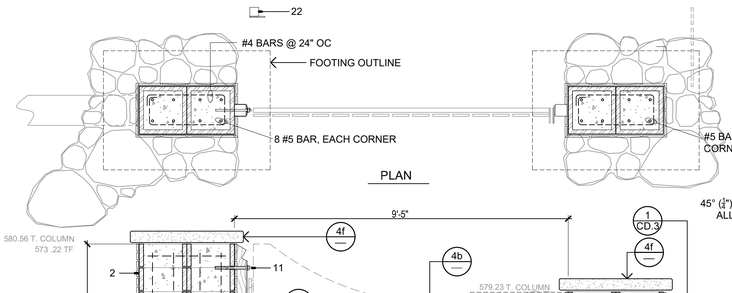
CONSTRUCTION NOTES

A. WELDS: ALL WELDS SHALL BE NON JAGGED ¼" FILLET WELDS. DO OT GRIND WELDS EXCEPT FO REMOVE JAGGED EDGES AND EXCESS NO-WELD MATERIAL. FIELD WELDS WILL NOT BE PREMITTED UNLESS APPROVED BY THE CITY ENGINEER.

B. STEEL FINISH: ALL STEEL (FERROUS) GATE COMPONENTS SHALL BE PAINTED. APPLY ONE (1) COAT ANTI-RUST 'ALKYD' METAL PRIMER. APPLY TWO (2) COATS OF AN 'ALKYD' ENAMEL URETHANE=SEMI GLOS PAINT. COLOR TO BE DETERMINED.

C. SHOP DRAWINGS: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY ENGINEER FOR REVIEW AND APPROVAL

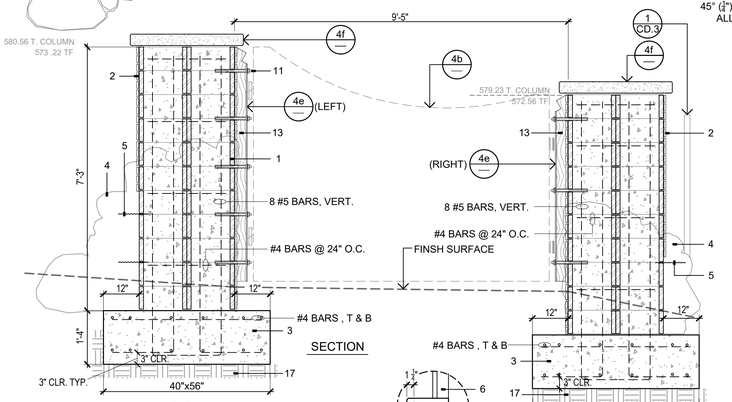
5 CONCRETE PLANTER WALL 'C'



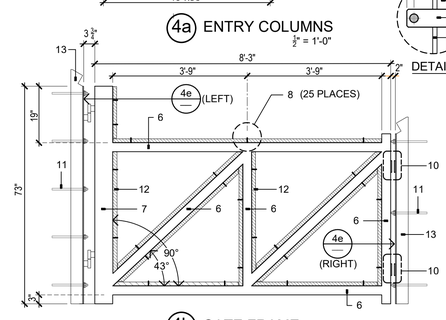
PLAN



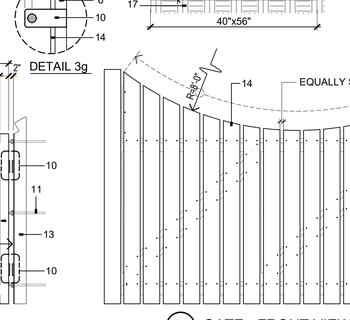
4d PARK SIGN
1 ½" = 1'-0"



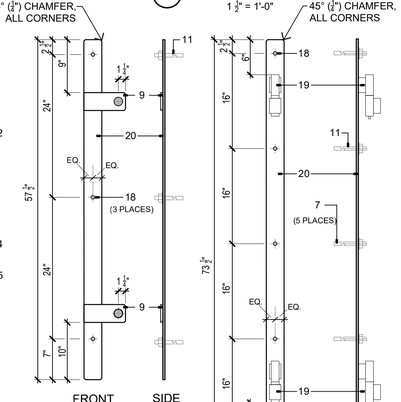
4a ENTRY COLUMNS
¾" = 1'-0"



4b GATE FRAME
½" = 1'-0"



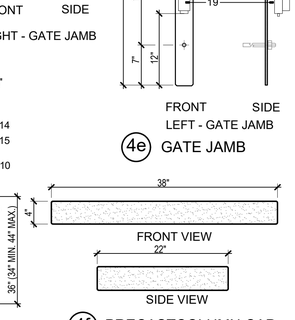
4c GATE - FRONT VIEW
½" = 1'-0"



FRONT SIDE
RIGHT - GATE JAMB

FRONT SIDE
LEFT - GATE JAMB

4e GATE JAMB



4f PRECASTCOLUMN CAP
QUANTITY: 2
1" = 1'-0"

LEGEND

1 — 16"x16" CMU COLUMN BLOCK. GROUT CELLS SOLID
2 — THIN CLAY BRICK VENEER. APPLY TO UPPER PORTION OF COLUMNS. (4) SIDES
3 — CONCRETE FOOTING, 2500 PSI
4 — ROUNDED ROCK MATERIAL, MORTAR IN PLACE, GROUT AND FILL VOIDS SOLID. APPLY ROCK TO COLUMN BASE. SELECT AND SET ROCKS TO CREATE (NATURAL, INFORMAL, CRAFTSMAN STYLE APPEARANCE) COORDINATE LANDSCAPE ARCHITECT TO ACHIEVE THE DESIRED APPEARANCE
5 — SIMPSON BRICK TIE, ⅜"W x 6 ⅝" L, 22 GA. GALV. ANCHOR TIES TO WALL EVERY 16" O.C. WHERE ROCK OCCURS
6 — 3"x2" RECTANGULAR TUBING (WALL THICKNESS .188)
7 — 6"x2" RECTANGULAR TUBING (WALL THICKNESS 250)
8 — ⅝" x 1 ½" L. GALV. THREADED STUD w/ NUT & WASHER. WELD TO FRAME
9 — 3"x7"x ¾" THK. STL. PLATE w/ 1 ½" DIA. HOLE FOR GATE LOCK. ALIGN PLATE WITH GATE'S AND WELD PLATE TO VERTICAL BAR
10 — 3"x7"x ¾" THK. STL. PLATE w/ 1 ½" DIA. HOLE FOR GATE LOCK. ALIGN PLATE WITH PLATE ON STL. BAR AND WELD PLATE TO GATE FRAME. REFER TO DETAIL 4g, THIS DETAIL.
11 — ¾" x 12" L. THREADED ROD w/ WASHER & NUT. EMBED (7") INTO COLUMN - INSTALL (5) PLACES HINGE SIDE AND (3) PLACES ON OPENING
12 — 1 ½" x 1 ½" WOOD PLANT-ON
13 — 4"x4" POST
14 — 1"x6" GATE BOARD
15 — STAINLESS STEEL FASTENER
16 — GATE PULL
17 — COMPACT SUBGRADE TO 90% RELATIVE COMPACTION
18 — ⅝" DIA. HOLE (TO ACCOMODATE THREADED ROD)
19 — WELD-ON BARREL HINGE WITH GREASE FITTING (3000 LBS.)
20 — 3" x ½" THK. FLAT BAR
21 — BRONZE PLAQUE (18"x24"). MOUNT TO COLUMN
22 — GATE STAY,3"x3" STEEL POST, IN-GROUND MOUNT - CAPABLE OF LOCKING GATE IN OPEN POSITION

CONSTRUCTION NOTES

A. FENCE BOARDS: WOOD FENCE BOARDS TO BE SELECT TK CEDAR, ROUGH.

B. FENCE RAILS: WOOD RAILS TO BE SELECT TK CEDAR, ROUGH.

C. FENCE BOARD FASTENERS: ATTACH FENCE AND GATE BOARDS USING STAINLESS STEEL FASTENERS. SPLIT BOARDS CAUSED BY ATTACHING BOARDS TO RAILS OR BOARDS TO GATE FRAME, WILL NOT BE ACCEPTED AND WILL REQUIRE REPLACEMENT. PRE-DRILLING HOLES PRIOR TO ATTACHING BOARDS MAYBE NECESSAY TO AVOID WOOD SPLITING.

D. WOOD SEALER: APPLY PENOFIN #FSSNC5G NATURAL CEDAR STAIN & SEALER TRANSPARENT PENETRATING OIL FINISH STAIN & SEALER OR EQUVALENT TO ALL FENCE & GATE WOOD MATERIAL. APPLY SEALER TO FENCE AND GATE WOOD MATERIAL PRIOR TO CONSTRUCTION.

E. WELDS: ALL WELDS SHALL BE NON JAGGED ¼" FILLET WELDS. DO OT GRIND WELDS EXCEPT FO REMOVE JAGGED EDGES AND EXCESS NO-WELD MATERIAL. FIELD WELDS WILL NOT BE PREMITTED UNLESS APPROVED BY THE CITY ENGINEER.

F. STEEL FINISH: ALL STEEL (FERROUS) GATE COMPONENTS SHALL BE PAINTED. APPLY ONE (1) COAT ANTI-RUST 'ALKYD' METAL PRIMER. APPLY TWO (2) COATS OF AN 'ALKYD' ENAMEL URETHANE=SEMI GLOS PAINT. COLOR TO BE DETERMINED.

G. PUSH OR PULL FORCE TO OPEN DOOR SHALL NOT EXCEED 5 POUNDS (22.2 N)

H. SHOP DRAWINGS: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY ENGINEER FOR REVIEW AND APPROVAL

ROCK MATERIAL

SOURCE: SOUTHWEST BOULDERS & STONE
ROCK: TOPANGA OR EQUAVILENT
SIZE: 25% - 12"-18"
25% - 8"-10"
50% - 4"-6"
PHONE: (714) 882-1010

BRICK VENEER

BRICK MANUFACTURE: McNEAR BRICK AND BLOCK (888) 442-6811
SERIES: SANDMOLD
SIZE & SHAPE: STANDARD THIN (CORNERS & FLATS)
COLOR: TIVOLI
SOURCE: RESOURCE BUILDING MATERIALS
PHONE: (800) 274-2549

PRECAST COLUMN CAP

SOURCE: QCP
PHONE: (866) 703-3434
MATERIAL: SRC
FINISH: STRADA
COLOR: ADOBE TAUPE

4 ENTRY GATE & COLUMNS

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning
Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323
e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:
REGISTERED PROFESSIONAL ENGINEER SURRENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA
DMS
6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25
Seal:
REGISTERED LANDSCAPE ARCHITECT GARY M. TASQUEZ NO. 3883 SIGNATURE EXP. Feb. 2025 6/3/24 DATE STATE OF CALIFORNIA

811 DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Remarks	By
		BUILDING AND SAFETY APPROVED	
		REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY. SUBJECT TO FURTHER REVIEW AND CORRECTIONS.	
		VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.	
		7/17/2024 3:15:20 PM	
		SP-B54560	

Project :

BERKSHIRE AVENUE PARK

Owner:

City of South Pasadena

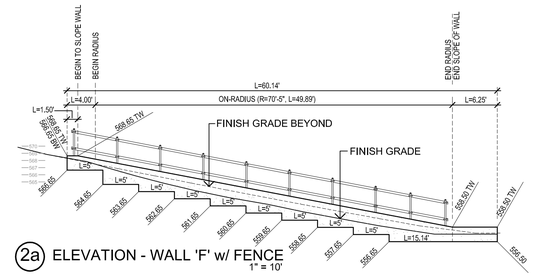
Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER, 2023
Scale :	AS SHOWN
Drawing Title :	

CONSTRUCTION DETAILS

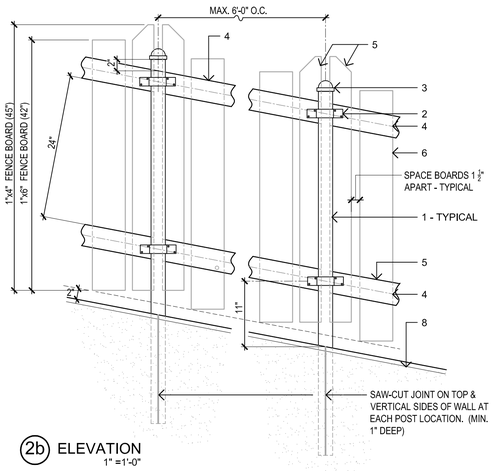
Drawing No :

CD.2

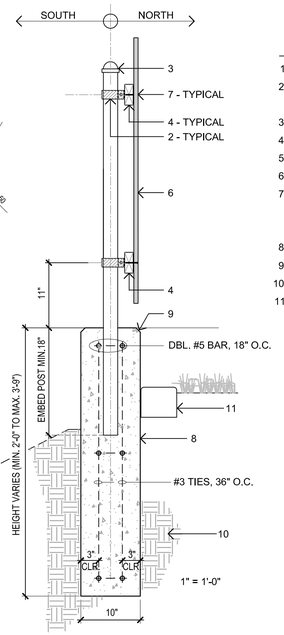
SHEET 11 OF 26



2a ELEVATION - WALL 'F' w/ FENCE
1" = 10'



2b ELEVATION
1" =1'-0"



2c SECTION
1" =1'-0"

LEGEND

1 — POST, 2 3/8" O.D. SCH. 40 POST, GALV.

2 — POST GRIP, SIMPSON STRONG TIE, #PGT2, 12 GAUGE

3 — DOME CAP, GALV.

4 — 2"x4" RAIL,TOP & BOTTOM ON ANGLE, CEDAR, ROUGH

5 — 1" x 4" FENCE BOARD, CEDAR, ROUGH

6 — 1" x 6" FENCE BOARD, CEDAR, ROUGH

7 — WOOD SCREW FASTENER, SS TYPE 305. 2 FASTENERS AT EACH BOARD/RAIL CONTACT POINT. 2" 6d S.S. COMMON NAIL OR #8 - 2" S.S., #8 -1 1/4" BUGLE HEAD STAR DRIVE WOOD SCREW WILL BE CONSIDERED ACCEPTABLE.

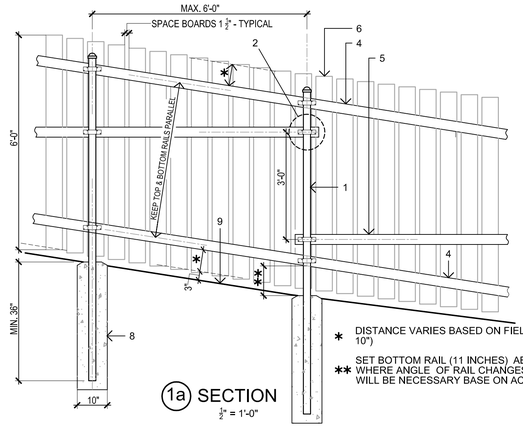
8 — CONCRETE WALL 'F' (ON-RADIUS)

9 — 3/4" 45° CHAMFER

10 — COMPACT SUBGRADE TO 90% RELATIVE COMPACTION

11 — CONCRETE HEADER - REFER TO DETAIL 4, CD.1

2 | WALL 'F' w/ 42" H. FENCE



1a SECTION
1" = 1'-0"

LEGEND

1 — POST, 2 3/8" O.D. SCH. 40 POST, GALV.

2 — POST GRIP, SIMPSON STRONG TIE, #PGT2, 12 GAUGE

3 — DOME CAP, GALV.

4 — 2"x4" RAIL,TOP & BOTTOM ON ANGLE, CEDAR, ROUGH

5 — 2"x4" RAIL, HORIZONTAL, CEDAR, ROUGH

6 — 1" x 6" FENCE BOARD, CEDAR, ROUGH

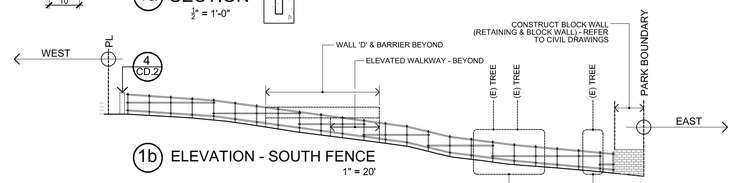
7 — WOOD SCREW FASTENER, SS TYPE 305. 2 FASTENERS AT EACH BOARD/RAIL CONTACT POINT. 2" 6d S.S. COMMON NAIL OR #8 - 2" S.S., #8 -1 1/4" BUGLE HEAD STAR DRIVE WOOD SCREW WILL BE CONSIDERED ACCEPTABLE.

8 — CONCRETE FOOTING

9 — FINISH GRADE

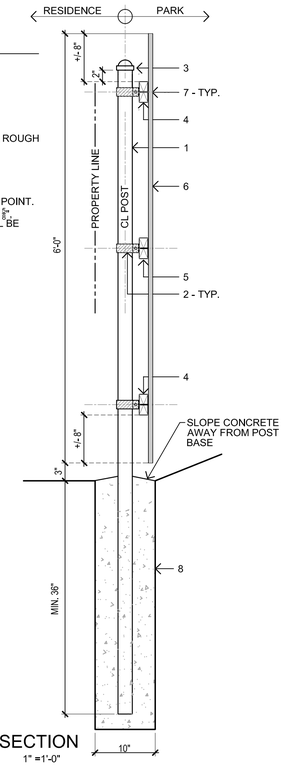
* DISTANCE VARIES BASED ON FIELD CONDITIONS. (MIN 4", MAX. 10")

** SET BOTTOM RAIL (11 INCHES) ABOVE FINISH GRADE WHERE ANGLE OF RAIL CHANGES, FIELD ADJUSTMENTS WILL BE NECESSARY BASE ON ACTURAL GRADES



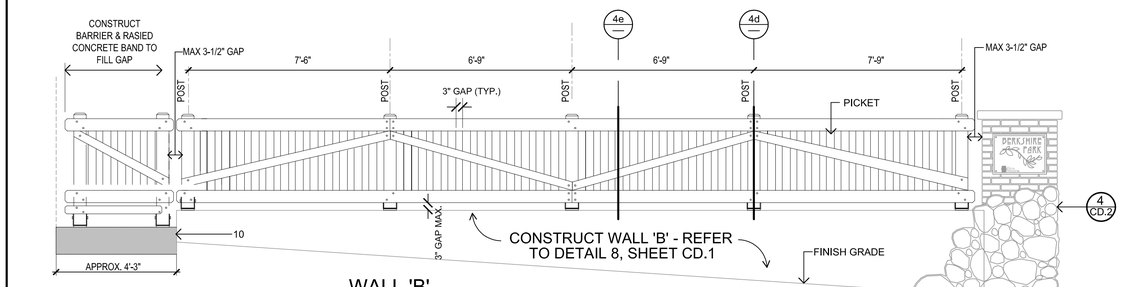
1b ELEVATION - SOUTH FENCE
1" = 20'

NOTE: THE ACTUAL FENCE ALIGNMENT MAY REQUIRE ADJUSTMENTS BASED ON FIELD CONDITIONS TO AVOID CONFLICT WITH EXISTING TREES. IF RE-ALIGNMENT IS NECESSARY, THE CONTRACTOR SHALL COORDINATE NEW ALIGNMENT WITH LANDSCAPE ARCHITECT

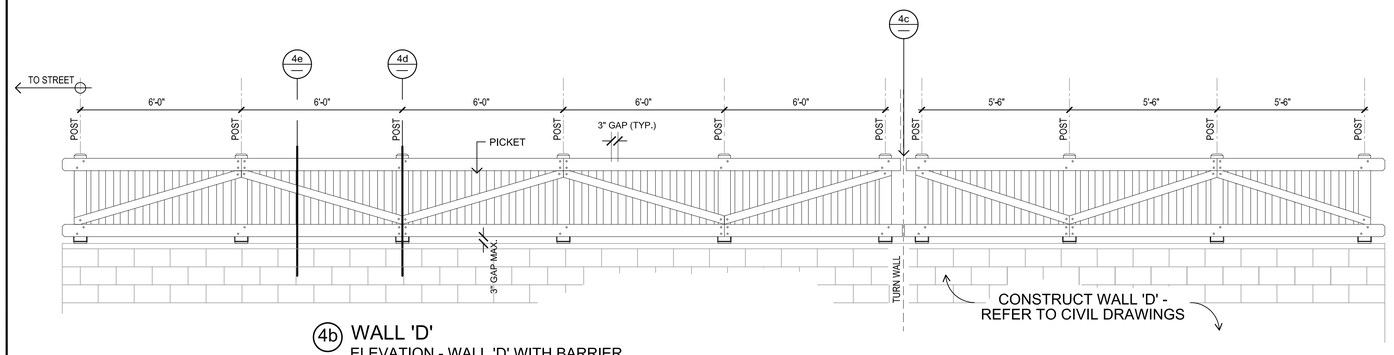


1d SECTION
1" =1'-0"

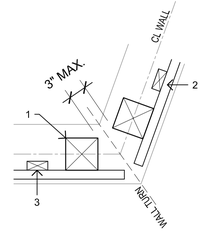
1 | 6' H. WOOD FENCE (ALONG SOUTHERN PARK BOUNDARY)



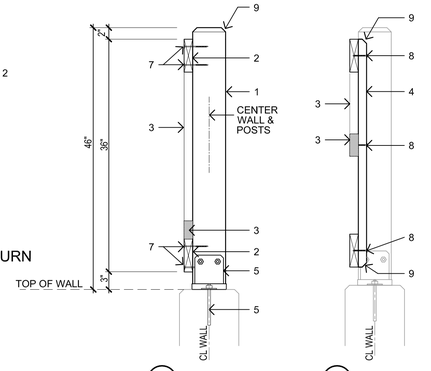
4a WALL 'B'
ELEVATION - WALL 'B' WITH BARRIER - STREET VIEW
3/8" = 1'-0"



4b WALL 'D'
ELEVATION - WALL 'D' WITH BARRIER
3/8" = 1'-0"



4c PLAN VIEW - WALL TURN
1" = 1'-0"



4d SECTION
1" = 1'-0"

4e SECTION
1" = 1'-0"

LEGEND

1 — 6"x6" WOOD POST, ROUGH CEDAR

2 — 2"x6" WOOD TOP & BOTTOM RAILS, ROUGH CEDAR

3 — 2"x4" WOOD DIAGONAL SUPPORTS, ROUGH CEDAR

4 — 2"x4" PICKETS, ROUGH CEDAR

5 — POST BASE: 6"x6" (ROUGH) OUTDOOR ACCENTS AVANT POST BASE BY SIMPSON STRONG TIE. ATTACH WOOD POST TO POST BASE w/ 4 - 3" SDWS TIMBER SCREWS. ATTACH POST BASE TO CONCRETE & CMU WALL AS SPECIFICIED BY THE MANUFUCTURER.

6 — CENTER AND ATTACH POST BASE TO TOP OF CONCRETE/CMU WALL PER MANUFACTURER'S SPECIFICATIONS

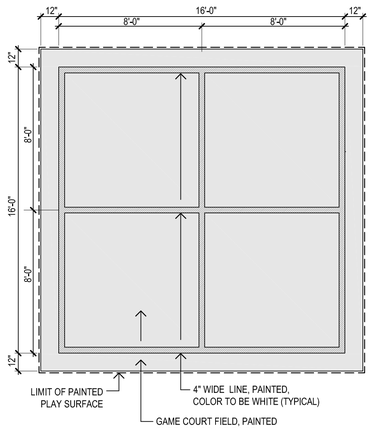
7 — 4" SDWS TIMBER SCREW (.16" SHANK) BY SIMPSON STRONG TIE

8 — 2 1/2" SDWS TIMBER SCREW (.16" SHANK) BY SIMPSON STRONG TIE.

9 — 3/4" (45°) CHAMFER, TOP & BOTTOM

10 — CONSTRUCT RAISED CONCRETE BAND - REFER TO DETAIL 3, CD.1

4 | POST & RAIL FENCE & BARRIER



GAME COURT SURFACING

1. PREP THE CONCRETE SURFACE TO RECEIVE COLOR PER THE MANUFACTURER'S RECOMMENDATIONS.
2. PRIOR TO APPLYING ANY COURT SURFACING THE CONCRETE MUST BE CURE FOR 28 DAYS.
3. APPLY MANUFACTUR'S APPROVED CONCRETE PRIMER OR SEALER TO THE CONCRETE FLATWORK PRIOR TO APPLYING COLOR COAT.
4. APPLY AN EXTERRIOR ACRYLIC COLOR SURFACING AS RECOMMENDED BY THE COLOR COURT SURFACING MANUFACTURER. COLOR OF THE FIELD TO BE DETERMINED.
5. THE CONTRACTOR SHALL SUBMIT A COLOR CHART FOR THE CITY'S REVIEW AND APPROVAL OF THE FINAL COLOR SELECTION.

1/4" = 1'-0"

3 | FOUR SQUARE COURT-LAYOUT, SURFACING & STRIPING

Landscape Architect:
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Landscape Architecture & Park Planning
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SURRENDER M. DEWAN
NO. 34559
Exp. 9/30/25
CIVIL
STATE OF CALIFORNIA

DMS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT
GARY D. TASQUEZ
NO. 3883
SIGNATURE
EXP. Feb. 2025
6/3/24
DATE
STATE OF CALIFORNIA

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BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions	By

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3/14/2024 - 3:15:20 PM
SP-B54560

Project :

BERKSHIRE AVENUE PARK

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER, 2023
Scale :	AS SHOWN
Drawing Title :	

CONSTRUCTION DETAILS

Drawing No :

CD.3

SHEET 12 OF 26

IRRIGATION POINT OF CONNECTION

FOR DOMESTIC WATER SERVICE AND SERVICE LINE REFER TO CIVIL PLANS.

CONTRACTOR TO INSTALL BACKFLOW PREVENTER, MASTER VALVE AND FLOW SENSOR, REFER TO IRRIGATION LEGEND. LINK NEW COMPONENTS TO CONTROLLER 'A' WITH 14 GA. CONTROL WIRES TO BE INSTALLED IN 1-1/4" CONDUIT. CONTRACTOR TO INSTALL NEW MAINLINE AND ALL NECESSARY FITTINGS FROM THE WATER METER.

IRRIGATION WATER METER INFORMATION

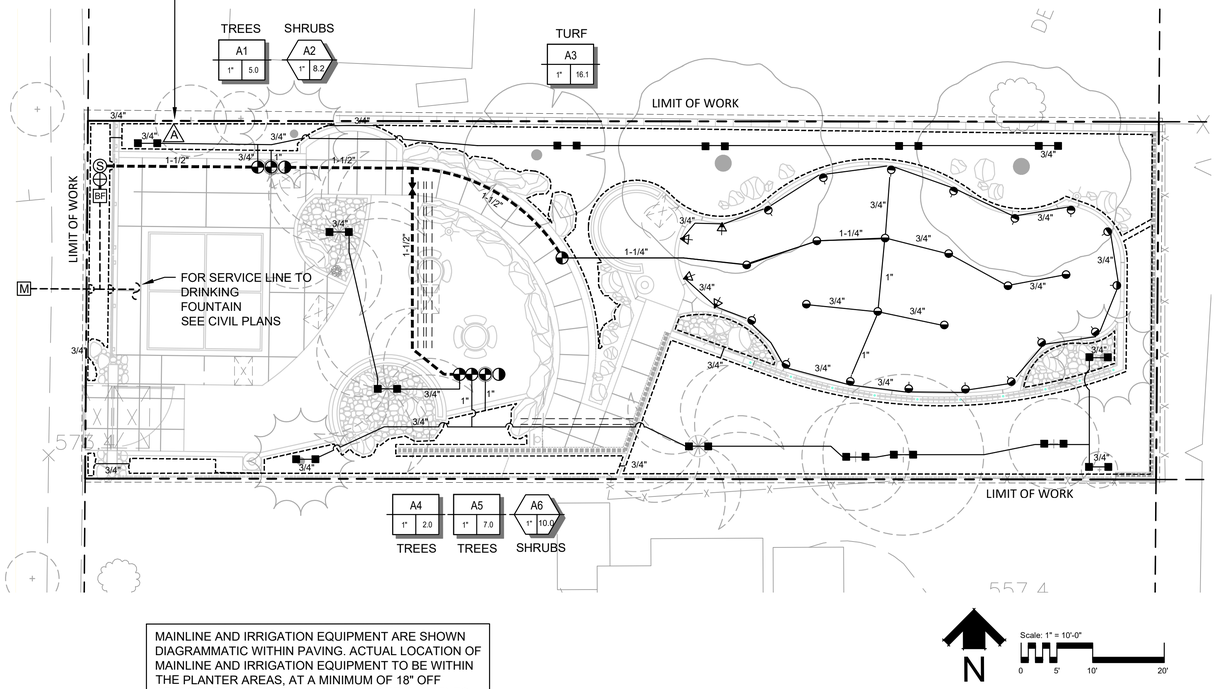
DOMESTIC WATER 'M' SIZE.....1-1/2"
WATER METER ADDRESS.....TBD
STATIC PRESSURE.....80(±5) PSI
DESIGN WATER PRESSURE.....67.4 PSI
MAXIMUM DEMAND.....16.1 GPM

NOTE

VERIFY THE ACTUAL LOCATION, SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. IF ANY OF THE P.O.C. INFORMATION SHOW ON THESE DRAWINGS IS FOUND TO BE DIFFERENT THAN THE ACTUAL P.O.C. INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE P.O.C. INFORMATION ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

CONTROLLER 'A'

(8) STATION IRRIGATION CONTROLLER,
REFER TO IRRIGATION LEGEND.
REFER TO ELECTRICAL PLANS FOR POWER SUPPLY.



MAINLINE AND IRRIGATION EQUIPMENT ARE SHOWN DIAGRAMMATIC WITHIN PAVING. ACTUAL LOCATION OF MAINLINE AND IRRIGATION EQUIPMENT TO BE WITHIN THE PLANTER AREAS, AT A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER SITE ELEMENTS. DO NOT INSTALL VALVES IN TURF.

IRRIGATION LEGEND

IN-LINE DRIP

SYMBOL	MANUFACTURER/ DESCRIPTION	NOZZLE	RAD.	HOUSING	FLOW	PSI	PRECIP. RATE
	RAINBIRD DRIP LINE TUBING AREA PERIMETER	XFS-06-12	N/A	INSTALL 4" BELOW FINISH GRADE. REFER TO DETAILS FOR TUBING LAYOUT.	0.6 GPH	30	N/A

TREE AND PALM TREE STREAM BUBBLERS

SYMBOL	MANUFACTURER/ DESCRIPTION	NOZZLE	RAD.	HOUSING	FLOW	PSI	PRECIP. RATE
■	RAINBIRD 6" POP-UP SPRAY BODY WITH HUNTER NOZZLE	MSBN-50Q STREAM BUBBLER	1.5 FT	1806-SAM-PRS (2 EA.) BUBBLERS PER TREE	0.5 GPM	30	1.5 IN/HR

ROTARY NOZZLES

SYMBOL 360°	210°	180°	90°	45°	MANUFACTURER/ DESCRIPTION	NOZZLE	RAD.	HOUSING	GPM 360°	210°	180°	90°	45°	PSI	PRECIP. RATE
		⏚			RAINBIRD 6" POP-UP HUNTER NOZZLE	MP800SR W/ HY FILTER	6'	1806-SAM-PRS			0.26	0.13		30	0.90 IN/HR
◒		◒			RAINBIRD 6" POP-UP HUNTER NOZZLE	MP800SR W/ HY FILTER	11'	1806-SAM-P45	0.85		0.46	0.25		45	0.90 IN/HR

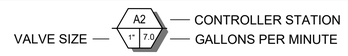
MISCELLANEOUS MATERIAL

SYMBOL	MANUFACTURER/ DESCRIPTION	MODEL	HOUSING	COMMENTS
◓	RAINBIRD REMOTE CONTROL VALVE	PEB	CARSON #1419 W/ FLUSH COVER AND L-BOLT LOCK	SIZE PER PLAN
◓	RAINBIRD REMOTE CONTROL DRIP ZONE KIT	XCZ-100-PRB-COM 120 MESH	CARSON #1220 W/ FLUSH COVER AND L-BOLT LOCK	SIZE PER PLAN
◑	RAINBIRD 1" QUICK COUPLING VALVE	44LRC	CARSON # 910 W/ T-COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
⋈	NIBCO GATE VALVE	T-113-K	CARSON # 910 W/ T-COVER AND L-BOLT LOCK	VALVE SIZE TO MATCH LINE SIZE
N/A	NETAFIM LINE FLUSHING VALVE	TL050MFV-1	CARSON # 910 W/ T-COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
N/A	RAINBIRD AIR RELIEF VALVE KIT	ARV050	CARSON #910 W/ T-COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
M	DOMESTIC WATER METER	REFER TO CIVIL PLANS FOR NEW WATER SERVICE		
BF	1" FEBCO BACKFLOW PREVENTER	LF825Y (LEAD FREE)	STRONG BOX SBBC-45SS	INSTALL PER MANUFACT. SPECIFICATIONS
⊕	SUPERIOR 1" MASTER VALVE (NORMALLY OPEN)	3100	CARSON #1419 W/ FLUSH COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
Ⓢ	GPI FLOWMEC ULTRASONIC 1" FLOW SENSOR	QS200-10	CARSON #1419 W/ FLUSH COVER AND L-BOLT LOCK	INSTALL PER MANUFACT. SPECIFICATIONS
Ⓐ	CALSENSE (8) STATION IRRIGATION CONTROLLER SITEONE CONTROLLER ASSEMBLY	CA6-CS5-8/ CS3-GR / GR-STUBBY / COMM 5YR		INSTALL PER MANUFACT. SPECIFICATIONS.

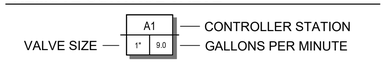
PIPING

SYMBOL	MANUFACTURER/ DESCRIPTION	MODEL	COMMENTS
- - - - - -	PRESSURE MAINLINE	USE PVC CLASS 315 FOR SIZES 2" AND LARGER AND PVC SCH.40 FOR SIZES 1-1/2" AND SMALLER.	INSTALL PER DETAILS
———	NON-PRESSURE LATERAL LINE	SCHEDULE 40 PVC	SIZE PER PLAN INSTALL PER DETAILS
= = = = = = = = =	SLEEVING	SCHEDULE 40 PVC	REFER TO IRRIGATION NOTES ON SHEET LI.4. INSTALL PER DETAILS

REMOTE CONTROL DRIP ZONE KIT



REMOTE CONTROL VALVE



REFER TO SHEETS LI.2 AND LI.3 FOR IRRIGATION DETAILS
REFER TO SHEET LI.4 FOR IRRIGATION NOTES AND CALCULATIONS

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
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Consultant:
REGISTERED PROFESSIONAL ENGINEER SURRENDER M. DEWAN NO. 34559 Exp. 9/30/25 CIVIL STATE OF CALIFORNIA
DMS
6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:
REGISTERED LANDSCAPE ARCHITECT MARY M. TASQUEZ NO. 3883 SIGNATURE EXP. Feb. 2025 6/3/24 DATE STATE OF CALIFORNIA

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No.	Date	Revisions	By

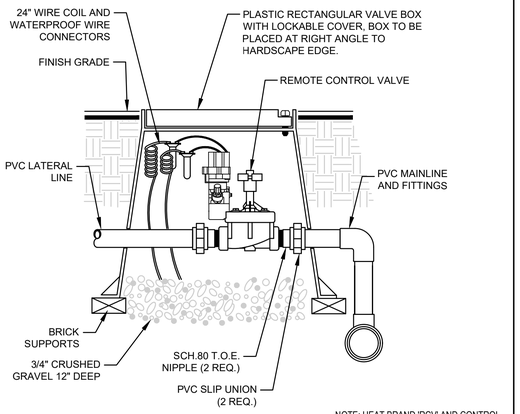
Project :
BERKSHIRE AVENUE PARK

Owner:
City of South Pasadena

Project No :
Drawn By : PC / LP
Checked By : GV / ES
Date : SEPTEMBER, 2023
Scale : AS SHOWN
Drawing Title :

IRRIGATION PLAN

Drawing No :
LI.1
SHEET 13 OF 26

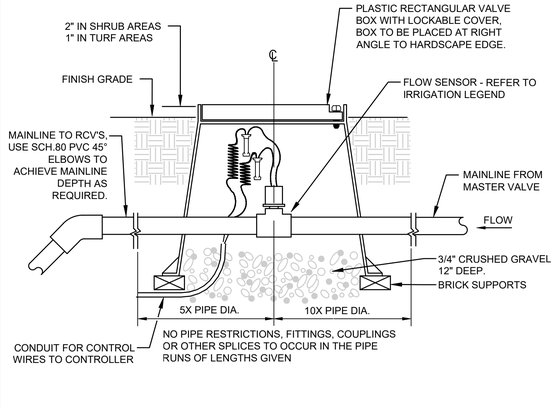


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

D | REMOTE CONTROL VALVE

NOT TO SCALE

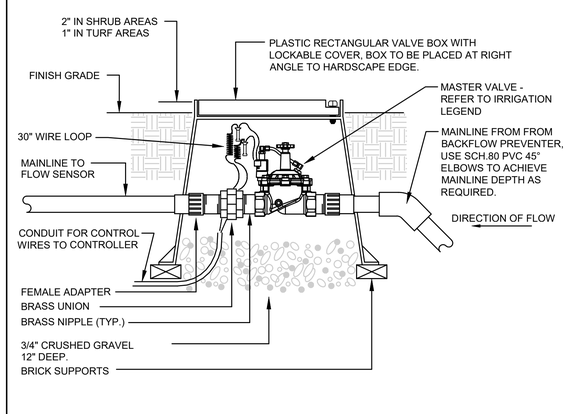


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

C | FLOW SENSOR

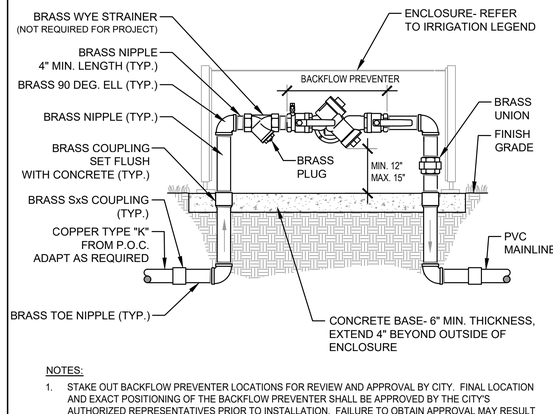
NOT TO SCALE



NOTE:
1. HEAT BRAND 'MV' ON LID IN 2" LETTERS
2. USE ALL BRASS PIPING ON DISCHARGE SIDE OF MASTER VALVE

B | MASTER VALVE

NOT TO SCALE



NOTES:

1. STAKE OUT BACKFLOW PREVENTER LOCATIONS FOR REVIEW AND APPROVAL BY CITY. FINAL LOCATION AND EXACT POSITIONING OF THE BACKFLOW PREVENTER SHALL BE APPROVED BY THE CITY'S AUTHORIZED REPRESENTATIVES PRIOR TO INSTALLATION. FAILURE TO OBTAIN APPROVAL MAY RESULT IN RELOCATION OF BACKFLOW PREVENTER PER CITY'S DIRECTION AT NO ADDITIONAL COST TO OWNER.
2. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

A | BACKFLOW PREVENTER

NOT TO SCALE

H | SLEEVE INSTALLATION

NOT TO SCALE

NOTES:

1. TAPE CONTROL WIRES EVERY 10'
2. IN ROCKY SOILS INSTALL PIPING IN SAND BED
3. 24" DEPTH REQUIRED FOR ALL DOMESTIC MAINLINES

G | PIPE INSTALLATION

NOT TO SCALE

NOTE: HEAT BRAND 'GV' ONTO LID IN 2" LETTERS

NOTES:

1. BOX TO BE INSTALLED TO ALL FOR PROPER OPERATION OF GATE VALVE

F | GATE VALVE

NOT TO SCALE

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

E | REMOTE CONTROL DRIP ZONE KIT

NOT TO SCALE

L | POP-UP SPRAY HEAD

NOT TO SCALE

NOTE: HEAT BRAND 'QC' ONTO LID IN 2" LETTERS

K | QUICK COUPLING VALVE

NOT TO SCALE

NOTE: HEAT BRAND 'PB' ONTO LID IN 2" LETTERS

J | PULL BOX

NOT TO SCALE

NOTE:
- WIRE CONNECTORS SHALL BE A 3M DBY DIRECT BURY SPLICE KIT. KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR, A POLYPROPYLENE TUBE, AND A WATERPROOF - SEALING GEL. TUBE SHALL BE SUPPLIED PRE-FILLED WITH GEL. SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2-3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES.
- LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

I | WIRE CONNECTIONS

NOT TO SCALE

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GARY M. VASQUEZ
NO. 3883
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811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

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No.	Date	Revisions	By

Project :

BERKSHIRE AVENUE PARK

Owner:

City of South Pasadena

Project No :	
Drawn By :	PC / LP
Checked By :	GV / ES
Date :	SEPTEMBER, 2023
Scale :	AS SHOWN

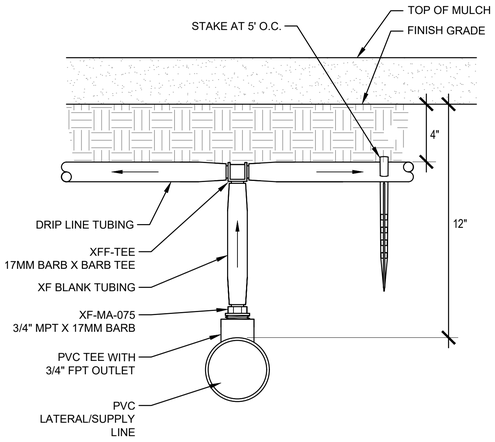
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IRRIGATION DETAILS

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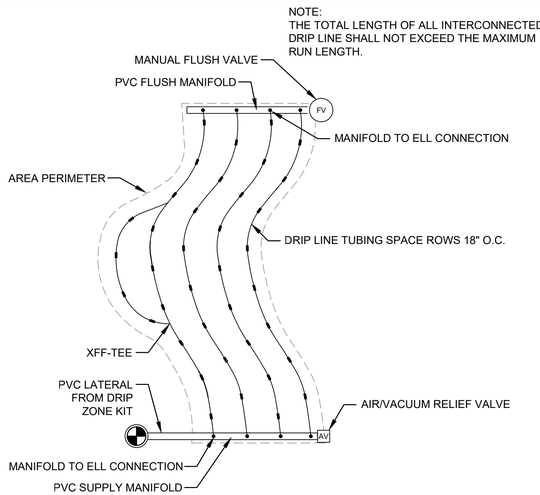
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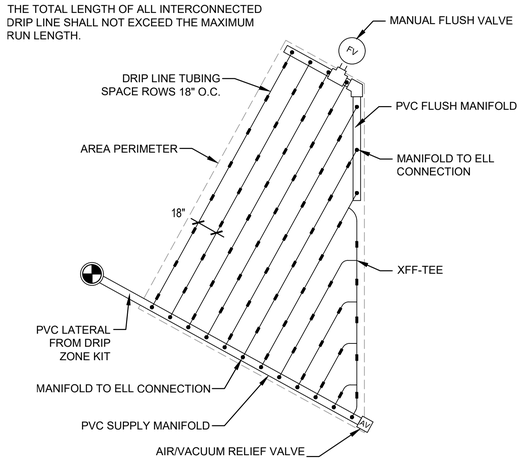
D | DRIP LINE MANIFOLD TO TEE CONNECTION

NOTE:
THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE SHALL NOT EXCEED THE MAXIMUM RUN LENGTH.



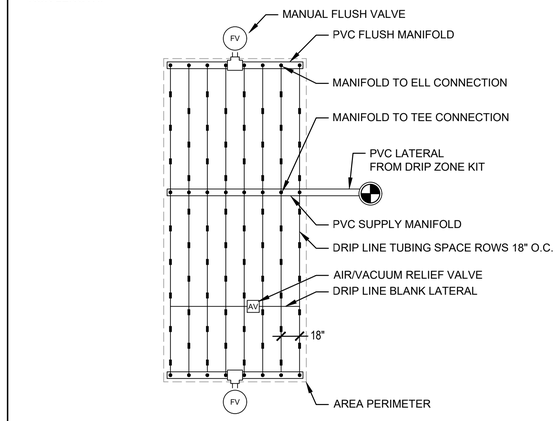
C | DRIP LINE IRREGULAR LAYOUT NOT TO SCALE

NOTE:
THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE SHALL NOT EXCEED THE MAXIMUM RUN LENGTH.



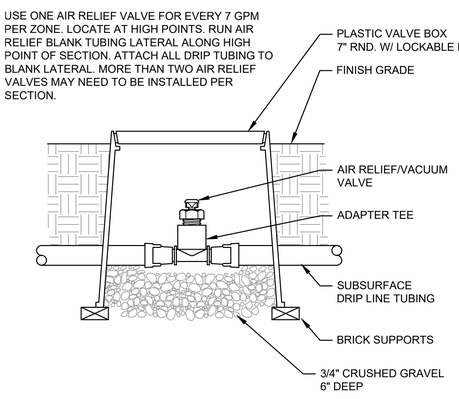
B | DRIP LINE TRIANGULAR LAYOUT NOT TO SCALE

NOTE:
THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE SHALL NOT EXCEED THE MAXIMUM RUN LENGTH.



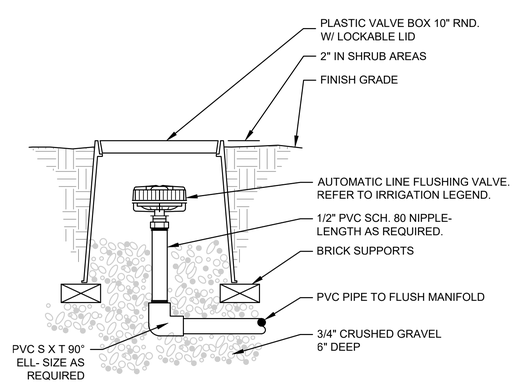
A | DRIP LINE LAYOUT NOT TO SCALE

USE ONE AIR RELIEF VALVE FOR EVERY 7 GPM PER ZONE. LOCATE AT HIGH POINTS. RUN AIR RELIEF BLANK TUBING LATERAL ALONG HIGH POINT OF SECTION. ATTACH ALL DRIP TUBING TO BLANK LATERAL. MORE THAN TWO AIR RELIEF VALVES MAY NEED TO BE INSTALLED PER SECTION.



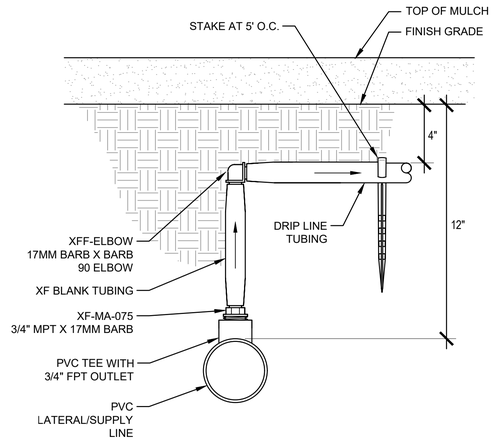
NOTE: HEAT BRAND 'AR' ONTO LID IN 2" LETTERS

G | DRIP AIR RELIEF VALVE NOT TO SCALE

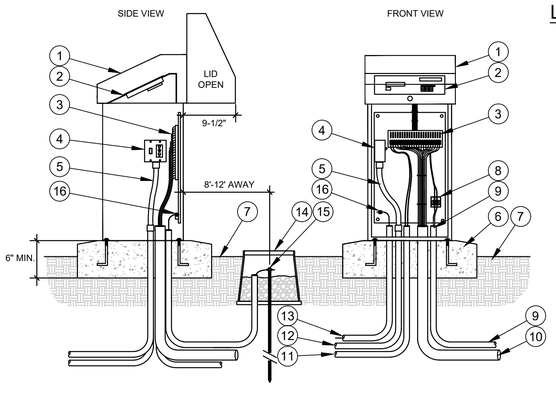


NOTE: HEAT BRAND 'FV' ONTO LID IN 2" LETTERS

F | LINE FLUSHING VALVE NOT TO SCALE



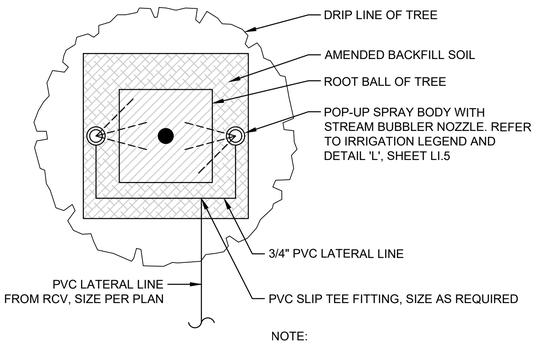
E | DRIP LINE MANIFOLD TO ELL CONNECTION NOT TO SCALE



LEGEND

1. STRONG BOX STAINLESS STEEL NEMA 3R RAINPROOF ENCLOSURE (UL LISTED).
2. CONTROLLER ASSEMBLY. ASSEMBLED IN ENCLOSURE BY JOHN DEERE GREEN TECH.
3. TERMINAL STRIP FOR VALVE WIRES.
4. POWER SWITCH/GFCI RECEPTACLE.
5. ELECTRICAL FLEX CONDUIT FOR POWER.
6. 6" MIN. THICK, CONCRETE PAD WITH ANCHOR BOLTS PER MANUFACTURER RECOMMENDATIONS.
7. FINISHED GRADE.
8. FLOW SENSOR TERMINAL BOARD.
9. 1" CONDUIT AND SWEEP ELL WITH FLOW SENSOR CABLE.
10. 3" CONDUIT AND SWEEP ELL FOR LEAD WIRES.
11. 1" CONDUIT AND SWEEP ELL FOR MASTER VALVE WIRES.
12. 1" CONDUIT AND SWEEP ELL FOR 110 VAC POWER LINE.
13. 1" CONDUIT AND SWEEP ELL FOR GROUND WIRE.
14. 10" ROUND VALVE BOX AROUND GROUND ROD. FILL WITH ¾" CRUSHED ROCK.
15. ⅝" X 8' GROUND ROD WITH #6 GROUND WIRE AND CLAMP. LOCATE 8'-12' FROM ENCLOSURE.
16. #6 GROUND WIRE SECURED TO BACKBOARD GROUNDING TERMINAL.

J | CONTROLLER ASSEMBLY NOT TO SCALE



NOTE:
ADJUST THE NOZZLE STREAMS TO WET THE ROOT BALL WITHOUT HITTING THE TRUNK OF THE TREE.

FOR EXISTING TREES LOCATE SPRAY BODIES NEAR DRIP LINE OF TREE TO EFFECTIVELY WATER THE ROOT ZONE.

I | TREE STREAM BUBBLER NOT TO SCALE

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City of South Pasadena

Project No :	
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Drawing Title :	

IRRIGATION DETAILS

Drawing No :

LI.3

SHEET 15 OF 26

PRESSURE LOSS CALCULATION

LANDSCAPE IRRIGATION WATER METER					
STATION		GPM DEMAND	STATIC PRESSURE	IRRIGATION TYPE	IRRIGATING
A3		16.1	80.0	SPRAY	TURF
QTY	SIZE	MATERIAL	DESCRIPTION	GPM	PSI LOSS
21 FT	1-1/2"	COPPER	SERVICE LINE	16.1	0.03
1 EA	1-1/2"	DISC	WATER METER	16.1	0.40
1 EA	1"	BRONZE	BACKFLOW	16.1	12.00
1 EA	1"	BRASS	MASTER VALVE	16.1	1.50
1 EA	1-1/2"	PVC	FLOW SENSOR	16.1	1.00
75 LF	1-1/2"	SCH 40 PVC	MAINLINE	16.1	0.57
1 EA	1"	PVC	CONTROL VALVE	16.1	2.35
45 FT	1-1/4"	SCH 40 PVC	LATERAL	16.1	0.25
20 FT	1"	SCH 40 PVC	LATERAL	7.7	1.80
54 FT	3/4"	SCH 40 PVC	LATERAL	3.2	0.50
				SUB-TOTAL	20.39
				MISC. FITTINGS ALLOWANCE (10% OF TOTAL)	2.03
				TOTAL COMPONENT LOSSES	22.43
				MINIMUM PRESSURE REQUIRED BY HEAD	40.00
				TOTAL PRESSURE REQUIRED TO OPERATE	62.43
				ELEVATION LOSS (17.30')	+7.49
				ELEVATION GAIN (0.00')	-0.00
				RESIDUAL PRESSURE	25.06

GENERAL IRRIGATION NOTES

1. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALL, RETAINING WALLS, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL REPAIR OR REPLACE, AT NO ADDITIONAL COST TO THE CITY, ALL ITEMS DAMAGED BY HIS WORK. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS, UNDER ROADWAYS AND PAVING, ETC.

2. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE AREA DIMENSION EXIST THAT MIGHT NOT HAVE BEEN ADDRESSED IN THE DESIGN OF THE IRRIGATION SYSTEM. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY ALTERATIONS TO THE WORK.

3. THE CONTRACTOR SHALL OBTAIN, COORDINATE, AND PAY FOR ANY AND ALL INSPECTIONS AS REQUIRED.

4. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY ENCROACHMENT INTO ADJACENT PROPERTY, R.O.W.'S EASEMENTS SETBACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.

5. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE SPECIFIED. INSTALL ALL HEADS WITH DOUBLE SWING JOINTS AS PER DETAIL. ALL HEADS ADJACENT TO PARKING LOTS, WALKS, ROADS, OR OTHER PAVED AREAS SHALL BE INSTALLED WITH POP-UP BODIES.

6. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE WITH MINIMAL MISTING AND/OR OVER SPRAY ONTO WALKS, STREETS, WALLS, ETC. SUBSTITUTION OF NOZZLE PATTERN OR RADIUS AS REQUIRED TO ACHIEVE OPTIMUM COVERAGE IS RESPONSIBILITY OF CONTRACTOR.

7. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

8. TRENCHING WITHIN THE DRIPLINE OF LARGE EXISTING TREES SHALL BE PERFORMED BY HAND, AND WITH EXTREME CARE NOT TO SEVER ROOTS 1-1/2" IN DIAMETER AND LARGER. WHERE ROOTS 1-1/2" IN DIAMETER AND LARGER ARE ENCOUNTERED, THE CONTRACTOR SHALL TUNNEL UNDER SAID ROOTS. EXPOSED ROOTS THAT HAVE BEEN TUNNELED UNDER SHALL BE WRAPPED IN WET BURLAP AND KEPT MOIST WHILE THE TRENCH IS OPEN.

9. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.

IRRIGATION SYSTEM LAYOUT

DUE TO THE SCALE OF THESE DRAWINGS THE CONTRACTOR SHOULD BE AWARE OF THE POSSIBILITY THAT THE NEED FOR MINOR ADJUSTMENTS TO THE IRRIGATION SYSTEM MAY BE NECESSARY TO PROVIDE PROPER COVERAGE. THESE ADJUSTMENTS COULD INCLUDE NOZZLE CHANGES AND/OR ADDITION OR DELETION OF INDIVIDUAL HEADS TO COMPENSATE FOR CHANGES MADE ON THE SITE. FURTHERMORE, THE IRRIGATION DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATIONS ONLY AND SHALL BE INSTALLED IN **SHRUB** AREAS WHEREVER POSSIBLE.

EXISTING CONDITIONS

THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY EXISTING DAMAGED ITEMS DURING CONSTRUCTION INCLUDING HARDSCAPE, LIGHTING, DRAINAGE, IRRIGATION EQUIPMENT, TREES, SHRUBS, TURF AND GROUNDCOVER. THE CONTRACTOR SHALL REPLACE ANY AND ALL DAMAGED ITEMS TO THE SATISFACTION OF THE ENGINEER.

EQUIPMENT BOXES

ALL REMOTE CONTROL VALVES, GATE VALVES, QUICK COUPLERS, ETC. SHALL BE INSTALLED IN SPECIFIED **TAN** SUBGRADE VALVE BOXES AS SHOWN IN IRRIGATION LEGEND COMPLETE WITH LOCKING COVERS. VALVE BOXES SHALL BE CARSON BROOKS OR APPROVED EQUAL AND SHALL BE MARKED 'G.V.' FOR GATE VALVES, 'R.C.V.' FOR REMOTE CONTROL VALVES, 'Q.C.' FOR QUICK COUPLERS, ETC. REMOTE CONTROL VALVE BOXES ARE ALSO TO BE HEAT BRANDED WITH THE CONTROLLER AND STATION NUMBER. ALL MARKINGS SHALL BE 2" LETTERS AND NUMBERS.

REMOTE CONTROL VALVE LABELS

ALL VALVES ARE TO BE FASTENED WITH CHRISTY'S VALVE IDENTIFICATION TAGS IDENTIFYING STATION # AND APPROPRIATE CONTROLLER IDENTIFICATION INFORMATION.

SLEEVING

SLEEVES SHALL BE PLACED UNDER ALL DRIVEWAYS AND WALKS WHERE IRRIGATION LATERAL, MAINLINE, AND WIRE WILL CROSS. SLEEVES SHALL BE PVC SCH. 40, MINIMUM BURY 36" DEEP. MINIMUM DISTANCE PAST EDGE OF DRIVEWAY OR CONCRETE WALK SHALL BE 24". WATER AND WIRE SHALL NOT BE PLACED IN THE SAME SLEEVE. SLEEVES TO BE TWICE THE DIAMETER OF THE PIPE BEING SLEEVED. WIRE SLEEVES TO BE 2" DIA.

POLYVINYL CHLORIDE PIPE CEMENT

IPS WELD-ON PVC 721 BLUE MEDIUM-BODIED (USE WITH 1/2" TO 1-1/2" PVC PIPE)
IPS WELD-ON PVC 711 GRAY HEAVY-BODIED (USE WITH 2" AND LARGER PVC PIPE AND ALL MAIN LINES)

POLYVINYL CHLORIDE PIPE PRIMER

IPS WELD-ON P-70 PRIMER PURPLE (USE WITH ALL PVC CONNECTIONS)

DETECTABLE MARKING TAPE

'CHRISTY'S' UNDERGROUND MARKING TAPE SHALL BE RUN WITH ALL MAINLINES AND MUST BE INSTALLED AT LEAST 6" ABOVE TOP OF PIPE.

DIRECT BURIAL CONTROL WIRES

(SOLID COPPER, 600 VOLT, TYPE UF)

COMMON WIRES:
WHITE (#12 AWG)

STATION WIRES:
(#14 AWG) COLOR-CODED REQUIREMENTS PER CITY STANDARD. SPARE WIRES MUST BE RUN TO THE FARTHEST VALVE MANIFOLD FROM THE CONTROLLER.

WIRE SPLICES/ CONNECTORS ARE TO BE 3M DBY DIRECT BURY SPLICE KIT. USE EXTRA SEALANT INSIDE CONNECTORS.

PVC PIPE FITTINGS

ALL FITTINGS CONNECTING PVC TO PVC SHALL BE SPEARS 'EverTUFF TURF FITTINGS' COLORED BLUE OR APPROVED EQUAL. ALL PVC FITTINGS TO BRASS VALVES SHALL BE REINFORCED WITH STAINLESS STEEL COLLAR.

STATIC PRESSURE

THE IRRIGATION SYSTEM DESIGN IS BASED ON A STATIC PRESSURE OF **80** PSI AT THE STREET MAINLINE. THE CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE ENGINEER.

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Berkshire Ave, South Pasadena, CA, 91030

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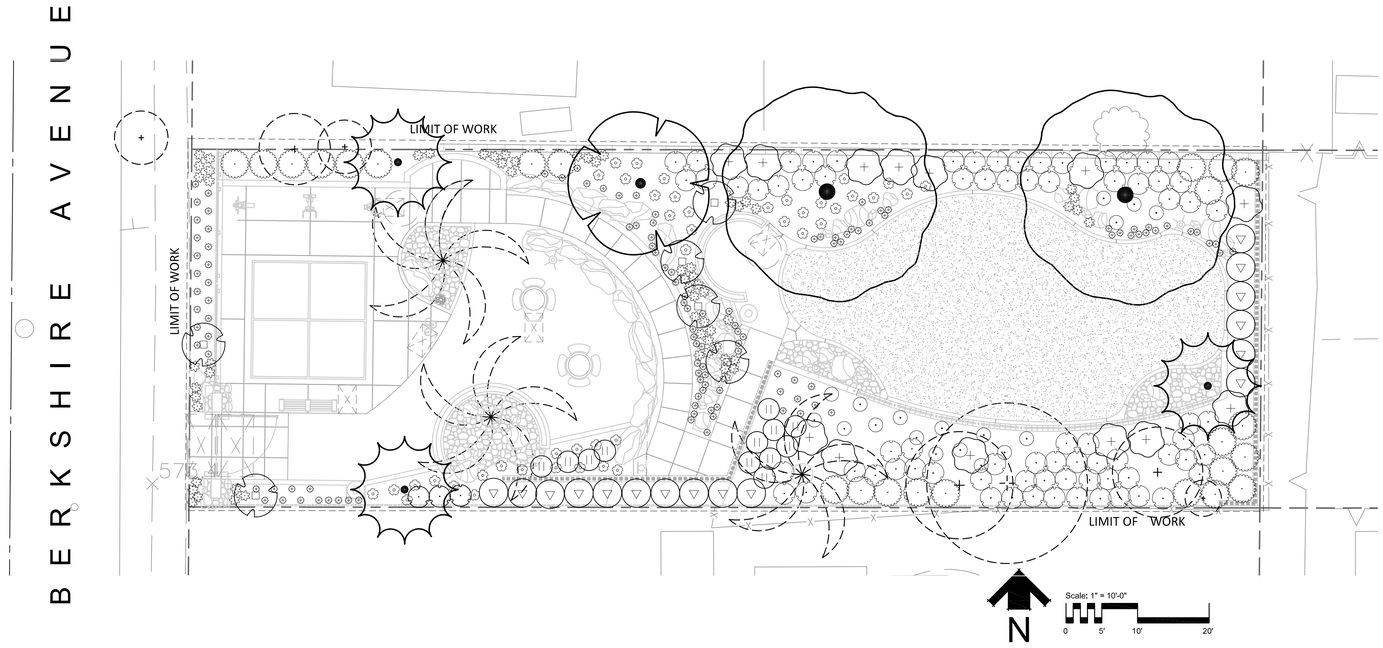
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IRRIGATION NOTES AND CALCULATIONS

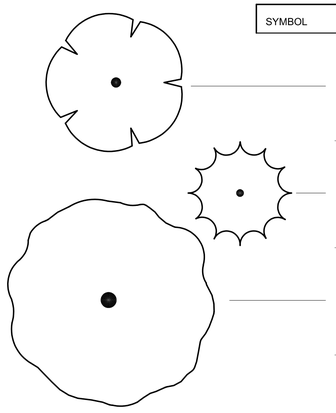
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LI.4



PLANT LEGEND

TREES



SYMBOL	BOTANICAL NAME / COMMON NAME	QUANTITY	SIZE	COMMENTS	WUCOLS
	Arbutus x 'Marina' MARINA STRAWBERRY TREE	1	24" BOX	LOW BRANCHING	MEDIUM
	Magnolia grandiflora 'Little Gem' LITTLE GEM MAGNOLIA	3	24" BOX	STANDARD	LOW
	Quercus suber CORK OAK	2	36" BOX	STANDARD	LOW

SHRUBS & GROUND COVERS

SYMBOL	BOTANICAL NAME / COMMON NAME	QUANTITY	CONTAINER SIZE	COMMENTS	WUCOLS
	Aloe 'Rooikappie' LITTLE RED RIDING HOOD ALOE	62	1 GAL	—	LOW
	Agave victoiae-reginae QUEEN VICTORIA AGAVE	119	1 GAL	—	LOW
	Cistus x pulverulentus 'Sunset' SUNSET ROCKROSE	75	1 GAL	—	LOW
	Cotoneaster dameri 'Coral Beauty' CORAL BEATY COTONEASTER	18	1 GAL	—	LOW
	Lantana sellowiana WHITE LIGHTING TRAILING LANTANA	43	1 GAL	—	LOW
	Eucalyptus lunata 'Moon Lagoon' FINE-LEAFED MALLEE	7	5 GAL	—	LOW
	Juniperus scopulorum 'Skyrocket' SKYROCKET JUNIPER	12	15 GAL	—	MEDIUM
	Olea europaea 'Montra' LITTLE OLIVE	24	5 GAL	—	LOW
	Prunus caroliniana 'Monus' BRIGHT 'N TIGHT CAROLINA LAUREL	16	15 GAL	—	MEDIUM
	Teucrium fruticans 'Azureum' AZURE BUSH GERMANDER	13	5 GAL	—	LOW

TURF

SYMBOL	TURF TYPE	COMMENTS	WATER USE
	SOD: BANDERA BERMUDA *SOD ROLLS: REGULAR ROLLS, 24"x60"* *GROWER: WEST COAST TURF* *CONTACT: (760) 340-7300*	FOLLOW WEST COAST TURF SPECIFICATIONS FOR SOD INSTALLATION, ESTABLISHMENT AND MAINTENANCE. AMEND SOIL PER SOIL REPORT RECOMMENDATIONS.	HIGH

EXISTING TREES

EXISTING PALM TREE TO PROTECT IN PLACE.

EXISTING TREE TO PROTECT IN PLACE.

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DATE
STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES IN THE AREA OF WORK THAT ARE DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions	By

Project :

BERKSHIRE AVENUE PARK

Berkshire Ave, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :
Drawn By : PC / LP
Checked By : GV / ES
Date : SEPTEMBER, 2023
Scale : AS SHOWN
Drawing Title :

PLANTING PLAN

Drawing No :

LP.1

SHEET 17 OF 26

PLANTING NOTES

1. ALL LOCAL, MUNICIPAL, COUNTY AND STATE LAWS, RULES, AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE PART OF THE PROJECT PLANS AND SPECIFICATIONS; AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR. ADDITIONALLY, ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE APWA, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, ("GREEN BOOK"), AND THE PROJECT SPECIFICATIONS.

WHENEVER SPECIAL REQUIREMENTS CONFLICT ON ANY SUBJECT MATTER, THE PARKS SUPERINTENDENT, OR HIS/HER DESIGNATED REPRESENTATIVE, WILL DETERMINE WHICH SPECIAL REQUIREMENTS AND/OR CODES SHALL GOVERN.

2. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA (DIG ALERT) AT LEAST TWO (2) WORKING DAYS BEFORE DIGGING, EXCAVATING, OR CONSTRUCTION. PHONE 1-800-422-4333 OR 811.

3. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES, OR DISCREPANCIES IN AREA CONFIGURATION OR SIZES, OR IN DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN ENGINEERING. SUCH OBSTRUCTIONS, OR DIFFERENCES, SHOULD BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER, OR HIS DESIGNATED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AND SHALL PERFORM SUCH REVISIONS AT HIS OWN EXPENSE.

4. FINISH GRADE ALL PLANTING AREAS TO ACHIEVE A MINIMUM 2% DRAINAGE AND SMOOTH AND EVEN CONDITION, MAKING SURE THAT NO WATER POCKETS OR IRREGULARITIES REMAIN. REMOVE AND DISPOSE OF ALL SURFACE STONES, ROOTS, WEEDS, DEBRIS, FOREIGN MATERIALS, CLODS, AND ROCKS OVER (1) INCH IN DIAMETER SO THAT AFTER CONDITIONING AND PLANTING THE GRADE IS TWO INCHES (2") BELOW ADJACENT HARDSCAPE EXCEPT ALONG CURB CUT AREAS. CONTRACTOR IS TO ENSURE SMOOTH TRANSITION FROM EXISTING TO NEW GRADE.

5. ALL INSPECTIONS HEREIN SPECIFIED SHALL BE MADE BY THE PARKS SUPERINTENDENT, OR HIS/HER DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL REQUEST INSPECTION AT LEAST 48 HOURS IN ADVANCE OF THE TIME THE INSPECTION IS REQUIRED.

6. ALL EXISTING LANDSCAPED AREAS DAMAGED DURING CONSTRUCTION MUST BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. RESTORATION OF EXISTING LANDSCAPE AREAS SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER.

7. ALL PLANT MATERIAL SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PARKS SUPERINTENDENT, OR HIS/HER DESIGNATED REPRESENTATIVE, BEFORE PLANTING. ALL PLANT MATERIAL DELIVERED ON-SITE WILL BE INSPECTED FOR SIZE AND CONDITION OF ROOT GROWTH, INSECTS, INJURIES, AND DEFECTS. PLANTS NOT APPROVED ARE TO BE REMOVED FROM THE SITE IMMEDIATELY AND REPLACED WITH SUITABLE PLANTS. THE PARKS SUPERINTENDENT RESERVES THE RIGHT TO REJECT ENTIRE LOTS OF PLANTS REPRESENTED BY DEFECTIVE SAMPLES. ALL PLANT MATERIAL SHALL HAVE NURSERY TAGS WHEN DELIVERED TO THE SITE.

8. STAKE TREES AS INDICATED PER TREE PLANTING DETAIL.

9. FINAL LOCATION OF ALL PLANT MATERIAL IS SUBJECT TO THE APPROVAL OF THE PARKS SUPERINTENDENT PRIOR TO PLANTING.

10. THE CONTRACTOR IS RESPONSIBLE FOR COUNT VERIFICATION AND IS TO SUPPLY THE QUANTITIES DELINEATED GRAPHICALLY ON PLANS.

11. PLANT ESTABLISHMENT AND MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER INSPECTION AND ACCEPTANCE OF THE WORK BY THE PARKS SUPERINTENDENT, OR HIS DESIGNATED REPRESENTATIVE. PLANT ESTABLISHMENT AND MAINTENANCE PERIOD SHALL BE FOR A DURATION STATED IN THE SPECIFICATIONS. PLANT ESTABLISHMENT AND MAINTENANCE SHALL BE PERFORMED PER THE PROJECT SPECIFICATIONS.

12. SUPPLEMENTAL HAND WATERING MAY BE REQUIRED DURING THE MAINTENANCE PERIOD TO ESTABLISH PLANT MATERIAL.

13. PLACE WOOD CHIP MULCH IN ALL PLANTED AREAS AT A MINIMUM DEPTH OF 3". DO NOT INSTALL MULCH WITHIN A 6" DIA. OF ANY TREE OR SHRUB TRUNK. CONTRACTOR TO PROVIDE A SAMPLE MULCH FOR THE REVIEW AND APPROVAL OF THE PARKS SUPERINTENDENT PRIOR TO INSTALLATION. REFER TO SPECIFICATIONS.

14. CONTRACTOR TO ENSURE THAT PROJECT SITE WILL REMAIN WEED FREE AND FREE OF DEBRIS AND LITTER AT ALL TIMES DURING CONSTRUCTION AND ESTABLISHMENT PERIOD. CONTRACTOR WILL MAINTAIN THE ENTIRETY OF STREET MEDIANS AND PARKWAYS DURING THE DURATION OF PROJECT AND ESTABLISHMENT PERIOD.

WEED ABATEMENT NOTES:

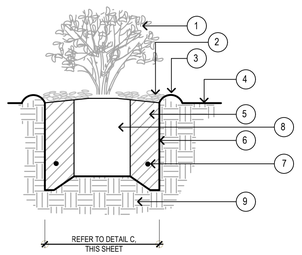
1. REFER TO WEED ABATEMENT REQUIREMENTS IN THE SPECIFICATIONS. ALL WEED ABATEMENT AND RELATED SECTIONS WILL BE ENFORCED INCLUDING TIME PERIOD REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FOR ALL WATER USED FOR IRRIGATION DURING THE WEED ABATEMENT PERIOD.
3. THE WEED ABATEMENT PERIOD SHALL PROCEED UPON THE COMPLETION OF THE IRRIGATION SYSTEM AND AFTER ALL WEEDS AND GROWTH HAS BEEN REMOVED FROM THE PLANTING AREAS PER THE SPECIFICATIONS.
4. SOIL CONDITIONERS AND FERTILIZERS SHALL BE MIXED INTO THE TOP SOIL AT QUANTITIES AND TYPE RECOMMENDED PER THE AGRONOMIC SOILS REPORT PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD
5. FINISHED GRADING SHALL BE COMPLETED AND ACCEPTED BY THE CITY'S DESIGNATED REPRESENTATIVE PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD.
6. ALL EXPOSED PROJECT AREAS SHALL BE FREE OF UNWANTED INSECTS, RODENTS, CLODS, ROCKS, AND LITTER PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD.
7. ALL UNWANTED GRASSES AND WEEDS SHALL BE KILLED BY SPRAYING AND REMOVED PRIOR TO BEGINNING THE WEED ABATEMENT PERIOD.

B SHRUB PLANTING DETAIL

NTS

LEGEND

1. 1 OR 5 GALLON SHRUB
2. WOOD MULCH - REFER TO PLANTING NOTES. TAPER MULCH AT BASE OF PLANT.
3. 3 INCH WATER BASIN
4. FINISH GRADE
5. AMENDED BACKFILL PER SOILS REPORT
6. PLANT PIT EXCAVATION - SEE DETAIL E, THIS SHEET.
7. FERTILIZER TABLETS - SEE SPECIFICATION FOR QUANTITIY PER SHRUB
8. ROOTBALL
9. NATIVE SOIL

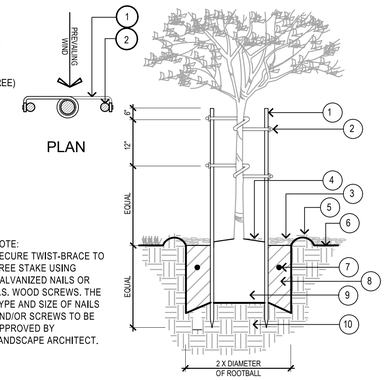


A TREE STAKING AND PLANTING DETAIL

NTS

LEGEND

1. TREE STAKE: TREATED LODGE POLE PINE (3 inch dia. x 10 feet long for 36" box tree) (3 inch dia. x 10 feet long for 24" box tree) (2 inch dia. x 10 feet long for 15 gal. tree)
2. TWIST-BRACE BY V.I.T. PRODUCTS (2 PER TREE) (TB36 for 36" box tree) (TB24 for 15 gal. & 24" box tree)
3. WOOD MULCH - REFER TO PLANTING NOTES
4. SET TOP OF ROOT BALL 1 INCH ABOVE FINISH GRADE
5. CONSTRUCT WATER BASIN - 3" HIGH
6. FINISH GRADE
7. FERTILIZER PLANT TABS - PLACE WITHIN THE TOP 12" OF PLANTING HOLE. SEE SPECIFICATIONS FOR QUANTITY PER TREE
8. AMENDED BACKFILL PER SOILS REPORT
9. ROOTBALL
10. NATIVE SUBGRADE



NOTE:
SECURE TWIST-BRACE TO TREE STAKE USING GALVANIZED NAILS OR S.S. WOOD SCREWS. THE TYPE AND SIZE OF NAILS AND/OR SCREWS TO BE APPROVED BY LANDSCAPE ARCHITECT.

D TRIANGULAR SPACING DETAIL

LEGEND

1. PLANT MATERIAL
2. MULCH LAYER - REFER TO PLANTING NOTES
3. FINISH GRADE
4. AMEND SOIL PER SOIL REPORT RECOMMENDATIONS

NOTE:
LOCATE PLANTS SPACED EQUAL DISTANCE (D) FROM EACH OTHER AS SHOWN. REFER TO THE PLANT LEGEND FOR DISTANCE (D).

C PLANT PIT DIMENSIONS

NTS

BOX TREES

- 1A — PLANT PIT TO BE SQUARE, SEE CHART ABOVE FOR THE PLANT PIT DIMENSIONS.
- 1B — ROOTBALL

CONTAINER PLANTS

- 2A — PLANT PIT TO BE ROUND, SEE CHART ABOVE FOR THE PLANT PIT DIMENSIONS.
- 2B — ROOTBALL

CONTAINER/BOX SIZE	"A" WIDTH/DIAMETER	DEPTH
1 GALLON	12 INCHES	12 INCHES
5 GALLON	26 INCHES	22 INCHES
15 GALLON	36 INCHES	24 INCHES
24 INCH BOX	48 INCHES	28 INCHES
30 INCH BOX	54 INCHES	33 INCHES
36 INCH BOX	66 INCHES	44 INCHES
48 INCH BOX	84 INCHES	60 INCHES

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Exp. 9/30/25
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STATE OF CALIFORNIA
DMS

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT
MARY M. TASQUEZ
NO. 6883
SIGNATURE
EXP. Feb. 2025
6/3/24
DATE
STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE FACILITIES UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

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PLANTING PLAN

Drawing No :

LP.2

SHEET 18 OF 26

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
3. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
5. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
6. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
7. FURNISH PULL STRING IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
8. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, PROVIDE SEPARATE CONDUIT FOR EACH HOMERUN INDICATED ON THE DRAWING, UNLESS INDICATED OTHERWISE.
9. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH N.E.C. REQUIREMENTS.
10. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16') SHALL BE WEATHERPROOF TYPE, NEMA 3R.
11. NO CONDUIT RUNS SHALL BE ALLOWED IN CONCRETE SLABS. ALL CONDUITS WILL BE PLACED ABOVE ACCESSIBLE CEILING SPACES UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
12. ALL ELECTRICAL POWER LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
13. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
14. CONTACT UTILITY COMPANIES FOR SCOPE OF WORK PRIOR TO SUBMITTING BID; INCLUDE UTILITY CHARGES IF ANY.
15. ALL DISTRIBUTION AND CONTROL EQUIPMENT (SUCH AS CB's, SWITCHES, CONTACTORS, ETC.), TERMINATIONS SHALL BE FULLY RATED PER UL AS FOLLOWS:

    a. 125A OR LESS : 60°C OR MORE.
    b. MORE THAN 125A : 75°C OR MORE.
16. ANY ERRORS, OMISSIONS, OR DESIGN DISCREPANCIES ON PLANS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER FOR CLARIFICATION OR CORRECTION PRIOR TO CONSTRUCTION AND PREPARATION OF SUBMITTAL PACKAGES.
17. CONDUCTORS SHALL HAVE UNDERWRITER'S LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW OR ELSEWHERE IN THE SPECIFICATIONS. CONDUCTORS SHALL BE COPPER.

    1. BRANCH CIRCUITS - LIGHTING AND POWER.

    a. #10 AWG AND SMALLER, SOLID WIRE TYPE THW OR THHN/THWN, THHW(THHN FOR DRY LOCATION ONLY).
    b. #8 AWG TO #2 AWG, STRANDED TYPE THW OR THHN/THHW.
    c. #1 AWG AND LARGER, STRANDED TYPE XHHW.

    2. FEEDERS : TYPE THW OR THHN/THWN, OR XHHW.
18. PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN EACH RACEWAY INCLUDING CONDUITS, PLUG STRIPS, WIREMOLD. SIZE OF GROUNDING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.
19. WIRING METHOD SHALL BE EMT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION. USE RIGID WHEN ENCASED IN CONCRETE OR SUSCEPTIBLE TO DAMAGE.
20. UNLESS OTHERWISE INDICATED, SHARING OF NEUTRAL/GROUNDED CONDUCTORS AMONG SINGLE PHASE BRANCH CIRCUITS OF DIFFERENT PHASES INSTALLED IN THE SAME RACEWAY IS NOT PERMITTED. PROVIDE DEDICATED NEUTRAL/GROUNDED CONDUCTOR FOR EACH INDIVIDUAL BRANCH CIRCUIT.

ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME RATING (CIRCUIT BREAKER)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE RATING (FUSE)
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH RATING (FUSE)
AT	AMPERE TRIP RATING (CIRCUIT BREAKER)
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CFSD	COMBINATION FIRE SMOKE DAMPER
CO	CONDUIT ONLY
CONC	CONCRETE
CT	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
DISC	DISCONNECT
DSBN	DISTRIBUTION SECTION
DN	DOWN
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EXIST, (E)	EXISTING
EXO	EXTERNAL OPERABLE DISCONNECT
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FLA	FULL LOAD CURRENT
FLUOR	FLUORESCENT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HV	HIGH VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED/INSULATED GROUND
INCAND	INCANDESCENT
ISC	SHORT CIRCUIT CURRENT AVAILABLE IN RMS SYMMETRICAL AMPERES
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
KV	KILO VOLT
KVA	KILO VOLT-AMPERE
LDC	LOCAL DISTRIBUTION CABINET
LDF	LOCAL DISTRIBUTION FRAME
LCL	LONG CONTINUOUS LOAD
LTG	LIGHTING
LV	LOW VOLTAGE
MFR	MANUFACTURER
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MH	MANHOLE / METAL HALIDE
M/M	METER AND MAIN SECTION
MULTI	MULTI-METER SECTION
MV	MEDIUM VOLTAGE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NEW (N)	NEW, TO BE FURNISHED AND INSTALLED BY CONTRACTOR
NF	NON-FUSED
NIC	NOT IN CONTRACT
N/L	NIGHT LIGHT
NO	NUMBER, NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PNL	PANEL
POC	POINT OF CONNECTION
PP	POWER POLE
PWR	POWER
PVC	POLYVINYL CHLORIDE
QUAD	QUADRUPLEX
QTY	QUANTITY
REQD	REQUIRED
REQMT	REQUIREMENT
RGS	RIGID GALVANIZED STEEL
RMC	RIGID METALLIC CONDUIT
RM	ROOM
RNC	RIGID NONMETALLIC CONDUIT
SHT	SHEET
SN	SOLID NEUTRAL
SPEC	SPECIFICATIONS
SPDT	SINGLE POLE, DOUBLE THROW
SPST	SINGLE POLE, SINGLE THROW
SW	SWITCH
SWBD	SWITCHBOARD
TC	TIME CLOCK
TEL	TELEPHONE
TERM	TERMINAL
TP	TEMPORARY POLE
TYP	TYPICAL
UGPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORY
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V	VOLT, VOLTAGE
VA	VOLT-AMPERE
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WH	WATT-HOUR
WP	WEATHERPROOF
WT	WEATHERTIGHT
WW	WIREWAY
XP	EXPLOSION PROOF
Z	IMPEDANCE
4W	FOUR-WIRE
3W	THREE-WIRE
5S	JUNCTION BOX (4 11/16" SQUARED X2 1/8" DEEP)
Ø	DIAMETER, PHASE
#	NUMBER
°C	DEGREE CELSIUS
(E)	EXISTING DEVICE TO REMAIN
(R)	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
(RL)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
(NL)	NEW LOCATION OF RELOCATED DEVICE

APPLICABLE CODES

1. 2022 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2. 2022 CALIFORNIA BUILDING CODE (CBC),PART 2, TITLE 24 C.C.R. (IBC WITH AMENDMENTS)
3. 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)
4. 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (UMC WITH AMENDMENTS)
5. 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (UPC WITH AMENDMENTS)
6. 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (IFC WITH AMENDMENTS)
7. 2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
8. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
9. 2022 CALIFORNIA ENERGY CODE (PART 6, TITLE 24 C.C.R.)
10. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSG), PART 11, TITLE 24 C.C.R.
11. 2023 COUNTY OF LOS ANGELES BUILDING CODE (TITLE 26)
12. 2023 COUNTY OF LOS ANGELES ELECTRICAL CODE (TITLE 27)
13. 2023 COUNTY OF LOS ANGELES PLUMBING CODE (TITLE 28)
14. 2023 COUNTY OF LOS ANGELES MECHANICAL CODE (TITLE 29)
15. 2023 COUNTY OF LOS ANGELES RESIDENTIAL CODE (TITLE 30)
16. 2023 COUNTY OF LOS ANGELES GREEN BUILDING STANDARDS CODE (TITLE 31)
17. 2023 COUNTY OF LOS ANGELES EXISTING BUILDING CODE (TITLE 33)

NOTE TO CONTRACTOR

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

LIGHTING LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
S#	POLETOP LED FIXTURE. S# INDICATES LUMINAIRE TYPE - REFER TO LUMINAIRE SCHEDULE, TYPICAL. SUBSCRIPT 2 REFERS TO CIRCUIT DESIGNATION.
	BOLLARD LED FIXTURE.
	MONUMENT PARK SIGN FIXTURE.

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
WP	WEATHERPROOF DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS, GFCI TYPE) MOUNTED ON PEDESTAL AT 20" A.F.G. CONFIRM EXACT MOUNTING HEIGHT WITH PEDESTAL MANUFACTURER.
J	ABOVE CEILING, CONCEALED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
KJ	RECESSED WALL MOUNTED JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
OR	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (SURFACE MOUNTED)
	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (RECESSED MOUNTED)
	MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING ENCLOSURE, (SEE SINGLE LINE DIAGRAM AND LOAD SUMMARY)
+96" OR 7'-6" AFF	MOUNTING HEIGHT FROM FINISHED FLOOR TO BOTTOM LINE OF OUTLET OR EQUIPMENT. FOR LIGHT FIXTURES, IT IS TO BOTTOM OF FIXTURE.
	CONDUIT TURNED DOWN, 3/4" UON
	CONDUIT TURNED UP, 3/4" UON
	CONDUIT STUBBED AND CAPPED, 3/4" UON
	RACEWAY CONCEALED IN WALLS OR ABOVE CEILING, 3/4" UON
	CONDUIT CONCEALED IN OR UNDER FLOOR, 3/4" UON, COORDINATE WITH G.C.: OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
DETAIL No. / SHEET No.	DETAIL REFERENCE
EQUIPMENT ID. No.	EQUIPMENT REFERENCE
PR	ELECTRICAL UTILITY PRIMARY
SC	ELECTRICAL UTILITY SECONDARY
T	UTILITY TELEPHONE
OH	TEMPORARY OVERHEAD CABLING
A-1,3	3/4" UON HOMERUN TO CIRCUITS #1 AND #3 IN PANEL "A". (CROSSMARKS INDICATE NUMBER OF PHASES AND NEUTRAL. PROVIDE GROUND WIRE.)
	3/4" CONDUIT WITH 2 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 3 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 4 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 5 #12 & 1 #12 GND WIRES
#10	3/4" CONDUIT WITH 2 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 3 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 4 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 5 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	1" CONDUIT WITH 6 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
	CONCEALED IN WALL OR CEILING
	GROUND WELL
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT
	TELEPHONE BACKBOARD 2'X4'X3/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.
	MOLDED CASE CIRCUIT BREAKER
	SWITCH AND FUSE ASSEMBLY
	UTILITY COMPANY PULL SECTION LUGS
	GROUNDING CONNECTION TO MAIN BUILDING GROUND SYSTEM U.O.N.
N G	GROUNDING CONNECTION AT SWITCHGEAR/DISTRIBUTION BOARD WITH NEUTRAL BONDING.
M	IN-LINE UTILITY COMPANY METER
M	UTILITY METER WITH CIRCUIT TRANSFORMERS (CT'S) METER
200-B	CONDUIT WIRING DESCRIPTION PER FEEDER SCHEDULE ON OTHER PLAN
PB	CONCRETE ELECTRICAL PULL BOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION. LID SHALL BE LABELED "ELECTRICAL" OR "COMM" ACCORDING TO USE.

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E0.1	ELECTRICAL LEGENDS & NOTES
E0.2	LUMINARE SCHEDULE
E0.3	SINGLE LINE DIAGRAM
E1.1	ELECTRICAL SITE LIGHTING PLAN
E1.2	SITE PHOTOMETRIC PLAN
E3.1	ELECTRICAL TITLE 24 FORMS
E4.1	ELECTRICAL DETAILS

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South Pasadena, CA 91030

Owner:

South Pasadena

Project No. :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

ELECTRICAL LEGENDS & NOTES

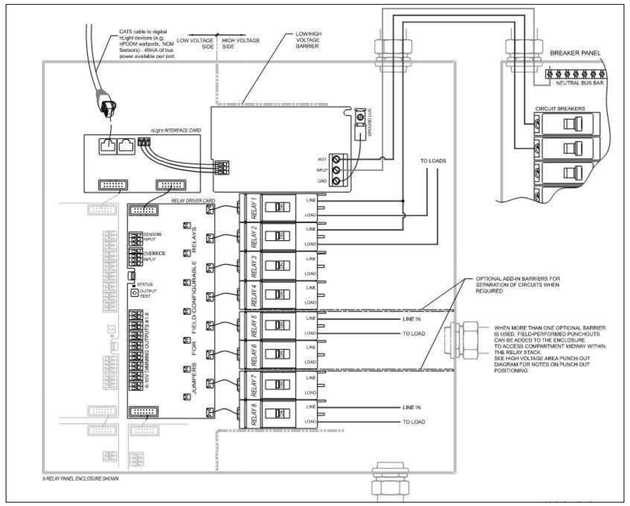
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LIGHTING CONTROL WIRING DETAIL | 1

LUMINAIRE SCHEDULE

TYPE	VOLTS	WATTAGE	LUMENS	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MFR.	CATALOG #	NOTES	SYMBOL
S1	120	30	3,085	LED 4000K	POLE	POST TOP LED FIXTURE WITH FLUSH MOUNT ADAPTER. MOUNT AT +10'-0" A.F.G.	ANP LIGHTING	EQ121-E030LD-T2-40K-FM3	COORDINATE COLOR OF FINISH WITH ARCHITECT	⌖
S2	120	20	2,591	LED 4000K	IN-GRADE	IN-GRADE VANDAL RESISTANT LED FLOODLIGHT FIXTURE.	LIGMAN	UKWH-30001-20W-T2-W40-120	COORDINATE COLOR OF FINISH WITH ARCHITECT	▽

LUMINAIRE SCHEDULE NOTES

1. EQUALS SHALL BE CONSIDERED UPON SUBMITTAL REVIEW AND APPROVAL. PLEASE NOTE THAT IF AN ALTERNATE IS CONSIDERED:
   a. THE CONTRACTOR IS COMPLETELY AND SOLELY RESPONSIBLE FOR ALL ASPECTS OF THE SUBSTITUTION INCLUDING UPDATING CONSTRUCTION DOCUMENTS, OBTAINING APPROVALS AND PERMITS FROM LOCAL AUTHORITY, AND COORDINATING WITH ALL TRADES TO ENSURE CHANGES TO AFFECTED BUILDING SYSTEM ARE ACCOUNTED FOR AND ACCEPTABLE TO THE ENGINEERING TEAM. CONTRACTOR SHALL ENSURE SUBSTITUTED EQUIPMENT MEETS OR EXCEEDS DESIGN INTENT REGARDING RATINGS, PERFORMANCE, DIMENSIONAL CLEARANCES, PHYSICAL DIMENSIONS (MAX/MIN), WEIGHT LIMITATIONS, AND OTHER ASPECTS, PROVING SUBSTITUTION IS SUITABLE TO THE APPLICATION. ENGINEERS WILL REVIEW THE RATING AND PERFORMANCE OF SUBSTITUTED EQUIPMENT ONLY AND WILL NOT ASSUME RESPONSIBILITY FOR SUBSTITUTION AT ANY LEVEL.
   b. IF CONTRACTOR CANNOT MAKE SUBSTITUTED EQUIPMENT WORK IN THIS PROJECT, CONTRACTOR SHALL REVERT TO REQUIREMENTS OF PERMITTED CONSTRUCTION DOCUMENTS AT THEIR EXPENSE.
   c. IT IS UNDERSTOOD BY ALL PARTIES THAT ANY SUBSTITUTIONS OF SPECIFIED PRODUCTS ARE DONE FOR THE PURPOSE OF COST SAVINGS TO THE OWNER. THEREFORE, ANY MATERIAL SUBSTITUTION OR DEVIATIONS PROPOSED BY THE CONTRACTOR SHALL BE INCLUDED WITH THE INITIAL BID AND SHALL SHOW A LINE ITEMS CREDIT TO THE OWNER FOR EACH SUBSTITUTION IN LIEU OF SPECIFIED PRODUCTS.
2. THE FIXTURE SCHEDULE INDICATES GENERAL DESCRIPTION OF LIGHTING FIXTURES AND MANUFACTURERS CATALOG NUMBERS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE CORRECT CEILING CONFIGURATION AND PROVIDE THE FIXTURES WITH ALL NECESSARY TRIMS AND MOUNTING HARDWARE SO THAT BOTH THE CEILING SYSTEM AND THE FIXTURE CONSTRUCTION MATCHES. PROVIDE SEISMIC HANGERS AS REQUIRED.
3. IT SHALL BE CONTRACTORS RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND TYPE OF CEILING WITH ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL ELEVATION DRAWING FOR MOUNTING HEIGHTS OF WALL MOUNTED FIXTURES.
4. PROVIDE ALL REQUIRED MOUNTING HARDWARE ANCHORAGE AND SUPPORTS TO INSTALL LIGHTING FIXTURES.
5. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERABLE LIGHTING SYSTEM AS PART OF THIS BUILDING CONTRACT.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE FIXTURE BALLAST OR DRIVER VOLTAGE MATCHES THE CIRCUIT VOLTAGE SUPPLYING FIXTURE PRIOR TO ORDERING.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY BALLAST/DRIVER DIMMING CONFIGURATION IS COMPATIBLE WITH CONTROLS BEING PROVIDED PRIOR TO ORDERING FIXTURES. EX. 2 WIRE, 3 WIRE, 4 WIRE, 0-10V, CAT 5, ETC.
8. LED LIGHT FIXTURES SHALL BE IN ACCORDANCE WITH IES, NFPA, UL, AS SHOWN ON THE DRAWINGS, AND AS SPECIFIED.
9. LED LIGHT FIXTURES SHALL BE REDUCTION OF HAZARDOUS SUBSTANCES (ROHS)-COMPLIANT.
10. LED DRIVERS SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - MINIMUM EFFICIENCY: 85% AT FULL LOAD.
    - MINIMUM OPERATING AMBIENT TEMPERATURE: -20 DEG C. (-4 DEG F.)
    - INPUT VOLTAGE: 120 - 277V (±10%) AT 60 HZ., UNLESS OTHERWISE INDICATED.
    - INTEGRAL SHORT CIRCUIT, OPEN CIRCUIT, AND OVERLOAD PROTECTION.
    - POWER FACTOR: >=0.95.
    - TOTAL HARMONIC DISTORTION: <=20%.
    - COMPLY WITH FCC 47 CFR PART 15.
12. LED MODULES SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - COMPLY WITH IES LM-79 AND LM-80 REQUIREMENTS.
    - MINIMUM CRI 80 AND COLOR TEMPERATURE 4000K UNLESS OTHERWISE SPECIFIED IN LUMINAIRE SCHEDULE.
    - MINIMUM RATED LIFE: 50,000 HOURS PER IES L70.
    - LIGHT OUTPUT LUMENS AS INDICATED IN THE LUMINAIRE SCHEDULE.
13. ALL FIXTURES MOUNTED OUTDOORS SHALL BE UL LISTED FOR WET LOCATION.

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Drawing Title :

LUMINARE SCHEDULE

Drawing No :

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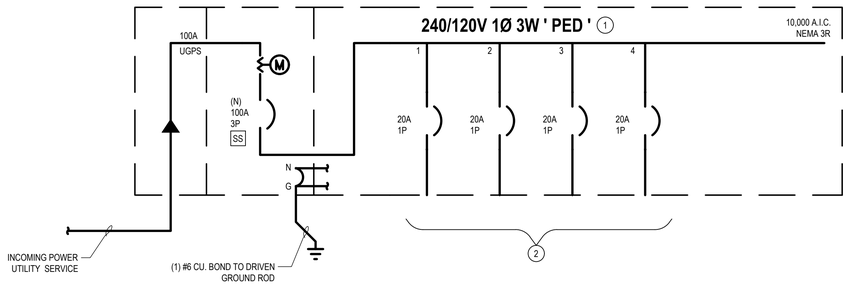
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600V FEEDER SCHEDULE 1Ø 3W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
20-B	20A-3W	1	2 # 12	1 # 12	1 # 12	3/4"
30-B	30A-3W	1	2 # 10	1 # 10	1 # 10	3/4"
40-B	40A-3W	1	2 # 8	1 # 10	1 # 10	1"
50-B	50A-3W	1	2 # 6	1 # 6	1 # 10	1"
60-B	60A-3W	1	2 # 6	1 # 6	1 # 10	1"
70-B	70A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
80-B	80A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
90-B	90A-3W	1	2 # 2	1 # 2	1 # 8	1-1/4"
100-B	100A-3W	1	2 # 1	1 # 1	1 # 8	1-1/2"
125-B	125A-3W	1	2 # 1	1 # 1	1 # 6	1-1/2"
150-B	150A-3W	1	2 # 1/0	1 # 1/0	1 # 6	1-1/2"
175-B	175A-3W	1	2 # 2/0	1 # 2/0	1 # 6	2"
200-B	200A-3W	1	2 # 3/0	1 # 3/0	1 # 6	2"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).



VOLTAGE DROP - CKT PED-1,3

RUN #	QTY	VOLTS	PHASE	VA FIXT	AMPS	WIRE SIZE	RES.	DIST.	VOLT DROP	%
PED - LTG	3	120	1	30	0.75	#10	1.2000	115	0.21	0.17
LTG - LTG	2	120	1	30	0.50	#10	1.2000	70	0.08	0.07
LTG - LTG	1	120	1	30	0.25	#10	1.2000	30	0.02	0.02
TOTALS								215	0.31	0.26

SINGLE LINE DIAGRAM 1

GENERAL NOTES

1. REFER TO 'GENERAL NOTES' ON ELECTRICAL LEGENDS AND NOTES SHEET FOR WIRING METHODS, MATERIALS, AND REQUIREMENTS.
2. ALL CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER.
3. CONTRACTOR SHALL UPDATE ALL MODIFIED PANEL DIRECTORIES OR CREATE A NEW TYPED DIRECTORY, IF ONE DOES NOT EXIST, IDENTIFYING EACH CIRCUIT AND INSTALLED CIRCUIT LOADS, MOUNTED IN GLASS OR PLASTIC INSIDE DOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING DIRECTORIES TO INDICATE ALL NEW CIRCUITS AND ACTUAL AREA SERVED WHICH IS NOT NECESSARILY THE DESCRIPTION INDICATED ON THE BID DOCUMENTS. USE A COMPUTER OR TYPEWRITER TO CREATE DIRECTORY; HANDWRITTEN DIRECTORIES ARE NOT ACCEPTABLE.
4. SERVICE EQUIPMENT, WHICH HAS BEEN MODIFIED, SHALL BE FIELD MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT PER CEC 110.24(B). THE FIELD MARKING(S) SHALL INCLUDE THE DATE THE FAULT-CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. THE MAXIMUM AVAILABLE FAULT CURRENT SHALL BE VERIFIED OR RECALCULATED AS NECESSARY TO ENSURE THE SERVICE EQUIPMENT RATINGS ARE SUFFICIENT FOR THE MAXIMUM AVAILABLE FAULT CURRENT AT THE LINE TERMINALS OF THE EQUIPMENT.
5. EQUIPMENT DATA AND CONFIGURATIONS SHOWN ON THE SINGLE LINE DIAGRAM PROVIDE GENERAL EQUIPMENT INFORMATION. CONTRACTOR SHALL REVIEW ELECTRICAL PLANS AND SPECIFICATIONS TO VERIFY ALL EQUIPMENT ASSOCIATED DESIGN INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY COMPONENTS REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. ANY DISCREPANCIES BETWEEN DESCRIPTIONS, SPECIFICATIONS, AND EXISTING CONDITIONS ARE TO BE PRESENTED TO THE ENGINEER OF RECORD PRIOR TO COMPLETION OF THE BID PROCESS FOR CLARIFICATION. NO EQUIPMENT SHALL BE ORDERED UNTIL DISCREPANCIES ARE RESOLVED THROUGH A FORMAL RFI PROCESS.
6. ELECTRICAL CONTRACTOR TO INCLUDE IN BID ALL ASSOCIATED COSTS FOR THIRD PARTY TESTING OF ELECTRICAL EQUIPMENT, GROUND FAULT, CONDUCTORS, ETC.

CONSTRUCTION NOTES

1. PROVIDE NEW ELECTRICAL SERVICE AS SHOWN.
2. REFER TO PANEL SCHEDULE FOR FEEDER INFORMATION.

MOUNTING: PEDESTAL
FED FROM: UTILITY
NEMA: 3R
AIC RATING: 10,000

PANEL PED (NEW)

LOCATION: PEDESTAL

VOLTAGE: 120/240V 1PH 3W
BUS: 100 A
MAIN: 100 A
FEEDER: 100 -B

NOTE	DESCRIPTION	A	B	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %	CONDUIT		PHASE		CONDUIT	V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	DESCRIPTION	NOTE
1	POLE LTS	120		L	1	20					1	A -	2					20	1	L	20		MONUMENT PARK SIGN	1
	PEDESTAL REC		360	R	1	20					3	- B	4					20	1				SPARE	
	LTS CONTROLS	500		C	1	20					5	A -	6					20	1				SPARE	
	SPARE				1	20					7	- B	8					20	1				SPARE	
	SPARE				1	20					9	A -	10					20	1				SPARE	
	SPACE										11	- B	12										SPACE	
	SPACE										13	A -	14										SPACE	
	SPACE										15	- B	16										SPACE	
	SPACE										17	A -	18										SPACE	
	SPACE										19	- B	20										SPACE	
	SUBTOTALS	620	360																		20	0		

CEC LOAD CALC:	CONNECTED	DEM.	DEM.	DEMAND
LOAD TYPE	VA	FACT.	VA	AMPS
(L) LIGHTING	140	1.25	175	1
(R) RECEPTACLE	360	220.44	360	2
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	500	1.25	625	3
(N) NON-CONTINUOUS	0	1.00	0	0
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	1000		1160	

TOTAL AMPS CONNECTED AT 120/240V 1PH 3W WITH LCL 5 A

SUBTOTALS:	PHASE
640 VA	A
360 VA	B
1000 VA	TOTAL
5	AMPS

NOTES:
1. ROUTE CIRCUIT VIA LIGHTING CONTROL PANEL

PANEL SCHEDULE 2

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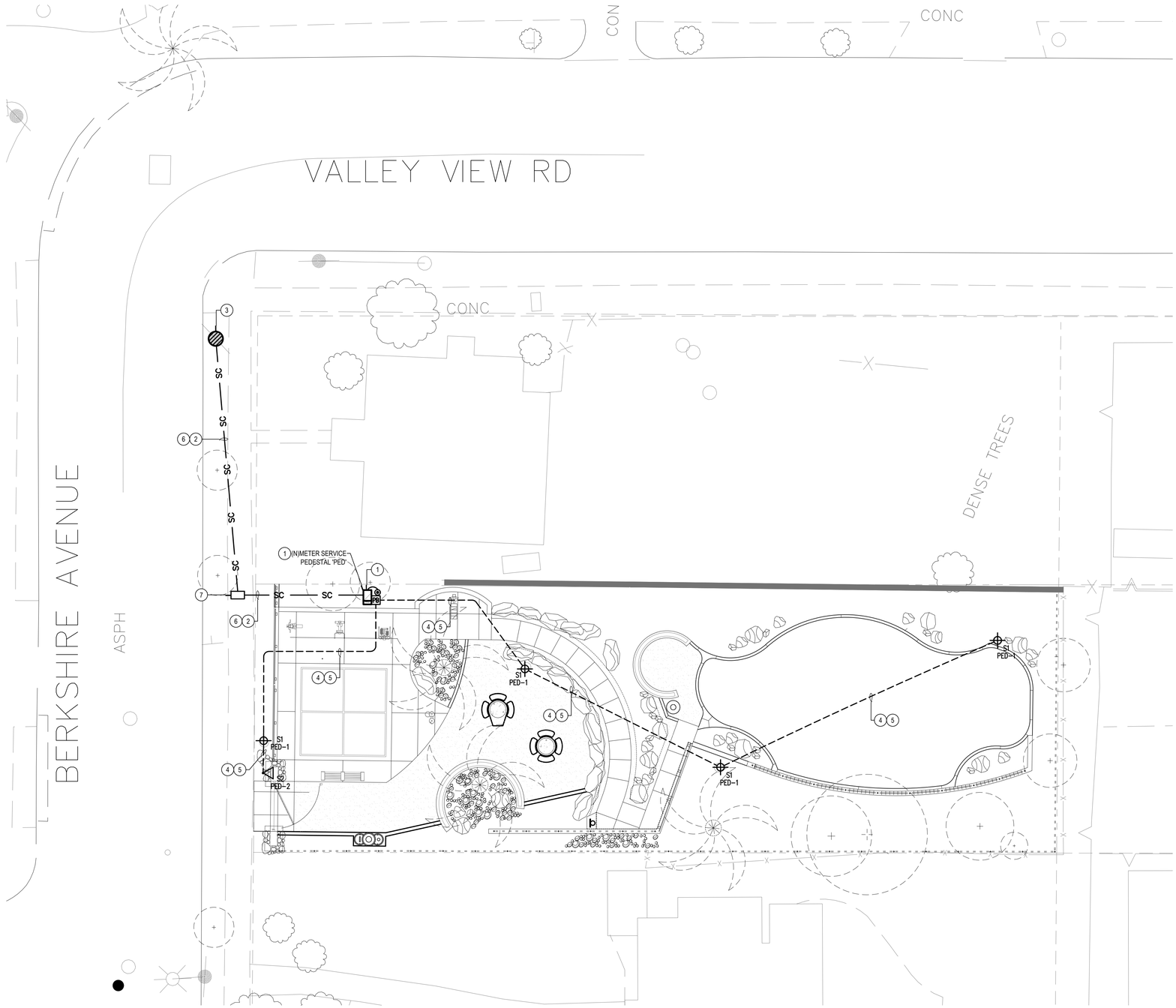
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GENERAL NOTES

1. ALL UTILITY SERVICES SHALL BE INSTALLED PER THE UTILITY COMPANY REQUIREMENTS. VERIFY FINAL CONSTRUCTION REQUIREMENTS WITH UTILITY COMPANY SERVICE PLANNERS.
2. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS PRIOR TO INSTALLATION OF UTILITY SERVICES.
3. COORDINATE TRENCH ROUTING AND EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS AND NEW WORK.
4. UTILITY SERVICE INFORMATION SHOWN IS FOR BIDDING PURPOSES ONLY. ACTUAL CONSTRUCTION DOCUMENTS SHALL BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANY REPRESENTATIVE.
5. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY REPRESENTATIVE TO ESTABLISH PRE-CONSTRUCTION COORDINATION, OBTAIN ALL NECESSARY METERS AND/OR APPROVALS, AND SCHEDULE UTILITY WORK TO COORDINATE WITH THE CONSTRUCTION SCHEDULE.
6. ALL SITE BRANCH CIRCUIT WIRING SHALL BE #10 AWG. OR LARGER.
7. CONTRACTOR SHALL VERIFY EXISTING BUILDING FOOTING PRIOR TO INSTALLATION OF STUB-UP CONDUITS FOR NEW WALL MOUNTED JUNCTION BOX TO AVOID ANY INTERFERENCE.
8. CONTRACTOR SHALL UTILIZE 'GPR GROUND PENETRATING RADAR TO SURVEY AND TRACE ALL EXISTING UNDERGROUND UTILITY LINES IN AREAS WHERE NEW TRENCHING IS PLANNED. CONTRACTOR TO SUBMIT "GPR" REPORT TO PROJECT MANAGER FOR REVIEWING PRIOR TO TRENCHING.
9. ALL POWER UTILITY WORK SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REQUIREMENTS OF THE SERVING UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE SERVING UTILITY TO RECEIVE COMPLETE INFORMATION ON THEIR REQUIREMENTS PRIOR TO THE SUBMISSION OF THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND THE CONTRACT DOCUMENTS.
10. ALL SITE UNDERGROUND CONDUIT TO BE 1" MIN. UNLESS OTHERWISE NOTED.
11. SUPPORT CONDUIT(S) EVERY 10'-0" AND WITHIN 3'-0" OF ANY JUNCTION BOX OR TERMINATION.
12. CONTACT INFORMATION FOR UTILITY COMPANIES ARE AS FOLLOWS:

    POWER
    SCE
13. CONTRACTOR IS TO CONTACT UTILITY INSPECTOR (LISTED ON FINAL UTILITY APPROVED PLANS) TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO ALL UTILITY CONSTRUCTION.
14. CONTRACTOR IS TO TAKE SPECIAL CARE NOT TO DAMAGE PLANTS OR TREE ROOTS WHEN TRENCHING IN BEDDING OR TREE ROOT AREA. ANY DAMAGED PLANTS TO BE REPLACED/REPAIRED AT CONTRACTOR'S EXPENSE.

CONSTRUCTION NOTES

1. NEW METER PEDESTAL PER POWER UTILITY SERVICE REQUIREMENTS. SEE SINGLE LINE DIAGRAM(S) FOR FURTHER INFORMATION. PROVIDE MINIMUM CLEARANCES AS REQUIRED BY THE SERVICE COMPANY.
2. POWER UTILITY SECONDARY CONDUITS. PROVIDE CONDUITS FOR SERVICE CAPACITY PLUS SPARE CONDUIT AS SPECIFIED BY UTILITY COMPANY, UNLESS NOTED OTHERWISE. VERIFY SIZE AND QUANTITY OF CONDUITS REQUIRED WITH UTILITY COMPANY PRIOR TO BID. ALL WORK TO BE DONE FROM UTILITY CO. APPROVED PLANS.
3. POINT OF CONNECTION TO POWER UTILITY COMPANY AT EXISTING POLE (#1547427E). VERIFY EXACT LOCATION WITH UTILITY SERVICE PLANNER AND IN FIELD.
4. PROVIDE (2) #10, (1) #10 GND. IN 1" CONDUIT.
5. ROUTE CIRCUIT VIA LIGHTING CONTROL PANEL.
6. NO PATCHES WILL BE ALLOWED TO EXISTING CONCRETE WALKS. ALL CONCRETE IS TO BE REPLACED FROM JOINT TO JOINT OR A MINIMUM OF 10' SECTIONS. HYDROJETTING IS ALLOWED AT CONTRACTOR'S CHOICE, IF COMPACTED AND REPAIRED TO ORIGINAL CONDITION.
7. PROVIDE 17"X30"X15" UTILITY APPROVED HAND HOLE FOR UTILITY CABLING. VERIFY EXACT LOCATION WITH UTILITY SERVICE PLANNER IN FIELD.

ELECTRICAL SITE LIGHTING PLAN | SCALE: 1" = 10'-0" | 1

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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND FACILITIES BY CONTACTING THE UNDERGROUND SERVICE ALERT AT 1+(800)+422+4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Berkshire Avenue Park
2008 Berkshire Avenue
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :	
Drawn By :	JM/MR
Checked By :	RM
Date :	November 12, 2021
Scale :	AS SHOWN

Drawing Title :

ELECTRICAL SITE LIGHTING PLAN

Drawing No :

E1.1

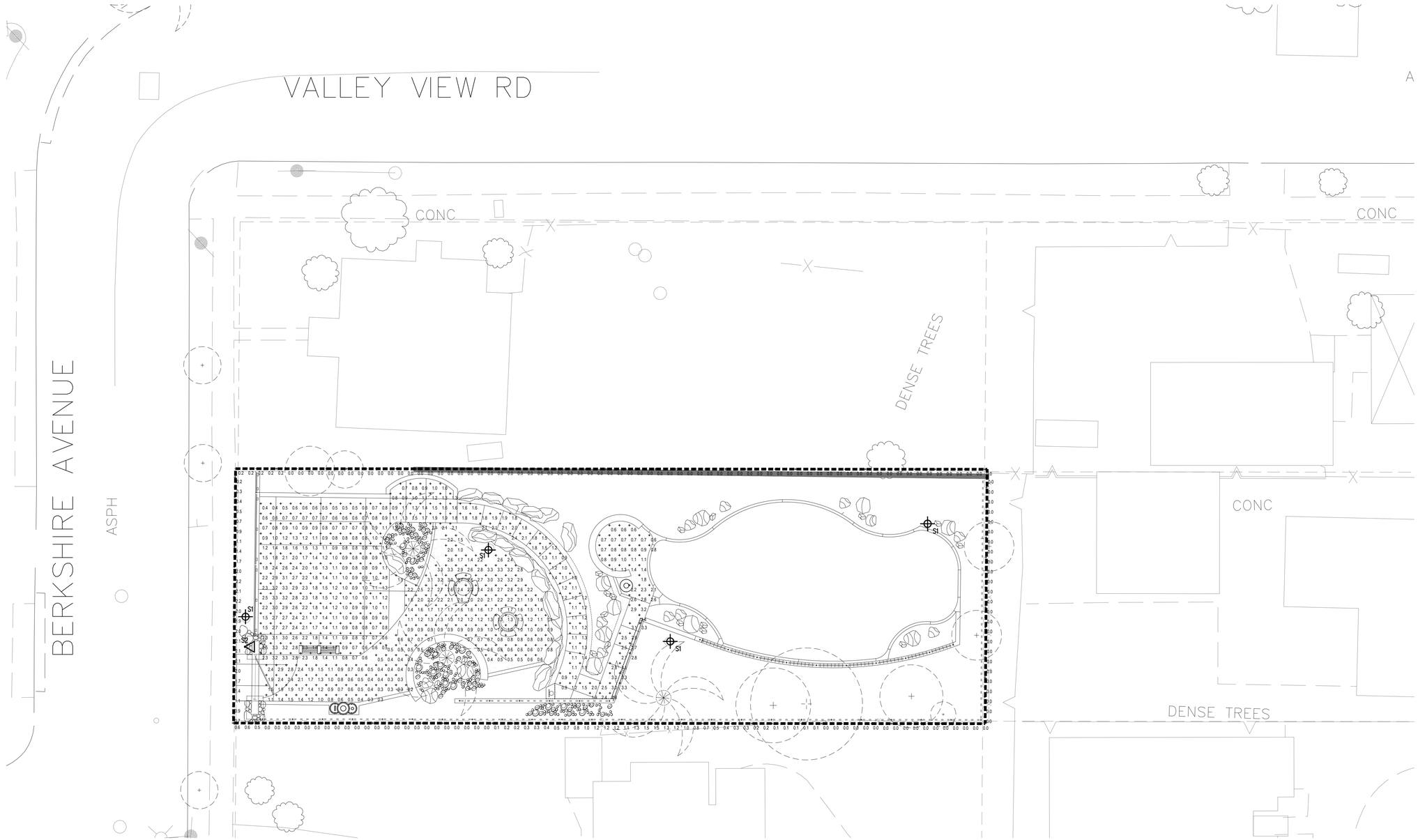
SHEET OF -

20-000

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_BERKSHIRE\21-333 E-SITELTG - 2023-09-26 - JESUS MANZO

LIGHTING FIXTURE SCHEDULE				
SYMBOL	LABEL	MANUFACTURER	DESCRIPTION	LIGHT LOSS FACTOR
⌖	S1	ANP LIGHTING	EQ121 TWIN STRUT POST TOP	0.91

STATISTICS SCHEDULE						
DESCRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
GRANITE PATHWAY	+	1.4 FC	3.3 FC	0.2 FC	16.5:1	7.0:1
MAIN PATHWAY	+	1.5 FC	3.4 FC	0.4 FC	8.5:1	3.7:1
PROPERTY LINE	+	0.3 FC	2.2 FC	0.0 FC	N/A	N/A



SITE PHOTOMETRIC PLAN | SCALE: 1" = 10'-0" | 1

Landscape Architect:

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323

e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:

412 E. Vanderbilt Way
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
Email: cadd@designwesteng.com

DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER
No. E19480
ELECTRICAL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Berkshire Avenue Park
2008 Berkshire Avenue
South Pasadena, CA 91030

Owner:

South Pasadena

Project No :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

SITE PHOTOMETRIC PLAN

Drawing No :

E1.2

SHEET OF -

20-000

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_BERKSHIRE\21-333 E-SITEPHOTO - 2023-09-24 - JESUS MANZO

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.		
Project Name: Berkshire Avenue Park	**Report Page:**	**(Page 1 of 7)**
Project Address: 2008 Berkshire Ave.	**Date Prepared:**	9/26/2023

A. GENERAL INFORMATION

01	Project Location (city)	South Pasadena	04	Total Illuminated Hardscape Area (ft²)	1443
02	Climate Zone	9			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval	
☐	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
• All Other Occupancies					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01		02		
☒	New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6		
☐	Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes	○ No
03		04		05
% of Existing Luminaires Being Altered[1]		Sum Total of Luminaires Being Added or Altered		Calculation Method
☐ < 10%	☐ >= 10% and < 50% ☐ >= 50%			

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv												Compliance Results			
01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
277	+	---	+	---	+	---	+	---	OR	---	=	277	≥	140	COMPLIES
Shielding Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)[4]	Field Inspector	
										Pass	Fail
S1	Post Top LED	☐ Linear	30	Mfr. Spec	4	New	☐	120	NA: < 6200 lumens	☐	☐
S2	In-Grade Flood LED	☐ Linear	20	Mfr. Spec	1	New	☐	20	NA: < 6200 lumens	☐	☐
							Total Design Watts:	140			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)
[2] For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.
[3] Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.
[4] Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
Walkway	Astronomical Timer	Provided	NA: Each Luminaire <= 40 Watts	☐	☐

[1] FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.
[2] Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.
[3] Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance. Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01			
	"Use it or lose it" Allowance (select all that apply) (select all that apply)			
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Walkway	1443	0.019	27.4	330	0.2	49.5	77
					Initial Wattage Allowance for Entire Site (Watts):		200
					Instances of Initial Wattage Allowance (LZ 0 only)[1]		
					Total General Hardscape Allowance (Watts):		277

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Walkway;

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Maya	Documentation Author Signature:
Company: Design West Engineering	Signature Date: 2023-09-26
Address: 412 East Vanderbilt Way	CEA/ HERS Certification Identification (if applicable): E19480
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Leonard Maya	Responsible Designer Signature:
Company: Design West Engineering	Date Signed: 2023-09-26
Address: 412 E. Vanderbilt Way	License: E19480
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

Landscape Architect:

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning
Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
Fax: (714) 641-1323
e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Subconsultant:
412 E. Vanderbilt Way
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
Email: cadd@designwesteng.com
DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:
REGISTERED PROFESSIONAL ENGINEER
Leonard Maya
No. E19480
ELECTRICAL
STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

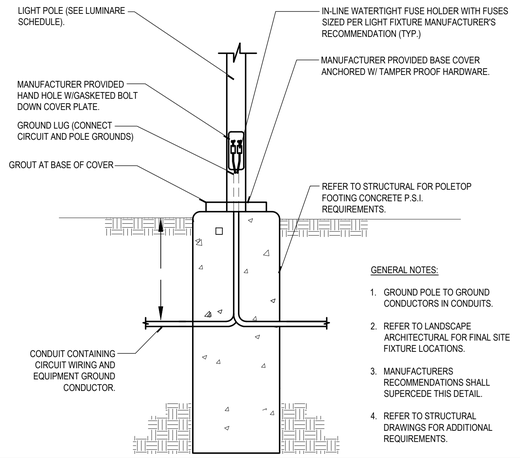
Project :
Berkshire Avenue Park
2008 Berkshire Avenue
South Pasadena, CA 91030
Owner:
South Pasadena

Project No :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

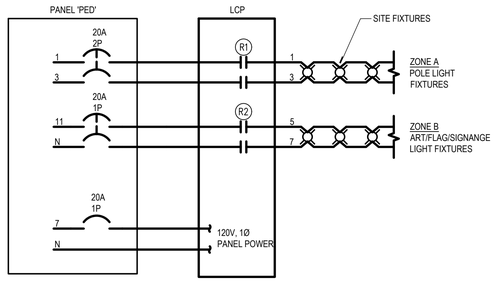
Drawing Title :
ELECTRICAL TITLE 24 FORMS

Drawing No :
E3.1
SHEET OF -
20-000

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_BERKSHIRE\21-333 E T24 - 2023-09-26 - JESUS MANZO



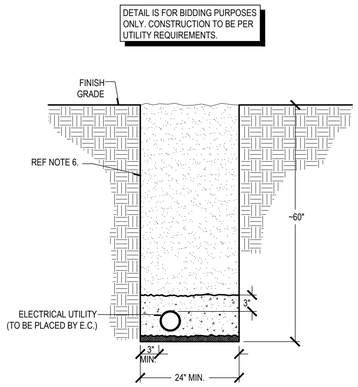
-	10	FLUSH GRADE POLETOP LIGHTING	7



GENERAL NOTES:

1. PROVIDE LIGHTING CONTROL PANEL nLIGHT MODEL # ARP-INTENC08-NLT-8FCRR-MVOLT-SC-SM-DTC-ARPA-PC.

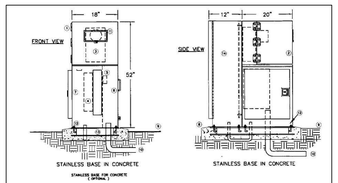
-	11	LIGHTING CONTROL DIAGRAM	8



NOTES:

1. THIS DETAIL IS FOR FOR ASSISTANCE IN BIDDING. DRY UTILITY REPRESENTATIVES ARE AVAILABLE TO PROV. ADDITIONAL INFORMATION. REF SINGLE LINE DIAGRAM FOR NAME AND PHONE NUMBER OF INVOLVED DRY UTILITY REPRESENTATIVES. REF NOTE BELOW.
2. VERIFY EXACT LOCATION AND ROUTING OF TRENCH WITH UTILITY COMPANY.
3. COMPACT TO 90%, OR TO ELECTRICAL UTILITY STANDARDS.
4. ELECTRICAL CONTRACTOR TO COORDINATE QUANTITY, SIZE AND TYPE OF CONDUIT(S), PULLROPES, BURIAL DEPTHS, ETC. WITH INFORMATION PROVIDED BY UTILITIES.
5. IT IS ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO CONTACT DRY UTILITIES AND OBTAIN A COMPLETE LIST OF UTILITY REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO INCLUDE IN HIS BID PRICE, ALL COSTS, INVOLVED IN BRINGING DRY UTILITIES TO THE SITE. OWNER WILL PAY COSTS ASSOCIATED WITH APPLYING FOR NEW DRY UTILITY SERVICE. IF E.C. IS UNABLE TO CONTACT ANY DRY UTILITY, HE IS TO CONTACT THE ELECTRICAL ENGINEER, PRIOR TO BID, FOR DIRECTION.
6. EDISON: FULL ENCASEMENT REQUIRED FOR MORE 4 CONDUITS. SEMI ENCASEMENT REQUIRED FOR 3 OR 4 CONDUITS.
7. TRENCHING TO BE 2' BACK FROM CURB.
8. MINIMUM TRENCH WIDTH TO BE 24".

UTILITY SERVICE TRENCH DETAIL	5

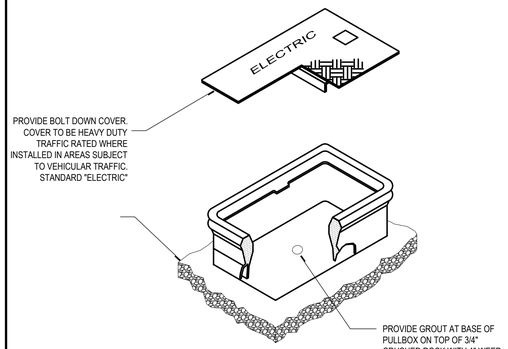


1. StrongBox metered enclosure, stainless steel, NEMA TYPE 3R— # MPE-XX-XXKAIC
2. Hinged removable lid
3. Meter socket with test blocks
4. Load center
5. Landing lugs
6. Landing lug compartment
7. Load center compartment
8. Poured concrete base—6" min. thickness—extend 6" beyond outside dimensions of enclosure with 1/2% slope for drainage
9. Finish grade
10. Underground service
11. Meter viewing window 2" x 4"
12. 3/8" stainless anchor bolts
13. Stainless mounting base in concrete
14. SB-1852SS stainless customer enclosure

GENERAL NOTES:

1. PEDESTAL TO BE IN NEMA 3R CABINET WITH HASP.
2. ORDERING INFORMATION ON SWITCHGEAR MAY BE OBTAINED FROM STRONGBOX. PEDESTAL MODEL #----- AND IS TO BE SUPPLIED WITH MAIN & BRANCH CIRCUIT BREAKERS AS INDICATED ON A.C. BREAKER ASSIGNMENTS.
3. REFER BREAKER ASSIGNMENTS FOR INFO ON MAIN CIRCUIT BREAKER, INTERIOR SPACES AND OTHER INFO.
4. PROVIDE WITH PAD - 2000PSI CONCRETE 8" THICK, 4" ABOVE GROUND, 4" BELOW. EXTEND 4" BEYOND SWITCHGEAR ON ALL SIDES.
5. PEDESTAL TO BE SECURED TO PAD WITH 5/8" X 5" ANCHOR BOLTS AT EACH CORNER.
6. PROVIDE 3' LEVEL & CLEAR WORKING SPACE IN FRONT OF PEDESTAL.
7. ENCLOSURE SHOWN IS TO HAVE SUFFICIENT SPACE FOR MOUNTING OF THE LIGHTING CONTROL PANEL SEPARATE FROM LIVE EXPOSED ELECTRICAL PARTS. ALTERNATE SUBMITTAL WILL ONLY BE CONSIDERED IF ALL EQUIPMENT CAN BE MOUNTED IN THE ONE ENCLOSURE.
8. PROVIDE DUPLEX GFCI RECEPTACLE TO BE MOUNTED INSIDE PANELBOARD.
9. FINISH OF PEDESTAL TO BE STAINLESS STEEL.
10. MANUFACTURER IS TO PROVIDE PHOTOCELL WINDOW FACING EAST. PROVIDE WITH PHOTOCELL MODEL # ARPA-PC.

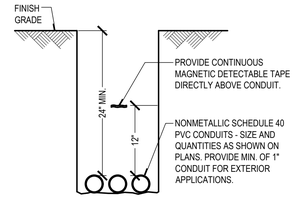
METER PEDESTAL 'PED'	6



GENERAL NOTES:

1. PULLBOX TO BE SIZED PER NEC, U.O.N.
2. PROVIDE COVER LABELED WITH "POWER" OR "DATA" DESIGNATION.

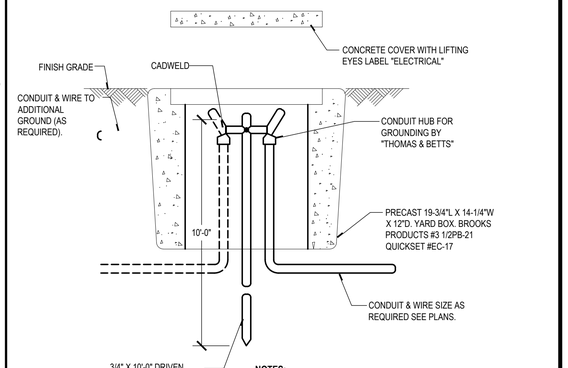
PULLBOX INSTALLATION	1



GENERAL NOTES:

1. PLACE CONDUIT IN TRENCH, FILL, AND COMPACT TO 90%. REPAIR AREA TO MATCH SURROUNDING. BACK FILL IS TO BE FREE OF LARGE ROCK, PAVING MATERIALS, ETC., THAT MAY CAUSE PHYSICAL DAMAGE TO CONDUIT. PROVIDE GRANULAR MATERIAL WITH A SAND EQUIVALENT (SE) GREATER THAN 30.
2. PROVIDE 30" MINIMUM COVER WHERE CONDUIT IS PLACED UNDER STREETS, HIGHWAYS, ROADS, ALLEYS, DRIVEWAYS, AND PARKING LOTS.
3. CONDUITS PLACED UNDER OR IN STRUCTURAL FOOTINGS SHALL BE GALVANIZED RIGID METAL (RMC) WRAPPED WITH 20 MIL PVC TAPE. THE COUPLINGS CONNECTED TO THE RMC ELBOW SHALL BE GALVANIZED MATERIAL.
4. MINIMUM TRENCH WIDTH TO BE 24".

BRANCH CIRCUIT CONDUIT BURIAL	2



NOTES:

1. SIZE OF CONDUCTORS SHALL COMPLY W/CEC 250.66.
2. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS W/CONDUCTORS AS SHOWN. SEPARATE AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (CEC 250.56)

GROUND ROD DETAIL	3

Landscape Architect:

Landscape Architect:
David Volz Design
Landscape Architecture & Park Planning

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DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

Seal:

REGISTERED PROFESSIONAL ENGINEER — LUCIANO MARCHESE — No. E19480 — ELECTRICAL — STATE OF CALIFORNIA

1-800-422-4133
DIGALERT
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS. IN ADDITION TO THE REQUIREMENTS OF THE SPECIAL PROVISIONS, THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTRACTING UNDERGROUND SERVICE ALERT AT 1+800+422+4133.

Revisions:

No.	Date	Revisions	By
1	03/24/23	SCE REVISIONS	
2	09/26/23	BLDG DIVISION COMMENTS	

Project :

Berkshire Avenue Park
2008 Berkshire Avenue
South Pasadena, CA 91030

Owner:
South Pasadena

Project No :
Drawn By : JM/MR
Checked By : RM
Date : November 12, 2021
Scale : AS SHOWN

Drawing Title :

ELECTRICAL DETAILS

Drawing No :

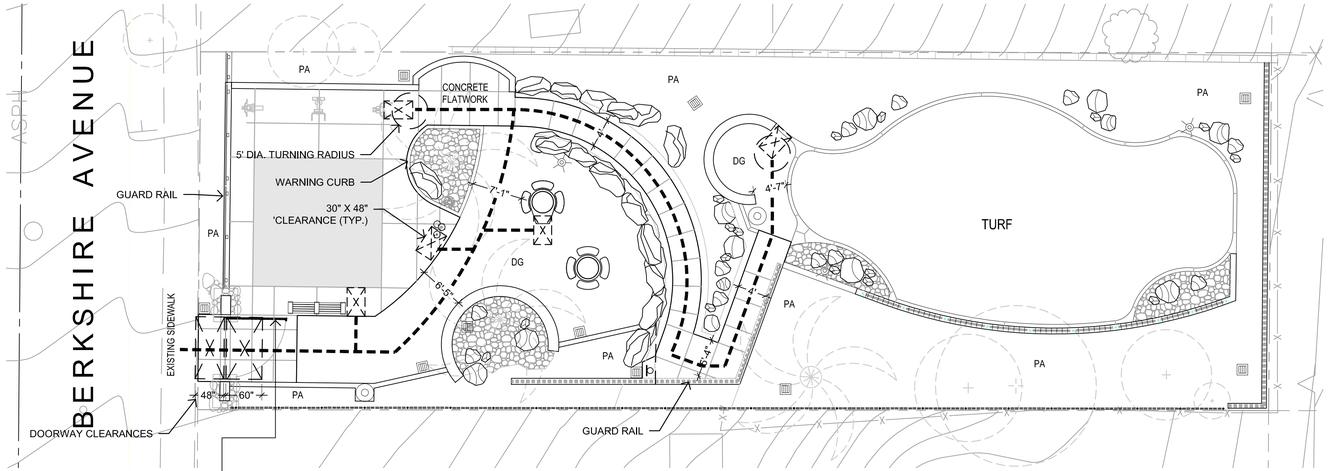
E4.1

SHEET OF -

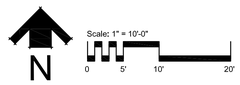
20-000

587

R:_PROJECT\2021\21-333 SOUTH PASADENA PARKS BERKSHIRE AND GREVELIA WALKWAY LIGHTS_BERKSHIRE\21-333 E-DETAILS - 2023-09-26 - JESUS MANZO



GATE TO REMAIN LOCKED OPEN AT ALL TIMES WHILE PARK IS OPEN TO THE PUBLIC. GATE TO BE CLOSED ONLY WHEN PARK IS CLOSED.



ACCESSIBLE ROUTE OF TRAVEL

- WALKWAYS TO BE A MINIMUM 48" WIDE.
- WALKWAYS AND RAMPS SHALL NOT EXCEED 2% CROSS SLOPE.
- RAMPS WITHOUT HANDRAIL SHALL NOT EXCEED 5% SLOPE IN THE DIRECTION OF TRAVEL.
- RAILING SHALL BE PROVIDED FOR ALL RAMPS GREATER THAN 5%.
- 8.333% MAXIMUM GRADE ON RAMPS WITH RAILS.
- LANDING AT THE TOP OF RAMPS SHALL BE A MINIMUM OF 60" X 60" WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- INTERMEDIATE LANDINGS SHALL BE PROVIDED ON RAMPS AND SHALL BE A MINIMUM OF 60" IN LENGTH WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- LANDINGS SHALL BE PROVIDED AT THE BOTTOM OF RAMPS AND SHALL BE 72" IN LENGTH WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- RAMPS WITH TURNING PLATFORMS SHALL HAVE LANDINGS 72" IN LENGTH WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- CURB RAMPS SHALL HAVE A MINIMUM 4' LANDING AS WIDE AS THE RAMP AND WITH LESS THAN 2% SLOPE IN ALL DIRECTIONS.
- ALL DRINKING FOUNTAINS SHALL BE ACCESSIBLE AND LOCATED OUT OF THE PATH OF TRAVEL.

REFER TO TITLE SHEET FOR GENERAL NOTES

Landscape Architect:

David Volz Design
Landscape Architecture & Park Planning

Costa Mesa Office:
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626
Phone: (714) 641-1300
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e-mail: drawings@dvolzdesign.com
www.dvolzdesign.com

Consultant:

DMS

REGISTERED PROFESSIONAL ENGINEER
SURRENDER M. DEWAN
NO. 34559
Exp. 9/30/25
CIVIL
STATE OF CALIFORNIA

6/3/24
SURENDER M. DEWAN RCE 34559 EXP. 9/30/25

Seal:

REGISTERED LANDSCAPE ARCHITECT
GARY M. YASQUEZ
NO. 3883
SIGNATURE
EXP. Feb. 2025
6/3/24
DATE
STATE OF CALIFORNIA

811 DIGALERT

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT, DIAL 811

Revisions:

No.	Date	Revisions	By

BUILDING AND SAFETY APPROVED
REVIEWED FOR SUBSTANTIAL COMPLIANCE ONLY.
SUBJECT TO FURTHER REVIEW AND CORRECTIONS.
VIOLATION OF APPLICABLE CODES, LAWS OR ORDINANCES IS STRICTLY PROHIBITED DESPITE CONTENTS OF THESE PLANS. ALL REVISIONS OR DEVIATIONS FROM THESE PLANS REQUIRE PRIOR BUILDING OFFICIAL APPROVAL.
3/17/2024, 3:15:20 PM
SP-B54560

Project :

BERKSHIRE AVENUE PARK

Berkshire Ave, South Pasadena, CA, 91030

Owner:

City of South Pasadena

Project No :
Drawn By : PC / LP
Checked By : GV / ES
Date : SEPTEMBER, 2023
Scale : AS SHOWN
Drawing Title :

ACCESSIBILITY PLAN

Drawing No :

AC.1

SHEET 26 OF 26

Public Works Project Bid Packet

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT NO. 005157

CITY OF SOUTH PASADENA
Public Works Department

Purpose: Construction, repair, improvements etc. of public buildings or property

Value: Over $200,000

Bidding: Formal Bid Process in accordance with South Pasadena Municipal Code (SPMC) Chapter 2 Administration, Article XIII Awarding Public Works Contracts and the Uniform Public Construction Cost Accounting Act (Public Contract Code Section 22000 et seq.)

Required Documents Checklist:

- □ Notice Inviting Sealed Bids
- □ Instruction to Bidders
- □ Proposal Information and Documents
- □ Contract Information and Documents
- □ Standard Specifications
- □ Special Provisions
- □ Appendices

Mandatory Forms Checklist:

- □ Bid Proposal
- □ Bid Schedule (Bid costs submitted through PlanetBids)
- □ Bid Bond & Certificate of Acknowledgment or Bid Guarantee
- □ Bidder Information
- □ Experience Statement
- □ Designation of Suppliers and Subcontractors
- □ Statement Regarding Insurance Coverage
- □ Statement Regarding Contractor's Licensing Laws
- □ Non-Collusion Affidavit

Documents Required Upon Award:

- □ Contract Agreement & Certificate of Acknowledgment
- □ Payment Bond & Certificate of Acknowledgment
- □ Faithful Performance Bond & Certificate of Acknowledgment
- □ Maintenance Bond & Certificate of Acknowledgment
- □ Worker's Compensation Insurance Certificate
- □ Endorsements to Insurance Policy

Approved for use on June 7, 2023
294856.v3

NOTICE INVITING BIDS AND CONTRACT DOCUMENTS

for

GREVELIA & BERKSHIRE POCKET PARKS PROJECT
SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Prepared by:
David Volz Design Landscape Architects, Inc.
151 Kalmus Drive, Suite M8
Costa Mesa, CA 92626

(714) 641-1300

Approved by:
City of South Pasadena
Public Works Department
1414 Mission Street
South Pasadena, CA 91030
(626) 403-7240

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GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

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SECTION A – NOTICE INVITING SEALED BIDS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157

IN THE CITY OF SOUTH PASADENA, CALIFORNIA

CALENDAR OF EVENTS*

Bid Advertisement	11th day of October, 2024
Bid Package available starting	10th day of October, 2024
Pre-Bid Meeting & Site Visit Walk Through	17th day of October, 2024 at 8:30 a.m.
Questions Regarding the Proposal Due	17th day of October, 2024 at 5:00 p.m.
Addendum Posted on City's Planet Bids system	22nd day of October, 2024 at 5:00 p.m.
Bid Due Date and Time	28th day of October, 2024 at 4:00 p.m.
Bid Opening	28th day of October, 2024 at 5:00 p.m.
Bid Results/Contractor Selection	31st day of October, 2024
Council approval of Contract	6th day of November, 2024
New Contract in Effect	12th day of November, 2024
Construction Start Date, not earlier than	18th day of November, 2024
Construction End Date, not later than	1st day of June, 2025

*All dates are subject to change.

NOTICE INVITING SEALED BIDS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

PUBLIC NOTICE IS HEREBY GIVEN that the City of South Pasadena as AGENCY, invites sealed bids for the above stated project and will receive such bids through the City's online bid management system ("PlanetBids"), up to the hour of 4:00 p.m., on Monday the 28th day of October, 2024. The date and time shall be extended by no less than 72 hours if the officer, department, or Project Manager issues any material changes, additions, or deletions to the invitation later than 72 hours prior to the bid closing. Any bids received after the time specified above or any extension due to material changes shall not be considered.

Project Name: *Grevelia & Berkshire Pocket Parks Project No. 005157*

City PlanetBids Project Bid Opportunities: https://vendors.planetbids.com/portal/44654/bo/bo-search

Project Description: The work consists of furnishing all materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the Specifications and Contract Documents. The work performed under this contract is summarized in the Notice Inviting Sealed Bids and includes, but is not limited to each bid item listed in the Contractor's Bid Proposal, as covered in the Standard Specifications, and as described in the corresponding items on the following pages. The work in general, to be performed pursuant to these specifications, consists of construction of two (2) new 'pocket' parks located on Grevelia Street (Assessor Parcel Number 5315-011-904 at or near 1107 Grevelia Street) and Berkshire Avenue (Assessor Parcel Number 5310-018-901 at or near 2006 Berkshire Avenue). The project also includes demolition, grading, landscaping, electrical, plumbing, and drainage improvements, as well as installation of equipment and site finishing; traffic control and all appurtenant work thereto necessary for the proper construction of the contemplated improvements, in accordance to Plans and Specification entitled as Grevelia & Berkshire Pocket Parks Project No. 005157.

Engineer's Estimate: $1,700,000

Bids must be submitted on the City's Bid Forms. A bidder may obtain a copies of the plans, specifications, and contract documents from PlanetBids. To the extent required by section 20103.7 of the Public Contract Code, upon request from a contractor plan room service, the City shall provide an electronic copy of the contract documents at no charge to the contractor plan room. Please Note: Prospective bidders who choose to review the contract documents at a plan room must also register with the City through PlanetBids to obtain the required contract documents if they decide to submit a bid for the Project.

It is the responsibility of each prospective bidder to download and print all contract documents for review and to verify the completeness of contract documents before submitting a bid. Any addenda will be posted on PlanetBids. It is the responsibility of each prospective bidder to check PlanetBids on a daily basis through the close of bids for any applicable addenda or updates. The City does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, downloading or printing of the contract documents. Information on PlanetBids may change without notice to prospective bidders. The contract documents shall supersede any information posted or transmitted by PlanetBids.

In accordance with the provisions of California Public Contract Code § 3300, and Business and Professions Code § 7028.15(e), the AGENCY has determined that the contractor shall possess a valid

Class A contractor's license at the time that the contract is awarded. Failure to possess the specified license shall render a bidder's bid as non-responsive and shall bar award of the contract to any bidder not possessing the specified license at the time of the award.

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 2600, SACRAMENTO, CA 95826. At the time the contract is awarded, the contractor shall be properly licensed in accordance with the laws of this state. The first payment for work or material shall not be made unless and until the Registrar of Contractors verifies to the AGENCY that the records of the Contractors' State License Board indicate that the contractor was properly licensed at the time the contract was awarded. Any bidder or contractor not so licensed shall be subject to all legal penalties imposed by law including, but not limited to, any appropriate disciplinary action by the Contractors' State Board. Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder. (Public Contract Code § 20103.5)

CONTRACTORS AND SUBCONTRACTORS ARE ALSO REQUIRED TO BE REGISTERED WITH THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS FOR ANY BID PROPOSAL SUBMITTED ON OR AFTER MARCH 1, 2015, AND FOR ANY CONTRACT FOR PUBLIC WORK ENTERED INTO ON OR AFTER APRIL 1, 2015. A contractor or subcontractor shall not be qualified to bid on, be listed on a bid proposal for, or perform any public work contract unless it is currently registered with the California Department of Industrial Relations as described in Labor Code § 1725.5.

Bids must be prepared on the approved bid forms in conformance with INSTRUCTIONS TO BIDDERS and submitted through PlanetBids.

The bid must be accompanied by a bid guarantee in the amount of 10% of the total bid by THE TIME AND DATE ADVERTISED FOR THE OPENING OF BIDS. More specifically, pursuant to Public Contract Code §§ 20170 and 20171, all bids for the project shall be presented, under sealed cover and shall be accompanied by one of the following forms of bidder's security in the amount of ten percent (10%) of the bid: (a) cash; (b) a cashier's check made payable to the City of South Pasadena; (c) a certified check made payable to the City of South Pasadena; or (d) a bidder's bond executed by an admitted surety insurer, made payable to the City of South Pasadena. Such security shall be forfeited should the successful bidder to whom the contract is awarded fails to timely execute the contract and to deliver the necessary bonds and insurance certificates as specified in the contract documents. The bid guarantee must be submitted in hard copy directly to the City prior to the specified date and time for bid opening as set forth in the Instructions to Bidders.

To the extent applicable, at any time during the term of the Agreement for the proposed project, the successful bidder may, at its own expense, substitute securities equivalent to the amount withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

Pursuant to California Civil Code § 9550, a payment bond is required to be submitted for all projects estimated in excess of $25,000.00.

The AGENCY has determined that the proposed project is a public works project subject to the provisions of Labor Code § 1720 thereby requiring the Contractor to pay the prevailing wage rates for all work performed under the Contract. Accordingly, the proposed project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations.

The AGENCY reserves the right to reject any and all bids and to waive any minor irregularities in the proposal documents.

All questions should be submitted via PlanetBids. City staff will not respond to questions made via phone or email.

CITY OF SOUTH PASADENA

Date: October 8, 2024 By: H. Ted Gerber

H. Ted Gerber
Public Works Director

SECTION B – INSTRUCTIONS TO BIDDERS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

B1.01 INSPECTION OF SITE OF WORK

Bidders are required to inspect the site of the work in order to satisfy themselves, by personal examination or by such other means as they may prefer, of the location of the proposed work and as to the actual conditions of and at the site of work. If, during the course of his/her examination, a bidder finds facts or conditions which appear to him/her to conflict with the letter or spirit of the contract documents, or with any other data furnished him/her, he/she may apply to the AGENCY in writing in accordance with **B1.04 INTERPRETATION OF CONTRACT DOCUMENTS** for additional information and explanation before submitting his/her bid.

The submission of a proposal by the bidder shall constitute the acknowledgment that, if awarded the contract, he/she has relied and is relying on his/her own examination of (a) the site of the work, (b) the access to the site, and (c) all other data, matters, and things requisite to the fulfillment of the work and on his/her own knowledge of existing services and utilities on and in the vicinity of the site of the work to be constructed under the contract, and not on any representation or warranty of the AGENCY. No claim for additional compensation will be allowed which is based upon a lack of knowledge of these items.

B1.02 EXAMINATION OF CONTRACT DOCUMENTS

Each bidder shall thoroughly examine and be familiar with legal and procedural documents, general conditions, specifications, drawings and addenda (if any). The submission of a proposal shall constitute an acknowledgment upon which the AGENCY may rely that the bidder has thoroughly examined and is familiar with the contract documents. The bidders' attention is directed to the need, if any, for special invoicing for this project. The failure or neglect of a bidder to receive or examine any of the contract documents shall in no way relieve him/her from any obligations with respect to his/her proposal or to the contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any contract document.

B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE

Bidder's attention is called to the provisions set forth in **SECTION E, STANDARD SPECIFICATIONS**, particularly those pertaining to the contract period and liquidated damages for avoidable delays.

The CONTRACTOR shall begin work within fifteen (15) calendar days after the date of the Notice to Proceed, and shall diligently prosecute said work to completion before the expiration **120 WORKING DAYS.** The CONTRACTOR shall pay to the AGENCY liquidated damages in accordance with Section 6-9 of the special Provisions (Section F) for each calendar day, or portion thereof, of delay in finishing the work in excess of the number of working days prescribed above.

B1.04 INTERPRETATION OF CONTRACT DOCUMENTS

No oral interpretations will be made to any bidder as to the meaning of the contract documents. Requests for an interpretation shall be made in writing and submitted to the AGENCY through PlanetBids at least five (5) working days before the time announced for opening the proposals. Interpretations by the AGENCY will be in the form of addenda to the contract documents and, when issued, will be posted on PlanetBids. It

is the responsibility of each prospective bidder to check PlanetBids on a daily basis through the close of bids for any applicable addenda or updates. All such addenda shall become part of the contract.

B1.05 SOIL INFORMATION

Geotechnical soil reports are included in an Appendix.

B1.06 PROPOSAL

Proposals shall be made on the forms enclosed in **SECTION C** of these specifications. All proposals shall give the prices proposed, both in words and in numbers, shall give all other information requested herein, and shall be signed by the bidder or his/her authorized representative, with his/her address. If the proposal is made by an individual, his/her name, signature and mailing address must be shown; if made by firm or partnership, the name and mailing address of the firm or partnership and the signature of at least one of the general partners must be shown; if made by a corporation, the proposal shall show the name of the state under the laws of which the corporation is chartered, the name and mailing address of the corporation, and the name and title of the person who signs on behalf of the corporation. If the proposal is made by a corporation, a certified copy of the bylaws or resolution of the board of directors of the corporation shall be furnished demonstrating the authority of the officer signing the proposal to execute contracts on behalf of the corporation.

Each proposal shall be submitted through PlanetBids. Bidders are warned against making erasures or alterations of any kind, and proposals which contain omissions, erasures or irregularities of any kind may be rejected. No oral, telegraphic or telephonic proposals or modifications will be considered.

The Bid Schedule is available on PlanetBids through the "Line Items" tab. Bidders must insert and submit their Bid prices directly through PlanetBids by selecting "Place eBid" under the "Line Items" tab. The Bid Schedule will be incorporated into the Contract Documents. Failure to submit the Bid Schedule will render a bid nonresponsive. Bidders must provide pricing for every bid item. The costs of any Work shown or required in the Contract Documents, but not specifically identified as a Pay Item are to be included in related Pay Items and no additional compensation shall be due Contractor by virtue of Contractor's compliance with the Contract Documents. The estimated quantities for unit price items are for purposes of comparing bids only and City makes no representation that the actual quantities of Work performed will not vary from the estimates.

In conformance with the Business and Profession Code, § 7028.15, the CONTRACTOR must state clearly his/her license number and expiration date. In addition, he/she shall sign a statement that these representations were made under the penalty of perjury. This statement shall be made on the **EXPERIENCE STATEMENT** in **SECTION C**.

The CONTRACTOR will be required to pay prevailing wage pursuant to California Law, including California Labor Code §§ 1770 et seq. Copies of the prevailing rate of per diem wages are on file at the offices of the AGENCY.

The following Bid Forms shall be completed and signed by the Bidder and uploaded to PlanetBids as a single PDF file:

- Bidder Information
- Experience Statement
- Designation of Suppliers and Subcontractors
- Statement Regarding Insurance Coverage
- Statement Regarding Contractor's Licensing Laws

- Non-Collusion Affidavit

B1.07 ADDENDA

Each proposal shall include specific acknowledgment in the space provided on **SECTION C - BID PROPOSAL** of receipt of all addenda issued during the bidding period. Failure to so acknowledge may result in the proposal being rejected as not responsive.

Each prospective Bidder shall register with the City through PlanetBids. Addenda will be uploaded to PlanetBids. Please Note: Bidders are responsible for ensuring that they have received any and all Addenda. To this end, each Bidder should visit PlanetBids to verify that it has received all Addenda issued, if any, prior to the Bid opening.

B1.08 BID PRICES

Bid prices shall include everything necessary for the completion of construction and fulfillment of the contract including, but not limited to, furnishing all materials, equipment, tools, plant and other facilities and all management, superintendence, labor and services, except as may be provided otherwise in the contract documents. In the event of a difference between a price quoted in words and a price quoted in numbers for the same quotation, the words shall be the amount bid.

In preparing bid prices, bidder represents that he/she has carefully examined the Contract Documents and the site where the work is to be performed and that he/she has familiarized himself with all local conditions and federal, state and local laws, ordinances, rules, and regulations that may affect the performance of the work in any manner. The bidder further represents that he/she has studied all surveys and investigation reports about subsurface and physical conditions pertaining to the job site, that he/she has performed such additional surveys and investigations as he/she deems necessary to complete the work at his/her bid price, and that he/she has correlated the results of all such data with the requirements of the Contract Documents. The submittal of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, including locality, uncertainty of weather and all other contingencies, and as to the character, quality, quantities, and scope of the work.

The plans and specifications for the work show subsurface conditions or otherwise hidden conditions as the Design Engineer supposes or believes them to exist, but is not intended or to be inferred that the conditions as shown thereon constitute a representation that such conditions are actually existent. Except as otherwise specifically provided in the Contract Documents, the AGENCY, the Design Engineer and their consultants or agents shall not be liable for any loss sustained by the CONTRACTOR as a result of any variance of such conditions as shown on the plans and the actual conditions revealed during the progress of the work or otherwise.

The CONTRACTOR shall perform an independent take-off of the plans and bid accordingly. Quantities listed in the **BID SCHEDULE** in **SECTION C** are intended only as a guide for the CONTRACTOR as to the anticipated order of magnitude of work. CONTRACTOR shall be responsible for verifying all estimated quantities. CONTRACTOR will be reimbursed for the quantity of items actually installed as required by the Contract Documents and shown on the plans to neat line and grade.

The CONTRACTOR will not be reimbursed for unauthorized work performed outside of that required by the Contract Documents.

B1.09 TAXES

No mention shall be made in the proposal of sales tax, use tax, or any other tax, as all amounts bid will be deemed and held to include any such taxes which may be applicable.

B1.10 RECOGNITION OF BONDING COMPANIES

All bonding companies used by the CONTRACTOR in this contract must be recognized by the Federal Government within Circular 570. All proposals or contracts received that include bonds posted by bonding companies not recognized in Circular 570 will result in the disqualification of the bid proposal and forfeiture of the bid bond.

B1.11 QUALIFICATION OF BIDDERS

Each bidder shall be skilled and regularly engaged in the general class or type of work called for under the contract. A statement setting forth his/her experience shall be submitted by each bidder on the **EXPERIENCE STATEMENT** form provided in **SECTION C**.

Each bidder shall possess a valid CONTRACTOR's License issued by the CONTRACTOR's State License Board at the time his/her bid is submitted. The class of license shall be applicable to the work specified in the contract. Each bidder shall also have no less than five (5) years of experience in the magnitude and character of the work bid.

It is the intention of the AGENCY to award a contract to a bidder who furnished satisfactory evidence that he/she has the requisite experience and ability, and that he/she has sufficient capital, facilities, and plant to enable him/her to prosecute the work successfully and properly, and to complete it within the time stated in the contract.

To determine the degree of responsibility to be credited to the bidder, the AGENCY will weigh any evidence that the bidder has performed satisfactorily other contracts of like nature, magnitude and comparable difficulty and comparable rates of progress. If in the opinion of the AGENCY, a bidder is determined to be insufficiently qualified, then that bidder will not be considered for award of the contract.

B1.12 DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS

Each proposal shall have listed on the **DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS** form provided in **SECTION C** the name, California contractor license number, and Department of Industrial Relations registration number, and address of each subcontractor to whom the bidder proposes to sublet portions of the work in excess of one-half of one percent of the total amount of his/her bid. For the purpose of this paragraph, a subcontractor is defined as one who contracts with the CONTRACTOR to furnish materials and labor, or labor only for the performance of work at the site of the work or who will specially fabricate a portion of the work off the site pursuant to detailed drawings in the contract documents.

Public Contract Code § 4104 requires all bidders to list subcontractors and state the license number of all subcontractors who will perform work in excess of one-half of one percent of the total bid, or in the case of streets and highways, one-half of one percent of the total bid or $10,000, whichever is greater.

Public Contract Code § 6109 prohibits a CONTRACTOR from performing work with a subcontractor who is debarred pursuant to Labor Code §§ 1777.1 or 1777.7.

B1.13 PROPOSAL GUARANTEE

The proposal shall be accompanied by a proposal guarantee bond duly completed on the form provided herewith by a guarantee company authorized to carry on business in the State of California for payments to the AGENCY in the sum of at least 10% of the total amount of the bid proposal, or alternatively by a certified or cashier's check payable to the AGENCY, or cash, in the sum of at least 10% of the total amount of the bid proposal. The amount payable to the AGENCY under the proposal guarantee shall be forfeited to the AGENCY in case of failure or neglect of the bidder to furnish, execute and deliver to the AGENCY the required bonds, evidence of insurance and to enter into, execute and deliver to the AGENCY the agreement on the form provided herewith, within ten (10) days after being notified in writing by the AGENCY that the award has been made and the agreement is ready for execution.

The bid security must be submitted in original hard copy directly to the City Clerk's office prior to specified time and date for the Bid opening.

B1.14 MODIFICATION OF PROPOSAL

A modification of a bid proposal already received will be considered only if the modification is received before the time announced for the opening of bids. All modifications shall be made in writing, executed and submitted in the same form and manner as the original bid proposal.

B1.15 WITHDRAWAL OF PROPOSAL

A proposal may be withdrawn through PlanetBids, incurring no penalty, if they are submitted prior to the bid opening hour stipulated in **SECTION A – NOTICE INVITING SEALED BIDS**. Proposals may not be withdrawn after that time without forfeiture of the proposal guarantee, except as authorized by Public Contract Code sections 5100 through 5110. The withdrawal of a proposal will not prejudice the right of the bidder to submit a new proposal, providing there is time to do so.

B1.16 POSTPONEMENT OF BID OPENING

The AGENCY reserves the right to postpone the date and time for opening of bids at any time prior to the date and time announced in **SECTION A–NOTICE INVITING SEALED BIDS**.

B1.17 DISQUALIFICATION OF BIDDERS

If there is reason to believe that collusion exists among the bidders, none of the bids of the participants in such collusion will be considered. In the event that any bidder acting as a prime CONTRACTOR has an interest in more than one proposal, all such proposals will be rejected, and the bidder will be disqualified. This restriction does not apply to subcontractors or suppliers who may submit quotations to more than one bidder, and while doing so, may also submit a formal proposal as a prime CONTRACTOR.

B1.18 REJECTION OF PROPOSALS

The AGENCY reserves the right to reject any and all proposals, to waive any irregularity, and to reject any proposals which are incomplete, obscure or irregular; any proposals which omit a bid on any one or more items on which bids are required; which omit unit prices if unit prices are required; in which unit prices are unbalanced in the opinion of the AGENCY; which are accompanied by insufficient or irregular bid security; or which are from bidders who have previously failed to perform properly or to timely complete contracts of any nature.

B1.19 AWARD OF CONTRACT

The Contract will be awarded, if at all, to the lowest responsible and responsive bidder, whose bid proposal is not rejected for cause by the AGENCY. However, until an award is made, the AGENCY reserves the right to reject any or all bids, and to waive technical errors or discrepancies, if to do so is deemed to best serve the interests of the AGENCY. In no event will an award be made until all necessary investigations are made as to the responsibility and qualifications of the bidder to whom it is proposed to make such an award.

Each bidder's attention is directed to the possibility that the award of the project may be delayed for various reasons. The AGENCY reserves the right to delay the award of the project for 45 calendar days. After 45 calendar days, the low bidder may at any time request release from its bid without penalty.

The acceptance of a proposal will be evidenced by a Notice of Award of Contract in writing, delivered by mail to the bidder whose proposal is accepted. No other act of the AGENCY shall constitute acceptance of a proposal. The award of contract shall obligate the bidder whose proposal is accepted to furnish a performance bond, payment bond and maintenance bond, as well as evidence of insurance and to execute the contract set forth herein.

B1.20 RETURN OF PROPOSAL GUARANTEES

Within ten (10) calendar days after the bids are opened, the AGENCY will release the proposal guarantees accompanying the proposals which are not to be considered in making the award. Proposal guarantees for the two lowest bidders will be held until the contract has been fully executed, after which they will be returned to the respective bidders.

B2.21 EXECUTION OF CONTRACT

The contract agreement shall be executed in duplicate by the successful bidder and returned, together with the contract bonds and evidence of insurance, within ten (10) calendar days after the notification of the contract award by the AGENCY in writing. In case of failure of the successful bidder to execute the contract agreement within ten (10) calendar days after such notice, or any subsequent extension approved by AGENCY, the AGENCY at its option may consider the bidder in default, in which case the bid bond or proposal guarantee accompanying the bid shall become the property of the AGENCY. After execution by the AGENCY, one original contract shall be returned to the CONTRACTOR.

B1.22 FLEXIBILITY OF BID SCHEDULE

It is the intent of the AGENCY to award a contract to the lowest responsible and responsive bidder and the flexibility shown in the bid schedule is necessary to ensure a project within the AGENCY's budget limits and constraints.

SECTION C – PROPOSAL INFORMATION AND DOCUMENTS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Proposal Information and Documents:

- □ Bid Proposal
- □ Bid Schedule
- □ Bid Bond
- □ Bid Guarantee
- □ Bidder Information
- □ Experience Statement
- □ Designation of Suppliers and Subcontractors
- □ Statement Regarding Insurance Coverage
- □ Statement Regarding Contractor's Licensing Laws
- □ Non-Collusion Affidavit

BID PROPOSAL

GREVELIA & BERKSHIRE POKCET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

CITY OF SOUTH PASADENA
1414 MISSION STREET
SOUTH PASADENA, CALIFORNIA 91030

HONORABLE MAYOR AND
MEMBERS OF THE CITY COUNCIL:

The undersigned, as bidder, declares that he/she has examined all of the contract documents and specifications contained in this project manual for the above referenced project, and that he/she will contract with the AGENCY on the form of contract provided herewith to do everything necessary for the fulfillment of this contract at the price, and on the terms and conditions therein contained.

The following are included and are to be considered as forming a part of this proposal: **BID PROPOSAL**, **BID SCHEDULE**, **BID BOND, NONCOLLUSION AFFIDAVIT, BID GUARANTEE** (if submitted in lieu of Bid Bond), **BIDDER INFORMATION**, **EXPERIENCE STATEMENT**, **DESIGNATION OF SUPPLIERS & SUBCONTRACTORS**, **BIDDER'S STATEMENT REGARDING INSURANCE COVERAGE**, and **STATEMENT REGARDING CONTRACTOR'S LICENSING LAWS**.

CONTRACTOR acknowledges receipt and inclusion of addenda _____ to _____ into this bid proposal and the contract documents.

Attached is a Bid Bond duly completed by a guarantee company authorized to carry on business in the State of California in the amount of at least 10% of the total amount of this proposal, or alternatively, there is attached a certified or cashier's check payable to the AGENCY or evidence of a cash payment to the AGENCY, in the amount of at least 10% of the total amount of our proposal.

If this proposal is accepted, we agree to sign the contract form and to furnish the Performance Bond and the Payment Bond (each to be 100% of the bid amount), the Maintenance Bond (to be 50% of the bid amount), and the required evidences of insurance within ten (10) calendar days after receiving written Notice of Award of Contract.

We further agree if our proposal is accepted and a contract for the performance of the work is entered into with the AGENCY, to so plan the work and to prosecute it with such diligence that all of the work shall be completed within the time stipulated in **B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE of SECTION B - INSTRUCTION TO BIDDERS**.

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

TELEPHONE NO. _____

STATE CONTRACTOR'S LICENSE NO. _____

STATE OF INCORPORATION:_____

AUTHORIZED SIGNATURE:_____

TITLE:_____

DATE:_____

(If Company is a Corporation, provide corporate resolution per **B1.06 PROPOSAL of SECTION B – INSTRUCTION TO BIDDERS.**)

BID SCHEDULE

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

IMPORTANT:

THE ELECTRONIC BID SCHEDULE MUST BE COMPLETED BY EACH BIDDER AND PROPERLY SUBMITTED ON PLANETBIDS.

FAILURE TO COMPLETE THE BID SCHEDULE WILL RESULT IN AN INCOMPLETE AND NON-RESPONSIVE BID.

THE ELECTRONIC BID SCHEDULE WILL BE INCORPORATED INTO THE CONTRACT DOCUMENTS.

The cost of all labor, services, material, equipment and installation necessary for the completion of the work itemized under this schedule, even though not shown or specified, shall be included in the unit price for the various items shown herein. For a description of the work associated with each bid item, see **SECTION F – SPECIAL PROVISIONS**. The AGENCY reserves the right to increase or decrease the quantity of any item or omit items as may be necessary, and the same shall in no way affect or void the contract, except that appropriate additions or deductions from the contract total price will be made at the stipulated unit price in accordance with these Contract Documents.

The AGENCY reserves the right to reject any and all bids, to waive any informality in a bid, and to make awards in the interest of the AGENCY.

The CONTRACTOR shall perform an independent take-off of the plans and bid accordingly. Quantities listed in this Bid Schedule are intended only as a guide for the CONTRACTOR as to the anticipated order of magnitude of work. The CONTRACTOR shall be responsible for verifying all estimated quantities. The CONTRACTOR will be reimbursed for the quantity of items actually installed as required by the Contract Documents, including addenda, and shown on the plans to neat line and grade.

The CONTRACTOR will not be reimbursed for work performed for his convenience, or as required to adapt to field conditions, or for unauthorized work performed outside of that required by the Contract Documents. The proposal schedule shall include all costs for labor, services, material, equipment, and installation associated with completing the work in place per the plans, specifications and details.

NAME OF BIDDER:_____

CONTRACTOR'S LICENSE NO.:_____

AUTHORIZED SIGNATURE:_____

TITLE:_____

DATE:_____

BID BOND

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

KNOW ALL MEN BY THESE PRESENTS that Bidder _____, as PRINCIPAL, and _____, as SURETY, are held and firmly bound unto the City of South Pasadena as AGENCY, in the penal sum of _____ dollars ($_____), which is ten percent (10%) of the total amount bid by PRINCIPAL to AGENCY for the above stated project, for the payment of which sum, PRINCIPAL and SURETY agree to be bound, jointly and severally, firmly by these presents.

The SURETY, for value received, hereby stipulates and agrees that the obligations of said SURETY and its BOND shall be in no way impaired or affected by any extension of the time within which the AGENCY may accept such Bid; and said SURETY does hereby waive notice of any such extension.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas PRINCIPAL is about to submit a bid to AGENCY for the above stated project, if said bid is rejected, or if said bid is accepted and a contract is awarded and entered into by PRINCIPAL in the manner and time specified, and PRINCIPAL provides the required payment and performance bonds and insurance coverages to AGENCY, then this obligation shall be null and void, otherwise it shall remain in full force and effect in favor of AGENCY.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this ____ day of _____, 20__.

PRINCIPAL* _____

_____

_____

_____

SURETY* _____

_____

_____

_____

*Provide BIDDER and SURETY name, address and telephone number and the name, title, address and telephone number for their authorized representatives. Power of Attorney must be attached.

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

BID GUARANTEE

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Note: The following statement shall be used if other than a bid surety bond accompanies bid.

"Accompanying this proposal is a money order*, certified check*, cashier's check*, cash*, payable to the order of the City of South Pasadena in the amount of _____ Dollars ($_____) which is at least ten percent (10%) of the total amount of this bid. The proceeds of this bid guarantee shall become the property of the City of South Pasadena provided this bid is accepted by said City, through action of its legally constituted contracting authorities, and the undersigned fails to execute a contract and furnish the required bonds and insurance within the stipulated time. Otherwise, the proceeds of this bid guarantee shall be returned to the undersigned."

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

_____

AUTHORIZED SIGNATURE: _____

TITLE: _____

DATE: _____

(*circle one option)

BIDDER INFORMATION

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

BIDDER certifies that the following information is true and correct:

Name of Bidder:_____

Business Address:_____

Telephone:_____FAX:_____

E-mail: _____

CONTRACTOR's License No.:_____ Date License Issued:_____

License Expiration Date:_____

The following are the names, titles, addresses, and phone numbers of all individuals, firm members, partners, joint venturers, and/or corporate officers having a principal interest in this proposal: (Name / Title / Address / Telephone)

_____

_____

_____

_____

Any voluntary or involuntary bankruptcy judgments against any principal having an interest in this proposal are as follows: (Type of Judgment / Date)

_____

_____

_____

All current and prior DBA's, aliases, and/or fictitious business names for any principal having an interest in this proposal are as follows: (Principal / DBA's / Applicable Dates)

_____

_____

_____

Prior Disqualification

Has your firm ever been disqualified from performing work for any City, County, Public or Private Contracting entity? Yes / No _____. If yes, provide the following information. (If more than once, use separate sheets):

Date: _____ Entity:_____

Location:_____

Reason:_____

Provide Status and any Supplemental Statement:_____

_____

_____

_____

_____

Has your firm been reinstated by this entity? Yes / No _____

Violations of Federal or State Law

A. Has your firm or its officers been assessed any penalties by any agency for noncompliance, violations of Federal or State labor laws and/or business or licensing regulations within the past five (5) years relating to your construction projects?

Yes / No: _____ Federal / State: _____

If "yes", identify and describe, (including status):_____

_____

_____

_____

_____

Have the penalties been paid? Yes / No:_____

B. Does you firm or its officers have any ongoing investigations by any agency regarding violations of the State Labor Code, California Business and Professions Code or State Licensing laws?

Yes / No:_____ Codes / Laws:_____ Section / Article:_____

If "yes", identify and describe (including status):_____

_____

_____

I declare under penalty of perjury under the laws of the State of California that all of the representations made in this **BIDDER INFORMATION** are true and correct. Executed this _____ day of _____, 20__, at _____, California.

Authorized Representative: Signature _____

Title _____

EXPERIENCE STATEMENT

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Pursuant to this **BID PROPOSAL** and **QUALIFICATION OF BIDDERS**, the following is a record of the Bidder's experience in construction of a type similar in magnitude and character to that contemplated under this contract. Included in this section should be a complete list of references for similar projects in terms of scope of work, value of work, and time constraints. The CONTRACTOR must demonstrate that he/she has experience with this type of project and can manage this project effectively. If necessary, additional numbered pages can be attached to this page. The CONTRACTOR must be properly licensed to perform the work in this project as determined by the State CONTRACTOR's License Board.

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

EXPERIENCE STATEMENT (Continued)

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

I declare under penalty of perjury under the laws of the State of California that all of the representations made in this **EXPERIENCE STATEMENT** are true and correct. Executed this _____ day of _____, 20__, at _____, California.

Authorized Representative: Signature _____

Title _____

DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

The following is a list of subcontractors and suppliers, as defined in 2-3 SUBCONTRACTS of the Standard Specifications, who will perform work or provide materials of value in excess of one-half of one percent of the total bid price or $10,000, whichever is greater.

No subcontractor shall perform work in excess of the amount specified in 2-3 SUBCONTRACTS of the Standard Specifications, without the written approval of the AGENCY.

The CONTRACTOR is responsible to ensure that appropriate provisions are to be inserted in all subcontracts to bind subcontractors to the contract requirements as contained herein.

Each subcontractor must agree to comply with all applicable Federal, State, and local requirements.

Name, License No., and Address of Subcontractor	License No.	MBE/ WBE (Y/N)	Work Subcontracted (List Line Items, e.g. #3, #6, etc.)	Portion of Work (% of Contract Price)

Name, License No., and Address of Subcontractor	License No.	MBE/ WBE (Y/N)	Work Subcontracted	Portion of Work (% of Contract Price)

These representations are made under the penalty of perjury under the laws of the State of California. The undersigned hereby certifies that each subcontractor has been notified in writing of its equal opportunity obligations.

NAME OF BIDDER: _____

AUTHORIZED SIGNATURE: _____

Date: _____

STATEMENT REGARDING INSURANCE COVERAGE

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

The undersigned representative of Bidder hereby certifies that he/she has reviewed the insurance coverage requirements specified in **5-4 INSURANCE** of Section E, Standard Specifications and Section F, Special Provisions. Should Bidder be awarded the contract for the work, the undersigned further certifies that Bidder can meet all of these specification requirements for insurance including insurance coverage of his/her subcontractors.

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

_____

AUTHORIZED SIGNATURE: _____

TITLE: _____

DATE: _____

STATEMENT REGARDING CONTRACTOR'S LICENSING LAWS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

[Business & Professions Code § 7028.15]
[Public Contract Code § 20103.5]

I, the undersigned, certify that I am aware of the following provisions of California law and that I, or the entity on whose behalf this certification is given, hold a currently valid California CONTRACTOR's license as set forth below:

Business & Professions Code § 7028.15:

a) **It is a misdemeanor for any person to submit a bid to a public agency to engage in the business or act in the capacity of a CONTRACTOR within this state without having a license therefor,** except in any of the following cases:

(1)The person is particularly exempted from this chapter.

(2)The bid is submitted on a state project governed by Section 10164 of the Public Contract Code or on any local agency project governed by Section 20104 [now § 20103.5] of the Public Contract Code.

b) If a person has been previously convicted of the offense described in this section, the court shall impose a fine of 20 percent of the price of the contract under which the unlicensed person performed contracting work, or four thousand five hundred dollars ($4,500), whichever is greater, or imprisonment in the county jail for not less than 10 days nor more than six months, or both.

In the event the person performing the contracting work has agreed to furnish materials and labor on an hourly basis, "the price of the contract" for the purposes of this subdivision means the aggregate sum of the cost of materials and labor furnished and the cost of completing the work to be performed.

c) This section shall not apply to a joint venture license, as required by Section 7029.1. However, at the time of making a bid as a joint venture, each person submitting the bid shall be subject to this section with respect to his/her individual licenser.

d) This section shall not affect the right or ability of a licensed architect, land surveyor, or registered professional engineer to form joint ventures with licensed CONTRACTORs to render services within the scope of their respective practices.

e) Unless one of the foregoing exceptions applies, a bid submitted to a public agency by a CONTRACTOR who is not licensed in accordance with this chapter shall be considered nonresponsive and shall be rejected by the public agency. Unless one of the foregoing exceptions applies, a local public agency shall, before awarding a contract or issuing a purchase order, verify that the CONTRACTOR was properly licensed when the CONTRACTOR submitted the bid. Notwithstanding any other provision of law, unless one of the foregoing exceptions applies, the registrar may issue a citation to any public officer or employee of a public entity who knowingly awards a contract or issues a purchase order to a CONTRACTOR who is not licensed pursuant to this chapter. The amount of civil penalties, appeal, and finality of such citations shall be subject to Sections 7028.7 to 7028.13, inclusive. **Any contract awarded to, or any purchase order issued to, as CONTRACTOR who is not licensed pursuant to this chapter is void.**

f) Any compliance or noncompliance with subdivision (e) of this section, as added by Chapter 863 of the Statutes of 1989, shall not invalidate any contract or bid awarded by a public agency during which time that subdivision was in effect.

g) A public employee or officer shall not be subject to a citation pursuant to this section if the public employee, officer, or employing agency made an inquiry to the board for the purposes of verifying the license status of any person or CONTRACTOR and the board failed to respond to the inquiry within three business days. For purposes of this section, a telephone response by the board shall be deemed sufficient.

Public Contract Code § 20103.5:

In all contracts subject to this part where federal funds are involved, no bid submitted shall be invalidated by the failure of the bidder to be licensed in accordance with the laws of this state. However, at the time the contract is awarded, the CONTRACTOR shall be properly licensed in accordance with the laws of this state. The first payment for work or material under any contract shall not be made unless and until the Registrar of CONTRACTORs verifies to the AGENCY that the records of the Contractors' State License Board indicate that the CONTRACTOR was properly licensed at the time the contract was awarded. Any bidder or CONTRACTOR not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the Contractors' State License Board. The AGENCY shall include a statement to that effect in the standard form of pre-qualification questionnaire and financial statement. **Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder.**

CONTRACTOR's License Number: _____

License Expiration Date:_____

Authorized Signature:_____

Date:_____

NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on the ___ day _____, 20__ at _____, California.

_____
CONTRACTOR's Signer's Name

_____
CONTRACTOR's Signer's Title

_____
CONTRACTOR's Business Name

Contractor's Business Address:

_____
Mailing Street Address

_____
City, State, Zip Code

_____
Telephone #

SECTION D – CONTRACT INFORMATION AND DOCUMENTS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Contract Information and Documents:

□ Contract Agreement and Attachment A
□ Payment Bond
□ Faithful Performance Bond
□ Maintenance Bond
□ Worker's Compensation Insurance Certificate
□ Endorsements to Insurance Policy

CONTRACT AGREEMENT

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

THIS AGREEMENT ("AGREEMENT") is made and entered into for the above-stated project this _____ day of_____, 20__ *(Council Action Date)*, BY AND BETWEEN the City of South Pasadena, a municipal corporation, hereafter designated as "AGENCY", and _____ a _____
[CONTRACTOR'S BUSINESS NAME] [corporation, partnership, limited liability company, or other business form]

in the State of _____, hereafter designated as "CONTRACTOR."

WITNESSETH that AGENCY and CONTRACTOR have mutually agreed as follows:

1) **Project Name:** Grevelia & Berkshire Pocket Parks, SPECIFICATION NO. 005157
2) **Project Scope of Work:** CONTRACTOR shall provide and install:

All materials, equipment, tools, labor, and incidentals required to complete the improvements shown on the Specifications and Contract Documents. The work performed under this contract is summarized in the Notice Inviting Sealed Bids and includes, but is not limited to each bid item listed in the Contractor's Bid Proposal, as covered in the Standard Specifications, and as described in the corresponding items on the following pages. The work in general, to be performed pursuant to these specifications, consists of consists of construction of two (2) new 'pocket' parks located on Grevelia Street (Assessor Parcel Number 5315-011-904 at or near 1107 Grevelia Street) and Berkshire Avenue (Assessor Parcel Number 5310-018-901 at or near 2006 Berkshire Avenue). The project also includes demolition, grading, landscaping, electrical, plumbing, and drainage improvements, as well as installation of equipment and site finishing; traffic control and all appurtenant work thereto necessary for the proper construction of the contemplated improvements, in accordance to Plans and Specification entitled as Grevelia & Berkshire Pocket Parks Project 005157.

The limits of work include:

- **Assessor Parcel Number 5315-011-904 (at or near 1107 Grevelia Street) and adjacent public right-of-way**
- **Assessor Parcel Number 5310-018-901 (at or near 2006 Berkshire Avenue) and adjacent public right-of-way**

3) **Contract Documents:** The complete contract and agreement ("AGREEMENT") consists of this Contract Agreement, including all attachments hereto, and:

- Approved Plans and Specifications for City Project No. 005157
- Notice Inviting Sealed Bids
- Instructions to Bidders
- Information for Bidders
- Contractor's Bid Proposal
- Bid Schedule
- Standard Specifications
- Special Provisions
- All reference specifications, plans, details, standard drawings, and appendices
- Bonds, insurance certificates, permits, notices, and affidavits
- Appendices, Addendums, and Memorandums
- And all mutually agreed-upon modifications and amendments thereto.

4) **Compensation:** CITY agrees to pay, and CONTRACTOR agrees to accept in full payment for the Work, the stipulated sum of _____ Dollars, ($_____).

5) **Time of Completion:** _____ Working Days *[see B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE of Section B Instruction to Bidders]*.

6) **Liquidated Damages:** $4,200 for each calendar day delay beyond the Time of Completion *[see 6-9 LIQUIDATED DAMAGES of Section F – Special Provisions]*.

7) **Notices:** Any notices, bills, invoices, or reports required by this Agreement shall be addressed to:

To CITY:

City of South Pasadena
Public Works Department
1414 Mission Street
South Pasadena, CA 91030

To CONTRACTOR:

Contractor's Name _____
Address _____
_____
City, State Zip Code _____

IN WITNESS WHEREOF the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this AGREEMENT to be executed in duplicate by setting hereunto their names, titles, hands, and seals this _____ day of _____, 20__ *(Council Action Date)*

CONTRACTOR: _____
[CONTRACTOR'S BUSINESS NAME]

_____
CONTRACTOR's Sign Name, Title

CONTRACTOR's License No. _____

AGENCY: _____ _____
Don Penman, City Manager — Date
City of South Pasadena

ATTESTED: _____ _____
Mark Perez, Deputy City Clerk — Date
City of South Pasadena

APPROVED AS TO FORM: _____ _____
Roxanne Diaz, City Attorney — Date
City of South Pasadena

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

ATTACHMENT A

ADDITIONAL TERMS AND CONDITIONS OF THE AGREEMENT

ARTICLE I: Contract Documents

The complete contract and agreement ("AGREEMENT") consists of the Contract Documents described on the Contract Agreement, and all terms and conditions of this Attachment are incorporated therein. In the event of conflict between these documents, precedence shall be determined under section 2-5.2 of the Standard Specifications.

All of the provisions of the Contract Documents are made a part hereof as though fully set forth herein.

ARTICLE II: Scope of Work

For and in consideration of the payments and agreements to be made and performed by AGENCY, CONTRACTOR agrees to furnish all materials and equipment and perform all work required for the above-stated project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

AGENCY hereby employs CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices provided herein, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in this AGREEMENT.

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to this AGREEMENT, CONTRACTOR offers and agrees to assign to the AGENCY all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (Section 16700, et seq.) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

ARTICLE III: Compensation

A. CONTRACTOR agrees to receive and accept the prices set forth in the Bid Proposal and Bid Schedule as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. In no event shall the total compensation and costs payable to CONTRACTOR under this Agreement exceed the sum shown on the Contract Agreement, unless specifically approved in advance and in writing by AGENCY.

Such compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements,

unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work. Such unforeseen difficulties or obstructions includes any act of God, the elements, strike, walkout, or any other cause beyond CONTRACTOR's reasonable control that occurs before AGENCY accepts the work as complete.

B. This AGREEMENT is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of CONTRACTORs by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to CONTRACTOR of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This AGREEMENT hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

C. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with AGENCY, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those moneys to CONTRACTOR upon AGENCY's confirmation of CONTRACTOR'S satisfactory completion of this AGREEMENT. At any time during the term of this AGREEMENT CONTRACTOR may, at its own expense, substitute securities for funds otherwise withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

ARTICLE IV: Labor Code

AGENCY and CONTRACTOR acknowledge that this AGREEMENT is subject to the provisions of Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code relating to public works and public agencies and agree to be bound by all the provisions thereof as though set forth fully herein. Full compensation for conforming to the requirements of the Labor Code and with other Federal, State, and local laws related to labor, and rules, regulations and ordinances which apply to any work performed pursuant to this AGREEMENT is included in the price for all contract items of work involved.

This AGREEMENT is further subject to prevailing wage law, including, but not limited to, the following:

A. The CONTRACTOR shall pay the prevailing wage rates for all work performed under the AGREEMENT. When any craft or classification is omitted from the general prevailing wage determinations, the CONTRACTOR shall pay the wage rate of the craft or classification most closely related to the omitted classification. The CONTRACTOR shall forfeit as a penalty to AGENCY $200.00, or any greater penalty provided in the Labor Code for each Calendar Day, or portion thereof, for each worker paid less than the prevailing wage rates for any work done under the AGREEMENT in violation of the provisions of the Labor Code whether such worker is employed in the execution of the work by CONTRACTOR or by any Subcontractor under CONTRACTOR. In addition, CONTRACTOR shall pay each worker the difference between such prevailing wage rates and the amount paid to each worker for each Calendar Day, or portion thereof, for which each worker was paid less than the prevailing wage rate.

B. CONTRACTOR shall comply with the provisions of Labor Code Section 1777.5 concerning the employment of apprentices on public works projects, and further agrees that CONTRACTOR is responsible for compliance with Section 1777.5 by all of its subcontractors.

C. Pursuant to Labor Code § 1725.5, CONTRACTOR and any subcontractor must be registered with the California Department of Industrial Relations for any bid proposal submitted on or after March 1, 2015, and for any contract for public work entered into on or after April 1, 2015. Further, this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

D. Pursuant to Labor Code § 1776, CONTRACTOR and any subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with this AGREEMENT. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following: (1) The information contained in the payroll record is true and correct; and (2) The employer has complied with the requirements of Labor Code §§ 1811, and 1815 for any work performed by his or her employees on the public works project. The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours as required by Labor Code § 1776.

E. This AGREEMENT is further subject to 8-hour workday and wage and hour penalty law, including, but not limited to, Labor Code Sections 1810 and 1813, as follows:

CONTRACTOR shall strictly adhere to the provisions of the Labor Code regarding the 8-hour day and the 40-hour week, overtime, Saturday, Sunday and holiday work and nondiscrimination based on race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, or sexual orientation, except as provided in Section 12940 of the Government Code. Pursuant to the provisions of the Labor Code, eight hours' labor shall constitute a legal day's work. Work performed by CONTRACTOR's employees in excess of eight hours per day, and 40 hours during any one week, must include compensation for all hours worked in excess of eight hours per day, or 40 hours during any one week, at not less than one and one-half times the basic rate of pay. CONTRACTOR shall forfeit as a penalty to AGENCY $25.00, or any greater penalty set forth in the Labor Code for each worker employed in the execution of the work by CONTRACTOR or by any Subcontractor of CONTRACTOR, for each Calendar Day during which such worker is required or permitted to the work more than eight hours in one Calendar Day or more than 40 hours in any one calendar week in violation of the Labor Code.

F. This AGREEMENT is subject to Public Contract Code Section 6109: CONTRACTOR shall be prohibited from performing work on this project with a subcontractor who is ineligible to perform work on the project pursuant to Sections 1777.1 or 1777.7 of the Labor Code.

ARTICLE V: Work Site Conditions

A. In compliance with and pursuant to Government Code Section 4215, AGENCY shall assume the responsibility, as between the parties to this AGREEMENT, for the timely removal, relocation, or protection of existing main- or trunk-line utility facilities located on the site of any construction project that is a subject of this AGREEMENT, if such utilities are not identified by AGENCY in

the plans and specifications made a part of the invitation for bids. The Contract Documents shall include provisions to compensate CONTRACTOR for the costs of locating, repairing damage not due to the failure of CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work. CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project when such delay was caused by the failure of AGENCY or the owner of a utility to provide for removal or relocation of such utility facilities.

B. To the extent that the work requires trenches in excess of five feet (5') and is estimated to cost more than $25,000, prior to any excavation, CONTRACTOR must provide the AGENCY, or a registered civil or structural engineer employed by the AGENCY to whom authority has been delegated to accept such plans, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. Nothing in this section shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders.

C. This AGREEMENT is further subject to Public Contract Code Section 7104 with regard to any trenches deeper than four feet (4') involved in the proposed work as follows:

CONTRACTOR shall promptly, and before the following conditions are disturbed, notify AGENCY, in writing, of any:

(1) Material that CONTRACTOR believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, which is required to be removed to a Class I, Class II, or Class III disposal site in accordance with existing law.

(2) Subsurface or latent physical conditions at the site differing from those indicated by all available information provided prior to the deadline for submission of bids.

(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

AGENCY shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or involve hazardous waste, and cause a decrease or increase in CONTRACTOR's cost of, or the time required for, performance of any part of the work, AGENCY shall issue a change order under the procedures described in this AGREEMENT.

In the event that a dispute arises between AGENCY and CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in CONTRACTOR's cost of, or time required for, performance of any part of the work, CONTRACTOR shall not be excused from any scheduled completion date provided in the AGREEMENT but shall proceed with all work to be performed under the AGREEMENT. CONTRACTOR shall retain any and all

rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

ARTICLE VI: Insurance

A. With respect to performance of work under this AGREEMENT, CONTRACTOR shall maintain, and shall require all of its subcontractors to maintain, insurance as required by Section E "Standard Specifications" of the Contract Documents.

B. This AGREEMENT is further subject to Workers' Compensation obligations, including, but not limited to, California Labor Code Sections 1860 and 1861 as follows:

CONTRACTOR shall take out and maintain, during the life of this contract, Worker's Compensation Insurance for all of CONTRACTOR's employees employed at the site of improvement; and, if any work is sublet, CONTRACTOR shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by CONTRACTOR. CONTRACTOR and any of CONTRACTOR's subcontractors shall be required to provide AGENCY with a written statement acknowledging its obligation to secure payment of Worker's Compensation Insurance as required by Labor Code § 1861; to wit: 'I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.' If any class of employees engaged in work under this AGREEMENT at the site of the Project is not protected under any Worker's Compensation law, CONTRACTOR shall provide and shall cause each subcontractor to provide adequate insurance for the protection of employees not otherwise protected. CONTRACTOR shall indemnify and hold harmless AGENCY for any damage resulting from failure of either CONTRACTOR or any subcontractor to take out or maintain such insurance.

Any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements or limits shall be available to AGENCY as additional insured. Further, the requirements for coverage and limits shall be the greater of (1) the maximum coverage and limits specified in this Agreement, or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured. Insurance provided by CONTRACTOR under this Contract shall not replace or substitute for CONTRACTOR's indemnification obligations in Article VII.

CONTRACTOR's insurance, including all endorsements, shall be primary to any coverage available to AGENCY. Any insurance or self-insurance maintained by AGENCY and/or its officers, employees, agents, or volunteers, shall be excess of CONTRACTOR's insurance and shall not contribute with it.

ARTICLE VII: Indemnification

To the fullest extent permitted by law, CONTRACTOR shall, at its sole cost and expense, fully defend, indemnify and hold harmless AGENCY, its authorized representatives and their respective

subsidiaries, affiliates, members, directors, officers, subcontractors (including governmental agencies), suppliers, employees and agents (collectively, the "Indemnitees") from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses, including but not limited to any fees of accountants, attorneys or other professionals (collectively "Liabilities"), arising out of, in connection with, resulting from or related to, any act, omission, fault or negligence of CONTRACTOR, CONTRACTOR's Representative, or any of its officers, agents, employees, Subcontractors or Suppliers, or any person or organization directly or indirectly employed by any of them (Collectively, the "Indemnitors"), in connection with or relating to or claimed to be in connection with or relating to the work performed under this AGREEMENT. Indemnification includes, but is not limited to, all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses arising out of, in connection with, resulting from or related to changes to the natural environment or environmental harms caused in whole or in part by work performed under this AGREEMENT.

If CONTRACTOR is a joint venture or partnership, each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of CONTRACTOR that are assumed under or arise out of this AGREEMENT. Each of such venturers or partners waives notice of the breach or non-performance of any undertaking or obligation of CONTRACTOR contained in, resulting from, or assumed under this AGREEMENT, and the failure to give any such notice shall not affect or impair such venturer's or partner's joint and several liability hereunder.

AGENCY may request a deposit for defense costs from CONTRACTOR with respect to a claim. If AGENCY requests a defense deposit, CONTRACTOR shall provide it within 15 days of the request.

ARTICLE VIII: Binding Effect

AGENCY and CONTRACTOR each bind itself, its partners, successors, assigns, and legal representatives to the other party hereto and to its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents. This AGREEMENT is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported

assignment or delegation of any of the rights of obligations of either party without the prior written consent of the other shall be void and of no force and effect.

ARTICLE IX: Dispute Resolution

A. All disputes arising out of this AGREEMENT are subject to a mandatory step-by-step claims submission and evaluation process as a precondition to legal action in accordance with Public Contracts Code § 9204.

B. Any court action arising out of this AGREEMENT shall be filed in the Los Angeles County Superior Court. Any alternative dispute resolution proceeding arising out of this AGREEMENT shall be heard in the County of Los Angeles.

C. AGENCY shall have full authority to compromise or otherwise settle any claim relating to this AGREEMENT or any part hereof at any time. AGENCY shall provide timely notification to CONTRACTOR of the receipt of any third-party claim relating to this AGREEMENT. AGENCY shall be entitled to recover its reasonable costs incurred in providing the notification required by this section.

D. This AGREEMENT is further subject to the provisions of Article 1.5 (commencing at Section 20104) of Division 2, Part 3 of the Public Contract Code regarding the resolution of public works claims of less than $375,000. Article 1.5 mandates certain procedures for the filing of claims and supporting documentation by CONTRACTOR, for the response to such claims by the AGENCY, for a mandatory meet and confer conference upon the request of CONTRACTOR, for mandatory nonbinding mediation in the event litigation is commenced, and for mandatory judicial arbitration upon the parties' failure to resolve the dispute through mediation. This AGREEMENT hereby incorporates the provisions of Article 1.5 as though fully set forth herein.

ARTICLE X: Independent CONTRACTOR

CONTRACTOR is and shall at all times remain as to AGENCY, a wholly independent CONTRACTOR. Neither AGENCY nor any of its agents shall have control of the conduct of CONTRACTOR or any of CONTRACTOR's employees, except as herein set forth. CONTRACTOR shall not at any time or in any manner represent that it or any of its agents or employees are in any manner agents or employees of AGENCY.

ARTICLE XI: Taxes

CONTRACTOR is responsible for paying all retail, sales and use, transportation, export, import, special or other taxes and duties applicable to, and assessable against any work, materials, equipment, services, processes, and operations incidental to or involved in this AGREEMENT. The CONTRACTOR is responsible for ascertaining and arranging to pay such taxes and duties. The prices established in this AGREEMENT shall include compensation for any taxes the CONTRACTOR is required to pay by laws and regulations in effect as of the execution of this AGREEMENT.

ARTICLE XII: Notices

All notices and communications shall be sent in writing to the parties at the addresses listed on the Contract Agreement.

ARTICLE XIII: Entire Agreement

This AGREEMENT supersedes any and all other agreements, either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described herein. Each party to this AGREEMENT acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any other agreement, statement or promise not contained in this AGREEMENT shall not be valid or binding. Any modification of this AGREEMENT will be effective only if signed by the party to be charged.

The benefits and obligations of this AGREEMENT shall inure to and be binding upon the representatives, agents, partners, heirs, successors and assigns of the parties hereto. This AGREEMENT shall be construed pursuant to the laws of the State of California.

ARTICLE XIV: Authority to Contract

The signatories hereto represent that they are authorized to sign on behalf of the respective parties they represent and are competent to do so, and each of the parties hereto hereby irrevocably waives any and all rights to challenge signatures on these bases.

ARTICLE XV: General Provisions

A. All reports, documents, or other written material ("written products" herein) developed by CONTRACTOR in the performance of this Agreement shall be and remain the property of AGENCY without restriction or limitation upon its use or dissemination by AGENCY. CONTRACTOR may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by CONTRACTOR.

B. In the performance of this Agreement, CONTRACTOR shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability, medical condition, or any other unlawful basis.

C. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph at the head of which it appears, the section or paragraph hereof, as the case may be, and not such heading, shall control and govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

D. The waiver by AGENCY or CONTRACTOR of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term, covenant, or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term,

covenant or condition of this Agreement shall be deemed to have been waived by AGENCY or CONTRACTOR unless in writing.

E. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any of all of such other rights, powers, or remedies.

F. CONTRACTOR shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to AGENCY under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to CONTRACTOR under this Agreement. All such documents shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of AGENCY. In addition, pursuant to Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars, all such documents and this Agreement shall be subject to the examination and audit of the State Auditor, at the request of AGENCY or as part of any audit of AGENCY, for a period of three (3) years after final payment under the Agreement.

(End of Attachment A)

(ATTACH TO EXECUTED CONTRACT AGREEMENT)

PAYMENT BOND

GREVELIA & BERKSHIRE POCKET PARKS PROJECT SPECIFICATION NO.005157 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

WHEREAS, the City of South Pasadena, as AGENCY has awarded to _____, as CONTRACTOR, a contract for the above-stated project;

AND WHEREAS, CONTRACTOR is required to furnish a bond in connection with the contract, to secure the payment of claims of laborers, mechanics, material persons, and other persons as provided by law;

NOW THEREFORE, we, the undersigned CONTRACTOR and SURETY, are held and firmly bound unto AGENCY in the sum of _____, ($_____.____) Dollars, which is one hundred percent (100%) of the total contract amount for the above-stated project, for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION IS SUCH that if CONTRACTOR, its heirs, executors, administrators, successors, assigns or subcontractors, shall fail to pay any of the persons named in Civil Code Section 9100, or amounts due under the Unemployment Insurance Code with respect to work or labor withheld, and to pay over to the Employment Development Department from the wages of employees of the CONTRACTOR and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, that the surety or sureties herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, SURETY will pay reasonable attorneys' fees to the plaintiffs and AGENCY in an amount to be fixed by the court.

This bond shall inure to the benefit to any of the persons named in Civil Code Section 9100 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

The SURETY hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or the specifications accompanying it shall in any manner affect SURETY's obligations on this bond. The SURETY hereby waives notice of any such change, extension, alteration or addition and hereby waives the requirements of Section 2845 of the Civil Code as a condition precedent to any remedies AGENCY may have.

(Continued on Next Page)

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals as of the dates set forth below:

CONTRACTOR*	CONTRACTOR's Signer's Name, Title	_____
	CONTRACTOR's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____
Surety*	Surety Signer's Name / Title	_____
	Surety's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____

*Provide CONTRACTOR and Surety name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney and Notary Acknowledgement must be attached. Seals and dates of signing must also be included.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

FAITHFUL PERFORMANCE BOND

GREVELIA & BERKSHIRE POCKET PARKS PROJECT SPECIFICATION NO.005157 IN THE CITY OF SOUTH PASADENA, CALIFORNIA

KNOW ALL PERSONS BY THESE PRESENTS That _____, hereinafter referred to as "CONTRACTOR" as PRINCIPAL, and _____, a corporation duly organized and doing business under and by virtue of the laws of the State of California and duly licensed for the purpose of making, guaranteeing, or becoming sole surety upon bonds or undertakings as Surety, are held and firmly bound unto the CITY OF SOUTH PASADENA, CALIFORNIA, hereinafter referred to as the "AGENCY" in the sum of _____, ($_____.____) Dollars, which is one hundred percent (100%) of the total contract amount for the above stated project; lawful money of the United States of America for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, assigns and successors, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that whereas CONTRACTOR has been awarded and is about to enter into a Contract with AGENCY to perform all work required pursuant to the contract documents for the project entitled: GREVELIA & BERKSHIRE POCKET PARKS PROJECT SPECIFICATION NO. 005157, CONTRACT which Contract is by this reference incorporated herein, and is required by AGENCY to give this Bond in connection with the execution of the Contract;

NOW, THEREFORE, if CONTRACTOR and his or her Subcontractors shall well and truly do and perform all the covenants and obligations of the Contract on his or her part to be done and performed at the times and in the manner specified herein including compliance with all Contract specifications and quality requirements, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect;

PROVIDED, that any alterations in the work to be done, or in the material to be furnished, which may be made pursuant to the terms of the Contract, shall not in any way release CONTRACTOR or the Surety thereunder, nor shall any extensions of time granted under the provisions of the Contract release either CONTRACTOR or said Surety, and notice of such alterations of extensions of the Contract is hereby waived by said Surety.

In the event suit is brought upon this Bond by AGENCY and judgment is recovered, said Surety shall pay all costs incurred by AGENCY in such suit, including a reasonable attorney's fee to be fixed by the Court.

(Continued on Next Page)

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals as of the dates set forth below:

CONTRACTOR*	CONTRACTOR's Signer's Name, Title	_____
	CONTRACTOR's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____
Surety*	Surety Signer's Name / Title	_____
	Surety's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____

*Provide CONTRACTOR and Surety name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney and Notary Acknowledgement must be attached. Seals and dates of signing must also be included.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)

personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

MAINTENANCE BOND

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

KNOW ALL PERSONS BY THESE PRESENTS THAT WHEREAS, the City of South Pasadena, as AGENCY has awarded to _____, as CONTRACTOR, a contract for the above-stated project.

AND WHEREAS, CONTRACTOR is required to furnish a bond in connection with the contract guaranteeing maintenance thereof;

NOW, THEREFORE, we, the undersigned CONTRACTOR and SURETY, are held firmly bound unto AGENCY in the sum of _____, ($_____.____) Dollars, which is fifty percent (50%) of the total contract amount for the above-stated project to be paid to AGENCY, its successors and assigns, for which payment well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if CONTRACTOR shall remedy without cost to AGENCY any defects which may develop during a period of one (1) year from the date of recordation of the Notice of Completion of the work performed under the contract, provided such defects are caused by defective or inferior materials or work, then this obligation shall be void; otherwise, it shall be and remain in full force and effect. In case suit is brought upon this bond, SURETY will pay reasonable attorneys' fees to the AGENCY in an amount to be fixed by the court.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals as of the dates set forth below:

CONTRACTOR*	CONTRACTOR's Signer's Name, Title	_____
	CONTRACTOR's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____
Surety*	Surety Signer's Name / Title	_____
	Surety's Business Name	_____
	Mailing Street Address	_____
	City, State, Zip Code	_____
	Telephone #	_____
	Date:	_____

*Provide CONTRACTOR and Surety name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney and Notary Acknowledgement must be attached. Seals and dates of signing must also be included.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, _____,
(insert name and title of the officer)
personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

WORKERS' COMPENSATION INSURANCE CERTIFICATE

The CONTRACTOR shall execute the following form as required by the California Labor Code, Sections 1860 and 1861:

> I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

Date: _____

_____
CONTRACTOR's Business Name

By:_____
(Signature)

_____
(Title)

Attest:

By:_____
(Signature)

_____
(Title)

NOTE: See Section 5.4 Insurance of the Standard Specifications for insurance carrier rating requirements.

ENDORSEMENTS TO INSURANCE POLICY

Name of Insurance Company:_____

Policy Number:_____

Effective Date:_____

The following endorsements are hereby incorporated by reference into the attached Certificate of Insurance as though fully set forth thereon:

1. The naming of an additional insured as herein provided shall not affect any recovery to which such additional insured would be entitled under this policy if not named as such additional insured, and
2. The additional insured named herein shall not be held liable for any premium or expense of any nature on this policy or any extensions thereof, and
3. The additional insured named herein shall not by reason of being so named be considered a member of any mutual insurance company for any purpose whatsoever, and
4. The provisions of the policy will not be changed, suspended, canceled or otherwise terminated as to the interest of the additional insured named herein without first giving such additional insured twenty (20) days' written notice.
5. Any other insurance held by the additional insured shall not be required to contribute anything toward any loss or expense covered by the insurance, which is referred to by this certificate.
6. **The company provided insurance for this certificate is a company licensed to do business in the State of California with rating of "A" or higher and a Financial Class VII or higher as established by A.M. Best, or higher rating established by Moody's or Standard & Poor's.**

It is agreed that the <u>City of South Pasadena, its officers and employees,</u> are included as Additional Insureds under the contracts of insurance for which the Certificate of Insurance is given.

_____
Authorized Insurance Agent

Date:_____

SECTION E – STANDARD SPECIFICATIONS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

STANDARD SPECIFICATIONS

INCORPORATION OF GREENBOOK. The 2021 edition of the Standard Specifications for Public Works Construction ("SSPWC" or "Greenbook") shall be incorporated by reference into these Standard Specifications as if fully replicated herein. These Standard Specification shall be supplemented, amended, or replaced by the Special Provision contained in Section F and G herein below. To the extent that anything in the Special Provisions conflicts with the terms or requirements of the SSPWC, the Special Provisions shall control.

SECTION F – SPECIAL PROVISIONS

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

SPECIAL PROVISIONS – PART 1. The following provisions supplement, amend, or replaced the requirements of the Standard Specifications for Public Works Construction ("SSPWC" or "Greenbook"). To the extent that anything in these Special Provisions conflicts with the terms or requirements of the SSPWC, these Special Provisions shall control.

SECTION 1 - GENERAL

1-1 GENERAL. Unless otherwise stated, the words *directed, required, permitted, ordered, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory*, or words of like meaning, refer to actions, expressions, and prerogatives of the Engineer.

1-2 TERMS AND DEFINITIONS

Acceptance – The AGENCY's formal written acceptance of a project that has been completed in all respects in accordance with the plans and specifications and any modifications thereof.

AGENCY – The City of South Pasadena.

Agent – Shall include persons and companies, other than the CONTRACTOR, retained by the City to perform design and construction services in relation to the Work.

Board – The City Council of the City of South Pasadena.

City – The City of South Pasadena, California, as the AGENCY and Owner.

City Council – City Council of the City of South Pasadena, California.

Construction Manager – Persons and/or company retained by the City to perform construction management services.

Contract Documents – Including, but not limited to: the Contract, any Addendum and Memorandum (which pertain to the contract documents), Notice Inviting Bids, Instructions to Bidders; Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Contract, the Bonds, the general conditions, permits from other agencies, the Special Provisions, the Plans, Standard Plans, Standard Specifications, Reference Specifications, and all Modifications issued after the execution of the Contract.

Days – Days shall mean consecutive calendar's days unless otherwise specified.

Design Engineer – Persons and/or company retained by the City to perform engineering design services.

Due Notice – A written notification, provided in due time, of a proposed action, where the contract requires such notification within a specified time (usually 48 hours or two working days) prior to the commencement of the contemplated action.

Engineer – The City Engineer of the City of South Pasadena, or his/her authorized representative.

Geotechnical Engineer – Person licensed to practice Soils Engineering or Geotechnical Engineering pursuant to the laws of the State of California and retained by the AGENCY during construction.

Geotextile – Synthetic fiber used in civil engineering applications, serving the primary functions of separation and filtration.

House Sewer – A sewer, wholly within private property, proposed to connect any building to a house connection sewer.

Luminaire Arm – The structural member, bracket, or mast arm, which, mounted on the standard, supports the luminaire.

Owner – City of South Pasadena, California.

Prompt – The briefest interval of time required for a considered reply, including time required for approval by a governing body.

Proposal – See Bid.

Reference Specifications – Those bulletins, standards, rules, methods of analysis or test, codes, and specifications of other agencies, engineering societies, or industrial associations referred to in the Contract Documents. These refer to the latest edition, including amendments in effect and published at the time of advertising the project or issuing the permit, unless specifically referred to by edition, volume, or date.

Standard Plans – "Standard Plans for Public Works Construction" or "SSPWC" – Latest edition of the Southern California Chapter of the American Public Works Association.

State Standard Specifications ("SSS") – Standard Specifications prepared by the State of California, Business and Transportation Agency, Department of Transportation.

State Standard Plans ("SSP") – Standard Plans prepared by State of California, Business and Transportation Agency, Department of Transportation.

Storm Drain – Any conduit and appurtenances intended for the reception and transfer of storm water.

Tonne – Also referred to as "metric ton" — Represents a unit of measure in the International System of Units equal to 1,000 kilograms.

Work – That which is proposed to be constructed or done under the Contract or permit, including the furnishing of all labor, materials, equipment, and services.

Working Days – Any days, except: (1) Saturdays, Sundays, legal holidays on which South Pasadena City Hall is closed for business; (2) days when work is suspended by the Engineer for reasons unrelated to the performance of the CONTRACTOR and provided in Subsection 6-6.1; and (3) days determined to be non-working in accordance with Section 6-3 "Time of Completion."

1-3 ABBREVIATIONS

1-3.3 Institutions. *Add the following:*
These Standard Specifications incorporate by reference the list of commonly used institution terms in the edition of the "Standard Plans for Public Works Construction" (aka the Greenbook) with the following additions:

AGCA	Associated General CONTRACTORs of America
APWA	American Public Works Association
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
NFPA	National Fire Protection Association
SSS	State of California Standard Specifications, latest edition, Department of Transportation
SSP	State of California Standard Plans, latest edition, Department of Transportation.
SSPWC	Standard Specifications for Public Works Construction

1-4 UNITS OF MEASURE

1-4.1 General. *Add the following:*

When U.S. Standard Measures are not included in parenthesis, then the SI units shall control.

1-7 AWARD AND EXECUTION OF CONTRACT. *Add the following:*

1-7.0 Investigation of Site Conditions. Prior to submittal of the bid, Bidders must visit the site of work and complete their own investigations to satisfy themselves as to the existing conditions affecting the work to be done under these specifications. If the bidder chooses not to visit the site or conduct investigations, he will, nevertheless, be charged with the knowledge of conditions which reasonable inspection and investigation would have disclosed.

After the project is awarded, the CONTRACTOR shall carefully study and compare the Contract Documents with each other and with information available to the CONTRACTOR and furnished by the Owner and shall immediately notify the Engineer of errors, inconsistencies or omissions discovered. If the CONTRACTOR performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Engineer, the CONTRACTOR shall assume appropriate responsibility for such performance and may assume responsibility for the full costs for correction.

The CONTRACTOR shall make field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the CONTRACTOR with the Contract Documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported to the Engineer immediately.

When existing conditions are encountered which, in the opinion of the Engineer, require temporary suspension of work for design modifications or for other determinations to be made, the CONTRACTOR shall move to other areas of work until such determinations are made at no cost to the City. No additional compensation will be allowed by reason of such temporary suspension of work, or modifications to work, except as noted in Section 3 of these Standard Specifications ("Changes in Work") for specific items of work not included in the bid. Appropriate extension of item for completion may be allowed where justification in the opinion of the Engineer.

1-7.1 General. *Add the following:*

The City reserves the right to reject any or all proposals.

The Contract will be awarded, if at all, to the lowest responsible and responsive Bidder determined as provided on the Proposal Form, whose proposal complies with all the requirements prescribed. Such award, if made, will be made within the number of days stated in the proposal form. Refusal or failure to deliver the executed contract, bonds, or insurance in the form provided in the Contract and approved by the AGENCY's attorney within the time provided herein shall be cause, at the AGENCY's option, for the annulment of the award and forfeiture of the bid security. In such event, the AGENCY may successively award the Contract to the next lowest responsible and responsive Bidder until a properly executed Contract, bonds, and insurance is obtained, or it may at any time reject all remaining bids and proceed as provided by law. The refusal or failure of a successive lowest responsible and responsive Bidder to execute the Contract may, at the AGENCY's option, result in an annulment of the award to that Bidder and the forfeiture of that Bidder's bid security. The periods of time specified above within which the award of the Contract may be made shall be subject to extension for such further period as may be agreed upon in writing between the AGENCY and the concerned Bidder.

The AGENCY reserves the right to waive any irregularities.

Within ten (10) calendar days after the date of the Notice of Award, the CONTRACTOR shall execute and return the following contract documents to the AGENCY:

Contract Agreement (in duplicate)
Faithful Performance Bond (in duplicate)
Maintenance Bond (in duplicate)
Payment Bond (in duplicate)
Public Liability and Property Damage Insurance Certificate (two originals)
Additionally Insured Endorsement
Workers' Compensation Insurance Certificate (two originals)

A corporation to which an award is made may be required, before the Contract agreement is executed by the AGENCY, to furnish evidence of its corporate existence, of its right to enter into contracts in the State of California, and that the officers signing the contract and bonds for the corporation have the authority to do so.

1-7.2 Contract Bonds. *Add the following:*

The PAYMENT BOND shall remain in force until thirty-five (35) calendar days after the date of recordation of the Notice of Completion. The FAITHFUL PERFORMANCE BOND shall remain

in force until the date of recordation of the Notice of Completion. The MAINTENANCE BOND shall remain in force until one (1) year after the date of recordation of the Notice of Completion.

All bonds must be accompanied by a Power of Attorney.

SECTION 2 - SCOPE OF THE WORK

2-1 WORK TO BE DONE. *Add the following:*

Any plan or method of work suggested by the AGENCY or the Engineer to the CONTRACTOR but not specified or required, if adopted or followed by the CONTRACTOR in whole or in part, shall be used at the risk and responsibility of the CONTRACTOR; and the AGENCY and the Engineer shall assume no responsibility therefore and in no way be held liable for any defects in the work which may result from or be caused by use of such plan or method of work.

2-3 RIGHT-OF-WAY. *Substitute the following:*

Rights-of-way, easements, or rights-of-entry for the Work will be provided by the AGENCY. Unless otherwise provided, the CONTRACTOR shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities temporarily required. The CONTRACTOR shall fully defend, indemnify and hold harmless AGENCY, its authorized representatives and their representative subsidiaries, affiliates, members, director, officer, employees and agents, including parties that AGENCY contracts with (including other governmental agencies such as the California Department of Transportation) (collectively, the "Indemnitees") from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses, including but not limited to any fees of accountants, attorneys or other professionals (collectively "Liabilities"), arising out of, in connection with these actions.

When the CONTRACTOR arranges for additional work areas and facilities temporarily required by him/her, he/she shall provide the AGENCY with proof that the additional work areas and/or facilities have been left in a condition satisfactory to the owner(s) of said work areas and/or facilities prior to acceptance of the work.

2-5 CONTRACTOR'S EQUIPMENT AND FACILITIES.

2-5.1 General. *Add the following:*

The CONTRACTOR shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the Work. Such equipment and facilities shall meet all requirements of applicable ordinances and laws.

A noise level limit of 85 dba at a distance of fifty (50) feet shall apply to all construction equipment on or related to the job, whether owned by the CONTRACTOR or not. The use of excessively loud warning signals shall be avoided except in those cases where required for the protection of personnel.

The CONTRACTOR shall arrange and maintain a secure storage site for all equipment and materials. All equipment and unused materials shall be returned to this site at the end of each workday.

SECTION 3 - CONTROL OF THE WORK

3-3 SUBCONTRACTORS. *Add the following:*

3-3.1 General. Each Bidder shall comply with the Public Contract Code including Sections 4100 through 4113. The following excerpts or summaries of some of the requirements of this Chapter are included below for information:

The Bidder shall set for the in the Bid, as provided in 4104:

> "(a) The name, and location of the place of business, the California contractor license number, and public works contractor registration number issued pursuant to Section 1725.5 of the Labor Code of each subcontractor who will perform work or labor or render service to the prime CONTRACTOR in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime CONTRACTOR, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime CONTRACTOR's total bid, or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime CONTRACTOR's total bid or ten thousand dollars ($10,000), whichever is greater."
>
> "(b) The portion of the work which will be done by each such subcontractor under this act. The prime CONTRACTOR shall list only one subcontractor for each such portion as is defined by the prime CONTRACTOR in his bid."

Subcontracting of more than one-half of one percent of the work for which no Subcontractor was designated in the original Bid will be allowed only in cases of public emergency or necessity and only after the Engineer makes a written finding of circumstances constituting public emergency or necessity.

The CONTRACTOR must obtain written consent of the City to substitute a Subcontractor designated in the original Bid, to permit any subcontract to be assigned or transferred, or to otherwise allow a subcontract to be performed by anyone other than the originally designated Subcontractor.

A violation of any of the above provisions will be considered a violation of the Contract, and the City may cancel the Contract and collect appropriate damages or assess the CONTRACTOR a penalty of not more than ten (10) percent of the subcontract involved.

If subcontracted work is not being performed in a satisfactory manner, the City will notify the CONTRACTOR of the need to take corrective action and the Engineer may report the facts to the City Council. Upon order by City Council and the CONTRACTOR's receipt of written instructions from the Engineer, the Subcontractor shall immediately be removed from the Work and may not again be employed on the Work.

3-3.2 Additional Responsibility. The CONTRACTOR shall perform, with its own organization, Contract work amounting to at least 50 percent of the Contract Price except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the Contract Price before computing the amount required to be performed by the CONTRACTOR with its own organization. "Specialty Items" will be identified by the AGENCY in the Bid or Proposal. Where an entire item is subcontracted, the value

of work subcontracted will be based on the Contract Unit Price. When a portion of an item is subcontracted, the value of work subcontracted will be based on the estimated percentage of the Contract Unit Price. This will be determined from information submitted by the CONTRACTOR, and subject to approval by the Engineer.

3-3.3 Status of Subcontractors. All persons engaged in the Work, including Subcontractors and their employees, will be considered employees of the CONTRACTOR. The CONTRACTOR will be held responsible for their work. The AGENCY will deal directly and solely with the CONTRACTOR and make all payments to the CONTRACTOR.

3-4 AUTHORITY OF BOARD AND THE ENGINEER. *Substitute the following:*

The Board has the final authority in all matters affecting the Work. Within the scope of the Contract, the Engineer has the authority to enforce compliance with the Plans and Specifications. The CONTRACTOR shall promptly comply with instructions from the Engineer or an authorized representative.

The decision of the Engineer is final and binding on all questions relating to: quantities; acceptability of materials, equipment, or work; execution, progress or sequence of work; and interpretation of the Plans, Specifications, or other drawings. This shall be precedent to any payment under the Contract, unless otherwise ordered by the Board.

3-7 CONTRACT DOCUMENTS.

3-7.1 General. *Add the following:*

The CONTRACTOR shall ascertain the existence of any conditions affecting the cost of the Work through a reasonable examination of the Work site prior to submitting the Bid.

Existing improvements visible at the Work site, for which no specific disposition is made on the Plans, but which interfere with the completion of the Work, shall be removed and disposed of by the CONTRACTOR.

The CONTRACTOR shall, upon discovering any error or omission in the Plans or Specifications, immediately call it to the attention of the Engineer.

All final locations determined in the field, and any deviations from the Plans and Specification, shall be marked in red on the documents to show the as-built conditions. CONTRACTOR shall maintain a complete and accurate record of all changes of construction from that shown in these plans and specifications for the purpose of providing a basis for construction record drawings. No changes shall be made without prior written approval of the Engineer. Upon completion of the Project, CONTRACTOR shall deliver this record of all construction changes to the Engineer along with a letter which declares that other than these noted changes "the Project was constructed in conformance with the Contract Documents." Final payment will not be made until this requirement is met.

As the figured dimensions shown on the drawings and in the specifications of the Contract may not in every case agree with scaled dimensions, the figured dimensions shall be followed in preference to the scaled dimensions, and drawings to a large scale shall be followed in preference to the drawings to a small scale. Should it appear that the work to be performed, or any related matter, are not sufficiently detailed or explained in the Contract documents, the CONTRACTOR shall apply to the Engineer for such further explanations as necessary, and shall conform to such

further explanations provided by the Engineer as part of the Contract to the extent that it is consistent with the terms of the Contract.

Caution: The engineer preparing these plans will not be responsible or liable for unauthorized changes to or uses of these plans. All changes to the plans must be approved in writing by the Engineer.

(a) Records of Construction Changes / As-Builts. CONTRACTOR shall maintain a complete and accurate record of all changes of construction from that shown in these Plans and Specifications for the purpose of providing a basis for construction record drawings. No changes shall be made without prior written approval of the City Engineer.

Upon completion of the Project, CONTRACTOR shall deliver this record of all construction changes to the Engineer along with a letter which declares that other than these noted changes that Project was constructed in conformance with the Contract Documents.

Caution: The engineer preparing these Plans will not be responsible for, or liable for, unauthorized changes to or uses of these Plans. All changes to the Plans must be approved in writing by City Engineer.

3-7.2 Precedence of Contract Documents. *Substitute the following:*

If there is a conflict between any of the Contract Documents, the document highest in precedence shall control. The order of precedence, from highest to lowest, shall be as follows:

1) Permits issued by jurisdictional regulatory agencies.

2) Change Orders and/or Supplemental Agreements; whichever occurs last.

3) Contract/Agreement

4) Addenda.

5) Bid/Proposal.

6) Special Provisions.

7) Plans.

8) Notice Inviting Bids

9) Instructions to Bidders

10) Standard Plans.

11) Standard Specifications.

12) Reference Specifications.

3-10 SURVEYING. *Substitute the following:*

3-10.1 General. The CONTRACTOR will provide all necessary construction surveying, staking or markings for locating the limits of construction and shall comply with the provisions of 2-9 of these Standard Specifications. The CONTRACTOR shall bear all costs for restaking or marking.

Construction surveys shall be done only under the direction of the Engineer by a Registered (licensed) Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state. The AGENCY will provide available record map information. The

CONTRACTOR is responsible for obtaining all necessary record maps, centerline ties and survey notes from Los Angeles County.

The CONTRACTOR and his surveyor shall provide the Engineer with a copy of the constructing staking field notes used to construct the improvements. In addition the CONTRACTOR shall also prove a plot of the improvements to be constructed based on the surveyor's construction staking and markings prior to the installation of the improvements. The plot shall be the same scale as the improvement plans.

3-10.2 Permanent Survey Markers. The CONTRACTOR shall notify the Engineer, or the owner on a Private Contract, at least 7 days before starting work to allow for the preservation of survey monuments, lot stakes (tagged), and bench marks.

The CONTRACTOR shall protect existing survey monuments, if any exist within the work limits, during the entire project. Asphalt overlaying of existing survey monuments in the roadway will not be permitted. In the event a surveyed monument lies within an area to be cold planed, removed or reconstructed, the CONTRACTOR shall immediately notify the AGENCY's representative and protect said monument until the monument is relocated.

The CONTRACTOR shall reestablish destroyed survey monuments at the CONTRACTOR's expense.

The Engineer, or the owner at its cost, shall file a Corner Record Form referencing survey monuments subject to disturbance in the Office of the County Surveyor prior to the start of construction and also prior to the completion of construction for the replacement of survey monuments. The CONTRACTOR shall not disturb survey monuments, lot stakes (tagged), or bench marks without the consent of the Engineer or the owner on Private Contracts. The CONTRACTOR shall bear the expense of replacing any that may be disturbed without permission. Replacement shall be done only under the direction of the Engineer by Registered (licensed) Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the CONTRACTOR shall adjust the monument cover to the new grade within 7 days of finished paving unless otherwise specified.

3-10.3 Line and Grade. The CONTRACTOR shall be responsible for all survey and layout of work.

The line and grades for construction will be parallel to and offset from the position of the work. From the established lines and grades, the CONTRACTOR shall extend the necessary lines and grades for construction of the work and shall be responsible for the correctness of same.

All work shall conform to the lines, elevations, and grades shown on the Plans.

Three consecutive points set on the same slope shall be used together so that any variation from a straight grade can be detected. Any such variation shall be reported to the Engineer. In the absence of such report, the CONTRACTOR shall be responsible for any error in the grade of the finished work.

Grades for underground conduits will be set at the surface of the ground. The CONTRACTOR shall transfer them to the bottom of the trench.

3-10.4 Survey Service. The Engineer will oversee surveying adequate for construction. The CONTRACTOR shall preserve construction survey stakes and marks for the duration of their usefulness. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be by the CONTRACTOR at his expense.

The CONTRACTOR shall notify the Engineer in writing at least 2 working days before survey services take place for the laying out of any portion of the Work. The CONTRACTOR shall dig all holes necessary for line and grade stakes.

Unless otherwise specified, stakes will be set and stationed by the CONTRACTOR for curbs, headers, sewers, storm drains, structures, and rough grade. A corresponding cut or fill to finished grade (or flowline) will be indicated on a grade sheet.

3-10.4 Payment. Payment for **CONSTRUCTION SURVEYING** shall be at the contract LUMP SUM (LS) price bid, and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted. Payment for construction surveying, construction staking, resetting of survey tags and monuments, professional services, office calculations, preparation and filing of corner records before and after construction, county fees, monuments, swing ties, certification letters, furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved shall be considered as included in the contract LUMP SUM (LS) price bid for Construction Surveying, and no additional compensation will be allowed.

3-12 WORK SITE MAINTENANCE

3-12.1 General. *Add the following:*

The CONTRACTOR shall also abate dust nuisance by cleaning, sweeping and sprinkling with water, or other means as necessary. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other methods.

Materials and equipment shall be removed from the site as soon as they are no longer necessary. Before the final inspection, the site shall be cleared of equipment, unused materials, and rubbish so as to present a satisfactory clean and neat appearance. All cleanup costs shall be included in the CONTRACTOR's Bid.

Excess excavated material from catch basins or similar structures shall be removed from the site immediately. Sufficient material may remain for use as backfill if permitted by the Specifications. Forms and form lumber shall be removed from the site as soon as practicable after stripping.

3-12.1.1 Vermin Control. *Add the following:*

At the time of acceptance, structures entirely constructed under the Contract shall be free of rodents, insects, vermin, and pests. Necessary extermination work shall be arranged and paid for by the CONTRACTOR as part of the Work within the Contract time, and shall be performed by a licensed exterminator in accordance with requirements of governing authorities. The CONTRACTOR shall be liable for injury to persons or property and responsible for the elimination of offensive odors resulting from extermination operations.

3-12.3 Noise Control. *Add the following:*

CONTRACTOR shall adhere to City noise restrictions at all times. Pursuant to Chapter 19A.13 of the South Pasadena Municipal Code, construction activity is prohibited within a residential zone or within 500 feet thereof on Monday through Friday before 8:00 a.m. and after 7:00 p.m., Saturday before 9:00 a.m. and after 7:00 p.m., and on Sundays and City recognized holidays before 10:00 a.m. and after 6:00 p.m.

3-12.6.3 Storm Water Pollution Prevention Plan (SWPPP). *Add the following:*

CONTRACTOR shall submit to the engineer a completed and signed SWPPP one week prior to the preconstruction meeting. The plan may utilize the practices recommended in the latest edition of the *California Storm Water Best Management Practices Handbook*, available from California Stormwater Quality Association (CSQA), and online at http://www.cabmphandbooks.net/ . The plan shall be consistent with the construction General Permit, issued by the State Water Resources, Control Board, through submittal of the Notice of Intent (NOI).

If construction will occur between October 15 and April 15 (considered as the rainy season per the City of South Pasadena), a wet weather erosion control plan must be submitted. Additionally, Best Management Practices (BMPs) implemented during the AGENCY's rainy season shall include but not be limited to those appropriate for wet weather conditions.

(a) Storm Water Pollution Prevention Measures. All storm water pollution prevention measures shall be in accordance with the submitted SWPPP. In the event circumstances during the course of construction require changes to the original SWPPP, a revised plan shall be promptly submitted to the AGENCY's representative in each instance. No responsibility shall accrue to the AGENCY as a result of the plan or as a result of knowledge of the plan. All work installed by the CONTRACTOR in connection with the SWPPP but not specified to become a permanent part of the project shall be removed and the site restored in so far as practical to its original condition prior to completion of construction or when directed by the AGENCY's representative.

(b) Storm Water Pollution Prevention – Measurement And Payment. Unless otherwise indicated in the Special Provisions, measurement and payment for Storm Water Pollution Prevention Measures, as described herein, shall be included in the items of Work requiring storm water pollution prevention measures as indicated in the project Special Provisions. Such payment shall be considered full compensation for all labor, materials, tools, and equipment for completion, and implementation and compliance with the SWPPP.

This item shall also include the installation, maintenance and removal of any necessary BMPs for SWPPP purposes throughout the duration of the project.

3-13 COMPLETION, ACCEPTANCE, AND WARRANTY.

3-13.1 Completion. Add the following:

The Work will be inspected by the Engineer for acceptance upon receipt of the CONTRACTOR's written assertion that the Work has been completed.

3-13.3 Warranty. *Add the following:*

All work shall be warranted by the CONTRACTOR against defective workmanship and materials for a period of 1 year from the date the Work was completed. The CONTRACTOR shall replace

or repair any such defective work in a manner satisfactory to the Engineer, after notice to do so from the Engineer, and within the time specified in the notice. If the CONTRACTOR fails to make such replacement or repairs within the time specified in the notice, the AGENCY may perform this work and the CONTRACTOR's sureties shall be liable for the cost thereof.

SECTION 4 - CONTROL OF MATERIALS

4-1 GENERAL. *Add the following:*

Used or secondhand materials, parts, and equipment may be used only if permitted by the Specifications.

The CONTRACTOR and all subcontractors, suppliers, and vendors shall guarantee that the entire Work will meet all requirements of this Contract as to the quality of materials, equipment, and workmanship. The CONTRACTOR, at no cost to the AGENCY, shall make any repairs or replacements made necessary by defects in materials, equipment, or workmanship that become evident within one year after the date of recordation of the Notice of Completion. Within this one-year period, the CONTRACTOR shall also restore to full compliance with the requirements of this Contract any portion of the Work which is found not to meet those requirements. The CONTRACTOR shall defend, indemnify, and hold the AGENCY, its officers, agents, and employees harmless from claims of any kind due to injuries or damages arising, directly or indirectly, from said defects or noncompliance.

The CONTRACTOR shall make all repairs, replacements, and restorations within thirty-five (35) days after the date of the Engineers' written notice.

If, in the opinion of the Engineer, the defective work is not of sufficient magnitude or importance to make the work dangerous or undesirable, or if, in the opinion of the Engineer, the removal of such work is impractical or will create conditions which are dangerous or undesirable, the AGENCY shall have the right and authority to retain such work instead of requiring it to be removed and reconstructed, but will make such deductions thereof in the payments due or to become due to the CONTRACTOR as the AGENCY may deem just and reasonable.

4-2 PROTECTION. *Add the following:*

The CONTRACTOR shall be responsible for the protection of public and private property adjacent to the Work and shall exercise due caution to avoid damage to such property.

The CONTRACTOR shall relocate, repair, replace or reestablish all existing improvements within the project limits (e.g., curbs, sidewalks, catch basins, catch basin screens, driveways, fences, walls, sprinkler systems, signs, utility installations, pavements, structures, survey monuments, landscaping, etc.) that are damaged or removed as a result of the CONTRACTOR's operations or as required by the plans and specifications.

All existing improvements, either within the right-of-way or not, including irrigation lines that are damaged by actions of the CONTRACTOR, shall be restored by the CONTRACTOR to their original or better condition at the CONTRACTOR's expense.

The CONTRACTOR shall mark, as approved by the Engineer, all survey monuments, manholes, valves, substructures, or other items that are visible on the surface and will be covered by his

operations. This shall be completed prior to the start of that operation and approved by the Engineer.

Existing traffic striping, pavement markings, and curb markings shall also be considered as existing improvements and the CONTRACTOR shall repaint or replace, at the CONTRACTOR's expense, such striping or markings (except for traffic striping and pavement markings within the limits of the Work) if damaged or if their reflectivity is reduced due to construction operations.

All restoration of existing improvements must occur within the construction completion date, unless directed otherwise by the City Engineer.

Maintenance of street and traffic signal systems that are damaged, temporarily removed or relocated shall be done in conformance with the Contract Documents.

Trees, lawns, and shrubbery that are not to be removed shall be protected from damage or injury. If damaged or removed due to CONTRACTOR's operations, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible. Lawns shall be reseeded and covered with suitable mulch.

The CONTRACTOR shall give reasonable notice to occupants or owners of adjacent property to permit them to salvage or relocate plants, trees, fences, sprinklers, and other improvements, within the right-of-way which are designated for removal and would be destroyed because of the Work.

All costs to the CONTRACTOR for protecting, removing, restoring, relocating, repairing, replacing, or reestablishing existing improvements shall be the responsibility of the CONTRACTOR.

4-6 TRADE NAMES. *Add the following:*

Along with information supplied by the CONTRACTOR regarding equivalency of the proposed item, the CONTRACTOR shall clearly identify all deviations from the specified item. Deviations discovered by the Engineer after acceptance of an "or equal" item which were not identified by the CONTRACTOR with his/her submittal shall be cause for rejection of the "or equal" item. CONTRACTOR shall be due no additional compensation in time or money for acceptance or rejection of a proposed "or equal" item and subsequent replacement with the item specified. CONTRACTOR shall pay cost to AGENCY for items requiring more than two submittals and analysis of any shop drawing which requires more than a general review of an "or equal" item.

Add the following Section 4-9:

4-9 CONSTRUCTION MATERIALS DISPUTE RESOLUTION (Soils, Rock Materials, Concrete, Mortar and Related Materials, Masonry Materials, Bituminous Materials, Rock Products, and Modified Asphalts). In the interest of safety and public value, whenever credible evidence arises to contradict the test values of materials, the AGENCY and the CONTRACTOR will initiate, an immediate and cooperative investigation. Test values of materials are results of the materials' tests, as defined by these Specifications or by the special provisions, required to accept the Work. Credible evidence is process observations or test values gathered using industry accepted practices. A contradiction exists whenever work acceptance or performance becomes suspect. The investigation shall allow access to all test results, procedures, and facilities relevant to the disputed work and consider all available information and, when necessary, gather new and additional information to determine the validity, the cause, and if necessary, the remedy to the contradiction. If the cooperative investigation reaches any resolution mechanism acceptable to

both the AGENCY and the CONTRACTOR, the contradiction shall be considered resolved and the cooperative investigation concluded.

Whenever the cooperative investigation is unable to reach resolution, the investigation may then either conclude without resolution or continue by written notification of one party to the other requesting the implementation of a resolution process by committee. The continuance of the investigation shall be contingent upon recipient's agreement and acknowledged in writing within 3 calendar days after receiving a request. Without acknowledgement, the investigation shall conclude without resolution. The committee shall consist of three State of California Registered Civil Engineers. Within 7 calendar days after the written request notification, the AGENCY and the CONTRACTOR will each select one engineer. Within 14 calendar days of the written request notification, the two selected engineers will select a third engineer. The goal in selection of the third member is to complement the professional experience of the first two engineers. Should the two engineers fail to select the third engineer, the AGENCY and the CONTRACTOR shall each propose 2 engineers to be the third member within 21 calendar days after the written request notification. The first two engineers previously selected shall then select one of the court proposed engineers in a blind draw.

The committee shall be a continuance of the cooperative investigation and will re-consider all available information and if necessary, gather new and additional information to determine the validity, the cause, and if necessary, the remedy to the contradiction. The committee will focus upon the performance adequacy of the material(s) using standard engineering principles and practices and to ensure public value, the committee may provide engineering recommendations as necessary. Unless otherwise agreed, the committee will have 30 calendar days from its formation to complete their review and submit their findings. The final resolution of the committee shall be by majority opinion, in writing, stamped and signed. Should the final resolution not be unanimous, the dissenter may attach a written, stamped, and signed minority opinion.

Once started, the resolution process by committee shall continue to full conclusion unless:

1. Within 7 days of the formation of the committee, the AGENCY and the CONTRACTOR reach an acceptable resolution mechanism; or
2. Within 14 days of the formation of the committee, the initiating party withdraws its written notification and agrees to bear all investigative related costs thus far incurred; or
3. At any point by the mutual agreement of the AGENCY and the CONTRACTOR.

Unless otherwise agreed, the CONTRACTOR shall bear and maintain a record for all the investigative costs until resolution. Should the investigation discover assignable causes for the contradiction, the assignable party, the AGENCY or the CONTRACTOR, shall bear all costs associated with the investigation. Should assignable causes for the contradiction extended to both parties, the investigation will assign costs cooperatively with each party or when necessary, equally. Should the investigation substantiate a contradiction without assignable cause, the investigation will assign costs cooperatively with each party or when necessary, equally. Should the investigation be unable to substantiate a contradiction, the initiator of the investigation shall bear all investigative costs. All claim notification requirements of the contract pertaining to the contradiction shall be suspended until the investigation is concluded.

SECTION 5 - LEGAL RELATIONS AND RESPONSIBILITIES

5-2 SPECIAL NOTICES. *Add the following:*

5-2.1 Mandatory Notification Prior To Excavation. The CONTRACTOR's attention is direct to Section 4215.5 through 4217 of the Government Code of the State of California. This requires that two (2) working days prior to commencing any excavation "Underground Service Alert of Southern California" (USA) ("Digalert") shall be notified by phone, toll free 1-800-422-4133, or 811, for the assignment of an Inquiry Identification Number.

CONTRACTOR shall contact all utility companies at least five (5) working days prior to commencing work and shall verify the location of any known utilities and determine whether or not a representative of each company will be present during excavation.

The known public utilities contacts are:

1.	City of South Pasadena, Public Works Inspection	(626) 403-7240
2.	AT&T	(626) 365-5733
3.	Southern California Edison	(714) 796-9932
4.	Southern California Gas Company	(714) 634-3079
5.	South Pasadena Water Department	(626) 403-7337
6.	Spectrum	(818) 407-3152
7.	South Pasadena Sewer Department	(626) 403-7370
8.	Athens Services	(888) 336-6100

The CONTRACTOR shall coordinate construction with public utility relocation activities.

The existing subsurface utilities shown have been indicated, based on the best available record information. However, to avoid or resolve any interference problems between these existing utilities and the proposed work, the CONTRACTOR shall field verify the vertical and horizontal locations of all utilities, such as water lines and water services, electronic conduits, telephone and television cable, storm drain facilities, and all other facilities and obstructions prior to beginning any excavations. If conflicts exist, revised grades and/or alignments may be established, if required. **Such field verification shall require exposing these utilities prior to the start of construction**.

Special reference is hereby made to Section 4-2, "Protection," of the Standard Specifications with respect to the protection, repair, and replacement of existing subsurface utilities.

Additionally, the CONTRACTOR shall also notify the following local entities of his/her schedule fourteen (14) days prior to commencing work, including local refuse collectors, street sweepers, the Post Office, Public Schools, and Bus Companies:

City of South Pasadena Attn: H. Ted Gerber, Public Works Director	(626) 403-7240
City of South Pasadena Attn: Anteneh Tesfaye, Deputy Public Works Director	(626) 403-7378
City of South Pasadena, Public Works Engineering Division Attn: Michael Vartanians, Principal Engineer	(626) 403-7245
City of South Pasadena, Public Works Water Division Attn: Victor Magana, Water Operations Manager	(626) 403-7396
City of South Pasadena, Public Works Operation Division Attn: Catrina Peguero, Operations Manager	(626) 403-7376
City of South Pasadena Attn: Eddie Munoz, Streets Supervisor	(626) 403-7375
Metropolitan Water District Attn: Kevin Johansen, Water Systems Operations Group	(526) 713-0348
AT&T Communications OSP Engineering	(626) 570-5454
Los Angeles County Sanitation Districts Attn: Doug Walton	(310) 638-1161
Los Angeles County Public Works Department Construction Division Attn: Angela George	(626) 458-3109
Los Angeles County Public Works Department Traffic & Lighting Division Attn: Guita Shiek Atten: Robery Gysel	 (626) 458-5905 (626) 458-3122
SBC Attn: Jack Wilson	(626) 373-5960
Southern California Edison Attn: Eddie Lopez	(626) 303-8405
Southern California Gas Company	(714) 634-3079
Spectrum	(818) 407-3152

Underground Service Alert (Dig Alert) (800) 422-4133

No excavation shall commence unless the CONTRACTOR has obtained the USA Inquiry Identification Number.

5-1.2 Accuracy of Utilities Information. The locations of known existing major utilities, whether above ground or underground, are indicated on the plans. Information and data reflected in the Contract Documents with respect to underground and above ground utilities at or contiguous to the site is based upon information and data furnished to the City and the Engineer by the owners of such utilities, and the City does not assume responsibility for the accuracy or completeness thereof. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

The CONTRACTOR shall be responsible for determining the location and depth of all underground facilities, including service connections, which may affect or be affected by his/her operations, and he/she shall include the cost to pothole all utilities within the limits of work in his/her bid. If an existing utility line, which has been marked by Underground Service Alert or is shown on the plans, is damaged by the CONTRACTOR, the CONTRACTOR shall repair the line and bear the cost thereof.

CONTRACTOR shall be aware that electrical conduits between street and traffic lights may exist beneath pavement and/or sidewalk in areas where such lights are in place and that said conduits are not shown on these plans.

In the event that the CONTRACTOR damages any existing utility lines that are not shown, shown incorrectly or the locations of which are not made known to the CONTRACTOR prior to excavation, a telephone call and written report shall be made immediately to the Utility owner, the Engineer, and to the City. If directed by the City, the CONTRACTOR shall make repairs under the provisions for changes and extra work contained in **2-7 CHANGES INITIATED BY THE AGENCY** of the Standard Specifications.

5-4 INSURANCE.

5-4.1 General. *Add The following:*

CONTRACTOR and AGENCY agree that AGENCY, its employees, agents and officials should, to the extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys fees, litigation costs, defense costs, court costs or any other cost arising out of or in any way related to the performance of this Agreement, which includes but is not limited to, contracts with other governmental agencies such as the California Department of Transportation, which are necessary for the AGENCY to enact this Agreement or from contracts with other parties or governmental agencies, which are necessary for the AGENCY to enact this Agreement.

CONTRACTOR acknowledges that its obligation pursuant to this section extends to liability attributable to AGENCY, if that liability is less than the sole fault of AGENCY. CONTRACTOR has no obligation under this Agreement for liability proven in a court of competent jurisdiction or by written agreement between the parties to be the sole fault of AGENCY.

The obligations of CONTRACTOR under this or any other provision of this Agreement will not be limited by the provisions of any workers compensation act or similar act. CONTRACTOR expressly waives its statutory immunity under such statutes or laws as to AGENCY, its employees, agents and officials.

CONTRACTOR agrees to obtain executed indemnity agreements with provisions identical to those as set forth here in this section from each and every subcontractor, sub-tier CONTRACTOR or any other person or entity involved by, for, with or on behalf of CONTRACTOR in the performance or subject matter of this Agreement. In the event CONTRACTOR fails to obtain such indemnity obligations from others as required here, CONTRACTOR agrees to be fully responsible according to the terms of this section.

Failure of AGENCY to monitor compliance with these requirements imposes no additional obligations on AGENCY and will in no way act as a waiver of any rights hereunder. This obligation to indemnify and defend AGENCY as set forth herein is binding on the successors, assigns or heirs of CONTRACTOR and shall survive the termination of this Agreement or this section.

CONTRACTOR agrees to provide insurance in accordance with the requirements as set forth here. If CONTRACTOR uses existing coverage to comply with these requirements and that coverage does not meet the requirements set forth herein, CONTRACTOR agrees to amend, supplement, or endorse the existing coverage to do so. The following coverages will be provided by CONTRACTOR and maintained on behalf of AGENCY and in accordance with the requirements set forth herein:

General Liability:

- General Aggregate: $4,000,000
- Products Comp/Op Aggregate $4,000,000
- Personal & Advertising Injury $2,000,000
- Each Occurrence $2,000,000
- Fire Damage (any one fire) $ 100,000
- Medical Expense (any 1 person) $ 10,000

Workers' Compensation:

- Workers' Compensation Statutory Limits
- EL Each Accident $1,000,000
- EL Disease - Policy Limit $1,000,000
- EL Disease - Each Employee $1,000,000

Automobile Liability

- Any vehicle, combined single limit $1,000,000

SECTION 6 - PROSECUTION AND PROGRESS OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK. *Add the following:*

6-1.3 Pre-Construction Meeting and Submittal. A pre-construction meeting will be conducted by the City prior to commencement of construction at a time and place designated by the City. Those attending the meeting shall include, but not be limited to, the following:

a. The CONTRACTORs representative(s)

b. Sub-CONTRACTORs representative(s), if needed

c. City of South Pasadena Director of Public Works

d. The Design Engineers

e. The Construction Engineers

f. The affected utility companies' representatives

g. City of South Pasadena Public Works Inspectors

h. Caltrans' inspector and/or representative(s)

One week prior to this meeting the CONTRACTOR shall submit the following:

1. Construction Schedule
2. Traffic Control Plan
3. Emergency Contact List
4. List of Subcontractors
5. Storm Water Pollution Prevention Plan (SWPPP)

6-1.4 Emergency Contact List. The CONTRACTOR shall provide the following information in writing and submit it with the signed contract, contract bonds and certificates of insurance. Failure to comply may result in delays in the processing of the contract documents.

1. Name of authorized representative at the job site.
2. Address and telephone number where the above person can be reached 24 hours a day.
3. Address of the nearest office of the CONTRACTOR, if any, and the name and telephone number of a person at that office who is familiar with the project.
4. Address and telephone number of the CONTRACTOR's main office and the name and telephone number of the person at that office familiar with the project.

6-2 PROSECUTION OF WORK. *Add the following:*

As soon as possible under the provisions of the Specifications, the CONTRACTOR shall backfill all excavations and restore to usefulness all improvements existing prior to the start of the Work.

The CONTRACTOR shall submit monthly progress reports to the Engineer by the tenth day of each month. The report shall include an updated construction schedule. Any deviations from the original schedule shall be explained.

6-2.1 Traffic and Access. The CONTRACTOR's operations shall cause no unnecessary inconvenience. The access rights of the public shall be considered at all times. Unless otherwise authorized, traffic shall be permitted to pass through the Work, or an approved detour shall be provided.

Safe and adequate pedestrian and vehicular access shall be provided and maintained to: fire hydrants; commercial and industrial establishments; churches, schools and parking lots; service stations and motels; hospitals; police and fire stations; and establishments of similar nature. Access to these facilities shall be continuous and unobstructed unless otherwise approved by the Engineer.

Safe and adequate pedestrian zones and public transportation stops, as well as pedestrian crossings of the Work at intervals not exceeding 90 m (300 feet), shall be maintained unless otherwise approved by the Engineer.

Vehicular access to residential driveways shall be maintained to the property lien except when necessary construction precludes such access for reasonable periods of time. If backfill has been completed to the extent that safe access may be provided, and the street is opened to local traffic, the CONTRACTOR shall immediately clear the street and driveways and provide and maintain access.

The CONTRACTOR shall cooperate with the various parties involved in the delivery of mail and the collection and removal of trash and garbage to maintain existing schedules for these services.

Grading operations, roadway excavation and fill construction shall be conducted by the CONTRACTOR in a manner to provide a reasonably satisfactory surface for traffic. When rough grading is completed, the roadbed surface shall be brought to a smooth, even condition satisfactory for traffic.

Unless otherwise authorized, work shall be performed in only one-half of the roadway at one time. One half shall be kept open and unobstructed until the opposite side is ready for use. If one-half a street only is being improved, the other half shall be conditioned and maintained as a detour.

The CONTRACTOR will be required to maintain at least one lane of traffic in each direction through the project area at all times in a manner satisfactory to the Engineer in the form of an engineered traffic control plan. The engineered traffic control plans must be signed by a California registered civil and/or traffic engineer. The plan is a required submittal for review one week prior to the pre-construction meeting.

If traffic control on the project shall be implemented by a sub-contractor, such subcontractor must specialize in Traffic Control and be approved by the City Engineer.

The CONTRACTOR shall include in its Bid all costs for the above requirements.

6-2.1.1 Notification to the Public. Affected properties will be determined by the Engineer and are, in general, those properties that fall within 500 feet of the limits of the work. CONTRACTOR shall remain aware of all adjacent property owners and take all steps necessary to minimize

construction impacts and disturbances to all affected property owners. The CONTRACTOR is required to distribute the approved public notice to property owners one week prior to roadway construction. CONTRACTOR shall be responsible for all costs associated with these tasks and responsibilities in the various contract bid items.

The CONTRACTOR is required to notify the City by e-mail that public notices have been distributed. The e-mail shall be addressed to the City representative(s) designated during the pre-construction meeting. The e-mail shall be sent to the City no later than 8 a.m. on the day following distribution of the notices. The e-mail notification to the City shall contain a map showing the limits of distribution and the dates and times distributed. A separate e-mail shall be sent for each distribution. The City will use the information on the e-mails to verify that the distribution has been performed. If the distribution is not verified by the City, the City will e-mail to the CONTRACTOR's representative the locations which must be redistributed with the new information. The CONTRACTOR shall not perform work in the distribution area without e-mail notification of verification by the City of the distribution.

The CONTRACTOR shall submit a sample of a public notice for review and approval by the Engineer. The CONTRACTOR shall provide changes as directed by the City representative and submit final draft for approval.

The CONTRACTOR shall furnish and place "No Parking" signs, 12"x18" minimum size, approved by the Engineer, along the street in front of every residence and/or business affected by the work, two (2) working days in advance of any work. In rural areas, the signs shall be placed at a spacing not exceeding 400 feet. The signs shall include the day and time during which parking is prohibited. Parking restrictions shall be limited to the intervals between 8 a.m. to 5 p.m. to allow parking during the night. The CONTRACTOR shall remove these signs immediately when they are no longer needed.

If the work is delayed or rescheduled for any reason after placement of "No Parking" signs, the CONTRACTOR shall re-date the signs affected and re-notify the residents and businesses of the change via a new "door-knob" notice. If the work is delayed more than five days, the CONTRACTOR shall remove the signs and place re-dated signs two (2) days in advance of the work.

6-2.1.2 Notification to the Public Agencies. The CONTRACTOR shall notify the following Agencies 48 hours prior to working in the area within the City of Pasadena unless otherwise noted:

City of South Pasadena Attn: H. Ted Gerber, Public Works Director	(626) 403-7240
City of South Pasadena Attn: Anteneh Tesfaye, Deputy Public Works Director	(626) 460-6393
City of South Pasadena, Public Works Water Division Attn: Victor Magana, Water Operations Manager	(213) 440-3543
City of South Pasadena, Public Works Operation Division Attn: Catrina Peguero, Operations Manager	(626) 403-7376
City of South Pasadena Attn: Eddie Munoz, Streets Supervisor	(626) 403-7375
Metropolitan Water District Attn: Kevin Johansen, Water Systems Operations Group	(526) 713-0348
AT&T Communications OSP Engineering	(626) 570-5454
Los Angeles County Sanitation Districts Attn: Doug Walton	(310) 638-1161
Los Angeles County Public Works Department Construction Division Attn: Angela George	(626) 458-3109
Los Angeles County Public Works Department Traffic & Lighting Division Attn: Guita Shiek Atten: Robery Gysel	 (626) 458-5905 (626) 458-3122
SBC Attn: Jack Wilson	(626) 373-5960
Southern California Edison Attn: Eddie Lopez	(626) 303-8405
Southern California Gas Company	(714) 634-3079
Spectrum	(818) 407-3152
Underground Service Alert (Dig Alert)	(800) 422-4133

6-2.1.3 Parking Restrictions and Posting for Tow Away. No Parking signs, posted by the CONTRACTOR, shall be of heavy card stock and not less than 1.75 square feet of surface area on the face. Background color shall be white and letters shall be printed in red water resistant ink except day, date, and time of restriction may be printed in black water resistant ink. The signs shall be printed with the words "Tow Away" and "No Parking" with a character height of not less than 2.75 inches and a stroke width of not less than 0.5 inches. The day, dated, and time of the particular restriction shall be printed or attached below the above-mentioned wording in characters of not less than 2.0 inches in height and 0.4 inches in stroke width. The day of the week shall be written out or properly abbreviated with three to four letters; date or dates or restriction shall be listed completely; the beginning and ending times shall be clearly listed on the sign.

Signs shall be mounted such that the wording "No Parking" are at an elevation at least three feet above the adjacent flowline. Signs may be tied with string to trees and power poles, taped to existing sign poles, or mounted to stakes or barricades as provided by the CONTRACTOR. The signs shall be placed as needed to control the parking of cars within the construction zone; signs shall be placed at intervals of 75 feet or less along each side of the roadway.

Signs shall be posted and maintained by the CONTRACTOR for a period of 72 hours prior to the restrictions becoming effective. The CONTRACTOR may only post parking restrictions that are effective for the duration of the Work. Upon completion of the Work, the CONTRACTOR shall promptly and completely remove and dispose all signs, stakes, and barricades. The CONTRACTOR shall promptly reset or replace all damaged or defective signs.

The CONTRACTOR shall be fully responsible for the adequate removal of all parked cars. The CONTRACTOR shall coordinate the removal of all vehicles with the Sheriff Department. The CONTRACTOR shall notify the Sheriff Communications Center upon posting of the parking restrictions for a particular street. For removal of parked vehicles, the CONTRACTOR shall notify the Sheriff Communications Center not less than two hours prior to the needed removal, stating the address nearest the parked vehicle, make, model, color and license number. The City shall not be responsible for any delay or additional costs associated with the removal of parked cars that obstruct the construction operation.

If a vehicle owner successfully contests a towing citation in court, and their citation is dismissed for causes related to the CONTRACTOR's failure to perform the requirements of this section, the CONTRACTOR shall reimburse the City for the cost of any claims associated with the towing citation.

DEVIATIONS FROM THE REQUIREMENTS OF THIS SUBSECTION WILL BE PERMITTED ONLY ON PRIOR CONSENT OF THE ENGINEER.

6-2.1.4 Storage of Equipment and Materials in Public Streets. Construction materials shall not be stored in streets, roads, or highways for more than 5 days after unloading. All materials or equipment not installed or used in construction within 5 days after unloading shall be stored elsewhere by the CONTRACTOR at its expense unless authorized additional storage time.

Construction equipment shall not be stored at the Work site before its actual use on the Work nor for more than 5 days after it is no longer needed. Time necessary for repair or assembly of equipment may be authorized by the Engineer.

Excavated material, except that which is to be used as backfill in the adjacent trench, shall not be stored in public streets unless otherwise permitted. After placing backfill, all excess material shall be removed immediately from the site.

6-2.1.5 Street Closures, Detours, Barricades. The CONTRACTOR shall comply with all applicable State, County and City requirements for closure of streets. The CONTRACTOR shall provide barriers, guards, lights, signs, temporary bridges, flag persons, and watchpersons. The CONTRACTOR shall be responsible for compliance with additional public safety requirements which may arise. The CONTRACTOR shall furnish and install signs and warning devices and promptly remove them upon completion of the Work.

At least 48 hours in advance of closing, partially closing or reopening, any street, alley, or other public thoroughfare, the CONTRACTOR shall notify the Police, Fire, Traffic and Engineering Departments, and comply with their requirements. Deviations must first be approved in writing by the Engineer.

The CONTRACTOR shall secure approval, in advance, from authorities concerned for the use of any bridges proposed by it for public use. Temporary bridges shall be clearly posted as to load limit, with signs and posting conforming to current requirements covering "signs" as set forth in the Traffic Manual published by the California Department of Transportation. This manual shall also apply to the street closures, barricades, detours, lights, and other safety devices required.

All traffic control barricades, signs and devices used by the CONTRACTOR shall, as a minimum, conform to the latest edition of the "California Manual on Uniform Traffic Controls Devices" ("MUTCD"). Channelization devices shall be spaced no greater than fifty (50) feet apart. The CONTRACTOR shall take additional precautions as he/she may find necessary under the circumstances.

Should the CONTRACTOR fail to provide adequate traffic control or safety barricades, and in the event a responsible individual cannot be located or refuses to perform, the AGENCY will at its option place needed devices or engage a private firm to place and maintain said barricades, which will be charged to the CONTRACTOR directly.

Full street closures will not be allowed without City Council approval.

All costs involved in the CONTRACTOR'S prosecution of the Work shall be included in the Bid.

6-2.2 Daily Reports. The CONTRACTOR shall complete a Daily Report indicating manpower, work performed, major equipment used and on standby (itemized separately), subcontractors, and similar items involved in the performance of the Work. The Daily Report shall be completed on forms prepared by the CONTRACTOR and acceptable to the Engineer and shall be submitted to the City Inspector weekly.

6-3 TIME OF COMPLETION

6-3.1 General. *Add the following:*

The CONTRACTOR shall complete the Work within the time specified in B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE, or as modified by Change Order or agreement, after the Notice to Proceed.

Add the following:

6-3.3 Working Day. A working day is any day within the period between the start of the Contract time as defined in 6-1.2 and the date provided for completion, or upon field acceptance by the Engineer for all work provided for in the Contract, whichever occurs first, other than:

1. Saturday,
2. Sunday,
3. any day designated as a holiday by the AGENCY,
4. any other day designated as a holiday in a Master Labor Agreement entered into by the CONTRACTOR or on behalf of the CONTRACTOR as an eligible member of a CONTRACTOR association,
5. any day the CONTRACTOR is prevented from working at the beginning of the workday for cause as defined in 6-4.1,
6. any day the CONTRACTOR is prevented from working during the first 5 hours with at least 60 percent of the normal work force for cause as defined in 6-4.1.

The CONTRACTOR's activities involving work which requires street closure, detours, and barricades shall be confined to the hours between 7:30 a.m. and 4:00 p.m. Monday through Friday. In addition, the CONTRACTOR shall not perform any Work on Saturday, Sunday, or on AGENCY-designated holidays. AGENCY-designated holidays are listed in **TABLE 1 – AGENCY-DESIGNATED HOLIDAYS** below. Deviation from these hours will be permitted upon approval of the Engineer, except in emergencies involving immediate hazard to persons or property.

Deviations from these hours will not be permitted without the prior consent of the Engineer, except in emergencies involving immediate hazard to persons or property. In the event of either a requested or emergency deviation, inspection service fees will be charged against the CONTRACTOR. Service fees will be calculated at overtime rates including benefits, overhead, and travel time; and will be deducted from the amounts due the CONTRACTOR.

Failure of the CONTRACTOR to adhere to working day requirements will result in damages being sustained by the City. Such damages are, and will continue to be, impracticable and extremely difficult to determine.

TABLE 1 – AGENCY-DESIGNATED HOLIDAYS

New Year's Day (January 1*)

Martin Luther King, Jr. Day (3rd Monday in January)

President's Day (3rd Monday in February)

Memorial Day (Last Monday in May)

Juneteenth (June 19*)

Independence Day (July 4*)

Labor Day (1st Monday in September)

Veteran's Day (November 11*)

Thanksgiving Day (4th Thursday in November)

Day after Thanksgiving (Friday after Thanksgiving Day)

Christmas Eve (December 24*)

Christmas Day (December 25*)

**If a holiday falls on a Saturday, the previous Friday shall be deemed the holiday. If a Holiday falls on a Sunday, the following Monday shall be deemed the holiday. The City shall close each year from December 25 to January 1.*

6-3.4 Restrictions on closure of traffic lanes:

No contractual work shall be performed in the public Right-of-Way during the first week of school unless approved by the City Engineer.

A. All traffic lanes shall be open for public use on the days and at the times specified below, unless approved otherwise by the City Engineer:

1. Saturdays, Sundays and AGENCY designated holidays: from 12:01 a.m. to 11:59 p.m.
2. Fridays and any days preceding an AGENCY designated holiday: from 3:00 p.m. to 11:59 p.m.
3. Non-construction hours: all hours when the CONTRACTOR's employees are not physically present at the construction site actively performing contract work.

B. On those days and hours when closure of traffic lanes is not prohibited under the provisions of the preceding subparagraph A, no more than one travel lane may be closed at any time during construction hours. During any lane closure, flashing arrow boards shall be used in accordance with the current version of the California MUTCD.

C. Traffic signals shall not be placed in flash operation during the hours that traffic lanes must be kept open as defined in Paragraph A. Under no circumstances shall traffic signal be placed in flash operation without prior approval from the Project Engineer. Traffic signal will be only placed in flash operation by City personnel. CONTRACTOR shall contact the Project Engineer at least two (2) working days in advance to coordinate traffic signal service.

6-4 DELAYS AND EXTENSIONS OF TIME.

6-4.4 Written Notice and Report. *Add the following:*

Whenever the CONTRACTOR foresees any delay in the prosecution of the work, and in any event immediately upon the occurrence of any delay which the CONTRACTOR regards as unavoidable, he/she shall notify the Engineer in writing of the probability of the occurrence of such delay and

its cause so that the Engineer may take immediate steps to prevent, if possible, the occurrence or continuance of the delay, or, if prevention is not possible, may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent it will delay the prosecution and completion of the work. It will be concluded that any and all delays which have occurred in the prosecution and completion of the work have been avoidable delays, except such delays as shall have been called to the attention of the Engineer at the time of their occurrence and found by him/her to have been unavoidable. The CONTRACTOR shall make no claims for any delay not called to the attention of the Engineer at the time of its occurrence as an unavoidable delay.

6-7 TERMINATION OF THE CONTRACT FOR DEFAULT.

6-7.1 General. *Add The following:*

If the CONTRACTOR fails to begin delivery of material and equipment, to commence the Work within the time specified, to maintain the rate of delivery of material, to execute the Work in the manner and at such locations as specified, or fails to maintain the Work schedule which will insure the AGENCY's interest, or, if the CONTRACTOR is not carrying out the intent of the Contract, the AGENCY may serve written notice upon the CONTRACTOR and the Surety on its Faithful Performance Bond demanding satisfactory compliance with the Contract.

6-9 LIQUIDATED DAMAGES. *Add the following:*

The CONTRACTOR agrees to forfeit and pay the AGENCY the amount of Four Thousand and Two-Hundred Dollars ($4,200.00) per day for each and every day of unauthorized delay beyond the completion date, which shall be deducted from any monies due the CONTRACTOR. This payment shall be considered liquidated damages. CONTRACTOR agrees that such liquidated damages are reasonable under the circumstances existing at the time of execution of the contract, that such liquidated damages are to compensate AGENCY for losses that are difficult to measure and that such damages are not a penalty.

The AGENCY's agreement to waive a specific time provision or to extend the time for performance shall not constitute a waiver of any other time provision contained in the Contract Documents.

Failure of the CONTRACTOR to complete performance promptly within the additional time authorized in a waiver or extension of time agreement shall constitute a material breach of this Contract entitling the AGENCY to terminate this agreement.

SECTION 7 - MEASUREMENT AND PAYMENT

7-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK.

7-1.1 General. *Add the following:*

The planimeter shall be considered an instrument of precision adapted to measurement of all areas.

7-3 PAYMENT

7-3.1 General. *Add the following:*

The quantities listed in the Bid schedule will not govern final payment. Payment to the CONTRACTOR will be made only for actual quantities of Contract items constructed in

accordance with the Plans and Specifications. Upon completion of construction, if the actual quantities show either an increase or decrease from the quantities given the Bid schedule, the Contract Unit Prices will prevail subject to the provisions of 7-3.5.1.

At the expiration of 35 calendar days from the date of acceptance of the Work by the board, or as prescribed by law, the amount deducted from the final estimate and retained by the AGENCY will be paid to the CONTRACTOR except such amounts as are required by law to be withheld by properly executed and filed notices to stop payment, or as may be authorized by the Contract to be further retained.

7-3.2 Partial and Final Payment. *Add the following:*

From each progress estimate, 10 percent will be deducted and retained by the AGENCY, and the remainder less the amount of all previous payments will be paid. After 50 percent of the Work has been completed and if progress on the Work is satisfactory, the deduction to be made from remaining progress estimates and from the final estimate may be limited to $500 or 10 percent of the first half of total Contract amount, whichever is greater.

The closure date for period progress payments will be the twenty-fifth day of each month. Authorization to pay is commonly received on the second Wednesday of the following month. The AGENCY requires four to six weeks to review all progress payments, issue payment checks, present progress payment to Council for approval, and release payment to CONTRACTOR. However, payments will be withheld pending receipt of any outstanding reports required by the Contract Documents. In addition, the final progress payment will not be released until the CONTRACTOR returns the control set of plans and specifications showing the as-built conditions.

The full five (5) percent retention will be deducted from all payments. The final retention will be authorized for payment thirty-five (35) days after the date of recordation of the Notice of Completion.

7-3.4 Mobilization. *Add the following:*

Mobilization shall conform to the provisions of Sections 7-3.4 of the Standard Specifications. This item shall also include any and all costs associated with demobilization at the time of project completion. The maximum price for this bid item **shall not exceed 5 percent** of the total contract price at the time of award.

PAYMENT

Payment for **MOBILIZATION** bid items shall be at the contract bid item price per lump sum (LS) and shall be payable as follows for each payment upon approval of the Public Works Director/City Engineer.

a) Payment of up to 50 percent of the contract lump sum bid price for mobilization at the first progress payment.
b) Payment to 75 percent of the contract lump sum bid price for mobilization when the monthly partial payment estimate of the total amount earned to date, not including the amount earned for mobilization, is 30 percent or more of the original contract amount.
c) Payment to 100 percent of the contract lump sum bid price for mobilization when the monthly partial payment estimate of the total amount earned to date, not including the amount earned for mobilization, is 50 percent or more of the original contract amount.

7-3.6 Stipulated Unit Prices. *Add the following:*

Stipulated Unit Prices are unit prices established by the AGENCY in the Contract Documents.

7-4 PAYMENT FOR EXTRA WORK.

7-4.1 General. *Add The following:*

New or unforeseen work will be classified as "extra work" when the Engineer determines that it is not covered by the Contract Unit Prices or stipulated unit prices.

7-4.2 Basis for Establishing Costs.

7.4.2.4 Other Items. *Add the following:*

Invoices covering all such items in detail shall be submitted with the request for payment.

7-5 PAYMENT FOR CHANGES REQUESTED BY THE CONTRACTOR. *Add the following:*

Changes in the Plans and Specifications, requested in writing by the CONTRACTOR, which do not materially affect the Work, and which are not detrimental to the Work or to the interests of the AGENCY, may be granted by the Engineer. Nothing herein shall be construed as granting a right to the CONTRACTOR to demand acceptance of such changes.

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-6 BASIS OF PAYMENT. *Substitute the following:*

All costs incurred in furnishing, maintaining, servicing, and removing field officers, laboratories, or bathhouse facilities required at the project site shall be included in the bid item for furnishing such facilities. If such facilities are required by the Plans or Specifications and no bid item is provided in the proposal, the costs shall in included in other items for which bids are entered. Such costs incurred in connection with offices and laboratories at plants shall be borne by the plant owners.

The first progress payment will not be approved until all facilities are in place and fully comply with the Contract Documents.

(End of Section)

APPENDIX I

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Technical Provisions for Grevelia Street Pocket Park

The following Technical Provisions describe materials, methods of construction, and measurement and payment for items of work that are unique to the project. These provisions supplement, amend, or replaced the requirements of the Standard Specifications for Public Works Construction ("SSPWC" or "Greenbook"). To the extent that anything in these Special Provisions conflicts with the terms or requirements of the SSPWC, these Special Provisions shall control.

Approved for use on June 7, 2023
294856.v3

TECHNICAL PROVISIONS

FOR GREVELIA STREET PARK PROJECT

IN THE CITY OF SOUTH PASADENA, CALIFORNIA

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TECHNICAL PROVISIONS

GENERAL STANDARD SPECIFICATIONS

The Standard Specifications for the construction materials and construction methods as set forth in the "Standard Specifications for Public Works Construction", 2021 Edition shall be the Standard Provisions for all the Work to be done and the provisions of the Contract for the Work. In case of conflict between the Standard Specifications and these Technical Provisions, the Technical Provisions shall take precedence over and prevail over such conflicting portions.

MOBILIZATION
BID ITEM 58;

Mobilization shall consist of preparatory work and operations including all of the labor, equipment, tools, supplies, costs, arrangements, and others that are necessary for the movement of personnel, equipment, materials, and incidentals to the project site necessary for work on the project and for all other work and operations which must be performed including, but not limited to, bonds, insurance, arranging and coordinating with the modular restrooms building manufacturer, securing an adequate storage site for equipment and materials, and financing prior to beginning work on the various contract items on the project site.

The cost of time, materials, and labor to move the necessary construction equipment to and from the site, supervisory time on the job by the Contractor's personnel to keep the construction site in a safe condition, and all other related work as required at all times and for all non-working days during the construction period shall have been included in the bid.

PAYMENT

Payment for the preceding shall be included in the **LUMP SUM** for mobilization and shall be considered full compensation including the cost for obtaining all the required business licenses and permits.

TRAFFIC CONTROL
NOT A BID ITEM

1.1 DESCRIPTION

Traffic control, construction signing and traffic maintenance shall comply with the provisions of the Standard Specifications and the current requirements set forth in the "Manual of Traffic Controls for Construction and Maintenance Work Zones" published by the Department of Transportation, State of California, these Technical Provisions, and as directed by the Engineer.

1.2 PROTECTION OF WORK AND PUBLIC

The Contractor shall take all necessary measures to protect work and prevent accidents during any and all phases of the work. The Contractor shall repair all damaged new improvements as a result of vandalism (i.e., vehicle tracks, footprints, writing, etc.). If deemed necessary by the City, the Contractor shall repair, at its cost, the defective area in accordance with these Technical Provisions.

1.3 CONSTRUCTION SIGNING

Construction signing shall consist of furnishing, installing, maintaining and removing construction signs and barricades as required by the "Manual of Traffic Controls for Construction and Maintenance Work Zones". The traffic control system shall be installed prior to starting work and shall not be removed until all work has been completed.

Also, in conjunction to the public relations effort, Contractor shall supply and erect project construction information signs at the designated locations as determined by the City. Such signs shall conform to the City's specifications. Specific verbiage to be determined by the City. There shall be a minimum of four (4) such signs posted.

1.4 TRAFFIC MAINTENANCE

The Contractor shall be responsible for handling vehicular and pedestrian traffic in accordance with the Standard Specifications and these Technical Provisions.

The Contractor shall cooperate with the Engineer relative to handling traffic through all work areas and shall make his own arrangements relative to keeping the working area clear of parked vehicles and maintaining clear access to driveways.

Contractor's equipment and personal vehicles of the Contractor's employees shall not be parked on the traveled way at any time. Overnight parking of construction equipment in the work zone or on adjacent roads is not permitted. Parking of construction equipment shall be confined to the approved storage site.

1.5 STRIPING

Temporary striping and marking for traffic control if required shall conform to the Standard Specifications. Temporary striping and marking which has no further use shall be removed by wet sandblasting, and all sand used in sandblasting shall be removed without delay as the sandblasting operation progresses.

1.6 RESTRICTIONS ON CLOSURE OF STREETS AND TRAFFIC LANES

The Contractor shall conduct all operations so as to provide reasonable access to the existing park facilities and have no greater length or quantity of work under construction that can be properly constructed with a minimum of inconvenience to the public.

PAYMENT

Payment for traffic control shall be included in other items of work and shall be full compensation for furnishing all materials, labor, equipment, and all incidentals necessary to complete the work in accordance with the Standard Specifications and these Technical Provisions.

DEMOLITION AND SITE CLEARING
BID ITEM 59;

Perform demolition work in a pre-planned, systematic, efficient, and orderly manner. Deploy customary and acceptable methods as required to complete the Work indicated on the Plans in accordance with governing regulations.

Provide services for effective air and water pollution controls as required by City and County Air Pollution Control District and the Southern California Air Quality Management District.

1.1 DISPOSAL OF DEMOLISHED MATERIALS

All removed materials not salvaged or reused shall be removed from the project site no later than the end of each workday and transported legally for disposal at a qualified site.

If hazardous materials are encountered, notify the City Inspector immediately.

Burning of removed materials is not permitted.

1.2 ADJUSTMENT OF EXISTING SANITARY SEWERAGE, WATER, GAS, ELECTRICAL AND TELECOMMUNICATION SYSTEMS

All existing utility facilities, i.e., manholes, vaults, irrigation boxes, valve cans, etc. may or may not have been indicated on the plans. While these items are not expected on this project, the Contractor is nevertheless hereby made aware that such encounter will require the contractor to bear the cost to raise ALL to finished grade at no additional cost to the City.

Drawings show existing major underground utilities using the best information available. Verification of existing utilities and the actual locations are the Contractor's responsibility.

Any utility inadvertently damaged by the Contractor shall be immediately called to the City's attention for shutoff and then be immediately repaired by the Contractor at its own cost within 4 hours.

1.3 CLEANUP AND REPAIR

The Contractor, at the end of each workday, shall dispose of all removed materials from the site. The Contractor also shall protect the site and the new improvements from vandals or other damages at all times until City acceptance.

PAYMENT

Payment for demolition and site clearing shall be made at the contract **LUMP SUM** included in the bid price and shall have included all of the costs for labor, equipment, supplies, tools, haulers, permit and disposal dump fees, security personnel, and other items of work to dispose of all unwanted materials and to clear, protect, and maintain the jobsite at no additional cost to the City.

CONSTRUCTION SURVEYING
BID ITEM 61;

The Contractor shall provide surveys for the purpose of survey control, layout, grade and cross sections required to control work. Survey shall conform to Standard Specifications.

Contractor shall tag and protect existing survey monuments found during course of work. Contractor shall replace monuments or stakes damaged during course of work at no added expense to City.
2. Contractor shall establish grid control for site to provide basis for location construction, utilities and other facilities. Provide copies of all survey control and grade sheets to the Engineer.

a. Flag limits of removal and construction
b. Stake for location and grade.
3. Contractor shall be responsible for layout and alignment of walks, curbs and grade, concrete pavement, fencing, landscape materials, site furnishings, etc.
4. Verify the location and elevation of improvements and utilities to be joined.
Submit grade sheet for verification prior to start of work.

PAYMENT

Payment shall be made at the contract **LUMP SUM** included in the bid price and shall have included all of the costs for labor, equipment, supplies, tools, haulers, permit and disposal dump fees, security personnel, and other items of work to dispose of all unwanted materials and to clear, protect, and maintain the jobsite at no additional cost to the City.

EXCAVATION, REMOVAL, AND GRADING
BID ITEM 60;

Earthwork, removal and grading, and removal and disposal of unclassified excavation for proposed improvements shall conform to the applicable portions of Section 300 of the Standard Specifications for Public Works Construction and recommendations of a Geotechnical Report prepared by Global Geo-Engineering, Inc. dated October 28, 2021. Such work shall include all the cost of all labor, equipment, tools, supplies, and all other costs required to:

- Arrange with DigAlert to mark all potential interfering underground wet and dry utilities within the work limits;
- To the extent possible search, identify, and mark other underground utilities that were not identified by DigAlert;
- Expose, cut, and cap all existing irrigation lines and components along the excavate limits;
- Excavate, remove, and properly dispose of existing interfering soil and landscape materials;
- Remove and dispose of all interfering tree roots and organic matters. Root prune as described on the Landscaping Plan;
- Excavate and disposal required for StormTech unit shall be paid per Bid Item 12;
- Grade to the elevations shown on plans. Backfill all voids and holes with similar and clean materials. Import as needed.

PAYMENT

Payment for this item shall be made at the bid price per **LUMP SUM** for removal and disposal/export of

excavated material and no additional compensation for this item of work shall be made.

WATER POLLUTION CONTROL
NOT A BID ITEM

Construction activities will be conducted in a manner to protect channels, storm drains, and bodies of water from pollution. Water pollution control work shall consist of activities necessary to meet the requirements of the City's National Pollutant Discharge Elimination System (NPDES) Area wide Urban Storm Water Runoff Permit, the County's Drainage Area Management Plan (DAMP), The State's General Construction Activities Permit (Order No. 2022-0057-DWQ, NPDES No CAS000002, adopted September 8, 2022 and effective September 1, 2023), and as required by the Engineer. The Contractor shall coordinate water pollution control work with all other work done on the contract.

The Contractor shall be required to comply with all requirements of the NPDES Permit, including preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Two (2) hard copies and one (1) electronic copy of the SWPPP shall be submitted to the City for review and approval. A hard copy of the SWPPP shall be retained on-site at all times as long as the Contractor is responsible for the project site conditions.

Implementation of the SWPPP shall not reduce effectiveness of existing storm drain system or interfere with traffic on public streets. The Contractor will implement the SWPPP and make changes both to the SWPPP and in the field as conditions warrant it. The Contractor will be solely responsible to prevent any pollutants from leaving the site.

The Contractor shall notify the City of South Pasadena's Stormwater/Wastewater Compliance Specialist immediately upon request from any regulatory agency to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to stormwater pollution control work. The Contractor shall provide copies of correspondence, notices of violation, enforcement actions, or fines proposed by regulatory agencies to the City's Stormwater/Wastewater Compliance Specialist.

Failure to update, implement and maintain the SWPPP will result in withholding of any progress payment(s) to the Contractor. Re-inspection staff costs due to NPDES non-compliance will be billed to the Contractor in 15-minute increments if the Contractor fails to maintain the site, water pollution testing data, Contractor inspection forms, and/or reports as detailed in the WPCP and as site conditions warrant. Contractor will also be responsible for any enforcement actions and penalties enacted on the City by the State Water Resources Control Board, Regional Water Quality Control Board, and/or any other agency due to Contractor's non-compliance with applicable water pollution regulations. Progress payments and/or final payments may be withheld to cover enforcement liabilities which include, but are not limited to, maximum financial penalties, legal costs, staff costs, and economic savings from violations and/or costs associated with corrective actions as required by enforcing agency.

Contractor shall install erosion and sediment control measures as indicated on Improvement Plans.

PAYMENT

Payment for water pollution control and complying with NPDES requirements shall be included in various other items of work and shall be full compensation for all items of work and all appurtenant work including installation of all erosion and sediment control measures and furnishing all labor, materials, tools, equipment and incidentals.

DUST CONTROL AND BMP

NOT A BID ITEM

Contractor shall be responsible for keeping the construction nuisance dust to a minimum from start of work till completion by keeping wet all materials to be lifted off the ground and/or disposed of off-site through watering, especially during the demolition, excavation, and disposal work stages. Work on windy days is discouraged when watering may not be sufficient as a dust control measure. The installation of construction fencing with silt fabric may be deployed to keep errant dust from migrating away from the work zone.

PAYMENT

Payment for dust control and BMP shall be included in various other items of work and shall include all the costs for this work for the entire project duration at no additional cost to the City.

CONCRETE CURB (8" CF), SIDEWALK, AND CURB AND GUTTER
BID ITEM 62, 72, 73;

Work shall be performed in accordance with provisions of Sections 201, 303, and 400 of the Standard Specifications. If not specified, concrete shall be in accordance with provisions of Section 201-1 of the Standard Specifications.

Subgrade preparation shall conform to the provisions of Section 301-1 of the Standard Specifications. A relative compaction of 90% is required for subgrade and 95% for aggregate base. Each location shall be inspected prior to placement of the concrete.

The Contractor shall remove all debris and perform all cleanup work to the satisfaction of the Engineer within 3 working days after forms have been removed at any location.

The Contractor shall submit the concrete design mix to the City Engineer for approval.

1.1 COARSE AGGREGATE FOR PORTLAND CEMENT CONCRETE

All concrete aggregate shall be per Section 200-1.4 of the Standard Specifications.

1.2 INSPECTIONS

The Contractor shall call for inspections during all form work prior to pouring. The Contractor shall notify the Engineer one working day prior to pouring any concrete. Any work covered prior to inspection shall be opened to view by the Contractor at his/her expense.

1.3 CURB (8" CF)

Curb shall be constructed per plan.

1.4 SIDEWALK

Sidewalk shall be constructed per APWA STD. Plan 113-2

1.5 CURB AND GUTTER

Curb and gutter shall be constructed per APWA STD. Plan 102-3, TYPE A2-8(200)

PAYMENT

Payment for curb (8" CF), curb and gutter, shall be at the contract unit price per **LINEAR FOOT** in place. Payment shall include full compensation for all labor, material, equipment, tools, and incidentals necessary to complete all work and no additional compensation shall be made.

Payment for sidewalk shall be at the contract unit price per **SQUARE FOOT** in place. Payment shall include full compensation for all labor, material, equipment, tools, and incidentals necessary to complete all work and no additional compensation shall be made.

PVC DRAIN PIPE AND DRAIN INLET BOX
BID ITEM 63, 64, 65, 66, 67, 68;

These items are for the construction of drainage improvements shall conform to Standard Specifications and to the details shown on Improvement Plans.

PAYMENT

Payment for installation of SDR 35 drain pipe shall include excavation, backfill and backfill compaction and shall be paid at the contract unit price bid per **LINEAR FOOT** and no additional compensation shall be made.

Payment for construction of drain inlets and overflow drain structure per detail on Plans and catch basin per APWA shall be paid at the contract unit price bid per **EACH** and no additional compensation shall be made.

MC-3500 STORMTECH UNIT
BID ITEM 69;

The work shall consist of installing MC-3500 StormTech unit with 24-inch nyoplast manhole and isolator per detail on Plans and per manufacturer's specifications.

PAYMENT

Payment for this item shall be made at the contract unit price per **EACH** and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work complete in place including excavation to bottom of unit as indicated on Plans and hauling and disposal of excavated material. No additional compensation shall be allowed.

1½-INCH AND 1-INCH WATER SERVICE
BID ITEM 70 AND 71;

The Contractor shall construct 1½-inch and 1-inch water piping and its appurtenances to serve the irrigation and drinking fountain as shown on the Plans. Water connects shall be made at the existing water main.

1.1 SYSTEM COMPONENTS

The components to be furnished and installed, at a minimum, shall include 1½-inch copper service, bends, "T"s, gate valves, backflow device, thrust blocks, hardware, fittings, and other appurtenances required for a functional system complete in place.

1.2 PIPELINE

Pipeline for 1½-inch and 1-inch water shall be copper and constructed per City of South Pasadena Water District standards. The Contractor at its own cost may substitute a higher strength pipeline product for the Engineer's consideration and approval.

1.3 PIPELINE JOINTS

All pipeline joints shall be made and tested leak free prior to trench placement.

1.4 BRACING AND SHORING

The Contractor as a part of the Work shall brace and shore the work site if the installation work requires a trench that is 5-feet or deeper.

1.5 PIPE EXCAVATION AND BACKFILL

The Contractor, with the Engineer's prior approval, may reuse excavated clean native material as backfill. Backfill shall be compacted to a minimum of 90% relative compaction prior to placing topsoil for resurface restoration per the Plans. Where the water line is to be installed below and across existing concrete improvements, the Contractor at its sole expense may request approval from the Engineer to perform trenchless construction to avoid making concrete replacements as a part of the price bid.

1.6 DISINFECTION

The Contractor shall disinfect the installed system in accordance to the applicable County and State Rules and Regulations. Such disinfection work shall be witnessed by the Engineer and/or his designee.

PAYMENT

Payment for 1½-inch water service shall include 1-inch water meter, gate valves and backflow preventer in cage enclosure and shall be made at the contract **LUMP SUM** bid price and shall have included full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all of the listed and unlisted work for a functional system complete in place. The contract bid price includes trenching necessary for connection to existing water main and abandonment of existing facilities as called out on the Plans.

Payment for 1-inch water service including shut off valve as shown on Plans shall be made at the contract **LUMP SUM** bid price and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all of the listed and unlisted work for a functional system complete in place.

SECTION 01 56 39 - TEMPORARY TREE PROTECTION

PART 1: GENERAL

1.01 SUMMARY

The general requirements apply to all tree protection work operations. Provide labor, materials, tools, transportation, and all incidentals necessary to perform work as indicated on the Plans and as herein specified.

1.02 DESCRIPTION OF WORK

A. Furnish all materials, labor, transportation, services, and equipment necessary to protect existing trees as indicated on Drawings and as specified herein.

B. Related Sections:
Section 32 80 00: Irrigation
Section 32 93 23: Sodding

1.03 TERMINOLOGY

A. Pruning terminology to be utilized as developed by the National Arborist Association and is herein attacked.

1.04 SUBMITTALS

A. Certification:

1. Submit written certification by a qualified Arborist that trees indicated to remain have been protected during course of construction in accordance with recognized standards and that where damage did occur, trees were promptly and properly treated.

2. Indicate which damaged trees, if any, are incapable of retaining full growth potential and are recommended to be replaced.

3. Arborist - an individual currently a member of the National Arborist Association or International Society of Arboriculture and verify proof of certification by such organization.

1.05 QUALITY ASSURANCE

A. Arborist Qualifications: Engage a qualified certified Arborist who has successfully completed tree protection and trimming, to perform the following work:

1. Remove branches from trees that are to remain.
2. Recommend procedures to compensate for loss of roots and perform initial pruning of branches and stimulation of root growth were removed to accommodate new construction.
3. Recommend procedures for excavation and grading work juxtaposed to established plants.
4. Perform tree repair work for damage incurred by new construction.
5. Pruning to conform to ISA Pruning Standards and National Arborist Association Class I-IV as specified.

1.06 PROJECT CONDITIONS

A. Temporary Protections: Provide a minimum of 6-foot height temporary fencing, barricades, or other suitable guards located outside dripline to protect trees and other plants that are to remain from damage.

Protect Root Systems:

1. Do not store construction materials, debris, or excavated material within dripline of trees to remain.
2. Do not permit vehicles within dripline.
3. Restrict foot traffic to prevent excessive compaction of soil over root systems within dripline.

PART 2: PRODUCTS

2.01 MATERIALS

A. Drainage Fill: Selected stone or gravel, graded to pass a 3-inch sieve and retained on a 1-inch sieve.

B. New Topsoil:

1. Fertile, friable, surface soil, containing natural loam.
2. Obtain from local sources or from areas having similar characteristics to indigenous topsoil.
3. Provide topsoil that is reasonably free of subsoil and clay lumps, and free of brush, weeds, roots, stones larger than 2-inches and free of other extraneous or toxic matter harmful to plant growth.
4. Obtain topsoil only from well-drained sites where soil occurs in depth of 4-inches or more. Do not obtain from bogs or marshes.

5. Topsoil, prior to use, must be laboratory tested for horticulture suitability and such test must be approved by Owner's Authorized Representative prior to placement.

PART 3: EXECUTION

3.01 GENERAL

A. Protect tree root systems from damage due to noxious materials caused by runoff or spillage during mixing, placement, or storage of construction materials. Protect root systems from flooding, eroding, or excessive wetting resulting from dewatering operations.

B. Do not allow fires under or adjacent to trees or other plants that are to remain.

C. Branches may be removed for construction purposes only upon approval of Owner's Authorized Representative or Arborist and subject to local governing agency ordinances.

D. Were directed by Engineer or Arborist, extend pruning operation to restore natural shape of entire tree.

E. Cut branches and roots, if required, with sharp pruning instruments. Do not break or chop.

3.02 EXCAVATION AROUND EXISTING TREES

A. Excavate within proximity of existing trees only were indicated on Drawings. Do not machine-excavate within dripline.

B. Where excavating for new construction is required within dripline of trees, hand-excavate to minimize damage to root systems. Provide sheeting at excavations if required. Use narrow-tine spading forks and comb soil to expose roots.

C. Relocate roots in backfill areas wherever possible. If large, main lateral roots are encountered, expose beyond excavation limits as required to bend and relocate without breaking. If encountered immediately adjacent to location of new construction and relocation is not practical, cut roots approximately 3-inches back from new construction.

D. Do not allow exposed roots to dry out before permanent backfill is placed. Provide temporary earth cover or pack with peat moss and wrap with burlap.

Water and maintain in moist condition and temporarily support and protect from damage until permanently relocated and covered with earth.

E. Root greater than 4" in diameter shall be protected within 3 hours of excavation.

F. Roots greater than 4" in diameter shall not remain unprotected at the end of a workday.

G. Where trenching for utilities is required within dripline, tunnel under or around roots by hand digging. Do not cut main lateral roots or tap roots; cut only smaller roots that interfere with installation of new work. Cut roots cleanly with sharp, appropriate pruning instruments. Do not break or chop roots.

H. Prune branches to balance loss to root system caused by damage or cutting of root system as directed by Owner's Authorized Representative or Arborist.

3.03 GRADING AND FILLING AROUND EXISTING TREES

A. Maintain existing grade within dripline of trees.

B. Lowering Grades:
1. Where existing grade is to be lowered around a protected tree, gradually slope grade away from tree as recommended by Arborist. Do not reduce grade within tree dripline.
2. Consult Owner's Authorized Representative or Arborist for appropriate plans on grade cuts exceeding 12-inches which may require details as to drains, special backfill mixes and retaining walls.

C. Raising Grades:
1. Where existing grade is to be raised 6-inches or more within tree root zone, consult the Engineer or Arborist to provide appropriate remedial plans to accommodate this grade change.
2. Such plans may address perforated pipe bends, drain lines, grates and retaining walls as may be required.
3. No soil fill will be allowed to cover over existing tree root zone grade.
4. Do not place soil as to cover tree trunk root flare.
5. For bidding purposes only: assume grades will be raise by placing a 2" layer of sand over the existing finish grade to achieve the design elevation for new finish surface.

3.04 ROOT PRUNING

A. Branch pruning may be required to stimulate root growth and to compensate for loss of roots.

B. Prune only per written recommendations from Arborist and conform to established pruning standard practices.

C. Ensure that Arborist provides Owner typed instructions for recommended long term maintenance procedures to be followed the completion of construction operations.

3.05 REPAIR AND REPLACEMENT OF TREES

A. Repair trees damaged by construction operations. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.

B. Remove and replace dead and damaged trees that Arborist determines to be incapable of restoration to normal growth pattern.

C. Provide new trees of same size and species as those being replaced.

D. If trees over 6-inches in caliper measurement (taken 12-inches above grade) are required to be replaced, provide new trees of 6-inch caliper size and of species selected by Owner's Authorized Representative.

3.06 DISPOSAL

A. Do not burn trees or branches on-site.

B. Removal from Owner's Property: Remove excess excavation, displaced trees, and trimmings and dispose of off Owner's property.

PART 4: PAYMENT

4.01 EXISTING TREE PROTECTION

A. Payment for Existing Tree Protection will be considered included in other items of work and no additional compensation will be made therefor.

END OF SECTION

SECTION 03 10 00 - CONCRETE FORMWORK

PART 1: GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all Concrete Formwork operations. Provide all labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections:
Section 03 30 53: Miscellaneous Cast-in-Place Concrete

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions.
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Manufacturer's directions, specifications and detailed drawings shall be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this Section shall be done to the satisfaction of the Engineer. The decision by the Engineer as to the true construction meaning of the Plans and Specifications will be final.

PART 2: PRODUCTS

2.01 MATERIALS

A. Where finish concrete is below grade, plywood or sawed lumber formwork shall be constructed of substantial material as selected by the Contractor.

B. Where finished concrete is above grade and scheduled to be exposed, use Plyform Class I and II B-B, EXT-DFPA.

C. Form coating shall be a non-grain-raising and non-staining type that will not leave residual matter on the surface of the concrete or adversely affect bonding to concrete of paint, plaster, or other applied materials.

D. Portland cement shall be Type V, ion alkali and shall conform to ASTM C150.

PART 3: EXECUTION

3.01 INSTALLATION

A. All concrete above grade shall be cast in plywood or sawed lumber forms.

B. Concrete below grade may be poured directly against earth in open trenches.

C. All forms shall be constructed true to line and level, sufficiently tight to prevent leakage of mortar, and shall conform exactly to the dimensions of the finished concrete as shown on the drawings. Forms for curved surfaces shall be so constructed and placed that the finished surface shall not deviate from the arc of the curve; flat spots will not be accepted.

D. Where studs in formwork are spaced not over 12” o.c., 5/8” minimum plywood shall be used. Where studs are spaced not over 16” o.c., 3/4” minimum plywood shall be used.

E. Place long dimension of plywood sheets perpendicular to direction of studs.

F. Forms and metal reinforcement shall be checked and approved by the Engineer before concrete is placed.

3.02 REMOVAL OF FORMS

A. Do not disturb or remove forms until the concrete has developed sufficient strength to safely sustain its own weight and the superimposed loads above. After

concrete is placed, the following minimum time periods shall elapse before the removal of forms.

ITEM	FORMS	SHORING
Sides of walls and edge of slabs and footings	3 days	5 days

PART 4: PAYMENT

Concrete formwork will be considered as included on other items of work and no additional payment will be made therefor.

END OF SECTION

SECTION 03 30 53 - MISCELLANEOUS CAST-IN-PLACE CONCRETE

PART 1: GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all miscellaneous concrete work operations. Provide labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections:
Section 03 10 00: Concrete Formwork

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the Engineer.

D. Definitions:
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

E. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specification are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Manufacturer's directions, specifications and detailed drawings will be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this section will be done to the satisfaction of the Engineer. The decision by the Engineer as to the true construction meaning of the Plans and Specifications will be final.

D. Material quality standards and testing procedures shall be in accordance with all ASTM standards and testing procedures and shall be the latest requirements.
1. All tests shall be made by a testing laboratory acceptable and approved by the Engineer.

2. One mechanical analysis and one decantation test shall be made of the sand and coarse aggregate proposed for the work.

E. Reinforcing Steel: All steel shall be Grade 60 billet steel conforming to ASTM A-615.

1.03 SUBMITTALS:

A. Shop Drawings: Submit for concrete slabs showing dimensioned locations and types of construction and isolation joints.

B. Samples: Prepare minimum 4-foot square samples of each required slab finish excluding only monolithic trowel and float finishes. Include a transverse isolation joint, scoring, and edging.

PART 2: PRODUCTS

2.01 MATERIALS

A. Concrete shall have a minimum compressive strength at 28 days of 2500 psi.

B. Portland Cement shall be Type V, low alkali, and shall conform to ASTM C150.

C. Concrete aggregate shall conform to ASTM C33. All aggregate shall be well graded and selected from a source that has a proven history of non-reactivity. Maximum aggregate size shall be 3/4 inch.

D. Fine aggregate shall consist of washed natural sand having hard, strong and durable particles and which does not contain more than 2% by weight of clay, loam, shale, alkali, organic matter or other deleterious substances.

E. Coarse aggregate shall consist of clean, hard, fine grained, sound crushed rock or gravel, which does not contain more than 5% by weight of flat, chip-like, thin, elongated, friable or laminated pieces. Any piece having a major dimension in excess of two and one-half (2 1/2) times the average thickness and which will adversely affect the strength of the concrete shall not be used.

F. Water shall be clean and free from deleterious amounts of acids, alkalis, and organic materials.

G. Imprint pattern and color shall be as noted on the plan under construction materials schedule.

H. Each component of the concrete mix shall be supplied from the same source for the entire project.

2.02 PROPORTIONS AND MIXING

A. The concrete shall be composed of cement, sand and coarse aggregate in the proportions as determined by the testing laboratory. Cost of mix design shall be borne by Contractor.

B. Slump: Adjust quantity of water so concrete at time of placing does not exceed the following slumps when tested according to ASTM C143. Use the minimum water necessary for workability required by part of structure being cast.

Part of Structure	Maximum Slump Inches	Maximum Water-Cement Ratio
Footings, foundation walls, and mass concrete, not reinforced	4	0.6
Slabs on grade, reinforced and non-reinforced	3	0.45
Reinforced concrete over 8” thick	4	0.5
Reinforced concrete 8” or less thick	4-1/2	0.5
All other concrete	4	0.5

C. The concrete shall be mixed as follows:

1. Each transit mixer shall be equipped with automatic devices for recording the number of revolutions of the drum prior to completing the mixing, with peripheral drum speed of approximately 200 feet per minute.

2. Transit-mix concrete shall be mixed for a period of not less than ten (10) minutes. At least three (3) minutes of the mixing period shall be immediately prior to discharging at the job.

3. Transit-mix concrete shall not be delivered to the work with the total specified amount of water incorporated therein. Two (2) gallons of water per cubic yard shall be withheld, and may be incorporated in the mix, before the concrete is discharged from the mixer truck.

4. The concrete, at time of placing, shall be in such condition that it can be properly placed.

2.03 MISCELLANEOUS CONCRETE

A. Concrete footings
B. Concrete flatwork
C. Concrete headers
D. Concrete curbs

PART 3: EXECUTION

3.01 PLACING CONCRETE

A. Before the placing of any concrete, all forms shall be thoroughly cleaned and wet. Concrete shall be poured into forms immediately after it is mixed, so that no separation will occur. No concrete which has stood for more than fifteen (15) minutes after leaving the mixer shall be used. Concrete shall be rejected if not placed in its final position within ninety (90) minutes after water is first added to the batch.

B. Maximum free drop of concrete shall not be more than 5'-0". Use tremies in deep sections.

C. The location of all stoppages shall be approved by the Engineer.

D. The flow surface of the freshly poured concrete shall be level whenever any pour is stopped, and tight dams shall be built as necessary to accomplish this result. Construction joints shall be made only when unavoidable, and then only at the point determined by the Engineer. Details of such joints shall be as directed by the Engineer.

E. Before the placing of any concrete, the surface of the previously poured concrete shall be clean, wet and free of oil or any other contamination.

F. Install concrete and cement finish work true to lines, dimensions, levels, and finish with smooth unblemished surfaces for exterior finishes specified on Plans.

G. Remove and replace defective concrete or cement work with new materials. Permission to patch any defective area shall not be a waiver of the right of the City to require complete removal of defective work if patching does not restore quality and appearance of work.

H. No advertising impression, stamp, or mark of any description will be permitted on surface of concrete or cement finish.

3.02 CONCRETE FINISH

A. Compact and tamp concrete as specified to bring 3/8" of mortar to surface, wood float to straight edges and screeds, and apply following finishes. Do not use steel or plastic floats of any kind for initial floating operations. Unless otherwise specified, do not apply finishes until surface water disappears and surface is sufficiently hardened. Remove any bleed water and laitance as it appears.

B. The color for concrete paving shall be as shown on plans.

C. Integral color concrete shall be incorporated per manufacturer's rates and specifications.

D. The pattern for imprint concrete shall be as shown on plans.

3.03 EXPANSION AND CONTROL JOINTS

A. Expansion joint material shall be as noted on the Plans.

B. Locate expansion and control joints to least impair the strength and appearance of the structure. In no case place an intersecting construction joint in such a way that two intersecting walks are separated by a construction or control joint at the point of intersection. Transition curves shall be part of a continuous pour of the intersection slab.

1. Isolation joints shall be a maximum of twenty feet (20') apart, with control joints a maximum of ten feet (10') from isolation joints. Exception to this are specialty work joints which will be laid out as shown on the Plans.

2. The Contractor shall obtain the Engineer's approval of layout showing proposed location of joints before pouring concrete.

C. Caulking of expansion joints were called for on the Plans shall be done with a non-tracking, multi-part flow type, self-leveling, polyurethane sealant manufactured by Chem-Seat, Grace, 3-H or approved equivalent.

1. Color shall match the color of the concrete where the expansion joint occurs unless shown otherwise on the plans.

2. Caulking shall be done by an experienced applicator in a workmanlike manner, in smooth straight runs, after thoroughly cleaning and priming joints.

3. All work shall be done in strict accordance with manufacturer's printed recommendations. Do not permit traffic to travel over seated joints until sealer has fully cured.

3.04 QUALITY CONTROL

A. Smoothness tolerance exterior concrete finish surfaces shall be of such smoothness and evenness that they shall contact the entire length of a 10' straight edge laid in any direction, with an allowable tolerance of 1/8 inch. Any operations necessary to achieve this result shall be performed by the Contractor at no additional cost to the City.

B. Inspections will be provided as necessary. Call for inspection two (2) working days prior to need.

C. The Contractor shall call for inspection during specific phases of construction. They shall include:

1. All form work prior to pouring.
2. All footings prior to pouring.
3. Subgrade prior to pouring.
4. Drag form approval.
5. At beginning of imprinting.

D. Contractor shall notify the Engineer twenty-four (24) hours prior to pouring any concrete.

E. Any work covered prior to inspection shall be opened to view by the Contractor at his expense.

3.05 TESTING

A. Compression tests of concrete shall be made as required by the Building Code except that compression tests of any grade of concrete shall be made whenever the quantity of that grade used in the project exceeds 25 cubic yards. At least two identical cylinders of each grade of concrete shall be taken of each 100 cubic yards of concrete or fraction thereof placed in the work. The cylinders shall be tested in a testing laboratory and test reports submitted to the City.

B. Storage of test cylinders on the site and after delivery to the testing shall be in accordance with ASTM Designation C31.

1. Should the strength by test fail, the mix shall be adjusted so that the resulting concrete shall comply with the minimum requirements, and all additional expense resulting from such adjustment shall be borne by the Contractor.
2. Should the strength of any grade by test fall below minimum, concrete from the defective pours which is in place may be tested by the core method. If such tests show the concrete to be defective, the concrete shall be removed and replaced or adequately strengthened as required under the governing Code. All expenses involved shall be borne by the Contractor.
3. Testing of concrete shall be at the discretion of the Engineer.

PART 4: PAYMENT

4.01 CONCRETE FOOTINGS

Payment for concrete footings for various walls, planters, and site furnishings will be considered as included in other items of work and no additional compensation will be made, therefore.

4.02 CONCRETE FLATWORK (4”) W/ TOPCAST FINISH

Payment for Concrete Flatwork (4”) w/ Topcast Finish will be made at the unit price per **Square Foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.03 CONCRETE FLATWORK (4") W/HAND-SEEDED AGGREGATE FINISH & PAVER BAND

Payment for Concrete Flatwork (4") w/ Hand Seeded Aggregate Finish & Paver Band will be made at the unit price per **Square Foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.04 CONCRETE HEADER (6” WIDTH)

Payment for Concrete Header (6” Width) will be made at the unit price per **Linear Foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.05 CONCRETE BAND (12” WIDTH)

Payment for Concrete Band (12” Width) will be made at the unit price per **Linear Foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.06 WARNING CURB

Payment for Warning Curb will be made at the unit price per **Linear Foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

END OF SECTION

SECTION 12 93 00 - SITE FURNISHINGS

PART 1: GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, tools, transportation, and incidentals to provide and install Site Furnishings as indicated on the Plans and as herein specified.

B. Related Sections:
Section 03 10 00: Concrete Formwork
Section 03 30 53: Miscellaneous Cast-in-Place Concrete

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions:
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

E. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specification are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

1.02 QUALITY ASSURANCE

A. Shop Drawings: Provide shop drawings for each component and each item of site furniture. Shop drawings shall indicate layouts, component locations, dimensions, set-backs, details of assembly, anchors, footing details, and all appurtenances required to assemble components. Three (3) sets of shop drawings shall be submitted to the City within twenty-one (21) calendar days after award of contract.

B. Materials Samples: Confirm color and finishes for all site furniture, equipment, and accessories, utility characteristics, connection requirements and product cut-sheets. Three (3) sets of product color samples and finishes shall be submitted to the City within twenty-one (21) calendar days after award of contract.

C. Product Data: Provide data on all site furnishings, equipment, and materials, including accessories, utility characteristics, connection requirements and product

cut-sheets. Submit three (3) sets of product data to the City within twenty-one (21) calendar days after award of contract.

D. Manufacturer's Installation Instructions: Provide three (3) sets of the manufacturer's installation instructions to the City within twenty (21) calendar days of award after the contract.

1.03 DELIVERY, STORAGE AND HANDLING

A. Store and protect all site furnishings. Contractor shall be responsible for all site furnishings and in the event of missing or stolen items, they shall be replaced at the CONTRACTOR'S sole expense.

B. Storage containers utilized on site for storage operations shall be located away from the root zones of existing trees in a location agreed upon by the Engineer.

1.04 RELATED REQUIREMENTS

A. Obtain all permits (except permanent easements) and licenses and give notice and pay for all fees necessary to complete work under this Section as delineated or specified at no additional cost to City.

B. Manufacturer's directions, specifications and detailed drawings will be followed in all cases where the articles used furnish directions and cover points not delineated on the Plans or in the Specifications.

C. The Specifications only indicate the quality and workmanship to be performed rather than a detailed description of the performance of the work. Install said site furnishings, materials, and equipment in such a manner that they will operate efficiently and evenly.

D. In the event of any discrepancies between the Plans and the Specifications, the final decision as to which will be followed shall be made by the Engineer, or his designated representative. In the event the installation is contradictory to the direction of the Engineer, the installation shall be rectified by the Contractor at no additional cost to City.

1.05 REGULATORY REQUIREMENTS

A. The work shall conform to Americans with Disabilities Act (ADA) and California Disabled Access Regulations-Title 24. The Contractor shall be responsible for compliance and provide written documentation for compliance to the Engineer upon installation of all equipment and material governed by said regulations.

B. All work shall conform to the City standards for public construction and any other agency's standards for public construction having jurisdiction over the work.

C. Provide certificate(s) of compliance from authority(s) having jurisdiction over the work. The certificate(s) shall indicate approval of products and their installation. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

1.06 SAMPLES AND SUBSTITUTIONS

A. All workmanship, equipment, materials, and articles incorporated shall be the best available grade of their respective kind.

B. Provide a sample and/or clearly delineated cut sheet (including texture, color, and finish clearly delineated) of each component specified. Accepted samples may be used in the work, subject to approval by the Engineer.

1. Submit three (3) sets of a typewritten list of equipment and materials as specified to the Engineer within twenty-one (21) days after award of contract. This list shall give the name, model number, and manufacturer, and shall be accompanied by cut sheets or reproductions of catalog pages for all of the equipment and material to be installed.

2. Substitutions shall be of equivalent design intent, size, quality, color, texture, material, and warranty to the original item specified.

C. Approval of substitutions will not relieve the Contractor from complying with the requirements of the Contract Documents, Plans and Specifications. Pay at Contractor's sole expense for all changes caused by approved substitutions which affect other items of work.

PART 2: PRODUCTS

2.01 MATERIAL

A. Whenever a material or process is delineated or specified by patent, proprietary name or process, or manufacturer's name, such specifications are used for the purpose of facilitating the description of material or process desired. Approved equivalents are acceptable.

B. Provide any nuts, bolts, washers, conduit, wiring, fittings, adapters, leveling plates, screws, connectors, and/or ties necessary to connect site furnishings to footings, sewer lines, drain lines, and/or electrical lines as shown in the construction documents shall be furnished by the contractor.

C. All surface mount bolts provided by product manufacturers shall be tamper resistant stainless-steel bolts. All washers provided by manufacturers shall be stainless steel.

D. Bolts and washers not provided by manufacturers for surface mounting applications shall be tamper resistant stainless steel and sized per the manufacturer's installation instructions.

2.02 COMPONENTS

A. Park Bench with Back Rest

B. Radius Bench

C. Waste Container

D. Decorative Bollard

E. Café Tables

F. Tree Grate

G. Drinking Fountain (w. Bottle Filler and Pet Fountain)

H. Playground

I. Boulders

J. Seatwall w/Tile Inlay & Memorial Plaque

K. Monument Park Sign & RPOSD Sign

L. Rock Cobble (4" to 8" Dia.)

M. Tree Grate

N. DoggiePot Waste Station

O. 6' Tall Wood Fence

P. 3' Tall Wood Fence

PART 3: EXECUTION

3.01 EXAMINATION

A. Verify site conditions and surfaces are ready to receive work.

B. Verify that layout and site are compatible.

3.02 PREPARATION

A. Layout and stake locations of components for approval by Engineer prior to installation.

B. Review layout requirements with other affected work.

3.03 INSTALLATION

A. Install in accordance with City standards and manufacturer's instruction.

B. Provide concrete footings for site furnishings as detailed on the Plans or as herein specified.

C. Install all site-furnishings as turn-key installations to the satisfaction of the Engineer.

3.04 SITE CONDITIONS

A. Promptly repair damage to facilities caused by construction operations. Cost of repair at Contractor's sole expense.

PART 4: PAYMENT

4.01 PARK BENCH WITH BACK REST

Payment for Park Bench with Back Rest will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.02 RADIUS BENCH

Payment for Radius Bench will be made at the contract unit price per **lump sum (LS)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.04 WASTE CONTAINER

Payment for Waste Container will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.05 DECORATIVE BOLLARD

Payment for Precast Concrete Decorative Bollard will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.06 CAFÉ TABLES

Payment for Precast Concrete Café Tables will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.07 TREE GRATE

Payment for Tree Grate will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.08 DRINKING FOUNTAIN (W/ BOTTLE FILLER AND PET FOUNTAIN)

Payment for Drinking Fountain (w/ Bottle Filler and Pet Fountain) will be made at the contract unit price per **lump sum (LS)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including all work required for drainage sump as shown and detailed on plans.

4.09 PLAY EQUIPMENT

Payment for play equipment will be made at the contract unit price per **lump sum (LS)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including all work required for drainage sump as shown and detailed on plans.

4.10 BOULDERS

Payment for Boulders will be made at the contract unit price per **lump sum (LS)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.11 SEATWALL W/TILE INLAY & PLAQUE

Payment for Seatwall w/Tile Inlay and Plaque will be made at the contract unit price per **lump sum (LS)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.12 MONUMENT PARK SIGN & RPOSD SIGN

Payment for Monument Park Sign & RPOSD Sign will be made at the contract unit price per **lump sum (LS)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.13 ROCK COBBLE (4" TO 8" DIA.)

Payment for Rock Cobble (4" to 8" Dia.) will be made at the contract unit price per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.14 DOGGIEPOT WASTE STATION

Payment for DoggiePot Waste Station will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.15 6' Tall Fence

Payment for 6'tall fence will be made at the contract unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.16 3' Tall Fence

Payment for 3'tall fence will be made at the contract unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved

END OF SECTION

SECTION 32 15 40 - DECOMPOSED GRANITE SURFACING

PART 1 – GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all Decomposed Granite Paving work operations. Provide all labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

1.02 REFERENCES

A. ASTM C136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.

1.03 SUBMITTALS

A. Samples for Verification:

1. Submit a (3) Three-pound sample of each type and color of decomposed granite surfacing material.

B. Certification:

1. Installer Qualifications.

1.04 QUALITY ASSURANCE

A. Single Source Responsibility: Obtain each type of decomposed granite surfacing from single source.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Bulk Materials: Each load of decomposed granite surfacing material arriving at the job site in bulk shall be accompanied by a delivery ticket containing the following minimum information:

1. Quarry of origin.
2. Amount, weight, and type of material.
3. Brand name and manufacturer’s identification.

D. Protect decomposed granite surface materials from contamination until ready for installation. Store under cover.

1.04 PROJECT CONDITIONS

A. Surfaces to receive decomposed granite surfacing shall be frost free and free of oil or any other foreign matter, which may impair the proper installation of the surfacing system.

B. Perform work in dry weather when subgrade is sufficiently stable to be properly compacted.

PART 2 – PRODUCTS

2.01 DECOMPOSED GRANITE SURFACING MATERIALS

A. Decomposed Granite and Crushed Stone Aggregate: Provide high quality materials consisting of sound, angular, durable stone particles, free from clay lumps, organic materials, frozen materials, or other deleterious substances.

B. Gradation: Manufacturer's standard mix of well-graded materials in accordance with ASTM C136. Blends of coarse sand and rock dust are not acceptable.

C. Color: As indicated in construction drawings within construction materials schedule or equivalent in color.

D. Binder / Stabilizer shall be used.

F. Decomposed Granite shall be delivered with packing receipts indicating supplier, color, and product name as indicated on the Plans.

E. Decomposed Granite described on plan.

G. Subbase to be Class II AB or approved equal

PART 3 – EXECUTION

3.02 PREPARATION

A. Excavation: Excavate to depth required so edges of decomposed granite surfacing will match adjacent grades and have a maximum cross-slope of 2 percent. Ensure edges and bottom of excavation are in a smooth and even line.

B. Subgrade Preparation: Plow, harrow and mix the entire surface of the in-place subgrade to a depth of at least 6-inches. After the material has been thoroughly

mixed, the subgrade shall be brought to line and grade and compacted to 90% of the maximum laboratory dry density.

3.03 INSTALLATION OF SUBGRADE

A. Subgrade: Proof-roll the subgrade with heavy pneumatic-tired equipment to locate unstable areas and to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, and replace with compacted backfill or fill as directed.

2. The surface of the completed subgrade shall be bladed to a smooth and uniform texture.

3. The finished subgrade shall be uniform and free from deleterious debris such as organic materials, nails, stones, and loose soil.

B. Compaction: Compact each lift of the subgrade, and final finish decomposed granite surfacing materials with a one to three-ton roller or compactor. In small areas that are difficult to access with compaction equipment, hand tamping may be performed with multiple passes to achieve the required density.

1. Lightly spray surface area following compaction. Do not disturb aggregate surface with spray action.

3.04 INSTALLATION OF DECOMPOSED GRANITE SURFACING

A. Spread decomposed granite surfacing material in 1.5-inch lifts. Spread evenly and smoothly before compacting. Allow for 20-25% compaction. Screed if possible.

B. Wet the mix to ensure water has penetrated the full depth of the decomposed granite surfacing material, and roll each lift to form a uniform, smooth surface with a cross slope of 2% maximum. Do not compact to greater than 20-25% relative compaction. Compact each lift to a minimum 90% density.

C. Grade and smooth to the required elevation; compact final lift with 1–3-ton drum roller or compactor.

D. Surface shall follow grades per plans. Remove crown, allow 1-2% cross pitch.

E. Completed surface shall be of consistent quality and shall not have depressions or humps greater than 1/4-inch in 10-feet.

F. Do not plant trees, shrubs, and ground cover into decomposed granite.

G. Remove and replace decomposed granite paving that is damaged, defective, or does not meet the requirements of this section.

3.05 INSTALLATION TOLERANCES

A. Decomposed Granite Surfacing Thickness: Allow for 20-25% compaction.

B. Decomposed Granite Surfacing Smoothness: Produce a surface smoothness within 1/4-inch tolerance when measured with a 10-foot straightedge.

1. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowed variance from template is 1/4-inch.

3.06 CLEAN-UP AND PROTECTION

A. Thoroughly clean all areas where work has occurred. Remove from site excess material, debris, and rubbish.

B. Take all precautions necessary to protect completed work until Substantial Completion of project.

PART 4: PAYMENT

4.01 STABILIZED DECOMPOSED GRANITE (3" LAYER) AND 4" OF AGGREGATE SUBBASE

Payment for Stabilized Decomposed Granite (3" Layer) and 4" of Aggregate Subbase will be made at the contract unit price per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, subbase, equipment, and incidentals for doing all work involved.

END OF SECTION

SECTION 32 18 40 – RESILIENT THERMAL PLASTIC VULCANIZED PLAY SURFACE

PART 1: GENERAL

1.01 GENERAL CONDITIONS

A. Products and materials to be provided are to be from manufacturers and producers regularly engaged full-time in the manufacture and production of poured-in-place playground surfacing and similar type items, with a history of successful manufacture or production that is acceptable to the City Engineer. The material shall meet the following standards:

a. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.
b. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
c. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
d. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering materials.
e. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties using the British Pendulum Tester.
f. ASTM F1292-18 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
g. ASTM F1951-14 Standard Specification for Determination of Accessibility of Surface

1.02 WORK SCOPE

A. Furnish labor, material, and equipment necessary to install the poured-in-place, resilient surfacing system as shown on the drawings and specified herein.

a. Work shall include, but not be limited to the following: layout; excavation; backfill; furnishing and installing of base material; furnishing and installing of poured-in-place, resilient surfacing and all other incidental work to provide a complete resilient surfacing system.

b. Poured-in-place playground surfacing shall consist of a polyurethane binder mixed with recycled rubber, which will make up the attenuation cushion layer. The attenuation cushion layer is capped with EPDM, mixed with a polyurethane binder creating the Wear Course. Surfaces shall comply with ADA and CPSC guidelines as well as ASTM Standards. The manufacturer is to be certified by IPEMA, a third- party testing organization for

playground surfaces and equipment.

1.03 PERMORMANCE REQUIREMENTS

A. Area Safety: Poured-in-place within playground use zones shall meet or exceed the performance requirements of the CPSC, ADA and Fall Height Test ASTM F1292-18. The surface must yield both a peak deceleration of no more than 100 G-max and a Head Injury Criteria (HIC) value of no more than 500 for a head-first fall from the highest accessible portion of play equipment being installed as shown on drawings. IPEMA certification is required. (ASTM F1292-18, section 15 The laboratory test used to determine critical fall height shall have been conducted on surfacing material samples identical in design, materials, components, and thickness and manufactured as the installed playground surface). ASTM F3351-19 standard test method for playground surface impact testing in a laboratory at specified test height for 8' critical fall height.

A. Surfaces shall comply with ADA and CPSC guidelines as well as ASTM Standards. The manufacturer is to be certified by IPEMA, a third-party testing organization for playground surfaces and equipment.

B. Play area shall conform to Uniform Federal Accessibility Standards FED-STD-795 and Architectural and Engineer Instructions (9AEI) Design Criteria.

C. The requirements of the Americans with Disabilities Act. Accessibility Guidelines (ADAAG) 28 CFR Part 36 that provide equal or greater accessibility than the requirements of UFAS must also be met in children's outdoor play areas.

1.04 DELIVERY STORAGE AND HANDLING

A. Delivery, Storage and Handling: Materials and equipment shall be delivered and stored in accordance with the manufacturer's recommendations.

1.05 SITE CONDITIONS

A. Project Site Conditions: Poured-in-place surfacing must be installed on a dry sub-surface, with no prospect of rain within the initial drying period and within the recommended temperature range of the manufacturer. Installation in weather condition of extreme heat, cold (less than 55°F), and/or high humidity may affect cure time, and the structural integrity of the final product. Immediate surrounding sites must be reasonably free of dust conditions or this could affect the final surface look.

1.06 SEQUENCING AND SCHEDULING

A. Sequencing and Scheduling: Poured-in-place surfacing shall be installed after all playground equipment, shade structures, signs and any other items that will be within the surfacing area. Coordinate with the General Contractor.

B. Surface installation coordinated by manufacturer representative.

1.07 SUBMITTALS

A. The Contractor shall submit a complete set of the material submittals, as required, including the manufacturer's name and address, specific trade names, catalog and model numbers, illustrations and descriptive material, and samples of the proposed material for this project clearly marked as to proposed items for approval by the City Engineer.

B. Products submitted as equal must include hard copies of the manufacturer's written specifications, warranty, purchase and use of materials.

C. Manufacturer’s descriptive data and installation instructions.

D. Manufacturer's details showing depths of wear course and sub-base materials, anchoring systems and edge details.

E. A signed statement by an authorized official certifying that the surfacing system meets the requirements of ASTM F1292-18, Section 15 for a head-first fall from the highest accessible portion of the specified playground equipment.

F. A signed statement from the manufacturer of the poured-in-place surfacing attesting that all materials under this section shall be installed only by the Manufacturer’s Trained Installers.

G. A Certificate of Insurance shall be provided by the Manufacturer for poured-in-place surfacing for use as playground safety surfacing, covering general and product liability, of not less than $1,000,000 for each occurrence, $2,000,000 general aggregate with an excess/umbrella liability of $25,000,000. The issuing underwrite shall be AA rated.

H. IPEMA Certification

1.08 QUALITY ASSURANCE

A. Qualifications: Utilize an installer approved and trained by the manufacturer of the playground surfacing system, having experience with other projects of the scope and scale of the work described in this section.

B. Certifications: Certification by the manufacturer that the installer is trained, experienced company employees or certified installers who have successfully completed the “Certified Installers Training Program”,

C. Experience: The installer shall provide a list and photographs of at least five installations where TPV Poured-in-Place Resilient Playground Surfacing has been installed and has been in service for a minimum period of three years. The list shall include the City or purchaser, address of installation, date of installation, contact person, and phone number.

E. International Play Equipment Manufacturers Association (IPEMA) certified.

1.09 TURN OVER AND CLOSE OUT SUBMITTALS

A. 10% Additional TPV granules of each color specified are to be turned over to the City Maintenance Department/City Engineer in sealed containers and clearly marked.
B. Closeout Submittals: Submit warranty documents and owner's manual(s) and maintenance document(s), and installation and safety certification letter specified herein.

1.10 WARRANTY

A. Warranty: Poured-in-Place surface shall maintain required impact attenuation characteristics and be guaranteed against defects in workmanship AND material for a limited seven-year period or as specified and agreed upon per alternate contract. The warranty will be specific to the maintenance requirements and performance standards of the completed product. The warranty is void if not installed by Manufacturers Trained and Certified Poured-in-Place Surfacing Installers.

1.11TESTING

A. Testing: NOTE: Critical Fall Height Four feet through 10 feet have been tested in accordance with Section 15 – Critical Fall Height Test Procedure of ASTM F1292-18.

PART 2: PRODUCTS

1.01 MATERIALS

A. Resilient material shall be based on the following performance requirements. Provide a two-layer system consisting of a polyurethane binder mixed with recycled rubber, which will make up the attenuation cushion layer. The attenuation cushion layer is capped with Thermal Plastic Vulcanized (TPV) granules, mixed with a polyurethane binder creating the Wear Course.

    a. Safety surfacing shall consist of both recycled and synthetic materials meeting the requirements of this specification. Poured-in-Place Surface: The poured-in-place surface shall consist of recycled rubber mixed with a polyurethane binder, then capped with .5-1.5mm TPV granules mixed with an aliphatic binder.

b. Approved Manufacturers: Robertson Industries Inc. (800) 858-0519 or approved equivalent.

c. Poured-in-Place Surface shall consist of a uniform material manufactured in such a way that the top portion meets the requirements specified herein for wear surface.

d. The type of safety surfacing shall be a poured-in-place system and shall be indicated in the construction drawings.

2.02 ATTENUATION CUSHION LAYER SECTION:

A. Impact attenuation cushion layer consists of these materials; recycled styrene butadiene rubber (SBR) and/or cryogenic crumb rubber and/or pre consumer postindustrial reclaimed scrap rubber adhered with a 100% solids polyurethane binder to form a resilient porous material.

B. Strands of SBR may vary from 0.5 mm – 2.0 mm in thickness by 3.0 mm – 20 mm in length.

C. Chunk Premium Black Rubber Granules are 5/8" granules: This rubber is pre-consumer, post-industrial, reclaimed rubber, granulated through a 5/8" screen and contains less than 2% dust.

D. SBR Crumb Rubber (5-9 Mesh) using sieve analysis ASTM D5644 with a fiber content of .1% or less mixed in.

E. Binder shall be between 7-12% of the total weight of the material and shall provide 100 % coating of the particles.

F. The attenuation cushion layer shall be compatible with the wear course and must meet requirements herein for impact attenuation.

2.03 WEAR COURSE

A. Wear course shall consist of .5-1.5mm Thermal Plastic Vulcanized (TPV) granules with polyurethane binder formulated to produce an even, uniform, seamless surface. The installation of surfacing shall be seamless (unless otherwise agreed upon by the City Engineer).

B. TPV shall be peroxide cured with an TPV content of 26% and shall include a processing aid to prevent hardness with 26% poly content to maintain dynamic testing characteristics, weatherization and UV stability.

C. ASTM D2240 (Shore A) hardness of 55-65, not less than 26 percent rubber hydrocarbons.

D. Size of TPV granules .5-1.5mm across. Binder shall be not less than 20% of total weight of rubber used in the wear surface and shall provide 100% coating of the particles.

E. Thickness of wear course shall be a minimum .5" (12.7 mm).

F. The wear course shall be porous.

2.04 SURFACING BINDER

A. No Toluene Diphenyl Isocyanate (TDI) shall be used.

B. No filler materials shall be used in urethane such as plasticizers and the catalyzing agent shall contain no heavy metals.

C. Weight of polyurethane shall be no less than 8.5 lbs. /gal (1.02 Kg/1) and no more than 9.5 lbs. /gal (1.14 Kg/1).

D. The manufacturer is permitted to modify the type of urethane required to match extreme weather conditions. Substitutions must be equal to or exceed the original quality.

2.05 MANUFACTURERS

A. Wear Course – TPV Granules

Manufacturers: Rosehill Polymers or approved equivalent

As Distributed by: Robertson Industries Inc. or approved equivalent

Location Used: Playground Area

B. Attenuation cushion layer – Shredded and/or Chunk Rubber

C. Binder – Aliphatic Urethane Premium, Non-Ambering

Manufacturer: Accella Polyurethane Systems or approved equivalent

D. Chunk Premium Black Rubber Granules

Manufacturer: American Recycling Center, Inc. (989) 725-5100

or approved equivalent

PART 3: EXECUTION

3.01 FINISH GRADING AND SUB-BASE

A. Finished Grade/Slope: Verify that finished elevations or adjacent areas are as indicated on the architectural or site plans, that the appropriate sub-grade elevation has been established for the safety surface to be installed, and that the subsurface has been installed per architectural, site or equipment plans while meeting accessibility and use zones requirements.

B. Aggregate Subbase: Tolerance of aggregate sub-base shall be within .5" in depth. Verify that aggregate sub-base has been fully compacted. Per ADA Guidelines: compacted Aggregate sub-base – 4" of .75" minus irregular stone with fines compacted to 95% in 2" watered lifts.

C. Concrete Sub-Base: Tolerance of concrete or bituminous sub-base shall be with .125" (3.0 mm) in 10' (3050 mm). Per ADA Guidelines: Concrete a minimum of 3' – 4' at a minimum 2500 PSI. Concrete must cure for 7 days prior to application of attenuation cushion layer. Concrete must cure 21 days if wear course is to be applied directly to concrete surface. If poured-in-place surfacing is installed, verify that the concrete sub-base has cured (all areas appear white in color usually at 7 days) and that all concrete curing compounds and other deleterious substances that might adversely affect adhesion have been removed. Surface shall be clean and dry.

D. Asphalt Sub-Base: Asphalt cure time requires 21-28 days. Once the new asphalt has cured, it must be pressure washed prior to the surfacing being installed. The Contractor shall be responsible for flooding the pad to ensure proper slope and tolerance. Any areas holding enough water to cover a flat nickel shall be patched prior to the arrival of our installation crews.

E. Drainage: Verify that sub-surfacing drainage, if required, has been installed to provide positive drainage.

3.02 INSTALLATION

A. Poured-in-Place Surfacing: Components of the poured-in-place surfacing shall be mixed on site in a rotating tumbler to ensure components are thoroughly mixed and are in accordance with manufactures recommendations. Installation of surfacing shall be seamless up to 2,000 square feet per day. Material shall cover all foundations and fill around all elements penetrating the surface.

B. Attenuation Cushion Layer: Whenever practical, attenuation cushion layer of surfacing material shall be installed in one continuous pour on the same day of up to 2,000 square feet. When a second pour is required, step the seam (see detail) and fully coat the step of the previous work with polyurethane binder to ensure 100%

bond with new work. Apply adhesive in small quantities so that new attenuation cushion layer can be placed before the adhesive dries.

C. Wear Course: Wear course must be quality peroxide cured TPV granules. wear surface shall be bonded to attenuation cushion layer. If necessary, additional primer will be used between the attenuation cushion layer and wear course. Apply adhesive to attenuation cushion layer in small quantities allowing the wear course to be applied before adhesive dries. Surface shall be hand troweled to a smooth, even finish. Expect continuous and seamless up to 2,000 square feet per day (contact sales representative for seamless in excess of 2,000 square feet). Where seams are required due to color change, size or adverse weather, a step configuration will be constructed to maintain wear course integrity. The edge of initial pour shall be coated with adhesive and wearing surface mixture shall be immediately applied. Pads with multiple seams are encouraged to include a top coat of urethane before being placed into use. Butt joint seams are not acceptable except for repairs.

D. Perimeter: For installations over existing concrete, the perimeter shall be saw cut to provide a keyway 1" deep x 1" wide, or formed during the pour, with surfacing rolled down into the void. Primer adhesive must be applied to all sides of the void. When connecting to a concrete curb or border, the inside vertical edge shall be primed with adhesive and the final 2" of the attenuation cushion layer shall be tapered to allow the wear surface material to be 1.5"– 2" thick where it joins the concrete.

E. Asphalt: When installing over new asphalt, a curb or other type of border is recommended around the entire pad to separate the new surface from other ground materials. Primer adhesive must be applied to the inside vertical edge of the border before poured in place surface installation.

F. Asphalt: When installing over existing asphalt, a key way cut of 1" deep by 1" side for the poured-in-place to taper into and terminate with required ADA slope.

G. Thickness: Construction methods such as the use of measured screeds or guides shall be employed to ensure that the full depth of specified surfacing material is installed. Surfacing system thickness throughout the playground equipment use zone shall be as required to meet the impact attenuation requirements specified herein.

H. Clean Up: Manufacturer installers shall work to minimize excessive adhesive on adjacent surfaces or play equipment. Spills of excess adhesive shall be promptly cleaned.

I. Protection: The safety surface shall be allowed to fully cure in accordance with Manufacturer's instructions. The surface shall be protected by the Prime Contractor from all traffic during the curing period of at a minimum of 48 hours or as instructed by the Manufacturer.

J. Manufacturer Services: For poured-in-place safety surfacing, a Manufacturer's representative who is experienced in the installation of playground safety surfacing shall be provided. The representative shall supervise the installation to ensure that the system meets the impact attenuation requirements as specified herein.

3.03 SITE AREA CLEAN UP

A. The site shall be kept clean and free of tools, trash, and debris and installation materials daily. Products may be stored on site during installation with appropriate protective measures and approval by the City Engineer.

PART 4: PAYMENT

4.01 TPV POUR IN PLACE RUBBERIZED SURFACING AND CONCRETE BAND

Payment for TPV Pour-in-place Rubberized Surfacing and Concrete Band will be made at the contract unit price per lump sum (LS) as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including subbase, containment band, and all related work.

END SECTION

SECTION 032 80 00 - IRRIGATION

PART 1 - GENERAL

1.01 Summary

A. It is the intent of the Specifications and Drawings that the finished system is complete in every respect and shall be ready for operation satisfactory to the City.

B. The work shall include all materials, labor, services, transportation, and equipment necessary to perform the work as indicated on the Drawings, in these Specifications, and as necessary to complete the contract.

C. Related Sections.
Section 32 92 23: Sodding
Section 32 90 00: Planting

D. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the city.

1.02 Construction Drawings

A. Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, sleeves, etc. which may be required. Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work, accordingly, furnishing such fittings, etc. as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems and any obstacles existing or proposed, including but not limited to building footings, underground utility structures, utility lines, architectural features, trees (new or existing), and buried boulders known or unknown.

B. All work called for on the Drawings by notes or details shall be furnished and installed whether specifically mentioned in the Specifications. When an item is shown on the Plans but not shown on the Specifications or vice versa, it shall be deemed to be as shown on both. The Engineer shall have final authority for clarification.

C. Do not willfully install the irrigation system as shown on the Drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been considered in engineering. Such obstructions or differences shall be brought to the attention of the Engineer as

soon as detected. In the event this notification is not performed, pay, at Contractor's sole cost, for any revision necessary.

1.03 Quality Assurance

A. Provide at least one English speaking person who shall be always present during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the manufacturer's recommended methods of installation and who shall direct all work performed under this Section.

B. Manufacturer's directions and detailed Drawings shall be followed in all cases where the manufacturer of articles used furnishes directions covering points not shown in the Drawings and Specifications.

C. All local, municipal, and state laws, rules and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these Specifications, and their provisions shall be carried out by the Contractor. Anything contained in these Specifications shall not be construed to conflict with any of the above rules and regulations of the same. However, when these Specifications and Drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above rules and regulations, the provisions of these Specifications and Drawings shall take precedence.

D. All materials supplied for this project shall be new and free from any defects. All defective materials shall be replaced immediately at no additional cost to City.

E. Obtain the required licenses and permits including payments of charges and fees, give required notices to public authorities, verify permits secured or arrangements made by others affecting the work of this Section.

1.04 Submittals

A. Materials List:
   1. After award of contract and before any irrigation system materials are delivered to the job site, submit to the Engineer a complete list of all irrigation systems, materials, or processes proposed to be furnished and installed as part of this contract.
   2. Show manufacturer's name and catalog number for each item, furnish complete catalog cuts and technical data, furnish the manufacturer's recommendations as to the method of installation.
   3. No substitutions will be allowed without prior written acceptance by the Engineer.
   4. Manufacturer's warranties shall not relieve the Contractor of its liability under the guarantee. Such warranties shall only supplement the guarantee.

B. Substitutions:
   1. If the Contractor wishes to substitute any equipment or materials for equipment or materials listed on the irrigation Drawings and Specifications, it may do so by providing the following information to the Engineer for approval. 2.Provide a written statement indicating the reason for making the substitution.
   2. Provide catalog cut sheets, technical data, and performance information for each substitute item.
   3. Provide in writing the difference in installed price if the item is accepted.

1.05 Existing Conditions

A. Verify and be familiar with the locations, size, and detail of points of connection provided as the source of water and electrical supply, connection to the irrigation system.

B. Irrigation design is based on the available static water pressure shown on the Drawings. Verify static water on the project prior to the start of construction. Should a discrepancy exist, notify the Engineer authorized representative prior to beginning construction.

C. Prior to cutting into the soil, locate all cables, conduits, sewer septic tanks, and other utilities as are commonly encountered underground, and it shall take proper precautions not to damage or disturb such improvements. If a conflict exists between the obstacles and the proposed work, promptly notify the Engineer who will arrange for relocations. Proceed in the same manner if a rock layer or any other such conditions are encountered.

D. Protect all existing utilities and features to remain on and adjacent to the project site during construction. Repair, at its sole cost, all damage resulting from its operations or negligence.

1.06 Inspections

A. Permit the Engineer to visit and always inspect any part of the work and shall provide safe access for such visits.

B. Where the Specifications require work to be tested by the Contractor, it shall not be covered over until accepted by the Engineer. Notify the Engineer, a minimum of 48 hours in advance of where and when the work is ready for testing. Should any work be covered without testing or acceptance, it shall be, if so ordered, uncovered at the Contractor's sole expense.

C. Inspections will be required for the following at a minimum:
   1. System layout

2. Pressure test irrigation main line (Six hours at 125 PSI) lateral lines (2 hours at 100 psi).
3. Coverage test for all spray irrigation areas prior to start of weed abatement period. (Refer to Section 02900 Landscaping for Weed Abatement Period)
4. Final inspection prior to starts of maintenance period
5. Final acceptance

D. Site observations and testing will not commence without the record Drawings as prepared by the irrigation contractor. Record Drawings must complete and up to date for each site visit.

E. Work that fails testing and is not accepted will be re-tested. Hourly rates and expenses of the Engineer for re-inspection or re-testing will be paid by the Contractor at no additional expense to City.

1.07 Storage and Handling

A. Use all means necessary to protect irrigation system materials before, during, and after installation and to protect the installation work and materials of all other trades. In the event of damage, immediately make all repairs and replacements necessary to the acceptance of the Engineer and at no additional cost to the City.

B. Exercise care in handling, loading, unloading, and storing plastic pipe and fittings under cover until ready to install. Transport plastic pipe only on a vehicle with a bed long enough to allow the pipe to lay flat to avoid undue bending and concentrated external load.

1.08 Cleanup and Disposal

A. Dispose of waste, trash, and debris in accordance with applicable laws and ordinances and as prescribed by authorities having jurisdiction. Do not bury waste material and debris on the site. Burning of trash and debris will not be permitted. Remove and dispose of rubbish and debris generated by his work and workmen at frequent intervals or when ordered to do so by the Engineer.

B. At the time of completion, the entire site will be cleared of tools, equipment, rubbish, and debris which shall be disposed of off-site in a disposal area that is fully and legally licensed.

1.09 Turnover Items

A. Drawings of Record:
1. Record accurately on one set of Drawings all changes in the work constituting departures from the original Drawings.

2. The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the City. Prior to final inspection of work, submit record Drawings to the Engineer.
3. Dimensions from/to permanent points of reference such as buildings, sidewalks, curbs, etc. shall be shown. Data on record Drawings shall be recorded on a day-to-day basis as the project is being installed. All lettering on Drawings shall be minimum 1/8 inch in size.
4. For systems where a flow sensor has been installed, provide flow sensor gallons per minute (GPM) data for all irrigation control valves.
5. Show locations and depths of the following items:
    a. Point of connection (including water P.O.C., master control valves, quick couplers, etc.)
    b. Routing of sprinkler pressure lines (dimensions shown at a maximum of 100 feet along routing)
    c. Isolation valves
    d. Automatic remote-control valves
    e. Quick coupling valves
    f. Routing of control wires
    g. Irrigation controllers
    h. Location of drip zones, flush valves, and air relief valves
    i. Related equipment (as may be directed)

6. Always maintain record Drawings on site upon completion of work. Transfer all as-built information and dimensions to reproducible mylar prints or per the direction of the Engineer.

B. Equipment:
1. Supply the following items:
    a. Two (2) wrenches for disassembly and adjustment of each type of sprinkler head used in the irrigation system.
    b. Two (2) 30-inch sprinkler keys for manual operation of control valves.
    c. Two (2) quick coupler keys with a 1" bronze hose bib, bent nose type with hand wheel and two coupler lid keys.
    d. Two (2) valve box cover key or wrench.
    e. Four (4) extra sprinkler heads of each size and type.
    f. 250 feet of additional drip line and 100 feet blank roll.
    g. 200 drip line staples.

2. The above equipment shall be turned over to the Engineer at the final inspection.

1.10 Completion

A. At the time of the pre-maintenance period inspection, the Engineer and governing agencies will inspect the work and, if not accepted, prepare a list of items to be

completed by the Contractor. At the time of the post-maintenance period or final inspection the work will be re-inspected, and final acceptance will be in writing by the Engineer.

B. The City Engineer shall have final authority on all portions of the work.

C. After the system has been completed, the Contractor shall instruct City's authorized representative in the operation and maintenance of the irrigation system and shall furnish a complete set of operating and maintenance instructions.

D. Without any additional expense to the City, repair any settling of trenches, which may occur during the one-year period following acceptance, to the City's satisfaction. Repairs shall include the complete restoration of planting, paving or other improvements determined damaged as the result of work.

E. Program the irrigation controller for the maintenance period/plant establishment to the satisfaction of the Engineer.

1.11 Guarantee

A. The entire irrigation system shall be unconditionally guaranteed against all defects and fault of material and workmanship, including settling of backfilled areas below grade, for a period of one (1) year following the filing of the Notice of Completion. The guarantee shall be valid unless existing equipment utilized on the project fails within the guarantee period.

B. Should any problem with the irrigation system be discovered within the guarantee period, and at no additional expense to City, correct it within ten (10) calendar days after receipt of written notice from City. When the nature of the repairs as determined by the City constitute an emergency (i.e. broken pressure line) the City may proceed to make repairs at the Contractor's expense. Any and all damages to existing improvement resulting either from faulty materials or workmanship, or from the necessary repairs to correct same, shall be repaired to the satisfaction of the owner by the Contractor, all at no additional cost to the City.

C. Guarantee shall be submitted on Contractors own letterhead as follows:

1. GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM
We hereby guarantee that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the Drawings and Specifications, ordinary wear and tear and unusual abuse, or neglect excepted. We shall repair or replace any defective material during the period of one year after date of filing of the Notice of Completion and repair or replace any damage resulting from the repairing or replacing of

such defects at no additional cost to the owner. We shall make such repairs or replacements within 10 calendar days following written notification by the owner. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from owner, we authorize the owner to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefor upon demand.

PART 2 - MATERIALS

2.01 Summary

A. Use only new materials of the manufacturer, size and type shown on the Drawings and Specifications. Materials or equipment installed or furnished that do not meet City standards will be rejected and shall be removed from the site at no expense to the City.

2.02 Pipe

A. All pressure supply lines downstream of backflow prevention unit shall be Class 315 solvent weld PVC. Piping shall conform to ASTM 1785.

B. All non-pressure lines downstream of the remote-control valve shall be Schedule 40 solvent weld PVC conforming to ASTM D1785.

2.03 Plastic Pipe and Fittings

A. Pipe shall be marked continuously with manufacturer's name, nominal pipe size, schedule or class, PVC type and grade, National Sanitation Foundation approval, Commercial Standards designation, and date of extrusion.

B. All plastic pipes shall be extruded of an improved PVC virgin pipe compound in accordance with ASTM D2241 or ASTM D1785.

C. All solvent weld PVC fittings shall be standard weight Schedule 40 and shall be injection molded of an improved virgin PVC fitting compound. Slip PVC fittings shall be the "deep socket" bracketed type. Threaded plastic fittings shall be injection molded. All tees and ells shall be side gated. All fittings shall conform to ASTM D2466.

D. All threaded nipples shall be standard weight Schedule 80 with molded threads and shall conform to ASTM D1785.

E. All solvent cementing of plastic pipe and fittings shall be a two-step process, using primer and solvent cement applied per the manufacturer's recommendations. Cement shall be of a fluid consistency, not gel-like or ropy.

Solvent cementing shall be in conformance with ASTM D2564 and ASTM D2855.

F. When connection is plastic to metal, female adapters shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be non-lead base teflon paste, tape, or approved equal.

2.04 Backflow Prevention Unit

A. The backflow prevention unit shall be a reduced pressure type vacuum breaker of the size, manufacturer and model number as indicated on the Drawings.

2.05 Valves

A. Gate Valves
1. Gate valves shall be of the manufacturer, size, and type indicated on the Drawings.
2. Gate valves shall be constructed of a bronze body, gate and stem with a malleable iron hand wheel. Gate valves shall have threaded connections.
3. All gate valves shall have a minimum working pressure of not less than 150 psi and shall conform to AWWA standards.

B. Quick Coupler Valves:
1. Quick coupler valves shall be of the manufacturer, size, and type indicated on the Drawings.
2. Quick coupler valves shall be brass with a wall thickness guaranteed to withstand normal working pressure of 150 psi without leakage. Valves shall have 1" female threads opening at base, with two-piece body. Valves shall be operated only with a coupler key designed for that purpose. Coupler key shall be inserted into valve and a positive, watertight connection shall be made between the coupler key and valve.

C. Automatic Control Valves:
1. Automatic control valves shall be of the manufacturer, size, and type indicated on the Drawings.
2. The contractor shall verify with the manufacturer that the solenoids are compatible with the irrigation controller and wiring prior to purchase.
3. Automatic control valves shall be electrically operated.

D. Ball Valves
1. Ball valves shall be of the manufacturer, size, and type indicated on the Drawings
2. Manual ball valves shall be PVC w/EPDM O-Rings and socket end connectors.
3. Manual ball valves shall have thermoplastic gear driven operating nut rotates 360° to achieve a 90° turn of the ball.

2.06 Valve Boxes

A. Valve boxes shall be fabricated from a durable, weather-resistant plastic material resistant to sunlight and chemical action of soils.

B. The valve box cover shall be green in color and secured with a hidden latch mechanism or bolts. Where reclaimed water is being utilized, or planned for the future, purple “reclaimed water” valve boxes shall be installed.

C. The cover and box shall be capable of sustaining a load of 1,500 pounds.

D. Valve box extensions shall be by the same manufacturer as the valve box.

E. Automatic control valve boxes shall be rectangular and sized to fit the components, see drawings for further information. Valve box covers shall be marked "RCV" with the valve identification number "heat branded" onto the cover in 2-inch-high letters / numbers.

F. Gate, Ball, and quick coupler valve boxes shall be circular and sized to fit the components, see drawings for further information. Valve box covers shall be marked with either "GV" or “BV” or "QCV" "heat branded" onto the cover in 2-inch-high letters.

2.07 Automatic Controller

A. Automatic controller shall be of the manufacturer, size, and type indicated on the drawings.

B. Controller wall mount shall be of the manufacturer, size, and type indicated on the drawings.

2.08 Electrical

A. All electrical equipment shall be NEMA Type 3, waterproofed for exterior installations.

B. All electrical work shall conform to local codes and ordinances.

2.09 Low Voltage Control Wiring

A. Remote control wire shall be direct-burial AWG-UF type, size as indicated on the Drawings, and in no case smaller than 14 gauge.

B. Connections shall be Spears DS-400 Dry-Spliced (Pre-filled).

C. Ground wires shall be white in color. Control wires shall be red (where two or more controllers are used, the control wires shall be a different color for each controller. These colors shall be noted on the "Record Drawings" Plans located on controller door).

2.10 Irrigation Heads

A. Irrigation heads shall be of the manufacturer, size, type, with radius of throw, operating pressure, and discharge rate indicated on the Drawings.

B. Irrigation heads shall be used as indicated on the Drawings.

PART 3 - EXECUTION

3.01 Site Conditions

A. Inspections:
1. Prior to all work of this Section, carefully inspect the installed work of all other trades, and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

B. Discrepancies:
1. In the event of discrepancy, immediately notify the Engineer.
2. Do not proceed with installation in areas of discrepancy until all discrepancies have been resolved.

C. Grades:
1. Before starting work, carefully check all grades to determine that work may safely proceed, keeping within the specified material depths with respect to finish grade.
2. The Engineer shall accept final grades before work on this Section will be allowed to begin.

D. Field Measurements:
1. Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design. Coordinate the installation of all irrigation materials with all other work.
2. All scaled dimensions are approximate. Check and verify all size dimensions prior to proceeding with work under this Section.
3. Exercise extreme care in excavating and working near existing utilities. Repair damages to utilities, which are caused by Contractor’s operations or neglect, at no additional cost to City.

E. Layout:
   1. Prior to installation, stake out all pressure supply lines, routing and location of sprinkler heads, valves, backflow preventer.
   2. Layout irrigation system and make minor adjustments required due to differences between site and Drawings. Where piping is shown on Drawings under paved areas, but running parallel and adjacent to planted areas, install the piping in the planted areas.

F. Water Supply:
   1. Connections to, or the installation of, the water supply shall be at the locations shown on the Drawings. Minor changes caused by actual site conditions shall be made at no additional expense to the City.

3.02 Trenching

A. Do NOT trench within 12' of an existing tree without consulting a certified arborist and the City Engineer.

B. Excavations shall be straight with vertical sides, even grade, and support pipe continuously on bottom of trench. Trenching excavation shall follow layout indicated on Drawings to the depths below finished grade and as noted. Where lines occur under paved area, these dimensions shall be considered below subgrade.

C. Provide minimum cover of 24 inches on pressure supply lines.\

D. Provide minimum cover of 24 inches for control wires.

E. Provide minimum cover of 12 inches for non-pressure lines.

F. Pipes installed in a common trench shall have a 6-inch minimum space between pipes.

3.03 Backfilling

A. Backfill material on all lines shall be the same as adjacent soil free of debris, litter, and rocks over 1/2 inch in diameter.

B. Backfill shall be tamped in 4-inch layers under the pipe and uniformly on both sides for the full width of the trench and the full length of the pipe. Backfill materials shall be sufficiently damp to permit thorough compaction, free of voids. Backfill shall be compacted to 90% relative compaction and shall conform to adjacent grades.

C. Flooding in lieu of tamping is not allowed.

D. Under no circumstances shall truck wheels be used to compact backfill.

E. Provide sand backfill a minimum of 6 inches over and under all piping under paved areas.

3.04 Piping

A. Piping under existing pavement may be installed by jacking, boring, or hydraulic driving. No hydraulic driving is permitted under asphalt pavement.

B. Cutting or breaking of existing pavement is not permitted.

C. Carefully inspect all pipe and fittings before installation, removing dirt, scale, burrs, and reaming. Install pipe with all markings up for visual inspection and verification.

D. Remove all dented and damaged pipe Sections.

E. All lines shall have a minimum clearance of 6 inches from each other and 12 inches from lines of other trades.

F. Parallel lines shall not be installed directly over each other.

G. In solvent welding, use only the specified primer and solvent cement and make all joints in strict accordance with the manufacturer's recommended methods including wiping all excess solvent from each weld. Allow solvent welds at least 15 minutes setup time before moving or handling and 24 hours curing time before filling.

H. PVC pipe shall be installed in a manner, which will provide for expansion and contraction as recommended by the pipe manufacturer.

I. Center load all plastic pipe prior to pressure testing.

J. All threaded plastic-to-plastic connections shall be assembled using Teflon tape or Teflon paste.

K. For plastic-to-metal connections, work the metal connections first. Use a non-hardening pipe dope an all-threaded plastic-to-metal connections, except where noted otherwise. All plastic-to-metal connections shall be made with plastic female adapters.

3.05 Control Wiring

A. Low voltage control wiring shall occupy the same trench and shall be installed along the same route as the pressure supply lines whenever possible.

B. Where more than one wire is placed in a trench, the wiring shall be taped together in a bundle at intervals of 10 feet. Bundle shall be secured to the mainline with tape at intervals of 20 feet.

C. All connections shall be of an approved type and shall occur in a valve box. Provide an 18-inch service loop at each connection.

D. An expansion loop of 12 inches shall be provided at each wire connection and/or directional change, and one of 24 inches shall be provided at each remote-control valve.

E. A continuous run of wire shall be used between a controller and each remote-control valve. Under no circumstances shall splices be used without prior approval.

3.06 Valves

A. Automatic control valves, quick coupler, and gate valves shall be installed in the approximate locations indicated on the Drawings. Ball Valves are not shown are drawings, they are to be installed one ball valve per every automatic control valve manifold.

B. Valve shall be installed in shrub areas whenever possible.

C. Install all valves as indicated in the detail Drawings.

D. Valves to be installed in valve boxes shall be installed one valve per box.

3.07 Valve Boxes

A. Valve boxes shall be installed in shrub areas whenever possible.

B. Each valve box shall be installed on a foundation of 3/4 inch gravel backfill; 3 cubic feet minimum. Valve boxes shall be installed with their tops 1/2 inch above the surface of surrounding finish grade in lawn areas and 2 inches above finish grade in ground cover areas.

3.08 Irrigation Heads

A. Irrigation heads shall be installed as indicated on the Drawings.

B. Spacing of heads shall not exceed maximum indicated on the Drawings.

C. Riser nipples shall be of the same size as the riser opening in the sprinkler body.

3.09 Miscellaneous Equipment

A. Install all assemblies specified herein according to the respective detail Drawings or Specifications, using best standard practices.

B. Quick coupler valves shall be set approximately 12 inches from walks, curbs, header boards, or paved areas where applicable.

3.10 Flushing the System

A. Prior to installation of irrigation heads, the valves shall be opened, and a full head of water used to flush out the lines and risers.

B. Irrigation heads shall be installed after flushing the system has been completed.

3.12 Adjusting the System

A. Adjust valves, align heads, and check the coverage of each system prior to coverage test.

B. If it is determined by the Engineer that additional adjustments or nozzle changes will be required to provide proper coverage, make all necessary changes or adjustments prior to any planting.

C. The entire system shall be operating properly before any planting operations commence.

D. Automatic control valves shall be adjusted so that the irrigation heads and drip tubing operate at the pressure recommended by the manufacturer.

3.13 Testing and Observation

A. Do not allow or cause any of the work of this Section to be covered up or enclosed until it has been observed, tested, and accepted by the Engineer.

B. Notify the Engineer a minimum of 48 hours in advance where and when the work is ready for testing.

C. When both drip and spray irrigation systems are completed, perform a coverage test of each system in its entirety to determine if the water coverage for the planted areas is complete and adequate in the presence of the Engineer.

D. Furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from the Plans, or where the system has been willfully installed as indicated on the Drawings when it is obviously inadequate, without bringing this to the attention of the Engineer. This test shall be accepted by the Engineer and accomplished before starting any planting.

E. Final inspection will not commence without record Drawings as prepared by the Contractor.

3.14 Maintenance

A. During the maintenance period adjust and maintain the irrigation system in a fully operational condition providing complete irrigation coverage to all intended plantings.

3.15 Completion Cleaning

B. Clean-up shall be made as each portion of the work progresses. Refuse and excess dirt shall be removed from the site, all walks and paving shall be broomed, and any damage sustained on the work of others shall be repaired to original conditions.

PART 4 –PAYMENT

4.01 AUTOMATIC IRRIGATION SYSTEM

Payment for Automatic Irrigation System shall include all materials, labor, services, and irrigation equipment, such as rotary spray nozzles, spray heads, drip line tubing, drip emitters, valves, PVC piping, sleeving, backflow preventer, quick couplers and irrigation controller and will be made at the **lump sum (LS)** contract price as set forth in the bid schedule.

END OF SECTION

SECTION 32 90 00 - LANDSCAPING

PART 1: GENERAL

1.01 DESCRIPTION

A. The general requirements apply to all Landscaping work operations. Provide labor, materials, tools, transportation, and all incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections.

Section 32 84 00: Irrigation

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions.

1. City: City of South Pasadena

2. Engineer: City Engineer, or the City Engineer's designated representative.

3. ASTM: American Society of Testing Materials

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Manufacturer's directions, specifications and detailed drawings will be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this section will be done to the satisfaction of the City and the decision by the City as to the true construction meaning of the Plans and Specifications will be final.

D. All drop slips for landscape materials (including plants and fertilizers) shall be given to the Engineer.

1.03 ENVIRONMENTAL REQUIREMENTS

A. Do not install landscape materials when ambient temperatures may drop below 45 degrees F (12 degrees C) or above 95 degrees F (39 degrees C).

B. Do not install landscape materials when wind velocity exceeds 30 mph (48 k/hr).

PART 2: PRODUCTS

2.01 REFERENCES

A. ANSI Z60.1 - Nursery Stock.

B. California State Department of Agriculture - Regulations for nursery inspections, rules, and grading.

2.02 TREES

A. Trees shall be grown by an established nursery having been in the business of growing trees, a minimum of five (5) years. At the option of the Engineer, trees shall be inspected and tagged at the nursery prior to shipment to the planting site.

Trees: All trees shall be of the specified container size and of the species specified.

B. Tree species indicated or listed in the "Plant Legend" on the Plans, shall be in accordance with the Standards of Practice recommended by the American Association of Nurserymen. Except for names not covered therein, the established custom of the nursery shall be followed.

C. Condition of trees shall be in accordance with the California State Department of Agriculture's regulations for nursery inspections, rules, and grading and shall be symmetrical, typical for variety and species, sound, healthy, vigorous, free from plant disease, insect pests, or their eggs, and shall have healthy normal root systems, well filling their containers, but not to the point of being root bound.

D. Trees shall not be pruned prior to delivery, except as authorized by the City. In no case shall trees be topped before delivery.

E. The size of the trees shall correspond with that normally expected for species and variety of commercially available nursery stock, or as specified on the Plans. The minimum acceptable size of all trees, measured before pruning with the branches in normal position, shall conform with the measurements, if any, specified on the Plans. Trees larger in size than specified may be used with the approval of the City, but the use of larger plants will not serve as the basis for a change order.

F. All trees shall be subject to the inspection and acceptance of the City before planting. Trees will be inspected for size and condition of root growth, insects, injuries and defects and will be tagged at the nursery prior to delivery to the site.

2.04 FERTILIZERS, BACKFILL MATERIALS AND WATER

A. General.

1. Fertilizing and backfill materials shall comply with the applicable requirements of the State Food and Agricultural Code. All materials shall be packaged first grade, commercial quality products identified as to source, type of material, weight, and manufacturer's guaranteed analysis. Fertilizing and backfill material shall not contain toxic ingredients or fillers in quantities harmful to human life, animals, or plants.

2. Furnish a Certificate of Compliance stating that the material substantially meets the specifications.

3. Backfill Mix:

a. 6 parts by volume on-site soil
b. 4 parts by volume composted organic amendment
c. 18 lb. Gro-Power per cubic yard of mix
d. 2lbs Iron Sulphate per cubic yard of mix

B. Commercial Fertilizer.

Commercial fertilizer shall be a palletized or granular product having a chemical analysis as specified on the Plans or in the Specifications. Commercial fertilizer shall be free-flowing material delivered in unopened sacks. Material which becomes caked or otherwise damaged shall not be used.

C. Composted Organic Soil Amendment.

1. Humus material shall have an acid-soluble ash content of no less than 5% and no more than 20%. Organic matter shall be at least 50% on a dry weight basis.

2. The pH of the material shall be between 6 and 7.5.

3. The salt content shall be less than 10 millimho/cm @ 25° C. in a saturated paste extract.

4. Boron content of the saturated extract shall be less than 1.0 parts per million.

5. Silicon content (acid-insoluble ash) shall be less than 50%.

6. Organic matter shall be at least 50% on a dry weight basis.

7. Calcium carbonate shall not be present if to be applied on alkaline soils.

8. Types of acceptable products are composts, manures, mushroom composts, straw, alfalfa, peat mosses etc. low in salts, low in heavy metals, free from weed seeds, free of pathogens and other deleterious materials.

9. Composted wood products are conditionally acceptable [stable humus must be present]. Wood based products are not acceptable which are based on red wood or cedar.

10. Sludge-based materials are not acceptable.

11. Carbon: nitrogen ratio is less than 25:1.

12. The compost shall be aerobic without malodorous presence of decomposition products.

13. The maximum particle size shall be 0.5 inch, 80% or more shall pass a No. 4 screen for soil amending. The maximum particle size shall be 0.25 inch for hydroseeding.

Maximum total permissible pollutant concentrations in amendment in parts per million on a dry weight basis:

arsenic	20	copper	150	selenium	50
cadmium	15	lead	200	silver	10
chromium	300	mercury	10	vanadium	400
cobalt	50	molybdenum	20	zinc	250
nickel	100				

D. Water.

1. Water shall be clean, fresh, and free of substances or matter which could inhibit vigorous growth of plants

2. Water shall be supplied at Contractor's sole expense at no additional cost to City through the end of the maintenance period.

2.05 WOOD MULCH

A. Mulch shall be "Forest Floor" (0-2")

Available from or equal to:
Aguinaga Green
7992 Irvine Boulevard
Irvine, CA 92618
(949) 786-9558

B. The mulch shall consist of fibrous, woody bark mixture of varied particle size with the following characteristics:

Percent Passing	Sieve Size
90-100	25.4 mm (1")
80-100	12.7 mm (1/2")
20-60	6.35 mm (1/4")

C. Mulch shall be packaged in bales or bags unless the City approves a bulk source in advance of delivery to the site of the work. The Contractor shall submit one sample of three (3) different mulch materials.

D. The Engineer has the right to reject all samples and request additional samples until a suitable mulch material is approved.

2.06 SAMPLES

A. Samples of products and materials shall be required by the City. Submittals for inspection shall be stored on the site until furnishing of material is complete.

B. Delivery of products and materials may begin upon acceptance of samples or as directed by the City.

2.07 PLANT TABLETS

Plant tablets shall be Scotts Agriform, Gro-power or approved equal, 20-10-5 applied at the following rates:

Tablet Size	21 Gram					5 Gram
Container Size	1 Gallon and 10" pots	5 Gallon	15 Gallon	24" Box	36" Box and Larger	Ground Cover Plants
Application Rates (No. of Tablets)	1	3	8	20	One Tablet per each foot of height	1

PART 3: EXECUTION

3.01 GENERAL

Earthwork and on-site disposal of excavated material shall include placement, spreading, densification, cultivation and raking.

1. Unless otherwise provided, curbs, walks, irrigation systems, and similar improvements required by the Plans or Specifications shall be constructed following rough grading and before sodding.

2. Planting holes and backfill shall be as herein specified.

3. For preliminary rough grading and related earthwork, prepare areas for sodding work to within one-tenth foot (0.1') of finish grade.

3. Fertilizing and conditioning materials shall be mechanically spread at a uniform rate. The quantities of materials necessary for the planting area shall be at the site and shall be verified by delivery tickets furnished to the Engineer before spreading.

3.02 FINISH GRADING

A. After spreading and raking, the soil shall be watered and allowed to settle to provide a stable surface, not overly densified to the extent that it will prevent aeration and water infiltration. After the soil has dried out to a workable condition, the planting areas shall be regraded, raked, and smoothed to the required grades and contours. Finish surfaces shall be clean and suitable for planting.

B. The finish grade shall be smooth, uniform, and free of abrupt grade changes and depressions to ensure surface drainage.

C. The finish grade below adjacent paving, curbs, or headers shall be one inch (1") in lawn areas and two inches (2") in shrub or ground cover areas.

3.03 TREE PLANTING GENERAL

A. All sprinkler/irrigation work shall be inspected and accepted by the City, prior to start of any work of this subsection.

B. Location of utility, structures and lines.

1. Prior to excavation for planting or placing of stakes, locate all utilities, electric cables, conduits, irrigation lines, heads, valves and valve control

wires, and all utility lines so that proper precautions may be taken not to damage such improvements.

2. In the event of a conflict between utilities and plant locations, promptly notify the Engineer who will arrange for one or the other to be relocated. If contractor fails to follow this procedure it shall repair all damages resulting from the work at contractor's sole expense.

C. All plants will be inspected by the Engineer prior to planting, including plants previously approved at the nursery. The Contractor shall be responsible for the condition of all trees, planted or otherwise, until acceptance.

D. Quantities.

1. Trees shall be furnished in the quantities and/or spacing as shown or noted for each location, and shall be of the species, kinds, sizes, etc., as symbolized, and/or described in the Plant Legend, as indicated on the Plans.

2. Verify all sizes and quantities on the Plans. Promptly report any discrepancy to the Engineer.

E. Substitution.

1. Any trees specified by trade name or equal, shall be according to these Plans and Specifications.

2. Installation and use of substitute trees shall not be made until the Contractor is in receipt of written approval from the Engineer. Substitution proposals must be accompanied by written proof of non-availability within a five-hundred-mile radius of the project site for trees originally specified and proof that material was ordered in a timely manner upon award of contract.

F. Protection and Storage.

1. Regularly water all nursery stock in containers and place them in a cool area protected from sun and drying winds.

2. Do not allow trees to dry out before or while being planted. Keep exposed roots moist by means of wet sawdust, peat moss or burlap at all times during planting operations. Do not expose roots to the air except while being placed in the ground. Wilted or diseased trees, whether in place or not, will not be accepted and shall be replaced at the Contractor's sole expense.

G. Moisten prepared surface immediately prior to installing trees.

H. Install trees within 24 hours after delivery to site.

I. Water trees immediately after installation.

J. Layout and Tree Location.

1. Layout of trees shall be performed by the Contractor and approved by the Engineer prior to planting

2. Tree locations will be staked by the Contractor and approved by the Engineer.

3.04 TREE AND SHRUB PLANTING

A. Planting Holes. Planting holes shall be approximately square. The holes shall be twice the width of the container, unless otherwise shown on the Plans. The holes shall be one-and-half times the depth of the root ball, or as shown on the Plans. The hole shall be larger, if necessary, to permit handling and planting without injury or breakage of the root ball or root system. Any trees having a broken or cracked root ball before or during planting shall not be planted.

B. Underground Obstructions. In the event that underground construction work or obstructions are encountered in the planting operation, alternate locations will be selected by the City. Operation shall be done at no extra cost to the City.

C. Planting Procedures.

1. The backfill mix shall be as specified under paragraph 2.04, A, 3 and shall be thoroughly blended.

   No mixing for individual planting holes is permitted. Mix planting soil prior to backfilling and stockpile at the site. Iron sulfate shall not contact cement surfaces because severe staining could occur; repair or replace stained cement at Contractor's sole cost.

2. Remove bottom of box and set trees so that, when settled, they bear the same relation to the required grade as they bore to the natural grade before being transplanted. Place each tree in the center of the pit, remove box sides and backfill with prepared backfill. Compact the backfill mix around the ball or roots. Do not use soil in muddy condition for backfilling. Cut off all broken or frayed roots.

3. Thoroughly water each tree when the hole is one-half filled.

4. After watering, backfill the remainder of the hole and tamp the soil in place until the surface of the backfill is level with the surrounding area and the crown of the tree is at the finished grade of the surrounding area.

5. After backfilling, a basin shall be constructed around each tree. Each basin shall be of a depth sufficient to hold at least six inches (6") of water. Basins shall be the same size as the container size of each individual tree. The the basins shall be constructed of amended backfill material.

6. Set the plant tablets to be used with each tree on the top of the root ball so the required number of tablets to be used in each hole can be easily verified. Bury tablets upon approval by the Engineer.

7. Immediately after planting, apply water to each tree by means of a hose. Apply water in a moderate stream in the planting hole until the material about the roots is completely saturated from the bottom of the hole to the top of the ground.

8. Apply water in sufficient quantities and as often as seasonal conditions require to always keep the tree moist, well below the root system.

9. Basins shall be maintained *thirty (30) days* following tree planting. They shall be removed at that time, unless otherwise directed by the Engineer.

D. Pruning. Pruning shall be limited to the minimum necessary to remove injured twigs and branches, and to compensate for loss of roots during transplanting, but never to exceed one-third of the branching structure. Upon approval of the Engineer, pruning may be done before delivery of plants, but not before plants have been inspected and approved.

E. Staking. All trees shall be staked per the planting details on the Plans. Staking shall be done immediately after planting.

3.05 MULCHING

Mulch shrub areas and trees after planting with three (3") inches of mulch.

3.06 MAINTENANCE AND ESTABLISHMENT PERIOD

A. Maintenance and establishment period will begin from the "Date of Acceptance of Installation" of all planting areas and end at project completion and acceptance by the Engineer. Request in writing from the Engineer notification of the date of the start of the maintenance period. At the acceptance of all planting, request in writing from the Engineer notification of the date of the completion of the maintenance period. The maintenance period shall not officially begin or end without written notification from the Engineer.

B. Construction fencing shall remain until after the maintenance period is complete or as directed by the Engineer.

C. Maintain all trees and shrubs on a continuous basis as they are completed during the progress of the work and during the establishment and maintenance period and shall continue to maintain them until final acceptance in accordance with the following.

1. Water and reapply mulch as necessary to promote a healthy growing condition. Re-stake if staking is not straight or solid. All areas shall be kept free of debris, weeds or litter. Keep project neat and attractive throughout the maintenance period.

2. Adjust the irrigation system to sufficiently saturate root zone without rotting trees.

3. Fertilize with "Gro-Power Plus" at 30 lbs./1000 sf every *thirty (30) calendar days*, during the maintenance period. Apply "Gro-Power Controlled Release Nitrogen" *five (5) calendar days* before the end of the maintenance period at manufacturer's recommended rate.

D. Maintenance period shall be extended if plant material is not in a healthy growing condition. When all maintenance work has been completed to the satisfaction of Engineer, the Engineer will issue to the Contractor a written notice of completion of maintenance.

3.09 WEED ABATEMENT

A. The weed abatement program shall proceed upon the completion of the irrigation system and after all existing weeds and growth has been removed from the planting areas. Begin watering daily for twenty-one (21) consecutive days and until weed seeds have germinated. Cease watering for three (3) days. Spray a non-selective herbicide (Roundup) to eradicate the germinated weeds. Allow herbicide sufficient time to kill weeds. Remove dead weeds within 1" of the soil surface. Repeat the non-selective herbicide application two more times. The contractor shall include a dye indicator with the third application of the non-selective herbicide.

B. If perennial weeds or grasses still exist, re-water four (4) times daily for fourteen (14) consecutive days until new growth appears. Reapply a non-selective herbicide with a dye indicator. Remove weeds after herbicide has had sufficient time to kill.

3.10 INSPECTION

A. All inspections herein specified shall be made by the City. Request inspection at least forty-eight (48) hours in advance of the time the inspection is required. Requested inspections, subsequently canceled without twenty-four (24) hours notice, will be billed to the Contractor.

B. Inspection is required for, and not necessarily limited to, the following parts of the work.

1. At completion of the incorporation of soil amendments and fine grading

2. Prior to digging plant pits for trees and shrubs.

3. Installing trees in the planting hole.

4. During backfilling of plant pits with amended backfill.

5. Final inspection at the end of the maintenance period.

PART 4: PAYMENT

4.01 SOIL PREP AND FINE GRADING

Payment will be made at the contract unit price bid per square foot as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.02 WEED ABATEMENT

Payment will be made at the contract unit price bid per square foot as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.03 36” BOX TREE

Payment will be made at the contract unit price per each as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including establishment and maintenance for the full duration of the project until completion and acceptance from Engineer.

4.04 24” BOX TREE

Payment will be made at the contract unit price per each as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including establishment and maintenance for the full duration of the project until completion acceptance from Engineer..

4.05 15 GALLON SHRUB

Payment will be made at the contract unit price per each as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including establishment and maintenance for the full duration of the project until completion acceptance from Engineer..

4.06 5 GALLON SHRUB

Payment will be made at the contract unit price per each as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including establishment and maintenance for the full duration of the project until completion acceptance from Engineer..

4.03 WOOD MULCH (3” DEPTH)

Payment will be made at the contract unit price bid per cubic yard as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

SECTION 32 92 23 - SODDING

PART 1: GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all Sodding work operations. Provide all labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections.
Section 32 80 00: Irrigation
Section 32 90 00: Planting

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions.
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

E. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specifications are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Grower's directions, specifications and detailed drawings will be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this section will be done to the satisfaction of the City and decision by the Engineer as to the true construction meaning of the Plans and Specifications will be final.

D. All drop slips for sod fertilizers shall be given to the City.

1.03 ENVIRONMENTAL REQUIREMENTS

A. Do not install sod when ambient temperatures may drop below 45 degrees F (12 degrees C) or above 95 degrees F (39 degrees C).

B. Do not install sod when wind velocity exceeds 30 mph (48 k/hr).

C. Do not install sod when soil is overly compacted preventing water permeability. Rototill as necessary to allow for plant establishment, see Part 3 Execution.

PART 2: PRODUCTS

2.01 REFERENCES

A. ANSI Z60.1 - Nursery Stock.

B. California State Department of Agriculture - Regulations for nursery inspections, rules, and grading.

2.02 SOD

A. Sod shall be as indicated in the construction drawings or approved equivalent grown by an established sod nursery having been in the business of growing sod a minimum of five (5) years Sod shall be free of turf disease, insects, or weeds, and capable of healthy, vigorous growth.

B. Sod shall be grown in a blown sand medium. It shall be cut with a 1/2” to 3/4” thickness of soil that completely covers the root zone. Sod shall be wide cut, big roll. The sod shall arrive vigorous and have a lush appearance, uniform texture and dark green color throughout with no dead or dying edge. The sod shall be sufficiently dense to bear handling and placement without tearing.

C. Nylon mesh in sod will not be accepted. Nylon mesh will be removed prior to installation.

2.03 FERTILIZERS, SOIL CONDITIONING MATERIALS AND WATER

A. General.

1. Fertilizing and soil conditioning materials shall comply with the applicable requirements of the City's Standards and Specifications. All materials shall be packaged first grade, commercial quality products identified as to source, type of material, weight, and manufacturer's guaranteed analysis. Fertilizing and soil conditioning material shall not contain toxic ingredients or fillers in quantities harmful to human life, animals, or plants.

2. The Contractor shall furnish to the Engineer the Certificate of Compliance stating that the material substantially meets the City's specifications.

3. Exact fertilizing and conditioning materials and the required composition and quantities shall be determined by the agronomic soils test.

B. Commercial Fertilizer.

1. Commercial fertilizer shall be a palletized or granular product having a chemical analysis as specified on the Plans or in the Specifications. Commercial fertilizer shall be free-flowing material delivered in unopened sacks. Material which becomes caked or otherwise damaged shall not be used.

2. Pre-planting fertilizer composition to be Best 6-24-24XB. Post-planting composition shall be Best 6-24-24XB. Fertilizer shall provide one pound of P and K per 1,000 square feet. Nitrogen shall not exceed 1/3 pound per 1,000 square feet. Exact composition and type to be determined by agronomic soil test.

3. Fertilizer can be obtained from:

J.R. Simplot
Lathrop, CA 95330
Phone: (209) 858-2511
Fax: (209) 858-2519

C. Water.

1. Water shall be clean, fresh, and free of substances or matter which could inhibit vigorous growth of plants.
2. Water shall be supplied at Contractor's expense at no additional cost to the City through the end of the maintenance period.

PART 3: EXECUTION

3.01 FERTILIZING

A. Two to three days prior to sodding, fertilize with J.R. Simplot Best 6-24-24XB at one pound of P and K per 1,000 square feet. Exact quantity shall be determined by the agronomic soil test

Adequately irrigate after application.

B. Fifteen days after sod installation is complete, fertilize as above with J. R. Simplot Best 16-24-24XB

3.02 INSTALLING SOD

A. Soil conditioning and fine grading shall be completed before sodding. No heavy equipment shall operate over the subgrade after grading is completed.

B. The subgrade shall be moist but not wet when sod is laid. Sod shall be laid with closely fitted joints, and the ends of the trips shall be staggered. Openings shall be plugged with sod.

C. Within two hours after installing sod and before rolling, the sod shall be adequately irrigated with a minimum of 1/2" of water. All seams and joints shall then be rolled until the sod is well bonded to the subgrade.

D. The area shall then be watered thoroughly with 2 to 4 inches of water to penetrate the subsoil at least 8 inches. Watering shall be repeated as necessary to keep the sod moist until rooted into the subgrade. Sodded areas shall be protected against foot traffic until the sod is well established.

3.03 MAINTENANCE & ESTABLISHMENT

A. Maintenance & establishment period will begin at "Date of Acceptance by the City of all sod installation" and continue until project completion and final acceptance by the engineer.

B. Maintenance includes:

1. Water, weed, fertilize, mow, edge and spray as necessary to promote a healthy growing condition. Keep project neat and attractive throughout the maintenance period.
2. Applying herbicides for weed control, as needed, or directed by City, in accordance with manufacturer's instructions. Remedy damage resulting from the use of herbicides.
3. Exterminate rodents and insects as required.

4. Adjust irrigation system scheduling to sufficiently saturate root zone
   a. Adjusting elevation of heads to new finish grade.
   b. Adjust head locations / add head locations to eliminate overthrow on sidewalks.

5. Repair or replace any damaged item caused by vehicles, vandals, bicycles, or foot traffic during the maintenance period.
6. (During growing season) fertilize turf every four weeks with one pound of nitrogen per 1,000 square feet in a complete fertilizer product (4-1-4 ratio).

C. Maintenance period may be extended if turf grass and other plant material is not in a healthy growing condition. When all maintenance work has been completed to the satisfaction of the Engineer, the Contractor will be released through written notification by the Engineer.

D. Mow turf a minimum of two (2) times a week with the first mowing to be completed ***seven (7) days*** after installation of sod. Maintain a mowing height of 3/8" to ¾" inches. Do not cut more than 1/3 of grass blade at anyone mowing. Grass shall be mowed with a sharp power-driven reel mower. Clippings shall be collected and removed.

PART 4: PAYMENT

4.01 TURF - SOD

Payment for Turf- Sod will be made at the contract unit price per square foot (SF) as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved including establishment and maintenance for the full duration of the project until completion and acceptance from Engineer.

END OF SECTION

SECTION 260010 – BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1SCOPE

A. This section supplements all sections of this division and shall apply to all phases of work hereinafter specified, shown on the drawings, or required to provide a complete installation of electrical systems for the Project. The work required under this division is not limited to the electrical specifications and drawings. Refer to all bid documents including Civil, Architectural, Structural, and Mechanical documents which may designate Work to be accomplished. The intent of the Specifications is to provide a complete and operable electrical system, which shall include all documents that are a part of the entire Project Contract.
   1. Work included: Furnish all labor, material, tools, equipment, facilities, transportation, skilled supervision necessary for, and incidental to, performing operations in connection with furnishing, delivery, and installation of the work in this division complete as shown or noted on the Drawings and specified herein.

B. Related Work Specified Elsewhere:
   1. Refer to all sections in the general contract conditions, Contract Requirements and Division 1, General Requirements.

C. Work Installed but Furnished by Others:
   1. The electrical work includes the installation or connection of certain materials and equipment furnished by others. Verify installation details. Foundations for apparatus and equipment will be furnished by others unless otherwise noted or detailed.

1.2 GENERAL REQUIREMENTS

A. Guarantee See General Conditions:
   1. Except as may be specified under other Sections in the specification, guarantee equipment furnished under the specifications for a period of one year, except for equipment required to have a longer guarantee period, from date of final completion. Guarantee all work against defective workmanship, material, and improper installation. Upon notification of failure, correct deficiency immediately and without additional cost to the Owner.
   2. Standard warranty of manufacturer shall apply for replacement of parts after expiration of the above period. Manufacturer shall furnish replacement parts to the Owner or his service agency as approved. Furnish to the Owner, through the Architect, printed manufacturer's warranties complete with material included and expiration dates, upon completion of project. Conform to Division 01.

B. Equipment Safety: All electrical materials and equipment shall be new and shall be listed by Underwriter's Laboratories and bear their label, or listed and certified by a nationally recognized testing authority where UL does not have an approval. Custom made equipment must have complete test data submitted by the manufacturer attesting to its safety.

C. Codes and Regulations:
   1. Design, manufacturer, testing and method of installation of all apparatus and materials furnished under the requirements of these specifications shall conform to the latest publications or standard rules of the following:
      a. Institute of Electrical and Electronic Engineers - IEEE
      b. National Electrical Manufacturers' Association - NEMA
      c. Underwriters' Laboratories, Inc. - UL
      d. National Fire Protection Association - NFPA
      e. American Society for Testing and Materials - ASTM
      f. American National Standards Institute - ANSI
      g. California Electrical Code - CEC, Title 24, Part 3
      h. California Code of Regulations, Title 8, Subchapter 5
      i. California Building Code-CBC, Title 24 Parts 1 &2
      j. State & Municipal Codes in Force in the Specific Project Area
      k. Occupational Safety & Health Administration - OSHA
      l. California State Fire Marshal
      m. California Fire Code- CFC, Title 24 Part 9
      n. National Electrical Testing Association - NETA
   2. The term "Code", when used within the specifications, shall refer to the Publications, Standards, ordinances and codes, listed above. In the case where the codes have different levels of requirements the most stringent rules shall apply.

D. Requirements of Regulatory Agencies:
   1. Codes, Permits, and Fees: Where the Contract Documents exceed minimum requirements, the Contract Documents take precedence. Where code conflicts occur, the most stringent shall apply. The most stringent condition shall be as interpreted by the Engineer.
      a. Comply with all requirements for permits, licenses, fees and Code. Permits, licenses, fees, inspections and arrangements required for the Contractor at his expense shall obtain the Work, unless otherwise specified.
      b. Comply with the requirements of the applicable utility companies serving the Project. Make all arrangements with the utility companies for proper coordination of the Work.

E. Shop Drawings:
   1. See Division 01 for additional requirements.
   2. Time Schedules for Submission and Ordering: The Contractor shall prepare, review and coordinate his schedule of submissions carefully, determining the necessary lead time for preparing, submitting, checking, ordering and delivery of materials and equipment for timely arrival. The Contractor shall be responsible for conformance with the overall construction schedule.
   3. Submittals will be checked for general compliance with specifications only. The Contractor shall be responsible for deviations from the drawings or specifications and for errors or omissions of any sort in submittals.
   4. Submit a complete list of materials and equipment proposed for the job, including manufacturers names and catalog numbers.
   5. Shop drawings shall be submitted in completed groups of materials (i.e., lighting fixtures or switchgear). The Contractor shall add and sign the following paragraph on equipment and materials submitted for review. "It is hereby certified that the

(equipment) (material) shown and marked in this submittal is that proposed to be incorporated into the project; is in compliance with the Contract Drawings and specifications and can be installed in the allocated spaces". Failure to add the above written statement for compliance will result in return of submittals without review.

a. Bind catalog cuts, plate numbers, descriptive bulletins and drawings, 11" x 17" (275 mm x 435 mm) or smaller, in sets with covers neatly showing titles.
b. The Contractor shall verify dimensions of equipment and be satisfied as to Code compliance for fit prior to submitting shop drawings for approval.
c. Where current limiting devices are specified, submit technical data to substantiate adequate protection of equipment cascaded downstream. Submittals shall not be reviewed unless supporting calculations and data are submitted therewith.
d. Include complete catalog information such as construction, ratings, insulation systems, as applicable.
e. For any material specified to meet UL or trade standards, furnish the manufacturers or vendor's certification that the material furnished for the work does in fact equal or exceed such specifications.
f. Reference listings to the specifications' Sections and Article to which each is applicable.
g. Equipment Floor Plans: After approval of material is secured prepare a floor plan of each electrical and communication equipment space, room or yard, drawn to scale at 1/2 inch equals 1 foot and submit for approval in the same manner as for shop drawings. The layout drawings shall be exact scale.

6. Contractor shall prepare coordinated drawings when required by Division 01 or where noted otherwise.

F. Interpretations: The Contractor through the Architect must make Requests for interpretations of drawings and specifications. Any such requests made by equipment manufacturers or suppliers will be referred to the Contractor.

G. Standard of Quality

1. The contract Drawings and Specifications establish the “MINIMUM STANDARD OF QUALITY” each product and/or system must meet to be considered acceptable. Products of other manufactures will be considered if the product and/or system meet or exceed the “MINIMUM STANDARD OF QUALITY” established by this Contract Document.
2. Items for similar application shall be of the same manufacturer.
3. The label of listing by UL shall appear on all materials and equipment for which standards have been established by the agency.
4. Where codes as listed in Section General Requirement Section of the Specifications that establish label or approved requirements, furnish all materials and equipment with either the required labels affixed or the necessary written approval.
5. Provide the type and quantity of electrical materials and equipment necessary to complete Work and all systems in operation, tested and ready for use.
6. Provide and install all incidental items that belong to the Work described and which are required for complete systems.

7. All switchboards, distribution boards, panel boards and circuit breakers shall be of the same manufacturer.
8. All wiring devices such as switches and receptacles shall be of the same manufacturer.

H. Substitutions: Refer to Division 01

I. Submit comprehensive material list, shop drawings and complete technical data for the following equipment and materials:
   1. General Requirements:
      a. Main service and distribution switchboards.
      b. Panelboards.
      c. Conduits
      d. Conductors, include all selected insulation types.
      e. Fuses
      f. Disconnect switches and Starters.
      g. Pullboxes, manholes and handholes.
      h. Standard lighting fixtures, specially fabricated fixtures, ballasts and lamps, with samples and sample of standard finish available (where requested).
      i. Control devices, standard and special receptacles, switches, outlets and finish device plates.
      j. Cabinets for signal and telephone system, special terminals and cabinets. Include all cabinet dimensions.
      k. Fire alarm system.
      l. Transformers

J. Utility Service:
   1. Contractor shall verify the locations shown on the drawings and shall include extensions of lines to building service from locations which are acceptable to the Owner.
   2. Verify electrical, civil, architectural and structural, dimensional and other requirements with the Owner.
   3. Should any major modifications to the work indicated be necessary to comply with the Owner requirements, notify the Architect.
   4. Contractor shall contact the utility company representatives to establish pre-construction coordination, obtain all necessary meters and/or approvals, and schedule utility work to coordinate with the construction schedule.
   5. All utility services shall be installed per the utility company requirements. Verify final construction requirements with utility company service planners prior to construction.

K. Record Drawings: Refer to Division 01, Contract Closeout.

L. Work Responsibilities:
   1. The drawings indicate diagrammatically the desired locations or arrangement of conduit runs, outlets, junction boxes and equipment and are to be followed. Execute the work so as to secure the best possible installation in the available space and to overcome local difficulties due to space limitations. The Contractor is responsible for the correct placing of his work. Where conflicts

occur in plans and/or specifications, the most stringent application shall apply and shall be part of the base bid.

2. Locations shown on architectural plan or on wall elevations shall take precedence over electrical plan locations, but where a major conflict is evident, notify the Architect.
3. In the event minor changes in the indicated locations or arrangement are necessary due to developed conditions in the building construction or rearrangement of furnishings or equipment or due to interference with other trades, such changes shall be made without extra cost.
4. Verify dimensions and the correct location of Owner-Furnished equipment before proceeding with the roughing-in of connections.
5. All scaled and figured dimensions are approximate of typical equipment of the class indicated. Before proceeding with work carefully check and verify dimensions and sizes with the drawings to see that the furnished equipment will fit into the spaces provided without violation of applicable Codes.
6. Should any changes to the work indicated on the drawings or described in the specifications be necessary in order to comply with the above requirements, notify the Architect.
7. Contractor shall be responsible for coordination of coordinated drawings when required by the Architect.
8. Replace or repair, without additional compensation any work which does not comply with or which is installed in violation of any of these requirements.

M. Installation General: For special requirements, refer to specific equipment under these requirements.

1. Unless otherwise specified elsewhere in the specifications, do all excavating necessary for the proper installation of the electrical work.
2. Locations of Openings: Locate chases, shafts and openings required for the installation of the electrical work during framing of the structure. Do any additional cutting and patching required. Cutting or drilling in any structural member is prohibited without approval of the Architect. Furnish all access panels to make all boxes, connections and devices accessible as required by CEC.
3. Location of Sleeves: Where conduits pass through concrete walls, suspended slabs or metal deck floors, install sleeves of adequate size to permit installation of conduit. Sleeves shall be installed prior to pouring of concrete and shall have ends flush with the wall or extend 2 inches above floor surfaces. Verify locations.
4. Wherever conduit extends through roof, install flashings in accordance with drawings and details.
5. Contractor shall be responsible for cutting and patching which may be required for the proper installation of the electrical work.
6. Protect work, materials and equipment and provide adequate and proper storage facilities during the progress of the work. Storage outdoors shall be weather protected and shall include space heaters to prevent condensation. Provide for the safety and good condition of all work until final acceptance of the work. Replace all damaged or defective work, materials and equipment before requesting final acceptance.
7. Conduit and Equipment to be Installed: Clean thoroughly to remove plaster, spattered paint, cement and dirt on both exterior and interior. All underground conduits shall be mandrelled prior to pulling wire.

8. Conduit and Equipment to be Painted: Clean conduit exposed to view in completed structure by removing plaster and dirt. Remove grease, oil and similar material from conduit and equipment by wiping with clean rags and suitable solvents in preparation for paint.
9. Items with Factory Finish: Remove cement, plaster, grease and oil, and leave surfaces, including cracks and corners, clean and polished. Touch up scratched or bare spots to match finish.
10. Site Cleaning: Remove from site all packing cartons, scrap materials and other rubbish on a weekly basis. Vacuum out all cabinets, switchgear and panels and junction boxes prior to pulling any conductors.
11. Electrical equipment and materials exposed to public and in finished areas shall be finish-painted after installation in accordance with the Painting Section. All exposed screw-type fasteners, exterior, or interior in restrooms, shall be vandal-resistant spanner type; include tool.

N. Excavation, Cutting and Patching:
1. Excavating, trenching and backfilling required for the work of this Division in accordance with the applicable requirements of Division 2. Excavating and backfilling connected with electrical work, repaving cuts and providing and maintaining protective measures for the electrical work excavation required by the governing authorities having jurisdiction shall be performed as a part of the work of this Division.
2. Verify openings indicated on the drawings. Provide all cutting, patching and reinforcement of the construction of the building as required to install electrical work.

O. Tests
1. Equipment and systems for which the National Electrical Testing Association (NETA) has an approved or recommended procedure, shall be tested in accordance with that procedure. Test values shall equal values recommended by NETA. Copies of test reports shall be submitted as required under shop drawing submittals.
2. Resistance to ground tests shall be accomplished by a qualified independent testing firm to measure resistance to ground at grounding electrodes. Make tests before slabs or affected areas are poured in order that corrective measures, if required, may be taken. Submit a report showing the results of these measurements. If the resistances exceed values specified elsewhere or NETA test procedure recommendations, perform corrective measures required to reduce resistance to acceptable values.
3. Prior to energizing any motor, measure the service voltage for phase balance and report if unbalance exceeds 1% from mean.
4. Measure the three-phase voltage at no load and at maximum load conditions and submit to the engineer a report showing the results of these measurements.
5. Upon completion of the work and adjustment of all equipment, conduct an operating test. Conduct the test in the presence of an authorized representative of the Owner's Representative. Demonstrate system and equipment to operate in accordance with requirements of the Contract Documents and to be free from electrical and mechanical defects. Provide systems free from short circuits and grounds and show an insulation resistance between phase conductors and ground

not less than the requirements of the governing electric code. Test circuits for proper neutral connection.

6. Complete tests prior to final inspection of project, including corrective work based on the results of the tests.
7. Perform special tests on systems and equipment as specified herein using personnel qualified to perform such tests.

P. Protection: Protect finish parts of the materials and equipment against damage during the progress of the work and until final completion and acceptance. Cover materials and equipment in storage and during construction in such a manner that no finished surfaces will be damaged or marred. Keep moving parts clean, dry and lubricated.

Q. Cleaning Up:
1. Upon completion of the work and at various time during the progress of the work, remove from the building all surplus materials, rubbish and debris resulting from the work of this Division.
2. Thoroughly clean switchgear including busses, apparatus, exposed conduit, metal work including the exterior and interior, and accessories for the work of this Division, of cement, plaster and other deleterious materials; remove grease and oil spots with cleaning solvent; carefully wipe surfaces and scrape cracks and corners clean.
3. Thoroughly polish chromium or plated work. Remove dirt and stains from lighting fixtures.
4. Leave the entire installation in a clean condition.

R. Completion:
1. The work will not be reviewed for final acceptance until operating and maintenance data, manufacturer's literature, panel directories and nameplates specified herein have been approved and properly posted or installed and final cleaning of equipment and premises has been completed.
2. When the installation is complete and adjustments have been made, operate the system for a period of one week, during which time demonstrate that systems are completed and operating in conformance with the specifications.

S. Operating and Maintenance Data: Submit complete and at one time, prior to acceptance of the installation, 4 copies of manufacturer's instructions for operation and maintenance of electrical equipment, including replacement parts lists. As specified in Division 01

T. Inspection and Acceptance Procedures: The Architect will submit observation reports periodically during the construction phase detailing Contract deficiencies. The Contractor is responsible for making corrections immediately. Notice of Completion of the project will not be made until all items have been corrected.

U. Final Completion of Electrical Systems:
1. Prior to Final Completion of operating electrical systems, the Contractor shall:
   a. Provide materials of the type and quality specified and as necessary for proper operation, tested and ready for use.
   b. Furnish the required Operating and Maintenance Data/Manuals.
   c. Clean up of the project pertaining to this Division of the work.

d. After installation has been completed and adjustments made, operate the system for a period of one week, during which time, demonstrate to the Architect that systems are complete and operating in conformance with Contract Documents.
e. Conduct tests required and as specified in this Division and submit test reports and corrective actions taken.
f. Submission of warranties and guarantees.

2. Final Completion of Work Shall be Contingent On:
a. Contractor replacing defective materials and workmanship.
b. Upon completion of work and adjustments made, Contractor shall conduct an operating test for each system for approval at such time as Architect directs. Conduct test in presence of authorized representative of Architect and demonstrate that systems and equipment do operate in accordance with requirements of the Contract Documents and are free from electrical and mechanical defects.
c. Contractor shall provide the necessary training programs and instructions to the Owner's representative. Number of hours shall be a minimum of four (4) hours for each system or days as required under separate Sections of these Specifications. Complete operation and maintenance manuals shall be provided at least two (2) weeks prior to training.
d. Submit copies of manufacturer's instructions and maintenance of electrical equipment including replacement parts lists. Each set shall include one set of shop drawings of equipment installed.

V. Submittals for Change Orders: When changes are made during the construction phase, deletions and additions shall be presented in a manner that will indicate the cost of each item of material and corresponding labor. Markup shall be then added in accordance with the requirements of the General Conditions as modified by the Supplementary Conditions.

W. The Contractor at a time convenient to the Owner shall provide instruction to the Owner's operating personnel in the proper operation and maintenance of all equipment and systems. The instructors shall have received factory training and shall be thoroughly familiar with the equipment installed. The operating personnel shall receive the number of days instruction as indicated in other sections.

1.3 PROJECT RECORD DOCUMENTS

A. Record Drawings: CAD: Use a computer aided drafting (CAD) system in the preparation of record drawings for this Project. Acceptable CAD systems shall be capable of producing files in AutoCAD Version 2012 compatible DWG or DXF format. Owner's consultant will furnish CAD backgrounds for use by the Contractor after construction is 85% complete except where prohibited by Contract.

B. Record Set During the Work: At site, maintain at least one set of Drawings as a Field Record Set. Also maintain at least one copy of all Addenda, Modifications, approved submittals, correspondence, and transmittals at site. Keep Drawings and data in good order and readily available to Architect and Owner.

C. Changes: Clearly and correctly mark Record Drawings to show changes made during the construction process at the time the changed work is installed. No such changes shall be made in the work unless authorized by the Architect.

D. Final Record Drawings: Conform to Division 01 requirements.

E. Preparation of Final Record Drawings: Contractor shall transfer recorded changes in the work indicated on the Field Record Set to the record set. Changes shall be neatly and clearly drawn and noted by skilled draftsmen, and shown technically correct.

F. Approval: Prior to Architect's inspection for Substantial Completion, submit the Final Record Drawings to the Architect for review, and make such revisions as may be necessary for Final Record Drawings to be a true, complete, and accurate record of the work.

G. Manuals: Obtain data from the various manufacturers and submit instruction, operation, and maintenance manuals as required and to the extent required under other Sections.

H. At all times when the work is in progress, maintain at the workplace, fabrication shop or Project Site as applies, a complete separate, clean, undamaged set of the latest stamped, actioned submittals. As work progresses, maintain records of "as installed" conditions on this set in suitable ink or chemical fluid. Update the set daily. After successful completion of Project Site testing specified herein, and after completion of Punch List corrections, copy all records of "as installed" conditions on to originals.

I. Quantity:
   1. Review sets: As for Shop and Field Drawings.
   2. Record set: Refer to Division 01.

J. Content: All drawings required under "Field and Shop Drawings". Show "as installed" condition. Where room designations according to Project permanent signage differ from construction designations in the Contract Documents, show both designations.

K. Warranty Certificates: Comply with Division 01.

PART 2 - COMMISSIONING

2.1 COMMISSIONING OF ELECTRICAL SYSTEMS

A. Include cost for commissioning requirements in the contract price.

B. Attend commissioning meetings scheduled by the CxA.

C. Prepare preliminary schedule for indoor lighting system inspections, O&M manual submission, training sessions, lighting controls testing, system verification, performance testing, and system completion for use by the CxA. Update schedule as appropriate throughout the construction period and provide updated schedule to the commissioning team.

D. Verify proper installation and performance of all electrical services provided.

E. Complete Title 24 Certificate(s) of Installation and manufacturer's pre-start checklists prior to scheduling startup of HVAC and electrical equipment.
   1. Retain Certificate(s) of Installation in a 3-ring binder in an organized fashion. Binder is to remain on the job site
   2. Make Certificate(s) of Installation available for CxA review upon request.
   3. Retain calibration records for equipment provided with manufacturer calibrated sensors in the Certificate(s) of Installation binder.

F. Where applicable, complete the Certificate(s) of Acceptance per the contract documents.
   1. Retain Certificate(s) of Acceptance in a 3-ring binder in an organized fashion. Binder is to remain on the job site
   2. Provide copies of all Certificate(s) of Acceptance to the CxA.
   3. Certificate(s) of Acceptance shall be conducted by companies who are certified as California Advanced Lighting Controls Training Program Acceptance Technician (CALCTP-AT) employer and only completed by those employees of said company who are certified to complete the respective acceptance test.

G. Monitor and respond to Resolution Tracking Forms distributed by the CxA in order to expedite corrective actions necessary to achieve design intent.

H. Participate in the Certificate(s) of Acceptance and Functional Performance Tests as required to achieve design intent.

I. Participate in the opposite-season testing as required to achieve design intent.

J. Participate in O&M Training as required by project specifications.

K. Ensure participation of major equipment manufacturers and their representatives as applicable.

L. Obtain O&M data on all equipment and assemble in binders using tabs as required.

M. Conduct a maintenance orientation and inspection with hands on training per the contract documents.

N. Provide written certification and completed Certificate(s) of Installation forms and checklists documenting that the following work has been completed in accordance with the plans and specifications and that they are functioning as designed.
   1. Correct labeling of all circuits with connected equipment.
   2. Lighting system controls operations, including occupancy sensors, automatic time controls or Energy Management control, override timers, manual dimming controls, exterior lighting controls, multi-level switching, as applicable to the Work.

PART 4 –PAYMENT

4.01 ELECTRICAL AND GENERAL PARK LIGHTING

Work under this bid item shall include all costs associated with the furnishing and installation all Electrical Items including Power, Lighting, and Conduit as indicated on the Electrical Plans and Specifications.

Payment for the Electrical shall be at the Lump Sum (LS) contract unit price as set forth in the Project Bid Schedule and shall be considered full compensation for furnishing labor, materials, tools, equipment, containers, steel plates, fittings, components, conduit, pillboxes, hardware, footings, panels, and equipment described in the construction drawings and specifications including incidentals for doing all work involved in hauling, excavation, lifting, assembling, compaction, testing, all electrical and power complete and in place as shown on the plans, specifications, structural details, and calculations. No additional compensation shall be allowed.

END OF SECTION

SECTION 260519 – LOW-VOLTAGE POWER CONDUCTORS & CABLES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Single conductor building wire.

B. Underground feeder and branch-circuit cable.

C. Service entrance cable.

D. Wiring connectors.

E. Electrical tape.

F. Heat shrink tubing.

G. Wire pulling lubricant.

H. Cable ties.

1.2 RELATED REQUIREMENTS

A. Section 260526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.

B. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire 2013 (Reapproved 2018).

B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft 2011 (Reapproved 2017).

C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes 2010, with Editorial Revision (2020).

D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation 2004 (Reapproved 2020).

E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape 2017.

F. ASTM D4388 - Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes 2020.

G. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

H. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy 2021.

I. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

J. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

K. UL 44 - Thermoset-Insulated Wires and Cables Current Edition, Including All Revisions.

L. UL 83 - Thermoplastic-Insulated Wires and Cables Current Edition, Including All Revisions.

M. UL 267 - Outline of Investigation for Wire-Pulling Compounds Most Recent Edition, Including All Revisions.

N. UL 486A-486B - Wire Connectors Current Edition, Including All Revisions.

O. UL 486C - Splicing Wire Connectors Current Edition, Including All Revisions.

P. UL 486D - Sealed Wire Connector Systems Current Edition, Including All Revisions.

Q. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
   2. Coordinate the installation of direct burial cable with other trades to avoid conflicts with piping or other potential conflicts.
   3. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
   4. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.

B. Project Record Documents: Record actual installed circuiting arrangements. Record actual routing for underground circuits.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.1 CONDUCTOR AND CABLE APPLICATIONS

A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.

B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.

C. Nonmetallic-sheathed cable is not permitted.

D. Underground feeder and branch-circuit cable is not permitted.

E. Service entrance cable is not permitted.

F. Armored cable is not permitted.

G. Metal-clad cable is not permitted.

2.2 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

A. Provide products that comply with requirements of NFPA 70.

B. Provide products listed, classified, and labeled as suitable for the purpose intended.

C. Provide new conductors and cables manufactured not more than one year prior to installation.

D. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.

E. Comply with NEMA WC 70.

F. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.

G. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.

H. Conductors for Grounding and Bonding: Also comply with Section 260526.

I. Conductor Material:
1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
3. Tinned Copper Conductors: Comply with ASTM B33.

J. Minimum Conductor Size:
1. Branch Circuits: 12 AWG.
a. Exceptions:
1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.
3) 20A exterior circuits: 10 AWG..
2. Control Circuits: 14 AWG.

K. Conductor Color Coding:
1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
2. Color Coding Method: Integrally colored insulation.
a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
3. Color Code:
a. 240/120 V, 1 Phase, 3 Wire System:
1) Phase A: Black.
2) Phase B: Red.
3) Neutral/Grounded: White.
b. Equipment Ground, All Systems: Green.

2.3 SINGLE CONDUCTOR BUILDING WIRE

A. Manufacturers:
1. Copper Building Wire:
a. Cerro Wire LLC: www.cerrowire.com/#sle.
b. Encore Wire Corporation: www.encorewire.com/#sle.
c. Southwire Company: www.southwire.com/#sle.
d. Rome Wire and Cable.
e. Okonite Wire
f. Pirelli Wire and Cable
g. Carol Cable

B. Description: Single conductor insulated wire.

C. Conductor Stranding:
1. Feeders and Branch Circuits:
a. Size 10 AWG and Smaller: Solid.
b. Size 8 AWG and Larger: Stranded.

D. Insulation Voltage Rating: 600 V.

E. Insulation:
   1. Copper Building Wire: Type THHN/THWN-2, except as indicated below.
      a. Size 4 AWG and Larger: Type XHHW-2.
      b. Installed Underground: Type XHHW-2.

2.4 WIRING CONNECTORS

A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.

B. Wiring Connectors for Splices and Taps:
   1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
   2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.

C. Wiring Connectors for Terminations:
   1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
   2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
   3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
   4. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression connectors where connectors are required.

D. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.

E. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.

F. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.

G. Mechanical Connectors: Provide bolted type or set-screw type.

H. Compression Connectors: Provide circumferential type or hex type crimp configuration.

2.5 ACCESSORIES

A. Electrical Tape:
   1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.

2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
3. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil; suitable for continuous temperature environment up to 194 degrees F and short-term 266 degrees F overload service.
4. Electrical Filler Tape: Rubber-based insulating moldable putty, minimum thickness of 125 mil; suitable for continuous temperature environment up to 176 degrees F.
5. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.

B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.

C. Wire Pulling Lubricant:
1. Listed and labeled as complying with UL 267.
2. Suitable for use with conductors/cables and associated insulation/jackets to be installed.
3. Suitable for use at installation temperature.

D. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that interior of building has been protected from weather.

B. Verify that work likely to damage wire and cable has been completed.

C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.

D. Verify that field measurements are as indicated.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.3 INSTALLATION

A. Circuiting Requirements:
1. Unless dimensioned, circuit routing indicated is diagrammatic.
2. When circuit destination is indicated without specific routing, determine exact routing required.

3. Arrange circuiting to minimize splices.
4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
5. Maintain separation of Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits in accordance with NFPA 70.
6. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
7. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is not permitted.
8. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.

B. Install products in accordance with manufacturer's instructions.

C. Perform work in accordance with NECA 1 (general workmanship).

D. Installation in Raceway:
1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
2. Pull all conductors and cables together into raceway at same time.
3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.

E. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.

F. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
1. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conductors and cables to lay on ceiling tiles.
2. Installation in Vertical Raceways: Provide supports where vertical rise exceeds permissible limits.

G. Install conductors with a minimum of 12 inches of slack at each outlet.

H. Where conductors are installed in enclosures for future termination by others, provide a minimum of 5 feet of slack.

I. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.

J. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.

K. Make wiring connections using specified wiring connectors.
   1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
   2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
   3. Do not remove conductor strands to facilitate insertion into connector.
   4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
   5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

L. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
   1. Dry Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
      a. For taped connections, first apply adequate amount of rubber splicing electrical tape or electrical filler tape, followed by outer covering of vinyl insulating electrical tape.
   2. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
      a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.
      b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.
   3. Wet Locations: Use heat shrink tubing.

M. Insulate ends of spare conductors using vinyl insulating electrical tape.

N. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.

O. Identify conductors and cables in accordance with Section 260553.

P. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section Firestopping.

Q. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

3.4 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS, except Section 4.

B. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors. The resistance test for parallel conductors listed as optional is not required.

C. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION

SECTION 260526 – GROUNDING & BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Grounding and bonding requirements.

B. Conductors for grounding and bonding.

C. Connectors for grounding and bonding.

D. Ground bars.

E. Ground rod electrodes.

F. Ground access wells.

1.2 RELATED REQUIREMENTS

A. Section 096500 - Resilient Flooring: Static control flooring.

B. Section 260519 - Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.

C. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. IEEE 81 - IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System 2012.

B. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

C. NEMA GR 1 - Grounding Rod Electrodes and Grounding Rod Electrode Couplings 2017.

D. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

E. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

F. UL 467 - Grounding and Bonding Equipment Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Verify exact locations of underground metal water service pipe entrances to building.
2. Coordinate the work with other trades to provide steel reinforcement complying with specified requirements for concrete-encased electrode.
3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:
1. Do not install ground rod electrodes until final backfill and compaction is complete.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.

B. Field quality control test reports.

C. Project Record Documents: Record actual locations of grounding electrode system components and connections.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.1 GROUNDING AND BONDING REQUIREMENTS

A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.

B. Do not use products for applications other than as permitted by NFPA 70 and product listing.

C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.

D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

E. Grounding System Resistance:
   1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect. Precipitation within the previous 48 hours does not constitute normally dry conditions.
   2. Grounding Electrode System: Not greater than 25 ohms to ground, when tested according to IEEE 81 using "fall-of-potential" method.

F. Grounding Electrode System:
   1. Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.
      a. Provide continuous grounding electrode conductors without splice or joint.
      b. Install grounding electrode conductors in raceway where exposed to physical damage. Bond grounding electrode conductor to metallic raceways at each end with bonding jumper.
   2. Metal Underground Water Pipe(s):
      a. Provide connection to underground metal domestic and fire protection (where present) water service pipe(s) that are in direct contact with earth for at least 10 feet at an accessible location not more than 5 feet from the point of entrance to the building.
      b. Provide bonding jumper(s) around insulating joints/pipes as required to make pipe electrically continuous.
      c. Provide bonding jumper around water meter of sufficient length to permit removal of meter without disconnecting jumper.
   3. Metal In-Ground Support Structure:
      a. Provide connection to metal in-ground support structure that is in direct contact with earth in accordance with NFPA 70.
   4. Concrete-Encased Electrode:
      a. Provide connection to concrete-encased electrode consisting of not less than 20 feet of either steel reinforcing bars or bare copper conductor not smaller than 4 AWG embedded within concrete foundation or footing that is in direct contact with earth in accordance with NFPA 70.
   5. Ground Rod Electrode(s):
      a. Provide two electrodes unless otherwise indicated or required.
      b. Space electrodes not less than 10 feet from each other and any other ground electrode.
      c. Provide ground access well for each electrode.
   6. Provide additional ground electrode(s) as required to achieve specified grounding electrode system resistance.
   7. Ground Bar: Provide ground bar, separate from service equipment enclosure, for common connection point of grounding electrode system bonding jumpers as permitted in NFPA 70. Connect grounding electrode conductor provided for service-supplied system grounding to this ground bar.

a. Ground Bar Size: 1/4 by 2 by 12 inches unless otherwise indicated or required.
b. Where ground bar location is not indicated, locate in accessible location as near as possible to service disconnect enclosure.
c. Ground Bar Mounting Height: 18 inches above finished floor unless otherwise indicated.

G. Service-Supplied System Grounding:
1. For each service disconnect, provide grounding electrode conductor to connect neutral (grounded) service conductor to grounding electrode system. Unless otherwise indicated, make connection at neutral (grounded) bus in service disconnect enclosure.
2. For each service disconnect, provide main bonding jumper to connect neutral (grounded) bus to equipment ground bus where not factory-installed. Do not make any other connections between neutral (grounded) conductors and ground on load side of service disconnect.

H. Bonding and Equipment Grounding:
1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
7. Provide bonding for interior metal piping systems in accordance with NFPA 70. This includes, but is not limited to:
a. Metal water piping where not already effectively bonded to metal underground water pipe used as grounding electrode.
b. Metal gas piping.
c. Metal process piping.

2.2 GROUNDING AND BONDING COMPONENTS

A. General Requirements:
1. Provide products listed, classified, and labeled as suitable for the purpose intended.
2. Provide products listed and labeled as complying with UL 467 where applicable.

B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 260526:
1. Use insulated copper conductors unless otherwise indicated.

a. Exceptions:
    1) Use bare copper conductors where installed underground in direct contact with earth.
    2) Use bare copper conductors where directly encased in concrete (not in raceway).

C. Connectors for Grounding and Bonding:
1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

D. Ground Bars:
1. Description: Copper rectangular ground bars with mounting brackets and insulators.
2. Size: As indicated.
3. Holes for Connections: As indicated or as required for connections to be made.

E. Ground Rod Electrodes:
1. Comply with NEMA GR 1.
2. Material: Copper-bonded (copper-clad) steel.
3. Size: 3/4 inch diameter by 10 feet length, unless otherwise indicated.

F. Ground Access Wells:
1. Description: Open bottom round or rectangular well with access cover for testing and inspection; suitable for the expected load at the installed location.
2. Size: As required to provide adequate access for testing and inspection, but not less than minimum size requirements specified.
3. Depth: As required to extend below frost line to prevent frost upheaval, but not less than 10 inches.
4. Cover: Factory-identified by permanent means with word "GROUND".

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that work likely to damage grounding and bonding system components has been completed.

B. Verify that field measurements are as indicated.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Perform work in accordance with NECA 1 (general workmanship).

C. Ground Rod Electrodes: Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70 or install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70.

D. Make grounding and bonding connections using specified connectors.
   1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
   2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
   3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
   4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

E. Identify grounding and bonding system components in accordance with Section 260553.

3.3 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS except Section 4.

B. Perform inspections and tests listed in NETA ATS, Section 7.13.

C. Perform ground electrode resistance tests under normally dry conditions. Precipitation within the previous 48 hours does not constitute normally dry conditions.

D. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

END OF SECTION

SECTION 260529 – HANGERS & SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1SECTION INCLUDES

A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.2 REFERENCE STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products 2017.

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2016a.

C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel 2019.

D. MFMA-4 - Metal Framing Standards Publication 2004.

E. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

F. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate sizes and arrangement of supports and bases with actual equipment and components to be installed.
   2. Coordinate work to provide additional framing and materials required for installation.
   3. Coordinate compatibility of support and attachment components with mounting surfaces at installed locations.
   4. Coordinate arrangement of supports with ductwork, piping, equipment and other potential conflicts.
   5. Notify Architect of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:
   1. Do not install products on or provide attachment to concrete surfaces until concrete has cured; see Section 033000.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for channel/strut framing systems, nonpenetrating rooftop supports, and post-installed concrete/masonry anchors.

B. Shop Drawings: Include details for fabricated hangers and supports where materials or methods other than those indicated are proposed for substitution.

1.5 QUALITY ASSURANCE

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.1 SUPPORT AND ATTACHMENT COMPONENTS

A. General Requirements:
   1. Comply with the following. Where requirements differ, comply with most stringent.
      a. NFPA 70.
      b. Requirements of authorities having jurisdiction.
   2. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
   3. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
   4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
   5. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
   6. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
      a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
      b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
      c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
      d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.

B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.
   1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
   2. Conduit Clamps: Bolted type unless otherwise indicated.

C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.

D. Metal Channel/Strut Framing Systems:
   1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
   2. Comply with MFMA-4.
   3. Channel Material:

a. Indoor Dry Locations: Use painted steel, zinc-plated steel, or galvanized steel.
b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.

E. Hanger Rods: Threaded, zinc-plated steel unless otherwise indicated.

F. Anchors and Fasteners:
1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.
2. New Concrete: Use preset concrete inserts.
3. Existing Concrete: Use expansion anchors.
4. Solid or Grout-Filled Masonry: Use expansion anchors.
5. Hollow Masonry: Use toggle bolts.
6. Hollow Stud Walls: Use toggle bolts.
7. Steel: Use welded threaded studs complying with AWS D1.1/D1.1M with lock washers and nuts or Beam clamps (MSS Type 19 21 23 25 or 27) complying with MSS SP-69.
8. Sheet Metal: Use sheet metal screws.
9. Wood: Fasten with lag screws or through bolts.
10. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.
11. Plastic and lead anchors are not permitted.
12. Preset Concrete Inserts: Continuous metal channel/strut and spot inserts specifically designed to be cast in concrete ceilings, walls, and floors.
a. Manufacturer: Same as manufacturer of metal channel/strut framing system.
b. Comply with MFMA-4.
c. Channel Material: Use galvanized steel.
13. Post-Installed Concrete and Masonry Anchors: Evaluated and recognized by ICC Evaluation Service, LLC (ICC-ES) for compliance with applicable building code.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive support and attachment components.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install hangers and supports in accordance with NECA 1.

C. Install anchors and fasteners in accordance with ICC Evaluation Services, LLC (ICC-ES) evaluation report conditions of use where applicable.

D. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.

E. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.

F. Unless specifically indicated or approved by Architect, do not provide support from roof deck.

G. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.

H. Equipment Support and Attachment:
   1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
   2. Use metal channel/strut secured to studs to support equipment surface mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
   3. Use metal channel/strut to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
   4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.

I. Preset Concrete Inserts: Use manufacturer provided closure strips to inhibit concrete seepage during concrete pour.

J. Secure fasteners in accordance with manufacturer's recommended torque settings.

K. Remove temporary supports.

3.3 CONCRETE BASES

A. Construct concrete bases of dimensions indicated but not less than 4 inches (100 mm) larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.

B. Use 3000-psi (20.7-MPa), 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in Division 03 Section "Cast-in-Place Concrete or Cast-in-Place Concrete (Limited Applications)" as applicable.

C. Anchor equipment to concrete base.
   1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
   2. Install anchor bolts to elevations required for proper attachment to supported equipment.
   3. Install anchor bolts according to anchor-bolt manufacturers written instructions.

3.4 FIELD QUALITY CONTROL

A. Inspect support and attachment components for damage and defects.

B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

C. Correct deficiencies and replace damaged or defective support and attachment components.

END OF SECTION

SECTION 260533.13 – CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Galvanized steel rigid metal conduit (RMC).

B. PVC-coated galvanized steel rigid metal conduit (RMC).

C. Galvanized steel electrical metallic tubing (EMT).

D. Stainless steel electrical metallic tubing (EMT).

E. Reinforced thermosetting resin conduit (RTRC).

1.2 REFERENCE STANDARDS

A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC) 2020.

B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S) 2020.

C. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

D. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT) 2020.

E. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable 2014.

F. NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit 2018.

G. NEMA TC 14 (SERIES) - Reinforced Thermosetting Resin Conduit and Fittings Series 2015.

H. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 6 - Electrical Rigid Metal Conduit-Steel Current Edition, Including All Revisions.

J. UL 514B - Conduit, Tubing, and Cable Fittings Current Edition, Including All Revisions.

K. UL 797A - Electrical Metallic Tubing - Aluminum and Stainless Steel Current Edition, Including All Revisions.

L. UL 1203 - Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
   2. Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts.
   3. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
   4. Coordinate work to provide roof penetrations that preserve integrity of roofing system and do not void roof warranty.
   5. Notify Architect of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:
   1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits and fittings.

B. Project Record Documents: Record actual routing for conduits installed underground and conduits 2 inch (53 mm) trade size and larger.

1.5 QUALITY ASSURANCE

A. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 CONDUIT APPLICATIONS

A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, and product listing.

B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.

C. Underground:
   1. Under Slab on Grade: Use rigid PVC conduit.
   2. Exterior, Direct-Buried: Use rigid PVC conduit.
   3. Where rigid polyvinyl chloride (PVC) conduit is provided, transition to galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), or schedule 80 rigid PVC conduit where emerging from underground.

4. Where rigid polyvinyl (PVC) conduitlarger than 2 inch (53 mm) trade size is provided, use PVC-coated galvanized steel rigid metal conduit elbows for bends.
5. Where galvanized steel rigid metal conduit (RMC) or galvanized steel intermediate metal conduit (IMC) is installed in direct contact with earth where soil has resistivity of less than 2000 ohm-centimeters or is characterized as severely corrosive based on soils report or local experience, use corrosion protection tape, factory-applied corrosion protection coating, or field-applied corrosion protection compound acceptable to authorities having jurisdiction to provide supplementary corrosion protection.
6. Where galvanized rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT) emerges from concrete into soil, use corrosion protection tape, factory-applied corrosion protection coating, or field-applied corrosion protection compound acceptable to authorities having jurisdiction to provide supplementary corrosion protection for minimum of 4 inches on either side of where conduit emerges.

D. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit.

E. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel rigid metal conduit or electrical metallic tubing (EMT).

F. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit.
1. Locations subject to physical damage include, but are not limited to:
   a. Where exposed below 8 feet, except within electrical and communication rooms or closets.

G. Exposed, Exterior: Use galvanized steel rigid metal conduit.

H. Concealed, Exterior, Not Embedded in Concrete or in Contact With Earth: Use galvanized steel rigid metal conduit.

I. Corrosive Locations Above Ground: Use stainless steel rigid metal conduit (RMC), stainless steel intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit (RMC), stainless steel electrical metallic tubing (EMT), or reinforced thermosetting resin conduit (RTRC).

2.2 CONDUIT - GENERAL REQUIREMENTS

A. Comply with NFPA 70.

B. Provide conduit, fittings, supports, and accessories required for complete raceway system.

C. Provide products listed, classified, and labeled as suitable for purpose intended.

D. Minimum Conduit Size, Unless Otherwise Indicated:
1. Branch Circuits: 3/4 inch (21 mm) trade size.
2. Branch Circuit Homeruns: 3/4-inch trade size.
3. Control Circuits: 1/2-inch trade size.
4. Flexible Connections to Luminaires: 3/8-inch trade size.

5. Underground, Exterior: 1-inch trade size.

E. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.3 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Manufacturers:
   1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
   2. Nucor Tubular Products: www.nucortubular.com/#sle.
   3. Western Tube, a division of Zekelman Industries: www.westerntube.com/#sle.

B. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

C. Fittings:
   1. Manufacturers:
      a. ABB; T&B: www.electrification.us.abb.com/#sle.
      b. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.us/#sle.
      c. Bridgeport Fittings Inc: www.bptfittings.com/#sle.
   2. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
   3. Material: Use steel or malleable iron.
   4. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.4 PVC-COATED GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Manufacturers:
   1. ABB; Ocal: www.electrification.us.abb.com/#sle.
   2. Calbond, a division of Atkore International www.calbond.com/#sle
   3. Robroy Industries: www.robroy.com/#sle.

B. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit with external polyvinyl chloride (PVC) coating complying with NEMA RN 1 and listed and labeled as complying with UL 6.

C. Exterior Coating: Polyvinyl chloride (PVC), nominal thickness of 40 mil, 0.040 inch.

D. PVC-Coated Boxes and Fittings:
   1. Manufacturer: Same as manufacturer of PVC-coated conduit to be installed.
   2. Nonhazardous Locations: Use boxes and fittings listed and labeled as complying with UL 514A, UL 514B, or UL 6.
   3. Hazardous/Classified Locations: Use fittings listed and labeled as complying with UL 1203 for classification of installed location.
   4. Material: Use steel or malleable iron.
   5. Exterior Coating: Polyvinyl chloride (PVC), minimum thickness of 40 mil, 0.040 inch.

E. PVC-Coated Supports: Furnish with exterior coating of polyvinyl chloride (PVC), minimum thickness of 15 mil, 0.015 inch.

2.5 STAINLESS STEEL ELECTRICAL METALLIC TUBING (EMT)

A. Manufacturers:
   1. Calbrite, a division of Atkore International: www.calbrite.com/#sle.

B. Description: NFPA 70, Type EMT stainless steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797A.

C. Fittings:
   1. Manufacturers:
      a. Calbrite, a division of Atkore International: www.calbrite.com/#sle.
   2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
   3. Connectors and Couplings: Use compression/gland or set-screw type.

2.6 REINFORCED THERMOSETTING RESIN CONDUIT (RTRC)

A. Description: NFPA 70, Type RTRC reinforced thermosetting resin conduit complying with NEMA TC 14 (SERIES).

B. Supports: As recommended by manufacturer.

C. Fittings: Same type and manufacturer as conduit to be connected.

2.7 ACCESSORIES

A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil, 0.020 inch.

B. Conduit Joint Compound: Corrosion-resistant, electrically conductive compound listed as complying with UL 2419; suitable for use with conduit to be installed.

C. Epoxy Adhesive for RTRC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.

D. Pull Strings: Use nylon or polyester tape with average breaking strength of not less than 1,250 lbf.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive conduits.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install conduit in accordance with NECA 1.

C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.

D. Install PVC-coated galvanized steel rigid metal conduit (RMC) using only tools approved by manufacturer.

E. Conduit Routing:
   1. Unless dimensioned, conduit routing indicated is diagrammatic.
   2. When conduit destination is indicated without specific routing, determine exact routing required.
   3. Conceal conduits unless specifically indicated to be exposed.
   4. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
   5. Arrange conduit to maintain adequate headroom, clearances, and access.
   6. Arrange conduit to provide no more than equivalent of four 90-degree bends between pull points.
   7. Arrange conduit to provide no more than 150 feet between pull points.
   8. Route conduits above water and drain piping where possible.
   9. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
   10. Maintain minimum clearance of 6 inches between conduits and piping for other systems.
   11. Maintain minimum clearance of 12 inches between conduits and hot surfaces. This includes, but is not limited to:
      a. Heaters.
      b. Hot water piping.
      c. Flues.
   12. Group parallel conduits in same area on common rack.

F. Conduit Support:
   1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 260529.
   2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
   3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
   4. Use conduit strap to support single surface-mounted conduit.
      a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
   5. Use metal channel/strut with accessory conduit clamps to support multiple parallel surface-mounted conduits.
   6. Use conduit clamp to support single conduit from beam clamp or threaded rod.
   7. Use trapeze hangers assembled from threaded rods and metal channel/strut with accessory conduit clamps to support multiple parallel suspended conduits.

8. Use nonpenetrating rooftop supports to support conduits routed across rooftops, where approved.
9. Use of spring steel conduit clips for support of conduits is not permitted.
10. Use of wire for support of conduits is not permitted.

G. Connections and Terminations:
1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
3. Use suitable adapters where required to transition from one type of conduit to another.
4. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
5. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
6. Secure joints and connections to provide mechanical strength and electrical continuity.

H. Penetrations:
1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
2. Make penetrations perpendicular to surfaces unless otherwise indicated.
3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
4. Conceal bends for conduit risers emerging above ground.
5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
7. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 078400.

I. Underground Installation:
1. Minimum Cover, Unless Otherwise Indicated or Required:
   a. Underground, Exterior: 18 inches.
   b. Under Slab on Grade: 12 inches to bottom of slab.
2. Provide underground warning tape in accordance with Section 260553 along entire conduit length.

J. Concrete Encasement: Where conduits not otherwise embedded within concrete are indicated to be concrete-encased, provide concrete in accordance with Section Concrete with minimum concrete cover of 3 inches on all sides unless otherwise indicated.

K. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:

1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
2. Where calculated in accordance with NFPA 70 for reinforced thermosetting resin conduit (RTRC) conduit installed above ground to compensate for thermal expansion and contraction.
3. Where conduits are subject to earth movement by settlement or frost.

L. Conduit Sealing:
1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
2. Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
   a. Where conduits pass from outdoors into conditioned interior spaces.
   b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.

M. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches at each end.

N. Provide grounding and bonding; see Section 260526.

O. Identify conduits; see Section 260553.

3.3 FIELD QUALITY CONTROL

A. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

B. Where coating of PVC-coated galvanized steel rigid metal conduit (RMC) contains cuts or abrasions, repair in accordance with manufacturer's instructions.

C. Correct deficiencies and replace damaged or defective conduits.

3.4 CLEANING

A. Clean interior of conduits to remove moisture and foreign matter.

3.5 PROTECTION

A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION

SECTION 260533.16 – BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1SECTION INCLUDES

A. Outlet and device boxes up to 100 cubic inches, including those used as junction and pull boxes.

B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches.

C. Underground boxes/enclosures.

1.2 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

B. NECA 130 - Standard for Installing and Maintaining Wiring Devices 2016.

C. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.

D. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable 2014.

E. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports 2013 (Reaffirmed 2020).

F. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

G. SCTE 77 - Specifications for Underground Enclosure Integrity 2017.

H. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations Current Edition, Including All Revisions.

I. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations Current Edition, Including All Revisions.

J. UL 508A - Industrial Control Panels Current Edition, Including All Revisions.

K. UL 514A - Metallic Outlet Boxes Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
   2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.

3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
5. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.
6. Coordinate the work with other trades to preserve insulation integrity.
7. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
8. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for floor boxes and underground boxes/enclosures.

B. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. See Section 016000 - Product Requirements, for additional provisions.
2. Keys for Lockable Enclosures: Two of each different key.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

PART 2 - PRODUCTS

2.1 BOXES

A. General Requirements:
1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
3. Provide products listed, classified, and labeled as suitable for the purpose intended.
4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
5. Provide grounding terminals within boxes where equipment grounding conductors terminate.

B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:
1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
3. Use suitable concrete type boxes where flush-mounted in concrete.
4. Use suitable masonry type boxes where flush-mounted in masonry walls.

5. Use raised covers suitable for the type of wall construction and device configuration where required.
6. Use shallow boxes where required by the type of wall construction.
7. Do not use "through-wall" boxes designed for access from both sides of wall.
8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
10. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
11. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.
12. Minimum Box Size, Unless Otherwise Indicated:
    a. Wiring Devices (Other Than Communications Systems Outlets): 4 inch square by 1-1/2 inch deep (100 by 38 mm) trade size.
    b. Communications Systems Outlets: 4 inch square by 2-1/8 inch (100 by 54 mm) trade size.
    c. Ceiling Outlets: 4 inch octagonal or square by 1-1/2 inch deep (100 by 38 mm) trade size.
13. Wall Plates: Comply with Section 262726.

C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:
1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
2. NEMA 250 Environment Type, Unless Otherwise Indicated:
3. Junction and Pull Boxes Larger Than 100 cubic inches:
    a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.
4. Cabinets and Hinged-Cover Enclosures, Other Than Junction and Pull Boxes:
    a. Provide lockable hinged covers, all locks keyed alike unless otherwise indicated.
    b. Back Panels: Painted steel, removable.
    c. Terminal Blocks: Provide voltage/current ratings and terminal quantity suitable for purpose indicated, with 25 percent spare terminal capacity.

D. Underground Boxes/Enclosures:
1. Description: In-ground, open bottom boxes furnished with flush, non-skid covers with legend indicating type of service and stainless steel tamper resistant cover bolts.
2. Size: As indicated on drawings.
3. Depth: As required to extend below frost line to prevent frost upheaval, but not less than 12 inches.
4. Applications:
    a. Sidewalks and Landscaped Areas Subject Only to Occasional Nondeliberate Vehicular Traffic: Use polymer concrete enclosures, with minimum SCTE 77 Tier 8 load rating.
    b. Do not use polymer concrete enclosures in areas subject to deliberate vehicular traffic.

5. Polymer Concrete Underground Boxes/Enclosures: Comply with SCTE 77.
   a. Manufacturers:
      1) Hubbell Incorporated; Quazite Products; [_____]: www.hubbellpowersystems.com/#sle.
      2) MacLean Highline; [_____]: www.macleanhighline.com/#sle.
      3) Oldcastle Precast, Inc; [_____]: www.oldcastleprecast.com/#sle.
   b. Combination fiberglass/polymer concrete boxes/enclosures are acceptable.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive boxes.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.

C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

D. Provide separate boxes for emergency power and normal power systems.

E. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.

F. Flush-mount boxes in finished areas unless specifically indicated to be surface-mounted.

G. Box Locations:
   1. Locate boxes to be accessible. Provide access panels in accordance with Section Access Panels as requiredwhere approved by the Architect.
   2. Unless dimensioned, box locations indicated are approximate.
   3. Locate boxes as required for devices installed under other sections or by others.
      a. Switches, Receptacles, and Other Wiring Devices: Comply with Section 262726.
   4. Locate boxes so that wall plates do not span different building finishes.
   5. Locate boxes so that wall plates do not cross masonry joints.
   6. Unless otherwise indicated, where multiple outlet boxes are installed at the same location at different mounting heights, install along a common vertical center line.
   7. Locate junction and pull boxes as indicated, as required to facilitate installation of conductors, and to limit conduit length and/or number of bends between pulling points in accordance with Section 260533.13.

H. Box Supports:
   1. Secure and support boxes in accordance with NFPA 70 and Section 260529 using suitable supports and methods approved by the authority having jurisdiction.
   2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.

I. Install boxes plumb and level.

J. Flush-Mounted Boxes:
   1. Install boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that front edge of box or associated raised cover is not set back from finished surface more than 1/4 inch or does not project beyond finished surface.
   2. Install boxes in combustible materials such as wood so that front edge of box or associated raised cover is flush with finished surface.
   3. Repair rough openings around boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that there are no gaps or open spaces greater than 1/8 inch at the edge of the box.

K. Install boxes as required to preserve insulation integrity.

L. Underground Boxes/Enclosures:
   1. Install enclosure on gravel base, minimum 6 inches deep.
   2. Install additional bracing inside enclosures in accordance with manufacturer's instructions to minimize box sidewall deflections during backfilling. Backfill with cover bolted in place.

M. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

N. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 078400.

O. Close unused box openings.

P. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.

Q. Provide grounding and bonding in accordance with Section 260526.

3.3 CLEANING

A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

3.4 PROTECTION

A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

END OF SECTION

SECTION 260553 – IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Electrical identification requirements.

B. Identification nameplates and labels.

C. Wire and cable markers.

D. Voltage markers.

E. Underground warning tape.

F. Warning signs and labels.

1.2 RELATED REQUIREMENTS

A. Section 260519 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

B. Section 262726 - Wiring Devices - Lutron: Device and wallplate finishes; factory pre-marked wallplates.

1.3 REFERENCE STANDARDS

A. ANSI Z535.2 - American National Standard for Environmental and Facility Safety Signs 2011 (Reaffirmed 2017).

B. ANSI Z535.4 - American National Standard for Product Safety Signs and Labels 2011 (Reaffirmed 2017).

C. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

D. NFPA 70E - Standard for Electrical Safety in the Workplace 2021.

E. UL 969 - Marking and Labeling Systems Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.

B. Sequencing:
   1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
   2. Do not install identification products until final surface finishes and painting are complete.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for each product.

B. Shop Drawings: Provide schedule of items to be identified indicating proposed designations, materials, legends, and formats.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.7 FIELD CONDITIONS

A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 - PRODUCTS

2.1 IDENTIFICATION REQUIREMENTS

A. Identification for Equipment:
1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
   a. Switchboards:
      1) Identify ampere rating and name.
      2) Identify voltage and phase.
      3) Identify power source and circuit number. Include location when not within sight of equipment.
      4) Use identification nameplate to identify main overcurrent protective device.
      5) Use identification nameplate to identify load(s) served for each branch device.Identify spares and spaces.
   b. Panelboards:
      1) Identify ampere rating and name.
      2) Identify voltage and phase.
      3) Identify power source and circuit number. Include location when not within sight of equipment.
      4) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.
      5) For power panelboards without a door, use identification nameplate to identify load(s) served for each branch device.Identify spares and spaces.
   c. Time Switches:
      1) Identify load(s) served and associated circuits controlled. Include location.
2. Service Equipment:
   a. Use identification nameplate to identify each service disconnecting means.
3. Available Fault Current Documentation: Use identification label to identify the available fault current and date calculations were performed at locations requiring documentation by NFPA 70 including but not limited to the following.

a. Service equipment.
b. Industrial control panels.
c. Motor control centers.
d. Elevator control panels.
e. Industrial machinery.

4. Arc Flash Hazard Warning Labels: Use warning labels to identify arc flash hazards for electrical equipment, such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized.
   a. Minimum Size: 3.5 by 5 inches.
   b. Legend: Include orange header that reads "WARNING", followed by the word message "Arc Flash and Shock Hazard; Appropriate PPE Required; Do not operate controls or open covers without appropriate personal protection equipment; Failure to comply may result in injury or death; Refer to NFPA 70E for minimum PPE requirements" or approved equivalent.

B. Identification for Conductors and Cables:
1. Color Coding for Power Conductors 600 V and Less: Comply with Section 260519.
2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.
3. Use wire and cable markers to identify circuit number or other designation indicated for power, control, and instrumentation conductors and cables at the following locations:
   a. At each source and load connection.
   b. Within boxes when more than one circuit is present.
   c. Within equipment enclosures when conductors and cables enter or leave the enclosure.
4. Use wire and cable markers to identify connected grounding electrode system components for grounding electrode conductors.

C. Identification for Raceways:
1. Use voltage markers to identify highest voltage present for accessible conduits at maximum intervals of 20 feet.
2. Use identification labels, handwritten text using indelible marker, or plastic marker tags to identify circuits enclosed for accessible conduits at wall penetrations, at floor penetrations, at roof penetrations, and at equipment terminations when source is not within sight.
3. Use identification labels, handwritten text using indelible marker, or plastic marker tags to identify spare conduits at each end. Identify purpose and termination location.
4. Use underground warning tape to identify underground raceways.

D. Identification for Boxes:
1. Use voltage markers to identify highest voltage present.
2. Use identification labels or handwritten text using indelible marker to identify circuits enclosed.
   a. For exposed boxes in public areas, use only identification labels.

E. Identification for Devices:
1. Wiring Device and Wallplate Finishes: Comply with Section 262726.
2. Use identification label or engraved wallplate to identify serving branch circuit for all receptacles.
   a. For receptacles in public areas or in areas as directed by Architect, provide identification on inside surface of wallplate.
3. Use identification label or engraved wallplate to identify load controlled for wall-mounted control devices controlling loads that are not visible from the control location and for multiple wall-mounted control devices installed at one location.

F. Identification for Luminaires:
1. Use permanent red dot on luminaire frame to identify luminaires connected to emergency power system.

2.2 IDENTIFICATION NAMEPLATES AND LABELS

A. Identification Nameplates:
1. Materials:
   a. Indoor Clean, Dry Locations: Use plastic nameplates.
   b. Outdoor Locations: Use plastic, stainless steel, or aluminum nameplates suitable for exterior use.
2. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch; engraved text.
   a. Exception: Provide minimum thickness of 1/8 inch when any dimension is greater than 4 inches.
3. Stainless Steel Nameplates: Minimum thickness of 1/32 inch; engraved or laser-etched text.
4. Aluminum Nameplates: Anodized; minimum thickness of 1/32 inch; engraved or laser-etched text.
5. Mounting Holes for Mechanical Fasteners: Two, centered on sides for sizes up to 1 inch high; Four, located at corners for larger sizes.

B. Identification Labels:
1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

C. Format for Equipment Identification:
1. Minimum Size: 1 inch by 2.5 inches.
2. Legend:
   a. Equipment designation or other approved description.
3. Text: All capitalized unless otherwise indicated.
4. Minimum Text Height:
   a. Equipment Designation: 1/2 inch.
   b. Other Information: 1/4 inch.
5. Color:
   a. Normal Power System: White text on black background.

D. Format for Caution and Warning Messages:
   1. Minimum Size: 2 inches by 4 inches.
   2. Legend: Include information or instructions indicated or as required for proper and safe operation and maintenance.
   3. Text: All capitalized unless otherwise indicated.
   4. Minimum Text Height: 1/2 inch.
   5. Color: Black text on yellow background unless otherwise indicated.

E. Format for Receptacle Identification:
   1. Minimum Size: 3/8 inch by 1.5 inches.
   2. Legend: Power source and circuit number or other designation indicated.
   3. Text: All capitalized unless otherwise indicated.
   4. Minimum Text Height: 3/16 inch.
   5. Color: Black text on clear background.

F. Format for Control Device Identification:
   1. Minimum Size: 3/8 inch by 1.5 inches.
   2. Legend: Load controlled or other designation indicated.
   3. Text: All capitalized unless otherwise indicated.
   4. Minimum Text Height: 3/16 inch.
   5. Color: Black text on clear background.

2.3 WIRE AND CABLE MARKERS

A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.

B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.

C. Legend: Power source and circuit number or other designation indicated.

D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.

E. Minimum Text Height: 1/8 inch.

F. Color: Black text on white background unless otherwise indicated.

2.4 VOLTAGE MARKERS

A. Markers for Conduits: Use factory pre-printed self-adhesive vinyl, self-adhesive vinyl cloth, or vinyl snap-around type markers.

B. Markers for Boxes and Equipment Enclosures: Use factory pre-printed self-adhesive vinyl or self-adhesive vinyl cloth type markers.

C. Minimum Size:

1. Markers for Conduits: As recommended by manufacturer for conduit size to be identified.
2. Markers for Pull Boxes: 1 1/8 by 4 1/2 inches.
3. Markers for Junction Boxes: 1/2 by 2 1/4 inches.

D. Legend:
1. Markers for Voltage Identification: Highest voltage present.

E. Color: Black text on orange background unless otherwise indicated.

2.5 UNDERGROUND WARNING TAPE

A. Materials: Use non-detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.

B. Non-detectable Type Tape: 6 inches wide, with minimum thickness of 4 mil.

C. Legend: Type of service, continuously repeated over full length of tape.

D. Color:

2.6 WARNING SIGNS AND LABELS

A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.

B. Warning Signs:
1. Materials:
2. Minimum Size: 7 by 10 inches unless otherwise indicated.

C. Warning Labels:
1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.
2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.
3. Minimum Size: 2 by 4 inches unless otherwise indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
1. Surface-Mounted Equipment: Enclosure front.
2. Flush-Mounted Equipment: Inside of equipment door.

3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
4. Elevated Equipment: Legible from the floor or working platform.
5. Branch Devices: Adjacent to device.
6. Interior Components: Legible from the point of access.
7. Conduits: Legible from the floor.
8. Boxes: Outside face of cover.
9. Conductors and Cables: Legible from the point of access.
10. Devices: Outside face of cover.

C. Install identification products centered, level, and parallel with lines of item being identified.

D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.

E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.

F. Install underground warning tape above buried lines with one tape per trench at 3 inches below finished grade.

G. Mark all handwritten text, where permitted, to be neat and legible.

3.3 FIELD QUALITY CONTROL

A. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

END OF SECTION

SECTION 260583 – WIRING CONNECTIONS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Electrical connections to equipment.

1.2 RELATED REQUIREMENTS

A. Section 260533.13 - Conduit for Electrical Systems.

B. Section 260533.16 - Boxes for Electrical Systems.

1.3 REFERENCE STANDARDS

A. NEMA WD 1 - General Color Requirements for Wiring Devices 1999 (Reaffirmed 2020).

B. NEMA WD 6 - Wiring Devices - Dimensional Specifications 2021.

C. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Obtain and review shop drawings, product data, manufacturer's wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.
   2. Determine connection locations and requirements.

B. Sequencing:
   1. Install rough-in of electrical connections before installation of equipment is required.
   2. Make electrical connections before required start-up of equipment.

1.5 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cords and Caps: NEMA WD 6; match receptacle configuration at outlet provided for equipment.
   1. Colors: Comply with NEMA WD 1.
   2. Cord Construction: NFPA 70, Type SO, multiconductor flexible cord with identified equipment grounding conductor, suitable for use in damp locations.
   3. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.2 ELECTRICAL CONNECTIONS

A. Make electrical connections in accordance with equipment manufacturer's instructions.

B. Make conduit connections to equipment using flexible conduit. Use liquidtight flexible conduit with watertight connectors in damp or wet locations.

C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.

D. Provide receptacle outlet to accommodate connection with attachment plug.

E. Provide cord and cap where field-supplied attachment plug is required.

F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.

G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.

H. Install terminal block jumpers to complete equipment wiring requirements.

I. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

END OF SECTION

SECTION 260802 – INSTALLATION & ACCEPTANCE TESTING OF ELECTRICAL SYSTEMS

INTRODUCTION

1.1TITLE 24 REQUIRES THE COMPLETION OF ALL APPLICABLE CERTIFICATES OF INSTALLATION AND CERTIFICATES OF ACCEPTANCE FOR LIGHTING SYSTEMS. THIS SHALL INCLUDE INDOOR AND OUTDOOR LIGHTING SYSTEMS.

1.2 RELATED DOCUMENTS

A. Contract drawings and specifications, general provisions of the contract, including general and supplementary conditions, electrical provisions and Division-1 Specification sections apply to work of this section.

1.3 DESCRIPTION OF WORK

A. Complete all Title 24 required Certificate(s) of Installation (NRCI) and Certificate(s) of Acceptance (NRCA) to be completed per the contract documents.

1.4 RESPONSIBILITIES OF INSTALLING CONTRACTORS

A. General Contractor (GC)
   1. Ensure that all contractors identified as the contractor responsible for acceptance testing and completion of the Title 24 Certificate(s) of Acceptance are certified by the State of California or its designated body to conduct each respective test.

B. Electrical Contractor (EC)
   1. Verify proper installation and performance of all electrical services provided.
   2. Meet with acceptance tester at beginning of construction to review project requirements.
   3. Complete Title 24 Certificate(s) of Installation and manufacturer's pre-start checklists prior to scheduling startup/programming of lighting control equipment.
      a. Retain Certificate(s) of Installation in a 3-ring binder in an organized fashion. Binder is to remain on the job site
      b. Make Certificate(s) of Installation available for building inspector's review.
      c. Retain calibration records for equipment provided with manufacturer calibrated sensors in the Certificate(s) of Installation binder.
      d. Correct labeling of all circuits with connected equipment.
   4. Complete the Certificate(s) of Acceptance per the contract documents.
      a. The company installing the lighting systems must be an authorized Lighting Controls Acceptance Test Employer certified by a Lighting Controls Acceptance Test Technician Certification Provider or include in their bid the cost of retaining and overseeing a contractor who is an authorized Lighting Controls Acceptance Test Employer to complete the acceptance testing.
      b. All required acceptance testing must be completed by a Lighting Controls Acceptance Test Technician employed by the Lighting Controls Acceptance Test Employer. The acceptance tester shall be present for all commissioning efforts.

c. Retain Certificate(s) of Acceptance in a 3-ring binder in an organized fashion. Binder is to remain on the job site
d. Upload all Certificate(s) of Acceptance to the California Title 24 Certificates of Acceptance database, if, at the time of project completion, the database is available to the public.

5. Successful completion of the required Acceptance Tests is the responsibility of the installing contractor. Any costs associated with modifications necessary to obtain compliance and re-testing of systems shall be included in the base bid of this project.

END OF SECTION

SECTION 262413 - SWITCHBOARDS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Low-voltage (600 V and less) switchboards and associated accessories for service and distribution applications.

B. Overcurrent protective devices for switchboards.

1.2 RELATED REQUIREMENTS

A. Section 260526 - Grounding and Bonding for Electrical Systems.

B. Section 260529 - Hangers and Supports for Electrical Systems.

1.3 REFERENCE STANDARDS

A. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service 2013e (Amended 2017).

B. IEEE C57.13 - IEEE Standard Requirements for Instrument Transformers 2016.

C. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

D. NECA 400 - Standard for Installing and Maintaining Switchboards 2007.

E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.

F. NEMA PB 2 - Deadfront Distribution Switchboards 2011.

G. NEMA PB 2.1 - General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less 2013.

H. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

I. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

J. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures Current Edition, Including All Revisions.

K. UL 869A - Reference Standard for Service Equipment Current Edition, Including All Revisions.

L. UL 891 - Switchboards Current Edition, Including All Revisions.
   a. UL 1053 - Ground-Fault Sensing and Relaying Equipment Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances required by NFPA 70.
   2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
   3. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
   4. Coordinate with manufacturer to provide shipping splits suitable for the dimensional constraints of the installation.
   5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Service Entrance Switchboards:
   1. Coordinate with Utility Company to provide switchboards with suitable provisions for electrical service and utility metering, where applicable.
   2. Coordinate with Owner to arrange for Utility Company required access to equipment for installation and maintenance.
   3. Obtain Utility Company approval of switchboard prior to fabrication.
   4. Arrange for inspections necessary to obtain Utility Company approval of installation.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for switchboards, enclosures, overcurrent protective devices, and other installed components and accessories.

B. Shop Drawings: Indicate dimensions, voltage, bus ampacities, overcurrent protective device arrangement and sizes, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.
   1. Include dimensioned plan and elevation views of switchboards and adjacent equipment with all required clearances indicated.
   2. Identify mounting conditions required for equipment seismic qualification.

C. Manufacturer's equipment seismic qualification certification.

D. Service Entrance Switchboards: Include documentation of Utility Company approval of switchboard.

E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

F. Project Record Documents: Record actual installed locations of switchboards and final equipment settings.

G. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Enclosure Keys: Two of each different key.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store switchboards in accordance with manufacturer's instructions, NECA 400, and NEMA PB 2.1.

B. Store in a clean, dry space having a uniform temperature to prevent condensation (including outdoor switchboards, which are not weatherproof until completely and properly installed). Where necessary, provide temporary enclosure space heaters or temporary power for permanent factory-installed space heaters.

C. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

D. Handle carefully to avoid damage to switchboard internal components, enclosure, and finish.

1.8 FIELD CONDITIONS

A. Maintain field conditions within required service conditions during and after installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Switchboards - Basis of Design: Eaton.

B. Switchboards- Other Acceptable Manufacturers:
   1. Eaton Corporation: www.eaton.com/#sle.
   2. Schneider Electric; Square D Products: www.schneider-electric.us/#sle.
   3. Siemens Industry, Inc: www.usa.siemens.com/#sle.

C. Products other than basis of design are subject to compliance with specified requirements and prior approval of Engineer. By using products other than basis of design, Contractor accepts responsibility for costs associated with any necessary modifications to related work, including any design fees.

D. Source Limitations: Furnish switchboards and associated components produced by the same manufacturer as the other electrical distribution equipment used for this project and obtained from a single supplier.

2.2 SWITCHBOARDS

A. Provide switchboards consisting of all required components, control power transformers, instrumentation and control wiring, accessories, etc. as necessary for a complete operating system.

B. Provide products listed, classified, and labeled as suitable for the purpose intended.

C. Description: Dead-front switchboard assemblies complying with NEMA PB 2, and listed and labeled as complying with UL 891; ratings, configurations and features as indicated on the drawings.

D. Service Entrance Switchboards:
1. Listed and labeled as suitable for use as service equipment according to UL 869A.
2. For solidly-grounded wye systems, provide factory-installed main bonding jumper between neutral and ground busses, and removable neutral disconnecting link for testing purposes.
3. Comply with Utility Company requirements for electrical service.
4. Utility Metering Provisions: Provide separate barriered compartment complying with Utility Company requirements where indicated or where required by Utility Company. Include hinged sealable door and provisions for Utility Company current transformers (CTs), potential transformers (PTs), or potential taps as required.

E. Service Conditions:
1. Provide switchboards and associated components suitable for operation at indicated ratings under the service conditions at the installed location.

F. Short Circuit Current Rating:
1. Provide switchboards with listed short circuit current rating not less than the available fault current at the installed location as indicated on the drawings.
2. Listed series ratings are not acceptable.

G. Main Devices: Configure for top or bottom incoming feed as indicated or as required for the installation. Provide separate pull section and/or top-mounted pullbox as indicated or as required to facilitate installation of incoming feed.

H. Bussing: Sized in accordance with UL 891 temperature rise requirements.
1. Through bus (horizontal cross bus) to be fully rated through full length of switchboard (non-tapered). Tapered bus is not permitted.
2. Provide solidly bonded equipment ground bus through full length of switchboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.
3. Phase and Neutral Bus Material: Copper.
4. Ground Bus Material: Copper.

I. Conductor Terminations: Suitable for use with the conductors to be installed.
   1. Line Conductor Terminations:
      a. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
      b. Main and Neutral Lug Type: Mechanical.
   2. Load Conductor Terminations:
      a. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
      b. Lug Type:
         1) Provide mechanical lugs.

J. Enclosures:
   1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
      a. Indoor Clean, Dry Locations: Type 1 or Type 2 (drip-proof).
      b. Outdoor Locations: Type 3R.
   2. Finish: Manufacturer's standard unless otherwise indicated.
   3. Outdoor Enclosures:
      a. Enclosure Type: Non-walk-in type unless otherwise indicated.
      b. Color: Manufacturer's standard.
      c. Access Doors: Lockable, with all locks keyed alike.

K. Future Provisions:
   1. Prepare designated spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.
   2. Equip distribution sections with full height vertical bussing to accommodate maximum utilization of space for devices.
   3. Where designated spaces for future device provisions are not indicated, include provisions for minimum of 6 device(s) rated at 25 percent of rating of switchboard main or incoming feed.
   4. Arrange and equip through bus and ground bus to accommodate future installation of additional switchboard sectionswhere indicated.

L. Ground Fault Protection: Where ground-fault protection is indicated, provide system listed and labeled as complying with UL 1053.
   1. Where overcurrent protective devices equipped with integral ground fault protection are used, provide separate neutral current sensor where applicable.
   2. Where accessory ground fault sensing and relaying equipment is used, equip companion overcurrent protective devices with ground-fault shunt trips.
      a. Use zero sequence or residual ground fault detection method unless otherwise indicated.
      b. Provide test panel and field-adjustable ground fault pick-up and delay settings.

M. Arc Flash Energy-Reducing Maintenance Switching: For circuit breakers rated 1200 A or higher, provide a local accessory switch with status indicator light that permits selection of a maintenance mode with alternate electronic trip unit settings for reduced fault clearing time.

N. Instrument Transformers:
   1. Comply with IEEE C57.13.

2. Select suitable ratio, burden, and accuracy as required for connected devices.
3. Current Transformers: Connect secondaries to shorting terminal blocks.
4. Potential Transformers: Include primary and secondary fuses with disconnecting means.

2.3 OVERCURRENT PROTECTIVE DEVICES

A. Circuit Breakers:
1. Interrupting Capacity:
a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated, but not less than specified minimum requirements.
b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
2. Molded Case Circuit Breakers:
a. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers; listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.
1) Provide thermal magnetic circuit breakers unless otherwise indicated.
2) Provide electronic trip circuit breakers where indicated.
b. Minimum Interrupting Capacity:
1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
c. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
d. Electronic Trip Circuit Breakers: Furnish solid state, microprocessor-based, true rms sensing trip units.
e. Provide the following features and accessories where indicated or where required to complete installation:
1) Shunt Trip: Provide coil voltage as required for connection to indicated trip actuator.

2.4 SOURCE QUALITY CONTROL

A. Factory test switchboards according to NEMA PB 2, including the following production (routine) tests on each switchboard assembly or component:
1. Dielectric tests.
2. Mechanical operation tests.
3. Grounding of instrument transformer cases test.
4. Electrical operation and control wiring tests, including polarity and sequence tests.
5. Ground-fault sensing equipment test.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that the ratings and configurations of the switchboards and associated components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive switchboards.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install switchboards in accordance with NECA 1 (general workmanship), NECA 400, and NEMA PB 2.1.

C. Arrange equipment to provide required clearances and maintenance access, including accommodations for any drawout devices.

D. Where switchboard is indicated to be mounted with inaccessible side against wall, provide minimum clearance of 1/2 inch between switchboard and wall.

E. Provide required support and attachment in accordance with Section 260529.

F. Install switchboards plumb and level.

G. Provide grounding and bonding in accordance with Section 260526.

H. Install all field-installed devices, components, and accessories.

I. Where accessories are not self-powered, provide control power source as indicated or as required to complete installation.

J. Set field-adjustable circuit breaker tripping function settingsas directed.

K. Set field-adjustable ground fault protection pickup and time delay settingsas directed.

L. Provide filler plates to cover unused spaces in switchboards.

3.3 FIELD QUALITY CONTROL

A. Before energizing switchboard, perform insulation resistance testing in accordance with NECA 400 and NEMA PB 2.1.

B. Inspect and test in accordance with NETA ATS, except Section 4.

C. Perform inspections and tests listed in NETA ATS, Section 7.1.

D. Molded Case and Insulated Case Circuit Breakers: Perform inspections and tests listed in NETA ATS, Section 7.6.1.1 for all main circuit breakers. Tests listed as optional are not required.

E. Ground Fault Protection Systems: Test in accordance with manufacturer's instructions as required by NFPA 70.

1. Perform inspections and tests listed in NETA ATS, Section 7.14. The insulation-resistance test on control wiring listed as optional is not required.

F. Instrument Transformers: Perform inspections and tests listed in NETA ATS, Section 7.10. The dielectric withstand tests on primary windings with secondary windings connected to ground listed as optional are not required.

G. Test shunt trips to verify proper operation.

H. Correct deficiencies and replace damaged or defective switchboards or associated components.

3.4 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

B. Adjust alignment of switchboard covers and doors.

3.5 CLEANING

A. Clean dirt and debris from switchboard enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred surfaces to match original factory finish.

3.6 PROTECTION

A. Protect installed switchboards from subsequent construction operations.

END OF SECTION

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1SECTION INCLUDES

A. Power distribution panelboards.

B. Lighting and appliance panelboards.

C. Overcurrent protective devices for panelboards.

1.2 RELATED REQUIREMENTS

A. Section 260526 - Grounding and Bonding for Electrical Systems.

B. Section 260529 - Hangers and Supports for Electrical Systems.

C. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service 2013e (Amended 2017).

B. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

C. NECA 407 - Standard for Installing and Maintaining Panelboards 2015.

D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.

E. NEMA PB 1 - Panelboards 2011.

F. NEMA PB 1.1 - General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less 2013.

G. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

H. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations Current Edition, Including All Revisions.

J. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations Current Edition, Including All Revisions.

K. UL 67 - Panelboards Current Edition, Including All Revisions.

L. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures Current Edition, Including All Revisions.

M. UL 943 - Ground-Fault Circuit-Interrupters Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
   2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
   3. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted panelboards where indicated.
   4. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
   5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for panelboards, enclosures, overcurrent protective devices, and other installed components and accessories.

B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, overcurrent protective device arrangement and sizes, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.

C. Project Record Documents: Record actual installed locations of panelboards and actual installed circuiting arrangements.

D. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Panelboard Keys: Two of each different key.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

D. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store panelboards in accordance with manufacturer's instructions and NECA 407.

B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

C. Handle carefully in accordance with manufacturer's written instructions to avoid damage to panelboard internal components, enclosure, and finish.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Eaton Corporation: www.eaton.com.

B. Schneider Electric; Square D Products: www.schneider-electric.us.

C. Siemens Industry, Inc: www.usa.siemens.com.

D. Source Limitations: Furnish panelboards and associated components produced by the same manufacturer as the other electrical distribution equipment used for this project and obtained from a single supplier.

2.2 PANELBOARDS - GENERAL REQUIREMENTS

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
   1. Altitude: Less than 6,600 feet.
   2. Ambient Temperature:
      a. Panelboards Containing Circuit Breakers: Between 23 degrees F and 104 degrees F.

C. Short Circuit Current Rating:
   1. Provide panelboards with listed short circuit current rating not less than the available fault current at the installed location as indicated on the drawings.

D. Mains: Configure for top or bottom incoming feed as indicated or as required for the installation.

E. Branch Overcurrent Protective Devices: Replaceable without disturbing adjacent devices.

F. Bussing: Sized in accordance with UL 67 temperature rise requirements.
   1. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.
   2. Provide solidly bonded equipment ground bus in each panelboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.

G. Conductor Terminations: Suitable for use with the conductors to be installed.

H. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
   1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
      a. Indoor Clean, Dry Locations: Type 1.
      b. Outdoor Locations: Type 3R.
   2. Boxes: Galvanized steel unless otherwise indicated.
      a. Provide wiring gutters sized to accommodate the conductors to be installed.
   3. Fronts:
      a. Fronts for Surface-Mounted Enclosures: Same dimensions as boxes.
      b. Fronts for Flush-Mounted Enclosures: Overlap boxes on all sides to conceal rough opening.
   4. Lockable Doors: All locks keyed alike unless otherwise indicated.

I. Future Provisions: Prepare all unused spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.

J. Load centers are not acceptable.

2.3 POWER DISTRIBUTION PANELBOARDS

A. Description: Panelboards complying with NEMA PB 1, power and feeder distribution type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.

B. Conductor Terminations:
   1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
   2. Main and Neutral Lug Type: Mechanical.

C. Bussing:
   1. Phase and Neutral Bus Material: Copper.
   2. Ground Bus Material: Copper.

D. Circuit Breakers:
   1. Provide bolt-on type.
   2. Provide thermal magnetic circuit breakersfor circuit breaker frame sizes less than 225 amperes.
   3. Provide electronic trip circuit breakersfor circuit breaker frame sizes 225 amperes and above.

E. Enclosures:

1. Provide surface-mounted or flush-mounted enclosuresas indicated.
2. Fronts: Provide door-in-door trim with hinged cover for access to load terminals and wiring gutters, and separate lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
3. Provide clear plastic circuit directory holder mounted on inside of door.

2.4 LIGHTING AND APPLIANCE PANELBOARDS

A. Description: Panelboards complying with NEMA PB 1, lighting and appliance branch circuit type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.

B. Conductor Terminations:
1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
2. Main and Neutral Lug Type: Mechanical.

C. Bussing:
1. Phase Bus Connections: Arranged for sequential phasing of overcurrent protective devices.
2. Phase and Neutral Bus Material: Copper.
3. Ground Bus Material: Copper.

D. Circuit Breakers: Thermal magnetic bolt-on type unless otherwise indicated.

E. Enclosures:
1. Provide surface-mounted or flush-mounted enclosures as indicated.
2. Fronts: Provide door-in-door trim with hinged cover for access to load terminals and wiring gutters, and separate lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
3. Provide clear plastic circuit directory holder mounted on inside of door.

2.5 OVERCURRENT PROTECTIVE DEVICES

A. Molded Case Circuit Breakers:
1. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.
2. Interrupting Capacity:
   a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated, but not less than:
      1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
      2) 14,000 rms symmetrical amperes at 480 VAC.
   b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
3. Conductor Terminations:
   a. Provide mechanical lugs unless otherwise indicated.
   b. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.

4. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
5. Electronic Trip Circuit Breakers: Furnish solid state, microprocessor-based, true rms sensing trip units.
6. Multi-Pole Circuit Breakers: Furnish with common trip for all poles.
7. Provide the following circuit breaker types where indicated:
   a. Ground Fault Circuit Interrupter (GFCI) Circuit Breakers: Listed as complying with UL 943, class A for protection of personnel.
8. Do not use tandem circuit breakers.
9. Provide multi-pole circuit breakers for multi-wire branch circuits as required by NFPA 70.
10. Provide the following features and accessories where indicated or where required to complete installation:
    a. Shunt Trip: Provide coil voltage as required for connection to indicated trip actuator.
    b. Handle Pad-Lock Provision: For locking circuit breaker handle in OFF position.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that the ratings and configurations of the panelboards and associated components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive panelboards.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship).

B. Install products in accordance with manufacturer's instructions.

C. Install panelboards in accordance with NECA 407 and NEMA PB 1.1.

D. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

E. Provide required support and attachment in accordance with Section 260529.

F. Install panelboards plumb.

G. Install flush-mounted panelboards so that trims fit completely flush to wall with no gaps and rough opening completely covered.

H. Mount panelboards such that the highest position of any operating handle for circuit breakers or switches does not exceed 79 inches above the floor or working platform.

I. Provide minimum of six spare 1 inch trade size conduits out of each flush-mounted panelboard stubbed into accessible space above ceiling and below floor.

J. Provide grounding and bonding in accordance with Section 260526.

K. Install all field-installed branch devices, components, and accessories.

L. Multi-Wire Branch Circuits: Group grounded and ungrounded conductors together in the panelboard as required by NFPA 70.

M. Provide filler plates to cover unused spaces in panelboards.

3.3 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS, except Section 4.

B. Molded Case Circuit Breakers: Perform inspections and tests listed in NETA ATS, Section 7.6.1.1 for all main circuit breakers and circuit breakers larger than [_____] amperes. Tests listed as optional are not required.

C. Test GFCI circuit breakers to verify proper operation.

D. Test shunt trips to verify proper operation.

E. Correct deficiencies and replace damaged or defective panelboards or associated components.

3.4 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

B. Adjust alignment of panelboard fronts.

3.5 CLEANING

A. Clean dirt and debris from panelboard enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION

SECTION 262726 – WIRING DEVICES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Wall switches.

B. Receptacles.

C. Wall plates.

1.2 RELATED REQUIREMENTS

A. Section 260533.16 - Boxes for Electrical Systems.

B. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. FS W-C-596 - Connector, Electrical, Power, General Specification for 2014h, with Amendments (2017).

B. FS W-S-896 - Switches, Toggle (Toggle and Lock), Flush-mounted (General Specification) 2014g, with Amendment (2017).

C. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

D. NECA 130 - Standard for Installing and Maintaining Wiring Devices 2016.

E. NEMA WD 1 - General Color Requirements for Wiring Devices 1999 (Reaffirmed 2020).

F. NEMA WD 6 - Wiring Devices - Dimensional Specifications 2021.

G. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

H. UL 20 - General-Use Snap Switches Current Edition, Including All Revisions.

I. UL 498 - Attachment Plugs and Receptacles Current Edition, Including All Revisions.

J. UL 514D - Cover Plates for Flush-Mounted Wiring Devices Current Edition, Including All Revisions.

K. UL 943 - Ground-Fault Circuit-Interrupters Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate the placement of outlet boxes with millwork, furniture, equipment, etc. installed under other sections or by others.
2. Coordinate wiring device ratings and configurations with the electrical requirements of actual equipment to be installed.
3. Coordinate the placement of outlet boxes for wall switches with actual installed door swings.
4. Coordinate the installation and preparation of uneven surfaces, such as split face block, to provide suitable surface for installation of wiring devices.
5. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

B. Sequencing:
1. Do not install wiring devices until final surface finishes and painting are complete.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.
1. Wall Dimmers: Include derating information for ganged multiple devices.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Hubbell Incorporated: www.hubbell-wiring.com.

B. Leviton Manufacturing Company, Inc: www.leviton.com.

C. Lutron Electronics Company, Inc: www.lutron.com.

D. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us

2.2 WIRING DEVICE APPLICATIONS

A. Provide wiring devices suitable for intended use and with ratings adequate for load served.

B. For single receptacles installed on an individual branch circuit, provide receptacle with ampere rating not less than that of the branch circuit.

C. Provide weather resistant GFCI receptacles with specified weatherproof covers for receptacles installed outdoors or in damp or wet locations.

D. Provide GFCI protection for receptacles installed within 6 feet of sinks.

E. Provide GFCI protection for receptacles installed in kitchens.

F. Provide GFCI protection for receptacles serving electric drinking fountains.

G. Unless noted otherwise, do not use combination switch/receptacle devices.

2.3 WIRING DEVICE FINISHES

A. Provide wiring device finishes as described below unless otherwise indicated.

B. Wiring Devices, Unless Otherwise Indicated: White with white nylon wall plate.

C. Wiring Devices Installed in Finished Spaces: White with white nylon wall plate.

D. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.

E. Wiring Devices Installed in Wet or Damp Locations: White with specified weatherproof cover.

2.4 WALL SWITCHES

A. Manufacturers:
1. Hubbell Incorporated: www.hubbell.com/#sle.
2. Leviton Manufacturing Company, Inc: www.leviton.com/#sle.
3. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us/#sle.

B. Wall Switches - General Requirements: AC only, quiet operating, general-use snap switches with silver alloy contacts, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 20 and where applicable, FS W-S-896; types as indicated on the drawings.
1. Wiring Provisions: Terminal screws for side wiring and screw actuated binding clamp for back wiring with separate ground terminal screw.

C. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.

2.5 RECEPTACLES

A. Manufacturers:
1. Hubbell Incorporated: www.hubbell-wiring.com.
2. Leviton Manufacturing Company, Inc: www.leviton.com.
3. Lutron Electronics Company, Inc; Designer Style: www.lutron.com/#sle.
4. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us

B. Receptacles - General Requirements: Self-grounding, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 498, and where applicable, FS W-C-596; types as indicated on the drawings.
1. Wiring Provisions: Terminal screws for side wiring or screw actuated binding clamp for back wiring with separate ground terminal screw.
2. NEMA configurations specified are according to NEMA WD 6.

C. Convenience Receptacles:

1. Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; single or duplex as indicated on the drawings.
2. Automatically Controlled Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; controlled receptacle marking on device face per NFPA 70; single or duplex as indicated on the drawings.

D. GFCI Receptacles:
1. GFCI Receptacles - General Requirements: Self-testing, with feed-through protection and light to indicate ground fault tripped condition and loss of protection; listed as complying with UL 943, class A.
2. Standard GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style.
3. Weather Resistant GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as weather resistant type complying with UL 498 Supplement SD suitable for installation in damp or wet locations.

2.6 WALL PLATES

A. Manufacturers:
1. Hubbell Incorporated: www.hubbell-wiring.com.
2. Leviton Manufacturing Company, Inc: www.leviton.com.
3. Lutron Electronics Company, Inc: www.lutron.com.
4. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us

B. Wall Plates: Comply with UL 514D.
1. Configuration: One piece cover as required for quantity and types of corresponding wiring devices.
2. Size: Standard.
3. Screws: Metal with slotted heads finished to match wall plate finish.

C. Nylon Wall Plates: Smooth finish, high-impact thermoplastic.

D. Stainless Steel Wall Plates: Brushed satin finish, Type 302 stainless steel.

E. Weatherproof Covers for Wet Locations: Gasketed, cast aluminum, with hinged lockable cover and corrosion-resistant screws; listed as suitable for use in wet locations while in use with attachment plugs connected and identified as extra-duty type.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate devices and conductors in accordance with NFPA 70.

C. Verify that wall openings are neatly cut and will be completely covered by wall plates.

D. Verify that final surface finishes are complete, including painting.

E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

F. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.3 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards unless otherwise indicated.

B. Coordinate locations of outlet boxes provided under Section 260533.16 as required for installation of wiring devices provided under this section.
   1. Mounting Heights: Unless otherwise indicated, as follows:
      a. Wall Switches: 48 inches above finished floor.
   2. Orient outlet boxes for vertical installation of wiring devices unless otherwise indicated.

C. Install wiring devices in accordance with manufacturer's instructions.

D. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

E. Where required, connect wiring devices using pigtails not less than 6 inches long. Do not connect more than one conductor to wiring device terminals.

F. Connect wiring devices by wrapping conductor clockwise 3/4 turn around screw terminal and tightening to proper torque specified by the manufacturer. Where present, do not use push-in pressure terminals that do not rely on screw-actuated binding.

G. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.

H. Provide GFCI receptacles with integral GFCI protection at each location indicated. Do not use feed-through wiring to protect downstream devices.

I. Where split-wired duplex receptacles are indicated, remove tabs connecting top and bottom receptacles.

J. Install wiring devices plumb and level with mounting yoke held rigidly in place.

K. Install wall switches with OFF position down.

L. Install vertically mounted receptacles with grounding pole on top and horizontally mounted receptacles with grounding pole on left.

M. Install wall plates to fit completely flush to wall with no gaps and rough opening completely covered without strain on wall plate. Repair or reinstall improperly installed outlet boxes or improperly sized rough openings. Do not use oversized wall plates in lieu of meeting this requirement.

N. Install blank wall plates on junction boxes and on outlet boxes with no wiring devices installed or designated for future use.

O. Identify wiring devices in accordance with Section 260553.

3.4 FIELD QUALITY CONTROL

A. Inspect each wiring device for damage and defects.

B. Operate each wall switch with circuit energized to verify proper operation.

C. Test each receptacle to verify operation and proper polarity.

D. Test each GFCI receptacle for proper tripping operation according to manufacturer's instructions.

E. Correct wiring deficiencies and replace damaged or defective wiring devices.

3.5 ADJUSTING

A. Adjust devices and wall plates to be flush and level.

3.6 CLEANING

A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

END OF SECTION

SECTION 262813 - FUSES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Fuses.

1.2 REFERENCE STANDARDS

A. NEMA FU 1 - Low Voltage Cartridge Fuses 2012.

B. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

C. UL 248-1 - Low-Voltage Fuses - Part 1: General Requirements Current Edition, Including All Revisions.

D. UL 248-12 - Low-Voltage Fuses - Part 12: Class R Fuses Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate fuse clips furnished in equipment provided under other sections for compatibility with indicated fuses.
   2. Coordinate fuse requirements according to manufacturer's recommendations and nameplate data for actual equipment to be installed.
   3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard data sheets including voltage and current ratings, interrupting ratings, time-current curves, and current limitation curves.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Bussmann, a division of Eaton Corporation: www.cooperindustries.com.

B. Littelfuse, Inc: www.littelfuse.com.

C. Mersen: ep-us.mersen.com.

2.2 APPLICATIONS

A. Individual Motor Branch Circuits: Class RK1, time-delay.

2.3 FUSES

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Unless specifically indicated to be excluded, provide fuses for all fusible equipment as required for a complete operating system.

C. Provide fuses of the same type, rating, and manufacturer within the same switch.

D. Comply with UL 248-1.

E. Unless otherwise indicated, provide cartridge type fuses complying with NEMA FU 1, Class and ratings as indicated.

F. Voltage Rating: Suitable for circuit voltage.

G. Class R Fuses: Comply with UL 248-12.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that fuse ratings are consistent with circuit voltage and manufacturer's recommendations and nameplate data for equipment.

B. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Do not install fuses until circuits are ready to be energized.

B. Install fuses with label oriented such that manufacturer, type, and size are easily read.

END OF SECTION

SECTION 265120 – AUTOMATIC LIGHTING CONTROL SYSTEM

PART 1 - GENERAL

1.1DESCRIPTION OF WORK

A. Provide and design an automatic lighting control system as described in this specification and as called for on the drawings.

1.2 QUALITY ASSURANCE

A. Manufacturer shall have a minimum of 10 years experience in manufacturing and installing this type of system.

B. The Contractor shall provide a list of recent jobs completed during the last 5 years with the name and phone number of a contact person.

C. All components and assemblies are to be pre-tested and assembled at the factory prior to installation.

D. Provide a factory-trained technician on site. The technician shall functionally test each component in the system after installation to verify proper operation and confirm that the panel wiring and addressing conform to the wiring documentation.

1.3 SUBMITTALS

A. The following list includes the required shop drawings and product data information that shall be submitted.
   1. Underwriters Laboratories, Inc. (UL) listing and factory test reports.
   2. Internal and system wiring diagrams.
   3. Single line diagram of the system configuration. Typical riser diagrams are not acceptable.
   4. Dimensions of the equipment layout.
   5. Control wiring and conduits layout and connections.
   6. Floor plans to scale showing the location of each device and equipment.
   7. Product data of all the components including but not limited to programmable central controllers, transceivers panels, input relays, switches and other ancillary equipment.

1.4 REFERENCES

A. UL 916 Energy Management Equipment.

B. FCC Emissions Standards specified in Part 15, subpart J for Class A, Applications.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide and microprocessor controlled relay panels for the Lighting Control System. The system shall include programmable standalone master panel, switch inputs, wiring, power supplies, relays and ancillary relays.

B. Panels shall be capable of standing alone or operating as part of a network.
   1. The system shall provide intelligence to operate as follows:
      a. Store all user operating data.
      b. Initiate all relay output commands based on:
         1) Operator inputs
         2) Automatic operating schedule
         3) Binary type field sensors
         4) Universal override switch inputs
      c. Provide automatic system diagnostics and alarming based on detected faults in the controller, transceiver panels, relays, and data line.
   2. System shall include a memory back up to be able to survive an indefinite length of power failure.

C. Lighting Control Panel (LCP): Microprocessor based, complete prewired assemblies consisting of the following:
   1. Stand alone panel controller capable of receiving and acting upon programs downloaded from the central computer. Programs downloaded from the network shall be capable of continuing to operate even if the network should fail. Battery Back up provides 8 days of memory retention. Panel shall be part of a system that can control up to 750 relays and receive up to 500 switch inputs. Panel shall have an USB input for local programming and trouble shooting from a laptop computer.
   2. Internal digital clock with self control power.
   3. Output modules: Plug in type to receive coded digital commands from the panel controller and pulse output relays to the appropriate state. Actual status feedback of the relays are to be fed back to the panel controller and from there to the central computer. Actual status of each relay is to be indicated by a pilot LED on the control board. Each Module controls 8 or 16 relays.
   4. Switch input modules: Plug-in type, actuated by remote external contact closures. These contact closures may be either momentary or maintained. The action of the contact is noted by the panel controller and acted upon as programmed by software. The action of the contact can command any group of output relays to the desired state. Either 8 or 24-input channels as shown on the plans.
   5. Output Relays
      a. Type: Momentary pulsed, mechanically latched with pilot light contact.
      b. Rating: 20 Ampere, 277VAC
      c. Number per panel: 16,32 or 48 as required to satisfy this project scope.
   6. The low voltage and high voltage sections of the lighting control cabinet shall be separated by a 14 gage steel barrier in which the relays are mounted. In areas where both 120 volt and 277 volt loads are present the high voltage compartment shall have a 14 gage steel barrier between the relays that carry 120 VAC and the relays that carry 277VAC. Each section shall be clearly labeled as to the voltage in that compartment.

7. Panel power supply shall be dual primary 115/277 volts AC, 60 Hz. ± 10%. Low voltage side shall be protected from power line surges and spikes on the input power. The low voltage section shall be protected against short circuit faults and relay failures.
8. Panels shall be UL approved and shall have a short circuit withstand current rating at 14,000 AIC.
9. Manufacturer: Lighting Control and Design, or G.E. or equal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. The Lighting Control System shall be installed and wired completely as required by the equipment manufacturer by the contractor, who shall make all necessary wiring connections to the lighting fixtures, override switches, photo cells and equipment.

B. The Contractor shall provide on-site programming time with factory-trained personnel for the system set-up. The Contractor shall set up the software program and program the entire system in accordance with the Owner's instructions.

C. Documentation
1. Accurate "as-built" drawings shall be provided by the Contractor. These shall indicate the load controlled by each relay and the identification number for that switch connected to an input and the identification number of that input. Three sets of space plans or reflected ceiling plans shall be provided by the contractor indicating which fixtures are controlled by each relay.
2. A separate data grade private line with RJ45 jack shall be furnished for each modem.

3.2 SERVICE AND SUPPORT

A. Startup: After the system has been installed, the Contractor shall provide the services of a factory trained representative of the manufacturer to verify correct operation of all system components. The contractor shall guarantee all material and workmanship involving the system for three years after startup.

B. Training: After system startup and after all the programming is completed, the Contractor shall arrange for a factory trained representative to train the Owner's personnel. The trainer shall instruct the Owner's personnel in how to program the system and demonstrate a typical operating program for an area. The Contractor shall allow for 24 hours' instruction time for the Owner's training.

C. Factory Support: Factory support shall be available free of charge during the three-year warranty period to answer programming and application questions. The manufacturer, or his representative, shall have a remote terminal capable of programming the system to support the Owner's personnel during this period. The Contractor shall include a modem, necessary cabling and telephone extension to support this telecommunications operation. The Contractor shall provide a three-year maintenance service contract as part of the cost.

D. The Contractor shall also provide a software site licensing so that the Owner will be able to transfer the software program from the main computer to the other computers. This transfer shall not be an extra cost to the Owner.

END OF SECTION

SECTION 265600 – EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Exterior luminaires.

B. Ballasts.

C. Poles and accessories.

1.2 RELATED REQUIREMENTS

A. Section 260529 - Hangers and Supports for Electrical Systems.

B. Section 260533.16 - Boxes for Electrical Systems.

1.3 REFERENCE STANDARDS

A. AASHTO LTS - Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals 2013 (Revised 2019).

B. IEEE C2 - National Electrical Safety Code(R) (NESC(R)) 2023.

C. IES LM-79 - Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products 2019.

D. IES LM-80 - Approved Method: Measuring Maintenance of Light Output Characteristics of Solid-State Light Sources 2021.

E. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

F. NECA/IESNA 501 - Standard for Installing Exterior Lighting Systems 2000 (Reaffirmed 2006).

G. NEMA 410 - Performance Testing for Lighting Controls and Switching Devices with Electronic Drivers and Disharge Ballasts 2020.

H. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 1598 - Luminaires Current Edition, Including All Revisions.

J. UL 8750 - Light Emitting Diode (LED) Equipment for Use in Lighting Products Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate placement of poles and associated foundations with utilities, curbs, sidewalks, trees, walls, fences, striping, etc. installed under other sections or by others. Coordinate elevation to obtain specified foundation height.
2. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

1.5 SUBMITTALS

A. Shop Drawings:
1. Indicate dimensions and components for each luminaire that is not a standard product of the manufacturer.
2. Provide photometric calculations where luminaires are proposed for substitution upon request.

B. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, weight, effective projected area (EPA), and installed accessories; include model number nomenclature clearly marked with all proposed features.
1. LED Luminaires:
a. Include estimated useful life, calculated based on IES LM-80 test data.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, handle, and store products according to NECA/IESNA 501 and manufacturer's written instructions.

B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

1.8 WARRANTY

A. Provide five year manufacturer warranty for all LED luminaires, including drivers.

PART 2 - PRODUCTS

2.1 LUMINAIRE TYPES

A. Furnish products as indicated in luminaire schedule included on the drawings.

2.2 LUMINAIRES

A. Provide products that comply with requirements of NFPA 70.

B. Provide products that are listed and labeled as complying with UL 1598, where applicable.

C. Provide products listed, classified, and labeled as suitable for the purpose intended.

D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.

E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, poles, foundations, supports, trims, accessories, etc. as necessary for a complete operating system.

F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.

G. LED Luminaires:
   1. Components: UL 8750 recognized or listed as applicable.
   2. Tested in accordance with IES LM-79 and IES LM-80.
   3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

2.3 BALLASTS AND DRIVERS

A. Manufacturers:
   1. California Accent Lighting, Inc; [_____]; www.calilighting.com/#sle.
   2. General Electric Company/GE Lighting; [_____]: www.gelighting.com/#sle.
   3. OSRAM Sylvania, Inc; [_____]: www.osram.us/ds/#sle.
   4. Manufacturer Limitations: Where possible, for each type of luminaire provide ballasts produced by a single manufacturer.

B. Ballasts/Drivers - General Requirements:
   1. Provide ballasts containing no polychlorinated biphenyls (PCBs).
   2. Minimum Efficiency/Efficacy: Provide ballasts complying with all current applicable federal and state ballast efficiency/efficacy standards.
   3. Electronic Ballasts/Drivers: Inrush currents not exceeding peak currents specified in NEMA 410.

C. Dimmable LED Drivers:
   1. Dimming Range: Continuous dimming from 100 percent to five percent relative light output unless dimming capability to lower level is indicated, without flicker.
   2. Control Compatibility: Fully compatible with the dimming controls to be installed.

2.4 POLES

A. All Poles:
   1. Provide poles and associated support components suitable for the luminaire(s) and associated supports and accessories to be installed.
   2. Structural Design Criteria:

a. Comply with AASHTO LTS.
3. Material: Steel, unless otherwise indicated.
4. Shape: Square straight, unless otherwise indicated.
5. Finish: Match luminaire finish, unless otherwise indicated.
6. Mounting: Install on concrete foundation, height as indicated on the drawings, unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate conductors in accordance with NFPA 70.

C. Verify that suitable support frames are installed where required.

D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to luminaires.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.3 INSTALLATION

A. Coordinate locations of outlet boxes provided under Section 260533.16 as required for installation of luminaires provided under this section.

B. Install products in accordance with manufacturer's instructions.

C. Install luminaires in accordance with NECA/IESNA 501.

D. Provide required support and attachment in accordance with Section 260529.

E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.

F. Pole-Mounted Luminaires:
1. Maintain the following minimum clearances:
a. Comply with IEEE C2.
b. Comply with utility company requirements.
2. Grounding:
a. Bond luminaires, metal accessories, metal poles, and foundation reinforcement to branch circuit equipment grounding conductor.

3. Install separate service conductors, 12 AWG copper, from each luminaire down to handhole for connection to branch circuit conductors.

G. Install accessories furnished with each luminaire.

H. Bond products and metal accessories to branch circuit equipment grounding conductor.

I. Install lamps in each luminaire.

3.4 FIELD QUALITY CONTROL

A. Inspect each product for damage and defects.

B. Operate each luminaire after installation and connection to verify proper operation.

C. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Architect.

3.5 ADJUSTING

A. Aim and position adjustable luminaires to achieve desired illumination as indicated or as directed by Architect. Secure locking fittings in place.

3.6 CLEANING

A. Clean surfaces according to NECA/IESNA 501 and manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

3.7 CLOSEOUT ACTIVITIES

A. Demonstration: Demonstrate proper operation of luminaires to Architect, and correct deficiencies or make adjustments as directed.

B. Just prior to Substantial Completion, replace all lamps that have failed.

3.8 PROTECTION

A. Protect installed luminaires from subsequent construction operations.

END OF SECTION

APPENDIX II

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Technical Provisions for Berkshire Avenue Pocket Park

The following Technical Provisions describe materials, methods of construction, and measurement and payment for items of work that are unique to the project. These provisions supplement, amend, or replaced the requirements of the Standard Specifications for Public Works Construction ("SSPWC" or "Greenbook"). To the extent that anything in these Special Provisions conflicts with the terms or requirements of the SSPWC, these Special Provisions shall control.

Approved for use on June 7, 2023
294856.v3

TECHNICAL PROVISIONS

FOR BERKSHIRE AVENUE PARK PROJECT

IN THE CITY OF SOUTH PASADENA, CALIFORNIA

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TECHNICAL PROVISIONS

GENERAL STANDARD SPECIFICATIONS

The Standard Specifications for the construction materials and construction methods as set forth in the "Standard Specifications for Public Works Construction", Latest Edition shall be the Standard Provisions for all the Work to be done and the provisions of the Contract for the Work. In case of conflict between the Standard Specifications and these Technical Provisions, the Technical Provisions shall take precedence over and prevail over such conflicting portions.

MOBILIZATION
BID ITEM 1;

Mobilization shall consist of preparatory work and operations including all of the labor, equipment, tools, supplies, costs, arrangements, and others that are necessary for the movement of personnel, equipment, materials, and incidentals to the project site necessary for work on the project and for all other work and operations which must be performed including, but not limited to, bonds, insurance, arranging and coordinating with the modular restrooms building manufacturer, securing an adequate storage site for equipment and materials, and financing prior to beginning work on the various contract items on the project site.

The cost of time, materials, and labor to move the necessary construction equipment to and from the site, supervisory time on the job by the Contractor's personnel to keep the construction site in a safe condition, and all other related work as required at all times and for all non-working days during the construction period shall have been included in the bid.

PAYMENT

Payment for the preceding shall be included in the **LUMP SUM** for mobilization and shall be considered full compensation including the cost for obtaining all the required business licenses and permits.

TRAFFIC CONTROL
NOT A BID ITEM

1.1 DESCRIPTION

Traffic control, construction signing and traffic maintenance shall comply with the provisions of Subsection 7-10 of the Standard Specifications and the current requirements set forth in the "Manual of Traffic Controls for Construction and Maintenance Work Zones" published by the Department of Transportation, State of California, these Technical Provisions, and as directed by the Engineer.

1.2 PROTECTION OF WORK AND PUBLIC

The Contractor shall take all necessary measures to protect work and prevent accidents during any and all phases of the work. The Contractor shall repair all damaged new improvements as a result of vandalism (i.e., vehicle tracks, footprints, writing, etc.). If deemed necessary by the City, the Contractor shall repair, at its cost, the defective area in accordance with these Technical Provisions.

1.3 CONSTRUCTION SIGNING

Construction signing shall consist of furnishing, installing, maintaining and removing construction signs and barricades as required by the "Manual of Traffic Controls for Construction and Maintenance Work Zones". The traffic control system shall be installed prior to starting work and shall not be removed until all work has been completed.

Also, in conjunction to the public relations effort, Contractor shall supply and erect project construction information signs at the designated locations as determined by the City. Such signs shall conform to the City's specifications. Specific verbiage to be determined by the City. There shall be a minimum of four (4) such signs posted.

1.4 TRAFFIC MAINTENANCE

The Contractor shall be responsible for handling vehicular and pedestrian traffic in accordance with Subsection 7-10 of the Standard Specifications and these Technical Provisions.

The Contractor shall cooperate with the Engineer relative to handling traffic through all work areas and shall make his own arrangements relative to keeping the working area clear of parked vehicles and maintaining clear access to driveways.

Contractor's equipment and personal vehicles of the Contractor's employees shall not be parked on the traveled way at any time. Overnight parking of construction equipment in the work zone or on adjacent roads is not permitted. Parking of construction equipment shall be confined to the approved storage site.

1.5 STRIPING

Temporary striping and marking for traffic control if required shall conform to Section 310-5.6.5 of the Standard Specifications. Temporary striping and marking which has no further use shall be removed by wet sandblasting, and all sand used in sandblasting shall be removed without delay as the sandblasting operation progresses.

1.6 RESTRICTIONS ON CLOSURE OF STREETS AND TRAFFIC LANES

The Contractor shall conduct all operations so as to provide reasonable access to the existing park facilities and have no greater length or quantity of work under construction that can be properly constructed with a minimum of inconvenience to the public.

PAYMENT

Payment for traffic control shall be included in other items of work and shall be full compensation for furnishing all materials, labor, equipment, and all incidentals necessary to complete the work in accordance with the Standard Specifications and these Technical Provisions.

DEMOLITION AND SITE CLEARING
BID ITEM 2;

Perform demolition work in a pre-planned, systematic, efficient, and orderly manner. Deploy customary and acceptable methods as required to complete the Work indicated on the Plans in accordance with governing regulations.

Provide services for effective air and water pollution controls as required by City and County Air Pollution Control District and the Southern California Air Quality Management District.

1.1 DISPOSAL OF DEMOLISHED MATERIALS

All removed materials not salvaged or reused shall be removed from the project site no later than the end of each workday and transported legally for disposal at a qualified site.

If hazardous materials are encountered, notify the City Inspector immediately.

Burning of removed materials is not permitted.

1.2 ADJUSTMENT OF EXISTING SANITARY SEWERAGE, WATER, GAS, ELECTRICAL AND TELECOMMUNICATION SYSTEMS

All existing utility facilities, i.e., manholes, vaults, irrigation boxes, valve cans, etc. may or may not have been indicated on the plans. While these items are not expected on this project, the Contractor is nevertheless hereby made aware that such encounter will require the contractor to bear the cost to raise ALL to finished grade at no additional cost to the City.

Drawings show existing major underground utilities using the best information available. Verification of existing utilities and the actual locations are the Contractor's responsibility.

Any utility inadvertently damaged by the Contractor shall be immediately called to the City's attention for shutoff and then be immediately repaired by the Contractor at its own cost within 4 hours.

1.3 CLEANUP AND REPAIR

The Contractor, at the end of each workday, shall dispose of all removed materials from the site. The Contractor also shall protect the site and the new improvements from vandals or other damages at all times until City acceptance.

PAYMENT

Payment for demolition and site clearing shall be made at the contract **LUMP SUM** included in the bid price and shall have included all of the costs for labor, equipment, supplies, tools, haulers, permit and disposal dump fees, security personnel, and other items of work to dispose of all unwanted materials and to clear, protect, and maintain the jobsite at no additional cost to the City.

EARTHWORK, REMOVAL, GRADING AND IMPORT
BID ITEM 3;

Earthwork, removal and grading, and removal and disposal of unclassified excavation for proposed improvements shall conform to the applicable portions of Section 300 of the Standard Specifications for Public Works Construction and recommendations of a Geotechnical Report prepared by Global Geo-Engineering, Inc. dated October 28, 2021. Such work shall include all the cost of all labor, equipment, tools, supplies, and all other costs required to:

- Arrange with DigAlert to mark all potential interfering underground wet and dry utilities within the work limits;
- To the extent possible search, identify, and mark other underground utilities that were not identified by DigAlert;
- Expose, cut, and cap all existing irrigation lines and components along the excavate limits;
- Excavate, remove, and properly dispose of existing interfering soil and landscape materials;
- Remove and dispose of all interfering tree roots and organic matters. Root prune as described on the Landscaping Plan;
- Excavate and disposal required for StormTech unit shall be paid per Bid Item 10;
- Grade to the elevations shown on plans.
- Import material as needed.

PAYMENT

Payment for this item shall be made at the bid price per **LUMP SUM** for removal of excavated material and import of all classified fill in accordance with recommendations of Geotechnical Report to complete the grading to elevations shown on Plans and no additional compensation for this item of work shall be made. A topographic survey of existing conditions is included in the Plans to assist the Contractor in determining the quantity of earthwork.

CONSTRUCTION SURVEYING
BID ITEM 4;

The Contractor shall provide surveys for the purpose of survey control, layout, grade and cross sections required to control work. Survey shall conform to Standard Specifications.

Contractor shall tag and protect existing survey monuments found during course of work. Contractor shall replace monuments or stakes damaged during course of work at no added expense to City.
2. Contractor shall establish grid control for site to provide basis for location construction, utilities and other facilities. Provide copies of all survey control and grade sheets to the Engineer.

a. Flag limits of removal and construction
b. Stake for location and grade.
3. Contractor shall be responsible for layout and alignment of walks, curbs and grade, concrete pavement, fencing, landscape materials, site furnishings, etc.
4. Verify the location and elevation of improvements and utilities to be joined.
Submit grade sheet for verification prior to start of work.

PAYMENT

Payment shall be made at the contract **LUMP SUM** included in the bid price and shall have included all

of the costs for labor, equipment, supplies, tools, haulers, permit and disposal dump fees, security personnel, and other items of work to dispose of all unwanted materials and to clear, protect, and maintain the jobsite at no additional cost to the City.

WATER POLLUTION CONTROL
NOT A BID ITEM

Construction activities will be conducted in a manner to protect channels, storm drains, and bodies of water from pollution. Water pollution control work shall consist of activities necessary to meet the requirements of the City's National Pollutant Discharge Elimination System (NPDES) Area wide Urban Storm Water Runoff Permit, the County's Drainage Area Management Plan (DAMP), The State's General Construction Activities Permit (Order No. 2022-0057-DWQ, NPDES No CAS000002, adopted September 8, 2022 and effective September 1, 2023), and as required by the Engineer. The Contractor shall coordinate water pollution control work with all other work done on the contract.

The Contractor shall be required to comply with all requirements of the NPDES Permit, including preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Two (2) hard copies and one (1) electronic copy of the SWPPP shall be submitted to the City for review and approval. A hard copy of the SWPPP shall be retained on-site at all times as long as the Contractor is responsible for the project site conditions.

Implementation of the SWPPP shall not reduce effectiveness of existing storm drain system or interfere with traffic on public streets. The Contractor will implement the SWPPP and make changes both to the SWPPP and in the field as conditions warrant it. The Contractor will be solely responsible to prevent any pollutants from leaving the site.

The Contractor shall notify the City of South Pasadena's Stormwater/Wastewater Compliance Specialist immediately upon request from any regulatory agency to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to stormwater pollution control work. The Contractor shall provide copies of correspondence, notices of violation, enforcement actions, or fines proposed by regulatory agencies to the City's Stormwater/Wastewater Compliance Specialist.

Failure to update, implement and maintain the SWPPP will result in withholding of any progress payment(s) to the Contractor. Re-inspection staff costs due to NPDES non-compliance will be billed to the Contractor in 15-minute increments if the Contractor fails to maintain the site, water pollution testing data, Contractor inspection forms, and/or reports as detailed in the WPCP and as site conditions warrant. Contractor will also be responsible for any enforcement actions and penalties enacted on the City by the State Water Resources Control Board, Regional Water Quality Control Board, and/or any other agency due to Contractor's non-compliance with applicable water pollution regulations. Progress payments and/or final payments may be withheld to cover enforcement liabilities which include, but are not limited to, maximum financial penalties, legal costs, staff costs, and economic savings from violations and/or costs associated with corrective actions as required by enforcing agency.

Contractor shall install erosion and sediment control measures as indicated on Improvement Plans.

PAYMENT

Payment for water pollution control and complying with NPDES requirements shall be included in various other items of work and shall be full compensation for all items of work and all appurtenant work including installation of all erosion and sediment control measures and furnishing all labor, materials,

tools, equipment and incidentals.

DUST CONTROL AND BMP
NOT A BID ITEM

Contractor shall be responsible for keeping the construction nuisance dust to a minimum from start of work till completion by keeping wet all materials to be lifted off the ground and/or disposed of off-site through watering, especially during the demolition, excavation, and disposal work stages. Work on windy days is discouraged when watering may not be sufficient as a dust control measure. The installation of construction fencing with silt fabric may be deployed to keep errant dust from migrating away from the work zone.

PAYMENT

Payment for dust control and BMP shall be included in various other items of work and shall include all the costs for this work for the entire project duration at no additional cost to the City.

PVC DRAIN PIPE AND DRAIN INLET BOX
BID ITEM 5, 6, 7, 8, 9 and 10;

These items are for the construction of drainage improvements and shall conform to Standard Specifications and to the details shown on Improvement Plans.

PAYMENT

Payment for installation of SDR 35 drainpipe shall include excavation, backfill and backfill compaction and shall be paid at the contract unit price bid per **LINEAR FOOT** and no additional compensation shall be made.

Payment for construction of drain inlets and overflow drain structure per detail on Plans and catch basin per APWA shall be paid at the contract unit price bid per **EACH** and no additional compensation shall be made.

MC-3500 STORMTECH UNIT
BID ITEM 11;

The work shall consist of installing MC-3500 StormTech unit with 24-inch nyoplast manhole and isolator per detail on Plans and per manufacturer's specifications.

PAYMENT

Payment for this item shall be made at the contract unit price per **EACH** and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work complete in place including excavation to bottom of unit as indicated on Plans and hauling and disposal of excavated material. No additional compensation shall be allowed.

1½-INCH AND 1-INCH WATER SERVICE
BID ITEM 12 AND 13;

The Contractor shall construct 1½-inch and 1-inch water piping and its appurtenances to serve the irrigation and drinking fountain as shown on the Plans. Water connects shall be made at the existing water main.

1.1 SYSTEM COMPONENTS

The components to be furnished and installed, at a minimum, shall include 1½-inch copper service, bends, "T"s, gate valves, backflow device, thrust blocks, hardware, fittings, and other appurtenances required for a functional system complete in place.

1.2 PIPELINE

Pipeline for 1½-inch and 1-inch water shall be copper and constructed per City of South Pasadena Water District standards. The Contractor at its own cost may substitute a higher strength pipeline product for the Engineer's consideration and approval.

1.3 PIPELINE JOINTS

All pipeline joints shall be made and tested leak free prior to trench placement.

1.4 BRACING AND SHORING

The Contractor as a part of the Work shall brace and shore the work site if the installation work requires a trench that is 5-feet or deeper.

1.5 PIPE EXCAVATION AND BACKFILL

The Contractor, with the Engineer's prior approval, may reuse excavated clean native material as backfill. Backfill shall be compacted to a minimum of 90% relative compaction prior to placing topsoil for resurface restoration per the Plans. Where the water line is to be installed below and across existing concrete improvements, the Contractor at its sole expense may request approval from the Engineer to perform trenchless construction to avoid making concrete replacements as a part of the price bid.

1.6 DISINFECTION

The Contractor shall disinfect the installed system in accordance to the applicable County and State Rules and Regulations. Such disinfection work shall be witnessed by the Engineer and/or his designee.

PAYMENT

Payment for 1½-inch water service shall include 1-inch water meter, gate valves and backflow preventer in cage enclosure and shall be made at the contract **LUMP SUM** bid price and shall have included full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all of the listed and unlisted work for a functional system complete in place. The contract bid price includes trenching necessary for connection to existing water main and abandonment of existing facilities as called out on the Plans.

Payment for 1-inch water service including shut off valve as shown on Plans shall be made at the contract **LUMP SUM** bid price and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all of the listed and unlisted work for a functional system complete in place.

SIDEWALK & CURB
BID ITEM 14 & 15;

Work shall be performed in accordance with provisions of Sections 201, 303, and 400 of the Standard Specifications. If not specified, concrete shall be in accordance with provisions of Section 201-1 of the Standard Specifications.

Subgrade preparation shall conform to the provisions of Section 301-1 of the Standard Specifications. A relative compaction of 90% is required for subgrade and 95% for aggregate base. Each location shall be inspected prior to placement of the concrete.

The Contractor shall remove all debris and perform all cleanup work to the satisfaction of the Engineer within 3 working days after forms have been removed at any location.

The Contractor shall submit the concrete design mix to the City Engineer for approval.

1.1 COARSE AGGREGATE FOR PORTLAND CEMENT CONCRETE

All concrete aggregate shall be per Section 200-1.4 of the Standard Specifications.

1.2 INSPECTIONS

The Contractor shall call for inspections during all form work prior to pouring. The Contractor shall notify the Engineer one working day prior to pouring any concrete. Any work covered prior to inspection shall be opened to view by the Contractor at his/her expense.

1.3 SIDEWALK

PAYMENT

Payment for removal and reconstruction of the sidewalk per APWA STD. 113-2 and reconstruction of sidewalk shall be at the contract unit price per **SQUARE FOOT** in place. Payment shall include full compensation for all labor, material, equipment, tools, and incidentals necessary to complete all work and no additional compensation shall be made.

Payment for removal and reconstruction of 6" curb per APWA STD. 120-1 and reconstruction of sidewalk shall be at the contract unit price per **LINEAR FOOT** in place. Payment shall include full compensation for all labor, material, equipment, tools, and incidentals necessary to complete all work and no additional compensation shall be made.

RETAINING WALLS AND BLOCK WALLS
BID ITEM 16, 17 AND 18;

Retaining wall with post and rail barrier, perforated drainpipe, retaining wall with 6-foot high block wall and perforated drain pipe, and 6-foot high block wall shall be constructed in accordance details on Plans.

Work for this item shall include the minimum 95% relative compaction of the subgrade below the wall footing, the construction of wall footing, the placement of wall reinforcements, placement of backfill complete in place and installation of perforated drainpipe.

PAYMENT

Payment for retaining wall (Wall 'D) shall be at the contract unit price per **LINEAR FOOT** in place. Payment shall include full compensation for all labor, material, equipment, tools, and incidentals necessary to complete all work and no additional compensation shall be made.

Payment for retaining wall with 6-foot high block wall shall be at the contract unit price per **LINEAR FOOT** in place. Payment shall include full compensation for all labor, material, equipment, tools, and incidentals necessary to complete all work and no additional compensation shall be made.

Payment for 6-high block wall shall be at the contract unit price per **LINEAR FOOT** in place. Payment shall include full compensation for all labor, material, equipment, tools, and incidentals necessary to complete all work and no additional compensation shall be made.

SECTION 01 56 39 - TEMPORARY TREE PROTECTION

PART 1: GENERAL

1.01 SUMMARY

The general requirements apply to all tree protection work operations. Provide labor, materials, tools, transportation, and all incidentals necessary to perform work as indicated on the Plans and as herein specified.

1.02 DESCRIPTION OF WORK

A. Furnish all materials, labor, transportation, services, and equipment necessary to protect existing trees as indicated on Drawings and as specified herein.

B. Related Sections:
Section 32 80 00: Irrigation
Section 32 93 23: Sodding
Section 32 90 00: Planting

1.04 SUBMITTALS

A. Certification:

1. Submit written certification by a qualified Arborist that trees indicated to remain have been protected during course of construction in accordance with recognized standards and that where damage did occur, trees were promptly and properly treated.

2. Indicate which damaged trees, if any, are incapable of retaining full growth potential and are recommended to be replaced.

3. Arborist - an individual currently a member of the National Arborist Association or International Society of Arboriculture and verify proof of certification by such organization.

1.05 QUALITY ASSURANCE

A. Arborist Qualifications: Engage a qualified certified Arborist who has successfully completed tree protection and trimming, to perform the following work:

1. Remove branches from trees that are to remain.
2. Recommend procedures to compensate for loss of roots and perform initial pruning of branches and stimulation of root growth were removed to accommodate new construction.
3. Recommend procedures for excavation and grading work juxtaposed to established plants.
4. Perform tree repair work for damage incurred by new construction.
5. Pruning to conform to ISA Pruning Standards and National Arborist Association Class I-IV as specified.

1.06 PROJECT CONDITIONS

A. Temporary Protections: Provide a minimum of 6-foot height temporary fencing, barricades, or other suitable guards located outside dripline to protect trees and other plants that are to remain from damage.

Protect Root Systems:

1. Do not store construction materials, debris, or excavated material within dripline of trees to remain.
2. Do not permit vehicles within dripline.
3. Restrict foot traffic to prevent excessive compaction of soil over root systems within dripline.

PART 2: PRODUCTS

2.01 MATERIALS

A. Drainage Fill: Selected stone or gravel, graded to pass a 3-inch sieve and retained on a 1-inch sieve.

B. New Topsoil:

1. Fertile, friable, surface soil, containing natural loam.
2. Obtain from local sources or from areas having similar characteristics to indigenous topsoil.
3. Provide topsoil that is reasonably free of subsoil and clay lumps, and free of brush, weeds, roots, stones larger than 2-inches and free of other extraneous or toxic matter harmful to plant growth.
4. Obtain topsoil only from well-drained sites where soil occurs in depth of 4-inches or more. Do not obtain from bogs or marshes.

5. Topsoil, prior to use, must be laboratory tested for horticulture suitability and such test must be approved by Owner's Authorized Representative prior to placement.

PART 3: EXECUTION

3.01 GENERAL

A. Protect tree root systems from damage due to noxious materials caused by runoff or spillage during mixing, placement, or storage of construction materials. Protect root systems from flooding, eroding, or excessive wetting resulting from dewatering operations.

B. Do not allow fires under or adjacent to trees or other plants that are to remain.

C. Branches may be removed for construction purposes only upon approval of Owner's Authorized Representative or Arborist and subject to local governing agency ordinances.

D. Were directed by Engineer or Arborist, extend pruning operation to restore natural shape of entire tree.

E. Cut branches and roots, if required, with sharp pruning instruments. Do not break or chop.

3.02 EXCAVATION AROUND EXISTING TREES

A. Excavate within proximity of existing trees only were indicated on Drawings. Do not machine-excavate within dripline.

B. Where excavating for new construction is required within dripline of trees, hand-excavate to minimize damage to root systems. Provide sheeting at excavations if required. Use narrow-tine spading forks and comb soil to expose roots.

C. Relocate roots in backfill areas wherever possible. If large, main lateral roots are encountered, exposed beyond excavation limits as required to bend and relocate without breaking. If encountered immediately adjacent to location of new construction and relocation is not practical, cut roots approximately 3-inches back from new construction.

D. Do not allow exposed roots to dry out before permanent backfill is placed. Provide temporary earth cover or pack with peat moss and wrap with burlap.

Water and maintain in moist condition and temporarily support and protect from damage until permanently relocated and covered with earth.

E. Root greater than 4" in diameter shall be protected within 3 hours of excavation.

F. Roots greater than 4" in diameter shall not remain unprotected at the end of a workday.

G. Where trenching for utilities is required within dripline, tunnel under or around roots by hand digging. Do not cut main lateral roots or tap roots; cut only smaller roots that interfere with installation of new work. Cut roots cleanly with sharp, appropriate pruning instruments. Do not break or chop roots.

H. Prune branches to balance loss to root system caused by damage or cutting of root system as directed by Owner's Authorized Representative or Arborist.

3.03 GRADING AND FILLING AROUND EXISTING TREES

A. Maintain existing grade within dripline of trees.

B. Lowering Grades:
1. Where existing grade is to be lowered around a protected tree, gradually slope grade away from tree as recommended by Arborist. Do not reduce grade within tree dripline.
2. Consult Owner's Authorized Representative or Arborist for appropriate plans on grade cuts exceeding 12-inches which may require details as to drains, special backfill mixes and retaining walls.

C. Raising Grades:
1. Where existing grade is to be raised 6-inches or more within tree root zone, consult the Engineer or Arborist to provide appropriate remedial plans to accommodate this grade change.
2. Such plans may address perforated pipe bends, drain lines, grates and retaining walls as may be required.
3. No soil fill will be allowed to cover over existing tree root zone grade.
4. Do not place soil as to cover tree trunk root flare.
5. For bidding purposes only: assume grades will be raise by placing a 2" layer of sand over the existing finish grade to achieve the design elevation for new finish surface.

3.04 ROOT PRUNING

A. Branch pruning may be required to stimulate root growth and to compensate for loss of roots.

B. Prune only per written recommendations from Arborist and conform to established pruning standard practices.

C. Ensure that Arborist provides Owner typed instructions for recommended long term maintenance procedures to be followed the completion of construction operations.

3.05 REPAIR AND REPLACEMENT OF TREES

A. Repair trees damaged by construction operations. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.

B. Remove and replace dead and damaged trees that Arborist determines to be incapable of restoration to normal growth pattern.

C. Provide new trees of same size and species as those being replaced.

D. If trees over 6-inches in caliper measurement (taken 12-inches above grade) are required to be replaced, provide new trees of 6-inch caliper size and of species selected by Owner's Authorized Representative.

3.06 DISPOSAL

A. Do not burn trees or branches on-site.

B. Removal from Owner's Property: Remove excess excavation, displaced trees, and trimmings and dispose of off Owner's property.

PART 4: PAYMENT

4.01 EXISTING TREE PROTECTION

A. Payment for Existing Tree Protection will be considered included in other items of work and no additional compensation will be made therefore.

END OF SECTION

SECTION 03 10 00 - CONCRETE FORMWORK

PART 1: GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all Concrete Formwork operations. Provide all labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections:
Section 03 30 53: Miscellaneous Cast-in-Place Concrete
Section 32 13 13: Concrete Paving

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions.
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Manufacturer's directions, specifications and detailed drawings shall be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this Section shall be done to the satisfaction of the Engineer. The decision by the Engineer as to the true construction meaning of the Plans and Specifications will be final.

PART 2: PRODUCTS

2.01 MATERIALS

A. Where finish concrete is below grade, plywood or sawed lumber formwork shall be constructed of substantial material as selected by the Contractor.

B. Where finished concrete is above grade and scheduled to be exposed, use Plyform Class I and II B-B, EXT-DFPA.

C. Form coating shall be a non-grain-raising and non-staining type that will not leave residual matter on the surface of the concrete or adversely affect bonding to concrete of paint, plaster, or other applied materials.

D. Portland cement shall be Type V, ion alkali and shall conform to ASTM C150.

PART 3: EXECUTION

3.01 INSTALLATION

A. All concrete above grade shall be cast in plywood or sawed lumber forms.

B. Concrete below grade may be poured directly against earth in open trenches.

C. All forms shall be constructed true to line and level, sufficiently tight to prevent leakage of mortar, and shall conform exactly to the dimensions of the finished concrete as shown on the drawings. Forms for curved surfaces shall be so constructed and placed that the finished surface shall not deviate from the arc of the curve; flat spots will not be accepted.

D. Where studs in formwork are spaced not over 12” o.c., 5/8” minimum plywood shall be used. Where studs are spaced not over 16” o.c., 3/4” minimum plywood shall be used.

E. Place long dimension of plywood sheets perpendicular to direction of studs.

F. Forms and metal reinforcement shall be checked and approved by the Engineer before concrete is placed.

3.02 REMOVAL OF FORMS

A. Do not disturb or remove forms until the concrete has developed sufficient strength to safely sustain its own weight and the superimposed loads above. After

concrete is placed, the following minimum time periods shall elapse before the removal of forms.

ITEM	FORMS	SHORING
Sides of walls and edge of slabs and footings	3 days	5 days

PART 4: PAYMENT

Payment for Concrete formwork will be considered included in other items of work and no additional compensation will be made therefore.

END OF SECTION

SECTION 03 30 53 - MISCELLANEOUS CAST-IN-PLACE CONCRETE

PART 1: GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all miscellaneous concrete work operations. Provide labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections:
Section 03 10 00: Concrete Formwork
Section 32 13 13: Concrete Paving

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the Engineer.

D. Definitions:
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

E. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specification are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Manufacturer's directions, specifications and detailed drawings will be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this section will be done to the satisfaction of the Engineer. The decision by the Engineer as to the true construction meaning of the Plans and Specifications will be final.

D. Material quality standards and testing procedures shall be in accordance with all ASTM standards and testing procedures and shall be the latest requirements.

1. All tests shall be made by a testing laboratory acceptable and approved by the Engineer.

2. One mechanical analysis and one decantation test shall be made of the sand and coarse aggregate proposed for the work.

E. Reinforcing Steel: All steel shall be Grade 60 billet steel conforming to ASTM A-615.

1.03 SUBMITTALS:

1.04

A. Shop Drawings: Submit for concrete slabs showing dimensioned locations and types of construction and isolation joints.

B. Samples: Prepare minimum 4-foot square samples of each required slab finish excluding only monolithic trowel and float finishes. Include a transverse isolation joint, scoring, and edging.

PART 2: PRODUCTS

2.01 MATERIALS

A. Concrete shall have a minimum compressive strength at 28 days of 2500 psi.

B. Portland Cement shall be Type V, low alkali, and shall conform to ASTM C150.

C. Concrete aggregate shall conform to ASTM C33. All aggregate shall be well graded and selected from a source that has a proven history of non-reactivity. Maximum aggregate size shall be 3/4 inch.

D. Fine aggregate shall consist of washed natural sand having hard, strong and durable particles and which does not contain more than 2% by weight of clay, loam, shale, alkali, organic matter or other deleterious substances.

E. Coarse aggregate shall consist of clean, hard, fine grained, sound crushed rock or gravel, which does not contain more than 5% by weight of flat, chip-like, thin, elongated, friable or laminated pieces. Any piece having a major dimension in excess of two and one-half (2 1/2) times the average thickness and which will adversely affect the strength of the concrete shall not be used.

F. Water shall be clean and free from deleterious amounts of acids, alkalis, and organic materials.

G. Imprint pattern and color shall be as noted on the plan under construction materials schedule.

H. Each component of the concrete mix shall be supplied from the same source for the entire project.

2.02 PROPORTIONS AND MIXING

A. The concrete shall be composed of cement, sand and coarse aggregate in proportions as determined by the testing laboratory. Cost of mix design shall be borne by Contractor.

B. Slump: Adjust quantity of water so concrete at time of placing does not exceed the following slumps when tested according to ASTM C143. Use the minimum water necessary for workability required by part of structure being cast.

Part of Structure	Maximum Slump Inches	Maximum Water-Cement Ratio
Footings, foundation walls, and mass concrete, not reinforced	4	0.6
Slabs on grade, reinforced and non-reinforced	3	0.45
Reinforced concrete over 8" thick	4	0.5
Reinforced concrete 8" or less thick	4-1/2	0.5
All other concrete	4	0.5

C. The concrete shall be mixed as follows:

1. Each transit mixer shall be equipped with automatic devices for recording the number of revolutions of the drum prior to completing the mixing, with peripheral drum speed of approximately 200 feet per minute.

2. Transit-mix concrete shall be mixed for a period of not less than ten (10) minutes. At least three (3) minutes of the mixing period shall be immediately prior to discharging at the job.

3. Transit-mix concrete shall not be delivered to the work with the total specified amount of water incorporated therein. Two (2) gallons of water per cubic yard shall be withheld, and may be incorporated in the mix, before the concrete is discharged from the mixer truck.

4. The concrete, at time of placing, shall be in such condition that it can be properly placed.

2.03 MISCELLANEOUS CONCRETE

A. Concrete footings

B. Wall 'A'-Concrete Seat Wall

C. Wall ‘B – Concrete Wall
D. Wall ‘C’- Concrete Planter & Bench
E. Wall ‘E’ – Concrete Seat Wall (On-Radius)
F. Wall ‘F’ – Concrete Wall

PART 3: EXECUTION

3.01 PLACING CONCRETE

A. Before the placing of any concrete, all forms shall be thoroughly cleaned and wet. Concrete shall be poured into forms immediately after it is mixed, so that no separation will occur. No concrete which has stood for more than fifteen (15) minutes after leaving the mixer shall be used. Concrete shall be rejected if not placed in its final position within ninety (90) minutes after water is first added to the batch.

B. Maximum free drop of concrete shall not be more than 5’-0”. Use tremies in deep sections.

C. The location of all stoppages shall be approved by the Engineer.

D. The flow surface of the freshly poured concrete shall be level whenever any pour is stopped, and tight dams shall be built as necessary to accomplish this result. Construction joints shall be made only when unavoidable, and then only at the point determined by the Engineer. Details of such joints shall be as directed by the Engineer.

E. Before the placing of any concrete, the surface of the previously poured concrete shall be clean, wet and free of oil or any other contamination.

F. Install concrete and cement finish work true to lines, dimensions, levels, and finish with smooth unblemished surfaces for exterior finishes specified on Plans.

G. Remove and replace defective concrete or cement work with new materials. Permission to patch any defective area shall not be a waiver of the right of the City to require complete removal of defective work if patching does not restore quality and appearance of work.

H. No advertising impression, stamp, or mark of any description will be permitted on surface of concrete or cement finish.

3.02 CONCRETE FINISH

A. Compact and tamp concrete as specified to bring 3/8” of mortar to surface, wood float to straight edges and screeds, and apply following finishes. Do not use steel or plastic floats of any kind for initial floating operations. Unless otherwise

specified, do not apply finishes until surface water disappears and surface is sufficiently hardened. Remove any bleed water and laitance as it appears.

B. The color for concrete paving shall be as per plans.

C. Integral color concrete shall be incorporated per manufacturer's rates and specifications.

D. The pattern for imprinted concrete shall be per plans.

3.03 EXPANSION AND CONTROL JOINTS

A. Expansion joint material shall be as noted on the Plans.

B. Locate expansion and control joints to least impair the strength and appearance of the structure. In no case place an intersecting construction joint in such a way that two intersecting walks are separated by a construction or control joint at the point of intersection. Transition curves shall be part of a continuous pour of the intersection slab.

1. Isolation joints shall be a maximum of twenty feet (20') apart, with control joints a maximum of ten feet (10') from isolation joints. Exception to this are specialty work joints which will be laid out as shown on the Plans.

2. The Contractor shall obtain the Engineer's approval of layout showing proposed location of joints before pouring concrete.

C. Caulking of expansion joints were called for on the Plans shall be done with a non-tracking, multi-part flow type, self-leveling, polyurethane sealant manufactured by Chem-Seat, Grace, 3-H or approved equivalent.

1. Color shall match the color of the concrete where the expansion joint occurs unless shown otherwise on the plans.

2. Caulking shall be done by an experienced applicator in a workmanlike manner, in smooth straight runs, after thoroughly cleaning and priming joints.

3. All work shall be done in strict accordance with the manufacturer's printed recommendations. Do not permit traffic to travel over seated joints until sealer has fully cured.

3.04 QUALITY CONTROL

A. Smoothness tolerance exterior concrete finish surfaces shall be of such smoothness and evenness that they shall contact the entire length of a 10’ straight edge laid in any direction, with an allowable tolerance of 1/8 inch. Any operations necessary to achieve this result shall be performed by the Contractor at no additional cost to the City.

B. Inspections will be provided as necessary. Call for inspection two (2) working days prior to need.

C. The Contractor shall call for inspection during specific phases of construction. They shall include:

1. All form work prior to pouring.
2. All footings prior to pouring.
3. Subgrade prior to pouring.
4. Drag form approval.
5. At beginning of imprinting.
6. Prior to the application of a Concrete Sealer or Chemical Retarder

D. Contractor shall notify the Engineer twenty-four (24) hours prior to pouring any concrete.

E. Any work covered prior to inspection shall be open to view by the Contractor at his expense.

3.05 TESTING

A. Compression tests of concrete shall be made as required by the Building Code except that compression tests of any grade of concrete shall be made whenever the quantity of that grade used in the project exceeds 25 cubic yards. At least two identical cylinders of each grade of concrete shall be taken of each 100 cubic yards of concrete or fraction thereof placed in the work. The cylinders shall be tested in a testing laboratory and test reports submitted to the City.

B. Storage of test cylinders on the site and after delivery to the testing shall be in accordance with ASTM Designation C31.
   1. Should the strength by test fail, the mix shall be adjusted so that the resulting concrete shall comply with the minimum requirements, and all additional expense resulting from such adjustment shall be borne by the Contractor.
   2. Should the strength of any grade by test fall below minimum, concrete from the defective pours which is in place may be tested by the core method. If such tests show the concrete to be defective, the concrete shall be removed and replaced or adequately strengthened as required under the governing Code. All expenses involved shall be borne by the Contractor.

3. Testing of concrete shall be at the discretion of the Engineer.

PART 4: PAYMENT

4.01 CONCRETE FOOTINGS

Payment for concrete footings for walls, planters, and site furnishings will be considered included in other items of work and no additional compensation will be made, therefore.

4.02 WALL 'A' - CONCRETE SEAT WALL

Payment for **WALL 'A' - CONCRETE SEAT WALL** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.03 WALL 'B' - CONCRETE WALL

Payment for **WALL 'B' - CONCRETE WALL** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.04 WALL 'C' – CONCRETE PLANTER & BENCH

Payment for **WALL 'C' - CONCRETE PLANTER & BENCH** will be made at the **lump sum (LS**) the contract as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.05 WALL 'E' - CONCRETE SEAT WALL (ON-RADIUS)

Payment for **WALL 'E' - CONCRETE SEAT WALL (ON RADIUS)** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.06 WALL 'F' - CONCRETE WALL

Payment for **WALL 'F' – CONCRETE WALL** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

END OF SECTION

SECTION 09 96 23 – GRAFFITI RESISTANT COATING

PART 1: GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, tools, transportation, and incidentals to provide and field apply the Graffiti Resistant Coating as indicated on the Plans and as herein specified.

B. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specifications are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

C. Related Documents.
Drawings and general provisions of the Contract

D. Definitions:
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

E. Standard coating terms defined in ASTM D 16 apply to this Section. Low- sheen refers to a finish with a gloss range between 30 and 40 when measured at a 60-degree meter.

F. Graffiti Resistant Coating properties defined in ASTM D 6578 apply to this Section.

1.02 SUBMITTALS AND SUBSTITUTIONS

A. Submit three (3) sets of a typewritten list of each component of the coating system as specified to the City Engineer and City Maintenance within twenty-one (21) days after award of contract for their review and approval.

1. This list shall give the:
Name, catalog number, and manufacturer, cut sheets or copies of catalog pages for all the equipment and material to be installed.

2. The submittal shall include a manufacturer's certification that all products supplied comply with the requirements indicated that limit the number of VOCs in coating products.

B. Approval of substitutions will not relieve the Contractor from complying with the requirements of the Contract Documents, Plans and Specifications.

1.04 QUALITY ASSURANCE

A. The Specifications only indicate the quality and workmanship to be performed rather than a detailed description of the performance of the work. Install said site components, materials, and equipment in a functional manner and in which they were intended in the drawings.

B. Applicator Qualifications: Engage an experienced applicator who has completed anti-graffiti coating system applications similar in material and extent to those indicated for Project and whose work has a record of successful in-service performance.

C. Source Limitations: Obtain primers and undercoat materials for each coating system from the same manufacturer as the finish coats.

D. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample for each substrate required.

E. Duplicate finish of approved sample Submittals. Architect will select one area or surface of each different substrate to represent surfaces and conditions for application. Wall Surfaces: Provide samples on at least 100 sq. ft. (9 sq. m), or as directed by Architect, of wall surface for each different substrate.

F. Apply coatings to each surface as specified. Provide the required sheen of each surface.

G. After finishes are accepted, City Engineer will use the surface to evaluate coating systems of a similar nature.

H. Final approval of coatings will be from benchmark samples.

I. Preinstallation Conference: Conduct conference at Project site to comply with requirements.

J. In the event of any discrepancies between the Plans and the Specifications, the final decision as to which will be followed shall be made by the Engineer, or his designated representative. In the event the installation is contradictory to the direction of the Engineer, the installation shall be rectified by the Contractor at no additional cost to City.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label with the following information:

Name or title of material.
Product description (generic classification or binder type).
Manufacturer's stock number and date of manufacture.
Contents by volume, for vehicle constituents.
Thinning instructions.
Application instructions.
Handling instructions and precautions.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a temperature range between 40 and 95 deg F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.

C. Protect materials from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and applying coatings.

1.06 PROJECT CONDITIONS

A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 45 and 85 deg F.

B. Limitations: Proceed with application only when the following existing and forecasted weather and substrate conditions permit coatings to be applied according to manufacturers' written instructions and warranty requirements.

C. Concrete surfaces and mortar have cured for more than 28 days. Rain is not predicted within 24 hours. Application proceeds more than 24 hours after surfaces have been wet, unless otherwise recommended by manufacturer.

D. Windy conditions do not exist that may cause anti-graffiti coatings to be blown onto vegetation or surfaces not intended to be treated.

E. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

F. Allow wet surfaces to dry thoroughly and attain temperature and conditions specified before proceeding with or continuing coating operation. Work may continue during inclement weather only if areas and surfaces to be coated are

enclosed and temperature within the area can be maintained within limits specified by manufacturer during application and drying periods.

1.07 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer and applicator agree(s) to repair or replace materials that fail to maintain graffiti repellency within specified warranty period.

B. Warranty Period: Ten years from date of Substantial Completion.

PART 2: PRODUCTS

2.01 MATERIAL & MANUFACTURERS

A. Whenever a material or process is delineated or specified by patent, proprietary name or process, or manufacturer’s name, such specifications are used for the purpose of facilitating the description of material or process desired. Approved equals are acceptable.

B. Information pertaining to the product as to the manufacturer, material, model, color, finish, etc. is shown on the plan.

2.02 GENERAL MATERIALS AND MANUFACTURERS

A. Material Compatibility: Provide primers, undercoats, and finish-coat materials that are compatible with one another, and substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's highest grade of the various anti-graffiti coatings specified. Materials not displaying manufacturer's product identification are not acceptable.

C. Proprietary Names: Use of manufacturer's proprietary product names to designate materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

D. VOC Classification: Provide anti-graffiti coating materials, including primers, undercoats, and finish-coat materials, that have a VOC classification of 100 g/L or less.

2.03 EXTERIOR ANTI-GRAFFITI COATING SYSTEMS

A. Provide the following 3 coat application over exterior cast-in-place concrete walls and brick, stone, or CMU masonry vertical surfaces; and where indicated per plans or approved equal by the City:

1. Primer: Acrylic/Silicon UV stable bonding primer applied at spreading rate recommended by manufacturer.

   SCS-002SP Sealer Prime
   SEI Industrial Chemicals
   (408) 402-5395
   www.seichemicals.com

2. Intermediate Coat: One component nanotechnological anti-graffiti coating applied at spread rate recommended by manufacturer to a dry film thickness of 1.0. Product must be a Level 1 Graffiti Resistant Coating as specified by ASTM D6578.

   GPA-300 Graffiti Proofer
   SEI Industrial Chemicals
   Tel: (408) 402-5395
   www.seichemicals.com

3. Finish Coat: One component nanotechnological anti-graffiti coating applied at a spread rate recommended by manufacturer to a thickness of 2.0 mils. Product must be a Level 1 Graffiti Resistant Coating as specified by ASTM D6578.

   GPA-300 Graffiti Proofer
   SEI Industrial Chemicals
   Tel: (408) 402-5395
   www.seichemicals.com

PART 3: EXECUTION

3.01 EXAMINATION

A. Verify site conditions and confirm with City all surfaces to receive work. All concrete and block wall surfaces exposed, (face & top of wall) will receive work. Wall surfaces not facing towards the park proper can be excluded.

B. Verify that layout and site are compatible.

C. With Applicator present, examine substrates and conditions under which Graffiti Resistant Coating will be applied, for compliance with coating application requirements.

D. Apply coatings only after unsatisfactory conditions have been corrected and surfaces to receive coatings are thoroughly dry.

E. Start of application is construed as Applicator's acceptance of surfaces within that area.

F. Coordination of Work: Review other Sections in which primers or other coatings are provided to ensure compatibility of total systems for various substrates. On request, furnish information on characteristics of specified finish materials to ensure compatible primers.

3.02 PREPARATION

A. General: Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item; provide surface-applied protection before surface preparation and coating.

B. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.

C. Cleaning: Before applying Graffiti Resistant Coating clean substrates of substances that could impair bond of coatings. Remove oil and grease before cleaning.

D. Schedule cleaning and coating application so dust and other contaminates from cleaning process will not fall on wet, newly coated surfaces.

E. Surface Preparation: Clean and prepare surfaces to be coated according to manufacturer's written instructions for each substrate condition and as specified.

F. Prepare concrete, brick, concrete masonry block, and cast stone surfaces to be coated. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods to prepare surfaces.

G. Use abrasive blast-cleaning methods if recommended by coating manufacturer.

H. Do not coat surfaces if moisture content exceeds that permitted in manufacturer's written instructions.

I. Material Preparation: Carefully mix and prepare coating materials according to manufacturer's written instructions.

J. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.

K. Stir materials before applying to produce a mixture of uniform density. Stir as required during application.

L. Do not stir surface film into the material. Remove film and, if necessary, strain coating material before using.

M. Use only the type of thinners approved by manufacturer and only within recommended limits.

N. Protect adjoining work, including sealant bond surfaces, from spillage or blow-over of coating system components.

O. Cover adjoining and nearby surfaces of aluminum and glass if there is the possibility of components being deposited on surfaces. Cover live plants and grass.

P. Coordination with Sealants: Do not apply graffiti resistant coatings until sealants for joints adjacent to surfaces receiving coatings have been installed and cured.

Q. Anti-graffiti coating work may precede sealant application only if sealant adhesion and compatibility have been tested and verified using substrate, graffiti resistant coatings, and sealant materials identical to those used in the work.

R. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 APPLICATION

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect the substrate before application of graffiti resistant coatings and to instruct Applicator on the product and application method to be used.

B. General: Apply Graffiti Resistant Coating according to manufacturer's written instructions.

C. Use applicators and techniques best suited for the material being applied. Do not apply Graffiti Resistant Coating over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film. Coating surface treatments and finishes are indicated in the coating system descriptions. Provide finish coats compatible with primers used. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, grilles, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.

D. Coat surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.

E. Scheduling Graffiti Resistant Coating: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for coating as soon as practicable after preparation and before subsequent surface deterioration.

F. The number of coats and film thickness required is the same regardless of application method.

G. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. Allow sufficient time between successive coats to permit proper drying.

H. Give special attention to edges, corners, crevices, and similar surfaces to ensure that they receive a dry film thickness equivalent to that of flat surfaces.

I. Application Procedures: Apply Graffiti Resistant Coating according to manufacturer's written instructions.

J. Spray Equipment: Use mechanical methods to apply coating as permitted by manufacturers written instructions and governing regulations.

K. Use spray equipment with orifice size recommended by manufacturer for material and texture required.

L. Minimum Coating Thickness: Apply each material no thinner than manufacturer's recommended spreading rate.

M. Provide total dry film thickness of the entire system as recommended by manufacturer.

N. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by manufacturer, to material required to be coated or finished that has not been prime coated by others.

O. Recoat primed and sealed substrates immediately if there is evidence of suction spots or unsealed areas in first coat, to ensure a finish coat with no burn -through or other defects caused by insufficient sealing.

P. Completed Work: Match approved Samples for shade and coverage. Remove, refinish, or recoat work that does not comply with specified requirements.

3.04 CLEANING

A. Immediately clean Graffiti Resistant Coating from adjoining surfaces and surfaces soiled or damaged by application as work progresses. Repair damage caused by application. Comply with manufacturer's written cleaning instructions.

3.05 PROTECTION

A. Protect work of other trades, whether being coated or not, against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.

B. Provide "Wet Paint" signs to protect newly coated finishes. After completing coating operations, remove temporary protective wrappings provided by others to protect their work.

C. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

PART 4: PAYMENT

4.01 GRAFFITI RESISTANT COATING

Graffiti Resistant Coating will be considered included on other items of work and no additional compensation will be made.

END OF SECTION

SECTION 12 93 00 - SITE FURNISHINGS

PART 1: GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, tools, transportation, and incidentals to provide and install Site Furnishings as indicated on the Plans and as herein specified.

B. Related Sections:
Section 03 10 00: Concrete Formwork
Section 03 30 00: Cast-In-Place Concrete
Section 03 30 53: Miscellaneous Cast-in-Place Concrete

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions:
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

E. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specification are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

1.02 QUALITY ASSURANCE

A. Shop Drawings: Provide shop drawings for each component and each item of site furniture. Shop drawings shall indicate layouts, component locations, dimensions, set-backs, details of assembly, anchors, footing details, and all appurtenances required to assemble components. Three (3) sets of shop drawings shall be submitted to the City within twenty-one (21) calendar days after award of contract.

B. Materials Samples: Confirm color and finishes for all site furniture, equipment, and accessories, utility characteristics, connection requirements and product cut-sheets. Three (3) sets of product color samples and finishes shall be submitted to the City within twenty-one (21) calendar days after award of contract.

C. Product Data: Provide data on all site furnishings, equipment, and materials, including accessories, utility characteristics, connection requirements and product

cut-sheets. Submit three (3) sets of product data to the City within twenty-one (21) calendar days after award of contract.

D. Manufacturer's Installation Instructions: Provide three (3) sets of the manufacturer's installation instructions to the City within twenty (21) calendar days of award after the contract.

1.03 DELIVERY, STORAGE AND HANDLING

A. Store and protect all site furnishings. Contractor shall be responsible for all site furnishings and in the event of missing or stolen items, they shall be replaced at the CONTRACTOR'S sole expense.

B. Storage containers utilized on site for storage operations shall be located away from the root zones of existing trees in a location agreed upon by the Engineer.

1.04 RELATED REQUIREMENTS

A. Obtain all permits (except permanent easements) and licenses and give notice and pay for all fees necessary to complete work under this Section as delineated or specified at no additional cost to City.

B. Manufacturer's directions, specifications and detailed drawings will be followed in all cases where the articles used furnish directions and cover points not delineated on the Plans or in the Specifications.

C. The Specifications only indicate the quality and workmanship to be performed rather than a detailed description of the performance of the work. Install said site furnishings, materials, and equipment in such a manner that they will operate efficiently and evenly.

D. In the event of any discrepancies between the Plans and the Specifications, the final decision as to which will be followed shall be made by the Engineer, or his designated representative. In the event the installation is contradictory to the direction of the Engineer, the installation shall be rectified by the Contractor at no additional cost to City.

1.05 REGULATORY REQUIREMENTS

A. The work shall conform to Americans with Disabilities Act (ADA) and California Disabled Access Regulations-Title 24. The Contractor shall be responsible for compliance and provide written documentation for compliance to the Engineer upon installation of all equipment and material governed by said regulations.

B. All work shall conform to the City standards for public construction and any other agency's standards for public construction having jurisdiction over the work.

C. Provide certificate(s) of compliance from authority(s) having jurisdiction over the work. The certificate(s) shall indicate approval of products and their installation. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

1.06 SAMPLES AND SUBSTITUTIONS

A. All workmanship, equipment, materials, and articles incorporated shall be the best available grade of their respective kind.

B. Provide a sample and/or clearly delineated cut sheet (including texture, color, and finish clearly delineated) of each component specified. Accepted samples may be used in the work, subject to approval by the Engineer.

1. Submit three (3) sets of a typewritten list of equipment and materials as specified to the Engineer within twenty-one (21) days after award of contract. This list shall give the name, model number, and manufacturer, and shall be accompanied by cut sheets or reproductions of catalog pages for all the equipment and material to be installed.

2. Substitutions shall be of equivalent design intent, size, quality, color, texture, material, and warranty to the original item specified.

C. Approval of substitutions will not relieve the Contractor from complying with the requirements of the Contract Documents, Plans and Specifications. Pay at Contractor's sole expense for all changes caused by approved substitutions which affect other items of work.

PART 2: PRODUCTS

2.01 MATERIAL

A. Whenever a material or process is delineated or specified by patent, proprietary name or process, or manufacturer's name, such specifications are used for the purpose of facilitating the description of material or process desired. Approved equivalents are acceptable.

B. Provide any nuts, bolts, washers, conduit, wiring, fittings, adapters, leveling plates, screws, connectors, and/or ties necessary to connect site furnishings to footings, sewer lines, drain lines, and/or electrical lines as shown in the construction documents shall be furnished by the contractor.

C. All surface mount bolts provided by product manufacturers shall be tamper resistant stainless-steel bolts. All washers provided by manufacturers shall be stainless steel.

D. Bolts and washers not provided by manufacturers for surface mounting applications shall be tamper resistant stainless steel and sized per the manufacturer's installation instructions.

2.02 COMPONENTS

A. Park Bench
B. Waste & Recycle Container
C. Waste Container
D. Café table – ADA compliant
E. Cafe Table
F. Drinking Fountain w/ Pet Fountain
G. Water Service Shut-off Vale & Rock Sump
H. Dogipot Waste Station
I. Wall 'B'- Wood Post & Rail Barrier
J. Wall 'D' – Wood Post & Rail Barrier
K. Wall 'F' – 42" H. Fence
L. 6' H. Wood Fence
M. Entry Gate and Columns
N. Fitness Stations
O. Four-Square Court Play Surface & Striping

PART 3: EXECUTION

3.01 EXAMINATION

A. Verify site conditions and surfaces are ready to receive work.

B. Verify that layout and site are compatible.

3.02 PREPARATION

A. Layout and stake locations of components for approval by Engineer prior to installation.

B. Review layout requirements with other affected work.

3.03 INSTALLATION

A. Install in accordance with City standards and manufacturer's instruction.

B. Provide concrete footings for site furnishings as detailed on the Plans or as herein specified.

C. Install all site furnishings as turn-key installations to the satisfaction of the Engineer.

3.04 SITE CONDITIONS

A. Promptly repair damage to facilities caused by construction operations. Cost of repair at Contractor's sole expense.

PART 4: PAYMENT

4.01 PARK BENCH

Payment for **PARK BENCH** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.02 WASTE CONTAINER

Payment for **WASTE CONTAINER** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.03 CAFE TABLE – ADA COMPLIANT

Payment for **CAFE TABLE- ADA COMPLIANT** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.04 CAFE TABLE

Payment for **CAFE TABLE** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.05 DRINKING FOUNTAIN w/ BOTTLE FILLER AND PET FOUNTAIN

Payment for **DRINKING FOUNTAIN w/ BOTTLE FILLER AND PET FOUNTAIN** will be made at lump sum **(LS)** contract price set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.06 WATER SERVICE SHUT-OFF VALVE AND ROCK SUMP

WATER SERVICE SHUT-OFF VALVE AND ROCK SUMP will be considered included in the lump sum **(LS)** contract price for **DRINKING FOUNTAIN w/ PET FOUNTAIN** as set forth in the bid schedule and no additional compensation shall be made.

4.07 DOGIPOT WASTE STATION

Payment for **DOGIPOT WASTE STATION** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.08 WALL 'B' – POST & RAIL BARRIER

Payment for **WALL 'B' – POST & RAIL BARRIER** will be made at the contract unit price per **lineal foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.09 WALL 'D' – WOOD POST & RAIL BARRIER

Payment for **WALL 'D'- WOOD POST & RAIL BARRIER** will be made at the contract unit price per
lineal foot (LF) as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.09 WALL 'F' – 42" HIGH WOOD FENCE

Payment for **WALL 'F'- 42" HIGH WOOD FENCE** will be made at the contract unit price per
lineal foot (LF) as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.10 6' H. WOOD FENCE

Payment for **6' H. WOOD FENCE** will be made at the contract unit price per
lineal foot (LF) as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.11 ENTRY GATE, RPOSD SIGN, COLUMNS, & MONUMENT SIGN

Payment for **ENTRY GATE, RPOSD SIGN, COLUMNS & MONUMENT SIGN** will be made at the lump sum (LS) contract price as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.12 FITNESS EQUIPMENT

Payment for **FITNESS EQUIPMENT** will be made at the lump sum (LS) contract price set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.13 FOUR SQUARE COURT PLAY SURFACING & STRIPING

Payment for **FOUR SQUARE COURT PLKAT SURFACING & STRIPING** will be made at the contract unit price per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.14 MISCELLANEOUS MATERIALS NECESSARY FOR TURN-KEY INSTALLATION OF SITE FURNISHINGS

Miscellaneous materials necessary for turn-key installations including but not limited to nuts, bolts, washers, conduit, wiring, fittings, adapters, leveling plates, screws, connectors, and/or ties necessary to connect site furnishings to adjacent footings, sewer lines, drain lines, and/or electrical lines as shown in the construction documents shall be considered included in the contract bid item for each respective component and no additional compensation will be made therefor.

4.15 SECURITY

Park security throughout construction, to the end of the maintenance period, will be considered included in other items of work and no additional compensation will be made.

END OF SECTION

SECTION 32 13 13 – CONCRETE PAVING

PART 1: GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all miscellaneous concrete work operations. Provide labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections:
Section 03 10 00: Concrete Formwork
Section 03 30 53: Miscellaneous Cast-In-Place Concrete

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the Engineer.

D. Definitions.
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Manufacturer's directions, specifications and detailed drawings will be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this section will be done to the satisfaction of the Engineer. The decision by the Engineer as to the true construction meaning of the Plans and Specifications will be final.

D. Material quality standards and testing procedures shall be in accordance with all ASTM standards and testing procedures and shall be the latest requirements.

1. All tests shall be made by a testing laboratory acceptable and approved by the Engineer.

2. One mechanical analysis and one decantation test shall be made of the sand and coarse aggregate proposed for the work.

E. Reinforcing Steel: All steel shall be Grade 60 billet steel conforming to ASTM A-615.

F. Reinforcement shall be as indicated in the latest version of the soils report. The soils report shall take precedence over the construction drawings. Steel reinforcement indicated in construction details is for reference only.

1.03 SUBMITTALS:

A. Shop Drawings: Submit dimensioned and location of construction and expansion joints for concrete slabs. Construction and isolation joints shall be in accordance with the requirements of the latest version of the soils report.

B. Samples: At a location acceptable to the Engineer, the Contractor shall Prepare minimum 4-foot square samples of each required slab to demonstrate methods used for construction of integrally colored concrete with surface retarder finish using material, workmanship, and joint treatments to be used throughout the project. The sample shall include a transverse isolation joint, scoring, and edging.

PART 2: PRODUCTS

2.01 MATERIALS

A. Concrete shall have a minimum compressive strength at 28 days of 2500 psi.

B. Portland Cement shall be Type V, low alkali, and shall conform to ASTM C150.

C. Concrete aggregate shall conform to ASTM C33. All aggregate shall be well graded and selected from a source that has a proven history of non-reactivity. Maximum aggregate size shall be 3/4 inch.

D. Fine aggregate shall consist of washed natural sand having hard, strong, and durable particles and which does not contain more than 2% by weight of clay, loam, shale, alkali, organic matter, or other deleterious substances.

E. Coarse aggregate shall consist of clean, hard, fine grained, sound crushed rock or gravel, which does not contain more than 5% by weight of flat, chip-like, thin, elongated, friable or laminated pieces. Any piece having a major dimension more than two and one-half (2 1/2) times the average thickness and which will adversely affect the strength of the concrete shall not be used.

F. Water shall be clean and free from deleterious amounts of acids, alkalis, and organic materials.

G. Each component of the concrete mix shall be supplied from the same source for the entire project.

2.02 PROPORTIONS AND MIXING

A. The concrete shall be composed of cement, sand and coarse aggregate in the proportions as determined by the testing laboratory. Cost of mix design shall be borne by Contractor.

B. Slump: Adjust quantity of water so concrete at time of placing does not exceed the following slumps when tested according to ASTM C143. Use the minimum water necessary for workability required by part of structure being cast.

Part of Structure	**Maximum Slump Inches**	**Maximum Water-Cement Ratio**
Footings, foundation walls, and mass concrete, not reinforced	4	0.6
Slabs on grade, reinforced and non-reinforced	3	0.45
Reinforced concrete over 8” thick	4	0.5
Reinforced concrete 8” or less thick	4-1/2	0.5
All other concrete	4	0.5

C. The concrete shall be mixed as follows:
1. Each transit mixer shall be equipped with automatic devices for recording the number of revolutions of the drum prior to completing the mixing, with peripheral drum speed of approximately 200 feet per minute.
2. Transit-mix concrete shall be mixed for a period of not less than ten (10) minutes. At least three (3) minutes of the mixing period shall be immediately prior to discharging at the job.
3. Transit-mix concrete shall not be delivered to the work with the total specified amount of water incorporated therein. Two (2) gallons of water per cubic yard shall be withheld, and may be incorporated in the mix, before the concrete is discharged from the mixer truck.
4. The concrete, at time of placing, shall be in such condition that it can be properly placed.

2.03 SAWCUT BLADES

A. Sawcut blade type to be 1/8” wide single blade by Ebbert Company (714) 437-5000 or approved equal.

2.04CONCRETE

A. Concrete Flatwork – 4” Thick

PART 3: EXECUTION

3.01 SURFACE PREPERATION

A. Prepare surface in accordance with the latest version of the geotechnical soils report.

3.02 EDGE FORMS

A. Place form work in accordance with the Concrete Formwork section of the specifications. See related sections.

3.03 PLACING REINFORCEMENT

A. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars" for placing and supporting reinforcement.

B. Place reinforcement in accordance with the latest version of the geotechnical soils report.

C. Clean reinforcement of loose rust and mill scale, earth, ice, and other bond-reducing materials.

D. Arrange, space, and securely tie bars and bars supports to hold reinforcement in position during concrete placement. Maintain minimum cover over reinforcement.

F. Install fabricated bar mats in lengths if practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities or replace units as required before placement.

G. Provide necessary chairs or supports and maintain position of reinforcing bars.

H. Reinforcement to be placed and approved by the engineer prior to pouring of concrete.

3.04 PLACING CONCRETE

A. Before the placing of any concrete, all forms shall be thoroughly cleaned and wet. Concrete shall be poured into forms immediately after it is mixed, so that no separation will occur. No concrete which has stood for more than fifteen (15) minutes after leaving the mixer shall be used. Concrete shall be rejected if not placed in final position within ninety (90) minutes after water is first added to the batch.

B. Maximum free drop of concrete shall not be more than 5’-0”. Use tremies in deep sections.

C. The location of all stoppages shall be approved by the Engineer.

D. The flow surface of the freshly poured concrete shall be level whenever any pour is stopped, and tight dams shall be built as necessary to accomplish this result. Construction joints shall be made only when unavoidable, and then only at the point determined by the Engineer. Details of such joints shall be as directed by the Engineer.

E. Before the placing of any concrete, the surface of the previously poured concrete shall be clean, wet, and free of oil or any other contamination.

F. Install concrete finish work true to lines, dimensions, levels, and finish with smooth unblemished surfaces for exterior finishes specified on Plans.

G. Remove and replace defective concrete work with new materials. Permission to patch any defective area shall not be a waiver of the right of the City to require complete removal of defective work if patching does not restore quality and appearance of work.

H. No advertising impression, stamp, or mark of any description will be permitted on the surface of concrete finish.

3.05 CONCRETE FINISH

A. Compact and tamp concrete as specified to bring 3/8” of mortar to surface, wood float to straight edges and screeds, and apply following finishes. Do not use steel or plastic floats of any kind for initial floating operations. Unless otherwise specified, do not apply finishes until surface water disappears and surface is sufficiently hardened. Remove any bleed water and laitance as it appears.

3.06 ISOLATION AND CONTROL JOINTS

A. Isolation joint material shall be as noted on the Plans.

B. Locate expansion and control joints to least impair the strength and appearance of the structure. In no case place an intersecting construction joint in such a way that two intersecting walks are separated by a construction or control joint at the point of intersection. Transition curves shall be part of a continuous pour of the intersection slab.

1. Isolation joints shall be a maximum of twenty feet (20’) apart, with control joints a maximum of ten feet (10’) apart or ten feet (10’) from isolation

joints. Exception to this is specialty work joints which will be laid out as shown on the Plans.

2. The Contractor shall obtain the Engineer's approval of layout showing proposed location of joints before pouring concrete.

C. Caulking of isolation joints were called for on the Plans shall be done with a non-tracking, multi-part flow type, self-leveling, polyurethane sealant manufactured by Chem-Seat, Grace, 3-H or approved equivalent. Apply silica sand, 100% coverage, to joints before joint sealant has cured. Remove excess sand after joint sealant has fully cured.

1. Color shall match the color of the concrete where the isolation joint occurs unless shown otherwise on the plans.

2. Caulking shall be done by an experienced applicator in a workmanlike manner, in smooth straight runs, after thoroughly cleaning and priming joints.

3. All work shall be done in strict accordance with manufacturer's printed recommendations. Do not permit traffic to travel over seated joints until sealer has fully cured.

D. Sawcut Joints

1. Install sawcut joints as shown on the Drawings using acceptable mechanical concrete saw (no Skill saws) with a new diamond-tipped blade as soon as concrete surface is sufficiently firm not to be torn, damaged by the blade, or cause spalling of the finish. Install sawcut control joints within 48 hours from time of placement.

2. Cut all sawcut joints to a uniform depth and width as called out on the Drawings. All joints shall be clean, smooth, and straight. Use forms or templates as required to achieve a consistent plumb and straight quality. Joints shall end cleanly at edge of slab and shall not extend into adjacent concrete pours.

3. A small radius blade (hand saw) shall be used to extend depth of cut to bring sawcut joints to within ½ of vertical surfaces and connect to perpendicular sawcut joints. Overlapping of sawcut joints into adjacent concrete panels or bands or wavy joint lines are not acceptable and will be rejected. Mis-jointed panels will be rejected.

4. Forming: Form joints and other edges in the fresh concrete using an edging tool to provide a smooth uniform impression for saw cutting. Strike all edges before and after brooming.

5. Sawcut: Sawcut with 1/8-inch-wide saw blades to a depth of ⅓ of the concrete thickness for control or construction joints, or as shown on the drawings. Sawcut to a depth of one (1) inch for decorative (non-control or construction) joint location, or as shown on the drawings.

3.07 QUALITY CONTROL

A. Smoothness tolerance of exterior concrete finish surfaces shall be of such smoothness and evenness that they shall contact the entire length of a 10' straight edge laid in any direction, with an allowable tolerance of 1/8 inch. Any operations necessary to achieve this result shall be performed by the Contractor at no additional cost to the City.

B. Inspections will be provided as necessary. Call for inspection two (2) working days prior to need.

C. The Contractor shall call for inspection during specific phases of construction. They shall include:

1. All form work prior to pouring.
2. All footings prior to pouring.
3. Subgrade prior to pouring.

D. Contractor shall notify the Engineer twenty-four (24) hours prior to pouring any concrete.

E. Any work covered prior to inspection shall be opened to view by the Contractor at his expense.

3.08 TESTING

A. Compression tests of concrete shall be made as required by the Building Code except that compression tests of any grade of concrete shall be made whenever the quantity of that grade used in the project exceeds 25 cubic yards. At least two identical cylinders of each grade of concrete shall be taken of each 100 cubic yards of concrete or fraction thereof placed in the work. The cylinders shall be tested in a testing laboratory and test reports submitted to the City.

B. Storage of test cylinders on the site and after delivery to the testing shall be in accordance with ASTM Designation C31.

1. Should the strength by test fail, the mix shall be adjusted so that the resulting concrete shall comply with the minimum requirements, and all additional expense resulting from such adjustment shall be borne by the Contractor.

2. Should the strength of any grade by test fall below minimum, concrete from the defective pours which is in place may be tested by the core method. If such tests show the concrete to be defective, the concrete shall be removed and replaced or adequately strengthened as required under the governing Code. All expenses involved shall be borne by the Contractor.

3. Testing of concrete shall be at the discretion of the Engineer.

PART 4: PAYMENT

4.01 4" CONCRETE FLATWORK OVER 4" AGG. BASE

Payment for **4" CONCRETE FLATWORK OVER 4" AGG. BASE** will be made at the unit price per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.02 CONCRETE HEADER – 6 INCH

Payment for **CONCRETE HEADER-6 INCH** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.03 CONCRETE HEADER – 10 INCH

Payment for **CONCRETE HEADER-10 INCH** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.04 CONCRETE CURB (8"X12")

Payment for **CONCRETE CURB (8"x12")** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

4.04 WARNING CURB (8"X8")

Payment for **CONCRETE CURB (8"x8")** will be made at the unit price per **linear foot (LF)** as set forth in the bid schedule and shall include full compensation for all labor, materials, tools, equipment, and incidentals for doing all work involved.

END OF SECTION

SECTION 32 13 73 – JOINT SEALANTS

PART 1: GENERAL

1.01 GENERAL CONDITIONS

A. The requirements of the "General Conditions of the Contract" and of Division 1, "General Requirements", shall apply to all work in this Section with the same force and effect as though repeated in full herein.

1.02 DESCRIPTION OF WORK

A. Furnish all materials, labor, transportation, services, and equipment necessary to install landscape joint sealants as indicated on Drawings and as specified herein.

B. Related Sections:
Section 03 10 00: Concrete Formwork
Section 03 30 53: Miscellaneous Cast-in-Place Concrete
Section 32 13 13: Concrete Paving

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions:
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials.

E. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specifications are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

1.03 REFERENCES

AAMA 800 - Specifications and Tests Methods for Sealants.
AAMA 850 - Fenestration Sealants Guide Manual.
ASTM C 661 - Indentation Hardness of Elastomeric Type Sealants by Mean of Durometer.
ASTM C 790 - Use of Latex Sealants.
ASTM C 804 - Use of Solvent-Release Type Sealants.
ASTM C 834 - Latex Sealing Compounds.
ASTM C 919 - Use of Sealants in Acoustical Applications.

ASTM C 920 - Elastomeric Joint Sealants.
ASTM C 962 - Use of Elastomeric Joint Sealants.
ASTM C 1085 - Butyl Rubber-Based Solvent-Release Sealants.
ASTM C 1193 - Standard Guide for Use of Joint Sealants.
ASTM D 1565 - Standard Specification for Flexible Cellular Materials--Vinyl Chloride Polymers and Copolymers (Open-Cell Foam).
ASTM D 1667 - Standard Specification for Flexible Cellular Materials - Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
Fed. Spec. TT-S-001543 Sealing Compound: Silicone Rubber Base.
Fed. Spec. TT-S-001657 - Sealing Compound Single Component, Butyl Rubber Based, Solvent Release Type.
SWI: Sealants - The Professional's Guide.

1.04 SYSTEM PERFORMANCE

A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

1.05 SUBMITTALS

A. In accordance with Division 1.

B. Submit a list of sealants used, data sheets indicating sealant chemical characteristics, manufacturer’s instructions, performance criteria, substrate preparation, limitations, and color availability. Submit which type of sealant installation system proposed for each condition to fulfill sealing requirements.

C. Samples:

1. Submit two samples of each sealant type and color specified for use on project for review and approval by the Engineer.

2. Match sealant color with adjacent paving color. Provide colors from manufacturer’s standard or extended color palette, however, the Engineer’s will not be limited to manufacturer’s standard or extended color palette.

3. Unavailability of a specified color in conjunction with a manufacturer’s product requires providing a product of another specified manufacturer in which designated color is available.

1.06 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing Work of this Section with a minimum of 5 years documented experience.

B. Coordination with Other Trades the installation of sealant and caulking materials of this section with adjacent work of other trades.

C. Obtain manufacturer's local representative supervision for the following:

1. Inspection of Work just prior to start of sealant application.
2. Provide initial instruction at start of Work, to ensure that physical conditions which could result in defective work are properly corrected before materials are applied.
3. Instruct personnel in correct procedures.
4. Verify that proper procedures are being followed.
5. Notify manufacturer at least 72 hours prior to time it is required.
6. Failure or refusal of manufacturer’s local representative to provide inspection and supervision required by this Section constitutes grounds for non-acceptability of materials manufactured by it even though such materials have been specified or approved.

1.07 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to Project in original factory wrappings and containers, clearly labeled with identification of manufacturer, brand name, and lot number.

B. Store materials in original undamaged packages and containers, inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.

1.08 PROJECT CONDITIONS

A. Conform to sealant manufacturer's recommendations for temperatures (ambient, surface and material), moisture, humidity, and similar factors that affect installation of joint sealant materials.

B. Install joint sealant materials at times when temperatures of surface materials are approximately at median of service temperature extremes.

1.09 ENVIRONMENTAL REQUIREMENTS

A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

1.10 COORDINATION

A. Coordinate Work with sections of work referenced in this Section.

1.11 WARRANTY

A. Include coverage for installed sealants and accessories which fail to achieve airtight seal, watertight seal, exhibit loss of adhesion, cohesion, or do not cure for a period of 5 years from date of Final Acceptance by the Owner's Authorized Representative.

PART 2: PRODUCTS

2.01 SEALANT TYPES

A. Type 1 (vertical joint applications):

1. Two-part, non-sag polyurethane sealant conforming to ASTM C 920, Type M, Grade NS, Use NT, M, A, and O for non-traffic, vertical applications not subject to service temperatures in excess of 150°F. or joint movement in excess of ±50%.

2. Acceptable Manufacturer's:

a. Vulkem 922; Mameco International, Inc.

b. Dynatrol II; Pecora Corp.

c. Sikaflex-2C NS; Sika Corporation.

d. Sonolastic NP 2; Sonneborn Building Products.

e. Dymeric 511; Tremco.

B. Type 3 (horizontal joint applications): Two-part, non-sag polyurethane sealant conforming to ASTM C 920-87, Type M, Grade NS, Class 25, Use T, M, A.

1. Acceptable Manufacturer's:

a. Dynatred; Pecora Corp.

b. Vulkem 227; Vulkem Corp.

c. THC-901; Tremco.

d. 2C; Sika Corporation.

e. Sonolastic SL-2; Sonneborn Building Products.

2.02 ACCESSORY MATERIALS

A. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

B. Masking Tape: Provide masking tape on horizontal surfaces prior to installing sealant.

1. Acceptable Manufacturers:
   a. 3M; Longmask.

C. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

D. Backer Rod:

1. Horizontal Joints: 9 lb. density, non-gassing, closed-cell polyethylene rod. Oversize rod to 25 to 30% of joint width.

2. Vertical Joints: 2 lb. density, non-gassing, closed-cell polyethylene rod. Oversize rod to 25 to 30% of joint width.

3. Acceptable Manufacturers:
   a. Sof-Rod; Sonneborn Building Products.
   b. Dual Rod; Nomaco.
   c. NMC Sof Rod; ITP.

PART 3; EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces and joint openings are ready to receive Work.

B. Verify that backer rod and bond breaker tape are compatible with sealant.

3.02 JOINT PREPARATION

A. Remove loose materials and foreign matter from joint which might impair adhesion of backer rod and sealant.

B. Clean and prime joints in accordance with manufacturer's instructions. Do not spill primer onto visible concrete. Immediately wipe off primer if spilling occurs.

3.03 BACKER ROD INSTALLATION

A. Allow primer to dry before installing backer rod.

B. Measure joint dimensions and size backer rod to be larger than 25 to 30% of the joint to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.

C. Do not leave gaps between ends of backer rod.

D. Do not stretch, twist, puncture, or tear backer rod.

3.04 SEALANT INSTALLATION

A. Provide masking tape along joint edges prior to installing sealant.

B. Install sealant in accordance with sealant manufacturer's instructions.

C. Install sealant by proven techniques that result in sealant directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

D. Install sealants at same time sealant backings are installed.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

G. Tooling:

1. Tool joints concave.
2. Immediately after sealant application and prior to time curing begins, tool sealant to form smooth, uniform beads, eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint.
3. Remove excess sealant from adjacent joint surfaces.
4. Do not use tooling agents that discolor sealant or adjacent surfaces or are not approved by sealant manufacturer.

3.05 CLEANING

A. Clean adjacent soiled surfaces.

3.06 PROTECTION OF FINISHED WORK

A. Protect sealants until fully cured.

PART 4: PAYMENT

4.01 JOINT SEALANT

Joint Sealant will be considered included in other items of work and no additional payment will be made.

END OF SECTION

SECTION 32 15 40 - DECOMPOSED GRANITE SURFACING

PART 1 – GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all Decomposed Granite Paving work operations. Provide all labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. RELATED SECTIONS:.

1.02 REFERENCES

A. ASTM C136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.

1.03 SUBMITTALS

A. Samples for Verification:

1. Submit a (3) Three-pound sample of each type and color of decomposed granite surfacing material.

B. Certification:

1. Installer Qualifications.

1.04 QUALITY ASSURANCE

A. Single Source Responsibility: Obtain each type of decomposed granite surfacing from single source.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Bulk Materials: Each load of decomposed granite surfacing material arriving at the job site in bulk shall be accompanied by a delivery ticket containing the following minimum information:

1. Quarry of origin.
2. Amount, weight, and type of material.
3. Brand name and manufacturer’s identification.

D. Protect decomposed granite surface materials from contamination until ready for installation. Store under cover.

1.04 PROJECT CONDITIONS

A. Surfaces to receive decomposed granite surfacing shall be frost free and free of oil or any other foreign matter, which may impair the proper installation of the surfacing system.

B. Perform work in dry weather when subgrade is sufficiently stable to be properly compacted.

PART 2 – PRODUCTS

2.01 DECOMPOSED GRANITE SURFACING MATERIALS

A. Decomposed Granite and Crushed Stone Aggregate: Provide high quality materials consisting of sound, angular, durable stone particles, free from clay lumps, organic materials, frozen materials, or other deleterious substances.

B. Gradation: Manufacturer's standard mix of well-graded materials in accordance with ASTM C136. Blends of coarse sand and rock dust are not acceptable.

C. Color: As indicated in construction drawings within construction materials schedule or equivalent in color.

D. Binder / Stabilizer shall be used.

F. Decomposed Granite shall be delivered with packing receipts indicating supplier, color, and product name as indicated on the Plans.

E. Decomposed Granite per plan.

PART 3 – EXECUTION

3.02 PREPARATION

A. Excavation: Excavate to depth required so edges of decomposed granite surfacing will match adjacent grades and have a maximum cross-slope of 2 percent. Ensure edges and bottom of excavation are in a smooth and even line.

B. Subgrade Preparation: Plow, harrow and mix the entire surface of the in-place subgrade to a depth of at least 6-inches. After the material has been thoroughly

mixed, the subgrade shall be brought to line and grade and compacted to 90% of the maximum laboratory dry density.

3.03 INSTALLATION OF SUBGRADE

A. Subgrade: Proof-roll the subgrade with heavy pneumatic-tired equipment to locate unstable areas and to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, and replace with compacted backfill or fill as directed.

2. The surface of the completed subgrade shall be bladed to a smooth and uniform texture.

3. The finished subgrade shall be uniform and free from deleterious debris such as organic materials, nails, stones, and loose soil.

B. Compaction: Compact each lift of the subgrade, and final finish decomposed granite surfacing materials with a one to three-ton roller or compactor. In small areas that are difficult to access with compaction equipment, hand tamping may be performed with multiple passes to achieve the required density.

1. Lightly spray surface area following compaction. Do not disturb aggregate surface with spray action.

3.04 INSTALLATION OF DECOMPOSED GRANITE SURFACING

A. Spread decomposed granite surfacing material in 3 to 4-inch lifts. Spread evenly and smoothly before compacting. Allow for 20-25% compaction. Screed if possible.

B. Wet the mix to ensure water has penetrated the full depth of the decomposed granite surfacing material, and roll each lift to form a uniform, smooth surface with a cross slope of 2% maximum. Do not compact to greater than 20-25% relative compaction. Compact each lift to a minimum 90% density.

C. Grade and smooth to the required elevation; compact final lift with 1–3-ton drum roller or compactor.

D. Surface shall follow grades per plans. Remove crown, allow 1-2% cross pitch.

E. Completed surface shall be of consistent quality and shall not have depressions or humps greater than 1/4-inch in 10-feet.

F. Do not plant trees, shrubs, and ground cover into decomposed granite.

G. Remove and replace decomposed granite paving that is damaged, defective, or does not meet the requirements of this section.

3.05 INSTALLATION TOLERANCES

A. Decomposed Granite Surfacing Thickness: Allow for 20-25% compaction.

B. Decomposed Granite Surfacing Smoothness: Produce a surface smoothness within 1/4-inch tolerance when measured with a 10-foot straightedge.

1. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowed variance from template is 1/4-inch.

3.06 CLEAN-UP AND PROTECTION

A. Thoroughly clean all areas where work has occurred. Remove from site excess material, debris, and rubbish.

B. Take all precautions necessary to protect completed work until Substantial Completion of project.

PART 4: PAYMENT

4.01 DECOMPOSED GRANITE w/ SOIL STABILIZER (3" LAYER) AND 4" OF AGGREGATE SUBBASE

Payment for **DECOMPOSED GRANITE w. STABLIZER (3" LAYER) AND 4" OF AGGREGATE SUBBASE** will be made at the contract unit price per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

END OF SECTION

SECTION 032 80 00 - IRRIGATION

PART 1 - GENERAL

1.01 Summary

A. It is the intent of the Specifications and Drawings that the finished system is complete in every respect and shall be ready for operation satisfactory to the City.

B. The work shall include all materials, labor, services, transportation, and equipment necessary to perform the work as indicated on the Drawings, in these Specifications, and as necessary to complete the contract.

C. Related Sections.
Section 32 92 23: Sodding
Section 32 90 00: Planting

D. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the city.

1.02 Construction Drawings

A. Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, sleeves, etc. which may be required. Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work, accordingly, furnishing such fittings, etc. as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems and any obstacles existing or proposed, including but not limited to building footings, underground utility structures, utility lines, architectural features, trees (new or existing), and buried boulders known or unknown.

B. All work called for on the Drawings by notes or details shall be furnished and installed whether specifically mentioned in the Specifications. When an item is shown on the Plans but not shown on the Specifications or vice versa, it shall be deemed to be as shown on both. The Engineer shall have final authority for clarification.

C. Do not willfully install the irrigation system as shown on the Drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been considered in engineering. Such

obstructions or differences shall be brought to the attention of the Engineer as soon as detected. In the event this notification is not performed, pay, at Contractor's sole cost, for any revision necessary.

1.03 Quality Assurance

A. Provide at least one English speaking person who shall be always present during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the manufacturer's recommended methods of installation and who shall direct all work performed under this Section.

B. Manufacturer's directions and detailed Drawings shall be followed in all cases where the manufacturer of articles used furnishes directions covering points not shown in the Drawings and Specifications.

C. All local, municipal, and state laws, rules and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these Specifications, and their provisions shall be carried out by the Contractor. Anything contained in these Specifications shall not be construed to conflict with any of the above rules and regulations of the same. However, when these Specifications and Drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above rules and regulations, the provisions of these Specifications and Drawings shall take precedence.

D. All materials supplied for this project shall be new and free from any defects. All defective materials shall be replaced immediately at no additional cost to City.

E. Obtain the required licenses and permits including payments of charges and fees, give required notices to public authorities, verify permits secured or arrangements made by others affecting the work of this Section.

1.04 Submittals

A. Materials List:
   1. After award of contract and before any irrigation system materials are delivered to the job site, submit to the Engineer a complete list of all irrigation systems, materials, or processes proposed to be furnished and installed as part of this contract.
   2. Show manufacturer's name and catalog number for each item, furnish complete catalog cuts and technical data, furnish the manufacturer's recommendations as to the method of installation.
   3. No substitutions will be allowed without prior written acceptance by the Engineer.

4. Manufacturer's warranties shall not relieve the Contractor of its liability under the guarantee. Such warranties shall only supplement the guarantee.

B. Substitutions:
1. If the Contractor wishes to substitute any equipment or materials for equipment or materials listed on the irrigation Drawings and Specifications, it may do so by providing the following information to the Engineer for approval. 2.Provide a written statement indicating the reason for making the substitution.
2. Provide catalog cut sheets, technical data, and performance information for each substitute item.
3. Provide in writing the difference in installed price if the item is accepted.

1.05 Existing Conditions

A. Verify and be familiar with the locations, size, and detail of points of connection provided as the source of water and electrical supply, connection to the irrigation system.

B. Irrigation design is based on the available static water pressure shown on the Drawings. Verify static water on the project prior to the start of construction. Should a discrepancy exist, notify the Engineer authorized representative prior to beginning construction.

C. Prior to cutting into the soil, locate all cables, conduits, sewer septic tanks, and other utilities as are commonly encountered underground, and it shall take proper precautions not to damage or disturb such improvements. If a conflict exists between the obstacles and the proposed work, promptly notify the Engineer who will arrange for relocations. Proceed in the same manner if a rock layer or any other such conditions are encountered.

D. Protect all existing utilities and features to remain on and adjacent to the project site during construction. Repair, at its sole cost, all damage resulting from its operations or negligence.

1.06 Inspections

A. Permit the Engineer to visit and always inspect any part of the work and shall provide safe access for such visits.

B. Where the Specifications require work to be tested by the Contractor, it shall not be covered over until accepted by the Engineer. Notify the Engineer, a minimum of 48 hours in advance of where and when the work is ready for testing. Should any work be covered without testing or acceptance, it shall be, if so ordered, uncovered at the Contractor's sole expense.
C. Inspections will be required for the following at a minimum:

1. System layout
2. Pressure test irrigation main line (Six hours at 125 PSI) lateral lines (2 hours at 100 psi).
3. Coverage test for all spray irrigation areas prior to start of weed abatement period. (Refer to Section 02900 Landscaping for Weed Abatement Period)
4. Final inspection prior to starts of maintenance period
5. Final acceptance

D. Site observations and testing will not commence without the record Drawings as prepared by the irrigation contractor. Record Drawings must complete and up to date for each site visit.

E. Work that fails testing and is not accepted will be re-tested. Hourly rates and expenses of the Engineer for re-inspection or re-testing will be paid by the Contractor at no additional expense to City.

1.07 Storage and Handling

A. Use all means necessary to protect irrigation system materials before, during, and after installation and to protect the installation work and materials of all other trades. In the event of damage, immediately make all repairs and replacements necessary to the acceptance of the Engineer and at no additional cost to the City.

B. Exercise care in handling, loading, unloading, and storing plastic pipe and fittings under cover until ready to install. Transport plastic pipe only on a vehicle with a bed long enough to allow the pipe to lay flat to avoid undue bending and concentrated external load.

1.08 Cleanup and Disposal

A. Dispose of waste, trash, and debris in accordance with applicable laws and ordinances and as prescribed by authorities having jurisdiction. Do not bury waste material and debris on the site. Burning of trash and debris will not be permitted. Remove and dispose of rubbish and debris generated by his work and workmen at frequent intervals or when ordered to do so by the Engineer.

B. At the time of completion, the entire site will be cleared of tools, equipment, rubbish, and debris which shall be disposed of off-site in a disposal area that is fully and legally licensed.

1.09 Turnover Items

A. Drawings of Record:
1. Record accurately on one set of Drawings all changes in the work constituting departures from the original Drawings.

2. The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the City. Prior to final inspection of work, submit record Drawings to the Engineer.
3. Dimensions from/to permanent points of reference such as buildings, sidewalks, curbs, etc. shall be shown. Data on record Drawings shall be recorded on a day-to-day basis as the project is being installed. All lettering on Drawings shall be minimum 1/8 inch in size.
4. For systems where a flow sensor has been installed, provide flow sensor gallons per minute (GPM) data for all irrigation control valves.
5. Show locations and depths of the following items:
    a. Point of connection (including water P.O.C., master control valves, quick couplers, etc.)
    b. Routing of sprinkler pressure lines (dimensions shown at a maximum of 100 feet along routing)
    c. Isolation valves
    d. Automatic remote-control valves
    e. Quick coupling valves
    f. Routing of control wires
    g. Irrigation controllers
    h. Location of drip zones, flush valves, and air relief valves
    i. Related equipment (as may be directed)

6. Always maintain record Drawings on site upon completion of work. Transfer all as-built information and dimensions to reproducible mylar prints or per the direction of the Engineer.

B. Equipment:
1. Supply the following items:
    a. Two (2) wrenches for disassembly and adjustment of each type of sprinkler head used in the irrigation system.
    b. Two (2) 30-inch sprinkler keys for manual operation of control valves.
    c. Two (2) quick coupler keys with a 1" bronze hose bib, bent nose type with hand wheel and two coupler lid keys.
    d. Two (2) valve box cover key or wrench.
    e. Four (4) extra sprinkler heads of each size and type.
    f. 250 feet of additional drip line and 100 feet blank roll.
    g. 200 drip line staples.

2. The above equipment shall be turned over to the Engineer at the final inspection.

1.10 Completion

A. At the time of the pre-maintenance period inspection, the Engineer and governing agencies will inspect the work and, if not accepted, prepare a list of items to be

completed by the Contractor. At the time of the post-maintenance period or final inspection the work will be re-inspected, and final acceptance will be in writing by the Engineer.

B. The City Engineer shall have final authority on all portions of the work.

C. After the system has been completed, the Contractor shall instruct City's authorized representative in the operation and maintenance of the irrigation system and shall furnish a complete set of operating and maintenance instructions.

D. Without any additional expense to the City, repair any settling of trenches, which may occur during the one-year period following acceptance, to the City's satisfaction. Repairs shall include the complete restoration of planting, paving or other improvements determined damaged as the result of work.

E. Program the irrigation controller for the maintenance period/plant establishment to the satisfaction of the Engineer.

1.11 Guarantee

A. The entire irrigation system shall be unconditionally guaranteed against all defects and fault of material and workmanship, including settling of backfilled areas below grade, for a period of one (1) year following the filing of the Notice of Completion. The guarantee shall be valid unless existing equipment utilized on the project fails within the guarantee period.

B. Should any problem with the irrigation system be discovered within the guarantee period, and at no additional expense to City, correct it within ten (10) calendar days after receipt of written notice from City. When the nature of the repairs as determined by the City constitute an emergency (i.e. broken pressure line) the City may proceed to make repairs at the Contractor's expense. Any and all damages to existing improvement resulting either from faulty materials or workmanship, or from the necessary repairs to correct same, shall be repaired to the satisfaction of the owner by the Contractor, all at no additional cost to the City.

C. Guarantee shall be submitted on Contractors own letterhead as follows:

1. GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM
We hereby guarantee that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the Drawings and Specifications, ordinary wear and tear and unusual abuse, or neglect excepted. We shall repair or replace any defective material during the period of one year after date of filing of the Notice of Completion and repair or replace any damage resulting from the repairing or replacing of

such defects at no additional cost to the owner. We shall make such repairs or replacements within 10 calendar days following written notification by the owner. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from owner, we authorize the owner to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefor upon demand.

PART 2 - MATERIALS

2.01 Summary

A. Use only new materials of the manufacturer, size and type shown on the Drawings and Specifications. Materials or equipment installed or furnished that do not meet City standards will be rejected and shall be removed from the site at no expense to the City.

2.02 Pipe

A. All pressure supply lines downstream of backflow prevention unit shall be Class 315 solvent weld PVC. Piping shall conform to ASTM 1785.

B. All non-pressure lines downstream of the remote-control valve shall be Schedule 40 solvent weld PVC conforming to ASTM D1785.

2.03 Plastic Pipe and Fittings

A. Pipe shall be marked continuously with manufacturer's name, nominal pipe size, schedule or class, PVC type and grade, National Sanitation Foundation approval, Commercial Standards designation, and date of extrusion.

B. All plastic pipes shall be extruded of an improved PVC virgin pipe compound in accordance with ASTM D2241 or ASTM D1785.

C. All solvent weld PVC fittings shall be standard weight Schedule 40 and shall be injection molded of an improved virgin PVC fitting compound. Slip PVC fittings shall be the "deep socket" bracketed type. Threaded plastic fittings shall be injection molded. All tees and ells shall be side gated. All fittings shall conform to ASTM D2466.

D. All threaded nipples shall be standard weight Schedule 80 with molded threads and shall conform to ASTM D1785.

E. All solvent cementing of plastic pipe and fittings shall be a two-step process, using primer and solvent cement applied per the manufacturer's recommendations. Cement shall be of a fluid consistency, not gel-like or ropy.

Solvent cementing shall be in conformance with ASTM D2564 and ASTM D2855.

F. When connection is plastic to metal, female adapters shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be non-lead base teflon paste, tape, or approved equal.

2.04 Backflow Prevention Unit

A. The backflow prevention unit shall be a reduced pressure type vacuum breaker of the size, manufacturer and model number as indicated on the Drawings.

2.05 Valves

A. Gate Valves
1. Gate valves shall be of the manufacturer, size, and type indicated on the Drawings.
2. Gate valves shall be constructed of a bronze body, gate and stem with a malleable iron hand wheel. Gate valves shall have threaded connections.
3. All gate valves shall have a minimum working pressure of not less than 150 psi and shall conform to AWWA standards.

B. Quick Coupler Valves:
1. Quick coupler valves shall be of the manufacturer, size, and type indicated on the Drawings.
2. Quick coupler valves shall be brass with a wall thickness guaranteed to withstand normal working pressure of 150 psi without leakage. Valves shall have 1" female threads opening at base, with two-piece body. Valves shall be operated only with a coupler key designed for that purpose. Coupler key shall be inserted into valve and a positive, watertight connection shall be made between the coupler key and valve.

C. Automatic Control Valves:
1. Automatic control valves shall be of the manufacturer, size, and type indicated on the Drawings.
2. The contractor shall verify with the manufacturer that the solenoids are compatible with the irrigation controller and wiring prior to purchase.
3. Automatic control valves shall be electrically operated.

D. Ball Valves
1. Ball valves shall be of the manufacturer, size, and type indicated on the Drawings
2. Manual ball valves shall be PVC w/EPDM O-Rings and socket end connectors.
3. Manual ball valves shall have thermoplastic gear driven operating nut rotates 360° to achieve a 90° turn of the ball.

2.06 Valve Boxes

A. Valve boxes shall be fabricated from a durable, weather-resistant plastic material resistant to sunlight and chemical action of soils.

B. The valve box cover shall be green in color and secured with a hidden latch mechanism or bolts. Where reclaimed water is being utilized, or planned for the future, purple “reclaimed water” valve boxes shall be installed.

C. The cover and box shall be capable of sustaining a load of 1,500 pounds.

D. Valve box extensions shall be by the same manufacturer as the valve box.

E. Automatic control valve boxes shall be rectangular and sized to fit the components, see drawings for further information. Valve box covers shall be marked "RCV" with the valve identification number "heat branded" onto the cover in 2-inch-high letters / numbers.

F. Gate, Ball, and quick coupler valve boxes shall be circular and sized to fit the components, see drawings for further information. Valve box covers shall be marked with either "GV" or “BV” or "QCV" "heat branded" onto the cover in 2-inch-high letters.

2.07 Automatic Controller

A. Automatic controller shall be of the manufacturer, size, and type indicated on the drawings.

B. Controller wall mount shall be of the manufacturer, size, and type indicated on the drawings.

2.08 Electrical

A. All electrical equipment shall be NEMA Type 3, waterproofed for exterior installations.

B. All electrical work shall conform to local codes and ordinances.

2.09 Low Voltage Control Wiring

A. Remote control wire shall be direct-burial AWG-UF type, size as indicated on the Drawings, and in no case smaller than 14 gauge.

B. Connections shall be Spears DS-400 Dry-Spliced (Pre-filled).

C. Ground wires shall be white in color. Control wires shall be red (where two or more controllers are used, the control wires shall be a different color for each controller. These colors shall be noted on the "Record Drawings" Plans located on controller door).

2.10 Irrigation Heads

A. Irrigation heads shall be of the manufacturer, size, type, with radius of throw, operating pressure, and discharge rate indicated on the Drawings.

B. Irrigation heads shall be used as indicated on the Drawings.

PART 3 - EXECUTION

3.01 Site Conditions

A. Inspections:
1. Prior to all work of this Section, carefully inspect the installed work of all other trades, and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

B. Discrepancies:
1. In the event of discrepancy, immediately notify the Engineer.
2. Do not proceed with installation in areas of discrepancy until all discrepancies have been resolved.

C. Grades:
1. Before starting work, carefully check all grades to determine that work may safely proceed, keeping within the specified material depths with respect to finish grade.
2. The Engineer shall accept final grades before work on this Section will be allowed to begin.

D. Field Measurements:
1. Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design. Coordinate the installation of all irrigation materials with all other work.
2. All scaled dimensions are approximate. Check and verify all size dimensions prior to proceeding with work under this Section.
3. Exercise extreme care in excavating and working near existing utilities. Repair damages to utilities, which are caused by Contractor’s operations or neglect, at no additional cost to City.

E. Layout:
   1. Prior to installation, stake out all pressure supply lines, routing and location of sprinkler heads, valves, backflow preventer.
   2. Layout irrigation system and make minor adjustments required due to differences between site and Drawings. Where piping is shown on Drawings under paved areas, but running parallel and adjacent to planted areas, install the piping in the planted areas.

F. Water Supply:
   1. Connections to, or the installation of, the water supply shall be at the locations shown on the Drawings. Minor changes caused by actual site conditions shall be made at no additional expense to the City.

3.02 Trenching

A. Do NOT trench within 12' of an existing tree without consulting a certified arborist and the City Engineer.

B. Excavations shall be straight with vertical sides, even grade, and support pipe continuously on bottom of trench. Trenching excavation shall follow layout indicated on Drawings to the depths below finished grade and as noted. Where lines occur under paved area, these dimensions shall be considered below subgrade.

C. Provide minimum cover of 24 inches on pressure supply lines.\

D. Provide minimum cover of 24 inches for control wires.

E. Provide minimum cover of 12 inches for non-pressure lines.

F. Pipes installed in a common trench shall have a 6-inch minimum space between pipes.

3.03 Backfilling

A. Backfill material on all lines shall be the same as adjacent soil free of debris, litter, and rocks over 1/2 inch in diameter.

B. Backfill shall be tamped in 4-inch layers under the pipe and uniformly on both sides for the full width of the trench and the full length of the pipe. Backfill materials shall be sufficiently damp to permit thorough compaction, free of voids. Backfill shall be compacted to 90% relative compaction and shall conform to adjacent grades.

C. Flooding in lieu of tamping is not allowed.

D. Under no circumstances shall truck wheels be used to compact backfill.

E. Provide sand backfill a minimum of 6 inches over and under all piping under paved areas.

3.04 Piping

A. Piping under existing pavement may be installed by jacking, boring, or hydraulic driving. No hydraulic driving is permitted under asphalt pavement.

B. Cutting or breaking of existing pavement is not permitted.

C. Carefully inspect all pipe and fittings before installation, removing dirt, scale, burrs, and reaming. Install pipe with all markings up for visual inspection and verification.

D. Remove all dented and damaged pipe Sections.

E. All lines shall have a minimum clearance of 6 inches from each other and 12 inches from lines of other trades.

F. Parallel lines shall not be installed directly over each other.

G. In solvent welding, use only the specified primer and solvent cement and make all joints in strict accordance with the manufacturer's recommended methods including wiping all excess solvent from each weld. Allow solvent welds at least 15 minutes setup time before moving or handling and 24 hours curing time before filling.

H. PVC pipe shall be installed in a manner, which will provide for expansion and contraction as recommended by the pipe manufacturer.

I. Center load all plastic pipe prior to pressure testing.

J. All threaded plastic-to-plastic connections shall be assembled using Teflon tape or Teflon paste.

K. For plastic-to-metal connections, work the metal connections first. Use a non-hardening pipe dope an all-threaded plastic-to-metal connections, except where noted otherwise. All plastic-to-metal connections shall be made with plastic female adapters.

3.05 Control Wiring

A. Low voltage control wiring shall occupy the same trench and shall be installed along the same route as the pressure supply lines whenever possible.

B. Where more than one wire is placed in a trench, the wiring shall be taped together in a bundle at intervals of 10 feet. Bundle shall be secured to the mainline with tape at intervals of 20 feet.

C. All connections shall be of an approved type and shall occur in a valve box. Provide an 18-inch service loop at each connection.

D. An expansion loop of 12 inches shall be provided at each wire connection and/or directional change, and one of 24 inches shall be provided at each remote-control valve.

E. A continuous run of wire shall be used between a controller and each remote-control valve. Under no circumstances shall splices be used without prior approval.

3.06 Valves

A. Automatic control valves, quick coupler, and gate valves shall be installed in the approximate locations indicated on the Drawings. Ball Valves are not shown are drawings, they are to be installed one ball valve per every automatic control valve manifold.

B. Valve shall be installed in shrub areas whenever possible.

C. Install all valves as indicated in the detail Drawings.

D. Valves to be installed in valve boxes shall be installed one valve per box.

3.07 Valve Boxes

A. Valve boxes shall be installed in shrub areas whenever possible.

B. Each valve box shall be installed on a foundation of 3/4 inch gravel backfill; 3 cubic feet minimum. Valve boxes shall be installed with their tops 1/2 inch above the surface of surrounding finish grade in lawn areas and 2 inches above finish grade in ground cover areas.

3.08 Irrigation Heads

A. Irrigation heads shall be installed as indicated on the Drawings.

B. Spacing of heads shall not exceed maximum indicated on the Drawings.

C. Riser nipples shall be of the same size as the riser opening in the sprinkler body.

3.09 Miscellaneous Equipment

A. Install all assemblies specified herein according to the respective detail Drawings or Specifications, using best standard practices.

B. Quick coupler valves shall be set approximately 12 inches from walks, curbs, header boards, or paved areas where applicable.

3.10 Flushing the System

A. Prior to installation of irrigation heads, the valves shall be opened, and a full head of water used to flush out the lines and risers.

B. Irrigation heads shall be installed after flushing the system has been completed.

3.12 Adjusting the System

A. Adjust valves, align heads, and check the coverage of each system prior to coverage test.

B. If it is determined by the Engineer that additional adjustments or nozzle changes will be required to provide proper coverage, make all necessary changes or adjustments prior to any planting.

C. The entire system shall be operating properly before any planting operations commence.

D. Automatic control valves shall be adjusted so that the irrigation heads and drip tubing operate at the pressure recommended by the manufacturer.

3.13 Testing and Observation

A. Do not allow or cause any of the work of this Section to be covered up or enclosed until it has been observed, tested, and accepted by the Engineer.

B. Notify the Engineer a minimum of 48 hours in advance where and when the work is ready for testing.

C. When both drip and spray irrigation systems are completed, perform a coverage test of each system in its entirety to determine if the water coverage for the planted areas is complete and adequate in the presence of the Engineer.

D. Furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from the Plans, or where the system has been willfully installed as indicated on the Drawings when it is obviously inadequate, without bringing this to the attention of the Engineer. This test shall be accepted by the Engineer and accomplished before starting any planting.

E. Final inspection will not commence without record Drawings as prepared by the Contractor.

3.14 Maintenance

A. During the maintenance period adjust and maintain the irrigation system in a fully operational condition providing complete irrigation coverage to all intended plantings.

3.15 Completion Cleaning

B. Clean-up shall be made as each portion of the work progresses. Refuse and excess dirt shall be removed from the site, all walks and paving shall be broomed, and any damage sustained on the work of others shall be repaired to original conditions.

PART 4 –PAYMENT

4.01 AUTOMATIC IRRIGATION SYSTEM

Payment for Automatic Irrigation System shall include all materials, labor, services, and irrigation equipment, such as rotary spray nozzles, spray heads, drip line tubing, drip emitters, valves, PVC piping, sleeving, backflow preventer, quick couplers and irrigation controller and will be made at the **lump sum (LS)** contract price as set forth in the bid schedule.

END OF SECTION

SECTION 32 90 00 - LANDSCAPING

PART 1: GENERAL

1.01 DESCRIPTION

A. The general requirements apply to all Landscaping work operations. Provide labor, materials, tools, transportation, and all incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections.

Section 32 84 00: Irrigation

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions.

1. City: City of South Pasadena

2. Engineer: City Engineer, or the City Engineer's designated representative.

3. ASTM: American Society of Testing Materials

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Manufacturer's directions, specifications and detailed drawings will be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this section will be done to the satisfaction of the City and the decision by the City as to the true construction meaning of the Plans and Specifications will be final.

D. All drop slips for landscape materials (including plants and fertilizers) shall be given to the Engineer.

1.03 ENVIRONMENTAL REQUIREMENTS

A. Do not install landscape materials when ambient temperatures may drop below 45 degrees F (12 degrees C) or above 95 degrees F (39 degrees C).

B. Do not install landscape materials when wind velocity exceeds 30 mph (48 k/hr).

PART 2: PRODUCTS

2.01 REFERENCES

A. ANSI Z60.1 - Nursery Stock.

B. California State Department of Agriculture - Regulations for nursery inspections, rules, and grading.

2.02 TREES

A. Trees shall be grown by an established nursery having been in the business of growing trees, a minimum of five (5) years. At the option of the Engineer, trees shall be inspected and tagged at the nursery prior to shipment to the planting site.

Trees: All trees shall be of the specified container size and of the species specified.

B. Tree species indicated or listed in the "Plant Legend" on the Plans, shall be in accordance with the Standards of Practice recommended by the American Association of Nurserymen. Except for names not covered therein, the established custom of the nursery shall be followed.

C. Condition of trees shall be in accordance with the California State Department of Agriculture's regulations for nursery inspections, rules, and grading and shall be symmetrical, typical for variety and species, sound, healthy, vigorous, free from plant disease, insect pests, or their eggs, and shall have healthy normal root systems, well filling their containers, but not to the point of being root bound.

D. Trees shall not be pruned prior to delivery, except as authorized by the City. In no case shall trees be topped before delivery.

E. The size of the trees shall correspond with that normally expected for species and variety of commercially available nursery stock, or as specified on the Plans. The minimum acceptable size of all trees, measured before pruning with the branches in normal position, shall conform with the measurements, if any, specified on the Plans. Trees larger in size than specified may be used with the approval of the City, but the use of larger plants will not serve as the basis for a change order.

F. All trees shall be subject to the inspection and acceptance of the City before planting. Trees will be inspected for size and condition of root growth, insects, injuries and defects and will be tagged at the nursery prior to delivery to the site.

2.04 FERTILIZERS, BACKFILL MATERIALS AND WATER

A. General.

1. Fertilizing and backfill materials shall comply with the applicable requirements of the State Food and Agricultural Code. All materials shall be packaged first grade, commercial quality products identified as to source, type of material, weight, and manufacturer's guaranteed analysis. Fertilizing and backfill material shall not contain toxic ingredients or fillers in quantities harmful to human life, animals, or plants.

2. Furnish a Certificate of Compliance stating that the material substantially meets the specifications.

3. Backfill Mix:

a. 6 parts by volume on-site soil
b. 4 parts by volume composted organic amendment
c. 18 lb. Gro-Power per cubic yard of mix
d. 2lbs Iron Sulphate per cubic yard of mix

B. Commercial Fertilizer.

Commercial fertilizer shall be a palletized or granular product having a chemical analysis as specified on the Plans or in the Specifications. Commercial fertilizer shall be free-flowing material delivered in unopened sacks. Material which becomes caked or otherwise damaged shall not be used.

C. Composted Organic Soil Amendment.

1. Humus material shall have an acid-soluble ash content of no less than 5% and no more than 20%. Organic matter shall be at least 50% on a dry weight basis.

2. The pH of the material shall be between 6 and 7.5.

3. The salt content shall be less than 10 millimho/cm @ 25° C. in a saturated paste extract.

4. Boron content of the saturated extract shall be less than 1.0 parts per million.

5. Silicon content (acid-insoluble ash) shall be less than 50%.

6. Organic matter shall be at least 50% on a dry weight basis.

7. Calcium carbonate shall not be present if to be applied on alkaline soils.

8. Types of acceptable products are composts, manures, mushroom composts, straw, alfalfa, peat mosses etc. low in salts, low in heavy metals, free from weed seeds, free of pathogens and other deleterious materials.

9. Composted wood products are conditionally acceptable [stable humus must be present]. Wood based products are not acceptable which are based on red wood or cedar.

10. Sludge-based materials are not acceptable.

11. Carbon: nitrogen ratio is less than 25:1.

12. The compost shall be aerobic without malodorous presence of decomposition products.

13. The maximum particle size shall be 0.5 inch, 80% or more shall pass a No. 4 screen for soil amending. The maximum particle size shall be 0.25 inch for hydroseeding.

Maximum total permissible pollutant concentrations in amendment in parts per million on a dry weight basis:

arsenic	20	copper	150	selenium	50
cadmium	15	lead	200	silver	10
chromium	300	mercury	10	vanadium	400
cobalt	50	molybdenum	20	zinc	250
nickel	100				

D. Water.

1. Water shall be clean, fresh, and free of substances or matter which could inhibit vigorous growth of plants

2. Water shall be supplied at Contractor's sole expense at no additional cost to City through the end of the maintenance period.

2.05 WOOD MULCH

A. Mulch shall be “Forest Floor” (0-2”)

Available from or equal to:
Aguinaga Green
7992 Irvine Boulevard
Irvine, CA 92618
(949) 786-9558

B. The mulch shall consist of fibrous, woody bark mixture of varied particle size with the following characteristics:

Percent Passing	Sieve Size
90-100	25.4 mm (1”)
80-100	12.7 mm (1/2”)
20-60	6.35 mm (1/4”)

C. Mulch shall be packaged in bales or bags unless the City approves a bulk source in advance of delivery to the site of the work. The Contractor shall submit one sample of three (3) different mulch materials.

D. The Engineer has the right to reject all samples and request additional samples until a suitable mulch material is approved.

2.06 SAMPLES

A. Samples of products and materials shall be required by the City. Submittals for inspection shall be stored on the site until furnishing of material is complete.

B. Delivery of products and materials may begin upon acceptance of samples or as directed by the City.

2.07 PLANT TABLETS

Plant tablets shall be Scotts Agriform, Gro-power or approved equal, 20-10-5 applied at the following rates:

Tablet Size	21 Gram					5 Gram
Container Size	1 Gallon and 10” pots	5 Gallon	15 Gallon	24” Box	36” Box and Larger	Ground Cover Plants
Application Rates (No. of Tablets)	1	3	8	20	One Tablet per each foot of height	1

2.08 CRUSHED ROCK MULCH (6”-12”)

- Refer to Landscape Construction Plan, Sheet LC.1 for crushed rock mulch description and supplier

2.09 LARGE “BENCH’ ROCK

- Refer to Landscape Construction Plan, Sheet LC.1 for crushed rock mulch description, quantities and supplier

2.10 ‘ROUNDED’ ROCK (Various sizes)

- Refer to Landscape Construction Plan, Sheet LC.1 for ‘Rounded’ Rock description, quantities and supplier

PART 3: EXECUTION

3.01 GENERAL

Earthwork and on-site disposal of excavated material shall include placement, spreading, densification, cultivation and raking.

1. Unless otherwise provided, curbs, walks, irrigation systems, and similar improvements required by the Plans or Specifications shall be constructed following rough grading and before sodding.

2. Planting holes and backfill shall be as herein specified.

3. For preliminary rough grading and related earthwork, prepare areas for sodding work to within one-tenth foot (0.1’) of finish grade.

3. Fertilizing and conditioning materials shall be mechanically spread at a uniform rate. The quantities of materials necessary for the planting area shall be at the site and shall be verified by delivery tickets furnished to the Engineer before spreading.

3.02 FINISH GRADING

A. After spreading and raking, the soil shall be watered and allowed to settle to provide a stable surface, not overly densified to the extent that it will prevent aeration and water infiltration. After the soil has dried out to a workable condition, the planting areas shall be regraded, raked, and smoothed to the

required grades and contours. Finish surfaces shall be clean and suitable for planting.

B. The finish grade shall be smooth, uniform, and free of abrupt grade changes and depressions to ensure surface drainage.

C. The finish grade below adjacent paving, curbs, or headers shall be one inch (1") in lawn areas and two inches (2") in shrub or ground cover areas.

3.03 TREE PLANTING GENERAL

A. All sprinkler/irrigation work shall be inspected and accepted by the City, prior to start of any work of this subsection.

B. Location of utility, structures and lines.

1. Prior to excavation for planting or placing of stakes, locate all utilities, electric cables, conduits, irrigation lines, heads, valves and valve control wires, and all utility lines so that proper precautions may be taken not to damage such improvements.

2. In the event of a conflict between utilities and plant locations, promptly notify the Engineer who will arrange for one or the other to be relocated. If contractor fails to follow this procedure it shall repair all damages resulting from the work at contractor's sole expense.

C. All plants will be inspected by the Engineer prior to planting, including plants previously approved at the nursery. The Contractor shall be responsible for the condition of all trees, planted or otherwise, until acceptance.

D. Quantities.

1. Trees shall be furnished in the quantities and/or spacing as shown or noted for each location, and shall be of the species, kinds, sizes, etc., as symbolized, and/or described in the Plant Legend, as indicated on the Plans.

2. Verify all sizes and quantities on the Plans. Promptly report any discrepancy to the Engineer.

E. Substitution.

1. Any trees specified by trade name or equal, shall be according to these Plans and Specifications.

2. Installation and use of substitute trees shall not be made until the Contractor is in receipt of written approval from the Engineer. Substitution proposals must be accompanied by written proof of non-availability within a five-hundred-mile radius of the project site for trees originally specified and proof that material was ordered in a timely manner upon award of contract.

F. Protection and Storage.

1. Regularly water all nursery stock in containers and place them in a cool area protected from sun and drying winds.

2. Do not allow trees to dry out before or while being planted. Keep exposed roots moist by means of wet sawdust, peat moss or burlap at all times during planting operations. Do not expose roots to the air except while being placed in the ground. Wilted or diseased trees, whether in place or not, will not be accepted and shall be replaced at the Contractor's sole expense.

G. Moisten prepared surface immediately prior to installing trees.

H. Install trees within 24 hours after delivery to site.

I. Water trees immediately after installation.

J. Layout and Tree Location.

1. Layout of trees shall be performed by the Contractor and approved by the Engineer prior to planting

2. Tree locations will be staked by the Contractor and approved by the Engineer.

3.04 TREE AND SHRUB PLANTING

A. Planting Holes. Planting holes shall be approximately square. The holes shall be twice the width of the container, unless otherwise shown on the Plans. The holes shall be one-and-half times the depth of the root ball, or as shown on the Plans. The hole shall be larger, if necessary, to permit handling and planting without injury or breakage of the root ball or root system. Any trees having a broken or cracked root ball before or during planting shall not be planted.

B. Underground Obstructions. In the event that underground construction work or obstructions are encountered in the planting operation, alternate locations will be selected by the City. Operation shall be done at no extra cost to the City.

C. Planting Procedures.

1. The backfill mix shall be as specified under paragraph 2.04, A, 3 and shall be thoroughly blended.

   No mixing for individual planting holes is permitted. Mix planting soil prior to backfilling and stockpile at the site. Iron sulfate shall not contact cement surfaces because severe staining could occur; repair or replace stained cement at Contractor's sole cost.

2. Remove bottom of box and set trees so that, when settled, they bear the same relation to the required grade as they bore to the natural grade before being transplanted. Place each tree in the center of the pit, remove box sides and backfill with prepared backfill. Compact the backfill mix around the ball or roots. Do not use soil in muddy condition for backfilling. Cut off all broken or frayed roots.

3. Thoroughly water each tree when the hole is one-half filled.

4. After watering, backfill the remainder of the hole and tamp the soil in place until the surface of the backfill is level with the surrounding area and the crown of the tree is at the finished grade of the surrounding area.

5. After backfilling, a basin shall be constructed around each tree. Each basin shall be of a depth sufficient to hold at least six inches (6") of water. Basins shall be the same size as the container size of each individual tree. The the basins shall be constructed of amended backfill material.

6. Set the plant tablets to be used with each tree on the top of the root ball so the required number of tablets to be used in each hole can be easily verified. Bury tablets upon approval by the Engineer.
7. Immediately after planting, apply water to each tree by means of a hose. Apply water in a moderate stream in the planting hole until the material about the roots is completely saturated from the bottom of the hole to the top of the ground.

8. Apply water in sufficient quantities and as often as seasonal conditions require to always keep the tree moist, well below the root system.

9. Basins shall be maintained *thirty (30) days* following tree planting. They shall be removed at that time, unless otherwise directed by the Engineer.

D. Pruning. Pruning shall be limited to the minimum necessary to remove injured twigs and branches, and to compensate for loss of roots during transplanting, but never to exceed one-third of the branching structure. Upon approval of the

Engineer, pruning may be done before delivery of plants, but not before plants have been inspected and approved.

E. Staking. All trees shall be staked per the planting details on the Plans. Staking shall be done immediately after planting.

3.05 MULCHING

Mulch shrub areas and trees after planting with three (3") inches of mulch.

3.06 MAINTENANCE AND ESTABLISHMENT PERIOD

A. Maintenance and establishment period will begin from the "Date of Acceptance of Installation" of all planting areas and end at project completion and acceptance by the Engineer. Request in writing from the Engineer notification of the date of the start of the maintenance period. At the acceptance of all planting, request in writing from the Engineer notification of the date of the completion of the maintenance period. The maintenance period shall not officially begin or end without written notification from the Engineer.

B. Construction fencing shall remain until after the maintenance period is complete or as directed by the Engineer.

C. Maintain all trees and shrubs on a continuous basis as they are completed during the progress of the work and during the establishment and maintenance period and shall continue to maintain them until final acceptance in accordance with the following.

1. Water and reapply mulch as necessary to promote a healthy growing condition. Re-stake if staking is not straight or solid. All areas shall be kept free of debris, weeds or litter. Keep project neat and attractive throughout the maintenance period.

2. Adjust the irrigation system to sufficiently saturate root zone without rotting trees.

3. Fertilize with "Gro-Power Plus" at 30 lbs./1000 sf every *thirty (30) calendar days*, during the maintenance period. Apply "Gro-Power Controlled Release Nitrogen" *five (5) calendar days* before the end of the maintenance period at manufacturer's recommended rate.

D. Maintenance period shall be extended if plant material is not in a healthy growing condition. When all maintenance work has been completed to the satisfaction of Engineer, the Engineer will issue to the Contractor a written notice of completion of maintenance.

3.09 WEED ABATEMENT

A. The weed abatement program shall proceed upon the completion of the irrigation system and after all existing weeds and growth has been removed from the planting areas. Begin watering daily for twenty-one (21) consecutive days and until weed seeds have germinated. Cease watering for three (3) days. Spray a non-selective herbicide (Roundup) to eradicate the germinated weeds. Allow herbicide sufficient time to kill weeds. Remove dead weeds within 1" of the soil surface. Repeat the non-selective herbicide application two more times. The contractor shall include a dye indicator with the third application of the non-selective herbicide.

B. If perennial weeds or grasses still exist, re-water four (4) times daily for fourteen (14) consecutive days until new growth appears. Reapply a non-selective herbicide with a dye indicator. Remove weeds after herbicide has had sufficient time to kill.

3.10 INSPECTION

A. All inspections herein specified shall be made by the City. Request inspection at least forty-eight (48) hours in advance of the time the inspection is required. Requested inspections, subsequently canceled without twenty-four (24) hours notice, will be billed to the Contractor.

B. Inspection is required for, and not necessarily limited to, the following parts of the work.

1. At completion of the incorporation of soil amendments and fine grading

2. Prior to digging plant pits for trees and shrubs.

3. Installing trees in the planting hole.

4. During backfilling of plant pits with amended backfill.

5. Final inspection at the end of the maintenance period.

PART 4: PAYMENT

4.01 TREE – 36” BOX

Payment for **TREE-36” BOX** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.02 TREE – 24” BOX

Payment for **TREE-24” BOX** will be made at the contract unit price per **each (EA**) as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.03 SHRUB - 15 GALLON

Payment for **SHRUB – 15 GALLON** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.04 SHRUB - 5 GALLON

Payment for **SHRUB-5 GALLON** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.05 SHRUB - 1 GALLON

Payment for **SHRUB – 1 GALLON** will be made at the contract unit price per **each (EA)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.06 WOOD MULCH - 3” LAYER

Payment for **WOOD MULCH- 3” LAYER** will be made at the contract unit price bid per **cubic yard (CY)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.07 SOIL PREPARATION & FINE GRADING

Payment for **SOIL PREPARATION & FINE GRADING** will be made at the contract unit price bid per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.08 WEED ABATEMENT

Payment for **WEED ABATEMENT** will be made at the contract unit price bid per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.09 CRUCHED ROCK MULCH (6”-12”)

Payment for **CRUSHED ROCK MULCH (6”-12”)** will be made at the contract unit price bid per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.10 LANDSCAPE BOULDERS-ROCK GROUPING G.1 & G.3

Payment for **LANDSCAPE BOULDERS-GROUPINGS G.1 & G.3** will be made at the **lump sum (LS**) contract price as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.11 LANDSCAPE BOULDER - ROCK GROUP G.2 (MEMORIAL BENCH)

Payment for **LANDSCAPE BOULDER – ROCK GROUP G.2** will be made at the **lump sum (LS**) contract price as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

4.12 LANDSCAPE BOULDERS - ROCK GROUPINGS G.4, G.5, G.6, G.7, G.8, G.9 & G.10

Payment for **LANDSCAPE BOULDERS - ROCK GROUPINGS G.4, G.5, G.6, G.7, G.8, G.9 & G.10** will be made at the **lump sum (LS**) contract price as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

END OF SECTION

SECTION 32 92 23 - SODDING

PART 1: GENERAL

1.01 DESCRIPTION

A. The General Provisions shall apply to all Sodding work operations. Provide all labor, materials, tools, transportation, equipment, and incidentals necessary to perform work as indicated on the Plans and as herein specified.

B. Related Sections.
Section 32 80 00: Irrigation
Section 32 93 43: Trees
Section 32 93 95: 90 Day Maintenance

C. The Standard Specifications for Public Works Construction, "Greenbook", latest edition, is referenced as if herein contained and the Contractor shall keep a copy at the project site. These Specifications shall supersede conflicts with information given in the "Greenbook", unless otherwise determined by the City.

D. Definitions.
1. City: City of South Pasadena
2. Engineer: City Engineer, or the City Engineer's designated representative.
3. ASTM: American Society of Testing Materials

E. All vendors, suppliers, and manufacturer's representatives and the associated addresses, phone, and fax numbers on the Plans and in the Specifications are listed for convenience only. They are subject to change and their inclusion in no way constitutes an endorsement by the City.

1.02 QUALITY ASSURANCE

A. Comply with all applicable local, state, federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

B. Grower's directions, specifications and detailed drawings will be followed in all cases where articles used furnish directions covering points not delineated on the Plans or Specifications.

C. The work included in this section will be done to the satisfaction of the City and decision by the Engineer as to the true construction meaning of the Plans and Specifications will be final.

D. All drop slips for sod fertilizers shall be given to the City.

1.03 ENVIRONMENTAL REQUIREMENTS

A. Do not install sod when ambient temperatures may drop below 45 degrees F (12 degrees C) or above 95 degrees F (39 degrees C).

B. Do not install sod when wind velocity exceeds 30 mph (48 k/hr).

C. Do not install sod when soil is overly compacted preventing water permeability. Rototill as necessary to allow for plant establishment, see Part 3 Execution.

PART 2: PRODUCTS

2.01 REFERENCES

A. ANSI Z60.1 - Nursery Stock.

B. California State Department of Agriculture - Regulations for nursery inspections, rules, and grading.

2.02 SOD

A. Sod shall be as indicated in the construction drawings or approved equivalent grown by an established sod nursery having been in the business of growing sod a minimum of five (5) years Sod shall be free of turf disease, insects, or weeds, and capable of healthy, vigorous growth.

B. Sod shall be grown in a blown sand medium. It shall be cut with a 1/2" to 3/4" thickness of soil that completely covers the root zone. Sod shall be wide cut, big roll. The sod shall arrive vigorous and have a lush appearance, uniform texture and dark green color throughout with no dead or dying edge. The sod shall be sufficiently dense to bear handling and placement without tearing.

C. Nylon mesh in sod will not be accepted. Nylon mesh will be removed prior to installation.

D. Sod may be obtained from:

A-G Sod Farms
30932 Palm Avenue
Nuevo, CA 92567
Phone: (800) 233-5254

2.03 FERTILIZERS, SOIL CONDITIONING MATERIALS AND WATER

A. General.

1. Fertilizing and soil conditioning materials shall comply with the applicable requirements of the City's Standards and Specifications. All materials shall be packaged first grade, commercial quality products identified as to source, type of material, weight, and manufacturer's guaranteed analysis. Fertilizing and soil conditioning material shall not contain toxic ingredients or fillers in quantities harmful to human life, animals, or plants.

2. The Contractor shall furnish to the Engineer the Certificate of Compliance stating that the material substantially meets the City's specifications.

3. Exact fertilizing and conditioning materials and the required composition and quantities shall be determined by the agronomic soils test.

B. Commercial Fertilizer.

1. Commercial fertilizer shall be a palletized or granular product having a chemical analysis as specified on the Plans or in the Specifications. Commercial fertilizer shall be free-flowing material delivered in unopened sacks. Material which becomes caked or otherwise damaged shall not be used.

2. Pre-planting fertilizer composition to be Best 6-24-24XB. Post-planting composition shall be Best 6-24-24XB. Fertilizer shall provide one pound of P and K per 1,000 square feet. Nitrogen shall not exceed 1/3 pound per 1,000 square feet. Exact composition and type to be determined by agronomic soil test.

3. Fertilizer can be obtained from:

J.R. Simplot
Lathrop, CA 95330
Phone: (209) 858-2511
Fax: (209) 858-2519

C. Water.

1. Water shall be clean, fresh, and free of substances or matter which could inhibit vigorous growth of plants.
2. Water shall be supplied at Contractor's expense at no additional cost to the City through the end of the maintenance period.

PART 3: EXECUTION

3.01 FERTILIZING

A. Two to three days prior to sodding, fertilize with J.R. Simplot Best 6-24-24XB at one pound of P and K per 1,000 square feet. Exact quantity shall be determined by the agronomic soil test

Adequately irrigate after application.

B. Fifteen days after sod installation is complete, fertilize as above with J. R. Simplot Best 16-24-24XB

3.02 INSTALLING SOD

A. Soil conditioning and fine grading shall be completed before sodding. No heavy equipment shall operate over the subgrade after grading is completed.

B. The subgrade shall be moist but not wet when sod is laid. Sod shall be laid with closely fitted joints, and the ends of the trips shall be staggered. Openings shall be plugged with sod.

C. Within two hours after installing sod and before rolling, the sod shall be adequately irrigated with a minimum of 1/2" of water. All seams and joints shall then be rolled until the sod is well bonded to the subgrade.

D. The area shall then be watered thoroughly with 2 to 4 inches of water to penetrate the subsoil at least 8 inches. Watering shall be repeated as necessary to keep the sod moist until rooted into the subgrade. Sodded areas shall be protected against foot traffic until the sod is well established.

3.03 MAINTENANCE & ESTABLISHMENT

A. Maintenance & establishment period will begin at "Date of Acceptance by the City of all sod installation" and continue until project completion and final acceptance by the engineer.

B. Maintenance includes:

1. Water, weed, fertilize, mow, edge and spray as necessary to promote a healthy growing condition. Keep project neat and attractive throughout the maintenance period.
2. Applying herbicides for weed control, as needed, or directed by City, in accordance with manufacturer's instructions. Remedy damage resulting from the use of herbicides.
3. Exterminate rodents and insects as required.

4. Adjust irrigation system scheduling to sufficiently saturate root zone
   a. Adjusting elevation of heads to new finish grade.
   b. Adjust head locations / add head locations to eliminate overthrow on sidewalks.

5. Repair or replace any damaged item caused by vehicles, vandals, bicycles, or foot traffic during the maintenance period.
6. (During growing season) fertilize turf every four weeks with one pound of nitrogen per 1,000 square feet in a complete fertilizer product (4-1-4 ratio).

C. Maintenance period may be extended if turf grass and other plant material is not in a healthy growing condition. When all maintenance work has been completed to the satisfaction of the Engineer, the Contractor will be released through written notification by the Engineer.

D. Mow turf a minimum of two (2) times a week with the first mowing to be completed ***seven (7) days*** after installation of sod. Maintain a mowing height of 3/8" to ¾" inches. Do not cut more than 1/3 of grass blade at anyone mowing. Grass shall be mowed with a sharp power-driven reel mower. Clippings shall be collected and removed.

PART 4: PAYMENT

4.01 TURF (SOD)

Payment for **TURF (SOD)** will be made at the contract unit price per **square foot (SF)** as set forth in the bid schedule and shall include full compensation for all labor materials, equipment, tools and incidentals necessary to complete all work and no additional compensation shall be made.

END OF SECTION

SECTION 260010 – BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1SCOPE

A. This section supplements all sections of this division and shall apply to all phases of work hereinafter specified, shown on the drawings, or required to provide a complete installation of electrical systems for the Project. The work required under this division is not limited to the electrical specifications and drawings. Refer to all bid documents including Civil, Architectural, Structural, and Mechanical documents which may designate Work to be accomplished. The intent of the Specifications is to provide a complete and operable electrical system, which shall include all documents that are a part of the entire Project Contract.
   1. Work included: Furnish all labor, material, tools, equipment, facilities, transportation, skilled supervision necessary for, and incidental to, performing operations in connection with furnishing, delivery, and installation of the work in this division complete as shown or noted on the Drawings and specified herein.

B. Related Work Specified Elsewhere:
   1. Refer to all sections in the general contract conditions, Contract Requirements and Division 1, General Requirements.

C. Work Installed but Furnished by Others:
   1. The electrical work includes the installation or connection of certain materials and equipment furnished by others. Verify installation details. Foundations for apparatus and equipment will be furnished by others unless otherwise noted or detailed.

1.2 GENERAL REQUIREMENTS

A. Guarantee See General Conditions:
   1. Except as may be specified under other Sections in the specification, guarantee equipment furnished under the specifications for a period of one year, except for equipment required to have a longer guarantee period, from date of final completion. Guarantee all work against defective workmanship, material, and improper installation. Upon notification of failure, correct deficiency immediately and without additional cost to the Owner.
   2. Standard warranty of manufacturer shall apply for replacement of parts after expiration of the above period. Manufacturer shall furnish replacement parts to the Owner or his service agency as approved. Furnish to the Owner, through the Architect, printed manufacturer's warranties complete with material included and expiration dates, upon completion of project. Conform to Division 01.

B. Equipment Safety: All electrical materials and equipment shall be new and shall be listed by Underwriter's Laboratories and bear their label, or listed and certified by a nationally recognized testing authority where UL does not have an approval. Custom made equipment must have complete test data submitted by the manufacturer attesting to its safety.

C. Codes and Regulations:
   1. Design, manufacturer, testing and method of installation of all apparatus and materials furnished under the requirements of these specifications shall conform to the latest publications or standard rules of the following:
      a. Institute of Electrical and Electronic Engineers - IEEE
      b. National Electrical Manufacturers' Association - NEMA
      c. Underwriters' Laboratories, Inc. - UL
      d. National Fire Protection Association - NFPA
      e. American Society for Testing and Materials - ASTM
      f. American National Standards Institute - ANSI
      g. California Electrical Code - CEC, Title 24, Part 3
      h. California Code of Regulations, Title 8, Subchapter 5
      i. California Building Code-CBC, Title 24 Parts 1 &2
      j. State & Municipal Codes in Force in the Specific Project Area
      k. Occupational Safety & Health Administration - OSHA
      l. California State Fire Marshal
      m. California Fire Code- CFC, Title 24 Part 9
      n. National Electrical Testing Association - NETA
   2. The term "Code", when used within the specifications, shall refer to the Publications, Standards, ordinances and codes, listed above. In the case where the codes have different levels of requirements the most stringent rules shall apply.

D. Requirements of Regulatory Agencies:
   1. Codes, Permits, and Fees: Where the Contract Documents exceed minimum requirements, the Contract Documents take precedence. Where code conflicts occur, the most stringent shall apply. The most stringent condition shall be as interpreted by the Engineer.
      a. Comply with all requirements for permits, licenses, fees and Code. Permits, licenses, fees, inspections and arrangements required for the Contractor at his expense shall obtain the Work, unless otherwise specified.
      b. Comply with the requirements of the applicable utility companies serving the Project. Make all arrangements with the utility companies for proper coordination of the Work.

E. Shop Drawings:
   1. See Division 01 for additional requirements.
   2. Time Schedules for Submission and Ordering: The Contractor shall prepare, review and coordinate his schedule of submissions carefully, determining the necessary lead time for preparing, submitting, checking, ordering and delivery of materials and equipment for timely arrival. The Contractor shall be responsible for conformance with the overall construction schedule.
   3. Submittals will be checked for general compliance with specifications only. The Contractor shall be responsible for deviations from the drawings or specifications and for errors or omissions of any sort in submittals.
   4. Submit a complete list of materials and equipment proposed for the job, including manufacturers names and catalog numbers.
   5. Shop drawings shall be submitted in completed groups of materials (i.e., lighting fixtures or switchgear). The Contractor shall add and sign the following paragraph on equipment and materials submitted for review. "It is hereby certified that the

(equipment) (material) shown and marked in this submittal is that proposed to be incorporated into the project; is in compliance with the Contract Drawings and specifications and can be installed in the allocated spaces". Failure to add the above written statement for compliance will result in return of submittals without review.

a. Bind catalog cuts, plate numbers, descriptive bulletins and drawings, 11" x 17" (275 mm x 435 mm) or smaller, in sets with covers neatly showing titles.
b. The Contractor shall verify dimensions of equipment and be satisfied as to Code compliance for fit prior to submitting shop drawings for approval.
c. Where current limiting devices are specified, submit technical data to substantiate adequate protection of equipment cascaded downstream. Submittals shall not be reviewed unless supporting calculations and data are submitted therewith.
d. Include complete catalog information such as construction, ratings, insulation systems, as applicable.
e. For any material specified to meet UL or trade standards, furnish the manufacturers or vendor's certification that the material furnished for the work does in fact equal or exceed such specifications.
f. Reference listings to the specifications' Sections and Article to which each is applicable.
g. Equipment Floor Plans: After approval of material is secured prepare a floor plan of each electrical and communication equipment space, room or yard, drawn to scale at 1/2 inch equals 1 foot and submit for approval in the same manner as for shop drawings. The layout drawings shall be exact scale.

6. Contractor shall prepare coordinated drawings when required by Division 01 or where noted otherwise.

F. Interpretations: The Contractor through the Architect must make Requests for interpretations of drawings and specifications. Any such requests made by equipment manufacturers or suppliers will be referred to the Contractor.

G. Standard of Quality

1. The contract Drawings and Specifications establish the “MINIMUM STANDARD OF QUALITY” each product and/or system must meet to be considered acceptable. Products of other manufactures will be considered if the product and/or system meet or exceed the “MINIMUM STANDARD OF QUALITY” established by this Contract Document.
2. Items for similar application shall be of the same manufacturer.
3. The label of listing by UL shall appear on all materials and equipment for which standards have been established by the agency.
4. Where codes as listed in Section General Requirement Section of the Specifications that establish label or approved requirements, furnish all materials and equipment with either the required labels affixed or the necessary written approval.
5. Provide the type and quantity of electrical materials and equipment necessary to complete Work and all systems in operation, tested and ready for use.
6. Provide and install all incidental items that belong to the Work described and which are required for complete systems.

7. All switchboards, distribution boards, panel boards and circuit breakers shall be of the same manufacturer.
8. All wiring devices such as switches and receptacles shall be of the same manufacturer.

H. Substitutions: Refer to Division 01

I. Submit comprehensive material list, shop drawings and complete technical data for the following equipment and materials:
   1. General Requirements:
      a. Main service and distribution switchboards.
      b. Panelboards.
      c. Conduits
      d. Conductors, include all selected insulation types.
      e. Fuses
      f. Disconnect switches and Starters.
      g. Pullboxes, manholes and handholes.
      h. Standard lighting fixtures, specially fabricated fixtures, ballasts and lamps, with samples and sample of standard finish available (where requested).
      i. Control devices, standard and special receptacles, switches, outlets and finish device plates.
      j. Cabinets for signal and telephone system, special terminals and cabinets. Include all cabinet dimensions.
      k. Fire alarm system.
      l. Transformers

J. Utility Service:
   1. Contractor shall verify the locations shown on the drawings and shall include extensions of lines to building service from locations which are acceptable to the Owner.
   2. Verify electrical, civil, architectural and structural, dimensional and other requirements with the Owner.
   3. Should any major modifications to the work indicated be necessary to comply with the Owner requirements, notify the Architect.
   4. Contractor shall contact the utility company representatives to establish pre-construction coordination, obtain all necessary meters and/or approvals, and schedule utility work to coordinate with the construction schedule.
   5. All utility services shall be installed per the utility company requirements. Verify final construction requirements with utility company service planners prior to construction.

K. Record Drawings: Refer to Division 01, Contract Closeout.

L. Work Responsibilities:
   1. The drawings indicate diagrammatically the desired locations or arrangement of conduit runs, outlets, junction boxes and equipment and are to be followed. Execute the work so as to secure the best possible installation in the available space and to overcome local difficulties due to space limitations. The Contractor is responsible for the correct placing of his work. Where conflicts

occur in plans and/or specifications, the most stringent application shall apply and shall be part of the base bid.

2. Locations shown on architectural plan or on wall elevations shall take precedence over electrical plan locations, but where a major conflict is evident, notify the Architect.
3. In the event minor changes in the indicated locations or arrangement are necessary due to developed conditions in the building construction or rearrangement of furnishings or equipment or due to interference with other trades, such changes shall be made without extra cost.
4. Verify dimensions and the correct location of Owner-Furnished equipment before proceeding with the roughing-in of connections.
5. All scaled and figured dimensions are approximate of typical equipment of the class indicated. Before proceeding with work carefully check and verify dimensions and sizes with the drawings to see that the furnished equipment will fit into the spaces provided without violation of applicable Codes.
6. Should any changes to the work indicated on the drawings or described in the specifications be necessary in order to comply with the above requirements, notify the Architect.
7. Contractor shall be responsible for coordination of coordinated drawings when required by the Architect.
8. Replace or repair, without additional compensation any work which does not comply with or which is installed in violation of any of these requirements.

M. Installation General: For special requirements, refer to specific equipment under these requirements.

1. Unless otherwise specified elsewhere in the specifications, do all excavating necessary for the proper installation of the electrical work.
2. Locations of Openings: Locate chases, shafts and openings required for the installation of the electrical work during framing of the structure. Do any additional cutting and patching required. Cutting or drilling in any structural member is prohibited without approval of the Architect. Furnish all access panels to make all boxes, connections and devices accessible as required by CEC.
3. Location of Sleeves: Where conduits pass through concrete walls, suspended slabs or metal deck floors, install sleeves of adequate size to permit installation of conduit. Sleeves shall be installed prior to pouring of concrete and shall have ends flush with the wall or extend 2 inches above floor surfaces. Verify locations.
4. Wherever conduit extends through roof, install flashings in accordance with drawings and details.
5. Contractor shall be responsible for cutting and patching which may be required for the proper installation of the electrical work.
6. Protect work, materials and equipment and provide adequate and proper storage facilities during the progress of the work. Storage outdoors shall be weather protected and shall include space heaters to prevent condensation. Provide for the safety and good condition of all work until final acceptance of the work. Replace all damaged or defective work, materials and equipment before requesting final acceptance.
7. Conduit and Equipment to be Installed: Clean thoroughly to remove plaster, spattered paint, cement and dirt on both exterior and interior. All underground conduits shall be mandrelled prior to pulling wire.

8. Conduit and Equipment to be Painted: Clean conduit exposed to view in completed structure by removing plaster and dirt. Remove grease, oil and similar material from conduit and equipment by wiping with clean rags and suitable solvents in preparation for paint.
9. Items with Factory Finish: Remove cement, plaster, grease and oil, and leave surfaces, including cracks and corners, clean and polished. Touch up scratched or bare spots to match finish.
10. Site Cleaning: Remove from site all packing cartons, scrap materials and other rubbish on a weekly basis. Vacuum out all cabinets, switchgear and panels and junction boxes prior to pulling any conductors.
11. Electrical equipment and materials exposed to public and in finished areas shall be finish-painted after installation in accordance with the Painting Section. All exposed screw-type fasteners, exterior, or interior in restrooms, shall be vandal-resistant spanner type; include tool.

N. Excavation, Cutting and Patching:
1. Excavating, trenching and backfilling required for the work of this Division in accordance with the applicable requirements of Division 2. Excavating and backfilling connected with electrical work, repaving cuts and providing and maintaining protective measures for the electrical work excavation required by the governing authorities having jurisdiction shall be performed as a part of the work of this Division.
2. Verify openings indicated on the drawings. Provide all cutting, patching and reinforcement of the construction of the building as required to install electrical work.

O. Tests
1. Equipment and systems for which the National Electrical Testing Association (NETA) has an approved or recommended procedure, shall be tested in accordance with that procedure. Test values shall equal values recommended by NETA. Copies of test reports shall be submitted as required under shop drawing submittals.
2. Resistance to ground tests shall be accomplished by a qualified independent testing firm to measure resistance to ground at grounding electrodes. Make tests before slabs or affected areas are poured in order that corrective measures, if required, may be taken. Submit a report showing the results of these measurements. If the resistances exceed values specified elsewhere or NETA test procedure recommendations, perform corrective measures required to reduce resistance to acceptable values.
3. Prior to energizing any motor, measure the service voltage for phase balance and report if unbalance exceeds 1% from mean.
4. Measure the three-phase voltage at no load and at maximum load conditions and submit to the engineer a report showing the results of these measurements.
5. Upon completion of the work and adjustment of all equipment, conduct an operating test. Conduct the test in the presence of an authorized representative of the Owner's Representative. Demonstrate system and equipment to operate in accordance with requirements of the Contract Documents and to be free from electrical and mechanical defects. Provide systems free from short circuits and grounds and show an insulation resistance between phase conductors and ground

not less than the requirements of the governing electric code. Test circuits for proper neutral connection.

6. Complete tests prior to final inspection of project, including corrective work based on the results of the tests.
7. Perform special tests on systems and equipment as specified herein using personnel qualified to perform such tests.

P. Protection: Protect finish parts of the materials and equipment against damage during the progress of the work and until final completion and acceptance. Cover materials and equipment in storage and during construction in such a manner that no finished surfaces will be damaged or marred. Keep moving parts clean, dry and lubricated.

Q. Cleaning Up:
1. Upon completion of the work and at various time during the progress of the work, remove from the building all surplus materials, rubbish and debris resulting from the work of this Division.
2. Thoroughly clean switchgear including busses, apparatus, exposed conduit, metal work including the exterior and interior, and accessories for the work of this Division, of cement, plaster and other deleterious materials; remove grease and oil spots with cleaning solvent; carefully wipe surfaces and scrape cracks and corners clean.
3. Thoroughly polish chromium or plated work. Remove dirt and stains from lighting fixtures.
4. Leave the entire installation in a clean condition.

R. Completion:
1. The work will not be reviewed for final acceptance until operating and maintenance data, manufacturer's literature, panel directories and nameplates specified herein have been approved and properly posted or installed and final cleaning of equipment and premises has been completed.
2. When the installation is complete and adjustments have been made, operate the system for a period of one week, during which time demonstrate that systems are completed and operating in conformance with the specifications.

S. Operating and Maintenance Data: Submit complete and at one time, prior to acceptance of the installation, 4 copies of manufacturer's instructions for operation and maintenance of electrical equipment, including replacement parts lists. As specified in Division 01

T. Inspection and Acceptance Procedures: The Architect will submit observation reports periodically during the construction phase detailing Contract deficiencies. The Contractor is responsible for making corrections immediately. Notice of Completion of the project will not be made until all items have been corrected.

U. Final Completion of Electrical Systems:
1. Prior to Final Completion of operating electrical systems, the Contractor shall:
   a. Provide materials of the type and quality specified and as necessary for proper operation, tested and ready for use.
   b. Furnish the required Operating and Maintenance Data/Manuals.
   c. Clean up of the project pertaining to this Division of the work.

d. After installation has been completed and adjustments made, operate the system for a period of one week, during which time, demonstrate to the Architect that systems are complete and operating in conformance with Contract Documents.
e. Conduct tests required and as specified in this Division and submit test reports and corrective actions taken.
f. Submission of warranties and guarantees.

2. Final Completion of Work Shall be Contingent On:
a. Contractor replacing defective materials and workmanship.
b. Upon completion of work and adjustments made, Contractor shall conduct an operating test for each system for approval at such time as Architect directs. Conduct test in presence of authorized representative of Architect and demonstrate that systems and equipment do operate in accordance with requirements of the Contract Documents and are free from electrical and mechanical defects.
c. Contractor shall provide the necessary training programs and instructions to the Owner's representative. Number of hours shall be a minimum of four (4) hours for each system or days as required under separate Sections of these Specifications. Complete operation and maintenance manuals shall be provided at least two (2) weeks prior to training.
d. Submit copies of manufacturer's instructions and maintenance of electrical equipment including replacement parts lists. Each set shall include one set of shop drawings of equipment installed.

V. Submittals for Change Orders: When changes are made during the construction phase, deletions and additions shall be presented in a manner that will indicate the cost of each item of material and corresponding labor. Markup shall be then added in accordance with the requirements of the General Conditions as modified by the Supplementary Conditions.

W. The Contractor at a time convenient to the Owner shall provide instruction to the Owner's operating personnel in the proper operation and maintenance of all equipment and systems. The instructors shall have received factory training and shall be thoroughly familiar with the equipment installed. The operating personnel shall receive the number of days instruction as indicated in other sections.

1.3 PROJECT RECORD DOCUMENTS

A. Record Drawings: CAD: Use a computer aided drafting (CAD) system in the preparation of record drawings for this Project. Acceptable CAD systems shall be capable of producing files in AutoCAD Version 2012 compatible DWG or DXF format. Owner's consultant will furnish CAD backgrounds for use by the Contractor after construction is 85% complete except where prohibited by Contract.

B. Record Set During the Work: At site, maintain at least one set of Drawings as a Field Record Set. Also maintain at least one copy of all Addenda, Modifications, approved submittals, correspondence, and transmittals at site. Keep Drawings and data in good order and readily available to Architect and Owner.

C. Changes: Clearly and correctly mark Record Drawings to show changes made during the construction process at the time the changed work is installed. No such changes shall be made in the work unless authorized by the Architect.

D. Final Record Drawings: Conform to Division 01 requirements.

E. Preparation of Final Record Drawings: Contractor shall transfer recorded changes in the work indicated on the Field Record Set to the record set. Changes shall be neatly and clearly drawn and noted by skilled draftsmen, and shown technically correct.

F. Approval: Prior to Architect's inspection for Substantial Completion, submit the Final Record Drawings to the Architect for review, and make such revisions as may be necessary for Final Record Drawings to be a true, complete, and accurate record of the work.

G. Manuals: Obtain data from the various manufacturers and submit instruction, operation, and maintenance manuals as required and to the extent required under other Sections.

H. At all times when the work is in progress, maintain at the workplace, fabrication shop or Project Site as applies, a complete separate, clean, undamaged set of the latest stamped, actioned submittals. As work progresses, maintain records of "as installed" conditions on this set in suitable ink or chemical fluid. Update the set daily. After successful completion of Project Site testing specified herein, and after completion of Punch List corrections, copy all records of "as installed" conditions on to originals.

I. Quantity:
   1. Review sets: As for Shop and Field Drawings.
   2. Record set: Refer to Division 01.

J. Content: All drawings required under "Field and Shop Drawings". Show "as installed" condition. Where room designations according to Project permanent signage differ from construction designations in the Contract Documents, show both designations.

K. Warranty Certificates: Comply with Division 01.

PART 2 - COMMISSIONING

2.1 COMMISSIONING OF ELECTRICAL SYSTEMS

A. Include cost for commissioning requirements in the contract price.

B. Attend commissioning meetings scheduled by the CxA.

C. Prepare preliminary schedule for indoor lighting system inspections, O&M manual submission, training sessions, lighting controls testing, system verification, performance testing, and system completion for use by the CxA. Update schedule as appropriate throughout the construction period and provide updated schedule to the commissioning team.

D. Verify proper installation and performance of all electrical services provided.

E. Complete Title 24 Certificate(s) of Installation and manufacturer's pre-start checklists prior to scheduling startup of HVAC and electrical equipment.
   1. Retain Certificate(s) of Installation in a 3-ring binder in an organized fashion. Binder is to remain on the job site
   2. Make Certificate(s) of Installation available for CxA review upon request.
   3. Retain calibration records for equipment provided with manufacturer calibrated sensors in the Certificate(s) of Installation binder.

F. Where applicable, complete the Certificate(s) of Acceptance per the contract documents.
   1. Retain Certificate(s) of Acceptance in a 3-ring binder in an organized fashion. Binder is to remain on the job site
   2. Provide copies of all Certificate(s) of Acceptance to the CxA.
   3. Certificate(s) of Acceptance shall be conducted by companies who are certified as California Advanced Lighting Controls Training Program Acceptance Technician (CALCTP-AT) employer and only completed by those employees of said company who are certified to complete the respective acceptance test.

G. Monitor and respond to Resolution Tracking Forms distributed by the CxA in order to expedite corrective actions necessary to achieve design intent.

H. Participate in the Certificate(s) of Acceptance and Functional Performance Tests as required to achieve design intent.

I. Participate in the opposite-season testing as required to achieve design intent.

J. Participate in O&M Training as required by project specifications.

K. Ensure participation of major equipment manufacturers and their representatives as applicable.

L. Obtain O&M data on all equipment and assemble in binders using tabs as required.

M. Conduct a maintenance orientation and inspection with hands on training per the contract documents.

N. Provide written certification and completed Certificate(s) of Installation forms and checklists documenting that the following work has been completed in accordance with the plans and specifications and that they are functioning as designed.
   1. Correct labeling of all circuits with connected equipment.
   2. Lighting system controls operations, including occupancy sensors, automatic time controls or Energy Management control, override timers, manual dimming controls, exterior lighting controls, multi-level switching, as applicable to the Work.

PART 4 –PAYMENT

4.01 ELECTRICAL AND PARK LIGHTING

Work under this bid item shall include all costs associated with the furnishing and installation all Electrical Items including Power, Lighting, and Conduit as indicated on the Electrical Plans and Specifications.

Payment for the Electrical shall be at the Lump Sum (LS) contract unit price as set forth in the Project Bid Schedule and shall be considered full compensation for furnishing labor, materials, tools, equipment, containers, steel plates, fittings, components, conduit, pillboxes, hardware, footings, panels, and equipment described in the construction drawings and specifications including incidentals for doing all work involved in hauling, excavation, lifting, assembling, compaction, testing, all electrical and power complete and in place as shown on the plans, specifications, structural details, and calculations. No additional compensation shall be allowed.

END OF SECTION

SECTION 260519 – LOW-VOLTAGE POWER CONDUCTORS & CABLES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Single conductor building wire.

B. Underground feeder and branch-circuit cable.

C. Service entrance cable.

D. Wiring connectors.

E. Electrical tape.

F. Heat shrink tubing.

G. Wire pulling lubricant.

H. Cable ties.

1.2 RELATED REQUIREMENTS

A. Section 260526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.

B. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire 2013 (Reapproved 2018).

B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft 2011 (Reapproved 2017).

C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes 2010, with Editorial Revision (2020).

D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation 2004 (Reapproved 2020).

E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape 2017.

F. ASTM D4388 - Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes 2020.

G. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

H. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy 2021.

I. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

J. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

K. UL 44 - Thermoset-Insulated Wires and Cables Current Edition, Including All Revisions.

L. UL 83 - Thermoplastic-Insulated Wires and Cables Current Edition, Including All Revisions.

M. UL 267 - Outline of Investigation for Wire-Pulling Compounds Most Recent Edition, Including All Revisions.

N. UL 486A-486B - Wire Connectors Current Edition, Including All Revisions.

O. UL 486C - Splicing Wire Connectors Current Edition, Including All Revisions.

P. UL 486D - Sealed Wire Connector Systems Current Edition, Including All Revisions.

Q. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
   2. Coordinate the installation of direct burial cable with other trades to avoid conflicts with piping or other potential conflicts.
   3. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
   4. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.

B. Project Record Documents: Record actual installed circuiting arrangements. Record actual routing for underground circuits.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.1 CONDUCTOR AND CABLE APPLICATIONS

A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.

B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.

C. Nonmetallic-sheathed cable is not permitted.

D. Underground feeder and branch-circuit cable is not permitted.

E. Service entrance cable is not permitted.

F. Armored cable is not permitted.

G. Metal-clad cable is not permitted.

2.2 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

A. Provide products that comply with requirements of NFPA 70.

B. Provide products listed, classified, and labeled as suitable for the purpose intended.

C. Provide new conductors and cables manufactured not more than one year prior to installation.

D. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.

E. Comply with NEMA WC 70.

F. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.

G. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.

H. Conductors for Grounding and Bonding: Also comply with Section 260526.

I. Conductor Material:
1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
3. Tinned Copper Conductors: Comply with ASTM B33.

J. Minimum Conductor Size:
1. Branch Circuits: 12 AWG.
a. Exceptions:
1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.
3) 20A exterior circuits: 10 AWG..
2. Control Circuits: 14 AWG.

K. Conductor Color Coding:
1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
2. Color Coding Method: Integrally colored insulation.
a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
3. Color Code:
a. 240/120 V, 1 Phase, 3 Wire System:
1) Phase A: Black.
2) Phase B: Red.
3) Neutral/Grounded: White.
b. Equipment Ground, All Systems: Green.

2.3 SINGLE CONDUCTOR BUILDING WIRE

A. Manufacturers:
1. Copper Building Wire:
a. Cerro Wire LLC: www.cerrowire.com/#sle.
b. Encore Wire Corporation: www.encorewire.com/#sle.
c. Southwire Company: www.southwire.com/#sle.
d. Rome Wire and Cable.
e. Okonite Wire
f. Pirelli Wire and Cable
g. Carol Cable

B. Description: Single conductor insulated wire.

C. Conductor Stranding:
1. Feeders and Branch Circuits:
a. Size 10 AWG and Smaller: Solid.
b. Size 8 AWG and Larger: Stranded.

D. Insulation Voltage Rating: 600 V.

E. Insulation:
   1. Copper Building Wire: Type THHN/THWN-2, except as indicated below.
      a. Size 4 AWG and Larger: Type XHHW-2.
      b. Installed Underground: Type XHHW-2.

2.4 WIRING CONNECTORS

A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.

B. Wiring Connectors for Splices and Taps:
   1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
   2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.

C. Wiring Connectors for Terminations:
   1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
   2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
   3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
   4. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression connectors where connectors are required.

D. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.

E. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.

F. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.

G. Mechanical Connectors: Provide bolted type or set-screw type.

H. Compression Connectors: Provide circumferential type or hex type crimp configuration.

2.5 ACCESSORIES

A. Electrical Tape:
   1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.

2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
3. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil; suitable for continuous temperature environment up to 194 degrees F and short-term 266 degrees F overload service.
4. Electrical Filler Tape: Rubber-based insulating moldable putty, minimum thickness of 125 mil; suitable for continuous temperature environment up to 176 degrees F.
5. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.

B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.

C. Wire Pulling Lubricant:
1. Listed and labeled as complying with UL 267.
2. Suitable for use with conductors/cables and associated insulation/jackets to be installed.
3. Suitable for use at installation temperature.

D. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that interior of building has been protected from weather.

B. Verify that work likely to damage wire and cable has been completed.

C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.

D. Verify that field measurements are as indicated.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.3 INSTALLATION

A. Circuiting Requirements:
1. Unless dimensioned, circuit routing indicated is diagrammatic.
2. When circuit destination is indicated without specific routing, determine exact routing required.

3. Arrange circuiting to minimize splices.
4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
5. Maintain separation of Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits in accordance with NFPA 70.
6. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
7. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is not permitted.
8. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.

B. Install products in accordance with manufacturer's instructions.

C. Perform work in accordance with NECA 1 (general workmanship).

D. Installation in Raceway:
1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
2. Pull all conductors and cables together into raceway at same time.
3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.

E. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.

F. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
1. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conductors and cables to lay on ceiling tiles.
2. Installation in Vertical Raceways: Provide supports where vertical rise exceeds permissible limits.

G. Install conductors with a minimum of 12 inches of slack at each outlet.

H. Where conductors are installed in enclosures for future termination by others, provide a minimum of 5 feet of slack.

I. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.

J. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.

K. Make wiring connections using specified wiring connectors.
   1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
   2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
   3. Do not remove conductor strands to facilitate insertion into connector.
   4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
   5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

L. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
   1. Dry Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
      a. For taped connections, first apply adequate amount of rubber splicing electrical tape or electrical filler tape, followed by outer covering of vinyl insulating electrical tape.
   2. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
      a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.
      b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.
   3. Wet Locations: Use heat shrink tubing.

M. Insulate ends of spare conductors using vinyl insulating electrical tape.

N. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.

O. Identify conductors and cables in accordance with Section 260553.

P. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section Firestopping.

Q. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

3.4 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS, except Section 4.

B. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors. The resistance test for parallel conductors listed as optional is not required.

C. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION

SECTION 260526 – GROUNDING & BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Grounding and bonding requirements.

B. Conductors for grounding and bonding.

C. Connectors for grounding and bonding.

D. Ground bars.

E. Ground rod electrodes.

F. Ground access wells.

1.2 RELATED REQUIREMENTS

A. Section 096500 - Resilient Flooring: Static control flooring.

B. Section 260519 - Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.

C. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. IEEE 81 - IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System 2012.

B. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

C. NEMA GR 1 - Grounding Rod Electrodes and Grounding Rod Electrode Couplings 2017.

D. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

E. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

F. UL 467 - Grounding and Bonding Equipment Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Verify exact locations of underground metal water service pipe entrances to building.
2. Coordinate the work with other trades to provide steel reinforcement complying with specified requirements for concrete-encased electrode.
3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:
1. Do not install ground rod electrodes until final backfill and compaction is complete.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.

B. Field quality control test reports.

C. Project Record Documents: Record actual locations of grounding electrode system components and connections.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.1 GROUNDING AND BONDING REQUIREMENTS

A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.

B. Do not use products for applications other than as permitted by NFPA 70 and product listing.

C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.

D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

E. Grounding System Resistance:
   1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect. Precipitation within the previous 48 hours does not constitute normally dry conditions.
   2. Grounding Electrode System: Not greater than 25 ohms to ground, when tested according to IEEE 81 using "fall-of-potential" method.

F. Grounding Electrode System:
   1. Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.
      a. Provide continuous grounding electrode conductors without splice or joint.
      b. Install grounding electrode conductors in raceway where exposed to physical damage. Bond grounding electrode conductor to metallic raceways at each end with bonding jumper.
   2. Metal Underground Water Pipe(s):
      a. Provide connection to underground metal domestic and fire protection (where present) water service pipe(s) that are in direct contact with earth for at least 10 feet at an accessible location not more than 5 feet from the point of entrance to the building.
      b. Provide bonding jumper(s) around insulating joints/pipes as required to make pipe electrically continuous.
      c. Provide bonding jumper around water meter of sufficient length to permit removal of meter without disconnecting jumper.
   3. Metal In-Ground Support Structure:
      a. Provide connection to metal in-ground support structure that is in direct contact with earth in accordance with NFPA 70.
   4. Concrete-Encased Electrode:
      a. Provide connection to concrete-encased electrode consisting of not less than 20 feet of either steel reinforcing bars or bare copper conductor not smaller than 4 AWG embedded within concrete foundation or footing that is in direct contact with earth in accordance with NFPA 70.
   5. Ground Rod Electrode(s):
      a. Provide two electrodes unless otherwise indicated or required.
      b. Space electrodes not less than 10 feet from each other and any other ground electrode.
      c. Provide ground access well for each electrode.
   6. Provide additional ground electrode(s) as required to achieve specified grounding electrode system resistance.
   7. Ground Bar: Provide ground bar, separate from service equipment enclosure, for common connection point of grounding electrode system bonding jumpers as permitted in NFPA 70. Connect grounding electrode conductor provided for service-supplied system grounding to this ground bar.

a. Ground Bar Size: 1/4 by 2 by 12 inches unless otherwise indicated or required.
b. Where ground bar location is not indicated, locate in accessible location as near as possible to service disconnect enclosure.
c. Ground Bar Mounting Height: 18 inches above finished floor unless otherwise indicated.

G. Service-Supplied System Grounding:
1. For each service disconnect, provide grounding electrode conductor to connect neutral (grounded) service conductor to grounding electrode system. Unless otherwise indicated, make connection at neutral (grounded) bus in service disconnect enclosure.
2. For each service disconnect, provide main bonding jumper to connect neutral (grounded) bus to equipment ground bus where not factory-installed. Do not make any other connections between neutral (grounded) conductors and ground on load side of service disconnect.

H. Bonding and Equipment Grounding:
1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
7. Provide bonding for interior metal piping systems in accordance with NFPA 70. This includes, but is not limited to:
a. Metal water piping where not already effectively bonded to metal underground water pipe used as grounding electrode.
b. Metal gas piping.
c. Metal process piping.

2.2 GROUNDING AND BONDING COMPONENTS

A. General Requirements:
1. Provide products listed, classified, and labeled as suitable for the purpose intended.
2. Provide products listed and labeled as complying with UL 467 where applicable.

B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 260526:
1. Use insulated copper conductors unless otherwise indicated.

a. Exceptions:
    1) Use bare copper conductors where installed underground in direct contact with earth.
    2) Use bare copper conductors where directly encased in concrete (not in raceway).

C. Connectors for Grounding and Bonding:
1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

D. Ground Bars:
1. Description: Copper rectangular ground bars with mounting brackets and insulators.
2. Size: As indicated.
3. Holes for Connections: As indicated or as required for connections to be made.

E. Ground Rod Electrodes:
1. Comply with NEMA GR 1.
2. Material: Copper-bonded (copper-clad) steel.
3. Size: 3/4 inch diameter by 10 feet length, unless otherwise indicated.

F. Ground Access Wells:
1. Description: Open bottom round or rectangular well with access cover for testing and inspection; suitable for the expected load at the installed location.
2. Size: As required to provide adequate access for testing and inspection, but not less than minimum size requirements specified.
3. Depth: As required to extend below frost line to prevent frost upheaval, but not less than 10 inches.
4. Cover: Factory-identified by permanent means with word "GROUND".

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that work likely to damage grounding and bonding system components has been completed.

B. Verify that field measurements are as indicated.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Perform work in accordance with NECA 1 (general workmanship).

C. Ground Rod Electrodes: Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70 or install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70.

D. Make grounding and bonding connections using specified connectors.
   1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
   2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
   3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
   4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

E. Identify grounding and bonding system components in accordance with Section 260553.

3.3 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS except Section 4.

B. Perform inspections and tests listed in NETA ATS, Section 7.13.

C. Perform ground electrode resistance tests under normally dry conditions. Precipitation within the previous 48 hours does not constitute normally dry conditions.

D. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

END OF SECTION

SECTION 260529 – HANGERS & SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1SECTION INCLUDES

A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.2 REFERENCE STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products 2017.

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2016a.

C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel 2019.

D. MFMA-4 - Metal Framing Standards Publication 2004.

E. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

F. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate sizes and arrangement of supports and bases with actual equipment and components to be installed.
   2. Coordinate work to provide additional framing and materials required for installation.
   3. Coordinate compatibility of support and attachment components with mounting surfaces at installed locations.
   4. Coordinate arrangement of supports with ductwork, piping, equipment and other potential conflicts.
   5. Notify Architect of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:
   1. Do not install products on or provide attachment to concrete surfaces until concrete has cured; see Section 033000.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for channel/strut framing systems, nonpenetrating rooftop supports, and post-installed concrete/masonry anchors.

B. Shop Drawings: Include details for fabricated hangers and supports where materials or methods other than those indicated are proposed for substitution.

1.5 QUALITY ASSURANCE

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.1 SUPPORT AND ATTACHMENT COMPONENTS

A. General Requirements:
   1. Comply with the following. Where requirements differ, comply with most stringent.
      a. NFPA 70.
      b. Requirements of authorities having jurisdiction.
   2. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
   3. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
   4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
   5. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
   6. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
      a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
      b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
      c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
      d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.

B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.
   1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
   2. Conduit Clamps: Bolted type unless otherwise indicated.

C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.

D. Metal Channel/Strut Framing Systems:
   1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
   2. Comply with MFMA-4.
   3. Channel Material:

a. Indoor Dry Locations: Use painted steel, zinc-plated steel, or galvanized steel.
b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.

E. Hanger Rods: Threaded, zinc-plated steel unless otherwise indicated.

F. Anchors and Fasteners:
1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.
2. New Concrete: Use preset concrete inserts.
3. Existing Concrete: Use expansion anchors.
4. Solid or Grout-Filled Masonry: Use expansion anchors.
5. Hollow Masonry: Use toggle bolts.
6. Hollow Stud Walls: Use toggle bolts.
7. Steel: Use welded threaded studs complying with AWS D1.1/D1.1M with lock washers and nuts or Beam clamps (MSS Type 19 21 23 25 or 27) complying with MSS SP-69.
8. Sheet Metal: Use sheet metal screws.
9. Wood: Fasten with lag screws or through bolts.
10. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.
11. Plastic and lead anchors are not permitted.
12. Preset Concrete Inserts: Continuous metal channel/strut and spot inserts specifically designed to be cast in concrete ceilings, walls, and floors.
a. Manufacturer: Same as manufacturer of metal channel/strut framing system.
b. Comply with MFMA-4.
c. Channel Material: Use galvanized steel.
13. Post-Installed Concrete and Masonry Anchors: Evaluated and recognized by ICC Evaluation Service, LLC (ICC-ES) for compliance with applicable building code.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive support and attachment components.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install hangers and supports in accordance with NECA 1.

C. Install anchors and fasteners in accordance with ICC Evaluation Services, LLC (ICC-ES) evaluation report conditions of use where applicable.

D. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.

E. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.

F. Unless specifically indicated or approved by Architect, do not provide support from roof deck.

G. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.

H. Equipment Support and Attachment:
   1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
   2. Use metal channel/strut secured to studs to support equipment surface mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
   3. Use metal channel/strut to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
   4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.

I. Preset Concrete Inserts: Use manufacturer provided closure strips to inhibit concrete seepage during concrete pour.

J. Secure fasteners in accordance with manufacturer's recommended torque settings.

K. Remove temporary supports.

3.3 CONCRETE BASES

A. Construct concrete bases of dimensions indicated but not less than 4 inches (100 mm) larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.

B. Use 3000-psi (20.7-MPa), 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in Division 03 Section "Cast-in-Place Concrete or Cast-in-Place Concrete (Limited Applications)" as applicable.

C. Anchor equipment to concrete base.
   1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
   2. Install anchor bolts to elevations required for proper attachment to supported equipment.
   3. Install anchor bolts according to anchor-bolt manufacturers written instructions.

3.4 FIELD QUALITY CONTROL

A. Inspect support and attachment components for damage and defects.

B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

C. Correct deficiencies and replace damaged or defective support and attachment components.

END OF SECTION

SECTION 260533.13 – CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Galvanized steel rigid metal conduit (RMC).

B. PVC-coated galvanized steel rigid metal conduit (RMC).

C. Galvanized steel electrical metallic tubing (EMT).

D. Stainless steel electrical metallic tubing (EMT).

E. Reinforced thermosetting resin conduit (RTRC).

1.2 REFERENCE STANDARDS

A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC) 2020.

B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S) 2020.

C. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

D. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT) 2020.

E. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable 2014.

F. NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit 2018.

G. NEMA TC 14 (SERIES) - Reinforced Thermosetting Resin Conduit and Fittings Series 2015.

H. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 6 - Electrical Rigid Metal Conduit-Steel Current Edition, Including All Revisions.

J. UL 514B - Conduit, Tubing, and Cable Fittings Current Edition, Including All Revisions.

K. UL 797A - Electrical Metallic Tubing - Aluminum and Stainless Steel Current Edition, Including All Revisions.

L. UL 1203 - Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
   2. Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts.
   3. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
   4. Coordinate work to provide roof penetrations that preserve integrity of roofing system and do not void roof warranty.
   5. Notify Architect of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:
   1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits and fittings.

B. Project Record Documents: Record actual routing for conduits installed underground and conduits 2 inch (53 mm) trade size and larger.

1.5 QUALITY ASSURANCE

A. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 CONDUIT APPLICATIONS

A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, and product listing.

B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.

C. Underground:
   1. Under Slab on Grade: Use rigid PVC conduit.
   2. Exterior, Direct-Buried: Use rigid PVC conduit.
   3. Where rigid polyvinyl chloride (PVC) conduit is provided, transition to galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), or schedule 80 rigid PVC conduit where emerging from underground.

4. Where rigid polyvinyl (PVC) conduitlarger than 2 inch (53 mm) trade size is provided, use PVC-coated galvanized steel rigid metal conduit elbows for bends.
5. Where galvanized steel rigid metal conduit (RMC) or galvanized steel intermediate metal conduit (IMC) is installed in direct contact with earth where soil has resistivity of less than 2000 ohm-centimeters or is characterized as severely corrosive based on soils report or local experience, use corrosion protection tape, factory-applied corrosion protection coating, or field-applied corrosion protection compound acceptable to authorities having jurisdiction to provide supplementary corrosion protection.
6. Where galvanized rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT) emerges from concrete into soil, use corrosion protection tape, factory-applied corrosion protection coating, or field-applied corrosion protection compound acceptable to authorities having jurisdiction to provide supplementary corrosion protection for minimum of 4 inches on either side of where conduit emerges.

D. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit.

E. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel rigid metal conduit or electrical metallic tubing (EMT).

F. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit.
1. Locations subject to physical damage include, but are not limited to:
   a. Where exposed below 8 feet, except within electrical and communication rooms or closets.

G. Exposed, Exterior: Use galvanized steel rigid metal conduit.

H. Concealed, Exterior, Not Embedded in Concrete or in Contact With Earth: Use galvanized steel rigid metal conduit.

I. Corrosive Locations Above Ground: Use stainless steel rigid metal conduit (RMC), stainless steel intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit (RMC), stainless steel electrical metallic tubing (EMT), or reinforced thermosetting resin conduit (RTRC).

2.2 CONDUIT - GENERAL REQUIREMENTS

A. Comply with NFPA 70.

B. Provide conduit, fittings, supports, and accessories required for complete raceway system.

C. Provide products listed, classified, and labeled as suitable for purpose intended.

D. Minimum Conduit Size, Unless Otherwise Indicated:
1. Branch Circuits: 3/4 inch (21 mm) trade size.
2. Branch Circuit Homeruns: 3/4-inch trade size.
3. Control Circuits: 1/2-inch trade size.
4. Flexible Connections to Luminaires: 3/8-inch trade size.

5. Underground, Exterior: 1-inch trade size.

E. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.3 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Manufacturers:
   1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
   2. Nucor Tubular Products: www.nucortubular.com/#sle.
   3. Western Tube, a division of Zekelman Industries: www.westerntube.com/#sle.

B. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

C. Fittings:
   1. Manufacturers:
      a. ABB; T&B: www.electrification.us.abb.com/#sle.
      b. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.us/#sle.
      c. Bridgeport Fittings Inc: www.bptfittings.com/#sle.
   2. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
   3. Material: Use steel or malleable iron.
   4. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.4 PVC-COATED GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Manufacturers:
   1. ABB; Ocal: www.electrification.us.abb.com/#sle.
   2. Calbond, a division of Atkore International www.calbond.com/#sle
   3. Robroy Industries: www.robroy.com/#sle.

B. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit with external polyvinyl chloride (PVC) coating complying with NEMA RN 1 and listed and labeled as complying with UL 6.

C. Exterior Coating: Polyvinyl chloride (PVC), nominal thickness of 40 mil, 0.040 inch.

D. PVC-Coated Boxes and Fittings:
   1. Manufacturer: Same as manufacturer of PVC-coated conduit to be installed.
   2. Nonhazardous Locations: Use boxes and fittings listed and labeled as complying with UL 514A, UL 514B, or UL 6.
   3. Hazardous/Classified Locations: Use fittings listed and labeled as complying with UL 1203 for classification of installed location.
   4. Material: Use steel or malleable iron.
   5. Exterior Coating: Polyvinyl chloride (PVC), minimum thickness of 40 mil, 0.040 inch.

E. PVC-Coated Supports: Furnish with exterior coating of polyvinyl chloride (PVC), minimum thickness of 15 mil, 0.015 inch.

2.5 STAINLESS STEEL ELECTRICAL METALLIC TUBING (EMT)

A. Manufacturers:
   1. Calbrite, a division of Atkore International: www.calbrite.com/#sle.

B. Description: NFPA 70, Type EMT stainless steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797A.

C. Fittings:
   1. Manufacturers:
      a. Calbrite, a division of Atkore International: www.calbrite.com/#sle.
   2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
   3. Connectors and Couplings: Use compression/gland or set-screw type.

2.6 REINFORCED THERMOSETTING RESIN CONDUIT (RTRC)

A. Description: NFPA 70, Type RTRC reinforced thermosetting resin conduit complying with NEMA TC 14 (SERIES).

B. Supports: As recommended by manufacturer.

C. Fittings: Same type and manufacturer as conduit to be connected.

2.7 ACCESSORIES

A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil, 0.020 inch.

B. Conduit Joint Compound: Corrosion-resistant, electrically conductive compound listed as complying with UL 2419; suitable for use with conduit to be installed.

C. Epoxy Adhesive for RTRC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.

D. Pull Strings: Use nylon or polyester tape with average breaking strength of not less than 1,250 lbf.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive conduits.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install conduit in accordance with NECA 1.

C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.

D. Install PVC-coated galvanized steel rigid metal conduit (RMC) using only tools approved by manufacturer.

E. Conduit Routing:
   1. Unless dimensioned, conduit routing indicated is diagrammatic.
   2. When conduit destination is indicated without specific routing, determine exact routing required.
   3. Conceal conduits unless specifically indicated to be exposed.
   4. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
   5. Arrange conduit to maintain adequate headroom, clearances, and access.
   6. Arrange conduit to provide no more than equivalent of four 90-degree bends between pull points.
   7. Arrange conduit to provide no more than 150 feet between pull points.
   8. Route conduits above water and drain piping where possible.
   9. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
   10. Maintain minimum clearance of 6 inches between conduits and piping for other systems.
   11. Maintain minimum clearance of 12 inches between conduits and hot surfaces. This includes, but is not limited to:
      a. Heaters.
      b. Hot water piping.
      c. Flues.
   12. Group parallel conduits in same area on common rack.

F. Conduit Support:
   1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 260529.
   2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
   3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
   4. Use conduit strap to support single surface-mounted conduit.
      a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
   5. Use metal channel/strut with accessory conduit clamps to support multiple parallel surface-mounted conduits.
   6. Use conduit clamp to support single conduit from beam clamp or threaded rod.
   7. Use trapeze hangers assembled from threaded rods and metal channel/strut with accessory conduit clamps to support multiple parallel suspended conduits.

8. Use nonpenetrating rooftop supports to support conduits routed across rooftops, where approved.
9. Use of spring steel conduit clips for support of conduits is not permitted.
10. Use of wire for support of conduits is not permitted.

G. Connections and Terminations:
1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
3. Use suitable adapters where required to transition from one type of conduit to another.
4. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
5. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
6. Secure joints and connections to provide mechanical strength and electrical continuity.

H. Penetrations:
1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
2. Make penetrations perpendicular to surfaces unless otherwise indicated.
3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
4. Conceal bends for conduit risers emerging above ground.
5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
7. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 078400.

I. Underground Installation:
1. Minimum Cover, Unless Otherwise Indicated or Required:
   a. Underground, Exterior: 18 inches.
   b. Under Slab on Grade: 12 inches to bottom of slab.
2. Provide underground warning tape in accordance with Section 260553 along entire conduit length.

J. Concrete Encasement: Where conduits not otherwise embedded within concrete are indicated to be concrete-encased, provide concrete in accordance with Section Concrete with minimum concrete cover of 3 inches on all sides unless otherwise indicated.

K. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:

1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
2. Where calculated in accordance with NFPA 70 for reinforced thermosetting resin conduit (RTRC) conduit installed above ground to compensate for thermal expansion and contraction.
3. Where conduits are subject to earth movement by settlement or frost.

L. Conduit Sealing:
1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
2. Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
   a. Where conduits pass from outdoors into conditioned interior spaces.
   b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.

M. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches at each end.

N. Provide grounding and bonding; see Section 260526.

O. Identify conduits; see Section 260553.

3.3 FIELD QUALITY CONTROL

A. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

B. Where coating of PVC-coated galvanized steel rigid metal conduit (RMC) contains cuts or abrasions, repair in accordance with manufacturer's instructions.

C. Correct deficiencies and replace damaged or defective conduits.

3.4 CLEANING

A. Clean interior of conduits to remove moisture and foreign matter.

3.5 PROTECTION

A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION

SECTION 260533.16 – BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1SECTION INCLUDES

A. Outlet and device boxes up to 100 cubic inches, including those used as junction and pull boxes.

B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches.

C. Underground boxes/enclosures.

1.2 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

B. NECA 130 - Standard for Installing and Maintaining Wiring Devices 2016.

C. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.

D. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable 2014.

E. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports 2013 (Reaffirmed 2020).

F. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

G. SCTE 77 - Specifications for Underground Enclosure Integrity 2017.

H. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations Current Edition, Including All Revisions.

I. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations Current Edition, Including All Revisions.

J. UL 508A - Industrial Control Panels Current Edition, Including All Revisions.

K. UL 514A - Metallic Outlet Boxes Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
   2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.

3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
5. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.
6. Coordinate the work with other trades to preserve insulation integrity.
7. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
8. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for floor boxes and underground boxes/enclosures.

B. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. See Section 016000 - Product Requirements, for additional provisions.
2. Keys for Lockable Enclosures: Two of each different key.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

PART 2 - PRODUCTS

2.1 BOXES

A. General Requirements:
1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
3. Provide products listed, classified, and labeled as suitable for the purpose intended.
4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
5. Provide grounding terminals within boxes where equipment grounding conductors terminate.

B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:
1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
3. Use suitable concrete type boxes where flush-mounted in concrete.
4. Use suitable masonry type boxes where flush-mounted in masonry walls.

5. Use raised covers suitable for the type of wall construction and device configuration where required.
6. Use shallow boxes where required by the type of wall construction.
7. Do not use "through-wall" boxes designed for access from both sides of wall.
8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
10. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
11. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.
12. Minimum Box Size, Unless Otherwise Indicated:
    a. Wiring Devices (Other Than Communications Systems Outlets): 4 inch square by 1-1/2 inch deep (100 by 38 mm) trade size.
    b. Communications Systems Outlets: 4 inch square by 2-1/8 inch (100 by 54 mm) trade size.
    c. Ceiling Outlets: 4 inch octagonal or square by 1-1/2 inch deep (100 by 38 mm) trade size.
13. Wall Plates: Comply with Section 262726.

C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:
1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
2. NEMA 250 Environment Type, Unless Otherwise Indicated:
3. Junction and Pull Boxes Larger Than 100 cubic inches:
    a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.
4. Cabinets and Hinged-Cover Enclosures, Other Than Junction and Pull Boxes:
    a. Provide lockable hinged covers, all locks keyed alike unless otherwise indicated.
    b. Back Panels: Painted steel, removable.
    c. Terminal Blocks: Provide voltage/current ratings and terminal quantity suitable for purpose indicated, with 25 percent spare terminal capacity.

D. Underground Boxes/Enclosures:
1. Description: In-ground, open bottom boxes furnished with flush, non-skid covers with legend indicating type of service and stainless steel tamper resistant cover bolts.
2. Size: As indicated on drawings.
3. Depth: As required to extend below frost line to prevent frost upheaval, but not less than 12 inches.
4. Applications:
    a. Sidewalks and Landscaped Areas Subject Only to Occasional Nondeliberate Vehicular Traffic: Use polymer concrete enclosures, with minimum SCTE 77 Tier 8 load rating.
    b. Do not use polymer concrete enclosures in areas subject to deliberate vehicular traffic.

5. Polymer Concrete Underground Boxes/Enclosures: Comply with SCTE 77.
   a. Manufacturers:
      1) Hubbell Incorporated; Quazite Products; [_____]: www.hubbellpowersystems.com/#sle.
      2) MacLean Highline; [_____]: www.macleanhighline.com/#sle.
      3) Oldcastle Precast, Inc; [_____]: www.oldcastleprecast.com/#sle.
   b. Combination fiberglass/polymer concrete boxes/enclosures are acceptable.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive boxes.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.

C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

D. Provide separate boxes for emergency power and normal power systems.

E. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.

F. Flush-mount boxes in finished areas unless specifically indicated to be surface-mounted.

G. Box Locations:
   1. Locate boxes to be accessible. Provide access panels in accordance with Section Access Panels as requiredwhere approved by the Architect.
   2. Unless dimensioned, box locations indicated are approximate.
   3. Locate boxes as required for devices installed under other sections or by others.
      a. Switches, Receptacles, and Other Wiring Devices: Comply with Section 262726.
   4. Locate boxes so that wall plates do not span different building finishes.
   5. Locate boxes so that wall plates do not cross masonry joints.
   6. Unless otherwise indicated, where multiple outlet boxes are installed at the same location at different mounting heights, install along a common vertical center line.
   7. Locate junction and pull boxes as indicated, as required to facilitate installation of conductors, and to limit conduit length and/or number of bends between pulling points in accordance with Section 260533.13.

H. Box Supports:
   1. Secure and support boxes in accordance with NFPA 70 and Section 260529 using suitable supports and methods approved by the authority having jurisdiction.
   2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.

I. Install boxes plumb and level.

J. Flush-Mounted Boxes:
   1. Install boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that front edge of box or associated raised cover is not set back from finished surface more than 1/4 inch or does not project beyond finished surface.
   2. Install boxes in combustible materials such as wood so that front edge of box or associated raised cover is flush with finished surface.
   3. Repair rough openings around boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that there are no gaps or open spaces greater than 1/8 inch at the edge of the box.

K. Install boxes as required to preserve insulation integrity.

L. Underground Boxes/Enclosures:
   1. Install enclosure on gravel base, minimum 6 inches deep.
   2. Install additional bracing inside enclosures in accordance with manufacturer's instructions to minimize box sidewall deflections during backfilling. Backfill with cover bolted in place.

M. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

N. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 078400.

O. Close unused box openings.

P. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.

Q. Provide grounding and bonding in accordance with Section 260526.

3.3 CLEANING

A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

3.4 PROTECTION

A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

END OF SECTION

SECTION 260553 – IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Electrical identification requirements.

B. Identification nameplates and labels.

C. Wire and cable markers.

D. Voltage markers.

E. Underground warning tape.

F. Warning signs and labels.

1.2 RELATED REQUIREMENTS

A. Section 260519 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

B. Section 262726 - Wiring Devices - Lutron: Device and wallplate finishes; factory pre-marked wallplates.

1.3 REFERENCE STANDARDS

A. ANSI Z535.2 - American National Standard for Environmental and Facility Safety Signs 2011 (Reaffirmed 2017).

B. ANSI Z535.4 - American National Standard for Product Safety Signs and Labels 2011 (Reaffirmed 2017).

C. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

D. NFPA 70E - Standard for Electrical Safety in the Workplace 2021.

E. UL 969 - Marking and Labeling Systems Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.

B. Sequencing:
   1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
   2. Do not install identification products until final surface finishes and painting are complete.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for each product.

B. Shop Drawings: Provide schedule of items to be identified indicating proposed designations, materials, legends, and formats.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.7 FIELD CONDITIONS

A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 - PRODUCTS

2.1 IDENTIFICATION REQUIREMENTS

A. Identification for Equipment:
1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
   a. Switchboards:
      1) Identify ampere rating and name.
      2) Identify voltage and phase.
      3) Identify power source and circuit number. Include location when not within sight of equipment.
      4) Use identification nameplate to identify main overcurrent protective device.
      5) Use identification nameplate to identify load(s) served for each branch device.Identify spares and spaces.
   b. Panelboards:
      1) Identify ampere rating and name.
      2) Identify voltage and phase.
      3) Identify power source and circuit number. Include location when not within sight of equipment.
      4) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.
      5) For power panelboards without a door, use identification nameplate to identify load(s) served for each branch device.Identify spares and spaces.
   c. Time Switches:
      1) Identify load(s) served and associated circuits controlled. Include location.
2. Service Equipment:
   a. Use identification nameplate to identify each service disconnecting means.
3. Available Fault Current Documentation: Use identification label to identify the available fault current and date calculations were performed at locations requiring documentation by NFPA 70 including but not limited to the following.

a. Service equipment.
b. Industrial control panels.
c. Motor control centers.
d. Elevator control panels.
e. Industrial machinery.

4. Arc Flash Hazard Warning Labels: Use warning labels to identify arc flash hazards for electrical equipment, such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized.
   a. Minimum Size: 3.5 by 5 inches.
   b. Legend: Include orange header that reads "WARNING", followed by the word message "Arc Flash and Shock Hazard; Appropriate PPE Required; Do not operate controls or open covers without appropriate personal protection equipment; Failure to comply may result in injury or death; Refer to NFPA 70E for minimum PPE requirements" or approved equivalent.

B. Identification for Conductors and Cables:
1. Color Coding for Power Conductors 600 V and Less: Comply with Section 260519.
2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.
3. Use wire and cable markers to identify circuit number or other designation indicated for power, control, and instrumentation conductors and cables at the following locations:
   a. At each source and load connection.
   b. Within boxes when more than one circuit is present.
   c. Within equipment enclosures when conductors and cables enter or leave the enclosure.
4. Use wire and cable markers to identify connected grounding electrode system components for grounding electrode conductors.

C. Identification for Raceways:
1. Use voltage markers to identify highest voltage present for accessible conduits at maximum intervals of 20 feet.
2. Use identification labels, handwritten text using indelible marker, or plastic marker tags to identify circuits enclosed for accessible conduits at wall penetrations, at floor penetrations, at roof penetrations, and at equipment terminations when source is not within sight.
3. Use identification labels, handwritten text using indelible marker, or plastic marker tags to identify spare conduits at each end. Identify purpose and termination location.
4. Use underground warning tape to identify underground raceways.

D. Identification for Boxes:
1. Use voltage markers to identify highest voltage present.
2. Use identification labels or handwritten text using indelible marker to identify circuits enclosed.
   a. For exposed boxes in public areas, use only identification labels.

E. Identification for Devices:
1. Wiring Device and Wallplate Finishes: Comply with Section 262726.
2. Use identification label or engraved wallplate to identify serving branch circuit for all receptacles.
   a. For receptacles in public areas or in areas as directed by Architect, provide identification on inside surface of wallplate.
3. Use identification label or engraved wallplate to identify load controlled for wall-mounted control devices controlling loads that are not visible from the control location and for multiple wall-mounted control devices installed at one location.

F. Identification for Luminaires:
1. Use permanent red dot on luminaire frame to identify luminaires connected to emergency power system.

2.2 IDENTIFICATION NAMEPLATES AND LABELS

A. Identification Nameplates:
1. Materials:
   a. Indoor Clean, Dry Locations: Use plastic nameplates.
   b. Outdoor Locations: Use plastic, stainless steel, or aluminum nameplates suitable for exterior use.
2. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch; engraved text.
   a. Exception: Provide minimum thickness of 1/8 inch when any dimension is greater than 4 inches.
3. Stainless Steel Nameplates: Minimum thickness of 1/32 inch; engraved or laser-etched text.
4. Aluminum Nameplates: Anodized; minimum thickness of 1/32 inch; engraved or laser-etched text.
5. Mounting Holes for Mechanical Fasteners: Two, centered on sides for sizes up to 1 inch high; Four, located at corners for larger sizes.

B. Identification Labels:
1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

C. Format for Equipment Identification:
1. Minimum Size: 1 inch by 2.5 inches.
2. Legend:
   a. Equipment designation or other approved description.
3. Text: All capitalized unless otherwise indicated.
4. Minimum Text Height:
   a. Equipment Designation: 1/2 inch.
   b. Other Information: 1/4 inch.
5. Color:
   a. Normal Power System: White text on black background.

D. Format for Caution and Warning Messages:
   1. Minimum Size: 2 inches by 4 inches.
   2. Legend: Include information or instructions indicated or as required for proper and safe operation and maintenance.
   3. Text: All capitalized unless otherwise indicated.
   4. Minimum Text Height: 1/2 inch.
   5. Color: Black text on yellow background unless otherwise indicated.

E. Format for Receptacle Identification:
   1. Minimum Size: 3/8 inch by 1.5 inches.
   2. Legend: Power source and circuit number or other designation indicated.
   3. Text: All capitalized unless otherwise indicated.
   4. Minimum Text Height: 3/16 inch.
   5. Color: Black text on clear background.

F. Format for Control Device Identification:
   1. Minimum Size: 3/8 inch by 1.5 inches.
   2. Legend: Load controlled or other designation indicated.
   3. Text: All capitalized unless otherwise indicated.
   4. Minimum Text Height: 3/16 inch.
   5. Color: Black text on clear background.

2.3 WIRE AND CABLE MARKERS

A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.

B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.

C. Legend: Power source and circuit number or other designation indicated.

D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.

E. Minimum Text Height: 1/8 inch.

F. Color: Black text on white background unless otherwise indicated.

2.4 VOLTAGE MARKERS

A. Markers for Conduits: Use factory pre-printed self-adhesive vinyl, self-adhesive vinyl cloth, or vinyl snap-around type markers.

B. Markers for Boxes and Equipment Enclosures: Use factory pre-printed self-adhesive vinyl or self-adhesive vinyl cloth type markers.

C. Minimum Size:

1. Markers for Conduits: As recommended by manufacturer for conduit size to be identified.
2. Markers for Pull Boxes: 1 1/8 by 4 1/2 inches.
3. Markers for Junction Boxes: 1/2 by 2 1/4 inches.

D. Legend:
1. Markers for Voltage Identification: Highest voltage present.

E. Color: Black text on orange background unless otherwise indicated.

2.5 UNDERGROUND WARNING TAPE

A. Materials: Use non-detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.

B. Non-detectable Type Tape: 6 inches wide, with minimum thickness of 4 mil.

C. Legend: Type of service, continuously repeated over full length of tape.

D. Color:

2.6 WARNING SIGNS AND LABELS

A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.

B. Warning Signs:
1. Materials:
2. Minimum Size: 7 by 10 inches unless otherwise indicated.

C. Warning Labels:
1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.
2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.
3. Minimum Size: 2 by 4 inches unless otherwise indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
1. Surface-Mounted Equipment: Enclosure front.
2. Flush-Mounted Equipment: Inside of equipment door.

3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
4. Elevated Equipment: Legible from the floor or working platform.
5. Branch Devices: Adjacent to device.
6. Interior Components: Legible from the point of access.
7. Conduits: Legible from the floor.
8. Boxes: Outside face of cover.
9. Conductors and Cables: Legible from the point of access.
10. Devices: Outside face of cover.

C. Install identification products centered, level, and parallel with lines of item being identified.

D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.

E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.

F. Install underground warning tape above buried lines with one tape per trench at 3 inches below finished grade.

G. Mark all handwritten text, where permitted, to be neat and legible.

3.3 FIELD QUALITY CONTROL

A. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

END OF SECTION

SECTION 260583 – WIRING CONNECTIONS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Electrical connections to equipment.

1.2 RELATED REQUIREMENTS

A. Section 260533.13 - Conduit for Electrical Systems.

B. Section 260533.16 - Boxes for Electrical Systems.

1.3 REFERENCE STANDARDS

A. NEMA WD 1 - General Color Requirements for Wiring Devices 1999 (Reaffirmed 2020).

B. NEMA WD 6 - Wiring Devices - Dimensional Specifications 2021.

C. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Obtain and review shop drawings, product data, manufacturer's wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.
   2. Determine connection locations and requirements.

B. Sequencing:
   1. Install rough-in of electrical connections before installation of equipment is required.
   2. Make electrical connections before required start-up of equipment.

1.5 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cords and Caps: NEMA WD 6; match receptacle configuration at outlet provided for equipment.
   1. Colors: Comply with NEMA WD 1.
   2. Cord Construction: NFPA 70, Type SO, multiconductor flexible cord with identified equipment grounding conductor, suitable for use in damp locations.
   3. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.2 ELECTRICAL CONNECTIONS

A. Make electrical connections in accordance with equipment manufacturer's instructions.

B. Make conduit connections to equipment using flexible conduit. Use liquidtight flexible conduit with watertight connectors in damp or wet locations.

C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.

D. Provide receptacle outlet to accommodate connection with attachment plug.

E. Provide cord and cap where field-supplied attachment plug is required.

F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.

G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.

H. Install terminal block jumpers to complete equipment wiring requirements.

I. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

END OF SECTION

SECTION 260802 – INSTALLATION & ACCEPTANCE TESTING OF ELECTRICAL SYSTEMS

INTRODUCTION

1.1TITLE 24 REQUIRES THE COMPLETION OF ALL APPLICABLE CERTIFICATES OF INSTALLATION AND CERTIFICATES OF ACCEPTANCE FOR LIGHTING SYSTEMS. THIS SHALL INCLUDE INDOOR AND OUTDOOR LIGHTING SYSTEMS.

1.2 RELATED DOCUMENTS

A. Contract drawings and specifications, general provisions of the contract, including general and supplementary conditions, electrical provisions and Division-1 Specification sections apply to work of this section.

1.3 DESCRIPTION OF WORK

A. Complete all Title 24 required Certificate(s) of Installation (NRCI) and Certificate(s) of Acceptance (NRCA) to be completed per the contract documents.

1.4 RESPONSIBILITIES OF INSTALLING CONTRACTORS

A. General Contractor (GC)
   1. Ensure that all contractors identified as the contractor responsible for acceptance testing and completion of the Title 24 Certificate(s) of Acceptance are certified by the State of California or its designated body to conduct each respective test.

B. Electrical Contractor (EC)
   1. Verify proper installation and performance of all electrical services provided.
   2. Meet with acceptance tester at beginning of construction to review project requirements.
   3. Complete Title 24 Certificate(s) of Installation and manufacturer's pre-start checklists prior to scheduling startup/programming of lighting control equipment.
      a. Retain Certificate(s) of Installation in a 3-ring binder in an organized fashion. Binder is to remain on the job site
      b. Make Certificate(s) of Installation available for building inspector's review.
      c. Retain calibration records for equipment provided with manufacturer calibrated sensors in the Certificate(s) of Installation binder.
      d. Correct labeling of all circuits with connected equipment.
   4. Complete the Certificate(s) of Acceptance per the contract documents.
      a. The company installing the lighting systems must be an authorized Lighting Controls Acceptance Test Employer certified by a Lighting Controls Acceptance Test Technician Certification Provider or include in their bid the cost of retaining and overseeing a contractor who is an authorized Lighting Controls Acceptance Test Employer to complete the acceptance testing.
      b. All required acceptance testing must be completed by a Lighting Controls Acceptance Test Technician employed by the Lighting Controls Acceptance Test Employer. The acceptance tester shall be present for all commissioning efforts.

c. Retain Certificate(s) of Acceptance in a 3-ring binder in an organized fashion. Binder is to remain on the job site
d. Upload all Certificate(s) of Acceptance to the California Title 24 Certificates of Acceptance database, if, at the time of project completion, the database is available to the public.

5. Successful completion of the required Acceptance Tests is the responsibility of the installing contractor. Any costs associated with modifications necessary to obtain compliance and re-testing of systems shall be included in the base bid of this project.

END OF SECTION

SECTION 262413 - SWITCHBOARDS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Low-voltage (600 V and less) switchboards and associated accessories for service and distribution applications.

B. Overcurrent protective devices for switchboards.

1.2 RELATED REQUIREMENTS

A. Section 260526 - Grounding and Bonding for Electrical Systems.

B. Section 260529 - Hangers and Supports for Electrical Systems.

1.3 REFERENCE STANDARDS

A. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service 2013e (Amended 2017).

B. IEEE C57.13 - IEEE Standard Requirements for Instrument Transformers 2016.

C. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

D. NECA 400 - Standard for Installing and Maintaining Switchboards 2007.

E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.

F. NEMA PB 2 - Deadfront Distribution Switchboards 2011.

G. NEMA PB 2.1 - General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less 2013.

H. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

I. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

J. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures Current Edition, Including All Revisions.

K. UL 869A - Reference Standard for Service Equipment Current Edition, Including All Revisions.

L. UL 891 - Switchboards Current Edition, Including All Revisions.
   a. UL 1053 - Ground-Fault Sensing and Relaying Equipment Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances required by NFPA 70.
   2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
   3. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
   4. Coordinate with manufacturer to provide shipping splits suitable for the dimensional constraints of the installation.
   5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Service Entrance Switchboards:
   1. Coordinate with Utility Company to provide switchboards with suitable provisions for electrical service and utility metering, where applicable.
   2. Coordinate with Owner to arrange for Utility Company required access to equipment for installation and maintenance.
   3. Obtain Utility Company approval of switchboard prior to fabrication.
   4. Arrange for inspections necessary to obtain Utility Company approval of installation.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for switchboards, enclosures, overcurrent protective devices, and other installed components and accessories.

B. Shop Drawings: Indicate dimensions, voltage, bus ampacities, overcurrent protective device arrangement and sizes, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.
   1. Include dimensioned plan and elevation views of switchboards and adjacent equipment with all required clearances indicated.
   2. Identify mounting conditions required for equipment seismic qualification.

C. Manufacturer's equipment seismic qualification certification.

D. Service Entrance Switchboards: Include documentation of Utility Company approval of switchboard.

E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

F. Project Record Documents: Record actual installed locations of switchboards and final equipment settings.

G. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Enclosure Keys: Two of each different key.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store switchboards in accordance with manufacturer's instructions, NECA 400, and NEMA PB 2.1.

B. Store in a clean, dry space having a uniform temperature to prevent condensation (including outdoor switchboards, which are not weatherproof until completely and properly installed). Where necessary, provide temporary enclosure space heaters or temporary power for permanent factory-installed space heaters.

C. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

D. Handle carefully to avoid damage to switchboard internal components, enclosure, and finish.

1.8 FIELD CONDITIONS

A. Maintain field conditions within required service conditions during and after installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Switchboards - Basis of Design: Eaton.

B. Switchboards- Other Acceptable Manufacturers:
   1. Eaton Corporation: www.eaton.com/#sle.
   2. Schneider Electric; Square D Products: www.schneider-electric.us/#sle.
   3. Siemens Industry, Inc: www.usa.siemens.com/#sle.

C. Products other than basis of design are subject to compliance with specified requirements and prior approval of Engineer. By using products other than basis of design, Contractor accepts responsibility for costs associated with any necessary modifications to related work, including any design fees.

D. Source Limitations: Furnish switchboards and associated components produced by the same manufacturer as the other electrical distribution equipment used for this project and obtained from a single supplier.

2.2 SWITCHBOARDS

A. Provide switchboards consisting of all required components, control power transformers, instrumentation and control wiring, accessories, etc. as necessary for a complete operating system.

B. Provide products listed, classified, and labeled as suitable for the purpose intended.

C. Description: Dead-front switchboard assemblies complying with NEMA PB 2, and listed and labeled as complying with UL 891; ratings, configurations and features as indicated on the drawings.

D. Service Entrance Switchboards:
   1. Listed and labeled as suitable for use as service equipment according to UL 869A.
   2. For solidly-grounded wye systems, provide factory-installed main bonding jumper between neutral and ground busses, and removable neutral disconnecting link for testing purposes.
   3. Comply with Utility Company requirements for electrical service.
   4. Utility Metering Provisions: Provide separate barriered compartment complying with Utility Company requirements where indicated or where required by Utility Company. Include hinged sealable door and provisions for Utility Company current transformers (CTs), potential transformers (PTs), or potential taps as required.

E. Service Conditions:
   1. Provide switchboards and associated components suitable for operation at indicated ratings under the service conditions at the installed location.

F. Short Circuit Current Rating:
   1. Provide switchboards with listed short circuit current rating not less than the available fault current at the installed location as indicated on the drawings.
   2. Listed series ratings are not acceptable.

G. Main Devices: Configure for top or bottom incoming feed as indicated or as required for the installation. Provide separate pull section and/or top-mounted pullbox as indicated or as required to facilitate installation of incoming feed.

H. Bussing: Sized in accordance with UL 891 temperature rise requirements.
   1. Through bus (horizontal cross bus) to be fully rated through full length of switchboard (non-tapered). Tapered bus is not permitted.
   2. Provide solidly bonded equipment ground bus through full length of switchboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.
   3. Phase and Neutral Bus Material: Copper.
   4. Ground Bus Material: Copper.

I. Conductor Terminations: Suitable for use with the conductors to be installed.
   1. Line Conductor Terminations:
      a. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
      b. Main and Neutral Lug Type: Mechanical.
   2. Load Conductor Terminations:
      a. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
      b. Lug Type:
         1) Provide mechanical lugs.

J. Enclosures:
   1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
      a. Indoor Clean, Dry Locations: Type 1 or Type 2 (drip-proof).
      b. Outdoor Locations: Type 3R.
   2. Finish: Manufacturer's standard unless otherwise indicated.
   3. Outdoor Enclosures:
      a. Enclosure Type: Non-walk-in type unless otherwise indicated.
      b. Color: Manufacturer's standard.
      c. Access Doors: Lockable, with all locks keyed alike.

K. Future Provisions:
   1. Prepare designated spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.
   2. Equip distribution sections with full height vertical bussing to accommodate maximum utilization of space for devices.
   3. Where designated spaces for future device provisions are not indicated, include provisions for minimum of 6 device(s) rated at 25 percent of rating of switchboard main or incoming feed.
   4. Arrange and equip through bus and ground bus to accommodate future installation of additional switchboard sectionswhere indicated.

L. Ground Fault Protection: Where ground-fault protection is indicated, provide system listed and labeled as complying with UL 1053.
   1. Where overcurrent protective devices equipped with integral ground fault protection are used, provide separate neutral current sensor where applicable.
   2. Where accessory ground fault sensing and relaying equipment is used, equip companion overcurrent protective devices with ground-fault shunt trips.
      a. Use zero sequence or residual ground fault detection method unless otherwise indicated.
      b. Provide test panel and field-adjustable ground fault pick-up and delay settings.

M. Arc Flash Energy-Reducing Maintenance Switching: For circuit breakers rated 1200 A or higher, provide a local accessory switch with status indicator light that permits selection of a maintenance mode with alternate electronic trip unit settings for reduced fault clearing time.

N. Instrument Transformers:
   1. Comply with IEEE C57.13.

2. Select suitable ratio, burden, and accuracy as required for connected devices.
3. Current Transformers: Connect secondaries to shorting terminal blocks.
4. Potential Transformers: Include primary and secondary fuses with disconnecting means.

2.3 OVERCURRENT PROTECTIVE DEVICES

A. Circuit Breakers:
1. Interrupting Capacity:
a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated, but not less than specified minimum requirements.
b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
2. Molded Case Circuit Breakers:
a. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers; listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.
1) Provide thermal magnetic circuit breakers unless otherwise indicated.
2) Provide electronic trip circuit breakers where indicated.
b. Minimum Interrupting Capacity:
1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
c. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
d. Electronic Trip Circuit Breakers: Furnish solid state, microprocessor-based, true rms sensing trip units.
e. Provide the following features and accessories where indicated or where required to complete installation:
1) Shunt Trip: Provide coil voltage as required for connection to indicated trip actuator.

2.4 SOURCE QUALITY CONTROL

A. Factory test switchboards according to NEMA PB 2, including the following production (routine) tests on each switchboard assembly or component:
1. Dielectric tests.
2. Mechanical operation tests.
3. Grounding of instrument transformer cases test.
4. Electrical operation and control wiring tests, including polarity and sequence tests.
5. Ground-fault sensing equipment test.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that the ratings and configurations of the switchboards and associated components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive switchboards.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install switchboards in accordance with NECA 1 (general workmanship), NECA 400, and NEMA PB 2.1.

C. Arrange equipment to provide required clearances and maintenance access, including accommodations for any drawout devices.

D. Where switchboard is indicated to be mounted with inaccessible side against wall, provide minimum clearance of 1/2 inch between switchboard and wall.

E. Provide required support and attachment in accordance with Section 260529.

F. Install switchboards plumb and level.

G. Provide grounding and bonding in accordance with Section 260526.

H. Install all field-installed devices, components, and accessories.

I. Where accessories are not self-powered, provide control power source as indicated or as required to complete installation.

J. Set field-adjustable circuit breaker tripping function settingsas directed.

K. Set field-adjustable ground fault protection pickup and time delay settingsas directed.

L. Provide filler plates to cover unused spaces in switchboards.

3.3 FIELD QUALITY CONTROL

A. Before energizing switchboard, perform insulation resistance testing in accordance with NECA 400 and NEMA PB 2.1.

B. Inspect and test in accordance with NETA ATS, except Section 4.

C. Perform inspections and tests listed in NETA ATS, Section 7.1.

D. Molded Case and Insulated Case Circuit Breakers: Perform inspections and tests listed in NETA ATS, Section 7.6.1.1 for all main circuit breakers. Tests listed as optional are not required.

E. Ground Fault Protection Systems: Test in accordance with manufacturer's instructions as required by NFPA 70.

1. Perform inspections and tests listed in NETA ATS, Section 7.14. The insulation-resistance test on control wiring listed as optional is not required.

F. Instrument Transformers: Perform inspections and tests listed in NETA ATS, Section 7.10. The dielectric withstand tests on primary windings with secondary windings connected to ground listed as optional are not required.

G. Test shunt trips to verify proper operation.

H. Correct deficiencies and replace damaged or defective switchboards or associated components.

3.4 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

B. Adjust alignment of switchboard covers and doors.

3.5 CLEANING

A. Clean dirt and debris from switchboard enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred surfaces to match original factory finish.

3.6 PROTECTION

A. Protect installed switchboards from subsequent construction operations.

END OF SECTION

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Power distribution panelboards.

B. Lighting and appliance panelboards.

C. Overcurrent protective devices for panelboards.

1.2 RELATED REQUIREMENTS

A. Section 260526 - Grounding and Bonding for Electrical Systems.

B. Section 260529 - Hangers and Supports for Electrical Systems.

C. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service 2013e (Amended 2017).

B. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

C. NECA 407 - Standard for Installing and Maintaining Panelboards 2015.

D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.

E. NEMA PB 1 - Panelboards 2011.

F. NEMA PB 1.1 - General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less 2013.

G. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.

H. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations Current Edition, Including All Revisions.

J. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations Current Edition, Including All Revisions.

K. UL 67 - Panelboards Current Edition, Including All Revisions.

L. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures Current Edition, Including All Revisions.

M. UL 943 - Ground-Fault Circuit-Interrupters Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
   2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
   3. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted panelboards where indicated.
   4. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
   5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for panelboards, enclosures, overcurrent protective devices, and other installed components and accessories.

B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, overcurrent protective device arrangement and sizes, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.

C. Project Record Documents: Record actual installed locations of panelboards and actual installed circuiting arrangements.

D. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Panelboard Keys: Two of each different key.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

D. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store panelboards in accordance with manufacturer's instructions and NECA 407.

B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

C. Handle carefully in accordance with manufacturer's written instructions to avoid damage to panelboard internal components, enclosure, and finish.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Eaton Corporation: www.eaton.com.

B. Schneider Electric; Square D Products: www.schneider-electric.us.

C. Siemens Industry, Inc: www.usa.siemens.com.

D. Source Limitations: Furnish panelboards and associated components produced by the same manufacturer as the other electrical distribution equipment used for this project and obtained from a single supplier.

2.2 PANELBOARDS - GENERAL REQUIREMENTS

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
   1. Altitude: Less than 6,600 feet.
   2. Ambient Temperature:
      a. Panelboards Containing Circuit Breakers: Between 23 degrees F and 104 degrees F.

C. Short Circuit Current Rating:
   1. Provide panelboards with listed short circuit current rating not less than the available fault current at the installed location as indicated on the drawings.

D. Mains: Configure for top or bottom incoming feed as indicated or as required for the installation.

E. Branch Overcurrent Protective Devices: Replaceable without disturbing adjacent devices.

F. Bussing: Sized in accordance with UL 67 temperature rise requirements.
   1. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.
   2. Provide solidly bonded equipment ground bus in each panelboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.

G. Conductor Terminations: Suitable for use with the conductors to be installed.

H. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
   1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
      a. Indoor Clean, Dry Locations: Type 1.
      b. Outdoor Locations: Type 3R.
   2. Boxes: Galvanized steel unless otherwise indicated.
      a. Provide wiring gutters sized to accommodate the conductors to be installed.
   3. Fronts:
      a. Fronts for Surface-Mounted Enclosures: Same dimensions as boxes.
      b. Fronts for Flush-Mounted Enclosures: Overlap boxes on all sides to conceal rough opening.
   4. Lockable Doors: All locks keyed alike unless otherwise indicated.

I. Future Provisions: Prepare all unused spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.

J. Load centers are not acceptable.

2.3 POWER DISTRIBUTION PANELBOARDS

A. Description: Panelboards complying with NEMA PB 1, power and feeder distribution type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.

B. Conductor Terminations:
   1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
   2. Main and Neutral Lug Type: Mechanical.

C. Bussing:
   1. Phase and Neutral Bus Material: Copper.
   2. Ground Bus Material: Copper.

D. Circuit Breakers:
   1. Provide bolt-on type.
   2. Provide thermal magnetic circuit breakersfor circuit breaker frame sizes less than 225 amperes.
   3. Provide electronic trip circuit breakersfor circuit breaker frame sizes 225 amperes and above.

E. Enclosures:

1. Provide surface-mounted or flush-mounted enclosuresas indicated.
2. Fronts: Provide door-in-door trim with hinged cover for access to load terminals and wiring gutters, and separate lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
3. Provide clear plastic circuit directory holder mounted on inside of door.

2.4 LIGHTING AND APPLIANCE PANELBOARDS

A. Description: Panelboards complying with NEMA PB 1, lighting and appliance branch circuit type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.

B. Conductor Terminations:
1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
2. Main and Neutral Lug Type: Mechanical.

C. Bussing:
1. Phase Bus Connections: Arranged for sequential phasing of overcurrent protective devices.
2. Phase and Neutral Bus Material: Copper.
3. Ground Bus Material: Copper.

D. Circuit Breakers: Thermal magnetic bolt-on type unless otherwise indicated.

E. Enclosures:
1. Provide surface-mounted or flush-mounted enclosures as indicated.
2. Fronts: Provide door-in-door trim with hinged cover for access to load terminals and wiring gutters, and separate lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
3. Provide clear plastic circuit directory holder mounted on inside of door.

2.5 OVERCURRENT PROTECTIVE DEVICES

A. Molded Case Circuit Breakers:
1. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.
2. Interrupting Capacity:
   a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated, but not less than:
      1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
      2) 14,000 rms symmetrical amperes at 480 VAC.
   b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
3. Conductor Terminations:
   a. Provide mechanical lugs unless otherwise indicated.
   b. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.

4. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
5. Electronic Trip Circuit Breakers: Furnish solid state, microprocessor-based, true rms sensing trip units.
6. Multi-Pole Circuit Breakers: Furnish with common trip for all poles.
7. Provide the following circuit breaker types where indicated:
   a. Ground Fault Circuit Interrupter (GFCI) Circuit Breakers: Listed as complying with UL 943, class A for protection of personnel.
8. Do not use tandem circuit breakers.
9. Provide multi-pole circuit breakers for multi-wire branch circuits as required by NFPA 70.
10. Provide the following features and accessories where indicated or where required to complete installation:
    a. Shunt Trip: Provide coil voltage as required for connection to indicated trip actuator.
    b. Handle Pad-Lock Provision: For locking circuit breaker handle in OFF position.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that the ratings and configurations of the panelboards and associated components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive panelboards.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship).

B. Install products in accordance with manufacturer's instructions.

C. Install panelboards in accordance with NECA 407 and NEMA PB 1.1.

D. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

E. Provide required support and attachment in accordance with Section 260529.

F. Install panelboards plumb.

G. Install flush-mounted panelboards so that trims fit completely flush to wall with no gaps and rough opening completely covered.

H. Mount panelboards such that the highest position of any operating handle for circuit breakers or switches does not exceed 79 inches above the floor or working platform.

I. Provide minimum of six spare 1 inch trade size conduits out of each flush-mounted panelboard stubbed into accessible space above ceiling and below floor.

J. Provide grounding and bonding in accordance with Section 260526.

K. Install all field-installed branch devices, components, and accessories.

L. Multi-Wire Branch Circuits: Group grounded and ungrounded conductors together in the panelboard as required by NFPA 70.

M. Provide filler plates to cover unused spaces in panelboards.

3.3 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS, except Section 4.

B. Molded Case Circuit Breakers: Perform inspections and tests listed in NETA ATS, Section 7.6.1.1 for all main circuit breakers and circuit breakers larger than [_____] amperes. Tests listed as optional are not required.

C. Test GFCI circuit breakers to verify proper operation.

D. Test shunt trips to verify proper operation.

E. Correct deficiencies and replace damaged or defective panelboards or associated components.

3.4 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

B. Adjust alignment of panelboard fronts.

3.5 CLEANING

A. Clean dirt and debris from panelboard enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION

SECTION 262726 – WIRING DEVICES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Wall switches.

B. Receptacles.

C. Wall plates.

1.2 RELATED REQUIREMENTS

A. Section 260533.16 - Boxes for Electrical Systems.

B. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. FS W-C-596 - Connector, Electrical, Power, General Specification for 2014h, with Amendments (2017).

B. FS W-S-896 - Switches, Toggle (Toggle and Lock), Flush-mounted (General Specification) 2014g, with Amendment (2017).

C. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

D. NECA 130 - Standard for Installing and Maintaining Wiring Devices 2016.

E. NEMA WD 1 - General Color Requirements for Wiring Devices 1999 (Reaffirmed 2020).

F. NEMA WD 6 - Wiring Devices - Dimensional Specifications 2021.

G. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

H. UL 20 - General-Use Snap Switches Current Edition, Including All Revisions.

I. UL 498 - Attachment Plugs and Receptacles Current Edition, Including All Revisions.

J. UL 514D - Cover Plates for Flush-Mounted Wiring Devices Current Edition, Including All Revisions.

K. UL 943 - Ground-Fault Circuit-Interrupters Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate the placement of outlet boxes with millwork, furniture, equipment, etc. installed under other sections or by others.
2. Coordinate wiring device ratings and configurations with the electrical requirements of actual equipment to be installed.
3. Coordinate the placement of outlet boxes for wall switches with actual installed door swings.
4. Coordinate the installation and preparation of uneven surfaces, such as split face block, to provide suitable surface for installation of wiring devices.
5. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

B. Sequencing:
1. Do not install wiring devices until final surface finishes and painting are complete.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.
1. Wall Dimmers: Include derating information for ganged multiple devices.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Hubbell Incorporated: www.hubbell-wiring.com.

B. Leviton Manufacturing Company, Inc: www.leviton.com.

C. Lutron Electronics Company, Inc: www.lutron.com.

D. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us

2.2 WIRING DEVICE APPLICATIONS

A. Provide wiring devices suitable for intended use and with ratings adequate for load served.

B. For single receptacles installed on an individual branch circuit, provide receptacle with ampere rating not less than that of the branch circuit.

C. Provide weather resistant GFCI receptacles with specified weatherproof covers for receptacles installed outdoors or in damp or wet locations.

D. Provide GFCI protection for receptacles installed within 6 feet of sinks.

E. Provide GFCI protection for receptacles installed in kitchens.

F. Provide GFCI protection for receptacles serving electric drinking fountains.

G. Unless noted otherwise, do not use combination switch/receptacle devices.

2.3 WIRING DEVICE FINISHES

A. Provide wiring device finishes as described below unless otherwise indicated.

B. Wiring Devices, Unless Otherwise Indicated: White with white nylon wall plate.

C. Wiring Devices Installed in Finished Spaces: White with white nylon wall plate.

D. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.

E. Wiring Devices Installed in Wet or Damp Locations: White with specified weatherproof cover.

2.4 WALL SWITCHES

A. Manufacturers:
1. Hubbell Incorporated: www.hubbell.com/#sle.
2. Leviton Manufacturing Company, Inc: www.leviton.com/#sle.
3. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us/#sle.

B. Wall Switches - General Requirements: AC only, quiet operating, general-use snap switches with silver alloy contacts, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 20 and where applicable, FS W-S-896; types as indicated on the drawings.
1. Wiring Provisions: Terminal screws for side wiring and screw actuated binding clamp for back wiring with separate ground terminal screw.

C. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.

2.5 RECEPTACLES

A. Manufacturers:
1. Hubbell Incorporated: www.hubbell-wiring.com.
2. Leviton Manufacturing Company, Inc: www.leviton.com.
3. Lutron Electronics Company, Inc; Designer Style: www.lutron.com/#sle.
4. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us

B. Receptacles - General Requirements: Self-grounding, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 498, and where applicable, FS W-C-596; types as indicated on the drawings.
1. Wiring Provisions: Terminal screws for side wiring or screw actuated binding clamp for back wiring with separate ground terminal screw.
2. NEMA configurations specified are according to NEMA WD 6.

C. Convenience Receptacles:

1. Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; single or duplex as indicated on the drawings.
2. Automatically Controlled Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; controlled receptacle marking on device face per NFPA 70; single or duplex as indicated on the drawings.

D. GFCI Receptacles:
1. GFCI Receptacles - General Requirements: Self-testing, with feed-through protection and light to indicate ground fault tripped condition and loss of protection; listed as complying with UL 943, class A.
2. Standard GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style.
3. Weather Resistant GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as weather resistant type complying with UL 498 Supplement SD suitable for installation in damp or wet locations.

2.6 WALL PLATES

A. Manufacturers:
1. Hubbell Incorporated: www.hubbell-wiring.com.
2. Leviton Manufacturing Company, Inc: www.leviton.com.
3. Lutron Electronics Company, Inc: www.lutron.com.
4. Pass & Seymour, a brand of Legrand North America, Inc: www.legrand.us

B. Wall Plates: Comply with UL 514D.
1. Configuration: One piece cover as required for quantity and types of corresponding wiring devices.
2. Size: Standard.
3. Screws: Metal with slotted heads finished to match wall plate finish.

C. Nylon Wall Plates: Smooth finish, high-impact thermoplastic.

D. Stainless Steel Wall Plates: Brushed satin finish, Type 302 stainless steel.

E. Weatherproof Covers for Wet Locations: Gasketed, cast aluminum, with hinged lockable cover and corrosion-resistant screws; listed as suitable for use in wet locations while in use with attachment plugs connected and identified as extra-duty type.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate devices and conductors in accordance with NFPA 70.

C. Verify that wall openings are neatly cut and will be completely covered by wall plates.

D. Verify that final surface finishes are complete, including painting.

E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

F. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.3 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards unless otherwise indicated.

B. Coordinate locations of outlet boxes provided under Section 260533.16 as required for installation of wiring devices provided under this section.
   1. Mounting Heights: Unless otherwise indicated, as follows:
      a. Wall Switches: 48 inches above finished floor.
   2. Orient outlet boxes for vertical installation of wiring devices unless otherwise indicated.

C. Install wiring devices in accordance with manufacturer's instructions.

D. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

E. Where required, connect wiring devices using pigtails not less than 6 inches long. Do not connect more than one conductor to wiring device terminals.

F. Connect wiring devices by wrapping conductor clockwise 3/4 turn around screw terminal and tightening to proper torque specified by the manufacturer. Where present, do not use push-in pressure terminals that do not rely on screw-actuated binding.

G. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.

H. Provide GFCI receptacles with integral GFCI protection at each location indicated. Do not use feed-through wiring to protect downstream devices.

I. Where split-wired duplex receptacles are indicated, remove tabs connecting top and bottom receptacles.

J. Install wiring devices plumb and level with mounting yoke held rigidly in place.

K. Install wall switches with OFF position down.

L. Install vertically mounted receptacles with grounding pole on top and horizontally mounted receptacles with grounding pole on left.

M. Install wall plates to fit completely flush to wall with no gaps and rough opening completely covered without strain on wall plate. Repair or reinstall improperly installed outlet boxes or improperly sized rough openings. Do not use oversized wall plates in lieu of meeting this requirement.

N. Install blank wall plates on junction boxes and on outlet boxes with no wiring devices installed or designated for future use.

O. Identify wiring devices in accordance with Section 260553.

3.4 FIELD QUALITY CONTROL

A. Inspect each wiring device for damage and defects.

B. Operate each wall switch with circuit energized to verify proper operation.

C. Test each receptacle to verify operation and proper polarity.

D. Test each GFCI receptacle for proper tripping operation according to manufacturer's instructions.

E. Correct wiring deficiencies and replace damaged or defective wiring devices.

3.5 ADJUSTING

A. Adjust devices and wall plates to be flush and level.

3.6 CLEANING

A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

END OF SECTION

SECTION 262813 - FUSES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Fuses.

1.2 REFERENCE STANDARDS

A. NEMA FU 1 - Low Voltage Cartridge Fuses 2012.

B. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

C. UL 248-1 - Low-Voltage Fuses - Part 1: General Requirements Current Edition, Including All Revisions.

D. UL 248-12 - Low-Voltage Fuses - Part 12: Class R Fuses Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate fuse clips furnished in equipment provided under other sections for compatibility with indicated fuses.
   2. Coordinate fuse requirements according to manufacturer's recommendations and nameplate data for actual equipment to be installed.
   3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard data sheets including voltage and current ratings, interrupting ratings, time-current curves, and current limitation curves.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Bussmann, a division of Eaton Corporation: www.cooperindustries.com.

B. Littelfuse, Inc: www.littelfuse.com.

C. Mersen: ep-us.mersen.com.

2.2 APPLICATIONS

A. Individual Motor Branch Circuits: Class RK1, time-delay.

2.3 FUSES

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Unless specifically indicated to be excluded, provide fuses for all fusible equipment as required for a complete operating system.

C. Provide fuses of the same type, rating, and manufacturer within the same switch.

D. Comply with UL 248-1.

E. Unless otherwise indicated, provide cartridge type fuses complying with NEMA FU 1, Class and ratings as indicated.

F. Voltage Rating: Suitable for circuit voltage.

G. Class R Fuses: Comply with UL 248-12.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that fuse ratings are consistent with circuit voltage and manufacturer's recommendations and nameplate data for equipment.

B. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Do not install fuses until circuits are ready to be energized.

B. Install fuses with label oriented such that manufacturer, type, and size are easily read.

END OF SECTION

SECTION 265120 – AUTOMATIC LIGHTING CONTROL SYSTEM

PART 1 - GENERAL

1.1DESCRIPTION OF WORK

A. Provide and design an automatic lighting control system as described in this specification and as called for on the drawings.

1.2 QUALITY ASSURANCE

A. Manufacturer shall have a minimum of 10 years experience in manufacturing and installing this type of system.

B. The Contractor shall provide a list of recent jobs completed during the last 5 years with the name and phone number of a contact person.

C. All components and assemblies are to be pre-tested and assembled at the factory prior to installation.

D. Provide a factory-trained technician on site. The technician shall functionally test each component in the system after installation to verify proper operation and confirm that the panel wiring and addressing conform to the wiring documentation.

1.3 SUBMITTALS

A. The following list includes the required shop drawings and product data information that shall be submitted.
   1. Underwriters Laboratories, Inc. (UL) listing and factory test reports.
   2. Internal and system wiring diagrams.
   3. Single line diagram of the system configuration. Typical riser diagrams are not acceptable.
   4. Dimensions of the equipment layout.
   5. Control wiring and conduits layout and connections.
   6. Floor plans to scale showing the location of each device and equipment.
   7. Product data of all the components including but not limited to programmable central controllers, transceivers panels, input relays, switches and other ancillary equipment.

1.4 REFERENCES

A. UL 916 Energy Management Equipment.

B. FCC Emissions Standards specified in Part 15, subpart J for Class A, Applications.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide and microprocessor controlled relay panels for the Lighting Control System. The system shall include programmable standalone master panel, switch inputs, wiring, power supplies, relays and ancillary relays.

B. Panels shall be capable of standing alone or operating as part of a network.
   1. The system shall provide intelligence to operate as follows:
      a. Store all user operating data.
      b. Initiate all relay output commands based on:
         1) Operator inputs
         2) Automatic operating schedule
         3) Binary type field sensors
         4) Universal override switch inputs
      c. Provide automatic system diagnostics and alarming based on detected faults in the controller, transceiver panels, relays, and data line.
   2. System shall include a memory back up to be able to survive an indefinite length of power failure.

C. Lighting Control Panel (LCP): Microprocessor based, complete prewired assemblies consisting of the following:
   1. Stand alone panel controller capable of receiving and acting upon programs downloaded from the central computer. Programs downloaded from the network shall be capable of continuing to operate even if the network should fail. Battery Back up provides 8 days of memory retention. Panel shall be part of a system that can control up to 750 relays and receive up to 500 switch inputs. Panel shall have an USB input for local programming and trouble shooting from a laptop computer.
   2. Internal digital clock with self control power.
   3. Output modules: Plug in type to receive coded digital commands from the panel controller and pulse output relays to the appropriate state. Actual status feedback of the relays are to be fed back to the panel controller and from there to the central computer. Actual status of each relay is to be indicated by a pilot LED on the control board. Each Module controls 8 or 16 relays.
   4. Switch input modules: Plug-in type, actuated by remote external contact closures. These contact closures may be either momentary or maintained. The action of the contact is noted by the panel controller and acted upon as programmed by software. The action of the contact can command any group of output relays to the desired state. Either 8 or 24-input channels as shown on the plans.
   5. Output Relays
      a. Type: Momentary pulsed, mechanically latched with pilot light contact.
      b. Rating: 20 Ampere, 277VAC
      c. Number per panel: 16,32 or 48 as required to satisfy this project scope.
   6. The low voltage and high voltage sections of the lighting control cabinet shall be separated by a 14 gage steel barrier in which the relays are mounted. In areas where both 120 volt and 277 volt loads are present the high voltage compartment shall have a 14 gage steel barrier between the relays that carry 120 VAC and the relays that carry 277VAC. Each section shall be clearly labeled as to the voltage in that compartment.

7. Panel power supply shall be dual primary 115/277 volts AC, 60 Hz. ± 10%. Low voltage side shall be protected from power line surges and spikes on the input power. The low voltage section shall be protected against short circuit faults and relay failures.
8. Panels shall be UL approved and shall have a short circuit withstand current rating at 14,000 AIC.
9. Manufacturer: Lighting Control and Design, or G.E. or equal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. The Lighting Control System shall be installed and wired completely as required by the equipment manufacturer by the contractor, who shall make all necessary wiring connections to the lighting fixtures, override switches, photo cells and equipment.

B. The Contractor shall provide on-site programming time with factory-trained personnel for the system set-up. The Contractor shall set up the software program and program the entire system in accordance with the Owner's instructions.

C. Documentation
1. Accurate "as-built" drawings shall be provided by the Contractor. These shall indicate the load controlled by each relay and the identification number for that switch connected to an input and the identification number of that input. Three sets of space plans or reflected ceiling plans shall be provided by the contractor indicating which fixtures are controlled by each relay.
2. A separate data grade private line with RJ45 jack shall be furnished for each modem.

3.2 SERVICE AND SUPPORT

A. Startup: After the system has been installed, the Contractor shall provide the services of a factory trained representative of the manufacturer to verify correct operation of all system components. The contractor shall guarantee all material and workmanship involving the system for three years after startup.

B. Training: After system startup and after all the programming is completed, the Contractor shall arrange for a factory trained representative to train the Owner's personnel. The trainer shall instruct the Owner's personnel in how to program the system and demonstrate a typical operating program for an area. The Contractor shall allow for 24 hours' instruction time for the Owner's training.

C. Factory Support: Factory support shall be available free of charge during the three-year warranty period to answer programming and application questions. The manufacturer, or his representative, shall have a remote terminal capable of programming the system to support the Owner's personnel during this period. The Contractor shall include a modem, necessary cabling and telephone extension to support this telecommunications operation. The Contractor shall provide a three-year maintenance service contract as part of the cost.

D. The Contractor shall also provide a software site licensing so that the Owner will be able to transfer the software program from the main computer to the other computers. This transfer shall not be an extra cost to the Owner.

END OF SECTION

SECTION 265600 – EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Exterior luminaires.

B. Ballasts.

C. Poles and accessories.

1.2 RELATED REQUIREMENTS

A. Section 260529 - Hangers and Supports for Electrical Systems.

B. Section 260533.16 - Boxes for Electrical Systems.

1.3 REFERENCE STANDARDS

A. AASHTO LTS - Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals 2013 (Revised 2019).

B. IEEE C2 - National Electrical Safety Code(R) (NESC(R)) 2023.

C. IES LM-79 - Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products 2019.

D. IES LM-80 - Approved Method: Measuring Maintenance of Light Output Characteristics of Solid-State Light Sources 2021.

E. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

F. NECA/IESNA 501 - Standard for Installing Exterior Lighting Systems 2000 (Reaffirmed 2006).

G. NEMA 410 - Performance Testing for Lighting Controls and Switching Devices with Electronic Drivers and Disharge Ballasts 2020.

H. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 1598 - Luminaires Current Edition, Including All Revisions.

J. UL 8750 - Light Emitting Diode (LED) Equipment for Use in Lighting Products Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate placement of poles and associated foundations with utilities, curbs, sidewalks, trees, walls, fences, striping, etc. installed under other sections or by others. Coordinate elevation to obtain specified foundation height.
2. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

1.5 SUBMITTALS

A. Shop Drawings:
1. Indicate dimensions and components for each luminaire that is not a standard product of the manufacturer.
2. Provide photometric calculations where luminaires are proposed for substitution upon request.

B. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, weight, effective projected area (EPA), and installed accessories; include model number nomenclature clearly marked with all proposed features.
1. LED Luminaires:
a. Include estimated useful life, calculated based on IES LM-80 test data.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Receive, handle, and store products according to NECA/IESNA 501 and manufacturer's written instructions.

B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

1.8 WARRANTY

A. Provide five year manufacturer warranty for all LED luminaires, including drivers.

PART 2 - PRODUCTS

2.1 LUMINAIRE TYPES

A. Furnish products as indicated in luminaire schedule included on the drawings.

2.2 LUMINAIRES

A. Provide products that comply with requirements of NFPA 70.

B. Provide products that are listed and labeled as complying with UL 1598, where applicable.

C. Provide products listed, classified, and labeled as suitable for the purpose intended.

D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.

E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, poles, foundations, supports, trims, accessories, etc. as necessary for a complete operating system.

F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.

G. LED Luminaires:
   1. Components: UL 8750 recognized or listed as applicable.
   2. Tested in accordance with IES LM-79 and IES LM-80.
   3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

2.3 BALLASTS AND DRIVERS

A. Manufacturers:
   1. California Accent Lighting, Inc; [_____]; www.calilighting.com/#sle.
   2. General Electric Company/GE Lighting; [_____]: www.gelighting.com/#sle.
   3. OSRAM Sylvania, Inc; [_____]: www.osram.us/ds/#sle.
   4. Manufacturer Limitations: Where possible, for each type of luminaire provide ballasts produced by a single manufacturer.

B. Ballasts/Drivers - General Requirements:
   1. Provide ballasts containing no polychlorinated biphenyls (PCBs).
   2. Minimum Efficiency/Efficacy: Provide ballasts complying with all current applicable federal and state ballast efficiency/efficacy standards.
   3. Electronic Ballasts/Drivers: Inrush currents not exceeding peak currents specified in NEMA 410.

C. Dimmable LED Drivers:
   1. Dimming Range: Continuous dimming from 100 percent to five percent relative light output unless dimming capability to lower level is indicated, without flicker.
   2. Control Compatibility: Fully compatible with the dimming controls to be installed.

2.4 POLES

A. All Poles:
   1. Provide poles and associated support components suitable for the luminaire(s) and associated supports and accessories to be installed.
   2. Structural Design Criteria:

a. Comply with AASHTO LTS.
3. Material: Steel, unless otherwise indicated.
4. Shape: Square straight, unless otherwise indicated.
5. Finish: Match luminaire finish, unless otherwise indicated.
6. Mounting: Install on concrete foundation, height as indicated on the drawings, unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate conductors in accordance with NFPA 70.

C. Verify that suitable support frames are installed where required.

D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to luminaires.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.3 INSTALLATION

A. Coordinate locations of outlet boxes provided under Section 260533.16 as required for installation of luminaires provided under this section.

B. Install products in accordance with manufacturer's instructions.

C. Install luminaires in accordance with NECA/IESNA 501.

D. Provide required support and attachment in accordance with Section 260529.

E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.

F. Pole-Mounted Luminaires:
1. Maintain the following minimum clearances:
a. Comply with IEEE C2.
b. Comply with utility company requirements.
2. Grounding:
a. Bond luminaires, metal accessories, metal poles, and foundation reinforcement to branch circuit equipment grounding conductor.

3. Install separate service conductors, 12 AWG copper, from each luminaire down to handhole for connection to branch circuit conductors.

G. Install accessories furnished with each luminaire.

H. Bond products and metal accessories to branch circuit equipment grounding conductor.

I. Install lamps in each luminaire.

3.4 FIELD QUALITY CONTROL

A. Inspect each product for damage and defects.

B. Operate each luminaire after installation and connection to verify proper operation.

C. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Architect.

3.5 ADJUSTING

A. Aim and position adjustable luminaires to achieve desired illumination as indicated or as directed by Architect. Secure locking fittings in place.

3.6 CLEANING

A. Clean surfaces according to NECA/IESNA 501 and manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

3.7 CLOSEOUT ACTIVITIES

A. Demonstration: Demonstrate proper operation of luminaires to Architect, and correct deficiencies or make adjustments as directed.

B. Just prior to Substantial Completion, replace all lamps that have failed.

3.8 PROTECTION

A. Protect installed luminaires from subsequent construction operations.

END OF SECTION

APPENDIX III

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Retaining Wall Calculations

RETAINING WALL CALCULATIONS

Berkshire Avenue Park
2006 Berkshire Avenue,
South Pasadena, California 91030

Prepared For:

City of South Pasadena
1414 Mission Street,
South Pasadena, California 91030

Prepared By:

Surender Dewan, P.E.
DMS Consultants, Inc.
12371 Lewis Street, Suite 203
Garden Grove, California 92840
714.740.8840



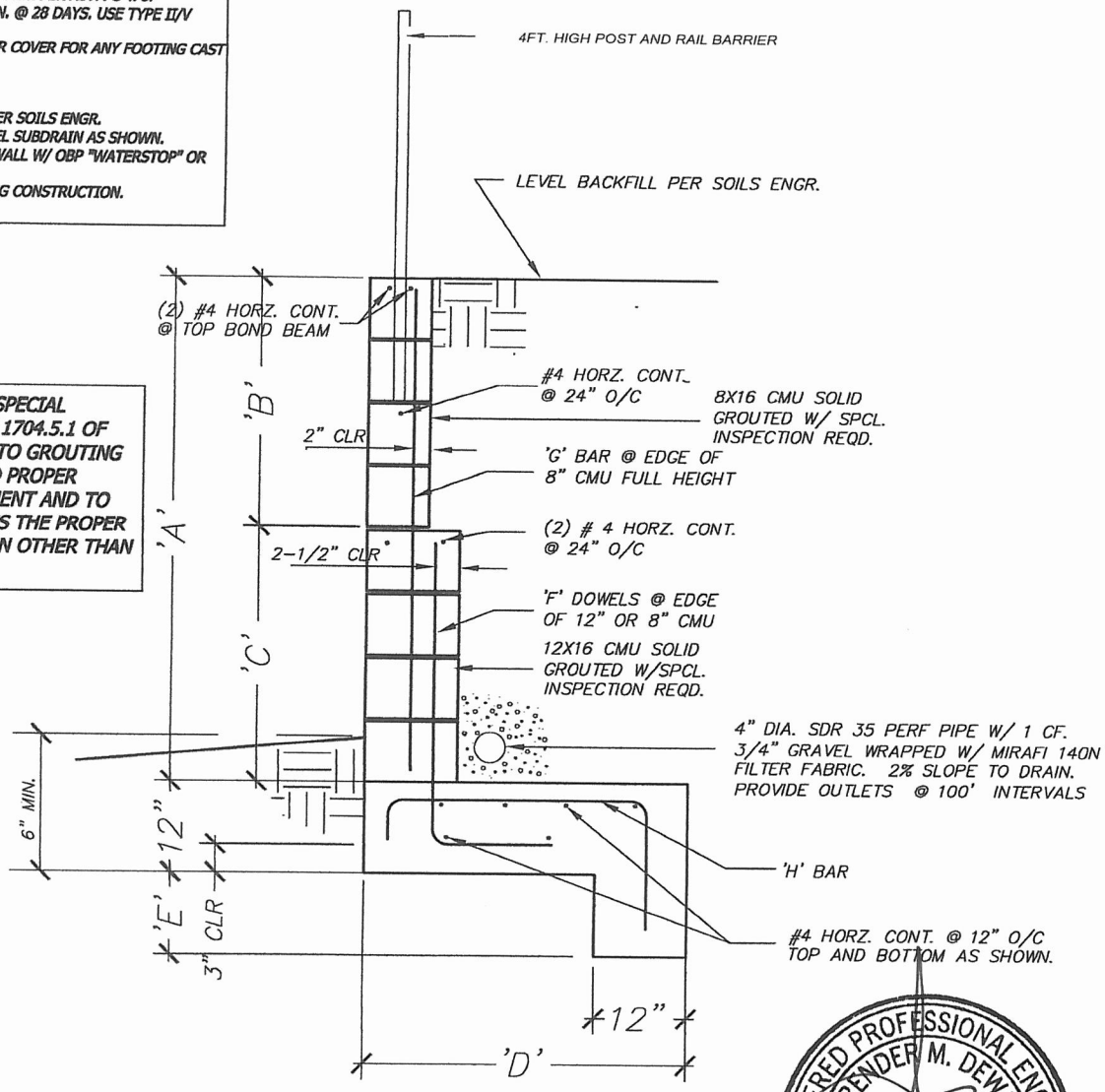
August 28, 2023

DMS
CONSULTANTS, INC.
CIVIL ENGINEERS

NOTES:
Fm = 1500 PSI WITH SPECIAL INSPECTION.
CONCRETE BLOCK SHALL CONFORM TO ASTM C 90 & USE OBP "TYPE S" MORTAR PER ASTM C 270.
USE ASTM A615 GRADE 40 STEEL MIN. GRADE 60 FOR #5 BARS AND UP.
GROUT STRENGTH TO BE 2000 PSI MIN. PER ASTM C 476.
FOOTING CONCRETE: 2500 PSI MIN. @ 28 DAYS. USE TYPE II/V CEMENT.
PROVIDE 3" MIN. CONCRETE REBAR COVER FOR ANY FOOTING CAST AGAINST NATURAL SOIL.

FOR RETAINING WALLS:
USE NATIVE BACKFILL W/ EI>50 PER SOILS ENGR.
PROVIDE A ASTM C-33 3/4" GRAVEL SUBDRAIN AS SHOWN.
WATERPROOF BACKFILL SIDE OF WALL W/ OBP "WATERSTOP" OR EQUAL.
PROVIDE PROPER SHORING DURING CONSTRUCTION.

NOTE: PROVIDE LEVEL ONE SPECIAL INSPECTION PER CBC TABLE 1704.5.1 OF THE MASONRY STEM PRIOR TO GROUTING TO VERIFY GRADE, SIZE AND PROPER PLACEMENT OF REINFORCEMENT AND TO ENSURE THE GROUT SPACE IS THE PROPER SIZE WITHOUT OBSTRUCTION OTHER THAN NORMAL MORTAR FINS.



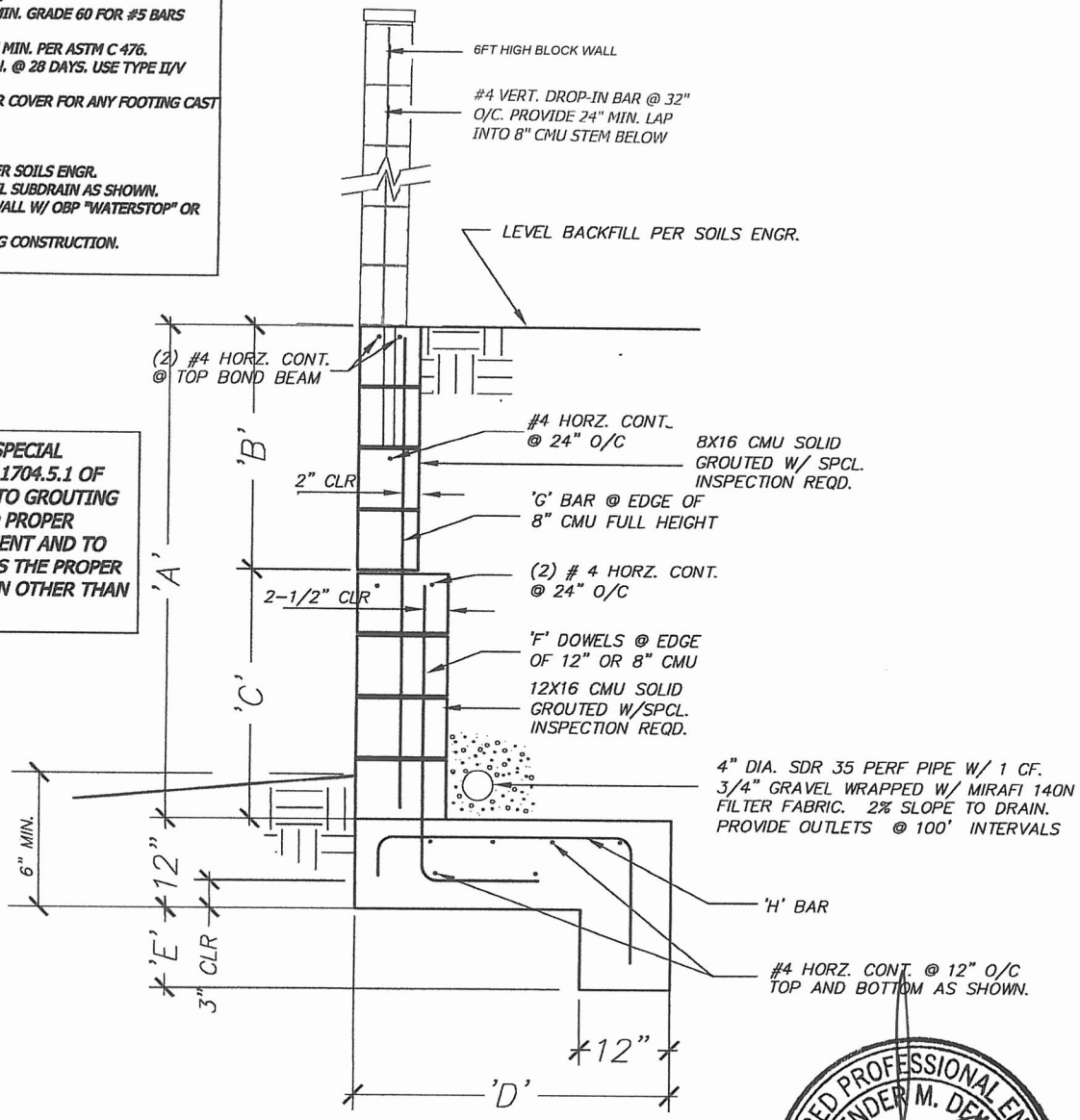
'A'	'B'	'C'	'D'	'E'	'F' DOWEL	'G' VERT	'H' BAR
2'-0"	2'-0"	N/A	2'-0"	4"	#4@32" O/C 33" / 12"	N/A	#4@32" O/C 18" / 6" / 12"
2'-8"	2'-8"	N/A	2'-3"	6"	#4@32" O/C 41" / 12"	N/A	#4@32" O/C 24" / 6"
3'-4"	3'-4"	N/A	2'-6"	10"	#4@32" O/C 49" / 12"	N/A	#4@32" O/C 24" / 6"
4'-0"	4'-0"	N/A	3'-0"	15"	#4@16" O/C 57" / 12"	N/A	#4@16" O/C 30" / 6" / 21"
4'-8"	4'-8"	N/A	3'-3"	18"	#4@16" O/C 65" / 12"	N/A	#4@16" O/C 33" / 6" / 24"
5'-4"	5'-4"	N/A	3'-6"	21"	#5@16" O/C 73" / 12"	N/A	#5@16" O/C 36" / 6" / 27"
6'-0"	4'-0"	2'-0"	4'-0"	24"	#4@16" O/C 33" / 12"	#4@16" O/C	#5@16" O/C 42" / 6" / 30"

REGISTERED PROFESSIONAL ENGINEER
SURENDER M. DEWAN
No. 34659
Exp. 9-30-2023
CIVIL
STATE OF CALIFORNIA

NOTES:
f'm = 1500 PSI WITH SPECIAL INSPECTION.
CONCRETE BLOCK SHALL CONFORM TO ASTM C 90 & USE OBP "TYPE S" MORTAR PER ASTM C 270.
USE ASTM A615 GRADE 40 STEEL MIN. GRADE 60 FOR #5 BARS AND UP.
GROUT STRENGTH TO BE 2000 PSI MIN. PER ASTM C 476.
FOOTING CONCRETE: 2500 PSI MIN. @ 28 DAYS. USE TYPE II/V CEMENT.
PROVIDE 3" MIN. CONCRETE REBAR COVER FOR ANY FOOTING CAST AGAINST NATURAL SOIL.

FOR RETAINING WALLS:
USE NATIVE BACKFILL W/ EI>50 PER SOILS ENGR.
PROVIDE A ASTM C-33 3/4" GRAVEL SUBDRAIN AS SHOWN.
WATERPROOF BACKFILL SIDE OF WALL W/ OBP "WATERSTOP" OR EQUAL.
PROVIDE PROPER SHORING DURING CONSTRUCTION.

NOTE: PROVIDE LEVEL ONE SPECIAL INSPECTION PER CBC TABLE 1704.5.1 OF THE MASONRY STEM PRIOR TO GROUTING TO VERIFY GRADE, SIZE AND PROPER PLACEMENT OF REINFORCEMENT AND TO ENSURE THE GROUT SPACE IS THE PROPER SIZE WITHOUT OBSTRUCTION OTHER THAN NORMAL MORTAR FINS.



'A'	'B'	'C'	'D'	'E'	'F' DOWEL	'G' VERT	'H' BAR
2'-0"	2'-0"	N/A	2'-0"	4"	#4@32" O/C 33" / 12"	N/A	#4@32" O/C 18" / 6"
2'-8"	2'-8"	N/A	2'-3"	6"	#4@32" O/C 41" / 12"	N/A	#4@32" O/C 6"
3'-4"	3'-4"	N/A	2'-6"	10"	#4@32" O/C 49" / 12"	N/A	#4@32" O/C 24" / 6"
4'-0"	4'-0"	N/A	3'-0"	15"	#4@16" O/C 57" / 12"	N/A	#4@16" O/C 30" / 6" 21"
4'-8"	4'-8"	N/A	3'-3"	18"	#4@16" O/C 65" / 12"	N/A	#4@16" O/C 33" / 6" 24"
5'-4"	5'-4"	N/A	3'-6"	21"	#5@16" O/C 73" / 12"	N/A	#5@16" O/C 36" / 6" 27"
6'-0"	4'-0"	2'-0"	4'-0"	24"	#4@16" O/C 33" / 12"	#4@16" O/C	#5@16" O/C 42" / 6" 30"

REGISTERED PROFESSIONAL ENGINEER
SURENDER M. DEWAN
No. 34559
Exp. 9-30-2023
CIVIL
STATE OF CALIFORNIA

2'-0" RETAINING WALL
W/LEVEL BACKFILL CALCULATIONS

Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 11 JUN 2022, 8:46PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 2'-0" RET WALL W/ LEVEL BACKFILL

Code Reference:

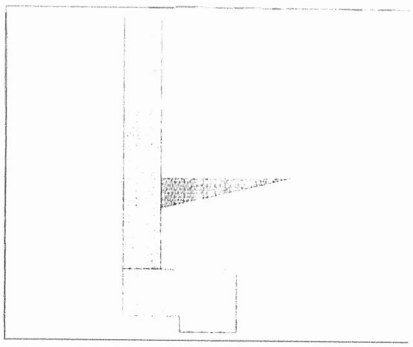
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16

Criteria

Retained Height	=	2.00 ft
Wall height above soil	=	3.50 ft
Slope Behind Wall	=	0.00
Height of Soil over Toe	=	6.00 in
Water height over heel	=	0.0 ft

Soil Data

Allow Soil Bearing	=	2,400.0 psf
Equivalent Fluid Pressure Method		
Active Heel Pressure	=	45.0 psf/ft
	=	
Passive Pressure	=	150.0 psf/ft
Soil Density, Heel	=	115.00 pcf
Soil Density, Toe	=	115.00 pcf
Footing||Soil Friction	=	0.233
Soil height to ignore for passive pressure	=	12.00 in



Surcharge Loads

Surcharge Over Heel	=	0.0 psf
Used To Resist Sliding & Overturning		
Surcharge Over Toe	=	0.0
Used for Sliding & Overturning		

Axial Load Applied to Stem

Axial Dead Load	=	0.0 lbs
Axial Live Load	=	0.0 lbs
Axial Load Eccentricity	=	0.0 in

Lateral Load Applied to Stem

Lateral Load	=	0.0 #/ft
...Height to Top	=	0.00 ft
...Height to Bottom	=	0.00 ft
Load Type	=	Wind (W) (Service Level)
Wind on Exposed Stem (Strength Level)	=	16.0 psf

Adjacent Footing Load

Adjacent Footing Load	=	0.0 lbs
Footing Width	=	0.00 ft
Eccentricity	=	0.00 in
Wall to Ftg CL Dist	=	0.00 ft
Footing Type		Spread Footing
Base Above/Below Soil at Back of Wall	=	0.0 ft
Poisson's Ratio	=	0.300



Project Title:
Engineer:
Project ID:
Project Descr:

Printed 11

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 2'-0" RET WALL W/ LEVEL BACKFILL

Design Summary

Wall Stability Ratios

Overturning	=	2.59	OK
Sliding	=	1.85	OK
Global Stability	=	3.11	

Total Bearing Load	=	1,119 lbs	
...resultant ecc.	=	5.82 in	
Eccentricity outside middle third			
Soil Pressure @ Toe	=	1,449 psf	OK
Soil Pressure @ Heel	=	0 psf	OK
Allowable	=	2,400 psf	
Soil Pressure Less Than Allowable			
ACI Factored @ Toe	=	2,028 psf	
ACI Factored @ Heel	=	0 psf	
Footing Shear @ Toe	=	0.0 psi	OK
Footing Shear @ Heel	=	0.9 psi	OK
Allowable	=	75.0 psi	

Sliding Calcs

Lateral Sliding Force	=	236.1 lbs	
less 100% Passive Force	-	177.1 lbs	
less 100% Friction Force	= -	260.6 lbs	
Added Force Req'd	=	0.0 lbs	OK
...for 1.5 Stability	=	0.0 lbs	OK

Vertical component of active lateral soil pressure IS NOT considered in the calculation of soil bearing

Load Factors

Building Code	
Dead Load	1.200
Live Load	1.600
Earth, H	1.600
Wind, W	1.600
Seismic, E	1.000

Stem Construction

		Bottom				
		Stem OK				
Design Height Above Ftg	ft =	0.00				
Wall Material Above "Ht"	=	Masonry				
Design Method	=	ASD	SD	SD	SD	SD
Thickness	=	8.00				
Rebar Size	=	# 4				
Rebar Spacing	=	32.00				
Rebar Placed at	=	Edge				
Design Data						
fb/FB + fa/Fa	=	0.303				
Total Force @ Section						
Service Level	lbs =	123.6				
Strength Level	lbs =					
Moment....Actual						
Service Level	ft-# =	186.0				
Strength Level	ft-# =					
Moment.....Allowable	=	612.1				
Shear.....Actual						
Service Level	psi =	1.4				
Strength Level	psi =					
Shear.....Allowable	psi =	45.1				
Anet (Masonry)	in2 =	91.50				
Wall Weight	psf =	84.0				
Rebar Depth 'd'	in =	5.25				

Masonry Data

f'm	psi =	2,000
Fs	psi =	
Solid Grouting	=	Yes
Modular Ratio 'n'	=	21.48
Equiv. Solid Thick.	in =	7.63
Masonry Block Type	=	
Masonry Design Method	=	ASD

Concrete Data

f'c	psi =
Fy	psi =

Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 11 JUN 2022 8:48PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 2'-0" RET WALL W/ LEVEL BACKFILL

Footing Data

Toe Width	=	0.00 ft
Heel Width	=	2.00
Total Footing Width	=	2.00
Footing Thickness	=	12.00 in
Key Width	=	12.00 in
Key Depth	=	4.00 in
Key Distance from Toe	=	1.00 ft

f'c = 2,500 psi Fy = 40,000 psi
Footing Concrete Density = 150.00 pcf
Min. As % = 0.0018
Cover @ Top 2.00 @ Btm.= 3.00 in

Footing Design Results

		Toe	Heel	
Factored Pressure	=	2,028	0 psf	
Mu' : Upward	=	0	148 ft-#	
Mu' : Downward	=	0	507 ft-#	
Mu: Design	=	0 NG	359 ft-#	OK
phiMn	=	1,956	2,500 ft-#	
Actual 1-Way Shear	=	0.00	0.85 psi	
Allow 1-Way Shear	=	0.00	40.00 psi	

Toe Reinforcing = # 4 @ 32.00 in
Heel Reinforcing = None Spec'd
Key Reinforcing = # 4 @ 0.00 in
Footing Torsion, Tu = 0.00 ft-lbs
Footing Allow. Torsion, phi Tu = 0.00 ft-lbs

If torsion exceeds allowable, provide supplemental design for footing torsion.

Other Acceptable Sizes & Spacings

Toe:
Heel:
Key:

Min footing T&S reinf Area 0.52 in2
Min footing T&S reinf Area per foot 0.26 in2 /ft

If one layer of horizontal bars:	If two layers of horizontal bars:
#4@ 9.26 in	#4@ 18.52 in
#5@ 14.35 in	#5@ 28.70 in
#6@ 20.37 in	#6@ 40.74 in

Summary of Overturning & Resisting Forces & Moments

Item		.....OVERTURNING..... Force lbs	Distance ft	Moment ft-#		.....RESISTING..... Force lbs	Distance ft	Moment ft-#
HL Act Pres (ab water tbl)		202.5	1.00	202.5	Soil Over HL (ab. water tbl)	306.7	1.33	408.9
HL Act Pres (be water tbl)					Soil Over HL (bel. water tbl)		1.33	408.9
Hydrostatic Force					Watre Table			
Buoyant Force	=				Sloped Soil Over Heel	=		
Surcharge over Heel	=				Surcharge Over Heel	=		
Surcharge Over Toe	=				Adjacent Footing Load	=		
Adjacent Footing Load	=				Axial Dead Load on Stem	=		
Added Lateral Load	=				* Axial Live Load on Stem	=		
Load @ Stem Above Soil	=	33.6	4.75	159.6	Soil Over Toe	=		
	=				Surcharge Over Toe	=		
					Stem Weight(s)	=	462.0	0.33	154.0
					Earth @ Stem Transitions	=			
					Footing Weight	=	300.0	1.00	300.0
					Key Weight	=	50.0	1.50	75.0
					Vert. Component	=			
Total	=	236.1	O.T.M. =	362.1	Total =	1,118.7 lbs	R.M.=	937.9

* Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.

Resisting/Overturning Ratio = **2.59**
Vertical Loads used for Soil Pressure = 1,118.7 lbs

Vertical component of active lateral soil pressure IS NOT considered in the calculation of Sliding Resistance.

Vertical component of active lateral soil pressure IS NOT considered in the calculation of Overturning Resistance.

2'-8" RETAINING WALL
W/LEVEL BACKFILL CALCULATIONS

Project Title:
Engineer:
Project ID:
Project Descr:

Printed 11 JUN 2022 9:14PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 2'-8" RET WALL W/ LEVEL BACKFILL

Code Reference:

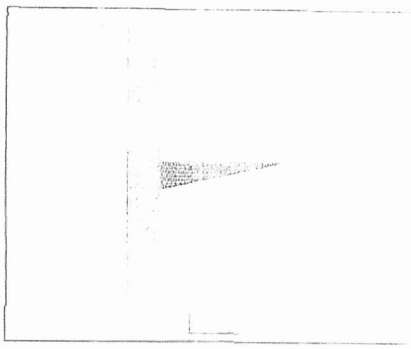
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16

Criteria

Retained Height	=	2.67 ft
Wall height above soil	=	3.50 ft
Slope Behind Wall	=	0.00
Height of Soil over Toe	=	6.00 in
Water height over heel	=	0.0 ft

Soil Data

Allow Soil Bearing	=	2,400.0 psf
Equivalent Fluid Pressure Method		
Active Heel Pressure	=	45.0 psf/ft
	=	
Passive Pressure	=	150.0 psf/ft
Soil Density, Heel	=	115.00 pcf
Soil Density, Toe	=	115.00 pcf
Footing||Soil Friction	=	0.233
Soil height to ignore for passive pressure	=	6.00 in



Surcharge Loads

Surcharge Over Heel	=	0.0 psf
Used To Resist Sliding & Overturning		
Surcharge Over Toe	=	0.0
Used for Sliding & Overturning		

Axial Load Applied to Stem

Axial Dead Load	=	0.0 lbs
Axial Live Load	=	0.0 lbs
Axial Load Eccentricity	=	0.0 in

Lateral Load Applied to Stem

Lateral Load	=	0.0 #/ft
...Height to Top	=	0.00 ft
...Height to Bottom	=	0.00 ft
Load Type	=	Wind (W) (Service Level)
Wind on Exposed Stem (Strength Level)	=	16.0 psf

Adjacent Footing Load

Adjacent Footing Load	=	0.0 lbs
Footing Width	=	0.00 ft
Eccentricity	=	0.00 in
Wall to Ftg CL Dist	=	0.00 ft
Footing Type		Spread Footing
Base Above/Below Soil at Back of Wall	=	0.0 ft
Poisson's Ratio	=	0.300



Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 11 JUN 2022, 9:14PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# : KW-06013308 Build:22.0.22

CALC INC 1983-2022

DESCRIPTION: 2'-8" RET WALL W/ LEVEL BACKFILL

Design Summary

Wall Stability Ratios

Overturning	=	2.69	OK
Sliding	=	1.54	OK
Global Stability	=	2.75	

Total Bearing Load	=	1,016 lbs	
...resultant ecc.	=	1.06 in	
Eccentricity within middle third			
Soil Pressure @ Toe	=	493 psf	OK
Soil Pressure @ Heel	=	306 psf	OK
Allowable	=	2,400 psf	
Soil Pressure Less Than Allowable			
ACI Factored @ Toe	=	690 psf	
ACI Factored @ Heel	=	428 psf	
Footing Shear @ Toe	=	2.7 psi	OK
Footing Shear @ Heel	=	1.9 psi	OK
Allowable	=	75.0 psi	

Sliding Calcs

Lateral Sliding Force	=	336.7 lbs	
less 100% Passive Force	-	281.3 lbs	
less 100% Friction Force	= -	236.8 lbs	
Added Force Req'd	=	0.0 lbs	OK
...for 1.5 Stability	=	0.0 lbs	OK

Vertical component of active lateral soil pressure IS considered in the calculation of soil bearing pressures.

Load Factors

Building Code	
Dead Load	1.200
Live Load	1.600
Earth, H	1.600
Wind, W	1.600
Seismic, E	1.000

Stem Construction

		Bottom				
		Stem OK				
Design Height Above Ftg	ft =	0.00				
Wall Material Above "Ht"	=	Masonry				
Design Method	=	ASD	SD	SD	SD	SD
Thickness	=	8.00				
Rebar Size	=	# 4				
Rebar Spacing	=	32.00				
Rebar Placed at	=	Edge				
Design Data						
fb/FB + fa/Fa	=	0.297				
Total Force @ Section						
Service Level	lbs =	194.0				
Strength Level	lbs =					
Moment....Actual						
Service Level	ft-# =	291.3				
Strength Level	ft-# =					
Moment.....Allowable	=	979.3				
Shear.....Actual						
Service Level	psi =	2.1				
Strength Level	psi =					
Shear.....Allowable	psi =	43.6				
Anet (Masonry)	in2 =	91.50				
Wall Weight	psf =	0.0				
Rebar Depth 'd'	in =	5.25				

Masonry Data

f'm	psi =	31,800
Fs	psi =	
Solid Grouting	=	Yes
Modular Ratio 'n'	=	21.48
Equiv. Solid Thick.	in =	7.63
Masonry Block Type	=	
Masonry Design Method	=	ASD

Concrete Data

f'c	psi =	
Fy	psi =	

Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 11 JUN 2022, 9:14PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

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DESCRIPTION: 2'-8" RET WALL W/ LEVEL BACKFILL

Footing Data

Toe Width	=	0.00 ft
Heel Width	=	2.25
Total Footing Width	=	2.25
Footing Thickness	=	12.00 in
Key Width	=	12.00 in
Key Depth	=	6.00 in
Key Distance from Toe	=	1.25 ft

f'c = 2,500 psi Fy = 40,000 psi
Footing Concrete Density = 150.00 pcf
Min As % = 0.0018
Cover @ Top 2.00 @ Btm.= 3.00 in

Footing Design Results

		Toe	Heel	
Factored Pressure	=	690	428	psf
Mu' : Upward	=	0	614	ft-#
Mu' : Downward	=	0	1,130	ft-#
Mu: Design	=	0 OK	517 ft-#	OK
phiMn	=	2,500	2,500 ft-#	
Actual 1-Way Shear	=	2.73	1.94	psi
Allow 1-Way Shear	=	40.00	40.00	psi

Toe Reinforcing = None Spec'd
Heel Reinforcing = None Spec'd
Key Reinforcing = None Spec'd
Footing Torsion, Tu = 0.00 ft-lbs
Footing Allow. Torsion, phi Tu = 0.00 ft-lbs

If torsion exceeds allowable, provide supplemental design for footing torsion.

Other Acceptable Sizes & Spacings

Toe:
Heel:
Key:

Min footing T&S reinf Area 0.58 in2
Min footing T&S reinf Area per foot 0.26 in2 /ft

If one layer of horizontal bars:	If two layers of horizontal bars:
#4@ 9.26 in	#4@ 18.52 in
#5@ 14.35 in	#5@ 28.70 in
#6@ 20.37 in	#6@ 40.74 in

Summary of Overturning & Resisting Forces & Moments

Item		.....OVERTURNING..... Force lbs	Distance ft	Moment ft-#		.....RESISTING..... Force lbs	Distance ft	Moment ft-#
HL Act Pres (ab water tbl)		303.1	1.22	370.7	Soil Over HL (ab. water tbl)	486.2	1.46	709.0
HL Act Pres (be water tbl)					Soil Over HL (bel. water tbl)		1.46	709.0
Hydrostatic Force					Watre Table			
Buoyant Force	=				Sloped Soil Over Heel	=		
Surcharge over Heel	=				Surcharge Over Heel	=		
Surcharge Over Toe	=				Adjacent Footing Load	=		
Adjacent Footing Load	=				Axial Dead Load on Stem	=		
Added Lateral Load	=				* Axial Live Load on Stem	=		
Load @ Stem Above Soil	=	33.6	5.42	182.1	Soil Over Toe	=		
	=				Surcharge Over Toe	=		
					Stem Weight(s)	=		
					Earth @ Stem Transitions	=		
Total	=	336.7	O.T.M. =	552.8	Footing Weight	=	337.5	1.13	379.7
					Key Weight	=	75.0	1.75	131.3
					Vert. Component	=	117.7	2.25	264.8
					Total =		1,016.3 lbs	R.M.=	1,484.7

Resisting/Overturning Ratio = 2.69
Vertical Loads used for Soil Pressure = 1,016.3 lbs

* Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.

Vertical component of active lateral soil pressure IS considered in the calculation of Sliding Resistance.

Vertical component of active lateral soil pressure IS considered in the calculation of Overturning Resistance.

3'-4" RETAINING WALL
W/LEVEL BACKFILL CALCULATIONS

Project Title:
Engineer:
Project ID:
Project Descr:

Printed 11 JUN 2022, 9:30PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 3'-4" RETWALL W/ LEVEL BACKFILL

Code Reference:

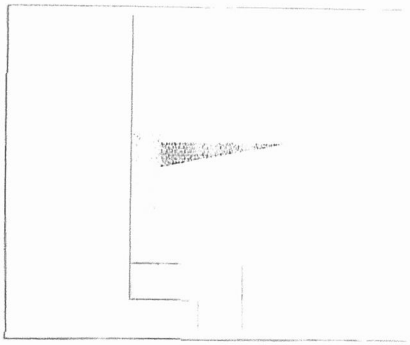
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16

Criteria

Retained Height	=	3.33 ft
Wall height above soil	=	3.50 ft
Slope Behind Wall	=	0.00
Height of Soil over Toe	=	6.00 in
Water height over heel	=	0.0 ft

Soil Data

Allow Soil Bearing	=	2,400.0 psf
Equivalent Fluid Pressure Method		
Active Heel Pressure	=	45.0 psf/ft
	=	
Passive Pressure	=	150.0 psf/ft
Soil Density, Heel	=	115.00 pcf
Soil Density, Toe	=	115.00 pcf
Footing||Soil Friction	=	0.233
Soil height to ignore for passive pressure	=	6.00 in



Surcharge Loads

Surcharge Over Heel	=	0.0 psf
Used To Resist Sliding & Overturning		
Surcharge Over Toe	=	0.0
Used for Sliding & Overturning		

Axial Load Applied to Stem

Axial Dead Load	=	0.0 lbs
Axial Live Load	=	0.0 lbs
Axial Load Eccentricity	=	0.0 in

Lateral Load Applied to Stem

Lateral Load	=	0.0 #/ft
...Height to Top	=	0.00 ft
...Height to Bottom	=	0.00 ft
Load Type	=	Wind (W) (Service Level)
Wind on Exposed Stem (Strength Level)	=	16.0 psf

Adjacent Footing Load

Adjacent Footing Load	=	0.0 lbs
Footing Width	=	0.00 ft
Eccentricity	=	0.00 in
Wall to Ftg CL Dist	=	0.00 ft
Footing Type		Spread Footing
Base Above/Below Soil at Back of Wall	=	0.0 ft
Poisson's Ratio	=	0.300



Project Title:
Engineer:
Project ID:
Project Descr:

Printed 11 JUN 2022, 9:30PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# : KW-06013306, Build 20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 3'-4" RETWALL W/ LEVEL BACKFILL

Design Summary

Wall Stability Ratios		
Overturning	2.75	OK
Sliding	1.55	OK
Global Stability	2.48	
Total Bearing Load	1,203 lbs	
...resultant ecc. =	4.85 in	
Eccentricity within middle third		
Soil Pressure @ Toe	948 psf	OK
Soil Pressure @ Heel =	14 psf	OK
Allowable =	2,400 psf	
Soil Pressure Less Than Allowable		
ACI Factored @ Toe	1,327 psf	
ACI Factored @ Heel	20 psf	
Footing Shear @ Toe	3.6 psi	OK
Footing Shear @ Heel	4.3 psi	OK
Allowable	75.0 psi	
Sliding Calcs		
Lateral Sliding Force	456.0 lbs	
less 100% Passive Force	389.6 lbs	
less 100% Friction Force	318.5 lbs	
Added Force Req'd	0.0 lbs	OK
...for 1.5 Stability	0.0 lbs	OK

Vertical component of active lateral soil pressure IS NOT considered in the calculation of soil bearing

Load Factors

Building Code	
Dead Load	1.200
Live Load	1.600
Earth, H	1.600
Wind, W	1.600
Seismic, E	1.000

Stem Construction

		Bottom				
		Stem OK				
Design Height Above Ftg	ft =	0.00				
Wall Material Above "Ht"	=	Masonry				
Design Method		ASD	SD	SD	SD	S
Thickness		8.00				
Rebar Size		# 4				
Rebar Spacing		32.00				
Rebar Placed at		Edge				
Design Data						
fb/FB + fa/Fa		0.457				
Total Force @ Section						
Service Level	lbs =	283.6				
Strength Level	lbs =					
Moment....Actual						
Service Level	ft-# =	448.5				
Strength Level	ft-# =					
Moment ....Allowable		979.3				
Shear.....Actual						
Service Level	psi =	3.1				
Strength Level	psi =					
Shear.....Allowable	psi =	43.6				
Anet (Masonry)	in2 =	91.50				
Wall Weight	psf =	0.0				
Rebar Depth 'd'	in =	5.25				
Masonry Data						
f'm	psi =	32,800				
Fs	psi =					
Solid Grouting		Yes				
Modular Ratio 'n'	=	21.48				
Equiv. Solid Thick.	in =	7.63				
Masonry Block Type						
Masonry Design Method		ASD				
Concrete Data						
f'c	psi =					
Fy	psi =					

Project Title:
Engineer:
Project ID:
Project Descr:

Cantilevered Retaining Wall

LIC# KW-06013306, Build:20.22.4.26
(cENERCALC INC 1983-2022

DESCRIPTION: 3'-4" RETWALL W/ LEVEL BACKFILL

Footing Data

Toe Width	=	0.00 ft
Heel Width	=	2.50
Total Footing Width	=	2.50
Footing Thickness	=	12.00 in
Key Width	=	12.00 in
Key Depth	=	10.00 in
Key Distance from Toe	=	1.50 ft

f'c = 2,500 psi Fy = 40,000 psi
Footing Concrete Density = 150.00 pcf
Min. As % = 0.0018
Cover @ Top 2.00 @ Btm.= 3.00 in

Footing Design Results

		Toe	Heel	
Factored Pressure	=	1,327	20 psf	
Mu' : Upward	=	0	570 ft-#	
Mu' : Downward	=	0	1,752 ft-#	
Mu: Design	=	0 OK	1,182 ft-#	OK
phiMn	=	2,500	2,500 ft-#	
Actual 1-Way Shear	=	3.60	4.34 psi	
Allow 1-Way Shear	=	40.00	40.00 psi	
Toe Reinforcing	=	None Spec'd		
Heel Reinforcing	=	None Spec'd		
Key Reinforcing	=	None Spec'd		
Footing Torsion, Tu	=	0.00 ft-lbs		
Footing Allow. Torsion, phi Tu	=	0.00 ft-lbs		

If torsion exceeds allowable, provide supplemental design for footing torsion.

Other Acceptable Sizes & Spacings

Toe:
Heel:
Key:

Min footing T&S reinf Area	0.65	in2
Min footing T&S reinf Area per foot	0.26	in2 /ft
If one layer of horizontal bars:	If two layers of horizontal bars:	
#4@ 9.26 in	#4@ 18.52 in	
#5@ 14.35 in	#5@ 28.70 in	
#6@ 20.37 in	#6@ 40.74 in	

Summary of Overturning & Resisting Forces & Moments

Item	.....OVERTURNING..... Force lbs	Distance ft	Moment ft-#	.....RESISTING..... Force lbs	Distance ft	Moment ft-#
HL Act Pres (ab water tbl)	422.4	1.44	610.1			
HL Act Pres (be water tbl)						
Hydrostatic Force						
Buoyant Force =						
Surcharge over Heel =						
Surcharge Over Toe =						
Adjacent Footing Load =						
Added Lateral Load =						
Load @ Stem Above Soil =	33.6	6.08	204.4			
=						
Soil Over HL (ab. water tbl)				702.7	1.58	1,112.6
Soil Over HL (bel. water tbl)					1.58	1,112.6
Watre Table						
Sloped Soil Over Heel =						
Surcharge Over Heel =						
Adjacent Footing Load =						
Axial Dead Load on Stem =						
* Axial Live Load on Stem =						
Soil Over Toe =						
Surcharge Over Toe =						
Stem Weight(s) =						
Earth @ Stem Transitions =						
Footing Weight =				375.0	1.25	468.8
Key Weight =				125.0	2.00	250.0
Vert. Component =				164.0	2.50	410.1
Total =	456.0	O.T.M. =	814.5	1,366.7 lbs	R.M.=	2,241.5

Resisting/Overturning Ratio = **2.75**
Vertical Loads used for Soil Pressure = 1,202.7 lbs

* Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.

Vertical component of active lateral soil pressure IS considered in the calculation of Sliding Resistance.

Vertical component of active lateral soil pressure IS considered in the calculation of Overturning Resistance.

4'-0" RETAINING WALL
W/LEVEL BACKFILL CALCULATIONS

Project Title:
Engineer:
Project ID:
Project Descr:

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Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 4'-0" RETWALL W/ LEVEL BACKFILL

Code Reference:

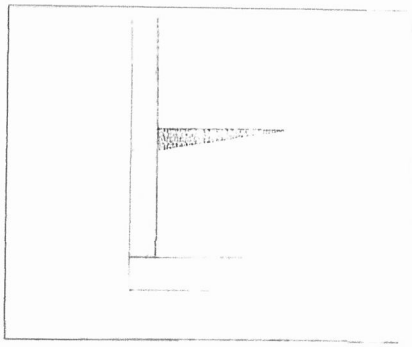
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16

Criteria

Retained Height	=	4.00 ft
Wall height above soil	=	3.50 ft
Slope Behind Wall	=	0.00
Height of Soil over Toe	=	6.00 in
Water height over heel	=	0.0 ft

Soil Data

Allow Soil Bearing	=	2,400.0 psf
Equivalent Fluid Pressure Method		
Active Heel Pressure	=	45.0 psf/ft
	=	
Passive Pressure	=	150.0 psf/ft
Soil Density, Heel	=	115.00 pcf
Soil Density, Toe	=	155.00 pcf
Footing||Soil Friction	=	0.233
Soil height to ignore for passive pressure	=	6.00 in



Surcharge Loads

Surcharge Over Heel	=	0.0 psf
Used To Resist Sliding & Overturning		
Surcharge Over Toe	=	0.0
Used for Sliding & Overturning		

Axial Load Applied to Stem

Axial Dead Load	=	0.0 lbs
Axial Live Load	=	0.0 lbs
Axial Load Eccentricity	=	0.0 in

Lateral Load Applied to Stem

Lateral Load	=	0.0 #/ft
...Height to Top	=	0.00 ft
...Height to Bottom	=	0.00 ft
Load Type	=	Wind (W) (Service Level)
Wind on Exposed Stem (Strength Level)	=	16.0 psf

Adjacent Footing Load

Adjacent Footing Load	=	0.0 lbs
Footing Width	=	0.00 ft
Eccentricity	=	0.00 in
Wall to Ftg CL Dist	=	0.00 ft
Footing Type		Spread Footing
Base Above/Below Soil at Back of Wall		0.0 ft
Poisson's Ratio		0.300



Project Title:
Engineer:
Project ID:
Project Descr:

Cantilevered Retaining Wall

Printed: 11 JUN 2022, 9:34PM
Project File: 22-07.ec6

LIC# : KW-06013306, Build:20.22.4.26

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DESCRIPTION: 4'-0" RETWALL W/ LEVEL BACKFILL

Design Summary

Wall Stability Ratios			
Overturning	≈	2.67	OK
Sliding	≈	1.67	OK
Global Stability	≈	2.35	
Total Bearing Load	≈	1,711 lbs	
...resultant ecc.	≈	4.34 in	
Eccentricity within middle third			
Soil Pressure @ Toe	=	983 psf	OK
Soil Pressure @ Heel	≈	158 psf	OK
Allowable	≈	2,400 psf	
Soil Pressure Less Than Allowable			
ACI Factored @ Toe	≈	1,376 psf	
ACI Factored @ Heel	=	221 psf	
Footing Shear @ Toe	≈	5.0 psi	OK
Footing Shear @ Heel	≈	1.2 psi	OK
Allowable	≈	75.0 psi	
Sliding Calcs			
Lateral Sliding Force	≈	596.1 lbs	
less 100% Passive Force	-	548.4 lbs	
less 100% Friction Force	≈ -	449.5 lbs	
Added Force Req'd	=	0.0 lbs	OK
...for 1.5 Stability	≈	0.0 lbs	OK

Vertical component of active lateral soil pressure IS NOT considered in the calculation of soil bearing

Load Factors

Building Code	
Dead Load	1.200
Live Load	1.600
Earth, H	1.600
Wind, W	1.600
Seismic, E	1.000

Stem Construction

		Bottom				
		Stem OK				
Design Height Above Ftg	ft =	0.00				
Wall Material Above "Ht"	=	Masonry				
Design Method	=	ASD	SD	SD	SD	SD
Thickness	=	8.00				
Rebar Size	=	# 4				
Rebar Spacing	=	16.00				
Rebar Placed at	=	Edge				
Design Data						
fb/FB + fa/Fa	=	0.352				
Total Force @ Section						
Service Level	lbs =	393.6				
Strength Level	lbs =					
Moment....Actual						
Service Level	ft-# =	673.2				
Strength Level	ft-# =					
Moment.....Allowable	=	1,909.1				
Shear.....Actual						
Service Level	psi =	4.3				
Strength Level	psi =					
Shear.....Allowable	psi =	43.6				
Anet (Masonry)	in2 =	91.50				
Wall Weight	psf =	0.0				
Rebar Depth 'd'	in =	5.25				
Masonry Data						
f'm	psi =	32,000				
Fs	psi =					
Solid Grouting	=	Yes				
Modular Ratio 'n'	=	21.48				
Equiv. Solid Thick.	in =	7.63				
Masonry Block Type	=					
Masonry Design Method	=	ASD				
Concrete Data						
f'c	psi =					
Fy	psi =					

Project Title:
Engineer:
Project ID:
Project Descr:

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Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# : KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 4'-0" RETWALL W/ LEVEL BACKFILL

Footing Data

Toe Width	=	0.00 ft
Heel Width	=	3.00
Total Footing Width	=	3.00
Footing Thickness	=	12.00 in
Key Width	=	12.00 in
Key Depth	=	15.00 in
Key Distance from Toe	=	2.00 ft

f'c = 2,500 psi Fy = 40,000 psi
Footing Concrete Density = 150.00 pcf
Min. As % = 0.0018
Cover @ Top 2.00 @ Btm.= 3.00 in

Footing Design Results

		Toe	Heel	
Factored Pressure	=	1,376	221 psf	
Mu' : Upward	=	0	1,416 ft-#	
Mu' : Downward	=	0	2,277 ft-#	
Mu: Design	=	0 OK	861 ft-#	OK
phiMn	=	2,500	2,500 ft-#	
Actual 1-Way Shear	=	4.95	1.21 psi	
Allow 1-Way Shear	=	40.00	40.00 psi	
Toe Reinforcing	=	None Spec'd		
Heel Reinforcing	=	None Spec'd		
Key Reinforcing	=	None Spec'd		
Footing Torsion, Tu	=		0.00 ft-lbs	
Footing Allow. Torsion, phi Tu	=		0.00 ft-lbs	

If torsion exceeds allowable, provide supplemental design for footing torsion.

Other Acceptable Sizes & Spacings

Toe:
Heel:
Key:

Min footing T&S reinf Area 0.78 in2
Min footing T&S reinf Area per foot 0.26 in2 /ft

If one layer of horizontal bars:	If two layers of horizontal bars:
#4@ 9.26 in	#4@ 18.52 in
#5@ 14.35 in	#5@ 28.70 in
#6@ 20.37 in	#6@ 40.74 in

Summary of Overturning & Resisting Forces & Moments

Item		.....OVERTURNING..... Force lbs	Distance ft	Moment ft-#		.....RESISTING..... Force lbs	Distance ft	Moment ft-#
HL Act Pres (ab water tbl)		562.5	1.67	937.5	Soil Over HL (ab. water tbl)	1,073.3	1.83	1,967.8
HL Act Pres (be water tbl)					Soil Over HL (bel. water tbl)		1.83	1,967.8
Hydrostatic Force					Watre Table			
Buoyant Force	=				Sloped Soil Over Heel	=		
Surcharge over Heel	=				Surcharge Over Heel	=		
Surcharge Over Toe	=				Adjacent Footing Load	=		
Adjacent Footing Load	=				Axial Dead Load on Stem	=		
Added Lateral Load	=				* Axial Live Load on Stem	=		
Load @ Stem Above Soil	=	33.6	6.75	226.8	Soil Over Toe	=		
	=				Surcharge Over Toe	=		
					Stem Weight(s)	=		
					Earth @ Stem Transitions	=		
Total	=	596.1	O.T.M. =	1,164.3	Footing Weight	=	450.0	1.50	675.0
					Key Weight	=	187.5	2.50	468.8
					Vert. Component	=			
					Total =		1,710.8 lbs	R.M.=	3,111.5

Resisting/Overturning Ratio = 2.67
Vertical Loads used for Soil Pressure = 1,710.8 lbs

* Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.

Vertical component of active lateral soil pressure IS considered in the calculation of Sliding Resistance.

Vertical component of active lateral soil pressure IS NOT considered in the calculation of Overturning Resistance.

4'-8" RETAINING WALL
W/LEVEL BACKFILL CALCULATIONS

Project Title:
Engineer:
Project ID:
Project Descr:

Printed 11 JUN 2022, 9:40PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# : KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 4'-8" RETWALL W/ LEVEL BACKFILL

Code Reference:

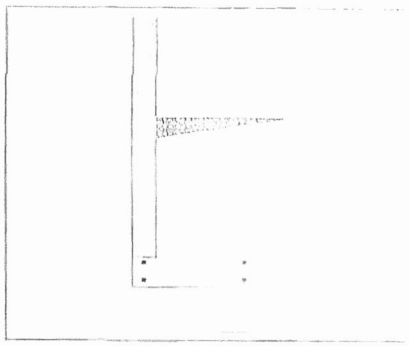
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16

Criteria

Retained Height	=	4.67 ft
Wall height above soil	=	3.50 ft
Slope Behind Wall	=	0.00
Height of Soil over Toe	=	6.00 in
Water height over heel	=	0.0 ft

Soil Data

Allow Soil Bearing	=	2,400.0 psf
Equivalent Fluid Pressure Method		
Active Heel Pressure	=	45.0 psf/ft
	=	
Passive Pressure	=	150.0 psf/ft
Soil Density, Heel	=	115.00 pcf
Soil Density, Toe	=	115.00 pcf
Footing||Soil Friction	=	0.233
Soil height to ignore for passive pressure	=	6.00 in



Surcharge Loads

Surcharge Over Heel	=	0.0 psf
Used To Resist Sliding & Overturning		
Surcharge Over Toe	=	0.0
Used for Sliding & Overturning		

Axial Load Applied to Stem

Axial Dead Load	=	0.0 lbs
Axial Live Load	=	0.0 lbs
Axial Load Eccentricity	=	0.0 in

Lateral Load Applied to Stem

Lateral Load	=	0.0 #/ft
...Height to Top	=	0.00 ft
...Height to Bottom	=	0.00 ft
Load Type	=	Wind (W) (Service Level)
Wind on Exposed Stem (Strength Level)	=	16.0 psf

Adjacent Footing Load

Adjacent Footing Load	=	0.0 lbs
Footing Width	=	0.00 ft
Eccentricity	=	0.00 in
Wall to Ftg CL Dist	=	0.00 ft
Footing Type		Spread Footing
Base Above/Below Soil at Back of Wall	=	0.0 ft
Poisson's Ratio		



Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 11 JUN 2022, 9:40PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# : KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 4'-8" RETWALL W/ LEVEL BACKFILL

Design Summary

Wall Stability Ratios			
Overturning	=	2.55	OK
Sliding	=	1.60	OK
Global Stability	=	2.16	
Total Bearing Load	=	2,100 lbs	
...resultant ecc.	=	5.15 in	
Eccentricity within middle third			
Soil Pressure @ Toe	=	1,158 psf	OK
Soil Pressure @ Heel	=	134 psf	OK
Allowable	=	2.400 psf	
Soil Pressure Less Than Allowable			
ACI Factored @ Toe	=	1,621 psf	
ACI Factored @ Heel	=	188 psf	
Footing Shear @ Toe	=	0.0 psi	OK
Footing Shear @ Heel	=	1.5 psi	OK
Allowable	=	75.0 psi	
Sliding Calcs			
Lateral Sliding Force	=	757.0 lbs	
less 100% Passive Force	-	656.3 lbs	
less 100% Friction Force	-	554.7 lbs	
Added Force Req'd	=	0.0 lbs	OK
...for 1.5 Stability	=	0.0 lbs	OK

Vertical component of active lateral soil pressure IS NOT considered in the calculation of soil bearing

Load Factors

Building Code	
Dead Load	1.200
Live Load	1.600
Earth, H	1.600
Wind, W	1.600
Seismic, E	1.000

Stem Construction

		Bottom				
		Stem OK				
Design Height Above Ftg	ft =	0.00				
Wall Material Above "Ht"	=	Masonry				
Design Method	=	ASD	SD	SD	SD	SD
Thickness	=	8.00				
Rebar Size	=	# 4				
Rebar Spacing	=	16.00				
Rebar Placed at	=	Edge				
Design Data						
fb/FB + fa/Fa	=	0.513				
Total Force @ Section						
Service Level	lbs =	524.3				
Strength Level	lbs =					
Moment....Actual						
Service Level	ft-# =	979.6				
Strength Level	ft-# =					
Moment.....Allowable	=	1,909.1				
Shear.....Actual						
Service Level	psi =	5.7				
Strength Level	psi =					
Shear.....Allowable	psi =	43.6				
Anet (Masonry)	in2 =	91.50				
Wall Weight	psf =	0.0				
Rebar Depth 'd'	in =	5.25				

Masonry Data

f'm	psi =	32,800
Fs	psi =	
Solid Grouting	=	Yes
Modular Ratio 'n'	=	21.48
Equiv. Solid Thick.	in =	7.63
Masonry Block Type	=	
Masonry Design Method	=	ASD

Concrete Data

f'c	psi =
Fy	psi =

Project Title:
Engineer:
Project ID:
Project Descr:

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Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 4'-8" RETWALL W/ LEVEL BACKFILL

Footing Data

Toe Width	=	0.00 ft
Heel Width	=	3.25
Total Footing Width	=	3.25
Footing Thickness	=	12.00 in
Key Width	=	12.00 in
Key Depth	=	18.00 in
Key Distance from Toe	=	2.25 ft

f'c = 2,500 psi Fy = 40,000 psi
Footing Concrete Density = 150.00 pcf
Min As % = 0.0018
Cover @ Top 2.00 @ Btm.= 3.00 in

Footing Design Results

		Toe	Heel	
Factored Pressure	=	1,621	188 psf	
Mu' : Upward	=	0	1,895 ft-#	
Mu' : Downward	=	0	3,106 ft-#	
Mu: Design	=	0 OK	1,211 ft-#	OK
phiMn	=	14,565	16,365 ft-#	
Actual 1-Way Shear	=	0.00	1.51 psi	
Allow 1-Way Shear	=	0.00	75.00 psi	

Toe Reinforcing = # 7 @ 12.00 in
Heel Reinforcing = # 7 @ 12.00 in
Key Reinforcing = None Spec'd
Footing Torsion, Tu = 0.00 ft-lbs
Footing Allow. Torsion, phi Tu = 0.00 ft-lbs

If torsion exceeds allowable, provide supplemental design for footing torsion.

Other Acceptable Sizes & Spacings

Toe:
Heel:
Key:

Min footing T&S reinf Area	0.84	in2
Min footing T&S reinf Area per foot	0.26	in2 /ft
If one layer of horizontal bars:	If two layers of horizontal bars:	
#4@ 9.26 in	#4@ 18.52 in	
#5@ 14.35 in	#5@ 28.70 in	
#6@ 20.37 in	#6@ 40.74 in	

Summary of Overturning & Resisting Forces & Moments

		.....OVERTURNING..... Force lbs	Distance ft	Moment ft-#		.....RESISTING..... Force lbs	Distance ft	Moment ft-#
HL Act Pres (ab water tbl)		723.4	1.89	1,367.1	Soil Over HL (ab. water tbl)	1,387.4	1.96	2,717.0
HL Act Pres (be water tbl)					Soil Over HL (bel. water tbl)		1.96	2,717.0
Hydrostatic Force					Watre Table			
Buoyant Force	=				Sloped Soil Over Heel	=		
Surcharge over Heel	=				Surcharge Over Heel	=		
Surcharge Over Toe	=				Adjacent Footing Load	=		
Adjacent Footing Load	=				Axial Dead Load on Stem	=		
Added Lateral Load	=				* Axial Live Load on Stem	=		
Load @ Stem Above Soil	=	33.6	7.42	249.3	Soil Over Toe	=		
	=				Surcharge Over Toe	=		
					Stem Weight(s)	=		
					Earth @ Stem Transitions	=		
Total	=	757.0	O.T.M. =	1,616.4	Footing Weight	=	487.5	1.63	792.2
					Key Weight	=	225.0	2.75	618.8
					Vert. Component	=			
					Total =		2,099.9 lbs	R.M.=	4,127.9

Resisting/Overturning Ratio = **2.55**
Vertical Loads used for Soil Pressure = 2,099.9 lbs

* Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.

Vertical component of active lateral soil pressure IS considered in the calculation of Sliding Resistance.

Vertical component of active lateral soil pressure IS NOT considered in the calculation of Overturning Resistance.

5'-4" RETAINING WALL
W/LEVEL BACKFILL CALCULATIONS

Project Title:
Engineer:
Project ID:
Project Descr:

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Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# : KW-06013306, Build:20.22.4.26

(c) ENERCALC INC 1983-2022

DESCRIPTION: 5'-4" RETWALL W/ LEVEL BACKFILL

Code Reference:

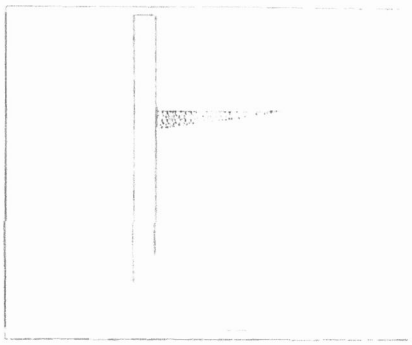
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16

Criteria

Retained Height	=	5.33 ft
Wall height above soil	=	3.50 ft
Slope Behind Wall	=	0.00
Height of Soil over Toe	=	6.00 in
Water height over heel	=	0.0 ft

Soil Data

Allow Soil Bearing	=	2,400.0 psf
Equivalent Fluid Pressure Method		
Active Heel Pressure	=	45.0 psf/ft
	=	
Passive Pressure	=	150.0 psf/ft
Soil Density, Heel	=	115.00 pcf
Soil Density, Toe	=	115.00 pcf
Footing||Soil Friction	=	0.233
Soil height to ignore for passive pressure	=	6.00 in



Surcharge Loads

Surcharge Over Heel	=	0.0 psf
Used To Resist Sliding & Overturning		
Surcharge Over Toe	=	0.0
Used for Sliding & Overturning		

Axial Load Applied to Stem

Axial Dead Load	=	0.0 lbs
Axial Live Load	=	0.0 lbs
Axial Load Eccentricity	=	0.0 in

Lateral Load Applied to Stem

Lateral Load	=	0.0 #/ft
...Height to Top	=	0.00 ft
...Height to Bottom	=	0.00 ft
Load Type	=	Wind (W) (Service Level)
Wind on Exposed Stem (Strength Level)	=	16.0 psf

Adjacent Footing Load

Adjacent Footing Load	=	0.0 lbs
Footing Width	=	0.00 ft
Eccentricity	=	0.00 in
Wall to Ftg CL Dist	=	0.00 ft
Footing Type		Spread Footing
Base Above/Below Soil at Back of Wall	=	0.0 ft
Poisson's Ratio		

REGISTERED PROFESSIONAL ENGINEER
SURENDER M. DEWAN
No. 34559
Exp. 9-30-2023
CIVIL
STATE OF CALIFORNIA

Project Title:
Engineer:
Project ID:
Project Descr:

Cantilevered Retaining Wall

Printed: 11 JUN 2022 9:43PM
Project File: 22-07.ec6
(c) ENERCALC INC 1983-2022

LIC# : KW-06013306, Build:20.22.4.26

DESCRIPTION: 5'-4" RETWALL W/ LEVEL BACKFILL

Design Summary

Wall Stability Ratios			
Overturning	=	2.45	OK
Sliding	=	1.54	OK
Global Stability	=	2.02	
Total Bearing Load	=	2,524 lbs	
..resultant ecc.	=	6.02 in	
Eccentricity within middle third			
Soil Pressure @ Toe	=	1,342 psf	OK
Soil Pressure @ Heel	=	101 psf	OK
Allowable	=	2,400 psf	
Soil Pressure Less Than Allowable			
ACI Factored @ Toe	=	1,878 psf	
ACI Factored @ Heel	=	141 psf	
Footing Shear @ Toe	=	7.3 psi	OK
Footing Shear @ Heel	=	1.7 psi	OK
Allowable	=	75.0 psi	
Sliding Calcs			
Lateral Sliding Force	=	935.2 lbs	
less 100% Passive Force	-	773.4 lbs	
less 100% Friction Force	= -	669.7 lbs	
Added Force Req'd	=	0.0 lbs	OK
..for 1.5 Stability	=	0.0 lbs	OK

Vertical component of active lateral soil pressure IS NOT considered in the calculation of soil bearing

Load Factors

Building Code	
Dead Load	1.200
Live Load	1.600
Earth, H	1.600
Wind, W	1.600
Seismic, E	1.000

Stem Construction

		Bottom				
		Stem OK				
Design Height Above Ftg	ft =	0.00				
Wall Material Above "Ht"	=	Masonry				
Design Method	=	ASD	SD	SD	SD	SD
Thickness	=	8.00				
Rebar Size	=	# 5				
Rebar Spacing	=	16.00				
Rebar Placed at	=	Edge				
Design Data						
fb/FB + fa/Fa	=	0.507				
Total Force @ Section						
Service Level	lbs =	672.8				
Strength Level	lbs =					
Moment....Actual						
Service Level	ft-# =	1,373.5				
Strength Level	ft-# =					
Moment.....Allowable	=	2,708.3				
Shear.....Actual						
Service Level	psi =	7.4				
Strength Level	psi =					
Shear.....Allowable	psi =	43.6				
Anet (Masonry)	in2 =	91.50				
Wall Weight	psf =	0.0				
Rebar Depth 'd'	in =	5.25				
Masonry Data						
f'm	psi =	32,800				
Fs	psi =					
Solid Grouting	=	Yes				
Modular Ratio 'n'	=	21.48				
Equiv. Solid Thick.	in =	7.63				
Masonry Block Type	=					
Masonry Design Method	=	ASD				
Concrete Data						
f'c	psi =					
Fy	psi =					

Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 11 JUN 2022, 9:43PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

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DESCRIPTION: 5'-4" RETWALL W/ LEVEL BACKFILL

Footing Data

Toe Width	=	0.00 ft
Heel Width	=	3.50
Total Footing Width	=	3.50
Footing Thickness	=	12.00 in
Key Width	=	12.00 in
Key Depth	=	21.00 in
Key Distance from Toe	=	2.50 ft

f'c = 2,500 psi Fy = 40,000 psi
Footing Concrete Density = 150.00 pcf
Min. As % = 0.0018
Cover @ Top 2.00 @ Btm.= 3.00 in

Footing Design Results

		Toe	Heel	
Factored Pressure	=	1,878	141 psf	
Mu' : Upward	=	0	2,448 ft-#	
Mu' : Downward	=	0	4,107 ft-#	
Mu: Design	=	0 OK	1,659 ft-#	OK
phiMn	=	2,500	2,500 ft-#	
Actual 1-Way Shear	=	7.28	1.68 psi	
Allow 1-Way Shear	=	40.00	40.00 psi	
Toe Reinforcing	=	None Spec'd		
Heel Reinforcing	=	None Spec'd		
Key Reinforcing	=	None Spec'd		
Footing Torsion, Tu	=		0.00 ft-lbs	
Footing Allow. Torsion, phi Tu	=		0.00 ft-lbs	

If torsion exceeds allowable, provide supplemental design for footing torsion.

Other Acceptable Sizes & Spacings

Toe:
Heel:
Key:

Min footing T&S reinf Area	0.91	in2
Min footing T&S reinf Area per foot	0.26	in2 /ft
If one layer of horizontal bars:	If two layers of horizontal bars:	
#4@ 9.26 in	#4@ 18.52 in	
#5@ 14.35 in	#5@ 28.70 in	
#6@ 20.37 in	#6@ 40.74 in	

Summary of Overturning & Resisting Forces & Moments

Item		.....OVERTURNING..... Force lbs	Distance ft	Moment ft-#		.....RESISTING..... Force lbs	Distance ft	Moment ft-#
HL Act Pres (ab water tbl)		901.6	2.11	1,902.3	Soil Over HL (ab. water tbl)	1,736.7	2.08	3,618.1
HL Act Pres (be water tbl)					Soil Over HL (bel. water tbl)		2.08	3,618.1
Hydrostatic Force					Watre Table			
Buoyant Force	=				Sloped Soil Over Heel	=		
Surcharge over Heel	=				Surcharge Over Heel	=		
Surcharge Over Toe	=				Adjacent Footing Load	=		
Adjacent Footing Load	=				Axial Dead Load on Stem	=		
Added Lateral Load	=				* Axial Live Load on Stem	=		
Load @ Stem Above Soil	=	33.6	8.08	271.5	Soil Over Toe	=		
	=				Surcharge Over Toe	=		
					Stem Weight(s)	=		
					Earth @ Stem Transitions	=		
Total	=	935.2	O.T.M. =	2,173.8	Footing Weight	=	525.0	1.75	918.8
					Key Weight	=	262.5	3.00	787.5
					Vert. Component	=			
					Total	=	2,524.2 lbs	R.M.=	5,324.4

Resisting/Overturning Ratio = 2.45
Vertical Loads used for Soil Pressure = 2,524.2 lbs

* Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.

Vertical component of active lateral soil pressure IS considered in the calculation of Sliding Resistance.

Vertical component of active lateral soil pressure IS NOT considered in the calculation of Overturning Resistance.

6'-0" RETAINING WALL
W/LEVEL BACKFILL CALCULATIONS

Project Title:
Engineer:
Project ID:
Project Descr:

Printed 11 JUN 2022 9:49PM

Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

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DESCRIPTION: 6'-0" RETWALL W/ LEVEL BACKFILL

Code Reference:

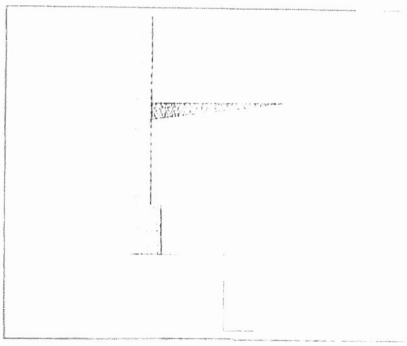
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16

Criteria

Retained Height	=	6.00 ft
Wall height above soil	=	3.50 ft
Slope Behind Wall	=	0.00
Height of Soil over Toe	=	6.00 in
Water height over heel	=	0.0 ft

Soil Data

Allow Soil Bearing	=	2,400.0 psf
Equivalent Fluid Pressure Method		
Active Heel Pressure	=	45.0 psf/ft
	=	
Passive Pressure	=	150.0 psf/ft
Soil Density, Heel	=	115.00 pcf
Soil Density, Toe	=	115.00 pcf
Footing||Soil Friction	=	0.233
Soil height to ignore for passive pressure	=	6.00 in



Surcharge Loads

Surcharge Over Heel	=	0.0 psf
Used To Resist Sliding & Overturning		
Surcharge Over Toe	=	0.0 psf
Used for Sliding & Overturning		

Axial Load Applied to Stem

Axial Dead Load	=	0.0 lbs
Axial Live Load	=	0.0 lbs
Axial Load Eccentricity	=	0.0 in

Lateral Load Applied to Stem

Lateral Load	=	0.0 #/ft
...Height to Top	=	0.00 ft
...Height to Bottom	=	0.00 ft
Load Type	=	Wind (W) (Service Level)
Wind on Exposed Stem (Strength Level)	=	16.0 psf

Adjacent Footing Load

Adjacent Footing Load	=	0.0 lbs
Footing Width	=	0.00 ft
Eccentricity	=	0.00 in
Wall to Ftg CL Dist	=	0.00 ft
Footing Type		Spread Footing
Base Above/Below Soil at Back of Wall	=	0.0 ft
Poisson's Ratio	=	0.300



Project Title:
Engineer:
Project ID:
Project Descr:

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Cantilevered Retaining Wall

Project File: 22-07.ec6

(C) ENERCALC INC 1993-2022

LIC# KW-06013306, Build 20.22.4.26

DESCRIPTION: 6'-0" RETWALL W/ LEVEL BACKFILL

Design Summary

Wall Stability Ratios

Overturning	=	2.63	OK
Sliding	=	1.52	OK
Global Stability	=	1.95	

Total Bearing Load	=	3,123 lbs	
...resultant ecc.	=	6.00 in	
Eccentricity within middle third			
Soil Pressure @ Toe	=	1,366 psf	OK
Soil Pressure @ Heel	=	196 psf	OK
Allowable	=	2,400 psf	
Soil Pressure Less Than Allowable			
ACI Factored @ Toe	=	1,912 psf	
ACI Factored @ Heel	=	274 psf	
Footing Shear @ Toe	=	8.6 psi	OK
Footing Shear @ Heel	=	3.0 psi	OK
Allowable	=	75.0 psi	

Sliding Calcs

Lateral Sliding Force	=	1,136.1 lbs	
less 100% Passive Force	-	900.0 lbs	
less 100% Friction Force	-	827.5 lbs	
Added Force Req'd	=	0.0 lbs	OK
for 1.5 Stability	=	0.0 lbs	OK

Vertical component of active lateral soil pressure IS NOT considered in the calculation of soil bearing

Load Factors

Building Code	
Dead Load	1.200
Live Load	1.600
Earth, H	1.600
Wind, W	1.600
Seismic, E	1.000

Stem Construction

		2nd	Bottom			
Design Height Above Ftg	ft =	Stem OK 2.00	Stem OK 0.00			
Wall Material Above "Ht"	=	Masonry	Masonry			
Design Method	=	ASD	ASD	SD	SD	SD
Thickness	=	8.00	12.00			
Rebar Size	=	# 4	# 4			
Rebar Spacing	=	16.00	16.00			
Rebar Placed at	=	Edge	Edge			
Design Data						
fb/FB + fa/Fa	=	**0.352**	**0.562**			
Total Force @ Section						
Service Level	lbs =	393.6	843.6			
Strength Level	lbs =					
Moment....Actual						
Service Level	ft-# =	673.2	1,880.4			
Strength Level	ft-# =					
Moment.....Allowable	ft-# =	1,909.1	3,340.5			
Shear.....Actual						
Service Level	psi =	4.3	6.0			
Strength Level	psi =					
Shear.....Allowable	psi =	43.6	43.7			
Anet (Masonry)	in2 =	91.50	139.50			
Wall Weight	psf =	0.0	0.0			
Rebar Depth 'd'	in =	5.25	9.00			
Masonry Data						
f'm	psi =	32,800	32,800			
Fs	psi =					
Solid Grouting	=	Yes	Yes			
Modular Ratio 'n'	=	21.48	21.48			
Equiv. Solid Thick.	in =	7.63	11.63			
Masonry Block Type	=					
Masonry Design Method	=	ASD				
Concrete Data						
f'c	psi =					
Fy	psi =					

Project Title:
Engineer:
Project ID:
Project Descr

123

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Cantilevered Retaining Wall

Project File: 22-07.ec6

LIC# KW-06013306, Build:20.22.4.26

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DESCRIPTION: 6'-0" RETWALL W/ LEVEL BACKFILL

Footing Data

Toe Width	=	0.00 ft
Heel Width	=	4.00
Total Footing Width	=	4.00
Footing Thickness	=	12.00 in
Key Width	=	12.00 in
Key Depth	=	24.00 in
Key Distance from Toe	=	3.00 ft

f'c = 2,500 psi Fy = 40,000 psi
Footing Concrete Density = 150.00 pcf
Min. As % = 0.0018
Cover @ Top 2.00 @ Btm.= 3.00 in

Footing Design Results

		Toe	Heel	
Factored Pressure	=	1,912	274 psf	
Mu' : Upward	=	0	3,076 ft-#	
Mu' : Downward	=	0	5,292 ft-#	
Mu: Design	=	0 OK	2,216 ft-#	OK
phiMn	=	2,500	2,500 ft-#	
Actual 1-Way Shear	=	8.58	2.99 psi	
Allow 1-Way Shear	=	40.00	40.00 psi	

Toe Reinforcing = None Spec'd
Heel Reinforcing = None Spec'd
Key Reinforcing = None Spec'd
Footing Torsion, Tu = 0.00 ft-lbs
Footing Allow. Torsion, phi Tu = 0.00 ft-lbs

If torsion exceeds allowable, provide supplemental design for footing torsion.

Other Acceptable Sizes & Spacings

Toe:
Heel:
Key:

Min footing T&S reinf Area 1.04 in2
Min footing T&S reinf Area per foot 0.26 in2 /ft

If one layer of horizontal bars:	If two layers of horizontal bars:
#4@ 9.26 in	#4@ 18.52 in
#5@ 14.35 in	#5@ 28.70 in
#6@ 20.37 in	#6@ 40.74 in

Summary of Overturning & Resisting Forces & Moments

Item		.....OVERTURNING..... Force lbs	Distance ft	Moment ft-#		.....RESISTING..... Force lbs	Distance ft	Moment ft-#
HL Act Pres (ab water tbl)		1,102.5	2.33	2,572.5	Soil Over HL (ab. water tbl)	2,070.0	2.50	5,175.0
HL Act Pres (be water tbl)					Soil Over HL (bel. water tbl)		2.50	5,175.0
Hydrostatic Force					Watre Table			
Buoyant Force	=				Sloped Soil Over Heel	=		
Surcharge over Heel	=				Surcharge Over Heel	=		
Surcharge Over Toe	=				Adjacent Footing Load	=		
Adjacent Footing Load	=				Axial Dead Load on Stem	=		
Added Lateral Load	=				* Axial Live Load on Stem	=		
Load @ Stem Above Soil	=	33.6	8.75	294.0	Soil Over Toe	=		
	=				Surcharge Over Toe	=		
					Stem Weight(s)	=		
					Earth @ Stem Transitions	=	153.3	0.83	127.8
					Footing Weight	=	600.0	2.00	1,200.0
					Key Weight	=	300.0	3.50	1,050.0
					Vert. Component	=			
Total	=	1,136.1	O.T.M. =	2,866.5	Total =	3,123.3 lbs	R.M.=		7,552.8

Resisting/Overturning Ratio = **2.63**
Vertical Loads used for Soil Pressure = 3,123.3 lbs

* Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.

Vertical component of active lateral soil pressure IS considered in the calculation of Sliding Resistance.

Vertical component of active lateral soil pressure IS NOT considered in the calculation of Overturning Resistance.

APPENDIX IV

GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

Geotechnical Reports

Approved for use on June 7, 2023
294856.v3

GLOBAL GEO-ENGINEERING, INC.

October 28, 2021
Project 9163-04

DMS Consultants, Inc.
12377 Lewis Street, Suite 101
Garden Grove, California 92840

Attention: Mr. Surender Dewan, P. E.
President

Subject: Geotechnical Investigation and Infiltration Testing
Proposed Park Development
South Side of Grevelia Street
South Pasadena, California

References:

a) California Geological Survey, 1998 (Revised 2001, 2005 and 2006), *Seismic Hazard Zone Report for the Los Angeles 7.5-Minute Quadrangle, Los Angeles County, California,* Seismic Hazard Zone Report 029.

b) Dibblee, Thomas W. Jr., 1989, *Geologic Map of the Los Angeles Quadrangle*, *Los Angeles County, California*, Dibblee Foundation Map #DF-22.

Dear Mr. Dewan:

1. INTRODUCTION

a) In accordance with your request, we have conducted a limited geotechnical investigation for the proposed improvements at the above referenced site located in South Pasadena, California.

b) We understand that a small restroom structure is planned to be constructed on the property. The improvements will also include the construction of an infiltration system for stormwater runoff.

c) The purpose of our services was to conduct limited field exploration and laboratory testing in order to provide design recommendations for the proposed structure and for the proposed infiltration system.

3 Corporate Park, Suite 270, Irvine, California 92606
Office (949) 221-0900 Fax (949) 221-0091
Email: global@globalgeo.net

2. SCOPE

The scope of services was as follows:

a) Preliminary planning and preparation;

b) Review of available geotechnical literature and maps which includes the subject property;

c) Contact Underground Service Alert (USA) to locate known municipal and private utilities, easements or piping in the area of the proposed drilling;

d) Excavating two borings to depths of 5 and 15 feet below ground surface. The 5 feet deep boring was utilized for percolation testing;

e) Obtaining in-situ and bulk samples from the borings for classifications and laboratory testing;

f) Laboratory testing of selected samples considered representative of site conditions in order to determine the R-value and other soil properties;

g) Engineering and geologic analysis of the field and laboratory data;

h) Preparation of a geotechnical report, presenting our findings, conclusions and recommendations.

3. SITE DESCRIPTION

3.1 Location

a) The subject property is located along the south side of Grevelia Street, approximately 60 feet east of Fairview Avenue in the city of South Pasadena, California.

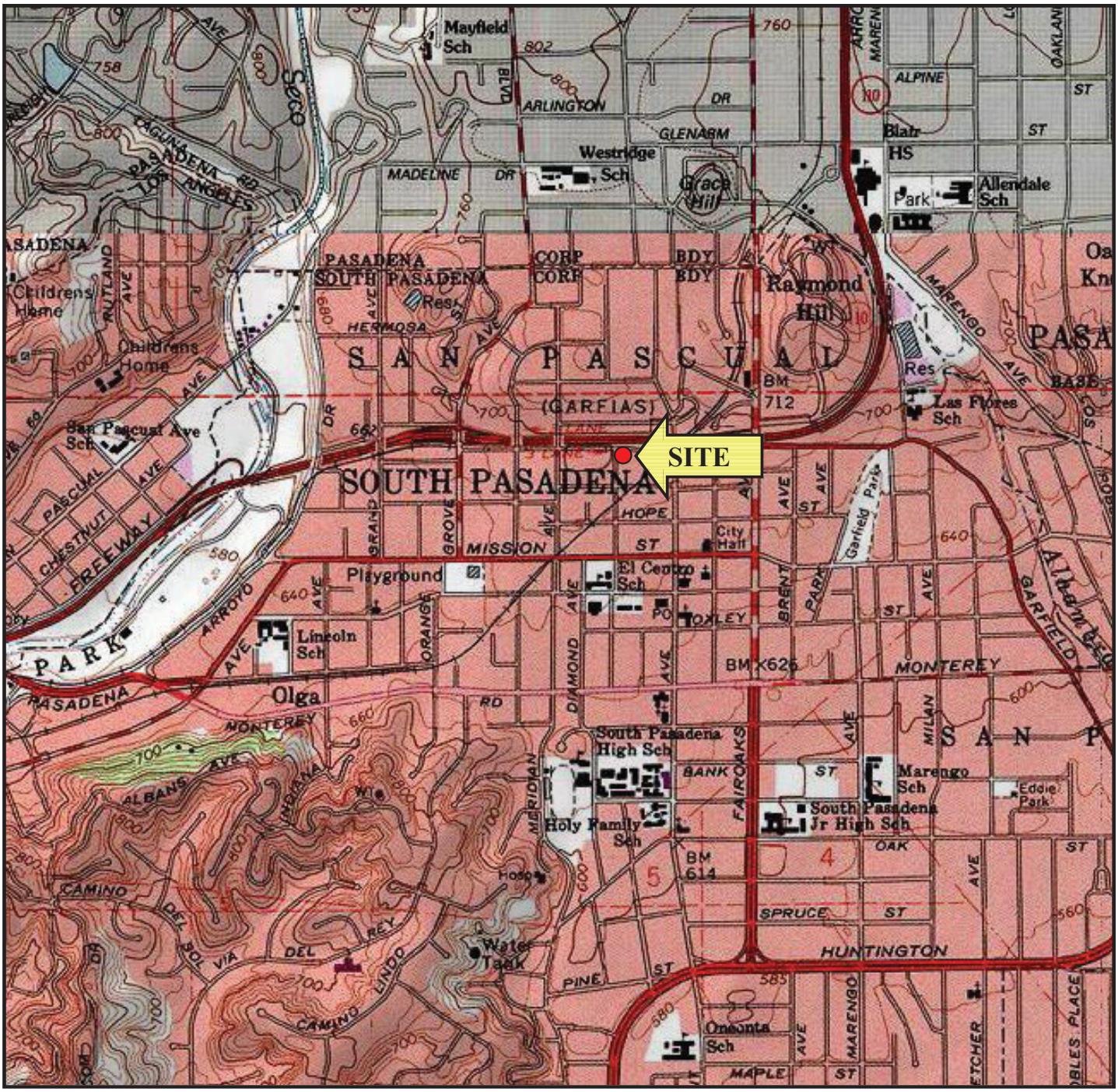
b) The approximate location is shown on the *Location Map, Figure 1*.

3.2 Surface Site Conditions

a) The property is currently vacant and void of any building structures. Single-family residential developments surround the eastern, southern and western sides of the lot.

b) The surface topography within the site area descends to the south at an approximate gradient of 2 to 3 percent.

LOCATION MAP



BASE MAP: USGS 7.5-Minute Topographic Map,
Los Angeles Quadrangle, 1994

2000 0 2000 4000

SCALE FEET

NORTH

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GEOLOGIC AND SOILS ENGINEERING IRVINE, CALIFORNIA

Grevelia Street and Fairview Avenue
South Pasadena, California

Date: October 2021

Figure No: 1

Project No.: 9163-04

1060

c) Surface drainage at the site consists of sheet flow runoff of incident rainfall derived from within the property boundaries.

3.3 Regional Geologic Setting

3.3.1 Regional Geologic Setting

The subject property is located just south of the southern fringe of the San Rafael Hills, which form part of the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges consist of a series of mountain ranges separated by longitudinal valleys. The ranges trend northwest-southeast and are subparallel to faults branching from the San Andreas Fault. The Peninsular Ranges extend from the southern side of the Santa Monica Mountains into Baja California, Mexico.

3.3.2 Local Geologic Setting

Locally, the project site is underlain by Holocene- to Pleistocene-age alluvium generated from the bedrock material situated within the nearby upland areas.

3.4 Seismicity

a) The subject property is located within an Earthquake Fault Zone (previously known as an Alquist-Priolo Special Studies Zone). The closest known active fault is the Raymond Fault, located at a distance of approximately 200 feet north of the project site. California Public Resources Code (CPRC) 2621.6 requires fault studies for *Projects* (defined as subdivisions of land, any commercial development, a development of four or more single-family residences, or a single-family dwelling exceeding two stories). Since the proposed development will consist of the construction of a small restroom structure, a fault study, in our opinion, is not required.

b) We utilized the California Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps internet program to calculate the peak ground acceleration (PGA) at the project site location. Using the ASCE 7-16 standard and Site Class D, the PGA_M at the subject property resulted to be 1.007g.

c) The subject property is not located in a State of California delineated *Seismic Hazard Zone* for liquefaction potential.

d) The project site is not located in a State of California delineated *Seismic Hazard Zone* for seismically-induced landslides.

4. FIELD EXPLORATION

a) A total of two borings (Borings HA-1 and P-1) were excavated within the lot.

b) Boring HA-1 was excavated to a depth of 15 feet to obtain subsurface samples and to determine the presence of any ground water. No ground water or seepage was encountered. The encountered soils consisted of slightly moist, medium stiff Sandy SILT alluvium.

c) Boring P-1 was excavated to a depth of 5 feet below ground surface for the purpose of conducting percolation testing. To prevent caving of the sidewalls during the percolation testing, a three-inch diameter perforated pipe with gravel rock encasement was installed in the percolation test boring.

d) *Logs of Borings* are enclosed as *Figures 2* and *3.* The locations of the borings are shown on the *Boring Location Plan, Figure 4.*

5. LABORATORY TESTING

5.1 Moisture-Density

Moisture-density information usually provides a gross indication of soil consistency. Local variations at the time of the investigation can be delineated, and a correlation obtained between soils found on this site and nearby sites. The dry unit weights and field moisture contents were determined for selected samples. The results are shown on the *Logs of Borings*.

5.2 Compaction

Representative soil samples were tested in the laboratory to determine the maximum dry density and optimum moisture content, using the ASTM D1557 compaction test method. This test procedure requires 25 blows of a 10-pound hammer falling a height of 18 inches on each of five layers, in a 1/30 cubic foot cylinder. The results of the tests are shown below:

Boring No.	Sample Depth (ft)	Soil Description	Optimum Moisture Content (%)	Maximum Dry Density (lb/ft^3)
HA-1	1-5	Sandy SILT	10.3	127.1

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Soils Engineering and Geology
Irvine, California

Grevelia Street and Fairview Avenue
South Pasadena, California

Project 9163-04

LOG OF BORING HA-1

Date : September 29, 2021
Logged By : KBY
Boring Diameter : 3"
Drilling Company : Mikes Excavating Service

Equipment : Hand Auger

Sample Type
Ring
Bulk

Water Levels
Groundwater Encountered
Seepage Encountered

Depth in Feet	Sample	Field Moisture % Dry Weight	Dry Density lb./cubic ft.	Relative Compactior	Water Level	USCS	GRAPHIC	DESCRIPTION
0								
		6.3	108.3			ML		Sandy SILT: light olive to yellow brown, slightly moist, medium stiff to stiff, slightly gravelly
5		56	115.1					@5' yellow brown, slightly more Sandy, stiff
		2.5	121.0			SM		Silty SAND: fine grained, yellow brown, slightly moist, medium dense to dense, slightly gravelly
10								@11' more gravelly @11.5' moderate caving
		4.0	106.8					ALLUVIUM
15								Bottom of Boring at 15 feet:
								Notes. 1. Moderate caving at 11.5 to 14' 2. No seepage or groundwater encountered 3. Boring backfilled
20								

Figure 2

GLOBAL GEO-ENIGNEERING, INC.
Soils Engineering and Geology
Irvine, California

Grevelia Street and Fairview Avenue
South Pasadena, California

Project 9163-04

LOG OF BORING P-1

Date : September 29, 2021
Logged By : KBY
Boring Diameter : 6"
Drilling Company : Mikes Excavating Service

Equipment : Hand Tools

Sample Type
Ring
Bulk

Water Levels
Groundwater Encountered
Seepage Encountered

Depth in Feet	Sample	Field Moisture % Dry Weight	Dry Density lb./cubic ft.	Relative Compactior	Water Level	USCS	GRAPHIC	DESCRIPTION
0						ML		Sandy SILT: light olive brown, slightly moist, medium stiff to stiff, slightly gravelly
5								ALLUVIUM Bottom of Boring at 5 feet:
10								
15								
20								

Notes.
1. No significant caving
2. No seepage or groundwater encountered
3. 3-inch diameter perforated pipe installed; Pipe encased with gravel rock

Figure 3

BORING LOCATION PLAN



KEY

HA-1 15′	Approximate Location of Boring, Showing Total Depth
P-1 5′	Approximate Location of Percolation Boring, Showing Total Depth

40 0 40 80

APPROXIMATE SCALE FEET

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GEOLOGIC AND SOILS ENGINEERING IRVINE, CALIFORNIA

Grevelia Street and Fairview Avenue
South Pasadena, California

Date: October 2021

Project No.: 9163-04

Figure No: 4

5.3 Direct Shear

Direct shear tests were conducted on relatively undisturbed samples, using a direct shear machine at a constant rate of strain in accordance with ASTM Test Method D3080. Variable normal or confining loads are applied vertically and the soil shear strengths are obtained at these loads. The angle of internal friction and the cohesion are then evaluated. The samples were tested at saturated moisture contents. The test results are shown in terms of the Coulomb shear strength parameters, as shown below:

Boring No.	Sample Depth (ft)	Soil Description	Coulomb Cohesion (lb/ft^2)	Angle of Internal Friction (°)	Peak/ Residual
HA-1	2	Sandy SILT	150 150	31 31	Peak Ultimate

5.4 Sulfate Content

A representative soil sample was analyzed for its sulphate content in accordance with California Test Method CA417. The results are given below:

Boring No.	Sample Depth (ft)	Soil Description	Sulphate Content (%)
HA-2	1-5	Sandy SILT	0.0108

5.5 Chloride Content

A representative soil sample was analyzed for chloride content in accordance with California Test Method CA422. The results are given below:

Boring No.	Sample Depth (ft)	Soil Description	Chloride Content (%)
HA-1	1-5	Sandy SILT	0.0064

5.6 Resistivity and pH

A representative soil sample was analyzed in accordance with California Test Methods CA532 and CA643 to determine the minimum resistivity and pH. The result is provided below:

Boring No.	Sample Depth (ft)	Soil Description	Minimum Resistivity (ohm-cm)	pH
HA-1	1-5	Sandy SILT	9,180	7.8

5.7 Expansion Potential

Surface soils were collected in the field and tested in the laboratory in accordance with the ASTM Test Designation D4829. The degree of expansion potential is determined from soil volume changes occurring during saturation of the specimen. The results of the tests are presented below:

Boring No.	Sample Depth (ft)	Soil Description	Expansion Index	Expansion Potential
HA-1	1-5	Sandy SILT	12	Low

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 General

a) It is our opinion that the site will be suitable for the proposed development from a geotechnical aspect, assuming that our recommendations are implemented during construction.

b) We are of the opinion that the proposed lightly loaded building may be supported on the new footings founded in the competent soils.

c) We are also of the opinion that with due and reasonable precautions, the proposed construction will not endanger adjacent property nor will construction be affected adversely by adjoining property.

d) The earthwork operations should be observed by a representative of a geotechnical engineer.

e) The design recommendations in the report should be reviewed during the grading phase when soil conditions in the excavations become exposed.

6.2 Grading

6.2.1 Processing of On-Site Soils

a) At this time, no overexcavation is required below the bottom of the footings for the addition, provided the footings are founded in the existing competent soils. The exposed soils should be tested to verify the relative compaction of at least 90 percent. If not, the soils should be compacted in place to at least 90 percent.

b) Wherever structural fills, if any, are to be placed, the upper 6 to 8 inches of the exposed subgrade should be scarified and reworked.

c) Any loosening of reworked or native material, consequent to the passage of construction traffic, weathering, etc., should be made good prior to further construction.

d) The depths of overexcavation, if any, should be reviewed by the Geotechnical Engineer during construction. Any surface or subsurface obstructions, or any variation of site materials or conditions encountered during grading should be brought immediately to the attention of the Geotechnical Engineer for proper exposure, removal or processing, as directed.

e) No underground obstructions or facilities should remain in any structural areas. Depressions and/or cavities created as a result of the removal of obstructions should be backfilled properly with suitable materials, and compacted.

6.2.2 Material Selection (for any new fills)

After the site has been stripped of any debris, excavated on-site soils are considered satisfactory for reuse in the construction of on-site fills. Concrete pieces greater than 4 inches in diameter should not be incorporated in compacted fill below slab-on-grade.

6.2.3 Compaction Requirements

a) Reworking/compaction shall include moisture-conditioning/drying as needed to bring the soils too slightly above the optimum moisture content. All reworked soils and structural fills should be densified to achieve at least 90 percent relative compaction with reference to laboratory compaction standard.

b) The optimum moisture content and maximum dry density should be determined in the laboratory in accordance with ASTM Test Designation D1557.

c) Fill should be compacted in lifts not exceeding 8 inches (loose).

6.2.4 Excavating Conditions

a) Excavation of on-site materials may be accomplished with standard earthmoving or trenching equipment.

b) Dewatering is not anticipated.

c) Portions of the demolished structures, if any, should be removed entirely from within the structural areas. Care should be taken not to undermine the foundations to be left in place.

6.2.5 Expansion Potential

The expansion potential of the subgrade soils is considered to be *low.* The recommendations provided in the report for slab-on-grade are anticipated to reduce the effects of the expansive soils.

6.2.6 Corrosion Potential

a) Soil Corrosion potential for metal and concrete was estimated by performing water-soluble sulfate, chloride, pH, and electrical resistivity tests during our prior investigation.

b) The laboratory test results indicate that the sulphate content of the subgrade soils is 0.0108 percent. Based on the test results, the sulphate exposure is considered to be *negligible.*

b) Electrical resistivity is a measure of soil resistance to the flow of corrosion currents. Corrosion currents are generally high in low resistivity soils. The electrical resistivity of a soil decreases primarily with an increase in its chemical and moisture contents.

c) A commonly accepted correlation between electrical resistivity and corrosivity for buried ferrous metals is presented below:

Electrical Resistivity, Ohm-cm	Corrosion Potential
Less than 1,000	Severe
1,000-2,000	Corrosive
2,000-10,000	Moderate
Greater than 10,000	Mild

d) Results of electrical resistivity test indicate a value of 9,180 ohm-cm for the near-surface soils. Based on this data, it is our opinion that, in general, on-site near-surface soils are considered *moderately corrosive* in nature. This potential should be considered in design of underground metal pipes.

6.2.7 Grading Control

a) All grading and earthwork should be performed under the observation of a Geotechnical Engineer in order to achieve proper subgrade preparation, selection of satisfactory materials, placement and compaction of all structural fill.

b) Sufficient notification prior to stripping and earthwork construction is essential to make certain that the work will be adequately observed and tested.

6.2.8 Surface Drainage

In accordance with Section 1804.4, 2019 CBC, the ground adjacent to the foundation should be sloped away at gradient of 5 percent. If the ground adjacent to the residence is covered with impervious material, the area adjacent to the foundations may be sloped away at 2 percent gradient.

6.3 Slab-on-Grade (if any)

a) Concrete floor slabs may be founded on the existing subgrade soils reworked to at least 12 inches and compacted to 90 percent relative compaction.

b) A 4-inch thick SAND or a granular layer per CALGreen code should be placed below slab-on-grade. A 10-mil thick plastic vapor barrier is recommended to be installed at the mid height the SAND.

c) It is recommended that #4 bars on 16-inch on center or equivalent, both ways, be provided as minimum reinforcement in slabs-on-grade. Joints should be provided and slabs should be at least 4 inches thick.

d) The FFL should be at least 6 inches above highest adjacent grade, if feasible.

e) The subgrade should be kept moist prior to the concrete pour.

6.4 Spread Foundations

The proposed addition can be founded on shallow spread footings. The minimum criteria are presented below.

6.4.1 Dimensions/Embedment Depths

	Minimum Width (ft)	Minimum Embedment Below Lowest Finished Surface (ft)
Wall Footings	1.0	1.0

6.4.2 Allowable Bearing Capacity

The following bearing capacities, based on the laboratory testing recommended for the foundation design.

Embedment Depth (ft)	Allowable Bearing Capacity (lb/ft^3)
1.0	1,500

(Notes:

- These values may be increased by one-third in the case of short-duration loads, such as induced by wind or seismic forces;
- Planter areas should not be sited adjacent to walls. In case planter areas are sited next to the walls the footings should be deepened by additional six inches;
- Footing excavations should be observed by the Geotechnical Engineer to verify the footings are excavated in the competent soils and are in one type of soils;
- Footing excavations should be kept moist prior to the concrete pour;
- It should be insured that the embedment depths do not become reduced or adversely affected by erosion, softening, planting, digging, etc.)

6.5 Seismic Coefficients

The following table provides the most recent seismic coefficients for the site calculated in accordance with the ASCE 7-16 Standards:

ITEM	VALUE
Site Latitude (Decimal-degrees)	34.1186
Site Longitude (Decimal-degrees)	-118.1548
Site Class	D
Seismic Design Category	D
Site Modified Peak Ground Acceleration	1.007
Mapped Spectral Response Acceleration-Short Period (0.2 Sec) - S_S	2.104
Mapped Spectral Response Acceleration-1 Second Period – S_1	0.735
Short Period Site Coefficient-F_a	1.0
Long Period Site Coefficient F_v	1.7
Adjusted Spectral Response Acceleration @ 0.2 Sec. Period (Sms)	2.104
Adjusted Spectral Response Acceleration @ 1Sec.Period (S_{m1})	1.25
Design Spectral Response Acceleration @ 0.2 Sec. Period (S_{Ds})	1.403
Design Spectral Response Acceleration @ 1-Sec. Period (S_{D1})	0.833

7. PERCOLATION TESTING

a) Boring P-1 was thoroughly pre-soaked the day before testing. The percolation testing was conducted on the next day following the pre-soak. Before the testing started, the boring was measured for any remaining water from the pre-soak. No water was found to remain in the percolation test boring. From a fixed reference point, the drop in the water level was measured in 30-minute intervals. The boring was refilled after every reading.

b) The drops in the water during the last reading period of 30 minutes and the corresponding percolation rate was:

Boring No.	Date	Drop (Inches)	Percolation Rate (min/inch)
P-1	October 10, 2021	26	1.15

c) We used *Porchet* method to calculate the infiltration rate. The rate is shown below:

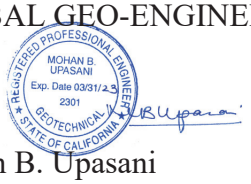
Boring No.	Infiltration Rate (inch/hour)
P-1	1.61

d) These rates are calculated using a factor of safety of 1.0. Appropriate factor of safety should be utilized while designing the basin.

The opportunity to be of service is sincerely appreciated. If you have any questions or if we can be of further assistance, please call.

Very truly yours,

GLOBAL GEO-ENGINEERING, INC.



Mohan B. Upasani
Principal Geotechnical Engineer
RGE 2301
(Exp. March 21, 2023)

MBU/KBY:kby

Enclosures:

Location Map	- Figure 1
Boring Logs	- Figures 2 and 3
Boring Location Plan	- Figure 4
Terms and Conditions	

TERMS AND CONDITIONS OF AUTHORIZATION

Consultant shall serve Client by providing professional counsel and technical advice regarding subsurface conditions consistent with the scope of services agreed-to between the parties. Consultant will use his professional judgment and will perform his services using that degree of care and skill ordinarily exercised under similar circumstances, by reputable foundation engineers and/or engineering geologists practicing in this or similar localities.

- In assisting Client, the Consultant may include or rely on information and drawings prepared by others for the purpose of clarification, reference or bidding; however, by including the same, the Consultant assumes no responsibility for the information shown thereon and Client agrees that Consultant is not responsible for any defects in its services that result from reliance on the information and drawings prepared by others. Consultant shall not be liable for any incorrect advice; judgment or decision based on any inaccurate information furnished by the Client or any third party, and Client will indemnify Consultant against claims, demands, or liability arising out of, or contribute to, by such information.

- Unless otherwise negotiated in writing, Client agrees to limit any and all liability, claim for damages, cost of defense, or expenses to be levied against Consultant on account of design defect, error, omission, or professional negligence to a sum not to exceed ten thousand dollars or charged fees whichever is less. Further, Client agrees to notify any construction contractor or subcontractor who may perform work in connection with any design, report, or study prepared by Consultant of such limitation of liability for design defects, errors, omissions, or professional negligence, and require as a condition precedent to their performing the work a like limitation of liability on their part as against the Consultant. In the event the Client fails to obtain a like limitation of liability provision as to design defects, errors, omissions or professional negligence, any liability of the Client and Consultant to such contractor or subcontractor arising out of a negligence shall be allocated between Client and Consultant in such a manner that the aggregate liability of Consultant for such design defects to all parties, including the Client shall not exceed ten thousand dollars or charged fees whichever is less. No warranty, expressed or implied of merchantability or fitness, is made or intended in connection with the work to be performed by Consultant or by the proposal for consulting or other services or by the furnishing of oral or written reports or findings made by Consultant.

- The Client agrees, to the fullest extent permitted by law, to indemnify, defend and hold harmless the Consultant, its officers, directors, employees, agents and subconsultants from and against all claims, damages, liabilities or costs, including reasonable attorney's fees and defense costs, of any nature whatsoever arising from or in connection with the Project to the extent that said claims, damages, liabilities or costs arise out of the work, services, or conduct of Client or Client's contractors, subconsultants, or other third party not under Consultant's control. Client further agrees that the duty to defend set forth herein arises immediately and is not contingent on a finding of fault against Client or Client's contractors, subconsultants, or other third parties. Client shall not be obligated under this provision to indemnify Consultant for Consultant's sole negligence or willful misconduct.

- Client shall grant free access to the site for all necessary equipment and personnel and Client shall notify any and all possessors of the project site that Client has granted Consultant free access to the project site at no charge to Consultant unless expressly agreed to otherwise in writing.

- If Client is not the property owner for the subject Project, Client agrees that it will notify the property owner of the terms of this agreement and obtain said property owner's approval to the terms and conditions herein. Should Client fail to obtain the property owner's agreement as required herein, Client agrees to be solely responsible to Consultant for all damages, liabilities, costs, including litigation fees and costs, arising from such failure that exceed that limitation of Consultant's liability herein.

- Client shall locate for Consultant and shall assume responsibility for the accuracy of his representations as to the locations of all underground utilities and installations. Consultant will not be responsible for damage to any such utilities or installation not so located.

- Client and Consultant agree to waive claims against each other for consequential damages arising out of or relating to this agreement. Neither party to this agreement shall assign the contract without the express, written consent of the other party.

- Consultant agrees to cover all open test holes and place a cover to carry a 200-pound load on each hole prior to leaving project site unattended. Consultant agrees that all test holes will be backfilled upon completion of the job. However, Client may request test holes to remain open after completion of Consultants work. In the event Client agrees to pay for all costs associated with covering and backfilling said test holes at a later date, and Client shall indemnify, defend and hold harmless Consultant for all claims, demands and liabilities arising from his request, except for the sole negligence of the Consultant, to the extent permitted by law.

- Consultant shall not be responsible for the general safety on the job or for the work of Client, other contractors and third parties.

- Consultant shall be excused for any delay in completion of the contract caused by acts of God, acts of the Client or Client's agent and/or contractors, inclement weather, labor trouble, acts of public utilities, public bodies, or inspectors, extra work, failure of Client to make payments promptly, or other contingencies unforeseen by Consultant and beyond reasonable control of the Consultant.

- In the event that either party desires to terminate this contract prior to completion of the project, written notification of such intention to terminate must be tendered to the other party. In the event Client notifies Consultant of such intention to terminate Consultant's services prior to completion of the contract, Consultant reserves the right to complete such analysis and records as are necessary to place files in order, to dispose of samples, put equipment in order, and (where considered necessary to protect his professional reputation) to complete a report on the work performed to date. In the event that Consultant incurs cost in Client's termination of this Agreement, a termination charge to cover such cost shall be paid by Client.

- If the Client is a corporation, the individual or individuals who sign or initial this Contract, on behalf of the Client, guarantee that Client will perform its duties under this Contract. The individual or individuals so signing or initialing this Contract warrant that they are duly authorized agents of the Client.

- Any notice required or permitted under this Contract may be given by ordinary mail at the address contained in this Contract, but such address may be changed by written notice given by one party to the other from time to time. Notice shall be deemed received in the ordinary course of the mail. This agreement shall be deemed to have been entered into the County of Orange, State of California.

LIMITATIONS

Our findings, interpretations, analyses, and recommendations are professional opinions, prepared and presented in accordance with generally accepted professional practices and are based on observation, laboratory data and our professional experience. Consultant does not assume responsibility for the proper execution of the work by others by undertaking the services being provided to Client under this agreement and shall in no way be responsible for the deficiencies or defects in the work performed by others not under Consultant's direct control. No other warranty herein is expressed or implied.

GLOBAL GEO-ENGINEERING, INC.

October 28, 2021
Project 9164-04

DMS Consultants, Inc.
12377 Lewis Street, Suite 101
Garden Grove, California 92840

Attention: Mr. Surender Dewan, P. E.
President

Subject: Geotechnical Investigation and Infiltration Testing
Proposed Park Development
Northeast of the Intersection of Valley View Road and Berkshire Avenue
South Pasadena, California

References:

a) California Geological Survey, 1998 (Revised 2001, 2005 and 2006), *Seismic Hazard Zone Report for the Los Angeles 7.5-Minute Quadrangle, Los Angeles County, California,* Seismic Hazard Zone Report 029.

b) Dibblee, Thomas W. Jr., 1989, *Geologic Map of the Los Angeles Quadrangle*, *Los Angeles County, California*, Dibblee Foundation Map #DF-22.

Dear Mr. Dewan:

1. INTRODUCTION

a) In accordance with your request, we have conducted a limited geotechnical investigation for the proposed improvements at the above referenced site located in South Pasadena, California.

b) We understand that a small restroom structure is planned to be constructed on the property. The improvements will also include the construction of an infiltration system for stormwater runoff.

c) The purpose of our services was to conduct limited field exploration and laboratory testing in order to provide design recommendations for the proposed structure and for the proposed infiltration system.

3 Corporate Park, Suite 270, Irvine, California 92606
Office (949) 221-0900 Fax (949) 221-0091
Email: global@globalgeo.net

2. SCOPE

The scope of services was as follows:

a) Preliminary planning and preparation;

b) Review of available geotechnical literature and maps which includes the subject property;

c) Contact Underground Service Alert (USA) to locate known municipal and private utilities, easements or piping in the area of the proposed drilling;

d) Excavating two borings to depths of 5 and 15 feet below ground surface. The 5-foot deep boring was utilized for percolation testing;

e) Obtaining in-situ and bulk samples from the borings for classifications and laboratory testing;

f) Laboratory testing of selected samples considered representative of site conditions in order to determine the R-value and other soil properties;

g) Engineering and geologic analysis of the field and laboratory data;

h) Preparation of a geotechnical report, presenting our findings, conclusions and recommendations.

3. SITE DESCRIPTION

3.1 Location

a) The subject property is located approximately 40 feet northeast of the intersection of Valley View Road and Berkshire Avenue in the city of South Pasadena, California.

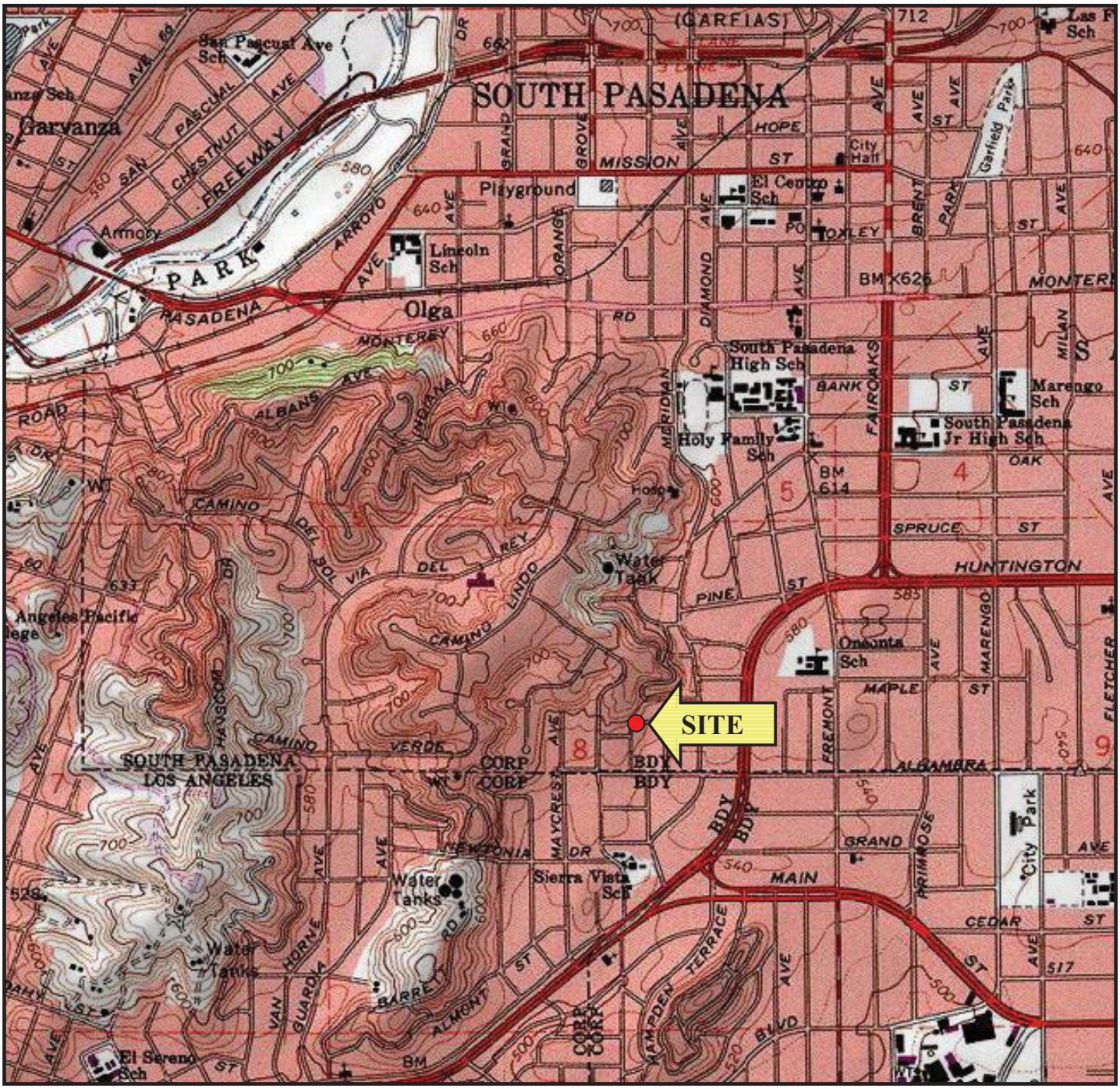
b) The approximate location is shown on the *Location Map, Figure 1*.

3.2 Surface Site Conditions

a) The property is currently vacant and void of any building structures. Single-family residential developments surround the northern, eastern, and southern sides of the lot.

b) The surface topography within the site area descends to the south at an approximate gradient of 10 percent.

LOCATION MAP



BASE MAP: USGS 7.5-Minute Topographic Map,
Los Angeles Quadrangle, 1994

2000 0 2000 4000

SCALE FEET

NORTH

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GEOLOGIC AND SOILS ENGINEERING IRVINE, CALIFORNIA

Valley View Road and Berkshire Avenue
South Pasadena, California

Date: October 2021

Figure No: 1

Project No.: 9164-04

1077

c) Surface drainage at the site consists of sheet flow runoff of incident rainfall derived from within the property boundaries.

3.3 Regional Geologic Setting

3.3.1 Regional Geologic Setting

The subject property is located just east of the Repetto Hills, which form part of the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges consist of a series of mountain ranges separated by longitudinal valleys. The ranges trend northwest-southeast and are subparallel to faults branching from the San Andreas Fault. The Peninsular Ranges extend from the southern side of the Santa Monica Mountains into Baja California, Mexico.

3.3.2 Local Geologic Setting

Locally, the project site is underlain by Holocene- to Pleistocene-age alluvium generated from the bedrock material situated within the nearby upland areas.

3.4 Seismicity

a) The subject property is not located within an Earthquake Fault Zone (previously known as an Alquist-Priolo Special Studies Zone). The closest known active fault is the Raymond Fault, located at a distance of approximately 1.3 miles north of the project site.

b) We utilized the California Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps internet program to calculate the peak ground acceleration (PGA) at the project site location. Using the ASCE 7-16 standard and Site Class D, the PGA_M at the subject property resulted to be 1.011g.

c) The subject property is not located in a State of California delineated *Seismic Hazard Zone* for liquefaction potential.

d) The project site is not located in a State of California delineated *Seismic Hazard Zone* for seismically-induced landslides.

4. FIELD EXPLORATION

a) A total of two borings (Borings HA-1 and P-1) were excavated within the lot.

b) Boring HA-1 was excavated to a depth of 15 feet to obtain subsurface samples and to determine the presence of any ground water. No ground water or seepage was encountered. The soils encountered in our borings consisted of up to 1 foot thick slightly moist, soft Sandy Silty CLAY fill (in Boring HA-1) underlain by slightly moist, soft to medium stiff Clayey SILT and slightly moist, medium dense Gravelly Silty SAND.

c) Boring P-1 was excavated to a depth of 5 feet below ground surface for the purpose of conducting percolation testing. To prevent caving of the sidewalls during the percolation testing, a three-inch diameter perforated pipe with gravel rock encasement was installed in the percolation test boring.

d) *Logs of Borings* are enclosed as *Figures 2* and *3.* The locations of the borings are shown on the *Boring Location Plan, Figure 4.*

5. LABORATORY TESTING

5.1 Moisture-Density

Moisture-density information usually provides a gross indication of soil consistency. Local variations at the time of the investigation can be delineated, and a correlation obtained between soils found on this site and nearby sites. The dry unit weights and field moisture contents were determined for selected samples. The results are shown on the *Logs of Borings*.

5.2 Compaction

Representative soil samples were tested in the laboratory to determine the maximum dry density and optimum moisture content, using the ASTM D1557 compaction test method. This test procedure requires 25 blows of a 10-pound hammer falling a height of 18 inches on each of five layers, in a 1/30 cubic foot cylinder. The results of the tests are shown below:

Boring No.	Sample Depth (ft)	Soil Description	Optimum Moisture Content (%)	Maximum Dry Density (lb/ft^3)
HA-1	1-5	Sandy SILT (without Rock Correction)	16.0	109.5
HA-1	1-5	Sandy SILT (with Rock Correction)	14.7	112.6

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Soils Engineering and Geology
Irvine, California

Valley View Road and Berkshire Avenue
South Pasadena, California

Project 9164-04

LOG OF BORING HA-1

Date : September 29, 2021
Logged By : KBY
Boring Diameter : 3"
Drilling Company : Mikes Excavating Service

Equipment : Hand Auger

Sample Type
Ring
Bulk

Water Levels
Groundwater Encountered
Seepage Encountered

Depth in Feet	Sample	Field Moisture % Dry Weight	Dry Density lb./cubic ft.	Relative Compactior	Water Level	USCS	GRAPHIC	DESCRIPTION
0						CL		Sandy Silty CLAY: brown to olive brown, slightly moist, soft with wood fragments — FILL
		11.1	88.6			ML		Clayey SILT: light brown, slightly moist, soft to medium stiff with gravels
5		6.2	119.2			SM		Gravelly Silty SAND: fine grained, yellow brown, slightly moist, medium dense — ALLUVIUM
						SM/ML		@7' less gravelly, more Silty with Sandy SILT interbeds, slightly moist to moist
10		11.7	110.0					@12' fine to medium grained
15		5.3	111.8					OLDER ALLUVIUM
								Bottom of Boring at 15 feet:
20								Notes. 1. No significant caving 2. No seepage or groundwater encountered 3. Boring backfilled

Figure 2

GLOBAL GEO-ENIGNEERING, INC.
Soils Engineering and Geology
Irvine, California

Valley View Road and Berkshire Avenue
South Pasadena, California

Project 9164-04

LOG OF BORING P-1

Date : September 29, 2021
Logged By : KBY
Boring Diameter : 3"
Drilling Company : Mikes Excavating Service

Equipment : Hand Auger

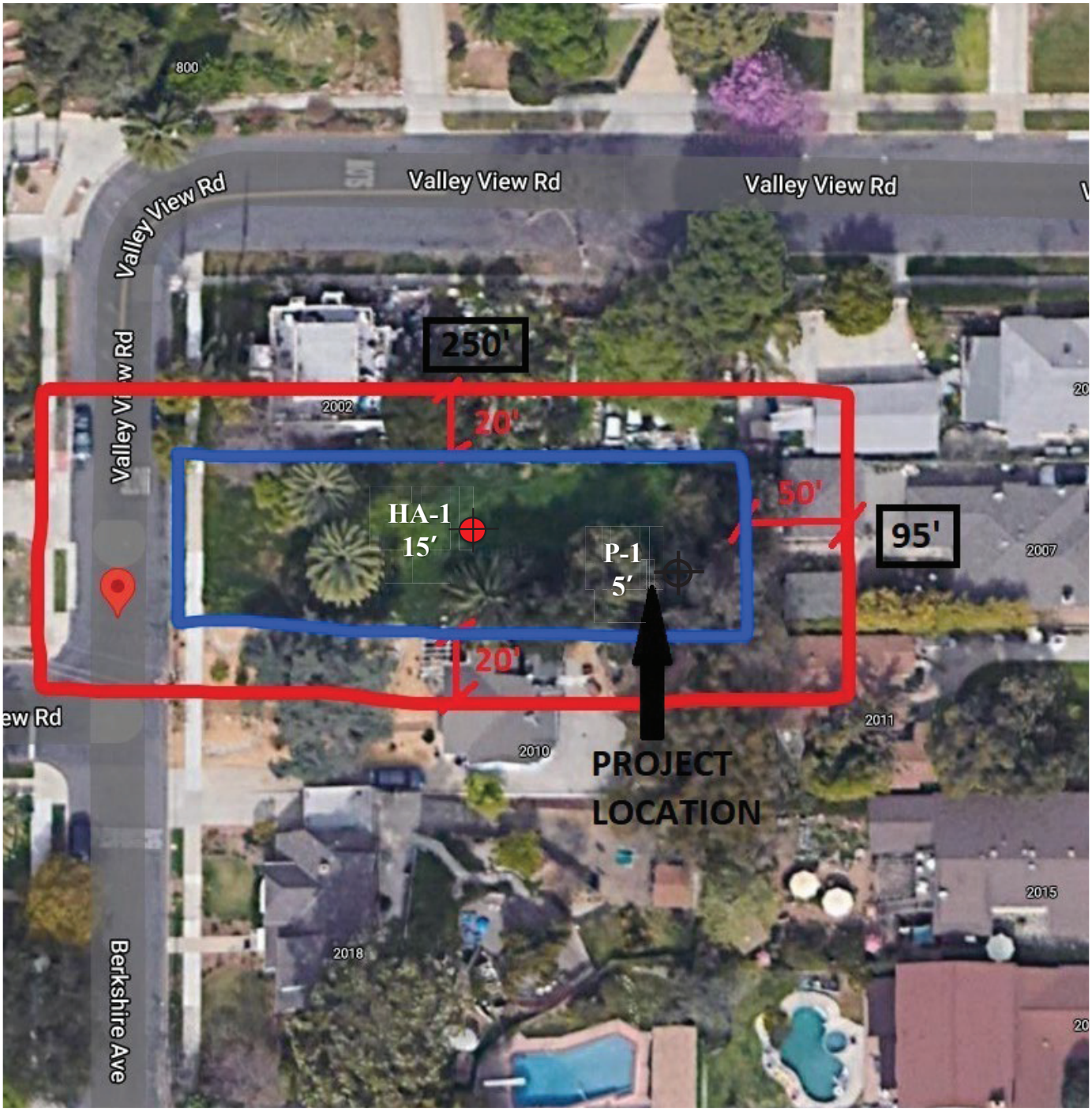
Sample Type
Ring
Bulk

Water Levels
Groundwater Encountered
Seepage Encountered

Depth in Feet	Sample	Field Moisture % Dry Weight	Dry Density lb./cubic ft.	Relative Compactior	Water Level	USCS	GRAPHIC	DESCRIPTION
0						ML		Clayey SILT: light brown, slightly moist, soft to medium stiff with gravels
								@3.5' less Clayey
5								ALLUVIUM
								Bottom of Boring at 5 feet:
10								Notes. 1. No significant caving 2. No seepage or groundwater encountered 3. 3-inch diameter perforated pipe installed; Pipe encased with gravel rocks
15								
20								

Figure 3

BORING LOCATION PLAN



KEY

HA-1 15′	Approximate Location of Boring, Showing Total Depth
P-1 5′	Approximate Location of Percolation Boring, Showing Total Depth

N

50 0 50 100

APPROXIMATE SCALE FEET

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GEOLOGIC AND SOILS ENGINEERING IRVINE, CALIFORNIA

Valley View Road and Berkshire Avenue
South Pasadena, California

Date: October 2021

Project No.: 9164-04

Figure No: 4

5.3 Direct Shear

Direct shear tests were conducted on relatively undisturbed samples, using a direct shear machine at a constant rate of strain in accordance with ASTM Test Method D3080. Variable normal or confining loads are applied vertically and the soil shear strengths are obtained at these loads. The angle of internal friction and the cohesion are then evaluated. The samples were tested at saturated moisture contents. The test results are shown in terms of the Coulomb shear strength parameters, as shown below:

Boring No.	Sample Depth (ft)	Soil Description	Coulomb Cohesion (lb/ft^2)	Angle of Internal Friction (°)	Peak/ Residual
HA-1	2	Sandy SILT	250 200	28 28	Peak Ultimate

5.4 Sulfate Content

A representative soil sample was analyzed for its sulphate content in accordance with California Test Method CA417. The results are given below:

Boring No.	Sample Depth (ft)	Soil Description	Sulphate Content (%)
HA-2	1-5	Sandy SILT	0.0033

5.5 Chloride Content

A representative soil sample was analyzed for chloride content in accordance with California Test Method CA422. The results are given below:

Boring No.	Sample Depth (ft)	Soil Description	Chloride Content (%)
HA-1	1-5	Sandy SILT	0.0025

5.6 Resistivity and pH

A representative soil sample was analyzed in accordance with California Test Methods CA532 and CA643 to determine the minimum resistivity and pH. The result is provided below:

Boring No.	Sample Depth (ft)	Soil Description	Minimum Resistivity (ohm-cm)	pH
HA-1	1-5	Sandy SILT	1,847	8.4

5.7 Expansion Potential

Surface soils were collected in the field and tested in the laboratory in accordance with the ASTM Test Designation D4829. The degree of expansion potential is determined from soil volume changes occurring during saturation of the specimen. The results of the tests are presented below:

Boring No.	Sample Depth (ft)	Soil Description	Expansion Index	Expansion Potential
HA-1	1-5	Sandy SILT	63	Medium

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 General

a) It is our opinion that the site will be suitable for the proposed development from a geotechnical aspect, assuming that our recommendations are implemented during construction.

b) We are of the opinion that the proposed lightly loaded modular building may be supported on the new footings founded in the competent soils.

c) We are also of the opinion that with due and reasonable precautions, the proposed construction will not endanger adjacent property nor will construction be affected adversely by adjoining property.

d) The earthwork operations should be observed by a representative of a geotechnical engineer.

e) The design recommendations in the report should be reviewed during the grading phase when soil conditions in the excavations become exposed.

6.2 Grading

6.2.1 Processing of On-Site Soils

a) At this time, no overexcavation is required below the bottom of the footings for the addition, provided the footings are founded in the existing competent soils. The exposed soils should be tested to verify the relative compaction of at least 90 percent. If not, the soils should be compacted in place to at least 90 percent.

b) The existing subgrade soils below the slab-on-grade are anticipated to be disturbed during the demolition process and should be reworked for a depth of 6 inches, subject to review during the construction.

c) Wherever structural fills, if any, are to be placed, the upper 8 to 10 inches of the exposed subgrade should be scarified and reworked, subject to review during the excavation.

d) Any loosening of reworked or native material, consequent to the passage of construction traffic, weathering, etc., should be made good prior to further construction.

e) The depths of overexcavation, if any, should be reviewed by the Geotechnical Engineer during construction. Any surface or subsurface obstructions, or any variation of site materials or conditions encountered during grading should be brought immediately to the attention of the Geotechnical Engineer for proper exposure, removal or processing, as directed.

f) No underground obstructions or facilities should remain in any structural areas. Depressions and/or cavities created as a result of the removal of obstructions should be backfilled properly with suitable materials, and compacted.

6.2.2 Material Selection (for any new fills)

After the site has been stripped of any debris, excavated on-site soils are considered satisfactory for reuse in the construction of on-site fills. Concrete pieces greater than 4 inches in diameter should not be incorporated in compacted fill below slab-on-grade.

6.2.3 Compaction Requirements

a) Reworking/compaction shall include moisture-conditioning/drying as needed to bring the soils too slightly above the optimum moisture content. All reworked soils and structural fills should be densified to achieve at least 90 percent relative compaction with reference to laboratory compaction standard.

b) The optimum moisture content and maximum dry density should be determined in the laboratory in accordance with ASTM Test Designation D1557.

c) Fill should be compacted in lifts not exceeding 8 inches (loose).

6.2.4 Excavating Conditions

a) Excavation of on-site materials may be accomplished with standard earthmoving or trenching equipment.

b) Dewatering is not anticipated.

c) Portions of the demolished structures, if any, should be removed entirely from within the structural areas. Care should be taken not to undermine the foundations to be left in place.

6.2.5 Expansion Potential

The expansion potential of the subgrade soils is considered to be *medium* The recommendations provided in the report for the slab-on-grade are anticipated to reduce the effects of the expansive soils.

6.2.6 Corrosion Potential

a) Soil Corrosion potential for metal and concrete was estimated by performing water-soluble sulfate, chloride, pH, and electrical resistivity tests during our prior investigation.

b) The laboratory test results indicate that the sulphate content of the subgrade soils is 0.0033 percent. Based on the test results, the sulphate exposure is considered to be *negligible.*

c) Electrical resistivity is a measure of soil resistance to the flow of corrosion currents. Corrosion currents are generally high in low resistivity soils. The electrical resistivity of a soil decreases primarily with an increase in its chemical and moisture contents.

d) A commonly accepted correlation between electrical resistivity and corrosivity for buried ferrous metals is presented below:

Electrical Resistivity, Ohm-cm	Corrosion Potential
Less than 1,000	Severe
1,000-2,000	Corrosive
2,000-10,000	Moderate
Greater than 10,000	Mild

e) Results of electrical resistivity test indicate a value of 1,847 ohm-cm for the near-surface soils. Based on this data, it is our opinion that, in general, on-site near-surface soils are considered *corrosive* in nature. This potential should be considered in design of underground metal pipes.

6.2.7 Grading Control

a) All grading and earthwork should be performed under the observation of a Geotechnical Engineer in order to achieve proper subgrade preparation, selection of satisfactory materials, placement and compaction of all structural fill.

b) Sufficient notification prior to stripping and earthwork construction is essential to make certain that the work will be adequately observed and tested.

6.2.8 Surface Drainage

In accordance with Section 1804.4, 2019 CBC, the ground adjacent to the foundation should be sloped away at gradient of 5 percent. If the ground adjacent to the residence is covered with impervious material, the area adjacent to the foundations may be sloped away at 2 percent gradient.

6.3 Slab-on-Grade (if any)

a) Concrete floor slabs may be founded on the existing subgrade soils reworked to at least 12 inches and compacted to 90 percent relative compaction.

b) A 4-inch thick SAND or a granular layer per CALGreen code should be placed below slab-on-grade. A 10-mil thick plastic vapor barrier is recommended to be installed at the mid height the SAND.

c) It is recommended that #4 bars on 16-inch on center or equivalent, both ways, be provided as minimum reinforcement in slabs-on-grade. Joints should be provided and slabs should be at least 5 inches thick.

d) The FFL should be at least 6 inches above highest adjacent grade, if feasible.

e) The subgrade should be kept moist prior to the concrete pour.

6.4 Spread Foundations

The proposed addition can be founded on shallow spread footings. The minimum criteria are presented below.

6.4.1 Dimensions/Embedment Depths

	Minimum Width (ft)	**Minimum Embedment Below Lowest Finished Surface (ft)**
1-story Wall Footings	1.0	1.0

6.4.2 Allowable Bearing Capacity

The following bearing capacities, based on the presumptive 2019 CBC values are recommended for the foundation design.

Embedment Depth (ft)	**Allowable Bearing Capacity (lb/ft^2)**
1.0	1,000

(Notes:

- These values may be increased by one-third in the case of short-duration loads, such as induced by wind or seismic forces;

- Planter areas should not be sited adjacent to walls. In case planter areas are sited next to the walls the footings should be deepened by additional six inches;

- Footing excavations should be observed by the Geotechnical Engineer to verify the footings are excavated in the competent soils and are in one type of soils;

- Footing excavations should be kept moist prior to the concrete pour;

- It should be insured that the embedment depths do not become reduced or adversely affected by erosion, softening, planting, digging, etc.)

6.5 Seismic Coefficients

The following table provides the most recent seismic coefficients for the site calculated in accordance with the ASCE 7-16 Standards:

ITEM	VALUE
Site Latitude (Decimal-degrees)	34.0998
Site Longitude (Decimal-degrees)	-118.1588
Site Class	D
Seismic Design Category	D
Site Modified Peak Ground Acceleration	1.011
Mapped Spectral Response Acceleration-Short Period (0.2 Sec) - S_S	2.11
Mapped Spectral Response Acceleration-1 Second Period – S_1	0.719
Short Period Site Coefficient-F_a	1.0
Long Period Site Coefficient F_v	1.7
Adjusted Spectral Response Acceleration @ 0.2 Sec. Period (Sms)	2.11
Adjusted Spectral Response Acceleration @ 1Sec.Period (S_{m1})	1.222
Design Spectral Response Acceleration @ 0.2 Sec. Period (S_{Ds})	1.407
Design Spectral Response Acceleration @ 1-Sec. Period (S_{D1})	0.815

7. PERCOLATION TESTING

a) Boring P-1 was thoroughly pre-soaked the day before testing. The percolation testing was conducted on the next day following the pre-soak. Before the testing started, the boring was measured for any remaining water from the pre-soak. No water was found to remain in the percolation test boring. From a fixed reference point, the drop in the water level was measured in 10-minute intervals. The boring was refilled after every reading.

b) The drops in the water during the last reading period of 10 minutes and the corresponding percolation rate was:

Boring No.	Date	Drop (Inches)	Percolation Rate (min/inch)
P-1	October 9, 2021	44	0.68

c) We used *Porchet* method to calculate the infiltration rate. The rate is shown below:

Boring No.	Infiltration Rate (inch/hour)
P-1	7.4

d) These rates are calculated using a factor of safety of 1.0. Appropriate factor of safety should be utilized while designing the basin.

The opportunity to be of service is sincerely appreciated. If you have any questions or if we can be of further assistance, please call.

Very truly yours,

GLOBAL GEO-ENGINEERING, INC.



Mohan B. Upasani
Principal Geotechnical Engineer
RGE 2301
(Exp. March 21, 2023)

MBU/KBY:kby

Enclosures:

Location Map - Figure 1
Boring Logs - Figures 2 and 3
Boring Location Plan - Figure 4
Terms and Conditions

TERMS AND CONDITIONS OF AUTHORIZATION

Consultant shall serve Client by providing professional counsel and technical advice regarding subsurface conditions consistent with the scope of services agreed-to between the parties. Consultant will use his professional judgment and will perform his services using that degree of care and skill ordinarily exercised under similar circumstances, by reputable foundation engineers and/or engineering geologists practicing in this or similar localities.

- In assisting Client, the Consultant may include or rely on information and drawings prepared by others for the purpose of clarification, reference or bidding; however, by including the same, the Consultant assumes no responsibility for the information shown thereon and Client agrees that Consultant is not responsible for any defects in its services that result from reliance on the information and drawings prepared by others. Consultant shall not be liable for any incorrect advice; judgment or decision based on any inaccurate information furnished by the Client or any third party, and Client will indemnify Consultant against claims, demands, or liability arising out of, or contribute to, by such information.

- Unless otherwise negotiated in writing, Client agrees to limit any and all liability, claim for damages, cost of defense, or expenses to be levied against Consultant on account of design defect, error, omission, or professional negligence to a sum not to exceed ten thousand dollars or charged fees whichever is less. Further, Client agrees to notify any construction contractor or subcontractor who may perform work in connection with any design, report, or study prepared by Consultant of such limitation of liability for design defects, errors, omissions, or professional negligence, and require as a condition precedent to their performing the work a like limitation of liability on their part as against the Consultant. In the event the Client fails to obtain a like limitation of liability provision as to design defects, errors, omissions or professional negligence, any liability of the Client and Consultant to such contractor or subcontractor arising out of a negligence shall be allocated between Client and Consultant in such a manner that the aggregate liability of Consultant for such design defects to all parties, including the Client shall not exceed ten thousand dollars or charged fees whichever is less. No warranty, expressed or implied of merchantability or fitness, is made or intended in connection with the work to be performed by Consultant or by the proposal for consulting or other services or by the furnishing of oral or written reports or findings made by Consultant.

- The Client agrees, to the fullest extent permitted by law, to indemnify, defend and hold harmless the Consultant, its officers, directors, employees, agents and subconsultants from and against all claims, damages, liabilities or costs, including reasonable attorney's fees and defense costs, of any nature whatsoever arising from or in connection with the Project to the extent that said claims, damages, liabilities or costs arise out of the work, services, or conduct of Client or Client's contractors, subconsultants, or other third party not under Consultant's control. Client further agrees that the duty to defend set forth herein arises immediately and is not contingent on a finding of fault against Client or Client's contractors, subconsultants, or other third parties. Client shall not be obligated under this provision to indemnify Consultant for Consultant's sole negligence or willful misconduct.

- Client shall grant free access to the site for all necessary equipment and personnel and Client shall notify any and all possessors of the project site that Client has granted Consultant free access to the project site at no charge to Consultant unless expressly agreed to otherwise in writing.

- If Client is not the property owner for the subject Project, Client agrees that it will notify the property owner of the terms of this agreement and obtain said property owner's approval to the terms and conditions herein. Should Client fail to obtain the property owner's agreement as required herein, Client agrees to be solely responsible to Consultant for all damages, liabilities, costs, including litigation fees and costs, arising from such failure that exceed that limitation of Consultant's liability herein.

- Client shall locate for Consultant and shall assume responsibility for the accuracy of his representations as to the locations of all underground utilities and installations. Consultant will not be responsible for damage to any such utilities or installation not so located.

- Client and Consultant agree to waive claims against each other for consequential damages arising out of or relating to this agreement. Neither party to this agreement shall assign the contract without the express, written consent of the other party.

- Consultant agrees to cover all open test holes and place a cover to carry a 200-pound load on each hole prior to leaving project site unattended. Consultant agrees that all test holes will be backfilled upon completion of the job. However, Client may request test holes to remain open after completion of Consultants work. In the event Client agrees to pay for all costs associated with covering and backfilling said test holes at a later date, and Client shall indemnify, defend and hold harmless Consultant for all claims, demands and liabilities arising from his request, except for the sole negligence of the Consultant, to the extent permitted by law.

- Consultant shall not be responsible for the general safety on the job or for the work of Client, other contractors and third parties.

- Consultant shall be excused for any delay in completion of the contract caused by acts of God, acts of the Client or Client's agent and/or contractors, inclement weather, labor trouble, acts of public utilities, public bodies, or inspectors, extra work, failure of Client to make payments promptly, or other contingencies unforeseen by Consultant and beyond reasonable control of the Consultant.

- In the event that either party desires to terminate this contract prior to completion of the project, written notification of such intention to terminate must be tendered to the other party. In the event Client notifies Consultant of such intention to terminate Consultant's services prior to completion of the contract, Consultant reserves the right to complete such analysis and records as are necessary to place files in order, to dispose of samples, put equipment in order, and (where considered necessary to protect his professional reputation) to complete a report on the work performed to date. In the event that Consultant incurs cost in Client's termination of this Agreement, a termination charge to cover such cost shall be paid by Client.

- If the Client is a corporation, the individual or individuals who sign or initial this Contract, on behalf of the Client, guarantee that Client will perform its duties under this Contract. The individual or individuals so signing or initialing this Contract warrant that they are duly authorized agents of the Client.

- Any notice required or permitted under this Contract may be given by ordinary mail at the address contained in this Contract, but such address may be changed by written notice given by one party to the other from time to time. Notice shall be deemed received in the ordinary course of the mail. This agreement shall be deemed to have been entered into the County of Orange, State of California.

LIMITATIONS

Our findings, interpretations, analyses, and recommendations are professional opinions, prepared and presented in accordance with generally accepted professional practices and are based on observation, laboratory data and our professional experience. Consultant does not assume responsibility for the proper execution of the work by others by undertaking the services being provided to Client under this agreement and shall in no way be responsible for the deficiencies or defects in the work performed by others not under Consultant's direct control. No other warranty herein is expressed or implied.

APPENDIX V

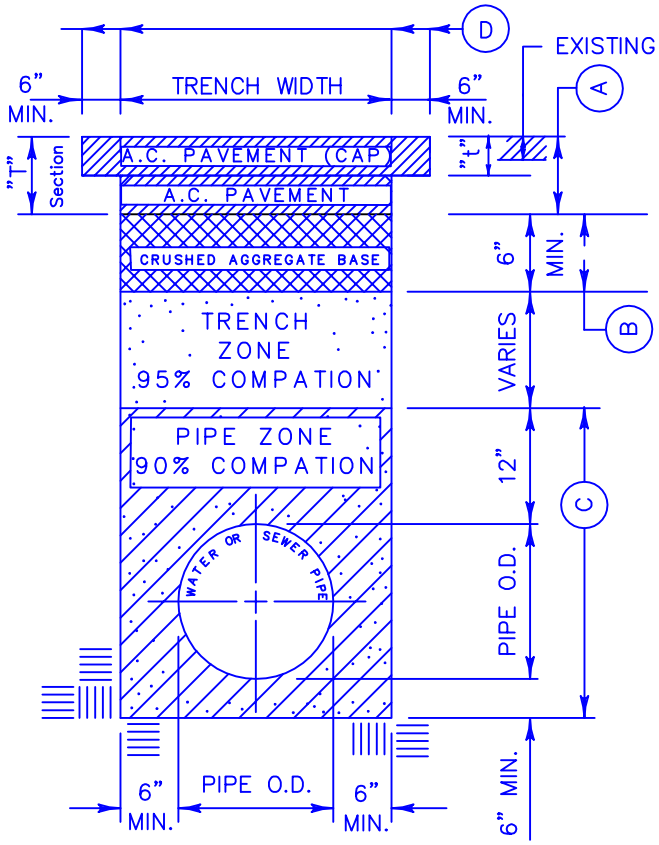
GREVELIA & BERKSHIRE POCKET PARKS
PROJECT SPECIFICATION NO. 005157
IN THE CITY OF SOUTH PASADENA, CALIFORNIA

City of South Pasadena Water Standards

Approved for use on June 7, 2023
294856.v3

City of South Pasadena Water Department Material List

Pipe	Ductile Iron (DI) pipe CL 350 Tyton Joint (TJ) with gasket
Water Elbows, Bends	Tyler/Union mechanical joint C153 Ductile Iron compact fittings
Water main coupling	Smith Blair, Romac coupling or approved equal
MJ pipe Restraint	EBAA Mega lug, Romac or approved equal
Bell & Spigot restraint	Romac 600 series Pipe Restraining System or approved equal
Gate Valve	Mueller A-2360 Resilient wedge gate valve or approved equal
Gate Valve Cap	Cast Iron 9 9/16" x 6 3/8" (with "SPWD" marked on top)
Gate Valve Can	8" SDR35 PVC Pipe
Valve Can extension	20 gauge galvanize steel 8" x 18"
Valve Box for concrete	Eisel 4TT valve box for valves in concrete sidewalk or driveway
Fire Hydrant	Clow Medallion dry barrel hydrant with plugged drain.
Fire Hydrant tapping Sleeve	Mueller H-304SS or Romac Stainless steel tapping sleeve or approved equal
Service Pipe	Type-K soft Copper pipe
Service tapping Saddle	Mueller BR2B Series Bronze Service saddle double strap with AWWA Iron Pipe (IP) thread for corporation ball valve connection
Corporation valve	Mueller B-25028 300 Ball corporation valve IP x Compression
Copper pipe coupling	Mueller H-15403 Compression connection or approved equal
Meter Angle Valve	1" Mueller B-24258 300 Ball angle meter valve
	1 ½" or 2" Mueller B-24276 300 Ball angle meter valve
Meter Box	Armor cast complete polymer meter box or approved equal
Meter Coupling	Mueller or Ford meter coupling or approved equal
Meter Bolts	Stainless Steel 316 or approved equal
Flange Nuts & Bolts	Stainless Steel 316 or approved equal
Air Vacuum/Release	Val-Matic or approved equal
Air Vac Enclosure	Polymer AIR-VAC enclosure



(A) A.C. PAVEMENT SECTION "t"
1" THICKER THAN EXISTING
ADJACENT SECTION; ("p" + 1")

A.C. PAVEMENT SECTION "T"
4" THICKER THAN EXISTING
ADJACENT SECTION; ("p" + 4")

ASPHALT PAVEMENT REPLACEMENT SHALL BE PER STD. PLAN 133–1 APWA LATEST EDITION, AND PLACEMENT PER SECTION 306–1.5.3 IN THE LATEST EDITION OF THE PUBLIC WORKS CONSTRUCTION STD. SPECS. "GREENBOOK".

(B) 95% COMPACTED BASE

(C) PREPARED BEDDING / BACK FILL WITH IMPORTED SAND W/ SAND EQUIVALENT 30 MIN., OR CONCRETE SLURRY CLASS 450–C–2000

(D) VERTICAL SAWCUT LINE – SAWCUTTING METHOD IS ONLY PERMITTED.

1. BACKFILL MATERIAL FOR ALL TRENCHES SHALL HAVE A CERTIFIED SAND EQUIVALENT OF NOT LESS THAN 30, AND SHALL CONFORM TO THE FOLLOWING GRADATION:

Sieve Size	Percent passing
2"	100
NO. 4	35 – 100
NO. 30	20 – 100

2. COMPACTION METHODS SHALL CONFORM TO SECTIONS 301 AND 306–1.3 OF THE STD. SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).

NOTE

1– ALL TRENCHING & CONSTRUCTION OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE DIVISION OF INDUSTRIAL SAFETY.

2– ANY DEVIATION FROM THE ABOVE SECTION AND REQUIREMNTS MUST BE APPROVED BY THE PUBLIC WORKS DIRECTOR.

CITY OF SOUTH PASADENA

SCALE N.T.S.

DATE NOV. 2005 (REVISED: 5/10/2006)

STANDARD TRENCHING AND PIPE ZONE DETAILS

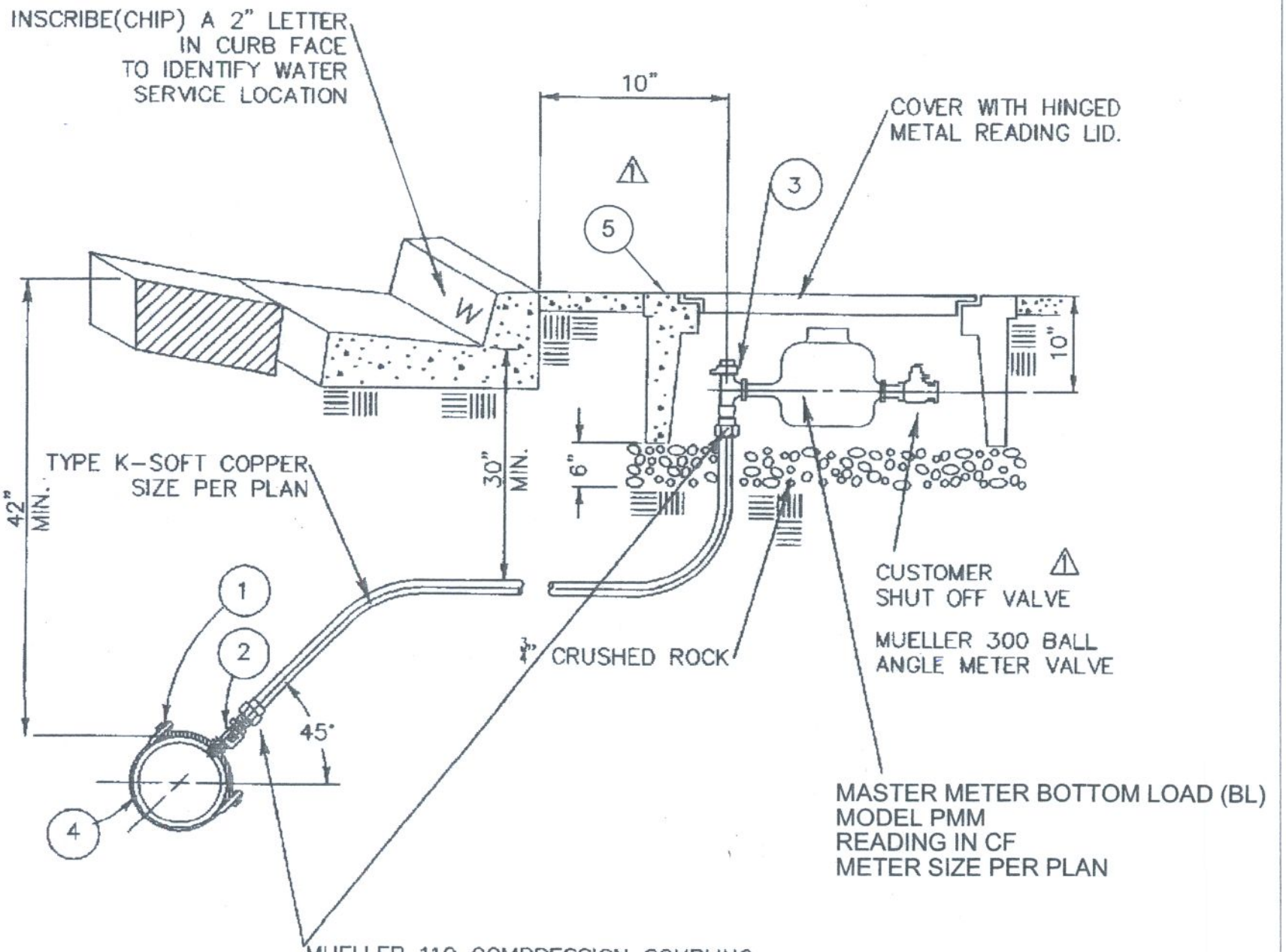
(THIS DETAIL APPLIES TO ANY UTILTIES INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, ELEC., GAS, TEL., TV CABLE, ETC.)

DRAWN BY: EGH

STANDARD PLAN 100–1

SHEET 1 OF 1

FILE NAME: G:\Public Works\200 Projects\Standards\City Std Dwg\City trenching detail.dwg



(1) SADDLE REQUIRED FOR ALL SERVICES. MINIMUM DISTANCE BETWEEN SERVICE TAPS ON MAINS OR TO A BELL, COUPLING, JOINT OR FITTING IS 36". (MUELLER DOUBLE STRAP SADDLE)

(2) MUELLER 300 (B25028) BALL TYPE CORPORATION VALVE ⚠

(3) ANGLE METER STOP W/LOCK WING
NOTE: TEST AT SYSTEM PRESSURE AND FLUSH SERVICE LINE.

(4) MUELLER BR2B SERIES SADDLE

(5) 10" X 20" ARMORCAST METER BOX

STANDARD PRESSURE WATER SERVICE CONNECTION AND METER

City of South Pasadena
Public Works

Revision Memorandum

Date: *October 10, 2024*

From: Ted Gerber, Public Works Director
Michael Vartanians, Principal Engineer

Re: Grevelia & Berkshire Pocket Parks Project No. 005157

The Grevelia & Berkshire Pocket Parks Project No. 005157 was originally advertised in August 2024. All bids were rejected from that bid process, and the project is now being readvertised in October 2024 with modifications to the bid package / construction documents. Please review this Revision Memorandum, which is included in the Contract Documents, and shall be considered before submitting a bid. It is the responsibility of each prospective bidder to download and print all contract documents for review and to verify the completeness of contract documents before submitting a bid.

The plans included in this bid package have not been modified since the August 2024 advertisement, however, the following list of revisions to the plans will be shown during construction and shall be considered before submitting a bid:

(1) Berkshire Sheet G.1

REMOVE EXISTING CURB (APPROX. 50 LF) AT PROW AND REPLACE WITH NEW CURB PER APWA STD PLAN 120-1, 6" CURB FACE. CLEAR AND GRUB PARKWAY AND COVER WITH 3" LAYER OF MULCH.

(2) Berkshire Sheet G.1

Construction Note 9 should read 'CONSTRUCT 8" CONC. CURB' not '6" CONC. CURB'.

(3) Berkshire Sheet LC.1

Description for Item P.2 on Construction Schedule should be '3" THK OVER 4" AGGREGATE BASE'.

(4) Berkshire Sheet LC.1

SF.2 and SF.3 on the construction schedule are the same item.

(5) Berkshire Sheet LC.1

All area drains shown on LC.1 do not apply, See Sheet G.1 for location of drains.

(6) Grevelia Sheet D.1

Remove existing fence at south edge of property and construct 6' tall fence per Detail 3, Sheet CD.2

(7) Grevelia Sheet G.1

Band around rock cobble area is a warning curb (Construction Note 21) to be constructed per Detail 6 on Sheet CD.1.

(8) Grevelia Sheet G.1

Construction Note 16 does not apply, there is no picnic table at Grevelia.

(9) Grevelia Sheet G.1

Band around playground to be constructed per Detail 10, Sheet CD.1 and shall be included in cost of rubber surfacing.

(10) Grevelia Sheet G.1

All radius score lines within concrete paving are intended to be part of the concrete flatwork and not separate bands. Within the technical specifications for Grevelia Park, section 03 30 53, part 4.05, Concrete Band (12'' Width) Line item has been removed and is to be included as part of the lump sum unit price of line item 76 - TPV POUR IN PLACE RUBBER SURFACING AND CONCRETE BAND. On sheet G.1 construction note 21 referenced as 12'' Wide Concrete Bands, these shall now be constructed as radius score lines and shall be included in the square foot unit price for line item 74 - CONCRETE FLATWORK (4") W/ TOPCAST FINISH.

(11) Grevelia Sheet G.2

On Section A-A, Section B-B, and Section D-D: Callout should read '6 FT WOOD FENCE' NOT '3 FT POST AND RAIL FENCE'. On Section C-C the addition of a new "6 FOOT WOOD FENCE" has not been shown. See item 14 below.

(12) Grevelia Sheet LC.1

Final location of RPOSD sign will be coordinated with the City.

(13) Grevelia Sheet LC.1

Detail reference on items F.1 to F.3 should be 'CD.2' not 'LC.2'.

(14) Grevelia Sheet LC.1

"25 linear feet of fence on the northeast corner of park (starting at sidewalk) shall be 3' tall post and rail fence (F.1 on Construction Schedule). All other perimeter fencing shall be 6' tall wood fence (F.2 on Construction Schedule). Existing fencing on South edge of park shall be removed and replaced with 6' wood fence".

(15) Grevelia Sheet CD.2

Detail 1: Post footing shall be 12" sq. and 24" deep. Posts to be imbedded 18" deep with 6” of clear cover from bottom of footing.

(16) Grevelia Sheet CD.2

Detail 3: Post footing shall be 12" sq. and 42" deep. Posts to be imbedded 36" deep with 6” of clear cover from bottom of footing.

(17) Grevelia Sheet CD.2

Concrete curb (Detail 3c) shall be 12" wide and 24" tall (8" above grade, and 16" below grade). Construct where shown on Sheet G.1 (Construction Note 8).

(18) Grevelia Sheet LI.1

All mainline PVC to be Class 315.

(19) Grevelia Sheet LI.1

POC Note, all control wires to be installed in 2" dia. conduit when under paving.

(20) Grevelia Sheet LI.4

All irrigation control wires to be red in color.

Additional clarifications to the Bid Package / Contract Documents that shall be considered before submitting a bid are as follows:

(21) The sum of the cost for Lines Item Numbers 1 and 58 (Mobilization for both parks) shall not exceed 5% of the total bid price.

(22) This project is subject to State Prevailing Wage Rates.

(23) Please note that the bid line items and quantities have been modified since the previous bid advertisement, as well as changes in the Specifications Section F Special Provisions and Appendices I & II Technical Provisions. Specifications Appendix V, City of South Pasadena Water Standards has been added.

(24) The Engineer's Estimate is $1,700,000.

(25) Mulch shall be 'Forest Floor (0-2") as described in Specifications. All mulch shall be installed a depth of 3".

(26) Per Specifications section 32 09 00, 3.06.C.3, nitrogen shall be used for maintenance and establishment of the various plants and trees.

(27) Boulder sizes are shown on the plans next to the boulder locations. (Sheet LC.1). Sizing shown on Plans shall be considered over sizing shown in the table/schedule.

(28) Per the Plans, 3M DBY wires splices / connectors shall be used.

(29) Per the plans, both Berkshire and Grevelia parks shall include irrigation backflow preventers, and only Grevelia shall include drip emitters.

(30) Per the plans, irrigation controllers shall be pedestal mounted.

(31) An electronic copy of the Bid Bond or Bid Guarantee submitted through PlanetBids is adequate for the bidding process, however, an original hard copy may be required prior to selection and award.

(32) The Project is not subject to a PLA (Project Labor Agreement), a PSA (Project Stabilization Agreement), a CBA (Collective Bargaining Agreement), or a CWA (Community Workforce Agreement).

Grevelia & Berkshire Pocket Parks Project No. 005157

Addenda

Send Ack Reminder | View Addenda Acknowledgments

Recall

Oct 14, 2024

1 Addendum 01

Correction to the pre-bid meeting date posted on Planetbids from 10/22/2024 at 8:30 AM to 10/17/2024 at 8:30 AM to be consistent with bid documents and to respond to a question received on 10/14/2024.

Recall

Oct 14, 2024

1.1 Q and A Set 1

Q and A Set 1 has been released for this project.

Recall

Oct 14, 2024

02 Addendum 02

Correction to Q & A deadline from 10/22/2024 at 5:00 PM to 10/17/2024 at 5:00 PM.

Recall

Oct 21, 2024

03 Q and A Set 2

Q and A Set 2 has been released for this project.

Recall

Oct 21, 2024

04 Addendum 04

SCE Approved Electrical Plans for both Grevelia and Berkshire Pocket Parks.
TD2041360_CUSTOMER WO MAP BERKSHIRE.pdf
TD2042914_CUSTOMER WO MAP GREVELIA.pdf

Email History

Filter List
All

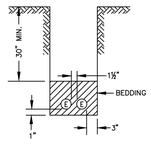
October 14, 2024 12:52 PM (PDT)
Addenda: Addendum Issued for Grevelia & Berkshire Pocket Parks Project No. 005157, with a bid due date of October 28, 2024 4:00 PM (Pacific)

October 14, 2024 12:55 PM (PDT)
Addenda: Addendum Issued for Grevelia & Berkshire Pocket Parks Project No. 005157, with a bid due date of October 28, 2024 4:00 PM (Pacific)

October 14, 2024 12:59 PM (PDT)
Addenda: Addendum Issued for Grevelia & Berkshire Pocket Parks Project No. 005157, with a bid due date of October 28, 2024 4:00 PM (Pacific)

October 21, 2024 5:01 PM (PDT)
Addenda: Addendum Issued for Grevelia & Berkshire Pocket Parks Project No. 005157, with a bid due date of October 28, 2024 4:00 PM (Pacific)

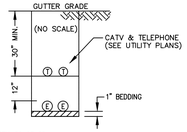
TYPICAL CONDUIT BANK SECTION
SEE UGS CD 120



DIRECT BURIAL
SIMILAR CONSTRUCTION FOR FEWER CONDUIT
2 CONDUITS MAX.

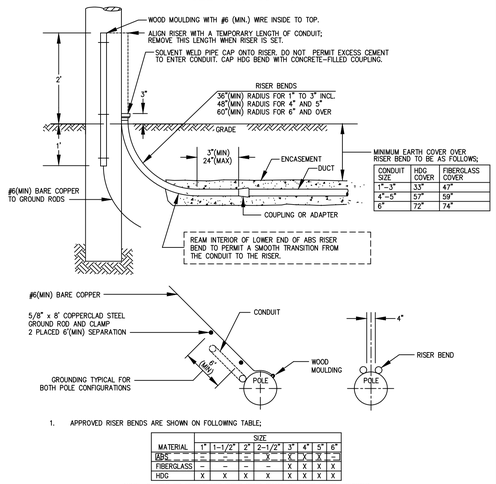
D81: Rev. 09/23/09

TYPICAL CONDUIT SECTION
JOINT WITH CATV & TELE
SEE UGS CD 120



D81-J REV. 09/23/09

POLE RISER BEND STANDARD LOCATION
SEE UGS CD 160



MINIMUM EARTH COVER OVER RISER BEND TO BE AS FOLLOWS:

CONDUIT SIZE	HDG COVER	FIBERGLASS COVER
1"–3"	33"	47"
4"–5"	57"	59"
6"	72"	74"

1. APPROVED RISER BENDS ARE SHOWN ON FOLLOWING TABLE;

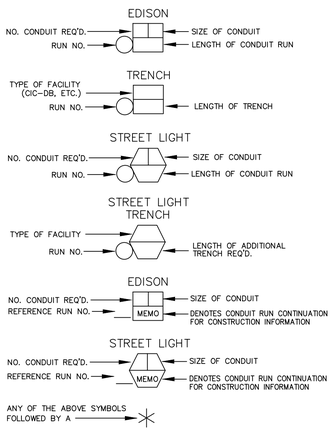
MATERIAL	SIZE 1"	1–1/2"	2"	2–1/2"	3"	4"	5"	6"
ABS	–	–	–	–	–	X	X	–
FIBERGLASS	–	–	–	–	X	X	X	X
HDG	X	X	X	X	X	X	X	X

NOTE: 6" HDG OR FIBERGLASS RISER BEND SHALL BE USED WHEN SPECIFIED ON THE WORKING DRAWING. SEE UGS AC 702 FOR GROUNDING HDG RISER BENDS.

2. THE TOP AND BOTTOM OF 3", 4", 5" OR 6" FIBERGLASS BENDS ARE FURNISHED WITH PERMANENTLY ATTACHED PVC COUPLINGS. ALSO INCLUDED IS A 6" LONG 3", 4", 5" OR 6" SCHEDULE 80 PVC STUB-OUT, SOLVENT WELDED INTO THE TOP COUPLING. SEE UGS CD 166 FOR FIBERGLASS RISER BEND MATERIAL INFORMATION AND SUPPLIERS.
3. TWO GROUND RODS ARE REQUIRED AT ALL PRIMARY RISER POLES. DRIVE RODS IN TRENCH BOTTOM WITH 6" MINIMUM SEPARATION IN UNDISTURBED EARTH. LEAVE THE ROD TOPS 3" ABOVE THE TRENCH BOTTOM AND ATTACH CONTINUOUS GROUND WIRE WITH CLAMPS. EXTEND WIRE TO INDICATED LOCATION ON POLE AND STUB UP 2' ABOVE GRADE IN WOOD MOULDING. ALL GROUNDING MATERIALS FURNISHED BY CONTRACTORS. SEE UGS AC 703 FOR APPROVED GROUNDING MATERIALS.
4. ENCASEMENT REQUIRED ONLY WHEN CALLED OUT ON WORKING DRAWING.
5. PVC RISERS MAY BE SUBSTITUTED FOR FIBERGLASS FOR STRAIGHT RUNS OF 150' OR LESS IN CONDUIT SIZES 4" AND UNDER.

D78: REV. 02/14/11

LEGEND OF CONDUIT SYMBOLS
(CONVENTIONAL U. G.)



DENOTES THE FOLLOWING:

DB CONDUIT WITHOUT ENCASEMENT IS ACCEPTABLE FOR PORTIONS OF TRENCH WITH ONLY ONE OR TWO CONDUITS

SEMI-ENCASEMENT IS REQUIRED FOR PORTIONS OF TRENCH WITH ONLY THREE OR FOUR CONDUITS

FULL ENCASEMENT IS REQUIRED FOR MORE THAN FOUR CONDUITS

D18: Rev. 5/08/2006

UNDERGROUND SERVICE ALERT
Contact USA
Dial 811 or 800-422-4133
www.digalert.org/contact
For Underground Locating
Two Working Days Before You Dig

D16: Rev. 05/28/20

LEGEND CODE DEFINITIONS

CI – CUSTOMER CONTRACTOR INSTALLED: MATERIALS FURNISHED AND INSTALLED BY APPLICANT AT EDISON'S EXPENSE AND ARE DEEDED TO EDISON. (EXCEPTION: STREET LIGHT ELECTROLIERS WILL BE INSTALLED BY EDISON'S CONTRACTOR.)

CO – CUSTOMER CONTRACTOR OWNED: MATERIALS FURNISHED, INSTALLED, OWNED, AND MAINTAINED BY APPLICANT.

CF – CUSTOMER CONTRACTOR FURNISHED: MATERIALS FURNISHED AND INSTALLED BY APPLICANT AT APPLICANT'S EXPENSE THAT MAY BE DEEDED TO EDISON.

IN – INSTALL: MATERIALS FURNISHED AND INSTALLED BY APPLICANT IF APPLICANT INSTALLED PROJECT OR BY EDISON IF EDISON INSTALLED PROJECT. EXCEPTION: FOR AN APPLICANT INSTALLED LINE EXTENSION, STATION NOS.

HAVING AN ASTERISK ADJACENT TO AN "IN" LEGEND CODE REPRESENTS MATERIALS TO BE PROVIDED BY APPLICANT AND INSTALLED BY EDISON IN ALL CASES. REFER TO DPB 8258. PROJECT MATERIAL LIST BY ASSEMBLY WITHIN A STATION.)

MI – MEMO INSTALL: SAME AS IN–INSTALL.

MR – MEMO REMOVE: MATERIALS REMOVED BY EDISON.

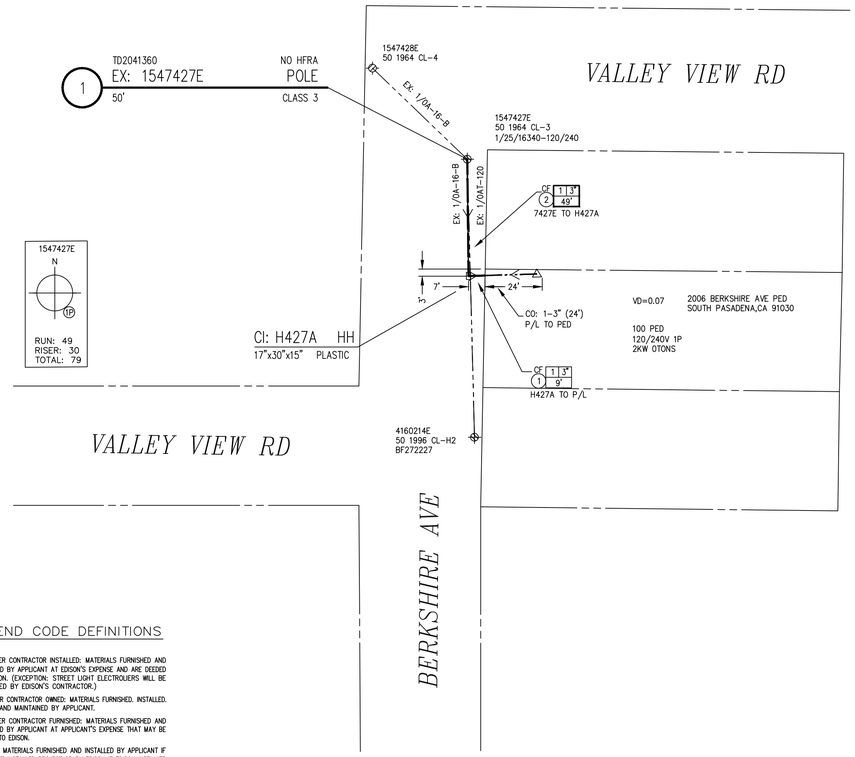
RM – MEMO REMOVED: MATERIALS REMOVED BY EDISON.

SI – SHOOFLY IN: MATERIALS FURNISHED AND INSTALLED BY EDISON FOR TEMPORARY CONSTRUCTION.

SR – SHOOFLY REMOVE: MATERIALS REMOVED BY EDISON FOR TEMPORARY CONSTRUCTION.

TR – TRANSFER: EDISON LABOR REQUIRED TO TRANSFER EXISTING FACILITIES.

D31: Rev. 11/85



PROJECT REQUIREMENTS (Y/N)	
EDISON EASEMENT REQUIRED	N
PWRD 88 REQUIRED	N
UG CIVIL ONLY WORK ORDER	N
PERMIT REQUIRED	Y
PERMIT TYPE: ENCROACHMENT	
OUTAGE REQUIRED	N
OUTAGE DATE: _____ TIME: _____	
TRAFFIC CONTROL REQUIRED	N
PED. TRAFFIC CONTROL REQ'D	N
CONVEYANCE LETTER REQ'D	N
ENVIRONMENTAL REQUIREMENTS DOCUMENT (ERD) REQUIRED	N
CSD 140 (TLM) REQ'D	Y
DIG ALERT APP	N
VERIFIED ACTIVE AND CONFIRMED USA TICKETS	☐
UTILIQUEST NOTIFIED	☐
STANDARD ADHERENCE: 4_0/_2022_Y	

D124: Rev. 10/12/21

T.L.M. DATA: 1547427E

	SIZE	KVA	CUST	% LOAD
EXIST.	25	10.6	4	42.4%
PROP.	25	12.4	5	49.6%

VOLTAGE DROP: 0.07%
FLICKER FACTOR: –
PRI. CIRCUIT: BRAUN 16KV

D27: REV. 12/10/21

SOUTH PASADENA
TLM:
2002 BERKSHIRE AVE.
2010 BERKSHIRE AVE.
2018 BERKSHIRE AVE.
2020 BERKSHIRE AVE.

CONSTRUCTION NOTES:

Unless otherwise specified on the working drawing which forms a part of the specification, the Contractor/Developer shall furnish the following items at no cost to the Edison Company.

Southern California Edison Company has attempted to correctly show all existing utilities and substructures in the vicinity of the work, but does not guarantee there are no other substructures in the area. Failure of SCE to show all substructures in their correct location will not be a basis for a claim for extra work, and the contractor shall be responsible for all damages to substructures whether shown or not.

1. FOR GENERAL SPECIFICATIONS SEE UGS GI 001.

2. CONDUIT:
   a. Minimum cover in street or parkway is 30" below gutter grade, unless noted otherwise.
   b. Minimum cover on private property is 30" below finished grade, unless noted otherwise.
   c. Contractor is to furnish and install approved conduit to Edison specifications per UGS CD 100.1, 110 AND 120.
   d. For the type of conduit for this job, See UGS CD 110.1.
   e. Install all risers per UGS CD 160, 161, 162 and 170.
   f. Cap all mainline conduits per UGS CD 148 and service conduits per UGS CD 150.
   g. Install blank conduit plugs in all conduits terminating into Vaults, Manhole's, PMH's, SOE's & all cap locations, per UGS CD 180.1 & UGS CD 180.2
   h. Install pull rope in all conduit runs. Pull rope to be at least 3/8" polypropylene rope, braided or twisted. For specifications, approved makes, and suppliers, see UGS GI 040.
   i. All conduit must be mandreled with the approved mandrel UGS CD 197.

3. CONDUIT RADIUS REQUIREMENTS:
   a: The minimum radius for bends are:
      36" for conduits 3" in diameter or smaller
      48" for conduits 4" and 5" in diameter
      60" for 6" diameter conduit
   b: The minimum radius for all sweeps of all mainline conduits is 12'–6" (unless noted otherwise).

4. EXCAVATION AND BACKFILL:
   a. Work area shall be cleared and rough graded to within four inches of final grade prior to installation of Edison conduit or structures.
   b. All excavations shall be in accordance with the California State Construction Safety Orders (when applicable), Edison specifications, and all governing local ordinances.
   c. Each trench to be a uniform depth below final grade prior to installation of Edison conduit or structures.
   d. Backfill shall be provided by the Contractor for all excavations and shall include crushed rock, concrete, and/or imported backfill, when required.
   e. Backfill with a MINIMUM of one sack per yard sand cement slurry around and over vaults and manholes per UGS GI 030, section 6.4 and around PMH's within one foot of finished grade, per UGS SS 590.1.
   f. Backfill, per Edison specifications, shall immediately follow conduit or substructure installation. At no time shall conduit be left exposed over 24 hours.
   g. No rocks are allowed within 12 inches of direct–buried cables or any conduit without concrete encasement. Native backfill capable of passing through a one–half inch mesh screen shall be considered to be "rock free". If existing backfill does not pass through a 1/2" screen, place imported sand 3" below and 12" above Edison cables. After this point, no rocks larger than 12" diameter are permitted.
   h. All backfill shall be compacted to meet or exceed local ordinances or other requirements. It shall be placed in a manner that will not damage the conduit or substructure or allow future subsidence of the trench or structures.

5. PAVING:
   Repaving, where required, shall be placed in such a manner that interference with traffic, including pedestrian traffic, will be kept to a minimum. The Contractor shall establish a program of repaving acceptable to the Municipality, County, or other authority having jurisdiction and which is acceptable to Edison.

6. STRUCTURES:
   a. All substructures shall be constructed or installed to Edison specifications.
   b. Install protection barriers per UGS MS 830 when required in areas exposed to traffic, per Edison inspector.
   c. All conduit lines and concrete floored substructures shall be water tight.
   d. All grounding materials shall be furnished and installed by the Contractor.

7. RETAINING WALLS:
   When required, retaining walls shall be provided by the Developer. Walls are required wherever grade rises more than 18 inches above the structure or 24" above the pad surface at a distance of 5 feet from the same, or in areas subject to erosion. Design and installation must comply with local building ordinances. Refer to Edison Inspector for typical space requirements.

8. PERMITS:
   All permits necessary for excavation shall be provided by the Contractor/Developer.

9. ACCESS:
   Heavy truck access shall be maintained to equipment locations. Structures must be clear of all appurtenances that would obstruct the loading or unloading of equipment.

10. SERVICES:
    a. Meters and services shall comply with Edison Electrical Services Requirements.
    b. Wiring must be in accordance with applicable local ordinances and approved by local Inspection Authorities.

11. LOCATION:
    a. The location of excavations and structures for Edison shall be as shown on the working drawing. No deviation from the planned locations will be permitted unless approved by the Edison Inspector. See UCS GI 001, section 2.2.
    b. Actual location of obstructions, storm drains, and/or other foreign utilities to be the responsibility of the Contractor. See UGS GI 001, section 2.3.

12. Contractor is to verify location and widths of all sidewalks and driveways prior to street light installation. See UGS CD 175.1, UGS CD 175.2 and UGS CD 175.3.

13. SURVEY:
    Surveying of street improvements, property corners, lot lines, finished grade, etc., necessary for the installation of underground facilities must be completed and markers or stakes placed prior to the start of the installation. In addition, Developer shall maintain the markers during the installation and inspection by Edison. Grade and property line stakes must show any offset measurements.

14. COORDINATION AND SUPERVISION:
    The Developer shall provide supervision over and coordination among the various contractors working within the development in order to prevent damage to Edison facilities. He is responsible for the cost of repairs, replacement, relocation, or other corrections to Edison facilities made necessary by his failure to provide supervision or to otherwise comply with these specifications.

15. TELEPHONE AND OTHER UTILITY REQUIREMENTS:
    The drawing prepared for this job may also cover the facilities to be installed for the telephone company and/or other utility. Any questions concerning details of their installation should be referred to the company concerned.

16. OWNERSHIP:
    Developer is to deed to the Edison Company all structures shown hereon except those shown as customer owned.

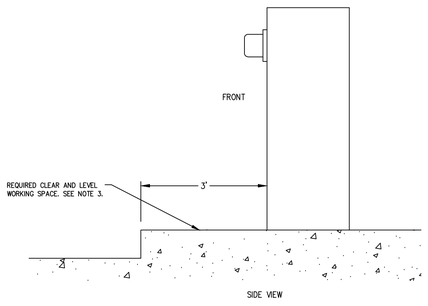
17. WARRANTY:
    Applicants expressly represent and warrant that all work performed and all material used in meeting Applicants' obligations herein are free from defects in workmanship and are in conformity with Southern California Edison Company's requirements. This warranty shall commence upon receipt by Applicants of Company's final acceptance and shall expire one year from that date. Applicants agree to promptly correct to the Company's satisfaction and that of any governmental agency having jurisdiction and at Applicant's expense any breach of this warranty which may become apparent through inspection or operation of underground electric system by Company during this warranty period.

18. INSPECTION:
    Inspection is required during the construction period. A 48 hour advance notice of intent to start construction is required from the contractor to the Southern California Edison Company. Standards of Edison construction requirements are available upon request.

Duct and Structure Inspector: PATRICK BEATTY Phone: 626–327–5124
Cabling Construction Coordinator: Phone:

D05: Rev. 07/21/16

PANEL CLEARANCE
UNDERGROUND SERVICE CONNECTIONS 0–600 VOLTS
SEE ESR 3–16



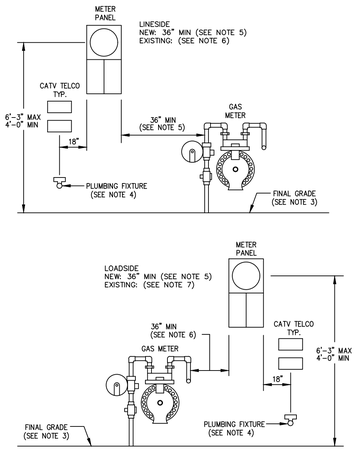
NOTES:
1. A MINIMUM OF THREE (3) FEET OF CLEAR, LEVEL WORK SPACE IS REQUIRED IN FRONT OF ALL TERMINATION, METERING, AND SERVICE EQUIPMENT.
2. SEE ESR–5 FOR METER–MOUNTING HEIGHT REQUIREMENTS. METER MOUNTING HEIGHT WILL BE MEASURED FROM THE STANDING AND WORKING SPACE TO THE CENTERLINE OF THE METER(S).
3. WHEN SERVICE EQUIPMENT IS INSTALLED ON AN ELEVATED PORTION OF THE FLOOR/GROUND, OR HOUSEKEEEPING PAD, THE PAD SHALL BE FLUSH WITH AND EXTEND A MINIMUM OF THREE (3) FEET. THIS IS MEASURED FROM THE FRONT OF THE SERVICE EQUIPMENT OR THE OUTER DOOR(S) OF THE SWITCHBOARD NEMA 3R ENCLOSURE WHEN INSTALLED. IN NO CASE SHALL THE MAXIMUM METER HEIGHT OF SIX (6) FEET THREE (3) INCHES BE EXCEEDED.
4. TO MAINTAIN A SAFE, CLEAR, AND LEVEL WORKING AREA IN FRONT OF NEW OR EXISTING METER AND SERVICE EQUIPMENT, A CONCRETE SLAB OR OTHER SUITABLE PERMANENT HARD SURFACE, ACCEPTABLE TO THE COMPANY, MUST BE USED.
5. FOR SWITCHBOARDS ABOVE 600V, FIVE–FOOT MINIMUM OF CLEAR AND LEVEL STANDING AND WORKING SPACE IS REQUIRED IN THE FRONT, REAR, AND SIDE OF ANY SECTION WHERE SUCH PART SUPPORTS OR PROVIDES ACCESS TO METERING, TESTING EQUIPMENT, OR SERVICE CABLE TERMINATION SECTIONS.

16.12 PROTECTIVE BARRIERS FOR SERVICE EQUIPMENT

BARRIER POSTS ARE USED TO PROTECT THE METER AND SERVICE EQUIPMENT, AS WELL AS PERSONNEL, FROM VEHICULAR CONTACT, AND TO PROHIBIT ENCROACHMENT INTO THE WORKING SPACE. (FOR EXAMPLE: LOADING ZONES, DRIVEWAYS, CONGESTED AREAS, OFF STREET PARKING, AND SO ON). THE CUSTOMER SHALL PROVIDE AND INSTALL "NON–REMOVABLE" BARRIERS TO PROVIDE THE PROPER SAFE WORKING CLEARANCES WHERE THE WORKSPACE IS EXPOSED TO VEHICULAR OR OTHER HAZARDOUS CONDITIONS. METERS WILL NOT BE SET UNTIL THE BARRIERS HAVE BEEN INSTALLED.

D99: 10/26/20

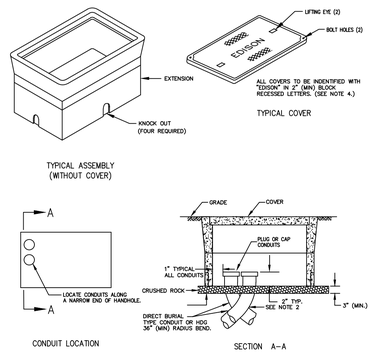
SEPARATION OF METER ASSEMBLIES
FOR ELECTRIC & GAS SERVICES
SEE ESR 5–19



NOTE(S):
1. SIZE AND DIMENSIONS OF PANELS WILL VARY. DRAWINGS ARE NOT TO SCALE.
2. THIS DRAWING PERTAINS TO BOTH OVERHEAD AND UNDERGROUND ELECTRIC SERVICE APPLICATIONS.
3. MAINTAIN A 3–FOOT CLEAR, LEVEL, AND UNOBSTRUCTED WORKSPACE IN FRONT OF ELECTRIC SERVICE EQUIPMENT.
4. PLUMBING FIXTURES THAT EXTEND MORE THAN 6 INCHES OUT FROM WALL SURFACE MUST BE LOCATED 18 INCHES MINIMUM FROM THE OUTSIDE EDGE OF THE METER PANEL.
5. FOR NEW CONSTRUCTION ONLY, DOES NOT APPLY FOR UPGRADES.
6. UPGRADES AND REPLACEMENTS – LINE SIDE PANELS THAT ARE CURRENTLY INSTALLED 24 INCHES OR GREATER FROM THE LINE SIDE OF THE GAS METER, CLEARANCE MAY NOT BE REDUCED. PANELS THAT ARE CURRENTLY INSTALLED LESS THAN 24 INCHES FROM THE GAS METER, MAY REMAIN (OR BE RE–INSTALLED) IN EXISTING LOCATION.
7. UPGRADES AND REPLACEMENTS – LOAD SIDE PANELS THAT ARE CURRENTLY INSTALLED 18 INCHES OR GREATER FROM THE LOAD SIDE OF THE GAS METER, CLEARANCE MAY NOT BE REDUCED. PANELS THAT ARE CURRENTLY INSTALLED LESS THAN 18 INCHES FROM THE GAS METER, MAY REMAIN (OR BE RE–INSTALLED) IN EXISTING LOCATION.

D122 Rev. 10/26/20

TYPICAL HANDHOLE INSTALLATION
SEE UGS HP 205



NOTES:
1. SEE UGS HP 200 FOR DIMENSIONS OF VARIOUS SIZE HANDHOLES AVAILABLE.
2. RADIUS ANGLE MAY BE REDUCED TO LESS THAN 90° PROVIDING THE PROJECTED CENTER LINE OF THE CONDUIT CLEARS HANDHOLE OPENING.
3. TWO HOLD DOWN DEVICES TO BE SUPPLIED WITH EACH HANDHOLE.
4. COVER SHALL BE IDENTIFIED WITH "EDISON" IN MINIMUM 2–INCH LETTERS OR LABELS PERMANENTLY SECURED TO THE LID.
5. FOR MAINTENANCE ON 10–1/2" X 17" CONCRETE HANDHOLES USE SWINGBOLT WITH SAP 10204721.

D75 REV. 03/18/19

CITY OF SOUTH PASADENA

SCOPE OF WORK:

- INSTALL RISER, HANDHOLE, METER, AND SERVICE TO NEW PEDESTAL AT 2006 BERKSHIRE AVE, SOUTH PASADENA, CA 91030
- POLE IS STREET SIDE
- TRUCK ACCESS: YES
- HFRA: NO
- EAGLE ZONE: NO
- SO# 200281014

CONDUIT RADIUS REQUIREMENTS:

A: The minimum radius for bends are:
36" for conduits 3" in diameter or smaller
48" for conduits 4" and 5" in diameter
60" for 6" diameter conduit
B: The minimum radius for sweeps are:
36" for conduits 3" in diameter or smaller
12'–6" for conduits 4" in diameter and larger, unless otherwise noted.

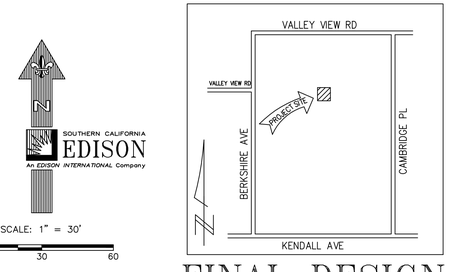
CUSTOMER–OWNED CONDUIT MATERIAL* AND CONCRETE ENCASEMENT ARE TO BE INSTALLED IN ACCORDANCE WITH EDISON ELECTRICAL SERVICE REQUIREMENTS.
*SUBJECT TO APPROVAL BY LOCAL INSPECTION AUTHORITIES

D14: Rev. 01/85

NOTE:
ALL ELECTRICAL DUCTS AND STRUCTURES WILL CONFORM TO GENERAL ORDER #128 (RULES FOR CONSTRUCTION OF UNDERGROUND ELECTRICAL SUPPLY AND COMMUNICATION PRESCRIBED BY THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA, JANUARY 2006).

WARNING
THE EXCAVATOR MUST TAKE ALL STEPS NECESSARY TO AVOID CONTACT WITH UNDERGROUND FACILITIES WHICH MAY RESULT IN INJURY TO PERSONS OR DAMAGE TO FACILITIES IN THE AREA. THE INDICATED LOCATIONS OF EDISON UNDERGROUND FACILITIES, AS PROVIDED, ARE BELIEVED TO BE ACCURATE, HOWEVER, THE FINAL DETERMINATION OF EXACT LOCATIONS AND THE COST OF REPAIR TO DAMAGED FACILITIES IS THE RESPONSIBILITY OF THE EXCAVATOR.

VICINITY MAP



BRAUN 16KV
ALHAMBRA B2

FINAL DESIGN
APPROVED FOR CONSTRUCTION

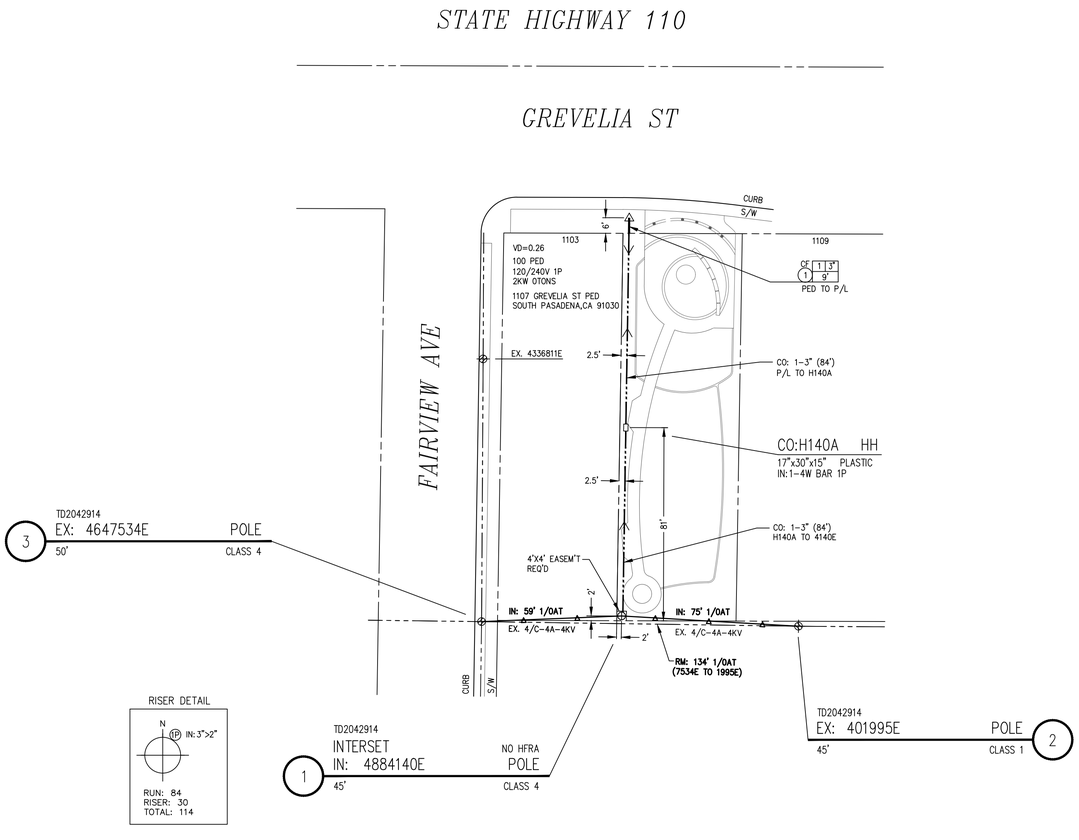
DISTRICT	PROJ. MGR. PHERREIGO, MATTHEW PHONE	PLANNER PHERREIGO, MATTHEW PHONE	DESIGNER PHERREIGO, MATTHEW
27 – MONROVIA			
PROJECT NO. 250171 3	SERVICE REQUEST 3391035	MSR NO.	PRODUCT–1 2041360–LINE EXTENSION ASSOC DESGN
CIRCUIT / VOLTAGE BRAUN / 16KV		GPS	PRODUCT–2 ASSOC DESGN
SUB / PG NO. ALHAMBRA / B2		CIRCUIT CODE 02150	PRODUCT–3 ASSOC DESGN
INVENTORY MAP		J.P.A. NO.	PROPOSED CONSTRUCTION (LOCATION) TD2041360/PERMIT/UG INSP/CITY REL/CUSTAPP 2006 BERKSHIRE AVE SOUTH PASADENA CA 91030

TYPE	DATE	APPROVED BY	CHECKED BY	DRAWN BY	PAX #
F	10/17/22	E. GADDISON	M. PHERREIGO	K. GARZA	

Southern California Edison Company

SHEET 1 OF 1 DESIGN\DRWG NO. 1553123_1.01

FILE NAME=1553123_1.01.DWG SAVE DATE=8/26/2023 10:44 AM SAVED BY=SHHC



RISER DETAIL

T.L.M. DATA: 4884140E	SIZE	KVA	CUST	% LOAD
EXIST.	—	—	—	—%
PROP.	25	2.4	1	1%

VOLTAGE DROP: 0.26%
FLICKER FACTOR: —
PRI. CIRCUIT: EL CENTRO 4KV

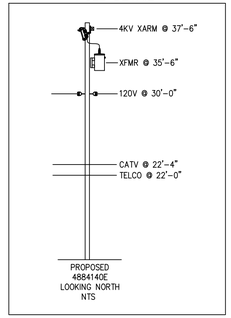
D27: REV. 12/10/21

TLM:
1107 GREVELIA ST

VICINITY MAP



POLE DETAIL



CONTACT FOR ACCESS:
ARMINE CHAPARYAN (626) 403-7210

SCOPE OF WORK:

- INSTALL NEW POLE, RISER, UG SVC & METER TO NEW PEDESTAL AT 1107 GREVELIA ST
- E TO SET NEW INTERSET POLE
- IDENTIFER: JPO7HD
- JOINT OWNER: HLA
- HFRA: NO
- EAGLE ZONE: NO
- POLE IS REAR PROPERTY. NO TRUCK ACCESS
- SO# 200290686

LEGEND OF DRAFTING SYMBOLS

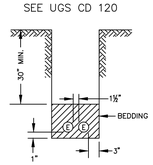
TRENCH

- EDISON CONDUIT (DIST. & SL)
- CUST. OWNED CONDUIT
- RESIDENTIAL SERVICE CABLE
- E — EXISTING CONDUIT

STRUCTURES

- VAULT
- MANHOLE
- PME 3-5
- PME 6-12
- PULL BOX
- HANDHOLE
- SOE
- PAD
- 4'x4' BURD SWITCH ENCLOSURE
- 36" BURD SWITCH ENCLOSURE
- BURD TRANSFORMER ENCLOSURE
- STREET LIGHT ELECTROLIER
- C/I METER PANEL
- FIRE HYDRANT

TYPICAL CONDUIT BANK SECTION
SEE UGS CD 120



DIRECT BURIAL
SIMILAR CONSTRUCTION FOR FEWER CONDUIT
2 CONDUITS MAX.

D81: Rev. 09/23/09

LEGEND OF CONDUIT SYMBOLS
(CONVENTIONAL U. G.)

EDISON
NO. CONDUIT REQ'D. — SIZE OF CONDUIT
RUN NO. — LENGTH OF CONDUIT RUN

TRENCH
TYPE OF FACILITY (CIC-DB, ETC.)
RUN NO. — LENGTH OF TRENCH

STREET LIGHT
NO. CONDUIT REQ'D. — SIZE OF CONDUIT
RUN NO. — LENGTH OF CONDUIT RUN

STREET LIGHT
TRENCH
TYPE OF FACILITY
RUN NO. — LENGTH OF ADDITIONAL TRENCH REQ'D.

EDISON
NO. CONDUIT REQ'D. — SIZE OF CONDUIT
REFERENCE RUN NO. — MEMO — DENOTES CONDUIT RUN CONTINUATION FOR CONSTRUCTION INFORMATION

STREET LIGHT
NO. CONDUIT REQ'D. — SIZE OF CONDUIT
REFERENCE RUN NO. — MEMO — DENOTES CONDUIT RUN CONTINUATION FOR CONSTRUCTION INFORMATION

ANY OF THE ABOVE SYMBOLS FOLLOWED BY A *

DENOTES THE FOLLOWING:

DB CONDUIT WITHOUT ENCASEMENT IS ACCEPTABLE FOR PORTIONS OF TRENCH WITH ONLY ONE OR TWO CONDUITS

SEMI-ENCASEMENT IS REQUIRED FOR PORTIONS OF TRENCH WITH ONLY THREE OR FOUR CONDUITS

FULL ENCASEMENT IS REQUIRED FOR MORE THAN FOUR CONDUITS

D18: Rev. 5/08/2006

UNDERGROUND SERVICE ALERT
Contact USA
Dial 811 or 800-422-4133
www.digalert.org/contact
For Underground Locating
Two Working Days Before You Dig

D16: Rev. 05/28/20

LEGEND CODE DEFINITIONS

CI – CUSTOMER CONTRACTOR INSTALLED: MATERIALS FURNISHED AND INSTALLED BY APPLICANT AT EDISON'S EXPENSE AND ARE DEEDED TO EDISON. (EXCEPTION: STREET LIGHT ELECTROLIERS WILL BE INSTALLED BY EDISON'S CONTRACTOR.)

CO – CUSTOMER CONTRACTOR OWNED: MATERIALS FURNISHED. INSTALLED. OWNED. AND MAINTAINED BY APPLICANT.

CF – CUSTOMER CONTRACTOR FURNISHED: MATERIALS FURNISHED AND INSTALLED BY APPLICANT AT APPLICANT'S EXPENSE THAT MAY BE DEEDED TO EDISON.

IN – INSTALL: MATERIALS FURNISHED AND INSTALLED BY APPLICANT IF APPLICANT INSTALLED PROJECT OR BY EDISON IF EDISON INSTALLED PROJECT. (EXCEPTION: FOR AN APPLICANT INSTALLED LINE EXTENSION. STATION NOS.
HAVING AN ASTERISK ADJACENT TO AN "IN" LEGEND CODE REPRESENTS MATERIALS TO BE PROVIDED BY APPLICANT AND INSTALLED BY EDISON IN ALL CASES. REFER TO DPB 8258. PROJECT MATERIAL LIST BY ASSEMBLY WITHIN A STATION.)

MI – MEMO INSTALL: SAME AS IN-INSTALL.

MR – MEMO REMOVE: MATERIALS REMOVED BY EDISON.

RM – MEMO REMOVED: MATERIALS REMOVED BY EDISON.

SI – SHOOFLY IN: MATERIALS FURNISHED AND INSTALLED BY EDISON FOR TEMPORARY CONSTRUCTION.

SR – SHOOFLY REMOVE: MATERIALS REMOVED BY EDISON FOR TEMPORARY CONSTRUCTION.

TR – TRANSFER: EDISON LABOR REQUIRED TO TRANSFER EXISTING FACILITIES.

D31: Rev. 11/85

PROJECT REQUIREMENTS (Y/N)	
EDISON EASEMENT REQUIRED	Y
PWRD 88 REQUIRED	N
UG CIVIL ONLY WORK ORDER	N
PERMIT REQUIRED	N
PERMIT TYPE: _____	
OUTAGE REQUIRED	Y
OUTAGE DATE: _____ TIME: _____	
TRAFFIC CONTROL REQUIRED	N
PED. TRAFFIC CONTROL REQ'D	N
CONVEYANCE LETTER REQ'D	N
ENVIRONMENTAL REQUIREMENTS DOCUMENT (ERD) REQUIRED	Y
CSD 140 (TLM) REQ'D	Y
DIG ALERT APP	Y
VERIFIED ACTIVE AND CONFIRMED USA TICKETS	☐
UTILIQUEST NOTIFIED	☐
STANDARD ADHERENCE: 4_0/_2022 Y	

D124: Rev. 10/12/21

CONSTRUCTION NOTES:

Unless otherwise specified on the working drawing which forms a part of the specification, the Contractor/Developer shall furnish the following items at no cost to the Edison Company.

Southern California Edison Company has attempted to correctly show all existing utilities and substructures in the vicinity of the work, but does not guarantee there are no other substructures in the area. Failure of SCE to show all substructures in their correct location will not be a basis for a claim for extra work, and the contractor shall be responsible for all damages to substructures whether shown or not.

1. FOR GENERAL SPECIFICATIONS SEE UGS GI 001.

2. CONDUIT:
   a. Minimum cover in street or parkway is 30" below gutter grade, unless noted otherwise.
   b. Minimum cover on private property is 30" below finished grade, unless noted otherwise.
   c. Contractor is to furnish and install approved conduit to Edison specifications per UGS CD 100.1, 110 AND 120.
   d. For the type of conduit for this job, See UGS CD 110.1.
   e. Install all risers per UGS CD 160, 161, 162 and 170.
   f. Cap all mainline conduits per UGS CD 148 and service conduits per UGS CD 150.
   g. Install blank conduit plugs in all conduits terminating into Vaults, Manhole's, PMH's, SOE's & all cap locations, per UGS CD 180.1 & UGS CD 180.2
   h. Install pull rope in all conduit runs. Pull rope to be at least 3/8" polypropylene rope, braided or twisted. For specifications, approved makes, and suppliers, see UGS GI 040.
   i. All conduit must be mandrelled with the approved mandrel UGS CD 197.

3. CONDUIT RADIUS REQUIREMENTS:
   a: The minimum radius for bends are:
      36" for conduits 3" in diameter or smaller
      48" for conduits 4" and 5" in diameter
      60" for 6" diameter conduit
   b: The minimum radius for all sweeps of all mainline conduits is 12'-6" (unless noted otherwise).

4. EXCAVATION AND BACKFILL:
   a. Work area shall be cleared and rough graded to within four inches of final grade prior to installation of Edison conduit or structures.
   b. All excavations shall be in accordance with the California State Construction Safety Orders (when applicable), Edison specifications, and all governing local ordinances.
   c. Each trench to be a uniform depth below final grade prior to installation of Edison conduit or structures.
   d. Backfill shall be provided by the Contractor for all excavations and shall include crushed rock, concrete, and/or imported backfill, when required.
   e. Backfill with a MINIMUM of one sack per yard sand cement slurry around and over vaults and manholes per UGS GI 030, section 6.4 and around PMH's within one foot of finished grade, per UGS SS 590.1.
   f. Backfill, per Edison specifications, shall immediately follow conduit or substructure installation. At no time shall conduit be left exposed over 24 hours.
   g. No rocks are allowed within 12 inches of direct-buried cables or any conduit without concrete encasement. Native backfill capable of passing through a one-half inch mesh screen shall be considered to be "rock free". If existing backfill does not pass through a 1/2" screen, place imported sand 3" below and 12" above Edison cables. After this point, no rocks larger than 12" diameter are permitted.
   h. All backfill shall be compacted to meet or exceed local ordinances or other requirements. It shall be placed in a manner that will not damage the conduit or substructure or allow future subsidence of the trench or structures.

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   Repaving, where required, shall be placed in such a manner that interference with traffic, including pedestrian traffic, will be kept to a minimum. The Contractor shall establish a program of repaving acceptable to the Municipality, County, or other authority having jurisdiction and which is acceptable to Edison.

6. STRUCTURES:
   a. All substructures shall be constructed or installed to Edison specifications.
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   c. All conduit lines and concrete floored substructures shall be water tight.
   d. All grounding materials shall be furnished and installed by the Contractor.

7. RETAINING WALLS:
   When required, retaining walls shall be provided by the Developer. Walls are required wherever grade rises more than 18 inches above the structure or 24" above the pad surface at a distance of 5 feet from the same, or in areas subject to erosion. Design and installation must comply with local building ordinances. Refer to Edison Inspector for typical space requirements.

8. PERMITS:
   All permits necessary for excavation shall be provided by the Contractor/Developer.

9. ACCESS:
   Heavy truck access shall be maintained to equipment locations. Structures must be clear of all appurtenances that would obstruct the loading or unloading of equipment.

10. SERVICES:
    a. Meters and services shall comply with Edison Electrical Services Requirements.
    b. Wiring must be in accordance with applicable local ordinances and approved by local Inspection Authorities.

11. LOCATION:
    a. The location of excavations and structures for Edison shall be as shown on the working drawing. No deviation from the planned locations will be permitted unless approved by the Edison Inspector. See UGS GI 001, section 2.2.
    b. Actual location of obstructions, storm drains, and/or other foreign utilities to be the responsibility of the Contractor. See UGS GI 001, section 2.3.

12. Contractor is to verify location and widths of all sidewalks and driveways prior to street light installation. See UGS CD 175.1, UGS CD 175.2 and UGS CD 175.3.

13. SURVEY:
    Surveying of street improvements, property corners, lot lines, finished grade, etc., necessary for the installation of underground facilities must be completed and markers or stakes placed prior to the start of the installation. In addition, Developer shall maintain the markers during the installation and inspection by Edison.
    Grade and property line stakes must show any offset measurements.

14. COORDINATION AND SUPERVISION:
    The Developer shall provide supervision over and coordination among the various contractors working within the development in order to prevent damage to Edison facilities. He is responsible for the cost of repairs, replacement, relocation, or other corrections to Edison facilities made necessary by his failure to provide supervision or to otherwise comply with these specifications.

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    The drawing prepared for this job may also cover the facilities to be installed for the telephone company and/or other utility. Any questions concerning details of their installation should be referred to the company concerned.

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    Developer is to deed to the Edison Company all structures shown hereon except those shown as customer owned.

17. WARRANTY:
    Applicants expressly represent and warrant that all work performed and all material used in meeting Applicants' obligations herein are free from defects in workmanship and are in conformity with Southern California Edison Company's requirements. This warranty shall commence upon receipt by Applicants of Company's final acceptance and shall expire one year from that date. Applicants agree to promptly correct to the Company's satisfaction and that of any governmental agency having jurisdiction and at Applicant's expense any breach of this warranty which may become apparent through inspection or operation of underground electric system by Company during this warranty period.

18. INSPECTION:
    Inspection is required during the construction period. A 48 hour advance notice of intent to start construction is required from the contractor to the Southern California Edison Company. Standards of Edison construction requirements are available upon request.

Duct and Structure Inspector: PATRICK BEATTY Phone: 626-327-5124
Cabling Construction Coordinator: Phone:

D05: Rev. 07/21/16

WARNING
THE EXCAVATOR MUST TAKE ALL STEPS NECESSARY TO AVOID CONTACT WITH UNDERGROUND FACILITIES WHICH MAY RESULT IN INJURY TO PERSONS OR DAMAGE TO FACILITIES IN THE AREA. THE INDICATED LOCATIONS OF EDISON UNDERGROUND FACILITIES, AS PROVIDED, ARE BELIEVED TO BE ACCURATE, HOWEVER, THE FINAL DETERMINATION OF EXACT LOCATIONS AND THE COST OF REPAIR TO DAMAGED FACILITIES IS THE RESPONSIBILITY OF THE EXCAVATOR.

CUSTOMER-OWNED CONDUIT MATERIAL* AND CONCRETE ENCASEMENT ARE TO BE INSTALLED IN ACCORDANCE WITH EDISON ELECTRICAL SERVICE REQUIREMENTS.
*SUBJECT TO APPROVAL BY LOCAL INSPECTION AUTHORITIES

D14: Rev. 01/85

NOTE:
ALL ELECTRICAL DUCTS AND STRUCTURES WILL CONFORM TO GENERAL ORDER #128 (RULES FOR CONSTRUCTION OF UNDERGROUND ELECTRICAL SUPPLY AND COMMUNICATION PRESCRIBED BY THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA, JANUARY 2006).

CONDUIT RADIUS REQUIREMENTS:
A: The minimum radius for bends are:
36" for conduits 3" in diameter or smaller
48" for conduits 4" and 5" in diameter
60" for 6" diameter conduit
B: The minimum radius for sweeps are:
36" for conduits 3" in diameter or smaller
12'-6" for conduits 4" in diameter and larger, unless otherwise noted.

N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

SCALE: 1" = 30'
0 30 60

FINAL DESIGN
APPROVED FOR CONSTRUCTION

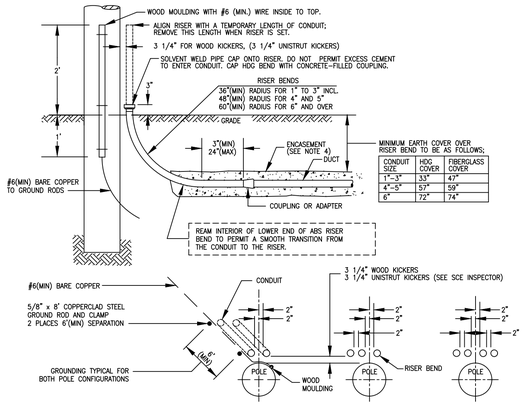
DECALS ON SHEET 2

CIRCUIT: EL CENTRO 4KV
SUB: GARFIELD

DISTRICT: 27 – MONROVIA	PROJ. MGR. PHERREIGO, MATTHEW PHONE (626) 201-2407	PLANNER PHERREIGO, MATTHEW PHONE (626) 201-2407	DESIGNER VIZCARRA, JOSE A	
PROJECT NO. 2504769	SERVICE REQUEST 3394042	MSR NO.	PRODUCT-1 2042914-LINE EXTENSION	ASSOC DESGN
CIRCUIT / VOLTAGE EL CENTRO 4KV		GPS	PRODUCT-2	ASSOC DESGN
SUB / PG NO. GARFIELD		CIRCUIT CODE	PRODUCT-3	ASSOC DESGN
INVENTORY MAP 71-76B		J.P.A. NO.	PROPOSED CONSTRUCTION (LOCATION) 1107 GREVELIA ST SOUTH PASADENA CA 91030	
F 11/7/22 E. GADDISON	M. PHERREIGO	J. VIZCARRA		
TYPE DATE	APPROVED BY	CHECKED BY	DRAWN BY	PAX #
Southern California Edison Company			SHEET 1 OF 2	DESIGN\DRWG NO. 1554340_0.01

TLE NAME:1554340_0.01.DWG SAVE DATE:11/7/2022 3:07 PM SAVED BY:VZCARRA

POLE RISER BEND FOR RISER ON KICK BLOCKS
SEE UGS CD 161



CONDUIT SIZE	HDG COVER	FIBERGLASS COVER
1"-3"	33"	47"
4"-5"	57"	59"
6"	72"	74"

1. APPROVED RISER BENDS ARE SHOWN ON FOLLOWING TABLE;

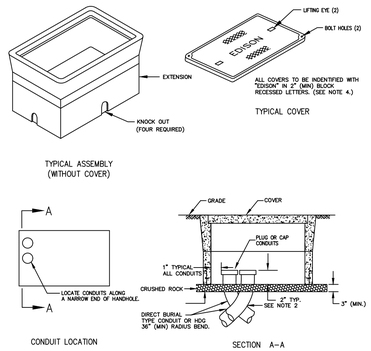
MATERIAL	SIZE								
	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"
PVC	–	–	–	–	X	X	X	–
FIBERGLASS	–	–	–	–	X	X	X	X
HDG	X	X	X	X	X	X	X	X

NOTE: 6" HDG OR FIBERGLASS RISER BEND SHALL BE USED WHEN SPECIFIED ON THE WORKING DRAWING. SEE UGS AC 702 FOR GROUNDING HDG RISER BENDS.

2. THE TOP AND BOTTOM OF 3", 4", 5" OR 6" FIBERGLASS BENDS ARE FURNISHED WITH PERMANENTLY ATTACHED PVC COUPLINGS. ALSO INCLUDED IS A 6" LONG 3", 4", 5" OR 6" SCHEDULE 80 PVC STUB-OUT, SOLVENT WELDED INTO THE TOP COUPLING. SEE UGS CD 166 FOR FIBERGLASS RISER BEND MATERIAL INFORMATION AND SUPPLIERS.
3. TWO GROUND RODS ARE REQUIRED AT ALL PRIMARY RISER POLES. DRIVE RODS IN TRENCH BOTTOM WITH 6" MINIMUM SEPARATION IN UNDISTURBED EARTH. LEAVE THE ROD TOPS 3" ABOVE THE TRENCH BOTTOM AND ATTACH CONTINUOUS GROUND WIRE WITH CLAMPS. EXTEND WIRE TO INDICATED LOCATION ON POLE AND STUB UP 2" ABOVE GRADE IN WOOD MOULDING. ALL GROUNDING MATERIALS FURNISHED BY THE CONTRACTOR. SEE UGS AC 703 FOR APPROVED GROUNDING MATERIALS.
4. ENCASEMENT REQUIRED ONLY WHEN CALLED OUT ON WORKING DRAWING.
5. SCHEDULE 80 PVC BENDS MAY BE SUBSTITUTED FOR FIBERGLASS BENDS FOR STRAIGHT RUNS OF 150' OR LESS IN CONDUIT SIZES 4" AND UNDER.

D78A: REV. 01/09/12

TYPICAL HANDHOLE INSTALLATION
SEE UGS HP 205

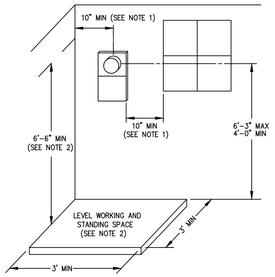


NOTES:

1. SEE UGS HP 200 FOR DIMENSIONS OF VARIOUS SIZE HANDHOLES AVAILABLE.
2. RADIUS ANGLE MAY BE REDUCED TO LESS THAN 90° PROVIDING THE PROJECTED CENTER LINE OF THE CONDUIT CLEARS HANDHOLE OPENING.
3. TWO HOLD DOWN DEVICES TO BE SUPPLIED WITH EACH HANDHOLE.
4. COVER SHALL BE IDENTIFIED WITH "EDISON" IN MINIMUM 2-INCH LETTERS OR LABELS PERMANENTLY SECURED TO THE LID.
5. FOR MAINTENANCE ON 10-1/2" X 17" CONCRETE HANDHOLES USE SWINGBOLT WITH SAP 10204721.

D75 REV. 03/18/19

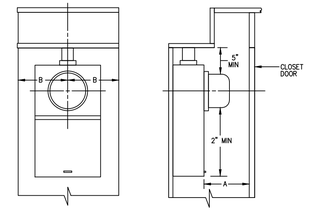
WORKSPACE
SURFACE-MOUNTED OR SEMI-FLUSH METER INSTALLATION
SEE ESR 5-25 (FIG. 5-5)



NOTES:

1. THE HORIZONTAL CLEARANCE FROM THE CENTERLINE OF THE METER TO THE NEAREST SIDE WALL OR OTHER OBSTRUCTION SHALL BE 10 INCHES MINIMUM. A HORIZONTAL CLEARANCE FROM THE EDGE OF THE METER PANEL TO THE EDGE OF A WINDOW OR DOORWAY (INCLUDING SLIDING GLASS DOORS) SHALL BE 10 INCHES MINIMUM. A GAS METER OR PLUMBING FIXTURE THAT DOES NOT PROTRUDE MORE THAN 6 INCHES OUT FROM THE WALL, OR EXTEND LESS THAN 18 INCHES HORIZONTALLY FROM THE OUTSIDE EDGE OF THE METER PANEL, SHALL NOT BE CONSIDERED AN OBSTRUCTION. SEE FIGURE 5-4.
2. A LEVEL WORKING AND STANDING SURFACE, CLEAR AND UNOBSTRUCTED, ENTIRELY ON THE PROPERTY OF THE CUSTOMER, SHALL BE PROVIDED. THE MINIMUM WIDTH OF THE WORKSPACE SHALL BE 36 INCHES OVERALL , BUT NEED NOT BE CENTERED BENEATH THE METER. THE MINIMUM DEPTH OF THE WORKSPACE SHALL BE 36 INCHES. WHERE METERS ARE ENCLOSED IN A CLOSET OR RECESSED IN AN ENCLOSURE, THE DEPTH OF THE WORKSPACE IS MEASURED FROM THE OUTER FACE OF THE CLOSET OR RECESS. THE MINIMUM HEIGHT OF THE WORKSPACE SHALL BE 78 INCHES.

MINIMUM ENCLOSED METER CLEARANCES – 0-600 V

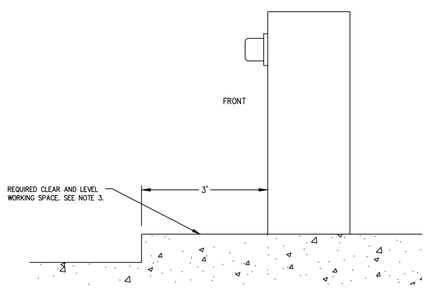


MINIMUM ENCLOSED METER CLEARANCES

	A	B
RESIDENTIAL	7"	10"
COMMERCIAL	11"	10"

D123 Rev. 10/26/20

PANEL CLEARANCE
UNDERGROUND SERVICE CONNECTIONS 0-600 VOLTS
SEE ESR 3-16



NOTES:

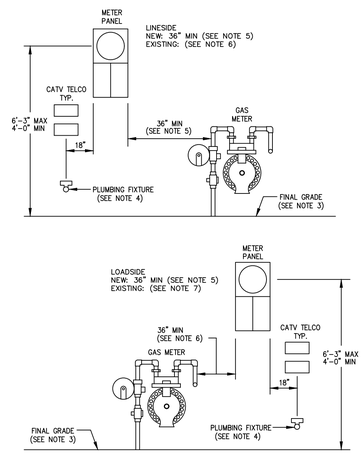
1. A MINIMUM OF THREE (3) FEET OF CLEAR, LEVEL WORK SPACE IS REQUIRED IN FRONT OF ALL TERMINATION, METERING, AND SERVICE EQUIPMENT.
2. SEE ESR-5 FOR METER-MOUNTING HEIGHT REQUIREMENTS. METER MOUNTING HEIGHT WILL BE MEASURED FROM THE STANDING AND WORKING SPACE TO THE CENTERLINE OF THE METER(S).
3. WHEN SERVICE EQUIPMENT IS INSTALLED ON AN ELEVATED PORTION OF THE FLOOR/GROUND, OR HOUSEKEEEPING PAD, THE PAD SHALL BE FLUSH WITH AND EXTEND A MINIMUM OF THREE (3) FEET. THIS IS MEASURED FROM THE FRONT OF THE SERVICE EQUIPMENT OR THE OUTER DOOR(S) OF THE SWITCHBOARD NEMA 3R ENCLOSURE WHEN INSTALLED. IN NO CASE SHALL THE MAXIMUM METER HEIGHT OF SIX (6) FEET THREE (3) INCHES BE EXCEEDED.
4. TO MAINTAIN A SAFE, CLEAR, AND LEVEL WORKING AREA IN FRONT OF NEW OR EXISTING METER AND SERVICE EQUIPMENT, A CONCRETE SLAB OR OTHER SUITABLE PERMANENT HARD SURFACE, ACCEPTABLE TO THE COMPANY, MUST BE USED.
5. FOR SWITCHBOARDS ABOVE 600V, FIVE-FOOT MINIMUM OF CLEAR AND LEVEL STANDING AND WORKING SPACE IS REQUIRED IN THE FRONT, REAR, AND SIDE OF ANY SECTION WHERE SUCH PART SUPPORTS OR PROVIDES ACCESS TO METERING, TESTING EQUIPMENT, OR SERVICE CABLE TERMINATION SECTIONS.

16.12 PROTECTIVE BARRIERS FOR SERVICE EQUIPMENT

BARRIER POSTS ARE USED TO PROTECT THE METER AND SERVICE EQUIPMENT, AS WELL AS PERSONNEL, FROM VEHICULAR CONTACT, AND TO PROHIBIT ENCROACHMENT INTO THE WORKING SPACE. (FOR EXAMPLE: LOADING ZONES, DRIVEWAYS, CONGESTED AREAS, OFF STREET PARKING, AND SO ON). THE CUSTOMER SHALL PROVIDE AND INSTALL "NON-REMOVABLE" BARRIERS TO PROVIDE THE PROPER SAFE WORKING CLEARANCES WHERE THE WORKSPACE IS EXPOSED TO VEHICULAR OR OTHER HAZARDOUS CONDITIONS. METERS WILL NOT BE SET UNTIL THE BARRIERS HAVE BEEN INSTALLED.

D99: 10/26/20

SEPARATION OF METER ASSEMBLIES
FOR ELECTRIC & GAS SERVICES
SEE ESR 5-19



NOTE(S):

1. SIZE AND DIMENSIONS OF PANELS WILL VARY. DRAWINGS ARE NOT TO SCALE.
2. THIS DRAWING PERTAINS TO BOTH OVERHEAD AND UNDERGROUND ELECTRIC SERVICE APPLICATIONS.
3. MAINTAIN A 3-FOOT CLEAR, LEVEL, AND UNOBSTRUCTED WORKSPACE IN FRONT OF ELECTRIC SERVICE EQUIPMENT.
4. PLUMBING FIXTURES THAT EXTEND MORE THAN 6 INCHES OUT FROM WALL SURFACE MUST BE LOCATED 18 INCHES MINIMUM FROM THE OUTSIDE EDGE OF THE METER PANEL.
5. FOR NEW CONSTRUCTION ONLY, DOES NOT APPLY FOR UPGRADES.
6. UPGRADES AND REPLACEMENTS – LINE SIDE PANELS THAT ARE CURRENTLY INSTALLED 24 INCHES OR GREATER FROM THE LINE SIDE OF THE GAS METER, CLEARANCE MAY NOT BE REDUCED. PANELS THAT ARE CURRENTLY INSTALLED LESS THAN 24 INCHES FROM THE GAS METER, MAY REMAIN (OR BE RE-INSTALLED) IN EXISTING LOCATION.
7. UPGRADES AND REPLACEMENTS – LOAD SIDE PANELS THAT ARE CURRENTLY INSTALLED 18 INCHES OR GREATER FROM THE LOAD SIDE OF THE GAS METER, CLEARANCE MAY NOT BE REDUCED. PANELS THAT ARE CURRENTLY INSTALLED LESS THAN 18 INCHES FROM THE GAS METER, MAY REMAIN (OR BE RE-INSTALLED) IN EXISTING LOCATION.

D122 Rev. 10/26/20

FINAL DESIGN
APPROVED FOR CONSTRUCTION

DISTRICT: 27 – MONROVIA	PROJ. MGR. PHERREIGO, MATTHEW PHONE (626) 201-2407		PLANNER PHERREIGO, MATTHEW PHONE (626) 201-2407	DESIGNER VIZCARRA, JOSE A	
PROJECT NO. 2504769	SERVICE REQUEST 3394042	MSR NO.	PRODUCT-1 2042914-LINE EXTENSION		ASSOC DESGN
CIRCUIT / VOLTAGE EL CENTRO 4KV		GPS	PRODUCT-2		ASSOC DESGN
SUB / PG NO. GARFIELD		CIRCUIT CODE	PRODUCT-3		ASSOC DESGN
INVENTORY MAP 71-76B		J.P.A. NO.	PROPOSED CONSTRUCTION (LOCATION) 1107 GREVELIA ST SOUTH PASADENA CA 91030		
F	11/7/22	E. GADDISON	M. PHERREIGO	J. VIZCARRA	
TYPE	DATE	APPROVED BY	CHECKED BY	DRAWN BY	PAX #
Southern California Edison Company				SHEET 2 of 2	DESIGN\DRWG NO. 1554340_0.01

FILE NAME:1554340_0.01.DWG SAVE DATE:11/7/2022 3:07 PM SAVED BY:VIZCARRA

Grevelia & Berkshire Pocket Parks Project No. 005157

Release Q&A | Export

Q&A Deadline *October 17, 2024 5:00 PM (PDT)*

Unreleased Questions

Select All | Select None | Add New | Expand All | Collapse All

Released Questions

Expand All | Collapse All

Set 1 Released via Addendum 1.1 10/14/2024 12:55 PM (PDT) – 1 question

1.1 Submitted 10/14/2024 11:58 AM (PDT) The prebid date is stated as 10/22 on planetbids, but 10/17 in the bid...

Vendor	RE Schultz Construction, Inc.
Question	The prebid date is stated as 10/22 on planetbids, but 10/17 in the bid docs. Please confirm which one is accurate.
Answer	Addendum 01 was issued to clarify that the pre-bid meeting will be help at 8:30 AM on 10/17/2024. The pre-bid meeting date has been corrected to 10/17/2024 at 8:30 am on Planetbids.

Set 2 Released via Addendum 03 10/21/2024 5:01 PM (PDT) – 6 questions

2.1 Submitted 10/17/2024 9:57 AM (PDT) There is no Landscape Maintenance bid item shown on the Bid Form. Plea...

Vendor Marina Landscape Inc.

Question There is no Landscape Maintenance bid item shown on the Bid Form. Please clarify the Landscape Maintenance specified in technical specs sections 3.06/ 329000 - Landscaping will be paid for which bid item.

Answer The costs associated with landscape maintenance as specified in the technical specifications shall be incorporated into the contract unit price for each line item that would require maintenance and establishment per the technical specifications.

2.2 Submitted 10/16/2024 4:44 PM (PDT) Because there are no approved Edison plans, we can only bid what is sh...

Vendor Monet Construction,Inc

Question Because there are no approved Edison plans, we can only bid what is shown on the Construction documents in regards to edison . Do you want to separate and add line items for the the edison costs at the 2 parks? Final pricing will have to happen once the edison plans are approved and issued if there are additional requirements.

Answer Please see Addendum Number 04 for approved SCE electrical plans which include the scope of work for which SCE is responsible. All electrical work required from the contractor shall be included in the line items labeled "ELECTRICAL & GENERAL PARK LIGHTING" for both parks. Work to be completed by SCE shall not be included in line items "ELECTRICAL & GENERAL PARK LIGHTING" for both parks. SCE work as described in the approved plans shall not to be included in the contractors bid.

2.3 Submitted 10/16/2024 4:43 PM (PDT) Please see Electrical Site plan for Gravelia E1.1 and note 6 in the bo...

Vendor	Monet Construction,Inc
Question	Please see Electrical Site plan for Gravelia E1.1 and note 6 in the bottom left corner. Note 6, says this should be a pull box, but looks like a power pole (note 7). Please confirm this is a new power pole and what the height of the pole is?
Answer	Yes, on Grevelia E1.1 the construction note 6 should be a construct note 7 for a new power pole to be installed. Please see Addendum Number 04 for approved SCE plans. Contractor shall be responsible for installation of conduit from new pole to the pedestal, installation of hand hole per plans and construction of the pedestal. SCE shall be responsible for installation of new pole, riser and underground service wiring from the riser, through conduit installed by contractor to the pedestal.

2.4 Submitted 10/16/2024 4:43 PM (PDT) -1-1/2" WATER SERVICE WITH BACKFLOW PREVENTER DEVICE WITH CAGE ENCLOSU...

Vendor	Monet Construction,Inc
Question	-1-1/2" WATER SERVICE WITH BACKFLOW PREVENTER DEVICE WITH CAGE ENCLOSURE. WATER METER AND GATE VALVE PER SOUTH PASADENA WATER DEPARTMENT STANDARDS Please confirm that this line item for both parks includes Hot tap to existing water main in street with traffic control, encroachment permit and Asphalt patch? Please confirm that we can hot tap or if we have to cut the main and install a T for the new service?
Answer	Yes, this line item shall include hot tap to existing water main in the street and shall include all costs associated with temporary traffic control,

trenching and backfilling and connection to water main per details provided in Appendix V of the specifications. Encroachment permit shall be required but the City will waive the fees associated.

2.5 Submitted 10/16/2024 12:13 PM (PDT) Is there a self-performance minimum for prime contractors?

Vendor	Environmental Construction Inc
Question	Is there a self-performance minimum for prime contractors?
Answer	Yes prime contractor shall be responsible for at least 50% of the contract work, please see Section 3 - Control of the Work, 3-3.2 Additional Responsibility in the Special Provisions (Section F) of the specifications.

2.6 Submitted 10/15/2024 11:13 PM (PDT) Is this job PLA or Prevailing Wages?

Vendor	RAMSA CONSTRUCTION INC
Question	Is this job PLA or Prevailing Wages?
Answer	This project will require prevailing wage rates to be paid. Project Labor Agreement is not required.

CITY OF SOUTH PASADENA

CLASS 32 CATEGORICAL EXEMPTION EVALUATION REPORT

Grevelia Pocket Park Project

1107 Grevelia Street (APN 5315-011-904), South Pasadena, CA 91030

November 2023

This Class 32 Categorical Exemption Evaluation Report (CE Evaluation) documents the eligibility of the proposed Grevelia Pocket Park in the City of South Pasadena (City) for a Categorical Exemption from the California Environmental Quality Act (CEQA).

1. Project Description and Location

The 9,130-square-foot Project Site is located at 1107 Grevelia Street (APN 5315-011-904) in South Pasadena, Los Angeles County, California. The Project Site is bounded by Grevelia Street to the north and residential uses to the east, west, and south. Interstate 110 Freeway/Arroyo Seco Parkway is located to the north and downslope of Grevelia Street. See **Figures 1** and **2** for the Regional Location Map and the Project Location Map.

The Project proposes a pocket park that would replace a vacant parcel. The entrance to the Project would be accessed from Grevelia Street and marked by a park sign and decorative bollards with lighting. The Project would feature a round plaza with a rock and succulent garden and a public art piece. Tables and seating areas would surround the plaza, which would connect to a walking path adjacent to two play areas. The first play area would consist of precast children's play equipment. The second play area would be passive and made of turf and would occupy approximately half of the southern portion of the Project Site. The southernmost portion of the Project Site would consist of the end of the walking path featuring a circular seating area surrounding a tree. In addition, the Project would include landscaping, new trees, benches, bollards with lighting, a drinking fountain, a pet waste station, and trash and recycling receptacles along the perimeter of the site. The Project would have fencing and would not include gates. Upon completion, the proposed park would be open from dawn to dusk with closure from 10 p.m. to 6 a.m. See **Figure 3** for the Conceptual Site Plan.

The Project is intended to serve the local neighborhood and the City does not anticipate an additional parking demand other than what can be accommodated by the available street parking within the vicinity.

Construction of the Project is anticipated to occur over 7 months.[1] Project construction activities would include site preparation, grading, building construction, paving, and painting. Grading of the Project Site is anticipated to be roughly balanced with approximately 30 cubic yards of fill to be imported.

2. Existing Conditions

The Project Site is currently vacant of developed uses. Vegetation onsite consists of six trees, including two protected coast live oak trees, as well as ruderal volunteer grasses and forbs that propagate between site maintenance cycles. The Project Site's topography descends to the south at an approximate gradient of 2 to 3 percent.

[1] The evaluation herein conservatively assumed commencement of construction of the Project in the summer of 2022, with anticipated Project completion in the spring of 2023. This is a conservative assumption, as construction equipment emissions are projected to decrease over time as new equipment and vehicles meeting stricter emissions standards replace older equipment and vehicles in the fleet.

The Project Site was previously owned by the California Department of Transportation (Caltrans) and was purchased by the City of South Pasadena and rezoned as OS (Open Space). The Project Site is currently designated for Medium Density Residential land uses by the existing General Plan. The City's ongoing General Plan update, which has not yet been adopted, would designate the Project Site for Parks & Open Space land uses.

Surrounding uses include Grevelia Street to the north and residential uses to the east, west, and south. North and downslope of Grevelia Street is the Interstate 110 Freeway/Arroyo Seco Historic Parkway.

3. Categorical Exemption

CEQA and the State CEQA Guidelines require the preparation of environmental documents to assess and report the environmental impacts of certain types of projects that could result in adverse effects on the environment. Pursuant to CEQA Section 21084, the CEQA Guidelines (Section 15300 et seq.) also define classes of projects that are found by the Secretary of the California Natural Resources Agency to not have a significant effect on the environment and thus are declared to be categorically exempt from the requirement for the preparation of environmental documents. These types of projects are exempt from CEQA, provided that none of the exceptions to the use of categorical exemptions apply (CEQA Guidelines Section 15300.2).

Among the list of categorically exempt classes of projects is Class 32 In-Fill Development Projects, as defined in CEQA Guidelines Section 15332. Class 32 projects consist of those characterized as infill development meeting the following conditions identified in Section 15332:

> (a) the project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;
>
> (b) the proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;
>
> (c) the project site has no habitat for endangered, rare, or threatened species;
>
> (d) approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and
>
> (e) the site can be adequately served by all required utilities and public services.

The evaluation below demonstrates the Project's satisfaction of these criteria.

a. Consistency with General Plan Designation and Policies and Zoning Designation and Regulations

As discussed above, the Project is a proposed park with play areas, seating, and landscaping. The Project Site is currently zoned for OS (Open Space) and designated for Medium Density Residential land uses by the existing General Plan. The General Plan update, which has not yet been adopted, would designate the Project Site for Parks & Open Space land uses.

(1) General Plan Designation and Policies

As established in the General Plan Land Use Element, the Medium Density Residential designation allows for the development of duplexes, triplexes, fourplexes, and other attached dwellings at a density of 6-14 units per acre, not exceeding two stories, or in combination with single-family dwellings.[2] The designation invites flexibility in site design and unit type and is intended to maintain the character of medium density neighborhoods and to encourage maintenance of existing structures when additional units are added to the medium density residential designation. The Project would be consistent with the current Medium Density

[2] City of South Pasadena General Plan, Land Use Element, 1998.

Residential designation as the proposed uses would not conflict with residential development or density. As a park operated by the City, the Project would be designed to maintain the character and livability of the existing neighborhood and encourage use by the surrounding community. As previously described, the General Plan update, which has not yet been adopted, would designate the Project Site for Parks & Open Space land uses. Furthermore, the City purchased the Project Site from Caltrans and rezoned the parcel for OS (Open Space) in 2016. As such, the updated General Plan's Parks & Open Space land use designation is described below for the CE Evaluation. The Parks & Open Space land use designation is intended for City parks and playgrounds, commercial recreation, natural open space, recreational trails and linkages, utility easements, and flood control channels. In addition to this upcoming land use designation, the Open Space & Resource Conservation Element from the existing General Plan identifies several goals and policies which act as guides for the City's future development of open space and resource conservation. Among these is Goal 1, which promotes the design, development, and maintenance of a system of parks that will provide a complete range of facilities and activities for all age groups. In addition, Policy 1.2 ensures that all residential neighborhoods are served by at least one neighborhood park to the fullest extent possible. The Open Space & Resource Conservation Element notes that as a built-out city, the challenge facing South Pasadena is to create an open space system that does not solely consist of the unusable spaces left over from development, but rather one that integrates parks and playgrounds, connecting corridors, natural habitats, and natural and cultural resources into a meaningful multipurpose network. The Project would be consistent with the goal and policy by constructing a park within a residential neighborhood whose nearest parks include Orange Grove Park, which is located approximately 0.35 miles southwest of the Project Site, and Garfield Park, which is located approximately 0.48 miles east of the Project Site. In providing a children's play area and open turf field, as well as seating areas, the Project would include a variety of active and passive recreational spaces and uses for all age groups within walking distance of nearby residences. The Project would also introduce new trees to the site, which would provide shade and habitat.

Therefore, the Project is consistent with the General Plan and its relevant provisions.

(2) Zoning Designation and Regulations

As discussed above, the City has already rezoned the parcel for OS. Per South Pasadena Municipal Code (SPMC) Section 36.240.040, the Project would be designed, constructed, and/or established in compliance with development standards determined through the City's development review process. As such, the Project would be consistent with the development regulations set forth in the SPMC.

(3) Summary

As discussed above, the Project is consistent with the Parks & Open Space land use designation and relevant provisions in the General Plan. With the allowed park use, the Project would also be consistent with the uses and development regulations specified in the SPMC for the OS zone.

b. Project Location within City Limits on a Site No More than 5 Acres Substantially Surrounded by Urban Uses

The Project Site is 9,130 square feet (0.21 acre) in an urbanized and developed area of the City of South Pasadena. The Project Site is bounded by Grevelia Street to the north and residential uses to the east, west, and south. Interstate 110 Freeway/Arroyo Seco Parkway is located to the north and downslope of Grevelia Street. Farther east are commercial uses, and farther to the south are residential and commercial uses of the Mission Street Specific Plan. As such, the Project Site is within the South Pasadena city limits, is located on a site that is less than 5 acres in size, and is substantially surrounded by urban land uses. Therefore, the Project is consistent with this criterion.

c. Habitat for Endangered, Rare, or Threatened Species

As stated above, the Project Site is in an urbanized area and completely surrounded by development. Vegetation onsite consists of maintained grasses and weeds and six trees around the perimeter of the

Project Site. No protected trees are present. The Project would retain four trees, and nine new trees, including two oak trees, would be planted. The Project Site does not contain any vegetation that constitutes a natural community or any habitat that is biologically sensitive. The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) shows that there have been endangered, rare, or threatened species identified in the Los Angeles quadrangle (where the Project Site is located).[3] However, the Project Site does not contain any critical habitat, as delineated by the United States Fish and Wildlife Service, nor does it contain the habitat necessary to support any of the listed species.[4] Furthermore, the Project Site does not contain any wetland or riparian habitat as identified by the National Wetlands Inventory.[5]

Because Project-related construction activities would take place on a vacant site that has been previously disturbed by past grading activities, and because the Project Site is located within a fully urbanized environment that is surrounded by disturbed areas (such as sidewalks, residential homes, overhead powerlines and streetlights, and major rights-of-way), implementation of the Project would not result in loss of habitat utilized by endangered, rare, or threatened species.

d. Effects Relating to Traffic, Noise, Air Quality, or Water Quality

(1) Traffic

The South Pasadena Transportation Impact Analysis Methodology (May 6, 2020) was developed on behalf of the City to address the 2019 amendments to the CEQA Guidelines made by the California Natural Resources Agency as required by Senate Bill 743. As discussed in this Methodology document, projects that do not meet the screening thresholds will be presumed to cause a less than significant CEQA transportation impact and will not require a detailed transportation impact analysis for CEQA purposes. The City's Transportation Impact Analysis Methodology provides several screening thresholds for land use development projects:

a) Small Project Size—Projects that would generate fewer than 100 trips per day.
b) Low Vehicle Miles Traveled (VMT) Area—Projects consistent with the General Plan and any relevant specific plan and located in traffic analysis zones (TAZ) that have VMT per service population below 85 percent of the Los Angeles County averages, as mapped in the Transportation Impact Analysis Methodology.
c) Within a Transit Priority Area—Projects within 0.5 miles of the five major transit stops in the City would be screened from analysis unless they have a floor area ratio of less than 0.75, include more parking than required by the City, are inconsistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainability Communities Strategy (RTP/SCS), or replace affordable housing units with a smaller number of moderate- or high-income residential units. The transit priority areas of the City are mapped in the Transportation Impact Analysis Methodology.
d) Retail Projects—Retail projects of less than 50,000 square feet.
e) Affordable Housing—The City will find a less than significant impact for development projects with a majority of affordable housing (over 50 percent) and the portions of a development project with less than 50 percent affordable housing.
f) Redevelopment Projects—Replacement of an existing land use with a land use that generates less VMT than its previous use.
g) Community-Serving Projects—Similar to the screening of retail projects, municipal projects such as schools, parks, community centers, libraries and other community-serving uses would be

[3] California Department of Fish and Wildlife, CNDDB Quad Species List, Los Angeles Quadrangle, https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick, accessed March 28, 2022.
[4] United States Fish and Wildlife Service, Critical Habitat for Threatened and Endangered Species Mapper, https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77, accessed March 28, 2022.
[5] United States Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/ accessed March 28, 2022.

intended for local use and would be presumed to have a less than significant impact on transportation, based on the discretion of the Public Works Department.

The Project is a municipal project that is community-serving and intended for local use. As described above, the Project would include a variety of active and passive recreational spaces and uses and would not include programmed activities. The neighborhood park would be within walking distance of nearby residences, and no parking would be proposed. Based on these characteristics, the Project would generate less than one vehicle trip per day (i.e., far fewer than 100 trips).[6] Therefore, the Project would be screened out of a CEQA transportation analysis because of its small project size. In addition, the Project Site is located within a City Transit Priority Area and does not include a floor area ratio, parking, or residential units, and would not be inconsistent with the SCAG RTP/SCS. Therefore, the Project would also be screened from analysis due to such criteria. Accordingly, the Project would not require a CEQA Transportation Impact Analysis, and transportation impacts would be less than significant.

(2) Noise

The following analysis summarizes the Noise Impact Analysis report prepared for the Project, available as **Appendix A** of this CE Evaluation.[7] Sensitive receptors surrounding the Project Site include residential uses on the west property line, 1.5 feet to the east, and 21 feet to the south. Such uses may be exposed to elevated noise levels generated by the Project during construction and operation.

Construction activities would occur over approximately seven months and would include the following phases: site preparation, grading, building construction, paving, and painting. Per SPMC Code Section 19A.13(a), it is unlawful for construction activity to occur within a residential zone or within 500 feet of a residential zone on Monday through Friday before 8:00 a.m. and after 7:00 p.m., Saturday before 9:00 a.m. and after 7:00 p.m., and on Sundays and City-recognized holidays before 10:00 a.m. and after 6:00 p.m. Accordingly, Project construction activities would only occur during the established allowable hours. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities. As such, the Federal Transit Administration (FTA) daytime construction noise thresholds of 90 dBA L_{eq} for residential uses were considered in the analysis. As shown in Table E of the Noise Report, the highest noise levels during construction would occur during site preparation and grading and would reach approximately 89 dBA L_{eq} at the residential uses next to the Project Site.[8] As such, all calculated construction noise levels are within the FTA daytime construction noise standards of 90 dBA L_{eq} for residential uses. Therefore, the Project would not create a substantial temporary increase in ambient noise levels from construction activities, and construction noise impacts would be less than significant.

During operation, the Project would serve the local community and the majority of the visitors would be anticipated to reach the park by walking. According to the Air Quality Impact Analysis report, the Project would generate less than one vehicle trip per day.[9] Due to the nominal vehicle trips generated, the Project would not result in a substantial permanent roadway noise increase to ambient noise levels. As such, Project impacts related to traffic noise would be less than significant.

Operation of the Project would also generate noise associated with the use of the park amenities and gathering areas. Based on Policy 5.1 of the existing General Plan Safety and Noise Element, which considers the impacts of new projects involving increases in noisy activities or traffic, an increase of 3 dBA where the ambient noise level in excess of 65 dBA CNEL in sensitive areas shall be considered significant. In order to determine the noise impacts created by the Project, a reference noise measurement was taken at the existing Community & Demonstration Garden, which is similarly sized open space at 1028 Magnolia

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6 Vista Environmental, Air Quality Impact Analysis, June 9, 2022.

7 Vista Environmental, Noise Impact Analysis, June 7, 2022.

8 Noise equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period.

9 Vista Environmental, Air Quality Impact Analysis, June 9, 2022.

Street.[10] During the reference noise measurement, there were two people working in the community garden, a person walked a dog through the front portion of the park, and a few vehicles passed by on Magnolia Street. The reference noise measurement found that Community & Demonstration Garden produces a noise level of 45.7 dBA L_{eq}, which is below the existing ambient noise level of 59.9 dBA L_{eq} for the Project Site. As such, the Project's on-site activities would not be anticipated to exceed the City's noise threshold of a 3 dBA increase in ambient noise where ambient noise levels exceed 65 dBA. Therefore, Project's operational on-site noise levels would be within the City noise standards, and impacts would be less than significant.

Lastly, Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Vibration impacts from construction activities associated with the Project would typically be created from the operation of heavy off-road equipment. As described above, sensitive receptors surrounding the Project Site include residential uses on the west property line, 1.5 feet to the east, and 21 feet to the south. Per SPMC Section 36.300.110(I), activities shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line; however, vibration caused by construction activities is exempt from this standard. Since neither the SPMC nor General Plan provide a quantifiable vibration threshold for temporary construction activities, guidance from the FTA has been utilized. Specifically, the *Transit Noise and Vibration Impact Assessment Manual*, September 2018, states that building damage may occur to non-engineered timber and masonry buildings at vibration levels as low as 0.25 inch per second peak particle velocity (PPV). The Project's primary source of vibration during construction would be from the operation of a loaded truck, which would create a vibration level of 0.076 inches per second PPV at 25 feet. As it is unlikely that a loaded truck would operate any closer than 10 feet to an existing structure, the vibration level at the nearest off-site structures (10 feet away) would be 0.21 inches per second PPV based on typical propagation rates. As such, the vibration level at the nearest off-site structures would be below the 0.25 inch per second PPV threshold detailed above, and impacts would be less than significant.

(3) Air Quality

The following analysis summarizes the Air Quality Impact Analysis Report prepared for the Project, included as **Appendix B** of this CE Evaluation.[11] The Project is located within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) has jurisdiction in the Basin, which has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. The Basin does not meet the federal ambient air quality standards for ozone or particulate matter $PM_{2.5}$ and is therefore classified as a non-attainment area for these pollutants. The Basin is designated as a non-attainment area for particulate matter PM_{10} based on state standards but designated as an attainment area based on federal standards. The Basin has also been designated as a partial non-attainment area for lead. In order to reduce emissions pursuant to the federal Clean Air Act, the SCAQMD adopted the 2016 Air Quality Management Plan (AQMP), which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state and federal air quality standards. The 2016 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the 2016-2040 RTP/SCS produced by SCAG, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.

The SCAQMD established two criteria for determining consistency with the AQMP. The first criterion considers whether a project would result in an increase in the frequency or severity of existing air quality

[10] The Community & Demonstration Garden located at 1028 Magnolia Street is referred to as Magnolia Street Park in Appendix A of this CE Evaluation.

[11] Vista Environmental, Air Quality Impact Analysis, June 9, 2022. The analysis considers the total development of the proposed Project (Grevelia Park) and a similarly proposed pocket park. Therefore, the impact analysis is conservative.

violations, cause or contribute to new violations, or delay attainment of air quality standards or the interim emission reductions specified in the AQMP. The second criterion considers whether a project would be consistent with the population, housing, and employment growth projections utilized by the AQMP. For determining consistency with AQMP consistency criterion 1, **Table 1** and **Table 2,** below, show Project-related emissions for construction and operation, as well as the SCAQMD thresholds for determining a significant impact.

In the short term, Project-related emissions would be generated from construction activities, including site preparation and grading, building construction, paving, and application of architectural coatings. In accordance with the SCAQMD Guidelines, the Air Quality Report utilized CalEEMod to model construction emissions for volatile organic compounds (VOCs), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), PM_{10}, and $PM_{2.5}$, which are shown in **Table 1**, below. As indicated therein, the maximum daily criteria pollutant emissions would not exceed the SCAQMD regional and local criteria pollutant thresholds. In addition, construction emissions would be short term, limited only to the period when construction activity is taking place. As such, construction-related criteria pollutant emissions would be less than significant for the Project.

Table 1 – Project Construction Emissions

Construction Period	Pollutant (pounds/day)[1]					
	VOC	**NO_X**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Summer 2022	1.13	12.58	7.48	0.02	2.74	1.52
Winter 2022	1.13	12.61	7.46	0.02	2.74	1.52
Summer 2023	0.67	5.54	7.67	0.01	0.47	0.30
Winter 2023	0.67	5.55	7.62	0.01	0..47	0..30
Maximum Daily Construction Emissions	**1.13**	**12.61**	**7.67**	**0.02**	**2.74**	**1.52**
SCAQMD Regional Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
SCAQMD Local Screening Thresholds[2]	*–*	*69*	*535*	*–*	*4*	*3*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

VOC = volatile organic compounds; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns.

Notes:

[1] Based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403. Emissions were calculated using CalEEMod, version 2020.4.0.

[2] Based on the SCAQMD Final Localized Significant Threshold (LST) Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$ and calculated from SCAQMD's Mass Rate Look-up Tables for one acre at 25 meters in Air Monitoring Area 8, West San Gabriel Valley.

Source: Vista Environmental, Air Quality Impact Analysis, June 9, 2022.

The Project's long-term operational emissions would be generated by project-generated vehicle trips, emissions from energy usage, and on-site area source emissions created from the ongoing use of the Project. The worst-case summer or winter daily emissions generated by the Project's long-term operations have been calculated and are summarized in **Table 2**, below. As indicated therein, criteria pollutant emissions during operation of the Project would not exceed either SCAQMD regional or local thresholds.

As such, operations-related criteria pollutant emissions would be less than significant for the Project. Furthermore, based on the information provided above, the Project would be consistent with the first criterion for evaluating consistency with the AQMP.

Table 2 – Long-Term Operational Air Emissions

Emissions Source	Pollutant (lbs/day)[1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source Emissions[2]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Energy Emissions[3]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Emissions[4]	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Total Emissions	**<0.01**	**<0.01**	**0.02**	**<0.01**	**<0.01**	**<0.01**
SCAQMD Regional Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
SCAQMD Local Screening Thresholds[2]	*–*	*69*	*535*	*–*	*1*	*1*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1 Emissions were calculated using CalEEMod, version 2020.4.0.
2 Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
3 Energy usage consist of emissions from natural gas usage; however, no natural gas appliances are proposed.
4 Mobile sources consist of emissions from vehicles and road dust.

Source: Vista Environmental, Air Quality Impact Analysis, June 9, 2022.

As stated above, the second AQMP consistency criterion considers whether a project would be consistent with the assumptions utilized in the AQMP. In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the City of South Pasadena General Plan, SCAG's regional growth forecast, and the SCAG RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth. As stated above, the Project Site is designated in the existing General Plan for Medium Density Residential land uses but would be designated as Parks & Open Space land uses when the General Plan update is adopted. The City has already rezoned the Project Site for open space uses. As such, the Project Site would result in reduced intensity of uses and would also address the community's need for additional open space. Therefore, the Project would be consistent with the General Plan and with the types, intensity, and patterns of land use envisioned for the Project vicinity. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the Project would be consistent with the projections. In addition, as discussed above, the Project would result in less than significant air quality impacts and would not require mitigation. As such, the Project would be consistent with criterion 2 of the AQMP consistency evaluation process.[12]

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. The closest sensitive receptors are residential uses on the west property line, 1.5 feet to the east, and 21 feet to the south. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction impacts (on-site emissions only) and operations impacts (only if the project includes stationary sources or attracts idling vehicles). As discussed above, construction-related emissions would not exceed the LST screening criteria established by the SCAQMD, and Project park operations do not include stationary sources or attract idling vehicles. Therefore, LST impacts would be less than significant.

As discussed in the Air Quality Report, CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. CO concentrations are usually indicative of the local air quality

[12] For the same reasons described above, due to the small scale of the proposed community-serving pocket park, the Project would be consistent with the 2022 AQMP adopted in December 2022.

generated by a roadway network and are used as an indicator of potential impacts to sensitive receptors. However, operation of the Project is anticipated to generate less than one vehicle trip per day. As such, no local CO hot spots are anticipated to be created from the Project and no CO hot spot modeling was required. Therefore, a less than significant impact is anticipated to sensitive receptors from potential CO hot spots.

Finally, the Project would not cause any significant odor impacts. Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of these uses. While construction activities may generate detectable odors from application of coatings (e.g., asphalt pavement, paints, and solvents) and from emissions from diesel equipment, construction-related odors would be short term in nature and would cease upon Project completion. Further, existing state and regional regulations, such as state codes limiting idling time of construction equipment and SCAQMD's Rule 1113, which minimizes odor impacts from architectural coatings, would ensure that any odor impacts associated with the Project would be less than significant.

(4) Water Quality

The Project Site contains six trees and is currently vacant of developed uses. The Project Site's topography descends to the south at an approximate gradient of 2 to 3 percent. Surface drainage at the Project Site consists of sheet flow runoff of incident rainfall derived from within the site boundaries. Based on a geotechnical investigation of the Project Site, no groundwater was encountered in a boring at a 15-foot depth and another boring at a 5-foot depth. As such, dewatering would not be anticipated as part of the proposed minimal-depth grading activities.[13]

Stormwater quality would be managed through compliance with regulatory requirements. During construction, in accordance with SPMC Chapter 23, temporary stormwater best management practices (BMPs), such as gravel bags and silt fences, would be installed to minimize erosion and restrict sedimentation of the storm drain downstream. In addition, in accordance with SPMC Section 23.14(d)(3), the Project would be required to develop a low-impact development (LID) plan and retain stormwater runoff on-site for the stormwater quality design volume defined as the runoff from: i) the 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or ii) the volume of runoff produced from a three-fourths-inch, 24-hour rain event, whichever is greater. Once developed as a pocket park, the Project Site would be covered by impervious surfaces, pervious surfaces, and managed landscaped areas. Given the proposed recreational use of the facility, the naturalized/permeable nature of the park, and the vegetated nature of the site, the amount of water pollutants that would be generated on-site would be limited. The amount of impervious surfaces on the Project Site (excluding the right-of-way) would increase from approximately 1 percent pre-development to 13 percent post-development. As part of its LID plan, the Project would install a new StormTech MC-3500 site drainage system to minimize the amount of surface runoff that would enter the City's storm drain system. With the proposed on-site drainage system, runoff from the Project Site would be negligible and the Project would comply with stormwater quality requirements. Thus, Project impacts related to water quality would be less than significant.

e. Utilities and Public Services

The Project Site is currently served by electric, trash, water, and wastewater services. The Project would require new service connections for electricity, water, and wastewater services, which would be undertaken during the construction period and could occur within the Project Site. Water and wastewater services to the Project would be provided by the City. The Project is expected to generate a minimal water demand from the proposed drinking fountain and landscaping. The City's latest Urban Water Management Plan (UWMP) uses the General Plan's planned growth and development in the City as well as population

[13] Global Geo-Engineering, Inc., Geotechnical Investigation and Infiltration Testing, Proposed Park Development, South Side of Grevelia Street, October 28, 2021.

projections from SCAG.[14] As the Project would be consistent with its underlying zoning and General Plan designation, and since the UWMP demonstrates adequate water supply for all normal and dry year scenarios through the plan's horizon year (2045), the Project's water demand could be adequately served by the City.

For wastewater services, the City Public Works Department's Sewer Division provides primary responsibility for ongoing maintenance and operations of the City's sanitary sewer system. The system consists of approximately 53 miles of gravity sewer lines ultimately flowing into larger trunk lines, which are owned and operated by the Los Angeles County Sanitation Districts.[15] The only source of wastewater from the Project would be the sole drinking fountain provided on-site. As such, the generated wastewater during operation would be minimal and a small fraction of the Sanitation Districts' existing capacity. Further, because the City's General Plan is used to assist with long-term sewer infrastructure planning efforts, the Project's consistency with the General Plan would ensure that the City's sewer infrastructure has sufficient capacity to serve the Project.

Electricity service is provided to the Project Site by Southern California Edison (SCE), whose existing portfolio of resources includes renewable energy (31.4 percent), large hydroelectric (2.3 percent), natural gas (22.3 percent), nuclear (9.2 percent), and other/unspecified power sources (34.8 percent).[16] This mix of resources enhances electrical system resilience by not relying on a single transmission source. SCE's Integrated Resource Plan has a primary objective that includes system reliability, as well as establishing SCE's planned procurement of energy to meet demands through 2030.[17] Therefore, SCE's long-term forecasts for electricity demand within its service area, which includes the Project Site, would account for Project-related electricity demand.

The City of South Pasadena contracts with Athens Services for waste and recycling services rubbish service and collection.[18] The City disposes of refuse at landfills both within Los Angeles County and outside the County.[19] These landfills have a total remaining disposal capacity of approximately 482.5 million tons.[20] As such, there is adequate solid waste service capacity to serve the Project.

The Project would also incrementally increase the demand for public services, such as fire protection and emergency medical services, and police protection. Because there is no residential component to the Project, it would not have any impact on area schools and libraries. In addition, as the Project is a proposed City pocket park, the City's Parks Division would be responsible for its maintenance and management.[21] As such, the Project would not have a negative impact on other parks in the City. The South Pasadena Fire Department (SPFD) would provide fire protection and emergency medical services. The SPFD station is located at 817 Mound Avenue, which is approximately 0.23 miles southeast of the Project Site. The South

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14 City of South Pasadena, 2020 Urban Water Management Plan, October 2021.
15 City of South Pasadena, Sanitary Sewer Management Plan, 2009.
16 Southern California Edison, 2021 Power Content Label.
17 Southern California Edison, 2017-2018 Integrated Resource Plan, August 1, 2018.
18 City of South Pasadena, Sanitary, Waste Collection & Utility Billing, https://www.southpasadenaca.gov/government/departments/finance/waste-collection-utility-billing, accessed June 21, 2022.
19 Within Los Angeles County: Antelope Valley Public Landfill; Azusa Land Reclamation Co. Landfill; Chiquita Canyon Sanitary Landfill; Lancaster Landfill and Recycling Center; and Scholl Canyon Landfill. Outside of Los Angeles County: El Sobrante Landfill; Frank R. Bowerman Sanitary Landfill; Mid-Valley Sanitary Landfill; Olinda Alpha Landfill; and San Timoteo Sanitary Landfill. Based on CalRecycle records of Los Angeles Countywide disposal by destination from 2019 (the most recent year for which data is available), https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/CountywideDisposal, accessed June 21, 2022.
20 Los Angeles County Public Works, Countywide Integrated Waste Management Plan 2020 Annual Report, October 2021, Appendix E-2, Tables 4 and 6.
21 City of South Pasadena Department of Public Works, Parks Division, https://www.southpasadenaca.gov/government/departments/public-works/parks-division, accessed June 21, 2022.

Pasadena Police Department (SPPD) would provide law enforcement services to the Project. The SPPD is located at 1422 Mission Street, which is approximately 0.24 miles southeast of the Project Site. Furthermore, because the Project would be consistent with the Project Site's zoning and General Plan designation, the level of growth associated with the Project would be consistent with the City's long-term growth planning.

Based on the above, the Project would result in less than significant impacts related to utilities and public services, and the Project Site can be adequately served by all required utilities and public services.

4. Considerations of Exceptions to the Use of a Categorical Exemption

Section 15300.2 of the CEQA Guidelines identifies the following exceptions to the use of a categorical exemption:

a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located—a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

d) Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including, but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

e) Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

f) Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

As evaluated below, none of these exceptions apply to the Project. Therefore, the lead agency (the City of South Pasadena) is not precluded from categorically exempting the Project from CEQA.

a. Location

The location exception does not apply to the Class 32 categorical exemption. Regardless, the Project Site is not within a particularly sensitive environment, and there are no designated environmental resources of hazardous or critical concern on the site or in the vicinity. The Project Site has been previously disturbed by past grading activities and is surrounded by residential development.

b. Cumulative Impact

The Project would involve site preparation and grading of the Project Site and construction of the proposed park, which would generate noise and air pollutants. The Project noise impacts were analyzed, as provided in **Appendix A**, and indicate that the Project's construction- and operation-related noise would not generate noise levels that would exceed the City's noise standards at the closest sensitive receptors. In addition, the Project's vehicle trips (less than one per day) would not cause an audible increase in roadway noise. With

regard to air quality, the SCAQMD considers projects that are consistent with the AQMP to have less than significant cumulative air quality impacts. The Project air impacts were analyzed, as provided in **Appendix B**, which indicate the Project would be consistent with the AQMP. As such, the Project would not result in cumulatively considerable air quality or noise impacts.

As discussed previously, the Project is a municipal project that is community-serving and intended for local use. The Project would generate up to a nominal amount of vehicle trips. The Project would not require a CEQA Transportation Impact Analysis, and transportation impacts would be less than significant. As such, the Project's transportation impacts would not be cumulatively considerable, and impacts would be less than significant.

Based on the analysis herein, the Project would not considerably contribute to any significant impacts resulting from successive projects of the same type in the same place over time.

c. Significant Effect Due to Unusual Circumstances

There are no features that distinguish this Project from others in the exempt class; therefore, there are no unusual circumstances. The proposed park uses are encouraged within the land use designation per the City's General Plan. Further, the Project Site is located within an suburbanized area and has been previously disturbed by past grading activities. Given that the Project would be constructed on a site that has been previously graded, that the Project would be consistent with the development pattern in the area, and that the City has rezoned this particular Project Site for the purposes of providing a community-serving pocket park, there are no unusual circumstances.

d. Scenic Highways

The Arroyo Seco Historic Parkway is a Federal Scenic Byway and is located north of the Project Site.[22] Specifically, the parkway is downslope of Grevelia Street and separated physically and from view of the Project Site due to trees, fencing, and vegetation. The Project Site does not contain, nor would it have any impact on, any scenic resources that contribute to views from a scenic highway.

e. Hazardous Waste Sites

Neither the Project site nor any of the adjacent properties appear on the Department of Toxic Substances Control's EnviroStor database or the State Water Resources Control Board's (SWRCB) list of solid waste disposal sites with waste constituents above hazardous waste levels outside the waste management unit.[23] Given the results of the various enforcement or permit-based regulatory listings, and any of the business type-based historical listings (e.g., the Cortese List as specified in Government Code Section 65962.5), this exception does not apply to the Project.

f. Historical Resources

Section 15300.2 of the CEQA Guidelines states that a categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource. CEQA Section 15064.5(b) states:

> A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

---

[22] California Department of Transportation, California State Scenic Highway System Map, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed June 21, 2022.

[23] Department of Toxic Substances Control, EnviroStor database, http://www.envirostor.dtsc.ca.gov/?surl=z19e8, accessed June 21, 2022. California Environmental Protection Agency, Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit, https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf, accessed June 13, 2022.

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code; … or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings … shall be considered as mitigated to a level of less than a significant impact on the historical resource.

The Project Site is currently vacant of developed uses and includes six trees. There are no resources on the Project Site that are eligible for designation as a local historical resource, for listing on the California Register of Historical Resources, or for listing on the National Register of Historic Places.[24] Therefore, the Project would not cause a substantial adverse change in the significance of a historical resource.

5. Conclusion

As described above, the Project meets the requirements of the Class 32 categorical exemption, as it meets the definition of infill development; would be consistent with the applicable General Plan designation and all applicable General Plan policies as well as with the applicable zoning designation and regulations; occurs within City limits on a Project Site of no more than 5 acres substantially surrounded by urban uses; would be located on a site that has no habitat for endangered, rare, or threatened species; would not result in any significant effects relating to traffic, noise, air quality, or water quality; and could be adequately served by all required utilities and public services. Further, none of the exceptions to the use of a categorical exemption apply to the Project. Finally, there are no features that distinguish the Project from others in the exempt class and thus there are no unusual circumstances. Therefore, the Project is categorically exempt from CEQA pursuant to Section 15332 of the State CEQA Guidelines—Class 32, In-Fill Development Projects.

[24] City of South Pasadena, Inventory of Historic Resources, approved by City Council in 2002. California Office of Historic Preservation, California Historical Resources, Los Angeles County, https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=19, accessed June 21, 2022.



Project Location

South Pasadena City Boundary

Michael Baker INTERNATIONAL

N

0 2.5 5 10 Miles

Source: Esri, ArcGIS Online, National Geographic World Map: *South Pasadena, California*

1107 GREVELIA STREET
SOUTH PASADENA, CA 91030

Regional Location Map

Figure **1123**



Project Site

Michael Baker INTERNATIONAL

N

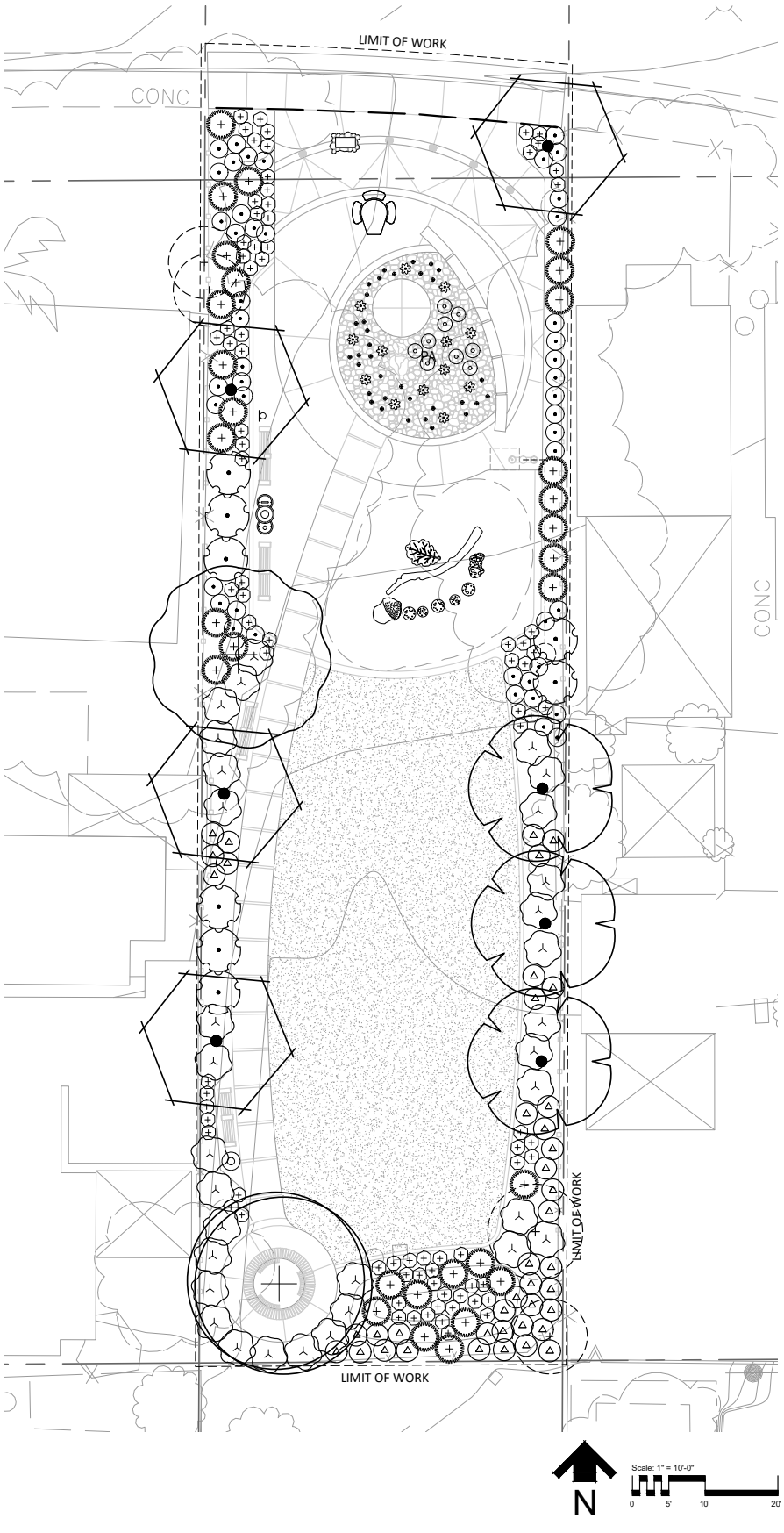
0 125 250 500 Feet

Source: Esri, ArcGIS Online, World Topographic Map: *South Pasadena, California*

1107 GREVELIA STREET
SOUTH PASADENA, CA 91030

Project Location

Figure **1124**



1107 GREVELIA STREET
SOUTH PASADENA, CA 91030

Conceptual Site Plan

Michael Baker INTERNATIONAL

Source: David Volz Design

Figure **1125**

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Appendices

- **Appendix A: Noise Impact Analysis Report**
- **Appendix B: Air Quality Impact Analysis Report**

Appendix A

.

NOISE IMPACT ANALYSIS

BERKSHIRE AND GREVELIA POCKET PARKS PROJECT

CITY OF SOUTH PASADENA

Lead Agency:

City of South Pasadena
Community Services Department
815 Mission Street
South Pasadena, CA 91030

Prepared by:

Vista Environmental
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949 510 5355
Greg Tonkovich, INCE

Project No. 21156

June 7, 2022

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of South Pasadena
cmu	concrete masonry unit
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the noise impacts associated with the proposed Berkshire and Grevelia Pocket Parks project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise and vibration impacts from the proposed project; and
- An analysis of long-term operations-related noise and vibration impacts from the proposed project.

1.2 Site Locations and Study Areas

The proposed project consists of two project sites that are both located in the City of South Pasadena (City). The Berkshire Park site is a 7,482 square foot property at 2006 Berkshire Avenue that is currently vacant other than for a few trees. The Berkshire Park site is bounded by residential uses to the north, east and south and Berkshire Avenue/Valley View Road to the west. The nearest sensitive receptors to the Berkshire Park site consist of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The Berkshire Park site study area is shown in Figure 1.

The Grevelia Park site is a 9,130 square foot property at 1107 Grevelia Street that is currently vacant other than a few trees. The Grevelia Park site is bounded by Grevelia Street and Intestate 110 to the north and residential uses to the east, south and west. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south. The Grevelia Park site study area is shown in Figure 2.

1.3 Proposed Project Description

The proposed project would consist of development of two pocket parks that total 16,612 square feet. Construction activities for the two parks are anticipated to start around July, 2022 and be completed in seven months. The operational hours for the two parks would be dawn to dusk.

The Berkshire Park will have a large grass area for free play at the rear and a small space to play within the front portion of the park. The park will have picnic tables, benches, trash receptacles, a drinking fountain, dog waste stations, exercise equipment, trees, and landscape. An accessible Americans with Disabilities Act (ADA)-compliant ramp will lead people to the rear of the park. Due to the elevation, a water infiltration system will need to be installed. Grading of Berkshire Park will require approximately 650 cubic yards of fill and 250 cubic yards of cut, which will result in the import of 400 cubic yards of dirt.

The proposed improvements will result in the installation of approximately 1,800 square feet of pavement. The proposed Berkshire Park site plan is shown in Figure 3.

The Grevelia Park will have a large grass area for free play at the rear and a small space with precast play pieced in the middle. The front portion of the park will have picnic tables, benches, a drinking fountain, a dog waste station, trash receptacles, ballad-type lighting, trees, and landscape. The park will need a water infiltration system to catch all run-off. Grading of Grevelia Park is anticipated to be roughly balanced with no or only nominal amounts of dirt being imported or exported from the project site. The proposed improvements will result in the installation of approximately 2,200 square feet of pavement. The proposed Grevelia Park project site plan is shown in Figure 4.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City and State of California (State).

City of South Pasadena Noise and Vibration Regulations

The following lists the noise and vibration regulations from the *South Pasadena City Code,* May 5, 2021, that are applicable, but not limited to the proposed project.

- Section 19A.13 – Construction Exemptions; and
- Section 36.300.110 – Performance Standards for new development for noise and vibration.

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 27200-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact.

Generation of excessive groundborne vibration or groundborne noise levels?

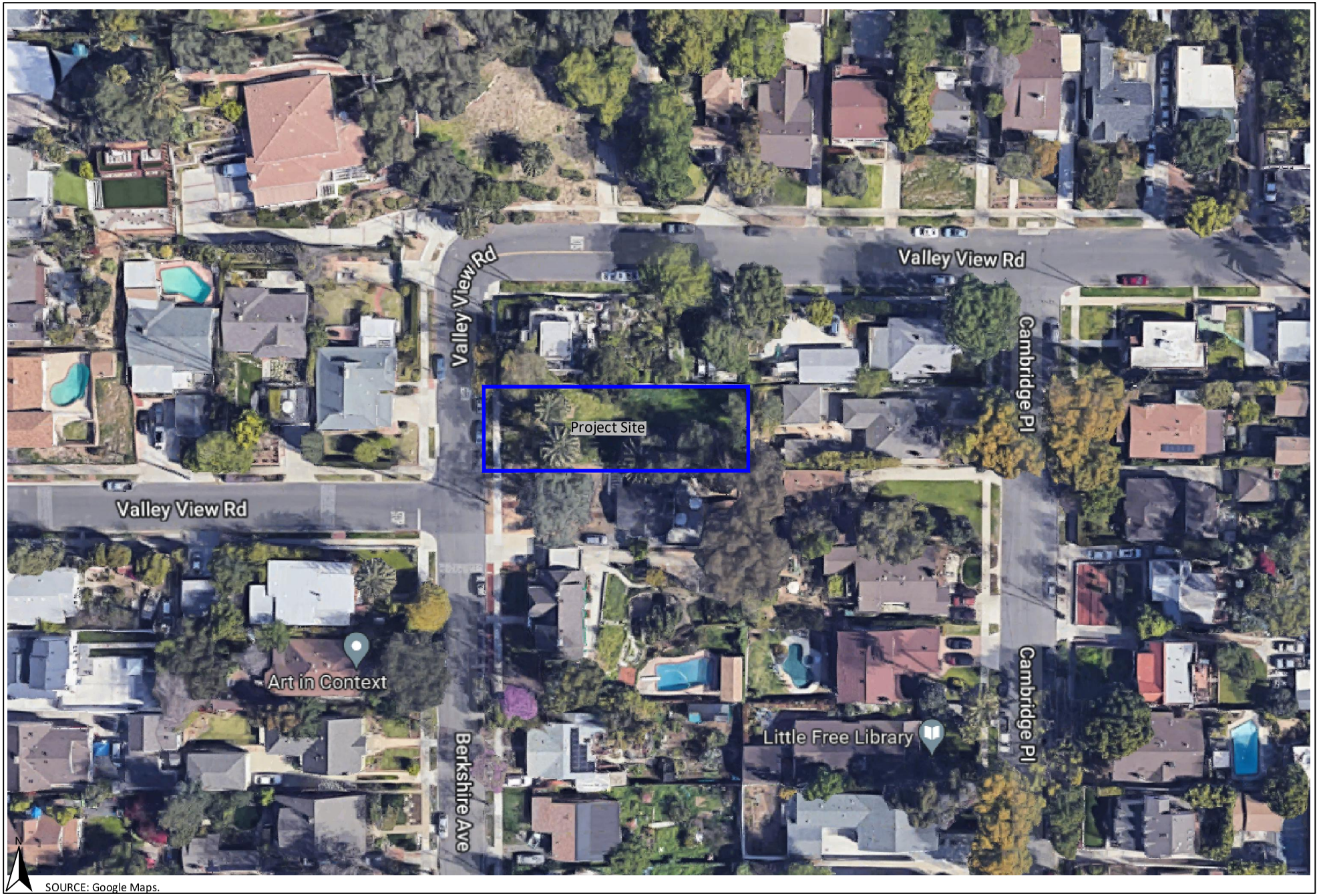
Less than significant impact.

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than significant impact.

1.5 Mitigation Measures for the Proposed Project

This analysis found that through adherence to the noise and vibration regulations detailed in Section 1.4 above were adequate to limit all noise and vibration impacts to less than significant levels. No mitigation measures are required for the proposed project with respect to noise and vibration impacts.



SOURCE: Google Maps.

VISTA ENVIRONMENTAL

1137

Figure 1
Berkshire Park Site Location Map

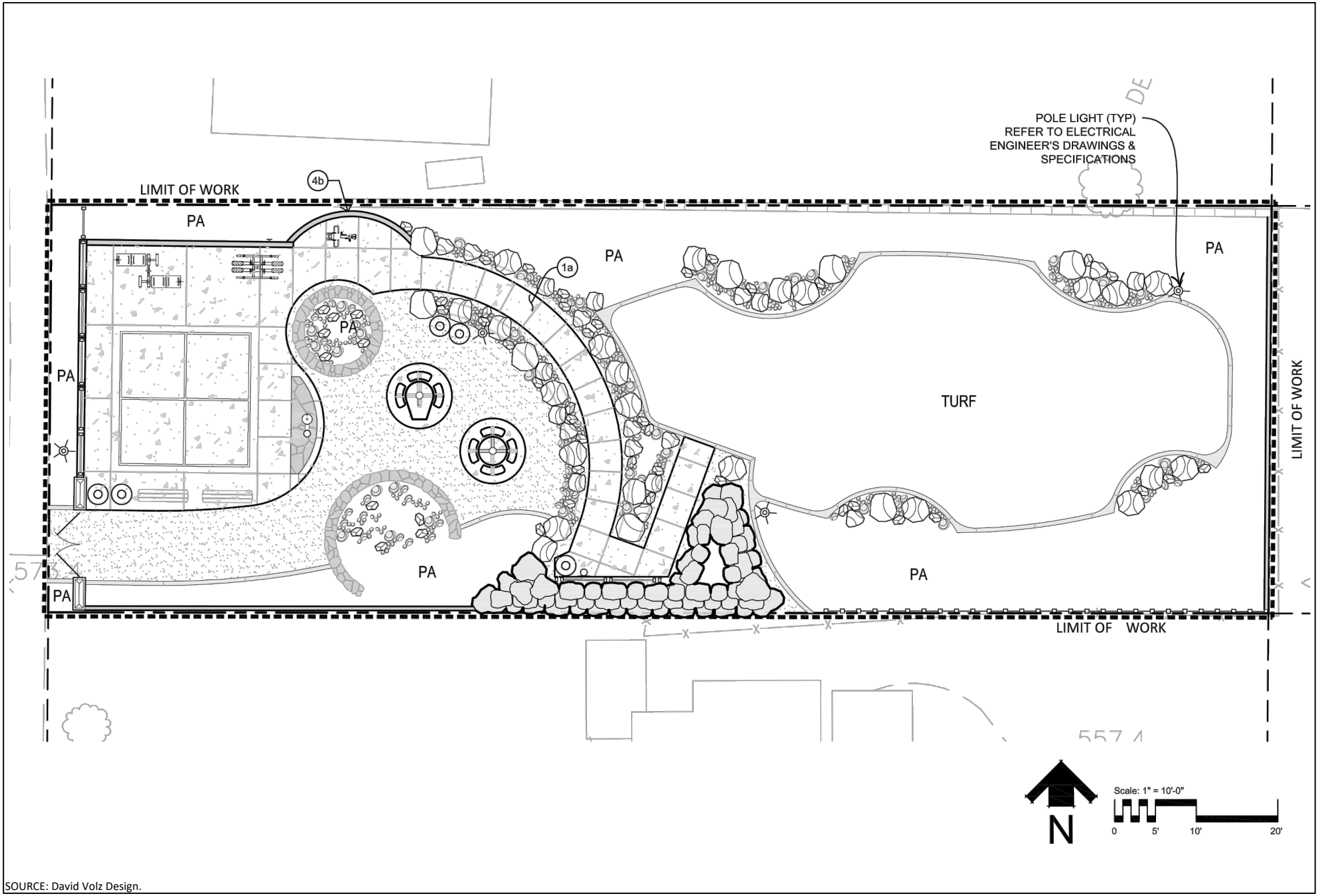


SOURCE: Google Maps.

VISTA ENVIRONMENTAL

1138

Figure 2
Grevelia Park Site Location Map

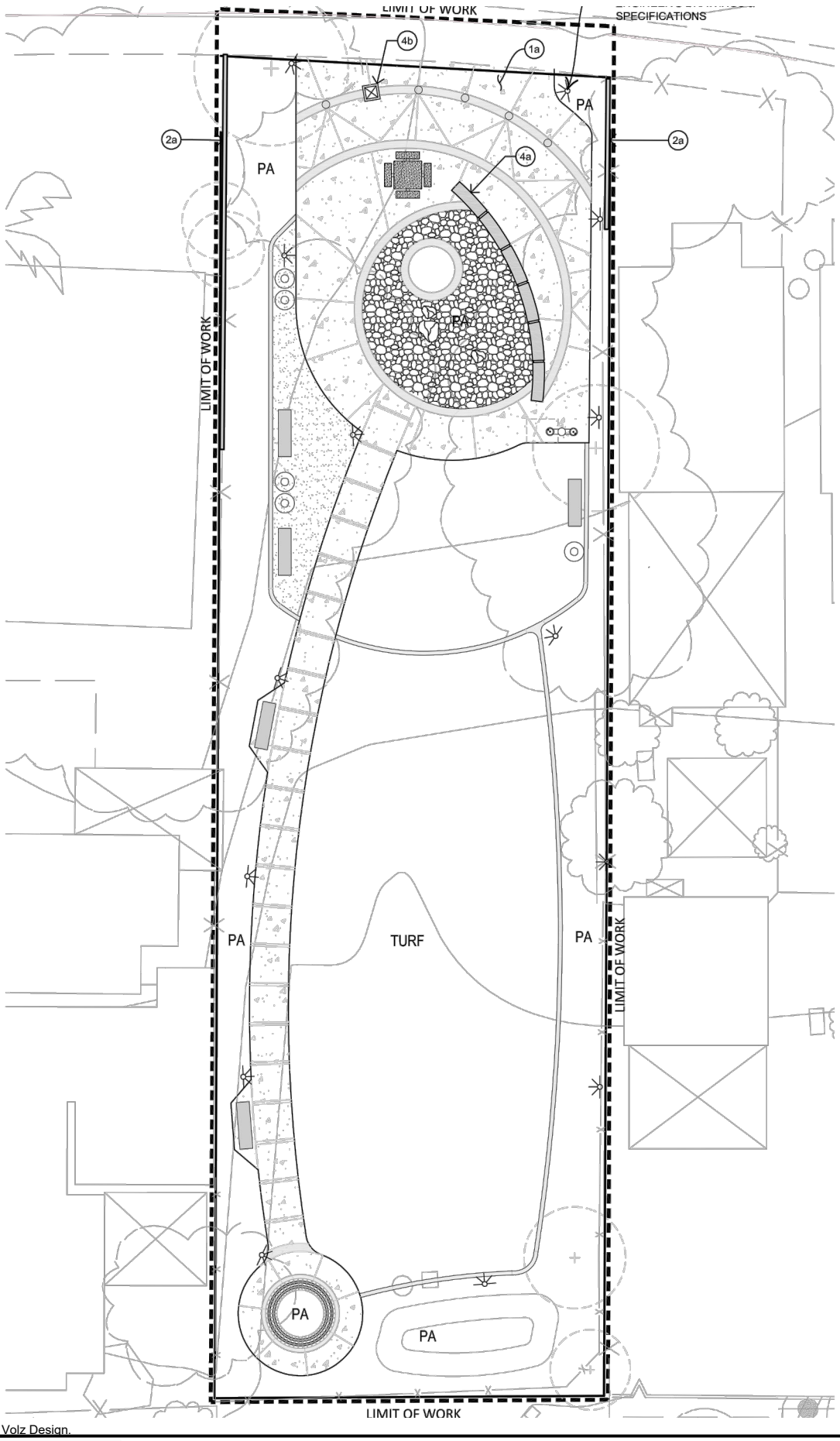


SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

1139

Figure 3
Proposed Berkshire Park Site Plan



SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

Figure 4
Proposed Grevelia Park Site

2.0 NOISE FUNDAMENTALS

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

2.1 Noise Descriptors

Noise Equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The worst-hour traffic Leq is the noise metric used by California Department of Transportation (Caltrans) for analyzing traffic noise impacts.

The Day-Night Average Level (Ldn or DNL) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason, the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of South Pasadena relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in level of noise as the distance from the source increases. The manner in which the noise level reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features.

Sound from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD) between source and receiver. Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 Vibration Descriptors

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is "VdB", which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 Vibration Propagation

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform medium, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation."

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of South Pasadena. Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA), which regulates transit noise, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the proposed project is not under the jurisdiction of the FTA, the *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual), prepared by the FTA, September 2018, is the only guidance document from a government agency that provides guidance on construction noise and recommends developing construction noise criteria on a project-specific basis that utilizes local noise ordinances if possible. However, local noise ordinances usually relates to nuisance and hours of allowed activity and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the noise impacts of a construction project. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land uses. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings for a general construction noise assessment are provided below in Table A.

Table A – FTA Construction Noise Criteria

Land Use	Day (dBA $Leq_{(1\text{-hour})}$)	Night (dBA $Leq_{(1\text{-hour})}$)
Residential	90	80
Commercial	100	100
Industrial	100	100

Notes:

Source: Federal Transit Administration, 2018.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

4.3 Local Regulations – City of South Pasadena

The *City of South Pasadena General Plan Safety & Noise Element*, adopted October 1998 and the *South Pasadena City Code,* May 5, 2021, establishes the following applicable policies related to noise and vibration.

General Plan Noise Element

The following applicable goals and policies to the proposed project are from the General Plan Safety & Noise Element.

Goal 5: To adequately protect indoor and outdoor living areas, and noise-sensitive uses such as schools and convalescent homes, from transportation noise impacts.

Policies

5.1: Consider the noise impacts of new projects involving increases in noisy activities or traffic. An increase of 3 dBA or noise in excess of 65 dBA in sensitive areas shall be considered significant.

City of South Pasadena Municipal Code

The City of South Pasadena Municipal Code establishes the following applicable standards related to noise.

19A.1 Declaration of policy.

It is declared to be the policy of the city to prohibit unnecessary, excessive, and annoying noises from all sources subject to its police power. At certain levels noises are detrimental to the health and welfare of the citizenry and in the public interests shall be systematically proscribed.

19A.12.3 Power yard maintenance equipment – Permitted hours of operation.

Power yard maintenance equipment shall be operated only between the following hours:

(a) Monday through Friday, eight a.m. to seven p.m.

(b) Saturday, nine a.m. to seven p.m.

(c) Sunday and holidays, ten a.m. to seven p.m.

19A.13 Construction of buildings and projects.

(a) It is unlawful for any person to perform any construction activity within a residential zone or within 500 feet thereof on Monday through Friday before 8:00 a.m. and after 7:00 p.m., Saturday before 9:00 a.m. and after 7:00 p.m., and on Sundays and city recognized holidays before 10:00 a.m. and after 6:00 p.m.

(b) For the purposes of this section, "construction activity" is activity requiring a building permit and defined to include, but is not limited to, the operation of any manual, electric or pneumatic hammer, saw, shovel, hoist, derrick or any other device used in the performance of site preparation, assembly, repair, demolition, alteration or similar action on structures, rights-of-way, or land.

(c) The prohibition of this section shall not apply to emergency work as defined in Article 1 of this chapter.

(d) City recognized holidays as of July 2015, shall be defined as:

(1) January 1st (New Year's Day);

(2) 3rd Monday in January (Martin Luther King Day);

(3) 3rd Monday of February (Washington's Birthday);

(4) Last Monday of May (Memorial Day);

(5) 4th of July (Independence Day);

(6) 1st Monday of September (Labor Day);

(7) 2nd Monday of October (Columbus Day);

(8) November 11th (Veteran's Day);

(9) 4th Thursday of November (Thanksgiving);

(10) 1st Friday after Thanksgiving;

(11) December 25th (Christmas Day).

36.300.110 Performance Standards.

A. Purpose. This Section provides performance standards that are designed to minimize various potential operational impacts of all land uses and development within the City, and promote compatibility with adjoining areas and land uses.

B. Applicability. The provisions of this Section apply to all new and existing land uses, including permanent and temporary uses, in all zoning districts unless an exemption is specifically provided. Uses existing on the effective date of the ordinance codified in this Section shall not be altered or modified thereafter to conflict with these standards.

G. Noise. The City's noise standards are in Chapter 19A of the Municipal Code.

I. Vibration. Uses, activities, and processes shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities. Vibrations from temporary construction, demolition, and vehicles that enter and leave the subject parcel (e.g., construction equipment, trains, trucks, etc.) are exempt.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken on the two project sites. The field survey noted that noise at the proposed Berkshire Park site is primarily from vehicles on Berkshire Avenue and from birds in the nearby trees. The noise at the proposed Grevelia Park Site is primarily from vehicles on Interstate 110 that is as near as 65 feet north of the site. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using two Extech Model 407780 Type 2 integrating sound level meters programmed in "slow" mode to record the sound pressure level at 3-second intervals for approximately 24 hours in "A" weighted form. In addition, the Leq averaged over the entire measuring time and Lmax were recorded. The sound level meters and microphones were mounted approximately six feet above the ground and were equipped with a windscreen. The sound level meters were calibrated before and after the monitoring using an Extech calibrator, Model 407766. The noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4-2014 standard).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise levels on the two project sites. Descriptions of the noise monitoring sites are provided below in Table B. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 9:17 a.m. on Tuesday, April 5, 2022 and 9:28 a.m. on Wednesday, April 6, 2022. When the noise measurements were started the sky was clear (no clouds), the temperature was 64 degrees Fahrenheit, the humidity was 63 percent, barometric pressure was 29.14 inches of mercury, and there was no wind. Overnight, the temperature dropped to 53 degrees Fahrenheit and the humidity peaked at 92 percent. At the conclusion of the noise measurements, the sky was clear, the temperature was 66 degrees Fahrenheit, the humidity was 59 percent, barometric pressure was 29.20 inches of mercury, and there was no wind.

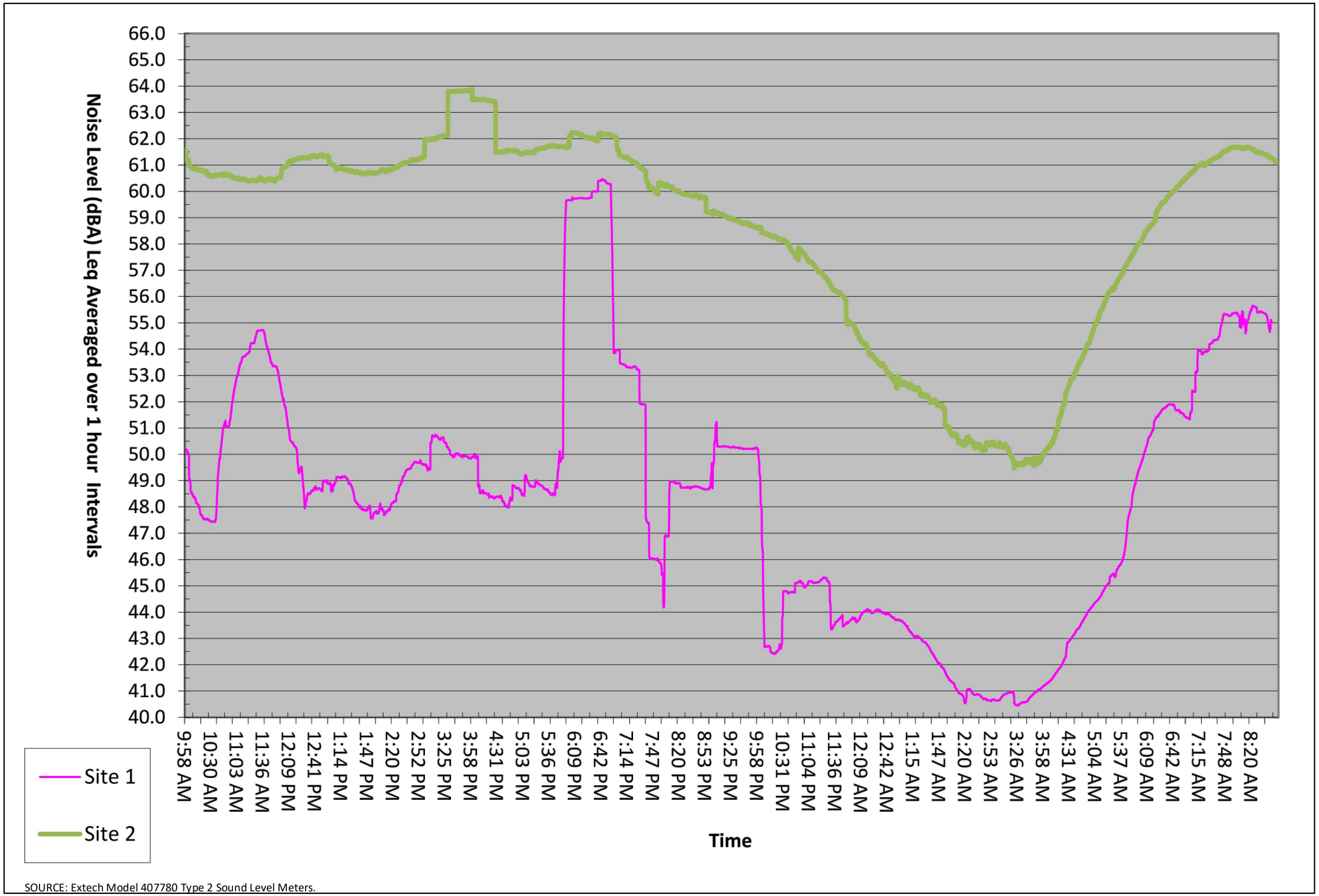
5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table B. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table B also shows the L_{eq}, L_{max}, and CNEL, based on the entire measurement time. The CNEL was calculated through use of Equation 2-23 from *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (TeNS), prepared by Caltrans, September 2013. The noise monitoring data printouts are included in Appendix B. Figure 5 shows a graph of the 24-hour noise measurements.

Table B – Existing (Ambient) Noise Measurement Results

Site No.	Site Description	Average (dBA L_{eq})	Maximum (dBA L_{max})	(dBA $L_{eq\ 1\text{-}hour}$/Time) Minimum	(dBA $L_{eq\ 1\text{-}hour}$/Time) Maximum	Average (dBA CNEL)
1	Located on the Berkshire Park Site on a tree in the northwest portion of the project site, approximately 60 feet east of Berkshire Avenue centerline.	51.4	77.1	40.4 3:27 a.m.	60.5 6:42 p.m.	54.7
2	Located on the Grevelia Park site on a tree in the northeast portion of the project site, approximately 60 feet south of Grevelia Street centerline.	59.9	89.2	49.5 3:22 a.m.	63.9 3:57 p.m.	63.9

Source: Noise measurements were taken with two Extech Model 407780 Type 2 sound level meters from Tuesday, April 5, 2022 to Wednesday, April 6, 2022.



SOURCE: Extech Model 407780 Type 2 Sound Level Meters.

VISTA ENVIRONMENTAL

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Figure 5
Field Noise Measurements Graph

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table C below provides a list of the construction equipment anticipated to be used for each phase of construction that was obtained from the *Air Quality Impact Analysis Berkshire and Grevelia Pocket Parks Project* (Air Quality Analysis), prepared by Vista Environmental, May 17, 2022.

Table C – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor[1] (percent)	Spec 721.560 Lmax at 50 feet[2] (dBA, slow[3])	Actual Measured Lmax at 50 feet[4] (dBA, slow[3])
Site Preparation				
Grader	1	40	85	83
Tractor	1	40	84	N/A
Grading				
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Tractor	1	40	84	N/A
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	2	40	85	83
Tractor	1	40	84	N/A
Front End Loader	1	40	80	79
Paving				
Cement and Mortar Mixer	4	40	85	79
Paver	1	50	85	77
Roller	1	20	85	80
Tractor	1	40	84	N/A
Architectural Coating				
Air Compressor	1	40	80	78

Notes:
[1] Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.
[2] Spec 721.560 is the equipment noise level utilized by the RCNM program.
[3] The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.
[4] Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.
Source: Federal Highway Administration, 2006.

Table C shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed Table C and through use of the RCNM. For each phase of construction, the two loudest pieces of construction equipment was analyzed based on being placed in the middle of both project site, which

is based on the analysis methodology detailed in FTA Manual for a General Assessment. The RCNM model printouts are provided in Appendix C.

6.2 Operational Noise

The proposed project would consist of the operation of two pocket parks. In order to determine the anticipated noise created by the proposed pocket parks, a reference noise measurement was taken at the existing Magnolia Street Park located at 1028 Magnolia Street in South Pasadena. During the reference noise measurement there were two people working in the community garden, a person walked a dog through the front portion of the park and a few vehicles passed by on Magnolia Street.

The reference noise measurement was taken using a Larson-Davis Model 831 Type 1 precision sound level meter programmed in "slow" mode to record noise levels in "A" weighted form as well as the frequency spectrum of the noise broken down into 1/3 octaves. The sound level meter and microphone were mounted on a tripod five feet above the ground and were equipped with a windscreen during the measurement. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. The unit meets the requirements of ANSI Standard S1.4-1984 and IEC Standard 942: 1988 for Class 1 equipment. The noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

The reference noise measurement was located on the southeast portion of Magnolia Street Park, approximately 60 feet north of the Magnolia Street centerline and measured a noise level of 45.7 dBA Leq. A photo index of the reference noise measurement site and the reference noise measurement results are provided in Appendix D.

6.3 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to damage at the highest levels. Table D gives approximate vibration levels for particular construction activities. The data in Table D provides a reasonable estimate for a wide range of soil conditions.

Table D – Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v)at 25 feet
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Federal Transit Administration, 2018.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table D and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table C.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction and paving of the two proposed pocket parks, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities.

The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south.

Section 19A.13 of the City's Municipal Code exempts construction noise from the City noise standards provided that construction activities occur between 8:00 a.m. and 7:00 p.m., Monday through Friday, between 9:00 a.m. and 7:00 p.m. on Saturdays, and between 10:00 a.m. and 7:00 p.m. on Sundays and holidays. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby residents. In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the FTA construction noise criteria thresholds detailed above in Section 4.1 and more specifically in Table A have been utilized, which shows that a significant construction noise impact would occur if construction noise exceeds 80 dBA during the daytime at any of the nearby homes.

In order to determine if construction noise levels to the nearby sensitive receptors would be within the FTA's construction noise standards, the construction noise levels have been calculated through use of the RCNM and the parameters and assumptions utilized are detailed in Section 6.1 of this report. The results are shown below in Table E and the RCNM printouts are provided in Appendix C.

Table E – Construction Noise Levels at the Nearby Receptors

Construction Phase	Construction Noise Level (dBA Leq) at:	
	Nearest Homes to Berkshire Park[1]	Nearest Homes to Grevelia Park[2]
Site Preparation	87	89
Grading	87	89
Building Construction	86	88
Paving	84	88
Painting	77	79
FTA Construction Noise Threshold[3]	**90**	**90**
Exceed Threshold?	No	No

[1] The nearest homes to Berkshire Park are located as near as 35 feet from the center of the project site.
[2] The nearest homes to Grevelia Park are located as near as 27 feet from the center of the project site.
[3] FTA Construction Noise Threshold obtained from Table A above.
Source: RCNM, Federal Highway Administration, 2006

Table E shows that the greatest noise impacts would occur during the site preparation and grading phases, with a noise level as high as 87 dBA Leq at the homes next to Berkshire Park and 89 dBA Leq at the homes next to Grevelia Park. All calculated construction noise levels shown in Table E are within the FTA daytime construction noise standards of 90 dBA for residential uses. Therefore, through adherence to the allowable construction times detailed in Section 19A.13 of the City's Municipal Code, the proposed project would not create a substantial temporary increase in ambient noise levels from construction of the proposed project. Impacts would be less than significant.

Operational-Related Noise

The proposed project would consist of the development of two pocket parks. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways. The proposed project would also generate onsite noise from activities occurring within the two parks.

Roadway Vehicular Noise Impact to Nearby Homes

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic that would occur with development of the proposed project.

According to the City staff, the two pocket parks would serve the local community and it is anticipated that the majority of park users would walk to the two parks. As such, the Air Quality Analysis (Vista Environmental, 2022), found that operation of the proposed project would generate less than one vehicle

trip per day. Due to the nominal vehicle trips generated by the proposed project, the proposed project would not result in a substantial permanent roadway noise increase to ambient noise levels. Impacts would be less than significant.

Onsite Noise Impact to Nearby Homes

The operational activities at the two proposed pocket parks may create an increase in onsite noise levels. General Plan Policy 5.1 details that the noise impacts of new projects to an increase of 3 dBA or noise in excess of 65 dBA shall be considered significant.

In order to determine the noise impacts created by the two proposed pocket parks, a reference noise measurement was taken at the existing Magnolia Street Park. During the reference noise measurement there were two people working in the community garden, a person walked a dog through the front portion of the park and a few vehicles passed by on Magnolia Street. The reference measurement details have been provided above in Section 6.2 and the printouts are provided in Appendix D.

The reference noise measurement found that Magnolia Street Park produces a noise level of 45.7 dBA Leq. This is below the existing ambient noise levels that are shown above in Table B of 51.4 dBA Leq for Berkshire Park and 59.9 dBA Leq for Grevelia Park. Onsite activities at the two proposed pocket parks would not exceed the noise standards provided in General Plan Policy 5.1 of a 3 dBA increase in ambient noise and would not create noise levels in excess of 65 dBA. As such, operational onsite noise impacts would be within the City noise standards.

Therefore, the proposed project would not expose persons to noise levels in excess of standards established in the local general plan or noise ordinance.

Level of Significance

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction and paving of the two proposed pocket parks, and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south.

Section 36.300.110(J) of the Municipal Code provides a vibration performance standard that no activities shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line, however vibration caused by construction activities is exempt from this standard. Since neither the Municipal nor the General Plan provide a quantifiable vibration

threshold for temporary construction activities, guidance from the *Transit Noise and Vibration Impact Assessment Manual,* prepared by FTA, September 2018, has been utilized, which details that building damage may occur to non-engineered timber and masonry buildings at vibration levels as low as 0.25 inch per second peak particle velocity (PPV).

The primary source of vibration during construction would be from the operation of a loaded truck on the two project sites. From Table D above a loaded truck would create a vibration level of 0.076 inch per second PPV at 25 feet. Due to the limitations of the accuracy of haul truck dumping operations, it is unlikely that a loaded truck would operate any closer than 10 feet to an existing structure. Based on typical propagation rates, the vibration level at the nearest offsite structures (10 feet away) would be 0.21 inch per second PPV. The vibration level at the nearest offsite structures would be below the 0.25 inch per second PPV threshold detailed above. Impacts would be less than significant.

Operations-Related Vibration Impacts

The proposed project would consist of the development of two pocket parks. The on-going operation of the proposed project would not include the operation of any known vibration sources. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project.

Level of Significance

Less than significant impact.

7.4 Aircraft Noise

The proposed project may expose people residing in the project area to excessive noise levels from aircraft. The nearest airport is San Gabriel Valley Airport that is located as near as seven miles southeast of the project site. The project site is located outside of the 60 dBA CNEL noise contours of this airport. Therefore, the proposed homes would not be exposed to excessive aircraft noise. Impacts would be less than significant.

Level of Significance

Less than significant impact.

8.0 REFERENCES

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation- and Construction Vibration Guidance Manual*, April 2020.

City of South Pasadena, *South Pasadena City Code,* May 5, 2021.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual,* September 2018.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide,* January, 2006.

U.S. Department of Transportation, *Highway Traffic Noise: Analysis and Abatement Guidance,* December, 2011.

Vista Environmental, *Air Quality Impact Analysis Berkshire and Grevelia Pocket Parks Project,* May 17, 2022

APPENDIX A

Field Noise Measurements Photo Index



Noise Measurement Site 1 - looking north



Noise Measurement Site 1 - looking northeast



Noise Measurement Site 1 - looking east



Noise Measurement Site 1 - looking southeast



Noise Measurement Site 1 - looking south



Noise Measurement Site 1 - looking southwest



Noise Measurement Site 1 - looking west



Noise Measurement Site 1 - looking northwest



Noise Measurement Site 2 - looking north



Noise Measurement Site 2 - looking northeast



Noise Measurement Site 2 - looking east



Noise Measurement Site 2 - looking southeast



Noise Measurement Site 2 - looking south



Noise Measurement Site 2 - looking southwest



Noise Measurement Site 2 - looking west



Noise Measurement Site 2 - looking northwest

APPENDIX B

Field Noise Measurements Printouts

Site 1 - On Northwest Area of Berkshire Park Site

Date	Time=04/05/22	9:17:00 AM			
Sampling	Time=3	Weighting=A			
Record	Num=	28800	Weighting=Slow	CNEL(24hr)=	54.7
Leq	51.4	SEL	Value=100.9	Ldn(24hr)=	54.1
MAX	77.1		Min Leq1hr =	40.4	3:27 AM
MIN	37.1		Max Leq1hr =	60.5	6:42 PM

Site 1 - On Northwest Area of Berkshire Park Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
47.6	9:17:00		47.6	47.6
66.5	9:17:03		66.5	66.5
68.8	9:17:06		68.8	68.8
64.4	9:17:09		64.4	64.4
61.3	9:17:12		61.3	61.3
54.3	9:17:15		54.3	54.3
55.4	9:17:18		55.4	55.4
51.9	9:17:21		51.9	51.9
60.1	9:17:24		60.1	60.1
69	9:17:27		69	69
61.5	9:17:30		61.5	61.5
58	9:17:33		58	58
56.5	9:17:36		56.5	56.5
65.7	9:17:39		65.7	65.7
67.5	9:17:42		67.5	67.5
60.6	9:17:45		60.6	60.6
64.4	9:17:48		64.4	64.4
66.2	9:17:51		66.2	66.2
59.5	9:17:54		59.5	59.5
52.8	9:17:57		52.8	52.8
63.7	9:18:00		63.7	63.7
64.4	9:18:03		64.4	64.4
63.4	9:18:06		63.4	63.4
65.1	9:18:09		65.1	65.1
67.4	9:18:12		67.4	67.4
68.7	9:18:15		68.7	68.7
62.5	9:18:18		62.5	62.5
60.8	9:18:21		60.8	60.8
51.1	9:18:24		51.1	51.1
49.6	9:18:27		49.6	49.6
48.9	9:18:30		48.9	48.9
52.8	9:18:33		52.8	52.8
50.3	9:18:36		50.3	50.3
49	9:18:39		49	49
47.8	9:18:42		47.8	47.8
48.2	9:18:45		48.2	48.2
48.3	9:18:48		48.3	48.3
48.9	9:18:51		48.9	48.9
46	9:18:54		46	46
49.6	9:18:57		49.6	49.6
50.1	9:19:00		50.1	50.1
50.6	9:19:03		50.6	50.6
47.8	9:19:06		47.8	47.8
45.3	9:19:09		45.3	45.3
46.6	9:19:12		46.6	46.6
46.2	9:19:15		46.2	46.2
47.9	9:19:18		47.9	47.9
45.9	9:19:21		45.9	45.9
45.9	9:19:24		45.9	45.9
45.3	9:19:27		45.3	45.3
52.4	9:19:30		52.4	52.4
47.2	9:19:33		47.2	47.2
46.8	9:19:36		46.8	46.8
47.9	9:19:39		47.9	47.9
47.1	9:19:42		47.1	47.1
44.3	9:19:45		44.3	44.3
46	9:19:48		46	46
46	9:19:51		46	46
45	9:19:54		45	45
45.3	9:19:57		45.3	45.3
47.2	9:20:00		47.2	47.2
50.5	9:20:03		50.5	50.5
48.3	9:20:06		48.3	48.3
49.8	9:20:09		49.8	49.8
48.7	9:20:12		48.7	48.7
49.2	9:20:15		49.2	49.2
46.4	9:20:18		46.4	46.4
50.3	9:20:21		50.3	50.3
47.8	9:20:24		47.8	47.8
46.6	9:20:27		46.6	46.6
50.8	9:20:30		50.8	50.8
54.2	9:20:33		54.2	54.2
54.7	9:20:36		54.7	54.7
51.6	9:20:39		51.6	51.6
49.5	9:20:42		49.5	49.5

Site 2 - On Northeast Area of Grevelia Park Site

Date	Time=04/05/22	9:28:00 AM			
Sampling	Time=3	Freq Weighting=A			
Record	Num=	28800	Weighting=Slow	CNEL(24hr)=	63.9
Leq	59.9	SEL	Value=109.3	Ldn(24hr)=	63.4
MAX	89.2		Min Leq1hr =	49.5	3:22 AM
MIN	38.5		Max Leq1hr =	63.9	3:57 PM

Site 2 - On Northeast Area of Grevelia Park Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
58.8	9:28:00		58.8	58.8
63.6	9:28:03		63.6	63.6
67.1	9:28:06		67.1	67.1
59.1	9:28:09		59.1	59.1
57.6	9:28:12		57.6	57.6
55.7	9:28:15		55.7	55.7
63.8	9:28:18		63.8	63.8
64.4	9:28:21		64.4	64.4
61.7	9:28:24		61.7	61.7
59.5	9:28:27		59.5	59.5
60.5	9:28:30		60.5	60.5
65.4	9:28:33		65.4	65.4
66	9:28:36		66	66
60.7	9:28:39		60.7	60.7
63.2	9:28:42		63.2	63.2
69.9	9:28:45		69.9	69.9
67.4	9:28:48		67.4	67.4
65.2	9:28:51		65.2	65.2
67.5	9:28:54		67.5	67.5
60.7	9:28:57		60.7	60.7
57.3	9:29:00		57.3	57.3
63.2	9:29:03		63.2	63.2
70.8	9:29:06		70.8	70.8
65.3	9:29:09		65.3	65.3
63.7	9:29:12		63.7	63.7
64.1	9:29:15		64.1	64.1
64.3	9:29:18		64.3	64.3
67.2	9:29:21		67.2	67.2
70.7	9:29:24		70.7	70.7
73.4	9:29:27		73.4	73.4
75.8	9:29:30		75.8	75.8
63.2	9:29:33		63.2	63.2
71	9:29:36		71	71
66.8	9:29:39		66.8	66.8
68	9:29:42		68	68
63.2	9:29:45		63.2	63.2
62.5	9:29:48		62.5	62.5
63	9:29:51		63	63
60	9:29:54		60	60
60.7	9:29:57		60.7	60.7
61.7	9:30:00		61.7	61.7
61.2	9:30:03		61.2	61.2
60.1	9:30:06		60.1	60.1
59.7	9:30:09		59.7	59.7
62	9:30:12		62	62
62	9:30:15		62	62
66.1	9:30:18		66.1	66.1
60.4	9:30:21		60.4	60.4
61	9:30:24		61	61
62.9	9:30:27		62.9	62.9
60.1	9:30:30		60.1	60.1
59.3	9:30:33		59.3	59.3
61.9	9:30:36		61.9	61.9
63.7	9:30:39		63.7	63.7
62.6	9:30:42		62.6	62.6
61.5	9:30:45		61.5	61.5
63.5	9:30:48		63.5	63.5
62.5	9:30:51		62.5	62.5
61.7	9:30:54		61.7	61.7
62.3	9:30:57		62.3	62.3
60.5	9:31:00		60.5	60.5
57.1	9:31:03		57.1	57.1
60.7	9:31:06		60.7	60.7
61.7	9:31:09		61.7	61.7
58.3	9:31:12		58.3	58.3
60.1	9:31:15		60.1	60.1
62.6	9:31:18		62.6	62.6
63.4	9:31:21		63.4	63.4
63.2	9:31:24		63.2	63.2
60.2	9:31:27		60.2	60.2
62.4	9:31:30		62.4	62.4
60.4	9:31:33		60.4	60.4
62	9:31:36		62	62
63.2	9:31:39		63.2	63.2
60	9:31:42		60	60

APPENDIX C

RCNM Model Construction Noise Calculation Printouts

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/18/2022
Case Description: Berkshire & Grevelia Pocket Parks - Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		35	0
Tractor	No	40	84		35	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		88.1	84.1	N/A	N/A	N/A	N/A
Tractor		87.1	83.1	N/A	N/A	N/A	N/A
	Total	**88**	**87**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		27	0
Tractor	No	40	84		27	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		90.4	86.4	N/A	N/A	N/A	N/A
Tractor		89.4	85.4	N/A	N/A	N/A	N/A
	Total	**90**	**89**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/19/2022
Case Description: Berkshire & Grevelia Pocket Parks - Grading

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		35	0
Tractor	No	40	84		35	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		88.1	84.1	N/A	N/A	N/A	N/A
Tractor		87.1	83.1	N/A	N/A	N/A	N/A
	Total	**88**	**87**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		27	0
Tractor	No	40.0	84		27	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		90.4	86.4	N/A	N/A	N/A	N/A
Tractor		89.4	85.4	N/A	N/A	N/A	N/A
	Total	**90**	**89**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/19/2022
Case Description: Berkshire & Grevelia Pocket Parks - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Gradall	No	40		83.4	35	0
Tractor	No	40	84		35	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Gradall		86.5	82.5	N/A	N/A	N/A	N/A
Tractor		87.1	83.1	N/A	N/A	N/A	N/A
	Total	**87**	**86**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Gradall	No	40		83.4	27	0
Tractor	No	40	84		27	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Gradall		88.8	84.8	N/A	N/A	N/A	N/A
Tractor		89.4	85.4	N/A	N/A	N/A	N/A
	Total	**89**	**88**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/19/2022
Case Description: Berkshire & Grevelia Pocket Parks - Paving

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Equipment Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80	35	0
Tractor	No	40	84		35	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller		83.1	76.1	N/A	N/A	N/A	N/A
Tractor		87.1	83.1	N/A	N/A	N/A	N/A
	Total	**87**	**84**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Equipment Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80	27	0
Tractor	No	40	84		27	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller		88.8	84.8	N/A	N/A	N/A	N/A
Tractor		89.4	85.4	N/A	N/A	N/A	N/A
	Total	**89**	**88**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/18/2022
Case Description: Berkshire & Grevelia Pocket Parks - Painting

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

			Equipment Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Impact Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	35	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		80.8	76.8	N/A	N/A	N/A	N/A
	Total	**81**	**77**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

			Equipment Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Impact Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	27	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		83.0	79.0	N/A	N/A	N/A	N/A
	Total	**83**	**79**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX D

Magnolia Street Park Reference Noise Measurement Printouts



Magnolia St Park - looking north



Magnolia St Park - looking northeast



Magnolia St Park - looking east



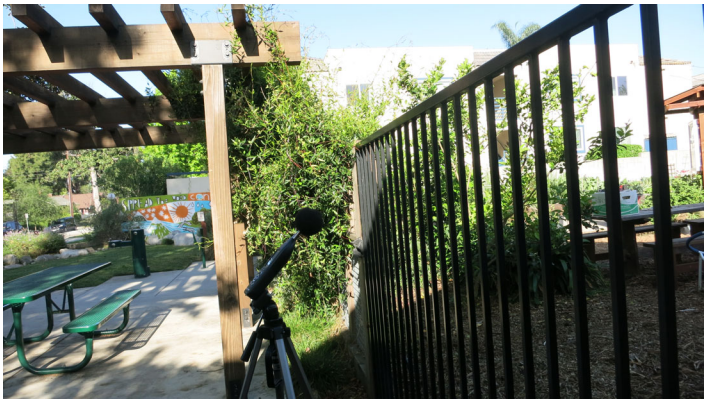
Magnolia St Park - looking southeast



Magnolia St Park - looking south



Magnolia St Park - looking southwest



Magnolia St Park - looking west



Magnolia St Park - looking northwest

Measurement Report

Report Summary

Meter's File Name	831_Data.001	Computer's File Name	SLM_0002509_831_Data_001.15.ldbin
Meter	831		
Firmware	2.314		
User	GT		Location
Description	Magnolia St Park		
Note	2 people working in Garden, a dog walker, birds and vehicles on Magnolia St		
Start Time	2022-04-06 08:42:32	Duration	0:15:00.0
End Time	2022-04-06 08:57:32	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	45.7 dB		
LAE	75.2 dB	SEA	--- dB
EA	3.7 µPa²h		
LZ_{peak}	99.0 dB	2022-04-06 08:42:33	
LAS_{max}	58.6 dB	2022-04-06 08:42:32	
LAS_{min}	39.4 dB	2022-04-06 08:50:06	
LA_{eq}	45.7 dB		
LC_{eq}	60.0 dB	LC_{eq} - LA_{eq}	14.3 dB
LAI_{eq}	49.8 dB	LAI_{eq} - LA_{eq}	4.2 dB

Exceedances	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	45.7 dB	45.7 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	45.7 dB	45.7 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	45.7 dB		60.0 dB		65.6 dB	
$LS_{(max)}$	58.6 dB	2022-04-06 08:42:32	70.1 dB	2022-04-06 08:42:33	90.6 dB	2022-04-06 08:42:33
$LF_{(max)}$	58.1 dB	2022-04-06 08:45:16	75.0 dB	2022-04-06 08:42:33	95.1 dB	2022-04-06 08:42:33
$LI_{(max)}$	74.0 dB	2022-04-06 08:42:32	78.9 dB	2022-04-06 08:42:33	96.8 dB	2022-04-06 08:42:32
$LS_{(min)}$	39.4 dB	2022-04-06 08:50:06	56.5 dB	2022-04-06 08:48:37	59.9 dB	2022-04-06 08:49:57
$LF_{(min)}$	37.9 dB	2022-04-06 08:50:05	54.6 dB	2022-04-06 08:48:57	58.0 dB	2022-04-06 08:49:53
$LI_{(min)}$	39.2 dB	2022-04-06 08:50:05	57.2 dB	2022-04-06 08:47:06	60.9 dB	2022-04-06 08:49:57
$L_{Peak(max)}$	74.9 dB	2022-04-06 08:50:36	84.9 dB	2022-04-06 08:42:33	99.0 dB	2022-04-06 08:42:33

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	48.8 dB
LAS 10.0	47.7 dB
LAS 33.3	45.8 dB
LAS 50.0	45.0 dB
LAS 66.6	44.3 dB
LAS 90.0	43.0 dB

Appendix B

AIR QUALITY IMPACT ANALYSIS

BERKSHIRE AND GREVELIA POCKET PARKS PROJECT

CITY OF SOUTH PASADENA

Lead Agency:

City of South Pasadena
Community Services Department
815 Mission Street
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Prepared by:

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Greg Tonkovich, AICP

Project No. 21156

June 9, 2022

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
City	City of South Pasadena
CO	Carbon monoxide
DPM	Diesel particulate matter
EPA	Environmental Protection Agency
ºF	Fahrenheit
FTIP	Federal Transportation Improvement Program
HAP	Hazardous Air Pollutants
LST	Localized Significant Thresholds
MATES	Multiple Air Toxics Exposure Study
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen oxides
NO_2	Nitrogen dioxide
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PPM	Parts per million
PPB	Parts per billion
PPT	Parts per trillion
RTIP	Regional Transportation Improvement Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments

SIP	State Implementation Plan
SO_x	Sulfur oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Air Quality Impact Analysis has been completed to determine the air quality emissions impacts associated with the proposed Berkshire and Grevelia Pocket Parks project (proposed project). The following is provided in this report:

- A description of the proposed project;
- A description of the atmospheric setting;
- A description of the criteria pollutants;
- A description of the air quality regulatory framework;
- A description of the air quality thresholds, including the California Environmental Quality Act (CEQA) significance thresholds;
- An analysis of the conformity of the proposed project with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP); and
- An analysis of the short-term construction related and long-term operational air quality emissions impacts.

1.2 Site Locations and Study Areas

The proposed project consists of two project sites that are both located in the City of South Pasadena (City). The Berkshire Park site is a 7,482 square foot property at 2006 Berkshire Avenue that is currently vacant other than for a few trees. The Berkshire Park site is bounded by residential uses to the north, east and south and Berkshire Avenue/Valley View Road to the west. The nearest sensitive receptors to the Berkshire Park site consist of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The Berkshire Park site local study area is shown in Figure 1.

The Grevelia Park site is a 9,130 square foot property at 1107 Grevelia Street that is currently vacant other than a few trees. The Grevelia Park site is bounded by Grevelia Street and Intestate 110 to the north and residential uses to the east, south and west. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south. The Grevelia Park site local study area is shown in Figure 2.

1.3 Proposed Project Description

The proposed project would consist of development of two pocket parks that total 16,612 square feet. Construction activities for the two parks are anticipated to start around July, 2022 and be completed in seven months. The operational hours for the two parks would be dawn to dusk.

The Berkshire Park will have a large grass area for free play at the rear and a small space to play within the front portion of the park. The park will have picnic tables, benches, trash receptacles, a drinking fountain, dog waste stations, exercise equipment, trees, and landscape. An accessible Americans with Disabilities Act (ADA)-compliant ramp will lead people to the rear of the park. Due to the elevation, a water infiltration system will need to be installed. Grading of Berkshire Park will require approximately

650 cubic yards of fill and 250 cubic yards of cut, which will result in the import of 400 cubic yards of dirt. The proposed improvements will result in the installation of approximately 1,800 square feet of pavement. The proposed Berkshire Park site plan is shown in Figure 3.

The Grevelia Park will have a large grass area for free play at the rear and a small space with precast play pieced in the middle. The front portion of the park will have picnic tables, benches, a drinking fountain, a dog waste station, trash receptacles, ballad-type lighting, trees, and landscape. The park will need a water infiltration system to catch all run-off. Grading of Grevelia Park is anticipated to be roughly balanced with no or only nominal amounts of dirt being imported or exported from the project site. The proposed improvements will result in the installation of approximately 2,200 square feet of pavement. The proposed Grevelia Park project site plan is shown in Figure 4.

1.4 Executive Summary

Standard Air Quality Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the SCAQMD and State of California (State).

South Coast Air Quality Management District Rules

The following lists the SCAQMD rules that are applicable, but not limited to the proposed project.

- Rule 402 Nuisance – Controls the emissions of odors and other air contaminants;
- Rule 403 Fugitive Dust – Controls the emissions of fugitive dust;
- Rules 1108 and 1108.1 Cutback and Emulsified Asphalt – Controls the volatile organic compound (VOC) content in asphalt;
- Rule 1113 Architectural Coatings – Controls the VOC content in paints and solvents; and
- Rule 1143 Paint Thinners – Controls the VOC content in paint thinners.

State of California Rules

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to the proposed project.

- CCR Title 13, Article 4.8, Chapter 9, Section 2449 – In use Off-Road Diesel Vehicles;
- CCR Title 13, Section 2025 – On-Road Diesel Truck Fleets;
- CCR Title 24 Part 6 – California Building Energy Standards; and
- CCR Title 24 Part 11 – California Green Building Standards.

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines air quality checklist questions.

Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact.

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

Less than significant impact.

Expose sensitive receptors to substantial pollutant concentrations?

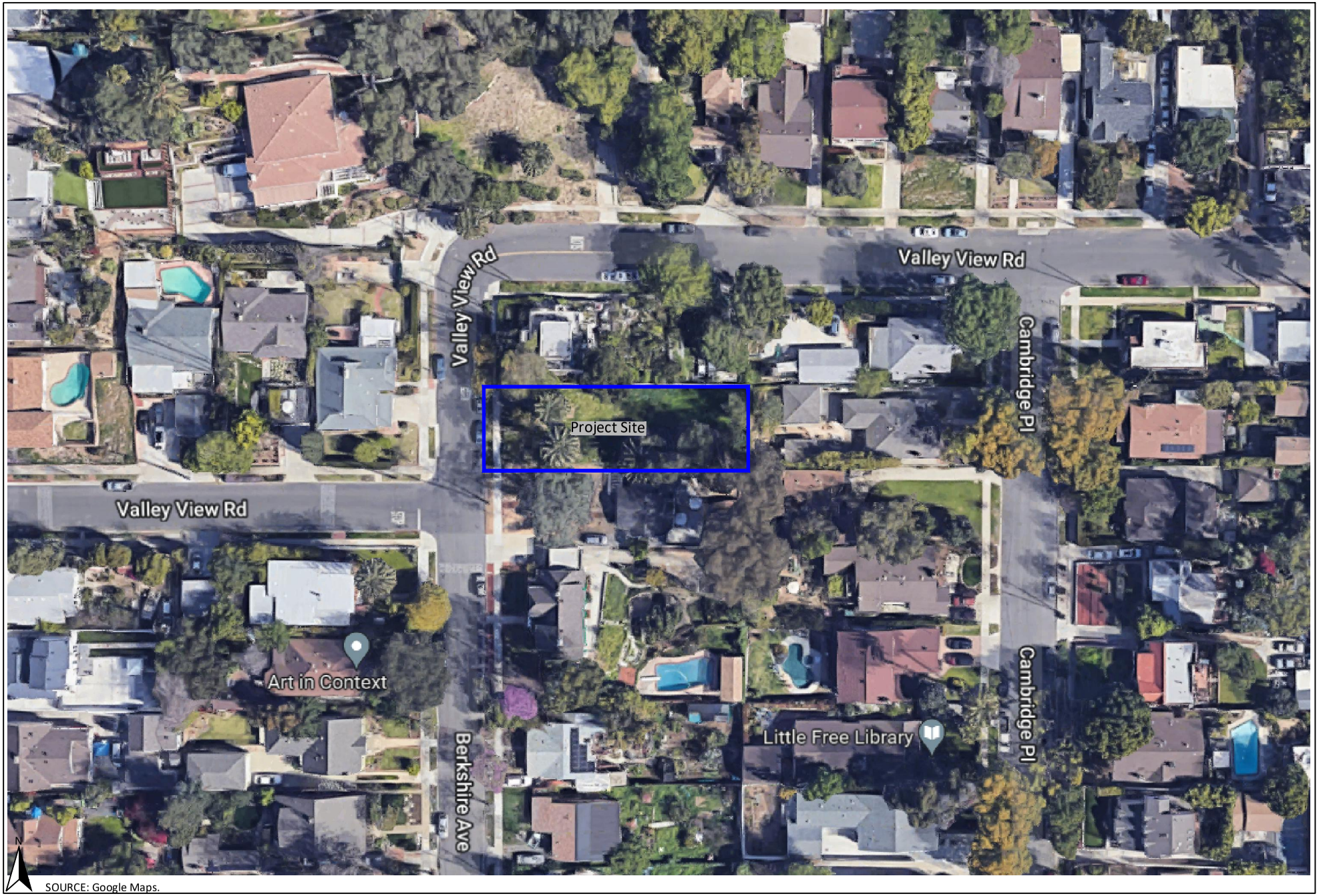
Less than significant impact.

Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than significant impact.

1.5 Mitigation Measures for the Proposed Project

This analysis found that implementation of the State and SCAQMD air quality emissions reductions regulations were adequate to limit criteria pollutants, toxic air contaminants, and odors from the proposed project to less than significant levels. No mitigation measures are required for the proposed project.



SOURCE: Google Maps.

VISTA ENVIRONMENTAL

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Figure 1
Berkshire Park Site Local Study Area

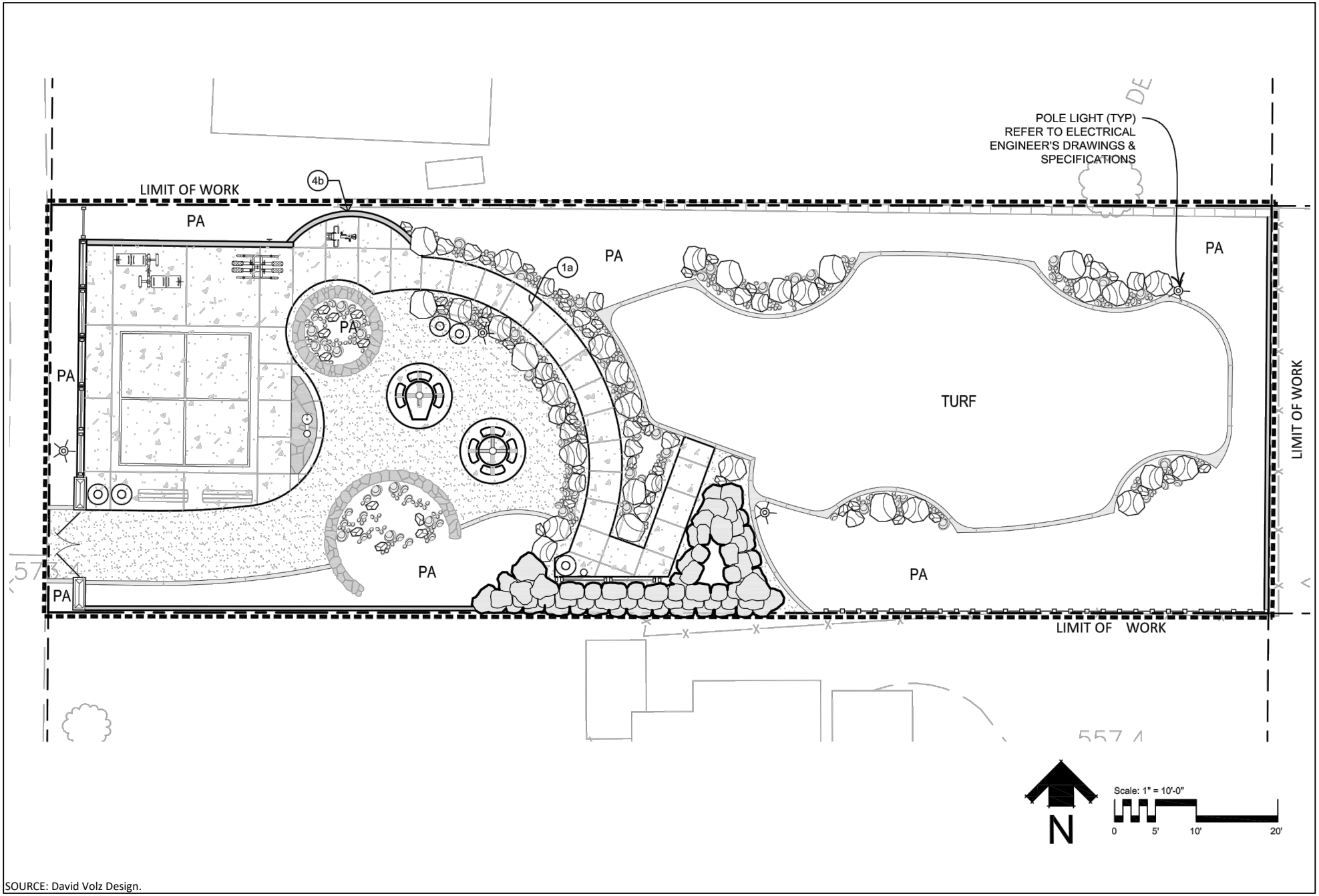


SOURCE: Google Maps.

VISTA ENVIRONMENTAL

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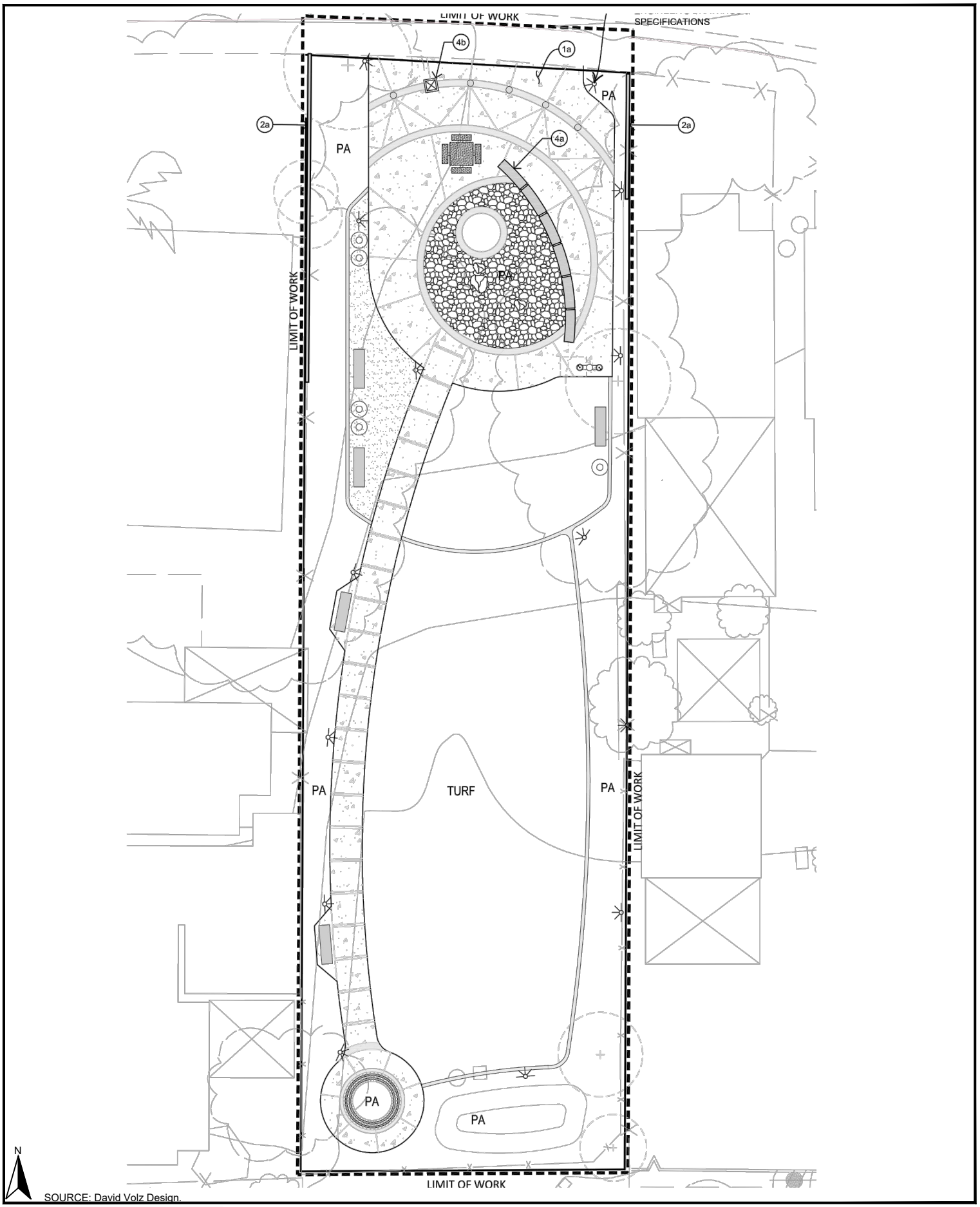
Figure 2
Grevelia Park Site Local Study Area



SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

Figure 3
Proposed Berkshire Park Site Plan



SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

Figure 4
Proposed Grevelia Park Site

2.0 AIR POLLUTANTS

Air pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

2.1 Criteria Pollutants and Ozone Precursors

The criteria pollutants consist of: ozone, nitrogen oxides (NOx), CO, sulfur oxides (SOx), lead, and particulate matter (PM). The ozone precursors consist of NO_x and VOC. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants and ozone precursors.

Nitrogen Oxides

NOx is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx are colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NO_x and the pollutants formed from NO_x can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Ozone

Ozone is not usually emitted directly into the air but in the vicinity of ground-level is created by a chemical reaction between NOx and VOC in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves,

gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Sulfur Oxides

SOx gases are formed when fuel containing sulfur, such as coal and oil is burned, as well as from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Particulate Matter

PM is the term for a mixture of solid particles and liquid droplets found in the air. PM is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) that are also known as *Respirable Particulate Matter* are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) that are also known as *Fine Particulate Matter* have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

Volatile Organic Compounds

Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of ozone are referred to and regulated as VOCs (also

referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

VOC is not classified as a criteria pollutant, since VOCs by themselves are not a known source of adverse health effects. The primary health effects of VOCs result from the formation of ozone and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

2.2 Other Pollutants of Concern

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, TACs are another group of pollutants of concern. TACs is a term that is defined under the California Clean Air Act and consists of the same substances that are defined as Hazardous Air Pollutants (HAPs) in the Federal Clean Air Act. There are over 700 hundred different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different toxic air contaminants. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to *The California Almanac of Emissions and Air Quality 2013 Edition*, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is DPM. DPM is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of DPM as a TAC in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in DPM by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

Asbestos

Asbestos is listed as a TAC by CARB and as a HAP by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release

asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. The nearest likely locations of naturally occurring asbestos, as identified in the *General Location Guide for Ultramafic Rocks in California*, prepared by the California Division of Mines and Geology, is located in Santa Barbara County. The nearest historic asbestos mine to the project site, as identified in the *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California,* prepared by U.S. Geological Survey, is located at Asbestos Mountain, which is approximately 100 miles southeast of the project site in the San Jacinto Mountains. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

3.0 AIR QUALITY MANAGEMENT

The air quality at the project site is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

3.1 Federal – United States Environmental Protection Agency

The Clean Air Act, first passed in 1963 with major amendments in 1970, 1977 and 1990, is the overarching legislation covering regulation of air pollution in the United States. The Clean Air Act has established the mandate for requiring regulation of both mobile and stationary sources of air pollution at the state and federal level. The EPA was created in 1970 in order to consolidate research, monitoring, standard-setting and enforcement authority into a single agency.

The EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. NAAQS pollutants were identified using medical evidence and are shown below in Table A.

Table A – State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone	0.09 ppm / 1-hour 0.07 ppm / 8-hour	0.070 ppm, / 8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm / 1-hour 9.0 ppm / 8-hour	35.0 ppm / 1-hour 9.0 ppm / 8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm / 1-hour 0.030 ppm / annual	100 ppb / 1-hour 0.053 ppm / annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm / 1-hour 0.04 ppm / 24-hour	75 ppb / 1-hour 0.14 ppm/annual	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3 / 24-hour 20 µg/m^3 / annual	150 µg/m^3 / 24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in elderly.

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3 / 24-hour 12 µg/m^3 / annual	
Sulfates	25 µg/m^3 / 24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage.
Lead	1.5 µg/m^3 / 30-day	0.15 µg/m^3 /3-month rolling	(a) Learning disabilities; and (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf .

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP. The CARB defines attainment as the category given to an area with no violations in the past three years. As indicated below in Table B, the Air Basin has been designated by EPA for the national standards as a non-attainment area for ozone and PM2.5 and partial non-attainment for lead. Currently, the Air Basin is in attainment with the national ambient air quality standards for CO, PM10, SO_2, and NO_2.

Table B – South Coast Air Basin Attainment Status

Criteria Pollutant	Standard	Averaging Time	Designation[a)]	Attainment Date[b)]
1-Hour Ozone[c)]	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 (revised deadline)
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
8-Hour Ozone[d)]	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	8/3/2038
	NAAQS	2015 8-Hour (0.070 ppm)	Pending – Expect Nonattainment (Extreme)	Pending (beyond 2032)
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
CO	NAAQS	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)

Criteria Pollutant	Standard	Averaging Time	Designation[a)]	Attainment Date[b)]
	CAAQS	1-Hour (20 ppm) 8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
NO_2[e)]	NAAQS	2010 1-Hour (0.10 ppm)	Unclassifiable/ Attainment	N/A (attained)
	NAAQS	1971 Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-Hour (0.18 ppm) Annual (0.030 ppm)	Attainment	---
SO_2[f)]	NAAQS	2010 1-Hour (75 ppb)	Designations Pending (expect Unclassifiable/ Attainment)	N/A (attained)
	NAAQS	1971 24-Hour (0.14 ppm) 1971 Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (attained)
PM10	NAAQS	1987 24-hour (150 µg/m^3)	Attainment (Maintenance)[g)]	7/26/2013 (attained)
	CAAQS	24-hour (50 µg/m^3) Annual (20 µg/m^3)	Nonattainment	N/A
PM2.5[h)]	NAAQS	2006 24-Hour (35 µg/m^3)	Nonattainment (Serious)	12/31/2019
	NAAQS	1997 Annual (15.0 µg/m^3)	Attainment (final determination pending)	8/24/2016 (attained 2013)
	NAAQS	2012 Annual (12.0 µg/m^3)	Nonattainment (Moderate)	12/31/2025
	CAAQS	Annual (12.0 µg/m^3)	Nonattainment	N/A
Lead[i)]	NAAQS	2008 3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial) (Attainment determination requested)	12/31/2015

Source: SCAQMD, February 2016

Notes:

a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable

b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration

c) The 1979 1-hour O_3 standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard and therefore has some continuing obligations with respect to the revoked standard

d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm. Effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour O_3 NAAQS (0.08 ppm) was revoked in the 2008 O_3 implementation rule, effective 4/6/15;there are continuing obligations under the revoked 1997 and revised 2008 O_3 until they are attained.

e) New NO_2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO_2 standard retained

f) The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations are still pending, with Basin expected to be designated Unclassifiable /Attainment.

g) Annual PM10 standard was revoked, effective December 18, 2006; 24-hour PM10 NAAQS deadline was 12/31/2006; SCAQMD request for attainment redesignation and PM10 maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.

h) The attainment deadline for the 2006 24-Hour PM2.5 NAAQS was 12/31/15 for the former "moderate" classification; EPA approved reclassification to "serious", effective 2/12/16 with an attainment deadline of 12/31/19; the 2012 (proposal year) annual PM2.5 NAAQS was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m^3; new annual designations were final 1/15/15, effective 4/15/15; on July 25, 2016 EPA finalized a determination that the Basin attained the 1997 annual (15.0 µg/m^3) and 24-hour PM2.5 (65 µg/m^3) NAAQS, effective August 24, 2016

i) Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect to remain in attainment based on current monitoring data; attainment re-designation request pending.

In 2015, one or more stations in the Air Basin exceeded the most current federal standards on a total of 146 days (40 percent of the year), including: 8-hour ozone (113 days over 2015 ozone NAAQS), 24-hour PM2.5 (30 days, including near-road sites; 25 days for ambient sites only), PM10 (2 days), and NO_2 (1 day). Despite substantial improvement in air quality over the past few decades, some air monitoring stations in the Air Basin still exceed the NAAQS for ozone more frequently than any other area in the United States.

Seven of the top 10 stations in the nation most frequently exceeding the 2015 8-hour ozone NAAQS in 2015 were located within the Air Basin, including stations in San Bernardino, Riverside, and Los Angeles Counties (SCAQMD, 2016).

PM2.5 levels in the Air Basin have improved significantly in recent years. By 2013 and again in 2014 and 2015, there were no stations measuring PM2.5 in the Air Basin that violated the former 1997 annual PM2.5 NAAQS (15.0 $\mu g/m^3$) for the 3-year design value period. On July 25, 2016 the EPA finalized a determination that the Basin attained the 1997 annual (15.0 $\mu g/m^3$) and 24-hour PM2.5 (65 $\mu g/m^3$) NAAQS, effective August 24, 2016. Of the 17 federal PM2.5 monitors at ambient stations in the Air Basin for the 2013-2015 period, five stations had design values over the current 2012 annual PM2.5 NAAQS (12.0 $\mu g/m^3$), including: Mira Loma (Air Basin maximum at 14.1 $\mu g/m^3$), Rubidoux, Fontana, Ontario, Central Los Angeles, and Compton. For the 24-hour PM2.5 NAAQS (35.0 $\mu g/m^3$) there were 14 stations in the Air Basin in 2015 that had one or more daily exceedances of the standard, with a combined total of 25 days over that standard in the Air Basin. While it was previously anticipated that the Air Basin's 24-hour PM2.5 NAAQS would be attained by 2015, this did not occur based on the data for 2013 through 2015. The higher number of days exceeding the 24-hour PM2.5 NAAQS over what was expected is largely attributed to the severe drought conditions over this period that allowed for more stagnant conditions in the Air Basin with multi-day buildups of higher PM2.5 concentrations. This was caused by the lack of storm-related dispersion and rain-out of PM and its precursors (SCAQMD, 2016).

The Air Basin is currently in attainment for the federal standards for SO_2, CO, NO_2, and PM10. The Air Basin is designated as partial nonattainment for lead and is based on two source specific monitors in Vernon and in the City of Industry that are both near battery recycling facilities. The 2012 Lead SIP for Los Angeles County provides measures to meet attainment of lead by December 31, 2015. Current monitoring data shows that lead is now below the standards at all monitoring stations, however it will take three years of meeting the standards before Los Angeles County can request to be re-designated by the EPA. While the concentration level of the 1-hour NO_2 federal standard (100 ppb) was exceeded in the Air Basin for one day in 2015 (Long Beach- Hudson Station), the NAAQS NO_2 design value has not been exceeded. Therefore, the Air Basin remains in attainment of the NO_2 NAAQS (SCAQMD, 2016).

3.2 State – California Air Resources Board

The CARB, which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The CAAQS for criteria pollutants are shown above in Table A. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The Air Basin has been designated by the CARB as a non-attainment area for ozone, PM10 and PM2.5. Currently, the Air Basin is in attainment with the ambient air quality standards for CO, NO_2, SO_2, lead, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to all development projects in the State.

Assembly Bill 2588

The Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release in California. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

CARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the CARB adopted California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 to reduce DPM and NOx emissions from in-use off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NOx emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirement making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less). Currently, no commercial operation in California may add any equipment to their fleet that has a Tier 0 or Tier 1 engine. By January 1, 2018 medium and large fleets will be restricted from adding Tier 2 engines to their fleets and by January 2023, no commercial operation will be allowed to add Tier 2 engines to their fleets. It should be noted that commercial fleets may continue to use their existing Tier 0 and 1 equipment, if they can demonstrate that the average emissions from their entire fleet emissions meet the NOx emissions targets.

CARB Resolution 08-43 for On-Road Diesel Truck Fleets

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NOx, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4 Final) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. By January 1, 2014, 50 percent of a truck fleet is required to have installed Best Available Control Technology (BACT) for NOx emissions and 100 percent of a truck fleet installed BACT for PM10 emissions. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California. All on-road diesel trucks utilized during construction of the proposed project will be required to comply with Resolution 08-43.

3.3 Regional – Southern California

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. The *Final 2016 Air Quality Management Plan* (2016 AQMP) was adopted by the SCAQMD Board on March 3, 2016 and was adopted by CARB on March 23, 2017 for inclusion into the SIP. The 2016 AQMP was prepared in order to meet the following standards:

- 8-hour Ozone (75 ppb) by 2032
- Annual PM2.5 (12 µg/m3) by 2021-2025
- 8-hour Ozone (80 ppb) by 2024 (updated from the 2007 and 2012 AQMPs)
- 1-hour Ozone (120 ppb) by 2023 (updated from the 2012 AQMP)
- 24-hour PM2.5 (35 µg/m^3) by 2019 (updated from the 2012 AQMP)

In addition to meeting the above standards, the 2016 AQMP also includes revisions to the attainment demonstrations for the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The prior 2012 AQMP was prepared in order to demonstrate attainment with the 24-hour PM2.5 standard by 2014 through adoption of all feasible measures. The prior 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These "black box" emissions reductions represent 65 percent of the remaining NOx emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NOx control measures have been provided in the 2012 AQMP even though the primary purpose was to show compliance with 24-hour PM2.5 emissions standards.

The 2016 AQMP provides a new approach that focuses on available, proven and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities to promote reductions in greenhouse gas emissions and TAC emissions as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the Air Basin. Instead, this is controlled through local jurisdictions in accordance to CEQA. In order to assist local jurisdictions with air quality compliance issues the *CEQA Air Quality Handbook* (SCAQMD CEQA Handbook), prepared by SCAQMD, 1993, with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs detailed in the AQMPs. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD

intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Air Basin, and adverse impacts will be minimized.

The following lists the SCAQMD rules that are applicable but not limited to park development projects in the Air Basin.

Rule 402 - Nuisance

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Compliance with Rule 402 will reduce local air quality and odor impacts to nearby sensitive receptors.

Rule 403- Fugitive Dust

Rule 403 governs emissions of fugitive dust during construction activities and requires that no person shall cause or allow the emissions of fugitive dust such that dust remains visible in the atmosphere beyond the property line or the dust emission exceeds 20 percent opacity, if the dust is from the operation of a motorized vehicle. Compliance with this rule is achieved through application of standard Best Available Control Measures, which include but are not limited to the measures below. Compliance with these rules would reduce local air quality impacts to nearby sensitive receptors.

- Utilize either a pad of washed gravel 50 feet long, 100 feet of paved surface, a wheel shaker, or a wheel washing device to remove material from vehicle tires and undercarriages before leaving project site.
- Do not allow any track out of material to extend more than 25 feet onto a public roadway and remove all track out at the end of each workday.
- Water all exposed areas on active sites at least three times per day and pre-water all areas prior to clearing and soil moving activities.
- Apply nontoxic chemical stabilizers according to manufacturer specifications to all construction areas that will remain inactive for 10 days or longer.
- Pre-water all material to be exported prior to loading, and either cover all loads or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114.
- Replant all disturbed area as soon as practical.
- Suspend all grading activities when wind speeds (including wind gusts) exceed 25 miles per hour.
- Restrict traffic speeds on all unpaved roads to 15 miles per hour or less.

Rules 1108 and 1108.1 – Cutback and Emulsified Asphalt

Rules 1108 and 1108.1 govern the sale, use, and manufacturing of asphalt and limits the VOC content in asphalt. This rule regulates the VOC contents of asphalt used during construction as well as any on-going maintenance during operations. Therefore, all asphalt used during construction and operation of the proposed project must comply with SCAQMD Rules 1108 and 1108.1.

Rule 1113 – Architectural Coatings

Rule 1113 governs the sale, use, and manufacturing of architectural coatings and limits the VOC content in sealers, coatings, paints and solvents. This rule regulates the VOC contents of paints available during construction. Therefore, all paints and solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1113.

Rule 1143 – Paint Thinners

Rule 1143 governs the sale, use, and manufacturing of paint thinners and multi-purpose solvents that are used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations. This rule regulates the VOC content of solvents used during construction. Solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1143.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (Connect SoCal), adopted September 3, 2020 and the *2019 Federal Transportation Improvement* Program (2019 FTIP), adopted September 2018, which addresses regional development and growth forecasts. Although the Connect SoCal and 2019 FTIP are primarily planning documents for future transportation projects a key component of these plans is to integrate land use planning with transportation planning that promotes higher density infill development in close proximity to existing transit service. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Connect SoCal, 2019 FTIP, and AQMP are based on projections originating within the City and County General Plans.

3.4 Local – City of South Pasadena

Local jurisdictions, such as the City of South Pasadena, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the AQMPs. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, the City relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook (SCAQMD, 1993) as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

4.0 ATMOSPHERIC SETTING

4.1 South Coast Air Basin

The project site is located within Los Angeles County, which is part of the South Coast Air Basin (Air Basin) that includes the non-desert portions of Riverside, San Bernardino, and Los Angeles Counties and all of Orange County. The Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

4.2 Local Climate

The climate of central Los Angeles County is characterized by hot dry summers, mild moist winters with infrequent rainfall, moderate afternoon breezes, and generally fair weather. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. Occasional periods of strong Santa Ana winds and winter storms interrupt the otherwise mild weather pattern.

Although the Air Basin has a semi-arid climate, the air near the surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the Air Basin by offshore winds, the ocean effect is dominant. Periods of heavy fog are frequent and low stratus clouds, often referred to as “high fog” are a characteristic climate feature.

Winds are an important parameter in characterizing the air quality environment of a project site because they determine the regional pattern of air pollution transport and control the rate of dispersion near a source. Daytime winds in Los Angeles County are usually light breezes from off the coast as air moves regionally onshore from the cool Pacific Ocean to the warm Mojave Desert interior of Southern California. These winds are usually the strongest in the dry summer months. Nighttime winds in Los Angeles County are a result mainly from the drainage of cool air off of the mountains to the east and they occur more often during the winter months and are usually lighter than the daytime winds. Between the periods of dominant airflow, periods of air stagnation may occur, both in the morning and evening hours. Whether such a period of stagnation occurs is one of the critical determinants of air quality conditions on any given day.

During the winter and fall months, surface high-pressure systems north of the Air Basin combined with other meteorological conditions, can result in very strong winds, called “Santa Ana Winds”, from the northeast. These winds normally have durations of a few days before predominant meteorological conditions are reestablished. The highest wind speed typically occurs during the afternoon due to daytime thermal convection caused by surface heating. This convection brings about a downward transfer of momentum from stronger winds aloft. It is not uncommon to have sustained winds of 60 miles per hour with higher gusts during a Santa Ana Wind event.

The temperature and precipitation levels for the Pasadena COOP Monitoring Station, which is the nearest weather station to the project site with historical data are shown below in Table C. Table C shows that August is typically the warmest month and January is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table C – Monthly Climate Data

Month	Average Maximum Temperature (°F)	Average Minimum Temperature (°F)	Average Total Precipitation (inches)
January	66.5	42.6	4.39
February	67.8	44.1	4.54
March	69.9	45.9	3.39
April	73.4	48.8	1.39
May	76.3	52.2	0.43
June	81.7	55.7	0.13
July	88.4	59.9	0.03
August	89.2	60.3	0.08
September	87.1	58.5	0.36
October	80.6	53.4	0.70
November	73.8	47.2	1.67
December	67.2	43.2	3.14
Annual	**76.8**	**51.0**	**20.24**

Source: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6719

4.3 Monitored Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. Estimates of the existing emissions in the Air Basin provided in the 2012 AQMP, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NOx emissions and 40 percent of directly emitted PM2.5, with another 10 percent of PM2.5 from road dust. The 2016 AQMP found that since 2012 AQMP projections were made stationary source VOC emissions have decreased by approximately 12 percent, but mobile VOC emissions have increased by 5 percent. The percentage of NOx emissions remain unchanged between the 2012 and 2016 projections.

SCAQMD has divided the Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in Air Monitoring Area 8, West San Gabriel Valley. Since not all air monitoring stations measure all of the tracked pollutants, the data from the following two monitoring stations, listed in the order of proximity to the project site have been used; Pasadena S Wilson Avenue Monitoring Station (Pasadena Station) and Los Angeles N Main St Monitoring Station (Los Angeles Station)

The Pasadena Station is located approximately 1.8 and 2.8 miles northeast of the two project sites at 752 S Wilson Avenue, Pasadena and the Los Angeles Station is located approximately 4.5 and 5.5 miles southwest of the two project sites at 1630 N Main Street, Los Angeles. The monitoring data is presented in Table D and shows the most recent three years of monitoring data from CARB. Ozone, PM2.5 and NO_2 were measured at the Pasadena Station and PM105 were measured at the Los Angeles Station. CO measurements have not been provided, since CO is currently in attainment in the Air Basin and monitoring of CO within the Air Basin ended on March 31, 2013.

Table D – Local Area Air Quality Monitoring Summary

Pollutant [1] (Standard)	Year 2018	2019	2020
Ozone[1]:			
Maximum 1-Hour Concentration (ppm)	0.112	0.120	0.163
Days > CAAQS (0.09 ppm)	**8**	**11**	**41**
Maximum 8-Hour Concentration (ppm)	0.090	0.098	0.115
Days > NAAQS (0.070 ppm)	**19**	**24**	**60**
Days > CAAQs (0.070 ppm)	**20**	**29**	**61**
Nitrogen Dioxide[1]:			
Maximum 1-Hour Concentration (ppb)	68.2	59.1	61.2
Days > NAAQS (100 ppb)	0	0	0
Days > CAAQS (180 ppb)	0	0	0
Inhalable Particulates (PM10)[2]:			
Maximum 24-Hour National Measurement (ug/m^3)	68.2	62.4	83.7
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	**31**	**15**	**34**
Annual Arithmetic Mean (AAM) (ug/m^3)	30.2	23.0	33.1
Annual > NAAQS (50 ug/m^3)	No	No	No
Annual > CAAQS (20 ug/m^3)	**Yes**	**Yes**	**Yes**
Ultra-Fine Particulates (PM2.5)[1]:			
Maximum 24-Hour National Measurement (ug/m^3)	32.5	41.8	67.7
Days > NAAQS (35 ug/m^3)	0	**1**	**2**
Annual Arithmetic Mean (AAM) (ug/m^3)	10.2	9.1	11.9
Annual > NAAQS and CAAQS (12 ug/m^3)	No	No	No

Notes: Exceedances are listed in **bold.** CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.

[1] Data obtained from the Pasadena Station.

[2] Data obtained from the Los Angeles Station

Source: http://www.arb.ca.gov/adam/

Ozone

During the last three years, the State 1-hour concentration standard for ozone has been exceeded between 8 and 41 days each year at the Pasadena Station. The State 8-hour ozone standard has been exceeded between 20 and 61 days each year over the last three years at the Rubidoux Station. The Federal 8-hour ozone standard has been exceeded between 19 and 60 days each year over the last three years at the Pasadena Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the

oxidant concentrations experienced in the area. Many areas of Southern California contribute to the ozone levels experienced at this monitoring station, with the more significant areas being those directly upwind.

Nitrogen Dioxide

The Pasadena Station did not record an exceedance of either the Federal or State 1-hour NO_2 standards for the last three years.

Particulate Matter

The State 24-hour concentration standard for PM10 has been exceeded between 15 and 34 days each year over the past three years at the Los Angeles Station. Over the past three years the Federal 24-hour standard for PM10 has not been exceeded over the past three years at the Los Angeles Station. The annual PM10 concentration at the Los Angeles Station has exceeded the State standard for the past three years and has not exceeded the Federal standard for the past three years.

Over the past three years the federal 24-hour concentration standard for PM2.5 has been exceeded between 0 and 2 days each year over the past three years at the Pasadena Station. The annual PM2.5 concentrations at the Pasadena Station has not exceeded either the State or Federal standards for the past three years. There does not appear to be a noticeable trend for PM10 or PM2.5 in either maximum particulate concentrations or days of exceedances in the area. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

4.2 Toxic Air Contaminant Levels

In order to determine the Air Basin-wide risks associated with major airborne carcinogens, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES) studies. According to the MATES V study (SCAQMD, 2021), the Berkshire Park site has an estimated cancer risk of 530 per million persons chance of cancer and the Grevelia Park site has an estimated cancer risk of 509 per million persons chance of cancer. In comparison, the average cancer risk for the Air Basin is 455 per million persons. The MATES V study that monitored air toxins between May 1, 2018 to April 30, 2019 found that cancer risk from air toxics has declined significantly in the Air Basin with a 40 percent decrease in cancer risk since the monitoring for the MATES IV study that occurred between July 1, 2012 and June 30, 2013 and an 84 percent decrease in cancer risk since the monitoring for the MATES II study that occurred between April 1, 1998 and March 31, 1999.

The MATES V study also analyzed impacts specific to the communities experiencing environmental injustices (EJ communities) that were evaluated using the Senate Bill 535 definition of disadvantaged communities, which found that between MATES IV and MATES V, the cancer risk from air toxics decreased by 57 percent in EJ communities overall, compared to a 53 percent reduction in non-EJ communities.

In order to provide a perspective of risk, it is often estimated that the incidence in cancer over a lifetime for the U.S. population ranges between 1 in 3 to 4 and 1 in 3, or a risk of about 300,000 per million persons. The MATES-III study referenced a Harvard Report on Cancer Prevention, which estimated that of cancers associated with known risk factors, about 30 percent were related to tobacco, about 30 percent were related to diet and obesity, and about 2 percent were associated with environmental pollution related exposures that includes hazardous air pollutants.

5.0 MODELING PARAMETERS AND ASSUMPTIONS

5.1 CalEEMod Model Input Parameters

The criteria air pollution emissions impacts created by the proposed project have been analyzed through use of CalEEMod Version 2020.4.0. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2017 computer program to calculate the emission rates specific for the South Coast Air Basin portion of Los Angeles County for employee, vendor and haul truck vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy equipment operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour.

The project characteristics in the CalEEMod model were set to a project location of the South Coast Air Basin portion of Los Angeles County, a Climate Zone of 9, utility company of Southern California Edison Utilities, and an opening year of 2023. In addition, the EMFAC off-model adjustment factors for gasoline light duty vehicle to account for the SAFE Vehicle rule was selected in the CalEEMod model run.

Land Use Parameters

The proposed project would consist of development of two pocket parks that total 16,612 square feet. The proposed project's land use parameters that were entered into the CalEEMod model are shown in Table E.

Table E – CalEEMod Land Use Parameters

Proposed Land Use	Land Use Subtype in CalEEMod	Land Use Size[1]	Lot Acreage[2]	Building/Paving[3] (square feet)
Berkshire and Grevelia Pocket Parks	City Park	0.29 AC	0.29	12,632
Paved Areas within the two Pocket Parks	Other Non-Asphalt Surfaces	4.00 TSF	0.09	4,000

Notes:
[1] AC = Acres; TSF = Thousand Square Feet.
[2] Lot acreage calculated based on the total project area of 0.381-acre.
[3] Building/Paving square feet represent area where architectural coatings will be applied.

Construction Parameters

Construction activities for the two parks are anticipated to start around July, 2022 and be completed in seven months. The phases of construction activities that have been analyzed are detailed below and include: 1) Site Preparation, 2) Grading, 3) Building Construction, 4) Paving, and 5) Application of architectural coatings.

The CalEEMod model provides the selection of "mitigation" to account for project conditions that would result in less emissions than a project without these conditions, however it should be noted that this "mitigation" may represent regulatory requirements. This includes the required to adherence to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.

Site Preparation

The site preparation phase would consist of removing any vegetation, tree stumps, and stones onsite prior to grading. The site preparation phase is anticipated to start in July 2022 and was modeled as occurring over one day, which is based on the CalEEMod default timing. The site preparation activities would generate 5 worker trips per day. The onsite equipment would consist of one grader, and one of either a tractor, loader, or backhoe, which is based on the CalEEMod default equipment mix. The mitigation of "water all exposed areas two times per day" was chosen in order to account for the fugitive dust reduction that would occur through adhering to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.

Grading

The grading phase was modeled as starting after the completion of the site preparation phase and was modeled as occurring over three weeks. The Grevelia Park site is anticipated to be balanced, which would not require any dirt to be imported or exported from the Grevelia Park site. However, the Berkshire Park site is anticipated to require approximately 650 cubic yards of fill and 250 cubic yards of cut, which will result in the import of 400 cubic yards of dirt that would generate a total of 50 haul truck trips (average 3.3 haul truck trips per day over duration of grading phase). The grading phase would generate eight worker trips per day. The onsite equipment would consist of the simultaneous operation of one grader, one rubber-tired dozer, and one of either a tractor, a loader, or a backhoe, which is based on the CalEEMod default equipment mix. The mitigation of water all exposed areas three times per day was chosen in order to account for the fugitive dust reduction that would occur through adhering to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.

Building Construction

The building construction would occur after the completion of the grading phase and was modeled as occurring over 100 workdays, which is based on the CalEEMod default timing. The building construction phase would generate seven worker trips and three vendor trips per day. The onsite equipment would consist of the simultaneous operation of one crane, two forklifts, and two of either tractors, loaders, or backhoes, which is based on the CalEEMod default equipment mix.

Paving

The paving phase would consist of paving the onsite parking lot areas, driveways, and impervious hardscape areas. The paving phase was modeled as occurring over four weeks and starting after completion of the building construction phase. The paving phase would generate 18 worker trips per day. The onsite equipment would consist of the simultaneous operation of four cement and mortar mixers, one paver, one roller, and one of either a tractor, loader or backhoe, which is based on the CalEEMod default equipment mix.

Architectural Coating

The application of architectural coatings was modeled as occurring after the paving phase and occurring over one week which is based on the CalEEMod default timing. The architectural coating phase was modeled based on covering 240 square feet of paved area. The architectural coating phase would generate one worker trips per day. The onsite equipment would consist of one air compressor, which is based on the CalEEMod default equipment mix.

Operational Emissions Modeling

The operations-related criteria air pollutant emissions created by the proposed project have been analyzed through use of the CalEEMod model. The proposed project was analyzed in the CalEEMod model based on the land use parameters provided above and the parameters entered for each operational emission source is described below.

Mobile Sources

Mobile sources include emissions the additional vehicle miles generated from the proposed project. According to the City, the two pocket parks would serve the local communities where people would walk to the parks and only a minimal number of vehicle trips would be generated by operation of the two pocket parks. In order to provide a conservative analysis, the default trip rates provided in the CalEEMod model have been utilized, which found that the proposed project would generate 0.23 weekday daily trips, 0.57 Saturday daily trips and 0.64 Sunday daily trips. No changes were made to the CalEEMod default mobile source parameters.

Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. The area source emissions were based on the on-going use of the proposed project in the CalEEMod model. No changes were made to the default area source parameters in the CalEEMod model.

Energy Usage

Energy usage includes emissions from electricity and natural gas used onsite. It should be noted that no natural gas appliances would be installed into either park. The energy usage was based on the ongoing use of the proposed project in the CalEEMod Model. No changes were made to the default energy usage parameters in the CalEEMod model.

6.0 THRESHOLDS OF SIGNIFICANCE

6.1 Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominant pollution generators in the Air Basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table F.

Table F – SCAQMD Regional Criteria Pollutant Emission Thresholds of Significance

	Pollutant Emissions (pounds/day)						
	VOC	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**	**Lead**
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2

6.2 Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. SCAQMD has also provided *Final Localized Significance Threshold Methodology* (LST Methodology), July 2008, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO_2, CO, PM10, and PM2.5.

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of the project site and distance to the nearest sensitive receptors. As detailed above in Section 4.3, the project site is located in Air Monitoring Area 8, West San Gabriel Valley. The Look-Up Tables provided in the LST Methodology include project site acreage sizes of 1-acre, 2-acres and 5-acres. The 1-acre project site values in the Look-Up Tables have been utilized in this analysis, since that is the nearest size available for the two project sites that total 0.38 acre.

The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south. According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25-meter thresholds. Table G below shows the LSTs for NOx, CO, PM10 and PM2.5 for both construction and operational activities.

Table G – SCAQMD Local Air Quality Thresholds of Significance

Activity	Allowable Emissions (pounds/day)[1]			
	NOx	CO	PM10	PM2.5
Construction	69	535	4	3
Operation	69	535	1	1

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one acre at 25 meters in Air Monitoring Area 8, West San Gabriel Valley.

6.3 Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to toxic air contaminants (TACs), the *Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*, (Diesel Analysis) prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create TACs through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the TAC and the toxicity of the hazardous air pollutant (HAP) should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

6.4 Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

> "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
>
> The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality emissions would occur if the proposed project is determined to:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

7.2 Air Quality Compliance

The proposed project would not conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan (AQMP). The following section discusses the proposed project's consistency with the SCAQMD AQMP.

SCAQMD Air Quality Management Plan

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and regional plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD AQMP. Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this report, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance discussed above in Section 6.1 or local thresholds of significance discussed above in Section 6.2. The ongoing operation of the proposed project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance discussed above in Section 6.1. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards. Therefore, a less than significant long-term impact would occur and no mitigation would be required.

Therefore, based on the information provided above, the proposed project would be consistent with the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the RTP/SCS and FTIP. The RTP/SCS is a major planning document for the regional transportation and land use network within Southern California. The RTP/SCS is a long-range plan that is required by federal and state requirements placed on SCAG and is updated every four years. The FTIP provides long-range planning for future transportation improvement projects that are constructed with state and/or federal funds within Southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA. For this project, the City of South Pasadena General Plan's Land Use Plan defines the assumptions that are represented in AQMP.

The Berkshire Park site is currently designated Low Density Residential and the Grevelia Park site is currently designated Medium Density Residential in the Land Use Policy Map. It should be noted that the *Draft South Pasadena General Plan,* November 4, 2019 designates these two parcels as Parks & Open Space. Although the Draft General Plan has not yet been adopted, City Parks are an allowed use under the Low Density Residential and the Medium Density Residential land uses and the City of Pasadena has recently rezoned the two parcels to Open Space to allow for development of the proposed project. As such, the proposed project is consistent with the current land use designations and would not require a General Plan Amendment. As such, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur in relation to implementation of the AQMP.

Level of Significance

Less than significant impact.

7.3 Cumulative Net Increase in Non-Attainment Pollution

The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality

standard. The following section calculates the potential air emissions associated with the construction and operations of the proposed project and compares the emissions to the SCAQMD standards.

Construction Emissions

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction and paving of the two proposed pocket parks, and application of architectural coatings. The CalEEMod model has been utilized to calculate the construction-related emissions from the proposed project and the input parameters utilized in this analysis have been detailed in Section 5.1. Table H shows the maximum summer and winter emissions for both year 2022 and 2023, which is when construction activities are anticipated to occur and the CalEEMod daily printouts are shown in Appendix A.

Table H – Construction-Related Maximum Daily Criteria Pollutant Emissions

Construction Year and Season	Pollutant Emissions[1] (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Summer 2022	1.13	12.58	7.48	0.02	2.74	1.52
Winter 2022	1.13	12.61	7.46	0.02	2.74	1.52
Summer 2023	0.67	5.54	7.67	0.01	0.47	0.30
Winter 2023	0.67	5.55	7.62	0.01	0.47	0.30
Maximum Daily Construction Emissions	**1.13**	**12.61**	**7.48**	**0.02**	**2.74**	**1.52**
SCQAMD Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
SCAQMD Local Thresholds	**--**	**69**	**535**	**--**	**4**	**3**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.
Source: CalEEMod Version 2020.4.0.

Table H shows that the maximum daily criteria pollutant emissions would not exceed either the SCAQMD regional and local criteria pollutant thresholds. In addition, construction emissions would be short-term, limited only to the period when construction activity is taking place. As such, construction-related criteria pollutant emissions would be less than significant for the proposed project.

Operational Emissions

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips, emissions from energy usage, and onsite area source emissions created from the on-going use of the proposed project.

The operations-related regional criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model and the input parameters utilized in this analysis have been detailed in Section 5.1. The worst-case summer or winter VOC, NOx, CO, SO_2, PM10, and PM2.5 daily emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table I and the CalEEMod daily emissions printouts are shown in Appendix A.

Table I – Operational Regional Criteria Pollutant Emissions

	Pollutant Emissions (pounds/day)					
Activity	**VOC**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Area Sources[1]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Energy Usage[2]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[3]	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Total Emissions	**<0.01**	**<0.01**	**0.02**	**<0.01**	**<0.01**	**<0.01**
SCQAMD Regional Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
SCAQMD Local Thresholds	**--**	**69**	**535**	**--**	**1**	**1**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[2] Energy usage consist of emissions from natural gas usage (no natural gas appliances would be installed into the two pocket parks).
[3] Mobile sources consist of emissions from vehicles and road dust.
Source: Calculated from CalEEMod Version 2020.4.0.

The data provided in Table I shows that the operations-related emissions would not exceed either SCAQMD regional or local thresholds. As such, operations-related criteria pollutant emissions would be less than significant for the proposed project.

Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

Level of Significance

Less than significant impact.

7.4 Sensitive Receptors

The proposed project would not expose sensitive receptors to substantial pollutant concentrations. The local concentrations of criteria pollutant emissions produced in the nearby vicinity of the proposed project, which may expose sensitive receptors to substantial concentrations have been calculated above in Section 9.3 for both construction and operations, which are discussed separately below. The discussion below also includes an analysis of the potential impacts from toxic air contaminant emissions.

The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south.

Construction-Related Sensitive Receptor Impacts

Construction activities may expose sensitive receptors to substantial pollutant concentrations of localized criteria pollutant concentrations and from toxic air contaminant emissions created from onsite construction equipment, which are described below.

Local Criteria Pollutant Impacts from Construction

The local air quality impacts from construction of the proposed project has been analyzed above in Section 9.3 and found that the construction of the proposed project would not exceed the SCAQMD's local NOx,

CO, PM10 and PM2.5 thresholds of significance discussed above in Section 8.2. Therefore, construction of the proposed project would create a less than significant construction-related impact to local air quality and no mitigation would be required.

Toxic Air Contaminants Impacts from Construction

The greatest potential for toxic air contaminant emissions would be related to diesel particulate matter (DPM) emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. It should be noted that the most current cancer risk assessment methodology recommends analyzing a 30 year exposure period for the nearby sensitive receptors (OEHHA, 2015).

Given the relatively limited number of heavy-duty construction equipment, the varying distances that construction equipment would operate to the nearby sensitive receptors, and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 or 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment to no more than five minutes, requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet's usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0 or Tier 1 equipment and by January 2023 no commercial operator is allowed to purchase Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. By January, 2022, 50 percent or more of all contractors' equipment fleets must be Tier 2 or higher. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project. As such, construction of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operations-Related Sensitive Receptor Impacts

The on-going operations of the proposed project may expose sensitive receptors to substantial pollutant concentrations of local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from onsite operations. The following analyzes the vehicular CO emissions. Local criteria pollutant impacts from onsite operations, and toxic air contaminant impacts.

Local CO Hotspot Impacts from Project-Generated Vehicle Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential impacts to sensitive receptors.

As detailed above in Section 5.1, operation of the proposed project is anticipated to generate less than one vehicle trip per day. As such, no local CO Hotspot are anticipated to be created from the proposed project and no CO Hotspot modeling was performed. Therefore, a less than significant impact is anticipated to sensitive receptors from potential CO Hotspots.

Local Criteria Pollutant Impacts from Onsite Operations

The local air quality impacts from the operation of the proposed project would occur from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances (no natural gas appliances would be installed in the two proposed pocket parks). The analysis provided above in Section 7.3 found that the operation of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 6.2. Therefore, the on-going operations of the proposed project would create a less than significant operations-related impact to local air quality due to on-site emissions and no mitigation would be required.

Operations-Related Toxic Air Contaminant Impacts

Particulate matter (PM) from diesel exhaust is the predominant TAC in most areas and according to *The California Almanac of Emissions and Air Quality 2013 Edition*, prepared by CARB, about 80 percent of the outdoor TAC cancer risk is from diesel exhaust. Some chemicals in diesel exhaust, such as benzene and formaldehyde have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips that are anticipated to be generated by the on-going operation of the two pocket parks, a less than significant TAC impact would occur during the on-going operations of the proposed project and no mitigation would be required.

Therefore, operation of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Level of Significance

Less than significant impact.

7.5 Odor Emissions Adversely Affecting a Substantial Number of People

The proposed project would not result in other emissions, such as those leading to odors that would adversely affect a substantial number of people. The local concentrations of criteria pollutant emissions, TAC emissions, and CO concentrations that may adversely impact a substantial number of people have been analyzed above in Section 7.4 for both construction and operations, which found that these types of emissions would create less than significant impacts. As such, the following analysis is limited to odors that would have the potential to adversely affect a substantial number of people.

Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the project site and is typically presented as the mean (or 50 percent of the

population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of coatings such as asphalt pavement, paints and solvents and from emissions from diesel equipment. Standard construction requirements that limit the time of day when construction may occur as well as SCAQMD Rule 1108 that limits VOC content in asphalt and Rule 1113 that limits the VOC content in paints and solvents would minimize odor impacts from construction. As such, the objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. Through compliance with the applicable regulations that reduce odors and due to the transitory nature of construction odors, a less than significant odor impact would occur and no mitigation would be required.

Operations-Related Odor Impacts

The proposed project would consist of the development of two pocket parks. According to the SCAQMD, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The operation of the proposed project does not include any uses identified in the SCAQMD CEQA Handbook (SCAQMD, 1993) as being associated with odors. Therefore, a less than significant odor impact would occur and no mitigation would be required.

Level of Significance

Less than significant impact.

8.0 REFERENCES

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APPENDIX A

CalEEMod Model Daily Printouts

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Berkshire & Grevelia Pocket Parks

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.29	Acre	0.29	12,632.40	0
Other Non-Asphalt Surfaces	4.00	1000sqft	0.09	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total area of both Parks = 16,612 sq ft

Construction Phase - Construction schedule provided by applicant

Grading - Gevelia - 400 cy import. Berkshire - balanced

Construction Off-road Equipment Mitigation - Water Exposed Area 3 times per day selected to account for SCAQMD Rule 403 minimum requirements.

Water Mitigation - Use Water Efficient Irrigation Systems

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	1/10/2023	2/3/2023

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	12/27/2022	12/30/2022
tblConstructionPhase	PhaseEndDate	8/9/2022	8/12/2022
tblConstructionPhase	PhaseEndDate	1/3/2023	1/28/2023
tblConstructionPhase	PhaseEndDate	8/5/2022	7/22/2022
tblConstructionPhase	PhaseStartDate	1/4/2023	1/29/2023
tblConstructionPhase	PhaseStartDate	8/10/2022	8/13/2022
tblConstructionPhase	PhaseStartDate	8/6/2022	7/25/2022
tblConstructionPhase	PhaseStartDate	12/28/2022	1/2/2023
tblConstructionPhase	PhaseStartDate	8/5/2022	7/22/2022
tblGrading	MaterialImported	0.00	400.00

2.0 Emissions Summary

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1264	12.5847	7.4790	0.0170	5.4627	0.5220	5.9847	2.6087	0.4804	3.0891						
2023	0.6688	5.5448	7.6732	0.0131	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1264**	**12.5847**	**7.6732**	**0.0170**	**5.4627**	**0.5220**	**5.9847**	**2.6087**	**0.4804**	**3.0891**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1264	12.5847	7.4790	0.0170	2.2206	0.5220	2.7426	1.0416	0.4804	1.5220						
2023	0.6688	5.5448	7.6732	0.0131	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1264**	**12.5847**	**7.6732**	**0.0170**	**2.2206**	**0.5220**	**2.7426**	**1.0416**	**0.4804**	**1.5220**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	57.24	0.00	50.25	58.87	0.00	46.22	0.00	0.00	0.00	0.00	0.00	0.00

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.2200e-003**	**1.7900e-003**	**0.0182**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.2200e-003**	**1.7900e-003**	**0.0182**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/22/2022	7/22/2022	5	1	
2	Grading	Grading	7/25/2022	8/12/2022	5	15	
3	Building Construction	Building Construction	8/13/2022	12/30/2022	5	100	
4	Paving	Paving	1/2/2023	1/28/2023	5	20	
5	Architectural Coating	Architectural Coating	1/29/2023	2/3/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 11.25

Acres of Paving: 0.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 240 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.2068**	**0.2573**	**0.4641**	**0.0223**	**0.2367**	**0.2591**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3150	0.0000	5.3150	2.5690	0.0000	2.5690						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.3150**	**0.5173**	**5.8322**	**2.5690**	**0.4759**	**3.0449**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5598	0.1305	2.0700e-003	0.0584	4.1600e-003	0.0625	0.0160	3.9800e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0432**	**0.5800**	**0.4458**	**2.8900e-003**	**0.1478**	**4.7300e-003**	**0.1525**	**0.0397**	**4.5100e-003**	**0.0442**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0728	0.0000	2.0728	1.0019	0.0000	1.0019						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.0728**	**0.5173**	**2.5901**	**1.0019**	**0.4759**	**1.4778**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5598	0.1305	2.0700e-003	0.0584	4.1600e-003	0.0625	0.0160	3.9800e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0432**	**0.5800**	**0.4458**	**2.8900e-003**	**0.1478**	**4.7300e-003**	**0.1525**	**0.0397**	**4.5100e-003**	**0.0442**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8700e-003						
Worker	0.0242	0.0177	0.2759	7.2000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0301**	**0.1646**	**0.3263**	**1.3100e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8700e-003						
Worker	0.0242	0.0177	0.2759	7.2000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0301**	**0.1646**	**0.3263**	**1.3100e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.2000e-003	2.2300e-003	0.0362	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.2000e-003**	**2.2300e-003**	**0.0362**	**1.0000e-004**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.2000e-003	2.2300e-003	0.0362	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.2000e-003**	**2.2300e-003**	**0.0362**	**1.0000e-004**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Unmitigated	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.23	0.57	0.64	960	960
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.23	0.57	0.64	960	960

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.0 Area Detail

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Berkshire & Grevelia Pocket Parks

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.29	Acre	0.29	12,632.40	0
Other Non-Asphalt Surfaces	4.00	1000sqft	0.09	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total area of both Parks = 16,612 sq ft

Construction Phase - Construction schedule provided by applicant

Grading - Gevelia - 400 cy import. Berkshire - balanced

Construction Off-road Equipment Mitigation - Water Exposed Area 3 times per day selected to account for SCAQMD Rule 403 minimum requirements.

Water Mitigation - Use Water Efficient Irrigation Systems

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	1/10/2023	2/3/2023

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	12/27/2022	12/30/2022
tblConstructionPhase	PhaseEndDate	8/9/2022	8/12/2022
tblConstructionPhase	PhaseEndDate	1/3/2023	1/28/2023
tblConstructionPhase	PhaseEndDate	8/5/2022	7/22/2022
tblConstructionPhase	PhaseStartDate	1/4/2023	1/29/2023
tblConstructionPhase	PhaseStartDate	8/10/2022	8/13/2022
tblConstructionPhase	PhaseStartDate	8/6/2022	7/25/2022
tblConstructionPhase	PhaseStartDate	12/28/2022	1/2/2023
tblConstructionPhase	PhaseStartDate	8/5/2022	7/22/2022
tblGrading	MaterialImported	0.00	400.00

2.0 Emissions Summary

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1280	12.6095	7.4581	0.0169	5.4627	0.5220	5.9847	2.6087	0.4804	3.0891						
2023	0.6731	5.5490	7.6205	0.0130	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1280**	**12.6095**	**7.6205**	**0.0169**	**5.4627**	**0.5220**	**5.9847**	**2.6087**	**0.4804**	**3.0891**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1280	12.6095	7.4581	0.0169	2.2206	0.5220	2.7426	1.0416	0.4804	1.5220						
2023	0.6731	5.5490	7.6205	0.0130	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1280**	**12.6095**	**7.6205**	**0.0169**	**2.2206**	**0.5220**	**2.7426**	**1.0416**	**0.4804**	**1.5220**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	57.24	0.00	50.25	58.87	0.00	46.22	0.00	0.00	0.00	0.00	0.00	0.00

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.1800e-003**	**1.9400e-003**	**0.0178**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.1800e-003**	**1.9400e-003**	**0.0178**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/22/2022	7/22/2022	5	1	
2	Grading	Grading	7/25/2022	8/12/2022	5	15	
3	Building Construction	Building Construction	8/13/2022	12/30/2022	5	100	
4	Paving	Paving	1/2/2023	1/28/2023	5	20	
5	Architectural Coating	Architectural Coating	1/29/2023	2/3/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 11.25

Acres of Paving: 0.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 240 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.2068**	**0.2573**	**0.4641**	**0.0223**	**0.2367**	**0.2591**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3150	0.0000	5.3150	2.5690	0.0000	2.5690						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.3150**	**0.5173**	**5.8322**	**2.5690**	**0.4759**	**3.0449**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0152	0.5826	0.1328	2.0700e-003	0.0584	4.1700e-003	0.0625	0.0160	3.9900e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0448**	**0.6049**	**0.4223**	**2.8400e-003**	**0.1478**	**4.7400e-003**	**0.1525**	**0.0397**	**4.5200e-003**	**0.0442**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0728	0.0000	2.0728	1.0019	0.0000	1.0019						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.0728**	**0.5173**	**2.5901**	**1.0019**	**0.4759**	**1.4778**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0152	0.5826	0.1328	2.0700e-003	0.0584	4.1700e-003	0.0625	0.0160	3.9900e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0448**	**0.6049**	**0.4223**	**2.8400e-003**	**0.1478**	**4.7400e-003**	**0.1525**	**0.0397**	**4.5200e-003**	**0.0442**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8800e-003						
Worker	0.0259	0.0195	0.2533	6.8000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0318**	**0.1726**	**0.3054**	**1.2700e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8800e-003						
Worker	0.0259	0.0195	0.2533	6.8000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0318**	**0.1726**	**0.3054**	**1.2700e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.4400e-003	2.4700e-003	0.0333	9.0000e-005	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.4400e-003**	**2.4700e-003**	**0.0333**	**9.0000e-005**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.4400e-003	2.4700e-003	0.0333	9.0000e-005	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.4400e-003**	**2.4700e-003**	**0.0333**	**9.0000e-005**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Unmitigated	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.23	0.57	0.64	960	960
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.23	0.57	0.64	960	960

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CITY OF SOUTH PASADENA

CLASS 32 CATEGORICAL EXEMPTION EVALUATION REPORT

Berkshire Pocket Park Project

2006 Berkshire Avenue (APN: 5310-018-901), South Pasadena, CA 91030

November 2023

This Class 32 Categorical Exemption Evaluation Report (CE Evaluation) documents the eligibility of the proposed Berkshire Pocket Park in the City of South Pasadena (City) for a Categorical Exemption from the California Environmental Quality Act (CEQA).

1. Project Description and Location

The 7,482-square-foot Project Site is located at 2006 Berkshire Avenue (APN: 5310-018-901) in South Pasadena, Los Angeles County, California. The Project Site is located at the southern edge of the City's boundaries and is bounded by Berkshire Avenue/Valley View Road to the west and single-family residential uses to the north, south, and east. See **Figures 1** and **2** for the Regional Location Map and the Project Location Map.

The Project proposes a pocket park on a currently vacant parcel. The Project would include fencing and walls with a gated entrance and decorative park sign. A walking path starting at the entrance in the southern portion of the Project Site would open to a landscaped gathering area with picnic tables and seating areas. Adjacent to this gathering area and in the northwestern portion of the Project Site, the Project would include a painted four-square play court and several pieces of fitness equipment. The walking path would curve around the gathering area and lead to an open play area comprising grass that would occupy the eastern portion of the Project Site. In addition, the Project would include landscaping, new trees, stones, rocks, and/or boulders to delineate the various recreation areas. Benches, bollards with lighting, a drinking fountain, a pet waste station, and trash and recycling receptacles would also be provided throughout the site. During operations, the park would be open from dawn to dusk with closure from 10 p.m. to 6 a.m. See **Figure 3** for the Conceptual Site Plan.

The Project is intended to serve the local neighborhood and the City does not anticipate an additional parking demand other than what can be accommodated by the available street parking within the vicinity.

Construction of the Project is anticipated to occur over 7 months.[1] Project construction (including site preparation, grading, and construction) would result in approximately 31 cubic yards of cut and 555 cubic yards of fill (i.e., approximately 524 cubic yards of import soil).

2. Existing Conditions

The Project Site is currently vacant of developed uses. Vegetation onsite consists of 13 trees, of which eight are protected coast live oak trees. Under existing conditions, the Project Site's topography descends to the south at an approximate gradient of 10 percent.

The Project Site was previously owned by the California Department of Transportation (Caltrans) and was purchased by the City of South Pasadena and rezoned as OS (Open Space). The Project Site is currently

[1] The evaluation herein conservatively assumed commencement of construction of the Project in the summer of 2022, with anticipated Project completion in the spring of 2023. This is a conservative assumption, as construction equipment emissions are projected to decrease over time as new equipment and vehicles meeting stricter emissions standards replace older equipment and vehicles in the fleet.

designated for Low Density Residential land uses by the existing General Plan. The City's ongoing General Plan update, which has not yet been adopted, would designate the Project Site for Parks & Open Space land uses.

Surrounding uses include Berkshire Avenue/Valley View Road to the west and residential uses to the north, south, and east. Farther to the west, north, and east are additional residential uses. The southern edge of the block on which the Project Site is located is part of the City's southern boundary.

3. Categorical Exemption

CEQA and the State CEQA Guidelines require the preparation of environmental documents to assess and report the environmental impacts of certain types of projects that could result in adverse effects on the environment. Pursuant to CEQA Section 21084, the CEQA Guidelines (Section 15300 et seq.) also define classes of projects that are found by the Secretary of the California Natural Resources Agency to not have a significant effect on the environment and thus are declared to be categorically exempt from the requirement for the preparation of environmental documents. These types of projects are exempt from CEQA, provided that none of the exceptions to the use of categorical exemptions apply (CEQA Guidelines Section 15300.2).

Among the list of categorically exempt classes of projects is Class 32 In-Fill Development Projects, as defined in CEQA Guidelines Section 15332. Class 32 projects consist of those characterized as infill development meeting the following conditions identified in Section 15332:

> (a) the project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;
>
> (b) the proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;
>
> (c) the project site has no habitat for endangered, rare, or threatened species;
>
> (d) approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and
>
> (e) the site can be adequately served by all required utilities and public services.

The evaluation below demonstrates the Project's satisfaction of these criteria.

a. Consistency with General Plan Designation and Policies and Zoning Designation and Regulations

As discussed above, the Project is a proposed park with play areas, seating, and landscaping. The Project Site is currently zoned for OS (Open Space) and designated for Low Density Residential land uses by the existing General Plan. The General Plan update, which has not yet been adopted, would designate the Project Site for Parks & Open Spaces land uses.

(1) General Plan Designation and Policies

As established in the General Plan Land Use Element, the Low Density Residential designation allows for the development of detached single-family units at a density of 3.5-6 units per acre.[2] This designation has been applied to the majority of existing single-family neighborhoods and is intended to protect and maintain their character and to prevent encroachment of higher density development. The Project would be consistent with the current Low Density Residential designation as the proposed uses would not conflict with residential development or density. As a park operated by the City, the Project would be designed to maintain the character and livability of the existing neighborhood and encourage use by the surrounding

[2] City of South Pasadena General Plan, Land Use Element, 1998.

community. As previously described, the General Plan update, which has not yet been adopted, would designate the Project Site for Parks & Open Space land uses. Furthermore, the City purchased the Project Site from Caltrans and rezoned the parcel for OS (Open Space). As such, the General Plan's Parks & Open Space land use designation is described below.

The Parks & Open Space land use designation is intended for City parks and playgrounds, commercial recreation, natural open space, recreational trails and linkages, utility easements and flood control channels. In addition to the land use designation, the Open Space & Resource Conservation Element from the existing General Plan identifies several goals and policies which act as guides for the City's future development of open space and resource conservation. Among these is Goal 1, which promotes the design, development and maintenance of a system of parks that will provide a complete range of facilities and activities for all age groups. In addition, Policy 1.2 ensures that all residential neighborhoods are served by at least one neighborhood park to the fullest extent possible. The Open Space & Resource Conservation Element notes that as a built-out city, the challenge facing South Pasadena is to create an open space system that does not solely consist of the unusable spaces left over from development, but rather one that integrates parks and playgrounds, connecting corridors, natural habitats, and natural and cultural resources into a meaningful multipurpose network. The Project would be consistent with the goal and policy by constructing a park within a residential neighborhood whose nearest parks within the City's boundaries include Orange Grove Park, which is located approximately 1 mile north of the Project Site, and Garfield Park, which is located approximately 1.25 miles northeast of the Project Site. In providing a children's play area and open turf field, as well as seating areas, the Project would include a variety of active and passive recreational spaces and uses for all age groups within walking distance of nearby residences. The Project would also introduce new trees to the site, which would provide shade and habitat.

Therefore, the Project is consistent with the General Plan and its relevant provisions.

(2) Zoning Designation and Regulations

As discussed above, the City has already rezoned the parcel for OS. Per South Pasadena Municipal Code (SPMC) Section 36.240.040, the Project would be designed, constructed, and/or established in compliance with development standards determined through the City's development review process. As such, the Project would be consistent with the development regulations set forth in the SPMC.

(3) Summary

As discussed above, the Project is consistent with the Parks & Open Space land use designation and relevant provisions in the General Plan. With the allowed park use, the Project would also be consistent with the uses and development regulations specified in the SPMC for the OS zone.

b. Project Location within City Limits on a Site No More than 5 Acres Substantially Surrounded by Urban Uses

The Project Site is 7,482 square feet (0.17 acre) in an urbanized and developed area of the City of South Pasadena. The Project Site is located at the southern edge of the City's boundaries and is bounded by Berkshire Avenue/Valley View Road to the west and residential uses to the north, south, and east. Farther to the west, north, and east are residential uses of varying densities. Four schools and institutional uses are located within 0.3 miles to 0.75 miles of the Project Site. As such, the Project Site is within the South Pasadena city limits, is located on a site that is less than 5 acres in size, and is substantially surrounded by urban land uses. Therefore, the Project is consistent with this criterion.

c. Habitat for Endangered, Rare, or Threatened Species

As stated above, the Project Site is in an urbanized area and completely surrounded by development. Under existing conditions, the Project Site includes 13 trees, of which eight are protected coast live oak trees. The Project would preserve seven protected oak trees in place; one oak tree will require removal as it is growing from the crown of a canary island palm tree. The Project would remove five unprotected trees and plant six new trees (including two new oak trees). The Project Site does not contain any vegetation that

constitutes a natural community or any habitat that is biologically sensitive. The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) shows that there have been endangered, rare, or threatened species identified in the Los Angeles Quadrangle (where the Project Site is located).[3] However, the Project Site does not contain any critical habitat, as delineated by the United States Fish and Wildlife Service, nor does it contain the habitat necessary to support any of the listed species.[4] Furthermore, the Project Site does not contain any wetland or riparian habitat as identified by the National Wetlands Inventory.[5]

Because the Project Site is located within a fully urbanized environment that is surrounded by disturbed areas (such as sidewalks, streets, residential homes, overhead powerlines and streetlights, and major rights-of-way), implementation of the Project would not result in loss of habitat utilized by endangered, rare, or threatened species.

d. Effects Relating to Traffic, Noise, Air Quality, or Water Quality

(1) Traffic

The South Pasadena Transportation Impact Analysis Methodology (May 6, 2020) was developed on behalf of the City to address the 2019 amendments to the CEQA Guidelines made by the California Natural Resources Agency as required by Senate Bill 743. As discussed in this Methodology document, projects that do not meet the screening thresholds will be presumed to cause a less than significant CEQA transportation impact and will not require a detailed transportation impact analysis for CEQA purposes. The City's Transportation Impact Analysis Methodology provides several screening thresholds for land use development projects:

a) Small Project Size—Projects that would generate fewer than 100 trips per day.
b) Low Vehicle Miles Traveled (VMT) Area—Projects consistent with the General Plan and any relevant specific plan and located in traffic analysis zones (TAZ) that have VMT per service population below 85 percent of the Los Angeles County averages, as mapped in the Transportation Impact Analysis Methodology.
c) Within a Transit Priority Area—Projects within 0.5 miles of the five major transit stops in the City would be screened from analysis unless they have a floor area ratio of less than 0.75, include more parking than required by the City, are inconsistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainability Communities Strategy (RTP/SCS), or replace affordable housing units with a smaller number of moderate- or high-income residential units. The transit priority areas of the City are mapped in the Transportation Impact Analysis Methodology.
d) Retail Projects—Retail projects of less than 50,000 square feet.
e) Affordable Housing—The City will find a less than significant impact for development projects with a majority of affordable housing (over 50 percent) and the portions of a development project with less than 50 percent affordable housing.
f) Redevelopment Projects—Replacement of an existing land use with a land use that generates less VMT than its previous use.
g) Community-Serving Projects—Similar to the screening of retail projects, municipal projects such as schools, parks, community centers, libraries and other community-serving uses would be intended for local use and would be presumed to have a less than significant impact on transportation, based on the discretion of the Public Works Department.

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3 California Department of Fish and Wildlife, CNDDB Quad Species List, Los Angeles Quadrangle, https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick, accessed March 31, 2022.

4 United States Fish and Wildlife Service, Critical Habitat for Threatened and Endangered Species Mapper, https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77, accessed March 31, 2022.

5 United States Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/, accessed March 31, 2022.

The Project is a municipal project that is community-serving and intended primarily for local use. As described above, the Project would include a variety of active and passive recreational spaces and uses and would not include programmed activities. The neighborhood park would be within walking distance of nearby residences, and no off-street parking is proposed. Based on these characteristics, the Project would generate less than one vehicle trip per day (i.e., far fewer than 100 trips).[6] Therefore, the Project would be screened out of a CEQA transportation analysis because of its small project size. Accordingly, the Project would not require a CEQA Transportation Impact Analysis, and transportation impacts would be less than significant.

(2) Noise

The following analysis summarizes the Noise Impact Analysis report prepared for the Project, available as **Appendix A** of this CE Evaluation.[7] Sensitive receptors surrounding the Project Site include residential uses as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. Such uses may be exposed to elevated noise levels generated by the Project during construction and operation.

Construction activities would occur over approximately seven months and would include the following phases: site preparation, grading, building construction, paving, and painting. Per SPMC Section 19A.13(a), it is unlawful for construction activity to occur within a residential zone or within 500 feet of a residential zone on Monday through Friday before 8:00 a.m. and after 7:00 p.m., Saturday before 9:00 a.m. and after 7:00 p.m., and on Sundays and City-recognized holidays before 10:00 a.m. and after 6:00 p.m. Accordingly, Project construction activities would only occur during the established allowable hours. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities. As such, the Federal Transit Administration (FTA) daytime construction noise thresholds of 90 dBA L_{eq} for residential uses were considered in the analysis. As shown in Table E of the Noise Report, the highest noise levels during construction would occur during site preparation and grading and would reach approximately 87 dBA L_{eq} at the residential uses next to the Project Site.[8] As such, all calculated construction noise levels are within the FTA daytime construction noise standards of 90 dBA L_{eq} for residential uses. Therefore, the Project would not create a substantial temporary increase in ambient noise levels from construction activities, and construction noise impacts would be less than significant.

During operation, the Project would serve the local community and the majority of the visitors would be anticipated to reach the park by walking. According to the Air Quality Impact Analysis report, the Project would generate less than one vehicle trip per day.[9] Due to the nominal vehicle trips generated, the Project would not result in a substantial permanent roadway noise increase to ambient noise levels. As such, Project impacts related to traffic noise would be less than significant.

Operation of the Project would also generate noise associated with the use of the park amenities and gathering areas. Based on Policy 5.1 of the existing General Plan Safety & Noise Element, which considers the impacts of new projects involving increases in noisy activities or traffic, an increase of 3 dBA where the ambient noise level is in excess of 65 dBA CNEL in sensitive areas shall be considered significant. In order to determine the noise impacts created by the Project, a reference noise measurement was taken at the existing Magnolia Street Park, which is similarly sized open space located at 1028 Magnolia Street. During the reference noise measurement, there were two people working in the community garden, a person walked a dog through the front portion of the park, and a few vehicles passed by on Magnolia Street. The reference noise measurement found that Magnolia Street Park produces a noise level of 45.7 dBA L_{eq}, which is below the existing ambient noise level of 51.4 dBA L_{eq} for the Project Site. As such, the Project's on-site activities would not be anticipated to exceed the City's noise threshold of a 3 dBA increase in

6 Vista Environmental, Air Quality Impact Analysis, June 9, 2022.
7 Vista Environmental, Noise Impact Analysis, June 7, 2022.
8 Noise equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period.
9 Vista Environmental, Air Quality Impact Analysis, June 9, 2022.

ambient noise where ambient noise levels exceed 65 dBA. Therefore, Project's operational on-site noise levels would be within the City noise standards, and impacts would be less than significant.

Lastly, Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Vibration impacts from construction activities associated with the Project would typically be created from the operation of heavy off-road equipment. As described above, sensitive receptors surrounding the Project Site include residential uses as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. Per SPMC Section 36.300.110(I), activities shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line; however, vibration caused by construction activities is exempt from this standard. Since neither the SPMC nor General Plan provide a quantifiable vibration threshold for temporary construction activities, guidance from the FTA has been utilized. Specifically, the *Transit Noise and Vibration Impact Assessment Manual*, September 2018, states that building damage may occur to non-engineered timber and masonry buildings at vibration levels as low as 0.25 inch per second peak particle velocity (PPV). The Project's primary source of vibration during construction would be from the operation of a loaded truck, which would create a vibration level of 0.076 inches per second PPV at 25 feet. As it is unlikely that a loaded truck would operate any closer than 10 feet to an existing structure, the vibration level at the nearest off-site structures (10 feet away) would be 0.21 inches per second PPV based on typical propagation rates. As such, the vibration level at the nearest off-site structures would be below the 0.25 inch per second PPV threshold detailed above, and impacts would be less than significant.

(3) Air Quality

The following analysis summarizes the Air Quality Impact Analysis Report (Air Quality Report) prepared for the Project, included as **Appendix B** of this CE Evaluation.[10] The Project is located within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) has jurisdiction in the Basin, which has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. The Basin does not meet the federal ambient air quality standards for ozone or particulate matter $PM_{2.5}$ and is therefore classified as a non-attainment area for these pollutants. The Basin is designated as a non-attainment area for particulate matter PM_{10} based on state standards but designated as an attainment area based on federal standards. The Basin has also been designated as a partial non-attainment area for lead. In order to reduce emissions pursuant to the federal Clean Air Act, the SCAQMD adopted the 2016 Air Quality Management Plan (AQMP), which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state and federal air quality standards. The 2016 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the 2016-2040 RTP/SCS produced by SCAG, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.

The SCAQMD established two criteria for determining consistency with the AQMP. The first criterion considers whether a project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay attainment of air quality standards or the interim emission reductions specified in the AQMP. The second criterion considers whether a project would be consistent with the population, housing, and employment growth projections utilized by the AQMP. For determining consistency with AQMP consistency criterion 1, **Table 1** and **Table 2,** below, show Project-related emissions for construction and operation, as well as the SCAQMD thresholds for determining a significant impact.

In the short term, Project-related emissions would be generated from construction activities, including site preparation and grading, building construction, paving, and application of architectural coatings. In

[10] Vista Environmental, Air Quality Impact Analysis, June 9, 2022. The analysis considers the total development of the proposed Project (Berkshire Park) and a similarly proposed pocket park. Therefore, the impact analysis is conservative.

accordance with the SCAQMD Guidelines, the Air Quality Report utilized CalEEMod to model construction emissions for volatile organic compounds (VOCs), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), PM_{10}, and $PM_{2.5}$, which are shown in **Table 1**, below. As indicated therein, the maximum daily criteria pollutant emissions would not exceed the SCAQMD regional and local criteria pollutant thresholds. In addition, construction emissions would be short term, limited only to the period when construction activity is taking place. As such, construction-related criteria pollutant emissions would be less than significant for the Project.

Table 1 – Project Construction Emissions

Construction Period	Pollutant (pounds/day)[1]					
	VOC	NO_X	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer 2022	1.13	12.58	7.48	0.02	2.74	1.52
Winter 2022	1.13	12.61	7.46	0.02	2.74	1.52
Summer 2023	0.67	5.54	7.67	0.01	0.47	0.30
Winter 2023	0.67	5.55	7.62	0.01	0..47	0..30
Maximum Daily Construction Emissions	**1.13**	**12.61**	**7.67**	**0.02**	**2.74**	**1.52**
SCAQMD Regional Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
SCAQMD Local Screening Thresholds[2]	*–*	*69*	*535*	*–*	*4*	*3*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

VOC = volatile organic compounds; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns.
Notes:
[1] Based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403. Emissions were calculated using CalEEMod, version 2020.4.0.
[2] Based on the SCAQMD Final Localized Significant Threshold (LST) Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$ and calculated from SCAQMD's Mass Rate Look-up Tables for one acre at 25 meters in Air Monitoring Area 8, West San Gabriel Valley.
Source: Vista Environmental, Air Quality Impact Analysis, June 9, 2022.

The Project's long-term operational emissions would be generated by project-generated vehicle trips, emissions from energy usage, and on-site area source emissions created from the ongoing use of the Project. The worst-case summer or winter daily emissions generated by the Project's long-term operations have been calculated and are summarized in **Table 2**, below. As indicated therein, criteria pollutant emissions during operation of the Project would not exceed either SCAQMD regional or local thresholds. As such, operations-related criteria pollutant emissions would be less than significant for the Project. Furthermore, based on the information provided above, the Project would be consistent with the first criterion for evaluating consistency with the AQMP.

As stated above, the second AQMP consistency criterion considers whether a project would be consistent with the assumptions utilized in the AQMP. In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the City of South Pasadena General Plan, SCAG's regional growth forecast, and the SCAG RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth. As stated above, the Project Site is designated in the existing General Plan for Low Density Residential land uses but would be designated as Parks & Open Space land uses when the General Plan update is adopted. The City has already rezoned the Project Site for open space uses. As such, the Project Site would result in reduced intensity of uses and would also address the community's need for additional open space. Therefore, the Project would be consistent with the General Plan and with the types, intensity, and patterns of land use envisioned for the Project vicinity. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based

Table 2 – Long-Term Operational Air Emissions

Emissions Source	Pollutant (lbs/day)[1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source Emissions[2]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Energy Emissions[3]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Emissions[4]	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Total Emissions	**<0.01**	**<0.01**	**0.02**	**<0.01**	**<0.01**	**<0.01**
SCAQMD Regional Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
SCAQMD Local Screening Thresholds[2]	*–*	*69*	*535*	*–*	*1*	*1*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1 Emissions were calculated using CalEEMod, version 2020.4.0.
2 Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
3 Energy usage consist of emissions from natural gas usage; however, no natural gas appliances are proposed.
4 Mobile sources consist of emissions from vehicles and road dust.

Source: Vista Environmental, Air Quality Impact Analysis, June 9, 2022.

on the local plans and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the Project would be consistent with the projections. In addition, as discussed above, the Project would result in less than significant air quality impacts and would not require mitigation. As such, the Project would be consistent with criterion 2 of the AQMP consistency evaluation process.[11]

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. The closest sensitive receptors are residential uses as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction impacts (on-site emissions only) and operations impacts (only if the project includes stationary sources or attracts idling vehicles). As discussed above, construction-related emissions would not exceed the LST screening criteria established by the SCAQMD, and Project park operations do not include stationary sources or attract idling vehicles. Therefore, LST impacts would be less than significant.

As discussed in the Air Quality Report, CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential impacts to sensitive receptors. However, operation of the Project is anticipated to generate less than one vehicle trip per day. As such, no local CO hot spots are anticipated to be created from the Project and no CO hot spot modeling was required. Therefore, a less than significant impact is anticipated to sensitive receptors from potential CO hot spots.

Finally, the Project would not cause any significant odor impacts. Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of these uses. While construction activities may generate detectable odors from application of coatings (e.g., asphalt pavement, paints, and solvents) and from emissions from diesel equipment, construction-related odors would be short term in nature and would cease upon Project completion. Further, existing state and regional regulations, such as state codes limiting idling time of construction equipment

[11] For the same reasons described above, due to the small scale of the proposed community-serving pocket park, the Project would be consistent with the 2022 AQMP adopted in December 2022.

and SCAQMD's Rule 1113, which minimizes odor impacts from architectural coatings, would ensure that any odor impacts associated with the Project would be less than significant.

(4) Water Quality

The Project Site contains 13 trees and is currently vacant of developed uses. The Project Site's topography descends to the south at an approximate gradient of 10 percent. Surface drainage at the Project Site consists of sheet flow runoff of incident rainfall derived from within the site boundaries. Based on a geotechnical investigation of the Project Site, no groundwater was encountered in a boring at a 15-foot depth and another boring at a 5-foot depth, and dewatering would not be anticipated as part of the proposed grading activities.[12]

Stormwater quality would be managed through compliance with local and regional requirements. During construction, in accordance with SPMC Chapter 23, temporary stormwater best management practices (BMPs), such as gravel bags and silt fences, would be installed to minimize erosion and restrict sedimentation of the storm drain downstream. In addition, in accordance with SPMC Section 23.14(d)(3), the Project would be required to develop a low-impact development (LID) plan and retain stormwater runoff on-site for the stormwater quality design volume defined as the runoff from: i) the 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or ii) the volume of runoff produced from a three-fourths-inch, 24-hour rain event, whichever is greater. Once developed as a pocket park, the Project Site would be covered by impervious surfaces, pervious surfaces, and managed landscaped areas. Given the proposed recreational use of the facility, the naturalized/permeable nature of the park, and the vegetated nature of the site, the amount of water pollutants that would be generated on-site would be limited. The amount of impervious surfaces on the Project Site would increase from 1 percent predevelopment to approximately 17 percent post-development. As part of its LID plan, the Project would include the installation of a new StormTech MC-3500 site drainage system to minimize the amount of surface runoff that would enter the City's storm drain system. Therefore, with the proposed on-site drainage system, runoff from the Project Site would be negligible and the Project would comply with stormwater quality requirements. Thus, Project impacts related to water quality would be less than significant.

e. Utilities and Public Services

The Project Site is currently served by electric, trash, water, and wastewater services. The Project would require new service connections for electricity, water, and wastewater services, which would be undertaken during the construction period and could occur within the Project Site. Water and wastewater services to the Project would be provided by the City. The Project is expected to generate a minimal water demand from the proposed drinking fountain and landscaping. The City's latest Urban Water Management Plan (UWMP) uses the General Plan's planned growth and development in the City as well as population projections from SCAG.[13] As the Project would be consistent with its underlying zoning and General Plan designation, and since the UWMP demonstrates adequate water supply for all normal and dry year scenarios through the plan's horizon year (2045), the Project's water demand could be adequately served by the City.

For wastewater services, the City Public Works Department's Sewer Division provides primary responsibility for ongoing maintenance and operations of the City's sanitary sewer system. The system consists of approximately 53 miles of gravity sewer lines ultimately flowing into larger trunk lines, which are owned and operated by the Los Angeles County Sanitation Districts.[14] The only source of wastewater from the Project would be the sole drinking fountain provided on-site. As such, the generated wastewater during operation would be minimal and a small fraction of the Sanitation Districts' existing capacity. Further,

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12 Global Geo-Engineering, Inc., Geotechnical Investigation and Infiltration Testing, Proposed Park Development, Northeast of the Intersection of Valley View Road and Berkshire Avenue, October 28, 2021.

13 City of South Pasadena, 2020 Urban Water Management Plan, October 2021.

14 City of South Pasadena, Sanitary Sewer Management Plan, 2009.

because the City's General Plan is used to assist with long-term sewer infrastructure planning efforts, the Project's consistency with the General Plan would ensure that the City's sewer infrastructure has sufficient capacity to serve the Project.

Electricity service is provided to the Project Site by Southern California Edison (SCE), whose existing portfolio of resources includes renewable energy (31.4 percent), large hydroelectric (2.3 percent), natural gas (22.3 percent), nuclear (9.2 percent), and other/unspecified power sources (34.8 percent).[15] This mix of resources enhances electrical system resilience by not relying on a single transmission source. SCE's Integrated Resource Plan has a primary objective that includes system reliability, as well as establishing SCE's planned procurement of energy to meet demands through 2030.[16] Therefore, SCE's long-term forecasts for electricity demand within its service area, which includes the Project Site, would account for Project-related electricity demand.

The City of South Pasadena contracts with Athens Services for waste and recycling services rubbish service and collection.[17] The City disposes of refuse at landfills both within Los Angeles County and outside the County.[18] These landfills have a total remaining disposal capacity of approximately 482.5 million tons.[19] As such, there is adequate solid waste service capacity to serve the Project.

The Project would also incrementally increase the demand for public services, such as fire protection and emergency medical services, and police protection. Because there is no residential component to the Project, it would not have any impact on area schools and libraries. In addition, as the Project is a proposed City pocket park, the City's Parks Division would be responsible for its maintenance and management.[20] As such, the Project would not have a negative impact on other parks in the City. The South Pasadena Fire Department (SPFD) would provide fire protection and emergency medical services. The SPFD station is located at 817 Mound Avenue, which is approximately 1.22 miles northeast of the Project Site. The South Pasadena Police Department (SPPD) would provide law enforcement services to the Project. The SPPD is located at 1422 Mission Street, which is approximately 1.20 miles northeast of the Project Site. Furthermore, because the Project would be consistent with the Project Site's zoning and General Plan designation, the level of growth associated with the Project would be consistent with the City's long-term growth planning.

Based on the above, the Project would result in less than significant impacts related to utilities and public services, and the Project Site can be adequately served by all required utilities and public services.

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15 Southern California Edison, 2021 Power Content Label.

16 Southern California Edison, 2017-2018 Integrated Resource Plan, August 1, 2018.

17 City of South Pasadena, Sanitary, Waste Collection & Utility Billing, https://www.southpasadenaca.gov/government/departments/finance/waste-collection-utility-billing, accessed June 21, 2022.

18 Within Los Angeles County: Antelope Valley Public Landfill; Azusa Land Reclamation Co. Landfill; Chiquita Canyon Sanitary Landfill; Lancaster Landfill and Recycling Center; and Scholl Canyon Landfill. Outside of Los Angeles County: El Sobrante Landfill; Frank R. Bowerman Sanitary Landfill; Mid-Valley Sanitary Landfill; Olinda Alpha Landfill; and San Timoteo Sanitary Landfill. Based on CalRecycle records of Los Angeles Countywide disposal by destination from 2019 (the most recent year for which data is available), https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/CountywideDisposal, accessed June 21, 2022.

19 Los Angeles County Public Works, Countywide Integrated Waste Management Plan 2020 Annual Report, October 2021, Appendix E-2, Tables 4 and 6.

20 City of South Pasadena Department of Public Works, Parks Division, https://www.southpasadenaca.gov/government/departments/public-works/parks-division, accessed June 21, 2022.

4. Considerations of Exceptions to the Use of a Categorical Exemption

Section 15300.2 of the CEQA Guidelines identifies the following exceptions to the use of a categorical exemption:

a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located—a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

d) Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including, but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

e) Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

f) Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

As evaluated below, none of these exceptions apply to the Project. Therefore, the lead agency (the City of South Pasadena) is not precluded from categorically exempting the Project from CEQA.

a. Location

The location exception does not apply to the Class 32 categorical exemption. Regardless, the Project Site is not within a particularly sensitive environment, and there are no designated environmental resources of hazardous or critical concern on the site or in the vicinity. The Project Site is a vacant lot that is surrounded by residential development.

b. Cumulative Impact

The Project would involve site preparation and grading of the Project Site and construction of the proposed park, which would generate noise and air pollutants. The Project noise impacts were analyzed, as provided in **Appendix A**, and indicate that the Project's construction- and operation-related noise would not generate noise levels that would exceed the City's noise standards at the closest sensitive receptors. In addition, the Project's vehicle trips (less than one per day) would not cause an audible increase in roadway noise. With regard to air quality, the SCAQMD considers projects that are consistent with the AQMP to have less than significant cumulative air quality impacts. The Project air impacts were analyzed, as provided in **Appendix B**, which indicate the Project would be consistent with the AQMP. As such, the Project would not result in cumulatively considerable air quality or noise impacts.

As discussed previously, the Project is a municipal project that is community-serving and intended for local use. The Project would generate only a nominal amount of vehicle trips. The Project would not require a CEQA Transportation Impact Analysis, and transportation impacts would be less than significant. As such,

the Project's transportation impacts would not be cumulatively considerable, and impacts would be less than significant.

Based on the analysis herein, the Project would not considerably contribute to any significant impacts resulting from successive projects of the same type in the same place over time.

c. Significant Effect Due to Unusual Circumstances

There are no features that distinguish this Project from others in the exempt class; therefore, there are no unusual circumstances. The proposed park uses are encouraged within the land use designation per the City's General Plan. Further, given that the Project Site is located within a suburbanized area, that the Project would be consistent with the development pattern in the area, and that the City has rezoned this particular Project Site for the purposes of providing a community-serving pocket park, there are no unusual circumstances.

d. Scenic Highways

There are no state scenic highways within the vicinity of the Project Site.[21] The Project Site does not contain, nor would it have any impact on, any scenic resources that contribute to views from a scenic highway.

e. Hazardous Waste Sites

Neither the Project site nor any adjacent properties appear on the Department of Toxic Substances Control's EnviroStor database or the State Water Resources Control Board's (SWRCB) list of solid waste disposal sites with waste constituents above hazardous waste levels outside the waste management unit.[22] Given the absence of the site on the various enforcement or permit-based regulatory listings, and any of the business type-based historical listings (e.g., the Cortese List as specified in Government Code Section 65962.5), this exception does not apply to the Project.

f. Historical Resources

Section 15300.2 of the CEQA Guidelines states that a categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource. CEQA Section 15064.5(b) states:

> A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.
>
> (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
>
> (2) The significance of an historical resource is materially impaired when a project:
>
> (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
>
> (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical

[21] California Department of Transportation, California State Scenic Highway System Map, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed June 21, 2022.

[22] Department of Toxic Substances Control, EnviroStor database, http://www.envirostor.dtsc.ca.gov/?surl=z19e8, accessed June 21, 2022. California Environmental Protection Agency, Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit, https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf, accessed June 13, 2022.

resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code; … or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings … shall be considered as mitigated to a level of less than a significant impact on the historical resource.

The Project Site is currently vacant of developed uses and includes 13 trees. There are no resources on the Project Site that are eligible for designation as a local historical resource, for listing on the California Register of Historical Resources, or for listing on the National Register of Historic Places.[23] Therefore, the Project would not cause a substantial adverse change in the significance of a historical resource.

5. Conclusion

As described above, the Project meets the requirements of the Class 32 categorical exemption, as it meets the definition of infill development; would be consistent with the applicable General Plan designation and all applicable General Plan policies as well as with the applicable zoning designation and regulations; occurs within City limits on a Project Site of no more than 5 acres substantially surrounded by urban uses; would be located on a site that has no habitat for endangered, rare, or threatened species; would not result in any significant effects relating to traffic, noise, air quality, or water quality; and could be adequately served by all required utilities and public services. Further, none of the exceptions to the use of a categorical exemption apply to the Project. Finally, there are no features that distinguish the Project from others in the exempt class and thus there are no unusual circumstances. Therefore, the Project is categorically exempt from CEQA pursuant to Section 15332 of the State CEQA Guidelines—Class 32, In-Fill Development Projects.

[23] City of South Pasadena, Inventory of Historic Resources, approved by City Council in 2002. California Office of Historic Preservation, California Historical Resources, Los Angeles County, https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=19, accessed June 21, 2022.



Project Location

South Pasadena City Boundary

Michael Baker INTERNATIONAL

N

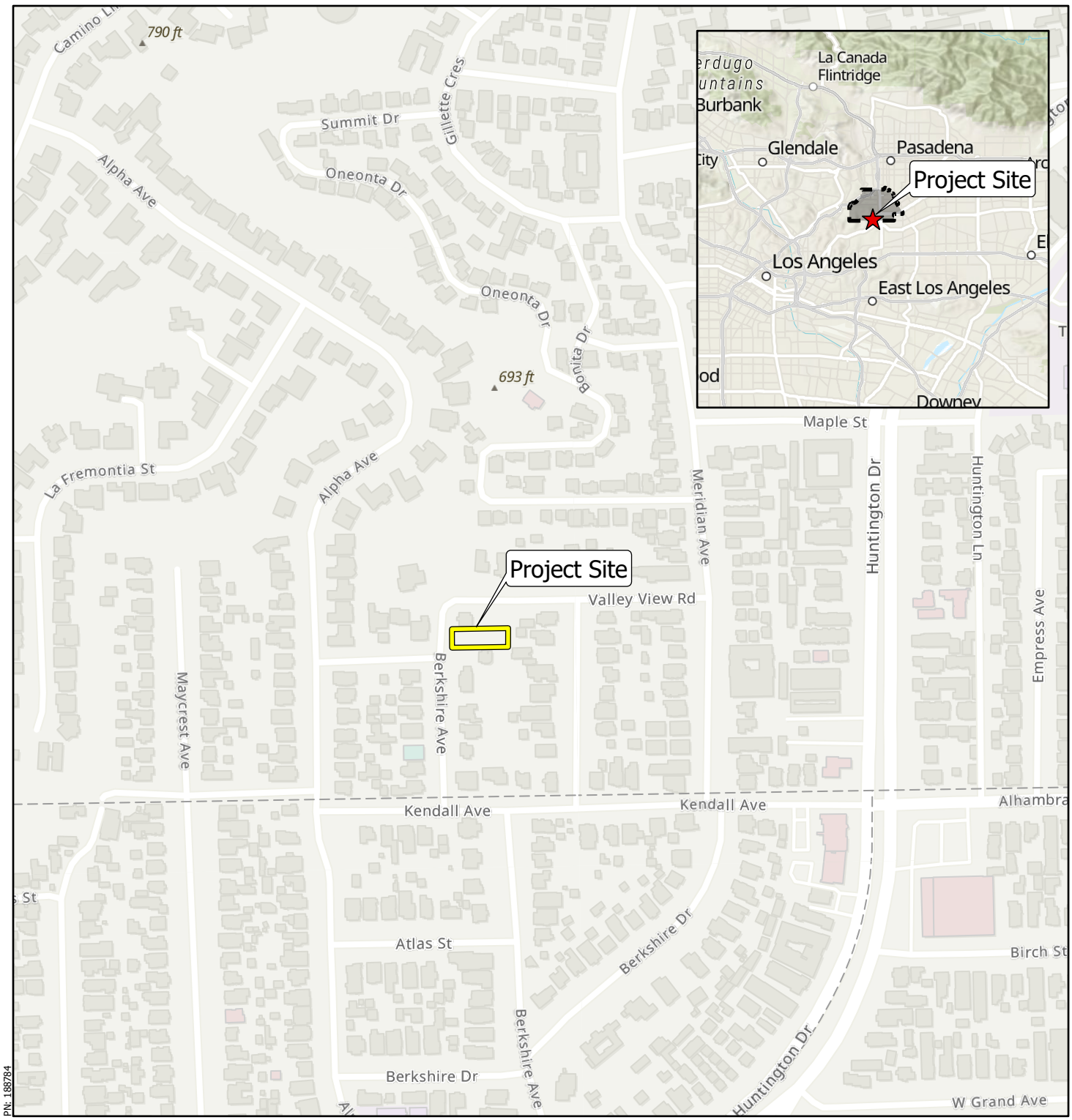
0 2.5 5 10 Miles

Source: Esri, ArcGIS Online, National Geographic World Map: *South Pasadena, California*

2006 BERKSHIRE AVENUE
SOUTH PASADENA, CA 91030

Regional Location Map

Figure **1277**



Project Site

Michael Baker INTERNATIONAL

N

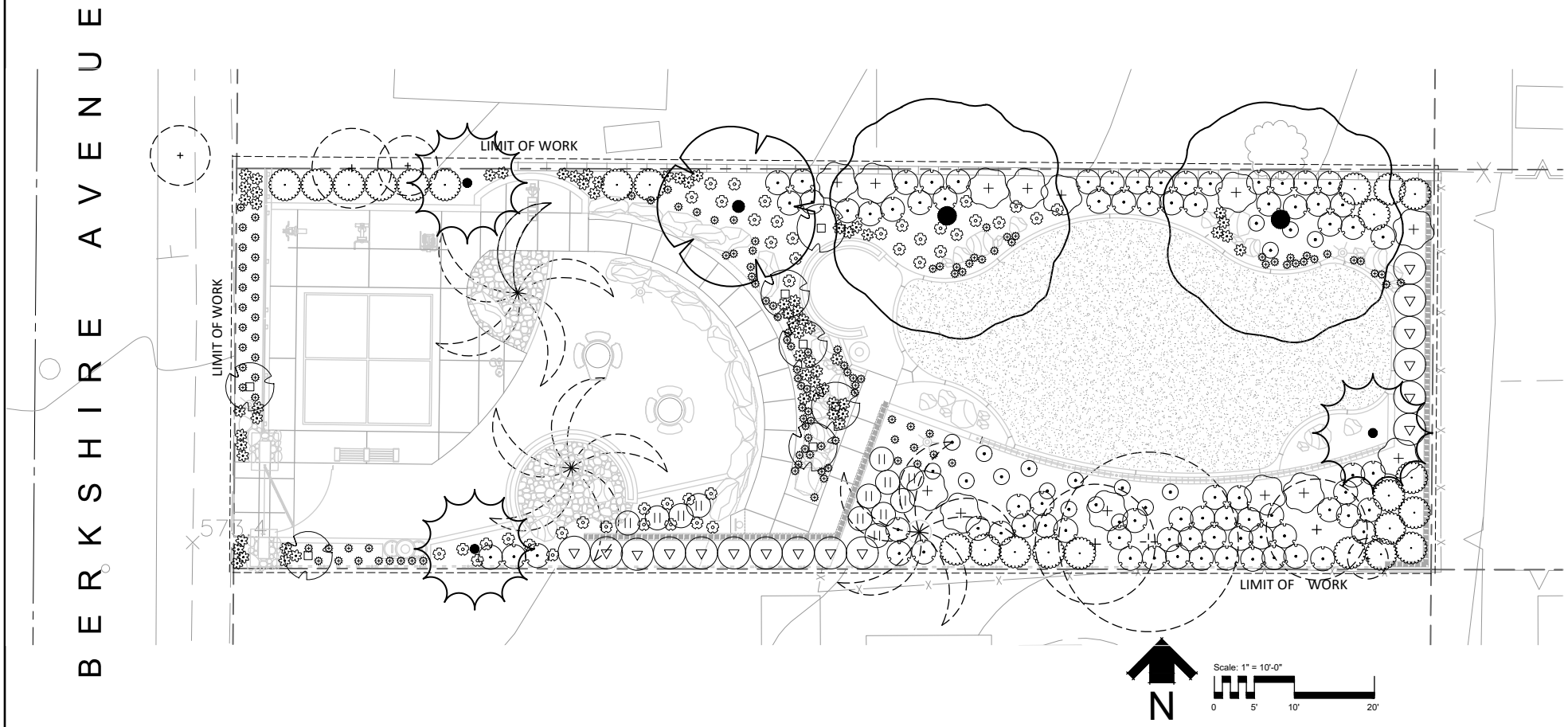
0 125 250 500 Feet

Source: Esri, ArcGIS Online, World Topographic Map: *South Pasadena, California*

2006 BERKSHIRE AVENUE
SOUTH PASADENA, CA 91030

Project Location

Figure **1278**



2006 BERKSHIRE AVENUE
SOUTH PASADENA, CA 91030

Conceptual Site Plan

Michael Baker INTERNATIONAL

Source: David Volz Design

Fig **1279**

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Appendices

- **Appendix A: Noise Impact Analysis Report**
- **Appendix B: Air Quality Impact Analysis Report**

Appendix A

.

NOISE IMPACT ANALYSIS

BERKSHIRE AND GREVELIA POCKET PARKS PROJECT

CITY OF SOUTH PASADENA

Lead Agency:

City of South Pasadena
Community Services Department
815 Mission Street
South Pasadena, CA 91030

Prepared by:

Vista Environmental
1021 Didrickson Way
Laguna Beach, CA 92651
949 510 5355
Greg Tonkovich, INCE

Project No. 21156

June 7, 2022

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of South Pasadena
cmu	concrete masonry unit
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the noise impacts associated with the proposed Berkshire and Grevelia Pocket Parks project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise and vibration impacts from the proposed project; and
- An analysis of long-term operations-related noise and vibration impacts from the proposed project.

1.2 Site Locations and Study Areas

The proposed project consists of two project sites that are both located in the City of South Pasadena (City). The Berkshire Park site is a 7,482 square foot property at 2006 Berkshire Avenue that is currently vacant other than for a few trees. The Berkshire Park site is bounded by residential uses to the north, east and south and Berkshire Avenue/Valley View Road to the west. The nearest sensitive receptors to the Berkshire Park site consist of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The Berkshire Park site study area is shown in Figure 1.

The Grevelia Park site is a 9,130 square foot property at 1107 Grevelia Street that is currently vacant other than a few trees. The Grevelia Park site is bounded by Grevelia Street and Intestate 110 to the north and residential uses to the east, south and west. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south. The Grevelia Park site study area is shown in Figure 2.

1.3 Proposed Project Description

The proposed project would consist of development of two pocket parks that total 16,612 square feet. Construction activities for the two parks are anticipated to start around July, 2022 and be completed in seven months. The operational hours for the two parks would be dawn to dusk.

The Berkshire Park will have a large grass area for free play at the rear and a small space to play within the front portion of the park. The park will have picnic tables, benches, trash receptacles, a drinking fountain, dog waste stations, exercise equipment, trees, and landscape. An accessible Americans with Disabilities Act (ADA)-compliant ramp will lead people to the rear of the park. Due to the elevation, a water infiltration system will need to be installed. Grading of Berkshire Park will require approximately 650 cubic yards of fill and 250 cubic yards of cut, which will result in the import of 400 cubic yards of dirt.

The proposed improvements will result in the installation of approximately 1,800 square feet of pavement. The proposed Berkshire Park site plan is shown in Figure 3.

The Grevelia Park will have a large grass area for free play at the rear and a small space with precast play pieced in the middle. The front portion of the park will have picnic tables, benches, a drinking fountain, a dog waste station, trash receptacles, ballad-type lighting, trees, and landscape. The park will need a water infiltration system to catch all run-off. Grading of Grevelia Park is anticipated to be roughly balanced with no or only nominal amounts of dirt being imported or exported from the project site. The proposed improvements will result in the installation of approximately 2,200 square feet of pavement. The proposed Grevelia Park project site plan is shown in Figure 4.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City and State of California (State).

City of South Pasadena Noise and Vibration Regulations

The following lists the noise and vibration regulations from the *South Pasadena City Code,* May 5, 2021, that are applicable, but not limited to the proposed project.

- Section 19A.13 – Construction Exemptions; and
- Section 36.300.110 – Performance Standards for new development for noise and vibration.

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 27200-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact.

Generation of excessive groundborne vibration or groundborne noise levels?

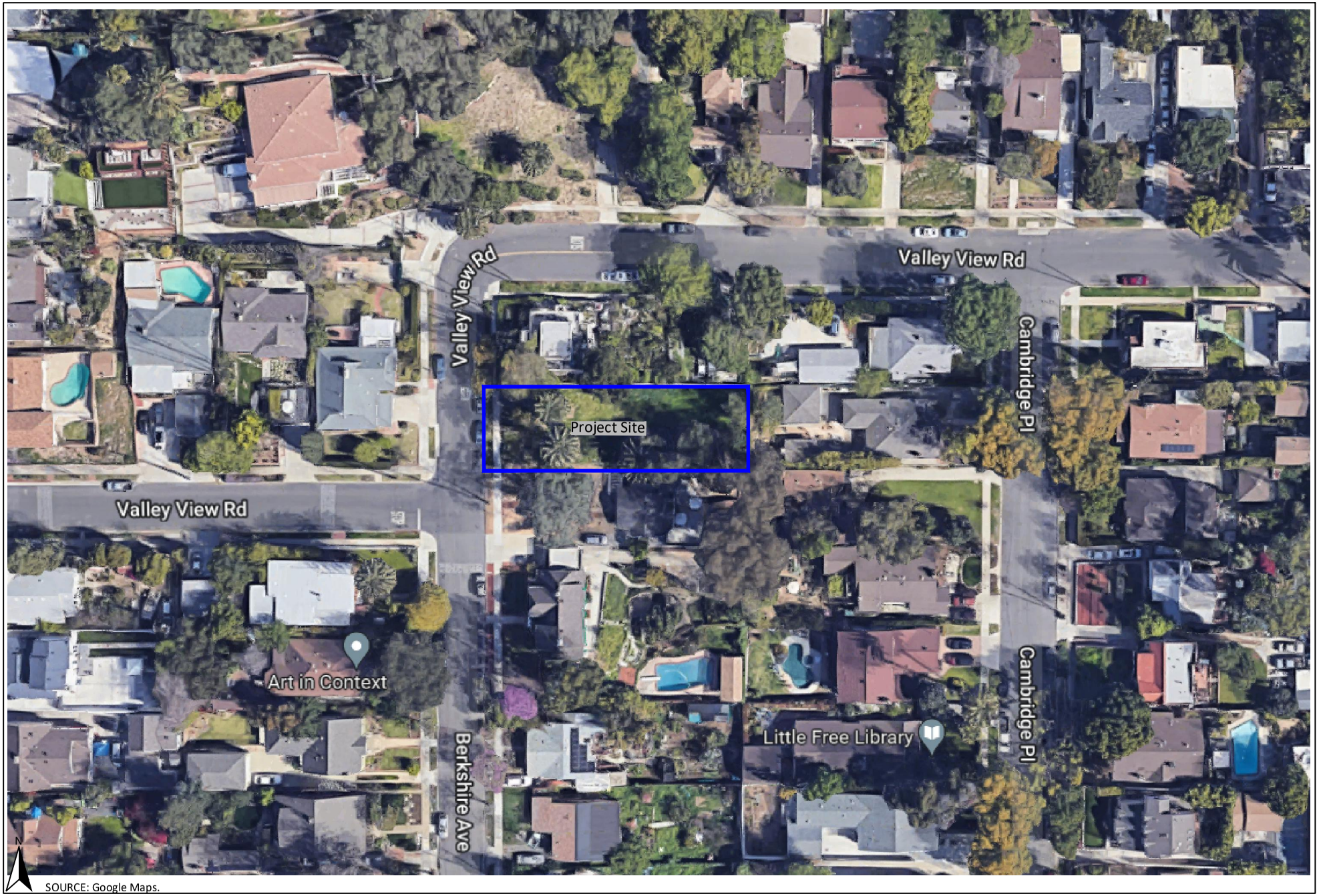
Less than significant impact.

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than significant impact.

1.5 Mitigation Measures for the Proposed Project

This analysis found that through adherence to the noise and vibration regulations detailed in Section 1.4 above were adequate to limit all noise and vibration impacts to less than significant levels. No mitigation measures are required for the proposed project with respect to noise and vibration impacts.



SOURCE: Google Maps.

VISTA ENVIRONMENTAL

1291

Figure 1
Berkshire Park Site Location Map

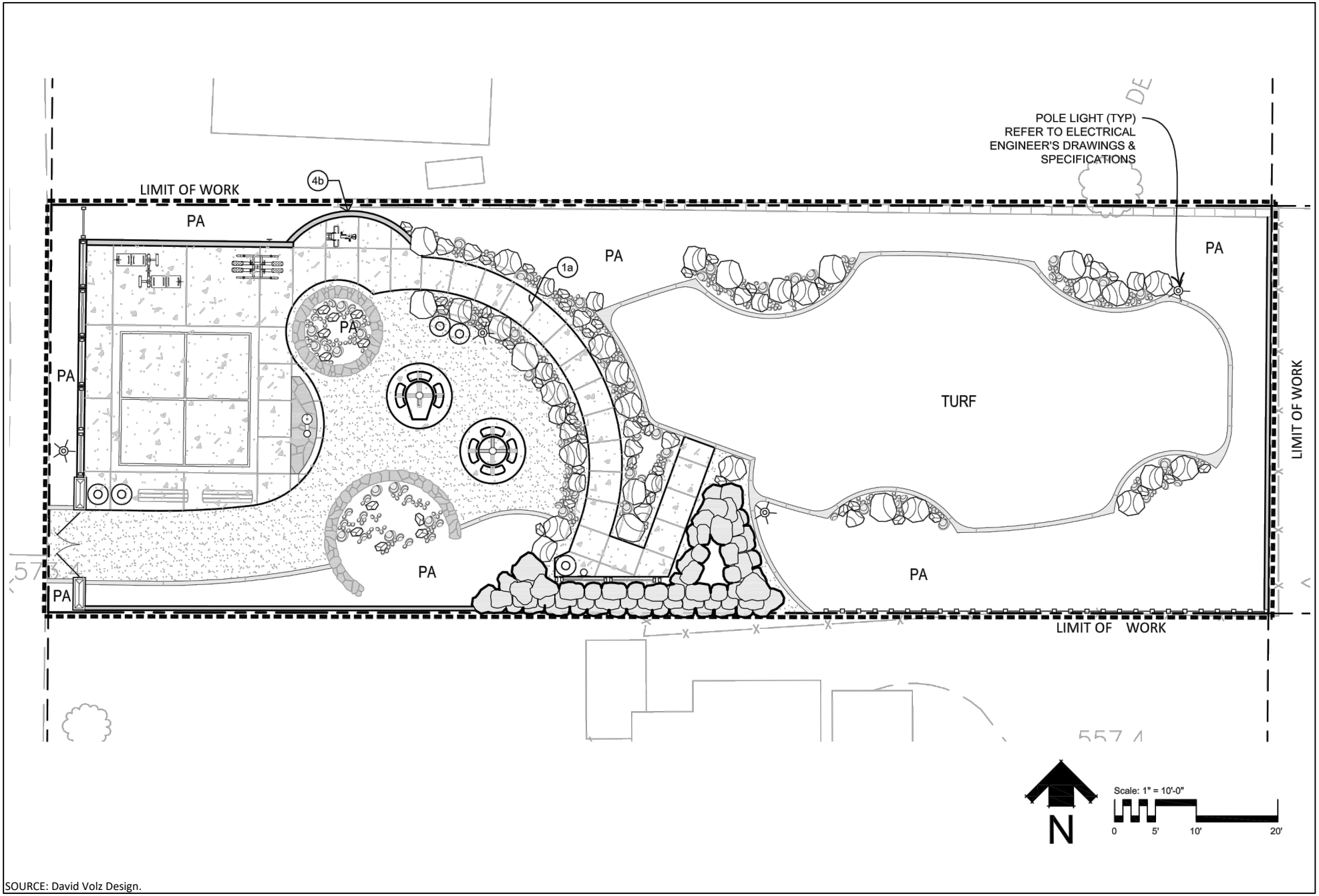


SOURCE: Google Maps.

VISTA ENVIRONMENTAL

1292

Figure 2
Grevelia Park Site Location Map

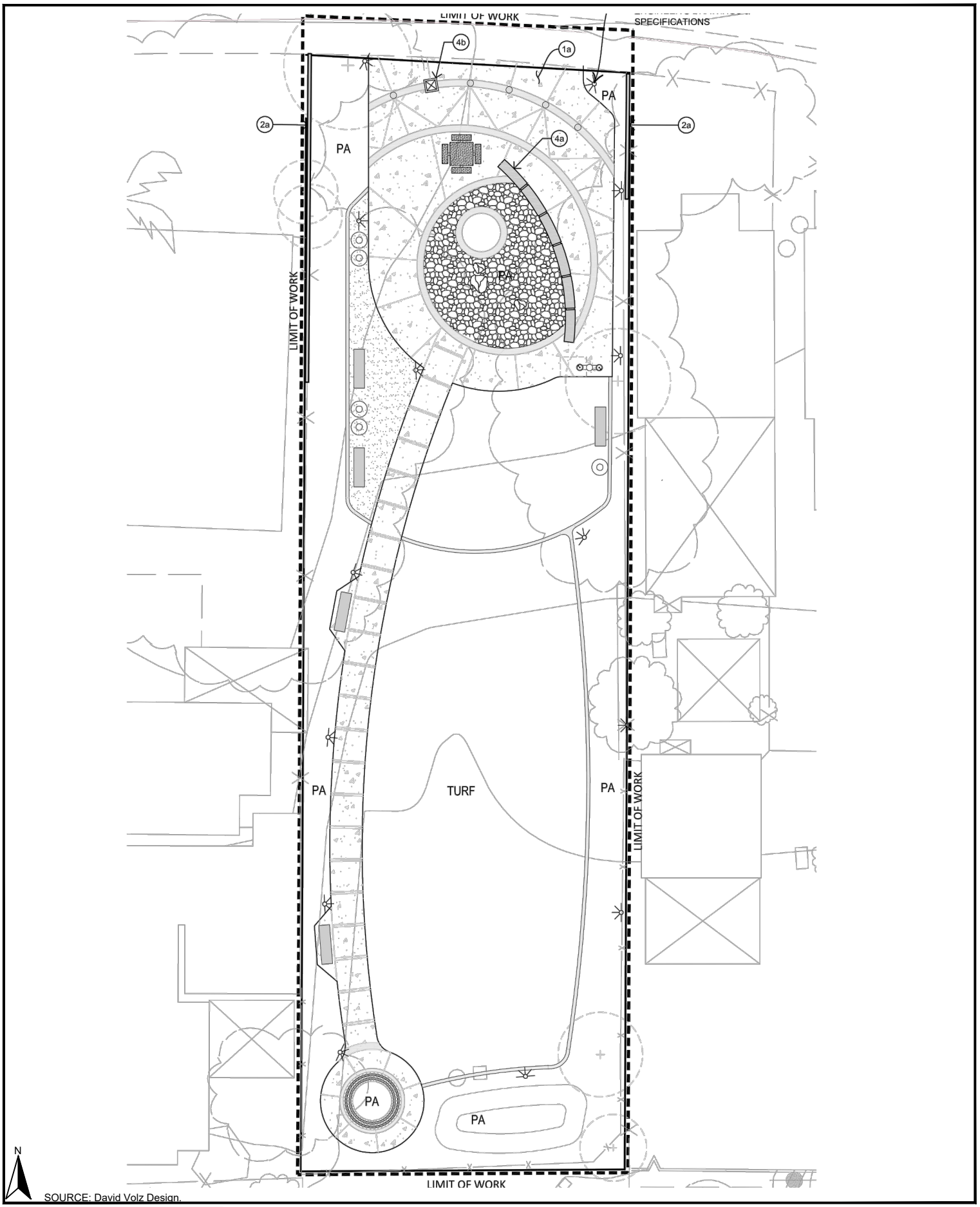


SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

1293

Figure 3
Proposed Berkshire Park Site Plan



SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

Figure 4
Proposed Grevelia Park Site

2.0 NOISE FUNDAMENTALS

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

2.1 Noise Descriptors

Noise Equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The worst-hour traffic Leq is the noise metric used by California Department of Transportation (Caltrans) for analyzing traffic noise impacts.

The Day-Night Average Level (Ldn or DNL) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason, the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of South Pasadena relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in level of noise as the distance from the source increases. The manner in which the noise level reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features.

Sound from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD) between source and receiver. Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 Vibration Descriptors

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is "VdB", which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 Vibration Propagation

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform medium, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation."

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of South Pasadena. Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA), which regulates transit noise, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the proposed project is not under the jurisdiction of the FTA, the *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual), prepared by the FTA, September 2018, is the only guidance document from a government agency that provides guidance on construction noise and recommends developing construction noise criteria on a project-specific basis that utilizes local noise ordinances if possible. However, local noise ordinances usually relates to nuisance and hours of allowed activity and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the noise impacts of a construction project. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land uses. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings for a general construction noise assessment are provided below in Table A.

Table A – FTA Construction Noise Criteria

Land Use	Day (dBA $Leq_{(1\text{-hour})}$)	Night (dBA $Leq_{(1\text{-hour})}$)
Residential	90	80
Commercial	100	100
Industrial	100	100

Notes:

Source: Federal Transit Administration, 2018.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

4.3 Local Regulations – City of South Pasadena

The *City of South Pasadena General Plan Safety & Noise Element*, adopted October 1998 and the *South Pasadena City Code,* May 5, 2021, establishes the following applicable policies related to noise and vibration.

General Plan Noise Element

The following applicable goals and policies to the proposed project are from the General Plan Safety & Noise Element.

Goal 5: To adequately protect indoor and outdoor living areas, and noise-sensitive uses such as schools and convalescent homes, from transportation noise impacts.

Policies

5.1: Consider the noise impacts of new projects involving increases in noisy activities or traffic. An increase of 3 dBA or noise in excess of 65 dBA in sensitive areas shall be considered significant.

City of South Pasadena Municipal Code

The City of South Pasadena Municipal Code establishes the following applicable standards related to noise.

19A.1 Declaration of policy.

It is declared to be the policy of the city to prohibit unnecessary, excessive, and annoying noises from all sources subject to its police power. At certain levels noises are detrimental to the health and welfare of the citizenry and in the public interests shall be systematically proscribed.

19A.12.3 Power yard maintenance equipment – Permitted hours of operation.

Power yard maintenance equipment shall be operated only between the following hours:

(a) Monday through Friday, eight a.m. to seven p.m.

(b) Saturday, nine a.m. to seven p.m.

(c) Sunday and holidays, ten a.m. to seven p.m.

19A.13 Construction of buildings and projects.

(a) It is unlawful for any person to perform any construction activity within a residential zone or within 500 feet thereof on Monday through Friday before 8:00 a.m. and after 7:00 p.m., Saturday before 9:00 a.m. and after 7:00 p.m., and on Sundays and city recognized holidays before 10:00 a.m. and after 6:00 p.m.

(b) For the purposes of this section, "construction activity" is activity requiring a building permit and defined to include, but is not limited to, the operation of any manual, electric or pneumatic hammer, saw, shovel, hoist, derrick or any other device used in the performance of site preparation, assembly, repair, demolition, alteration or similar action on structures, rights-of-way, or land.

(c) The prohibition of this section shall not apply to emergency work as defined in Article 1 of this chapter.

(d) City recognized holidays as of July 2015, shall be defined as:

(1) January 1st (New Year's Day);

(2) 3rd Monday in January (Martin Luther King Day);

(3) 3rd Monday of February (Washington's Birthday);

(4) Last Monday of May (Memorial Day);

(5) 4th of July (Independence Day);

(6) 1st Monday of September (Labor Day);

(7) 2nd Monday of October (Columbus Day);

(8) November 11th (Veteran's Day);

(9) 4th Thursday of November (Thanksgiving);

(10) 1st Friday after Thanksgiving;

(11) December 25th (Christmas Day).

36.300.110 Performance Standards.

A. Purpose. This Section provides performance standards that are designed to minimize various potential operational impacts of all land uses and development within the City, and promote compatibility with adjoining areas and land uses.

B. Applicability. The provisions of this Section apply to all new and existing land uses, including permanent and temporary uses, in all zoning districts unless an exemption is specifically provided. Uses existing on the effective date of the ordinance codified in this Section shall not be altered or modified thereafter to conflict with these standards.

G. Noise. The City's noise standards are in Chapter 19A of the Municipal Code.

I. Vibration. Uses, activities, and processes shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities. Vibrations from temporary construction, demolition, and vehicles that enter and leave the subject parcel (e.g., construction equipment, trains, trucks, etc.) are exempt.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken on the two project sites. The field survey noted that noise at the proposed Berkshire Park site is primarily from vehicles on Berkshire Avenue and from birds in the nearby trees. The noise at the proposed Grevelia Park Site is primarily from vehicles on Interstate 110 that is as near as 65 feet north of the site. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using two Extech Model 407780 Type 2 integrating sound level meters programmed in "slow" mode to record the sound pressure level at 3-second intervals for approximately 24 hours in "A" weighted form. In addition, the Leq averaged over the entire measuring time and Lmax were recorded. The sound level meters and microphones were mounted approximately six feet above the ground and were equipped with a windscreen. The sound level meters were calibrated before and after the monitoring using an Extech calibrator, Model 407766. The noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4-2014 standard).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise levels on the two project sites. Descriptions of the noise monitoring sites are provided below in Table B. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 9:17 a.m. on Tuesday, April 5, 2022 and 9:28 a.m. on Wednesday, April 6, 2022. When the noise measurements were started the sky was clear (no clouds), the temperature was 64 degrees Fahrenheit, the humidity was 63 percent, barometric pressure was 29.14 inches of mercury, and there was no wind. Overnight, the temperature dropped to 53 degrees Fahrenheit and the humidity peaked at 92 percent. At the conclusion of the noise measurements, the sky was clear, the temperature was 66 degrees Fahrenheit, the humidity was 59 percent, barometric pressure was 29.20 inches of mercury, and there was no wind.

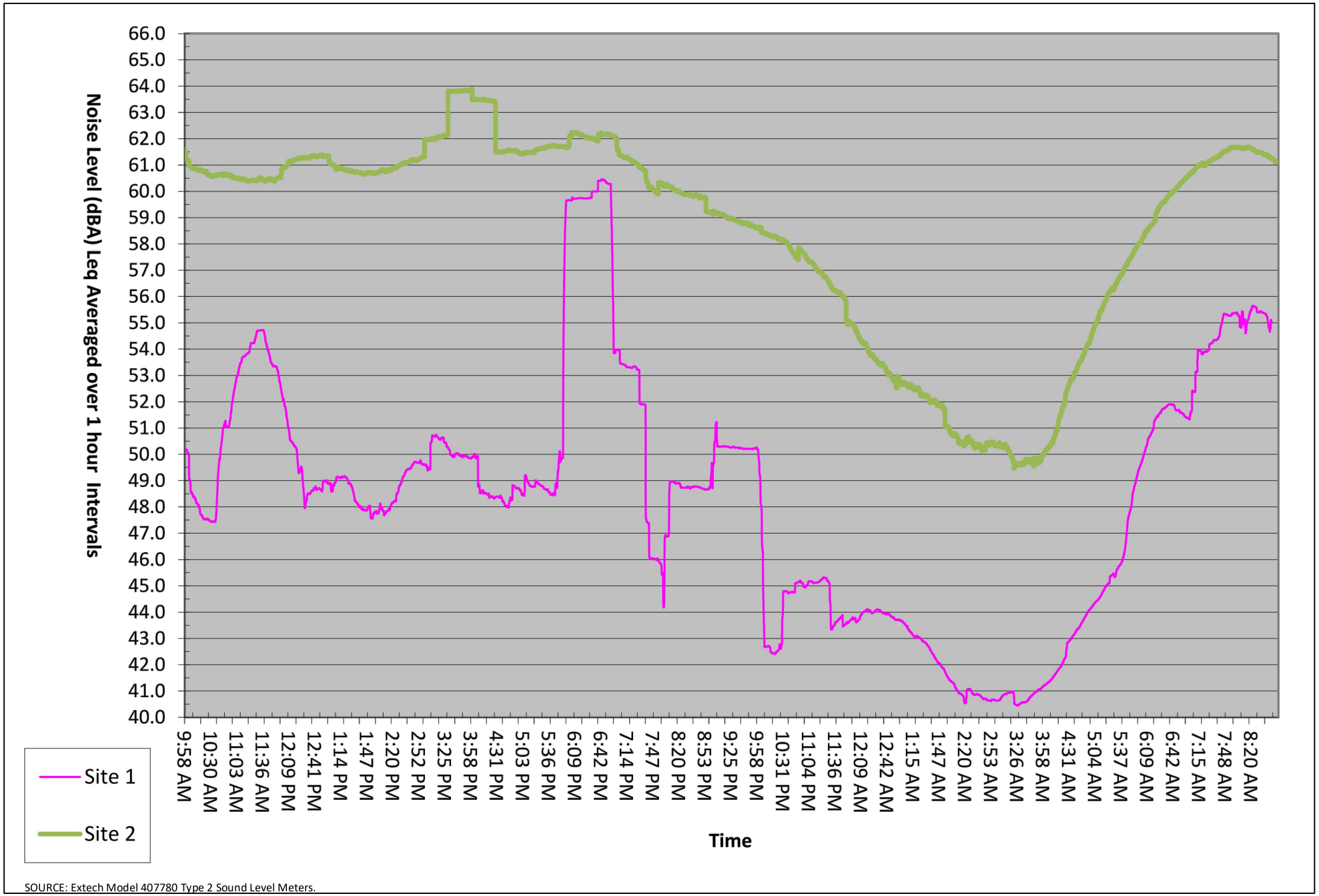
5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table B. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table B also shows the L_{eq}, L_{max}, and CNEL, based on the entire measurement time. The CNEL was calculated through use of Equation 2-23 from *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (TeNS), prepared by Caltrans, September 2013. The noise monitoring data printouts are included in Appendix B. Figure 5 shows a graph of the 24-hour noise measurements.

Table B – Existing (Ambient) Noise Measurement Results

Site No.	Site Description	Average (dBA L_{eq})	Maximum (dBA L_{max})	(dBA $L_{eq\ 1\text{-}hour}$/Time) Minimum	(dBA $L_{eq\ 1\text{-}hour}$/Time) Maximum	Average (dBA CNEL)
1	Located on the Berkshire Park Site on a tree in the northwest portion of the project site, approximately 60 feet east of Berkshire Avenue centerline.	51.4	77.1	40.4 3:27 a.m.	60.5 6:42 p.m.	54.7
2	Located on the Grevelia Park site on a tree in the northeast portion of the project site, approximately 60 feet south of Grevelia Street centerline.	59.9	89.2	49.5 3:22 a.m.	63.9 3:57 p.m.	63.9

Source: Noise measurements were taken with two Extech Model 407780 Type 2 sound level meters from Tuesday, April 5, 2022 to Wednesday, April 6, 2022.



SOURCE: Extech Model 407780 Type 2 Sound Level Meters.

VISTA ENVIRONMENTAL

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Figure 5
Field Noise Measurements Graph

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table C below provides a list of the construction equipment anticipated to be used for each phase of construction that was obtained from the *Air Quality Impact Analysis Berkshire and Grevelia Pocket Parks Project* (Air Quality Analysis), prepared by Vista Environmental, May 17, 2022.

Table C – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor[1] (percent)	Spec 721.560 Lmax at 50 feet[2] (dBA, slow[3])	Actual Measured Lmax at 50 feet[4] (dBA, slow[3])
Site Preparation				
Grader	1	40	85	83
Tractor	1	40	84	N/A
Grading				
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Tractor	1	40	84	N/A
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	2	40	85	83
Tractor	1	40	84	N/A
Front End Loader	1	40	80	79
Paving				
Cement and Mortar Mixer	4	40	85	79
Paver	1	50	85	77
Roller	1	20	85	80
Tractor	1	40	84	N/A
Architectural Coating				
Air Compressor	1	40	80	78

Notes:
[1] Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.
[2] Spec 721.560 is the equipment noise level utilized by the RCNM program.
[3] The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.
[4] Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.
Source: Federal Highway Administration, 2006.

Table C shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed Table C and through use of the RCNM. For each phase of construction, the two loudest pieces of construction equipment was analyzed based on being placed in the middle of both project site, which

is based on the analysis methodology detailed in FTA Manual for a General Assessment. The RCNM model printouts are provided in Appendix C.

6.2 Operational Noise

The proposed project would consist of the operation of two pocket parks. In order to determine the anticipated noise created by the proposed pocket parks, a reference noise measurement was taken at the existing Magnolia Street Park located at 1028 Magnolia Street in South Pasadena. During the reference noise measurement there were two people working in the community garden, a person walked a dog through the front portion of the park and a few vehicles passed by on Magnolia Street.

The reference noise measurement was taken using a Larson-Davis Model 831 Type 1 precision sound level meter programmed in "slow" mode to record noise levels in "A" weighted form as well as the frequency spectrum of the noise broken down into 1/3 octaves. The sound level meter and microphone were mounted on a tripod five feet above the ground and were equipped with a windscreen during the measurement. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. The unit meets the requirements of ANSI Standard S1.4-1984 and IEC Standard 942: 1988 for Class 1 equipment. The noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

The reference noise measurement was located on the southeast portion of Magnolia Street Park, approximately 60 feet north of the Magnolia Street centerline and measured a noise level of 45.7 dBA Leq. A photo index of the reference noise measurement site and the reference noise measurement results are provided in Appendix D.

6.3 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to damage at the highest levels. Table D gives approximate vibration levels for particular construction activities. The data in Table D provides a reasonable estimate for a wide range of soil conditions.

Table D – Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v)at 25 feet
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Federal Transit Administration, 2018.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table D and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table C.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction and paving of the two proposed pocket parks, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities.

The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south.

Section 19A.13 of the City's Municipal Code exempts construction noise from the City noise standards provided that construction activities occur between 8:00 a.m. and 7:00 p.m., Monday through Friday, between 9:00 a.m. and 7:00 p.m. on Saturdays, and between 10:00 a.m. and 7:00 p.m. on Sundays and holidays. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby residents. In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the FTA construction noise criteria thresholds detailed above in Section 4.1 and more specifically in Table A have been utilized, which shows that a significant construction noise impact would occur if construction noise exceeds 80 dBA during the daytime at any of the nearby homes.

In order to determine if construction noise levels to the nearby sensitive receptors would be within the FTA's construction noise standards, the construction noise levels have been calculated through use of the RCNM and the parameters and assumptions utilized are detailed in Section 6.1 of this report. The results are shown below in Table E and the RCNM printouts are provided in Appendix C.

Table E – Construction Noise Levels at the Nearby Receptors

Construction Phase	Construction Noise Level (dBA Leq) at:	
	Nearest Homes to Berkshire Park[1]	Nearest Homes to Grevelia Park[2]
Site Preparation	87	89
Grading	87	89
Building Construction	86	88
Paving	84	88
Painting	77	79
FTA Construction Noise Threshold[3]	**90**	**90**
Exceed Threshold?	No	No

[1] The nearest homes to Berkshire Park are located as near as 35 feet from the center of the project site.
[2] The nearest homes to Grevelia Park are located as near as 27 feet from the center of the project site.
[3] FTA Construction Noise Threshold obtained from Table A above.
Source: RCNM, Federal Highway Administration, 2006

Table E shows that the greatest noise impacts would occur during the site preparation and grading phases, with a noise level as high as 87 dBA Leq at the homes next to Berkshire Park and 89 dBA Leq at the homes next to Grevelia Park. All calculated construction noise levels shown in Table E are within the FTA daytime construction noise standards of 90 dBA for residential uses. Therefore, through adherence to the allowable construction times detailed in Section 19A.13 of the City's Municipal Code, the proposed project would not create a substantial temporary increase in ambient noise levels from construction of the proposed project. Impacts would be less than significant.

Operational-Related Noise

The proposed project would consist of the development of two pocket parks. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways. The proposed project would also generate onsite noise from activities occurring within the two parks.

Roadway Vehicular Noise Impact to Nearby Homes

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic that would occur with development of the proposed project.

According to the City staff, the two pocket parks would serve the local community and it is anticipated that the majority of park users would walk to the two parks. As such, the Air Quality Analysis (Vista Environmental, 2022), found that operation of the proposed project would generate less than one vehicle

trip per day. Due to the nominal vehicle trips generated by the proposed project, the proposed project would not result in a substantial permanent roadway noise increase to ambient noise levels. Impacts would be less than significant.

Onsite Noise Impact to Nearby Homes

The operational activities at the two proposed pocket parks may create an increase in onsite noise levels. General Plan Policy 5.1 details that the noise impacts of new projects to an increase of 3 dBA or noise in excess of 65 dBA shall be considered significant.

In order to determine the noise impacts created by the two proposed pocket parks, a reference noise measurement was taken at the existing Magnolia Street Park. During the reference noise measurement there were two people working in the community garden, a person walked a dog through the front portion of the park and a few vehicles passed by on Magnolia Street. The reference measurement details have been provided above in Section 6.2 and the printouts are provided in Appendix D.

The reference noise measurement found that Magnolia Street Park produces a noise level of 45.7 dBA Leq. This is below the existing ambient noise levels that are shown above in Table B of 51.4 dBA Leq for Berkshire Park and 59.9 dBA Leq for Grevelia Park. Onsite activities at the two proposed pocket parks would not exceed the noise standards provided in General Plan Policy 5.1 of a 3 dBA increase in ambient noise and would not create noise levels in excess of 65 dBA. As such, operational onsite noise impacts would be within the City noise standards.

Therefore, the proposed project would not expose persons to noise levels in excess of standards established in the local general plan or noise ordinance.

Level of Significance

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction and paving of the two proposed pocket parks, and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south.

Section 36.300.110(J) of the Municipal Code provides a vibration performance standard that no activities shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line, however vibration caused by construction activities is exempt from this standard. Since neither the Municipal nor the General Plan provide a quantifiable vibration

threshold for temporary construction activities, guidance from the *Transit Noise and Vibration Impact Assessment Manual,* prepared by FTA, September 2018, has been utilized, which details that building damage may occur to non-engineered timber and masonry buildings at vibration levels as low as 0.25 inch per second peak particle velocity (PPV).

The primary source of vibration during construction would be from the operation of a loaded truck on the two project sites. From Table D above a loaded truck would create a vibration level of 0.076 inch per second PPV at 25 feet. Due to the limitations of the accuracy of haul truck dumping operations, it is unlikely that a loaded truck would operate any closer than 10 feet to an existing structure. Based on typical propagation rates, the vibration level at the nearest offsite structures (10 feet away) would be 0.21 inch per second PPV. The vibration level at the nearest offsite structures would be below the 0.25 inch per second PPV threshold detailed above. Impacts would be less than significant.

Operations-Related Vibration Impacts

The proposed project would consist of the development of two pocket parks. The on-going operation of the proposed project would not include the operation of any known vibration sources. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project.

Level of Significance

Less than significant impact.

7.4 Aircraft Noise

The proposed project may expose people residing in the project area to excessive noise levels from aircraft. The nearest airport is San Gabriel Valley Airport that is located as near as seven miles southeast of the project site. The project site is located outside of the 60 dBA CNEL noise contours of this airport. Therefore, the proposed homes would not be exposed to excessive aircraft noise. Impacts would be less than significant.

Level of Significance

Less than significant impact.

8.0 REFERENCES

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation- and Construction Vibration Guidance Manual*, April 2020.

City of South Pasadena, *South Pasadena City Code,* May 5, 2021.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual,* September 2018.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide,* January, 2006.

U.S. Department of Transportation, *Highway Traffic Noise: Analysis and Abatement Guidance,* December, 2011.

Vista Environmental, *Air Quality Impact Analysis Berkshire and Grevelia Pocket Parks Project,* May 17, 2022

APPENDIX A

Field Noise Measurements Photo Index



Noise Measurement Site 1 - looking north



Noise Measurement Site 1 - looking northeast



Noise Measurement Site 1 - looking east



Noise Measurement Site 1 - looking southeast



Noise Measurement Site 1 - looking south



Noise Measurement Site 1 - looking southwest



Noise Measurement Site 1 - looking west



Noise Measurement Site 1 - looking northwest



Noise Measurement Site 2 - looking north



Noise Measurement Site 2 - looking northeast



Noise Measurement Site 2 - looking east



Noise Measurement Site 2 - looking southeast



Noise Measurement Site 2 - looking south



Noise Measurement Site 2 - looking southwest



Noise Measurement Site 2 - looking west



Noise Measurement Site 2 - looking northwest

APPENDIX B

Field Noise Measurements Printouts

Site 1 - On Northwest Area of Berkshire Park Site

Date	Time=04/05/22	9:17:00 AM			
Sampling	Time=3	Weighting=A			
Record	Num=	28800	Weighting=Slow	CNEL(24hr)=	54.7
Leq	51.4	SEL	Value=100.9	Ldn(24hr)=	54.1
MAX	77.1		Min Leq1hr =	40.4	3:27 AM
MIN	37.1		Max Leq1hr =	60.5	6:42 PM

Site 1 - On Northwest Area of Berkshire Park Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
47.6	9:17:00		47.6	47.6
66.5	9:17:03		66.5	66.5
68.8	9:17:06		68.8	68.8
64.4	9:17:09		64.4	64.4
61.3	9:17:12		61.3	61.3
54.3	9:17:15		54.3	54.3
55.4	9:17:18		55.4	55.4
51.9	9:17:21		51.9	51.9
60.1	9:17:24		60.1	60.1
69	9:17:27		69	69
61.5	9:17:30		61.5	61.5
58	9:17:33		58	58
56.5	9:17:36		56.5	56.5
65.7	9:17:39		65.7	65.7
67.5	9:17:42		67.5	67.5
60.6	9:17:45		60.6	60.6
64.4	9:17:48		64.4	64.4
66.2	9:17:51		66.2	66.2
59.5	9:17:54		59.5	59.5
52.8	9:17:57		52.8	52.8
63.7	9:18:00		63.7	63.7
64.4	9:18:03		64.4	64.4
63.4	9:18:06		63.4	63.4
65.1	9:18:09		65.1	65.1
67.4	9:18:12		67.4	67.4
68.7	9:18:15		68.7	68.7
62.5	9:18:18		62.5	62.5
60.8	9:18:21		60.8	60.8
51.1	9:18:24		51.1	51.1
49.6	9:18:27		49.6	49.6
48.9	9:18:30		48.9	48.9
52.8	9:18:33		52.8	52.8
50.3	9:18:36		50.3	50.3
49	9:18:39		49	49
47.8	9:18:42		47.8	47.8
48.2	9:18:45		48.2	48.2
48.3	9:18:48		48.3	48.3
48.9	9:18:51		48.9	48.9
46	9:18:54		46	46
49.6	9:18:57		49.6	49.6
50.1	9:19:00		50.1	50.1
50.6	9:19:03		50.6	50.6
47.8	9:19:06		47.8	47.8
45.3	9:19:09		45.3	45.3
46.6	9:19:12		46.6	46.6
46.2	9:19:15		46.2	46.2
47.9	9:19:18		47.9	47.9
45.9	9:19:21		45.9	45.9
45.9	9:19:24		45.9	45.9
45.3	9:19:27		45.3	45.3
52.4	9:19:30		52.4	52.4
47.2	9:19:33		47.2	47.2
46.8	9:19:36		46.8	46.8
47.9	9:19:39		47.9	47.9
47.1	9:19:42		47.1	47.1
44.3	9:19:45		44.3	44.3
46	9:19:48		46	46
46	9:19:51		46	46
45	9:19:54		45	45
45.3	9:19:57		45.3	45.3
47.2	9:20:00		47.2	47.2
50.5	9:20:03		50.5	50.5
48.3	9:20:06		48.3	48.3
49.8	9:20:09		49.8	49.8
48.7	9:20:12		48.7	48.7
49.2	9:20:15		49.2	49.2
46.4	9:20:18		46.4	46.4
50.3	9:20:21		50.3	50.3
47.8	9:20:24		47.8	47.8
46.6	9:20:27		46.6	46.6
50.8	9:20:30		50.8	50.8
54.2	9:20:33		54.2	54.2
54.7	9:20:36		54.7	54.7
51.6	9:20:39		51.6	51.6
49.5	9:20:42		49.5	49.5

Site 2 - On Northeast Area of Grevelia Park Site

Date	Time=04/05/22	9:28:00 AM			
Sampling	Time=3	Freq Weighting=A			
Record	Num=	28800	Weighting=Slow	CNEL(24hr)=	63.9
Leq	59.9	SEL	Value=109.3	Ldn(24hr)=	63.4
MAX	89.2		Min Leq1hr =	49.5	3:22 AM
MIN	38.5		Max Leq1hr =	63.9	3:57 PM

Site 2 - On Northeast Area of Grevelia Park Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
58.8	9:28:00		58.8	58.8
63.6	9:28:03		63.6	63.6
67.1	9:28:06		67.1	67.1
59.1	9:28:09		59.1	59.1
57.6	9:28:12		57.6	57.6
55.7	9:28:15		55.7	55.7
63.8	9:28:18		63.8	63.8
64.4	9:28:21		64.4	64.4
61.7	9:28:24		61.7	61.7
59.5	9:28:27		59.5	59.5
60.5	9:28:30		60.5	60.5
65.4	9:28:33		65.4	65.4
66	9:28:36		66	66
60.7	9:28:39		60.7	60.7
63.2	9:28:42		63.2	63.2
69.9	9:28:45		69.9	69.9
67.4	9:28:48		67.4	67.4
65.2	9:28:51		65.2	65.2
67.5	9:28:54		67.5	67.5
60.7	9:28:57		60.7	60.7
57.3	9:29:00		57.3	57.3
63.2	9:29:03		63.2	63.2
70.8	9:29:06		70.8	70.8
65.3	9:29:09		65.3	65.3
63.7	9:29:12		63.7	63.7
64.1	9:29:15		64.1	64.1
64.3	9:29:18		64.3	64.3
67.2	9:29:21		67.2	67.2
70.7	9:29:24		70.7	70.7
73.4	9:29:27		73.4	73.4
75.8	9:29:30		75.8	75.8
63.2	9:29:33		63.2	63.2
71	9:29:36		71	71
66.8	9:29:39		66.8	66.8
68	9:29:42		68	68
63.2	9:29:45		63.2	63.2
62.5	9:29:48		62.5	62.5
63	9:29:51		63	63
60	9:29:54		60	60
60.7	9:29:57		60.7	60.7
61.7	9:30:00		61.7	61.7
61.2	9:30:03		61.2	61.2
60.1	9:30:06		60.1	60.1
59.7	9:30:09		59.7	59.7
62	9:30:12		62	62
62	9:30:15		62	62
66.1	9:30:18		66.1	66.1
60.4	9:30:21		60.4	60.4
61	9:30:24		61	61
62.9	9:30:27		62.9	62.9
60.1	9:30:30		60.1	60.1
59.3	9:30:33		59.3	59.3
61.9	9:30:36		61.9	61.9
63.7	9:30:39		63.7	63.7
62.6	9:30:42		62.6	62.6
61.5	9:30:45		61.5	61.5
63.5	9:30:48		63.5	63.5
62.5	9:30:51		62.5	62.5
61.7	9:30:54		61.7	61.7
62.3	9:30:57		62.3	62.3
60.5	9:31:00		60.5	60.5
57.1	9:31:03		57.1	57.1
60.7	9:31:06		60.7	60.7
61.7	9:31:09		61.7	61.7
58.3	9:31:12		58.3	58.3
60.1	9:31:15		60.1	60.1
62.6	9:31:18		62.6	62.6
63.4	9:31:21		63.4	63.4
63.2	9:31:24		63.2	63.2
60.2	9:31:27		60.2	60.2
62.4	9:31:30		62.4	62.4
60.4	9:31:33		60.4	60.4
62	9:31:36		62	62
63.2	9:31:39		63.2	63.2
60	9:31:42		60	60

APPENDIX C

RCNM Model Construction Noise Calculation Printouts

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/18/2022
Case Description: Berkshire & Grevelia Pocket Parks - Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		35	0
Tractor	No	40	84		35	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		88.1	84.1	N/A	N/A	N/A	N/A
Tractor		87.1	83.1	N/A	N/A	N/A	N/A
	Total	**88**	**87**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		27	0
Tractor	No	40	84		27	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		90.4	86.4	N/A	N/A	N/A	N/A
Tractor		89.4	85.4	N/A	N/A	N/A	N/A
	Total	**90**	**89**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/19/2022
Case Description: Berkshire & Grevelia Pocket Parks - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		35	0
Tractor	No	40	84		35	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Grader	88.1	84.1	N/A	N/A	N/A	N/A
Tractor	87.1	83.1	N/A	N/A	N/A	N/A
Total	**88**	**87**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		27	0
Tractor	No	40.0	84		27	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Grader	90.4	86.4	N/A	N/A	N/A	N/A
Tractor	89.4	85.4	N/A	N/A	N/A	N/A
Total	**90**	**89**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/19/2022
Case Description: Berkshire & Grevelia Pocket Parks - Building Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Gradall	No	40		83.4	35	0
Tractor	No	40	84		35	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Gradall		86.5	82.5	N/A	N/A	N/A	N/A
Tractor		87.1	83.1	N/A	N/A	N/A	N/A
	Total	**87**	**86**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Gradall	No	40		83.4	27	0
Tractor	No	40	84		27	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Gradall		88.8	84.8	N/A	N/A	N/A	N/A
Tractor		89.4	85.4	N/A	N/A	N/A	N/A
	Total	**89**	**88**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/19/2022
Case Description: Berkshire & Grevelia Pocket Parks - Paving

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

			Equipment Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Roller	No	20		80	35	0
Tractor	No	40	84		35	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller		83.1	76.1	N/A	N/A	N/A	N/A
Tractor		87.1	83.1	N/A	N/A	N/A	N/A
	Total	**87**	**84**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

			Equipment Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Roller	No	20		80	27	0
Tractor	No	40	84		27	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller		88.8	84.8	N/A	N/A	N/A	N/A
Tractor		89.4	85.4	N/A	N/A	N/A	N/A
	Total	**89**	**88**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/18/2022
Case Description: Berkshire & Grevelia Pocket Parks - Painting

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Berkshire Park	Residential	51.4	51.4	51.4

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	35	0

Equipment		Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq
Compressor (air)		80.8	76.8	N/A	N/A	N/A	N/A
	Total	**81**	**77**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Home to Grevelia Park	Residential	59.9	59.9	59.9

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	27	0

Equipment		Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq
Compressor (air)		83.0	79.0	N/A	N/A	N/A	N/A
	Total	**83**	**79**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX D

Magnolia Street Park Reference Noise Measurement Printouts



Magnolia St Park - looking north



Magnolia St Park - looking northeast



Magnolia St Park - looking east



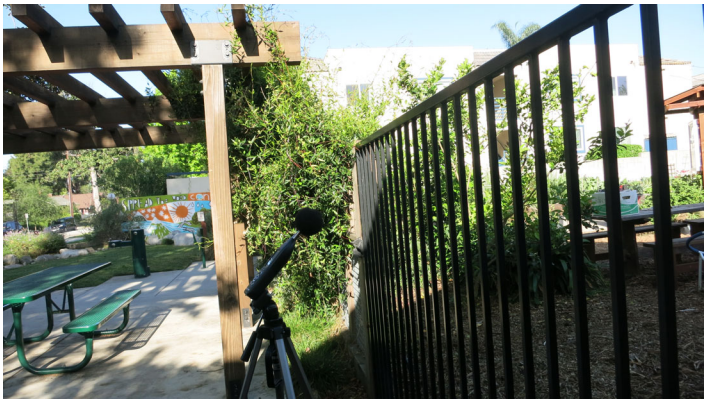
Magnolia St Park - looking southeast



Magnolia St Park - looking south



Magnolia St Park - looking southwest



Magnolia St Park - looking west



Magnolia St Park - looking northwest

Measurement Report

Report Summary

Meter's File Name	831_Data.001	Computer's File Name	SLM_0002509_831_Data_001.15.ldbin
Meter	831		
Firmware	2.314		
User	GT		Location
Description	Magnolia St Park		
Note	2 people working in Garden, a dog walker, birds and vehicles on Magnolia St		
Start Time	2022-04-06 08:42:32	Duration	0:15:00.0
End Time	2022-04-06 08:57:32	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	45.7 dB		
LAE	75.2 dB	SEA	--- dB
EA	3.7 µPa²h		
LZ_{peak}	99.0 dB	2022-04-06 08:42:33	
LAS_{max}	58.6 dB	2022-04-06 08:42:32	
LAS_{min}	39.4 dB	2022-04-06 08:50:06	
LA_{eq}	45.7 dB		
LC_{eq}	60.0 dB	LC_{eq} - LA_{eq}	14.3 dB
LAI_{eq}	49.8 dB	LAI_{eq} - LA_{eq}	4.2 dB

Exceedances	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	45.7 dB	45.7 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	45.7 dB	45.7 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	45.7 dB		60.0 dB		65.6 dB	
$LS_{(max)}$	58.6 dB	2022-04-06 08:42:32	70.1 dB	2022-04-06 08:42:33	90.6 dB	2022-04-06 08:42:33
$LF_{(max)}$	58.1 dB	2022-04-06 08:45:16	75.0 dB	2022-04-06 08:42:33	95.1 dB	2022-04-06 08:42:33
$LI_{(max)}$	74.0 dB	2022-04-06 08:42:32	78.9 dB	2022-04-06 08:42:33	96.8 dB	2022-04-06 08:42:32
$LS_{(min)}$	39.4 dB	2022-04-06 08:50:06	56.5 dB	2022-04-06 08:48:37	59.9 dB	2022-04-06 08:49:57
$LF_{(min)}$	37.9 dB	2022-04-06 08:50:05	54.6 dB	2022-04-06 08:48:57	58.0 dB	2022-04-06 08:49:53
$LI_{(min)}$	39.2 dB	2022-04-06 08:50:05	57.2 dB	2022-04-06 08:47:06	60.9 dB	2022-04-06 08:49:57
$L_{Peak(max)}$	74.9 dB	2022-04-06 08:50:36	84.9 dB	2022-04-06 08:42:33	99.0 dB	2022-04-06 08:42:33

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	48.8 dB
LAS 10.0	47.7 dB
LAS 33.3	45.8 dB
LAS 50.0	45.0 dB
LAS 66.6	44.3 dB
LAS 90.0	43.0 dB

Appendix B

AIR QUALITY IMPACT ANALYSIS

BERKSHIRE AND GREVELIA POCKET PARKS PROJECT

CITY OF SOUTH PASADENA

Lead Agency:

City of South Pasadena
Community Services Department
815 Mission Street
South Pasadena, CA 91030

Prepared by:

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Greg Tonkovich, AICP

Project No. 21156

June 9, 2022

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
City	City of South Pasadena
CO	Carbon monoxide
DPM	Diesel particulate matter
EPA	Environmental Protection Agency
ºF	Fahrenheit
FTIP	Federal Transportation Improvement Program
HAP	Hazardous Air Pollutants
LST	Localized Significant Thresholds
MATES	Multiple Air Toxics Exposure Study
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen oxides
NO_2	Nitrogen dioxide
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PPM	Parts per million
PPB	Parts per billion
PPT	Parts per trillion
RTIP	Regional Transportation Improvement Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments

SIP	State Implementation Plan
SO_x	Sulfur oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Air Quality Impact Analysis has been completed to determine the air quality emissions impacts associated with the proposed Berkshire and Grevelia Pocket Parks project (proposed project). The following is provided in this report:

- A description of the proposed project;
- A description of the atmospheric setting;
- A description of the criteria pollutants;
- A description of the air quality regulatory framework;
- A description of the air quality thresholds, including the California Environmental Quality Act (CEQA) significance thresholds;
- An analysis of the conformity of the proposed project with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP); and
- An analysis of the short-term construction related and long-term operational air quality emissions impacts.

1.2 Site Locations and Study Areas

The proposed project consists of two project sites that are both located in the City of South Pasadena (City). The Berkshire Park site is a 7,482 square foot property at 2006 Berkshire Avenue that is currently vacant other than for a few trees. The Berkshire Park site is bounded by residential uses to the north, east and south and Berkshire Avenue/Valley View Road to the west. The nearest sensitive receptors to the Berkshire Park site consist of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The Berkshire Park site local study area is shown in Figure 1.

The Grevelia Park site is a 9,130 square foot property at 1107 Grevelia Street that is currently vacant other than a few trees. The Grevelia Park site is bounded by Grevelia Street and Intestate 110 to the north and residential uses to the east, south and west. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south. The Grevelia Park site local study area is shown in Figure 2.

1.3 Proposed Project Description

The proposed project would consist of development of two pocket parks that total 16,612 square feet. Construction activities for the two parks are anticipated to start around July, 2022 and be completed in seven months. The operational hours for the two parks would be dawn to dusk.

The Berkshire Park will have a large grass area for free play at the rear and a small space to play within the front portion of the park. The park will have picnic tables, benches, trash receptacles, a drinking fountain, dog waste stations, exercise equipment, trees, and landscape. An accessible Americans with Disabilities Act (ADA)-compliant ramp will lead people to the rear of the park. Due to the elevation, a water infiltration system will need to be installed. Grading of Berkshire Park will require approximately

650 cubic yards of fill and 250 cubic yards of cut, which will result in the import of 400 cubic yards of dirt. The proposed improvements will result in the installation of approximately 1,800 square feet of pavement. The proposed Berkshire Park site plan is shown in Figure 3.

The Grevelia Park will have a large grass area for free play at the rear and a small space with precast play pieced in the middle. The front portion of the park will have picnic tables, benches, a drinking fountain, a dog waste station, trash receptacles, ballad-type lighting, trees, and landscape. The park will need a water infiltration system to catch all run-off. Grading of Grevelia Park is anticipated to be roughly balanced with no or only nominal amounts of dirt being imported or exported from the project site. The proposed improvements will result in the installation of approximately 2,200 square feet of pavement. The proposed Grevelia Park project site plan is shown in Figure 4.

1.4 Executive Summary

Standard Air Quality Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the SCAQMD and State of California (State).

South Coast Air Quality Management District Rules

The following lists the SCAQMD rules that are applicable, but not limited to the proposed project.

- Rule 402 Nuisance – Controls the emissions of odors and other air contaminants;
- Rule 403 Fugitive Dust – Controls the emissions of fugitive dust;
- Rules 1108 and 1108.1 Cutback and Emulsified Asphalt – Controls the volatile organic compound (VOC) content in asphalt;
- Rule 1113 Architectural Coatings – Controls the VOC content in paints and solvents; and
- Rule 1143 Paint Thinners – Controls the VOC content in paint thinners.

State of California Rules

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to the proposed project.

- CCR Title 13, Article 4.8, Chapter 9, Section 2449 – In use Off-Road Diesel Vehicles;
- CCR Title 13, Section 2025 – On-Road Diesel Truck Fleets;
- CCR Title 24 Part 6 – California Building Energy Standards; and
- CCR Title 24 Part 11 – California Green Building Standards.

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines air quality checklist questions.

Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact.

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

Less than significant impact.

Expose sensitive receptors to substantial pollutant concentrations?

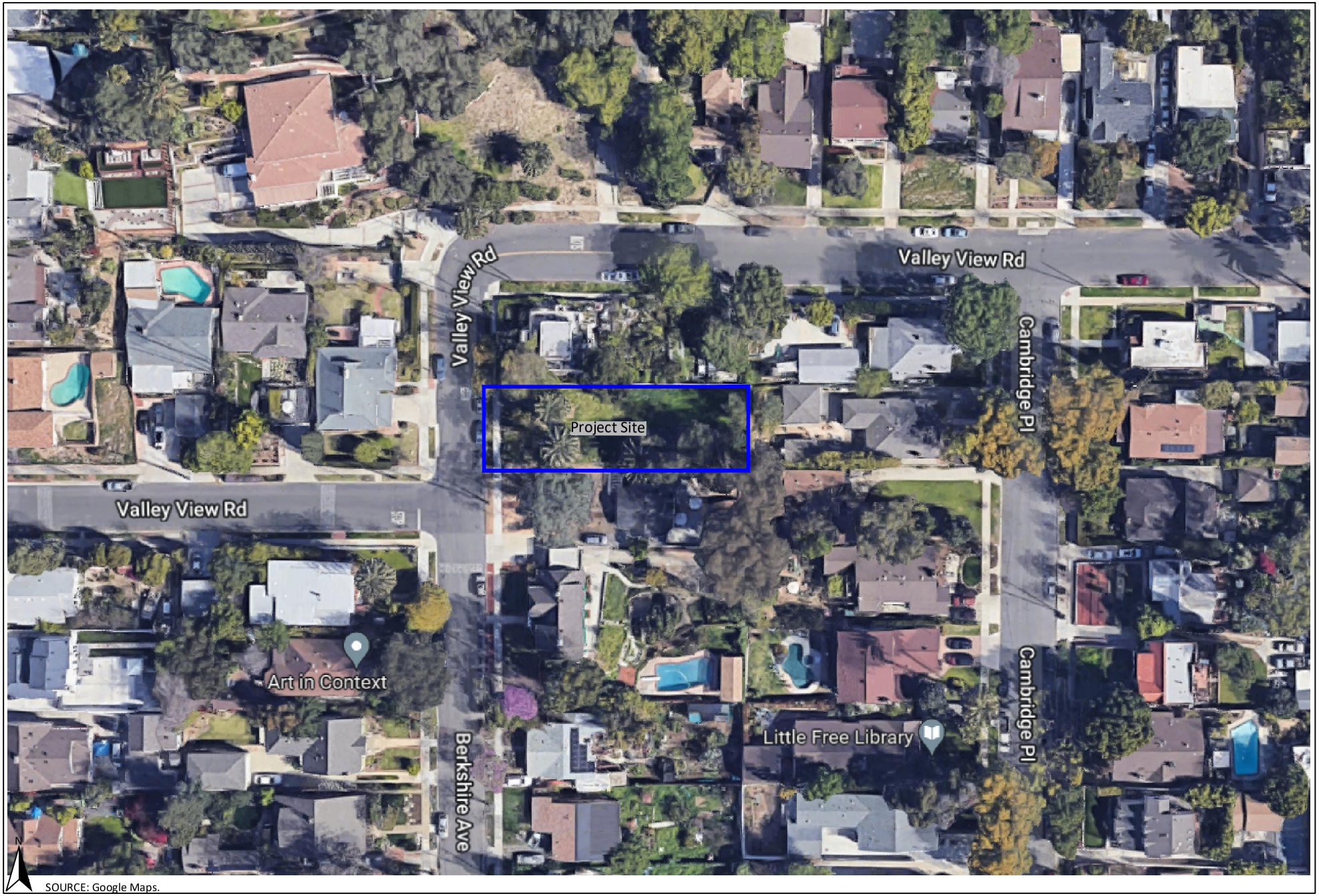
Less than significant impact.

Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than significant impact.

1.5 Mitigation Measures for the Proposed Project

This analysis found that implementation of the State and SCAQMD air quality emissions reductions regulations were adequate to limit criteria pollutants, toxic air contaminants, and odors from the proposed project to less than significant levels. No mitigation measures are required for the proposed project.



SOURCE: Google Maps.

VISTA ENVIRONMENTAL

1336

Figure 1
Berkshire Park Site Local Study Area

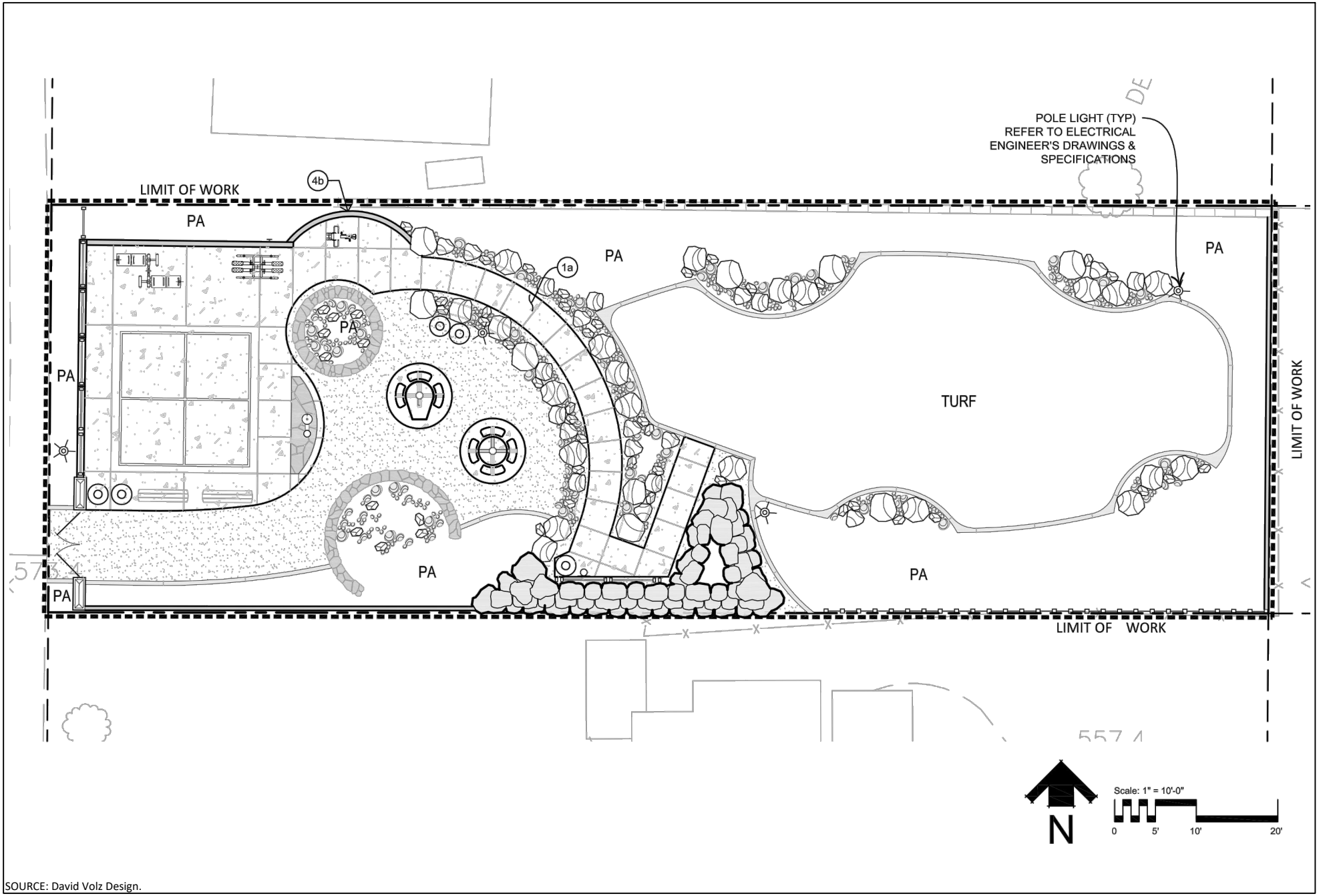


SOURCE: Google Maps.

VISTA ENVIRONMENTAL

1337

Figure 2
Grevelia Park Site Local Study Area

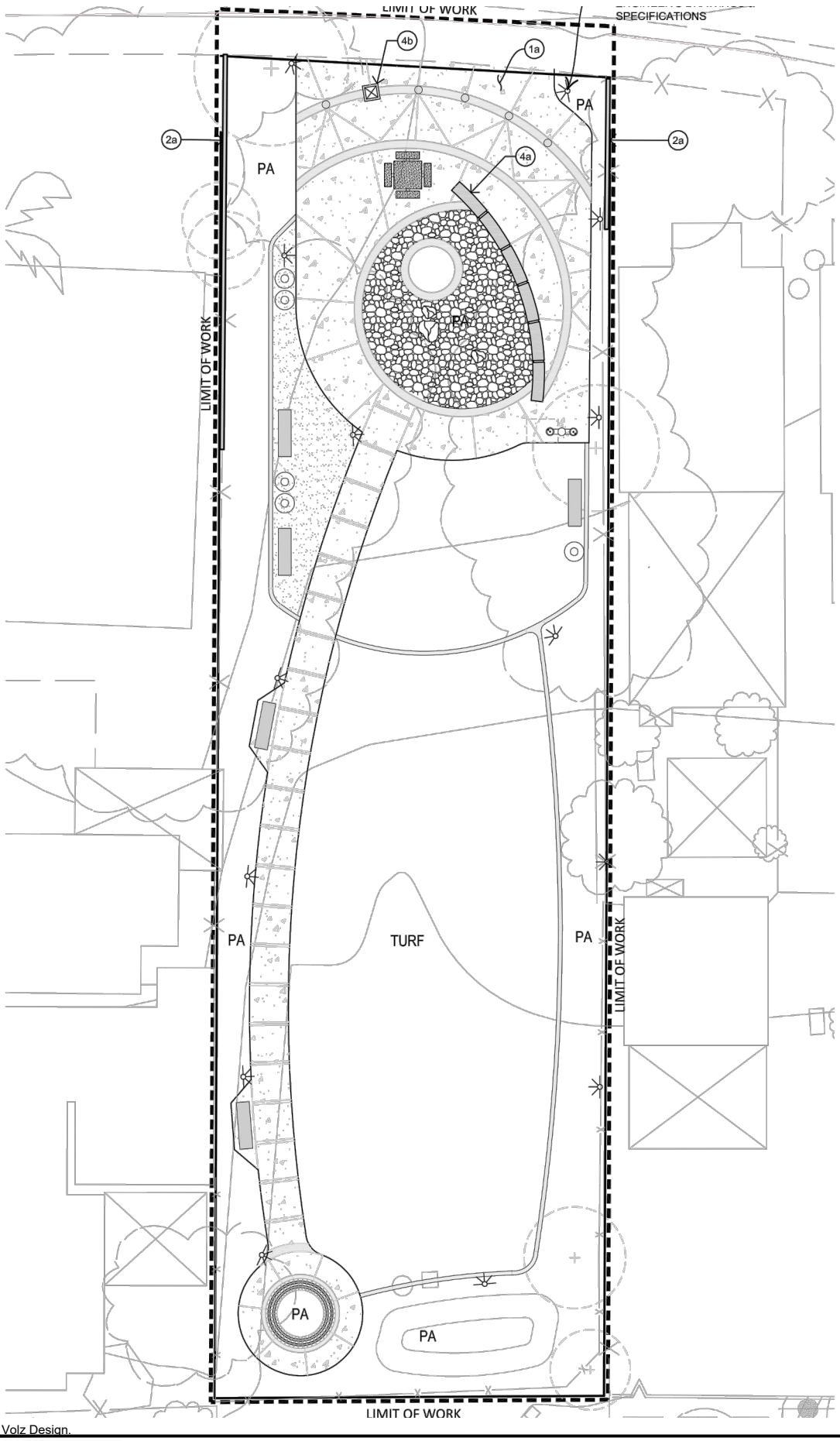


SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

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Figure 3
Proposed Berkshire Park Site Plan



SOURCE: David Volz Design.

VISTA ENVIRONMENTAL

Figure 4
Proposed Grevelia Park Site

2.0 AIR POLLUTANTS

Air pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

2.1 Criteria Pollutants and Ozone Precursors

The criteria pollutants consist of: ozone, nitrogen oxides (NOx), CO, sulfur oxides (SOx), lead, and particulate matter (PM). The ozone precursors consist of NO_x and VOC. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants and ozone precursors.

Nitrogen Oxides

NOx is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx are colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NO_x and the pollutants formed from NO_x can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Ozone

Ozone is not usually emitted directly into the air but in the vicinity of ground-level is created by a chemical reaction between NOx and VOC in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves,

gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Sulfur Oxides

SOx gases are formed when fuel containing sulfur, such as coal and oil is burned, as well as from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Particulate Matter

PM is the term for a mixture of solid particles and liquid droplets found in the air. PM is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) that are also known as *Respirable Particulate Matter* are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) that are also known as *Fine Particulate Matter* have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

Volatile Organic Compounds

Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of ozone are referred to and regulated as VOCs (also

referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

VOC is not classified as a criteria pollutant, since VOCs by themselves are not a known source of adverse health effects. The primary health effects of VOCs result from the formation of ozone and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

2.2 Other Pollutants of Concern

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, TACs are another group of pollutants of concern. TACs is a term that is defined under the California Clean Air Act and consists of the same substances that are defined as Hazardous Air Pollutants (HAPs) in the Federal Clean Air Act. There are over 700 hundred different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different toxic air contaminants. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to *The California Almanac of Emissions and Air Quality 2013 Edition*, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is DPM. DPM is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of DPM as a TAC in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in DPM by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

Asbestos

Asbestos is listed as a TAC by CARB and as a HAP by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release

asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. The nearest likely locations of naturally occurring asbestos, as identified in the *General Location Guide for Ultramafic Rocks in California*, prepared by the California Division of Mines and Geology, is located in Santa Barbara County. The nearest historic asbestos mine to the project site, as identified in the *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California,* prepared by U.S. Geological Survey, is located at Asbestos Mountain, which is approximately 100 miles southeast of the project site in the San Jacinto Mountains. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

3.0 AIR QUALITY MANAGEMENT

The air quality at the project site is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

3.1 Federal – United States Environmental Protection Agency

The Clean Air Act, first passed in 1963 with major amendments in 1970, 1977 and 1990, is the overarching legislation covering regulation of air pollution in the United States. The Clean Air Act has established the mandate for requiring regulation of both mobile and stationary sources of air pollution at the state and federal level. The EPA was created in 1970 in order to consolidate research, monitoring, standard-setting and enforcement authority into a single agency.

The EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. NAAQS pollutants were identified using medical evidence and are shown below in Table A.

Table A – State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone	0.09 ppm / 1-hour 0.07 ppm / 8-hour	0.070 ppm, / 8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm / 1-hour 9.0 ppm / 8-hour	35.0 ppm / 1-hour 9.0 ppm / 8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm / 1-hour 0.030 ppm / annual	100 ppb / 1-hour 0.053 ppm / annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm / 1-hour 0.04 ppm / 24-hour	75 ppb / 1-hour 0.14 ppm/annual	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3 / 24-hour 20 µg/m^3 / annual	150 µg/m^3 / 24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in elderly.

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3 / 24-hour 12 µg/m^3 / annual	
Sulfates	25 µg/m^3 / 24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage.
Lead	1.5 µg/m^3 / 30-day	0.15 µg/m^3 /3-month rolling	(a) Learning disabilities; and (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf .

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP. The CARB defines attainment as the category given to an area with no violations in the past three years. As indicated below in Table B, the Air Basin has been designated by EPA for the national standards as a non-attainment area for ozone and PM2.5 and partial non-attainment for lead. Currently, the Air Basin is in attainment with the national ambient air quality standards for CO, PM10, SO_2, and NO_2.

Table B – South Coast Air Basin Attainment Status

Criteria Pollutant	Standard	Averaging Time	Designation[a)]	Attainment Date[b)]
1-Hour Ozone[c)]	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 (revised deadline)
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
8-Hour Ozone[d)]	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	8/3/2038
	NAAQS	2015 8-Hour (0.070 ppm)	Pending – Expect Nonattainment (Extreme)	Pending (beyond 2032)
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
CO	NAAQS	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)

Criteria Pollutant	Standard	Averaging Time	Designation[a)]	Attainment Date[b)]
	CAAQS	1-Hour (20 ppm) 8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
NO_2[e)]	NAAQS	2010 1-Hour (0.10 ppm)	Unclassifiable/ Attainment	N/A (attained)
	NAAQS	1971 Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-Hour (0.18 ppm) Annual (0.030 ppm)	Attainment	---
SO_2[f)]	NAAQS	2010 1-Hour (75 ppb)	Designations Pending (expect Unclassifiable/ Attainment)	N/A (attained)
	NAAQS	1971 24-Hour (0.14 ppm) 1971 Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (attained)
PM10	NAAQS	1987 24-hour (150 µg/m^3)	Attainment (Maintenance)[g)]	7/26/2013 (attained)
	CAAQS	24-hour (50 µg/m^3) Annual (20 µg/m^3)	Nonattainment	N/A
PM2.5[h)]	NAAQS	2006 24-Hour (35 µg/m^3)	Nonattainment (Serious)	12/31/2019
	NAAQS	1997 Annual (15.0 µg/m^3)	Attainment (final determination pending)	8/24/2016 (attained 2013)
	NAAQS	2012 Annual (12.0 µg/m^3)	Nonattainment (Moderate)	12/31/2025
	CAAQS	Annual (12.0 µg/m^3)	Nonattainment	N/A
Lead[i)]	NAAQS	2008 3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial) (Attainment determination requested)	12/31/2015

Source: SCAQMD, February 2016

Notes:

a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable

b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration

c) The 1979 1-hour O_3 standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard and therefore has some continuing obligations with respect to the revoked standard

d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm. Effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour O_3 NAAQS (0.08 ppm) was revoked in the 2008 O_3 implementation rule, effective 4/6/15;there are continuing obligations under the revoked 1997 and revised 2008 O_3 until they are attained.

e) New NO_2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO_2 standard retained

f) The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations are still pending, with Basin expected to be designated Unclassifiable /Attainment.

g) Annual PM10 standard was revoked, effective December 18, 2006; 24-hour PM10 NAAQS deadline was 12/31/2006; SCAQMD request for attainment redesignation and PM10 maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.

h) The attainment deadline for the 2006 24-Hour PM2.5 NAAQS was 12/31/15 for the former "moderate" classification; EPA approved reclassification to "serious", effective 2/12/16 with an attainment deadline of 12/31/19; the 2012 (proposal year) annual PM2.5 NAAQS was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m^3; new annual designations were final 1/15/15, effective 4/15/15; on July 25, 2016 EPA finalized a determination that the Basin attained the 1997 annual (15.0 µg/m^3) and 24-hour PM2.5 (65 µg/m^3) NAAQS, effective August 24, 2016

i) Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect to remain in attainment based on current monitoring data; attainment re-designation request pending.

In 2015, one or more stations in the Air Basin exceeded the most current federal standards on a total of 146 days (40 percent of the year), including: 8-hour ozone (113 days over 2015 ozone NAAQS), 24-hour PM2.5 (30 days, including near-road sites; 25 days for ambient sites only), PM10 (2 days), and NO_2 (1 day). Despite substantial improvement in air quality over the past few decades, some air monitoring stations in the Air Basin still exceed the NAAQS for ozone more frequently than any other area in the United States.

Seven of the top 10 stations in the nation most frequently exceeding the 2015 8-hour ozone NAAQS in 2015 were located within the Air Basin, including stations in San Bernardino, Riverside, and Los Angeles Counties (SCAQMD, 2016).

PM2.5 levels in the Air Basin have improved significantly in recent years. By 2013 and again in 2014 and 2015, there were no stations measuring PM2.5 in the Air Basin that violated the former 1997 annual PM2.5 NAAQS (15.0 $\mu g/m^3$) for the 3-year design value period. On July 25, 2016 the EPA finalized a determination that the Basin attained the 1997 annual (15.0 $\mu g/m^3$) and 24-hour PM2.5 (65 $\mu g/m^3$) NAAQS, effective August 24, 2016. Of the 17 federal PM2.5 monitors at ambient stations in the Air Basin for the 2013-2015 period, five stations had design values over the current 2012 annual PM2.5 NAAQS (12.0 $\mu g/m^3$), including: Mira Loma (Air Basin maximum at 14.1 $\mu g/m^3$), Rubidoux, Fontana, Ontario, Central Los Angeles, and Compton. For the 24-hour PM2.5 NAAQS (35.0 $\mu g/m^3$) there were 14 stations in the Air Basin in 2015 that had one or more daily exceedances of the standard, with a combined total of 25 days over that standard in the Air Basin. While it was previously anticipated that the Air Basin's 24-hour PM2.5 NAAQS would be attained by 2015, this did not occur based on the data for 2013 through 2015. The higher number of days exceeding the 24-hour PM2.5 NAAQS over what was expected is largely attributed to the severe drought conditions over this period that allowed for more stagnant conditions in the Air Basin with multi-day buildups of higher PM2.5 concentrations. This was caused by the lack of storm-related dispersion and rain-out of PM and its precursors (SCAQMD, 2016).

The Air Basin is currently in attainment for the federal standards for SO_2, CO, NO_2, and PM10. The Air Basin is designated as partial nonattainment for lead and is based on two source specific monitors in Vernon and in the City of Industry that are both near battery recycling facilities. The 2012 Lead SIP for Los Angeles County provides measures to meet attainment of lead by December 31, 2015. Current monitoring data shows that lead is now below the standards at all monitoring stations, however it will take three years of meeting the standards before Los Angeles County can request to be re-designated by the EPA. While the concentration level of the 1-hour NO_2 federal standard (100 ppb) was exceeded in the Air Basin for one day in 2015 (Long Beach- Hudson Station), the NAAQS NO_2 design value has not been exceeded. Therefore, the Air Basin remains in attainment of the NO_2 NAAQS (SCAQMD, 2016).

3.2 State – California Air Resources Board

The CARB, which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The CAAQS for criteria pollutants are shown above in Table A. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The Air Basin has been designated by the CARB as a non-attainment area for ozone, PM10 and PM2.5. Currently, the Air Basin is in attainment with the ambient air quality standards for CO, NO_2, SO_2, lead, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to all development projects in the State.

Assembly Bill 2588

The Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release in California. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

CARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the CARB adopted California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 to reduce DPM and NOx emissions from in-use off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NOx emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirement making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less). Currently, no commercial operation in California may add any equipment to their fleet that has a Tier 0 or Tier 1 engine. By January 1, 2018 medium and large fleets will be restricted from adding Tier 2 engines to their fleets and by January 2023, no commercial operation will be allowed to add Tier 2 engines to their fleets. It should be noted that commercial fleets may continue to use their existing Tier 0 and 1 equipment, if they can demonstrate that the average emissions from their entire fleet emissions meet the NOx emissions targets.

CARB Resolution 08-43 for On-Road Diesel Truck Fleets

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NOx, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4 Final) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. By January 1, 2014, 50 percent of a truck fleet is required to have installed Best Available Control Technology (BACT) for NOx emissions and 100 percent of a truck fleet installed BACT for PM10 emissions. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California. All on-road diesel trucks utilized during construction of the proposed project will be required to comply with Resolution 08-43.

3.3 Regional – Southern California

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. The *Final 2016 Air Quality Management Plan* (2016 AQMP) was adopted by the SCAQMD Board on March 3, 2016 and was adopted by CARB on March 23, 2017 for inclusion into the SIP. The 2016 AQMP was prepared in order to meet the following standards:

- 8-hour Ozone (75 ppb) by 2032
- Annual PM2.5 (12 µg/m3) by 2021-2025
- 8-hour Ozone (80 ppb) by 2024 (updated from the 2007 and 2012 AQMPs)
- 1-hour Ozone (120 ppb) by 2023 (updated from the 2012 AQMP)
- 24-hour PM2.5 (35 µg/m^3) by 2019 (updated from the 2012 AQMP)

In addition to meeting the above standards, the 2016 AQMP also includes revisions to the attainment demonstrations for the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The prior 2012 AQMP was prepared in order to demonstrate attainment with the 24-hour PM2.5 standard by 2014 through adoption of all feasible measures. The prior 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These "black box" emissions reductions represent 65 percent of the remaining NOx emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NOx control measures have been provided in the 2012 AQMP even though the primary purpose was to show compliance with 24-hour PM2.5 emissions standards.

The 2016 AQMP provides a new approach that focuses on available, proven and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities to promote reductions in greenhouse gas emissions and TAC emissions as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the Air Basin. Instead, this is controlled through local jurisdictions in accordance to CEQA. In order to assist local jurisdictions with air quality compliance issues the *CEQA Air Quality Handbook* (SCAQMD CEQA Handbook), prepared by SCAQMD, 1993, with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs detailed in the AQMPs. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD

intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Air Basin, and adverse impacts will be minimized.

The following lists the SCAQMD rules that are applicable but not limited to park development projects in the Air Basin.

Rule 402 - Nuisance

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Compliance with Rule 402 will reduce local air quality and odor impacts to nearby sensitive receptors.

Rule 403- Fugitive Dust

Rule 403 governs emissions of fugitive dust during construction activities and requires that no person shall cause or allow the emissions of fugitive dust such that dust remains visible in the atmosphere beyond the property line or the dust emission exceeds 20 percent opacity, if the dust is from the operation of a motorized vehicle. Compliance with this rule is achieved through application of standard Best Available Control Measures, which include but are not limited to the measures below. Compliance with these rules would reduce local air quality impacts to nearby sensitive receptors.

- Utilize either a pad of washed gravel 50 feet long, 100 feet of paved surface, a wheel shaker, or a wheel washing device to remove material from vehicle tires and undercarriages before leaving project site.
- Do not allow any track out of material to extend more than 25 feet onto a public roadway and remove all track out at the end of each workday.
- Water all exposed areas on active sites at least three times per day and pre-water all areas prior to clearing and soil moving activities.
- Apply nontoxic chemical stabilizers according to manufacturer specifications to all construction areas that will remain inactive for 10 days or longer.
- Pre-water all material to be exported prior to loading, and either cover all loads or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114.
- Replant all disturbed area as soon as practical.
- Suspend all grading activities when wind speeds (including wind gusts) exceed 25 miles per hour.
- Restrict traffic speeds on all unpaved roads to 15 miles per hour or less.

Rules 1108 and 1108.1 – Cutback and Emulsified Asphalt

Rules 1108 and 1108.1 govern the sale, use, and manufacturing of asphalt and limits the VOC content in asphalt. This rule regulates the VOC contents of asphalt used during construction as well as any on-going maintenance during operations. Therefore, all asphalt used during construction and operation of the proposed project must comply with SCAQMD Rules 1108 and 1108.1.

Rule 1113 – Architectural Coatings

Rule 1113 governs the sale, use, and manufacturing of architectural coatings and limits the VOC content in sealers, coatings, paints and solvents. This rule regulates the VOC contents of paints available during construction. Therefore, all paints and solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1113.

Rule 1143 – Paint Thinners

Rule 1143 governs the sale, use, and manufacturing of paint thinners and multi-purpose solvents that are used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations. This rule regulates the VOC content of solvents used during construction. Solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1143.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (Connect SoCal), adopted September 3, 2020 and the *2019 Federal Transportation Improvement* Program (2019 FTIP), adopted September 2018, which addresses regional development and growth forecasts. Although the Connect SoCal and 2019 FTIP are primarily planning documents for future transportation projects a key component of these plans is to integrate land use planning with transportation planning that promotes higher density infill development in close proximity to existing transit service. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Connect SoCal, 2019 FTIP, and AQMP are based on projections originating within the City and County General Plans.

3.4 Local – City of South Pasadena

Local jurisdictions, such as the City of South Pasadena, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the AQMPs. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, the City relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook (SCAQMD, 1993) as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

4.0 ATMOSPHERIC SETTING

4.1 South Coast Air Basin

The project site is located within Los Angeles County, which is part of the South Coast Air Basin (Air Basin) that includes the non-desert portions of Riverside, San Bernardino, and Los Angeles Counties and all of Orange County. The Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

4.2 Local Climate

The climate of central Los Angeles County is characterized by hot dry summers, mild moist winters with infrequent rainfall, moderate afternoon breezes, and generally fair weather. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. Occasional periods of strong Santa Ana winds and winter storms interrupt the otherwise mild weather pattern.

Although the Air Basin has a semi-arid climate, the air near the surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the Air Basin by offshore winds, the ocean effect is dominant. Periods of heavy fog are frequent and low stratus clouds, often referred to as “high fog” are a characteristic climate feature.

Winds are an important parameter in characterizing the air quality environment of a project site because they determine the regional pattern of air pollution transport and control the rate of dispersion near a source. Daytime winds in Los Angeles County are usually light breezes from off the coast as air moves regionally onshore from the cool Pacific Ocean to the warm Mojave Desert interior of Southern California. These winds are usually the strongest in the dry summer months. Nighttime winds in Los Angeles County are a result mainly from the drainage of cool air off of the mountains to the east and they occur more often during the winter months and are usually lighter than the daytime winds. Between the periods of dominant airflow, periods of air stagnation may occur, both in the morning and evening hours. Whether such a period of stagnation occurs is one of the critical determinants of air quality conditions on any given day.

During the winter and fall months, surface high-pressure systems north of the Air Basin combined with other meteorological conditions, can result in very strong winds, called “Santa Ana Winds”, from the northeast. These winds normally have durations of a few days before predominant meteorological conditions are reestablished. The highest wind speed typically occurs during the afternoon due to daytime thermal convection caused by surface heating. This convection brings about a downward transfer of momentum from stronger winds aloft. It is not uncommon to have sustained winds of 60 miles per hour with higher gusts during a Santa Ana Wind event.

The temperature and precipitation levels for the Pasadena COOP Monitoring Station, which is the nearest weather station to the project site with historical data are shown below in Table C. Table C shows that August is typically the warmest month and January is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table C – Monthly Climate Data

Month	Average Maximum Temperature (°F)	Average Minimum Temperature (°F)	Average Total Precipitation (inches)
January	66.5	42.6	4.39
February	67.8	44.1	4.54
March	69.9	45.9	3.39
April	73.4	48.8	1.39
May	76.3	52.2	0.43
June	81.7	55.7	0.13
July	88.4	59.9	0.03
August	89.2	60.3	0.08
September	87.1	58.5	0.36
October	80.6	53.4	0.70
November	73.8	47.2	1.67
December	67.2	43.2	3.14
Annual	**76.8**	**51.0**	**20.24**

Source: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6719

4.3 Monitored Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. Estimates of the existing emissions in the Air Basin provided in the 2012 AQMP, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NOx emissions and 40 percent of directly emitted PM2.5, with another 10 percent of PM2.5 from road dust. The 2016 AQMP found that since 2012 AQMP projections were made stationary source VOC emissions have decreased by approximately 12 percent, but mobile VOC emissions have increased by 5 percent. The percentage of NOx emissions remain unchanged between the 2012 and 2016 projections.

SCAQMD has divided the Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in Air Monitoring Area 8, West San Gabriel Valley. Since not all air monitoring stations measure all of the tracked pollutants, the data from the following two monitoring stations, listed in the order of proximity to the project site have been used; Pasadena S Wilson Avenue Monitoring Station (Pasadena Station) and Los Angeles N Main St Monitoring Station (Los Angeles Station)

The Pasadena Station is located approximately 1.8 and 2.8 miles northeast of the two project sites at 752 S Wilson Avenue, Pasadena and the Los Angeles Station is located approximately 4.5 and 5.5 miles southwest of the two project sites at 1630 N Main Street, Los Angeles. The monitoring data is presented in Table D and shows the most recent three years of monitoring data from CARB. Ozone, PM2.5 and NO_2 were measured at the Pasadena Station and PM105 were measured at the Los Angeles Station. CO measurements have not been provided, since CO is currently in attainment in the Air Basin and monitoring of CO within the Air Basin ended on March 31, 2013.

Table D – Local Area Air Quality Monitoring Summary

Pollutant [1] (Standard)	Year 2018	2019	2020
Ozone[1]:			
Maximum 1-Hour Concentration (ppm)	0.112	0.120	0.163
Days > CAAQS (0.09 ppm)	**8**	**11**	**41**
Maximum 8-Hour Concentration (ppm)	0.090	0.098	0.115
Days > NAAQS (0.070 ppm)	**19**	**24**	**60**
Days > CAAQs (0.070 ppm)	**20**	**29**	**61**
Nitrogen Dioxide[1]:			
Maximum 1-Hour Concentration (ppb)	68.2	59.1	61.2
Days > NAAQS (100 ppb)	0	0	0
Days > CAAQS (180 ppb)	0	0	0
Inhalable Particulates (PM10)[2]:			
Maximum 24-Hour National Measurement (ug/m^3)	68.2	62.4	83.7
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	**31**	**15**	**34**
Annual Arithmetic Mean (AAM) (ug/m^3)	30.2	23.0	33.1
Annual > NAAQS (50 ug/m^3)	No	No	No
Annual > CAAQS (20 ug/m^3)	**Yes**	**Yes**	**Yes**
Ultra-Fine Particulates (PM2.5)[1]:			
Maximum 24-Hour National Measurement (ug/m^3)	32.5	41.8	67.7
Days > NAAQS (35 ug/m^3)	0	**1**	**2**
Annual Arithmetic Mean (AAM) (ug/m^3)	10.2	9.1	11.9
Annual > NAAQS and CAAQS (12 ug/m^3)	No	No	No

Notes: Exceedances are listed in **bold.** CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.

[1] Data obtained from the Pasadena Station.

[2] Data obtained from the Los Angeles Station

Source: http://www.arb.ca.gov/adam/

Ozone

During the last three years, the State 1-hour concentration standard for ozone has been exceeded between 8 and 41 days each year at the Pasadena Station. The State 8-hour ozone standard has been exceeded between 20 and 61 days each year over the last three years at the Rubidoux Station. The Federal 8-hour ozone standard has been exceeded between 19 and 60 days each year over the last three years at the Pasadena Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the

oxidant concentrations experienced in the area. Many areas of Southern California contribute to the ozone levels experienced at this monitoring station, with the more significant areas being those directly upwind.

Nitrogen Dioxide

The Pasadena Station did not record an exceedance of either the Federal or State 1-hour NO_2 standards for the last three years.

Particulate Matter

The State 24-hour concentration standard for PM10 has been exceeded between 15 and 34 days each year over the past three years at the Los Angeles Station. Over the past three years the Federal 24-hour standard for PM10 has not been exceeded over the past three years at the Los Angeles Station. The annual PM10 concentration at the Los Angeles Station has exceeded the State standard for the past three years and has not exceeded the Federal standard for the past three years.

Over the past three years the federal 24-hour concentration standard for PM2.5 has been exceeded between 0 and 2 days each year over the past three years at the Pasadena Station. The annual PM2.5 concentrations at the Pasadena Station has not exceeded either the State or Federal standards for the past three years. There does not appear to be a noticeable trend for PM10 or PM2.5 in either maximum particulate concentrations or days of exceedances in the area. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

4.2 Toxic Air Contaminant Levels

In order to determine the Air Basin-wide risks associated with major airborne carcinogens, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES) studies. According to the MATES V study (SCAQMD, 2021), the Berkshire Park site has an estimated cancer risk of 530 per million persons chance of cancer and the Grevelia Park site has an estimated cancer risk of 509 per million persons chance of cancer. In comparison, the average cancer risk for the Air Basin is 455 per million persons. The MATES V study that monitored air toxins between May 1, 2018 to April 30, 2019 found that cancer risk from air toxics has declined significantly in the Air Basin with a 40 percent decrease in cancer risk since the monitoring for the MATES IV study that occurred between July 1, 2012 and June 30, 2013 and an 84 percent decrease in cancer risk since the monitoring for the MATES II study that occurred between April 1, 1998 and March 31, 1999.

The MATES V study also analyzed impacts specific to the communities experiencing environmental injustices (EJ communities) that were evaluated using the Senate Bill 535 definition of disadvantaged communities, which found that between MATES IV and MATES V, the cancer risk from air toxics decreased by 57 percent in EJ communities overall, compared to a 53 percent reduction in non-EJ communities.

In order to provide a perspective of risk, it is often estimated that the incidence in cancer over a lifetime for the U.S. population ranges between 1 in 3 to 4 and 1 in 3, or a risk of about 300,000 per million persons. The MATES-III study referenced a Harvard Report on Cancer Prevention, which estimated that of cancers associated with known risk factors, about 30 percent were related to tobacco, about 30 percent were related to diet and obesity, and about 2 percent were associated with environmental pollution related exposures that includes hazardous air pollutants.

5.0 MODELING PARAMETERS AND ASSUMPTIONS

5.1 CalEEMod Model Input Parameters

The criteria air pollution emissions impacts created by the proposed project have been analyzed through use of CalEEMod Version 2020.4.0. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2017 computer program to calculate the emission rates specific for the South Coast Air Basin portion of Los Angeles County for employee, vendor and haul truck vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy equipment operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour.

The project characteristics in the CalEEMod model were set to a project location of the South Coast Air Basin portion of Los Angeles County, a Climate Zone of 9, utility company of Southern California Edison Utilities, and an opening year of 2023. In addition, the EMFAC off-model adjustment factors for gasoline light duty vehicle to account for the SAFE Vehicle rule was selected in the CalEEMod model run.

Land Use Parameters

The proposed project would consist of development of two pocket parks that total 16,612 square feet. The proposed project's land use parameters that were entered into the CalEEMod model are shown in Table E.

Table E – CalEEMod Land Use Parameters

Proposed Land Use	Land Use Subtype in CalEEMod	Land Use Size[1]	Lot Acreage[2]	Building/Paving[3] (square feet)
Berkshire and Grevelia Pocket Parks	City Park	0.29 AC	0.29	12,632
Paved Areas within the two Pocket Parks	Other Non-Asphalt Surfaces	4.00 TSF	0.09	4,000

Notes:
[1] AC = Acres; TSF = Thousand Square Feet.
[2] Lot acreage calculated based on the total project area of 0.381-acre.
[3] Building/Paving square feet represent area where architectural coatings will be applied.

Construction Parameters

Construction activities for the two parks are anticipated to start around July, 2022 and be completed in seven months. The phases of construction activities that have been analyzed are detailed below and include: 1) Site Preparation, 2) Grading, 3) Building Construction, 4) Paving, and 5) Application of architectural coatings.

The CalEEMod model provides the selection of "mitigation" to account for project conditions that would result in less emissions than a project without these conditions, however it should be noted that this "mitigation" may represent regulatory requirements. This includes the required to adherence to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.

Site Preparation

The site preparation phase would consist of removing any vegetation, tree stumps, and stones onsite prior to grading. The site preparation phase is anticipated to start in July 2022 and was modeled as occurring over one day, which is based on the CalEEMod default timing. The site preparation activities would generate 5 worker trips per day. The onsite equipment would consist of one grader, and one of either a tractor, loader, or backhoe, which is based on the CalEEMod default equipment mix. The mitigation of "water all exposed areas two times per day" was chosen in order to account for the fugitive dust reduction that would occur through adhering to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.

Grading

The grading phase was modeled as starting after the completion of the site preparation phase and was modeled as occurring over three weeks. The Grevelia Park site is anticipated to be balanced, which would not require any dirt to be imported or exported from the Grevelia Park site. However, the Berkshire Park site is anticipated to require approximately 650 cubic yards of fill and 250 cubic yards of cut, which will result in the import of 400 cubic yards of dirt that would generate a total of 50 haul truck trips (average 3.3 haul truck trips per day over duration of grading phase). The grading phase would generate eight worker trips per day. The onsite equipment would consist of the simultaneous operation of one grader, one rubber-tired dozer, and one of either a tractor, a loader, or a backhoe, which is based on the CalEEMod default equipment mix. The mitigation of water all exposed areas three times per day was chosen in order to account for the fugitive dust reduction that would occur through adhering to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.

Building Construction

The building construction would occur after the completion of the grading phase and was modeled as occurring over 100 workdays, which is based on the CalEEMod default timing. The building construction phase would generate seven worker trips and three vendor trips per day. The onsite equipment would consist of the simultaneous operation of one crane, two forklifts, and two of either tractors, loaders, or backhoes, which is based on the CalEEMod default equipment mix.

Paving

The paving phase would consist of paving the onsite parking lot areas, driveways, and impervious hardscape areas. The paving phase was modeled as occurring over four weeks and starting after completion of the building construction phase. The paving phase would generate 18 worker trips per day. The onsite equipment would consist of the simultaneous operation of four cement and mortar mixers, one paver, one roller, and one of either a tractor, loader or backhoe, which is based on the CalEEMod default equipment mix.

Architectural Coating

The application of architectural coatings was modeled as occurring after the paving phase and occurring over one week which is based on the CalEEMod default timing. The architectural coating phase was modeled based on covering 240 square feet of paved area. The architectural coating phase would generate one worker trips per day. The onsite equipment would consist of one air compressor, which is based on the CalEEMod default equipment mix.

Operational Emissions Modeling

The operations-related criteria air pollutant emissions created by the proposed project have been analyzed through use of the CalEEMod model. The proposed project was analyzed in the CalEEMod model based on the land use parameters provided above and the parameters entered for each operational emission source is described below.

Mobile Sources

Mobile sources include emissions the additional vehicle miles generated from the proposed project. According to the City, the two pocket parks would serve the local communities where people would walk to the parks and only a minimal number of vehicle trips would be generated by operation of the two pocket parks. In order to provide a conservative analysis, the default trip rates provided in the CalEEMod model have been utilized, which found that the proposed project would generate 0.23 weekday daily trips, 0.57 Saturday daily trips and 0.64 Sunday daily trips. No changes were made to the CalEEMod default mobile source parameters.

Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. The area source emissions were based on the on-going use of the proposed project in the CalEEMod model. No changes were made to the default area source parameters in the CalEEMod model.

Energy Usage

Energy usage includes emissions from electricity and natural gas used onsite. It should be noted that no natural gas appliances would be installed into either park. The energy usage was based on the ongoing use of the proposed project in the CalEEMod Model. No changes were made to the default energy usage parameters in the CalEEMod model.

6.0 THRESHOLDS OF SIGNIFICANCE

6.1 Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominant pollution generators in the Air Basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table F.

Table F – SCAQMD Regional Criteria Pollutant Emission Thresholds of Significance

	Pollutant Emissions (pounds/day)						
	VOC	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**	**Lead**
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2

6.2 Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. SCAQMD has also provided *Final Localized Significance Threshold Methodology* (LST Methodology), July 2008, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO_2, CO, PM10, and PM2.5.

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of the project site and distance to the nearest sensitive receptors. As detailed above in Section 4.3, the project site is located in Air Monitoring Area 8, West San Gabriel Valley. The Look-Up Tables provided in the LST Methodology include project site acreage sizes of 1-acre, 2-acres and 5-acres. The 1-acre project site values in the Look-Up Tables have been utilized in this analysis, since that is the nearest size available for the two project sites that total 0.38 acre.

The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south. According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25-meter thresholds. Table G below shows the LSTs for NOx, CO, PM10 and PM2.5 for both construction and operational activities.

Table G – SCAQMD Local Air Quality Thresholds of Significance

Activity	Allowable Emissions (pounds/day)[1]			
	NOx	CO	PM10	PM2.5
Construction	69	535	4	3
Operation	69	535	1	1

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one acre at 25 meters in Air Monitoring Area 8, West San Gabriel Valley.

6.3 Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to toxic air contaminants (TACs), the *Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*, (Diesel Analysis) prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create TACs through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the TAC and the toxicity of the hazardous air pollutant (HAP) should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

6.4 Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

> "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
>
> The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality emissions would occur if the proposed project is determined to:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

7.2 Air Quality Compliance

The proposed project would not conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan (AQMP). The following section discusses the proposed project's consistency with the SCAQMD AQMP.

SCAQMD Air Quality Management Plan

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and regional plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD AQMP. Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this report, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance discussed above in Section 6.1 or local thresholds of significance discussed above in Section 6.2. The ongoing operation of the proposed project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance discussed above in Section 6.1. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards. Therefore, a less than significant long-term impact would occur and no mitigation would be required.

Therefore, based on the information provided above, the proposed project would be consistent with the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the RTP/SCS and FTIP. The RTP/SCS is a major planning document for the regional transportation and land use network within Southern California. The RTP/SCS is a long-range plan that is required by federal and state requirements placed on SCAG and is updated every four years. The FTIP provides long-range planning for future transportation improvement projects that are constructed with state and/or federal funds within Southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA. For this project, the City of South Pasadena General Plan's Land Use Plan defines the assumptions that are represented in AQMP.

The Berkshire Park site is currently designated Low Density Residential and the Grevelia Park site is currently designated Medium Density Residential in the Land Use Policy Map. It should be noted that the *Draft South Pasadena General Plan,* November 4, 2019 designates these two parcels as Parks & Open Space. Although the Draft General Plan has not yet been adopted, City Parks are an allowed use under the Low Density Residential and the Medium Density Residential land uses and the City of Pasadena has recently rezoned the two parcels to Open Space to allow for development of the proposed project. As such, the proposed project is consistent with the current land use designations and would not require a General Plan Amendment. As such, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur in relation to implementation of the AQMP.

Level of Significance

Less than significant impact.

7.3 Cumulative Net Increase in Non-Attainment Pollution

The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality

standard. The following section calculates the potential air emissions associated with the construction and operations of the proposed project and compares the emissions to the SCAQMD standards.

Construction Emissions

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction and paving of the two proposed pocket parks, and application of architectural coatings. The CalEEMod model has been utilized to calculate the construction-related emissions from the proposed project and the input parameters utilized in this analysis have been detailed in Section 5.1. Table H shows the maximum summer and winter emissions for both year 2022 and 2023, which is when construction activities are anticipated to occur and the CalEEMod daily printouts are shown in Appendix A.

Table H – Construction-Related Maximum Daily Criteria Pollutant Emissions

Construction Year and Season	Pollutant Emissions[1] (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Summer 2022	1.13	12.58	7.48	0.02	2.74	1.52
Winter 2022	1.13	12.61	7.46	0.02	2.74	1.52
Summer 2023	0.67	5.54	7.67	0.01	0.47	0.30
Winter 2023	0.67	5.55	7.62	0.01	0.47	0.30
Maximum Daily Construction Emissions	**1.13**	**12.61**	**7.48**	**0.02**	**2.74**	**1.52**
SCQAMD Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
SCAQMD Local Thresholds	**--**	**69**	**535**	**--**	**4**	**3**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.
Source: CalEEMod Version 2020.4.0.

Table H shows that the maximum daily criteria pollutant emissions would not exceed either the SCAQMD regional and local criteria pollutant thresholds. In addition, construction emissions would be short-term, limited only to the period when construction activity is taking place. As such, construction-related criteria pollutant emissions would be less than significant for the proposed project.

Operational Emissions

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips, emissions from energy usage, and onsite area source emissions created from the on-going use of the proposed project.

The operations-related regional criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model and the input parameters utilized in this analysis have been detailed in Section 5.1. The worst-case summer or winter VOC, NOx, CO, SO_2, PM10, and PM2.5 daily emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table I and the CalEEMod daily emissions printouts are shown in Appendix A.

Table I – Operational Regional Criteria Pollutant Emissions

	Pollutant Emissions (pounds/day)					
Activity	**VOC**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Area Sources[1]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Energy Usage[2]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[3]	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Total Emissions	**<0.01**	**<0.01**	**0.02**	**<0.01**	**<0.01**	**<0.01**
SCQAMD Regional Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
SCAQMD Local Thresholds	**--**	**69**	**535**	**--**	**1**	**1**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[2] Energy usage consist of emissions from natural gas usage (no natural gas appliances would be installed into the two pocket parks).
[3] Mobile sources consist of emissions from vehicles and road dust.
Source: Calculated from CalEEMod Version 2020.4.0.

The data provided in Table I shows that the operations-related emissions would not exceed either SCAQMD regional or local thresholds. As such, operations-related criteria pollutant emissions would be less than significant for the proposed project.

Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

Level of Significance

Less than significant impact.

7.4 Sensitive Receptors

The proposed project would not expose sensitive receptors to substantial pollutant concentrations. The local concentrations of criteria pollutant emissions produced in the nearby vicinity of the proposed project, which may expose sensitive receptors to substantial concentrations have been calculated above in Section 9.3 for both construction and operations, which are discussed separately below. The discussion below also includes an analysis of the potential impacts from toxic air contaminant emissions.

The nearest sensitive receptors to the Berkshire Park site consists of homes located as near as 7.5 feet to the north, 8.5 feet to the south, and 14 feet to the southeast. The nearest sensitive receptors to the Grevelia Park site consists of homes located on the west property line (actually encroach onto project site by 0.7 foot), homes as near as 1.5 feet to the east, and 21 feet to the south.

Construction-Related Sensitive Receptor Impacts

Construction activities may expose sensitive receptors to substantial pollutant concentrations of localized criteria pollutant concentrations and from toxic air contaminant emissions created from onsite construction equipment, which are described below.

Local Criteria Pollutant Impacts from Construction

The local air quality impacts from construction of the proposed project has been analyzed above in Section 9.3 and found that the construction of the proposed project would not exceed the SCAQMD's local NOx,

CO, PM10 and PM2.5 thresholds of significance discussed above in Section 8.2. Therefore, construction of the proposed project would create a less than significant construction-related impact to local air quality and no mitigation would be required.

Toxic Air Contaminants Impacts from Construction

The greatest potential for toxic air contaminant emissions would be related to diesel particulate matter (DPM) emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. It should be noted that the most current cancer risk assessment methodology recommends analyzing a 30 year exposure period for the nearby sensitive receptors (OEHHA, 2015).

Given the relatively limited number of heavy-duty construction equipment, the varying distances that construction equipment would operate to the nearby sensitive receptors, and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 or 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment to no more than five minutes, requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet's usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0 or Tier 1 equipment and by January 2023 no commercial operator is allowed to purchase Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. By January, 2022, 50 percent or more of all contractors' equipment fleets must be Tier 2 or higher. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project. As such, construction of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operations-Related Sensitive Receptor Impacts

The on-going operations of the proposed project may expose sensitive receptors to substantial pollutant concentrations of local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from onsite operations. The following analyzes the vehicular CO emissions. Local criteria pollutant impacts from onsite operations, and toxic air contaminant impacts.

Local CO Hotspot Impacts from Project-Generated Vehicle Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential impacts to sensitive receptors.

As detailed above in Section 5.1, operation of the proposed project is anticipated to generate less than one vehicle trip per day. As such, no local CO Hotspot are anticipated to be created from the proposed project and no CO Hotspot modeling was performed. Therefore, a less than significant impact is anticipated to sensitive receptors from potential CO Hotspots.

Local Criteria Pollutant Impacts from Onsite Operations

The local air quality impacts from the operation of the proposed project would occur from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances (no natural gas appliances would be installed in the two proposed pocket parks). The analysis provided above in Section 7.3 found that the operation of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 6.2. Therefore, the on-going operations of the proposed project would create a less than significant operations-related impact to local air quality due to on-site emissions and no mitigation would be required.

Operations-Related Toxic Air Contaminant Impacts

Particulate matter (PM) from diesel exhaust is the predominant TAC in most areas and according to *The California Almanac of Emissions and Air Quality 2013 Edition*, prepared by CARB, about 80 percent of the outdoor TAC cancer risk is from diesel exhaust. Some chemicals in diesel exhaust, such as benzene and formaldehyde have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips that are anticipated to be generated by the on-going operation of the two pocket parks, a less than significant TAC impact would occur during the on-going operations of the proposed project and no mitigation would be required.

Therefore, operation of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Level of Significance

Less than significant impact.

7.5 Odor Emissions Adversely Affecting a Substantial Number of People

The proposed project would not result in other emissions, such as those leading to odors that would adversely affect a substantial number of people. The local concentrations of criteria pollutant emissions, TAC emissions, and CO concentrations that may adversely impact a substantial number of people have been analyzed above in Section 7.4 for both construction and operations, which found that these types of emissions would create less than significant impacts. As such, the following analysis is limited to odors that would have the potential to adversely affect a substantial number of people.

Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the project site and is typically presented as the mean (or 50 percent of the

population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of coatings such as asphalt pavement, paints and solvents and from emissions from diesel equipment. Standard construction requirements that limit the time of day when construction may occur as well as SCAQMD Rule 1108 that limits VOC content in asphalt and Rule 1113 that limits the VOC content in paints and solvents would minimize odor impacts from construction. As such, the objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. Through compliance with the applicable regulations that reduce odors and due to the transitory nature of construction odors, a less than significant odor impact would occur and no mitigation would be required.

Operations-Related Odor Impacts

The proposed project would consist of the development of two pocket parks. According to the SCAQMD, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The operation of the proposed project does not include any uses identified in the SCAQMD CEQA Handbook (SCAQMD, 1993) as being associated with odors. Therefore, a less than significant odor impact would occur and no mitigation would be required.

Level of Significance

Less than significant impact.

8.0 REFERENCES

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APPENDIX A

CalEEMod Model Daily Printouts

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Berkshire & Grevelia Pocket Parks

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.29	Acre	0.29	12,632.40	0
Other Non-Asphalt Surfaces	4.00	1000sqft	0.09	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total area of both Parks = 16,612 sq ft

Construction Phase - Construction schedule provided by applicant

Grading - Gevelia - 400 cy import. Berkshire - balanced

Construction Off-road Equipment Mitigation - Water Exposed Area 3 times per day selected to account for SCAQMD Rule 403 minimum requirements.

Water Mitigation - Use Water Efficient Irrigation Systems

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	1/10/2023	2/3/2023

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	12/27/2022	12/30/2022
tblConstructionPhase	PhaseEndDate	8/9/2022	8/12/2022
tblConstructionPhase	PhaseEndDate	1/3/2023	1/28/2023
tblConstructionPhase	PhaseEndDate	8/5/2022	7/22/2022
tblConstructionPhase	PhaseStartDate	1/4/2023	1/29/2023
tblConstructionPhase	PhaseStartDate	8/10/2022	8/13/2022
tblConstructionPhase	PhaseStartDate	8/6/2022	7/25/2022
tblConstructionPhase	PhaseStartDate	12/28/2022	1/2/2023
tblConstructionPhase	PhaseStartDate	8/5/2022	7/22/2022
tblGrading	MaterialImported	0.00	400.00

2.0 Emissions Summary

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1264	12.5847	7.4790	0.0170	5.4627	0.5220	5.9847	2.6087	0.4804	3.0891						
2023	0.6688	5.5448	7.6732	0.0131	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1264**	**12.5847**	**7.6732**	**0.0170**	**5.4627**	**0.5220**	**5.9847**	**2.6087**	**0.4804**	**3.0891**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1264	12.5847	7.4790	0.0170	2.2206	0.5220	2.7426	1.0416	0.4804	1.5220						
2023	0.6688	5.5448	7.6732	0.0131	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1264**	**12.5847**	**7.6732**	**0.0170**	**2.2206**	**0.5220**	**2.7426**	**1.0416**	**0.4804**	**1.5220**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	57.24	0.00	50.25	58.87	0.00	46.22	0.00	0.00	0.00	0.00	0.00	0.00

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.2200e-003**	**1.7900e-003**	**0.0182**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.2200e-003**	**1.7900e-003**	**0.0182**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/22/2022	7/22/2022	5	1	
2	Grading	Grading	7/25/2022	8/12/2022	5	15	
3	Building Construction	Building Construction	8/13/2022	12/30/2022	5	100	
4	Paving	Paving	1/2/2023	1/28/2023	5	20	
5	Architectural Coating	Architectural Coating	1/29/2023	2/3/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 11.25

Acres of Paving: 0.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 240 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.2068**	**0.2573**	**0.4641**	**0.0223**	**0.2367**	**0.2591**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3150	0.0000	5.3150	2.5690	0.0000	2.5690						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.3150**	**0.5173**	**5.8322**	**2.5690**	**0.4759**	**3.0449**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5598	0.1305	2.0700e-003	0.0584	4.1600e-003	0.0625	0.0160	3.9800e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0432**	**0.5800**	**0.4458**	**2.8900e-003**	**0.1478**	**4.7300e-003**	**0.1525**	**0.0397**	**4.5100e-003**	**0.0442**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0728	0.0000	2.0728	1.0019	0.0000	1.0019						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.0728**	**0.5173**	**2.5901**	**1.0019**	**0.4759**	**1.4778**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5598	0.1305	2.0700e-003	0.0584	4.1600e-003	0.0625	0.0160	3.9800e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0432**	**0.5800**	**0.4458**	**2.8900e-003**	**0.1478**	**4.7300e-003**	**0.1525**	**0.0397**	**4.5100e-003**	**0.0442**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8700e-003						
Worker	0.0242	0.0177	0.2759	7.2000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0301**	**0.1646**	**0.3263**	**1.3100e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8700e-003						
Worker	0.0242	0.0177	0.2759	7.2000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0301**	**0.1646**	**0.3263**	**1.3100e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.2000e-003	2.2300e-003	0.0362	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.2000e-003**	**2.2300e-003**	**0.0362**	**1.0000e-004**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.2000e-003	2.2300e-003	0.0362	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.2000e-003**	**2.2300e-003**	**0.0362**	**1.0000e-004**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Unmitigated	1.8100e-003	1.7900e-003	0.0177	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.23	0.57	0.64	960	960
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.23	0.57	0.64	960	960

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.0 Area Detail

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Berkshire & Grevelia Pocket Parks

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.29	Acre	0.29	12,632.40	0
Other Non-Asphalt Surfaces	4.00	1000sqft	0.09	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total area of both Parks = 16,612 sq ft

Construction Phase - Construction schedule provided by applicant

Grading - Gevelia - 400 cy import. Berkshire - balanced

Construction Off-road Equipment Mitigation - Water Exposed Area 3 times per day selected to account for SCAQMD Rule 403 minimum requirements.

Water Mitigation - Use Water Efficient Irrigation Systems

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	1/10/2023	2/3/2023

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	12/27/2022	12/30/2022
tblConstructionPhase	PhaseEndDate	8/9/2022	8/12/2022
tblConstructionPhase	PhaseEndDate	1/3/2023	1/28/2023
tblConstructionPhase	PhaseEndDate	8/5/2022	7/22/2022
tblConstructionPhase	PhaseStartDate	1/4/2023	1/29/2023
tblConstructionPhase	PhaseStartDate	8/10/2022	8/13/2022
tblConstructionPhase	PhaseStartDate	8/6/2022	7/25/2022
tblConstructionPhase	PhaseStartDate	12/28/2022	1/2/2023
tblConstructionPhase	PhaseStartDate	8/5/2022	7/22/2022
tblGrading	MaterialImported	0.00	400.00

2.0 Emissions Summary

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1280	12.6095	7.4581	0.0169	5.4627	0.5220	5.9847	2.6087	0.4804	3.0891						
2023	0.6731	5.5490	7.6205	0.0130	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1280**	**12.6095**	**7.6205**	**0.0169**	**5.4627**	**0.5220**	**5.9847**	**2.6087**	**0.4804**	**3.0891**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1280	12.6095	7.4581	0.0169	2.2206	0.5220	2.7426	1.0416	0.4804	1.5220						
2023	0.6731	5.5490	7.6205	0.0130	0.2012	0.2655	0.4667	0.0534	0.2477	0.3011						
Maximum	**1.1280**	**12.6095**	**7.6205**	**0.0169**	**2.2206**	**0.5220**	**2.7426**	**1.0416**	**0.4804**	**1.5220**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	57.24	0.00	50.25	58.87	0.00	46.22	0.00	0.00	0.00	0.00	0.00	0.00

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.1800e-003**	**1.9400e-003**	**0.0178**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Total	**4.1800e-003**	**1.9400e-003**	**0.0178**	**4.0000e-005**	**3.8500e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/22/2022	7/22/2022	5	1	
2	Grading	Grading	7/25/2022	8/12/2022	5	15	
3	Building Construction	Building Construction	8/13/2022	12/30/2022	5	100	
4	Paving	Paving	1/2/2023	1/28/2023	5	20	
5	Architectural Coating	Architectural Coating	1/29/2023	2/3/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 11.25

Acres of Paving: 0.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 240 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223						
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367						
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.2068**	**0.2573**	**0.4641**	**0.0223**	**0.2367**	**0.2591**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152						
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3150	0.0000	5.3150	2.5690	0.0000	2.5690						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.3150**	**0.5173**	**5.8322**	**2.5690**	**0.4759**	**3.0449**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0152	0.5826	0.1328	2.0700e-003	0.0584	4.1700e-003	0.0625	0.0160	3.9900e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0448**	**0.6049**	**0.4223**	**2.8400e-003**	**0.1478**	**4.7400e-003**	**0.1525**	**0.0397**	**4.5200e-003**	**0.0442**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0728	0.0000	2.0728	1.0019	0.0000	1.0019						
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759						
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.0728**	**0.5173**	**2.5901**	**1.0019**	**0.4759**	**1.4778**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0152	0.5826	0.1328	2.0700e-003	0.0584	4.1700e-003	0.0625	0.0160	3.9900e-003	0.0200						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242						
Total	**0.0448**	**0.6049**	**0.4223**	**2.8400e-003**	**0.1478**	**4.7400e-003**	**0.1525**	**0.0397**	**4.5200e-003**	**0.0442**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8800e-003						
Worker	0.0259	0.0195	0.2533	6.8000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0318**	**0.1726**	**0.3054**	**1.2700e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422						
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8800e-003						
Worker	0.0259	0.0195	0.2533	6.8000e-004	0.0782	5.0000e-004	0.0787	0.0208	4.6000e-004	0.0212						
Total	**0.0318**	**0.1726**	**0.3054**	**1.2700e-003**	**0.0975**	**1.9000e-003**	**0.0994**	**0.0263**	**1.8000e-003**	**0.0281**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545						
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.4400e-003	2.4700e-003	0.0333	9.0000e-005	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.4400e-003**	**2.4700e-003**	**0.0333**	**9.0000e-005**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

Berkshire & Grevelia Pocket Parks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2225					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**0.4141**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	3.4400e-003	2.4700e-003	0.0333	9.0000e-005	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003						
Total	**3.4400e-003**	**2.4700e-003**	**0.0333**	**9.0000e-005**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**6.0000e-005**	**3.0300e-003**						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						
Unmitigated	1.7700e-003	1.9400e-003	0.0174	4.0000e-005	3.8500e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.23	0.57	0.64	960	960
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.23	0.57	0.64	960	960

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	2.4100e-003	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.0000e-004					0.0000	0.0000		0.0000	0.0000						
Consumer Products	2.0700e-003					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Total	**2.4100e-003**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation