AGENDA

REGULAR JOINT MEETING OF THE OAKLEY CITY COUNCIL/OAKLEY CITY COUNCIL ACTING AS THE SUCCESSOR AGENCY TO THE OAKLEY REDEVELOPMENT AGENCY AND SPECIAL MEETING OF THE OAKLEY PUBLIC FINANCING AUTHORITY

Tuesday, October 22, 2019
6:30 PM
Oakley City Council Chambers, 3231 Main Street, Oakley, CA 94561

MISSION STATEMENT: The City of Oakley exists to build and enhance a quality community and to serve the public in a friendly, efficient, responsive manner.

VISION STATEMENT: The City of Oakley will be recognized as a model of civic participation and a vibrant Delta community where families live, work, play, shop and visit.

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A complete packet of information containing staff reports and exhibits related to each item is available for public review prior to an Oakley City Council and/or City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority meeting at Oakley City Hall, 3231 Main Street, Oakley, CA 94561. Any writings or documents provided to a majority of the Oakley City Council, Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency or Oakley Public Financing Authority regarding any item on this agenda will be made available for public inspection, during regular business hours, at the front counter in the Main Lobby of the Oakley City Hall located at 3231 Main Street, Oakley, CA 94561.

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If you have a physically challenging condition and require special accommodations, please call the City Clerk's office at (925) 625-7013.

Please keep cell phones/electronic devices turned off during the meeting. Please be advised that City Council meetings are video recorded and attendees may appear on video.

1. OPENING MATTERS

1.1 Call to Order and Roll Call of the Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency and Special Meeting of the Oakley Public Financing Authority

1.2 Pledge of Allegiance to the Flag (Fernando Flores, 3rd Grade Student at Ironhouse Elementary School)

1.3 Update Provided by Contra Costa Library Commission Appointee Yolanda Pena-Mendrek

1.4 Update Provided by Oakley Community Library Manager Andrea Freyler

2. PUBLIC COMMENTS

At this time, the public is permitted to address the Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority on non-agendized items. PUBLIC COMMENTS ARE LIMITED TO THREE (3) MINUTES. In accordance with State Law, however, no action or discussion may take place on any item not appearing on the posted agenda. The Oakley City Council/ Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority may respond to statements made or questions asked or may request Staff to report back at a future meeting on the matter. The exceptions under which the Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority MAY discuss and/or take action on items not appearing on the agenda are contained in Government Code §54954.2(b)(1)(2)(3). Members of the public should submit any Speaker Cards for Public Comments in advance of the Mayor calling for Public Comments.

3. CONSENT CALENDAR

Consent Calendar items are typically non-controversial in nature and are considered for approval by the Oakley City Council/ Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority with one single action. Members of the audience, Staff or the Oakley City Council/ Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority who would like an item removed from the Consent Calendar for

purposes of public input may request the Mayor remove the item. Members of the public should submit any Speaker Cards related to the Consent Calendar in advance of the Consent Calendar being considered.

3.1 Approve the Minutes of the Regular Joint Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Public Financing Authority Meeting held October 8, 2019 (Libby Vreonis, City Clerk)
Minutes 10-08-19

3.2 Waive the Second Reading and Adopt an Ordinance Regarding Text Amendments to Oakley Municipal Code Chapter 4.2 (Noise Control) Related to Excluding Residential Related Sites and Uses from Receiving Permits for Sound-Amplification Equipment (Ken Strelo, Principal Planner)
Ordinance

3.3 Waive the First Reading and Introduce an Ordinance Adopting Editorial Corrections in relation to Various Uniform Building Codes Which are Adopted by Reference (Derek Cole, City Attorney)
Staff Report
1. Proposed ordinance-redlined version

3.4 Acceptance of Work Associated with the Laurel Road Widening (Rose to Mellowood) Project - Capital Improvement Project Number 196 (Kevin Rohani P.E., Public Works Director/City Engineer)
Staff Report
1. Resolution
2. Notice of Completion

3.5 Award of Construction Contract to ANDERSON Striping & Construction, Inc. for the Fiscal Year 2019/20 Street Restriping Project Capital Improvement Project Number 234 (Kevin Rohani, P.E., Public Works Director/City Engineer)
Staff Report
1. Resolution

4. PUBLIC HEARINGS

4.1 Acacia - An application requesting approval of: 1) a General Plan Amendment (GPA 03-18) to amend the land use designation from Single-Family Residential, High Density (SH) to Multi-Family Residential, Low Density (ML); 2) a Rezone (RZ 07-18) from Single-Family Residential (R-6) to Planned Unit Development (P-1); 3) a Vesting Tentative Map (TM 04-18) to subdivide approximately 13.4 acres into 108 single-family residential lots within a gated community, as well as

one private street lot, twelve private drive lots, two water quality lots, and three landscape lots; and 4) a Design Review (DR 11-18) for the home designs, site landscaping, fence plans, and site design. The project site is located at 5360 Main Street (APN's: 033-030-001 and 033-030-027). (Joshua McMurray, Community Development Director)

Suggested Action: Staff recommendation: 1) Open the Public Hearing, 2) Receive the Staff Report, 3) Receive Questions from the City Council, 4) Receive Public Testimony, 5) Close the Public Hearing, 6) Deliberate, 7) Summarize the Deliberation, 8) Adopt the Mitigated Negative Declaration, 9) Adopt a Resolution approving the General Plan Amendment, 10) Waive the first reading and introduce an Ordinance approving the Rezone, and 11) Adopt a resolution approving the Vesting Tentative Map and Design Review.

Staff Report
1. Vicinity Map
2. Public Hearing Notice
3. Initial Study with Mitigated Negative Declaration
3a. Errata Sheet
4. Applicant's Plans
5. Citizen Planning Advisor Comments
6. Proposed General Plan Land Use Amendment Resolution
6a - Exhibit to General Plan Land Use Amendment Resolution
7. Proposed Rezone Ordinance
7a - Exhibit to Proposed Rezone Ordinance
8. Proposed Design Review Resolution

5. REGULAR CALENDAR

5.1 Waive the First Reading and Introduce an Ordinance Adding Section 2.1.009 to the Oakley Municipal Code Requiring Electronic Filing of Campaign Statements and Statements of Economic Interests (Libby Vreonis, City Clerk)

Staff Report
1. Proposed Ordinance

5.2 Fiscal Year 2019/20 First Quarter Report on the Capital Improvement Program (Kevin Rohani, P.E., Public Works Director/City Engineer)

Staff Report

5.3 Economic Development Update (Dwayne Dalman, Economic Development Director)

5.4 Amendment to Chapter 6.02 of the Oakley Municipal Code Related to Reimbursement for Adjustment to Public Utilities in Streets and Sidewalks (Derek Cole, City Attorney)

Staff Report
1. Ordinance

6. REPORTS

6.1 CITY MANAGER
(a) City Manager

6.2 OAKLEY CITY COUNCIL/OAKLEY CITY COUNCIL ACTING AS THE SUCCESSOR AGENCY TO THE OAKLEY REDEVELOPMENT AGENCY

(a) Reports from Council Liaisons to Regional Committees, Commissions and Boards AND Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency

(b) Requests for Future Agendas

7. WORK SESSION

7.1 General Plan Work Session-Environmental Justice and Climate Change (Joshua McMurray, Community Development Director)
Staff Report
1. White Paper - Environmental Justice
2. White Paper - Climate Adaptation

8. CLOSED SESSIONS

9. ADJOURN

Minutes of the Joint Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority Meeting held October 8, 2019

1. OPENING MATTERS

1.1 Call to Order and Roll Call of the Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency/Oakley Public Financing Authority

Vice Mayor Doug Hardcastle called the meeting to order in the Oakley City Council Chambers located at 3231 Main Street, Oakley, California at 6:30 p.m. In addition to Vice Mayor Hardcastle, Councilmembers Sue Higgins and Kevin Romick were present. Vice Mayor Hardcastle announced Mayor Claire Alaura was absent due to a family emergency and Councilmember Randy Pope was absent due to his police duty.

Vice Mayor Hardcastle made a public service announcement that PG&E has not informed the City that it will be subject to a power shut off and if the City is notified, it will be 48 hours in advance of the shut off in which the City will post information on its website, provide through its email distribution lists and also include on its message board at City Hall. He suggested residents prepare in advance for any emergency situation where they could be without food and water for 2-3 days regardless of a power shut off.

1.2 Pledge of Allegiance to the Flag (Girl Scout Troop #33784)

Members of Girl Scout Troop #33784 led the Pledge of Allegiance.
The City Council thanked them.

1.3 Swearing in of the Oakley Police Department Explorers (Libby Vreonis, City Clerk)

Chief of Police Eric Christensen provided information regarding the Explorer program. He introduced the Explorers and thanked Officer Casey Minister for managing the program and Gabriela Banos-Galvan, You, Me, We=Oakley! Program Coordinator, for her role in the program. Chief Christensen congratulated Explorers Juliette Sartain and Daniel Romero for their promotion to Sergeant Explorers. City Clerk Libby Vreonis administered the oath of office to the Explorers.

2. PUBLIC COMMENTS

None.

3. CONSENT CALENDAR

3.1 Approve the Minutes of the Regular Joint Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency and Special Meeting of the Public Financing Authority Meeting held September 24, 2019 (Libby Vreonis, City Clerk)

3.2 Award of Construction Contract to DC Electric Group, Inc. for the Installation of the Emergency Generator for the Civic Center Emergency Generator Project – Capital Improvement Project Number 228 (Kevin Rohani, P.E., Public Works Director/City Engineer)

3.3 Adopt a Resolution Authorizing the City Manager to Execute a Termination of the Deferred Improvement Agreement Concerning 2131 O'Hara Avenue (Derek Cole, City Attorney)

3.4 Appointment of Michael Syrett to the Contra Costa County Advisory Council on Aging (Libby Vreonis, City Clerk)

3.5 Notice of Vacancy of One Seat on the Oakley City Council and Approval of an Appointment Process to Fill the Vacancy for the Remainder of the Term which shall expire in November of 2020 (Libby Vreonis, City Clerk)

3.6 Text Amendments to Oakley Municipal Code Chapter 4.2 (Noise Control) Related to Excluding Residential Related Sites and Uses from Receiving Permits for Sound-Amplification Equipment (Ken Strelo, Principal Planner)

Vice Mayor Hardcastle pulled item 3.5 from the Consent Calendar.

It was moved by Councilmember Romick and seconded by Councilmember Higgins to approve the remainder of the Consent Calendar. Motion was unanimous and so ordered. (3-0)

Item 3.5
Vice Mayor Hardcastle announced he received a public comment from George Fuller regarding item 3.5.

Mr. Fuller commented that in 2013, the City made a loan in the amount of $935k to a private developer and he believes its first increment was provided to the developer in the amount of $343k, then four years later the City determined the funds were embezzled and a warrant was made for the developer's arrest. He also commented the City is spending money to construct a parking lot for the private developer of the medical building on Main Street of which project seems to be a bouncing ball, and the City provided a $74k loan to a private developer for a business at 4th and Main Streets. He inquired how the City can say that a minimum $44k is too costly to hold an election to fill the vacancy seat and approve an appointment process when constituents are seeking a vote. He shared that in his opinion, an appointment of 1 day is too many and a year is a lifetime. He requested the City Council vote no on item 3.5.

Councilmember Higgins commented that initially she was in favor of an election process for transparency; however, she considered the candidate may have to run for the seat twice within approximately 1.5 years because he or she would run in March and then possibly again in November for the next four-year term which is a lot of burden to place upon someone. She explained an election could be closer to $100k and the City is very frugal with money. She also explained that she has been elected for a reason which includes the decision who to appoint.

Councilmember Romick commented that loans have been made and money spent on specific items that cannot be spent on elections because they are designated for other purposes. He mentioned it is financially difficult to campaign and the candidate would potentially engage in two campaigns which could be burdensome.

It was moved by Councilmember Higgins and seconded by Councilmember Romick to approve item 3.5. Motion was unanimous and so ordered. (3-0)

4. PUBLIC HEARINGS

4.1 Twin Oaks Senior Residence Mixed-Use Project (CUP 02-19, DR 07-19, and DBA 01-19) – Request for approval of a Conditional Use Permit, Design Review, and Density Bonus Housing Agreement to construct a mixed-use project including 130 affordable senior apartment units and 5,667 sq. ft. of commercial space located at 2605 Main Street (Ken Strelo, Principal Planner)

Vice Mayor Hardcastle opened the public hearing.

Principal Planner Ken Strelo presented the staff report including changes outlined by staff.

Moe Mohanna, Principal and Owner of M.H. Development Company, provided a presentation regarding the project and explained the rent structure and its regulation by agencies.

Ernie Vasquez, Partner and CEO of SVA Architects, provided information regarding the project design.

Councilmember Higgins inquired if fire escapes will be provided for the third floor of the building and how people who may be immobile would evacuate during an emergency situation.

Mr. Vasquez responded that there is a waiting space near the elevator and the fire department would assist with evacuations.

Councilmember Romick commented that he understands the percentages in which rents are calculated. He inquired who sets the rents.

Mr. Mohanna explained the U.S. Department of Housing and Urban Development (HUD) sets the rents.

Councilmember Romick commented that if residents have concerns regarding rents for this housing, they would not come to the City to address the concerns because HUD sets the rents.

Mr. Mohanna confirmed the City if not the agency to address the rents. He explained that HUD publishes rents and over time there could be rent increases and operating expense increases, but notice will first be published and provided to tenants. He explained that community facilities district charges are significant in Oakley and therefore it is likely that rent increases will be necessary to cover costs. He also explained that rents are dictated by HUD and what the market maintains, but are not under City control.

Councilmember Higgins inquired if pets will be allowed.

Mr. Mohanna responded that small pets will be allowed and a small park area will be located in the back of the project site for pet use.

Vice Mayor Hardcastle commented that it seems like a well-regulated business. He inquired if the management company could implement a rent increase if it wanted to; i.e., by $500/month.

Mr. Mohanna explained the project will be over regulated by the State, the lender, the investors and their company (through its asset management company and third party auditors) and there is no freedom to charge whatever they want. He added the financial penalties for doing so are significant.

Vice Mayor Hardcastle inquired how many people can occupy a unit.

Mr. Mohanna responded that the maximum occupancy per unit is 2 people for a senior community, regardless of the size of the unit.

Vice Mayor Hardcastle commented that affordable and low-income housing are often confused.

Mr. Mohanna explained that the tax credit program is called the “low-income tax credit program” as termed by Congress for 50% rents that range from $1100-$1300 which is not low-income, but affordable. He opined that Congress created the term “low-income” to help the program sell better. He added that a market study was conducted for this site and it showed the demand is 1,110 units; however, they can only provide 130 units; therefore, he anticipates a much greater demand than supply.

Vice Mayor Hardcastle called for public comments.

Diane Spurrier commented she is a resident at Summer Creek Place in Oakley and more low-income, affordable housing units are needed as residents at Summer Creek Place are being forced out due to rent increases while corporate is receiving the tax breaks and incentives. She expressed she does not believe HUD rates are being used because of the significant increases recently implemented. She explained with the majority of homeless people now being seniors, Oakley needs fixed-income housing, not affordable housing because it is not affordable for someone on a fixed income.

Vice Mayor Hardcastle commented the developer would have to have their own money rather than government loans to build it to make it affordable for people with low or no income.

Councilmember Romick inquired if staff has set up contact information available for anyone needing to address rent increases.

City Manager Bryan Montgomery responded that he has spoken with Ms. Spurrier many times and she has been meeting with housing representatives.

Vice Mayor Hardcastle commented that the City does not set rents.

Ms. Spurrier commented that the City can reach out to other agencies.

Vice Mayor Hardcastle commented that was addressed at the last meeting.

Ms. Spurrier responded that no one from the City showed up to their meeting, but Dawn Morrow from Supervisor Diane Burgis’ office attended the meeting and

wondered why the issue was not addressed earlier in which a resident provided her a letter that was written a year ago.

Vice Mayor Hardcastle suggested Ms. Spurrier could also contact Assemblymember Jim Frazier. He thanked her for her input.

Two online comments were received. Mike Stewart and Charles Daggett both expressed support for the project.

The public hearing was closed.

It was moved by Councilmember Romick and seconded by Councilmember Higgins to approve item 4.1 with changes as outlined by staff. Motion was unanimous and so ordered. (3-0)

5. REGULAR CALENDAR

5.1 Resolution of Support for the Contra Costa Transportation Authority's (Authority) proposed Draft Transportation Expenditure Plan (TEP) (Bryan Montgomery, City Manager)

Deputy Executive Director Tim Hale with the Contra Costa Transportation Authority (CCTA) presented the CCTA 2020 Transportation Expenditure Plan.

Councilmember Higgins inquired if CCTA is asking every City for support and if financial support is being requested.

Mr. Hale responded that CCTA will place the measure on the ballot and therefore will be financially responsible, but it needs the support of the majority of cities with majority population for the county-wide measure.

Councilmember Higgins inquired if Oakley is CCTA's first ask.

Mr. Hale responded that Oakley is not CCTA's first ask; they are approximately ½ way through presentations with the cities.

Councilmember Romick commented he is on the CCTA Board and thanked Mr. Hale for doing a great job presenting the information. He explained the cities' support helps to place the measure on the ballot.

Vice Mayor Hardcastle commented that he likes the plan and inquired how the money will be kept from the State.

Mr. Hale explained the ballot measure is for a local tax and the State cannot take the money generated by the tax.

Councilmember Higgins inquired what type of tax is being proposed.

Mr. Hale responded a local sales tax is being proposed.

Vice Mayor Hardcastle thanked Mr. Hale for his presentation and called for public comments.

Antonio Acevedo, Field Representative for Local 152 Carpenter's Union, expressed support for the ballot measure.

Mark Fuchs, Executive Director of the Carpenters Training Committee for Northern California, expressed support for the ballot measure with approval of a joint apprenticeship program.

It was moved by Councilmember Romick and seconded by Councilmember Higgins to approve item 5.1. Motion was unanimous and so ordered. (3-0)

6. REPORTS

6.1 CITY MANAGER
(a) City Manager

None.

6.2 OAKLEY CITY COUNCIL/OAKLEY CITY COUNCIL ACTING AS THE SUCCESSOR AGENCY TO THE OAKLEY REDEVELOPMENT AGENCY

(a) Reports from Council Liaisons to Regional Committees, Commissions and Boards AND Oakley City Council/Oakley City Council Acting as the Successor Agency to the Oakley Redevelopment Agency

Councilmember Romick reported he attended a Reclamation District 2137 meeting today in charge of the Dutch Slough Tidal Restoration Project and the heavy equipment located near the project is not being used for building houses but rather to restore marsh land; the equipment should be removed toward end of November. He explained Marsh Creek is being rerouted through a channel. He explained the project involves a unique process of creating marsh land out of sand and beginning this month, wood habitat structures will be installed for turtles, followed by tulie planting November through February. He mentioned that 175 acres on the Burroughs property will be for mitigation of the swainson hawk. He also reported he attended a

kayak tour of Big Break last week and applied what he learned to the restoration project. He expressed that he hopes the two areas can connect eventually to provide a unique destination of 3,000 acres of open space along the Delta.

Councilmember Higgins reported she attended the first Joint Park Use meeting with the schools which was held the same time as the community meeting with the Summer Creek Place residents which was the reason she could not attend the latter. She shared that the joint use areas were reviewed during the meeting including use and condition and another meeting will be held to further discuss the sites. She mentioned the school district has hired two additional staff members to handle maintenance. She also reported she attended Stand Down on the Delta for four mornings, the Mayors' Conference in which the CCTA 2020 Transportation Expenditure Plan was discussed, and she began the CERT program.

Vice Mayor Hardcastle reported he attended the Friday Night Bites and concert which was well attended. He also reported he attended the kayak tour of Big Break and East Bay Parks offers the tour if anyone is interested. He mentioned Tri-Delta Transit is getting ready to build a parking lot in Oakley for a park and ride. He asked staff to confirm how many parking spaces will be provided.

City Manager Bryan Montgomery responded the lot will provide over 100 parking spaces.

(b) Requests for Future Agendas

None.

7. WORK SESSIONS

None.

8. CLOSED SESSION

None.

9. ADJOURN

There being no further business, the meeting was adjourned at 8:07 p.m.

Respectively Submitted,

Libby Vreonis
City Clerk

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF OAKLEY ADOPTING TEXT AMENDMENTS TO OAKLEY MUNICIPAL CODE CHAPTER 4.2 (NOISE CONTROL) RELATED TO EXCLUDING RESIDENTIAL RELATED SITES AND USES FROM RECEIVING PERMITS FOR SOUND-AMPLIFICATION EQUIPMENT

The City Council of the City of Oakley does ordain as follows:

SECTION 1. Section 4.2.201 of the Oakley Municipal Code, titled "Findings," is hereby amended as follows:

"4.2.102 Findings.

The City Council finds that the making, creation, or maintenance of loud, unnecessary, unnatural, unusual, or habitual noise that are prolonged, unusual, and unnatural in their time, place, and use affect and are a detriment to the public health, comfort, safety, welfare, and prosperity of the residents of the City. The provisions of this section are enacted for the purpose of securing and promoting the public health, comfort, safety, welfare, and prosperity and the peace and quiet of the City and its inhabitants."

SECTION 2. Subsection "c" of Section 4.2.210 of the Oakley Municipal Code, titled "Exception Permits; Permit for Sound-Amplification Equipment." is hereby amended in its entirety as follows:

"c. Permit for Sound-Amplification Equipment. The City Manager may grant a permit to allow sound-amplification equipment, subject to reasonable restrictions regarding time, place and manner of use for the safety and convenience of the public, so long as the request for exception is not related to any social gathering or event located on a residential site or in conjunction with a residential use, or within a residential zoning district, as defined by chapter 9.1, or within a P-1 District approved for residential uses. Permits for existing non-residential uses legally established within a residential zoning district or within a P-1 District approved for residential uses may be considered. The applicant shall submit an application containing the following information:

1) The name, address and telephone number of both the owner and user of the sound-amplifying equipment;

2) The maximum wattage to be used, and the approximate distance for which sound will be audible from the sound-amplifying equipment;

3) The license number, if a sound truck is to be used;

4) A general description of the sound-amplifying equipment which is to be used;

5) Which measures will be implemented to reduce noise to neighbors;

6) Where the equipment will be used; and

7) During which day(s) and hour(s) the equipment will be used.

If the application is denied, the City Manager shall advise the applicant in writing of the reasons for denial."

SECTION 6. California Environmental Quality Act (CEQA).

This project is exempt from environmental analysis under the requirements of the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines section 15061(b)(3), because it can be seen with certainty that the proposed amendments will not have a significant effect on the environment.

SECTION 7. Effective Date and Posting.

This ordinance shall take effect and be in force thirty (30) days from and after the date of its passage. The City Clerk shall cause the ordinance to be published within fifteen (15) days after its passage in a newspaper of general circulation, or by publishing a summary of the proposed ordinance, posting a certified copy of the proposed ordinance in the City Clerk's Office at least five (5) days prior to the City Council meeting at which the ordinance is to be adopted, and within fifteen (15) days after its adoption, publishing a summary of the ordinance with the names of the Council Members voting for and against the ordinance.

The foregoing ordinance was adopted with the reading waived at a regular meeting of the Oakley City Council on _____, 2019 by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

APPROVED:

_____

Claire Alaura, Mayor Date

ATTEST:

_____

Libby Vreonis, City Clerk Date

OAKLEY
CALIFORNIA

STAFF REPORT

DATE: October 22, 2019

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Derek P. Cole, City Attorney

Cc: Louis Kidwell, Building Official

SUBJECT: Ordinance Adopting Editorial Corrections in relation to the 2019 Various Uniform Building Codes Which are Adopted by Reference

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Background and Analysis

Every three years, the various Uniform Building Codes (Building, Electrical, Plumbing, etc.) are updated by the California Building Standards Commission. These codes then become the uniform codes within the various cities and counties throughout California. Local governments are allowed to make amendments only when justified by some unique local factor.

The attached proposed ordinance provides the most recent California standards for 2019. There have been no substantive changes to the Uniform Building Codes since the last California update; therefore, the proposed ordinance provides only editorial corrections and would automatically adopt the 2019 California standards by reference for the next three years.

It should be noted that because ordinances addressing various State codes are often technical in nature and can become quite voluminous and labor-intensive to retype many unchanged provisions, the last ordinance adopted in 2016 included a provision that new versions of the uniform codes are incorporated as they are adopted by the State. The provision was included to make future updates to ordinances much simpler, or perhaps unnecessary, as the new codes are adopted by reference as they are promulgated.

Fiscal Impact

None.

Staff Recommendation

Staff recommends the City Council waive the first reading and introduce the ordinance.

Attachment

1. Proposed Ordinance with redlined editorial corrections

ORDINANACE NO.___-19

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF OAKLEY PROVIDING EDITORIAL REVISIONS TO TITLE 7 OF THE OAKLEY MUNICIPAL CODE, DEALING WITH BUILDING AND HOUSING REGULATIONS

The City Council of the City of Oakley does ordain as follows:

Section 1. Chapter 1 of Title 7 of the Oakley Municipal Code is hereby amended to read as follows:

CHAPTER 1 CODE ADOPTIONS

7.1.102 Adoption by reference.

The following publications, 2019 Edition, including the specified appendices thereto, are hereby adopted by reference and incorporated into this code as they are adopted, published and promulgated from time to time by the International Code Council, and as adopted by the California Building Standards Commission in the California Code of Regulations:

a. The California Building Code, Volumes 1 and 2, including Appendix Chapters: C – Group U Agricultural Buildings, H – Signs, I – Patio Covers.

b. The California Residential Code, including Appendix Chapters: G – Swimming Pools, Spas and Hot Tubs, and H – Patio Covers.

c. The California Electrical Code, incorporating the National Electrical Code.

d. The California Mechanical Code, incorporating the Uniform Mechanical Code, excluding Appendix Chapters.

e. The California Plumbing Code, incorporating the Uniform Plumbing Code.

f. The California Energy Code, including Appendix Chapter 1-A – Standards and Documents Referenced in the Energy Efficiency Regulations.

g. The California Historical Building Code, including Appendix Chapter A.

h. The California Existing Building Code.

i. The California Green Building Code.

j. The California Reference Standards.

k. The International Property Maintenance Code, including Appendix A – Boarding Standard.

l. The California Fire Code, as amended to adopt ~~the~~ local amendments and appendices to the 2019~~96~~ California Fire Code ~~contained in~~as adopted by East Contra Costa Fire Protection District ~~Ordinance No. 2017-02~~, ~~one~~ a copy of which shall be~~is~~ kept in the office of the Building Official~~,~~ and ~~are adopted and~~ referred to and by this reference, expressly incorporated and made part of this chapter as though fully set forth herein, subject to additional amendments set forth in this chapter.

CHAPTER 2
AMENDMENTS TO CODES

7.2.102 Amendments to the California Building Code.

The California Building Code ("CBC"), Volumes 1 and 2, are amended by the changes, additions and deletions set forth in this Chapter.

a. CBC Volume 1, Chapter 1 – Scope and Administration, Division II – Administration, is amended as follows:

1) Section 101.1, Title, is amended to read as follows:

Section 101.1 Title. These regulations shall be known as the Building Code of the City of Oakley hereinafter referred to as "this Code".

2) Section 101.4.3, Plumbing, is amended in its entirety to read as follows:

Section 101.4.3 Plumbing. The provisions of the California Plumbing Code (CPC) shall apply to the installation, alteration, repair, and replacement of plumbing systems, including equipment, appliance, fixtures, fittings and appurtenances, and where connection to a water or sewage system and all aspects of a medical gas system.

3) Section 105, Permits, is amended to include subsection 105.2(14), Residential decks, to read as follows:

Section 105.2(14). Residential decks. Decks for Group R-3 occupancies and Group U occupancies accessory to R-3 occupancies, not exceeding 200 square feet (18.58m) in area, that are not more than 30 inches (762 mm) above grade at any point, are not attached to a dwelling and do not serve the exit door required by California Residential Code (CRC) section R311.4~~1~~ – Egress door.

4) Section 105.5, Permits, is amended to read as follows:

Section 105.5. Expiration. Every permit issued by the building official under the provisions of this code shall expire by limitation and become null and void if the building, structure, equipment or work authorized by

such permit is not commenced within ~~180~~ 365 days from the date of such permit, or if the building, structure, equipment or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be recommenced, a new permit shall be first obtained to do so, and the fee therefore shall be one-half the amount required for a new permit for such work as set forth in the current fee schedule as adopted by the Council, provided no changes have been made or will be made to the original plans or specifications for such work, and provided further that such suspension or abandonment has not exceeded one year.

Any permittee holding an unexpired permit may apply for an extension of the time within which work may commence under that permit when the permittee is unable to commence work within the time frame required by this section for good and satisfactory reasons. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing with justifiable cause demonstrated and accompanied by an extension request review fee, as required by the current fee schedule as adopted by the Council.

5) Section 109.2, Schedule of permit fees, is amended in its entirety to read as follows:

Section 109.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the current fee schedule as adopted by the Council.

The Council is hereby authorized to set and amend all fees prescribed by this Code. Said fees may be adjusted periodically by the Council to ensure the full recovery of City costs relating to building permits and inspections.

Permit fees and any required plan checks are based upon the value of the project. Electrical, plumbing and mechanical fees are based on a percentage of the building permit fee. The determination of value or valuation shall be made by the Chief Building Official. The Chief Building Official shall maintain the current fee schedule, and shall make it available for public review upon request.

6) Section 109.4, Work commencing before permit issuance, is amended to include subsection 109.4.1, Investigation, investigation fees, work without a permit:

Section 109.4.1 Investigation, investigation fees, and work without a permit. Whenever any work for which a permit is required

by this code has been commenced without first obtaining said permit, an investigation shall be made before a permit may be issued for such work. An investigation fee shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code. The minimum investigation fee shall be the same as the minimum fee set forth in the current fee schedule as adopted by the Council. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

7) Section 109.6, Refunds, is amended in its entirety to read as follows:

Section 109.6 Refunds. The Building Official may authorize the refunding of not more than 80% of the permit fees paid when no work has commenced under a permit in accordance with this code or when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.

8) Section 109, Fees, is amended to include Section 109.7, Re-inspections, and Section 109.8, Plan review fees:

Section 109.7 Re-inspections. A re-inspection fee may be assessed for each inspection or re-inspection when such portion of work for which inspection is scheduled and is not complete or when corrections called for previously are not complete.

This section is not to be interpreted as requiring re-inspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or re-inspection.

To obtain a re-inspection, the applicant shall call and schedule a re-inspection and pay the re-inspection fee set forth in the current fee schedule as adopted by the Council.

In instances where re-inspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

Section 109.8 Plan review fees. When submittal documents are required, a plan review fee shall be paid at the time of submittal for plan review. Said plan review fee shall be a percent of the building permit fee as shown in the current fee schedule as adopted by the Council.

The plan review fees specified in this section are separate fees from the permit fees specified in the current fee schedule as adopted by the Council and are in addition to the permit fees.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items as defined in Section 107.3.4.1 – Deferred submittals, an additional plan review fee shall be charged at the rate shown in the current fee schedule as adopted by the Council.

9) Section 113, Board of appeals, is amended for existing Section 113.1, General:

Section 113.1 General. Any appeals of City determinations under this chapter shall occur as specified in Title 1 Chapter 8 of this code.

7.2.104 Amendments to the California Residential Code.

The California Residential Code ("CRC") is amended by the changes, additions and deletions set forth in this chapter.

a. CRC Part 1, Administrative, Chapter 1, Scope and Application, Division II, Administration, is amended as follows:

1) Section R100, General, subsection R101.1, Title, is amended in its entirety to read as follows:

Section R101.1-Title. These provisions shall be known as the Residential Code for One- and Two-family Dwellings of the City of Oakley, and shall be cited as such and will be referred to herein as "this code."

2) Section R102, Applicability, subsection R102.4.1, Conflicts, is amended in its entirety to read as follows:

Section R102.4.1-Conflicts. When conflicts occur between the administrative provisions of this code and the adopted provisions of CBC Chapter 1-Scope and Administration, Division II-Administration, the provisions which have greater specificity shall apply.

Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

7.2.106 Amendments to the California Electrical Code.

The California Electrical Code ("CEC") is amended as follows: Administrative provisions, as amended and adopted by the City of Oakley, prescribed in the

Building Code of the City of Oakley, shall be used for the administration of this code.

7.2.108 Amendments to the California Mechanical Code.

The California Mechanical Code ("CMC") is amended by the changes, additions, and deletions set forth in this chapter.

a. CMC Chapter 1, Administration, Division II, Administration, Part 1, General, is amended as follows:

1) Section 102 Title, Applicability, subsection 102.1, Conflicts between codes, is amended in its entirety to read as follows:

Section 201.1~~2~~ Conflicts Between Codes. Where, in a specific case, different sections of this code or referenced standards specify different materials, methods of construction, or other requirements, the most restrictive shall govern as determined by the authority having jurisdiction. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall prevail

When conflicts occur between the administrative provisions of this code and the adopted provisions of CBC Chapter 1 – Scope and Administration, Division II – Administration, the provisions which have greater specificity shall apply.

Where conflicts occur between the provisions of this code and referenced codes and standards, the provisions of this code shall apply.

b. CMC Chapter 1, Administration, Division II, Administration, Part III, Permits and Inspections, is amended as follows:

1) Section 104, Fees, subsection 104.3.2, Plan Review Fees, and subsection 104.5, Permit Fees, is amended in its entirety to read as follows:

Section 104.3.2. Plan Review Fees. Where plans or other data are required to be submitted in accordance with section 112.2 – Plans and Specifications, a plan review fee shall be paid at the time of submitting plans and specifications for review. The plan review fees for mechanical work shall be in accordance with the most current fee schedule as adopted by the Council.

Section 104.5 – Permit Fees. The fee for each permit shall be as set forth in the most current fee schedule as adopted by the Council.

7.2.110 Amendments to the California Plumbing Code.

The California Plumbing Code ("CPC") is amended by the changes, additions, and deletions set forth in this Chapter.

a. CPC Chapter 1, Administration, Division II, Administration, is amended by addingas ~~follows~~the following:

1) Section 102, Applicability, subsection 102.4.1, Conflicts between codes, is amended ~~in its entirety to read as follows~~by adding the following:

Section 102.4.1 Conflicts between codes. Where the requirements within the jurisdiction of this plumbing code conflict with the requirements of the mechanical code, this code shall prevail. In instances where the code, applicable standards, or the manufacturer's installation instructions conflict, the more stringent provisions shall prevail. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall prevail.

When conflicts occur between the administrative provisions of this code and the adopted provisions of CBC Chapter 1 – Scope and Administration, Division II – Administration, the provisions which have greater specificity shall apply.

When conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

2) Section 104, Permits and Inspections, subsection 104.3.2, Plan Review Fees, and subsection 104.5, Fees, is amended in its entirety to read as follows:

Section 104.3.2 Plan Review Fees. Where plans or other data are required to be submitted by either section 104.3.1 – Construction Documents, a plan review fee shall be paid at the time of submitting plans and specifications for review. The plan review fees for plumbing work shall be in accordance with the most current fee schedule as adopted by the Council.

Section 104.5 Fees. The fee for each permit shall be as set forth in the most current fee schedule as adopted by the Council.

7.2.112 Amendments to the International Property Maintenance Code.

The International Property Maintenance Code ("IPMC") is amended by the changes, additions and deletions set forth in this chapter.

a. IPMC Chapter 1, Scope and Administration, Part 1, Scope and Application, is amended as follows:

1) Section 101, General is amended to read as follows:

Section 101 General. These regulations shall be known as the Property Maintenance Code of the City of Oakley, hereinafter referred to as "this code."

2) Section 102.3, Application of other codes, is amended to read as follows:

Section 102.3 Application of other codes. Repairs, additions or alterations to a structure, or changes of occupancy, shall be done in accordance with the procedures and provisions of the effective California Existing Building Code, California Building Code, California Residential Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code and the California Reference Standards.

b. IPMC Chapter 1, Scope and Administration, Part 2, Administration and Enforcement, is amended as follows:

1) Section 103.1, General, is amended to read as follows:

Section 103.1 General. The Authority for the enforcement of this code shall rest with the City Manager

2) Section 103.2, Appointment, is amended to read as follows:

Section 103.2 Appointment. The code official referenced in this Code shall be a building official hired, appointed or retained in accordance with the Oakley Municipal Code.

3) Section 103.5, Fees, is amended to read as follows:

Section 103.5 Fees. The fees for activities and services performed by the department in carrying out its responsibilities under this code shall be as indicated in the most current fee schedule as adopted by the Council.

4) Section 106.3, Prosecution of violations, is amended to read as follows:

Section 106.3 Prosecution of violations. Any person failing to comply with a notice of violation or order served in accordance with section 107-Notices and orders shall be deemed guilty of a misdemeanor in accordance with Oakley Municipal Code Title 1, Chapter 5.

5) Section 111, Means of appeal, is amended to read as follows:

General. Any appeals of City determinations under this chapter shall occur as specified in Title 1 Chapter 8 of this code

Section 113.4.3 Extension of time to perform work. Upon receipt of an application from the person required to conform to the order and by agreement of such person to comply with the order if allowed additional time, not to exceed an additional 120 days, within which to complete said repair, rehabilitation or demolition, if the code official determines that such an extension of time will not create or perpetuate a situation imminently dangerous

to life or property. The code official's authority to extend time is limited to the physical repair, rehabilitation or demolition of the premises and will not in any way affect the time to appeal the notice and order.

Section 113.4.4 Summary abatement.

(a) If a declared dangerous structure or public nuisance is not completely abated by the owner of the property within the time prescribed, the Chief Building Official or authorized agent may request from the Council the authority and funding to cause the dangerous structure or declared public nuisance to be abated by county personnel or private contract. In furtherance of this section, the Chief Building Official or designee is expressly authorized to enter upon the premises for the purpose of abating the dangerous structure or declared public nuisance.

(b) Where required by state or federal law, a warrant shall be obtained prior to entry onto the premises for the purpose of abating the nuisance, unless written consent to enter is received from the owner or occupant of the premises or warrantless entry is otherwise permissible under state or federal law. Where a warrant is required, notice shall be given to the owner or occupant of the issuance of the warrant 24 hours prior to the entry, unless the warrant provides otherwise.

Section 113.4.5 Cost of abatement. The Chief Building Official or his designee shall keep an accounting of the costs and expenses of abating such dangerous structure or declared public nuisance, and shall render a statement of such costs to the person or persons receiving the notice and order.

(a) Such person or persons receiving the notice and order shall be liable to the City for any and all costs and expenses to the City involved in abating the dangerous structure or declared public nuisance.

(b) Costs and expenses as referred to in this section shall include but are not limited to, any and all direct costs related to personnel salaries

and benefits, operational overhead, fees for experts, consultants or contractors, legal costs or expenses including attorney fees, claims against the county arising as a consequence of the dangerous structure or declared public nuisance and procedures associated with collecting moneys due hereunder.

Section 113.4.6 Assessment of Costs-Lien against property. The total cost of abating a dangerous structure or declared public nuisance shall constitute a special assessment against the premises to which it relates, and upon recordation in the office of the County Recorder of a notice of lien, shall constitute a lien on the property for the amount of such assessment.

(a) After such recordation, a copy of the lien may be turned over to the County Auditor, who shall then enter the amount of the lien on the assessment rolls as a special assessment. Thereafter, said amount shall be collected at the same time and in the same manner as ordinary municipal taxes are collected, and shall be subject to the same penalties and the same procedure under foreclosure and sale in case of delinquency as provided for ordinary municipal taxes.

(b) After such recordation, such lien may be foreclosed by judicial or other sale in the manner and means provided by law.

Section 113.4.7 Alternative enforcement. Nothing in this chapter shall be deemed to prevent the City Attorney from commencing with any other available civil or criminal proceedings to abate a dangerous structure or declared public nuisance under applicable provision of state law as an alternative to the proceedings set forth in this chapter.

6) Section 202, General Definitions, is amended to include the following definitions to be incorporated in alphabetical order:

PUBLIC NUISANCE. Shall mean anything which;

(a) is injurious to health or is indecent or offensive to the senses or any obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; and

(b) affects at the same time an entire community or neighborhood or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

"Public nuisance" shall include, but not be limited to the following;

(c) any attractive nuisance which may prove detrimental to children, whether in a building, on the premises of a building, or upon an unoccupied lot. This includes any abandoned wells or shafts;

(d) whatever is dangerous to human life or is detrimental to health and safety as determined by the code official; and

(e) inadequate or unsanitary sewage or plumbing facilities.

7) Section 302, Exterior property areas, subsections 302.4, Weeds, and 304.14, Insect screens, are amended as follows:

Section 302.4-Weeds Insert 6 inches.

Section 304.14 Insect screens. Every door, window and other outside opening required for ventilation of habitable rooms, food preparation areas, food service areas or any areas where products to be included or utilized in food for human consumption are processed, manufactured, packaged or stored shall be supplied with approved tightly fitting screens of minimum 16 mesh per inch (16 mesh per 25mm), and every screen door used for insect control shall have a self-closing device in good working condition.

Exception: Screens shall not be required where other approved means, such as air curtains or insect repellent fans, are employed.

8) Section 602, Heating facilities, is amended to repeal the exception listed for Section 602.2, Residential occupancies, Section 602.3, Heat supply, and Section 602.4, Occupiable work spaces.

7.2.114 Violations: Penalties.

Any person violating the provisions of this chapter shall be deemed guilty of a misdemeanor or infraction as charged by the prosecuting attorney and shall be punishable as set forth in City of Oakley Municipal Code.

7.2.116 Amendments to the California Building Code Dealing with Small Residential Rooftop Solar Systems.

a. The following words and phrases as used in this section are defined as follows:

"Electronic submittal" means the utilization of one or more of the following:

1) Email,

2) The Internet,

3) Facsimile.

"Small residential rooftop solar energy system" means all of the following:

1) A solar energy system that is no larger than ten (10) kilowatts alternating current nameplate rating or thirty (30) kilowatts thermal.

2) A solar energy system that conforms to all applicable State fire, structural, electrical, and other building codes as adopted or amended by the City and paragraph (iii) of subdivision (c) of Section 714 of the Civil Code, as such section or subdivision may be amended, renumbered, or redesignated from time to time.

3) A solar energy system that is installed on a single- or duplex family dwelling.

4) A solar panel or module array that does not exceed the maximum legal building height as defined by the authority having jurisdiction.

"Solar energy system" has the same meaning set forth in paragraphs (1) and (2) of subdivision (a) of Section 801.5 of the Civil Code, as such section or subdivision may be amended, renumbered, or redesignated from time to time.

b. Section 65850.5 of the California Government Code provides that in developing an expedited permitting process, the City, County, or City and County shall adopt a checklist of all requirements with which small rooftop solar energy systems shall comply to be eligible for expedited review. The Building Official is hereby authorized and directed to develop and adopt such checklist.

c. The checklist shall be published on the City's Internet website. The applicant may submit the permit application and associated documentation to the City's building division by personal, mailed, or electronic submittal together with any required permit processing and inspection fees. In the case of electronic submittal, the electronic signature of the applicant on all forms, applications and other documentation may be used in lieu of a wet signature.

d. Prior to submitting an application, the applicant shall:

1) Verify to the applicant's reasonable satisfaction through the use of standard engineering evaluation techniques that the support structure for the small residential rooftop solar energy system is stable and adequate to transfer all wind, seismic, and dead and live loads associated with the system to the building foundation; and

2) At the applicant's cost, verify to the applicant's reasonable satisfaction using standard electrical inspection techniques that the existing electrical system including existing line, load, ground and bonding wiring as well as main panel and subpanel sizes are adequately sized, based on the existing electrical system's current use, to carry all new photovoltaic electrical loads.

e. For a small residential rooftop solar energy system eligible for expedited review, only one inspection shall be required, which shall be done in a timely

manner and may include a consolidated inspection by the Building Official and Fire Chief. If the system fails inspection, a subsequent inspection is authorized.

f. An application that satisfies the information requirements in the checklist, as determined by the Building Official, shall be deemed complete. Upon receipt of an incomplete application, the Building Official shall issue a written correction notice detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance. The determination of incompleteness may be appealed to the City Council.

g. Upon confirmation by the Building Official of the application and supporting documentation being complete and meeting the requirements of the checklist, the Building Official shall administratively approve the application and issue all required permits or authorizations. Such approval does not authorize an applicant to connect the small residential rooftop energy system to the local utility provider's electricity grid. The applicant is responsible for obtaining such approval or permission from the local utility provider.

h. Fees for permitting small rooftop residential energy systems shall comply with Government Code Sections 65850.55, 66015, and 66016 and Health and Safety Code Section 17951.

7.1.102 Adoption by reference.

Section 8. Severability.

In the event that any section or portion of this ordinance shall be determined to be invalid or unconstitutional, such section or portions shall be deemed severable and all other sections or portions hereof shall remain in full force and effect.

Section 9. California Environmental Quality Act ("CEQA") finding.

This ordinance is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3), Review for Exemption, because it can be seen with certainty that this ordinance will not have a significant effect on the environment; therefore it is not subject to CEQA.

Section 10. Effective Date:

This ordinance shall take effect and be in force and effect thirty (30) days from and after the date of its passage. The City Clerk shall cause the ordinance to be published within fifteen (15) days after its passage in a newspaper of general circulation, or by publishing a summary of the proposed ordinance, posting a certified copy of the proposed ordinance in the office of the City Clerk at least five (5) days prior to the City Council meeting at which the ordinance is to be adopted, and within fifteen (15) days after its adoption, publishing a summary of

the ordinance with the names of the Council Members voting for and against the ordinance.

The foregoing ordinance was adopted with the reading waived at a regular meeting of the Oakley City Council on _____, 2019 by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

APPROVED:

_____
Claire Alaura, Mayor

ATTEST:

_____
Libby Vreonis, City Clerk Date

OAKLEY
CALIFORNIA

STAFF REPORT

DATE: October 22, 2019

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Kevin Rohani, P.E. Public Works Director/City Engineer

SUBJECT: Acceptance of work associated with the Laurel Road Widening Project (Rose Avenue to Mellowood Drive) – Capital Improvement Project Number 196

Background and Analysis

Laurel Road is a major arterial road in Oakley and a key component of the City's transportation network with direct connection to Highway 4. The project widened Laurel Road to (4) lanes, as well as added bicycle lanes in accordance with the City's Long Range Roadway Plan and General Plan Circulation Element.

The section of Laurel Road between Rose Avenue and Mellowood Drive was a narrow two lane road that did not accommodate the traffic demands of the community. This section of Laurel Road had not been widened or improved due to the lack of Right of Way in 2017; however, the City acquired the necessary Right of Way for the project to accommodate the roadway widening and also to relocate PG&E's power poles. The construction of this roadway widening project was successfully completed on time and under budget.

The scope of the Laurel Road Widening project was to widen the roadway to a four lane divided roadway with landscaped medians and bike lanes from Rose Avenue to Mellowood Drive. Along with the road widening, the project included curb, gutter, and sidewalk, as well as the installation of irrigation and landscaping in the median and planter areas. The underground utility construction included the installation of water laterals and storm drainage improvements. L.E.D. street lights were installed in the median, which has vastly improved the visibility along this stretch of Laurel Road. In addition, new paving, striping, and signage was installed as well. This project was a much needed improvement to this corridor and will benefit the community by providing a safer roadway and improving traffic flows along Laurel Road.

The developer of the Duarte Ranch project will reimburse the City the cost for the widening on the south side of Laurel Road along the new subdivision project in accordance with their project conditions of approval and reimbursement agreement.

Fiscal Impact

The authorized budget for the construction of this project was $3,198,159. This project was completed on time and under the authorized budget for a total of $2,766,428.60. This amount included all of the work related to the construction of Laurel Road from Rose Avenue to Mellowood Drive in order to complete the project.

Pursuant to the contract documents, 5% of the accrued costs were withheld from the amount paid to the contractor. These funds are called “retention”, and are held until the end of the project to ensure that the contractor completes the project in a timely manner. Approval of this item will authorize the release of the retention payment to the contractor. The retention was already budgeted as part of the contract and change order approvals, so there is no additional fiscal impact associated with this action.

Staff Recommendation

Staff recommends that the City Council Adopt the Resolution accepting CIP Project No. 196 – Laurel Road Widening Project (Rose Avenue to Mellowood Drive) as constructed by DeSilva Gates Construction LP, to be complete, and to direct the City Clerk to file a Notice of Completion for the project with the County Recorder

Attachments

1. Resolution
2. Notice of Completion

RESOLUTION NO. __-19

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OAKLEY ACCEPTING THE WORK AS COMPLETE WITH DESILVA GATES CONSTRUCTION LP, FOR CIP 196 - LAUREL ROAD WIDENING PROJECT (ROSE AVENUE TO MELLOWOOD DRIVE)

WHEREAS, BKF Engineers, Inc. prepared the plans, specifications, and estimates for the Laurel Road Widening (Rose Ave to Mellowood Drive) Project; and

WHEREAS, on December 11, 2018 by adopting Resolution No. 153-18, the City Council awarded a construction contract to DeSilva Gates Construction LP, for the construction of the Laurel Road Widening Project (Rose Avenue to Mellowood Drive - CIP No. 196; and

WHEREAS, DeSilva Gates Construction LP, has satisfied the contractual requirements necessary for the acceptance of the Laurel Road Widening Project (Rose Avenue to Mellowood Drive - CIP No. 196 to be deemed complete.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Oakley that the Laurel Road Widening Project (Rose Avenue to Mellowood Drive - CIP No. 196 is hereby accepted as complete.

BE IT FURTHER RESOLVED AND ORDERED, that the City Clerk is hereby directed to file a Notice of Completion for the Laurel Road Widening Project (Rose Avenue to Mellowood Drive - CIP No. 196 with the County Recorder.

PASSED AND ADOPTED by the City Council of the City of Oakley at a meeting held on the 22nd of October, 2019 by the following vote:

AYES:
NOES:
ABSENT:
ABSTENTIONS:

APPROVED:

_____
Claire Alaura, Mayor

ATTEST:

_____ _____
Libby Vreonis, City Clerk Date

PURSUANT TO GOVERNMENT CODE §6103 NO FEE IS REQUIRED FOR THE RECORDATION OF THIS DOCUMENT

WHEN RECORDED MAIL TO:
City Clerk
City Of Oakley
3231 Main Street
Oakley, Ca 94561

RECORDING REQUESTED BY:
City Of Oakley
3231 Main Street
Oakley, Ca 94561

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

NOTICE OF COMPLETION
CIP 196 – Laurel Road Widening Project (Rose Avenue to Mellowood Drive)

NOTICE IS HEREBY GIVEN THAT:

The CITY OF OAKLEY, a political subdivision of the State of California, did, on December 11, 2018 enter into an agreement with DeSilva Gates Construction LP, for the construction of Capital Improvement Program Project Number 196 – Laurel Road Widening Project (Rose Avenue to Mellowood Drive).

The Owner's nature of interest or estate in the property described below is in fee.

The work described in the contract documents was to furnish all material, labor, and equipment necessary to complete CIP No. 196 – Laurel Road Widening Project (Rose Avenue to Mellowood Drive).

On October 22, 2019 said contract, as a whole was completed and the work was accepted by the City Council of the City of Oakley.

VERIFICATION

I have read the foregoing NOTICE OF COMPLETION and know the contents thereof; the same is true of my knowledge. 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 was executed this 22nd day of October 2019 at Oakley, California.

Date: _____

By: _____
Libby Vreonis, City Clerk
City of Oakley, California

OAKLEY
CALIFORNIA

STAFF REPORT

DATE: October 22, 2019

Approved and Forwarded to the City Council

TO: Bryan Montgomery, City Manager

FROM: Kevin Rohani, P.E., Public Works Director/City Engineer

SUBJECT: Award of Construction Contract to ANDERSON Striping & Construction, Inc. for the Fiscal Year 2019/20 Street Restriping Project – Capital Improvement Project Number 234

Background and Analysis

The City's adopted FY 2019/20 Capital Improvement Program (CIP) Budget designates funding for various infrastructure repair and replacement projects. This is consistent with the City's goal to improve the quality of the City's public infrastructure and to enhance the quality of life for our residents.

This project will restripe various City streets to help maintain visible stripes and delineations that are marked for usage by motorists and pedestrians. The work performed under this project focuses on the streets that are not in the plan for resurfacing in the next few years and need the striping for lane delineation (centerline, edge line, crosswalk, pavement marking) to provide safer streets for the community.

Fiscal Impact

ANDERSON Striping & Construction, Inc. was the lowest responsible bidder for the project at a cost of $28,464.30. The FY 2019/20 budget for this project is $50,000 in Gas Tax Funds.

Staff Recommendation

On September 26, 2019, three (3) bids were received for this project. Staff reviewed the bids and determined that ANDERSON Striping & Construction, Inc. was the lowest responsible bid and responsive to the City's bid process. The summary of bids are as follows:

ANDERSON Striping & Construction, Inc.	$28,464.30
Centerline Striping Company, Inc.	$43,882.00
Chrisp Company	$65,179.00

Staff recommends that the City Council adopt the resolution approving the construction agreement with ANDERSON Striping & Construction, Inc. for an amount not to exceed $28,464.80, and authorizing the City Manager to execute said agreement.

Attachments

1) Resolution

RESOLUTION NO. __-19

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OAKLEY APPROVING AN AGREEMENT WITH ANDERSON STRIPING & CONSTRUCTION, INC. FOR THE CONSTRUCTION OF THE FISCAL YEAR (FY) 2019/20 STREET RESTRIPING PROJECT – CAPITAL IMPROVEMENT PROJECT NUMBER 234

WHEREAS, City Staff prepared the plans, specifications, and estimates for the construction of the Street Restriping Project; and

WHEREAS, the plans, specifications and special provisions were publicly advertised for bidding, with the bid period closing at 2:00 P.M. on Thursday, September 26, 2019; and

WHEREAS, three (3) bids were received prior to the close of the bidding process; and

WHEREAS, ANDERSON Striping & Construction, Inc. submitted the lowest responsible bid for a total cost of $28,464.30 for the work; and

WHEREAS, the FY 2019/20 budget included $50,000 for the project in Gas Tax Funds; and

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Oakley that the Agreement with ANDERSON Striping & Construction, Inc. for the construction of the FY 2019/20 Street Restriping Project - CIP 234, for an amount not to exceed $28,464.30 is approved, and the City Manager is hereby authorized to execute said Agreement.

PASSED AND ADOPTED by the City Council of the City of Oakley at a meeting held on the 22nd of October, 2019 by the following vote:

AYES:
NOES:
ABSENT:
ABSTENTIONS:

APPROVED:

_____
Claire Alaura, Mayor

ATTEST:

_____ _____
Libby Vreonis, City Clerk Date

OAKLEY
CALIFORNIA

STAFF REPORT

DATE: October 22, 2019

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Joshua McMurray, Community Development Director

SUBJECT: **Acacia - An application requesting approval of: 1) a General Plan Amendment (GPA 03-18) to amend the land use designation from Single-Family Residential, High Density (SH) to Multi-Family Residential, Low Density (ML); 2) a Rezone (RZ 07-18) from Single-Family Residential (R-6) to Planned Unit Development (P-1); 3) a Vesting Tentative Map (TM 04-18) to subdivide approximately 13.4 acres into 108 single-family residential lots within a gated community, as well as one private street lot, twelve private drive lots, two water quality lots, and three landscape lots; and 4) a Design Review (DR 11-18) for the home designs, site landscaping, fence plans, and site design. The project site is located at 5360 Main Street (APN's: 033-030-001 and 033-030-027).**

Summary

This is an application by Signature Homes, Inc. ("Applicant") requesting approval of: 1) a General Plan Amendment (GPA 03-18) to amend the land use designation from Single-Family Residential, High Density (SH) to Multi-Family Residential, Low Density (ML); 2) a Rezone (RZ 07-18) from Single-Family Residential (R-6) to Planned Unit Development (P-1); 3) a Vesting Tentative Map (TM 04-18) to subdivide approximately 13.4 acres into 108 single-family residential lots within a gated community, as well as one private street lot, twelve private drive lots, two water quality lots, and three landscape lots; and 4) a Design Review (DR 11-18) for the home designs, site landscaping, fence plans, and site design. The project site is located at 5360 Main Street (APN's: 033-030-001 and 033-030-027).

Staff recommends the City Council approve the Acacia project with the following actions:

- Adopt the Mitigated Negative Declaration (included as a finding to proposed General Plan resolution and referenced in the proposed Rezone ordinance and Vesting Tentative Map and Design Review resolution);

- Adopt a Resolution approving the General Plan Amendment, as conditioned;

- Waive the first reading and introduce an Ordinance approving the Rezone, as conditioned; and

- Adopt a resolution approving the Vesting Tentative Map and Design Review, as conditioned.

Existing General Plan and Zoning

General Plan

- Existing: *Single-Family Residential, High Density ("SH")* - The purpose of the "SH" designation is provide for moderately dense single-family residential development that is consistent with suburban uses. Allowable density is between 3.8 and 5.5 dwelling units per gross acre.

- Proposed: 1) *Multi-Family Residential, Low Density ("ML")* – The purpose of the "ML" designation is to provide a more affordable, small lot development and to increase the availability of rental or entry-level housing at a density range of 5.5 to 9.6 dwelling units per gross acre. The land use designation will set a maximum density that matches the proposed Vesting Tentative Map. All proposed homes are single family detached residential units.

Zoning

- Existing: Single Family Residential (R-6) District – R-6 District allows for a minimum 6,000 sf. lot size and single family residential development, and has pre-existing development regulations set forth in Oakley Municipal Code ("OMC") section 9.1.404.

- Proposed: Planned Unit Development (P-1) District – P-1 District allows for project specific development regulations, including minimum lot sizes, setbacks, and uses, as specified in OMC section 9.1.1002.

Existing Conditions and Surrounding Land Uses

The project site consists of approximately 13.4 acres located southeast of the Main Street and Shady Oak Drive intersection. The site is bordered by Main Street to the west, Honey Lane to the north, and Salvador Lane to the east. Surrounding existing land uses include residential uses on all sides of the project site. Currently the western portion of the project site is has a single family home and shed and the remainder of the property is regularly disked. The eastern portion of the site is developed with a single-family home and several sheds. Figures 1 and 2 on the following page show the street view of the project site and Figure 3 shows the aerial of the project site.

Figure 1. Street View of Project Site from Main Street



Figure 2. Street View of Project Site from Honey Lane

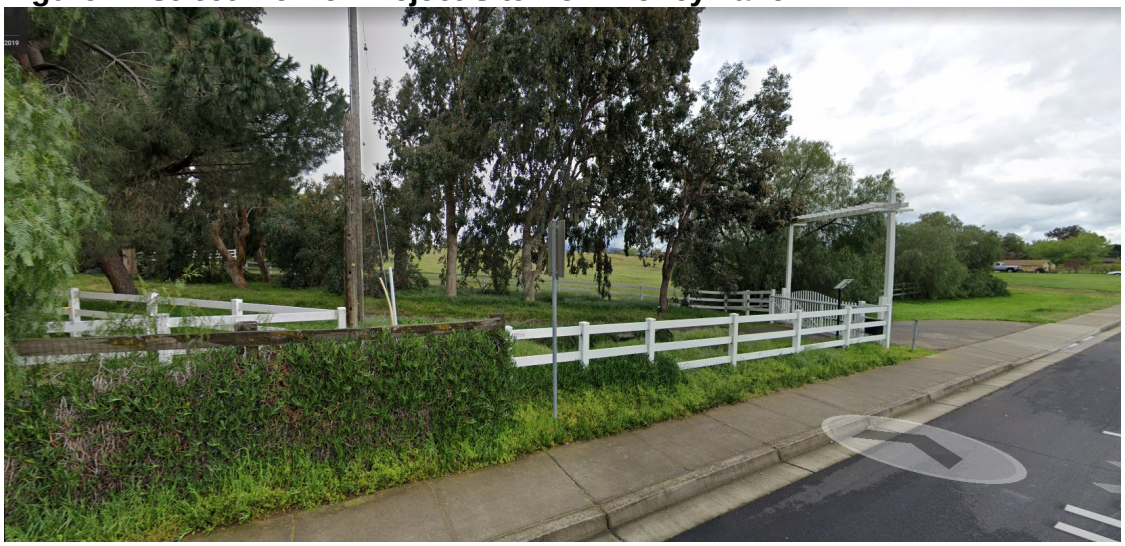
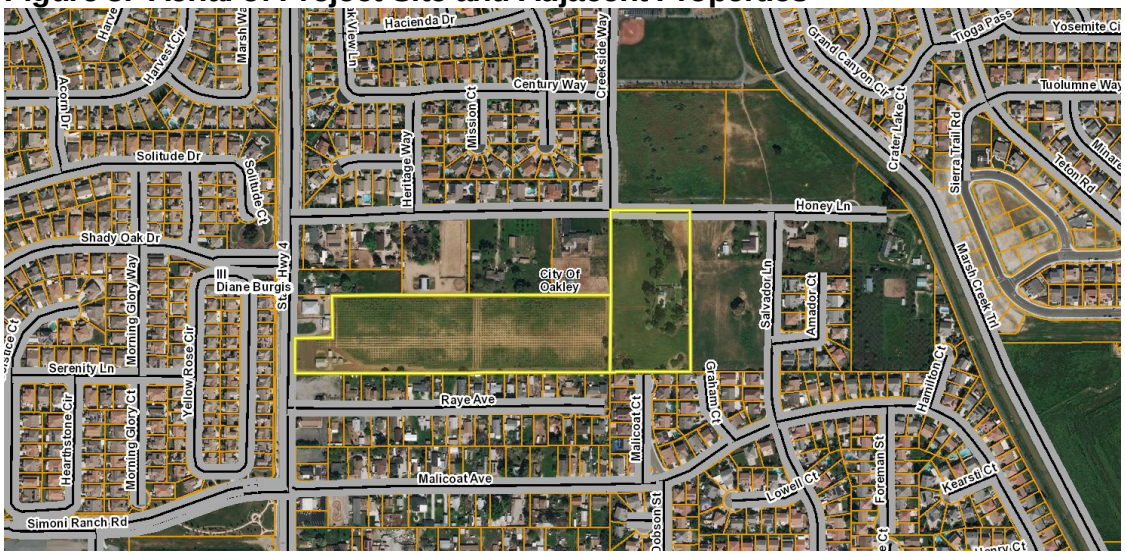


Figure 3. Aerial of Project Site and Adjacent Properties



Project Description

Proposed General Plan Amendment

The proposed General Plan land use designation amendment is to change the Single-Family Residential, High Density ("SH") on the property to "*Multi-Family Residential, Low Density (ML)"*. As stated in the Oakley 2020 General Plan, "The purpose of the Multi-Family Residential, Low Density Land Use Designation is to provide a more affordable, small lot development and to increase the availability of rental or entry-level housing. This designation allows for a minimum of 5.5 dwelling units and a maximum of 9.6 dwelling units per gross acre. Population density would normally range between 12 to 20 persons per acre. Primary land uses include single-family dwellings, attached single-family residences (such as duplexes and duets), multiple-family residences (such as condominiums, town houses, apartments), and accessory structures normally auxiliary to the primary uses. Secondary uses may include home occupations, group care and/or childcare facilities, and private schools." In order to establish the proposed project, the applicable land use designation would need to be amended to a residential land use designation with a density range that allows for 8.1 dwelling units per acre, such as ML which has a range of 5.5 to 9.6 dwelling units per acre.

Proposed Rezoning

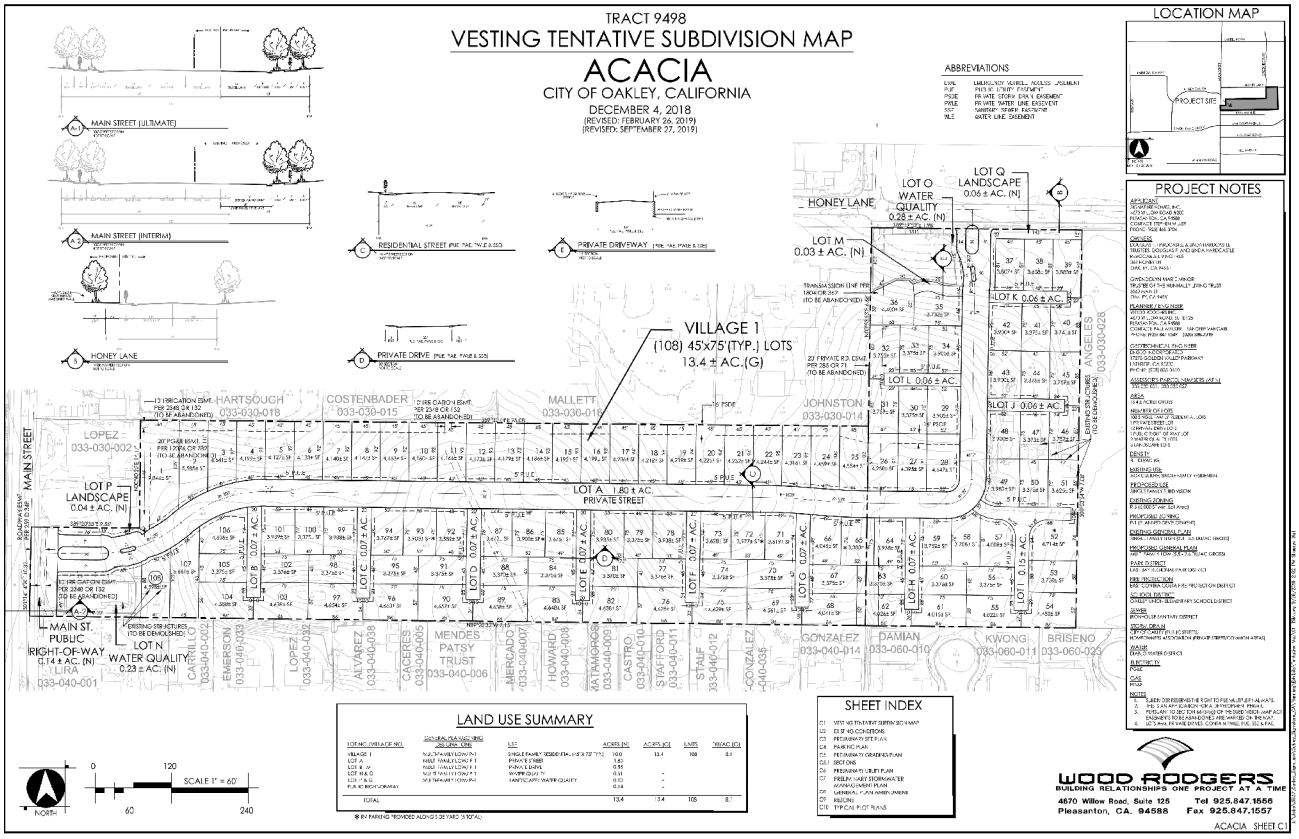
Amending the applicable land use designation to ML would allow for a rezoning application to change the applicable zoning district, but only to one of the zoning districts found to be compatible with ML, which include Single-Family Residential (R-6) District, Multi-Family Residential (M-9) District, or Planned Unit Development (P-1) District. The P-1 District allows for any land uses permitted by an approved final development plan which are in harmony with each other, serve to fulfill the function of the planned unit development, and are consistent with the General Plan. The applicant has proposed the Planned Unit Development (P-1) District, which in this case would allow for the proposed project.

Proposed Vesting Tentative Map

The project proposal includes a Vesting Tentative Map to subdivide the 13.4-acre site consisting of 2 parcels into 108 single family lots.

The Vesting Tentative Map Exhibit is depicted as Figure 3 on the following page:

Figure 3. Vesting Tentative Map Exhibit



Proposed Design Review

The Design Review Ordinance has different levels of Design Review procedures for review and approval of a Design Review Permit. Oakley Municipal Code section 9.1.1604(c)(2)(a)(1) requires that when an applicant or developer proposes a residential subdivision of five or more lots and proposes the house design and elevations at the same time of the subdivision approval process, the design review process shall be undertaken by the Planning Commission concurrently with the subdivision approval process and be heard as a public hearing item.[1]. The proposed new development fits the criteria above and requires Design Review. The proposed design review covers all of the physical development of the project, such as house floor plans and elevations, lot siting, colors and materials, landscaping, and walls/fencing.

[1] City Council acts as the Planning Commission per Ordinance No. 06-09

Proposed Floor Plans and Architecture

The project includes a total of three different house plans with three architectural styles (or "elevations"). All three plans share the same architectural styles, which are referred to as: Prairie, Craftsman and Early Californian. Floor plans for the homes range from 2,165 sf. for Plan 1 to 2,473 sf. for Plan 3. Table 1 on the next page provides a summary of the homes specifications.

Table 1. Summary of House Specifications

	Square Feet (livable)	Bedrooms (max)	Bathrooms	Garage Spaces
Plan 1 (Two Story)	2,165	4	2.75	2
Plan 2 (Two Story)	2,275	4	2.5	2
Plan 3 (Two Story)	2,473	4 + Loft	2.75	2

The applicant's plans are attached and include the floor plans, front, side, and rear elevations of floor plan/elevation combinations, conceptual front yard landscape plans, development plan for the neighborhood (shows where each house type is proposed) and the proposed fence and wall specifications.

All of the home elevations include high quality materials such as concrete tile roofing, high definition shingles, stucco finishes, cementitious horizontal siding, decorative out lookers, and enhanced window sills. The streetscape rendering below shows, from left to right, Plan 3, 2, and 1.



Proposed Master Plotting Plan (Final Development Plan)

These homes will be placed on lots of a minimum size of 3,375 sf. (45 feet wide by 75 feet deep). The Final Development Plan shows a specific plan type on each lot, as well as the expected setbacks to property lines and distance between adjacent homes. Out of the 108 lots, plans One, Two and Three are represented with unit counts of 30, 35 and 43 respectively. All garages are a minimum 18 feet from the

front property lines. Living areas of homes get as close at 15 feet from the front property line, and porches as close as 12 feet. All homes maintain a minimum 10 foot rear yard setback and side setbacks of a minimum 4 feet on side yards. The corner side yard setback minimum is the same as the interior side yard setback of 4 feet, although the Development Plan shows larger than 4 foot setbacks for the corner yards.

The applicant has also designed the subdivision to where five of the lots have larger side yard setbacks, on the garage side of the home, to accommodate boats and RV's.

Color and Materials Board

The applicant has provided a color and material scheme plan that includes at least three schemes for each elevation type. The schemes show the specific combinations body color, trim color, accent color, roofing type and color, and stone details, if applicable. Since there are three floor plans, each with three elevations with three schemes, a total of 27 house combinations are possible.

Neighborhood Layout

The subdivision takes its main access from Main Street with a secondary access from Honey Lane. The entries will feature gated access and enhanced stamped colored asphalt paving. The main street and access drives within the subdivision will be private. The subdivision includes both standard lots that are directly off the main street and homes that are accessed off the private drives. The subdivision for the most part is orientated in a west to east manner, which then leads to a south north orientation once you get to the eastern portion of the project site. A total of 52 homes front onto the main private street with the remainder of the 56 homes front onto private drives.

When looking at the Vesting Tentative Map (Sheet C1 of Attachment 4) there are 108 single family lots, Lot A is the private street, Lot's B through M are the private drives, Lots N and O are the water quality basins and Lots P and Q are for landscaping and water quality.

The applicant will be required to improve Main Street with roadway widening (east side of Main Street along the project's frontage), a six foot parkway strip, a six foot sidewalk and a six foot parkway strip. The entrance off Main Street will include a stamped asphalt entry way, with in and out movements being separated by landscaping and a community sign. To the south of the entry point, a water quality basin will be constructed and will provide for some additional landscaping to soften the entry. The nearest home will be approximately 134 feet east of the Main Street entrance. The Honey Lane entrance will be improved with similar features. In this area there are three homes that would back onto Honey Lane, with their rear yard wall being 15 feet from the back of sidewalk.

The applicant is proposing a gated Home Owners Association (HOA) managed community. The HOA will maintain the private streets, front yard landscaping, open space areas as well as the bio-retention area. This is a unique feature in Oakley as most of the subdivisions are not HOA governed. Existence of the HOA should result in a positive impact on the City because it will ensure a standard of quality aesthetics within the subdivision through enforcement of CC&Rs. This is seen as a benefit to the project and should help to maintain an attractive development that will fit harmoniously within the community. CC&Rs have not been drafted by the applicant at this time.

Analysis

General Plan Amendment

Amending a land use designation from a Single-Family to a Multi-Family Residential land use will not significantly change the underlying type of development allowed as the site is currently designated to allow for single family uses and the proposed project will still allow for single-family uses. When considering the potential for a General Plan Amendment on this site, one important aspect is whether or not the site should have an increase in the allowable density (or otherwise known as dwelling units per acre). Given the analysis done by Staff after the full project has been submitted and studied, this residential proposal will serve as an entry level/first time homebuyer development with a unique aspect of providing a HOA. It will also increase the number of new homes in the area where the City is lacking lower priced, entry level homes. The product as presented in this application will be marketed and geared towards first time home buyers, at a price point most likely less than what we are seeing for new homes on the East Cypress Road and Laurel Road corridors. Given the proposed project and request to rezone the parcel to Planned Unit Development (P-1) District, the proposed General Plan Amendment is warranted.

Rezone

To revisit the background section, the Planned Unit Development (P-1) District is compatible with the *Multi-Family Residential, Low Density (ML)* land use designation and would allow for a single-family residential use as a permitted use. The project, as conditioned, is well thought out and will allow the site to be developed in the vision of the applicant in a manner consistent with the *Multi-Family Residential, Low Density (ML)* land use designation. It is important to note that although the site would be designated for Multi-Family development, that is purely an exercise of density rather than product type. The Multi-Family land use designation still envisions and allows for single-family residential uses, such as the proposed project. One aspect to keep in mind is that when a project is proposing a single-family detached product at a higher density that translates to smaller lot sizes and predominantly two-story homes.

Vesting Tentative Map

The Vesting Tentative Map has been reviewed against all applicable codes including the Subdivision Map Act and the Zoning Ordinance. The applicant has proposed the Planned Unit Development (P-1) District which allows the project to develop its own unique development standards. The Final Development Plan (Sheet C3 of Attachment 4) lists the specific standards applicable to this project. The minimum lot size is 3,375 square feet and the proposed lot coverage will be capped at 50% per the Typical Plot Plan (Sheet C10 of Attachment 4). The Vesting Tentative Map as proposed meets all applicable codes and regulations.

Design Review

The proposed plans were analyzed for consistency with the adopted City of Oakley Residential Guidelines ("Guidelines"). Staff has focused this analysis on the home design and other elements discussed in the Project Description section of this Staff Report.

Residential Siting and Lot Design: The applicant has plotted the homes to provide adequate front yard setback variations. The project has also been conditioned to vary the front yard setback of adjacent lots by three feet for every three homes. Interior side yard setbacks are consistently at the minimum four feet; however, the plot plan shows several instances of side yard setbacks as large as 16 feet and sometimes more depending on the orientation of the lot. Rear yard setbacks vary depending on the plan type and how the home is positioned on the lot, with the minimum 10 foot being observed. The plan has been carefully thought out to be sensitive to the edge conditions that exist on both the southern and northern property lines. Increased yard setbacks in these two areas have been provided to ensure there are adequate buffers between the proposed project and the existing single family homes.

Building mass is an element of lot siting and design. The covered porches, projecting architectural elements, and varying roof plans within the same footprint all add to the diversity of the house styles. The smaller lots do pose a challenge when trying to comply with all of the Residential Design Guidelines. The house designs use as much articulation and building plane relief on the front elevations to make the front facing facades as interesting as possible.

There are two guidelines commonly referenced in staff reports that are unable to be implemented with this project. First, the guideline related to the setback between adjacent two-story elements being at least 15 feet. Since all of the plans are two story, and the interior side yard setbacks are at four feet, these guidelines are impossible to implement without a significant modification to one or more of the plans. Those revisions would most likely result in plans that are undesirable to the market which is not something the City or the developer supports. There is a tradeoff when considering smaller lots in the overall approval of a P-1 Districts for

neighborhoods that provide an amenity, and in this case an HOA gated community is being proposed. However, the Council has approved (with Staff recommendation) other design reviews in other P-1 District developments that have smaller than 6,000 square foot minimum lot sizes that do not meet these guidelines. Typically, these guidelines are more feasible with 6,000 square foot minimum lot sizes that allow for larger setbacks and a one-story home (which often requires a larger footprint of the ground). Since this neighborhood lots are typically 3,375 square feet, Staff is recommending approval of this design review without implementation of required 15 foot setback between adjacent second stories.

The second is the guideline related to at least 20% of all lots and 50% of corner lots being one-story homes. The applicant is not proposing any one-story homes within the development. The applicant has stated that they are targeting first time homebuyers and growing families. In their experience with this sector of the market, they have stated that this demographic is price sensitive and values bedroom count, unit size and community amenities. This higher density development has resulted in smaller lots which create challenges with product type. Single-story lots require deeper lot depths and most often wider lot widths in order to accommodate the homes footprint and to provide adequate living areas. In order to fit one-story plans on this project, the units would have to be very small, with limited bedroom counts. For example, the largest footprint in this subdivision would be the first floor of Plan 4 at 1,055 square feet. A one-story home of that size isn't something we are seeing developed and sold in the current market, and to accommodate any larger of a footprint, the setbacks for these lots would have to be minimized to the point that the subdivision would be too cramped and the building mass of each home would dominate the streetscape as well as the private backyard space of each home. Staff would not recommend requiring one-story homes within this development in order to keep the more open and less home dominant streetscape that is currently being proposed. The proposed General Plan Land Use Designation of ML anticipates higher density single-family projects aimed at entry-level buyers, in which the application is consistent with. Staff is recommending approval of this design review without implementation of the guideline to provide any one story homes.

Architectural Character: The architectural character and design of the proposed homes is similar to what has been reviewed and approved throughout other subdivisions in the City, which normally include architectural styles that consist mainly of stucco siding. In reviewing this application, Staff felt the architecture was of high quality and took into account the level of quality we expect in Oakley. This submittal is consistent with the guidelines in that there is variety in the architectural elements, such as horizontal siding and stone and brick veneer. Stone and brick veneer has been conditioned to wrap to the side fence lines.

Conceptual Front Yard Landscaping: The conceptual front yard landscape plans show a mix of street trees, accent trees, shrubs and ground cover. The proposed plans will help tie in the home design to the landscape design. At the time of plan check, the specific street tree species will be more closely analyzed to be good fits

depending on distance to sidewalks and utilities. It should be noted that due to the smaller size of the proposed lots, the standard condition requiring two street trees along each lot and four street trees per each corner side yard cannot be achieved. Staff worked with the applicant to come up with a solution that works with the lot sizes. The Final Development Plan (Sheet C3 of Attachment 4) provides that each lot shall have 1 street tree per frontage and when there is a corner/street side yard condition. A note has also been provided that where feasible, smaller accent trees shall be provided on both the lot frontage and corner lots. The application has been conditioned as follows:

> "Each residential lot shall include street and accent trees as indicated on he approved plans, unless otherwise modified due to comments receive from City Staff on the Final Landscape Plan review in relation to final locations of trees and utilities. All final decision are subject to the review and approval of the City Engineer and/or Community Development Director"

With adoption of the proposed resolution for the Design Review approval, as conditioned, the project will comply with the Residential Design Guidelines.

On June 3, 2019, the applicant held a community meeting at the City of Oakley Recreation Building. Several residents from the surrounding area attended and the applicant listed to and made changes to address most of the concerns about the fencing and separation from the existing properties to the north of the project site. The relevant changes included providing for a combination block wall and fence with decorative lattice top in addition to establishing trees within the rear yards of the proposed homes. This is not something commonly done with new construction in that rear yard landscaping is something that is not typically provided.

Citizen Planning Advisors

The Oakley Citizen Planning Advisors received copies of the Applicant's Plans via email on November 1, 2017. Per City Council Resolution 15-14, which established the Citizen Planning Advisors, Staff has attached the comments received from the Citizen Planning Advisors to the Staff Report. Although the process does not necessarily have Staff respond directly to each of the individual comments, Staff did review them and many of the comments are addressed in this report's "Analysis" section or the conditions of approval, and Staff is prepared to address them at the City Council's discretion.

Environmental Review

An Initial Study and Mitigated Negative Declaration ("MND") have been prepared for this project pursuant to the California Environmental Quality Act (CEQA). The Notice of Intent to Adopt a MND and Initial Study was circulated for public review and comment from February 4, 2019 to March 5, 2019 and was filed with the County Clerk. A copy of the MND and Initial Study are attached. The City Council must

adopt the MND in order to approve the project. Adoption of the MND is included in the proposed General Plan resolution, and referenced in the Rezone ordinance and Design Review resolution.

The City did receive two comment letters during the public review period from the Contra Costa Mosquito & Vector Control District and the Contra Costa County Flood Control & Water Conservation District. The comment letter and the response to the comment are attached.

Findings

Draft findings for the General Plan Amendment, Vesting Tentative Map and Design Review can be found in the proposed Resolutions. Draft findings for the Rezone can be found in the proposed Ordinance.

Recommendation

Staff recommends the City Council approve the Acacia project with the following actions:

- Adopt the Mitigated Negative Declaration (included as a finding to proposed General Plan resolution and referenced in the proposed Rezone ordinance and Vesting Tentative Map and Design Review resolution);
- Adopt a Resolution approving the General Plan Amendment, as conditioned;
- Waive the first reading and introduce an Ordinance approving the Rezone, as conditioned; and
- Adopt a resolution approving the Vesting Tentative Map and Design Review, as conditioned.

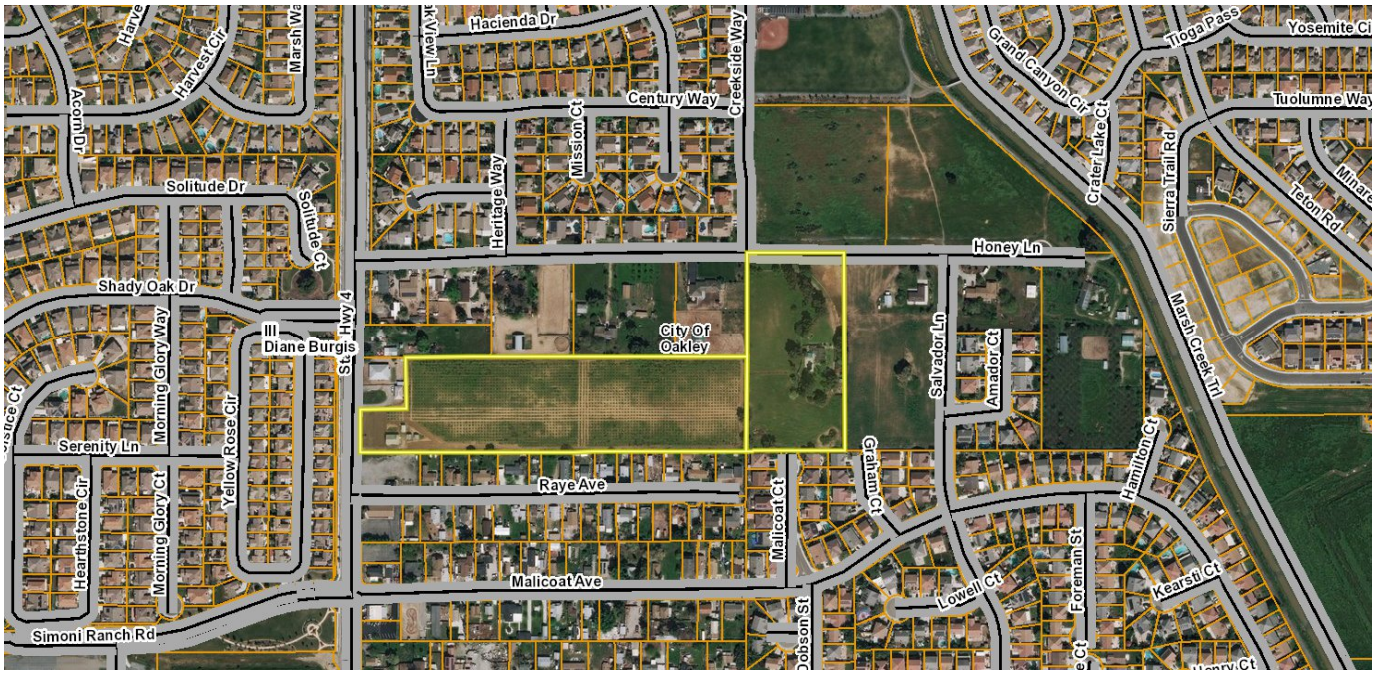
Attachments

1. Vicinity Map
2. Public Hearing Notice
3. Initial Study with Mitigated Negative Declaration
4. Applicant's Plans
5. Citizen Planning Advisor Comments
6. Proposed General Plan Land Use Amendment Resolution
7. Proposed Rezone Ordinance
8. Proposed Design Review Resolution

Vicinity Map

Acacia Project - General Plan Amendment (GPA 03-18), Rezone (RZ 07-18), Tentative Map (TM 04-18) and Design Review (DR 11-18)

APN's: 033-030-001 and 033-030-027



City of Oakley
3231 Main Street
Oakley, CA 94561
www.oakleyinfo.com

NOTICE OF PUBLIC HEARING

Notice is hereby given that on **October 22, 2019** at 6:30 p.m., or as soon thereafter as the matter may be heard, the City Council of the City of Oakley will hold a Public Hearing at the Council Chambers located at 3231 Main Street, Oakley, CA 94561 for the purposes of considering an application for a **General Plan Amendment (GPA 03-18), Rezone (RZ 07-18), Tentative Map (TM 04-18) and Design Review DR (11-18).**

Project Name: Acacia by Signature Homes General Plan Amendment (GPA 03-18), Rezone (RZ 07-18), Tentative Map (TM 04-18) and Design Review DR (11-18)

Project Location: 5360 Main St., Oakley, CA 94561; APN's: 033-030-001 and 033-030-027.

Applicant: Signature Homes, Attn: Steve Miller, 4670 Willow Road #200, Pleasanton, CA 94588

Request: This is a public hearing on a request for approval of 1) a General Plan Amendment (GPA 03-18) to amend the land use designation from Single-Family Residential, High Density (SFH) to Multi-Family Residential, Low Density (ML); 2) a Rezone (RZ 07-18) from Single-Family Residential (R-6) to Planned Development (P-1); 3) a Tentative Map (TM 04-18) to subdivide approximately 13.4 acres into 108 single-family residential lots within a gated community, as well as one private street lot, twelve private drive lots, two water quality lots, and three landscape lots; and 4) a Design Review (DR 11-18) for the home designs, site landscaping, fence plans, and site design. The project description and plans are available at https://www.ci.oakley.ca.us/departments/planning-zoning/current-projects/.

How to Review: The Staff Report and its attachments will be available for public review, on or before **October 16, 2019** at City Hall, 3231 Main Street, Oakley, CA 94561 or online at www.ci.oakley.ca.us/agendas-minutes-videos-archive/ by navigating to the **October 22, 2019** agenda and clicking the project title link. (Note: City Hall is closed on the 1st and 3rd Fridays of each month).

Interested persons are invited to submit written comments prior to, and may testify at, the public hearing. **Written comments may be submitted to Joshua McMurray, Community Development Director at the City of Oakley, 3231 Main Street, Oakley, CA 94561 or by email to: mcmurray@ci.oakley.ca.us.**

NOTICE IS ALSO GIVEN pursuant to Government Code Section 65009(b) that, if this matter is subsequently challenged in Court by you or others, you may be limited to raising only those issues you or someone else has raised at a Public Hearing described in this notice or in written correspondence delivered to the City of Oakley City Clerk at, or prior to, the Public Hearing.

City of Oakley
Community Development Department

California Environmental Quality Act (CEQA) Initial Study

Acacia Project

(GPA 03-18, RZ 07-18, TM 04-18, DR 11-18)

September 2019

Prepared by

RANEY PLANNING & MANAGEMENT, INC. 20 years
1501 Sports Drive, Suite A, Sacramento, CA 95834

TABLE OF CONTENTS

A. BACKGROUND 1

B. SOURCES 2

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED 3

D. DETERMINATION 4

E. BACKGROUND AND INTRODUCTION 5

F. PROJECT DESCRIPTION 5

G. ENVIRONMENTAL CHECKLIST 11

I. AESTHETICS. 12
II. AGRICULTURE AND FOREST RESOURCES. 14
III. AIR QUALITY. 16
IV. BIOLOGICAL RESOURCES. 25
V. CULTURAL RESOURCES. 36
VI. ENERGY 39
VII. GEOLOGY AND SOILS. 43
VIII. GREENHOUSE GAS EMISSIONS. 47
IX. HAZARDS AND HAZARDOUS MATERIALS. 49
X. HYDROLOGY AND WATER QUALITY. 54
XI. LAND USE AND PLANNING. 60
XII. MINERAL RESOURCES. 62
XIII. NOISE 63
XIV. POPULATION AND HOUSING. 75
XV. PUBLIC SERVICES. 76
XVI. RECREATION. 78
XVII. TRANSPORTATION. 79
XVIII. TRIBAL CULTURAL RESOURCES. 90
XIX. UTILITIES AND SERVICE SYSTEMS. 92
XX. WILDFIRE. 94
XXI. MANDATORY FINDINGS OF SIGNIFICANCE. 95

APPENDIX:

Air Quality and GHG Modeling Results

INITIAL STUDY
September 2019

A. BACKGROUND

1. Project Title: Acacia Project

2. Lead Agency Name and Address: City of Oakley
Community Development Department
3231 Main Street
Oakley, CA 94561

3. Contact Person and Phone Number: Joshua McMurray
Planning Manager
(925) 625-7000

4. Project Location: Southeast of the Main Street/Honey Lane Intersection
Oakley, CA 94561
Assessor's Parcel Numbers (APNs): 033-030-001 & -027

5. Project Sponsor: Signature Homes, Inc.
4760 Willow Road #200
Pleasanton, CA 94588

6. Existing General Plan: Single-Family Residential, High Density (SFH)

7. Proposed General Plan: Multi-Family Residential, Low Density (ML)

8. Existing Zoning: Single-Family Residential (R-6)

9. Proposed Zoning: Planned Development (P-1)

10. Surrounding Land Uses and Setting:

The project site consists of approximately 13.4 acres located southeast of the Main Street and Honey Lane intersection. The site is bordered by Main Street to the west, Honey Lane to the north, and Salvador Lane to the east. Surrounding existing land uses include residential uses on all sides of the project site. Currently the western portion of the project site is undeveloped and regularly disked. The eastern portion of the site is developed with two single-family homes and seven sheds.

11. Project Description Summary:

The Acacia Project (proposed project) would include demolition of the existing on-site structures and redevelopment of the project site with a gated housing subdivision containing 108 single-family residential lots, one private street lot, twelve private drive lots, one public right of way, two water quality lots, and three landscape lots. The proposed lots would be a minimum of 3,375-square feet (sf) and include one of three designs for a two-story, four-bedroom home with an attached garage. The project would require approval of a General Plan Amendment, Rezone, Tentative Map to subdivide the 13.4-acre site,

and a Design Review for the home designs, site landscaping, fence plans, and site design.

12. Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1.:

    In compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1), project notification letters were distributed to the Amah Mutsun Tribal Band of Mission San Juan Bautista, Muwekma Ohlone Indian Tribe of the SF Bay Area, the Ohlone Indian Tribe, North Valley Yokuts Tribe, Wilton Rancheria, Indian Canyon Mutsun Band of Costanoan, Torres Martinez Desert Cahuila Indians, and the Ione Band of Miwok Indians. The letters were distributed on January 7, 2019 and requests to consult were not received during the consultation period.

B. SOURCES

All technical reports prepared for the project analysis are available upon request at the City of Oakley City Hall, located at 3231 Main Street, Oakley, CA 94561. The following documents are referenced information sources utilized by this analysis:

1. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.
2. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.
3. California Department of Conservation. *Contra Costa County Important Farmland 2016.* Published August 2018.
4. California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.
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C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Potentially Significant" as indicated by the checklist on the following pages.

☐ **Aesthetics**	☐ **Agriculture and Forest Resources**	✖ **Air Quality**
✖ **Biological Resources**	✖ **Cultural Resources**	☐ **Energy**
✖ **Geology and Soils**	☐ **Greenhouse Gas Emissions**	✖ **Hazards and Hazardous Materials**
✖ **Hydrology and Water Quality**	☐ **Land Use and Planning**	☐ **Mineral Resources**
✖ **Noise**	☐ **Population and Housing**	☐ **Public Services**
☐ **Recreation**	✖ **Transportation**	☐ **Tribal Cultural Resources**
☐ **Wildfire**	☐ **Utilities and Service Systems**	

D. DETERMINATION

On the basis of this Initial Study:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

✖ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Joshua McMurray	City of Oakley
Printed Name	For

E. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) provides an environmental analysis pursuant to the California Environmental Quality Act (CEQA) for the proposed project. The applicant has submitted this application to the City of Oakley, which is the Lead Agency for the purposes of CEQA review. The IS/MND contains an analysis of the environmental effects of construction and operation of the proposed project.

In December 2002, the City of Oakley adopted the Oakley General Plan and the Oakley General Plan Environmental Impact Report (EIR). The General Plan EIR was a program-level EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 *et seq*.). The General Plan EIR analyzed full implementation of the Oakley General Plan and identified measures to mitigate the significant adverse project and cumulative impacts associated with the General Plan. Pursuant to CEQA Guidelines Section 15150(a), the City of Oakley General Plan and General Plan EIR are incorporated by reference. Both documents are available at the City of Oakley, 3231 Main Street, Oakley, CA 94561.

The impact discussions for each section of this IS/MND have been largely based on information in the Oakley General Plan and the Oakley General Plan EIR, as well as technical studies prepared for the proposed project.

The mitigation measures prescribed for environmental effects described in this IS/MND would be implemented in conjunction with the project, as required by CEQA, and the mitigation measures would be incorporated into the project. In addition, a project Mitigation Monitoring and Reporting Program (MMRP) would be adopted in conjunction with approval of the project.

F. PROJECT DESCRIPTION

The following section includes a description of the project's location and surrounding land uses, as well as a discussion of the project components and discretionary actions requested of the City of Oakley by the applicant.

Project Location and Surrounding Land Uses

The project site is located southeast of the intersection of Main Street and Honey Lane in the City of Oakley. The site is identified by APNs 033-030-001 and -027 and totals approximately 13.4 acres (see Figure 1). Currently, the project site contains a single-family residence and three sheds in the southwestern corner of the site, along Main Street, and an existing single-family residence and three sheds on the eastern border of the site. The remainder of the western parcel is vacant and regularly disked. Several trees exist on the parcel to the east.

The site is bounded by Main Street to the west and a single-family residence to the east, with single-family residences bordering the site directly north and south, as well as to the west, across Main Street. The Green Leaves Church of God is located south of the site.

Project Components

The proposed project would include demolition of all existing on-site structures and construction of a gated housing subdivision. The housing development would include 108 single-family residential lots, one private street lot, twelve private drive lots, landscape areas, and associated improvements.

Figure 1
Project Site



The single-family residential lots would range from 3,375 sf to 5,661 sf (see Figure 2). Each unit would have a private garage and driveway with access from the new private drive aisles. All houses would have four bedrooms over two stories. Each unit would have access to a front, side, and rear private yard. A landscaping area would be included along Honey Lane on the eastern boundary of the project site.

Proposed Residences

The proposed single-family residences would be offered in three different styles and layouts. Each two-story residence would contain four bedrooms and would have a private, two-car garage with a driveway. The private yards provided at each residence would adhere to the required setbacks, including a 12-foot minimum from the road to the porch, 15-feet to the living area, and 18-feet to the garage. All residences would be surrounded by a six-foot high wood fence. The development of 108 residences across 13.4 acres of land would result in a density of 8.1 dwelling units per acre.

Access and Circulation

Access to the project site would be provided by two new gated driveways, one with entrance from Main Street, and one from Honey Lane. The Main Street access point would include a one-way entrance on the south side and a one-way exit on the northern side. The entrance and exit lanes would each be 19-feet wide and would be separated by a 20-foot wide median. At the Honey Lane driveway, the entrance lane would be 14-feet wide on the western side and the exit lane would be 19-feet wide on the eastern side. Both lanes would be separated by a 20-foot wide median.

The main drive aisle would be L-shaped and would provide access to the entire project site through connection with 12 smaller drive aisles. Each entrance would provide access to the entire project site. All of the residences would include a private driveway and two-car garage, which would total 432 possible private parking spaces. Additionally, 62 on-street parallel parking spaces would be included, primarily for guests.

Landscape

Landscaping would be included throughout the project site within the main drive aisles and at both entrances. Three landscaping lots would be provided throughout the project site. A variety of trees and shrubs would line the smaller drive aisles off the main aisle. In addition, six-foot lattice panel fences would separate the lots from the main aisle. The two bioretention areas would be landscaped with trees and shrubs which would treat stormwater.

Utilities

Diablo Water District (DWD) provides potable water service to the project site. As shown in Figure 3, the proposed project would include connection of a new eight-inch water main within the main drive aisle to an existing 12-inch water line within Main Street and Honey Lane. Sanitary sewer services are provided by Ironhouse Sanitary District (ISD). A new eight-inch sanitary sewer line would be constructed in the main drive aisle with connection to the City's existing eight-inch sewer line in Honey Lane. The project would also include construction of 11 new six-inch sanitary sewer lines in the small private drive aisles with connection to the new sewer line in the main drive aisle. Development of the project would also include construction of a new 18-inch storm drain in the main drive aisle with connection to both an existing 18-inch storm drain in Main Street and a 24-inch storm drain in Honey Lane. The project would include two bioretention areas which would treat water prior to discharge into the City's stormwater system.

Figure 2
Tentative Site Map

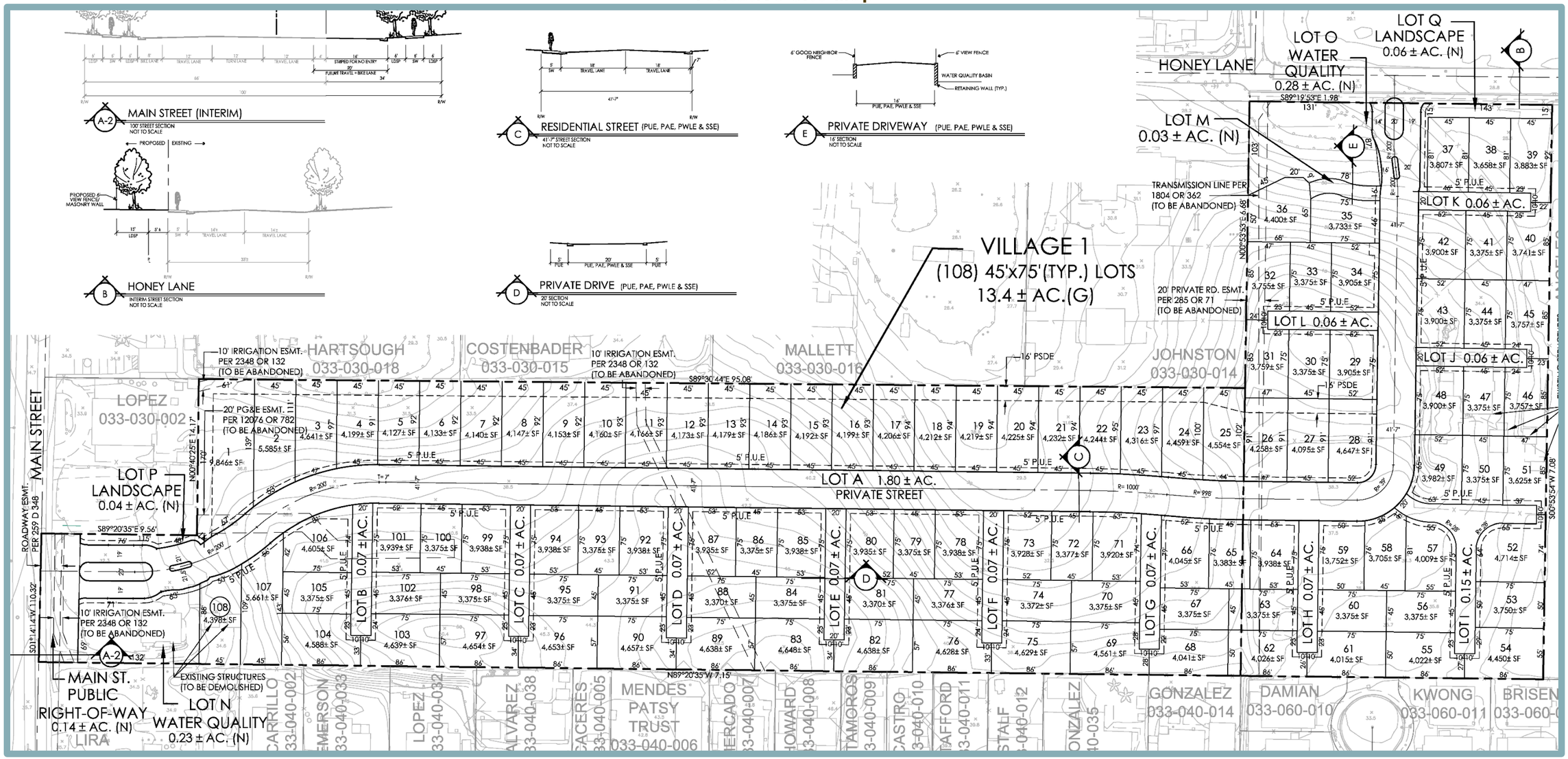
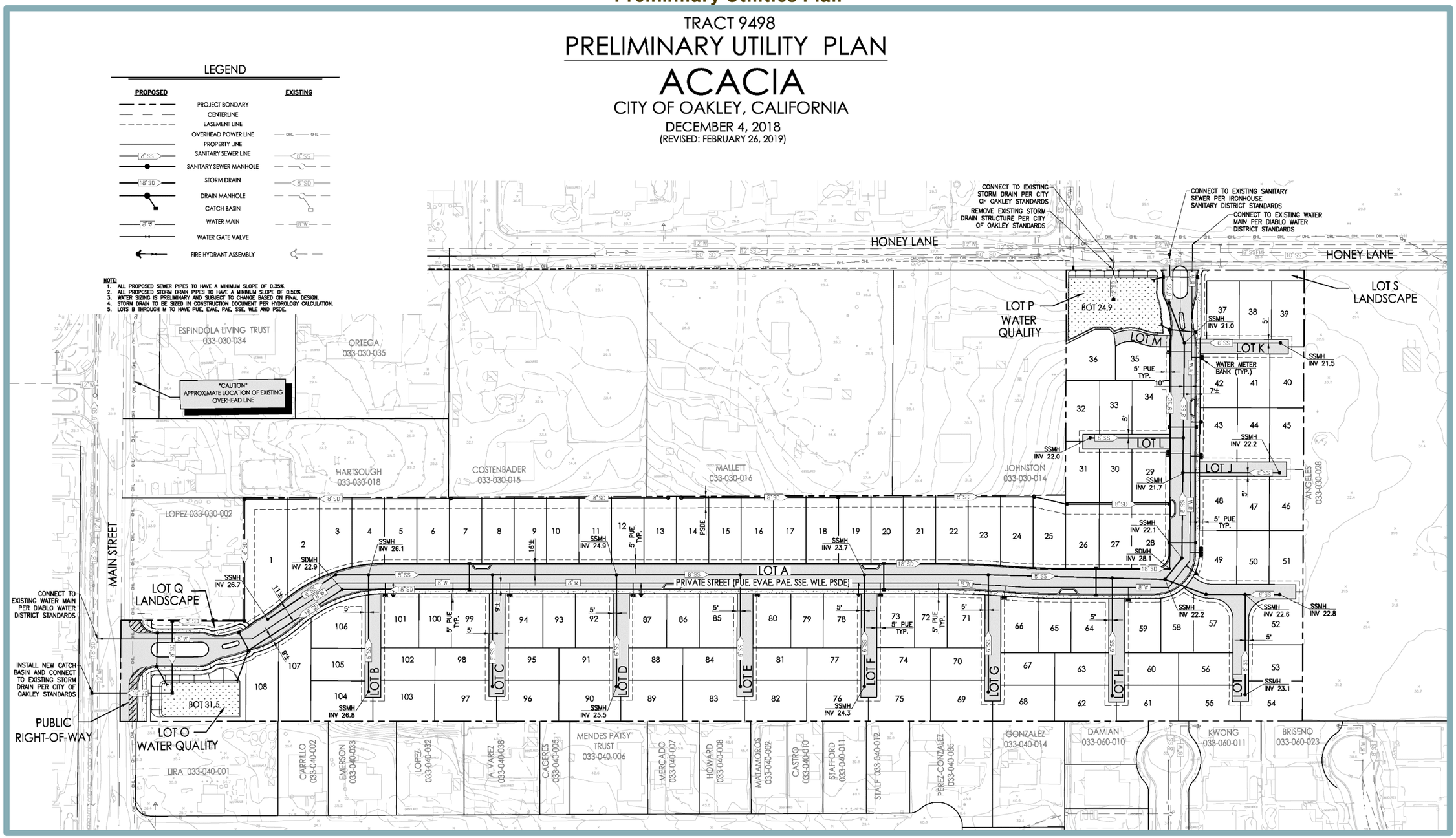


Figure 3
Preliminary Utilities Plan



General Plan Amendment

The proposed project would include a General Plan Amendment to change 13.4 acres of the project site from Single Family Residential, High Density to Multi-Family Residential, Low Density. The purpose of designating the site Multi-Family Residential, Low Density is to provide a more affordable, small lot development. The designation allows for a minimum of 5.5 dwelling units and maximum of 9.6 dwelling units per gross acre.

Rezone

The project would include a rezone of both parcels from Single-Family Residential (R-6) to Planned Unit Development (P-1). The purpose of the P-1 District is to allow diversification in the relationship of various uses, buildings, structures, and lot sizes, ensure compatibility with surrounding land uses, and to ensure substantial compliance with the General Plan.

Construction Details

For the purposes of this analysis, construction is assumed to begin in February 2020 and occur over an approximately 24-month period. The project would include demolition, site preparation, grading, paving, and building construction. The following phase lengths have been assumed for the purposes of this analysis based on available project information:

- Demolition: 11 days;
- Site preparation: two weeks;
- Grading (including soil hauling): 30 days;
- Paving: three days; and
- Building construction: 24 months.

Construction equipment used for construction activities would likely include, but would not be limited to, bulldozers, loaded trucks, auger/drill rigs, jackhammers, vibratory hammers, vibratory compactors/rollers, graders, tractors/loaders/backhoes, cranes, forklifts, cement and mortar mixers, pavers, excavators, scrapers, generators, and air compressors.

Discretionary Actions

Implementation of the proposed project would require the approval of the following entitlements by the City of Oakley:

- Adoption of the IS/MND;
- Adoption of the Mitigation Monitoring and Reporting Program;
- General Plan Amendment of 13.4 acres from Single Family High to Multi-Family Low;
- Rezone of both parcels from R-6 to P-1;
- Tentative Subdivision Map; and
- Site Plan and Design Review of 108 single-family units.

G. ENVIRONMENTAL CHECKLIST

The following checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue area identified in the checklist. Included in each discussion are project-specific mitigation measures required, where necessary, as part of the proposed project.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which mitigation has not been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant With Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

Issues	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
I. AESTHETICS. *Would the project:*				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	✖	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	✖	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	✖	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	✖	☐

Discussion

a. Scenic resources in Oakley, as defined in the City's General Plan, include predominant natural landscape features such as the Delta Waterway, Dutch Slough, Marsh Creek, and views of Mount Diablo to the west. The City of Oakley does not specifically identify scenic vistas within the City's planning area, but the conclusion could be drawn that any development which would impact views of any of the aforementioned landscape features from public viewpoints would result in an impact to scenic vistas. Marsh Creek flows approximately 0.2-mile east of the project site. The creek is not currently visible from the project site or surrounding areas, and thus, the proposed project would not interfere with existing views. Additionally, the project site is currently designated for residential use and developed with two single-family residential units. Although the project would include a General Plan Amendment, the site has been anticipated for residential use and the development of the project would not further obstruct views beyond what has been analyzed in the General Plan. Because the proposed project is not in an area designated as a scenic vista by the City of Oakley and would not have a substantial adverse effect on a scenic vista, the project would result in a ***less-than-significant*** impact related to such.

b. According to the California Scenic Highway Mapping System, administered by Caltrans, the project site is not in the vicinity of any Officially Designated State Scenic Highways[1]. Although State Route (SR) 4 is considered an Eligible State Scenic Highway, the eligible portion is located 2.5 miles to the west. Thus, the site would not substantially damage a scenic resource, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway, and a ***less-than-significant*** impact would occur.

[1] California Department of Transportation. *California Scenic Highway Mapping System Contra Costa County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed August 2019.

c. The project site is located within an urbanized area of the City. Currently, the project site contains a single-family residence and three sheds on the southwestern portion of the site, as well as a single-family residence and associated sheds on the eastern portion of the site. Residential land uses surround the project site. The proposed project would develop 108 single-family residences on the project site, along with an internal circulation system, and associated improvements.

The City's General Plan has anticipated development of the site with high density single-family development. The proposed General Plan Amendment would modify the site to be developed as a low density multi-family development. While the housing density on the site may increase slightly above what has been anticipated and analyzed in the General Plan EIR, the overall visual character of the site would remain the same as was anticipated by the City. The residences would be designed in keeping with the surrounding residential land uses, and thus, would not substantially degrade the visual character of the project site or the surroundings and a ***less-than-significant*** impact would occur.

d. Currently, the project site consists of two single-family residences and vacant land. The development of the proposed project would add 108 new single-family residences, resulting new sources of light and glare to the site from interior light spilling through windows, exterior lighting on homes, street lighting on the internal roadway, and light reflected off of windows. However, as previously discussed, the General Plan designates the site for development of single-family homes. Thus, development of the site with residences has been anticipated and analyzed by the City's General Plan EIR. The creation of new sources of light would be consistent with what is expected. Additionally, the project site is surrounded by residential land uses to the north and south and bordered to the west by Main Street, which is lined with street lamps.

Furthermore, pursuant to Section 9.1.1604, the project would be required to undergo a design review to ensure that development of the project would be in compliance with the Residential Design Guidelines, including lighting standards that establishes the City's standard for residential street lights and limits residential lighting for security purposes. Therefore, any creation of new sources of light and glare by the future project would be considered a ***less-than-significant*** impact.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES. *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*					
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	☐	☐	✖	☐
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	✖
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	✖
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	✖
e.	Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	☐	☐	✖	☐

Discussion

a,e. Currently, the eastern and southwestern portions of the project site are developed with two single-family residences and associated sheds. The undeveloped portions of the site are covered in ruderal grasses, trees, and shrubs. The project site is designated as "Farmland of Local Importance" on the Contra Costa County Important Farmland Map 2016, published by the Department of Conservation.[2] While a small portion of the site was historically used for growth of grapevines and orchard trees, agriculture has not been produced on the site since the 1950s. By 1982, the majority of the former trees had been removed. Furthermore, the project site is not zoned or designated in the General Plan for agricultural uses. Thus, development of the site with single-family residences would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use and a ***less-than-significant*** impact would occur.

b. The project site is currently zoned R-6 and would be rezoned to P-1 for development of 108 single-family residences. Consequently, the project would not conflict with any agricultural zoning use for the project site. Additionally, the site is not under a Williamson Act contract. Thus, the proposed project would not conflict with existing zoning for agricultural use and would not conflict with a Williamson Act contract, and ***no impact*** would occur.

c,d. The project site is not considered forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526) and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

[2] California Department of Conservation. *Contra Costa County Important Farmland 2016.* Published August 2018.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
III. AIR QUALITY.					
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	✖	☐	☐
b.	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?	☐	✖	☐	☐
c.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	✖	☐
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	✖	☐

Discussion

a,b. The City of Oakley is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB area is currently designated as a nonattainment area for State and federal ozone, State and federal fine particulate matter 2.5 microns in diameter ($PM_{2.5}$), and State respirable particulate matter 10 microns in diameter (PM_{10}) ambient air quality standards (AAQS). The SFBAAB is designated attainment or unclassified for all other AAQS. It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour $PM_{2.5}$ federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal $PM_{2.5}$ AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan (CAP), adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM_{10}

standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. The BAAQMD's established significance thresholds associated with development projects for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as for PM_{10} and $PM_{2.5}$, expressed in pounds per day (lbs/day) and tons per year (tons/yr), are listed in Table 1. By exceeding the BAAQMD's mass emission thresholds for ROG, NO_X, PM_{10}, or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

Table 1
BAAQMD Thresholds of Significance

Pollutant	Construction	Operational	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10} (exhaust)	82	82	15
$PM_{2.5}$ (exhaust)	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2017.

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2 – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, vehicle mix, trip length, average speed, compliance with the California Building Standards Code (CBSC), etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the proposed project's modeling assumes the following project and/or site-specific information:

- Construction would begin in February 2020;
- Construction would occur over an approximately two-year period;
- A total of 2,200 sf of building space would be demolished;
- A total of 100 cubic yards (CY) of soil/material would be imported during site preparation;
- A total of 33,000 CY of soil/material would be exported during grading activities;
- On-site renewable energy would generate 100 percent of electricity use;
- The site is within 0.3 mile of a transit station;
- Traffic calming measures, such as speed bumps and traffic circles would be included; and

- An average vehicle trip rate of 9.44 was applied based on project-specific information provided by TJKM.

The proposed project's estimated emissions associated with construction and operations are presented and discussed in further detail below. A discussion of the proposed project's contribution to cumulative air quality conditions is provided below as well. All CalEEMod results are included as Appendix A to this IS/MND.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 2. As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance for ROG, PM_{10}, and $PM_{2.5}$. However, NO_x emissions related to construction of the proposed project would exceed the applicable BAAQMD threshold of significance.

Table 2
Maximum Unmitigated Construction Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	7.82	54	**NO**
NO_X	90.60	54	**YES**
PM_{10} (exhaust)	2.31	82	**NO**
PM_{10} (fugitive)	18.2	None	**N/A**
$PM_{2.5}$ (exhaust)	2.13	54	**NO**
$PM_{2.5}$ (fugitive)	9.97	None	**N/A**

Source: CalEEMod, August 2019 (see appendix).

All projects under the jurisdiction of the BAAQMD are required to implement all of the BAAQMD's Basic Construction Mitigation Measures, which include the following:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.

8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The proposed project's required implementation of the BAAQMD's Basic Construction Mitigation Measures listed above would help to further minimize construction-related emissions.

The proposed project's required implementation of the BAAQMD's Basic Construction Mitigation Measures listed above would reduce the construction-related emissions from the levels estimated and presented in Table 2. However, the proposed project could still result in emissions above the applicable threshold of significance for construction NO_x. Therefore, the proposed project would be considered to result in a potentially significant air quality impact during construction.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 3. As shown in the table, the proposed project's operational emissions would be below the applicable thresholds of significance.

Table 3
Unmitigated Maximum Operational Emissions

Pollutant	Proposed Project Emissions		Threshold of Significance		Exceeds Threshold?
	lbs/day	tons/yr	lbs/day	tons/yr	
ROG	9.33	1.13	54	10	**NO**
NO_X	6.70	1.19	54	10	**NO**
PM_{10} (exhaust)	4.07	0.06	82	15	**NO**
PM_{10} (fugitive)	4.41	0.77	None	None	**N/A**
$PM_{2.5}$ (exhaust)	4.08	0.06	54	10	**NO**
$PM_{2.5}$ (fugitive)	1.18	0.21	None	None	**N/A**

Source: CalEEMod, August 2019 (see appendix).

Because the proposed project's operational emissions would be below the applicable thresholds of significance, the proposed project would not be considered to conflict with air quality plans during project operations.

Cumulative Emissions

Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The thresholds of significance presented in Table 1 represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If a project

exceeds the significance thresholds presented in Table 1, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality conditions. The proposed project would be below all applicable thresholds for criteria pollutants during operation, and would be below most thresholds during construction. However, because the proposed project would result in emissions above the applicable thresholds of significance for construction-related NO_X emissions, the project could result in a cumulatively considerable contribution to the region's existing air quality conditions.

Conclusion

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 CAP. Because the proposed project would result in short-term construction-related emissions of NO_X, an ozone precursor, above the applicable threshold of significance, the project could conflict with or obstruct implementation of regional air quality plans. Therefore, the proposed project could contribute to the region's nonattainment status of ozone, thus contributing to the violation of an air quality standard, and a ***potentially significant*** impact associated with construction-related emissions of NO_X would result.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the construction-related emissions of NO_X from 90.60 lbs/day to 52.17 lbs/day, which would be below BAAQMD's threshold of significance of 54 lbs/day. Thus, implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

III-1. *Prior to approval of any demolition or grading permits, the project applicant shall show on the demolition and grading plans via notation that the contractor shall ensure that all heavy-duty diesel-powered equipment (e.g., rubber-tired dozers, scrapers, excavators, etc.) to be used in the demolition and grading phases of construction of the project (including owned, leased, and subcontractor vehicles) shall, at a minimum, meet U.S. Environmental Protection Agency standards for Tier 4 engines or equivalent. The plans shall be submitted to the Community Development Department for review and approval.*

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptor would be the single-family residences located south of the project site.

The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and toxic air contaminant (TAC) emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if all of the following conditions are true for the project:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

As discussed in Section XVII, Transportation, of this IS/MND, the project would generate more than 100 new peak hour trips and, thus, a Traffic Impact Analysis was prepared, consistent with the requirements of the Contra Costa Transportation Authority (CCTA) Congestion Management Plan. Per the Traffic Impact Analysis prepared for the project by TJKM, all of the study intersections currently experience volumes well below 44,000 vehicles per hour. Furthermore, intersections where air mixing is inhibited do not exist in proximity to the project site. As such, based on the BAAQMD screening criteria, the proposed project would result in a less-than-significant impact related to localized CO emissions concentrations and would not expose sensitive receptors to substantial concentrations of localized CO.

TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. The nearest sensitive receptors to the project site are the single-family residences located south of the site.

The proposed project does not include any operations that would be considered a substantial source of TACs. Accordingly, operations of the proposed project would not expose sensitive receptors to excess concentrations of TACs.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. Specifically, the amount of soil removal required for the proposed project would result in a high number of haul trips to and from the site per day. However, as discussed above, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be limited to approximately two years. All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Additionally, Mitigation Measure III-1 above would require the use of Tier 4 construction equipment during the demolition and grading phases in order to reduce NO_X emissions below the acceptable threshold. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources.

Because construction equipment on-site would not operate for long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a substantially extended period of time would be low. Therefore, construction of the proposed project would not be expected to expose nearby sensitive receptors to substantial pollutant concentrations.

The BAAQMD thresholds of significance were established with consideration given to the health-based air quality standards established by the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), and are designed to aid the district in achieving attainment of the NAAQS and CAAQS,[3] for which the SFBAAB is in nonattainment, but the thresholds of significance do not represent a level above which individual project-level emissions would directly result in public health impacts. Rather, the thresholds of significance represent emissions levels that would ensure that project-specific emissions would not inhibit attainment of regional NAAQS and CAAQS. Considering that implementation of the proposed project would not result in short-term construction-related or long-term operational emissions of criteria pollutants that would exceed BAAQMD standards, the proposed project would not inhibit attainment of regional NAAQS and CAAQS.

Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to substantial concentrations of pollutants, including localized CO or TACs, during construction or operation. Therefore, the proposed project would result in a ***less-***

[3] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.

than-significant impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Emissions such as those leading to odor have the potential to adversely affect people. Emissions of principal concern include emissions leading to odors, emission that have the potential to cause dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Per the BAAQMD CEQA Guidelines, odors are generally regarded as an annoyance rather than a health hazard.[4] Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on a number of variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses and is not located in the vicinity of any such existing or planned land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction activities would be temporary, and hours of operation for construction equipment would be restricted to the hours of 7:30 AM and 5:30 PM on Monday through Friday per Section 4.2.208 of the City of Oakley Municipal Code. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize emissions, including emissions leading to odors. Accordingly, substantial objectionable odors would not be expected to occur during construction activities.

It should be noted that BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitation on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the proposed project is developed, the BAAQMD would ensure that such odors are addressed and any potential odor effects are minimized or eliminated.

[4] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.

With respect to dust, as noted previously, all projects under the jurisdiction of BAAQMD are required to implement the BAAQMD's Basic Construction Mitigation Measures. While the project would require several truckloads of soil removal, all haul trucks with loose material are required to be covered, which would ensure that soil from the site would not create significant amounts of dust during transport. Additionally, the Construction Mitigation Measures limit vehicle speeds within the project site and require removal of all mud or dirt tracked on to adjacent roads, which would ensure that construction of the proposed project does not result in substantial emissions of dust. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, and non-paved areas would be landscaped. Thus, project operations would not include sources of dust that could adversely affect a substantial number of people.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES.					
Would the project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	✖	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	✖	☐
c.	Have a substantial adverse effect on state or federally protected (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	✖	☐
d.	Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	✖	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	✖	☐	☐
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	✖	☐

Discussion

a. The following is based primarily on a Planning Survey Report (PSR) prepared for the proposed project by Moore Biological Consultants.[5]

Currently, the project site is occupied by two single-family residences and associated sheds in the southwestern and eastern portions of the site. The remainder of the site is vacant and covered in ruderal grasses and various shrubs and trees.

[5] Moore Biological Consultants. *Application Form and Planning Survey Report*. September 2018.

Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal and State Endangered Species Acts. Both acts afford protection to listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, sensitive species included in USFWS Recovery Plans, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally do not have special legal status, they are given special consideration under CEQA. In addition to regulations for special-status species, most birds in the U.S., including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal. In addition, plant species on California Native Plant Society (CNPS) Lists 1 and 2 are considered special-status plant species and are protected under CEQA.

The project site is located within the boundaries of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCCHCP/NCCP), which is intended to provide an effective framework to protect natural resources in the County, including special-status species. Per the PSR prepared for the proposed project, approximately 4.74 acres of the site are categorized by the Grassland (Ruderal) land cover type, 7.82 acres are categorized by the Vineyard land cover type, and 0.93 acre of the site is considered Developed (Urban) (see Figure 4). Based on the land cover types found on-site, Moore Biological Consultants conducted planning-level surveys on the project site for western burrowing owl, Swainson's hawk, and golden eagle.

In addition, Raney Planning & Management, Inc. conducted a search of the California Natural Diversity Database (CNDDB) for the project site quadrangle, Brentwood, as well as the eight surrounding quadrangles (Clifton Court Forebay, Byron Hot Springs, Tassajara, Woodward Island, Bouldin Island, Jersey Island, Antioch North, and Antioch South). The intent of the database review was to identify documented occurrences of special-status species in the vicinity of the project area, to determine their locations relative to the project site, and to evaluate whether the site meets the habitat requirements of such species. Based on the results of the CNDDB search, a total of 48 special-status plant species and 40 wildlife species are known to occur within the project region.

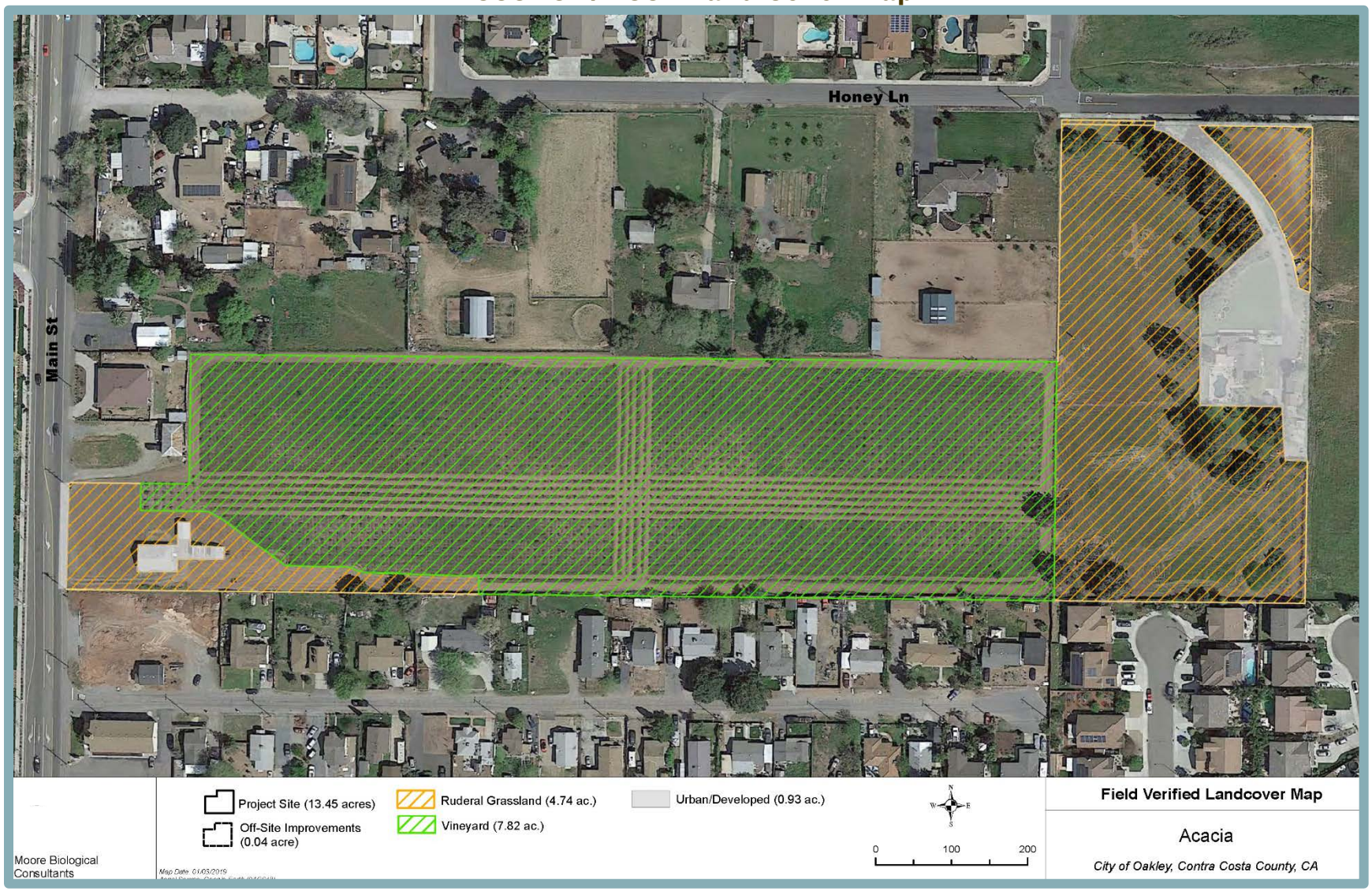
The potential for species covered by the ECCCHCP/NCCP and other special-status species to occur on the project site is discussed in further detail below.

Special-Status Plants

Special-status plants generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes and swamps, chenopod scrub, seasonal wetlands, riparian scrub, chaparral, alkali playa, dunes, and areas with unusual soil characteristics.

A survey to assess potentially suitable habitat for special-status plants was undertaken by Moore Biological Consultants on August 31, 2018. The site was systematically searched by walking throughout the site. The southwestern portion of the site's land use coverage is abandoned vineyard that has been previously disturbed by agricultural uses. The northeast portion of the site contains ruderal grassland vegetation that has been highly disturbed by agricultural use, development on the site, and other human activities. The on-site grasslands are periodically disked and/or mowed for weed abatement.

Figure 4
ECCCHCP / NCCP Land Cover Map



Due to the disturbed nature of the site and the absence of potentially suitable habitat, special-status plants do not currently occur on the project site and are not anticipated to be present on the site upon commencement of construction. Thus, construction activities associated with the proposed project would not result in adverse effects to special-status plant species.

Special-Status Wildlife

Many of the 40 special-status wildlife species identified as a result of the CNDDB search have habitat requirements that are not present on the project site (i.e., wetlands, chaparral, oak woodland, etc.). As noted previously, the site has been disturbed through past agricultural use and periodic disking.

Of the 40 special-status species, 37 are unlikely to occur on-site due to habitat limitations. However, per the PSR, despite the low quality of the existing habitat within the project site, the on-site ruderal grassland and nearby trees provide potential habitat for western burrowing owl (*Athene cunnicularia*), Swainson's hawk (*Buteo swainsoni*), and golden eagle (*Aquila chrysaetos*). Furthermore, other avian species protected by the MBTA could use the existing grassland as foraging and potential nesting habitat.

Western Burrowing Owl

The primary habitat requirement for western burrowing owls is small mammal burrows that the species uses for nesting. Typically, the species uses abandoned ground squirrel burrows, but western burrowing owls have been known to dig burrows in softer soils. In urban areas, western burrowing owls may use pipes, culverts, and piles of material as artificial burrows. Western burrowing owls breed semi-colonially from March through August.

The project site contains ruderal grassland within the range of western burrowing owl. CNDDB contains one record of the species within the vicinity of the project site. As part of the planning survey, the site was inspected for burrowing owls and ground squirrel burrows with evidence of burrowing owl occupancy (i.e., white wash, pellets, feathers). Burrowing owls or burrows with evidence of burrowing owl occupancy were not observed during the survey. Nonetheless, pre-construction surveys for western burrowing owl are required by the ECCCHCP/NCCP.

Swainson's Hawk

Per the PSR, over 30 potential nest trees exist on the site and several potential nest trees are located near and visible from site. As part of the PSR, trees on the site and visible from the site were inspected for raptor stick nests. Raptor stick nests were not observed in the on-site trees or in trees visible from the site. In addition, Swainson's hawks were not observed during the field survey, which was conducted toward the end of the nesting season of the species.

Given that the site is located in an urban area along the west edge of the Swainson's hawk nesting range and is defined by a primarily urban setting, the species is not likely to nest in trees in or near the site. Nonetheless, pre-construction surveys for Swainson's hawk are required by the ECCCHCP/NCCP.

Golden Eagle

The project site contains ruderal grassland and an abandoned vineyard that is located within the range of the golden eagle. The site contains over 30 potential nest trees, as well as a few potential nest trees near and visible from the site. As part of the PSR, trees on the site and visible from the site were inspected for raptor stick nests. However, raptor stick nests were not observed in the trees on site or any of the off-site trees visible from the site, and the species was not sighted during the survey. The CNDDB does not identify any occurrences of golden eagle within 0.5-mile of the site. In addition, per the PSR, the species typically nests more often on cliffs in remote natural areas than in trees near urban areas. Nonetheless, pre-construction surveys for golden eagle are required by the ECCCHCP/NCCP.

Nesting Raptors and Migratory Birds

The project site contains existing trees that could be used by raptors and migratory birds protected by the MBTA for nesting. Such trees would be removed as part of the proposed project. Construction activities that adversely affect the nesting success of raptors and migratory birds (i.e., lead to the abandonment of active nests) or result in mortality of individual birds constitute a violation of State and federal laws. Thus, in the event that such species occur on-site during the breeding season, project demolition and construction activities could result in an adverse effect to species protected under the MBTA.

Conclusion

Based on the above, the field survey did not identify any special-status species within the project site and the site is considered low-quality habitat. Special-status species are unlikely to occur on-site during construction of the proposed project. However, per the ECCCHCP/NCCP, pre-construction surveys are required for western burrowing owl, Swainson's hawk, and golden eagle. In addition, the site contains suitable nest trees for nesting raptors and migratory birds protected by the MBTA. Thus, the proposed project could have an adverse effect, either directly or through habitat modifications, on species identified as special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS, and a ***potentially significant*** impact could result.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

IV-1. *Prior to the issuance of demolition permits for the existing structures on the project site, the developer shall pay the applicable ECCCHCP/NCCP per-acre fee in effect for the applicable zone in compliance with Section 9.2.712 of the Oakley Municipal Code.*

Western Burrowing Owl

IV-2(a). *Prior to any ground disturbance related to activities covered under the ECCCHCP/NCCP, the project applicant shall retain a USFWS/CDFW-approved biologist to conduct a pre-construction survey for western burrowing owls within the disturbance footprint and within 500 feet from the perimeter of the footprint where possible. Surveys shall take place no more than 30 days prior to construction and shall be conducted near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls*

shall be identified and mapped. During the breeding season (February 1 to August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1 to January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted. Written results of the preconstruction survey shall be submitted to the City of Oakley Community Development Department. If western burrowing owls are not discovered, then further mitigation is not necessary.

IV-2(b). *If burrowing owls are found during the breeding season (February 1 to August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance shall include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 to January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a buffer zone (described below).*

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur shall be established around each occupied burrow (nest site). Buffer zones of 160 feet shall be established around each burrow being used during the nonbreeding season. The buffers shall be delineated by highly visible, temporary construction fencing.

If occupied burrows for burrowing owls are not avoided, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. Such doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for one week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Swainson's Hawk

IV-3(a). *Prior to any ground disturbance related to activities covered under the ECCCHCP/NCCP, which are conducted during the nesting season (March 15 to September 15), a qualified biologist shall conduct a preconstruction survey no more than one month prior to construction in order to establish whether occupied Swainson's hawk nests are located within 1,000 feet of the project site. A written summary of the survey results shall be submitted to the City of Oakley Community Development Department. If occupied nests are not found during the survey, further mitigation is not required.*

IV-3(b). *If potentially occupied nests within 1,000 feet are off the project site, then their occupancy will be determined by observation from public roads or by observations of Swainson's hawk activity (e.g., foraging) near the project site. If nests are occupied, minimization measures and construction monitoring are required (see below).*

During the nesting season (March 15 to September 15), covered activities within 1,000 feet of occupied nests or nests under construction shall be prohibited to prevent nest abandonment. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be used, the Project applicant shall coordinate with CDFW/USFWS to determine the appropriate buffer size. If young fledge prior to September 15, covered activities may proceed normally. If the active nest site is shielded from view and noise from the project site by other development, topography, or other features, the project applicant may apply to the City of Oakley Community Development Department for a waiver of this avoidance measure. Any waiver must also be approved by USFWS and CDFW. While the nest is occupied, activities outside the buffer may take place. All active nest trees shall be preserved on site, if feasible. Nest trees, including non-native trees, lost to covered activities shall be mitigated by the project proponent according to the requirements below.

The loss of non-riparian Swainson's hawk nest trees shall be mitigated by the project proponent by:

- *If feasible on-site, planting 15 saplings for every tree lost with the objective of having at least five mature trees established for every tree lost according to the requirements listed below.*

  AND either

  1) *Pay the City of Oakley an additional fee to purchase, plant, maintain, and monitor 15 saplings on the ECCCHCP/NCCP Preserve System for every tree lost according to the requirements listed below, OR*

  2) *The project proponent shall plant, maintain, and monitor 15 saplings for every tree lost at a site to be approved by the City of Oakley Community Development Department (e.g., within an ECCCHCP/NCCP Preserve or existing open space linked to ECCCHCP/NCCP preserves), according to the requirements listed below.*

The following requirements will be met for all planting options:

- *Tree survival shall be monitored at least annually for five years, then every other year until year 12. All trees lost during the first five years shall be replaced. Success shall be reached at the end of 12 years if at least five trees per tree lost survive without supplemental*

irrigation or protection from herbivory. Trees must also survive for at least three years without irrigation.

- *Irrigation and fencing to protect from deer and other herbivores may be needed for the first several years to ensure maximum tree survival.*
- *Native trees suitable for the project site shall be planted. When site conditions permit, a variety of native trees shall be planted for each tree lost to provide trees with different growth rates, maturation, and life span, and to provide a variety of tree canopy structures for Swainson's hawk. This variety will help to ensure that nest trees will be available in the short term (five to 10 years for cottonwoods and willows) and in the long term (e.g., Valley oak, sycamore). This will also minimize the temporal loss of nest trees.*
- *Riparian woodland restoration conducted as a result of covered activities (i.e., loss of riparian woodland) can be used to offset the nest tree planting requirement above, if the nest trees are riparian species.*
- *Whenever feasible and when site conditions permit, trees shall be planted in clumps together or with existing trees to provide larger areas of suitable nesting habitat and to create a natural buffer between nest trees and adjacent development (if plantings occur on the development site).*
- *Whenever feasible, plantings on the site shall occur closest to suitable foraging habitat outside the Urban Development Area.*
- *Trees planted in the ECCCHCP/NCCP preserves or other approved offsite location shall occur within the known range of Swainson's hawk in the inventory area and as close as possible to high-quality foraging habitat.*

Golden Eagle

IV-4(a). *Prior to any ground disturbance related to activities covered under the ECCCHCP/NCCP, a qualified biologist shall conduct a preconstruction survey to establish whether nests of golden eagles are occupied. A written summary of the survey results shall be submitted to the City of Oakley Community Development Department.*

IV-4(b). *If nests are occupied, minimization requirements and construction monitoring shall be required.*

Covered activities shall be prohibited within 0.5-mile of active nests. Nests can be built and active at almost any time of the year, although mating and egg incubation occurs late January through August, with peak activity in March through July. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be appropriate or that a larger buffer should be implemented, the project applicant shall coordinate with CDFW/USFWS to determine the appropriate buffer size.

Construction monitoring shall focus on ensuring that covered activities do not occur within the buffer zone established around an active nest. Although known golden eagle nest sites do not occur within or near the Urban Limit Line (ULL), covered activities inside and outside of the Preserve System have the potential to disturb golden eagle nest sites. Construction monitoring shall ensure that direct effects to golden eagles are minimized.

Raptors and Migratory Birds

IV-5(a). *Prior to any ground disturbance related to covered activities during the nesting season (March 15 to September 15), a qualified biologist shall conduct a preconstruction survey 30 days or less prior to construction in order to establish whether occupied migratory bird and/or raptor nests are located within 250 feet of the project site. A written summary of the survey results shall be submitted to the City of Oakley Community Development Department. If occupied nests occur on-site or within 250 feet of the project site, then Mitigation Measure IV-5(b) shall be implemented. If occupied nests are not found, further mitigation is not necessary.*

IV-5(b). *During the nesting season (March 15-September 15), if occupied nests occur on-site or within 250 feet of the project site, covered activities within 250 feet of occupied nests or nests under construction shall be prohibited to prevent nest abandonment. If site-specific conditions, or the nature of the covered activity (e.g., dense vegetation, limited activities) indicate that a smaller buffer could be used, the project applicant may coordinate with CDFW/USFWS to determine the appropriate buffer size. If young fledge prior to September 15, covered activities can proceed normally.*

b,c. An assessment of potentially jurisdictional waters of the U.S. or wetlands on the project site was performed during the field survey conducted on August 31, 2018 as part of the PSR. According to the PSR, the site consists of vineyard and ruderal grassland habitats that support upland grasses and weeds. The project site does not contain riparian habitat or other sensitive natural communities, including wetlands, or potentially jurisdictional waters of the State. Therefore, the proposed project would not have a substantial adverse effect on riparian habitat, sensitive natural communities, or federally protected wetlands, and a ***less-than-significant*** impact would occur.

d. The project site is located in an urbanized area and is bordered by existing residential development in all directions. Thus, the project site does not support any substantial wildlife movement corridors. Despite the proximity of the site to Marsh Creek, which could be used by migratory fish or as a corridor for other wildlife species, the area surrounding the creek is dominated by residential development. In addition, existing residential units separate the project site from the creek and, thus, the project is not likely to interfere with any species using the creek as a migratory corridor. As such, the project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites, and a ***less-than-significant*** impact would occur.

e. A Tree Inventory Summary was performed for the project site by Sierra Nevada Arborists.[6] Currently, the project site contains 24 trees across the site. A total of 21 trees would be removed as part of the proposed project.

Section 9.1.1112 of the Municipal Code defines protected trees and establishes requirements governing the removal of such. The Tree Inventory Summary determined that of the 24 trees measuring four inches in diameter or larger, one has been recommended for removal due to the nature and extent of defects, compromised health, and/or structural instability noted at the time of the field inventory. The remaining on-site trees to be removed would include 19 non-protected trees and two protected California Pepper trees. While the project site does contain one Chinaberry tree with a diameter at breast height of 44 inches, the tree is not considered protected due to the poor structure and advanced maturity. It should be noted that two protected trees are located just off-site; however, the off-site protected trees would not be removed as part of the proposed project.

Based on the Tree Inventory Summary, the removal of the two protected trees on the project site would require an application and permit for removal. The application and permitting process would be followed according to Section 9.1.1112 of the Municipal Code. According to the Municipal Code, the removal of the trees would require replacement at a ratio of 12 to 1 or payment of in-lieu fees equal to the cost of 12 protected trees. The replacement or payment of fees would ensure that the removal of two protected trees would not be significant.

Although the two protected trees located off-site would not be removed as part of the proposed project, the trees are subject to a tree protection plan. Without a plan developed according to Section 9.1.1112 of the Municipal Code, the protected trees could be disturbed during construction and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

IV-6. Prior to the issuance of grading permits, the applicant shall develop a tree preservation plan that would implement the following practices:

1. *Install protective fencing at the edge of the dripline radius of the protected trees;*
2. *Place appropriate signage on the fencing indicating that the trees are protected and construction activity should not take place under the canopy of the protected trees. The fencing and signage should remain in place for the duration of the construction;*
3. *For tree #107, excavation, grading, and trenching should be done in a way to prevent damage to the roots of the trees. Roots greater than one inch in diameter that need to be cut for trenching or grading should be done in accordance with ANSI standards, under the direction of a qualified project arborist; and*

[6] Sierra Nevada Arborists. *Amended Tree Inventory Summary, Construction Impact Assessment and Tree Protection Plan.* February 19, 2019.

4. *Any pruning of the canopy of protected tree #107 to facilitate construction should be performed in accordance with ANSI standards, under the direction of a qualified project arborist.*

The tree preservation plan shall be submitted to the Community Development Department for review and approval.

f. The project site is located within the boundaries of the ECCCHCP/NCCP, which establishes an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species and provides guidance for the mitigation of impacts to covered species. As noted previously, the site is within the range of potential habitat for several wildlife species covered under the ECCCHCP/NCCP. The PSR and field survey for the proposed project were conducted in adherence with requirements by the ECCCHCP/NCCP. Applicable Avoidance and Minimization Measures for western burrowing owl, Swainson's hawk, golden eagle, and nesting and migratory birds, as adapted from Chapter 6 of the ECCCHCP/NCCP, have been included in Mitigation Measures IV-2 through IV-5 of this IS/MND. Additionally, the proposed project would be subject to pay all applicable fees according to the Fee Zone Map of the ECCCHCP/NCCP prior to construction (Mitigation Measure IV-1). The developer would be required to pay the appropriate fees based on the applicable fee calculator at the time of development. Therefore, the proposed project would not conflict with the applicable provisions of the ECCCHCP/NCCP and a ***less-than-significant*** impact would occur related to conflicts with an adopted HCP, NCCP, or other approved local, regional, or State HCP.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
V. CULTURAL RESOURCES. *Would the project:*					
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	✖	☐
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	✖	☐	☐
c.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	✖	☐	☐

Discussion

a. The Oakley General Plan EIR on page 3-149 states that "while there are no officially designated historic structures in Oakley, there are numerous buildings, primarily in the old town area, eligible for such designation or listing […] Oakley's historic resources are generally in need of official recognition." Historical resources are features that are associated with the lives of historically-important persons and/or historically-significant events, or that embody the distinctive characteristics of a type, period, region, or method of construction. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics.

Per the results of the California Historical Resources Information System (CHRIS) records search conducted by the Northwest Information Center (NWIC), the State Office of Historic Preservation Historic Property Directory (which includes listings of the California Register of Historical Interest, and the National Register of Historic Places) does not list any recorded buildings or structures within or adjacent to the project area. In addition, the NWIC base maps do not show any recorded buildings or structures within the project site.

Currently, the project site contains a single-family residence and three sheds in the southwestern corner of the site, along Main Street, and a single-family residence and three sheds on the eastern border of the site. While the residences on the project site are not listed on any State or National Register, the buildings were built between the 1930s and 1940s. Structures that are 50 years of age or older may be eligible for consideration as historic resources under the California Register of Historic Places (CRHP) and the National Register of Historic Places (NRHP). Thus, the structures have been evaluated pursuant to the CRHP and NRHP criteria. The CRHR eligibility criteria include the following:

(1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
(2) It is associated with the lives of persons important to local, California, or national history;

(3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
(4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

The NRHP eligibility criteria include the following: "The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and

(a) is associated with events that have made a significant contribution to the broad patterns of our history;
(b) is associated with the lives of a person or persons significance in our past;
(c) embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction; or
(d) has yielded or may be likely to yield information important in prehistory or history.

According to the City's General Plan EIR, the largest concentration of potential historic resources from the period of early development are located in Old Town Oakley, which is approximately one mile from the project site. While several farm structures were built in the City between 1901 and 1955, and farming in Oakley was historically significant, the site was not associated with historic farming activities, and thus, the structures would not embody a distinctive characteristic of a type, period, region, or method of construction, or yield information important to the prehistory or history of the local area. In addition, the existing residences are not associated with the lives of any persons important to local, California, or national history.

Furthermore, the Contra Costa County Conservation and Development, Community Development Division has compiled a list of historical structures and sites throughout Contra Costa County. The buildings on the project site, nor any structures or sites in the vicinity, are listed on the Historic Resources Inventory.[7]

Thus, the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5, and a ***less-than-significant*** impact would occur.

b,c. According to the Oakley General Plan EIR (p. 3-148), few archeological finds have occurred in the City of Oakley. However, the City's General Plan EIR states that given the rich history of the region, the City will continue to require procedures if artifacts are unearthed during construction. The project site has been disturbed during past agricultural operations as well as during periodic disking and mowing. Additionally, review of historical literature and maps did not give indication of the possibility of historic-period activity within

[7] Contra Costa County Conservation and Development, Community Development Division. *Historic Resources Inventory*. July 2019.

the project site. As a result, the project would be unlikely to unearth cultural resources in the previously disturbed areas where soil and debris would be excavated.

Based on evaluation of the environmental setting and features associated with known sites, Native American resources in Contra Costa County have been found along the general margin of the San Joaquin-Sacramento River Delta and associated wetlands. Given the proximity of the site to Marsh Creek, the potential exists for unrecorded Native American resources to be discovered on the project site.

Due to the disturbed nature of the site and the surrounding area, the discovery of archeological resources is not expected. However, unknown archaeological and Native American resources, including human bone, have the potential to be uncovered during ground-disturbing construction activities. As a result, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the potential construction-related impact to a *less-than-significant* level.

V-1. *If buried historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the discovery and the developer shall immediately notify the Planning Division of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery, as appropriate. The archaeologist shall be required to submit to the City of Oakley Planning Division for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery would not be allowed until the preceding work has occurred.*

V-2. *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. Additional work is not to take place within 100 feet of the find until the identified appropriate actions have been implemented.*

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VI. ENERGY.				
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	✖	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	✖	☐

Discussion

a,b. The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2016 California Green Building Standards Code and the Building Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to energy demand during construction and operations are provided below.

California Green Building Standards Code

The 2016 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the CBSC, which became effective with the rest of the CBSC on January 1, 2017. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of Electric Vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills;
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board; and
- For some single-family and low-rise residential development developed after January 1, 2020, mandatory on-site solar energy systems capable of producing 100 percent of the electricity demand created by the residence(s). Certain residential developments, including those developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement.

Building Energy Efficiency Standards

The 2016 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2013 Building Energy Efficiency Standards resulting in a 28 percent reduction in energy consumption from the 2013 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards are achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high-performance attics and walls.

The 2019 Building Energy Efficiency Standards, which go into effect on January 1, 2020, build upon energy efficiency measures from the 2016 Building Energy Efficiency Standards resulting in a seven percent reduction in energy consumption from the 2016 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficiency lighting, improved water heating system efficiency, and high-performance attics and walls.

One of the improvements included within the 2019 Building Energy Efficiency Standards will be the requirement that certain residential developments, including some single-family and low-rise residential developments, include on-site solar energy systems capable of producing 100 percent of the electricity demanded by the residences. Certain residential developments, including developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement; however, such developments would continue to be subject to all other applicable portions of the 2019 Building Energy Efficiency Standards.

Construction Energy Use

Construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the sites where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the CARB In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or

other design changes, which could help to reduce demand on oil and emissions associated with construction.

The CARB has recently prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),[8] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The regulation described above, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Following implementation of the proposed project, PG&E would provide electricity and natural gas to the project site. Energy use associated with operation of the proposed project would be typical of residential uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed single-family homes.

The proposed residential project would be subject to all relevant provisions of the most recent update of the CBSC, including the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary. In addition, electricity supplied to the project by PG&E would comply with the State's Renewables Portfolio Standard (RPS), which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent by 2030. Thus, a portion of the energy consumed during project operations would originate from renewable sources.

[8] California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, as discussed in Section XVII, Transportation, of this IS/MND, the project site is located in an urban area with access to several public transit lines. Transit would provide access to several grocery stores, restaurants, banks, and schools within close proximity to the project site. The site's access to public transit and proximity to such uses would reduce VMT and, consequently, fuel consumption associated with the proposed single-family residences. Furthermore, the project would include construction of sidewalks along both sides of the proposed internal roadway and along the project frontage at Main Street. Such sidewalks would connect to existing sidewalk facilities to the north and south of the site at Main Street, thereby providing for increased pedestrian connectivity with the surrounding area and resulting in reduced vehicle use.

Conclusion

Based on the above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VII. GEOLOGY AND SOILS. *Would the project:*				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist - Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault?	☐	☐	✖	☐
ii. Strong seismic ground shaking?	☐	☐	✖	☐
iii. Seismic-related ground failure, including liquefaction?	☐	✖	☐	☐
iv. Landslides?	☐	✖	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	✖	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	✖	☐	☐
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code?	☐	☐	✖	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	✖
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	✖	☐	☐

Discussion

ai-aii. According to the City's General Plan EIR, the City of Oakley is subject to seismic risk because the City is within the San Francisco Bay Area, an area of high seismicity. The San Francisco Bay Area has been impacted by more than 10 severe earthquakes throughout historic time. As shown in Figure 8-1 of the City's General Plan, *Faults and Seismic Stability*, three active faults exist in the Oakley area, with the Brentwood Fault directly underlying the City, and the Davis and Antioch Faults to the west of the City. However, the project site does not contain any active or potentially active faults, nor is the

site located within a State-designated Alquist-Priolo Fault Zone.[9] Thus, the potential for fault rupture at the project site is relatively low.

An earthquake of moderate to high magnitude generated by the above faults could cause considerable ground shaking at the project site. However, the proposed buildings would be properly engineered in accordance with the CBSC. Projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage, 2) resist moderate earthquakes without structural damage but with some nonstructural damage, and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance with the design standards is verified by the City prior to the issuance of building permits. Proper engineering of the proposed buildings would ensure that the project would not be subject to substantial risks related to seismic ground shaking.

Based on the above, a ***less-than-significant*** impact would occur related to seismic surface rupture and strong seismic ground shaking

aiii, aiv,

c. The proposed project's potential effects related to liquefaction, landslides, lateral spreading, and subsidence/settlement are discussed in detail below.

Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as that imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded and fine-grained sands. As shown in Figure 8-2, *Estimated Liquefaction Potential*, of the City of Oakley General Plan, most of the City's planning area is within an area of generally high liquefaction potential, including the project site. The General Plan Policy 8.1.9 requires any structures permitted in areas of high liquefaction potential be sited, designed, and constructed to minimize the dangers from damage due to earthquake-induced liquefaction. A geologic engineering study must be performed which defines and delineates potential hazardous geologic and/or soils conditions, recommends means of mitigating any adverse conditions, and provides implementation of the mitigation measures. Because the proposed project would be sited in an area of generally high liquefaction potential, the project would be subject to Policy 8.1.9, and would require a design-level geologic engineering study. Without implementation of relevant design standards, the proposed project could expose people or structures to potential risk of loss, injury, or death involving liquefaction.

Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The topography of the project site is relatively level, and the site is not located on or near any slopes. Furthermore, per the California Geologic Survey, the site is not located within a designated seismic hazard zone for landslides.[10] Thus, landslides are not likely to occur on- or off-site as a result of the proposed project.

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9 California Geologic Survey. *Seismic Hazard Zone Report for the Brentwood 7.5-Minute Quadrangle, Contra Costa County, California.* 2018.

10 California Geologic Survey. *Seismic Hazard Zone Report for the Brentwood 7.5-Minute Quadrangle, Contra Costa County, California.* 2018.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. The project site does not contain any open faces that would be considered susceptible to lateral spreading. Therefore, the potential for lateral spreading to pose a risk to the proposed development is relatively low.

Subsidence/Settlement

Subsidence in Contra Costa County has occurred primarily along the Delta, within the City's planning area. As discussed above, the project's risk of liquefaction would require a geologic study to determine the appropriate design of the structures to minimize the dangers from damage due to liquefaction or subsidence. Implementation of all recommendations would ensure that subsidence/settlement would not pose a substantial risk to the proposed development.

Conclusion

Based on the above, the proposed project would not be subject to substantial risks related to landslides, lateral spreading, or subsidence/settlement. However, the General Plan places the project site within an area of high liquefaction potential. Development of the project would require a geological engineering report to determine the best development standards to minimize risk. Without implementation of the necessary minimization measures, the proposed project could cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction. Thus, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impacts related to liquefiable soils, and ground lurching to a *less-than-significant* level.

VII-1. *Prior to issuance of a grading permit, the applicant/developer shall incorporate the recommendations of a design-level geotechnical report into the Improvement Plans for approval by the City Engineer. The following measures include, but are not limited to, the options available to reduce site liquefaction potential and expansive soils, and/or adverse effects to structures located above potentially liquefiable soils. Once final grading plans are designed, the project's geotechnical engineers shall determine the appropriate methods of mitigating the effects of liquefaction, such as:*

- *Remove and replace potentially liquefiable soils and/or expansive and corrosive soils;*
- *Strengthen foundations (e.g., post-tensioned slab, reinforced mat or grid foundation, or other similar system) to resist excessive differential settlement associated with seismically-induced liquefaction;*
- *Support the proposed structures on an engineered fill pad (minimum of 5 feet thick) in order to reduce differential settlement resulting from seismically-induced liquefaction and post-seismic pore pressure dissipation; and/or*

- *Densify potentially liquefiable soils with an in-situ ground improvement technique such as deep dynamic compaction, vibro-compaction, vibro-replacement, compaction grouting, or other similar methods.*

VII-2. *All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the Director of Public Works/City Engineer, Chief Building Official, and a qualified Geotechnical Engineer prior to issuance of grading and building permits to ensure that all geotechnical recommendations specified in the geotechnical report required by Mitigation Measure VII-1 are properly incorporated and utilized in the project design.*

b. Development of the proposed project would cause substantial ground disturbance of top soil. The ground disturbance would be primarily limited to the areas proposed for grading and excavation. Issues related to erosion and degradation of water quality during construction are discussed in Section X, Hydrology and Water Quality, of this IS/MND. As noted therein, the proposed project would not result in substantial soil erosion or the loss of topsoil. Thus, a ***less-than-significant*** impact would occur.

d. The project site is within a region that is identified in the Oakley General Plan EIR as possessing soils that are very slowly permeable and highly expansive. Highly expansive soils are prone to shrink/swell activity, which could have adverse effects on structures constructed on such soils. Mitigation Measure VII-2 requires compliance with recommendations in a geotechnical report which would ensure that the foundations and pavements are designed in order to reduce the impact of the proposed project from expansive soils to a ***less-than-significant*** level.

e. The proposed project would be serviced by ISD for sanitary sewer collection and treatment. Construction of the proposed project would include connection to existing City sewer service infrastructure. Thus, the project would have ***no impact*** related to soils incapable of adequately supporting septic tanks.

f. As discussed in Section V, Cultural Resources, according to the Oakley General Plan EIR (page 3-148), few paleontological finds have been discovered in the City of Oakley. Additionally, the project site has been disturbed during past agricultural and development activities. As a result, the project would be unlikely to directly or indirectly destroy a unique paleontological resource or unique geologic feature. However, construction activities involving grading, paving, and excavation could result in the discovery of a paleontological feature, and ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impacts related to liquefiable soils, and ground lurching to a *less-than-significant* level.

VII-3. *Implement Mitigation Measures V-1.*

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS.					
Would the project:					
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	✖	☐
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	✖	☐

Discussion

a,b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

The proposed project is located within the jurisdictional boundaries of BAAQMD. BAAQMD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move towards climate stabilization. If a project would generate GHG emissions above the threshold level, the project would be considered to generate significant GHG emissions and conflict with applicable GHG regulations. The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100 $MTCO_2e$/yr.

It should be noted that construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. In addition, neither BAAQMD nor the City has adopted thresholds of significance for construction-related GHG emissions. Nevertheless, GHG emissions resulting from construction and operations of the proposed project were modeled using the CalEEMod emissions model under the same assumptions as discussed in Section III, Air Quality, of this IS/MND. In order to evaluate the project's consistency with California's goals, the CO_2

intensity factor within CalEEMod was adjusted to reflect PG&E's progress towards achieving the State's Renewable Portfolio Standard (RPS) goals for the operational year of 2023. All modeling outputs are included in the appendix to this IS/MND.

The project's estimated maximum yearly construction emissions of 581.3 $MTCO_2e$ would be well below BAAQMD's adopted operational threshold of 1,100 $MTCO_2e$/yr. In order to provide a conservative estimate of emissions, the proposed project's construction GHG emissions have been amortized over the anticipated operational lifetime of the project.

The BAAQMD does not recommend any specific operational lifetimes for use in amortizing construction-related GHG emissions; however, the emissions were amortized based off of information from California Executive Order D-16-00 and the US Green Building Council's 2013 report on *The Costs and Financial Benefits of Green Buildings.*[11] In the absence of specific BAAQMD recommendations, the 25 year lifetime is used for analysis. Construction of the proposed project would occur over two years and would result in total GHG emissions of 1,000.5 $MTCO_2e$. Thus, the total construction emissions amortized over 25 years would be 40.0 $MTCO_2e$/yr. Accordingly, the proposed project would not be expected to have a significant impact related to GHG emissions during construction.

The operational emissions were determined to equal 1,053.5 $MTCO_2e$/yr per year. Consequently, even if project operational and amortized construction emissions were considered together, the total mass emission of 1,093.5 $MTCO_2e$/yr would be below BAAQMD's threshold of 1,100 $MTCO_2e$/yr. Consequently, neither construction nor operations of the proposed project would be anticipated to result in significant emissions of GHGs.

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; and impacts would be considered ***less than significant***.

[11] Sacramento Metropolitan Air District. *Guide to Air Quality Assessment in Sacramento County*. Available at: http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools. Accessed February 2019.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS.					
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	✖	☐
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	✖	☐	☐
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	✖
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	✖
e.	For a project located within 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 result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	✖
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	✖	☐
g.	Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	✖	☐

Discussion

a. Residential land uses are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future residents may use common household cleaning products, fertilizers, and herbicides on-site, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations

governing use of such products and the amount anticipated to be used on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b. The following discussion provides an analysis of potential hazards and hazardous materials associated with upset or accident conditions related to the proposed construction activities and existing on-site conditions.

Construction Activities

Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used at the project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes and local City ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Thus, construction of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Existing On-Site Hazardous Conditions

A Phase I Environmental Site Assessment (ESA) was prepared for the proposed project by Consulting Associates of California for the purpose of identifying potential recognized environmental conditions (RECs) associated with the project site.[12] The Phase I ESA was performed in accordance with the American Society for Testing and Materials (SSTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* . The Phase I ESA consisted of a reconnaissance of the site, summary of historical information review, regulatory agency records review, and interviews.

Sources reviewed as part of the Phase I ESA indicate that the two parcels on the project site were developed with a single-family residence in 1932 and 1939. A vineyard and orchard trees were planted on one parcel in 1939 and sustained through the late 1950s. The garages and other structures were built between 1950 and 1963. Between 1982 and 1984, a natural gas well was drilled and operated near the western portion of the site. By 1982, the majority of the former orchard trees and vineyard had been removed from the site.

Septic System and Wells

The project site currently contains one septic tank and leach field located on the northwest portion of the site, and two septic tanks and two leach fields located on the northeast portion of the site. Domestic water is provided by an on-site well on each property that was installed at the time the residence was constructed. The project applicant would be

[12] Consulting Associates California. *Phase I Environmental Site Assessment, The Minor and Hardcastle Properties Oakley California.* June 13, 2018.

required to properly abandon the existing septic systems and wells prior to development of the proposed project.

Additionally, a natural gas supply well was drilled and operated on the western portion of the site from approximately 1983 through 1999. The well was operated by Shohone Oil Corporation and was drilled to approximately 8,140 feet. The above-ground well equipment was removed in 1999 and the Phase I ESA did not identify any RECs associated with past use of the well.

Asbestos-Containing Materials and Lead-Based Paint

Asbestos is the name for a group of naturally occurring silicate minerals that are considered to be "fibrous" and, through processing, can be separated into smaller and smaller fibers. The fibers are strong, durable, chemical resistant, and resistant to heat and fire. They are also long, thin, and flexible, such that they can be woven into cloth. Because of the above qualities, asbestos was considered an ideal product and has been used in thousands of consumer, industrial, maritime, automotive, scientific, and building products. However, later discoveries found that, when inhaled, the material caused serious illness.

For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation (boiler insulation, pipe lagging, and related materials) and surface materials must be designated as "presumed asbestos-containing material" unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act. Because the existing structures were built prior to 1980, the potential exists that asbestos-containing materials (ACM) were used in the construction of the residential structures and outbuildings on-site.

Lead-based paint (LBP) is defined by federal guidelines as any paint, varnish, stain, or other applied coating that has one milligram of lead per square centimeter or greater. Lead is a highly toxic material that may cause a range of serious illnesses, and in some cases death. In buildings constructed after 1978, the presence of LBP is unlikely. Structures built prior to 1978, and especially prior to the 1960s, are expected to contain LBP. The existing structures on the property were constructed before the phase-out of LBPs in the 1970s. Therefore, the potential exists that LBPs are present in the on-site residence and outbuildings.

Based on the age of the existing on-site structures, ACM and LBP are presumed to be present. The proposed project would include demolition of all on-site structures. Therefore, without implementation of the appropriate safety measures, the proposed project could potentially expose construction workers during structure demolition to LBP and ACM.

Pesticides

A subsequent soil sampling was conducted to evaluate the presence of residual pesticides and arsenic in surface soil from past agricultural use on the project site.[13] Eight composite samples were analyzed for organochlorine pesticides. Detectable amounts of chemicals were identified in all samples; however, the concentrations were all below the California Environmental Protection Agency's (EPA) California Human Health Screening Levels

[13] Consulting Associates of California. *Summary Surface Soil Sampling at Minor and Hardcastle Properties in Oakley, California.* July 10, 2018.

(CHHSLs). The CHHSLs are concentrations of chemicals in soil that the EPA considers to be below the threshold of concern for risk to human health.

Additionally, six soil samples were analyzed for concentrations of arsenic. Each sample's level of arsenic was below the anthropogenic natural level of 12 ppm for agricultural land in California. Thus, the soil sampling determined that the soils found on the project site do not contain elevated concentrations of organochlorine pesticides or arsenic.

Other Hazardous Conditions

Per the Phase I ESA, features such as stressed vegetation, wells, above-ground storage tanks (ASTs), and underground storage tanks (USTs) were not identified on the site. Hazardous materials or petroleum substances, with the exception of small quantities of household maintenance materials, were not observed.

Conclusion

Although the site has been used for agricultural purposes, soil sampling determined that past agricultural uses have not contaminated on-site soils. However, based on the age of the buildings and the presence of septic and well systems, without proper testing or abandonment, the project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impacts to a *less-than-significant* level.

IX-1. *Prior to issuance of grading permits, the existing septic systems shall be abandoned in consultation with the Contra Costa County Environmental Health Department. Proof of abandonment shall be provided to the City Community Development Department and City Engineer.*

IX-2. *Prior to initiation of any ground disturbance activities within 50 feet of the on-site well, the project applicant shall hire a licensed well contractor to obtain a well abandonment permit from Contra Costa County Environmental Health Division and properly abandon the on-site wells to the satisfaction of the Contra Costa County Environmental Health Division. Proof of abandonment shall be provided to the City Community Development Department and City Engineer.*

IX-3. *Prior to issuance of a demolition permit for the on-site structures, the project applicant shall consult with certified Asbestos and Lead Risk Assessors to complete and submit for review to the Planning Division an asbestos and lead survey. If asbestos-containing materials or lead-containing materials are not discovered during the survey, further mitigation related to asbestos-containing materials or lead containing materials shall not be required. If asbestos-containing materials and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos-containing materials and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal-OSHA)*

Administration regulations and disposed of in accordance with all CalEPA regulations, prior to the demolition and/or removal of the on-site structures. The plan shall include the requirement that work shall be conducted by a Cal-OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR 1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the Planning Division for review and approval. Materials containing more than one (1) percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.

c. The proposed project would not be located within one-quarter mile of a school. Therefore, the project would have ***no impact*** related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. The proposed project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5,[14] and would not create a significant hazard to the public or the environment. Therefore, ***no impact*** would occur.

e. The proposed project is not located in the within an airport land use plan. The closest airport to the project site is the Byron Airport, located 10.5 miles from the project site. As such, the proposed project site is not located within two miles of any public airports and does not fall within an airport land use plan area. Therefore, ***no impact*** related to a safety hazard for people residing or working in the project area would occur.

f. During operation, the proposed project would provide adequate access for emergency vehicles and would not interfere with potential evacuation or response routes used by emergency response teams. The project would not substantially alter the existing circulation system in the surrounding area. As a result, the project would have a ***less-than-significant*** impact with respect to impairing the implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

g. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the proposed project site is not located within a Very High Fire Hazard Severity Zone.[15] In addition, the site is located in an urbanized area of the City and is surrounded by residential development on all sides. The site is not located adjacent to wildlands. Therefore, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, and a ***less-than-significant*** impact would occur.

[14] California Department of Toxic Substances Control. EnviroStor. Available at: http://www.envirostor.dtsc.ca.gov. Accessed August 2019.

[15] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY.				
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	✖	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	✖	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	✖	☐	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	✖	☐	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	✖	☐	☐
iv. Impede or redirect flood flows?	☐	☐	☐	✖
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	✖
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	✖	☐

Discussion

a. During the early stages of construction activities, topsoil would be exposed due to grading and excavation of the site. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. Given that the proposed project would disturb 13 acres of land, the proposed construction activities would be subject to applicable SWRCB regulations. The City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts. The City of Oakley requires all development projects to use BMPs to treat runoff.

Following completion of project buildout, the site would be largely covered with impervious surfaces and landscaping areas, and topsoil would no longer be exposed. As such, the potential for impacts to water quality would be reduced. However, addition of the impervious surfaces on the site would result in the generation of urban runoff, which could contain pollutants if the runoff comes into contact with vehicle fluids on parking surfaces and/or landscape fertilizers and herbicides. All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit.

The City of Oakley has adopted the County C.3 Stormwater Standards, which require new development and redevelopment projects that create or alter 10,000 or more sf of impervious area to contain and treat all stormwater runoff from the project site. Thus, the proposed project would be subject to the requirements of the SWRCB and the Regional Water Quality Control Board (RWQCB), including the C.3 Standards, which are included in the City's NPDES General Permit. Compliance with such requirements would ensure that impacts to water quality standards or waste discharge requirements would not occur during operation of the proposed project.

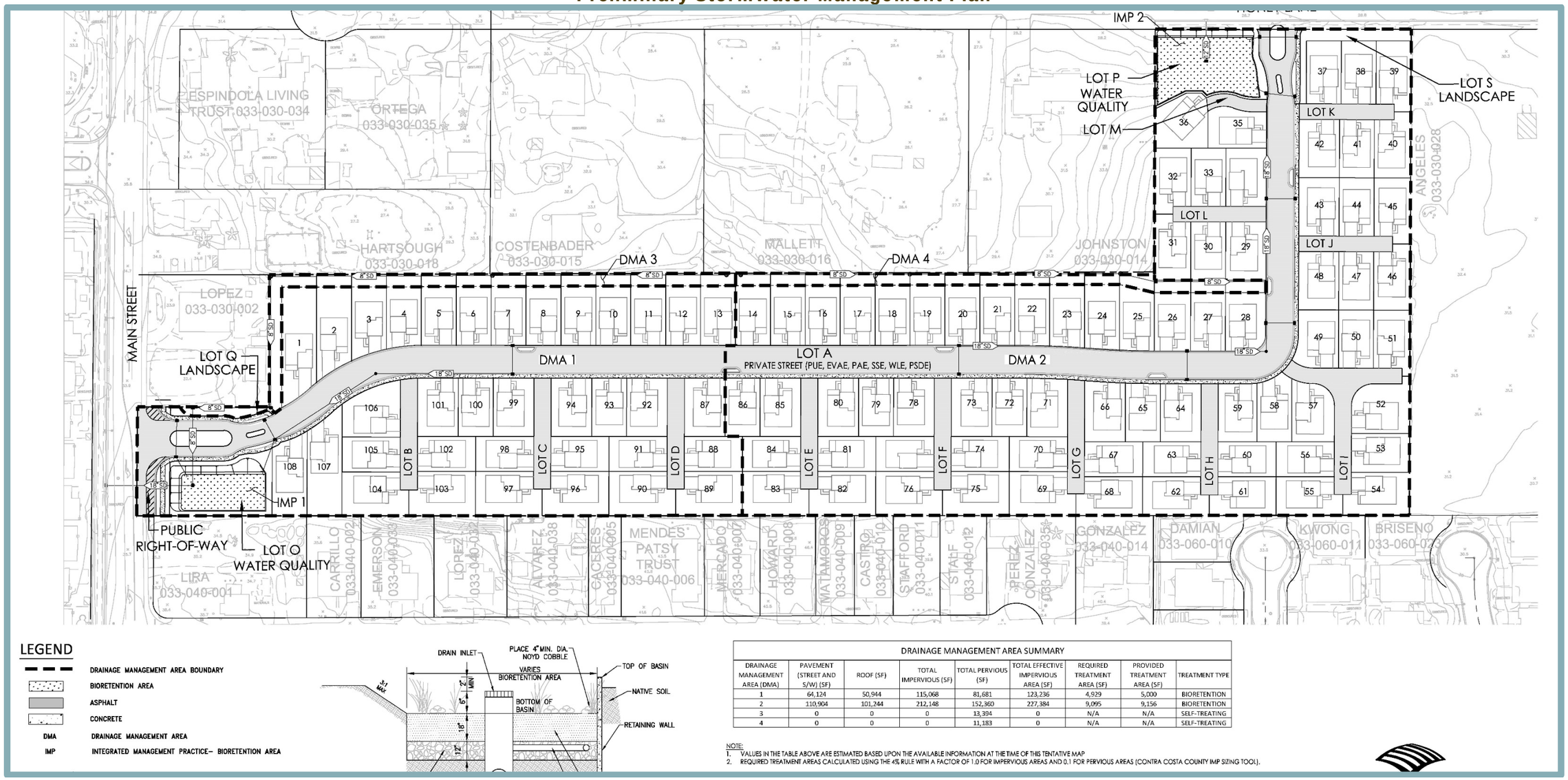
In compliance with the C.3 Guidebook, the proposed project would divide the site into four drainage management areas (DMAs) (see Figure 5). Each DMA would be sized to properly treat runoff from the project site. The Stormwater Management Plan (SWMP) prepared for the proposed project conforms with the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook and verifies that the proposed project would comply with all City stormwater requirements.

Based on the above, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Thus, a ***less-than-significant*** impact would occur.

b,e. Water supplies for the project site would be supplied by the Diablo Water District (DWD). Per the DWD's 2015 Urban Water Management Plan (UWMP),[16] the primary water supply is surface water. However, the DWD does operate a groundwater supply system that currently consists of groundwater from two wells in Oakley, conveyed in a dedicated well supply pipeline to a blending facility. The wells are connected to the Tracy Subbasin underlying the City.

[16] Diablo Water District. *Final 2015 Urban Water Management Plan*. June 2016.

Figure 5
Preliminary Stormwater Management Plan



LEGEND

- DRAINAGE MANAGEMENT AREA BOUNDARY
- BIORETENTION AREA
- ASPHALT
- CONCRETE
- DMA — DRAINAGE MANAGEMENT AREA
- IMP — INTEGRATED MANAGEMENT PRACTICE– BIORETENTION AREA

DRAINAGE MANAGEMENT AREA SUMMARY

DRAINAGE MANAGEMENT AREA (DMA)	PAVEMENT (STREET AND S/W) (SF)	ROOF (SF)	TOTAL IMPERVIOUS (SF)	TOTAL PERVIOUS (SF)	TOTAL EFFECTIVE IMPERVIOUS AREA (SF)	REQUIRED TREATMENT AREA (SF)	PROVIDED TREATMENT AREA (SF)	TREATMENT TYPE
1	64,124	50,944	115,068	81,681	123,236	4,929	5,000	BIORETENTION
2	110,904	101,244	212,148	152,360	227,384	9,095	9,156	BIORETENTION
3	0	0	0	13,394	0	N/A	N/A	SELF-TREATING
4	0	0	0	11,183	0	N/A	N/A	SELF-TREATING

NOTE:
1. VALUES IN THE TABLE ABOVE ARE ESTIMATED BASED UPON THE AVAILABLE INFORMATION AT THE TIME OF THIS TENTATIVE MAP
2. REQUIRED TREATMENT AREAS CALCULATED USING THE 4% RULE WITH A FACTOR OF 1.0 FOR IMPERVIOUS AREAS AND 0.1 FOR PERVIOUS AREAS (CONTRA COSTA COUNTY IMP SIZING TOOL).

While the proposed project would create new impervious surfaces within the site, the Tracy Subbasin is 345,000 acres in size; therefore, the groundwater basin within which the project site is located would be recharged from many sources over a large area. Additionally, the Tracy Subbasin has been designated as a medium-priority basin by the Department of Water Resources, and is not in overdraft conditions. Therefore, any new impervious surfaces associated with the project would not interfere substantially with groundwater recharge within the Tracy Subbasin.

While the proposed project would require a general plan amendment to allow a greater number of dwelling units per acre, the project site has been anticipated for residential development, which likely involves covering of the entire site in impervious surfaces. As such, the increase in density of residences would not impact the loss of groundwater recharge. However, the project site would include two bio-retention basins and several landscaping areas, which would facilitate recharge.

Based on the above, although the project would increase the amount of impervious surfaces currently on the project site, the DWD has determined the groundwater supply to be adequate based on the current subbasin supplies and future buildout. Therefore, the proposed project would result in a ***less-than-significant*** impact with respect to substantially decreasing groundwater supplies or interfering substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. In addition, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ci-iii. Per the Stormwater Management Plan (SWMP) prepared for the project, implementation of the proposed project would involve the creation of approximately 327,216 sf of new impervious surface area (see Figure 5).

All municipalities within Contra Costa County are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. Known as the "C.3 Standards", new development and redevelopment projects that create or replace 10,000 or more sf of impervious surface area must contain and treat stormwater runoff from the site. Because the proposed project would create more than 10,000 sf of impervious surface area, the proposed project would be considered a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures. In addition, the project site is within Drainage Area 30b and Drainage Area 130, and would be required to pay the applicable Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) drainage fees in accordance with Flood Control Ordinance Number 2006-51 and 2007-06.[17]

The SWCP prepared for the proposed project incorporates the most recent Stormwater C.3 Guidebook and Contra Costa Clean Water Program requirements,[18] as well as all applicable City stormwater requirements. As noted in the SWCP, stormwater draining off impervious surfaces such as roofs, parking areas, and drive aisles within the project site would be captured by curb inlets and routed, by way of new storm drains, to two bio-retention basins on the western and northeastern borders of the site. The bio-retention basins would include layers of cobbles, soil mix, gravel, and plants to provide for on-site

[17] Contra Costa County Flood Control District. *Contra Costa County Formed Drainage Areas.* February 7, 2008.
[18] Contra Costa County Clean Water Program. *Stormwater C.3 Guidebook.* May 17, 2017.

treatment of runoff. Treated runoff would be routed to existing City storm drain inlet located within Main Street and Honey Lane. As noted previously, the bio-retention basins have been sized to provide for adequate treatment and management of all stormwater runoff.

Furthermore, because the proposed project is consistent with the type of development that has been anticipated on the site, the City's infrastructure has been designed and built to accommodate stormwater runoff associated with development of the site with residential uses, in addition to stormwater flows associated with existing development in the area. Thus, the existing pipeline would not require upsizing or replacement as a result of the proposed project.

Although the calculations included in the SWMP demonstrate that the bio-retention areas would be adequately sized, the design of the proposed bio-retention facilities has not yet been finalized. Therefore, the efficacy of the bio-retention areas in controlling post-project stormwater discharge rates cannot be determined. Pre- and post-project stormwater discharge calculations would be necessary to demonstrate compliance with the C.3 Standards and the efficacy of the proposed bio-retention areas.

Because stormwater discharge calculations are not yet available for the proposed project, compliance with the C.3 Standards cannot be assured at this time, and implementation of the proposed project could result in the discharge of stormwater in a manner that could exceed the capacity of the City's storm drain system. Consequently, the proposed project could result in a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

X-1. *Prior to ~~issuance~~ approval of ~~grading permits~~ Improvement Plans, the applicant shall submit to the City final plans, identifying permanent stormwater control measures to be implemented on the project. The final plans shall include calculations demonstrating that post-project stormwater flows comply with the applicable provisions of the C.3 Standards and meet City standards as well as show the path of overland flow that the water from the bioretention areas would take should the facilities draining the bioretention areas become clogged or otherwise fail to drain. The final plans shall also include one of the following:*

- *A hydrology study showing the increased density of the proposed project would not increase stormwater flows beyond what was anticipated in the Drainage Area 30B and Drainage Area 130 Hydrology Plans; or*
- *A hydrology study and hydraulic calculations that show the adequacy of the in-tract drainage system and the downstream drainage system to handle flows from the proposed residences.*

The final plans shall be submitted to the Public Works Department for review and approval.

civ. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the project site, the project site is located within an Area of Minimal Flood Hazard

(Zone X).[19] The site is not classified as a Special Flood Hazard Area or otherwise located within a 100-year or 500-year floodplain. Therefore, development of the proposed project would not impede or redirect flood flows and ***no impact*** would result.

d. As discussed under question 'civ' above, the project site is not located within a flood hazard zone. Tsunamis are defined as sea waves created by undersea fault movement or other underwater disturbance that displace a large volume of water, resulting in flooding hazards to coastal development. The project site is not located in proximity to a coastline and would not be potentially affected by flooding risks associated with tsunamis. A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. Seiches do not pose a risk to the proposed project, as the project site is not located adjacent to a large closed body of water. While the Sacramento-San Joaquin Delta is located to the north, the site is over two miles away. Additionally, per General Plan Policy 8.2.13, levees have been properly engineered and designed to ensure protection against seiches. Based on the above, the proposed project would not pose a risk related to the release of pollutants due to project inundation due to flooding, tsunami, or seiche, and ***no impact*** would occur.

[19] Federal Emergency Management Agency. *Flood Insurance Rate Map 06013C0355G.* Effective March 21, 2007.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XI. LAND USE AND PLANNING.					
Would the project:					
a.	Physically divide an established community?	☐	☐	✖	☐
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating on environmental effect?	☐	☐	✖	☐

Discussion

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. Existing land uses in the project vicinity include single-family residences to the north, south, east, and west across Main Street. The General Plan has anticipated development of residences on the project site. The project would be developed on two contiguous parcels and would not isolate an existing land use. As such, the proposed project would not physically divide an established community and a ***less-than-significant*** impact would occur.

b. The proposed project includes a request for a General Plan Amendment from Single-Family Residential High Density to Multi-Family Residential Low Density, as well as a rezone from R-6 to P-1. Upon approval of both amendments, the proposed project would develop 108 single-family homes at a density of 8.1 dwelling units per acre. The current designations would be amended to reflect the characteristics of the proposed project. The site is currently anticipated to be developed with residential land uses, and as such, the type of development included with the proposed project would be consistent with the type of development expected in the General Plan.

In addition, the General Plan contains several policies which govern the development of residential land uses, including preservation of the City's design qualities, protection of existing residential areas from intrusion of incompatible land uses, and preservation of multi-family residential development. The proposed project would ensure compliance with all such policies. Furthermore, the City has implemented several policies designed for the preservation of biological resources, such as developing projects in an ecologically sensitive manner and encouraging preservation of portions of wildlife habitats that would be disturbed by major development. The mitigation measures set forth in Section IV, Biological Resources, of this IS/MND would promote the goals of the City and ensure compatibility with the applicable General Plan policies. The Noise Element of the General Plan also requires that the proposed project would not exceed the allowable standard of 65 dBA L_{dn} at nearby residences. As discussed in Section XII, Noise, of this IS/MND, with mitigation, the proposed project would be in compliance with all applicable noise thresholds.

Compliance with all applicable policies and regulations regarding environmental protection would ensure that the proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the

proposed of avoiding or mitigating an environmental effect and a ***less-than-significant*** impact would occur.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XII. MINERAL RESOURCES.					
Would the project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	✖
b.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	✖

Discussion

a,b. The City of Oakley General Plan EIR states that the only viable mineral resource currently mined in the City of Oakley is sand. Currently mining of sand does not occur at the project site and much of the adjacent land is developed for residential uses. Thus, proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral recovery site; therefore, the proposed project would have ***no impact*** to mineral resources.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIII. NOISE.					
Would the project result in:					
a.	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?	☐	✖	☐	☐
b.	Generation of excessive groundborne vibration or groundborne noise levels?	☐	✖	☐	☐
c.	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?	☐	☐	☐	✖

Discussion

The following discussion is based primarily on an Environmental Noise Assessment and Traffic Noise Analysis prepared for the proposed project by Saxelby Acoustics.[20]

a. The following sections present information regarding sensitive noise receptors in proximity to the project site, the existing noise environment, and the potential for the proposed project to result in impacts during project construction and operation. The following terms are referenced in the sections below:

- Decibel (dB): A unit of sound energy intensity. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.
- Day-Night Average Level (Ldn): The average sound level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours.

Sensitive Noise Receptors

Some land uses are considered more sensitive to noise than others, and, thus, are referred to as sensitive noise receptors. Land uses often associated with sensitive noise receptors generally include residences, schools, libraries, hospitals and passive recreational areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise. In the vicinity of the project site, sensitive land uses include existing single-family residential uses located on the north, east, and south boundaries of the project site.

[20] Saxelby Acoustics. *Environmental Noise Assessment, Acacia Residential Project*. August 18, 2019.

Existing Noise Environment

The existing noise environment in the project vicinity is primarily defined by vehicle traffic on Main Street. To quantify the ambient noise environment at the project site, Saxelby Acoustics conducted continuous (24-hour) noise level measurements at two locations on the site (see Figure 6). Larson Davis Laboratories (LDL) Model 812 and 831 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. Table 4 below provides a summary of the noise measurement results.

Table 4
Summary of Existing Background Noise Measurement Data

Continuous (24-hour) Noise Level Measurements								
			Average Measured Hourly Noise Levels (dB)					
			Daytime (7 AM to 10 PM)			Nighttime (10 PM to 7 AM)		
Site	Date	L_{dn}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
LT-1	4/17/19-4/18/19	60	57	55	73	53	43	68
LT-2	4/17/19-4/18/19	53	47	43	65	46	40	59

Short Term Noise Level Measurements						
Site	Date	Time	L_{eq}	L_{50}	L_{max}	Notes
ST-1	4/17/19	1:31 PM	46	46	51	Primary noise source is traffic on Main St.
ST-2	4/17/19	2:01 PM	45	40	63	Primary noise source is traffic on Main St. L_{max} caused by traffic on Honey Ln.
ST-3	4/17/19	2:19 PM	43	41	54	Primary noise source is traffic on Main St. L_{max} caused by small aircraft overhead
ST-4	4/17/19	2:36 PM	56	54	67	Primary noise source is lawnmower and farm animals at adjacent residence

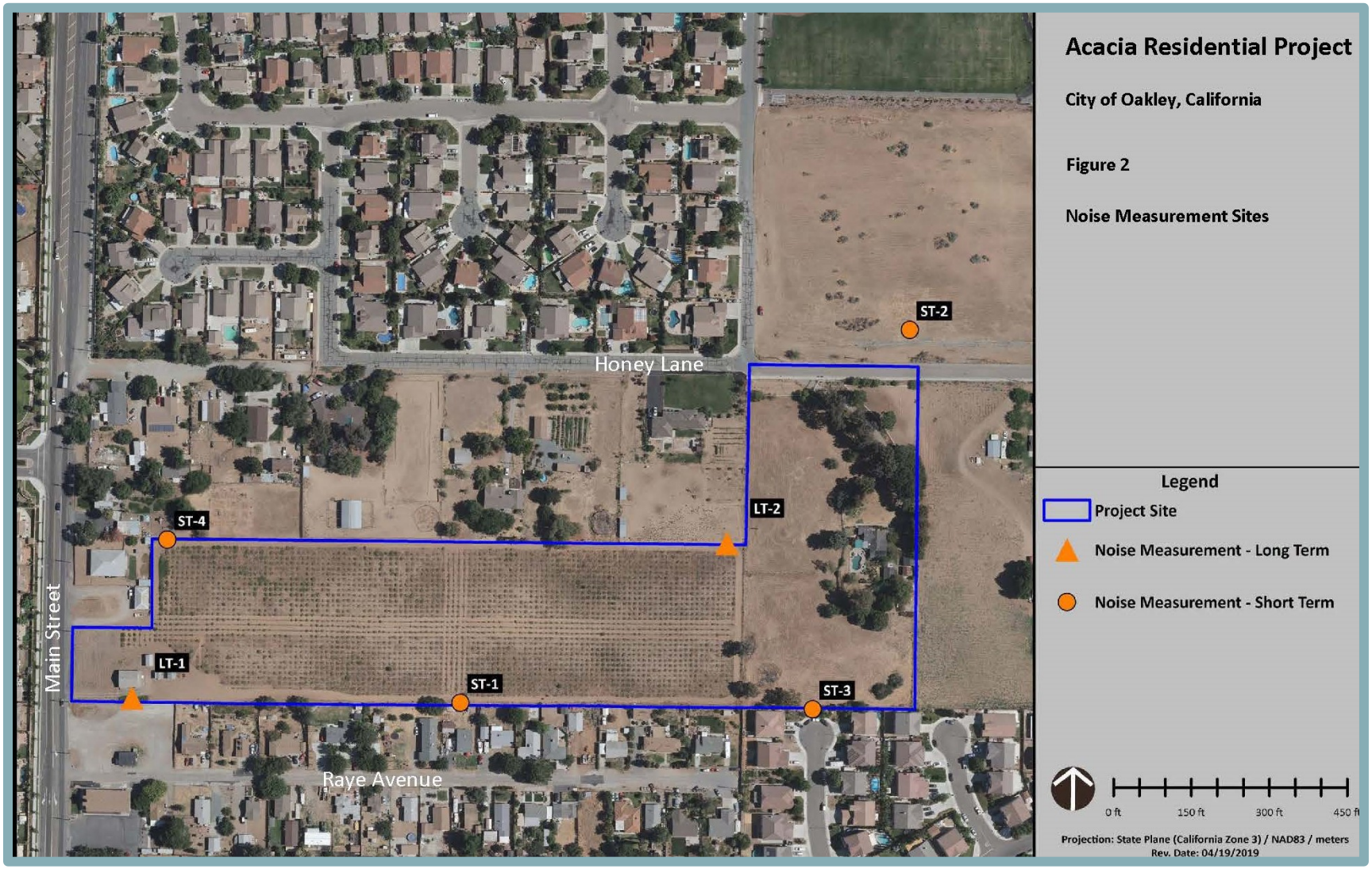
Source: Saxelby Acoustics. 2019.

Standards of Significance

The City of Oakley General Plan Noise Element establishes a noise level standard of 60 dB as normally acceptable at residential land uses. The noise level performance standards for transportation noise compatibility are shown in Table 5. With regard to transportation noise sources, Policy 9.1.6 from the City's General Plan establishes the following significance criteria:

- Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a 5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a 3 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise sensitive uses, a +1.5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant.

Figure 6
Noise Measurement Locations



Source: Saxelby Acoustics, 2019.

Table 5
Maximum Allowable Noise Exposure Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	65	45	--
Transient Lodging	65[3]	45	--
Hospitals, Nursing Homes	65	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	65	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:
1. Where the location of outdoor activity areas is unknown, the exterior noise level standards shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
2. As determined for a typical worst-case hour during periods of use.
3. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

Source: City of Oakley 2020 General Plan, Table 9-3.

Impact Analysis

The following sections provide an analysis of potential noise impacts associated with construction and operation of the proposed residences.

Construction Noise

During construction of the proposed project, heavy-duty equipment would be used for demolition, grading, excavation, paving, and building construction, which would result in temporary noise level increases. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the project site would vary depending on the proximity of construction activities to that point. Standard construction equipment, such as graders, backhoes, loaders, and haul trucks would be used on-site.

Table 6 shows the predicted construction noise levels for each of the project construction phases. Based on the table, site preparation and grading are predicted to be the loudest phases of construction with an average noise exposure of 88 dBA at 50 feet. Based on the SoundPLAN noise model calculations performed by Saxelby Acoustics, the proposed project is predicted to generate construction noise levels ranging between 58-71 dBA L_{eq} at the nearest sensitive receptor. The results of the measurements are shown in Figure 7 below.

Table 6
Construction Equipment Noise

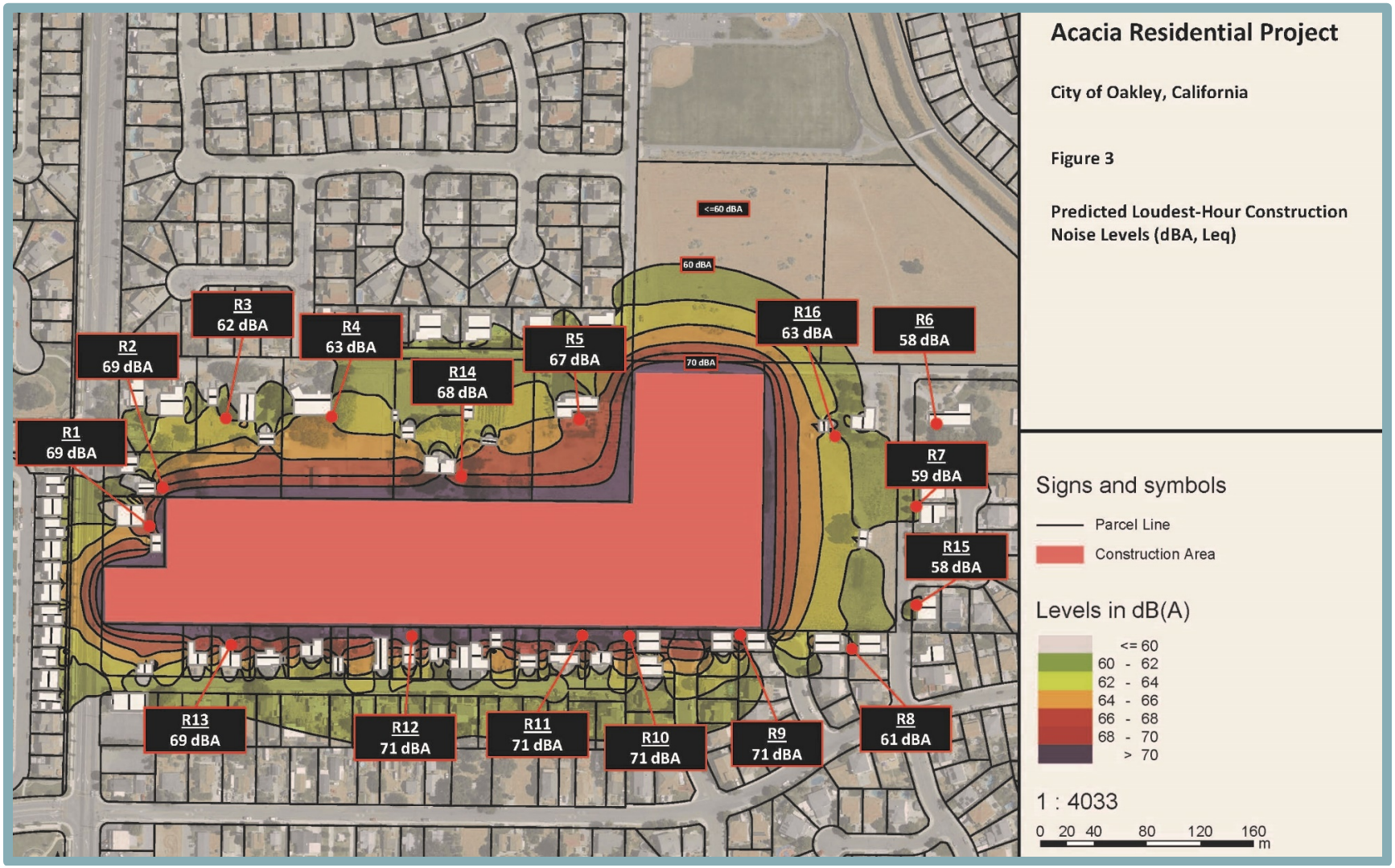
Equipment	Quantity	Usage (%)	Maximum, L_{max} (dBA at 50 feet)	Hourly Average, L_{eq} (dBA at 50 feet)
Demolition				
Concrete Saw	1	20	90	83
Excavator	3	40	81	82
Dozer	2	40	82	81
			Total	87
Site Preparation				
Dozer	3	40	82	83
Tractor/Loader/Backhoe	4	40	84	86
			Total	88
Grading				
Grader	2	40	85	84
Dozer	1	40	82	78
Scraper	1	40	84	80
Tractor/Loader/Backhoe	2	40	84	83
			Total	88
Building Construction				
Crane	1	16	81	73
Forklift	3	40	83	84
Generator	1	50	81	78
Tractor/Loader/Backhoe	3	40	84	85
Welder/Torch	1	40	74	70
			Total	88
Paving				
Paver	2	50	77	77
Paving Equipment	2	50	77	77
Rollers	2	20	80	76
			Total	81
Architectural Coating				
Air Compressor	1	40	79	75
			Total	75

Source: FHWA, Roadway Construction Noise Model (RCNM), January 2006.

The City of Oakley establishes permissible hours of construction in Section 4.2.208 of the Municipal Code. The ordinance restricts noise producing construction activities to weekday hours between 7:30 AM and 5:30 PM, with work not allowed on weekends unless otherwise authorized by the City in writing.

However, given that the project could expose nearby sensitive receptors to noise levels above the acceptable 60 dB threshold, construction of the project could have a significant impact related to the generation of a substantial temporary 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.

Figure 7
Predicted Loudest Hour Construction Noise Levels



Project Operational Noise

Operations of the proposed project would generate noise sources primarily associated with increased traffic on nearby roadways. To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. Traffic volumes were sourced from the Transportation Assessment prepared for the proposed project by TJKM and truck usage and vehicle speeds were based on field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. In some locations, sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the study roadway segments.

Table 7 summarizes traffic noise levels along each study roadway segment in the project vicinity for the Existing No Project and Existing Plus Project conditions. Cumulative No Project and Cumulative Plus Project conditions are summarized in Table 8.

Table 7
Predicted Traffic Noise Level and Project-Related Traffic Noise Level Increases

Roadway	Segment	Noise Levels at Nearest Sensitive Receptors (L_{dn}, dB)		
		Existing No Project	Existing Plus Project	Change
Main Street	North of Laurel	61.8	61.9	0.1
	Between Laurel and Shady Oak	58.9	59.2	0.3
	North of project access	60.9	61.2	0.3
	North of Malicoat/Simoni Ranch	61.6	61.6	0.1
	North of Brownstone	65.8	65.9	0.1
	North of Delta	60.6	60.6	0.0
	South of Delta	65.5	65.6	0.0
Creekside Way	North of Laurel	39.2	39.2	0.0
	North of Honey	49.9	50.9	1.0
Laurel Road	West of Main	55.3	55.7	0.4
	West of Creekside	57.9	58.0	0.1
	East of Creekside	52.5	52.5	0.0
Honey Lane	West of Creekside	44.3	46.9	2.6
	West of project access	51.5	52.5	1.0
	East of project access	47.8	47.8	0.0
Simoni Ranch Road	West of Main	53.3	53.3	0.0
Malicoat Avenue	East of Main	55.7	55.7	0.0

Source: Saxelby Acoustics, 2019.

Table 8
Predicted Cumulative Traffic Noise Levels and Cumulative Plus Project Increase

Roadway	Segment	Noise Levels at Nearest Sensitive Receptors (L_{dn}, dB)		
		Cumulative No Project	Cumulative Plus Project	Change
Main Street	North of Laurel	64.1	64.2	0.1
	Between Laurel and Shady Oak	59.8	60.0	0.2
	North of project access	61.8	62.0	0.2
	North of Malicoat/Simoni Ranch	62.4	62.4	0.0
	North of Brownstone	66.4	66.4	0.0
	North of Delta	60.7	60.8	0.1
	South of Delta	66.0	66.1	0.1
Creekside Way	North of Laurel	39.2	39.2	0.0
	North of Honey	49.9	50.9	1.0
Laurel Road	West of Main	58.1	58.3	0.2
	West of Creekside	58.5	58.6	0.1
	East of Creekside	53.3	53.3	0.0
Honey Lane	West of Creekside	44.3	46.9	2.6
	West of project access	51.5	52.5	1.0
	East of project access	47.8	47.8	0.0
Simoni Ranch Road	West of Main	55.2	55.2	0.0
Malicoat Avenue	East of Main	55.7	55.7	0.0

Source: Saxelby Acoustics, 2019.

As shown in the two tables, the proposed project is predicted to increase traffic noise levels by a maximum of 2.6 dBA on Honey Lane, west of Creekside Way. An increase of 2.6 dBA is below the City's 5 dBA threshold where existing noise levels are below 60 dBA, as established by General Plan Policy 9.1.6. Thus, impacts related to project traffic noise would be less than significant.

Impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required CEQA review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. City of Los Angeles,* (2011) 201 Cal.App.4th 455, 473 (*Ballona*).) The California Supreme Court recently held that "CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. What CEQA does mandate… is an analysis of how a project might exacerbate existing environmental hazards." (*California Building Industry Assn. v. Bay Area Air Quality Management Dist.* (2015) 62 Cal.4th 369, 392; see also *Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 197 ["identifying the effects on the project and its users of locating the project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes"], quoting *Ballona*, *supra*, 201 Cal.App.4th at p. 474.)

Therefore, for the purposes of the CEQA analysis, the relevant inquiry is not whether the proposed project's future residents would be exposed to preexisting environmental noise-related hazards, but instead whether project-generated noise would exacerbate the pre-existing conditions. Nonetheless, the Environmental Noise Assessment modeled traffic noise to predict the anticipated noise levels at the proposed residences.

Modern building construction typically yields an exterior-to-interior noise level reduction of 25 dBA. Therefore, where exterior noise levels are 70 dBA, or less, additional interior noise control measures are not typically required. Based on the predicted noise level of 57 dBA at the exterior of the propose residences, the interior noise levels would reach up to 32 dBA. Therefore, the proposed residences would not be exposed to interior noise levels above the City's 45 dB interior noise level standard.

Conclusion

Based on the above, operation of the proposed project would not result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City's General Plan and the Municipal Code. However, considering the potential for construction activities to result in temporary increases in noise levels in the project area, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impacts to a *less-than-significant* level.

XIII-1. *The project contractor shall ensure that the following construction noise BMPs are met on-site during all phases of construction:*

- *All construction equipment powered by internal combustion engines shall be properly muffled and maintained.*
- *Quiet construction equipment, particularly air compressors, are to be selected whenever possible.*
- *All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.*
- *Unnecessary idling of internal combustion engines is prohibited.*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.*
- *Use of pile drivers, sources of impulsive sound and jack hammers shall be prohibited on Sundays and holidays, except for emergencies or as approved in advance by the Building Official.*
- *The construction contractor shall limit noise producing construction activity to weekday hours between 7:30 AM and*

5:30 PM, with no work allowed on weekends unless otherwise authorized by the City in writing.

Construction noise BMPs shall be included in the grading plan submitted by the developer for review and approval by the Community Development Director prior to grading permit issuance.

b. Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 9, which was developed by the California Department of Transportation (Caltrans), shows the vibration levels that would normally be required to result in damage to structures. As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

Table 9
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

The primary vibration-generating activities associated with the proposed project would occur during demolition, grading, placement of underground utilities, and construction of foundations. Table 10 shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. Use of vibratory compactors/rollers could be required during construction of the proposed on-site drive aisles and parking areas.

Table 10
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)
Large Bulldozer	0.089	0.029
Loaded Trucks	0.076	0.025
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.029
Jackhammer	0.035	0.011
Vibratory Hammer	0.070	0.023
Vibratory Compactor/roller	0.210 (less than 0.20 at 26 feet)	0.070

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.

The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration. Although noise and vibration associated with the construction phases of the project would add to the noise and vibration environment in the immediate project vicinity, construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. With the exception of vibratory compactors, Table 10 indicates that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at a distance of 26 feet. However, the proposed project includes construction within approximately 15 feet from the adjacent single-family residences to the south. Therefore, project construction could cause vibrations in excess of 0.2 in/sec.

Based on the above, the proposed project could expose people to or generate excessive groundborne vibration or groundborne noise levels, and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impacts to a *less-than-significant* level.

XIII-2. *For construction activity occurring within 26 feet of any adjacent single-family residential uses located to the south, a pre-construction crack documentation and construction vibration monitoring shall be conducted to ensure that construction vibrations do not cause damage to the adjacent structures.*

The results and recommendations of the documentation and monitoring shall be submitted to the Community Development Department prior to issuance of the grading permits.

c. The nearest public airport to the site is Byron Airport, located approximately 10.5 miles south of the site. In addition, a private airfield (Funny Farm Airfield) is located approximately 3.5 miles east of the proposed project site. The project site is not covered by an existing airport land use plan. Given that the project site is not located within two miles of a public or private airport, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with airports. Thus, ***no impact*** would occur.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIV. POPULATION AND HOUSING.					
Would the project:					
a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	✖	☐
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	✖	☐

Discussion

a. The proposed project would develop 108 single-family residences. Using the General Plan's average of 3.26 persons per household, the proposed project would add 352 residents to the City's population. Based on a 2018 population estimate of 41,116 residents, the project would constitute a 0.9 increase in population within the City. The General Plan previously anticipated single-family residential development on the project site, and associated population growth was analyzed in the General Plan EIR. The proposed project would not result in substantially more intensive population growth beyond what has been anticipated by the City. Furthermore, the project site is located within an urbanized area of the City and is surrounded by existing residential development. Urban infrastructure exists within the vicinity of the site and would include connection as part of the proposed project. Therefore, development of the proposed project would not induce substantial unplanned population growth in an area, either directly or indirectly, and a ***less-than-significant*** impact would occur.

b. The proposed project would require removal of two dwelling units on the project site. However, the voluntary removal of two residences would not constitute displacement of substantial numbers of people. Moreover, the project would result in the development of 108 single-family residences, which would be a net increase of 106 dwelling units. Therefore, the project would not displace substantial numbers of existing housing or people, and a ***less-than-significant*** impact would occur.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XV. PUBLIC SERVICES. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a. Fire protection?	☐	☐	✖	☐
b. Police protection?	☐	☐	✖	☐
c. Schools?	☐	☐	✖	☐
d. Parks?	☐	☐	✖	☐
e. Other Public Facilities?	☐	☐	✖	☐

Discussion

a. Fire protection is currently provided to the City of Oakley by the East Contra Costa Fire Protection District. A new fire station was built to accommodate increased demand, staffing and equipment in 2010. With the completion of the new fire station the City of Oakley General Plan anticipates fire service to be adequate for buildout of the City. Station 93 is located 1.5 miles northwest of the project site. The proposed project would be subject to the fire facilities impact fees established by the City of Oakley Municipal Code Section 9.2.502. Payment of the required impact fee would mitigate any potential impacts caused by increased demands on fire services that may result from the proposed project, as well as ensure that the project conforms with the City of Oakley's General Plan Policy 4.4.2. Additionally, the proposed project does not include any alterations to the circulation system of the surrounding area, which could conflict with the City of Oakley's General Plan Policy 4.4.4, or lead to a degradation in response times. Given the payment of fees in accordance with City of Oakley Municipal Code guidelines the proposed project is not expected to cause significant degradation to response times or service ratios, which would induce the need for physically altered or expanded governmental facilities, the construction of which could cause significant environmental impacts, and the project would, therefore, result in a ***less-than-significant*** impact.

b. Police protection is currently provided to the City of Oakley by the Oakley Police Department and the Contra Costa County Sheriff's Office. The Oakley Police Department currently employs 43 persons, including the Chief of Police, the Lieutenant, six Sergeants, five Detectives, 21 Police Officers, and nine Police Services Assistants.[21] As previously discussed, the proposed project would include construction of 108 single-family residential units. With the development of the project site with single-family residential uses, an increase in demand for police services would occur, because residences typically generate a higher demand for police. Nevertheless, police service demand from residential development at the project site would have been included in City of Oakley's demand

[21] City of Oakley Police Department. *2017 Annual Report*. 2017. Available at http://www.ci.oakley.ca.us/wp-content/uploads/2018/04/Annual-Report-2017-2-2.pdf. Accessed June 19, 2018.

predictions based on anticipated General Plan buildout. The residences would also be located within a gated community, which would reduce some potential for criminal activity. In addition, development fees would be applied to the proposed project, as well as a Police Services levy. Based on the above, the proposed project would create a demand equal to or less than that anticipated for the site and would not induce the need for physically altered or expanded governmental facilities, the construction of which could cause significant environmental impacts. Therefore, the proposed project would result in a ***less-than-significant*** impact.

c. The project site is within the limits of the Oakley Unified School District, which provides K-8 education, and the Liberty Union High School District, which provides 9-12 education. The proposed project would develop 108 single-family residences. Using a standard student generation rate of 0.5 students/dwelling unit, the proposed project would add 54 new students to the local K-12 schools. According to Government Code Section 65995 et. seq. and Education Code Section 17620 et. seq, payment of applicable development fees would be sufficient in reducing the impacts associated with an increase in students from the project. Therefore, the proposed project would result in a ***less-than-significant*** impact regarding an increase in demand for schools.

d,e. The proposed project would result in development of 108 single-family residences. The City of Oakley Municipal Code 9.2.2.08 requires five acres of parkland per 1,000 residents. Based on the rate of 3.26 residents per single-family dwelling unit, the maximum buildout of the proposed project site would result in an increase of 352 new residents to the City. As a result, 1.76 acres of parkland would be required. Oakley resolution 19-03 requires subdividers of land within the City to dedicate land and/or pay fees in lieu of the dedication for the neighborhood and community parks and recreation programs.

The proposed project would not include any on-site parks and, thus, would be subject to payment of in-lieu park fees. Therefore, given that the proposed project would be required to pay the applicable park in-lieu fee, the project would result in a ***less-than-significant*** impact on recreation.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVI. RECREATION.					
Would the project:					
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	✖	☐
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	✖	☐

Discussion

a-b. The proposed project would result in development of 108 single-family residences. The development of residences would create an increase in population and therefore, an increase in demand on recreational facilities would occur. The City of Oakley Municipal Code 9.2.2.08 requires five acres of parkland per 1,000 residents. Based on the rate of 3.26 residents per single-family dwelling unit, the maximum buildout of the proposed project site would result in an increase of 352 new residents to the City. As a result, 1.76 acres of parkland would be required. Oakley resolution 19-03 requires subdividers of land within the City to dedicate land and/or pay fees in lieu of the dedication for the neighborhood and community parks and recreation programs. Therefore, given that the proposed project would not include any park acreage, payment of the City's in-lieu fee would be required, and the project would result in a ***less-than-significant*** impact on recreation.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVII. TRANSPORTATION.					
Would the project:					
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	✖	☐	☐
b.	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	✖	☐
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	✖	☐
d.	Result in inadequate emergency access?	☐	☐	✖	☐

Discussion

a. The following is based primarily on a Traffic Impact Analysis (TIA) prepared for the proposed project by TJKM.[22] The TIA evaluates the potential transportation impacts that could result from the proposed project, short- and long-term multi-modal circulation needs where relevant to site access and/or project impacts, potential mitigation measures for any significant transportation impacts, and evaluate the adequacy of the proposed site plan for accommodating multi-modal site access and meeting City of Oakley Guidelines.

Study Intersections

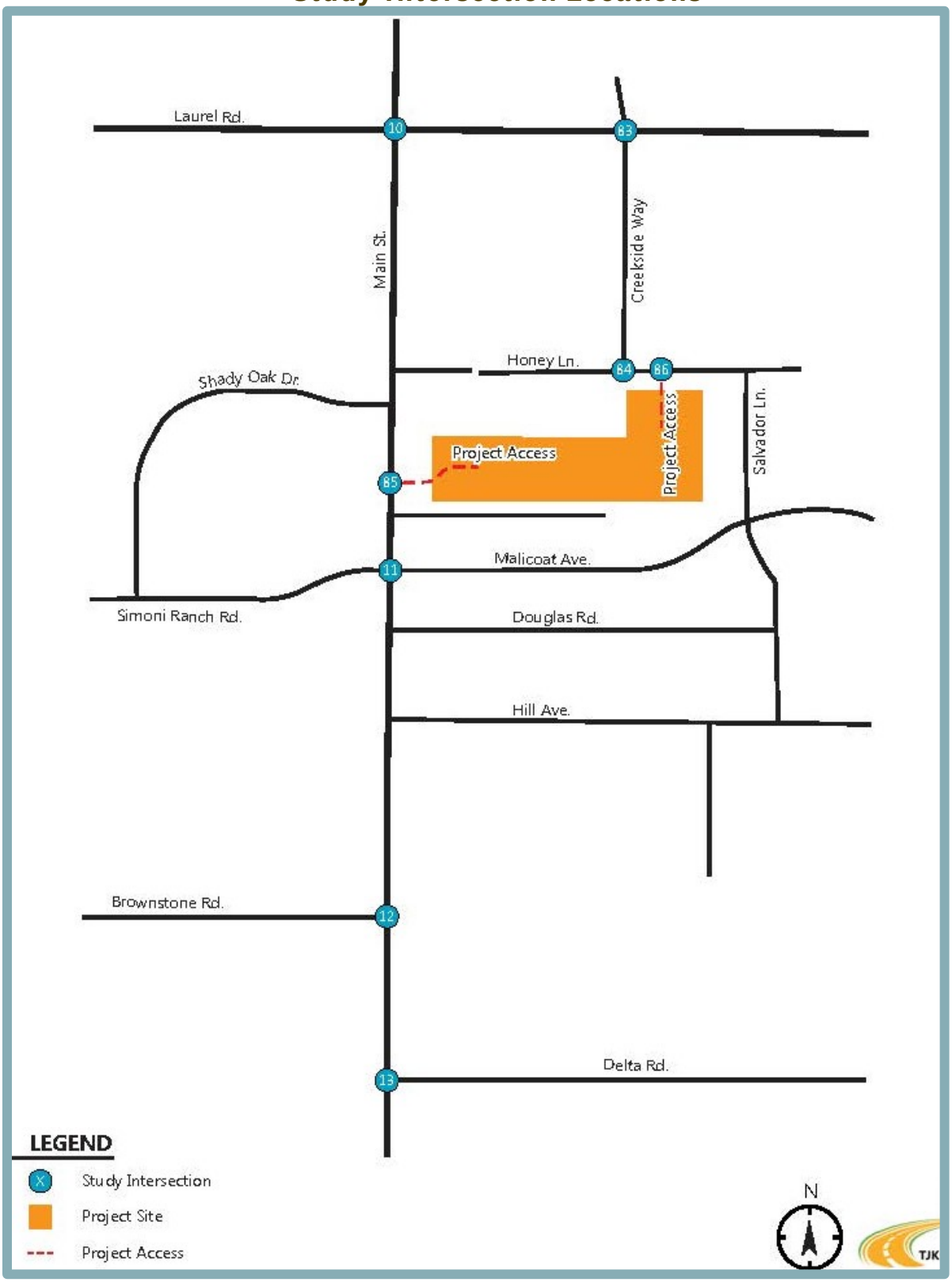
TJKM evaluated transportation conditions at six existing study intersections, and two proposed new intersections that would serve the project site (see Figure 8). Four intersections were evaluated based on conditions provided from the Citywide model, and the remaining two study intersections were evaluated during AM (7:00 AM-9:00 AM) and PM (4:00 PM-6:00 PM) peak periods for a typical weekday with clear weather. The following study intersections were selected in consultation with City staff based on the anticipated trip generation and travel pattern for project trips:

1. Main Street / Laurel Road
2. Main Street / Simoni Ranch Road
3. Main Street / Brownstone Road
4. Main Street / Delta Road
5. Creekside Way / Laurel Road*
6. Creekside Way / Honey Lane*
7. Main Street / Project Access*
8. Honey Lane / Project Access*

*Indicates new count location (not in Citywide model)

[22] TJKM. *Acacia Residential Traffic Impact Analysis.* May 2019.

Figure 8
Study Intersection Locations



Source: TJKM, 2019.

Study Scenarios

Conditions at each intersection were analyzed under the following scenarios:

- **Existing Conditions** – Describes existing transportation conditions in the study area based on the current roadway and sidewalk network characteristics, transit service, and intersection counts conducted on April 11, 2019;
- **Existing Plus Project Conditions** – Similar to Existing Conditions but with the net new trips that would be generated by the project;
- **Background Conditions** – Describes the projected peak hour traffic operations based on the net change to travel patterns anticipated from approved (but not yet constructed) or fully/partially occupied developments in the City at the time of the Existing Conditions assessment. The analysis includes additional trips that would be generated if the proposed developments were to operate at full occupancy;
- **Background Plus Project Conditions** – Similar to Background Conditions but with the inclusion of vehicle trips that would be generated by the project. The Background plus Project Conditions analysis provides an assessment of project impacts that takes into account other projects that would be completed within a similar timeframe as the project.

Thresholds of Significance

Operations at each of the study intersections were evaluated based on Level of Service (LOS), a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers. The LOS generally describes conditions in terms of speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The operational levels of service are given letter designations from A to F, with A representing the best operating conditions and F representing the worst conditions. Table 11 provides descriptions of various LOS and the corresponding ranges of delay.

Per the City of Oakley General Plan, LOS D or a volume-to-capacity (V/C) ratio of 0.90 are the thresholds of acceptability for signalized intersections. Any signalized intersection operating worse than LOS D would be considered inconsistent with the standard. Within the TIA, the study intersections were analyzed using HCM 6th Edition Methodology as per the City's guidance. Average control delay is reported in seconds per vehicle for signalized and all-way-stop-control intersections and critical delay for minor approaches is reported for two-way-stop-control intersections. Signalized intersections or unsignalized intersection operating worse than LOS D are considered inconsistent with the City's standard. At already unacceptably operating intersections, a project constitutes a significant impact if intersection delay increases by five seconds under Existing Plus Project Conditions.

Trip Generation and Distribution

Project vehicle trip generation rates were obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) (see Table 12). Based on the ITE rates, the proposed project is estimated to generate 1,020 daily vehicle trips, including 80 AM peak hour and 107 PM peak hour trips.

Table 11
Signalized Intersection LOS Criteria

LOS	Description	Delay (seconds)
A	Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	< 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

Source: TJKM, 2019.

Table 12
Vehicle Trip Generation Summary

Land Use (ITE Code)	Size	Daily Vehicle Trips		AM Peak Hour Vehicle Trips				PM Peak hour Vehicle Trips			
		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Single Family Detached Housing (210)	108 DU	9.44	1,020	0.74	20	60	80	0.99	67	40	107
Total			**1,020**				**80**				**107**

Source: TJKM, May 2019.

The distribution of peak hour vehicle trips generated by the project was determined based on the methodology used for the Citywide Traffic Model. Based on the methodology the following results were determined from the model: 45 percent of peak-hour trips are to/from origins and designations west of Oakley via SR 4; 15 percent are to/from origins and destinations south/east of Oakley via SR 4; 20 percent are to/from other destinations near Oakley via other routes; and 20 percent are internal to Oakley. Based on that distribution: peak-hour vehicle trips generated by the project were manually assigned to each study intersection.

Existing Plus Project Conditions

Table 13 summarizes the peak hour levels of service at the study intersections under Existing Plus Project conditions, based on the addition of project trips to each study intersection. As shown, all study intersections operate at acceptable LOS under Existing Plus Project conditions, except the intersections of Main Street/Brownstone Road and Main Street/Delta Road, which operate at LOS E or F during one or both peak hours.

Table 13
Existing Plus Project Conditions Traffic Level of Service Analysis Results

Intersection	Control	Peak Hour	Existing Conditions		Existing Plus Project Conditions	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]
10. Main Street/Laurel Road	Signal	AM	46.2	D	51.5	D
		PM	37.0	D	42.2	D
11. Main Street/Simoni Ranch Road	Signal	AM	31.6	C	31.8	C
		PM	15.7	B	15.7	B
12. Main Street/Brownstone Road	One-Way Stop	AM	**>100**	**F**	**>100**	**F**
		PM	29.9	D	32.3	D
13. Main Street/Delta Road	One-Way Stop	AM	**>50**	**F**	**>50**	**F**
		PM	**40.5**	**E**	**41.9**	**E**
83. Creekside Way/ Laurel Road	Two-Way Stop	AM	17.4	C	18.6	C
		PM	14.1	B	14.6	B
84. Creekside Way/ Honey Lane	All-Way Stop	AM	7.0	A	7.0	A
		PM	7.0	A	7.1	A
85. Main Street/Project Site	One-Way Stop	AM	N/A	--	16.6	C
		PM	N/A	--	15.8	C
86. Honey Lane/Project Site	One-Way Stop	AM	N/A	--	8.8	A
		PM	N/A	--	8.9	A

Note: **Bold** text indicates unacceptable intersection operations.
[1]Delay: Average control delay in seconds per vehicle. Reported values are overall for signalized and all-way-stop-control intersections and critical minor approaches for two-way-stop-control intersections
[2]LOS: Level of Service

Source: TJKM, May 2019.

Based on the above, the project impact at the Main Street/Delta Road intersection under Existing Plus Project Conditions would not be considered a significant impact because the project would add less than five second of delay to the already unacceptable intersection.

The stop-sign controlled intersection of Main Street/Brownstone Road operates at unacceptable LOS F during the AM peak hour under both Existing and Existing Plus Project Conditions. Under Existing Plus Project Conditions, the project would add more than five seconds of delay to the Main Street/Brownstone Road intersection, which constitutes a significant impact. The project would add 13 AM and 17 PM peak hour vehicle trips, an increase of approximately one percent (0.86 percent AM and 1.09 percent PM) compared to existing peak hour traffic volumes. Thus, implementation of the proposed project would exceed the City's threshold of addition of a five second delay at an already unacceptable intersection.

Background Plus Project Conditions

Using the calibrated and validated Citywide Traffic Model, additional traffic projected to be generated from approved developments was forecasted for Background Conditions. Table 14 summarizes the peak hour levels of service at study intersections under Background and Background Plus Project Conditions. As shown, six intersections operate at an unacceptably without the proposed project. Three of the intersections would not result in a five second delay due to the project and, thus, would not constitute a significant impact; however, the proposed project would increase delay by more than five seconds at the following three intersections:

- Main Street/Laurel Road is forecasted to operate at unacceptable LOS F during both AM and PM peak hours, primarily due to a forecasted large increase in eastbound left-turns from Laurel Road to northbound Main Street, and southbound right-turns from Main Street to westbound Laurel Road;
- Main Street/Brownstone Road is forecasted to continue operating at unacceptable LOS F during both peak hours (as is the case under Existing Conditions) reflecting eastbound delay approaching the stop-sign on Brownstone Road approaching the stop sign; and
- Main Street/Delta Road is forecasted to operate at unacceptable LOS F during the AM peak hour and LOS E during the PM peak hour, reflecting westbound delay on Delta Road approaching the stop sign.

Table 14
Intersection Traffic Level of Service – Background Plus Project Conditions

Intersection	Control	Peak Hour	Existing Conditions		Existing Plus Project Conditions	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]
10. Main Street/Laurel Road	Signal	AM	**>100**	**F**	**>100**	**F**
		PM	**>100**	**F**	**>100**	**F**
11. Main Street/Simoni Ranch Road	Signal	AM	38.8	D	39.5	D
		PM	17.3	B	17.3	B
12. Main Street/Brownstone Road	One-Way Stop	AM	**>100**	**F**	**>100**	**F**
		PM	**80.8**	**F**	**92.9**	**F**
13. Main Street/Delta Road	One-Way Stop	AM	**>100**	**F**	**>100**	**F**
		PM	**47.0**	**E**	**48.2**	**E**
83. Creekside Way/ Laurel Road	Two-Way Stop	AM	21.1	C	23.0	C
		PM	16.0	C	16.8	C
84. Creekside Way/ Honey Lane	All-Way Stop	AM	7.0	A	7.0	A
		PM	7.9	A	7.0	A
85. Main Street/Project Site	One-Way Stop	AM	N/A	--	23.8	C
		PM	N/A	--	23.8	C
86. Honey Lane/Project Site	One-Way Stop	AM	N/A	--	8.8	A
		PM	N/A	--	8.9	A

Note: **Bold** text indicates unacceptable intersection operations.
[1]Delay: Average control delay in seconds per vehicle. Reported values are overall for signalized and all-way-stop-control intersections and critical minor approaches for two-way-stop-control intersections
[2]LOS: Level of Service

Source: TJKM, May 2019.

The proposed project would result in an increased delay at three study intersections forecasted to operate unacceptably due to cumulative traffic growth generated by background growth and the proposed project. The delays would constitute a significant impact because the proposed project would increase delay by five seconds at the already unacceptably operating intersection would have an increased five second delay due to the project's implementation. The City requires a fair share contribution towards the funding of future improvements. Upon payment of the fees, the project would be in compliance with City standards. However, if the fair share fees are not paid in accordance with City standards, the degradation of the intersections could result in a significant impact.

Pedestrian, Bicycle, and Transit Facilities

The proposed project's potential impacts related to pedestrian, bicycle, and transit facilities are discussed below.

Pedestrian Facilities

Sidewalks are provided on both sides of Main Street north of Shady Oak Drive, and on the west side, between Shady Oak Drive and Simoni Ranch Road. Sidewalks are provided on the north side of Honey Lane, west of Creekside Way, and on the project frontage bordering Honey Lane. Sidewalks are not provided on Brownstone Road, Delta Road, and the project frontage bordering Main Street. The project would include construction and connection of new sidewalks to the existing system.

Bicycle Facilities

The City of Oakley General Plan, City of Oakley Parks, Recreation, and Trails Master Plan, and the Contra Costa County Bicycle and Pedestrian Plan proposed that several new bicycle facilities be constructed in the area in the near future, in order to further promote alternative transportation.

The area surrounding the project site currently provides several Class II bicycle facilities, including along Main Street, between Harvest Drive and Main Street on Laurel Road, and between Rose Court and Main Street on Simoni Ranch Road. The project would not introduce any alterations to the existing circulation system, and thus, would not impact the existing bicycle facilities in the vicinity of the site.

Transit Facilities

Eastern Contra Costa Transit Authority (Tri Delta Transit) provides transit service in eastern Contra Costa County, serving the communities of Oakley, Brentwood, Antioch, Concord, Discovery Bay, Bay Point, and Pittsburg. Thirteen routes operate on weekdays, with four routes operating on weekends. Four routes operate in the vicinity of the project site (300, 383, 391, and 393).

Route 300, the Pittsburg BART/Brentwood Park & Ride route, is a weekday express route connecting Brentwood to the Pittsburg/Bay Point BART station by way of Oakley and Antioch. The bus travels along Main Street, operating from 4:15 AM to approximately 10:00 PM with 15 to 30-minute headways.

Route 383, the Oakley/Antioch/Freedom High School route, connects Oakley to Antioch and Freedom High School in Oakley. The route, in both clockwise and counterclockwise directions, provides only weekday service. The counterclockwise route runs with

approximate one-hour headways, and the clockwise route runs twice during the AM peak hour period only.

Route 391, the BART/Pittsburg/Antioch/Oakley/Brentwood route, provides weekday service to most East County Cities. The route operates from 4:00 AM to 1:15 AM with 30 to 60-minute headways.

Route 393, the BART/Pittsburg/Antioch/Oakley/Brentwood route, provides weekend service to Route 391. The route operates from 5:20 AM to 2:00 AM with approximately 60-minute headways.

Alternative Transportation Conclusion

Based on the above, several pedestrian, bicycle, and transit facilities exist within the vicinity of the project site. The proposed project is not anticipated to have adverse impacts to existing or planned pedestrian, bicycle, or transit facilities as per the Contra Costa Countywide Bicycle and Pedestrian Plan and the City of Oakley General Plan.

Conclusion

Based on the above, one intersection in the vicinity of the project site would operate at an unacceptable LOS under Existing Plus Project Conditions, and three intersections would operate unacceptably under Background Plus Project Conditions. The project would be subject to fair share fees which would result in modifications to the City's roadways to improve the LOS at the existing intersections.

The proposed project would include construction of new sidewalks with connection to the existing facilities on Main Street and Honey Lane. Additionally, several bicycle and public transit facilities exist with project site access.

Because the project would degrade several intersections in the vicinity of the site to an unacceptable LOS, the project could conflict with a program, plan, ordinance, or policy addressing the circulation systems, including transit, roadway, bicycle, and pedestrian facilities. With proper payment of the fair share fees, the project would reduce the potential impacts. However, without proper payment, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impacts to a *less-than-significant* level for reasons described below.

Existing Plus Project Impact at Main Street/Brownstone Road: The project impact to the intersection of Main Street/Brownstone Road is potentially significant because the project adds more than five seconds of delay. The stop-sign controlled intersection of Main Street/Brownstone Road operates an unacceptable LOS F during the AM peak hour under Existing and Existing Plus Project Conditions. With implementation of the following mitigation, the LOS would improve to acceptable levels. Thus, implementation of the following mitigation would reduce the potential impacts to a *less-than-significant* level.

XVII-1. *Prior to approval of Improvement Plans, the applicant shall submit all fair share contribution payments to the City's Traffic Impact Fee program for the installation of a traffic signal at the intersection of Main Street and*

Brownstone Road. Proof of payment shall be submitted to the Community Development Department.

Background Plus Project Conditions at Main Street/Laurel Road: Main Street/Laurel Road (Study Intersection #10) is forecasted to operate at unacceptable LOS F during the AM and PM peak hours under Background Conditions with and without the proposed project. Average delay with the addition of project trips under Background plus Project Conditions would increase by more than five seconds during the AM peak hour. All fair share fees would be submitted to an existing Traffic Impact Fee Program. Implementation of the following mitigation would ensure that the LOS under Background Plus Project Conditions would improve to acceptable LOS D (52.5 seconds average delay) during the AM peak hour and LOS D (48.7 seconds average delay) in the PM peak hour and a *less-than-significant* impact would occur.

XVII-2. *Prior to issuance of building permits, the applicant shall pay all fair share contributions towards the Traffic Impact Fee Program for the cost of the future installation of one additional eastbound left-turn lane on Laurel Road and one additional southbound right-turn lane on Main Street to the satisfaction of the Community Development Department.*

Background Plus Project Conditions at Main Street/Brownstone Road: The stop-sign controlled intersection of Main Street/Brownstone Road (Study Intersection #12) is forecasted to operate at unacceptable LOS F during the AM and PM peak hours under Background Conditions with and without the proposed project. The anticipated unacceptable delay is primarily due to anticipated increases in through movement volume on Main Street. Average delay with the addition of project trips under Background Plus Project Conditions would increase by more than five seconds during both the AM and PM peak hours. All fair share fees would be submitted to an existing Traffic Impact Fee Program. Implementation of the mitigation would ensure that the LOS under Background Plus Project Conditions would improve to acceptable LOS C (34.2 seconds average delay) during the AM peak hour and LOS B (13.4 seconds average delay) in the PM peak hour and a *less-than-significant* impact would occur.

XVII-3. *Prior to approval of Improvement Plans, the applicant shall pay all fair share contribution fees towards the Traffic Impact Fee Program for the cost of installation of a future traffic signal at the Main Street/ Brownstone Road intersection to the satisfaction of the Community Development Department.*

Background Plus Project Conditions at Main Street/Delta Road: The stop-sign controlled intersection of Main Street/Delta road (Intersection #13) is forecasted to operate at LOS F during the AM peak hour and LOS E during the PM peak hour under Background Conditions with and without the proposed project. Average delay with the addition of project trips under Background Plus Project Conditions would increase by more than five seconds during the AM peak hour. All fair share fees would be submitted to an existing Traffic Impact Fee Program. Upon implementation of the mitigation, the intersection would operate at acceptable LOS C (23.0 seconds average delay) during the AM peak hour and LOS B (18.6 seconds average delay) in the PM peak hour and a *less-than-significant* impact would occur.

XVII-4. *Prior to approval of Improvement Plans, the applicant shall submit fair share contribution fees towards the Traffic Impact Fee Program for the cost of installing a future traffic signal at the Main Street/Delta Road intersection to the satisfaction of the Community Development Department.*

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Per Section 15064.3, analysis of vehicle miles traveled (VMT) attributable to a project is the most appropriate measure of transportation impacts. While a qualitative discussion of VMT has been provided below, the provisions of Section 15064.3 apply only prospectively; determination of impacts based on VTM is not required Statewide until July 1, 2020.

Per Section 15064.3(3), a lead agency may analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc. While changes to driving conditions that increase intersection delay are an important consideration for traffic operations and management, the method of analysis does not fully describe environmental effects associated with fuel consumption, emissions, and public health. Section 15064.3(3) changes the focus of transportation impact analysis in CEQA from measuring impact to drivers to measuring the impact of driving. As noted in question 'a' above, the project site would be served by the Tri-Delta Transit system with Routes 391 and 393 stopping approximately 0.3 mile north of the site. Additionally, the project would include access to bicycle and pedestrian facilities. The site is located within close proximity to schools, parks, grocery stores, food establishments, and banks. The inclusion of pedestrian and bicycle infrastructure and distance to nearby amenities would encourage residents to use alternative means of transportation to and from the project site.

Based on the above, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and a ***less-than-significant*** impact would occur.

c,d. Primary access to the project site would be provided by two new gated access points. One would be from Main Street, and the other from Honey Lane. The project roadway would have separate gates for each entrance and exit lane and would circulate the site through an "L-shaped" internal street. Vehicle parking would be provided by 494 spaces, including 62 on-street parallel parking spaces, 216 driveway spaces, and 216 garage spaces. Section 9.1.1402 of the City's Municipal Code requires at least two covered, off-street automobile parking space for each single-family dwelling unit. Dwelling units are required to have driveways of a minimum length of 25 feet. Thus, the parking supply and proposed driveway lengths meet the City's requirement.

The proposed intersection of the roadway and Main Street would generate left and right turning traffic onto Main Street from the project site. The intersection is proposed to be one-way stop controlled at the driveway with vehicles exiting the site anticipated to be travelling 15 miles per hour (mph). Main Street has a posted speed limit of 40 mph and requires at least 305 feet of stopping distance for oncoming vehicles from the point where they can see a vehicle exiting the driveway. Oncoming traffic travelling northbound and southbound on Main Street have a clear line of sight to vehicles exiting the driveway well above the minimum stopping distance.

The second proposed intersection of the project roadway at Honey Lane would generate left and right turning traffic onto Honey Lane from the project site, and into the project site from Honey Lane. The intersection is proposed to be one-way stop controlled at the driveway, with vehicles exiting the project site anticipated to be travelling at 15 mph. Honey Lane has a posted speed limit of 25 mph and requires at least 155 feet of stopping distance for oncoming vehicles from the point where they can see a vehicle exiting the driveway. Oncoming vehicles travelling eastbound on Honey Lane must stop at the intersection of Honey Lane & Creekside Way, approximately 135 feet west of the project driveway, and

have an unobstructed line of sight to the project driveway. Oncoming traffic travelling westbound on Honey Lane would have a clear line of sight well above the minimum stopping distance.

Additionally, sufficient emergency access is determined by factors such as the number of access points, the width of access roadways, and the width of internal roadways. The project site would provide two entrance points, each with widths able to accommodate emergency vehicles. The internal roadway would be sized to properly accommodate emergency vehicles circulating the project site.

The TIA did not identify any substantial issues related to project design hazards or emergency access to the project site. Based on the above, the project would not substantially increase hazards due to a design feature or incompatible uses, or result in inadequate emergency access, and a ***less-than-significant*** impact would occur.

Issues	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	☐	☐	✖	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	✖	☐

Discussion

a,b. In compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1), a project notification letter was distributed by the City to those Native American tribes who have previously requested notification under AB 52 of projects within the City subject to CEQA. The letters were distributed on January 7, 2019 and the City did not receive any responses within the mandatory 30-day response period for consultation under AB 52/Public Resources Code Section 21080.3.1(b).

The potential for unrecorded Native American resources to exist within the project site is relatively low based on the disturbed nature of the site. Implementation of Mitigation Measures V-1 and V-2, described in detail in Section V, Cultural Resources, would reduce any potential impacts related to unknown resources to less-than-significant levels. Based on a record search of the Native American Heritage Commission (NAHC) Sacred Land files, known tribal resources do not exist for the project area or adjacent lands.

Given that the project would be required to comply with the City's standard conditions of approval regarding cultural resources, as well as mitigation measures in Section V, construction of the proposed project would not result in a substantial adverse change in the significance of a tribal cultural resource. Per Public Resource Code sections 5020.1(k) and 5024.1, the project site is not listed as a historical resource nor does the site contain any known resources with significance to a California Native American tribe. Thus, the

proposed project would have a ***less-than-significant*** impact related to tribal cultural resources.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS.				
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	✖	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	✖	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	✖	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	✖	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	✖	☐

Discussion

a-c. Water service for the proposed project would be provided by the DWD. According to the DWD Final 2015 Urban Water Management Plan (UWMP)[23], the DWD has a baseline per capita demand of 177 gallons. The proposed project would develop 108 single-family houses. Based on the City of Oakley's estimate of 3.26 persons per household, the project would add 352 residents. Thus, the project is projected to use 62,304 gallons per day, or 69.8 acre-feet per year. The 2015 UWMP indicates that total water supply in the City is anticipated to increase from 16,830 acre-feet in 2020 to 20,411 acre-feet in 2040. The UWMP water supply projections account for planned growth within the City limits, including the project site. Thus, the project's annual demand of 69.8 acre-feet is a net increase of 22.8 acre-feet over what was previously anticipated at the site. Given the relatively small increase and anticipated water surplus by 2020, adequate long-term water supply exists.

Sanitary sewer services are provided to the project site by ISD. The wastewater system is composed of collection, treatment, and effluent recycling facilities. The Water Recycling Facility has an average daily flow of 2.3 million gallons per day (mgd). The facility has a treatment capacity of approximately 4.3 mgd. Using standard industry assumptions that (1) domestic water use represents 40 percent of consumption; and (2) wastewater

[23] Diablo Water District. *Final 2015 Urban Water Management Plan.* June 2016.

generation represents 90 percent of domestic water use, the proposed project would generate 22,429 gallons of effluent on a daily basis. Thus, the addition of wastewater from the project would represent less than one percent of the available capacity. Given the available capacity within the wastewater facility and the small generation of wastewater, the project would not result in inadequate capacity to serve the project's projected demand in addition to the existing commitments. Furthermore, the project would include connection of a new sewer line within the project site to the City's existing infrastructure in Honey Lane.

The proposed project would include a new storm drain with connection to existing storm drain systems in Main Street and Honey Lane. As discussed above, two bio-retention facilities would treat stormwater on-site and be designed to detain runoff during peak storm events and meter the release into the City's existing system.

Furthermore, electricity, natural gas, and telecommunications utilities would be provided by way of connections to existing infrastructure located within the immediate project vicinity. Therefore, the project would result in a ***less-than-significant*** impact related to the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

d,e. Solid waste, recyclable materials, and compostable material collection within the City of Oakley is hauled to Potrero Hills Landfill located in Solano County to the north. The site has a maximum permitted throughput of 4,330 tons per day. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Potrero Hills Landfill has a remaining capacity of 13,872,000 cubic yards out of a total permitted capacity of 83,100,000, or 83 percent remaining capacity.[24] Due to the substantial amount of available capacity remaining at Potrero Hills Landfill, sufficient capacity would be available to accommodate the project's solid waste disposal needs. Therefore, a ***less-than-significant*** impact related to solid waste would occur as a result of the proposed project.

[24] California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Potrero Hill Landfill (48-AA-0075)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0075/. Accessed August 2019.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XX. WILDFIRE.					
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	✖	☐
b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	✖	☐
c.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	✖	☐
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post fire slope instability, or drainage changes?	☐	☐	✖	☐

Discussion

a-d. As noted in Section IX, Hazards and Hazardous Materials, according to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is not located within a Very High Fire Hazard Severity Zone.[25] In addition, the surrounding area consist of residential land uses. Thus, the proposed project would not experience result in substantial risk or hazards related to wildfires, and a ***less-than-significant*** impact would occur.

[25] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	✖	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	✖	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	✖	☐

Discussion

a. As discussed in Section IV, Biological Resources, of this IS/MND, while a limited potential exists for western burrowing owl, Swainson's hawk, golden eagle, and nesting raptors and migratory birds protected by the MBTA to occur on-site, Mitigation Measures IV-1 through IV-5 would ensure that any impacts related to special-status species would be reduced to a less-than-significant level. The proposed project would involve demolition of two single-family residences, but does not contain any known historic or prehistoric resources. Thus, implementation of the proposed project is not anticipated to have the potential to result in impacts related to historic or prehistoric resources. Nevertheless, Mitigation Measures V-1 and V-2 would ensure that in the event that prehistoric resources are discovered within the project site, such resources would be protected in compliance with the requirements of CEQA and other State standards.

Considering the above, the proposed project would not degrade the quality of the environment, substantially reduce or impact the habitat of fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, a ***less-than-significant*** impact would occur.

b. The proposed project, in conjunction with other development within the City of Oakley, could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level through compliance with the mitigation measures included in this IS/MND, as well as applicable

General Plan policies, Municipal Code standards, and other applicable local and State regulations. In addition, the proposed project would be consistent with the site's current land use and zoning designations. Accordingly, buildout of the site with residential uses and associated cumulative impacts have been analyzed within the General Plan EIR.

All cumulative impacts related to air quality and noise are either less than significant after mitigation or less than significant and do not require mitigation. Given the scope of the project, the incremental effects of this project are not considerable relative to the effects of past, current, and probably future projects. As discussed previously, the project does have potential significant cumulative traffic impacts. However, Mitigation Measures XVII-1 through XVII-4 would fully mitigate all potential cumulative impacts to a less than significant level. With the implementation of the mitigation measures, the proposed project would not result in cumulatively significant impacts on these areas. Impacts would be less than significant.

Therefore, when viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts in the City of Oakley, and the project's incremental contribution to cumulative impacts would be ***less than significant***.

c. As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Municipal Code standards, other applicable local and State regulations, in addition to the mitigation measures included herein. In addition, as discussed in Section III, Air Quality, Section IX, Hazards and Hazardous Materials, and Section XIII, Noise, of this IS/MND, the proposed project would not cause substantial effects to human beings, including effects related to exposure to air pollutants, hazardous materials, traffic, and noise. Therefore, the proposed project would result in a ***less-than-significant*** impact.

Appendix

Air Quality and GHG Modeling Results

CalEEMod Unmitigated Output Results

Acacia Project

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - per applicant

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	27.00	0.00
tblFireplaces	NumberNoFireplace	8.64	0.00
tblFireplaces	NumberWood	46.44	0.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2020	0.8091	3.8968	2.7246	6.4300e-003	0.3243	0.1726	0.4969	0.1519	0.1618	0.3137	0.0000	578.7118	578.7118	0.1040	0.0000	581.3116
2021	0.9834	2.6507	2.5787	4.7800e-003	0.0587	0.1381	0.1968	0.0159	0.1305	0.1464	0.0000	417.1910	417.1910	0.0781	0.0000	419.1443
2022	0.3308	0.7666	0.8167	1.5300e-003	0.0190	0.0376	0.0566	5.1300e-003	0.0356	0.0407	0.0000	133.6362	133.6362	0.0247	0.0000	134.2533
Maximum	**0.9834**	**3.8968**	**2.7246**	**6.4300e-003**	**0.3243**	**0.1726**	**0.4969**	**0.1519**	**0.1618**	**0.3137**	**0.0000**	**578.7118**	**578.7118**	**0.1040**	**0.0000**	**581.3116**

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	tons/yr										MT/yr					
2020	0.8091	3.8968	2.7246	6.4300e-003	0.3243	0.1726	0.4969	0.1519	0.1618	0.3137	0.0000	578.7113	578.7113	0.1040	0.0000	581.3112
2021	0.9834	2.6507	2.5786	4.7800e-003	0.0587	0.1381	0.1968	0.0159	0.1305	0.1464	0.0000	417.1906	417.1906	0.0781	0.0000	419.1439
2022	0.3308	0.7666	0.8167	1.5300e-003	0.0190	0.0376	0.0566	5.1300e-003	0.0356	0.0407	0.0000	133.6360	133.6360	0.0247	0.0000	134.2532
Maximum	**0.9834**	**3.8968**	**2.7246**	**6.4300e-003**	**0.3243**	**0.1726**	**0.4969**	**0.1519**	**0.1618**	**0.3137**	**0.0000**	**578.7113**	**578.7113**	**0.1040**	**0.0000**	**581.3112**

Acacia Project - Bay Area AQMD Air District, Annual

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-3-2020**	**5-2-2020**	2.0681	2.0681
2	**5-3-2020**	**8-2-2020**	0.9697	0.9697
3	**8-3-2020**	**11-2-2020**	0.9909	0.9909
4	**11-3-2020**	**2-2-2021**	0.9646	0.9646
5	**2-3-2021**	**5-2-2021**	0.8854	0.8854
6	**5-3-2021**	**8-2-2021**	0.9144	0.9144
7	**8-3-2021**	**11-2-2021**	0.9149	0.9149
8	**11-3-2021**	**2-2-2022**	0.8894	0.8894
9	**2-3-2022**	**5-2-2022**	0.7810	0.7810
10	**5-3-2022**	**8-2-2022**	0.0221	0.0221
		Highest	2.0681	2.0681

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	tons/yr										MT/yr					
Area	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	269.6436	269.6436	0.0147	5.4500e-003	271.6350
Mobile	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.2653	8.4977	0.2300	5.5600e-003	15.9044
Total	**1.1970**	**1.1849**	**3.7510**	**0.0116**	**0.8763**	**0.0655**	**0.9418**	**0.2352**	**0.0650**	**0.3001**	**34.1112**	**1,177.3245**	**1,211.4357**	**1.8600**	**0.0110**	**1,261.2159**

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Mobile	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.1546	8.3870	0.2300	5.5600e-003	15.7926
Total	**1.1873**	**1.1259**	**3.5233**	**0.0105**	**0.7729**	**0.0647**	**0.8375**	**0.2074**	**0.0642**	**0.2716**	**34.1112**	**976.8594**	**1,010.9706**	**1.8458**	**8.6300e-003**	**1,059.6869**

	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	**0.81**	**4.98**	**6.07**	**9.23**	**11.80**	**1.25**	**11.07**	**11.80**	**1.19**	**9.50**	**0.00**	**17.03**	**16.55**	**0.76**	**21.62**	**15.98**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

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	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1826	0.1196	2.1000e-004		9.1200e-003	9.1200e-003		8.4800e-003	8.4800e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**0.0182**	**0.1826**	**0.1196**	**2.1000e-004**	**1.0800e-003**	**9.1200e-003**	**0.0102**	**1.6000e-004**	**8.4800e-003**	**8.6400e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

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	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

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	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1826	0.1196	2.1000e-004		9.1200e-003	9.1200e-003		8.4800e-003	8.4800e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**0.0182**	**0.1826**	**0.1196**	**2.1000e-004**	**1.0800e-003**	**9.1200e-003**	**0.0102**	**1.6000e-004**	**8.4800e-003**	**8.6400e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

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	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

3.3 Site Preparation - 2020

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	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3393	0.1721	3.0000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0326**	**0.3393**	**0.1721**	**3.0000e-004**	**0.1445**	**0.0176**	**0.1621**	**0.0795**	**0.0162**	**0.0956**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

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	tons/yr										MT/yr					
Hauling	5.0000e-005	1.7500e-003	3.5000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4598	0.4598	2.0000e-005	0.0000	0.4604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.0900e-003**	**3.8900e-003**	**1.0000e-005**	**1.2400e-003**	**2.0000e-005**	**1.2600e-003**	**3.3000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.4567**	**1.4567**	**4.0000e-005**	**0.0000**	**1.4579**

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	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3393	0.1721	3.0000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0326**	**0.3393**	**0.1721**	**3.0000e-004**	**0.1445**	**0.0176**	**0.1621**	**0.0795**	**0.0162**	**0.0956**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

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	tons/yr										MT/yr					
Hauling	5.0000e-005	1.7500e-003	3.5000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4598	0.4598	2.0000e-005	0.0000	0.4604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.0900e-003**	**3.8900e-003**	**1.0000e-005**	**1.2400e-003**	**2.0000e-005**	**1.2600e-003**	**3.3000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.4567**	**1.4567**	**4.0000e-005**	**0.0000**	**1.4579**

3.4 Grading - 2020

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	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.0994**	**0.0326**	**0.1320**	**0.0507**	**0.0300**	**0.0807**	**0.0000**	**81.7264**	**81.7264**	**0.0264**	**0.0000**	**82.3872**

3.4 Grading - 2020

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	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

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	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.0994**	**0.0326**	**0.1320**	**0.0507**	**0.0300**	**0.0807**	**0.0000**	**81.7263**	**81.7263**	**0.0264**	**0.0000**	**82.3871**

3.4 Grading - 2020

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	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

3.5 Paving - 2020

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	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

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	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

3.6 Building Construction - 2020

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	tons/yr										MT/yr					
Off-Road	0.1897	1.7172	1.5079	2.4100e-003		0.1000	0.1000		0.0940	0.0940	0.0000	207.2909	207.2909	0.0506	0.0000	208.5552
Total	**0.1897**	**1.7172**	**1.5079**	**2.4100e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**207.2909**	**207.2909**	**0.0506**	**0.0000**	**208.5552**

3.6 Building Construction - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

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	tons/yr										MT/yr					
Off-Road	0.1897	1.7172	1.5079	2.4100e-003		0.1000	0.1000		0.0940	0.0940	0.0000	207.2907	207.2907	0.0506	0.0000	208.5550
Total	**0.1897**	**1.7172**	**1.5079**	**2.4100e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**207.2907**	**207.2907**	**0.0506**	**0.0000**	**208.5550**

3.6 Building Construction - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

3.6 Building Construction - 2021

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	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.6 Building Construction - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

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	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.6 Building Construction - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

3.6 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	tons/yr										MT/yr					
Off-Road	0.0708	0.6481	0.6791	1.1200e-003		0.0336	0.0336		0.0316	0.0316	0.0000	96.1660	96.1660	0.0230	0.0000	96.7419
Total	**0.0708**	**0.6481**	**0.6791**	**1.1200e-003**		**0.0336**	**0.0336**		**0.0316**	**0.0316**	**0.0000**	**96.1660**	**96.1660**	**0.0230**	**0.0000**	**96.7419**

3.6 Building Construction - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

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	tons/yr										MT/yr					
Off-Road	0.0708	0.6481	0.6791	1.1200e-003		0.0336	0.0336		0.0316	0.0316	0.0000	96.1659	96.1659	0.0230	0.0000	96.7418
Total	**0.0708**	**0.6481**	**0.6791**	**1.1200e-003**		**0.0336**	**0.0336**		**0.0316**	**0.0316**	**0.0000**	**96.1659**	**96.1659**	**0.0230**	**0.0000**	**96.7418**

3.6 Building Construction - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

3.7 Architectural Coating - 2020

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	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6168
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6168**

3.7 Architectural Coating - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

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	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6167
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6167**

3.7 Architectural Coating - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

3.7 Architectural Coating - 2021

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	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3200	33.3200	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3200**	**33.3200**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

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	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3199	33.3199	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3199**	**33.3199**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

3.7 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8920
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8920**

3.7 Architectural Coating - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

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	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8919
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8919**

3.7 Architectural Coating - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	tons/yr										MT/yr					
Mitigated	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Unmitigated	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.1330	102.1330	0.0115	2.3800e-003	103.1290
NaturalGas Mitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
NaturalGas Unmitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060

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	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

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	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	873782	102.1330	0.0115	2.3800e-003	103.1290
Total		**102.1330**	**0.0115**	**2.3800e-003**	**103.1290**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

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	tons/yr										MT/yr					
Mitigated	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228
Unmitigated	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228

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	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0279	4.1300e-003	0.2534	8.3000e-004		0.0413	0.0413		0.0413	0.0413	5.5346	0.0000	5.5346	0.0259	0.0000	6.1814
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.9481**	**0.0134**	**1.0555**	**8.7000e-004**		**0.0458**	**0.0458**		**0.0458**	**0.0458**	**5.5346**	**1.3099**	**6.8445**	**0.0271**	**0.0000**	**7.5228**

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	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0279	4.1300e-003	0.2534	8.3000e-004		0.0413	0.0413		0.0413	0.0413	5.5346	0.0000	5.5346	0.0259	0.0000	6.1814
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.9481**	**0.0134**	**1.0555**	**8.7000e-004**		**0.0458**	**0.0458**		**0.0458**	**0.0458**	**5.5346**	**1.3099**	**6.8445**	**0.0271**	**0.0000**	**7.5228**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.3870	0.2300	5.5600e-003	15.7926
Unmitigated	8.4977	0.2300	5.5600e-003	15.9044

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.43614	8.4977	0.2300	5.5600e-003	15.9044
Total		**8.4977**	**0.2300**	**5.5600e-003**	**15.9044**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.16553	8.3870	0.2300	5.5600e-003	15.7926
Total		**8.3870**	**0.2300**	**5.5600e-003**	**15.7926**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.3442	1.5569	0.0000	65.2666
Unmitigated	26.3442	1.5569	0.0000	65.2666

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

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

Acacia Project

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - per applicant

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	27.00	0.00
tblFireplaces	NumberNoFireplace	8.64	0.00
tblFireplaces	NumberWood	46.44	0.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

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					
2020	7.8040	89.6258	40.3226	0.1730	18.2279	2.3037	20.4270	9.9736	2.1241	11.9968	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.5413	20.2874	19.8396	0.0369	0.4673	1.0578	1.5252	0.1258	1.0002	1.1260	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.3193	18.2786	19.5158	0.0367	0.4673	0.8954	1.3628	0.1258	0.8473	0.9731	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.8040**	**89.6258**	**40.3226**	**0.1730**	**18.2279**	**2.3037**	**20.4270**	**9.9736**	**2.1241**	**11.9968**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

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					
2020	7.8040	89.6258	40.3226	0.1730	18.2279	2.3037	20.4270	9.9736	2.1241	11.9968	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.5413	20.2874	19.8396	0.0369	0.4673	1.0578	1.5252	0.1258	1.0002	1.1260	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.3193	18.2786	19.5158	0.0367	0.4673	0.8954	1.3628	0.1258	0.8473	0.9731	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.8040**	**89.6258**	**40.3226**	**0.1730**	**18.2279**	**2.3037**	**20.4270**	**9.9736**	**2.1241**	**11.9968**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

	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

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	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968
Total	**9.3867**	**6.7579**	**48.3833**	**0.1410**	**5.0022**	**4.0828**	**9.0850**	**1.3382**	**4.0799**	**5.4181**	**579.3792**	**6,793.9524**	**7,373.3316**	**2.9338**	**0.0186**	**7,452.2041**

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	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Total	**9.3323**	**6.4541**	**46.9716**	**0.1348**	**4.4120**	**4.0782**	**8.4902**	**1.1803**	**4.0756**	**5.2559**	**579.3792**	**6,163.8790**	**6,743.2582**	**2.9169**	**0.0186**	**6,821.7079**

	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	**0.58**	**4.50**	**2.92**	**4.42**	**11.80**	**0.11**	**6.55**	**11.80**	**0.10**	**2.99**	**0.00**	**9.27**	**8.55**	**0.58**	**0.00**	**8.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

3.3 Site Preparation - 2020

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.1900e-003	0.2148	0.0427	6.0000e-004	0.0131	7.0000e-004	0.0138	3.5900e-003	6.7000e-004	4.2600e-003		63.8088	63.8088	3.1900e-003		63.8886
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0688**	**0.2527**	**0.5257**	**2.0800e-003**	**0.1610**	**1.6600e-003**	**0.1626**	**0.0428**	**1.5500e-003**	**0.0444**		**211.5486**	**211.5486**	**6.7500e-003**		**211.7174**

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.1900e-003	0.2148	0.0427	6.0000e-004	0.0131	7.0000e-004	0.0138	3.5900e-003	6.7000e-004	4.2600e-003		63.8088	63.8088	3.1900e-003		63.8886
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0688**	**0.2527**	**0.5257**	**2.0800e-003**	**0.1610**	**1.6600e-003**	**0.1626**	**0.0428**	**1.5500e-003**	**0.0444**		**211.5486**	**211.5486**	**6.7500e-003**		**211.7174**

3.4 Grading - 2020

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

3.5 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

3.6 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

3.6 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

3.6 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

3.7 Architectural Coating - 2020

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

3.7 Architectural Coating - 2021

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

3.7 Architectural Coating - 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					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Unmitigated	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

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					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

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	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Unmitigated	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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

Acacia Project

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - per applicant

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	27.00	0.00
tblFireplaces	NumberNoFireplace	8.64	0.00
tblFireplaces	NumberWood	46.44	0.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

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					
2020	7.8158	90.6022	40.8892	0.1711	18.2279	2.3060	20.4270	9.9736	2.1263	11.9968	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.5525	20.3188	19.8090	0.0365	0.4673	1.0579	1.5253	0.1258	1.0003	1.1261	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.3301	18.3061	19.4841	0.0364	0.4673	0.8955	1.3628	0.1258	0.8474	0.9732	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.8158**	**90.6022**	**40.8892**	**0.1711**	**18.2279**	**2.3060**	**20.4270**	**9.9736**	**2.1263**	**11.9968**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

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					
2020	7.8158	90.6022	40.8892	0.1711	18.2279	2.3060	20.4270	9.9736	2.1263	11.9968	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.5525	20.3188	19.8090	0.0365	0.4673	1.0579	1.5253	0.1258	1.0003	1.1261	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.3301	18.3061	19.4841	0.0364	0.4673	0.8955	1.3628	0.1258	0.8474	0.9732	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.8158**	**90.6022**	**40.8892**	**0.1711**	**18.2279**	**2.3060**	**20.4270**	**9.9736**	**2.1263**	**11.9968**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

	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

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	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993
Total	**9.1823**	**7.0385**	**48.4534**	**0.1374**	**5.0022**	**4.0830**	**9.0852**	**1.3382**	**4.0801**	**5.4183**	**579.3792**	**6,428.0674**	**7,007.4466**	**2.9373**	**0.0186**	**7,086.4066**

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	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Total	**9.1286**	**6.7001**	**47.1974**	**0.1315**	**4.4120**	**4.0785**	**8.4904**	**1.1803**	**4.0758**	**5.2561**	**579.3792**	**5,836.7098**	**6,416.0890**	**2.9211**	**0.0186**	**6,494.6445**

	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	**0.58**	**4.81**	**2.59**	**4.25**	**11.80**	**0.11**	**6.55**	**11.80**	**0.10**	**2.99**	**0.00**	**9.20**	**8.44**	**0.55**	**0.00**	**8.35**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

3.3 Site Preparation - 2020

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.3600e-003	0.2201	0.0460	5.9000e-004	0.0131	7.1000e-004	0.0138	3.5900e-003	6.8000e-004	4.2700e-003		62.7370	62.7370	3.3500e-003		62.8208
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0725**	**0.2669**	**0.4996**	**1.9600e-003**	**0.1610**	**1.6700e-003**	**0.1626**	**0.0428**	**1.5600e-003**	**0.0444**		**198.8288**	**198.8288**	**6.6800e-003**		**198.9958**

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.3600e-003	0.2201	0.0460	5.9000e-004	0.0131	7.1000e-004	0.0138	3.5900e-003	6.8000e-004	4.2700e-003		62.7370	62.7370	3.3500e-003		62.8208
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0725**	**0.2669**	**0.4996**	**1.9600e-003**	**0.1610**	**1.6700e-003**	**0.1626**	**0.0428**	**1.5600e-003**	**0.0444**		**198.8288**	**198.8288**	**6.6800e-003**		**198.9958**

3.4 Grading - 2020

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

3.5 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

3.6 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

3.6 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

3.6 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

3.7 Architectural Coating - 2020

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

3.7 Architectural Coating - 2021

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

3.7 Architectural Coating - 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					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Unmitigated	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

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					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

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	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Unmitigated	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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

Acacia Project

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 3	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	Tier 3	0	1	No Change	0.00
Cranes	Diesel	Tier 3	0	1	No Change	0.00
Excavators	Diesel	Tier 3	0	5	No Change	0.00
Forklifts	Diesel	Tier 3	0	3	No Change	0.00
Generator Sets	Diesel	Tier 3	0	1	No Change	0.00
Graders	Diesel	Tier 3	0	1	No Change	0.00
Pavers	Diesel	Tier 3	0	2	No Change	0.00
Paving Equipment	Diesel	Tier 3	0	2	No Change	0.00
Rollers	Diesel	Tier 3	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 3	0	6	No Change	0.00
Scrapers	Diesel	Tier 3	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 3	0	9	No Change	0.00
Welders	Diesel	Tier 3	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67676E+001	6.67676E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	2.30000E-003	1.81400E-002	2.02800E-002	3.00000E-005	1.09000E-003	1.09000E-003	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	1.13900E-002	1.12190E-001	1.51950E-001	2.40000E-004	5.43000E-003	5.00000E-003	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17760E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05352E+002	1.05352E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	7.14000E-003	9.48800E-002	2.72200E-002	1.00000E-004	3.03000E-003	2.79000E-003	0.00000E+000	8.74597E+000	8.74597E+000	2.83000E-003	0.00000E+000	8.81668E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24907E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91460E-001	6.91460E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	5.39700E-002	5.66610E-001	2.06580E-001	4.30000E-004	2.77500E-002	2.55300E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78311E+001
Scrapers	2.97900E-002	3.52560E-001	2.23760E-001	4.50000E-004	1.37500E-002	1.26500E-002	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.44300E-001	1.45707E+000	1.69500E+000	2.33000E-003	8.76400E-002	8.06200E-002	0.00000E+000	2.04301E+002	2.04301E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98260E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92197E+001	4.92197E+001	6.62000E-003	0.00000E+000	4.93853E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67675E+001	6.67675E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	2.30000E-003	1.81400E-002	2.02800E-002	3.00000E-005	1.09000E-003	1.09000E-003	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	1.13900E-002	1.12190E-001	1.51950E-001	2.40000E-004	5.43000E-003	5.00000E-003	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17750E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05351E+002	1.05351E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	7.14000E-003	9.48800E-002	2.72200E-002	1.00000E-004	3.03000E-003	2.79000E-003	0.00000E+000	8.74596E+000	8.74596E+000	2.83000E-003	0.00000E+000	8.81667E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24906E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91450E-001	6.91450E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	5.39700E-002	5.66610E-001	2.06580E-001	4.30000E-004	2.77500E-002	2.55300E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78310E+001
Scrapers	2.97900E-002	3.52560E-001	2.23760E-001	4.50000E-004	1.37500E-002	1.26500E-002	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.44300E-001	1.45707E+000	1.69499E+000	2.33000E-003	8.76400E-002	8.06200E-002	0.00000E+000	2.04300E+002	2.04300E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98250E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92196E+001	4.92196E+001	6.62000E-003	0.00000E+000	4.93852E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19819E-006	1.19819E-006	0.00000E+000	0.00000E+000	1.19607E-006
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20703E-006	1.20703E-006	0.00000E+000	0.00000E+000	1.19735E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.48000E-007	9.48000E-007	0.00000E+000	0.00000E+000	9.40397E-007
Forklifts	0.00000E+000	0.00000E+000	1.08961E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13904E-006	1.13904E-006	0.00000E+000	0.00000E+000	1.12991E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21785E-006	1.21785E-006	0.00000E+000	0.00000E+000	1.21626E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.14338E-006	1.14338E-006	0.00000E+000	0.00000E+000	1.13421E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	8.00596E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.44622E-005	1.44622E-005	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.06588E-006	1.06588E-006	0.00000E+000	0.00000E+000	1.05733E-006
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.25233E-006	1.25233E-006	0.00000E+000	0.00000E+000	1.24228E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	5.89971E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22369E-006	1.22369E-006	0.00000E+000	0.00000E+000	1.21387E-006
Welders	0.00000E+000	2.51092E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.01585E-006	1.01585E-006	0.00000E+000	0.00000E+000	1.21494E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Water Exposed Area	PM10 Reduction	0.00	PM2.5 Reduction	0.00	Frequency (per day)	

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.02	0.00	0.02	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.10	0.03	0.10	0.03	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.10	0.05	0.10	0.05	0.00	0.00
Grading	Roads	0.04	0.01	0.04	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.14	0.08	0.14	0.08	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	4.18	5.75	8.64	10.92	10.22	10.28	0.00	10.91	10.91	8.57	0.00	10.91
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77	1.30	0.00	0.00	0.70
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.15	0.30		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
Yes	Neighborhood Enhancements	Provide Traffic Calming Measures		50.00		
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.12			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.12			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
Yes	On-site Renewable		100.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

CalEEMod Mitigated Output Results

Acacia Project - Mitigated

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Trips and VMT - mitigation

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2020	0.8091	3.8969	2.7246	6.4300e-003	0.3243	0.1726	0.4969	0.1519	0.1618	0.3137	0.0000	578.7501	578.7501	0.1040	0.0000	581.3500
2021	0.9834	2.6507	2.5787	4.7800e-003	0.0587	0.1381	0.1968	0.0159	0.1305	0.1464	0.0000	417.1910	417.1910	0.0781	0.0000	419.1443
2022	0.3308	0.7666	0.8167	1.5300e-003	0.0190	0.0376	0.0566	5.1300e-003	0.0356	0.0407	0.0000	133.6362	133.6362	0.0247	0.0000	134.2533
Maximum	**0.9834**	**3.8969**	**2.7246**	**6.4300e-003**	**0.3243**	**0.1726**	**0.4969**	**0.1519**	**0.1618**	**0.3137**	**0.0000**	**578.7501**	**578.7501**	**0.1040**	**0.0000**	**581.3500**

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	tons/yr										MT/yr					
2020	0.7330	2.9642	2.7511	6.4300e-003	0.3243	0.1288	0.4531	0.1519	0.1215	0.2734	0.0000	578.7496	578.7496	0.1040	0.0000	581.3496
2021	0.9721	2.5202	2.5848	4.7800e-003	0.0587	0.1300	0.1887	0.0159	0.1232	0.1390	0.0000	417.1906	417.1906	0.0781	0.0000	419.1439
2022	0.3278	0.7304	0.8191	1.5300e-003	0.0190	0.0355	0.0545	5.1300e-003	0.0337	0.0388	0.0000	133.6360	133.6360	0.0247	0.0000	134.2532
Maximum	**0.9721**	**2.9642**	**2.7511**	**6.4300e-003**	**0.3243**	**0.1300**	**0.4531**	**0.1519**	**0.1232**	**0.2734**	**0.0000**	**578.7496**	**578.7496**	**0.1040**	**0.0000**	**581.3496**

Acacia Project - Mitigated - Bay Area AQMD Air District, Annual

	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	**4.26**	**15.03**	**-0.57**	**0.00**	**0.00**	**15.49**	**7.19**	**0.00**	**15.10**	**9.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-3-2020**	**5-2-2020**	2.0683	1.1720
2	**5-3-2020**	**8-2-2020**	0.9697	0.9297
3	**8-3-2020**	**11-2-2020**	0.9909	0.9508
4	**11-3-2020**	**2-2-2021**	0.9646	0.9261
5	**2-3-2021**	**5-2-2021**	0.8854	0.8509
6	**5-3-2021**	**8-2-2021**	0.9144	0.8787
7	**8-3-2021**	**11-2-2021**	0.9149	0.8792
8	**11-3-2021**	**2-2-2022**	0.8894	0.8554
9	**2-3-2022**	**5-2-2022**	0.7810	0.7526
10	**5-3-2022**	**8-2-2022**	0.0221	0.0221
		Highest	2.0683	1.1720

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	tons/yr										MT/yr					
Area	1.5568	0.0232	1.7277	1.9500e-003		0.1379	0.1379		0.1379	0.1379	13.7280	4.6806	18.4086	0.0272	7.8000e-004	19.3223
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	269.6436	269.6436	0.0147	5.4500e-003	271.6350
Mobile	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.2653	8.4977	0.2300	5.5600e-003	15.9044
Total	**1.8056**	**1.1947**	**4.4233**	**0.0127**	**0.8763**	**0.1576**	**1.0339**	**0.2352**	**0.1571**	**0.3923**	**42.3046**	**1,180.6951**	**1,222.9997**	**1.8601**	**0.0118**	**1,273.0154**

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	0.9202	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Mobile	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.1546	8.3870	0.2300	5.5600e-003	15.7926
Total	**1.1594**	**1.1217**	**3.2700**	**9.6900e-003**	**0.7729**	**0.0233**	**0.7962**	**0.2074**	**0.0229**	**0.2303**	**28.5766**	**976.8594**	**1,005.4360**	**1.8199**	**8.6300e-003**	**1,053.5055**

	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	**35.79**	**6.11**	**26.07**	**23.52**	**11.80**	**85.20**	**22.99**	**11.80**	**85.46**	**41.30**	**32.45**	**17.26**	**17.79**	**2.16**	**26.80**	**17.24**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

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	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1826	0.1196	2.1000e-004		9.1200e-003	9.1200e-003		8.4800e-003	8.4800e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**0.0182**	**0.1826**	**0.1196**	**2.1000e-004**	**1.0800e-003**	**9.1200e-003**	**0.0102**	**1.6000e-004**	**8.4800e-003**	**8.6400e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

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	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

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	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e-003	0.0709	0.1297	2.1000e-004		3.3100e-003	3.3100e-003		3.0700e-003	3.0700e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**7.9000e-003**	**0.0709**	**0.1297**	**2.1000e-004**	**1.0800e-003**	**3.3100e-003**	**4.3900e-003**	**1.6000e-004**	**3.0700e-003**	**3.2300e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

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	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

3.3 Site Preparation - 2020

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	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3393	0.1721	3.0000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0326**	**0.3393**	**0.1721**	**3.0000e-004**	**0.1445**	**0.0176**	**0.1621**	**0.0795**	**0.0162**	**0.0956**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

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	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9000e-003	3.8000e-004	1.0000e-005	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4981	0.4981	3.0000e-005	0.0000	0.4988
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.2400e-003**	**3.9200e-003**	**2.0000e-005**	**1.2500e-003**	**2.0000e-005**	**1.2700e-003**	**3.3000e-004**	**2.0000e-005**	**3.5000e-004**	**0.0000**	**1.4950**	**1.4950**	**5.0000e-005**	**0.0000**	**1.4963**

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	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.1951	0.1690	3.0000e-004		0.0102	0.0102		9.3900e-003	9.3900e-003	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0197**	**0.1951**	**0.1690**	**3.0000e-004**	**0.1445**	**0.0102**	**0.1547**	**0.0795**	**9.3900e-003**	**0.0888**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

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	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9000e-003	3.8000e-004	1.0000e-005	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4981	0.4981	3.0000e-005	0.0000	0.4988
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.2400e-003**	**3.9200e-003**	**2.0000e-005**	**1.2500e-003**	**2.0000e-005**	**1.2700e-003**	**3.3000e-004**	**2.0000e-005**	**3.5000e-004**	**0.0000**	**1.4950**	**1.4950**	**5.0000e-005**	**0.0000**	**1.4963**

3.4 Grading - 2020

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	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.0994**	**0.0326**	**0.1320**	**0.0507**	**0.0300**	**0.0807**	**0.0000**	**81.7264**	**81.7264**	**0.0264**	**0.0000**	**82.3872**

3.4 Grading - 2020

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	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

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	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.1765	0.4958	9.3000e-004		8.5800e-003	8.5800e-003		8.0000e-003	8.0000e-003	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	**0.0228**	**0.1765**	**0.4958**	**9.3000e-004**	**0.0994**	**8.5800e-003**	**0.1079**	**0.0507**	**8.0000e-003**	**0.0587**	**0.0000**	**81.7263**	**81.7263**	**0.0264**	**0.0000**	**82.3871**

3.4 Grading - 2020

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	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

3.5 Paving - 2020

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	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

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	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

3.6 Building Construction - 2020

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	tons/yr										MT/yr					
Off-Road	0.1897	1.7172	1.5079	2.4100e-003		0.1000	0.1000		0.0940	0.0940	0.0000	207.2909	207.2909	0.0506	0.0000	208.5552
Total	**0.1897**	**1.7172**	**1.5079**	**2.4100e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**207.2909**	**207.2909**	**0.0506**	**0.0000**	**208.5552**

3.6 Building Construction - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

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	tons/yr										MT/yr					
Off-Road	0.1809	1.6169	1.5112	2.4100e-003		0.0934	0.0934		0.0879	0.0879	0.0000	207.2907	207.2907	0.0506	0.0000	208.5550
Total	**0.1809**	**1.6169**	**1.5112**	**2.4100e-003**		**0.0934**	**0.0934**		**0.0879**	**0.0879**	**0.0000**	**207.2907**	**207.2907**	**0.0506**	**0.0000**	**208.5550**

3.6 Building Construction - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

3.6 Building Construction - 2021

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	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.6 Building Construction - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

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	tons/yr										MT/yr					
Off-Road	0.2368	2.1444	2.1692	3.5100e-003		0.1171	0.1171		0.1103	0.1103	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2368**	**2.1444**	**2.1692**	**3.5100e-003**		**0.1171**	**0.1171**		**0.1103**	**0.1103**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.6 Building Construction - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

3.6 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	tons/yr										MT/yr					
Off-Road	0.0708	0.6481	0.6791	1.1200e-003		0.0336	0.0336		0.0316	0.0316	0.0000	96.1660	96.1660	0.0230	0.0000	96.7419
Total	**0.0708**	**0.6481**	**0.6791**	**1.1200e-003**		**0.0336**	**0.0336**		**0.0316**	**0.0316**	**0.0000**	**96.1660**	**96.1660**	**0.0230**	**0.0000**	**96.7419**

3.6 Building Construction - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

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	tons/yr										MT/yr					
Off-Road	0.0678	0.6118	0.6816	1.1200e-003		0.0315	0.0315		0.0297	0.0297	0.0000	96.1659	96.1659	0.0230	0.0000	96.7418
Total	**0.0678**	**0.6118**	**0.6816**	**1.1200e-003**		**0.0315**	**0.0315**		**0.0297**	**0.0297**	**0.0000**	**96.1659**	**96.1659**	**0.0230**	**0.0000**	**96.7418**

3.6 Building Construction - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

3.7 Architectural Coating - 2020

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	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6168
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6168**

3.7 Architectural Coating - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

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	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6167
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6167**

3.7 Architectural Coating - 2020

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

3.7 Architectural Coating - 2021

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	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3200	33.3200	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3200**	**33.3200**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

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	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3199	33.3199	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3199**	**33.3199**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

3.7 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8920
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8920**

3.7 Architectural Coating - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

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	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8919
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8919**

3.7 Architectural Coating - 2022

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	tons/yr										MT/yr					
Mitigated	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Unmitigated	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.1330	102.1330	0.0115	2.3800e-003	103.1290
NaturalGas Mitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
NaturalGas Unmitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060

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	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

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	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	873782	102.1330	0.0115	2.3800e-003	103.1290
Total		**102.1330**	**0.0115**	**2.3800e-003**	**103.1290**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	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	tons/yr										MT/yr					
Mitigated	0.9202	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Unmitigated	1.5568	0.0232	1.7277	1.9500e-003		0.1379	0.1379		0.1379	0.1379	13.7280	4.6806	18.4086	0.0272	7.8000e-004	19.3223

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	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6366	0.0140	0.9256	1.9100e-003		0.1335	0.1335		0.1335	0.1335	13.7280	3.3707	17.0987	0.0259	7.8000e-004	17.9809
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**1.5568**	**0.0232**	**1.7277**	**1.9500e-003**		**0.1379**	**0.1379**		**0.1379**	**0.1379**	**13.7280**	**4.6806**	**18.4086**	**0.0272**	**7.8000e-004**	**19.3223**

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	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.9202**	**9.2500e-003**	**0.8021**	**4.0000e-005**		**4.4400e-003**	**4.4400e-003**		**4.4400e-003**	**4.4400e-003**	**0.0000**	**1.3099**	**1.3099**	**1.2600e-003**	**0.0000**	**1.3414**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.3870	0.2300	5.5600e-003	15.7926
Unmitigated	8.4977	0.2300	5.5600e-003	15.9044

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.43614	8.4977	0.2300	5.5600e-003	15.9044
Total		**8.4977**	**0.2300**	**5.5600e-003**	**15.9044**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.16553	8.3870	0.2300	5.5600e-003	15.7926
Total		**8.3870**	**0.2300**	**5.5600e-003**	**15.7926**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.3442	1.5569	0.0000	65.2666
Unmitigated	26.3442	1.5569	0.0000	65.2666

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

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

Acacia Project - Mitigated

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Trips and VMT - mitigation

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

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					
2020	7.8040	89.6258	40.3226	0.1730	18.2290	2.3037	20.4282	9.9739	2.1241	11.9971	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.5413	20.2874	19.8396	0.0369	0.4673	1.0578	1.5252	0.1258	1.0002	1.1260	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.3193	18.2786	19.5158	0.0367	0.4673	0.8954	1.3628	0.1258	0.8473	0.9731	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.8040**	**89.6258**	**40.3226**	**0.1730**	**18.2290**	**2.3037**	**20.4282**	**9.9739**	**2.1241**	**11.9971**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

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					
2020	7.7050	51.1952	41.4152	0.1730	18.2290	1.2749	19.5039	9.9739	1.1750	11.1489	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.4551	19.2876	19.8869	0.0369	0.4673	0.9962	1.4635	0.1258	0.9437	1.0695	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.2461	17.4060	19.5759	0.0367	0.4673	0.8463	1.3136	0.1258	0.8023	0.9281	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.7050**	**51.1952**	**41.4152**	**0.1730**	**18.2290**	**1.2749**	**19.5039**	**9.9739**	**1.1750**	**11.1489**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

Acacia Project - Mitigated - Bay Area AQMD Air District, Summer

	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	**1.14**	**31.44**	**-1.51**	**0.00**	**0.00**	**26.77**	**4.44**	**0.00**	**26.45**	**6.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968
Total	**118.6594**	**8.5204**	**169.0722**	**0.3351**	**5.0022**	**20.6260**	**25.6282**	**1.3382**	**20.6231**	**21.9613**	**2,200.8606**	**7,461.0112**	**9,661.8718**	**2.9466**	**0.1739**	**9,787.3437**

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	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Total	**6.6827**	**6.0616**	**22.9093**	**0.0563**	**4.4120**	**0.1529**	**4.5649**	**1.1803**	**0.1503**	**1.3306**	**0.0000**	**6,163.8790**	**6,163.8790**	**0.2084**	**0.0186**	**6,174.6167**

	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	**94.37**	**28.86**	**86.45**	**83.21**	**11.80**	**99.26**	**82.19**	**11.80**	**99.27**	**93.94**	**100.00**	**17.39**	**36.20**	**92.93**	**89.33**	**36.91**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.4372	12.8824	23.5779	0.0388		0.6027	0.6027		0.5583	0.5583	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**1.4372**	**12.8824**	**23.5779**	**0.0388**	**0.1969**	**0.6027**	**0.7995**	**0.0298**	**0.5583**	**0.5881**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

3.3 Site Preparation - 2020

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.7000e-003	0.2327	0.0463	6.5000e-004	0.0142	7.6000e-004	0.0150	3.8900e-003	7.3000e-004	4.6200e-003		69.1262	69.1262	3.4600e-003		69.2126
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0693**	**0.2706**	**0.5292**	**2.1300e-003**	**0.1621**	**1.7200e-003**	**0.1638**	**0.0431**	**1.6100e-003**	**0.0447**		**216.8659**	**216.8659**	**7.0200e-003**		**217.0414**

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	2.4631	24.3908	21.1215	0.0380		1.2732	1.2732		1.1733	1.1733	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**2.4631**	**24.3908**	**21.1215**	**0.0380**	**18.0670**	**1.2732**	**19.3401**	**9.9308**	**1.1733**	**11.1041**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.7000e-003	0.2327	0.0463	6.5000e-004	0.0142	7.6000e-004	0.0150	3.8900e-003	7.3000e-004	4.6200e-003		69.1262	69.1262	3.4600e-003		69.2126
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0693**	**0.2706**	**0.5292**	**2.1300e-003**	**0.1621**	**1.7200e-003**	**0.1638**	**0.0431**	**1.6100e-003**	**0.0447**		**216.8659**	**216.8659**	**7.0200e-003**		**217.0414**

3.4 Grading - 2020

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	1.5166	11.7669	33.0509	0.0620		0.5718	0.5718		0.5330	0.5330	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**1.5166**	**11.7669**	**33.0509**	**0.0620**	**6.6237**	**0.5718**	**7.1955**	**3.3806**	**0.5330**	**3.9136**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

3.5 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

3.6 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

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	2.0208	18.0654	16.8845	0.0269		1.0431	1.0431		0.9825	0.9825	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.0208**	**18.0654**	**16.8845**	**0.0269**		**1.0431**	**1.0431**		**0.9825**	**0.9825**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

3.6 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

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	1.8147	16.4323	16.6225	0.0269		0.8970	0.8970		0.8448	0.8448	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.8147**	**16.4323**	**16.6225**	**0.0269**		**0.8970**	**0.8970**		**0.8448**	**0.8448**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

3.6 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

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	1.6331	14.7430	16.4235	0.0269		0.7599	0.7599		0.7162	0.7162	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.6331**	**14.7430**	**16.4235**	**0.0269**		**0.7599**	**0.7599**		**0.7162**	**0.7162**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

3.7 Architectural Coating - 2020

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

3.7 Architectural Coating - 2021

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

3.7 Architectural Coating - 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					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Unmitigated	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

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					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	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	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Unmitigated	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	111.9223	2.1550	144.7512	0.2726		20.4685	20.4685		20.4685	20.4685	2,200.8606	667.0588	2,867.9194	2.7213	0.1553	2,982.2308
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**117.1008**	**2.2578**	**153.6633**	**0.2731**		**20.5179**	**20.5179**		**20.5179**	**20.5179**	**2,200.8606**	**683.1025**	**2,883.9630**	**2.7367**	**0.1553**	**2,998.6602**

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**5.1785**	**0.1027**	**8.9121**	**4.7000e-004**		**0.0493**	**0.0493**		**0.0493**	**0.0493**	**0.0000**	**16.0437**	**16.0437**	**0.0154**	**0.0000**	**16.4294**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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

Acacia Project - Mitigated

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Trips and VMT - mitigation

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

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					
2020	7.8158	90.6022	40.8892	0.1711	18.2290	2.3060	20.4282	9.9739	2.1263	11.9971	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.5525	20.3188	19.8090	0.0365	0.4673	1.0579	1.5253	0.1258	1.0003	1.1261	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.3301	18.3061	19.4841	0.0364	0.4673	0.8955	1.3628	0.1258	0.8474	0.9732	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.8158**	**90.6022**	**40.8892**	**0.1711**	**18.2290**	**2.3060**	**20.4282**	**9.9739**	**2.1263**	**11.9971**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

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					
2020	7.7168	52.1716	41.9818	0.1711	18.2290	1.2749	19.5039	9.9739	1.1750	11.1489	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.4662	19.3190	19.8562	0.0365	0.4673	0.9963	1.4636	0.1258	0.9438	1.0696	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.2569	17.4334	19.5443	0.0364	0.4673	0.8464	1.3137	0.1258	0.8024	0.9282	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.7168**	**52.1716**	**41.9818**	**0.1711**	**18.2290**	**1.2749**	**19.5039**	**9.9739**	**1.1750**	**11.1489**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

	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	**1.14**	**31.19**	**-1.50**	**0.00**	**0.00**	**26.81**	**4.44**	**0.00**	**26.49**	**6.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993
Total	**118.4550**	**8.8010**	**169.1423**	**0.3315**	**5.0022**	**20.6262**	**25.6284**	**1.3382**	**20.6233**	**21.9615**	**2,200.8606**	**7,095.1262**	**9,295.9868**	**2.9501**	**0.1739**	**9,421.5462**

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	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Total	**6.4790**	**6.3076**	**23.1351**	**0.0530**	**4.4120**	**0.1531**	**4.5651**	**1.1803**	**0.1505**	**1.3308**	**0.0000**	**5,836.7098**	**5,836.7098**	**0.2126**	**0.0186**	**5,847.5533**

	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	**94.53**	**28.33**	**86.32**	**84.00**	**11.80**	**99.26**	**82.19**	**11.80**	**99.27**	**93.94**	**100.00**	**17.74**	**37.21**	**92.79**	**89.33**	**37.93**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

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					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.4372	12.8824	23.5779	0.0388		0.6027	0.6027		0.5583	0.5583	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**1.4372**	**12.8824**	**23.5779**	**0.0388**	**0.1969**	**0.6027**	**0.7995**	**0.0298**	**0.5583**	**0.5881**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

3.3 Site Preparation - 2020

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.8900e-003	0.2385	0.0498	6.4000e-004	0.0142	7.7000e-004	0.0150	3.8900e-003	7.4000e-004	4.6300e-003		67.9651	67.9651	3.6300e-003		68.0559
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0731**	**0.2853**	**0.5034**	**2.0100e-003**	**0.1621**	**1.7300e-003**	**0.1638**	**0.0431**	**1.6200e-003**	**0.0447**		**204.0569**	**204.0569**	**6.9600e-003**		**204.2309**

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					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	2.4631	24.3908	21.1215	0.0380		1.2732	1.2732		1.1733	1.1733	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**2.4631**	**24.3908**	**21.1215**	**0.0380**	**18.0670**	**1.2732**	**19.3401**	**9.9308**	**1.1733**	**11.1041**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	6.8900e-003	0.2385	0.0498	6.4000e-004	0.0142	7.7000e-004	0.0150	3.8900e-003	7.4000e-004	4.6300e-003		67.9651	67.9651	3.6300e-003		68.0559
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0731**	**0.2853**	**0.5034**	**2.0100e-003**	**0.1621**	**1.7300e-003**	**0.1638**	**0.0431**	**1.6200e-003**	**0.0447**		**204.0569**	**204.0569**	**6.9600e-003**		**204.2309**

3.4 Grading - 2020

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

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					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	1.5166	11.7669	33.0509	0.0620		0.5718	0.5718		0.5330	0.5330	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**1.5166**	**11.7669**	**33.0509**	**0.0620**	**6.6237**	**0.5718**	**7.1955**	**3.3806**	**0.5330**	**3.9136**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

3.5 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

3.6 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

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	2.0208	18.0654	16.8845	0.0269		1.0431	1.0431		0.9825	0.9825	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.0208**	**18.0654**	**16.8845**	**0.0269**		**1.0431**	**1.0431**		**0.9825**	**0.9825**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

3.6 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

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	1.8147	16.4323	16.6225	0.0269		0.8970	0.8970		0.8448	0.8448	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.8147**	**16.4323**	**16.6225**	**0.0269**		**0.8970**	**0.8970**		**0.8448**	**0.8448**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

3.6 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

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	1.6331	14.7430	16.4235	0.0269		0.7599	0.7599		0.7162	0.7162	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.6331**	**14.7430**	**16.4235**	**0.0269**		**0.7599**	**0.7599**		**0.7162**	**0.7162**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

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		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

3.7 Architectural Coating - 2020

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

3.7 Architectural Coating - 2021

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

3.7 Architectural Coating - 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					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

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	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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		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		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Unmitigated	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

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					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	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	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Unmitigated	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	111.9223	2.1550	144.7512	0.2726		20.4685	20.4685		20.4685	20.4685	2,200.8606	667.0588	2,867.9194	2.7213	0.1553	2,982.2308
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**117.1008**	**2.2578**	**153.6633**	**0.2731**		**20.5179**	**20.5179**		**20.5179**	**20.5179**	**2,200.8606**	**683.1025**	**2,883.9630**	**2.7367**	**0.1553**	**2,998.6602**

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	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**5.1785**	**0.1027**	**8.9121**	**4.7000e-004**		**0.0493**	**0.0493**		**0.0493**	**0.0493**	**0.0000**	**16.0437**	**16.0437**	**0.0154**	**0.0000**	**16.4294**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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

Acacia Project - Mitigated

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.04	0.05	0.00	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.56	0.61	-0.08	0.00	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.52	0.42	-0.03	0.00	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.39	0.42	0.02	0.00	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	Tier 4 Final	1	1	No Change	0.00
Cranes	Diesel	Tier 4 Final	0	1	No Change	0.00
Excavators	Diesel	Tier 4 Final	5	5	No Change	0.00
Forklifts	Diesel	Tier 4 Final	0	3	No Change	0.00
Generator Sets	Diesel	Tier 4 Final	0	1	No Change	0.00
Graders	Diesel	Tier 4 Final	1	1	No Change	0.00
Pavers	Diesel	Tier 4 Final	0	2	No Change	0.00
Paving Equipment	Diesel	Tier 4 Final	0	2	No Change	0.00
Rollers	Diesel	Tier 4 Final	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 4 Final	3	6	No Change	0.00
Scrapers	Diesel	Tier 4 Final	2	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2	9	No Change	0.00
Welders	Diesel	Tier 4 Final	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67676E+001	6.67676E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	2.30000E-003	1.81400E-002	2.02800E-002	3.00000E-005	1.09000E-003	1.09000E-003	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	1.13900E-002	1.12190E-001	1.51950E-001	2.40000E-004	5.43000E-003	5.00000E-003	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17760E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05352E+002	1.05352E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	7.14000E-003	9.48800E-002	2.72200E-002	1.00000E-004	3.03000E-003	2.79000E-003	0.00000E+000	8.74597E+000	8.74597E+000	2.83000E-003	0.00000E+000	8.81668E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24907E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91460E-001	6.91460E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	5.39700E-002	5.66610E-001	2.06580E-001	4.30000E-004	2.77500E-002	2.55300E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78311E+001
Scrapers	2.97900E-002	3.52560E-001	2.23760E-001	4.50000E-004	1.37500E-002	1.26500E-002	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.44300E-001	1.45707E+000	1.69500E+000	2.33000E-003	8.76400E-002	8.06200E-002	0.00000E+000	2.04301E+002	2.04301E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98260E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92197E+001	4.92197E+001	6.62000E-003	0.00000E+000	4.93853E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67675E+001	6.67675E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	3.40000E-004	1.49000E-003	2.12200E-002	3.00000E-005	5.00000E-005	5.00000E-005	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	2.95000E-003	1.28000E-002	1.82190E-001	2.40000E-004	3.90000E-004	3.90000E-004	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17750E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05351E+002	1.05351E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	1.22000E-003	5.27000E-003	4.46200E-002	1.00000E-004	1.60000E-004	1.60000E-004	0.00000E+000	8.74596E+000	8.74596E+000	2.83000E-003	0.00000E+000	8.81667E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24906E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91450E-001	6.91450E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	2.96000E-002	2.94630E-001	1.99130E-001	4.30000E-004	1.42200E-002	1.31100E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78310E+001
Scrapers	5.59000E-003	2.42300E-002	2.05060E-001	4.50000E-004	7.50000E-004	7.50000E-004	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.18810E-001	1.16361E+000	1.70773E+000	2.33000E-003	6.91900E-002	6.37200E-002	0.00000E+000	2.04300E+002	2.04300E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98250E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92196E+001	4.92196E+001	6.62000E-003	0.00000E+000	4.93852E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19819E-006	1.19819E-006	0.00000E+000	0.00000E+000	1.19607E-006
Concrete/Industrial Saws	8.52174E-001	9.17861E-001	-4.63511E-002	0.00000E+000	9.54128E-001	9.54128E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20703E-006	1.20703E-006	0.00000E+000	0.00000E+000	1.19735E-006
Excavators	7.41001E-001	8.85908E-001	-1.99013E-001	0.00000E+000	9.28177E-001	9.22000E-001	0.00000E+000	9.48000E-007	9.48000E-007	0.00000E+000	0.00000E+000	9.40397E-007
Forklifts	0.00000E+000	0.00000E+000	1.08961E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13904E-006	1.13904E-006	0.00000E+000	0.00000E+000	1.12991E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21785E-006	1.21785E-006	0.00000E+000	0.00000E+000	1.21626E-006
Graders	8.29132E-001	9.44456E-001	-6.39236E-001	0.00000E+000	9.47195E-001	9.42652E-001	0.00000E+000	1.14338E-006	1.14338E-006	0.00000E+000	0.00000E+000	1.13421E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	8.00596E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.44622E-005	1.44622E-005	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	4.51547E-001	4.80013E-001	3.60635E-002	0.00000E+000	4.87568E-001	4.86486E-001	0.00000E+000	1.06588E-006	1.06588E-006	0.00000E+000	0.00000E+000	1.05733E-006
Scrapers	8.12353E-001	9.31274E-001	8.35717E-002	0.00000E+000	9.45455E-001	9.40711E-001	0.00000E+000	1.25233E-006	1.25233E-006	0.00000E+000	0.00000E+000	1.24228E-006
Tractors/Loaders/Backhoes	1.76646E-001	2.01404E-001	-7.51032E-003	0.00000E+000	2.10520E-001	2.09625E-001	0.00000E+000	1.22369E-006	1.22369E-006	0.00000E+000	0.00000E+000	1.21387E-006
Welders	0.00000E+000	2.51092E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.01585E-006	1.01585E-006	0.00000E+000	0.00000E+000	1.21494E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Water Exposed Area	PM10 Reduction	0.00	PM2.5 Reduction	0.00	Frequency (per day)	

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.02	0.00	0.02	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.10	0.03	0.10	0.03	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.10	0.05	0.10	0.05	0.00	0.00
Grading	Roads	0.04	0.01	0.04	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.14	0.08	0.14	0.08	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00
Hearth	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	4.18	5.75	8.64	10.92	10.22	10.28	0.00	10.91	10.91	8.57	0.00	10.91
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77	1.30	0.00	0.00	0.70
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.15	0.30		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
Yes	Neighborhood Enhancements	Provide Traffic Calming Measures		50.00		
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.12			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.12			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
Yes	On-site Renewable		100.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Acacia Project
Initial Study/Mitigated Negative Declaration

Errata Sheet
October 15, 2019

This errata sheet presents, in ~~strike-through~~ and double-underline format, the revisions to the Initial Study/Mitigated Negative Declaration (IS/MND) for the Acacia Project (proposed project). The revisions to the IS/MND reflected in this errata sheet do not affect the adequacy of the previous environmental analysis contained in the IS/MND. Because the changes presented below would not result in any new significant impacts or a substantial increase in the severity of an environmental impact identified in the IS/MND, recirculation of the IS/MND is not required.

The IS/MND concluded that because the project site has been anticipated for development of residential structures, the intensity of stormwater flows would not exceed the existing or planned stormwater infrastructure capacity. However, because the project would result in greater density of housing than previously anticipated in the City's General Plan, Mitigation Measure X-1 requires the applicant submit final plans to the City, identifying permanent stormwater control measures, as well as calculations demonstrating that post-project stormwater flows comply with the applicable provisions of the C.3 Standards. City staff has initiated the following change to page 58 of the IS/MND to include clarification that the applicant submit hydrology and hydraulic calculations to show the adequacy of the existing drainage system and the downstream drainage system. Additionally, the mitigation is revised to include requirements that the applicant show the path of overland flow that the water from the bioretention area would take should the facilities draining the bioretention areas become clogged.

X-1. *Prior to ~~issuance~~ approval of ~~grading permits~~ Improvement Plans, the applicant shall submit to the City final plans, identifying permanent stormwater control measures to be implemented on the project. The final plans shall include calculations demonstrating that post-project stormwater flows comply with the applicable provisions of the C.3 Standards and meet City standards as well as show the path of overland flow that the water from the bioretention areas would take should the facilities draining the bioretention areas become clogged or otherwise fail to drain. The final plans shall also include one of the following:*

- *A hydrology study showing the increased density of the proposed project would not increase stormwater flows beyond what was anticipated in the Drainage Area 30B and Drainage Area 130 Hydrology Plans; or*
- *A hydrology study and hydraulic calculations that show the adequacy of the in-tract drainage system and the downstream drainage system to handle flows from the proposed residences.*

The final plans shall be submitted to the Public Works Department for review and approval.

The aforementioned revision is for clarification purposes only, and does not affect the conclusions of the IS/MND.

The IS/MND also concluded that because the project is located in Drainage Area 30b, the site would be subject to the applicable Contra Costa County Flood Control and Water Conservation District drainage fees. However, the site is also located in Drainage Area 130, which requires the applicant additionally pay the applicable fees for Drainage Area 130. Therefore, the following changes have been initiated by the City staff to clarify that the project site is located in Drainage Areas 30b and 130 and would be subject to all applicable fees.

> All municipalities within Contra Costa County are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. Known as the "C.3 Standards", new development and redevelopment projects that create or replace 10,000 or more sf of impervious surface area must contain and treat stormwater runoff from the site. Because the proposed project would create more than 10,000 sf of impervious surface area, the proposed project would be considered a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures. In addition, the project site is within Drainage Area 30b and Drainage Area 130, and would be required to pay the applicable Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) drainage fees in accordance with Flood Control Ordinance Number 2006-51 and 2007-06.[17]

The aforementioned revisions are for clarification purposes only, and do not affect the conclusions of the IS/MND.













ACACIA

OAKLEY, CA

SEPTEMBER 27, 2019

Signature Homes

4670 Willow Rd, Suite 100, Pleasanton, CA 94588
925.463.1122

SDG Architects, Inc.
3361 Walnut Blvd. Suite 120
Brentwood, CA 94513
925.634.7000 | sdgarchitectsinc.com



LEGEND

1. Entry Gate
2. Stamped Asphalt Paving
3. Community Entry Monument
4. Bio Retention Area
5. Masonry Wall
6. 6' H Wood Fence w/ Lattice on Block Wall
7. 6' H Ornamental Metal Fence
8. 42" Ornamental Metal Fence
9. Concrete Walkway
10. Backyard
11. 6'H Good Neighbor Fence
12. Drainage Easement

0 20' 40' 80'

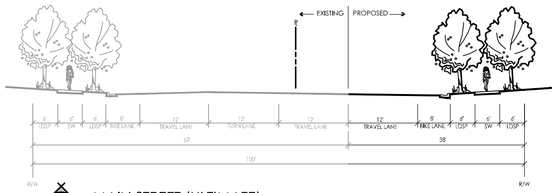
TRACT 9498

VESTING TENTATIVE SUBDIVISION MAP

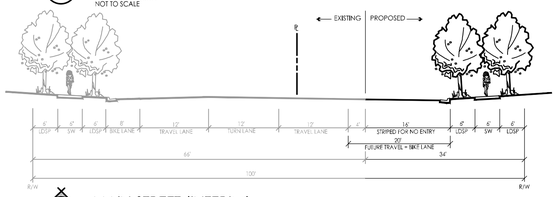
ACACIA

CITY OF OAKLEY, CALIFORNIA

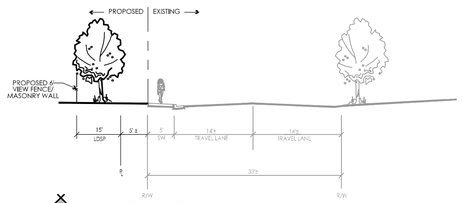
DECEMBER 4, 2018
(REVISED: FEBRUARY 26, 2019)
(REVISED: SEPTEMBER 27, 2019)



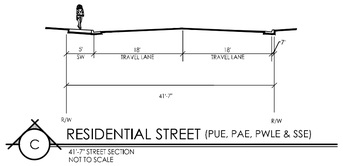
A-1 MAIN STREET (ULTIMATE)
100' STREET SECTION
NOT TO SCALE



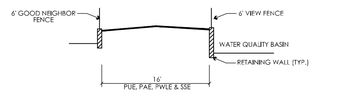
A-2 MAIN STREET (INTERIM)
100' STREET SECTION
NOT TO SCALE



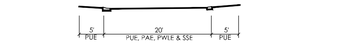
B HONEY LANE
INTERIM STREET SECTION
NOT TO SCALE



C RESIDENTIAL STREET (PUE, PAE, PWLE & SSE)
41'-7" STREET SECTION
NOT TO SCALE

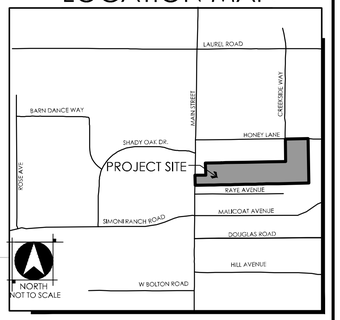


E PRIVATE DRIVEWAY (PUE, PAE, PWLE & SSE)
16' SECTION
NOT TO SCALE



D PRIVATE DRIVE (PUE, PAE, PWLE & SSE)
20' SECTION
NOT TO SCALE

LOCATION MAP



ABBREVIATIONS

EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
PUE	PUBLIC UTILITY EASEMENT
PSDE	PRIVATE STORM DRAIN EASEMENT
PWLE	PRIVATE WATER LINE EASEMENT
SSE	SANITARY SEWER EASEMENT
WLE	WATER LINE EASEMENT

PROJECT NOTES

APPLICANT
SIGNATURE HOMES, INC.
4670 WILLOW ROAD #200
PLEASANTON, CA 94588
CONTACT: STEPHEN MILLER
PHONE: (925) 468-3704

OWNERS
DOUGLAS F. HARDCASTLE & LINDA HARDCASTLE TRUSTEES, DOUGLAS F. AND LINDA HARDCASTLE REVOCABLE LIVING TRUST
361 HONEY LN
OAKLEY, CA 94561

GWENDOLYN MARIE MINOR
TRUSTEE OF THE NUNNALLY LIVING TRUST
5360 MAIN ST
OAKLEY, CA 94561

PLANNER / ENGINEER
WOOD RODGERS INC.
4670 WILLOW ROAD, SUITE 125
PLEASANTON, CA 94588
CONTACT: PAUL MEUSER | SANDEEP VANGARI
PHONE: (925) 847-1549 | (925) 398-7919

GEOTECHNICAL ENGINEER
ENGEO INCORPORATED
17278 GOLDEN VALLEY PARKWAY
LATHROP, CA 95330
PHONE: (209) 835-0610

ASSESSOR'S PARCEL NUMBERS (APN)
033-030-001, 033-030-027

AREA
13.4 ± ACRES GROSS

NUMBER OF LOTS
108 SINGLE-FAMILY RESIDENTIAL LOTS
1 PRIVATE STREET LOT
12 PRIVATE DRIVE LOTS
1 PUBLIC RIGHT-OF-WAY LOT
2 WATER QUALITY LOTS
3 LANDSCAPE LOTS

DENSITY
8.1 DU/AC (G)

EXISTING USE
AGRICULTURE; SINGLE FAMILY RESIDENTIAL

PROPOSED USE
SINGLE FAMILY SUBDIVISION

EXISTING ZONING
R-6 (6,000 SF Min. Lot Area)

PROPOSED ZONING
P-1 (PLANNED DEVELOPMENT)

EXISTING GENERAL PLAN
SINGLE FAMILY HIGH (3.8 - 5.5 DU/AC GROSS)

PROPOSED GENERAL PLAN
MULTI FAMILY LOW (5.5 - 9.6 DU/AC GROSS)

PARK DISTRICT
EAST BAY REGIONAL PARK DISTRICT

FIRE PROTECTION
EAST CONTRA COSTA FIRE PROTECTION DISTRICT

SCHOOL DISTRICT
OAKLEY UNION ELEMENTARY SCHOOL DISTRICT

SEWER
IRONHOUSE SANITARY DISTRICT

STORM DRAIN
CITY OF OAKLEY (PUBLIC STREETS)
HOMEOWNERS ASSOCIATION (PRIVATE STREET/COMMON AREAS)

WATER
DIABLO WATER DISTRICT

ELECTRICITY
PG&E

GAS
PG&E

NOTES
1. SUBDIVIDER RESERVES THE RIGHT TO FILE MULTIPLE FINAL MAPS.
2. THIS IS AN APPLICATION FOR A DEVELOPMENT PERMIT.
3. PURSUANT TO SECTION 66434(g) OF THE SUBDIVISION MAP ACT, EASEMENTS TO BE ABANDONED ARE MARKED ON THE MAP.
4. LOTS A-M, PRIVATE DRIVES, CONTAIN PWLE, PUE, SSE & PAE.

LAND USE SUMMARY

LOT NO./VILLAGE NO.	GENERAL PLAN/ZONING DESIGNATIONS	USE	ACRES (N)	ACRES (G)	UNITS	DU/AC (G)
VILLAGE 1	MULTI-FAMILY LOW/ P-1	SINGLE FAMILY RESIDENTIAL (45' X 75' TYP.)	10.0	13.4	108	8.1
LOT A	MULTI-FAMILY LOW/ P-1	PRIVATE STREET	1.80	-		
LOT B - M	MULTI-FAMILY LOW/ P-1	PRIVATE DRIVE	0.85	-		
LOT N & O	MULTI-FAMILY LOW/ P-1	WATER QUALITY	0.51	-		
LOT P & Q	MULTI-FAMILY LOW/ P-1	LANDSCAPE/ WATER QUALITY	0.10	-		
PUBLIC RIGHT-OF-WAY			0.14	-		
TOTAL			13.4	13.4	108	8.1

* RV PARKING PROVIDED ALONG SIDE YARD (5 TOTAL)

SHEET INDEX

C1	VESTING TENTATIVE SUBDIVISION MAP
C2	EXISTING CONDITIONS
C3	PRELIMINARY SITE PLAN
C4	PARKING PLAN
C5	PRELIMINARY GRADING PLAN
C5.1	SECTIONS
C6	PRELIMINARY UTILITY PLAN
C7	PRELIMINARY STORMWATER MANAGEMENT PLAN
C8	GENERAL PLAN AMENDMENT
C9	REZONE
C10	TYPICAL PLOT PLANS

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
4670 Willow Road, Suite 125
Pleasanton, CA. 94588
Tel 925.847.1556
Fax 925.847.1557

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TRACT 9498

EXISTING CONDITIONS

ACACIA

CITY OF OAKLEY, CALIFORNIA

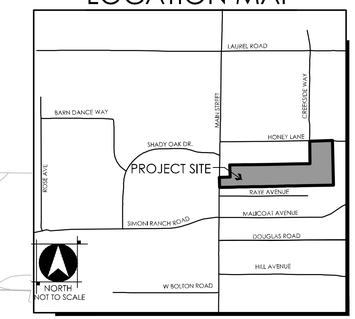
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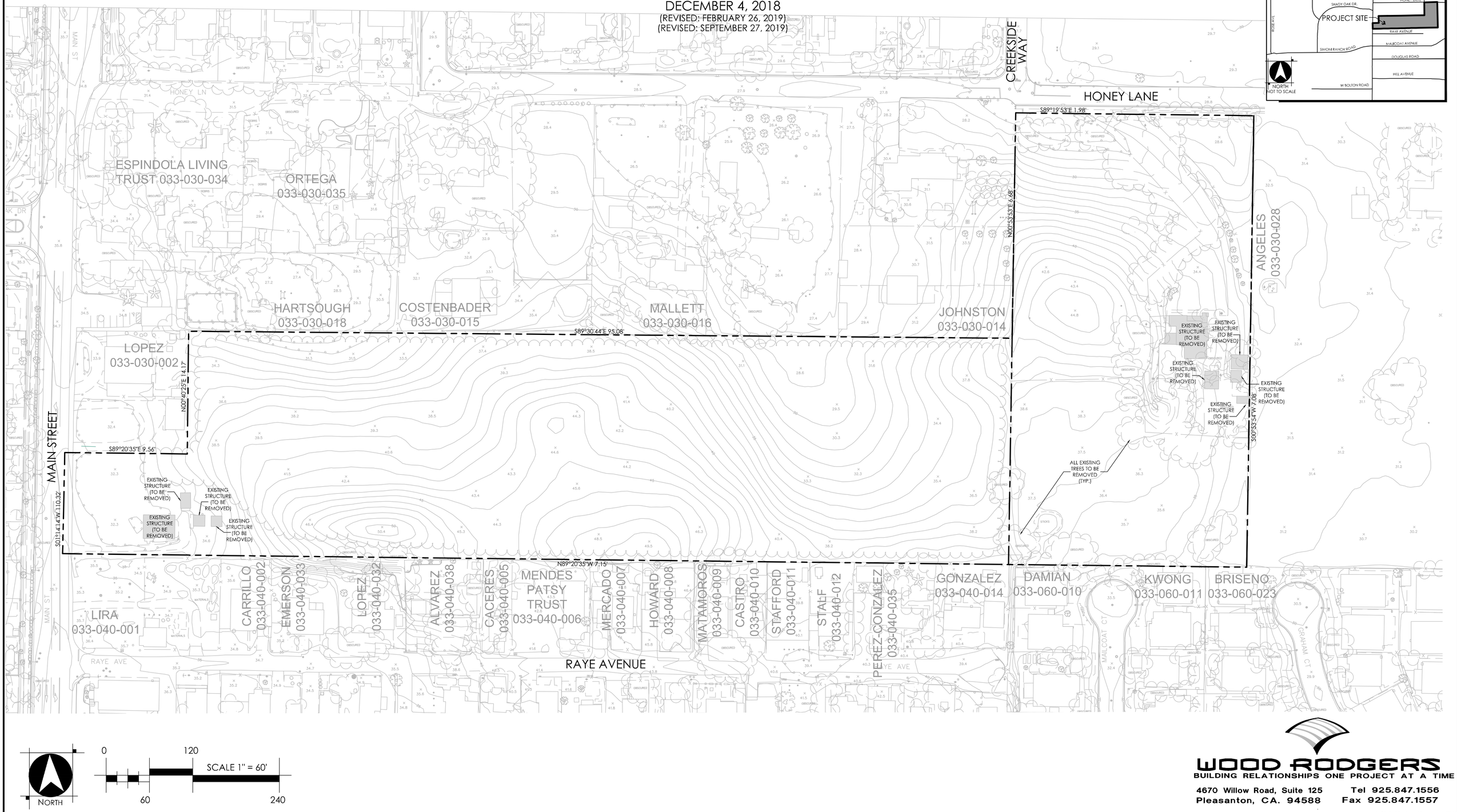
(REVISED: FEBRUARY 26, 2019)

(REVISED: SEPTEMBER 27, 2019)

401

LOCATION MAP





NORTH

0 60 120 240

SCALE 1" = 60'

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TRACT 9498

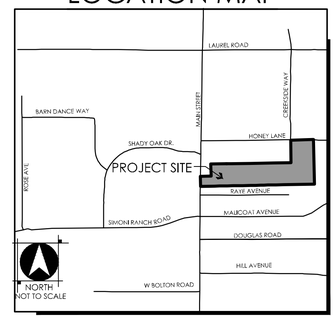
FINAL DEVELOPMENT PLAN

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CITY OF OAKLEY, CALIFORNIA

DECEMBER 4, 2018
(REVISED: FEBRUARY 26, 2019)
(REVISED: SEPTEMBER 27, 2019)

LOCATION MAP



HOUSING SUMMARY

LOT 45'x75'	UNIT COUNT	PERCENT MIX*
PLAN 1	30	28%
PLAN 2	35	32%
PLAN 3	43	40%
TOTAL	108	100%

NOTE: * HOUSE PLAN MIX IS APPROXIMATE. AND IS SUBJECT TO CHANGE.

* RV PARKING PROVIDED ALONG SIDE YARD (5 TOTAL)

HONEY LANE

LOT O WATER QUALITY

LOT Q LANDSCAPE

LOT M 0.03 ± AC. (N)

S89°19'53"E 1.98'

N00°55'55"E 6.68'

VILLAGE 1
(108) 45'x75'(TYP.) LOTS
13.4 ± AC.(G)

ESPINDOLA LIVING TRUST 033-030-034

ORTEGA 033-030-035

HARTSOUGH 033-030-018

COSTENBADER 033-030-015

MALLETT 033-030-016

JOHNSTON 033-030-014

ANGELES 033-030-028

LOPEZ 033-030-002

MAIN STREET

S89°30'44"E 95.08'

N00°40'25"E 14.17'

LOT P LANDSCAPE

S89°20'35"E 9.56'

LOT A

S00°53'54"W 7.08'

S01°14'14"W 110.32'

LOT B

LOT C

LOT D

LOT E

LOT F

LOT G

LOT H

LOT I

LOT J

LOT K

LOT L

N89°20'35"W 7.15'

MAIN ST. PUBLIC RIGHT-OF-WAY

LOT N WATER QUALITY

LIRA 033-040-001

CARRILLO 033-040-002

EMERSON 033-040-033

LOPEZ 033-040-032

ALVAREZ 033-040-038

CACERES 033-040-005

MENDES PATSY TRUST 033-040-006

MERCADO 033-040-007

HOWARD 033-040-008

MATAMOROS 033-040-009

CASTRO 033-040-010

STAFFORD 033-040-011

STALF 033-040-012

EZ-CONZALEZ 033-040-035

GONZALEZ 033-040-014

DAMIAN 033-060-010

KWONG 033-060-011

BRISENO 033-060-023

MINIMUM YARD REQUIREMENTS	PLANNED UNIT DEVELOPMENT (P-1)
FRONT YARD	12' MINIMUM TO PORCH
	15' MINIMUM TO LIVING AREA
	18' MINIMUM TO GARAGE
REAR YARD	10' MINIMUM
SIDE YARD	4' ONE SIDE
	8' AGGREGATE SIDE YARD
	9' TO PRIVATE STREET /PRIVATE DRIVE

MINIMUM LOT REQUIREMENTS	PLANNED UNIT DEVELOPMENT (P-1)
LOT AREA (IN SQUARE FEET)	3,375
LOT WIDTH	45'
LOT DEPTH	75'

BUILDING HEIGHT	30' MAXIMUM
DENSITY	8.1 DU/AC (G)

STREET TREE REQUIREMENTS	PLANNED UNIT DEVELOPMENT (P-1)
LOT FRONTAGE	1
LOT, CORNER/STREET-SIDE	1

NOTE: Where feasible smaller accent trees will be provided on both lot frontage and corner lots.

NORTH

0 120 SCALE 1" = 60'

60 240

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TRACT 9498

PARKING PLAN

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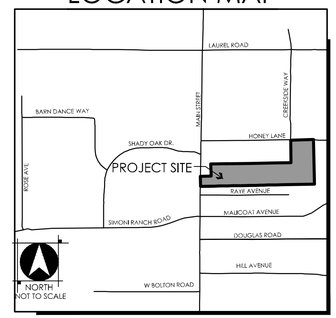
CITY OF OAKLEY, CALIFORNIA

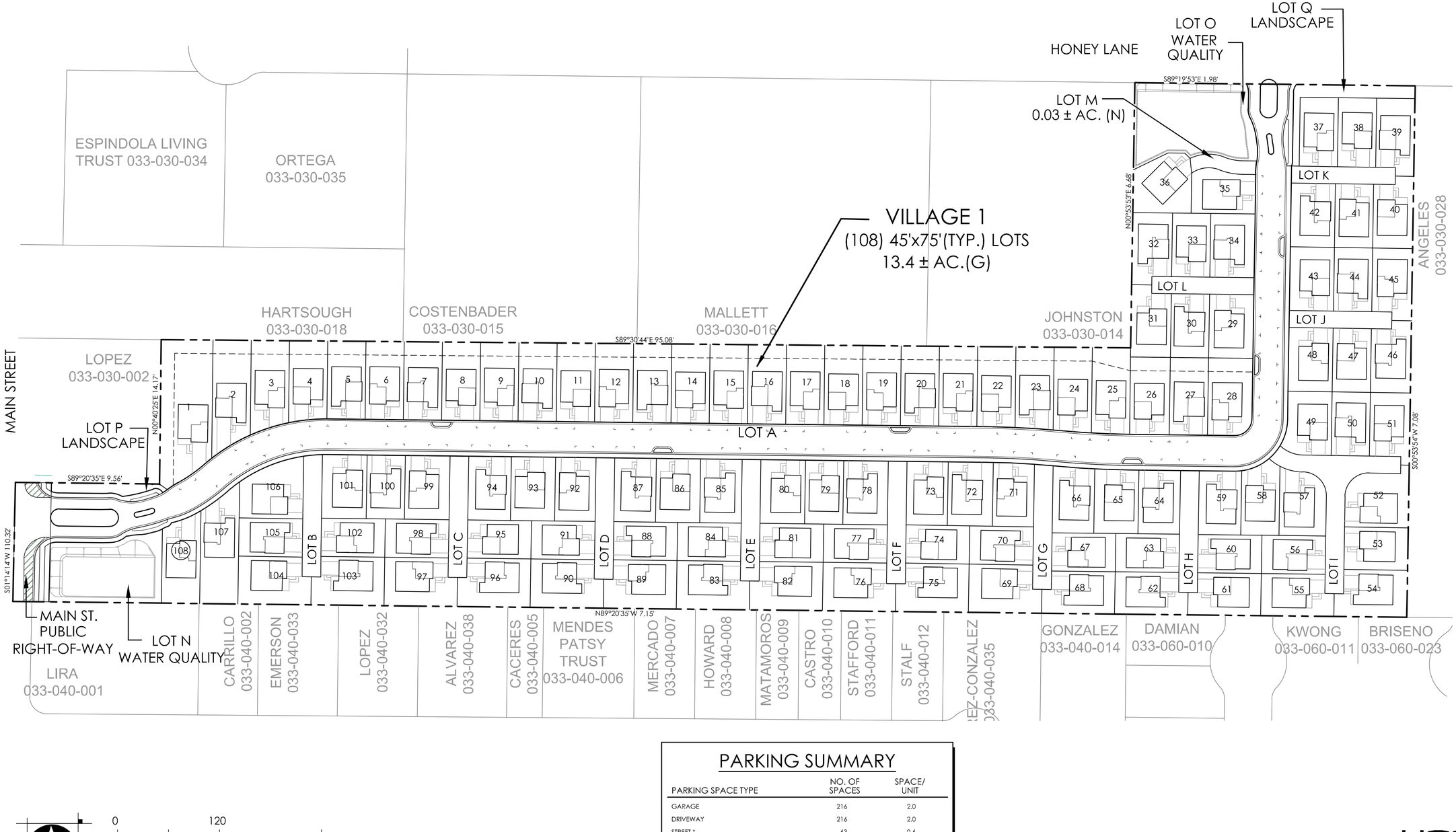
DECEMBER 4, 2018

(REVISED: FEBRUARY 26, 2019)

(REVISED: SEPTEMBER 27, 2019)

LOCATION MAP





PARKING SUMMARY

PARKING SPACE TYPE	NO. OF SPACES	SPACE/ UNIT
GARAGE	216	2.0
DRIVEWAY	216	2.0
STREET *	63	0.6
TOTAL	495	4.6 SPACES/UNIT

NORTH

0 60 120 240

SCALE 1" = 60'

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TRACT 9498

PRELIMINARY GRADING SECTIONS

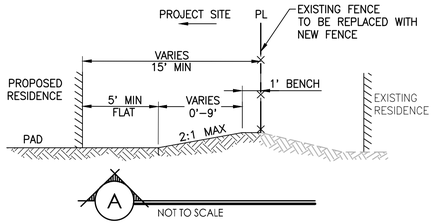
ACACIA

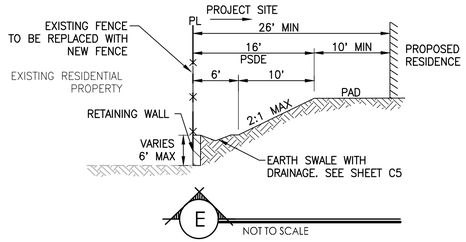
CITY OF OAKLEY, CALIFORNIA

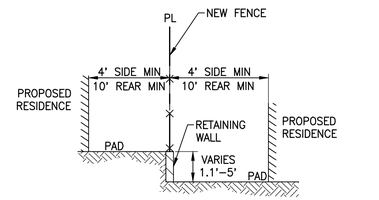
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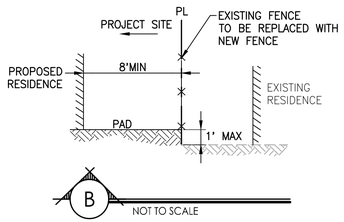


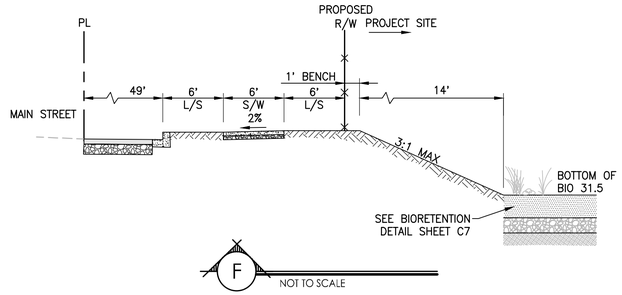


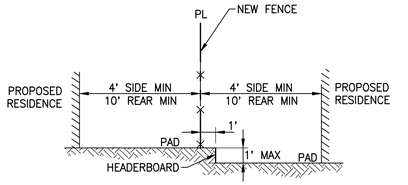


TYPICAL PAD TO PAD RELATIONSHIP (GREATER THAN 1' PAD DIFFERENTIAL)

NOT TO SCALE

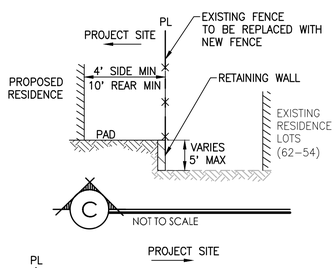


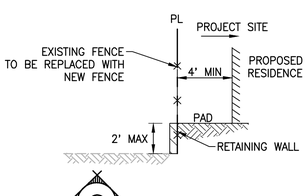


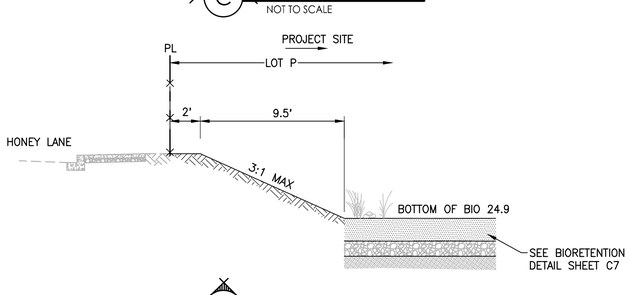


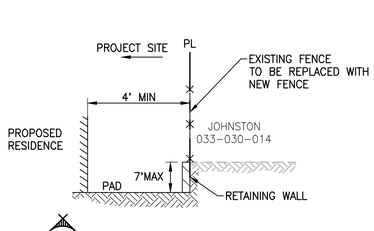
TYPICAL PAD TO PAD RELATIONSHIP (MAX 1' PAD DIFFERENTIAL)

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TRACT 9498

PRELIMINARY GRADING & DRAINAGE PLAN

ACACIA

CITY OF OAKLEY, CALIFORNIA

DECEMBER 4, 2018

(REVISED: FEBRUARY 26, 2019)

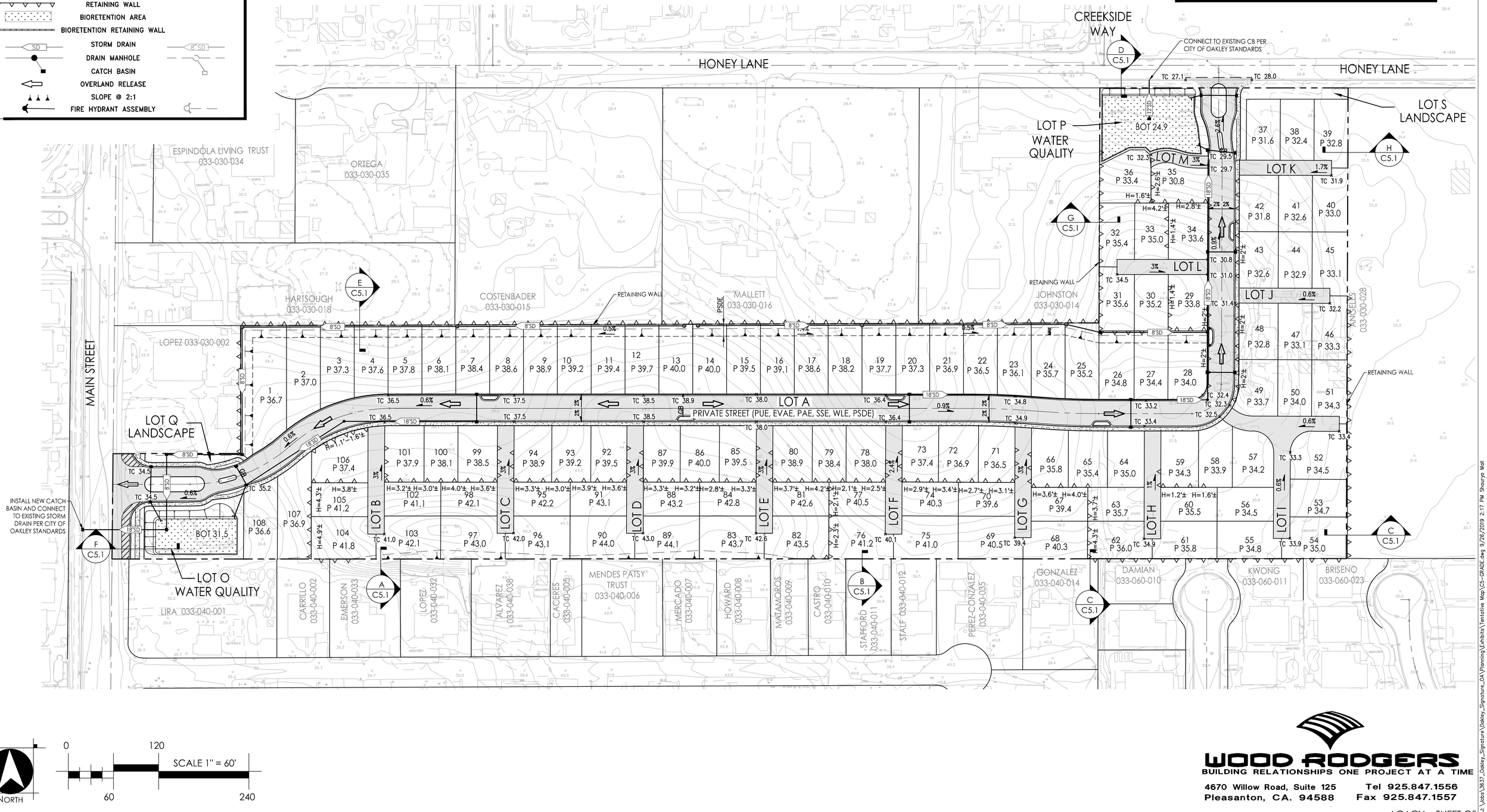
(REVISED: SEPTEMBER 27, 2019)

LEGEND

PROPOSED		EXISTING
	LOT LINE	
	CURB FACE	
	SIDEWALK	
	CENTERLINE	
	PUE, EVAE, WLE, SDE, & PSE	
	PROPERTY BOUNDARY	
	SAWCUT LINE	
	OVERHEAD POWER LINE	OHL OHL
	RETAINING WALL	
	BIORETENTION AREA	
	BIORETENTION RETAINING WALL	
SD	STORM DRAIN	8" SD
	DRAIN MANHOLE	
	CATCH BASIN	
	OVERLAND RELEASE	
	SLOPE @ 2:1	
	FIRE HYDRANT ASSEMBLY	

ABBREVIATIONS

AC	ACRES	INV	INVERT
BNDY	BOUNDARY	L	LENGTH
C	COMPACT PARKING STALL	LP	LOW POINT
CL	CENTER LINE	MH	MANHOLE
CONC	CONCRETE	N	NORTH
C	COMPACT PARKING SPACE	PL	PROPERTY LINE
D	DRAIN	PUE	PUBLIC UTILITY EASEMENT
DMA	DRAINAGE MANAGEMENT AREA	R/W	RIGHT-OF-WAY
DW	DRIVEWAY	R=	RADIUS
Δ	DELTA	S	SOUTH
E	EAST	SF	SQUARE FEET
EP	EDGE OF PAVEMENT	SDE	STORM DRAIN EASEMENT
ESMT	EASEMENT	SSE	SANITARY SEWER EASEMENT
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT	STD	STANDARD
EX.	EXISTING	TCM	TREATMENT CONTROL MEASURE
FF	FINISH FLOOR ELEVATION	TYP	TYPICAL
FH	FIRE HYDRANT	USD	UNION SANITARY DISTRICT
GB	GRADE BREAK	W	WATER, WEST
HC	DISABLED PARKING STALL	WLE	WATER LINE EASEMENT
HP	HIGH POINT	WQ	WATER QUALITY



NORTH

0 60 120 240

SCALE 1" = 60'

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TRACT 9498
PRELIMINARY UTILITY PLAN
ACACIA
CITY OF OAKLEY, CALIFORNIA

DECEMBER 4, 2018
(REVISED: FEBRUARY 26, 2019)
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406

LEGEND

PROPOSED		EXISTING
	PROJECT BONDARY	
	CENTERLINE	
	EASEMENT LINE	
	OVERHEAD POWER LINE	OHL OHL
	PROPERTY LINE	
8" SS	SANITARY SEWER LINE	8" SS
	SANITARY SEWER MANHOLE	
18" SD	STORM DRAIN	8" SD
	DRAIN MANHOLE	
	CATCH BASIN	
8" W	WATER MAIN	8" W
	WATER GATE VALVE	
	FIRE HYDRANT ASSEMBLY	

NOTE:
1. ALL PROPOSED SEWER PIPES TO HAVE A MINIMUM SLOPE OF 0.35%.
2. ALL PROPOSED STORM DRAIN PIPES TO HAVE A MINIMUM SLOPE OF 0.50%.
3. WATER SIZING IS PRELIMINARY AND SUBJECT TO CHANGE BASED ON FINAL DESIGN.
4. STORM DRAIN TO BE SIZED IN CONSTRUCTION DOCUMENT PER HYDROLOGY CALCULATION.
5. LOTS B THROUGH M TO HAVE PUE, EVAE, PAE, SSE, WLE AND PSDE.

CONNECT TO EXISTING STORM DRAIN PER CITY OF OAKLEY STANDARDS
REMOVE EXISTING STORM DRAIN STRUCTURE PER CITY OF OAKLEY STANDARDS
CONNECT TO EXISTING SANITARY SEWER PER IRONHOUSE SANITARY DISTRICT STANDARDS
CONNECT TO EXISTING WATER MAIN PER DIABLO WATER DISTRICT STANDARDS
HONEY LANE
LOT P WATER QUALITY
BOT 24.9
LOT S LANDSCAPE
LOT M
LOT K
LOT L
LOT J
SSMH INV 21.0
SSMH INV 21.5
SSMH INV 22.0
SSMH INV 22.2
SSMH INV 21.7
SSMH INV 22.1
SDMH INV 28.1
WATER METER BANK (TYP.)
5' PUE TYP.
ESPINDOLA LIVING TRUST 033-030-034
ORTEGA 033-030-035
"CAUTION" APPROXIMATE LOCATION OF EXISTING OVERHEAD LINE
HARTSOUGH 033-030-018
COSTENBADER 033-030-015
MALLETT 033-030-016
JOHNSTON 033-030-014
ANGELES 033-030-028
LOPEZ 033-030-002
MAIN STREET
LOT A
PRIVATE STREET (PUE, EVAE, PAE, SSE, WLE, PSDE)
LOT B
LOT C
LOT D
LOT E
LOT F
LOT G
LOT H
LOT I
SSMH INV 26.1
SSMH INV 24.9
SSMH INV 23.7
SSMH INV 26.7
SSMH INV 26.8
SSMH INV 25.5
SSMH INV 24.3
SSMH INV 22.6
SSMH INV 22.8
SSMH INV 23.1
SDMH INV 22.9
CONNECT TO EXISTING WATER MAIN PER DIABLO WATER DISTRICT STANDARDS
INSTALL NEW CATCH BASIN AND CONNECT TO EXISTING STORM DRAIN PER CITY OF OAKLEY STANDARDS
PUBLIC RIGHT-OF-WAY
LOT Q LANDSCAPE
LOT O WATER QUALITY
BOT 31.5
LIRA 033-040-001
CARRILLO 033-040-002
EMERSON 033-040-033
LOPEZ 033-040-032
ALVAREZ 033-040-038
CACERES 033-040-005
MENDES PATSY TRUST 033-040-006
AMERCADO 033-040-007
HOWARD 033-040-008
MATAMOROS 033-040-009
CASTRO 033-040-010
STAFFORD 033-040-011
STALF 033-040-012
PEREZ-GONZALEZ 033-040-035
GONZALEZ 033-040-014
DAMIAN 033-060-010
KWONG 033-060-011
BRISENO 033-060-023

NORTH
0 60 120 240
SCALE 1" = 60'

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PRELIMINARY STORMWATER MANAGEMENT PLAN

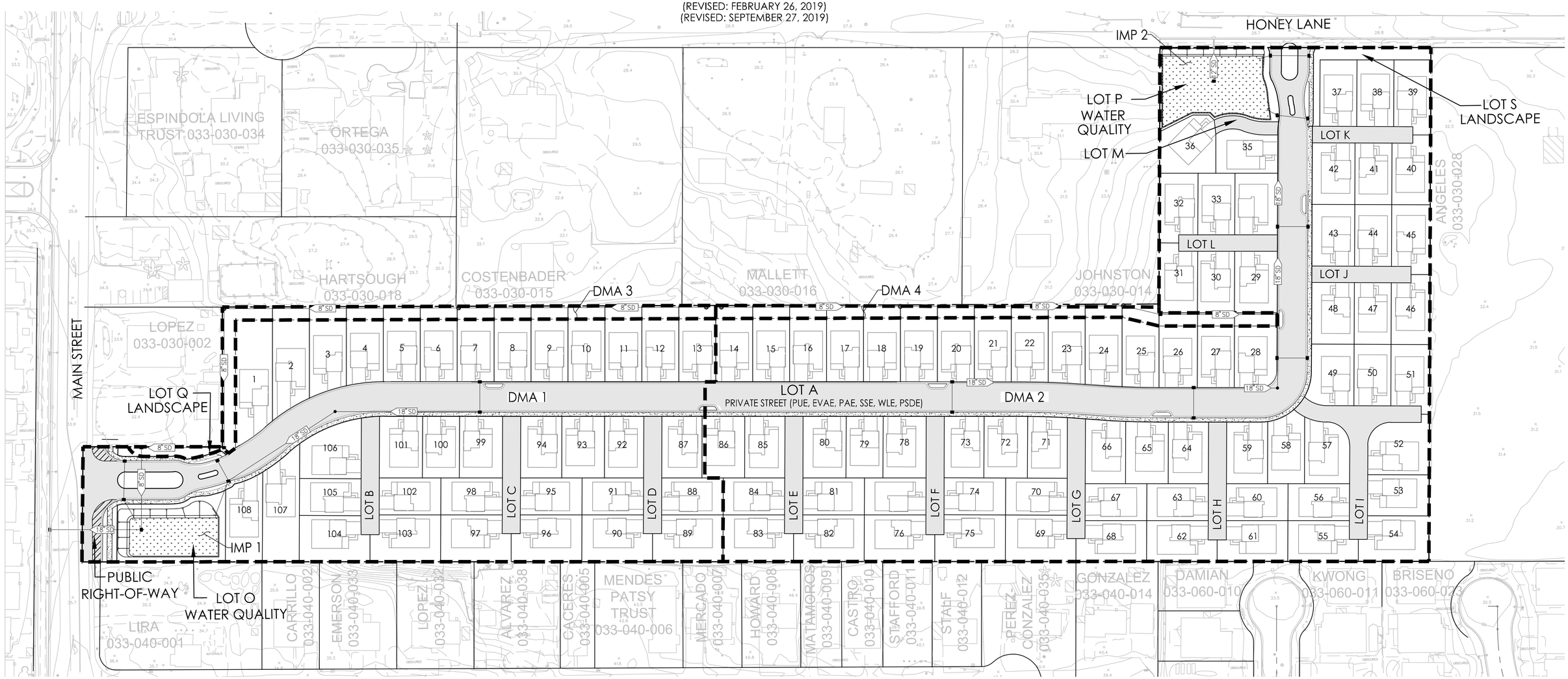
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CITY OF OAKLEY, CALIFORNIA

DECEMBER 4, 2018

(REVISED: FEBRUARY 26, 2019)

(REVISED: SEPTEMBER 27, 2019)



LEGEND

- DRAINAGE MANAGEMENT AREA BOUNDARY
- BIORETENTION AREA
- ASPHALT
- CONCRETE
- DMA — DRAINAGE MANAGEMENT AREA
- IMP — INTEGRATED MANAGEMENT PRACTICE– BIORETENTION AREA

NORTH

0 120 SCALE 1" = 60'

60 240

BIORETENTION SECTION

NOT TO SCALE

DRAINAGE MANAGEMENT AREA SUMMARY

DRAINAGE MANAGEMENT AREA (DMA)	PAVEMENT (STREET AND S/W) (SF)	ROOF (SF)	TOTAL IMPERVIOUS (SF)	TOTAL PERVIOUS (SF)	TOTAL EFFECTIVE IMPERVIOUS AREA (SF)	REQUIRED TREATMENT AREA (SF)	PROVIDED TREATMENT AREA (SF)	TREATMENT TYPE
1	64,124	50,944	115,068	81,681	123,236	4,929	5,000	BIORETENTION
2	110,904	101,244	212,148	152,360	227,384	9,095	9,156	BIORETENTION
3	0	0	0	13,394	0	N/A	N/A	SELF-TREATING
4	0	0	0	11,183	0	N/A	N/A	SELF-TREATING

NOTE:
1. VALUES IN THE TABLE ABOVE ARE ESTIMATED BASED UPON THE AVAILABLE INFORMATION AT THE TIME OF THIS TENTATIVE MAP
2. REQUIRED TREATMENT AREAS CALCULATED USING THE 4% RULE WITH A FACTOR OF 1.0 FOR IMPERVIOUS AREAS AND 0.1 FOR PERVIOUS AREAS (CONTRA COSTA COUNTY IMP SIZING TOOL).

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GENERAL PLAN AMENDMENT

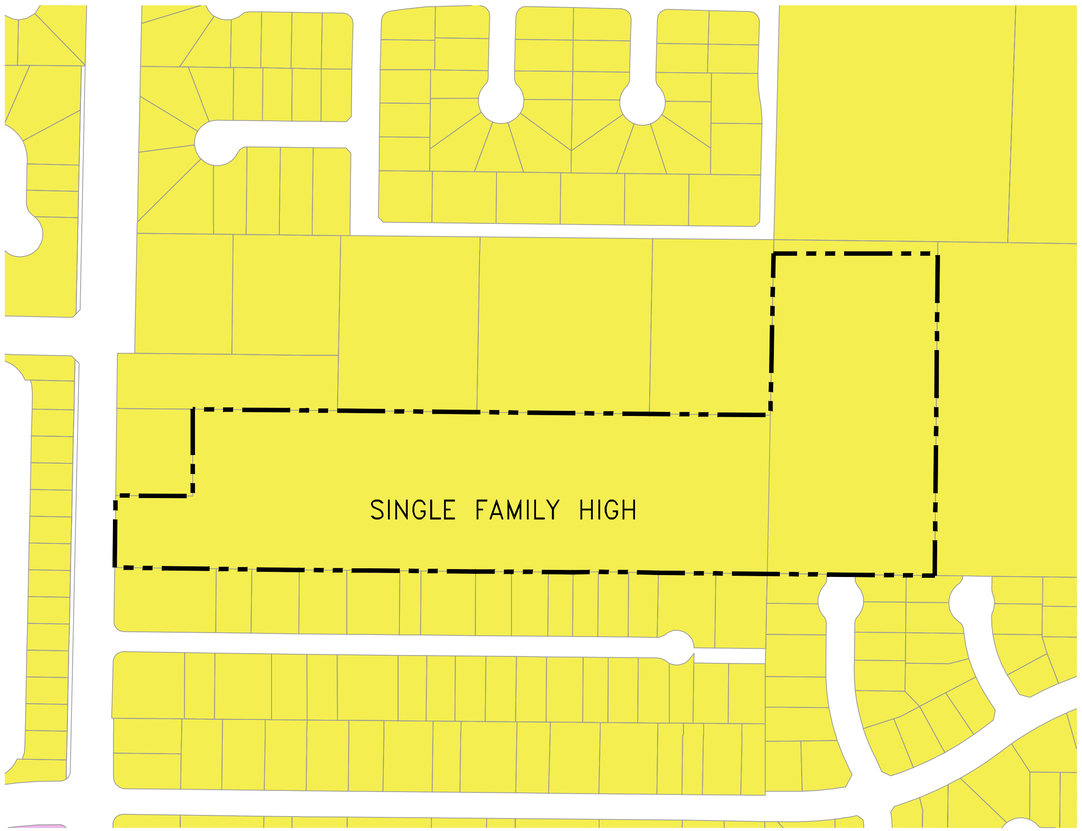
ACACIA

CITY OF OAKLEY, CALIFORNIA

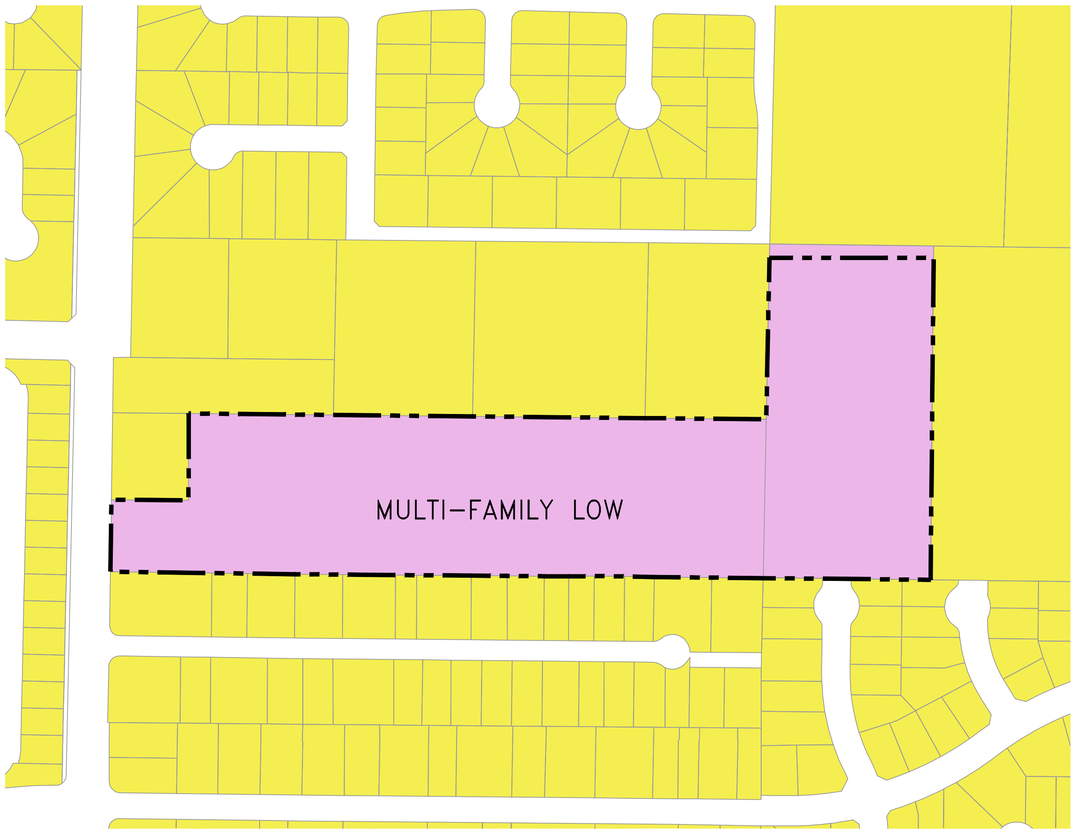
DECEMBER 4, 2018

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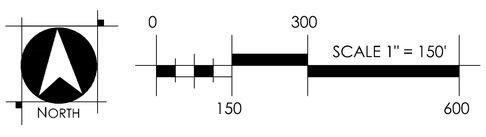
EXISTING GENERAL PLAN



PROPOSED GENERAL PLAN

GENERAL PLAN AMENDMENT SUMMARY TABLE

LAND USE DESIGNATION	EXISTING (AC.)	PROPOSED (AC.)	DIFFERENCE
SINGLE FAMILY HIGH	13.4	-	- 13.4
MULTI FAMILY LOW	-	13.4	+ 13.4
	13.4	13.4	



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PLEASANTON, CA 94588 FAX 925.847.1557

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REZONE

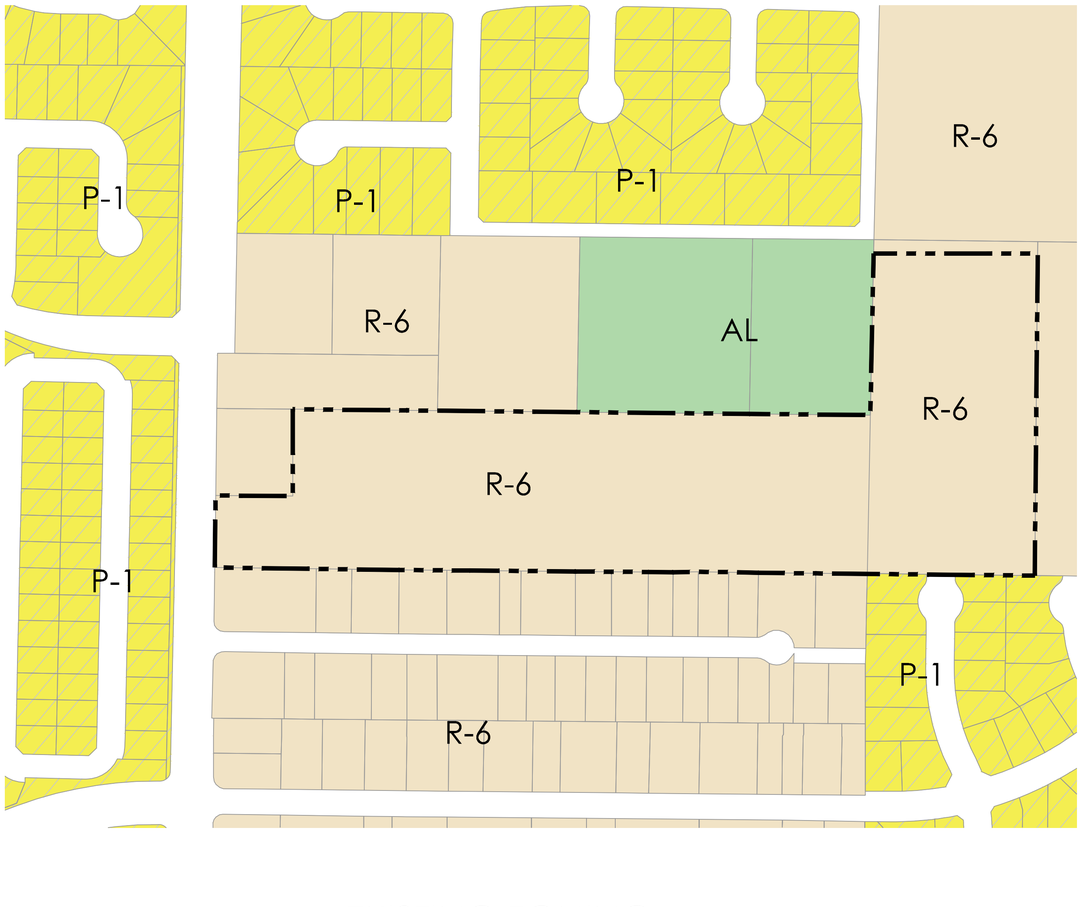
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CITY OF OAKLEY, CALIFORNIA

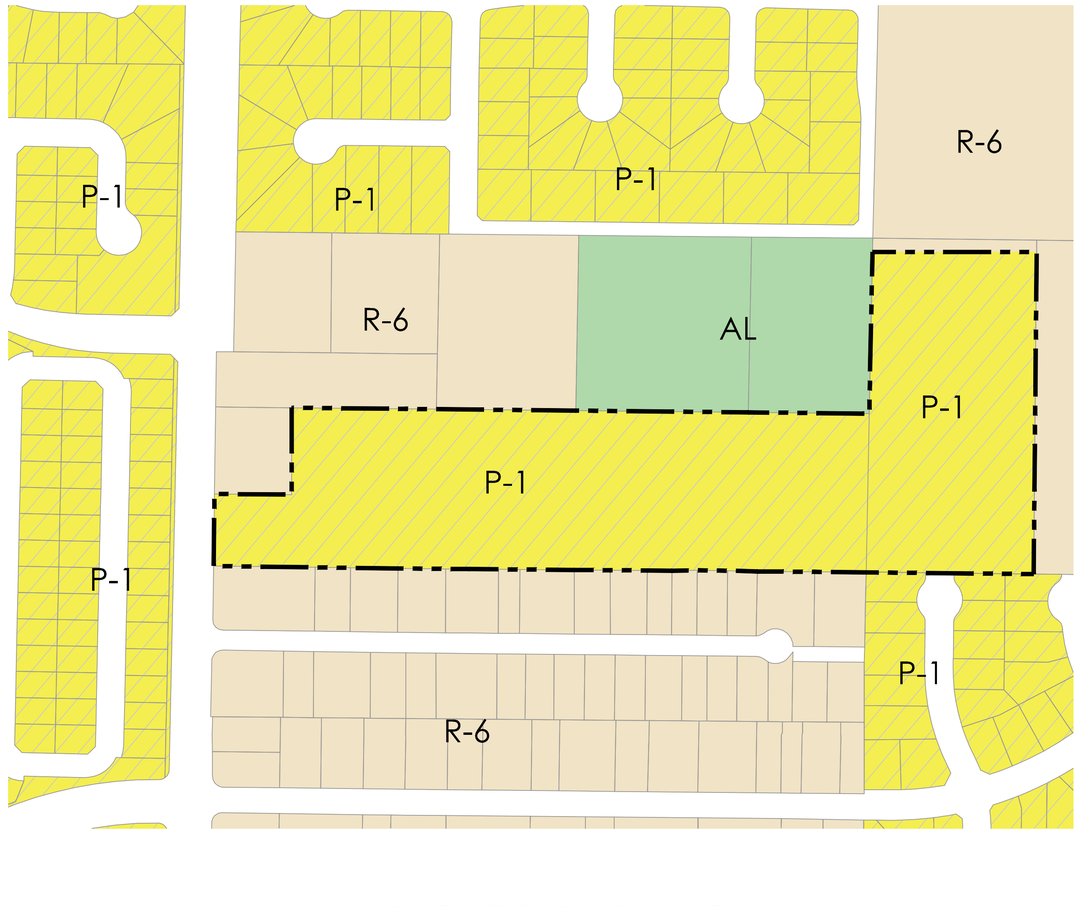
DECEMBER 4, 2018

(REVISED: FEBRUARY 26, 2019)

(REVISED: SEPTEMBER 27, 2019)



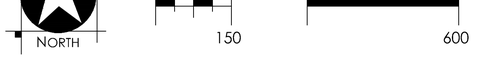
EXISTING ZONING



PROPOSED ZONING

REZONE SUMMARY TABLE

LAND USE DESIGNATION	EXISTING (AC.)	PROPOSED (AC.)	DIFFERENCE
6,000 SF MIN LOT AREA (R-6)	13.4	-	- 13.4
PLANNED DEVELOPMENT WITH DEVELOPMENT PLAN (P-1)	-	13.4	+ 13.4
	13.4	13.4	



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
4670 WILLOW ROAD STE 125 TEL 925.847.1556
PLEASANTON, CA 94588 FAX 925.847.1557

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TRACT 9498

TYPICAL PLOT PLAN

ACACIA

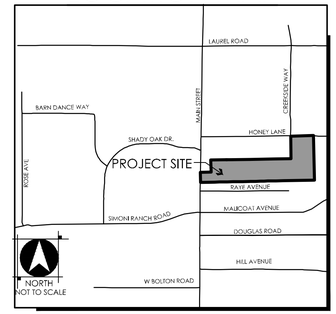
CITY OF OAKLEY, CALIFORNIA

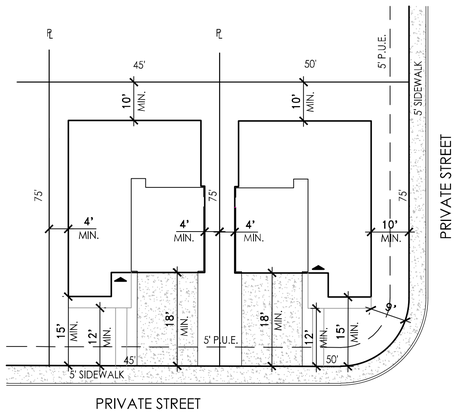
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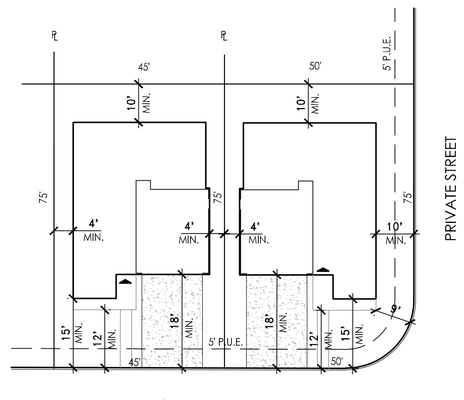
LOCATION MAP





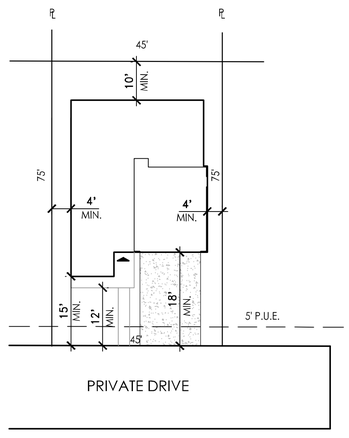
PRIVATE STREET

TYPE 1

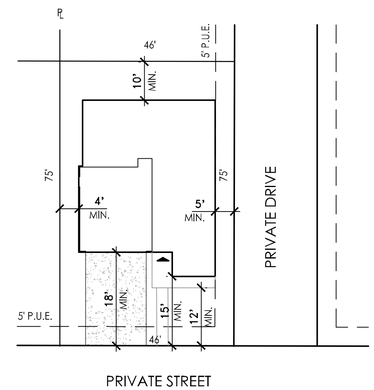


PRIVATE STREET

TYPE 2



TYPE 3



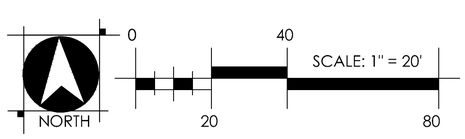
TYPE 4

MINIMUM YARD REQUIREMENTS	PLANNED UNIT DEVELOPMENT (P-1)
FRONT YARD	12' MINIMUM TO PORCH
	15' MINIMUM TO LIVING AREA
	18' MINIMUM TO GARAGE
REAR YARD	10' MINIMUM
SIDE YARD	4' ONE SIDE
	8' AGGREGATE SIDE YARD
	5' TO PRIVATE STREET /PRIVATE DRIVE

MINIMUM LOT REQUIREMENTS	PLANNED UNIT DEVELOPMENT (P-1)
LOT AREA (IN SQUARE FEET)	3,375
LOT WIDTH	45'
LOT DEPTH	75'

BUILDING HEIGHT	30' MAXIMUM
DENSITY	8.1 DU/AC (G)

MAXIMUM COVERAGE	PLANNED UNIT DEVELOPMENT (P-1)
MAX. LOT COVERAGE	50%



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PLANT SCHEDULE

STREET TREES	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
ACB	ACER BUERGERIANUM	TRIDENT MAPLE	24"BOX	M
GIN	GINKGO BILOBA `PRINCETON SENTRY`	PRINCETON SENTRY GINKGO	24"BOX	M
PIS	PISTACIA CHINENSIS `KEITH DAVEY`	KEITH DAVEY CHINESE PISTACHE	24"BOX	M
QUA	QUERCUS AGRIFOLIA	COAST LIVE OAK	72"BOX	L
QUL	QUERCUS LOBATA	VALLEY OAK	24"BOX	L
RHU	RHUS LANCEA	AFRICAN SUMAC	24"BOX	L
TIL	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	24"BOX	M
ULM	ULMUS PARVIFOLIA `DRAKE`	DRAKE ELM	24"BOX	M

BIO-RETENTION TREES	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
ARB	ARBUTUS UNEDO	STRAWBERRY TREE SHRUB	15 GAL.	L
CEC	CERCIS CANADENSIS	EASTERN REDBUD MULTI-TRUNK	24"BOX	L
CER	CERCIS OCCIDENTALIS	WESTERN REDBUD MULTI-TRUNK	15 GAL.	L
PRU	PRUNUS SERRULATA `SHIROFUGEN`	SHIROFUGEN FLOWERING CHERRY	24"BOX	M

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
RO	ROSMARINUS OFFICINALIS	ROSEMARY	5 GAL	L

SHRUB AREAS	BOTANICAL NAME	COMMON NAME	CONT	WATER USE
CB	CORREA PULCHELLA `CARMINE BELLS`	AUSTRALIAN FUCHSIA	1 GAL	L
DV	DIETES VEGETA `VARIEGATA`	VARIEGATED AFRICAN IRIS	1 GAL	L
JP	JUNCUS PATENS	CALIFORNIA GRAY RUSH	1 GAL	L
LC	LEYMUS CONDENSATUS `CANYON PRINCE`	NATIVE BLUE RYE	1 GAL	L
LB	LOMANDRA LONGIFOLIA `BREEZE`	DWARF MAT RUSH	1 GAL	L

WATER USE RATING LEGEND:
WUCOLS III CATEGORIES OF WATER NEEDS FROM: UNIVERSITY OF CALIF COOPERATIVE EXTENSION, CALIF DEPARTMENT OF WATER RESOURCES, U.S. BUREAU OF RECLAMATION
H = HIGH
M = MODERATE
L = LOW
VL = VERY LOW

WATER CONSERVATION STATEMENT

1. THE PLANT LIST IS PRELIMINARY IN NATURE. SPECIES SHALL BE ADDED AND SUBTRACTED TO FULFILL THE DESIGN AND HORTICULTURAL REQUIREMENTS AS NECESSARY.
2. THE IRRIGATION SYSTEM SHALL BE DESIGNED WITH WATER CONSERVATION IN MIND WHILE ACHIEVING THE GOAL OF EFFECTIVELY AND EFFICIENTLY PROVIDING THE LANDSCAPE WITH WATER BY MEANS OF SPRAY IRRIGATION TO THE SHRUBS/GROUNDCOVER AREAS AND BUBBLERS TO THE TREES.
3. THE SPRAY SYSTEM SHALL BE TORO SPRAY HEADS WITH PRESSURE COMPENSATING NOZZLES IN A HEAD TO HEAD LAYOUT TO ACHIEVE AN EVEN LEVEL OF PRECIPITATION THROUGHOUT THE IRRIGATION SYSTEM.
4. A STATE-OF-THE-ART IRRIGATION CONTROLLER SHALL BE SPECIFIED FOR THIS PROJECT TO CONTROL THE WATER ALLOCATED TO EACH VALVE GROUPED PER INDIVIDUAL HYDROZONE (BASED ON PLANT TYPE AND EXPOSURE).

NOTES:

STREET TREE QUANTITIES AND LOCATIONS ARE DIAGRAMMATIC AND SHALL BE BASED ON IN-FIELD CONDITIONS. TREES SHALL BE LOCATED TO AVOID CONFLICTS WITH UTILITIES, STREET LIGHTS, PAVING/DRIVEWAYS AND DRAINAGE FACILITIES. THE CONTRACTOR SHALL DETERMINE TREE QUANTITIES BASED ON IN-FIELD CONDITIONS USING SPACING REQUIREMENTS NOTED AT RIGHT.

STREET TREES SHALL BE PLANTED AN AVERAGE OF ONE (1) TREE PER 35 LINEAR FEET OF STREET FRONTAGE

FOR STREET TREE LOCATIONS ON TYPICAL LOTS SEE PLANTING PLAN SHEET L-5

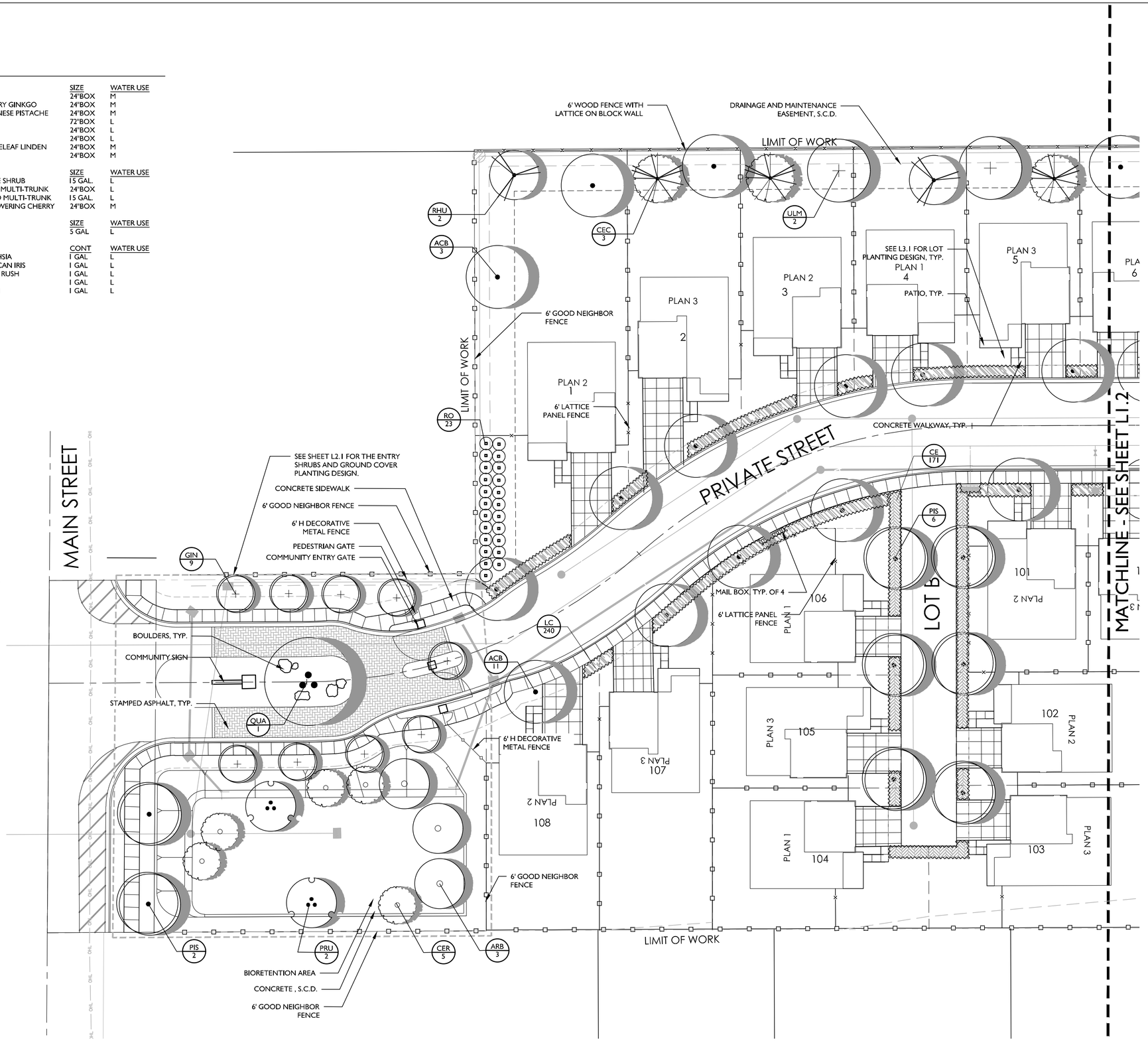
EACH FRONT YARD SHALL HAVE THE FOLLOWING MINIMUM TREE PLANTINGS:

STREET TREES:
A. FRONT YARD STREET TREES - MINIMUM 1 PER LOT
B. SIDE YARD STREET TREES - MINIMUM 2 PER LOT

ACCENT TREE (NOT SHOWN):
A. FRONT YARD ACCENT TREES - MINIMUM 1 PER FRONT YARD

FENCE AND WALL LEGEND

6' GOOD NEIGHBOR FENCE	1 / L4.2
6' H SOLID WOOD GATE	4 / L4.2
6' H LATTICE PANEL FENCE	2 / L4.2
WOOD FENCE WITH LATTICE ON BLOCK WALL	7 / L4.2
3'-6" H DECORATIVE METAL FENCE	5 / L4.2
6' H DECORATIVE METAL FENCE	6 / L4.2
6' H CMU SCREEN WALL AND PILASTER	8-9 / L4.1



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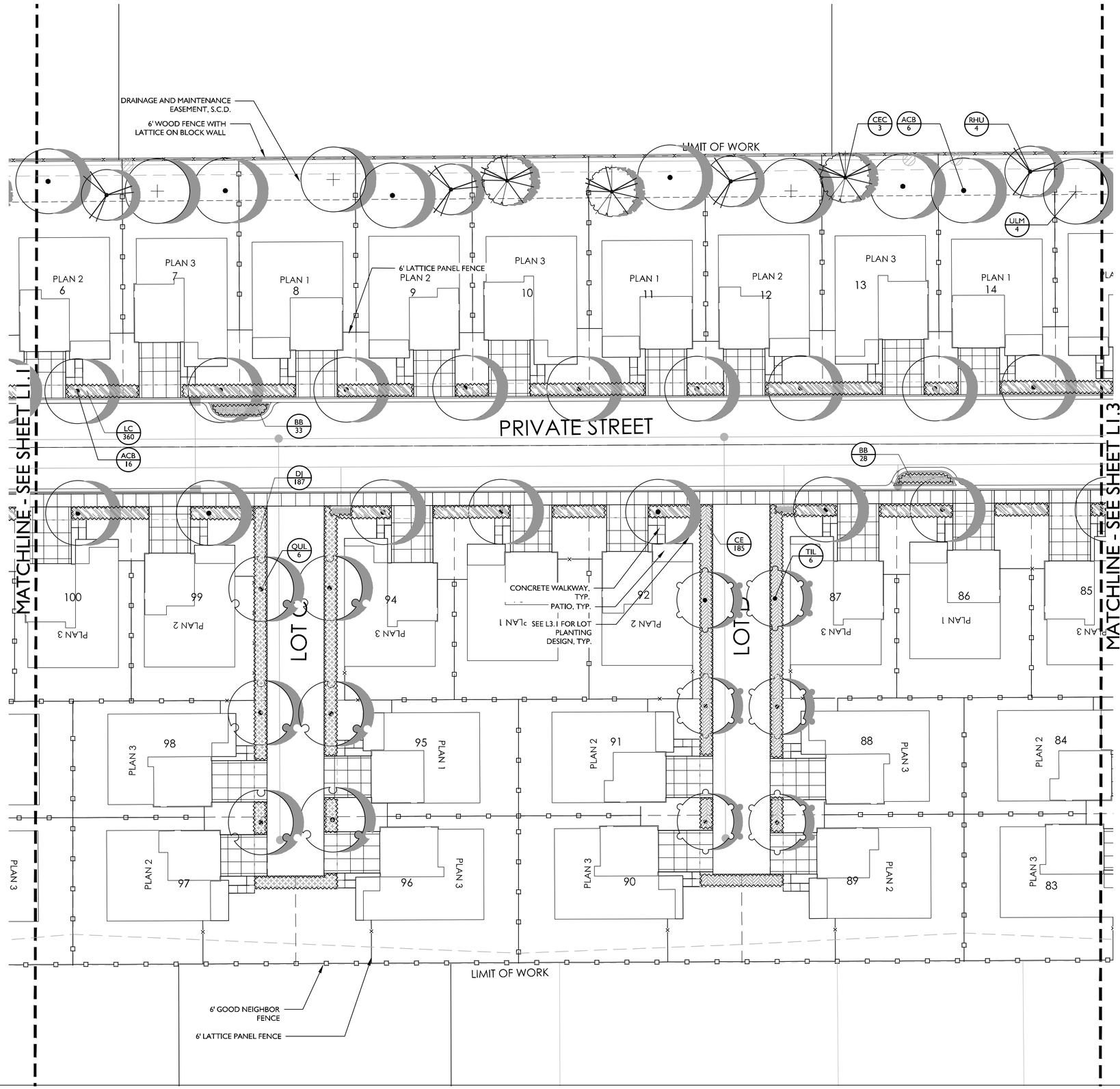
REGISTERED LANDSCAPE ARCHITECT — CHRIS CASE — No. 6383 — STATE OF CALIFORNIA
6/30/2020
9/10/2019
L.A.

PROJECT NUMBER:	5535
DRAWN:	JG/CR
CHECK:	RC
DATE:	09/26/2019
SCALE:	1"=20'

0 10' 20' 40'

LANDSCAPE PLAN

L1.1



PLANT SCHEDULE

STREET TREES	BOTANICAL NAME
ACB	ACER BUERGERIANUM
GIN	GINKGO BILOBA `PRINCETON SENTRY`
PIS	PISTACIA CHINENSIS `KEITH DAVEY`
QUA	QUERCUS AGRIFOLIA
QUL	QUERCUS LOBATA
RHU	RHUS LANCEA
TIL	TILIA CORDATA `GREENSPIRE`
ULM	ULMUS PARVIFOLIA `DRAKE`

BIO-RETENTION TREES	BOTANICAL NAME
ARB	ARBUTUS UNEDO
CEC	CERCIS CANADENSIS
CER	CERCIS OCCIDENTALIS
PRU	PRUNUS SERRULATA `SHIROFUGEN`

SHRUBS	BOTANICAL NAME
RO	ROSMARINUS OFFICINALIS

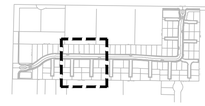
SHRUB AREAS	BOTANICAL NAME
CB	CORREA PULCHELLA `CARMINE BELLS`
DV	DIETES VEGETA `VARIEGATA`

SEE SHEET L1.1 FOR COMPLETE PLANT SCHEDULE

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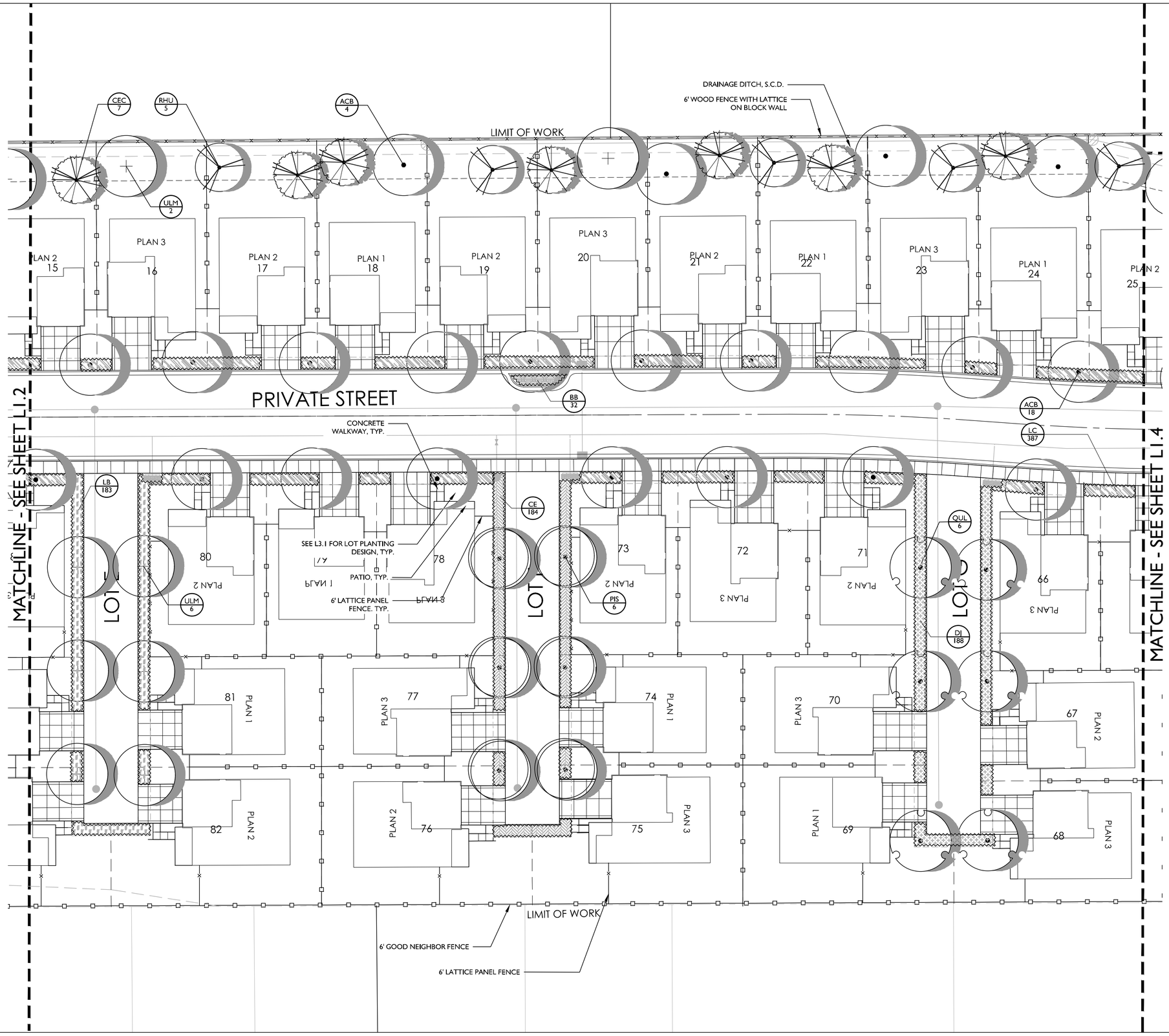


PROJECT NUMBER:	5535
DRAWN:	JG/CR
CHECK:	RC
DATE:	09/26/2019
SCALE:	1"=20'

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LANDSCAPE PLAN

L1.2



PLANT SCHEDULE

STREET TREES	BOTANICAL NAME
ACB	ACER BUERGERIANUM
GIN	GINKGO BILOBA `PRINCETON SENTRY`
PIS	PISTACIA CHINENSIS `KEITH DAVEY`
QUA	QUERCUS AGRIFOLIA
QUL	QUERCUS LOBATA
RHU	RHUS LANCEA
TIL	TILIA CORDATA `GREENSPIRE`
ULM	ULMUS PARVIFOLIA `DRAKE`

BIO-RETENTION TREES	BOTANICAL NAME
ARB	ARBUTUS UNEDO
CEC	CERCIS CANADENSIS
CER	CERCIS OCCIDENTALIS
PRU	PRUNUS SERRULATA `SHIROFUGEN`

SHRUBS	BOTANICAL NAME
RO	ROSMARINUS OFFICINALIS

SHRUB AREAS	BOTANICAL NAME
CB	CORREA PULCHELLA `CARMINE BELLS`
DV	DIETES VEGETA `VARIEGATA`
JP	JUNCUS PATENS
LC	LEYMUS CONDENSATUS `CANYON PRINCE`
LB	LOMANDRA LONGIFOLIA `BREEZE`

SEE SHEET L1.1 FOR COMPLETE PLANT SCHEDULE

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REGISTERED LANDSCAPE ARCHITECT
CHRIS CASE No. 6006
6/30/2020
9/10/2019
L.A.
STATE OF CALIFORNIA

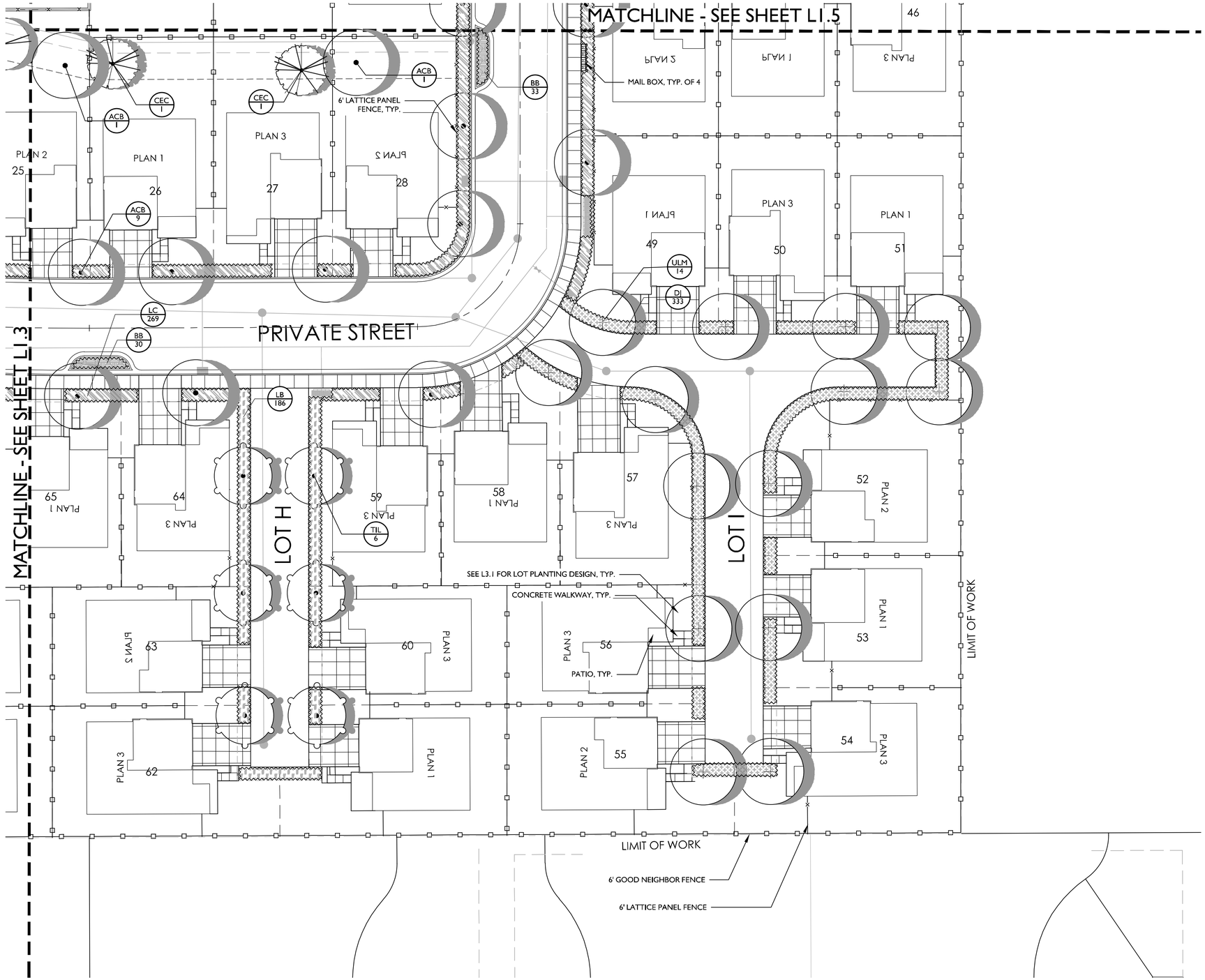
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LANDSCAPE PLAN

L1.3

PATH: P:\OAKLEY\ACACIA (5535)\ACAD\SHEETS_DG-PT-ACACIA.DWG
PLOT DATE: 9/26/2019 12:48 PM



PLANT SCHEDULE

STREET TREES	BOTANICAL NAME
ACB	ACER BUERGERIANUM
GIN	GINKGO BILOBA `PRINCETON SENTRY`
PIS	PISTACIA CHINENSIS `KEITH DAVEY`
QUA	QUERCUS AGRIFOLIA
QUL	QUERCUS LOBATA
RHU	RHUS LANCEA
TIL	TILIA CORDATA `GREENSPIRE`
ULM	ULMUS PARVIFOLIA `DRAKE`

BIO-RETENTION TREES	BOTANICAL NAME
ARB	ARBUTUS UNEDO
CEC	CERCIS CANADENSIS
CER	CERCIS OCCIDENTALIS
PRU	PRUNUS SERRULATA `SHIROFUGEN`

SHRUBS	BOTANICAL NAME
RO	ROSMARINUS OFFICINALIS

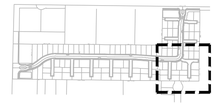
SHRUB AREAS	BOTANICAL NAME
CB	CORREA PULCHELLA `CARMINE BELLS`
DV	DIETES VEGETA `VARIEGATA`
JP	JUNCUS PATENS
LC	LEYMUS CONDENSATUS `CANYON PRINCE`
LB	LOMANDRA LONGIFOLIA `BREEZE`

SEE SHEET L1.1 FOR COMPLETE PLANT SCHEDULE

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REGISTERED LANDSCAPE ARCHITECT
CHRISTOPHER CASE
No. 6130
6/30/2020
Renewal Date
9/10/2019
Date
L.A.
STATE OF CALIFORNIA

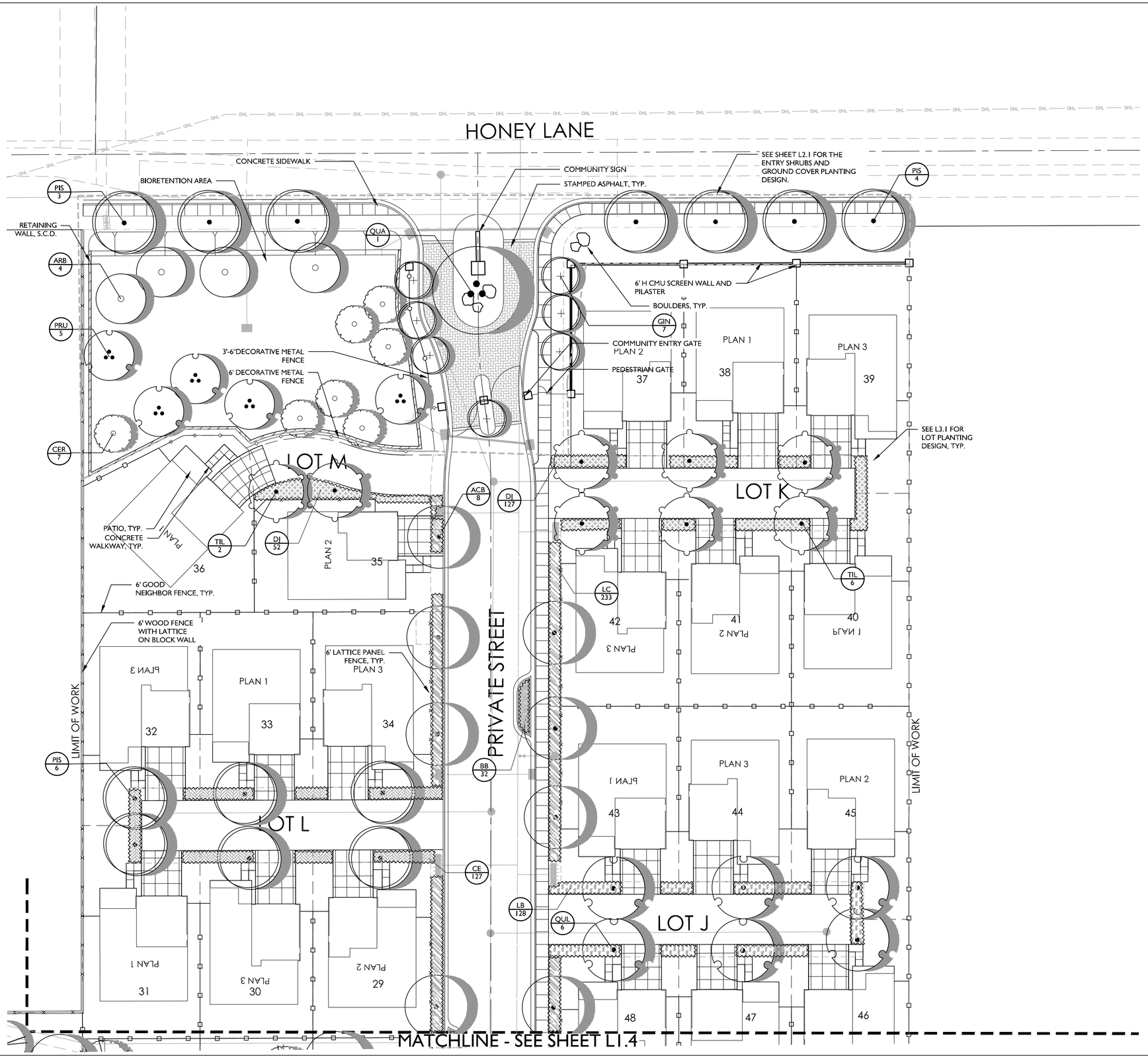
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LANDSCAPE PLAN

L1.4

PATH: P:\OAKLEY\ACACIA (P5535)\ACAD\SHEETS_DG-PT-ACACIA.DWG
PLOT DATE: 9/26/2019 12:48 PM



PLANT SCHEDULE

STREET TREES	BOTANICAL NAME
ACB	ACER BUERGERIANUM
GIN	GINKGO BILOBA `PRINCETON SENTRY`
PIS	PISTACIA CHINENSIS `KEITH DAVEY`
QUA	QUERCUS AGRIFOLIA
QUL	QUERCUS LOBATA
RHU	RHUS LANCEA
TIL	TILIA CORDATA `GREENSPIRE`
ULM	ULMUS PARVIFOLIA `DRAKE`

BIO-RETENTION TREES	BOTANICAL NAME
ARB	ARBUTUS UNEDO
CEC	CERCIS CANADENSIS
CER	CERCIS OCCIDENTALIS
PRU	PRUNUS SERRULATA `SHIROFUGEN`

SHRUBS	BOTANICAL NAME
RO	ROSMARINUS OFFICINALIS

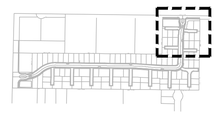
SHRUB AREAS	BOTANICAL NAME
CB	CORREA PULCHELLA `CARMINE BELLS`
DV	DIETES VEGETA `VARIEGATA`
JP	JUNCUS PATENS
LC	LEYMUS CONDENSATUS `CANYON PRINCE`
LB	LOMANDRA LONGIFOLIA `BREEZE`

SEE SHEET L1.1 FOR COMPLETE PLANT SCHEDULE

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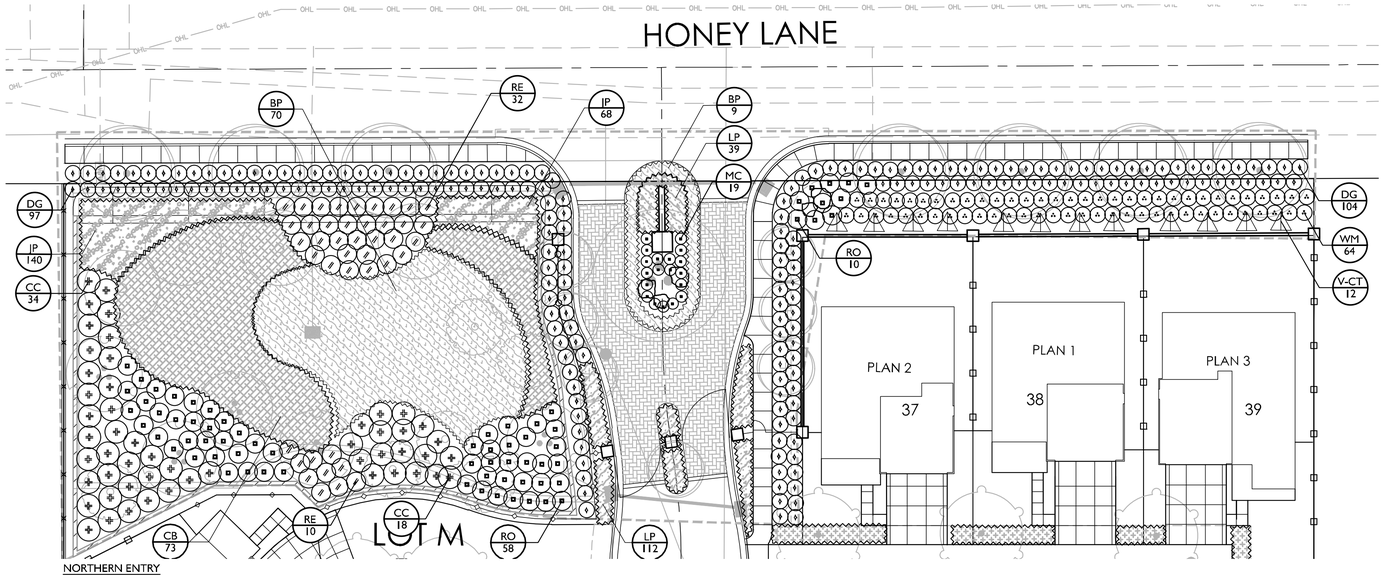
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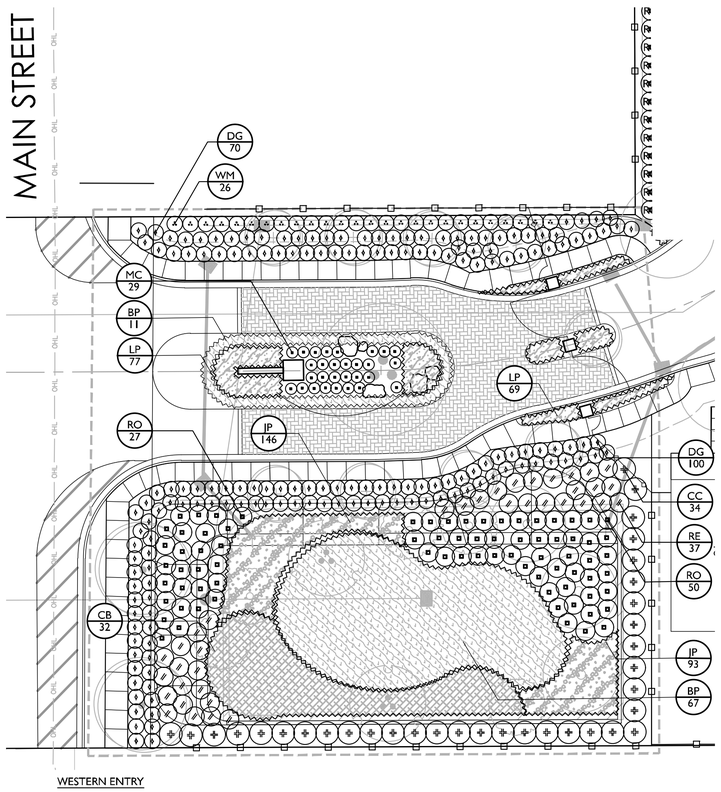
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LANDSCAPE PLAN

L1.5

PATH: P:\OAKLEY\ACACIA (P5535)\ACAD\SHEETS_DG-PT-ACACIA.DWG
PLOT DATE: 9/26/2019 12:48 PM





PLANT SCHEDULE

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
V-CT	CAMPSIS X TAGLIABUANA `CRIMSON TRUMPET`	CRIMSON TRUMPET VINE	1 GAL	L	60" o.c.
CC	CARPENTERIA CALIFORNICA	BUSH ANEMONE	5 GAL	L	72" o.c.
DG	DIETES GRANDIFLORA	WILD IRIS	5 GAL	L	48" o.c.
MC	MYRTUS COMPACTA	COMPACT MYRTLE	5 GAL	L	36" o.c.
RE	RHAMNUS CALIFORNICA `EVE CASE`	CALIFORNIA COFFEEBERRY	5 GAL	L	60" o.c.
RO	ROSMARINUS OFFICINALIS	ROSEMARY	5 GAL	L	60" o.c.
WM	WESTRINGIA FRUTICOSA `MORNING LIGHT`	MORNING LIGHT COAST ROSEMARY	5 GAL	L	48" o.c.

SHRUB AREAS	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	SPACING
CB	CORREA PULCHELLA `CARMINE BELLS`	AUSTRALIAN FUCHSIA	1 GAL	L	72" o.c.
JP	JUNCUS PATENS	CALIFORNIA GRAY RUSH	1 GAL	L	24" o.c.
LP	LAVANDULA X INTERMEDIA `PROVENCE`	PROVENCE LAVENDIN	1 GAL	L	24" o.c.

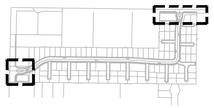
GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	SPACING
BP	BACCHARIS PILULARIS `TWIN PEAKS`	TWIN PEAKS COYOTE BRUSH	1 GAL	L	72" o.c.

WATER USE RATING LEGEND:
WUCOLS III CATEGORIES OF WATER NEEDS FROM: UNIVERSITY OF CALIF COOPERATIVE EXTENSION, CALIF DEPARTMENT OF WATER RESOURCES, U.S. BUREAU OF RECLAMATION
H = HIGH
M = MODERATE
L = LOW
VL = VERY LOW

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2	ENTITLEMENT	02/25/2019
3	ENTITLEMENT	09/10/2019

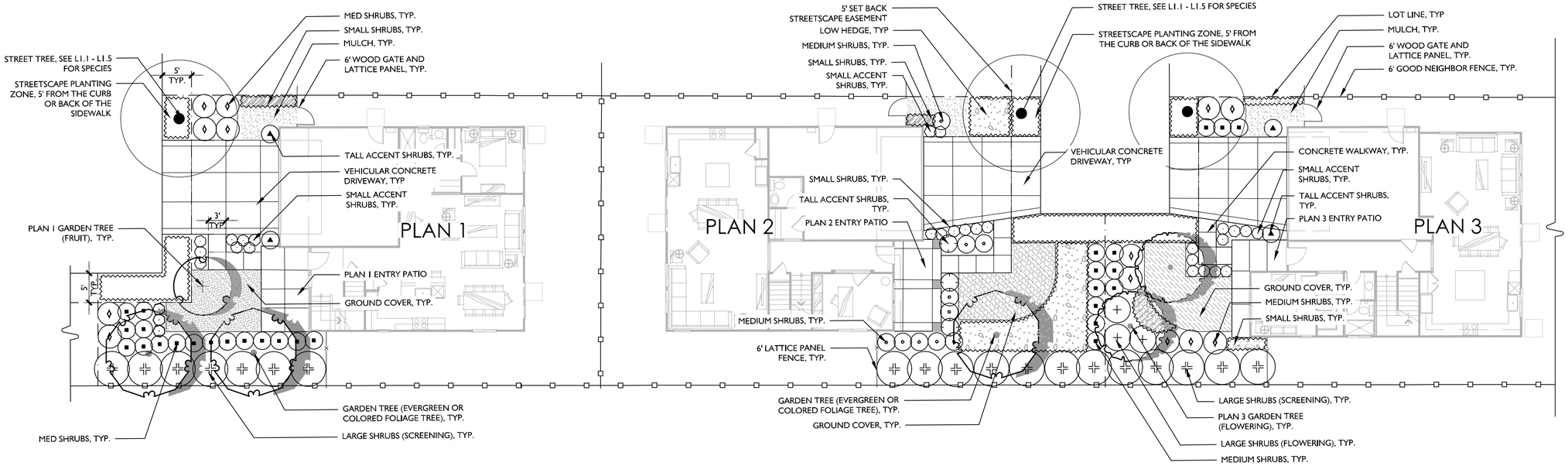
REGISTERED LANDSCAPE ARCHITECT
JAMES CASE • No. 6065
6/30/2020
Renewal Date
9/10/2019
Date
L.A.
STATE OF CALIFORNIA

PROJECT NUMBER:	5535
DRAWN:	JG/CR
CHECK:	RC
DATE:	09/26/2019
SCALE:	1"=20'

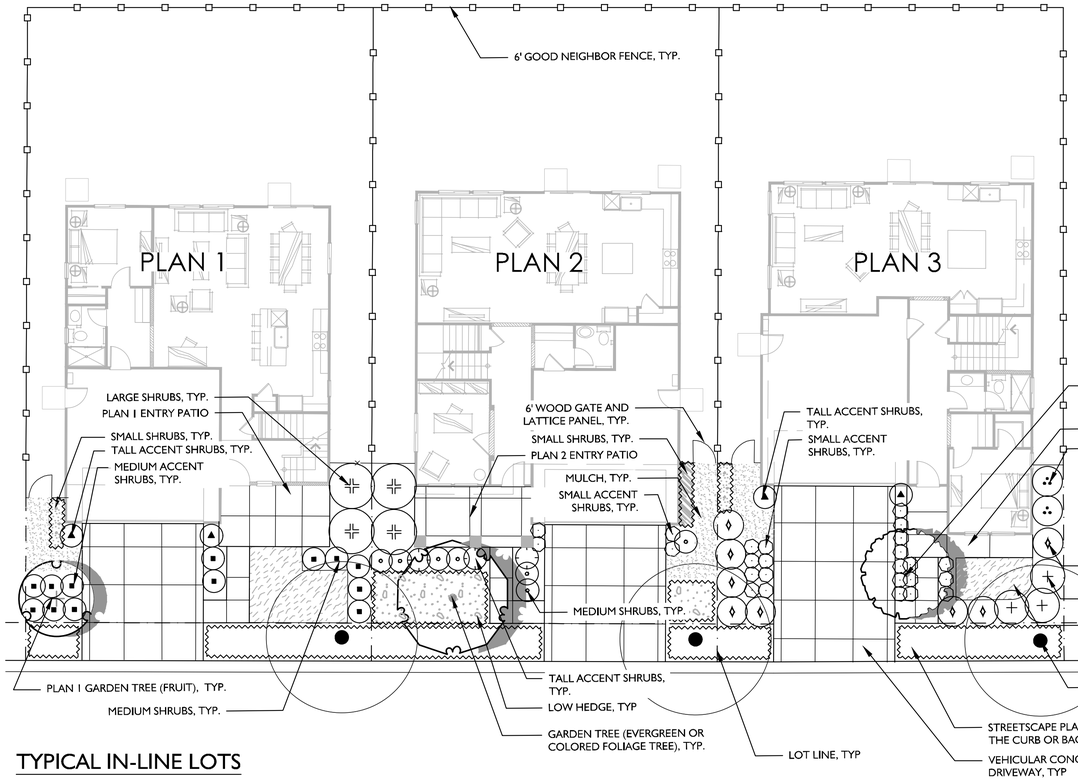
0 10' 20' 40'
0" 1/2" 1" 2"

ENTRY SHRUB PLAN

L2.1



TYPICAL END LOTS



TYPICAL IN-LINE LOTS

PLANT LIST - TYPICAL LOT LANDSCAPE PLAN

PLAN 1 - FRUIT TREES	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
CIT	CITRUS X SINENSIS `BLOOD`	BLOOD RED ORANGE	15 GAL.	M
CIL	CITRUS LIOM 'MEYER IMPROVED'	LEMON	15 GAL.	M
PUN	PUNICA GRANATUM	POMEGRANATE	15 GAL.	L

PLAN 1&2 - GARDEN TREES	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
ACP	ACER PALMATUM	JAPANESE MAPLE	15 GAL.	M
OLE	OLEA EUROPAEA `SWAN HILL` TM	SWAN HILL OLIVE	15 GAL.	L
OSM	OSMANTHUS FRAGRANS	SWEET OLIVE	15 GAL.	M

PLAN 3 - GARDEN TREES	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
CED	CERCIS CHINENSIS `DON EGOLF`	DON EGOLF REDBUD	15 GAL.	M
MAS	MAGNOLIA X SOULANGIANA	SAUCER MAGNOLIA MULTI-TRUNK	15 GAL.	M
PRT	PRUNUS SERRULATA `TAIZO`	JAPANESE FLOWERING CHERRY	15 GAL.	M

TALL ACCENT SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
BH	BERBERIS THUNBERGII `HELMOND PILLAR`	COLUMNAR BARBERRY	5 GAL	L	30" o.c.
EU	EUONYMUS JAPONICUS `GREENSPIRE`	GREENSPIRE UPRIGHT EUONYMUS	5 GAL	L	36" o.c.
RT	ROSMARINUS OFFICINALIS `TUSCAN BLUE`	TUSCAN BLUE ROSEMARY	5 GAL	L	36" o.c.

MED ACCENT SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
AG	AGAVE X `BLUE GLOW`	BLUE GLOW AGAVE	5 GAL	L	36" o.c.
PW	PHORMIUM TENAX `WINGS OF GOLD`	NEW ZEALAND FLAX	5 GAL	L	36" o.c.

SMALL ACCENT SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
AP	ALOE POLYPHYLLA	SPIRAL ALOE	5 GAL	L	24" o.c.
AB	ANIGOZANTHOS X `BUSH GOLD`	KANGAROO PAW	5 GAL	L	24" o.c.
CR	CRASSULA OVATA `JITTERS`	JITTERS JADE PLANT	1 GAL	L	24" o.c.
ID	IRIS DOUGLASIANA	DOUGLAS IRIS	1 GAL	L	24" o.c.
KF	KNIPHOFIA UVARIA `FLAMENCO`	FLAMENCO RED HOT POKER	1 GAL	L	18" o.c.
LP	LAVANDULA X INTERMEDIA `PROVENCE`	PROVENCE LAVENDIN	1 GAL	L	24" o.c.

LARGE SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
CC	CARPENTERIA CALIFORNICA	BUSH ANEMONE	5 GAL	L	72" o.c.
SB	SALVIA LEUCANTHA `SANTA BARBARA`	MEXICAN BUSH SAGE	1 GAL	L	60" o.c.

MED SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
DG	DIETES GRANDIFLORA	WILD IRIS	5 GAL	L	48" o.c.
MC	MYRTUS COMPACTA	COMPACT MYRTLE	5 GAL	L	36" o.c.
PA	PEROVSKIA ABROTANOIDES `BLUE JEAN BABY`	RUSSIAN SAGE	5 GAL	L	36" o.c.
RM	RHAMNUS CALIFORNICA `MOUND SAN BRUNO`	CALIFORNIA COFFEEBERRY	5 GAL	L	42" o.c.
WM	WESTRINGIA FRUTICOSA `MORNING LIGHT`	MORNING LIGHT COAST ROSEMARY	5 GAL	L	48" o.c.

SMALL SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
HM	HEUCHERA MAXIMA	ISLAND ALUM ROOT	1 GAL	L	18" o.c.
JP	JUNCUS PATENS	CALIFORNIA GRAY RUSH	1 GAL	L	24" o.c.
NG	NANDINA DOMESTICA `GULF STREAM` TM	HEAVENLY BAMBOO	1 GAL	L	18" o.c.
SS	SALVIA X SYLVESTRIS 'BLUE HILL'	BLUE HILL MEADOW SAGE	1 GAL	L	18" o.c.

LOW HEDGE	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
EB	EUONYMUS JAPONICUS MICROPHYLLA	BOX-LEAF EUONYMUS	5 GAL	L	48" o.c.
LS	LIGUSTRUM SINENSE `SUNSHINE`	SUNSHINE LIGUSTRUM	5 GAL	L	36" o.c.
NL	NANDINA DOMESTICA `LEMON LIME`	LEMON LIME NANDINA	5 GAL	L	36" o.c.

GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	SPACING
AM	ACHILLEA MILLEFOLIUM	COMMON YARROW	1 GAL	L	36" o.c.
BP	BACCHARIS PILULARIS `TWIN PEAKS`	TWIN PEAKS COYOTE BRUSH	1 GAL	L	72" o.c.
CB	CORREA PULCHELLA `CARMINE BELLS`	AUSTRALIAN FUCHSIA	1 GAL	L	72" o.c.
CX	CORREA REFLEXA `CAPE CARPET`	CAPE CARPET AUSTRALIAN FUCHSIA	1 GAL	L	72" o.c.
MP	MYOPORUM PARVIFOLIUM `PINK`	TRAILING MYOPORUM	1 GAL	L	72" o.c.

STREETSCAPE SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING
AB	DIETES VEGETA `VARIEGATA`	VARIEGATED AFRICAN IRIS	1 GAL	L	42" o.c.
LB	LOMANDRA LONGIFOLIA `BREEZE`	DWARF MAT RUSH	1 GAL	L	36" o.c.
LC	LEYMUS CONDENSATUS `CANYON PRINCE`	NATIVE BLUE RYE	1 GAL	L	36" o.c.

1 TYPICAL LOT LANDSCAPE PLANS

SCALE: 1" = 10'-0"

GATES +ASSOCIATES
LANDSCAPE ARCHITECTURE
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ACACIA

OAKLEY
CALIFORNIA



SIGNATURE HOMES

ISSUE:	DESCRIPTION:	DATE:
1	ENTITLEMENT	12/04/2018
2	ENTITLEMENT	02/25/2019
3	ENTITLEMENT	09/10/2019

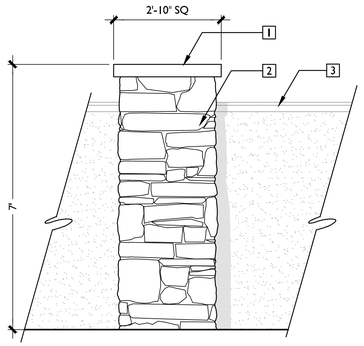
REGISTERED LANDSCAPE ARCHITECT
DAVID C. GATES
6/30/2020
Renewal Date
9/10/2019
Date
L.A.
STATE OF CALIFORNIA

PROJECT NUMBER:	5535
DRAWN:	JG/CR
CHECK:	RC
DATE:	09/26/2019
SCALE:	

0
1" 2" 1' 2'

TYPICAL LOT LANDSCAPE PLAN

L3.1



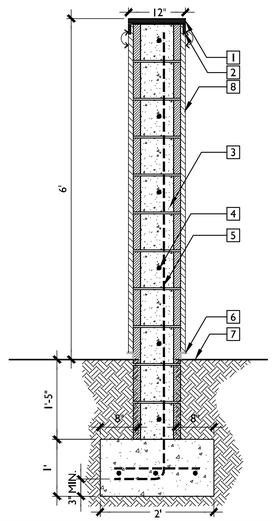
KEY:
1. 4" PRECAST CONCRETE CAP
   MFR: QUICKCRETE
   MODEL:TBD
   COLOR:TBD
   FINISH: ACID ETCH
2. STONE VENEER
   MFR: CORONADO STONE
   MODEL: TBD
   COLOR: TBD
   GROUT: DRY STACK
3. 6' H CMU SCREEN WALL, SEE DETAIL

9 PILASTER

SCALE: 1/2" = 1'-0"

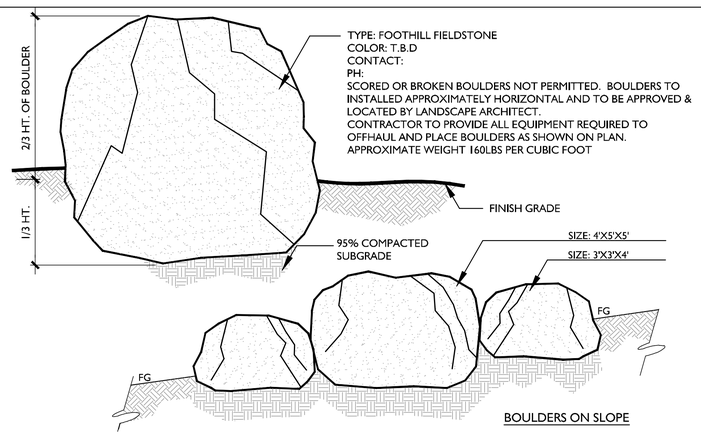
NOTE:
THIS IS A DESIGN INTENT DRAWING ONLY, CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION.

KEY:
1. 12X12 TERRACOTTA TILE CAP
   MFR: T.B.D
   COLOR: T.B.D.
   STYLE: T.B.D.
2. 2X6 TERRACOTTA SUBWAY TILE
   MFR: T.B.D.
   COLOR: T.B.D
   STYLE: T.B.D.
3. 8X10X16 C.M.U. BLOCK GROUT ALL CELLS SOLID
4. VERTICAL REBAR "D", TYP.
5. HORIZONTAL REBAR "E", TYP.
6. DRIP SCREED - 1" ABOVE GRADE
7. FINISH GRADE- SEE GRADING PLANS
8. SMOOTH FINISH STUCCO. EASE ALL EDGES 1" MIN. 3-COAT STUCCO SYSTEM. PROCESS SHALL INCLUDE SCRATCH COAT TO DEPTH OF 3/8", BROWN COAT TO A DEPTH OF 3/8" AND FINISH COAT TO A DEPTH OF 1/4". PRIME AND PAINT 2 COATS SHERWIN WILLIAMS PAINTS EXTERIOR LATEX COLOR #TBD. APPLY PER ALL MANUFACTURER'S RECOMMENDATIONS.



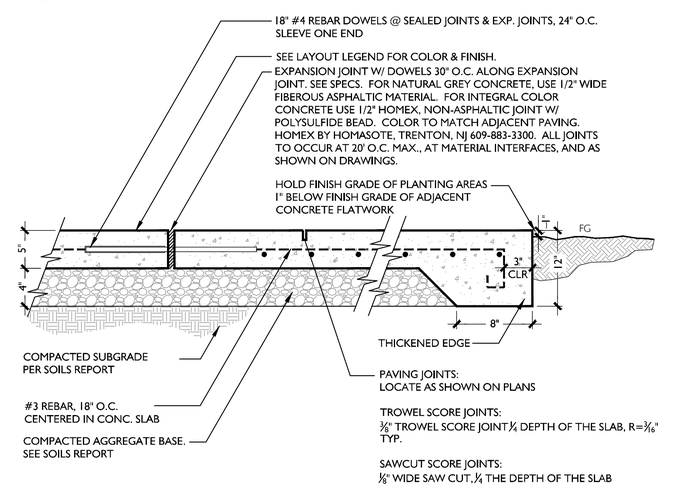
8 CMU SCREEN WALL

SCALE: 3/4" = 1'-0"



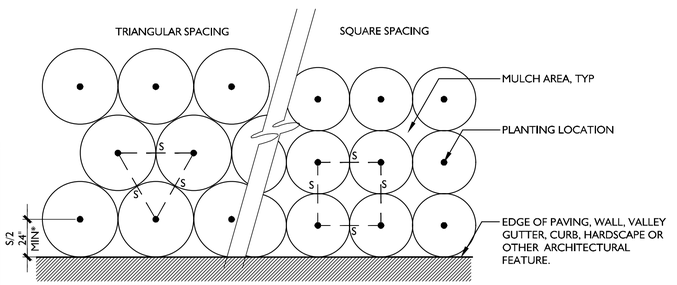
6 BOULDER PLACEMENT

SCALE: N.T.S.



5 PEDESTRIAN CONCRETE PAVING ON GRADE

SCALE: 1-1/2" = 1'-0"

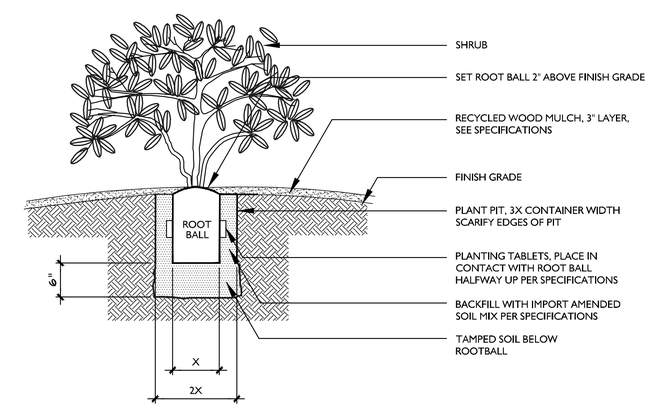


NOTES:
A. S = PLANT SPACING DISTANCE ON CENTER, SEE CHART
B. FOR USE AS A GUIDE FOR SHRUBS AND GROUNDCOVER WHEN PLANTS ARE SPACED EQUIDISTANT FROM EACH OTHER.
   *AT ALL SHRUB AND GROUNDCOVER LOCATIONS WHERE SPRAY IRRIGATION IS USED. HOLD PLANTING 24" CLEAR OF CURB LINE IN CONJUNCTION WITH IRRIGATION PER AB 1881.

Plant Quantity Chart	
Spacing	# of Plants/S.F.
6" o.c.	4.60
8" o.c.	2.60
12" o.c.	1.15
18" o.c.	.512
24" o.c.	.290
30" o.c.	.185
36" o.c.	.128
42" o.c.	.087
48" o.c.	.063

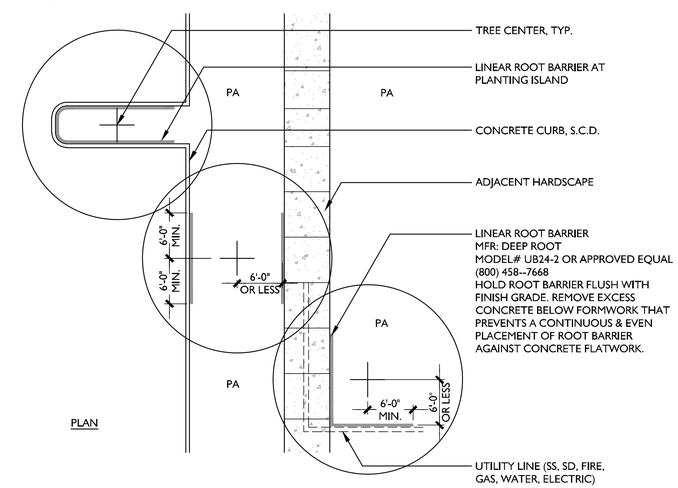
4 PLANT SPACING

SCALE: N.T.S.



3 SHRUB PLANTING

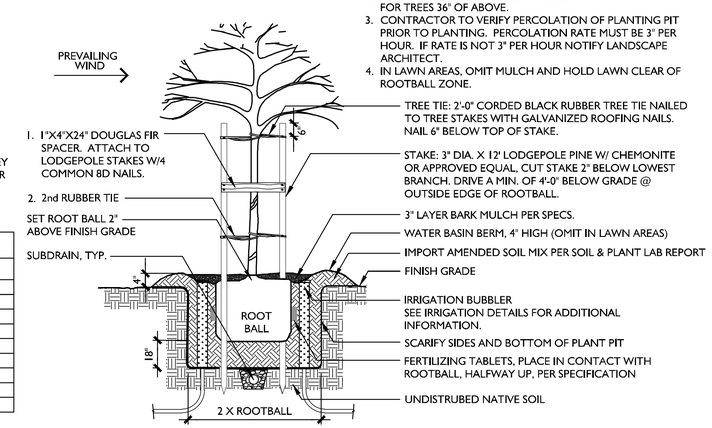
SCALE: N.T.S.



2 LINEAR ROOT BARRIER

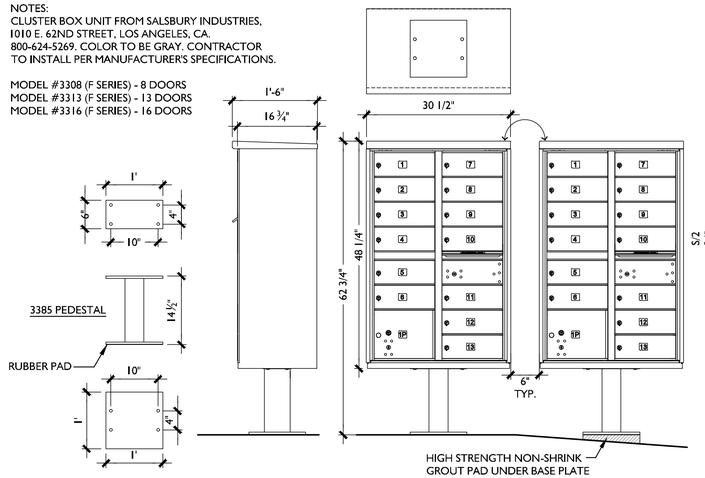
SCALE: 1" = 10'-0"

NOTES:
1. ROOT CONTROL BARRIER MUST BE USED IF TREE IS PLANTED WITHIN 5' OF CURB OR SIDEWALK. SEE DETAIL
2. RBK ROOTBALL KIT MODEL # : 88-RBK FOR TREES 36" OF ABOVE.
3. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO PLANTING. PERCOLATION RATE MUST BE 3" PER HOUR. IF RATE IS NOT 3" PER HOUR NOTIFY LANDSCAPE ARCHITECT.
4. IN LAWN AREAS, OMIT MULCH AND HOLD LAWN CLEAR OF ROOTBALL ZONE.



1 TREE STAKING DETAIL

SCALE: 3/8" = 1'-0"



NOTES:
CLUSTER BOX UNIT FROM SALSBURY INDUSTRIES, 1010 E. 62ND STREET, LOS ANGELES, CA. 800-624-5269. COLOR TO BE GRAY. CONTRACTOR TO INSTALL PER MANUFACTURER'S SPECIFICATIONS.

MODEL #3308 (F SERIES) - 8 DOORS
MODEL #3313 (F SERIES) - 13 DOORS
MODEL #3316 (F SERIES) - 16 DOORS

7 CLUSTERED MAILBOX UNIT

SCALE: 3/4" = 1'-0"

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SIGNATURE HOMES

ISSUE:	DESCRIPTION:	DATE:
1	ENTITLEMENT	12/04/2018
2	ENTITLEMENT	02/25/2019
3	ENTITLEMENT	09/10/2019



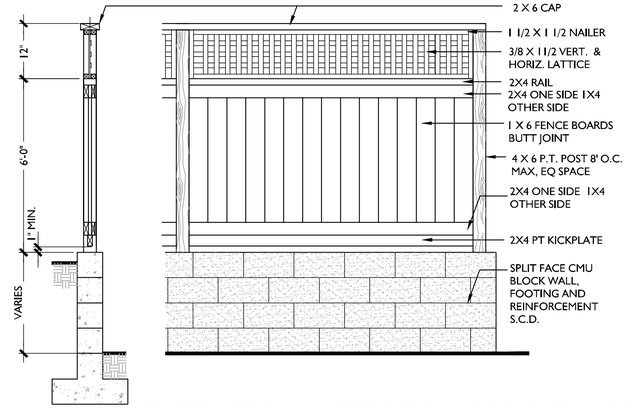
PROJECT NUMBER:	5535
DRAWN:	JG/CR
CHECK:	RC
DATE:	09/26/2019
SCALE:	



LANDSCAPE DETAILS

L4.1

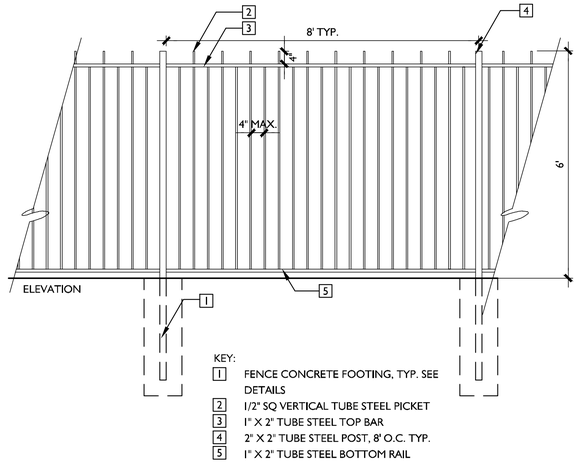
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PLOT DATE: 9/26/2019 12:49 PM



NOTE:
1. ALL FASTENERS TO BE GALVANIZED. SEE SPECS FOR MORE INFO.
2. ALL WOOD TO BE CON. HEART REDWOOD.
3. PROVIDE SEMI TRANSPARENT STAIN ON ALL WOOD SURFACES. PROVIDE MOCKUP SAMPLE FOR REVIEW AND APPROVAL.
4. ALL POSTS SHALL BE EQUALLY SPACED.

7 WOOD FENCE W/ LATTICE ON BLOCK WALL

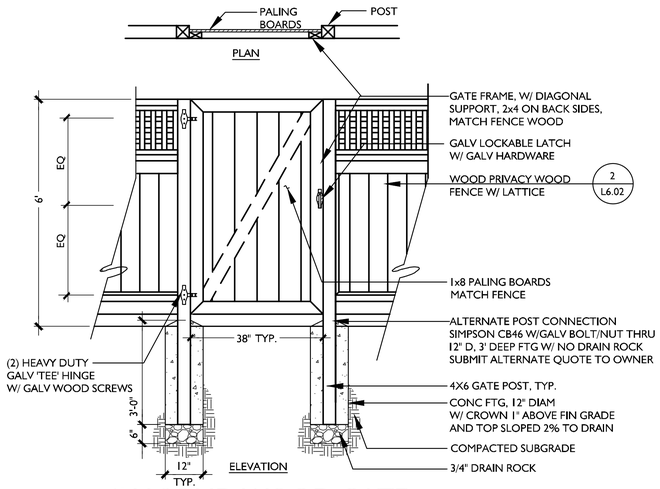
NOT TO SCALE



KEY:
1. FENCE CONCRETE FOOTING, TYP. SEE DETAILS
2. 1/2" SQ VERTICAL TUBE STEEL PICKET
3. 1" X 2" TUBE STEEL TOP BAR
4. 2" X 2" TUBE STEEL POST, 8' O.C. TYP.
5. 1" X 2" TUBE STEEL BOTTOM RAIL

6 6' H DECORATIVE METAL FENCE

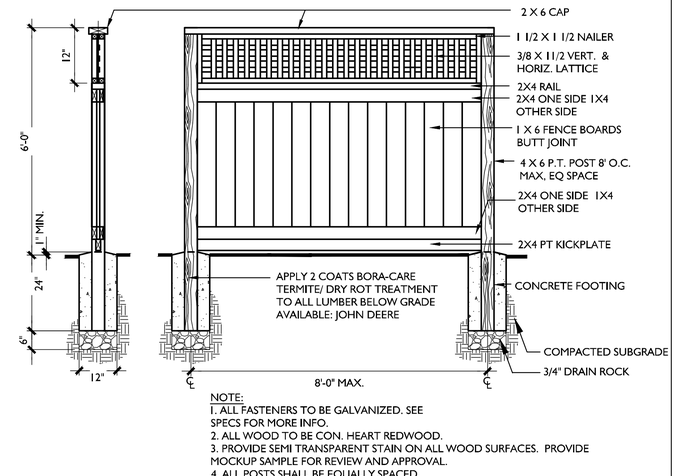
SCALE: 1/2" = 1'-0"



NOTES:
1. GATE POSTS TO BE 4x6 PT DOUGLAS FIR. REMAINING WOOD MEMBERS TO BE CONSTRUCTION COMMON REDWOOD.
2. ALL HARDWARE TO BE GALVANIZED.
3. ALL FASTENERS TO BE GALVANIZED. SEE SPECS FOR MORE INFO.
4. ALL WOOD TO BE CON. COMMON REDWOOD U.O.N.
5. PROVIDE OIL BASED CLEAR SEALANT ON ALL WOOD SURFACES.
6. ALL POSTS SHALL BE EQUALLY SPACED.
7. GATE POST TO BE 4X6 P.T. DOUGLAS FIR

4 6' H SOLID WOOD GATE

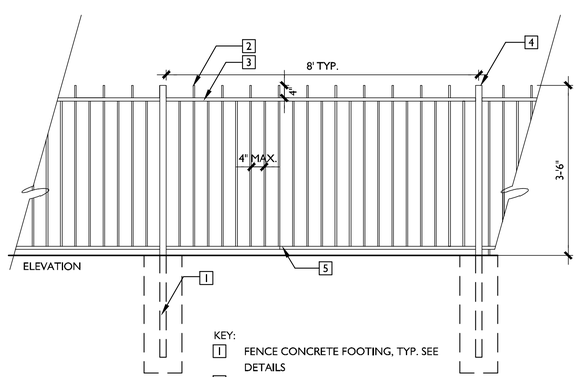
SCALE: N.T.S.



NOTE:
1. ALL FASTENERS TO BE GALVANIZED. SEE SPECS FOR MORE INFO.
2. ALL WOOD TO BE CON. HEART REDWOOD.
3. PROVIDE SEMI TRANSPARENT STAIN ON ALL WOOD SURFACES. PROVIDE MOCKUP SAMPLE FOR REVIEW AND APPROVAL.
4. ALL POSTS SHALL BE EQUALLY SPACED.

2 6' LATTICE PANEL FENCE

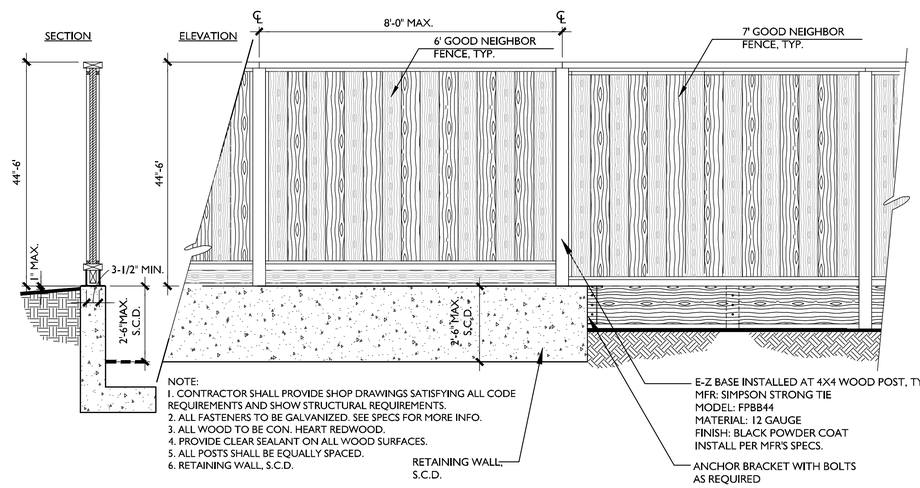
SCALE: 1/2" = 1'-0"



KEY:
1. FENCE CONCRETE FOOTING, TYP. SEE DETAILS
2. 1/2" SQ VERTICAL TUBE STEEL PICKET
3. 1" X 2" TUBE STEEL TOP BAR
4. 2" X 2" TUBE STEEL POST, 8' O.C. TYP.
5. 1" X 2" TUBE STEEL BOTTOM RAIL

5 3'-6" H DECORATIVE METAL FENCE

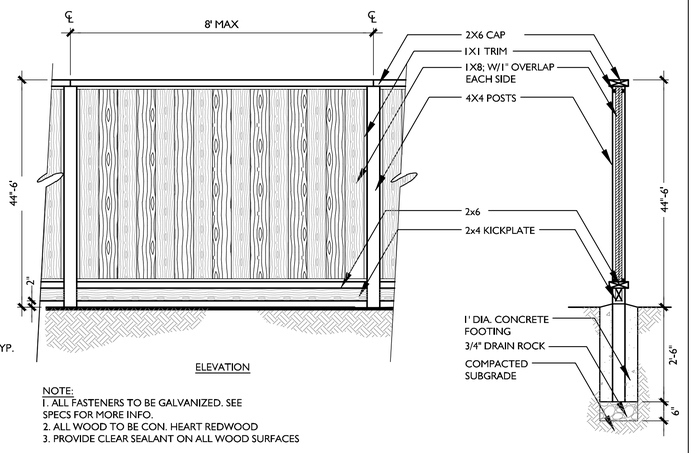
SCALE: 1/2" = 1'-0"



NOTE:
1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SATISFYING ALL CODE REQUIREMENTS AND SHOW STRUCTURAL REQUIREMENTS.
2. ALL FASTENERS TO BE GALVANIZED. SEE SPECS FOR MORE INFO.
3. ALL WOOD TO BE CON. HEART REDWOOD.
4. PROVIDE CLEAR SEALANT ON ALL WOOD SURFACES.
5. ALL POSTS SHALL BE EQUALLY SPACED.
6. RETAINING WALL, S.C.D.

3 GOOD NEIGHBOR FENCE ON RETAINING WALL

SCALE: NTS



NOTE:
1. ALL FASTENERS TO BE GALVANIZED. SEE SPECS FOR MORE INFO.
2. ALL WOOD TO BE CON. HEART REDWOOD
3. PROVIDE CLEAR SEALANT ON ALL WOOD SURFACES

1 6' GOOD NEIGHBOR FENCE

SCALE: 1/2" = 1'-0"

GATES +ASSOCIATES
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ACACIA

OAKLEY
CALIFORNIA



SIGNATURE HOMES

ISSUE:	DESCRIPTION:	DATE:
1	ENTITLEMENT	12/04/2018
2	ENTITLEMENT	02/25/2019
3	ENTITLEMENT	09/10/2019

REGISTERED LANDSCAPE ARCHITECT JAMES GATES No. 3535 STATE OF CALIFORNIA
6/30/2020 Renewal Date
9/10/2019 Date
L.A.

PROJECT NUMBER:	5535
DRAWN:	JG/CR
CHECK:	RC
DATE:	09/26/2019
SCALE:	

0 1/2" 1" 2"

LANDSCAPE DETAILS

L4.2



PLAN 3 - PRAIRIE
SCHEME 9

PLAN 2 - CRAFTSMAN
SCHEME 5

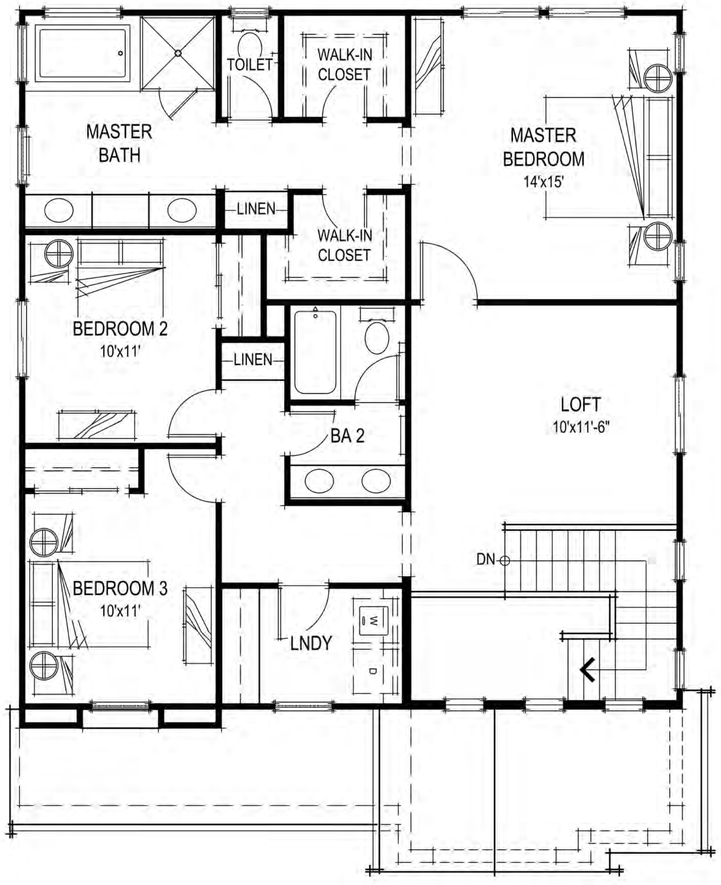
PLAN 1 - EARLY CALIFORNIAN
SCHEME 1

Acacia
Oakley, CA
November 28, 2018

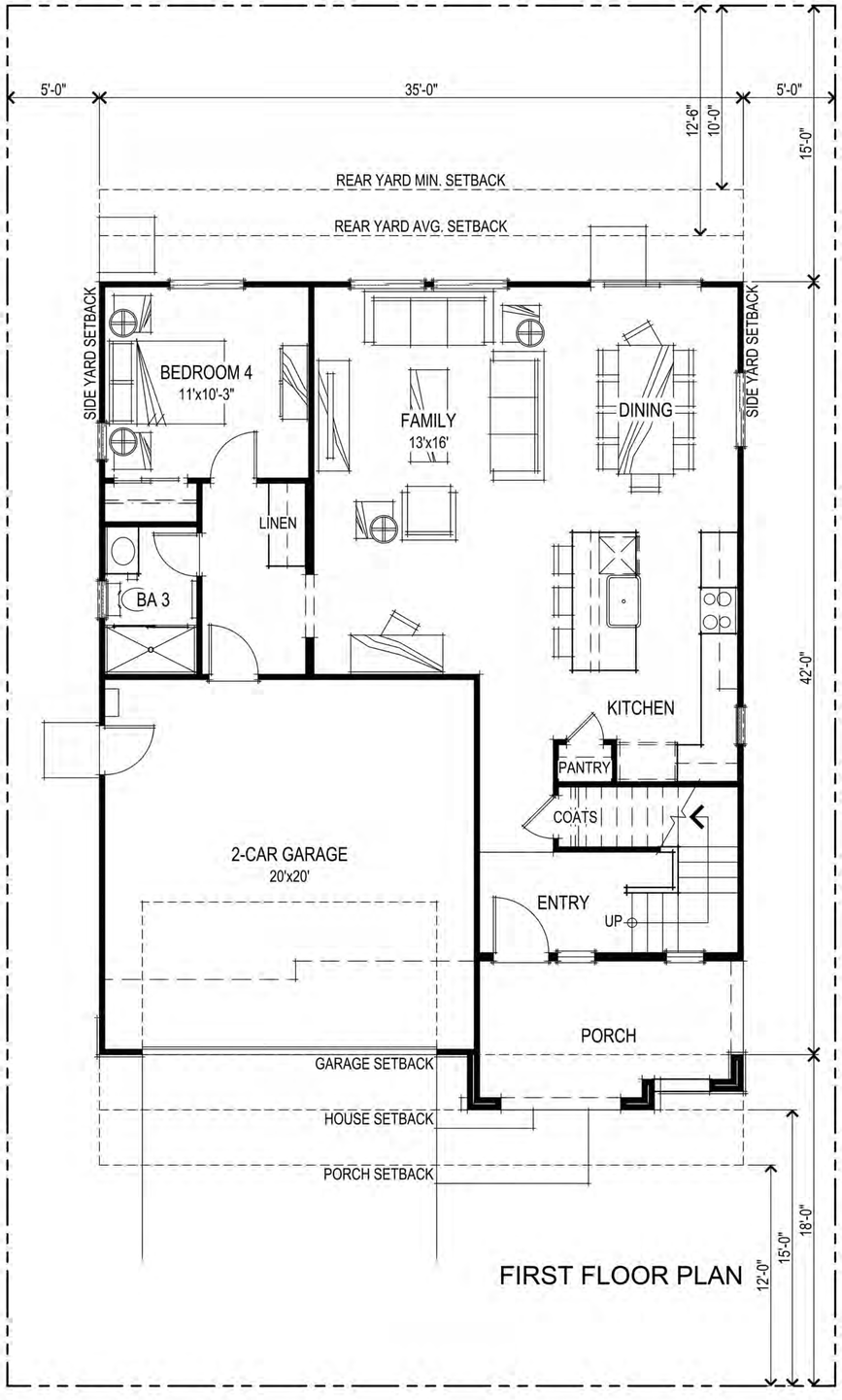
STREET SCENE
A00

Signature Homes
4670 Willow Rd, Suite 100, Pleasanton, CA 94588
925.463.1122

SDG Architects, Inc.
3361 Walnut Blvd. Suite 120
Brentwood, CA 94513
925.634.7000 | sdgarchitectsinc.com



SECOND FLOOR PLAN



FIRST FLOOR PLAN

SQUARE FOOTAGES	
FIRST FLOOR	981 SQ. FT.
SECOND FLOOR	1184 SQ. FT.
TOTAL LIVING	2165 SQ. FT.
2-CAR GARAGE	417 SQ. FT.

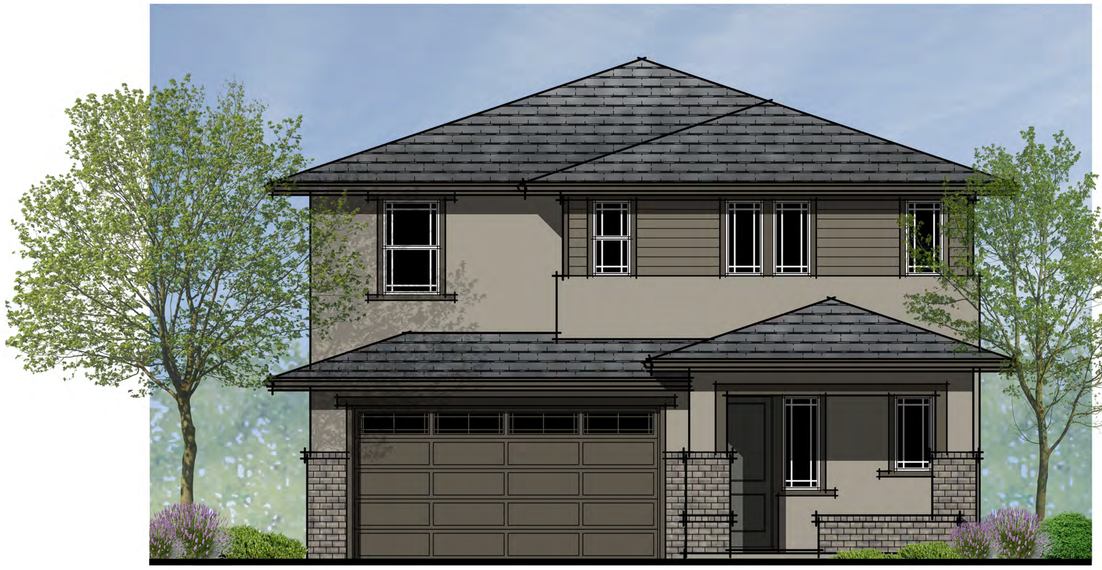
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PLAN 1 FLOOR PLANS
A01

Acacia
Oakley, CA
November 28, 2018

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SCHEME 7
PRAIRIE FRONT ELEVATION



SCHEME 1
EARLY CALIFORNIA FRONT ELEVATION



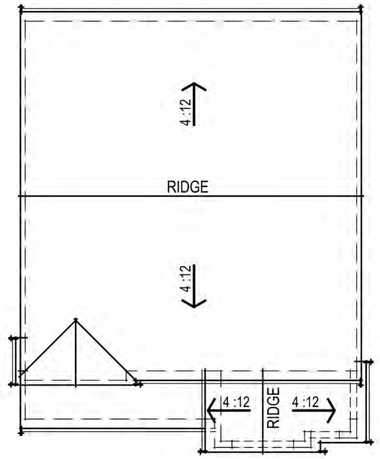
SCHEME 5
CRAFTSMAN FRONT ELEVATION

Acacia
Oakley, CA
November 28, 2018

PLAN 1 FRONT ELEVATIONS
A02

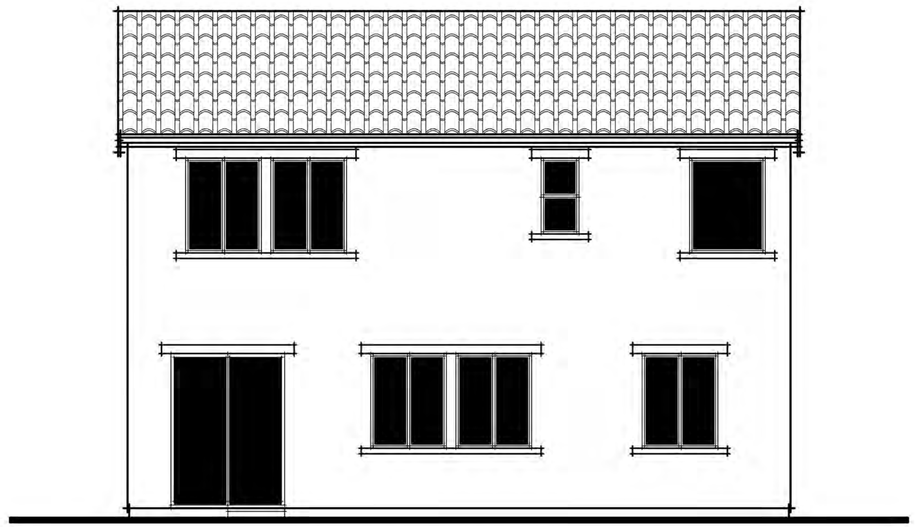
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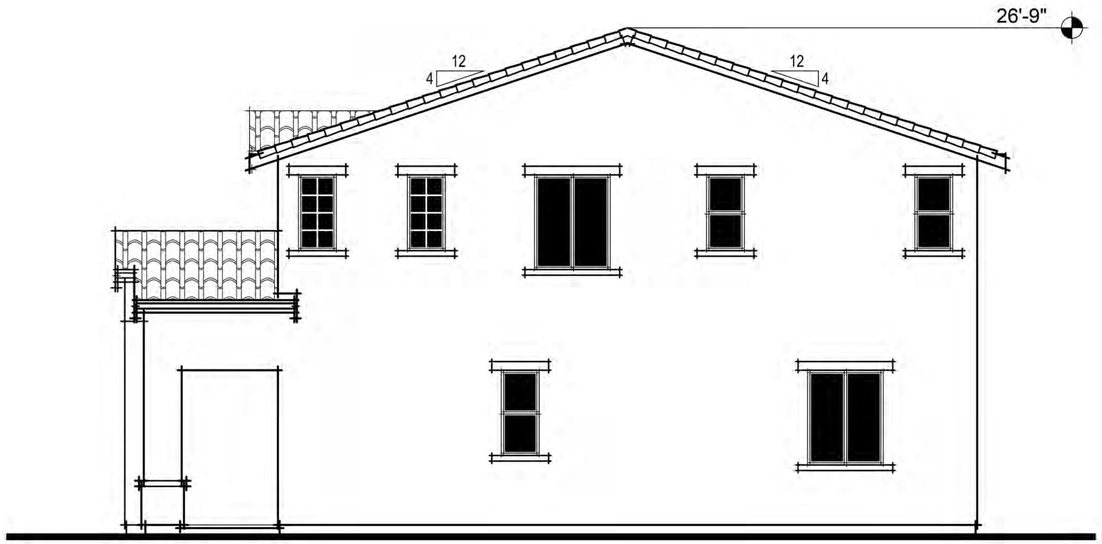


EARLY CALIFORNIA ROOF PLAN

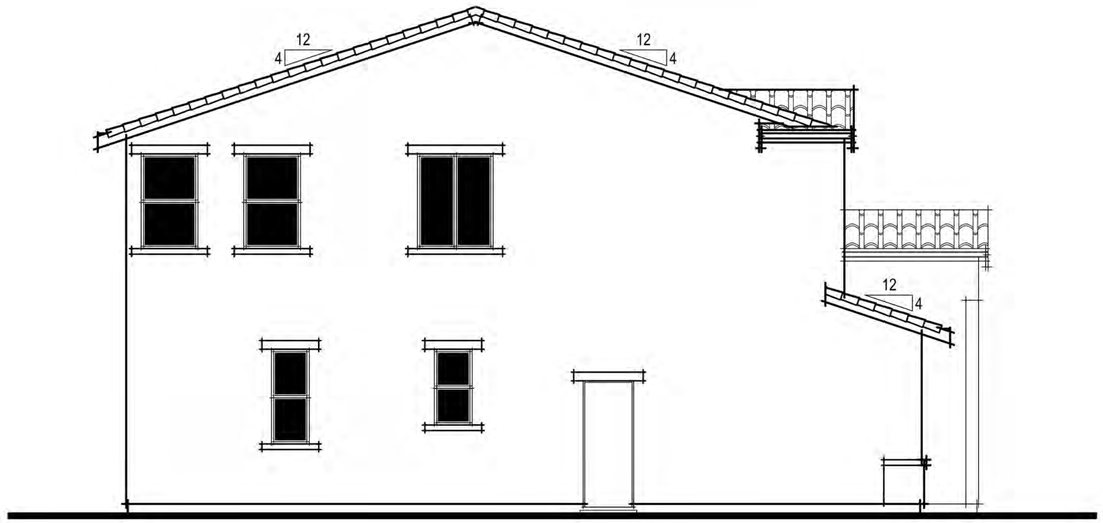
0 2' 4' 6' 8' 16'



EARLY CALIFORNIA REAR ELEVATION



EARLY CALIFORNIA RIGHT ELEVATION



EARLY CALIFORNIA LEFT ELEVATION

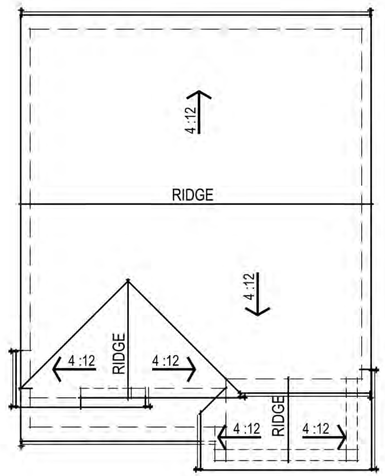
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PLAN 1 EARLY CALIFORNIA ELEVATIONS
A03

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Oakley, CA
November 28, 2018

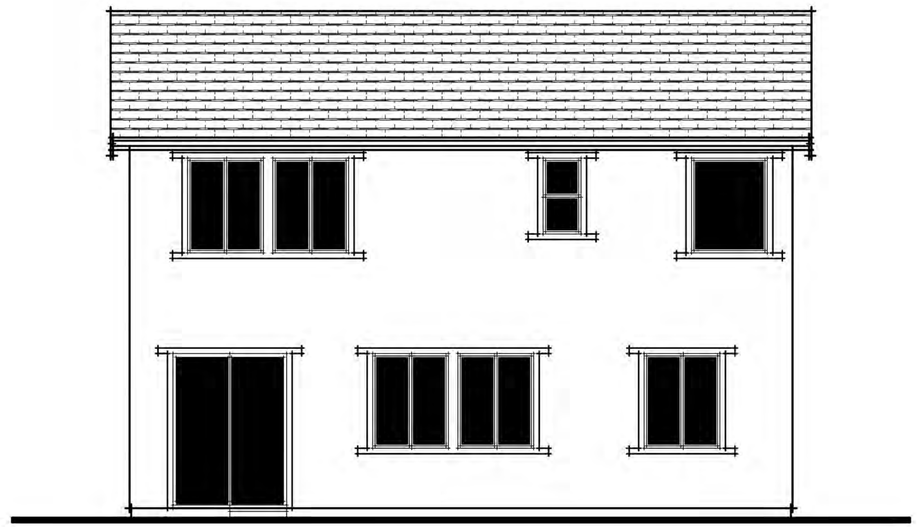
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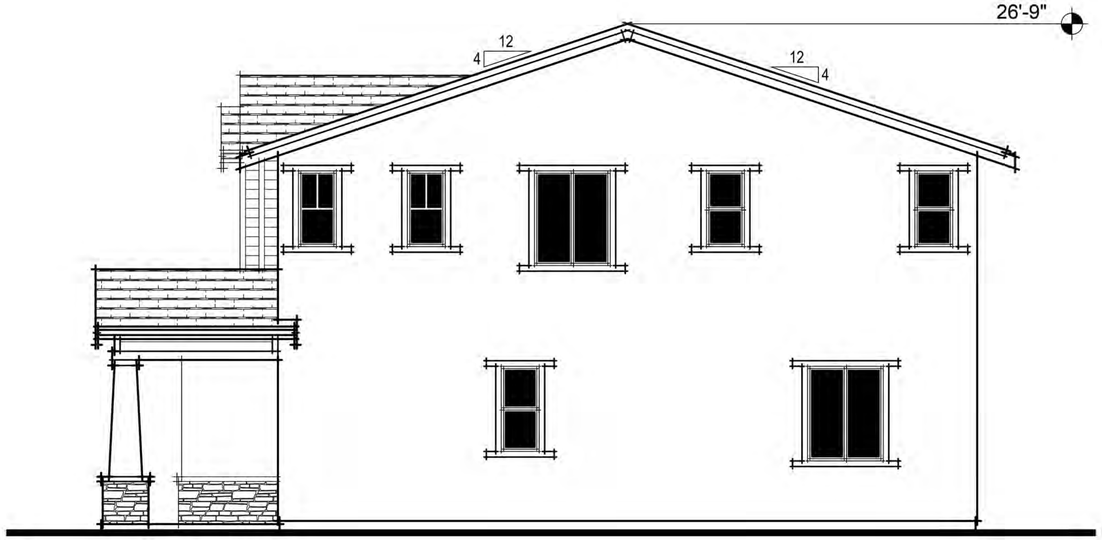


CRAFTSMAN ROOF PLAN

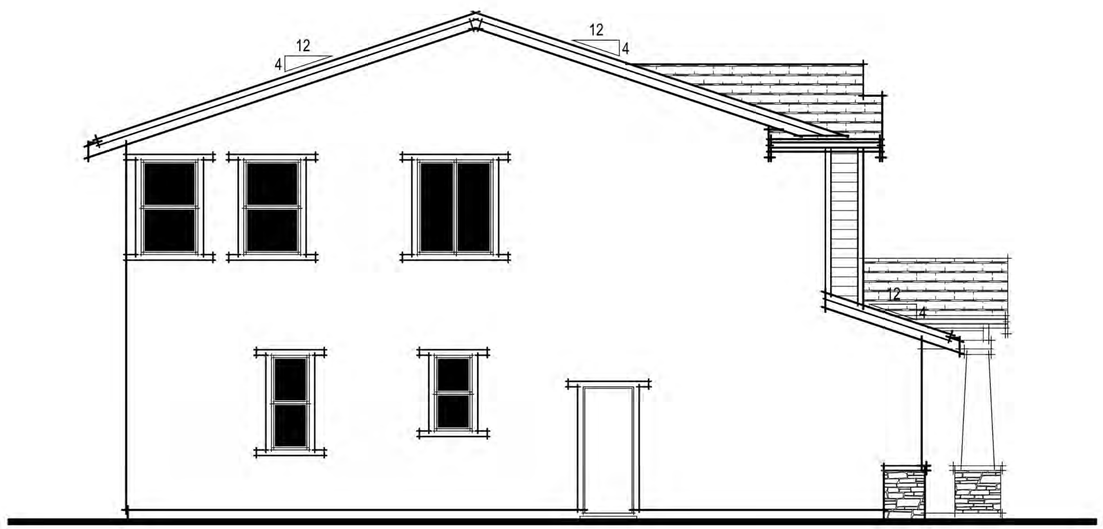
0 2' 4' 6' 8' 16'



CRAFTSMAN REAR ELEVATION



CRAFTSMAN RIGHT ELEVATION



CRAFTSMAN LEFT ELEVATION

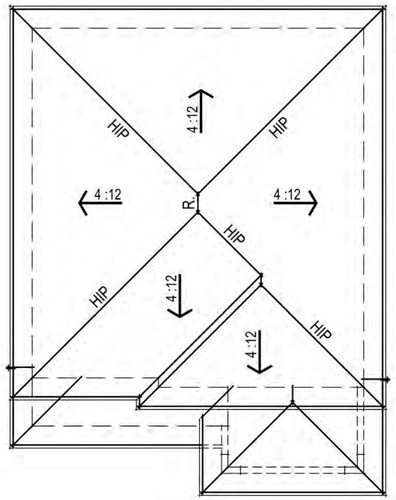
0 1' 2' 3' 4' 8'

PLAN 1 CRAFTSMAN ELEVATIONS
A04

Acacia
Oakley, CA
November 28, 2018

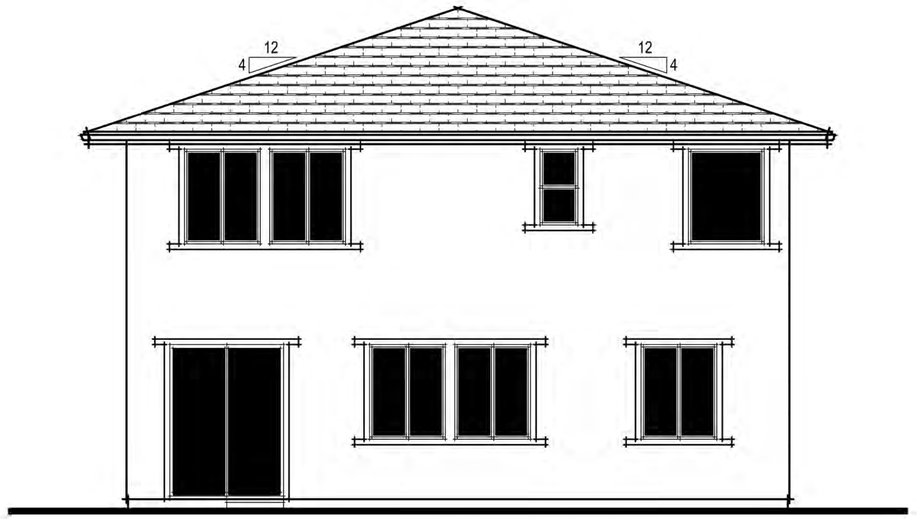
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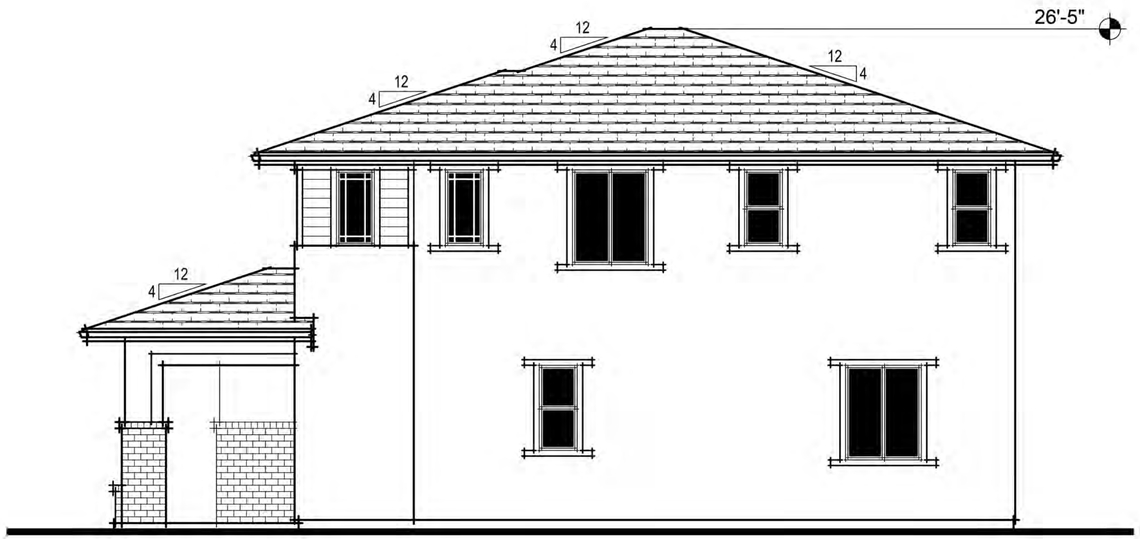


PRAIRIE ROOF PLAN

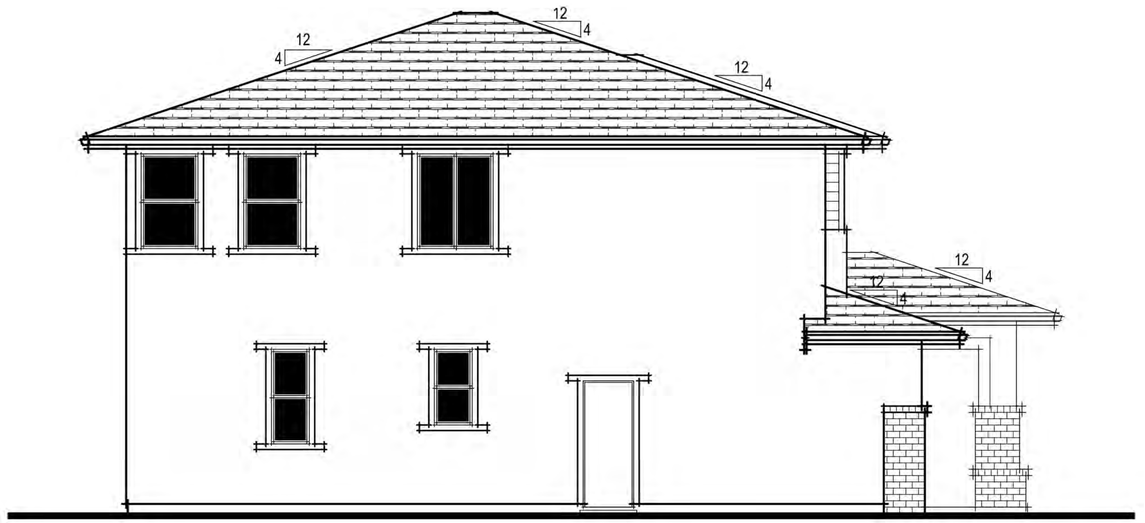
0 2' 4' 6' 8' 16'



PRAIRIE REAR ELEVATION



PRAIRIE RIGHT ELEVATION



PRAIRIE LEFT ELEVATION

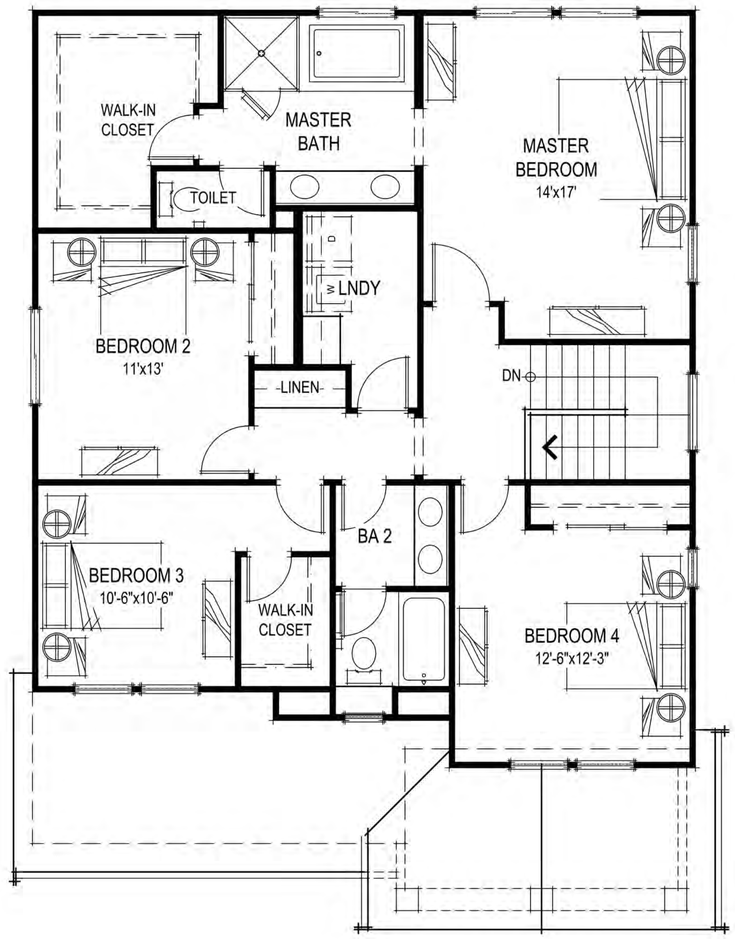
0 1' 2' 3' 4' 8'

PLAN 1 PRAIRIE ELEVATIONS
A05

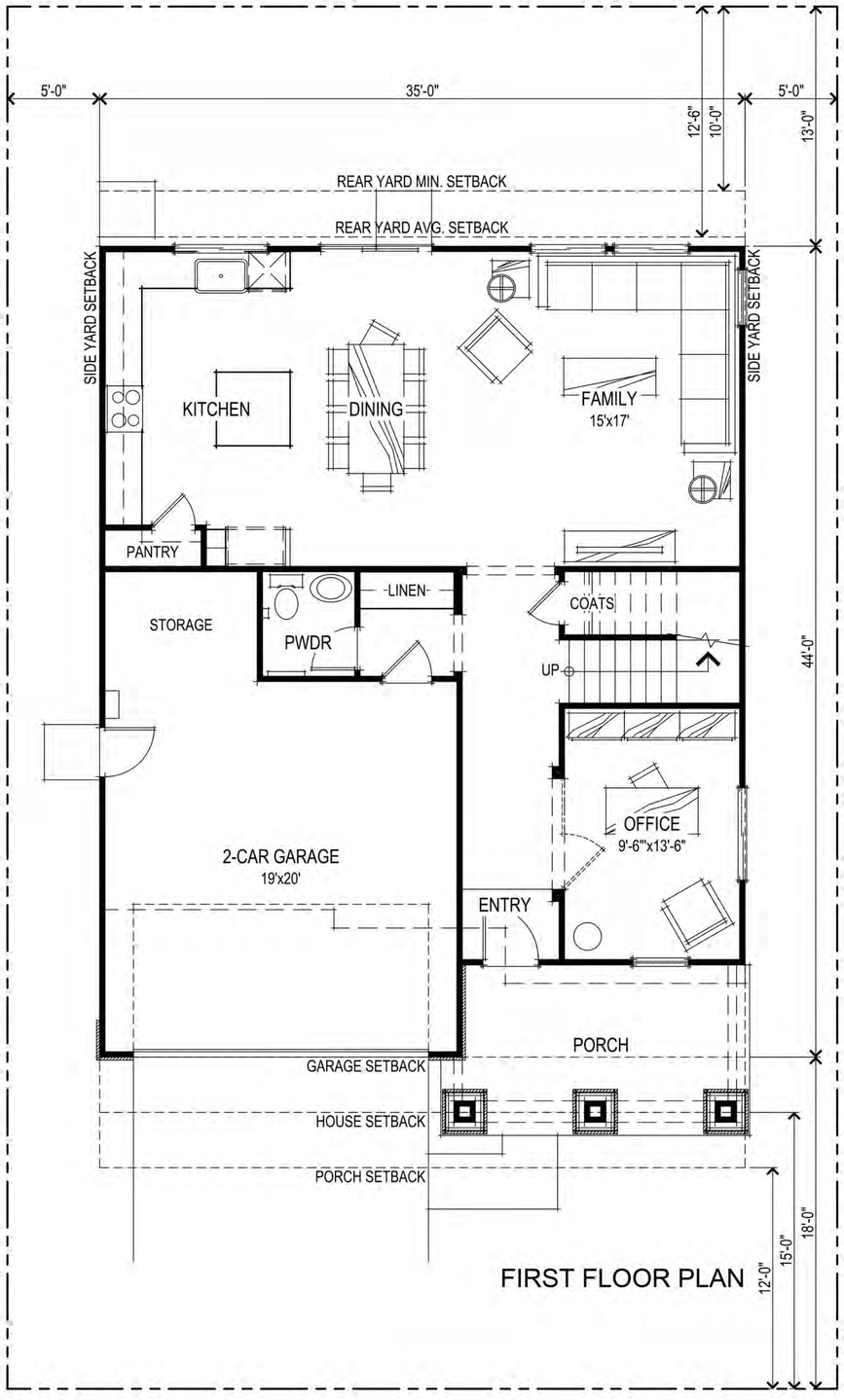
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November 28, 2018

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SECOND FLOOR PLAN



FIRST FLOOR PLAN

SQUARE FOOTAGES	
FIRST FLOOR	1016 SQ. FT.
SECOND FLOOR	1259 SQ. FT.
TOTAL LIVING	2275 SQ. FT.
2-CAR GARAGE	447 SQ. FT.

0 1' 2' 3' 4' 8'

PLAN 2 FLOOR PLANS
A06

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November 28, 2018

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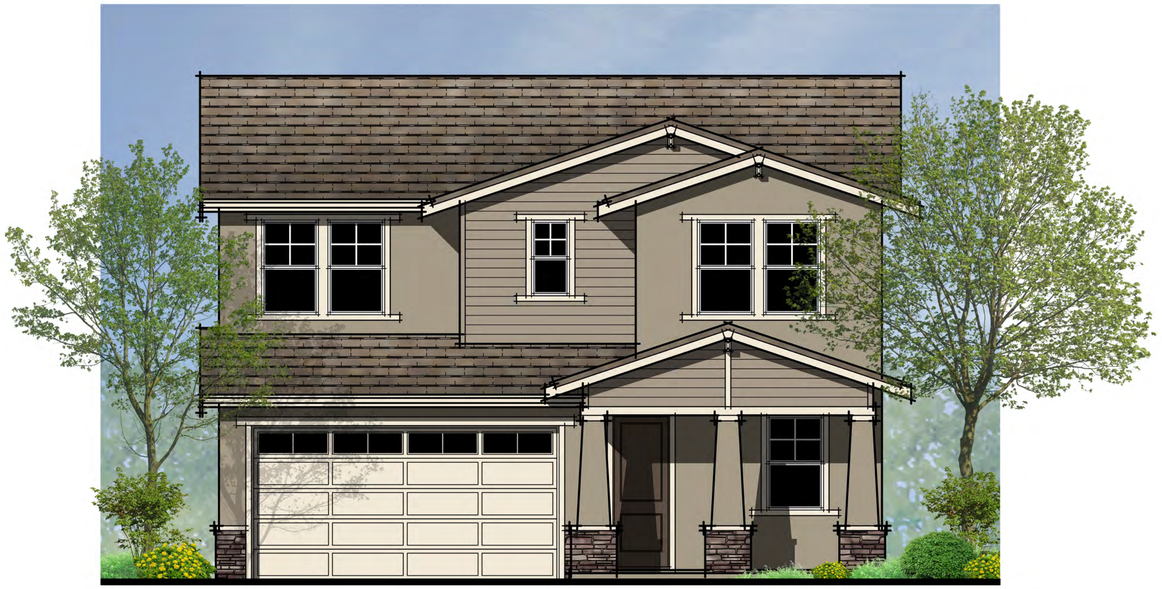
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SCHEME 8
PRAIRIE FRONT ELEVATION



SCHEME 2
EARLY CALIFORNIA FRONT ELEVATION



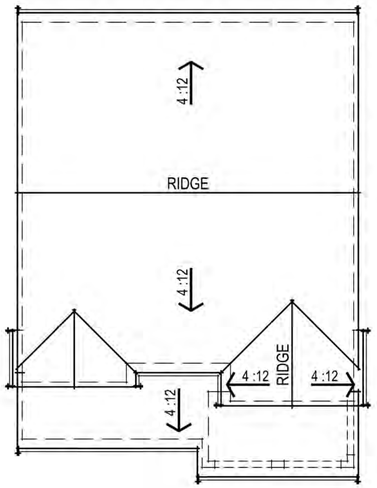
SCHEME 6
CRAFTSMAN FRONT ELEVATION

Acacia
Oakley, CA
November 28, 2018

PLAN 2 FRONT ELEVATIONS
A07

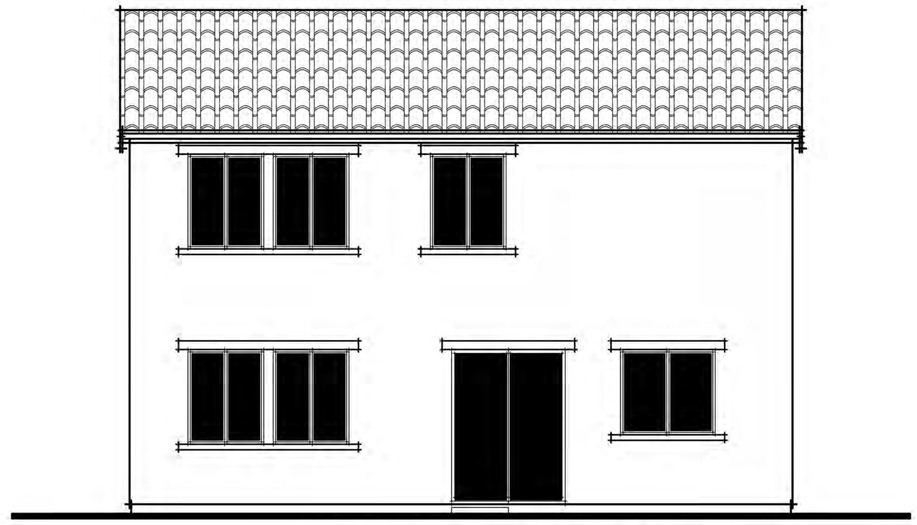
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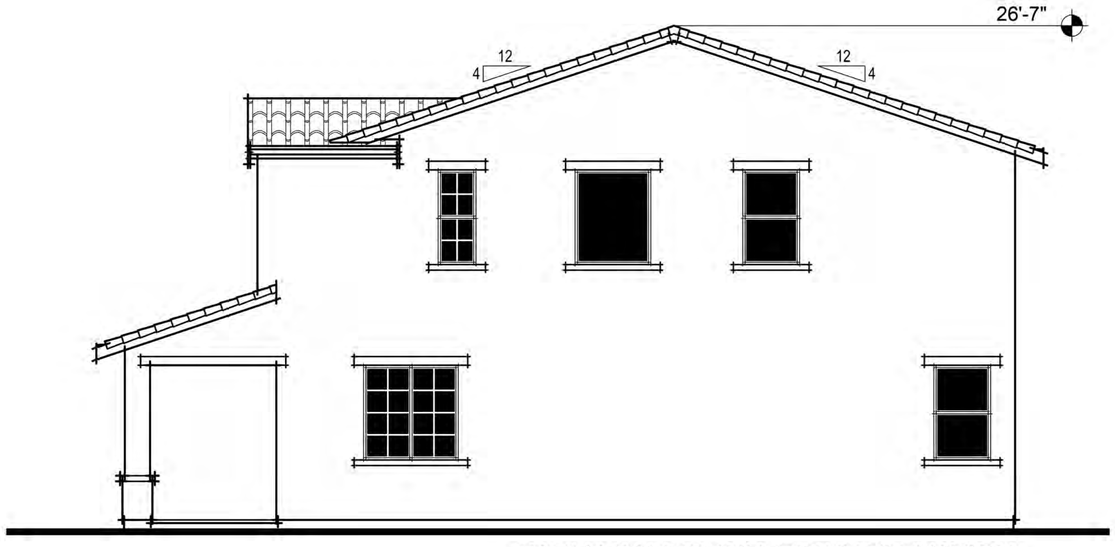


EARLY CALIFORNIA ROOF PLAN

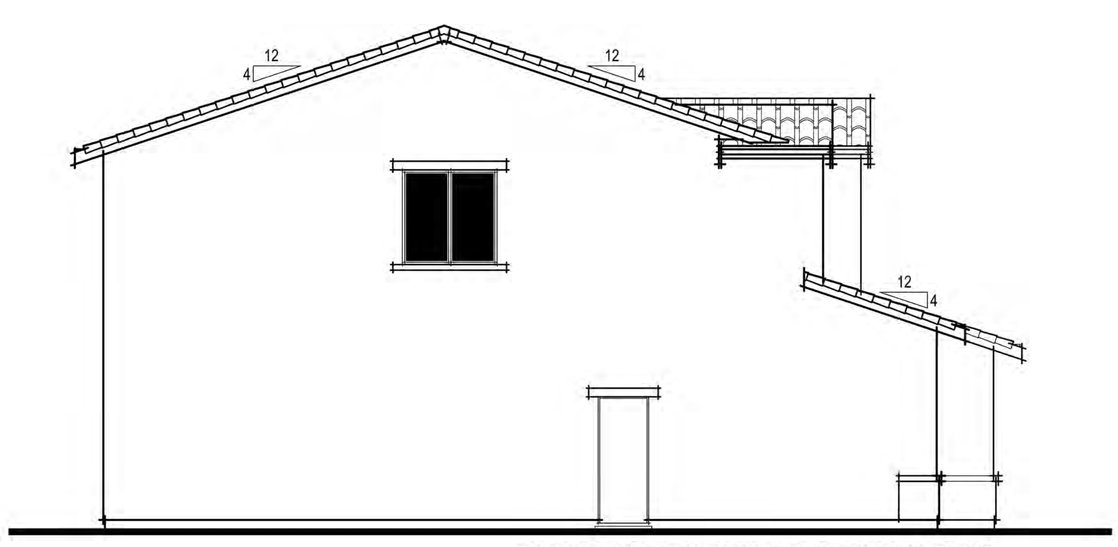
0 2' 4' 6' 8' 16'



EARLY CALIFORNIA REAR ELEVATION



EARLY CALIFORNIA RIGHT ELEVATION



EARLY CALIFORNIA LEFT ELEVATION

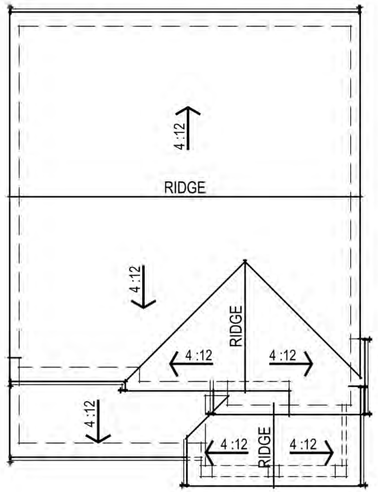
0 1' 2' 3' 4' 8'

PLAN 2 EARLY CALIFORNIA ELEVATIONS
A08

Acacia
Oakley, CA
November 28, 2018

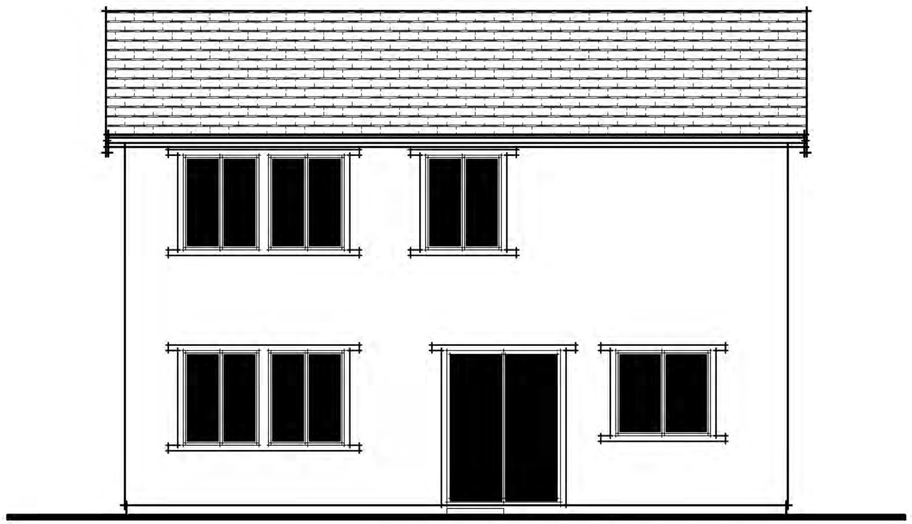
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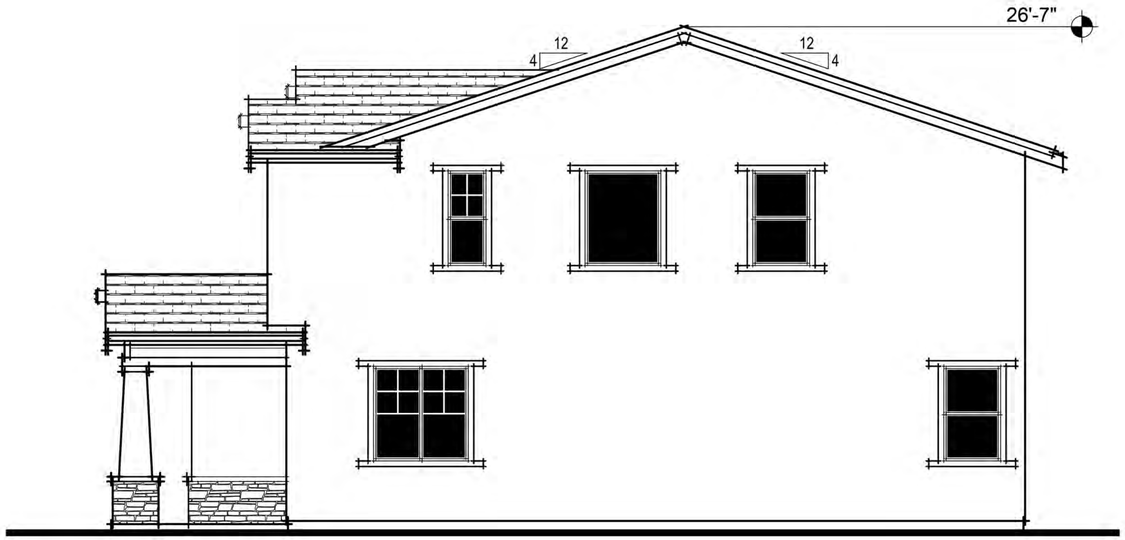


CRAFTSMAN ROOF PLAN

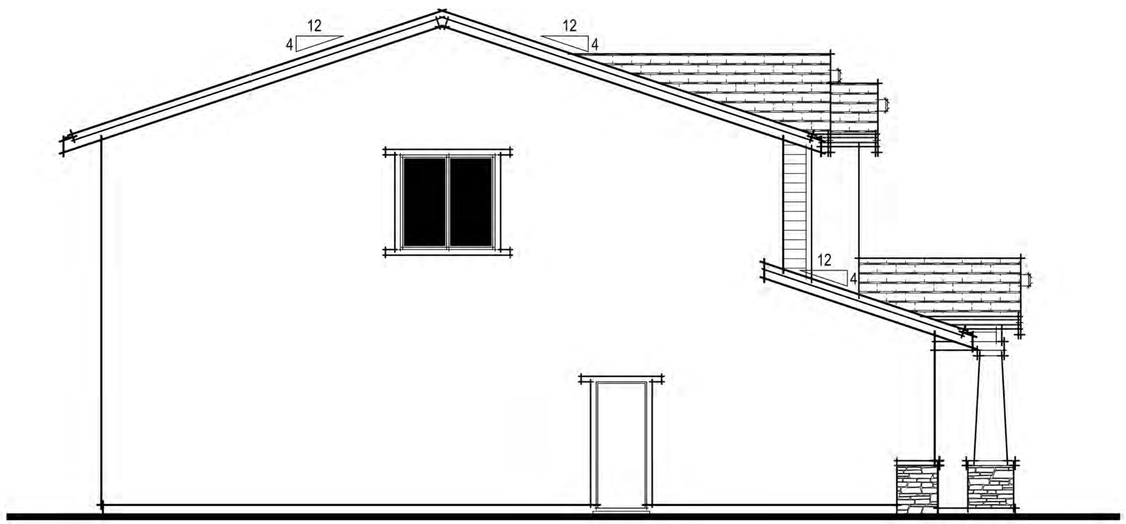
0 2' 4' 6' 8' 16'



CRAFTSMAN REAR ELEVATION



CRAFTSMAN RIGHT ELEVATION



CRAFTSMAN LEFT ELEVATION

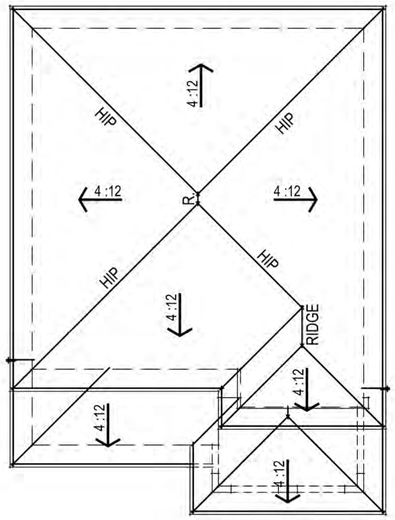
0 1' 2' 3' 4' 8'

PLAN 2 CRAFTSMAN ELEVATIONS
A09

Acacia
Oakley, CA
November 28, 2018

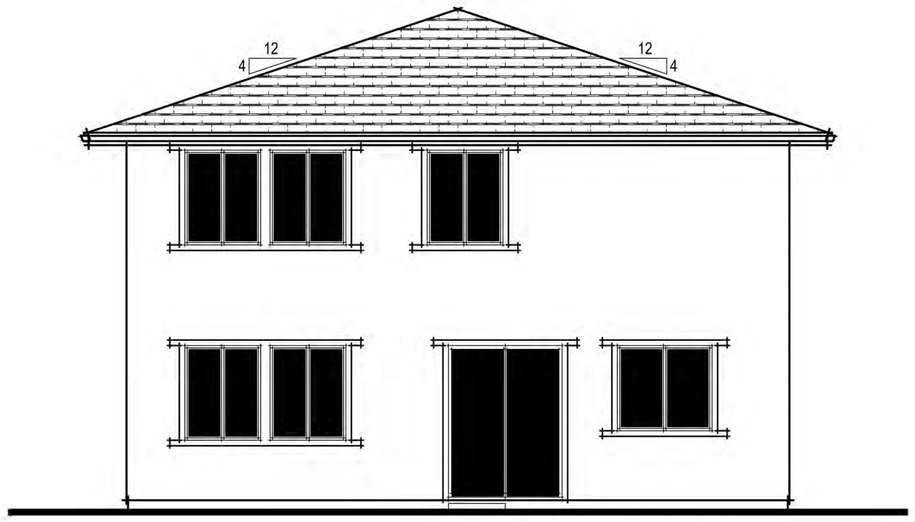
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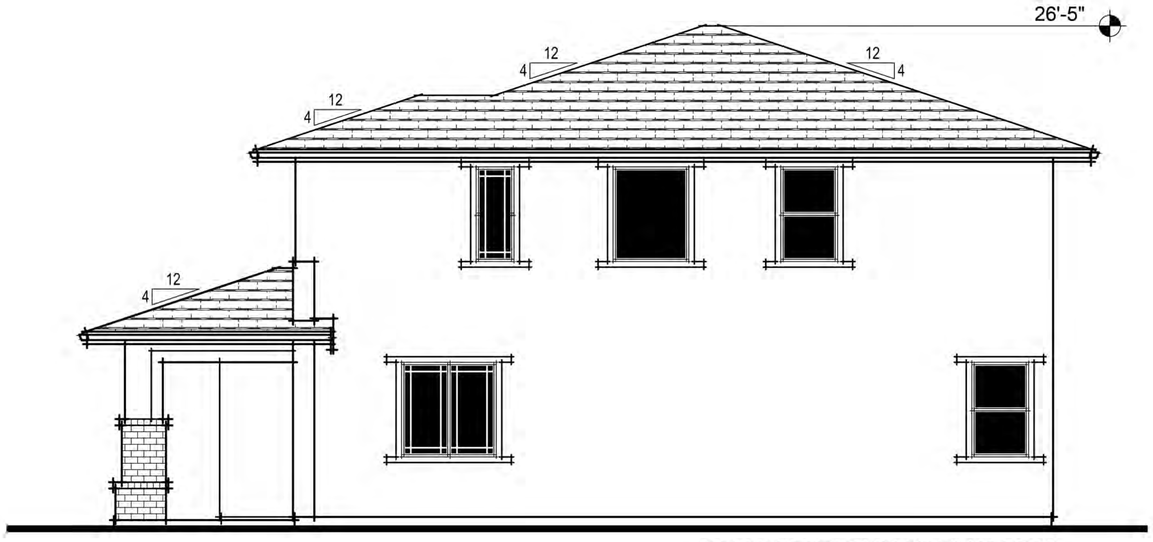


PRAIRIE ROOF PLAN

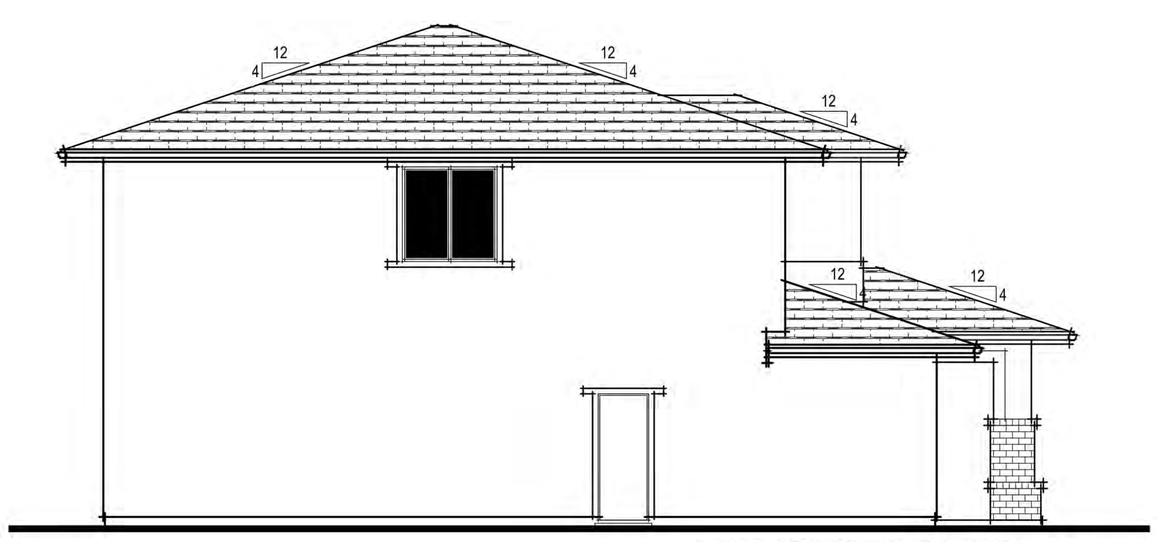
0 2' 4' 6' 8' 16'



PRAIRIE REAR ELEVATION



PRAIRIE RIGHT ELEVATION



PRAIRIE LEFT ELEVATION

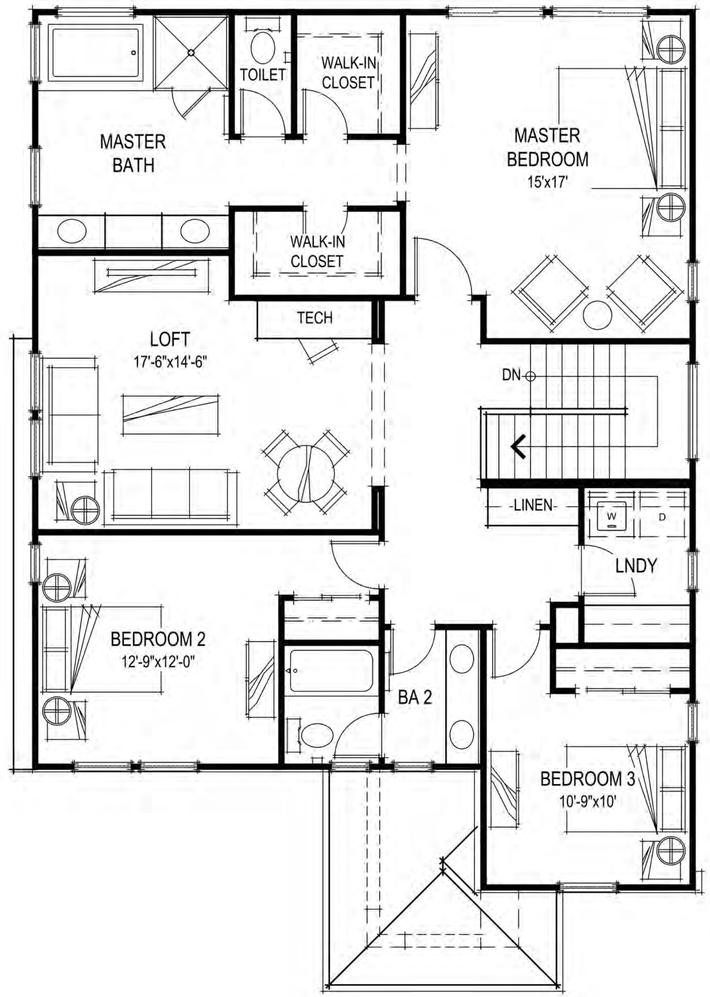
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PLAN 2 PRAIRIE ELEVATIONS
A10

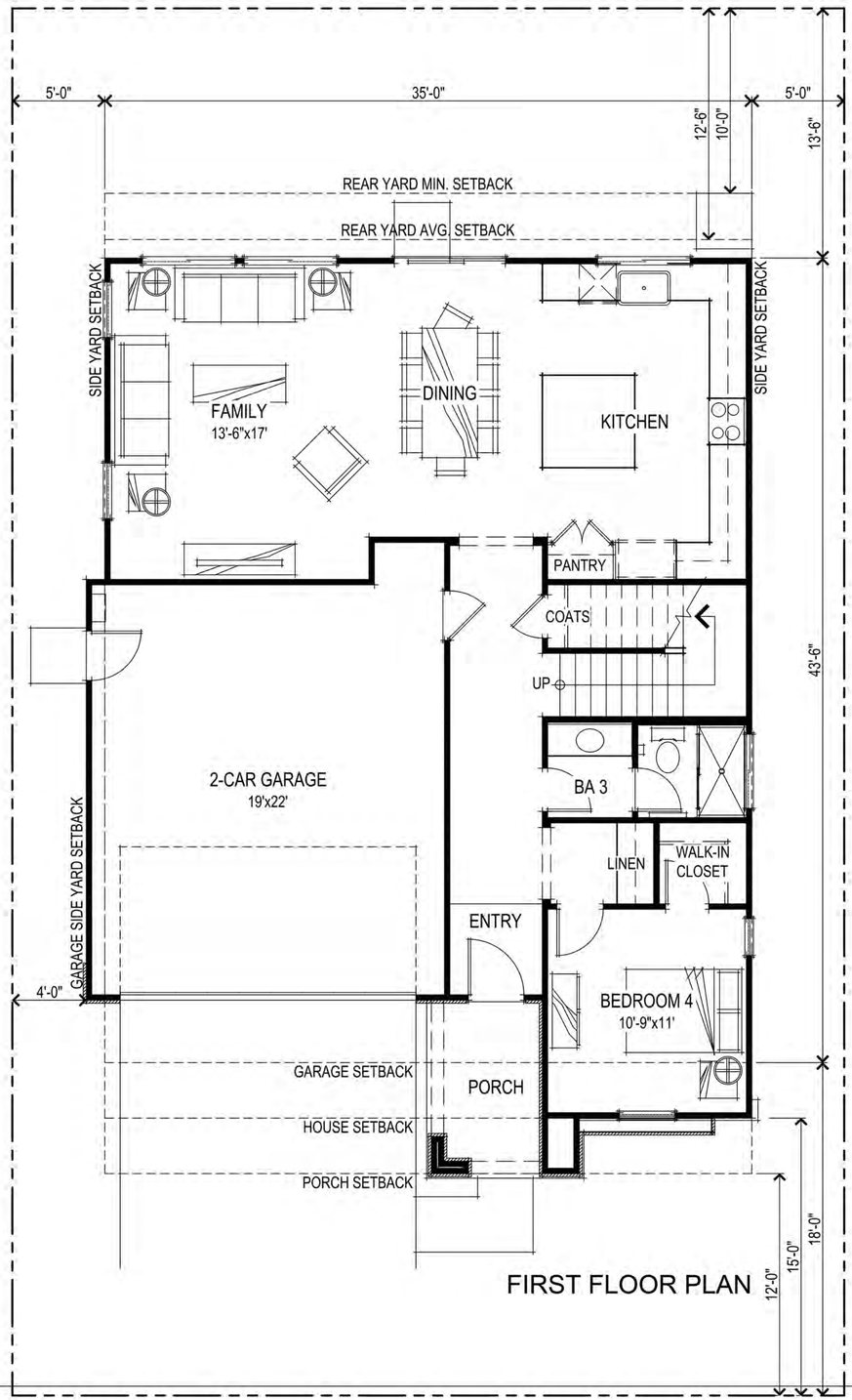
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SECOND FLOOR PLAN



FIRST FLOOR PLAN

SQUARE FOOTAGES	
FIRST FLOOR	1055 SQ. FT.
SECOND FLOOR	1418 SQ. FT.
TOTAL LIVING	2473 SQ. FT.
2-CAR GARAGE	444 SQ. FT.

0 1' 2' 3' 4' 8'

PLAN 3 FLOOR PLANS
A11

Acacia
Oakley, CA
November 28, 2018

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SCHEME 9
PRAIRIE FRONT ELEVATION



SCHEME 3
EARLY CALIFORNIA FRONT ELEVATION



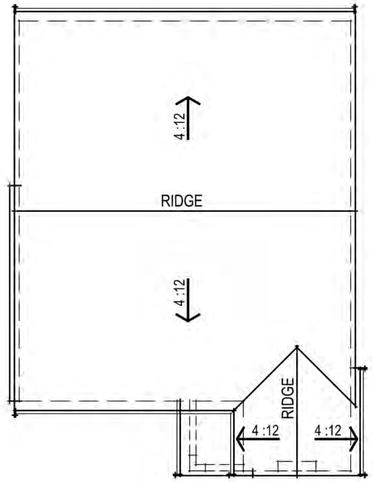
SCHEME 4
CRAFTSMAN FRONT ELEVATION

Acacia
Oakley, CA
November 28, 2018

PLAN 3 FRONT ELEVATIONS
A12

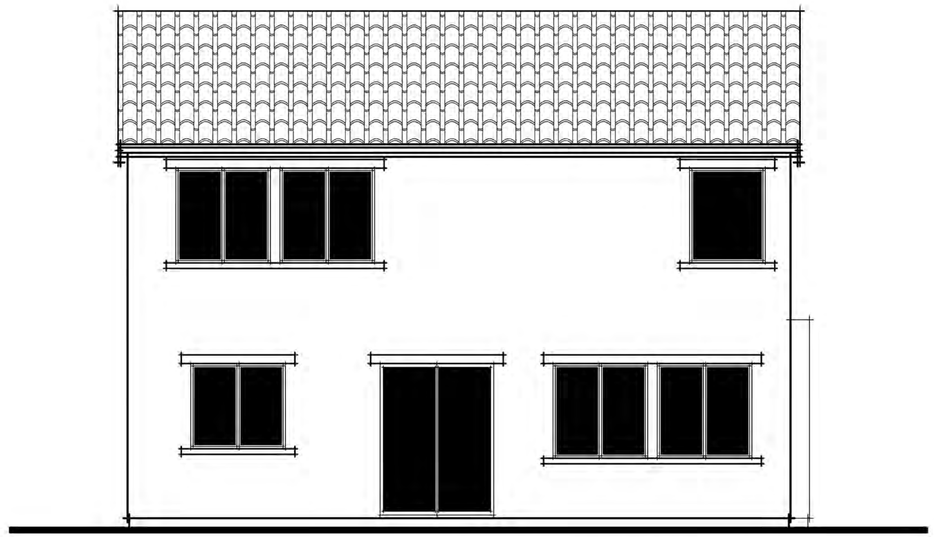
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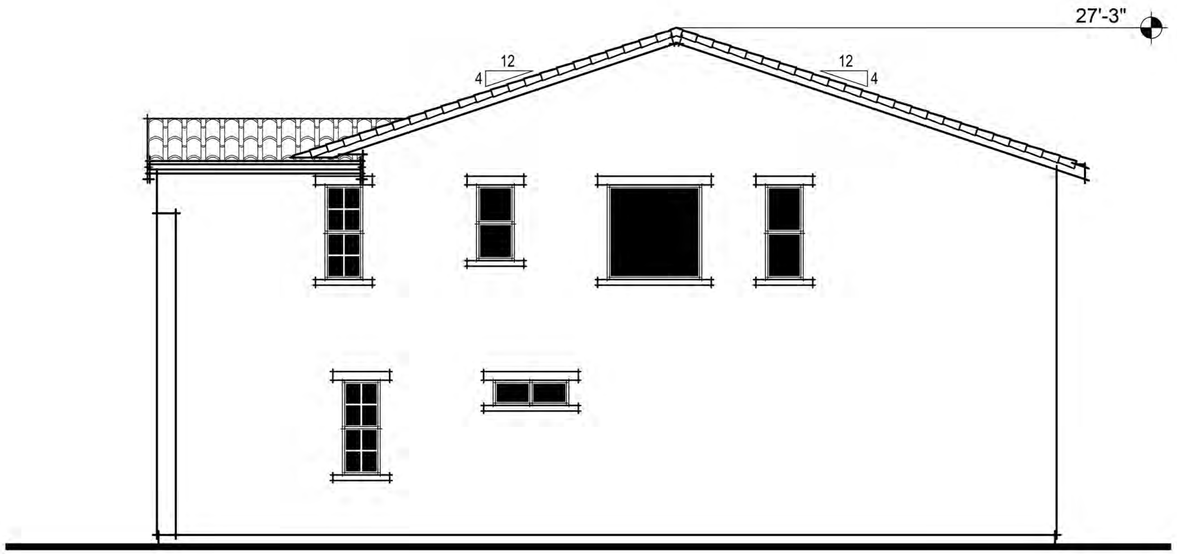


EARLY CALIFORNIA ROOF PLAN

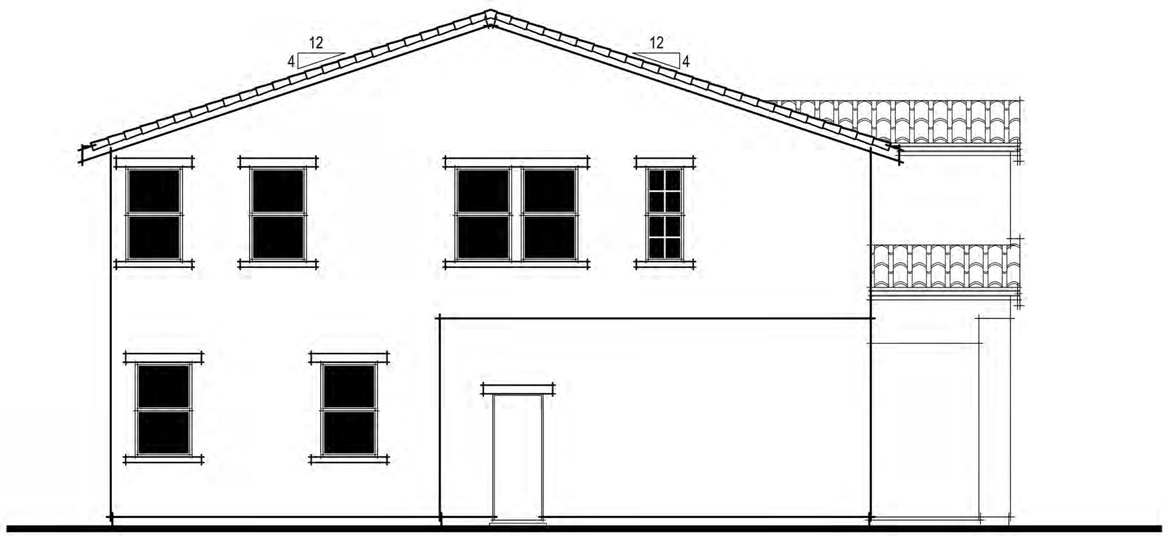
0 2' 4' 6' 8' 16'



EARLY CALIFORNIA REAR ELEVATION



EARLY CALIFORNIA RIGHT ELEVATION



EARLY CALIFORNIA LEFT ELEVATION

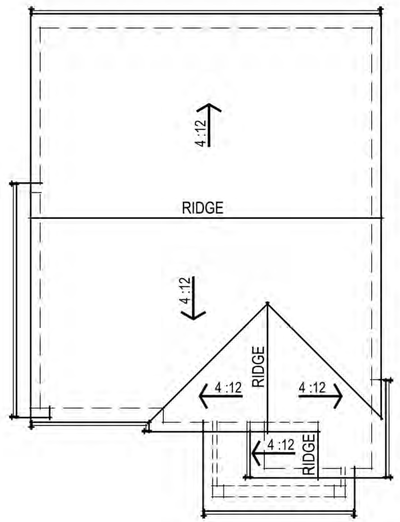
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PLAN 3 EARLY CALIFORNIA ELEVATIONS
A13

Acacia
Oakley, CA
November 28, 2018

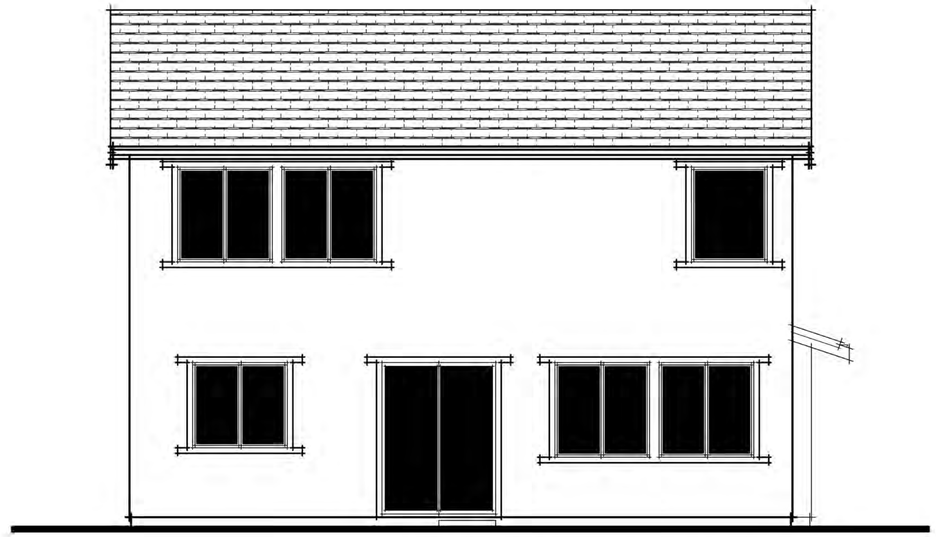
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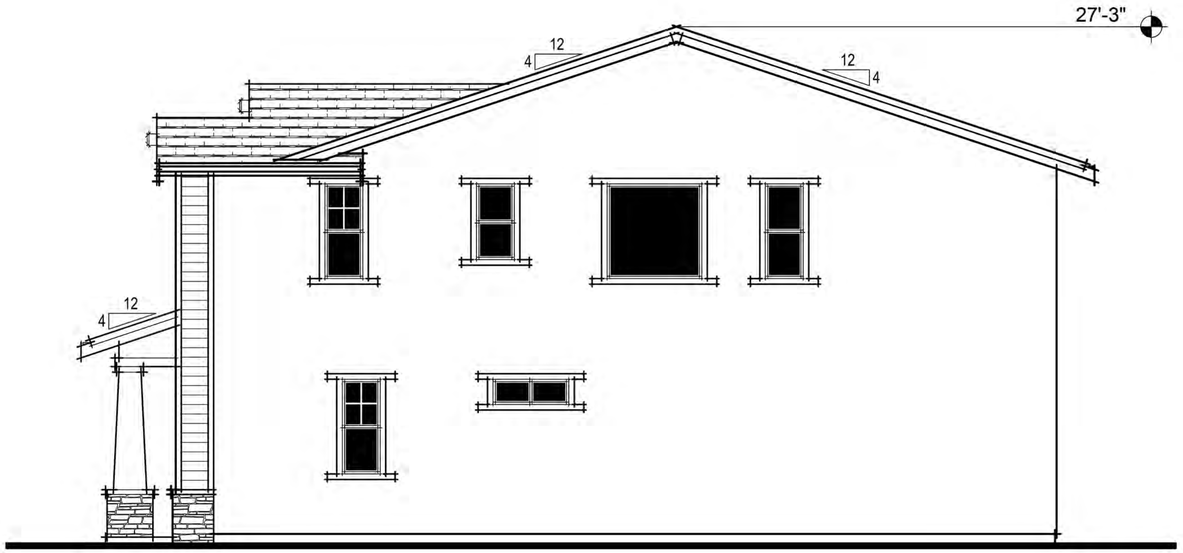


CRAFTSMAN ROOF PLAN

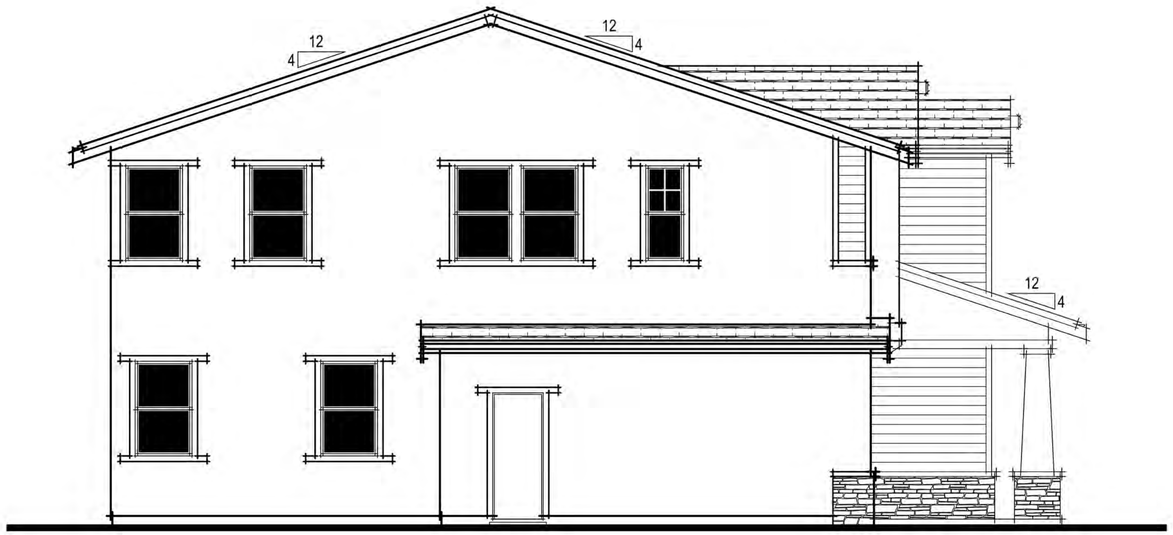
0 2' 4' 6' 8' 16'



CRAFTSMAN REAR ELEVATION



CRAFTSMAN RIGHT ELEVATION



CRAFTSMAN LEFT ELEVATION

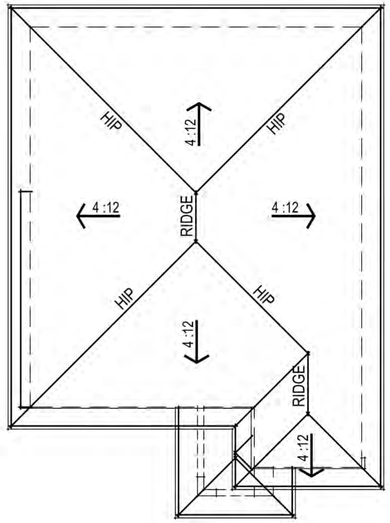
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PLAN 3 CRAFTSMAN ELEVATIONS
A14

Acacia
Oakley, CA
November 28, 2018

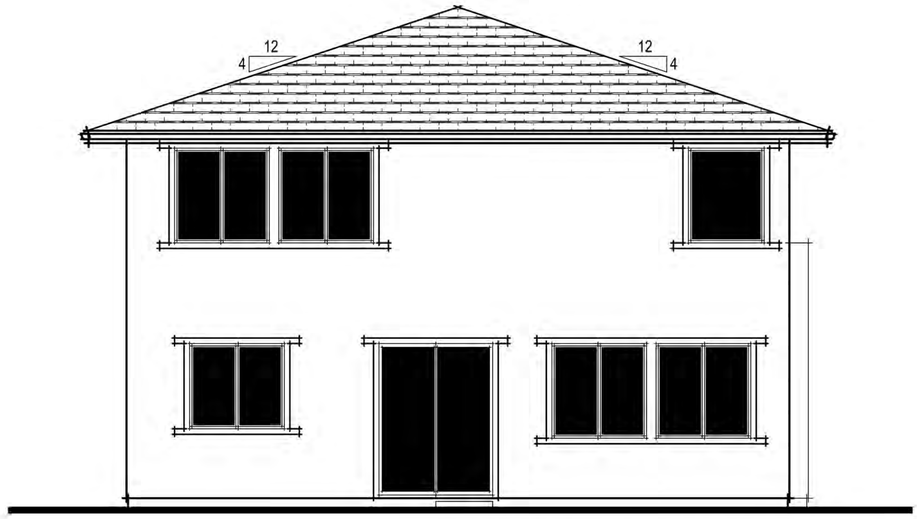
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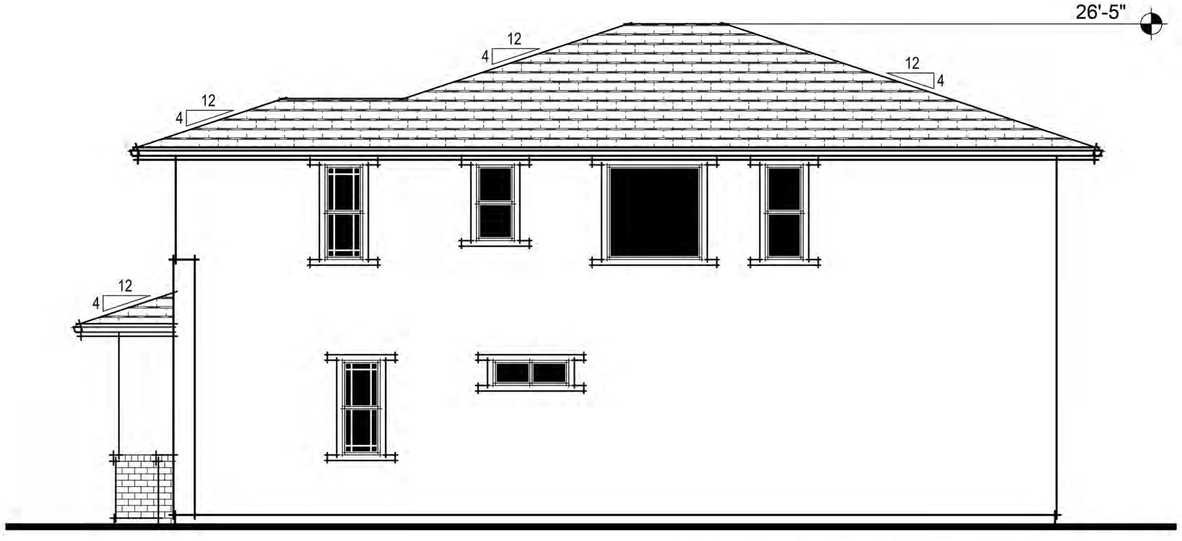


PRAIRIE ROOF PLAN

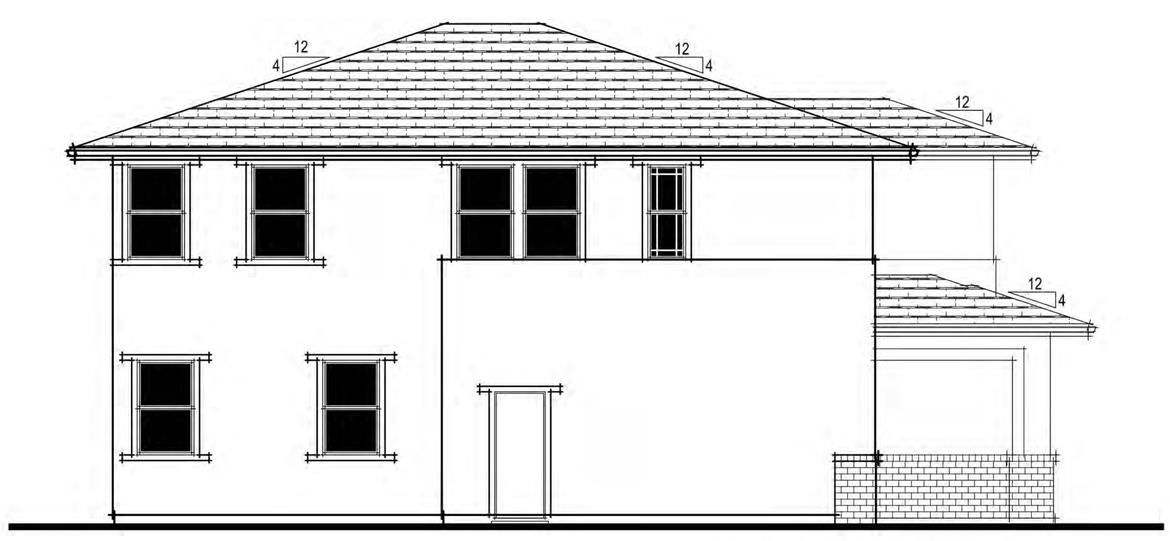
0 2' 4' 6' 8' 16'



PRAIRIE REAR ELEVATION



PRAIRIE RIGHT ELEVATION



PRAIRIE LEFT ELEVATION

0 1' 2' 3' 4' 8'

PLAN 3 PRAIRIE ELEVATIONS
A15

Acacia
Oakley, CA
November 28, 2018

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3361 Walnut Blvd. Suite 120
Brentwood, CA 94513
925.634.7000 | sdgarchitectsinc.com

SCHEME 1



Roofing
Eagle Roofing - 3636 Piedmont Blend

Body 1
Stucco
23 Swiss Coffee

Trim & Garage Doors
Trim, Fascia & Garage Doors
KMA 77-5 Brown Bear

Accent
Front Door
KMA 79 Lights Out

SCHEME 2



Roofing
Eagle Roofing - 3723 Adobe Blend

Body 1
Stucco
KM 4646 Magic Sail

Trim & Garage Doors
Trim, Fascia & Garage Doors
KM 4650 King's Ransom

Accent
Front Door
KM 4589 Mama Raccoon

SCHEME 3



Roofing
Eagle Roofing - 3813 San Mateo Blend

Body 1
Stucco
36 Navajo White

Trim & Garage Doors
Trim, Fascia & Garage Doors
KM 5800-5 Sausalito Ridge

Accent
Front Door
KM A69 Roasted Kona

Note: *All colors and textures are representative samples only, pending verification of actual material suppliers and manufacturers for this particular project.*

Signature Homes
4670 Willow Rd, Suite 100, Pleasanton, CA 94588
925.463.1122

SDG Architects, Inc.
3361 Walnut Blvd. Suite 120
Brentwood, CA 94513
925.634.7000 | sdgarchitectsinc.com

SCHEME 4



Roofing
GAF - Timberline
0676-0132A Sagewood

Body 1
Stucco
KM 4705 Kiss The Blarney Stone

Body 2
Siding
KM 4720 Open Range

Trim & Garage Doors
Trim, Fascia & Garage Doors
KM 4703 Whirligig Geyser

Accent
Front Door
KMA 72 Barnwood



Stone
Eldorado Stone
Mesa Verde Mountain Ledge

SCHEME 5



Roofing
GAF - Timberline
0676-0133A Sandalwood

Body 1
Stucco
HLS 4273 Trail Dust

Body 2
Siding
KM 5740 Montecito

Trim & Garage Doors
Trim, Fascia & Garage Doors
KM 4602 Pie Safe

Accent
Front Door
KM 4491 Aged Teak



Stone
Eldorado Stone
Silverton Mountain Ledge Panels

SCHEME 6



Roofing
GAF - Timberline
0676-0132A Sagewood

Body 1
Stucco
KM 5784 Creek Bay

Body 2
Siding
KM 5786 River Bank

Trim & Garage Doors
Trim, Fascia & Garage Doors
28 Clam

Accent
Front Door
KM A 65 Ground Bean



Stone
Eldorado Stone
bitteroot Mountain Ledge

Note: *All colors and textures are representative samples only, pending verification of actual material suppliers and manufacturers for this particular project.*

Signature Homes
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925.463.1122

SDG Architects, Inc.
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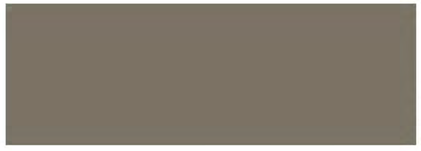
SCHEME 7



Roofing
GAF - Timberline
0676-0137 Stone Gray



Body 1
Stucco
KM 4586 Abbey Road



Body 2
Stucco & Siding
KM 4263 Hammered Pewter



Trim & Garage Doors
Trim, Fascia & Garage Doors
KM 4575 Mud Room



Accent
Front Door
KM 4952 Pompeii Ruins



Brick
Eldorado/ Boral Brick
Ashland TundraBrick

SCHEME 8



Roofing
GAF - Timberline
0676-0132A Sagewood



Body 1
Stucco
KM 4543 Coffee Diva



Body 2
Stucco & Siding
KM 5720 Man Cave



Trim & Garage Doors
Trim, Fascia & Garage Doors
KMA 74 Stagecoach



Accent
Front Door
KM 4720 Open Range



Brick
Eldorado/ Boral Brick
Latigo TundraBrick

SCHEME 9



Roofing
GAF - Timberline
0676-0130 Aged Chestnut



Body 1
Stucco
KM 5791 Northpointe



Body 2
Stucco & Siding
KM 5799 Downtown Benny Brown



Trim & Garage Doors
Trim, Fascia & Garage Doors
KM 4582 Beaver Pelt



Accent
Front Door
KM 4810 Appalachian Forest



Brick
Eldorado/ Boral Brick
Tobacco Road - Boral Queen Brick

Note: *All colors and textures are representative samples only, pending verification of actual material suppliers and manufacturers for this particular project.*

Citizen Planning Advisors
Consolidated Comments

Acacia Project - General Plan Amendment (GPA 03-18), Rezone (RZ 07-18), Tentative Map (TM 04-18) and Design Review (DR 11-18)

Several of the five Citizen Planning Advisors (CPA) members submitted comments to Staff by email. Per the CPA guidelines, Staff has consolidated the comments and made them part of the project meeting packet. Comments are verbatim with the exception of formatting and corrected typos. Some comments and questions are similar in nature. Staff has included a section in the project staff report that addresses some of the comments. The staff report does not directly respond to each comment and question.

- I believe approval of amendment to GPA and Rezoning is going to cause too much congestion and not good for the city. Making too many multifamily locations or SFR's with very small lots are going to change the character and image of the city, I think city should not approve of any of these requests.

- As has been discussed about other developments lately, the lack of a single level home plan is disappointing.

- I personally would object to the density of the development. It seems inconsistent in the context of the surrounding community.

- In the plan noted above, it does not mention any solar materials (unless I missed something). I would like to see some clarification about what material will be used to prepare for solar with the 2020 California solar mandate around the corner.

- How would that affect roofing material and design?

- While each plan/scheme looks well thought out I feel the garages could be less prominent so the road looks less narrow and cluttered with garages facing each other. If some of the garages could be setback or made in to side loading garages, and the facade could be driveway portion could be more disguised with perhaps and adjacent stamped walkway I feel the neighborhood would get a more homely feel.

- The setbacks from the road to the house and between the properties could be increased by a few feet to make better use of spacing, but I understand that it may be hard with smaller properties in the P1 district.

- I think this community will bring a new set of variety to our community in regards of housing options.

CITY OF OAKLEY

RESOLUTION NO. XX-19

A RESOLUTION OF THE CITY OF OAKLEY CITY COUNCIL MAKING FINDINGS AND APPROVING THE GENERAL PLAN AMENDMENT TO AMEND THE LAND USE DESIGNATION OF 2 PARCELS COMPRISED OF 13.4-ACRES LOCATED AT 5360 MAIN STREET (APN'S 033-030-001 and 033-030-027) FROM SINGLE-FAMILY RESIDENTIAL, HIGH DENSITY (SH) TO MULTI-FAMILY RESIDENTIAL, LOW DENSITY (ML) FOR THE PROJECT TITLED "ACACIA"

FINDINGS

WHEREAS, on July 1, 1999, the incorporation of the City of Oakley took effect; and

WHEREAS, after incorporation, the City adopted the Contra Costa County General Plan for the Oakley Area as its general plan, the County's subdivision ordinance as its subdivision ordinance, and the County's zoning ordinance as its zoning ordinance (Ordinance Nos. 1-99, 17-99, 22-99). Since that time, the City has prepared its own general plan, as required by Government Code Section 65360; and

WHEREAS, in December 2002, the Oakley City Council adopted the Oakley 2020 General Plan; and

WHEREAS, on December 6, 2018, Signature Homes, Inc., ("Applicant") submitted an application requesting approval of: 1) a General Plan Amendment (GPA 03-18) to amend the land use designation from Single-Family Residential, High Density (SH) to Multi-Family Residential, Low Density (ML); 2) a Rezone (RZ 07-18) from Single-Family Residential (R-6) to Planned Development (P-1); 3) a Vesting Tentative Map (TM 04-18) to subdivide approximately 13.4 acres into 108 single-family residential lots within a gated community, as well as one private street lot, twelve private drive lots, two water quality lots, and three landscape lots; and 4) a Design Review (DR 11-18) for the home designs, site landscaping, fence plans, and site design. The project site is located at 5360 Main Street (APN's: 033-030-001 and 033-030-027). ("Project"); and

WHEREAS, the Applicant has initiated a project to change the General Plan Land Use Designation for the property from Single-Family Residential, High Density (SFH) to Multi-Family Residential, Low Density (ML); and

WHEREAS, pursuant to the requirements of the California Environmental Quality Act ("CEQA"), the City prepared an Initial Study/Mitigated Negative Declaration dated March 2019, which was circulated for public review and comment from September 13, 2019 to October 2, 2019. The Notice of Intent to Adopt a Negative Declaration and Initial Study/Mitigated Negative Declaration was filed with the County Clerk, on September 12, 2019; and

WHEREAS, on October 9, 2019, the Notice of Public Hearing for the Project was duly noticed in the Contra Costa Times, a newspaper of general distribution. On October 11, 2019, the Notice of Public Hearing was posted at Oakley City Hall located at 3231 Main Street, outside the gym at Delta Vista Middle School located at 4901 Frank Hengel Way, outside the library at Freedom High School located at 1050 Neroly Road. The notice was also mailed out to all owners of property within a 500-foot radius of the subject property's boundaries, to parties requesting such notice, and to outside agencies; and

WHEREAS, on October 22, 2019, the City Council opened the public hearing at which it received a report from City Staff, oral and written testimony from the public, and deliberated on the project. At the conclusion of its deliberations, the City Council took a vote and adopted this resolution to approve the project, as revised by the City Council during its deliberations; and

WHEREAS, these Findings are based on the City's General Plan and the City's Zoning Ordinance, and the information submitted to the City Council at its October 22, 2019 meeting, both written and oral, as reflected in the minutes of such meetings, together with the documents contained in the file for the Project (hereafter the "Record").

NOW, THEREFORE, on the basis of the above findings of fact and the entire Record, the City Council makes the following findings regarding the General Plan Amendment as shown in "Exhibit A" of this resolution in support of the recommended approvals:

A. The Initial Study and Notice of Intent to Adopt a Mitigated Negative Declaration ("MND") has been prepared and made available for public comment, pursuant to the California Environmental Quality Act (CEQA) Guidelines. The Initial Study found that the project will have a less than significant effect on the environment, and the City Council hereby adopts the project MND (Attachment to the October 22, 2019 Staff Report).

B. The change in Land Use Designation will provide for the orderly, well planned and balanced growth within the City in that:

    1. The site would be designated for Multi-Family development, and that land use designation still envisions and allows for single-family residential uses, such as the proposed project; and

    2. Re-designating this site to allow for a residential use, such as the proposed higher density single-family project, will serve to provide for housing choices that are currently lacking; and

    3. It would serve to result in a development that will beautify a vacant piece of land that has been underutilized for years, which will result in a more balanced and attractive use along Main Street.

BE IT FURTHER RESOLVED THAT, on the basis of the foregoing Findings and the entire Record, the City Council hereby approves the amendment to the General Plan as shown in "Exhibit A" of this resolution.

PASSED AND ADOPTED by the City Council of the City of Oakley at a meeting held on the 22nd of October, 2019 by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

APPROVED:

_____

Claire Alaura, Mayor Date

ATTEST:

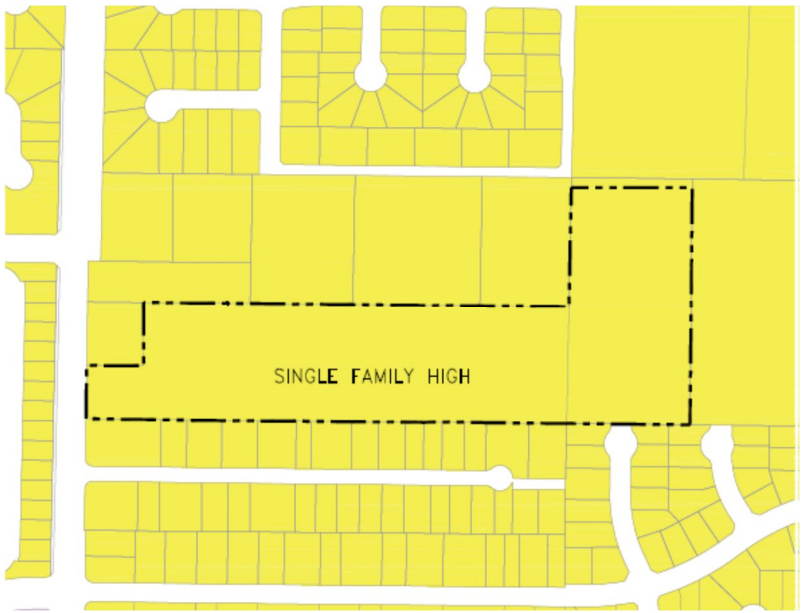
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Libby Vreonis, City Clerk Date

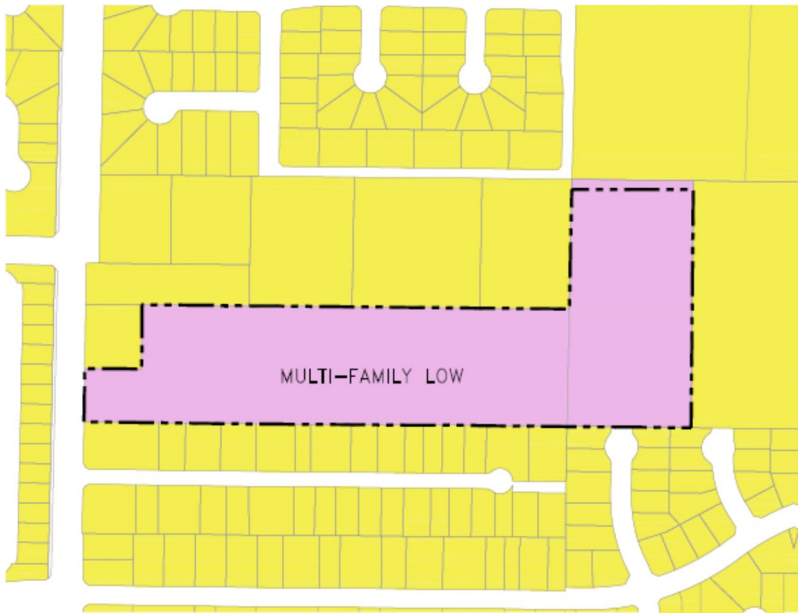
Exhibit A to Resolution No. _____

Acacia Rezone (GPA 03-18)

Existing



Proposed



CITY OF OAKLEY

ORDINANCE NO. XX-19

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF OAKLEY REZONING 2 PARCELS COMPRISED OF 13.4-ACRES LOCATED AT 5360 MAIN STREET (APN'S 033-030-001 and 033-030-027) FROM THE SINGLE-FAMILY RESIDENTIAL (R-6) DISTRICT TO THE P-1 (PLANNED UNIT DEVELOPMENT) DISTRICT

WHEREAS, on December 6, 2018, Signature Homes, Inc., ("Applicant") submitted an application requesting approval of: 1) a General Plan Amendment (GPA 03-18) to amend the land use designation from Single-Family Residential, High Density (SH) to Multi-Family Residential, Low Density (ML); 2) a Rezone (RZ 07-18) from Single-Family Residential (R-6) to Planned Development (P-1); 3) a Vesting Tentative Map (TM 04-18) to subdivide approximately 13.4 acres into 108 single-family residential lots within a gated community, as well as one private street lot, twelve private drive lots, two water quality lots, and three landscape lots; and 4) a Design Review (DR 11-18) for the home designs, site landscaping, fence plans, and site design. The project site is located at 5360 Main Street (APN's: 033-030-001 and 033-030-027). ("Project"); and

WHEREAS, the proposal complies with the requirements of the rezoning application requirements of Section 2.4.012 (a) of the Oakley Municipal Code; and

WHEREAS, the Applicant has initiated a project to change the zoning for the property from the Single-Family Residential (R-6) District to the Planned Development (P-1) District; and

WHEREAS, pursuant to the requirements of the California Environmental Quality Act ("CEQA"), the City prepared an Initial Study/Mitigated Negative Declaration dated March 2019, which was circulated for public review and comment from September 13, 2019 to October 2, 2019. The Notice of Intent to Adopt a Negative Declaration and Initial Study/Mitigated Negative Declaration was filed with the County Clerk, on September 12, 2019; and

WHEREAS, on October 9, 2019, the Notice of Public Hearing for the Project was duly noticed in the Contra Costa Times, a newspaper of general distribution. On October 11, 2019, the Notice of Public Hearing was posted at Oakley City Hall located at 3231 Main Street, outside the gym at Delta Vista Middle School located at 4901 Frank Hengel Way, outside the library at Freedom High School located at 1050 Neroly Road. The notice was also mailed out to all owners of property within a 500-foot radius of the subject property's boundaries, to parties requesting such notice, and to outside agencies; and

WHEREAS, on October 22, 2019, the City Council adopted Resolution XX-19 adopting the Negative Declaration and General Plan Amendment; and

The City Council of the City of Oakley does ordain as follows:

SECTION 1. FINDINGS. Pursuant to Chapter 2.4.012 of the Oakley Municipal Code, the City Council of the City of Oakley hereby finds and determines as follows:

a. The change proposed will substantially comply with the general plan:

The proposed rezone to the Planned Development (P-1) District in conjunction with the proposed Multi-Family, Low Density (ML) will provide for residentially zoned land in an area with existing residential land use designations and zoning. It is not uncommon for more dense residential land use designations to front on arterials which then allows lower density land use designations and this proposal would provide for that. In addition, the P-1 District will allow for private streets and no through traffic, which will alleviate maintenance responsibility from the City, and not result in additional traffic in the neighborhood to the south.

b. The uses authorized or proposed in the land use district are compatible within the district and to uses authorized in adjacent districts:

The proposed change in the Zoning from Single Family Residential (R-6) District to Planned Unit Development (P-1) District will not result in providing new uses not already permitted in the existing R-6 District, rather the proposed P-1 District is only permitting single family residential uses and auxiliary uses allowed in residential districts in the Oakley Municipal Code. The proposed land use will be compatible with the surrounding land uses.

c. Community need, but not necessarily future financial success, has been demonstrated for the use proposed:

A community need has been demonstrated for the proposed use. The Project will result in the construction of additional housing units, which is necessary to meet demand in the community in that: The City of Oakley falls under the jurisdiction of the Association of Bay Area Governments (ABAG). ABAG uses a predominately demographic formula to allocate the regional housing needs among the incorporated cities and unincorporated county. This process results in a Regional Housing Needs Assessment (RHNA) and the number reflected in that assessment becomes part the City of Oakley's estimated housing needs. The development of this project will help the city meet its regional fair share housing goal.

SECTION 2. Property Defined and Rezoned.

Pursuant to Section 2.4.012 of the Oakley Municipal Code, the Oakley Zoning Map is amended to rezone the following property from the Single-Family Residential (R-6) District to the Planned Development (P-1) District:

A. Approximately 13.4-acres of real property located at 5360 Main Street (APN's: 033-030-001 and 033-030-027), as shown on the "Exhibit A" attached to this ordinance.

SECTION 3. Applicable Regulations and Standards.

A. Planned Unit Development (P-1) District – The P-1 District shall allow for Multi-Family Residential development consistent with the Acacia project application consisting of 108 single family lots at a density of 8.1 dwelling units per gross acre. The Development Standards of the P-1 District are contained within the Final Development Plan of the Plan Set approved with the project on October 22, 2019.

SECTION 4. California Environmental Quality Act (CEQA) Finding.

Pursuant to California State Law, an Initial Study was conducted by the Planning Division to evaluate the potential effects of this project upon the environment. The Initial Study analysis found there were no potentially significant impacts, and therefore a Mitigated Negative Declaration was prepared. Based upon the findings contained in the Initial Study it has been determined that this project will not have a significant impact upon the environment.

SECTION 5. Severability.

If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the remainder of the ordinance, including the application of such part or provision to other persons or circumstances shall not be affected thereby and shall continue in full force and effect. To this end, the provisions of this ordinance are severable. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause, or phrase thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases may be held unconstitutional, invalid or unenforceable.

SECTION 6. Effective Date and Posting.

This ordinance shall take effect and be in force thirty (30) days from and after the date of its passage. The City Clerk shall cause the ordinance to be published within fifteen (15) days after its passage in a newspaper of general circulation, or by publishing a summary of the proposed ordinance, posting a certified copy of the proposed office in

the City Clerk's Office at least five (5) days prior to the City Council meeting at which the ordinance is to be adopted, and within fifteen (15) days after its adoption, publishing a summary of the ordinance with the names of the Council Members voting for and against the ordinance.

The foregoing ordinance was adopted with the reading waived at a regular meeting of the Oakley City Council on _____, 2019 by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

APPROVED:

_____
Claire Alaura, Mayor Date

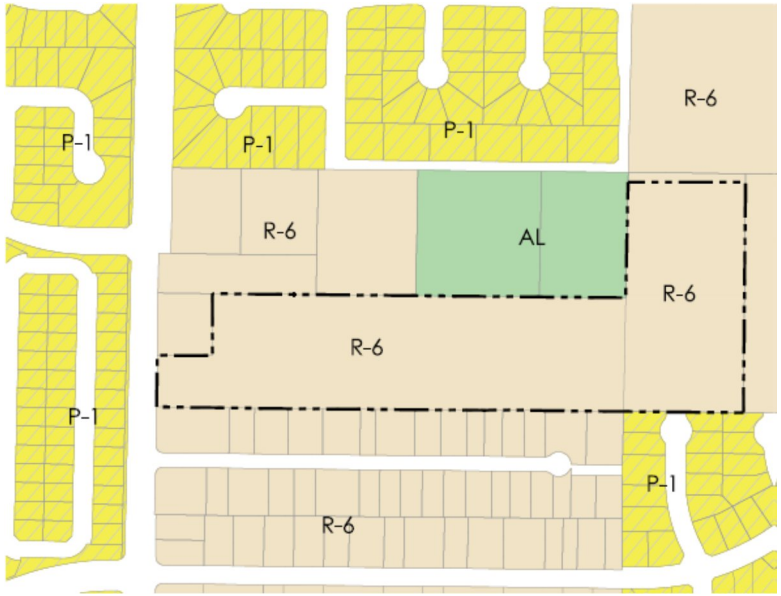
ATTEST:

_____
Libby Vreonis, City Clerk Date

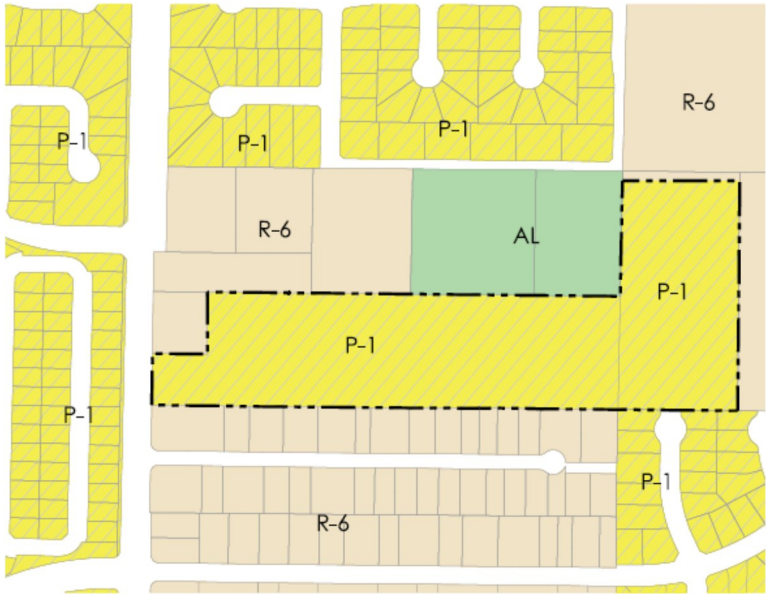
Exhibit A to Ordinance No. XX-19

Acacia Rezone (RZ 07-18)

Existing



Proposed



RESOLUTION NO. XX-19

A RESOLUTION OF THE CITY OF OAKLEY CITY COUNCIL MAKING FINDINGS AND APPROVING VESTING TENTATIVE MAP (TM 04-18) AND DESIGN REVIEW (DR 11-18) ON A 13.4-ACRE SITE LOCATED AT 5360 MAIN STREET (APN'S 033-030-001 AND 033-030-027) FOR THE PROJECT KNOWN AS "ACACIA"

WHEREAS, on December 6, 2018, Signature Homes, Inc., ("Applicant") submitted an application requesting approval of: 1) a General Plan Amendment (GPA 03-18) to amend the land use designation from Single-Family Residential, High Density (SH) to Multi-Family Residential, Low Density (ML); 2) a Rezone (RZ 07-18) from Single-Family Residential (R-6) to Planned Development (P-1); 3) a Vesting Tentative Map (TM 04-18) to subdivide approximately 13.4 acres into 108 single-family residential lots within a gated community, as well as one private street lot, twelve private drive lots, two water quality lots, and three landscape lots; and 4) a Design Review (DR 11-18) for the home designs, site landscaping, fence plans, and site design. The project site is located at 5360 Main Street (APN's: 033-030-001 and 033-030-027). ("Project"); and

WHEREAS, on August 9, 2019, the project application was deemed complete per Government Code section 65920 et. seq; and

WHEREAS, the project is designated as *Multi-Family, Low Density (ML)* in the Oakley 2020 General Plan per City Council Resolution No. ____ and zoned Planned Development (P-1) District per Ordinance No. ____; and

WHEREAS, pursuant to the requirements of the California Environmental Quality Act ("CEQA"), the City prepared an Initial Study/Mitigated Negative Declaration dated March 2019, which was circulated for public review and comment from September 13, 2019 to October 2, 2019. The Notice of Intent to Adopt a Negative Declaration and Initial Study/Mitigated Negative Declaration was filed with the County Clerk, on September 12, 2019; and

WHEREAS, on October 9, 2019, the Notice of Public Hearing for the Project was duly noticed in the Contra Costa Times, a newspaper of general distribution. On October 11, 2019, the Notice of Public Hearing was posted at Oakley City Hall located at 3231 Main Street, outside the gym at Delta Vista Middle School located at 4901 Frank Hengel Way, outside the library at Freedom High School located at 1050 Neroly Road. The notice was also mailed out to all owners of property within a 500-foot radius of the subject property's boundaries, to parties requesting such notice, and to outside agencies; and

WHEREAS, on October 22, 2019, the City Council opened the public hearing at which it received a report from City Staff, oral and written testimony from the public, and deliberated on the project. At the conclusion of its deliberations, the City Council took a vote and adopted this resolution to approve the project, as revised by the City Council during its deliberations; and

WHEREAS, if any term, provision, or portion of these Findings or the application of these Findings to a particular situation is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of these Findings, or their application to other actions related to the Project, shall continue in full force and effect unless amended or modified by the City; and

WHEREAS, these Findings are based upon the City's General Plan, the City's Zoning Ordinance, the City's Residential Design Guidelines, and the information submitted to the City Council at its October 22, 2019 meeting, both written and oral, including oral information provided by the applicant, as reflected in the minutes of such meetings, together with the documents contained in the file for the project (hereinafter the "Record"); and

NOW, THEREFORE, BE IT RESOLVED THAT, on the basis of the above findings of fact and the entire Record, the City Council makes the following additional findings in support of the approvals:

A. Regarding the application requesting approval of Vesting Tentative Map (TM 04-18) to subdivide the 13.4-acre site consisting of 2 parcels into 108 single family lots, the City Council finds that:

1. The proposed Vesting Tentative Map, together with the provisions of its design and improvements, is consistent with the Zoning Ordinance, and applicable portions of the Multi-Family, Low Density (ML) General Plan Land Use Designation, as approved by City Council for the Project, in that it allows for orderly residential development in a residential area that meets the General Plan density allowance (maximum 9.6 dwelling units per acre) and complies with the minimum lot size, lot width, and lot depth and all other applicable regulations set forth in the project's Planned Development (P-1) District;

2. The site is physically suitable for the type of development in that the proposed Vesting Tentative Map meets all of the applicable development standards in the project's Planned Development (P-1) District and is compatible with surrounding residential and commercial land uses;

3. The site is physically suitable for the proposed density and number of dwelling units;

4. The Project Initial Study and Mitigated Negative Declaration were prepared in accordance with CEQA Guidelines. The Mitigation and Monitoring Plan is attached hereto as Exhibit "A";

5. The design of the subdivision and type of improvements are not likely to cause serious public health problems in that the proposed subdivision

consists of 108 single-family residential lots. Construction and grading of the project are subject to building or grading permits, and violations of any such permits are subject to appropriate enforcement;

6. The design of the subdivision includes the construction of improvements within public right-of-way that are consistent with major subdivisions and the City's design standards. The improvements consist of widening Main Street, with additional roadway, sidewalks, curbs and gutters, and landscaping adjacent to the projects frontage. The remainder of the subdivision will be gated and private; and

7. The design of the subdivision and the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision. In this connection, the governing body may approve a map if it finds that alternate easements, for access or for use, will be provided, and that these will be substantially equivalent to ones previously acquired by the public. This subsection shall apply only to easements of record or to easements established by judgment of a court of competent jurisdiction and no authority is hereby granted to a legislative body to determine that the public at large has acquired easements for access through or use of property within the proposed subdivision. The Vesting Tentative Map does not conflict with easements acquired by the public for access and utilities.

B. In regards to the application requesting Design Review approval for (DR 11-18) for the Acacia project, the City Council finds that:

1. The proposed Design Review plans are substantially consistent with the applicable General Plan designation and approved Vesting Tentative Map. The proposed use is allowed for by the approval of the projects General Plan Amendment and Rezone application; and

2. The proposed Design Review plans comply with all applicable Planned Development (P-1) District regulations as set forth in the approval of the projects Rezone application; and

3. The proposed design and materials of the single-family homes and the conceptual front yard landscaping are compatible with the applicable adopted City of Oakley Residential Design Guidelines standards, subject to the approved Final Development Plan.

C. The project complies with Measure J Growth Management requirements.

D. The Initial Study/Mitigated Negative Declaration has been prepared and made available for public comment, pursuant to the California Environmental Quality Act

(CEQA) Guidelines, and mitigation measures contained therein will reduce all potentially significant impacts of the project to a less than significant level.

BE IT FURTHER RESOLVED THAT, on the basis of the above Findings and the Record, the City Council approves of the Applicant's request for **Vesting Tentative Map (TM 04-18) and Design Review (DR 11-18)** subject to the following Conditions of Approval:

CONDITIONS OF APPROVAL

Applicant shall comply with the requirements of the Oakley Municipal Code. Any exceptions must be stipulated in these Conditions of Approval. Conditions of Approval are based on the application received by the Planning Division dated **September 27, 2019**, as well as additional information acquired since that time and made part of the project file.

THE FOLLOWING CONDITIONS OF APPROVAL SHALL BE SATISFIED PRIOR TO THE CONSTRUCTION OF THE BUILDING'S ON EITHER PARCEL UNLESS OTHERWISE NOTED:

PLANNING DIVISION CONDITIONS

General:

1. This **Vesting Tentative Map (TM 04-18) and Design Review (DR 11-18)** is approved, as shown on the plans, date stamped by the Planning Division on **September 27, 2019**, and as modified by the following conditions of approval, subject to final review and approval by the Community Development Director.

2. This approval for **Vesting Tentative Map (TM 04-18) and Design Review (DR 11-18)** shall be effectuated within a period of three (3) years from the effective date of this resolution by pulling a building permit and if not effectuated shall expire on **October 22, 2022**. Prior to said expiration date, the applicant may apply for an extension of time pursuant to the provisions of the Zoning Code.

3. All construction drawings submitted for plan check shall be in substantial compliance with the plans presented to and approved by the City Council on **October 22, 2019**.

4. All conditions of approval shall be satisfied by the owner/developer. All costs associated with compliance with the conditions shall be at the owner/developer's expense.

5. Noise generating construction activities, including such things as power generators, shall be limited to the hours of 7:30 a.m. to 5:30 p.m. Monday through Friday, and shall be prohibited on City, State and Federal Holidays. The

restrictions on allowed working days and times may be modified on prior written approval by the Community Development Director.

6. Should archaeological materials be uncovered during grading, trenching or other on- site excavation(s), earthwork within 30 yards of these materials shall be stopped until a professional archaeologist who is certified by the Society of Professional Archaeology (SOPA) has had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), if deemed necessary. If the remains are determined to be that of Native American origin, procedures will be guided by California PRC 5097 through California's Native American Heritage Commission.

7. The applicant shall defend, indemnify, and hold harmless the city or any of its boards, commissions, agents, officers, and employees from any claim, action or proceeding against the city, its boards, commissions, agents, officers, or employees to attack, set aside, void, or annul, the approval of the project. The city shall promptly notify the applicant of any such claim, action or proceeding. The city shall have the option of coordinating the defense. Nothing contained in this condition shall prohibit the city from participating in a defense of any claim, action, or proceeding if the city bears its own attorney's fees and costs, and the city defends the action in good faith.

Parks and Landscaping:

8. This project is not proposing to construct any parkland. The applicant will be required to pay in-lieu park impact fees on each lot based on the net acreage of the project after right of way dedication as indicated on the recorded Final Map.

9. The applicant shall submit final landscape plans for all portions of the project, including any improvements to public right of way, that are substantially consistent with the conceptual plans included with the approved project plans. Final approval of plant species selection and location shall be subject to the review and approval of the Community Development Director and/or Public Works Director or their designees.

10. A landscaping and irrigation plan for all front yard, right-of-way, parks, open space, and trail landscaping shall conform to the Oakley Water Efficient Landscape Ordinance and the Guidelines for Implementation of the City of Oakley Water Efficient Landscape Ordinance and shall be installed prior to final occupancy. The plan shall be prepared by a licensed landscape architect and shall be certified to be in compliance with the City's Water Conservation Ordinance by adding a statement as to such with the preparer's signature.

11. California native drought tolerant plants shall be used as much as possible. All trees shall be a mix of fifteen-gallon and 24" box or larger if indicated on the approved plans; all shrubs shall be a minimum five-gallon size, except as otherwise noted.

12. All landscaped areas not covered by shrubs or groundcover shall be covered with a physical weed barrier underneath bark or acceptable alternative as reviewed and approved by the Community Development Director. On slopes greater than 3 to 1, the applicant shall use an alternative to bark per the review and approval of the Community Development Director. Areas covered with bark shall use a weed barrier.

13. Each residential lot shall include street and accent trees as indicated on he approved plans, unless otherwise modified due to comments receive from City Staff on the Final Landscape Plan review in relation to final locations of trees and utilities. All final decision are subject to the review and approval of the City Engineer and/or Community Development Director

14. The applicant shall maintain all private landscaping until occupancy.

15. A street tree plan shall be submitted for review prior to issuance of Building Permits. The street trees shall be inter-mixed throughout the subdivision, so there are a variety of trees on every street, per review of the Community Development Department.

16. The Arborist and Tree Inventory Summary prepared by Sierra Nevada Arborists dated September 4, 2018, indicates that the project will require the removal of two protected trees on the project site. The applicant shall provide mitigation for the removal of the two trees per OMC Section 9.1.1112(g)(11)(a).

Fences and Walls:

17. Within the subdivision good neighbor fences shall be constructed of six-foot high wood fences with metal posts or acceptable alternative as reviewed and approved by the Community Development Director. Corner lots or any good neighbor fence facing a street shall provide a fence or wall constructed of a durable material such as, but not limited to, masonry, vinyl, enhanced wood, composite or other durable material as approved by the Community Development Director. All wood fencing visible from the street shall be stained or painted on both sides to prevent water damage to the satisfaction of the Community Development Director.

18. Anti-graffiti techniques shall be used on all masonry walls.

Subdivision Design:

19. The neighborhood entries (both the main entrance and the secondary entrance) shall be identified by accent paving, project monument signage and accent planting per the review and approval of the Community Development Director.

20. Driveway openings shall be a maximum 18’ in width or up to 25% of a lot’s frontage (except on cul de sacs).

21. The street names shall be approved by the Community Development Department and the East Contra Costa Fire Protection District.

22. The project shall be constructed as a Home Owner Association (HOA) governed community. The applicant shall submit preliminary information prior to forming the HOA that details what minimum standards the development will be held to in order to avoid conflict with any applicable City regulations.

Subdivision Disclosures:

23. The model home complex shall have a copy of the City of Oakley's General Plan land use map posted within the sales office or included with the informational material provided to prospective home buyers.

Design Review:

24. All windows and doors shall be trimmed on all four sides.

25. The use of stone or brick veneer shall be carried to the fence line or change in wall plane per the review of the Community Development Director.

26. All houses that side or back onto a road shall have additional architectural embellishments on the side and rear elevations.

27. Front yard setbacks shall vary from those of adjacent lots by at least 3 feet, for every three lots.

Energy Efficiency:

28. Water heaters shall provide an energy efficiency factor of 0.62 or better.

29. Dual zone air conditioning shall be provided on all two-story residential units.

30. Air conditioning condenser units shall be located to take advantage of natural shade. Condensers should not be placed on the west or south elevation of a home, unless shade is provided. The location of the condenser shall be added to all plot plans for review and approval of the Community Development Director.

31. Design and site units so as to take advantage of natural heating and cooling, sun and wind exposure, and solar energy opportunities.

Mitigation Measures

32. All mitigation measures addressed in the Mitigated Negative Declaration dated **October 2019** shall be complied with and addressed as outlined in the Mitigation

Monitoring and Reporting Plan, per the review and approval of the Community Development Director.

33. All mitigation measures contained within the HCP Planning Survey Report dated **January 4, 2019** shall be complied with, per the review and approval of the Community Development Director.

Waste Management Plan:

34. The applicant shall submit a Waste Management Plan that complies with the City of Oakley Construction and Demolition Debris Recycling Ordinance.

BUILDING DIVISION CONDITIONS

35. Plans shall meet the currently adopted Uniform Codes as well as the newest T-24 Energy Requirements per the State of California Energy Commission. To confirm the most recent adopted codes please contact the Building Division at (925) 625 – 7005.

36. An Automatic Life Safety Sprinkler System shall be required in all new construction pursuant to Ordinance 22-06. The Automatic Life Safety Sprinkler Systems in commercial and industrial buildings shall be designed and installed to the standards and requirements found in the most recent version of the NFPA (National Fire Protection Association). Automatic Life Safety Sprinkler Systems in hotels and apartments shall be installed to the stands and requirements found in the most recent version of the NFPA, Standard 13R.

37. Prior to requesting a Certificate of Occupancy from the Building Division all Conditions of Approval required to occupancy must be completed.

PUBLIC WORKS AND ENGINEERING CONDITIONS OF APPROVAL

THE FOLLOWING SHALL BE SATISFIED PRIOR TO THE ISSUANCE OF AN ENCROACHMENT AND/OR GRADING PERMIT:

38. GENERAL. All public improvements shall be made according to the latest adopted City Standard Drawings and Specifications. All work shall conform to the applicable City ordinances. The adjacent public right-of-way shall be kept clear of all job-related dirt and debris at the end of the day. Dirt and debris shall not be washed into storm drainage facilities. The storing of goods and materials on the sidewalk and/or the street will not be allowed unless a special permit is issued. The developer's representative in charge shall be at the job site during all working hours. Failure to maintain the public right-of-way according to this condition may result in the City performing the required maintenance at the developer's expense.

39. ENCROACHMENT PERMIT. All work in the public right-of-way, including any blockage or partial closure of sidewalks will require an Encroachment Permit. Special provisions such as limitations on works hours, protective enclosures, or other means to facilitate public access in a safe manner may be required.

40. GRADING PERMIT. All earthwork must comply with the City's Grading Ordinance. A Grading Permit must be issued by the public works department prior to site disturbance.

41. PUBLIC WORKS INSPECTIONS. The developer or their representative shall notify the Engineering Inspector at least forty-eight (48) hours before starting any work pertaining to on-site drainage facilities, grading or paving, and all improvements in approved plans. Failure to do so will result in rejection of work that was completed without inspection.

42. PRECONSTRUCTION MEETING. Prior to issuance of any permit or the commencement of any site work, the general contractor shall:

    a) Along with the project applicant, attend a pre-construction meeting with the City Engineer to discuss the project conditions of approval, working hours, site maintenance and other construction matters;

    b) Acknowledge in writing that they have read and understand the project conditions of approval and will make certain that all project sub-contractors have read and understand them prior to commencing work and that a copy of the project conditions of approval will be posted on site at all times during construction.

43. CONSTRUCTION STREET PARKING. No vehicle having a manufacturer's rated gross vehicle weight exceeding ten thousand (10,000) pounds shall be allowed to park on the portion of a street which abuts property in a residential zone without prior approval from the City Engineer.

44. EROSION CONTROL. Interim and final erosion control plans shall be prepared and submitted to the Public Works Department. A Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) shall be submitted to the State SMARTS system for projects disturbing more than one acre and obtain a WDID number. A maximum of two weeks is allowed between clearing of an area and stabilizing/building on an area if grading is allowed during the rainy season. Interim erosion control measures, to be carried out during construction and before installation of the final landscaping shall be included. Interim erosion control method shall include, but are not limited to: silt fences, fiber rolls (with locations and details), erosion control blankets, City standard seeding specification, filter berms, check dams, retention basins, etc. Provide erosion control measures as needed to protect downstream water quality during winter months. The grading,

drainage, erosion control plans and SWPPP shall be in compliance with applicable measures contained in the City of Oakley's NPDES Permit.

45. DUST CONTROL. Blowing dust shall be reduced by timing construction activities so that paving and building construction begin as soon as possible after completion of grading, and by landscaping disturbed soils as soon as possible. Further, water trucks shall be present and in use at the construction site. All portions of the site subject to blowing dust shall be watered as often as deemed necessary by the City, or a minimum of three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites in order to insure proper control of blowing dust for the duration of the project. Watering on public streets shall not occur. Streets will be cleaned by street sweepers or by hand as often as deemed necessary by the City Engineer, or at least once a day. Watering associated with on-site construction activity shall take place between the hours of 8 a.m. and 5 p.m. and shall include at least one late-afternoon watering to minimize the effects of blowing dust. All public streets soiled or littered due to this construction activity shall be cleaned and swept daily during the workweek to the satisfaction of the City. Demolition or earthwork activities shall be halted when wind speeds (instantaneous gusts) exceed 25 MPH. All trucks hauling soil, sand, or other loose debris shall be covered.

46. SILT AND MUD IN PUBLIC RIGHT-OF-WAY. It is the responsibility of contractor and homeowner to make sure that all dirt tracked into the public right-of-way is cleaned up daily. Mud, silt, concrete and other construction debris SHALL NOT be washed into the City's storm drains. Construction entrances must be in place per the Erosion Control Plan.

47. TRAFFIC CONTROL PLAN. The project sponsor will be required to work with the Public Works Department to develop a traffic control plan per the current California MUTCD. This plan will include, but not be limited to, the following measures:

    a) Construction activities shall be strategically timed and coordinated to minimize traffic disruption for schools, residents, businesses, and special events. The schools located on the haul route shall be contacted to help with the coordination of the trucking operation to minimize traffic disruption.

    b) Flag persons shall be placed at locations necessary to control one-way traffic flow, if required. All flag persons shall have the capability of communicating with each other to coordinate the operation.

    c) Prior to construction, advance notification of all affected residents and emergency services shall be made regarding one-way operation, specifying dates and hours of operation and lane closures on main arterial and collector streets and will be permitted only between the hours of 8:30AM to 2:30PM on M, T, TH & F. 8:30AM to 12:00PM on W.

d) The traffic control plan shall be reviewed for compliance to the project's Haul Route, approved by the City of Oakley.

e) A full road closure will require a detour plan and a road closure permit issued by the Public Works Department.

48. CONSTRUCTION MANAGEMENT PLAN. The Applicant shall submit a construction management plan that shall incorporate at a minimum the Earth Movement Plan, Traffic Control Plan, Project Schedule, site security fencing, employee parking, construction staging area, construction trailer, and proposed outhouse locations.

49. RESTORATION OF PUBLIC IMPROVEMENTS. The developer shall repair or replace all existing improvements not designated for removal that are damaged or removed because of developer's operations. Improvements such as, but not limited to: curbs, gutters, sidewalks, driveways, signs, pavements, raised pavement markers, thermoplastic pavement markings, etc. shall be repaired and replaced to a condition equal to or better than the original condition. Existing improvement to be repaired or replaced shall be at the direction of the Public Works & Engineering Inspector and shall comply with all Title 24 Disabled Access provisions. Developer shall request a walk-through with the Engineering Construction Inspector before the start of construction to verify existing conditions.

50. SIDEWALK REPAIR. The developer shall repair and replace to existing City standards any sidewalk damaged now or during construction of this project. Sidewalk repair shall match existing color, texture and design, and shall be constructed per City Standard Details. The limits of sidewalk repair will be determined by the Public Works Inspector during the construction phase of the project.

51. CURB AND GUTTER. The developer shall repair and replace to existing City standards any curb and gutter damaged now or during construction of this project. New curb and gutter shall be constructed per City Standard Details. The limits of curb and gutter repair will be determined by the Public Works Inspector during the construction phase of the project.

52. CONSTRUCTION NOISE. Between the hours of 7:30 a.m. to 5:30 p.m., weekdays and 9:00 a.m. to 5:30 p.m. weekends and holidays, construction, alteration or repair activities shall be allowed. No individual piece of equipment shall produce a noise level exceeding eighty-five (85) dBA at twenty-five (25) feet. If the device is located within a structure on the property, the measurement shall be made at distances as close to twenty-five (25) feet from the device as possible. The noise level at any point outside of the property plane shall not exceed eighty-five (85) dBA. Pickup and delivery of materials and equipment is restricted to the hours listed above unless prior written approval is obtained by the Public Works Department.

53. GOOD HOUSEKEEPING. Good housekeeping practices shall be observed at all times during the course of construction. Superintendence of construction shall be diligently performed by a person or persons authorized to do so at all times during working hours. The storing of goods and/or materials on the sidewalk and/or the street will not be allowed unless a special permit is issued by the Engineering Division. The adjacent public right-of-way shall be kept clear of all job-related dirt and debris at the end of the day. Dirt and debris shall not be washed into storm drainage facilities. The storing of goods and materials on the sidewalk and/or the street will not be allowed unless a special permit is issued. The developer's representative in charge shall be at the job site during all working hours. Failure to maintain the public right-of-way according to this condition may result in the City performing the required maintenance at the developer's expense.

54. GATE: Any proposed private gates are to be set be minimum 20' from Main Street and Honey Lane.

55. HOMEOWNER'S ASSOCIATION: Prior to the sale of any lot or acceptance of site improvements, whichever occur first, Conditions, Covenants and Restrictions (CC&R's), creating a Homeowners Association (HOA) for the project shall be reviewed and approved by the City of Oakley and recorded. The HOA shall own and maintain the private roadways, alleys and common landscape, private infrastructures and on-site storm drain systems within the development.

THE FOLLOWING SHALL BE SATISFIED PRIOR TO THE APPROVAL OF THE GRADING PLAN:

56. GEOLOGY AND SOIL MITIGATION MEASURES. A geotechnical investigation shall be conducted for the project to determine the surface and sub-surface conditions at the site and to determine the potential for surface fault rupture on the site. The geotechnical study shall provide recommendations for site grading as well as the design of foundations, retaining walls, concrete slab-on-grade construction, excavation, drainage, on-site utility trenching and pavement sections. The soils report shall include specific criteria and standards governing site grading, drainage, pavement design, retaining wall design, and erosion control. All recommendations of the investigation shall be incorporated into project plans. One copy of the geologic report shall be submitted with the grading permit and public improvement application. Prior to issuance of any permit, the applicant's soils engineer shall review the final grading and drainage plans to ensure that designs for foundations, retaining walls, site grading, and site drainage are in accordance with their recommendations. The applicant's soils engineer's approval shall then be conveyed to the City either by letter or by signing the plans.

57. GRADING.

a) Grade all pads so that they drain directly to the street at a minimum of one percent. Any pads requiring private drains crossing another property will need a Private Storm Drain Easement.

b) Grade any slopes with a vertical height of four (4) feet or more at a slope of 3H to 1V. Retaining walls that may be installed to reduce the slope must be masonry and comply with the City's building code.

c) Retaining wall or other suitable option acceptable by the City Engineer is required where the grade differential between property or adjacent lots are greater than 6". Retaining walls or an alternative acceptable to the City Engineer are required to be identified on the grading plans and shall have a note stating a separate building permit is required for retaining wall greater than four (4) feet in height.

d) At least one week prior to commencement of grading, the applicant shall post the site and mail to the owners of property within 300 feet to the exterior boundary of the project site notice that construction work will commence. The notice shall include a list of contact persons with the name, title, phone number and area of responsibility. The person responsible for maintaining the list shall be included. The list shall always be kept current and shall consist of persons with authority to indicate and implement corrective action in their area of responsibility. The names of the individual responsible for noise and litter control shall be expressly identified in the notice. The notice shall be reissued with each phase of major grading activity. A copy of the notice shall be concurrently transmitted to the City Engineer. The notice shall be accompanied by a list of the names and addresses of the property owners noticed, and a map identifying the area noticed.

e) Submit a Haul Route Plan to the City Engineer for review and approval prior to importing or exporting any material from the site. The plan shall include the location of the borrow or fill area, the proposed haul routes, the estimated number and frequency of trips, and the proposed schedule of hauling. Based on this plan, the City Engineering shall determine whether pavement condition surveys must be conducted along the proposed haul routes to determine what impacts the trucking activities may have. The project proponents shall be responsible to repair to their pre-construction condition any roads along the utilized routes.

f) Prior to commencement of any site work that will be result in a land disturbance of one acre or more, the applicant shall provide evidence to the City Engineer that the requirements for obtaining a State General Construction Permit have been met. Such evidence may be a copy of the Notice of Intent Letter sent by the State Water Resources Control Board. The

WDID Number shall be shown on the grading plan prior to approval by the City Engineer.

g) The burying of any construction debris is prohibited on construction sites

58. NPDES – NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM. Comply with all rules, regulations and procedures of the NPDES for municipal, construction and industrial activities as promulgated by the California State Water Resources Control Board, the Regional Water Quality Control Board (Central Valley – Region IV), including the Stormwater C.3 requirements as detailed in the Guidebook available at www.cccleanwater.org

Compliance shall include developing long-term best management practices (BMP's) for the reduction or elimination of storm water pollutants. The project design shall incorporate wherever feasible, the following long-term BMP's in accordance with the Contra Costa Clean Water Program for the site's storm water drainage.

- Offer pavers for household driveways and/or walkways as an option to buyers.
- Minimize the amount of directly connected impervious surface area.
- Delineate all storm drains with "No Dumping, Drains to the Delta" permanent metal markers per City Standards.
- Construct concrete driveway weakened plane joints at angles to assist in directing run-off to landscaped/pervious areas prior to entering the street curb and gutter.
- Distribute public information items regarding the Clean Water Program to buyers.
- Other alternatives as approved by the City Engineer.
- Prepare an Operations and Maintenance Manual for the project's storm water control measures.

THE FOLLOWING SHALL BE SATISFIED PRIOR TO THE APPROVAL OF THE IMPROVEMENT PLAN:

59. PUBLIC IMPROVEMENTS. Construct the project streets to City public road standards and as shown on the Tentative Map with the following:

a. The minimum street grade may be lowered from the standard 1% to 0.75% provided that the project proponent demonstrates that the City's drainage standards can be achieved.

b. Submit a turning radius exhibit to the City Engineer for review and approval to illustrate that the ninety-degree turns of project streets can accommodate the largest expected vehicle to use the streets without the inclusion of City standard elbows. If the exhibit illustrates that elbows are necessary to accommodate the expected traffic, then they shall be included in the improvement plans.

c. The following improvements shall be installed by the developer. Plans for those improvements shall be prepared by a California registered civil engineer, reviewed and approved by the City.

i. Main Street frontage improvements to accommodate the ultimate four lane arterial. Curb, gutter, sidewalk, street lights, tie-in paving, signing, striping, and storm drainage as required. Roadway improvements shall meet taper requirements for the posted 40 miles per hour.

ii. Enter into an agreement with the City of Oakley to construct the necessary improvements for signalizing Main Street/Delta Road and Main Street /Brownstone Road and reduce the Traffic Impact Fee obligation per lot equivalent to the cost of improvements or pay the full amount of the Traffic Impact Fee.

60. DRAINAGE IMPROVEMENTS.

a. Collect and convey all stormwater entering and /or originating on this property, without diversion and within an adequate storm drainage facility, to an adequate natural watercourse having definable bed and banks, or to an existing adequate public storm drainage facility that conveys the storm waters to an adequate natural watercourse consistent with the plans for Drainage Zone Area 30B and DA130 as prepared by the Contra Costa County Flood Control and Water Conservation District.

b. Submit a final hydrology and hydraulic report including 10-year and 100-year frequency event calculations for the proposed drainage system and stormwater pond to the city Engineer for review and approval. The report shall includes study of the downstream stormdrain facilities to confirm its adequacy and mitigate on-site so that the peak flows of post-project conditions do not exceed the pre-project peak flows.

c. Design and construct all storm drainage facilities in compliance with the Municipal Code and City design standards.

d. Prevent storm drainage from draining across the sidewalk(s) and driveway(s) in a concentrated manner.

e. Dedicate a public drainage easement over the drainage system that conveys storm water run-off from public streets.

61. SIGHT DISTANCE EXHIBIT. For the project driveways' ingress and egress, provide an exhibit that will analyze the sight distance required for the appropriate speed limit on Main Street and Honey Lane identified with this project as required by the City Engineer.

62. DESIGN CHANGES. The Applicant's registered Engineer shall notify the City Engineer, in writing, at least 72 hours in advance of all differences between the proposed work and the design indicated on the plans. Any proposed changes shall be subject to the approval of the City before altered work is started. A plan revision must be submitted for approval by the City Engineer.

63. JOINT TRENCH PLANS. The applicant shall submit Joint Trench Composite Plans to the City for review prior to approval of improvement plans or recordation of the final map. The developer shall provide joint trench composite plans for the underground electrical, gas, telephone, cable television and communication conduits and cables including the size, location and details of all trenches, locations of building utility service stubs and meters and placements or arrangements of junction structures as a part of the improvement Plan submittals for the project. The composite drawings and/or utility improvement plans shall be signed by a licensed civil engineer. The joint trench plans shall include street and/or site lighting and associated photometrics. A letter shall be provided by PG&E stating that public streetlight billing will be per Rule LS2A, and that private lights shall be metered with billing to the HOA. Pole numbers, assigned by PG&E, shall be clearly delineated on the plans.

64. UTILITIES & UNDERGROUNDING.
    a) Underground all new and existing utility distribution facilities per City of Oakley code section Title 6 Chapter 8 Underground Utility Districts.

    b) All utility boxes shall be installed underground, and all wires and cables must be installed in conduits. Compliance with this condition shall be at the discretion of the City Engineer.

    c) Above ground utility boxes shall be camouflaged per the review and approval of the City Engineer.

    d) A written approval from Diablo Water District and Iron House Sanitary District must be provided that all underground utility improvements have passed all testing requirements prior to commencement of paving a street.

65. STREET LIGHTS. Install streetlights along all project streets and the project's main frontage along Main Street as required by the City Engineer. The City Engineer shall determine the final number and location of the lights, and the lights shall be on an LS2-A rate service. The lights on the project streets shall be decorative per City Standards and the lights along Main Street shall be spun aluminum "cobra head" style as required by the City of Oakley Standard Plans.

66. LANDSCAPING IN PUBLIC RIGHT OF WAY.
    a) Install public right-of-way landscaping along the project's frontages as required by the City Engineer and Community Development Director.

b) Maintain all landscaping within the public right-of-way until such time that the adjacent roadway improvements have been accepted for maintenance. Frontage landscaping shall be maintained by the HOA.

c) Prior to the issuance of certificate of occupancy, an inspection will be performed to verify the health and location of the street trees per lot. Trees in poor health or those without adequate clearance from utilities will require replacement or relocation.

67. FENCING. Any proposed fencing and walls shall be located on private property and maintained by the property owner or HOA.

THE FOLLOWING PUBLIC WORKS AND ENGINEERING CONDITIONS OF APPROVAL SHALL BE SATISFIED PRIOR TO THE APPROVAL OF THE FINAL MAP:

68. BONDS. The applicant shall supply suitable securities for all improvements that are a part of the development in a form acceptable to the City in the amount of 100% (performance), 50% (labor and material) prior to issuance of any permit.

69. DRAINAGE FEES. Applicant shall comply with the drainage fee requirements for the designated Drainage Area as adopted by the County Board of Supervisors for Contra Costa County Flood Control District. The applicant shall pay the fee in effect at the time of final map approval. Applicant to contact Contra Costa County Flood Control District for the exact fees amount. Fees are to be collected prior to filing of the Final Map.

70. FINAL MAP. Submit a Final Map prepared by a Licensed Land Surveyor. The final map shall be recorded, and the Subdivision Agreement must be executed before any building permits for production homes are issued. Insurance shall be provided per the terms of the Subdivision Agreement.

71. DEDICATIONS. The following shall be dedicated on the final map. The dedication shall be recorded before any permits are issued.

a. Main Street: Dedicate the required right-of-way along the project frontage to achieve a 40’ face of curb to centerline half street section plus 22’ where feasible for landscaping and sidewalk.
b. Public Utility Easement (PUE): 5’ PUE beyond Parcel A, B & C and as required.
c. Ingress-egress, storm drainage easements, as required.
d. Emergency Access Easement: Twenty (20) feet wide connecting Main Street and Honey Lane.

Any necessary rights of way, rights of entry, permits and/or easements for the construction of off-site, temporary or permanent, public and private road, utility and drainage improvements shall be furnished to the City.

72. PRIVATE EASEMENTS. Agreements detailing rights, limitations, and responsibilities of involved parties shall accompany each private easement. The easements and associated agreements shall be recorded simultaneously with the final map.

73. UTILITY SETBACKS. Building foundations shall be set back from utility lines a sufficient distance to allow excavation of the utility without undermining the house foundation. The City Engineer shall determine the appropriate setback based on the depth of the utility, input from the project soils engineer, and the type of foundation.

THE FOLLOWING SHALL BE SATISFIED PRIOR TO THE ISSUANCE OF THE <u>BUILDING PERMIT</u>:

74. PAD CERTIFICATION. A letter from a licensed land surveyor stating that the building pad was constructed in accordance with the approved plans shall be provided prior to the issuance of the building permit.

75. SOILS ENGINEER CONSTRUCTION OBSERVATION. During construction, all excavations and grading shall be inspected by the applicant's soils engineer prior to placement of concrete and/or backfill so they can verify that the actual conditions are as anticipated in the design-level geotechnical report and recommend appropriate changes in the recommendations contained in the report, if necessary. The results of the construction observation and testing should be documented in an "as-built" letter/report prepared by the applicants' soils engineer and submitted to the City before any building permit is granted.

76. AGREEMENT FOR STORMWATER BEST MANAGEMENT PRACTICES INSPECTION AND MAINTENANCE OBLIGATIONS. The property owner/HOA shall enter into an agreement with the City for maintenance of the stormwater filtration devices required to be installed on this project. The agreement will specify that certain routine maintenance shall be performed by the property owner/HOA and will specify device maintenance reporting requirements. The agreement will also specify routine inspection requirements, permits and payment of fees. The agreement shall be recorded prior to release of any occupancy permits.

77. AS-BUILT PLANS. After completion of the construction of all work, the original plans shall have all changes (change orders and field changes) clearly marked. The "as-built" plans shall again be signed and "wet-stamped" by the civil engineer who prepared the plans, attesting to the changes. The original "as-built" plans shall be review and approved the Engineering Inspector. A Mylar and AutoCAD

disk of the approved "as-built" plans shall be provided to the City before acceptance of improvements.

78. IMPACT FEES

Comply with the requirements of the development impact fees listed below, in addition to those noticed by the City Council in Resolution 85-00 and 08-03. The applicant shall pay the fees in the amounts in effect at the time each building permit is issued.

A. Traffic Impact Fee (authorized by Ordinance No. 14-00, adopted by Resolution 49-03);

B. Regional Transportation Development Impact Mitigation Fee or any future alternative regional fee adopted by the City (authorized by Ordinance No. 14-00, adopted by Resolution No. 73-05);

C. Park Land Dedication In-Lieu Fee (adopted by Ordinance No. 03-03);

D. Park Impact Fee (authorized by Ordinance No. 05-00, adopted by Resolution No. 19-03);

E. Public Facilities Fee (authorized by Ordinance No. 05-00, adopted by Resolution No. 18-03);

F. Fire Facilities Impact Fee (adopted by Resolution No. 09-01);

G. General Plan Fee (adopted by Resolution No. 53-03);

The applicant should contact the City Engineer prior to constructing any public improvements to determine if any of the required improvements are eligible for credits or reimbursements against the applicable traffic benefit fees or from future developments.

79. ANNEXATIONS

A. Annex the property to the City of Oakley Community Facilities District No. 2018-1 Fire Protection Services (CFD) for funding certain services within the boundaries of the City of Oakley including fire protection services. The applicant shall apply for annexation and provide all information and documents required by the City to process the annexation. All costs of the annexations shall be paid by the applicant. The assessment shall be the per parcel annual amount set by CFD at the time of the annexation. Annexation shall be completed prior to filing of the final map.

B. Participate in the provision of funding to maintain police services by voting to approve a special tax for the parcels created by the subdivision approval. The

tax shall be the per parcel annual amount (with appropriate future cost of living adjustment) as established at the time of voting by the City Council. The election to provide for the tax shall be completed prior to filing of the final map. If the homes are occupied prior to the City receiving the first disbursement from the tax bill, the project proponent shall be responsible for paying the pro-rate share for the remainder of the tax year prior to the City conducting a final inspection.

C. Annex the property to the City of Oakley Community Facilities District No. 2015-2 (CFD) for funding the maintenance and operation costs associated with regional, community and neighborhood parks, public area landscaping, street lights and storm water facilities. The applicant shall apply for annexation and provide all information and documents required by the City to process the annexation. All costs of the annexations shall be paid by Applicant. The assessment shall be the per parcel annual amount set by CFD at the time of annexation. Annexation shall be completed prior to filing of the final map.

ADVISORY NOTES

The following Advisory Notes are provided to the applicant as a courtesy but are not a part of the conditions of approval. Advisory Notes are provided for the purpose of informing the applicant of additional ordinance requirements that must be met in order to proceed with development.

A. The applicant/owner should be aware of the expiration dates and renewing requirements prior to requesting building or grading permits.

B. The project will require a grading permit pursuant to the Ordinance Code.

C. Applicant shall comply with the requirements of Iron House Sanitary District.

D. The applicant shall comply with the requirements of the Diablo Water District.

E. Comply with the requirements of the East Contra Costa Fire Protection District.

F. Comply with the requirements of the Building Inspection Division. Building permits are required prior to the construction of most structures.

G. This project may be subject to the requirements of the Department of Fish and Game. It is the applicant's responsibility to notify the Department of Fish and Game, P.O. Box 47, Yountville, California 94599, of any proposed construction within this development that may affect any fish and wildlife resources, per the Fish and Game Code.

H. The applicant shall be responsible for paying the County Recorder's Fee for the Notice of Determination as well as the State Department of Fish and Game's Filing Fee.

I. East Contra Costa County Habitat Conservation Plan Fee (adopted by Resolution No. 112-07 & 124-07).

PASSED AND ADOPTED by the City Council of the City of Oakley at a meeting held on the 22nd day of October, 2019 by the following vote:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

APPROVED:

_____

Claire Alaura, Mayor Date

ATTEST:

_____

Libby Vreonis, City Clerk Date

OAKLEY
CALIFORNIA

STAFF REPORT

DATE: October 22, 2019

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Libby Vreonis, City Clerk

SUBJECT: **Waive the First Reading and Introduce an Ordinance Adding Section 2.1.009 to the Oakley Municipal Code Requiring Electronic Filing of Campaign Statements and Statements of Economic Interests**

Background and Analysis

State law requires that certain positions within the City and committees are required to file economic interest disclosure statements and campaign disclosure statements. The most frequently filed statements are Fair Political Practices Commission (FPPC) Form 700 and FPPC Forms 460 or 470; however, other statements can be filed. Traditionally, filings within the City have been submitted in paper copy. In recent years, the FPPC implemented an electronic filing system, but only for Government Code Section 87200 filers which includes City Councilmembers, the City Manager, City Attorney and Finance Director. Under the City's local Conflict of Interest Code, other staff members are required to file FPPC Form 700. In total, the City Clerk's Office is currently responsible for approximately 50 Form 700 filings.

Government Code §84615 allows a local government agency to mandate online or electronic filing for an elected officer, candidate, committee, or other person who is required to file statements, reports, or other documents under the Political Reform Act, so long as the filer receives contributions or makes expenditures totaling two thousand dollars ($2,000) or more in a calendar year.

The law requires the Fair Political Practices Commission (FPPC) to approve all electronic systems used by cities. Before implementing an all-electronic filing system, the FPPC must review the program to ensure it complies with prescribed security and transparency protocols. Once approved, the FPPC issues an identification number to the city and then the e-filing system can be implemented. There are only two vendors approved by the Secretary of

State. Staff analyzed information and received product demonstrations from both vendors. NetFile provided the best economic terms and user functionality.

In order for the City of Oakley to accept electronically filed campaign statements, the City Council must adopt an ordinance permitting the use of an online filing system as an option for filing, and designating the filings received electronically by the City Clerk's Office as the filings of record for the City. In addition, the system must operate securely and effectively, be of no cost to filers, be available to the public to view filings, not place an unduly burden on filers and include procedures for filers to comply with the requirement that they sign statements and reports under penalty of perjury.

The Form 700 e-filing component does not require an ordinance by law to implement; however, it is recommended the City Council adopt e-filing of Form 700 by ordinance to require filers to submit the form electronically. Form 700s occasionally need amendments or are submitted incomplete. The Form 700 e-filing provides the filer alerts of errors at the time information is being entered into the system, reducing time for both staff and filers to request amendments to resolve errors.

The proposed ordinance includes the information provided above and would require campaign statements and Form 700 to be filed electronically. Electronic filing makes it easier for officials to comply with reporting obligations and provides the public with the information in a more accessible and consistent format.

The e-filing system will provide efficiency, convenience and transparency. In some cases, it will increase the accuracy of filed campaign statements as the system detects information that is entered incomplete. The system provides guidance to the filer as each section of disclosure forms are completed to ensure information is not omitted.

To accommodate the transition from paper to e-filing, Netfile and staff will offer one-on-one training with filers. The same will apply to candidates and treasurers during elections and post-election. Training will include set-up of filer accounts, explaining the online process, how to input data and save reports, prepare statements for e-signature, and finalizing statements to e-file. E-filing would be required upon the effective date of the proposed ordinance.

Netfile is a web-based vendor-hosted application that utilizes "industry best practices" for securing data, using the same encryption for online filings that is use by banks for online banking. Netfile stores and backs up data at three separate locations, creating the essential safety measures and redundancy that will allow for recovery of information in the event of an emergency or

disaster. The City's data will be retained for the required minimum 10-year period pursuant to Government Code Section 84615(i). For professional treasurers who have already purchased campaign software, NetFile is able to receive uploaded data from certain types of third party applications for electronic filing purposes.

Numerous cities and counties have converted to online or electronic campaign statement and Form 700 filing requirements. NetFile is being used by 130 local government agencies in California including Contra Costa County and the City of Richmond. Other agencies using NetFile include Berkeley, Capitola, Chico, Cotati, Dublin, Fresno, Gilroy, Half Moon Bay, Hayward, Livermore, Los Gatos, Manteca, Menlo Park, Morgan Hill, Mountain View, Oakland, Palo Alto, Patterson, Pleasanton, Sacramento, Salinas, San Francisco, San Leandro, San Luis Obispo, Santa Clara, Santa Cruz, Santa Rosa, Sausalito, Stockton, Sunnyvale, Watsonville, West Sacramento and Yountville. 70% of all cities approved by the FPPC for paperless filing use NetFile.

As NetFile is used by Contra Costa County, some Councilmembers may already be set up in the e-filing system if they have sat on a County committee, board or commission. If Councilmembers need to submit statements to agencies not using NetFile, the e-filing system will allow Councilmembers to print copies, sign, and submit wet signatures to those agencies.

In accordance with Government Code Section 84615(f), the data made available for public viewing shall not contain building number and street name of the persons or entity representatives listed on the e-filed forms or any bank account number required to be disclosed by the filer and the City Clerk shall make a complete, unredacted copy of any statement, report, or other document that has been e-filed, including any street names, building numbers, and bank account numbers disclosed by the filer upon request.

In the event of an emergency and systems are down, a paper filing will be accepted.

Fiscal Impact

Funds have been appropriated in the FY 2019-2020 operating budget for the e-filing system.

Staff Recommendation

Staff recommends the City Council waive the first reading and introduce the ordinance.

Attachments
1. Proposed Ordinance

ORDINANCE NO.____-19

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF OAKLEY ADDING SECTION 2.1.009 TO THE OAKLEY MUNICIPAL CODE REQUIRING ELECTRONIC FILING OF CAMPAIGN STATEMENTS AND STATEMENTS OF ECONOMIC INTERESTS

The City Council of the City of Oakley does ordain as follows:

Section 1. The Oakley Municipal Code is hereby amended to add Section 2.1.009 which reads as follows:

"**2.1.009 Electronic Filing of Campaign Statements and Statements of Economic Interests"**

a. Any elected officer, candidate, committee or other person required to file statements, reports or other documents, except an elected officer, candidate, committee or other person who receives contributions totaling less than two thousand dollars ($2,000) and makes expenditures totaling less than two thousand dollars ($2,000) in a calendar year, shall file those statements, reports or other documents electronically with the City Clerk.
b. Any person holding a position listed in Government Code Section 87200 or designated in the City's local Conflict of Interest Code adopted pursuant to Government Code Section 87300, shall file any required Statement of Economic Interest reports (Form 700) electronically with the City Clerk.
c. Filings set forth in Sections 2.1.009(a) and 2.1.009(b) which are filed and received electronically with the City Clerk are not required to also be filed with the City Clerk in paper format. An electronic filing will be the official record of such filing. Filers must sign electronic filings in the system under penalty of perjury.
d. In any instance in which an original statement, report or other document must be filed with the California Secretary of State and a copy of that statement, report or other document is required to be filed with the City Clerk, the filer may, but is not required to, file the copy electronically.
e. If the City Clerk's electronic system is not capable of accepting a particular type of statement, report or other document, an elected officer, candidate, committee or other person shall file that document with the City Clerk in an alternative format.
f. The date of filing for a statement, report or other document that is filed electronically shall be the day that it is received by the City Clerk. The City Clerk shall provide a confirmation of receipt upon receiving the filing which includes the date and time received and the method by which the filer may view and print the data received by the City Clerk.
g. A copy of the electronic filing retained by the filer and the confirmation set forth in Section 2.1.009(f) shall create a rebuttable presumption that he filer timely filed the statement, report or other document.

h. Electronic filing data made available through the City's website shall not contain the street name and building number of the persons or entity representatives listed on the electronically filed forms or any bank account number required to be disclosed by the filer. The local officer shall make a complete, unredacted copy of any statement, report, or other document filed pursuant to this section, including any street names, building numbers, and bank account numbers disclosed by the filer, available to any person upon request.
i. The local filing officer shall maintain, for a period of at least 10 years commencing from the date filed, a secured, official version of each online or electronic statement, report, or other document files pursuant to this section, which shall serve as the official version of that record for audit or legal purposes. Data that has been maintained for at least 10 years may then be archived in a secure format.
j. It is found that the electronic filing system will operate securely and effectively and will not unduly burden filers. Specifically, the electronic filing system will ensure the integrity of the data and includes safeguards against efforts to tamper with, manipulate, alter, or subvert data; the electronic filing system will only accept a filing in the standardized record format developed by the Secretary of State and compatible with the Secretary of State's system for receiving an online or electronic filing; and the electronic filing system will be available free of charge to filers and to the public for viewing filings."

Section 2. Severability.

In the event that any section or portion of this ordinance shall be determined to be invalid or unconstitutional, such section or portions shall be deemed severable and all other sections or portions hereof shall remain in full force and effect.

Section 3. California Environmental Quality Act ("CEQA") finding.

This ordinance is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3), Review for Exemption, because it can be seen with certainty that this ordinance will not have a significant effect on the environment; therefore it is not subject to CEQA.

Section 4. Effective Date and Publication.

This ordinance shall take effect and be in force and effect thirty (30) days from and after the date of its passage. The City Clerk shall cause the ordinance to be published within fifteen (15) days after its passage in a newspaper of general circulation, or by publishing a summary of the proposed ordinance, posting a certified copy of the proposed ordinance in the office of the City Clerk at least five (5) days prior to the City Council meeting at which the ordinance is to be adopted, and within fifteen (15) days after its adoption, publishing a summary of

the ordinance with the names of the Council Members voting for and against the ordinance.

The foregoing ordinance was adopted with the reading waived at a regular meeting of the Oakley City Council on _____, 2019 by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

APPROVED:

_____
Claire Alaura, Mayor

ATTEST:

_____
Libby Vreonis, City Clerk Date

OAKLEY
CALIFORNIA

STAFF REPORT

DATE: October 22, 2019

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Kevin Rohani, P.E. Public Works Director/City Engineer

SUBJECT: **Fiscal Year (FY) 2019/20 First Quarter Report on the Capital Improvement Program**

Background and Analysis

This report summarizes the status of the various projects in the City of Oakley Capital Improvement Program (CIP) at the end of the First Quarter for FY 2019/20.

The City's CIP is a multi-year forecast of capital needs that include new construction projects and planned improvements of existing facilities. The CIP establishes structure by identifying, prioritizing, approving, and the funding of capital improvement projects. Since the demand for capital projects typically exceeds the amount of available funds, projects are prioritized based on the City Council's strategic goals.

The following highlights CIP project progress in the First Quarter of FY 2019/20 (July-September 2019):

1. Laurel Road/Rose Avenue Intersection Improvement Project

Project # 191
Schedule: Construction is complete
Budget: $2,400,000
Funding Source: Transportation Impact Fee (TIF) Fund

The intersection of Laurel Road and Rose Avenue is a major intersection in the City of Oakley on an arterial road that is not signalized. Currently, this intersection operates as a four-way stop and has one lane of traffic in each direction. This project will widen the intersection, construct a new traffic signal, and improve the traffic flows on Laurel Road at Rose Avenue. This project requires Western Area Power Administration (WAPA) pole relocations. This project is in conjunction with the private development project (Aspen Place) that

will pay to widen the south side of Laurel Road to the west along the development site.

2. Laurel Road Widening Project (Rose Avenue to Mellowood Drive)

Project # 196
Schedule: Construction is complete
Budget: $3,400,000
Funding Source: Transportation Impact Fee (TIF) Fund

This section of Laurel Road between Rose Avenue and Mellowood Drive is a narrow 2 lane road that cannot accommodate the traffic demands of the community. Laurel Road is a major arterial street in Oakley and a direct connection to Highway 4. This project required PG&E power pole relocations. This project is in conjunction with a private development project (Duarte Ranch) that will pay for the widening of the south side of Laurel Road to the east of Rose Avenue.

3. Laurel Road Reconstruction Project (Mellowood Drive to Main Street)

Project # 208
Schedule: Design is currently underway
Budget: $175,000
Funding Source: Transportation Impact Fee (TIF) Fund

This project will reconstruct and improve Laurel Road in the section from Mellowood Drive to Main Street. This section of Laurel Road has required frequent and costly repairs due to the heavy concentration of Sierra-Crete that had been used decades ago by the County. The construction of this project will complement the adjacent roadway improvement project on Laurel Road (Rose Avenue to Mellowood Drive) CIP 196. The scope of this project includes: removal of all failed base materials and Sierra-Crete and replacement with proper aggregate base material, placement of new curb, gutter, and sidewalk, new pavement, improving the landscaping and irrigation. This project will also construct a protected double left turn from Laurel Road to Main Street to accommodate current and future traffic demands. The design of this project is underway and construction is anticipated to start by summer 2020.

4. Downtown Train Platform Station and Parking Lot Phase 1 Project

Project # 205
Schedule: Design is underway
Budget: $563,613
Funding Source: Main Street Fund

The Downtown Oakley Train Platform Station and Parking Lot Project features a new San Joaquin Joint Power Authorities train station platform located north of Main Street between 2nd Street and O'Hara Avenue. The station platform is strategically located in downtown on Main Street, adjacent to a future Main Street Plaza that could be used for civic events and markets. The new parking lot is anticipated to provide over 300 parking spaces, and is a big part of the future for Downtown Oakley. The San Joaquin Joint Power Authorities have secured a grant for the construction of the platform station. The City will need to fund the design and construction of the roadway, parking lot, and other public infrastructure that will be adjacent to the platform station. The City has hired a consultant team to design the above referenced public infrastructure part of this project. The construction costs will be allocated in the FY 2020/21 City budget. The design of the entire railroad platform station, roadway and parking lot infrastructure project is on a fast track and the completion of the construction is anticipated by spring 2022.

5. New Fire Station #55 Construction Project

Project # 217
Schedule: Construction is complete
Budget: $3,600,000
Funding Source: Developer Contribution

The conditions of approval for the Summerlake Subdivision had required the developer to construct a new Fire Station on East Cypress Road just north of the subdivision. This task has been delayed for some years, and a settlement was finally reached late last year between the City and the developer. Subsequently, the construction of Fire Station #55 began last year and was completed in summer 2019.

6. Athletic Field at Nunn-Wilson Park Project

Project # 206
Schedule: Project construction is underway
Budget: $700,000
Funding Source: Park Impact Fee (interfund loan from the General Fund)

The existing storm drain basin at the intersections of Laurel/Brown/Oxford has been in place for many years and is under-utilized. This project will address a growing need in the community for athletic fields, and also compliment the Koda Dog Park which was constructed next to this site last year. The new athletic field will be similar to the Freedom High School Stormwater Basin, except on a smaller scale. The project construction contract was awarded by City Council in June and construction in currently underway and anticipated to be completed by winter 2019.

7. Vintage Parkway Repair and Rehabilitation Project

Project # 214
Schedule: Project design is underway
Budget: $1.5M
Funding Source: One Bay Area Government Grant (OBAG) grant, General Capital Fund

This Project will reconstruct and improve Vintage Parkway from Main Street to Big Break Road. Each year the pavement conditions change due to wear and tear, and streets must routinely undergo preventative maintenance to ensure their functionality. Vintage Parkway is a 2 lane collector street that serves nearly 1,200 households in the neighborhoods north of the railroad tracks. Vintage Parkway is part of the Federal Highway System and qualifies for the One Bay Area Government Grant (OBAG). The OBAG grant is approximately $960,000 which will go towards the construction costs for the rehabilitation. The design of this project is currently underway, with the construction anticipated to start by spring 2020.

8. FY 2019/20 Street Repair and Resurfacing Project

Project # 237
Schedule: Project design is underway
Budget: $900,000
Funding Source: General Capital Fund, Gas Tax Fund

This project will repair the base and surface failures and resurface streets as a part of a comprehensive program to maintain the roadways for the community. Street repair and resurfacing is critical for keeping the City's street infrastructure in good condition, and to prevent the necessity of costly reconstruction due to the lack of proper rehabilitation and maintenance. The scope of project will include a combination of base dig-outs, overlay, crack seal, and slurry seal. The areas that are covered under this project include: Summerlake neighborhood, Heartwood neighborhood, and Gardenia neighborhood. This project will start construction in spring 2020.

9. Oakley Civic Center Emergency Generator Project

Project # 228
Schedule: Project is under construction
Budget: $150,000
Funding Source: General Capital Fund

The Civic Center facility is the center of government in Oakley which handles all critical functions for the community residents, including Police services. The current facility does not have a standby emergency generator to address the frequent PG&E power outages that take place in this region. This project will install an emergency generator which will provide electricity to the entire Civic Center facility in times of power emergencies. The work on this project is underway and it is anticipated that the new generator will be operational by spring 2020.

10. Main Street/O'Hara Avenue Intersection Improvement Project

Project # 218
Schedule: Project is under design
Budget: $500,000
Funding Source: Transportation Impact Fee (TIF) Fund

This project will complete the downtown improvements on the north side of Main Street between Norcross Lane and 2nd Street at its intersection with O'Hara Avenue by constructing new curb, gutter, sidewalks, street lights, and modifications of a traffic signal, landscaping, and street widening. The design of this project is currently underway and the PG&E pole relocations are scheduled to be completed by the end of the year. It is anticipated that the construction of the improvements will start in spring 2020.

11. Delta de Anza and Marsh Creek Trail Connection Safety Improvements Project

Project # 239
Schedule: Project is in design
Budget: $183,500
Funding Source: State Grant, 2012 Bond Benefit

The proposed project will improve safety at trail crossings and connect two regional trails in the City of Oakley, including new flashing beacons on Laurel Road and Delta Road at the crossing with the Delta de Anza and Marsh Creek Regional Trail, high visibility green bike lanes at the intersection of Cypress Road/Main Street, and bicycle lanes on West Cypress Road. Enhanced safety is very important for our community. This project will have both a local and regional benefit for all trail users in the Oakley area. The construction of this project is anticipated to start in spring 2020.

12. Police Department Locker Room & Detective Room Expansion Project

Project # 204
Schedule: Project is under construction
Budget: $645.000
Funding Source: Facility Fund

The continued growth of the Oakley Police Department requires further facility expansion to provide a functional and efficient work space for the Police Department staff and their operations. This project will expand the existing locker room and remodel the existing area that is currently used by the Finance Department to create more room for the Police Department as well as the Human Resources Department; which will move into that area after the remodeling is complete. The Finance Department staff will move into another space in the Public Works Department that was previously occupied by the Public Works maintenance staff, who have since relocated to the new Public Works Operations Center. The construction of the project is currently underway and anticipated to be completed by winter 2019.

13. Empire Avenue/Gateway Drive Signalization Project

Project # 230
Schedule: Project is under construction
Budget: $300.000
Funding Source: Transportation Impact Fee (TIF) Fund

Empire Avenue is one of the major streets in Oakley, a truck route, and a key component of the City's transportation network. Crockett Park is located along Empire Avenue at its intersection with Gateway Drive and is one of the most popular parks in Oakley with its wide range of recreational amenities for the community. This project will remove the existing flashing signs and pedestrian crosswalk system, install a new traffic signal system, and install ADA ramps to complement the new traffic signal. The construction of the project is currently underway and anticipated to be completed by fall 2019.

Fiscal Impact

Each project listed in this report has a budgeted source of funds which have been approved by the City Council. These sources include Grants, Gas Tax, Measure J Sales Tax, Traffic Impact Fees, General Fund, Main Street Fund, and other Special Use funds. There is no fiscal impact associated with this CIP Update, this report is solely for informational purposes.

Staff Recommendation

The Oakley City Council should provide comments and input to staff on the CIP report for the First Quarter of FY 2019/20.

OAKLEY
CALIFORNIA

STAFF REPORT

DATE: October 22, 2019

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Elizabeth Fratarcangeli, Assistant City Attorney

SUBJECT: **Amendment to Chapter 6.02 of the Oakley Municipal Code Related to Reimbursement for Adjustment to Public Utilities in the City Public Right of Way**

Introduction

Staff proposes changes to Chapter 6.02 of the City Code concerning reimbursement for adjustments and/or relocations of public utilities affecting any public works project. Specifically, Staff proposes adding Article 7 to this Chapter. Generally, this Article declares it the sole responsibility of a public utility owner to make any adjustments and or/relocations of their utility infrastructure, if required by a Public Works Project within the City. For all future Public Works Projects, some clarifying changes are needed to address some of the interpretation questions that have come up in implementing the Chapter.

Background and Analysis

With Public Works Projects there are many public utilities, including but not limited to, Diablo Water District (DWD), Ironhouse Sanitary District (ISD) as well as AT&T, Comcast, and Pacific Gas and Electric (PG&E), that may be impacted by a project. For instance, there may be manholes and valve boxes within the specific project limits that must be adjusted to grade in accordance with the project specifications. As a part of the City's noticing requirements, Staff sends the owner of the utilities a "Notice to Owner" which states, among other things, that they are responsible for reimbursing the City for any costs associated with the adjustment and/or relocation of their utility infrastructure, unless the utility owner performs the work voluntarily.

Under the ordinance, the City will be able to recoup all costs associated with an adjustment to a public utility in a City street, sidewalk, or right-of-way, should the utility owner not perform the work of adjustment and/or relocation of its utility as described in the City's Notice to Owner.

Fiscal Impact

Reimbursement of fees to adjust and/or relocate a Public Utility within a Public Works Project.

Staff Recommendation

Staff recommends the Council waive the first reading and introduce the attached ordinance.

Attachments

1. Ordinance

ORDINANCE NO.

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF OAKLEY AMENDING CHAPTER 6.2 RELATED TO REIMBURSEMENT FOR ADJUSTMENT OF PUBLIC UTILITIES IN STREETS AND SIDEWALKS

THE CITY COUNCIL OF THE CITY OF OAKLEY DOES ORDAIN AS FOLLOWS:

SECTION 1. Upon the effective date of this Ordinance, Oakley Municipal Code section 6.2.102 shall be amended to read as follows:

Definitions

As used in this chapter the following words and phrases shall have the meanings given in this section:

a. "Public highway" means the full width of the surfaced or traveled portion, including shoulders, of any road, street, path, lane, or alley dedicated to, reserved for, or used by or for the general public when those roads, streets, paths, lanes, and alleys have been accepted as and declared to be part of the City system of public highways, except highways forming a part of the State highway system or of an incorporated City street system.

b. "Right-of-way" means all land or interest therein which by deed, conveyance, agreement, easement, dedication, usage, or process of law is reserved for or dedicated to the use of the general public for road or highway purposes.

c. "Encroach" includes going on, over, or under, or using any right-of-way so as to prevent, obstruct, or interfere with the normal use of that way, including the performance of any of the following acts:

1) Excavating or disturbing the right-of-way;

2) Erecting or maintaining any post, sign, pole, fence, on, over, or under the right-of-way;

3) Planting any tree, shrub, grass, or other growing thing within the right-of-way;

4) Placing or leaving on the right-of-way any rubbish, brush, leaves, earth or any material;

5) Constructing, placing, or maintaining on, over, under, or within the right-of-way any pathway, sidewalk, driveway, or other surfacing, any culvert or other surface drainage or subsurface drainage facility; or any pipe, conduit, or cable;

6) Traveling on the right-of-way by any vehicle or combination of vehicles or object of dimension, weight, or other characteristic prohibited by law without a permit;

7) Lighting or building a fire within the right-of-way;

8) Constructing, placing, planting, or maintaining any structure, embankment, excavation, tree, or other object adjacent to the right-of-way which causes or will cause an encroachment;

d. "Permittee" means any person, firm, company, corporation, association, public agency, or organization that proposes to do work or encroach on a right-of-way as defined in this section and has been issued a permit for encroachment by the City Engineer. All obligations, responsibilities, and other requirements of the permittee as described in this title shall be binding on subsequent owners of the encroachment.

e. “Public Transportation Project” means any capital improvement project involving a City street, sidewalk, and/or right-of-way.

f. “Public Utility” means any public utility located within the City, including but not limited to, gas and electric companies and water and sanitation districts.

g. “Public Utility Owner” means the owner of any public utility and corresponding infrastructure located within the City.

SECTION 2. Upon the effective date of this Ordinance, Oakley Municipal Code Article 7 section 6.2.702 shall be added to read as follows:

6.2.702 Reimbursement for Adjustment of Public Utilities

If a Public Works Project requires the adjustment and/or relocation of the Public Utility’s Infrastructure located within the City, it is the sole responsibility of the Public Utility Owner to perform the required adjustment and/or relocation in accordance with the Public Works Project specifications or reimburse the City for the cost to perform the required adjustment and/or relocation of the Public Utility’s Infrastructure.

SECTION 3. CEQA.

The City Council finds that this Ordinance is not subject to the California Environmental Quality Act (CEQA) pursuant to Section 15060(c)(3) (the activity is not a project as defined in Section 15378) of the CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, because it has no potential for resulting in physical change to the environment, directly or indirectly; and it concerns continuing maintenance activities.

SECTION 4. SEVERABILITY.

The City Council of the City of Oakley hereby declares that should any section, paragraph, sentence, phrase, term or word of this Ordinance be declared for any reason to be invalid, it is the intent of the City Council that it would have adopted all other portions of this Ordinance independent of the elimination herefrom of any such portion as may be declared invalid. If any section, subdivision, paragraph, sentence, clause or phrase of this Ordinance is for any reason held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance, and each section, subdivision, paragraph, sentence, clause and phrase thereof, irrespective of the fact that any one (or more) section, subdivision, paragraph, sentence, clause or phrase had been declared invalid or unconstitutional.

SECTION 5. EFFECTIVE DATE.

This Ordinance shall become effective thirty (30) days after adoption.

SECTION 6. PUBLICATION.

The City Clerk shall certify to the passage of this Ordinance and shall cause this Ordinance or a summary thereof to be printed once within fifteen (15) days after its adoption in a newspaper of general circulation, published and circulated in the City of Oakley.

THE FOREGOING ORDINANCE was introduced at a regular meeting of the City Council of the City of Oakley held on the 22 day of October, 2019, and passed and adopted on that date, by the following roll call vote, and shall be and become effective immediately:

AYES:
NOES:
ABSTENTIONS:
ABSENT:

APPROVED:

_____
Claire Alaura, Mayor

ATTEST:

_____
Libby Vreonis, City Clerk

_____
Date

STAFF REPORT

DATE: October 22, 2019

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Joshua McMurray, Community Development Director

SUBJECT: **Oakley General Plan Update Work Session – Environmental Justice and Climate Adaptation**

Background and Recommendation

This work session on the General Plan Update will be focused on providing the City Council information related Environmental Justice and Climate Adaptation. The City's consultant, De Novo Planning Group, has prepared two white papers to assist in the discussion. The focus of the City Council Work Session is to: 1) present the City Council with the information contained in the two white paper's, 2) identify elements of the General Plan that we anticipate revising to address Environmental Justice and Climate Adaptation, and 3) ask the City Council for their input.

Included with this Staff Report are the Environmental Justice and Climate Adaptation White Paper's that discusses the two topics in detail.

Recommendation

Staff recommends the City Council review the information provided, through the Staff Report and Power Point presentation, and provide Staff and De Novo Planning Group with comments and direction.

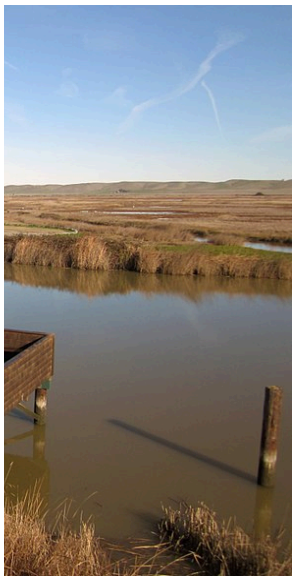
Attachments

1. White Paper – Environmental Justice
2. White Paper – Climate Adaptation

OAKLEY

General Plan Update











October 2019

ENVIRONMENTAL JUSTICE WHITE PAPER

City of Oakley Focused General Plan Update

TABLE OF CONTENTS

Table Of Contents i
1. Background & Regulatory Framework 1
2. Disadvantaged Communities 4
3. Health & Socioeconomic Characteristics 5
4. Environmental Justice Issues 6
5. Community Input 20
6. Policy Approaches 22
References 24

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1. BACKGROUND & REGULATORY FRAMEWORK

Background

The negative effects of environmental degradation and pollution are well-documented and include severe impacts to human health and longevity, depending on the level of exposure. Within the United States, certain communities have historically been disproportionately affected by environmental threats and the negative health impacts of environmental degradation. These communities include, but are not limited to, low-income communities, communities of color, communities comprising members of tribal nations, and immigrant communities. Increased exposure to environmental pollutants, unsafe drinking water, and contaminated facilities/structures have contributed to poorer health outcomes for these communities. Structural inequalities that disadvantage certain individuals and groups, local and regional policies, zoning, code enforcement deficiencies, and lack of community engagement and advocacy are related to disproportionate environmental and social effects. The field of environmental justice is focused on addressing these disproportionate impacts and improving the wellness of all communities by bolstering community planning efforts, considering exposure to adverse environmental effects, increasing access to amenities and services, and promoting the fair treatment of all people regardless of their race, ethnicity, national origin, or income.

Regulatory Framework

State

Senate Bill 1000

In 2016, the Senate passed Senate Bill 1000 (SB 1000), also known as The Planning for Healthy Communities Act, to amend Section 65302 of the Government Code. SB 1000 requires local California jurisdictions to prepare and maintain an Environmental Justice element or environmental justice-related goals, policies, and implementation programs in their General Plan's other elements. SB 1000 outlines the approach to identifying disadvantaged communities (DACs), strategies to promote the protection of sensitive land uses within the state and simultaneously mandates that local jurisdictions address the needs of DACs. Through this bill, environmental justice is a mandated consideration in all local jurisdictions' land-use planning policies, regulations, and activities.

The California Environmental Justice Alliance created a strategic toolkit to identify legislative requirements and provide tools, best practices, and resources to support stakeholders in addressing environmental justice. Each General Plan must address the following topics:

- Pollution Exposure and Air Quality
- Public Facilities
- Food Access
- Safe and Sanitary Homes
- Physical Activity
- "Civil" or Community Engagement
- Improvements and Programs that address the needs of Disadvantaged Communities

Senate Bill 535

In 2012, the Legislature passed SB 535, adding Sections 39711, 39713, 39715, 39721, and 39723 to the Health and Safety Code. SB 535 directs 25% of the proceeds from the Greenhouse Gas Reduction Fund (established by the California Global Warming Solutions Act of 2006 AB 52's cap and trade program) to projects that provide a benefit to DACs.

Assembly Bill 1550

In 2016, the Legislature passed AB 1550, to amend Section 39713 of the Health and Safety Code. AB 1550 amended SB 535 to require all GGRF investments that benefit DACs to also be located within those communities. The law also requires that an additional 10% of the fund be dedicated to low-income households and communities, of which 5% is reserved for low-income households and communities living within a half-mile of a designated DAC.

Senate Bill 673

In 2015, the Senate passed SB 673, to add Sections 25200.21 and 25200.23 to the Health and Safety Code. SB 673 directs the Department of Toxic Substances Control (DTSC) to include criteria such as cumulative impact and neighborhood vulnerability when issuing or renewing hazardous waste facility permits. The law provides the DTSC with an opportunity to use tools such as CalEnviroScreen (CES), an Internet-based mapping tool described below that helps jurisdictions identify DACs, when making decisions on hazardous waste permitting.

Assembly Bill 523

In 2017, the Legislature passed AB 523, to amend Section 25711.5 of, and to add and repeal Section 25711.6 of, the Public Resources Code. AB 523 allocates at least 25% of the Electric Program Investment Charge (EPIC) funds administered by the California Energy Commission (CEC) to support technology demonstration and deployment projects located in and benefiting "disadvantaged communities," and dedicates at least 10% of the fund to activities located in and benefiting "low-income" communities as defined by AB 1550.

Senate Bill 43

In 2013, the Senate passed SB 43, to add and repeal Chapter 7.6 (commencing with Section 2831) of Part 2 of Division 1 of the Public Utilities Code. SB 43 establishes the Green Tariff Shared Renewables program, administered by the California Public Utilities Commission (CPUC), which enables utility customers to meet their energy generation needs through offsite generation of renewable energy projects. The program requires 100 MW of renewable energy projects to be sited in the top 20% of CES scores based on each investor-owned utility (IOU) service territory.

Assembly Bill 2722

In 2016, legislature passed AB 2722, to add Part 4 (commencing with Section 75240) to Division 44 of the Public Resources Code. AB 2722 requires the California Strategic Growth Council to award competitive grants to specified eligible entities for the development and implementation of neighborhood-level transformative climate community plans that include greenhouse gas emissions reduction projects that provide local economic, environmental, and health benefits to DACs. AB 2722 created the Transformative Climate Communities (TCC) program administered through the California Strategic Growth Council (SGC). The TCC is a GGRF-funded program that supports innovative, comprehensive, and community-led plans that reduce pollution and achieve multiple co-benefits at the neighborhood level.

California Department of Transportation's Active Transportation Program (ATP)

The California Department of Transportation (CalTrans) Active Transportation Program (ATP) aims to enhance public health and advance California's climate goals by increasing safety and mobility for non-motorized active transportation such as

biking and walking. ATP projects in "disadvantaged communities" (defined as census tracts within the top 25% of CES scores along with several other options) are allocated 25% of program funds, while an additional 2% is set aside to fund active transportation planning in DACs.

The City of Oakley is currently receiving ATP funding to help develop the City's active transportation plan, known as "Oakley Moves."

Local

City Of Oakley General Plan

A variety of policies contained in the existing City of Oakley General Plan support DACs and environmental justice issues through city-wide improvements that provide equitable access to facilities and services, transportation network improvements, parks and recreation opportunities, and promoting air and water quality.

Specific goals included within the General Plan that are most related to the topics of environmental justice and DACs include:

Land Use Element

GOAL 2.1: Guide development in a manner that creates a balanced and desirable community, maintains and enhances the character and best qualities of the community, and ensures that Oakley remains an economically viable City.

GOAL 2.8: Encourage projects exhibiting excellent design and sensitivity to the community, while preserving the community character of the City of Oakley.

Circulation Element

GOAL 3.1: Provide an efficient and balanced transportation system.

GOAL 3.3: Provide adequate, convenient, and affordable public transportation.

Growth Management Element

GOAL 4.1: Provide for the levels of growth and development depicted in the Land Use Element, while preserving and extending the quality of life through the provision of public facilities and ensuring traffic levels of service necessary to protect the public health, safety, and welfare.

GOAL 4.3: Assure that high quality civic and community facilities are provided to meet the broad range of needs of Oakley residents.

GOAL 4.7: Promote and seek to assure the provision of safe, efficient, and cost-effective removal of waste from residences, businesses, and industry.

Open Space and Conservation Element

GOAL 6.2: Maintain or improve air quality in the City of Oakley.

GOAL 6.6: Encourage preservation and enhancement of existing open space resources in and around Oakley and balance open space and urban areas to meet the social, environmental and economic needs of the City now and for the future.

Parks and Recreation Element

GOAL 7.2: Provide a vital system of community parks, playfields, and recreation facilities to serve the residents of Oakley.

Health and Safety Element

GOAL 8.3: Provide protection from hazards associated with the use, transport, treatment, and disposal of hazardous substances.

Housing Element

GOAL 1: Production of New Housing. Provide adequate sites to accommodate the City's share of regional housing needs, including housing for special needs groups, through appropriate zoning and development standards; and where appropriate, removal of identified governmental constraints to the development of housing.

GOAL 2: Rehabilitation of Existing Housing Stock. Conserve and improve the condition of existing housing stock for all income levels.

GOAL 3: Preservation and Conservation of Existing Housing Resources. Preserve existing affordable housing and maintain community character.

GOAL 4: Increase Access to Housing Opportunities. Promote housing opportunities for all persons, regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status or disability.

2. DISADVANTAGED COMMUNITIES

The term 'disadvantaged community' is a broad designation that includes any community disproportionally affected by environmental, health, and other burdens or low income areas disproportionally affected by environmental pollution and other hazards. In relation to environmental justice, DACs are typically those communities that disproportionately face the burdens of environmental hazards. Government Code Section 65302, as amended by SB 1000, defines a DAC as follows:

> *"…an area identified by the California Environmental Protection Agency (CalEPA) pursuant to Section 39711 of the Health and Safety Code or an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation."*

The CES 3.0 tool identifies communities that are disproportionately affected by environmental hazards. The CES 3.0 map is a science-based tool developed by the Office of Environmental Health Hazards Assessment on behalf of CalEPA that uses existing environmental, health, and socioeconomic data to rank all census tracts in California with a CES score. CalEPA designates the tracts with a CES score in the top 25 percentile as DACs. Figure 1 identifies the CES score for each census tract in and around the Planning Area, which includes the City, Sphere of Influence, and Urban Limit Line, and indicates that tract 3020.05 is a DAC based on CES score in the top 25 percentile.

Low income communities disproportionately affected by environmental concerns can be identified using the California Air Resources Board (CARB) Priority Populations Mapping Tool, which identifies low-income communities located within ½ mile of a CalEPA-identified disadvantaged community. Figure 1 identifies census tract 3060.02 as a DAC based on

income and proximity to a CalEPA-identified DAC income. It is noted that DAC tract 3060.02 is largely within Antioch and only a portion of this census tract is within Oakley.

3. HEALTH & SOCIOECONOMIC CHARACTERISTICS

To understand the existing health and socioeconomic conditions of each DAC, Table 1 lists the percentiles for sensitive population and socioeconomic factor indicators in the Planning Area by census tract. The two DAC census tracts are highlighted with bold boxes. The sensitive population indicators reflect the communities' health and the socioeconomic factor indicators describe educational attainment, income level, employment, and housing conditions and burden. In combination with the environmental/pollution data included in Table 2: Pollution Burden by Pollution Indicator, the data forms the basis of the CES scores. For each indicator, scores of 75% or higher represent a high burden on the population. Based upon the indicators, all of the tracts are burdened one or more indicator, but the socioeconomic indicators are typically less than the sensitive population indicators. In particular, five of the tracts, 3010, 3020.05, 3020.07, 3020.08, and 3060.02, have medium or high burdens in seven or more of the eight indicators. DAC tract 3020.05 has high burdens in three of the indicators (asthma, cardiovascular disease, and housing) and medium burdens in five of the indicators. DAC tract 3060.02 has high burdens in three of the indicators (asthma, cardiovascular disease, and unemployment) medium burdens in three of the indicators, and a low burden in one of the indicators.

TABLE 1: POPULATION CHARACTERISTICS BY SENSITIVE POPULATION AND SOCIOECONOMIC FACTOR INDICATORS

INDICATOR (%)	CENSUS TRACTS							
	3010	**3020.05**	3020.06	3020.07	3020.08	3020.10	3031.02	**3060.02**
SENSITIVE POPULATION INDICATORS								
Asthma	90	90	90	88	88	89	68	99
Low Birth Weight	78	63	68	45	38	35	38	57
Cardiovascular Disease	94	94	94	91	90	93	85	92
SOCIOECONOMIC FACTOR INDICATORS								
Education	42	49	61	60	57	35	47	46
Linguistic Isolation	2	24	5	49	28	6	12	22
Poverty	42	64	15	43	46	9	37	53
Unemployment	46	69	61	77	68	17	15	75
Housing Burden	46	80	7	40	30	36	34	51
Total Population Characteristics Score	**67**	**80**	**60**	**72**	**63**	**45**	**45**	**74**

	High Burden: 75.0 – 100.0%		Medium Burden: 25.0 – 74.9%		Low Burden: 0.0 – 24.9%

NOTE: DACS INCLUDE CENSUS TRACT 3020.05 AND A PORTION OF 3060.02.
SOURCE: CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT, CALENVIROSCREEN 3.0, 2019.

4. ENVIRONMENTAL JUSTICE ISSUES

Based Government Code Section 65302, as amended by SB 1000, the General Plan's Environmental Justice Element or integrated environmental justice policies must seek to reduce the unique or compounded health risks in the City's DAC by addressing the following topics, at a minimum: pollution exposure, including air quality, public facilities, food access, safe and sanitary homes, and physical activity, and by providing a policy framework to encourage civil engagement. The existing conditions for these topics within the City of Oakley and larger Planning Area is summarized below.

Pollution Exposure and Air Quality

The various forms and sources of air and water pollution and hazardous waste often disproportionately affect DACs. This is typically due to the existence and relative concentration of pollution-emitting sources within close proximity to the communities. Disproportionate exposure to pollutants is linked to variety of negative health impacts, including but not limited to, asthma, cardiovascular diseases, cancer, and other potentially fatal conditions. Based on CES data, Table 2 lists the percentile of pollution burden for the twelve CES pollution indicators by census tract.

Table 2: Pollution Burden by Pollution Indicators

Indicator (%)	Census Tracts							
	3010	3020.05	3020.06	3020.07	3020.08	3020.10	3031.02	3060.02
Air Quality: Ozone	40	32	40	40	40	32	40	32
Air Quality: PM2.5	18	18	18	18	18	18	18	18
Air Quality: Diesel PM	4	65	53	52	53	76	59	55
Pesticide Use	56	70	61	63	61	58	48	64
Toxic Releases from Facilities	28	34	34	32	34	34	33	38
Traffic Density	N/A	39	25	42	25	14	27	18
Drinking Water Contaminants	90	14	14	17	14	14	38	10
Cleanup Sites	0	33	65	48	65	28	86	87
Groundwater Hazards	14	79	92	61	92	22	33	96
Hazardous Waste	0	94	97	43	97	16	0	98
Impaired Water Bodies	93	76	93	93	93	76	86	76
Solid Waste Sites	74	0	0	0	0	0	20	0
Total Pollution Burden Score	**41**	**58**	**63**	**49**	**63**	**27**	**45**	**62**

	High Burden: 75.0 – 100.0%		Medium Burden: 25.0 – 74.9%		Low Burden: 0.0 – 24.9%

Note: DACs include Census Tract 3020.05 and a portion of 3060.02.
Source: California Office of Environmental Health Hazard Assessment, CalEnviroScreen 3.0, 2019.

Scores of 75% or higher represent a high pollution burden. The census tracts with the highest pollution burden scores are 3020.06 and 3020.08. DAC tract 3020.05 has a high burden score for three indicators (groundwater hazards, hazardous waste, and impaired water bodies) and an overall score of 58. DAC tract 3060.02 has a high burden score for four indicators (cleanup sites, groundwater hazards, hazardous waste, and impaired water bodies) and an overall score of 62. Impaired water bodies, groundwater hazards, and hazardous waste are the most common indicators affecting the Planning Area.

Hazardous Materials and Toxics

The Planning Area includes 31 hazardous waste sites that are currently under evaluation or in the midst of cleanup. The sites are generally clustered within the city's northcentral area, predominately occupying locations within DAC tract 3020.05 (13 sites) and tract 3020.08 (8 sites) and affecting residents living in these and the adjoining tracts. DAC tract 3060.02 does not contain any hazardous waste sites.

Table 3: Hazardous Materials and Toxics Sites

Name	Project Type/Activity	Address	Census Tract
Envirostor Sites[1]			
Baldocchi Property	Voluntary Cleanup	6390 Sellers Avenue	3020.08
Carpenter Road School	School Investigation	1629 and 1541 Carpenter Road	3020.10
Chemours Company FC LLC	Corrective Action	6000 Bridgehead Road	3020.05
Contra Costa Auto Salvage	Voluntary Cleanup	1731 Main Street	3020.05
Cook Battery (Oakley Battery)	State Response	139 Hill Avenue	3020.08
Cypress Road New Elementary School	School Investigation	Cypress Road/Highway 4	3020.08
Cypress Road School	School Cleanup	4901 Frank Hengel Way	3020.08
Dal Porto Elementary School Site	School Investigation	East Cypress Road/Jersey Island Road	3010
Dupont De Nemours & Co., Inc.	Corrective Action	6000 Bridgehead Road	3020.05
New Oakley Road ES	School Investigation	Live Oake Avenue/Oakley Road	3020.05
O'Hara Park Middle School	School Cleanup	1100 O'Hara Avenue	3020.07
Oakley Union Elementary School District - Future Middle School	Evaluation	Sandmound, Bethel Island Boulevard, E. Cypress Road	3010
Summer Lake Elementary School Site	School Investigation	Cypress Road/Bethel Island Road	3010
The Chemours Company FC LLC	Post Closure	6000 Bridgehead Road	3020.05
Zocchi Elementary School	School Investigation	Brownstone Road/Anderson Lane	3031.02
Cortese List Site[2]			
Cook Battery (Oakley Battery)	State Response	139 Hill Avenue	3020.08
GeoTracker Sites[3]			
Cook Battery Reclamation Site	Cleanup Program Site	139 Hill Avenue	3020.08
Custom Cleaners	Cleanup Program Site	2575 Main Street	3020.05
Cypress Square Shopping Center	Cleanup Program Site	2025 Main Street	3020.05
Pacific Gas & Electric	Cleanup Program Site	5400 Neroly Road	3020.05
PG&E Antioch Natural Gas Terminal	Cleanup Program Site	5900 Bridgehead Road	3020.06
PG&E Dutch Slough Dehydrator Station	Cleanup Program Site	1126 Fetzer Lane	3020.06
LUST Cleanup Sites[4]			
A & A Market (Former)	LUST Cleanup Site	407 Main Street	3020.05
Big Break Marina	LUST Cleanup Site	100 Big Break Road	3020.06
Blue Star Gas	LUST Cleanup Site	1541 Cypress Road, E	3020.08
Bridgehead Inc.	LUST Cleanup Site	5540 Bridgehead Road	3020.05
Chevron #9-3801	LUST Cleanup Site	5433 Neroly Road	3020.05
Food & Liquor #86	LUST Cleanup Site	Highway 4/Cypress	3020.08
Lauritzen Yacht Harbor LLC	LUST Cleanup Site	115 Lauritzen Lane	3020.06
Oakley Builders Supply	LUST Cleanup Site	800 Main Street	3020.05
Rain for Rent	LUST Cleanup Site	5301 Live Oak Avenue	3020.05

1: Source: California Department of Toxic Substances Control, Envirostor Database, 2019.
2: Source: calepa.ca.gov/sitecleanup/corteselist/, 2019.
3: Source: California Water Resources Control Board Geotracker Database, 2019.
4: Source: California Water Resources Control Board Geotracker Database, 2019.

Public Facilities

Access and availability of public facilities is an aspect of the built-environment that may disproportionately limit the opportunities of DACs. If DACs have unequal access to public facilities, or if a City does not provide adequate facilities for public use, DACs may be limited in their ability to access necessary key resources. Limited access to resources as a result of inadequate public facilities can lead to reduced lifespan, poorer health outcomes, and diminished mental well-being. The adequate planning of parks and transportation infrastructure can ensure that all communities within a City have equal access to resources.

This section summarizes the adequacy of public facilities as they pertain to the DAC.

Public Facility Locations

Figures 2 and 3 show the locations of the public facilities within the Planning Area and with relationship to the DACs. The content portrayed on each map is as follows:

- Figure 2: Public Services Map – shows the location of transit stations and routes, hospitals, and emergency services and public safety facilities.
- Figure 3: Community Facilities Map – shows the location of city and county government buildings; parks; daycare centers; and libraries, museums, and cultural facilities.

Distribution and Access

Public Services

The Planning Area includes one fire station, one police station, one sheriff's office, and a medical clinic. Two of the Planning Area's four public services sites (the medical clinic and police station) are located in the same DAC tract: 3020.05. The other two sites (the sheriff's office and fire station) are within 400 feet of DAC tract 3020.05. The police, sheriff, and fire sites are centrally located and provide services Citywide, while the medical clinic is located in the northwestern quadrant.

Community Facilities

Five of the Planning Area's 43 community facilities, including four parks and City Hall, are located within DAC tract 3020.05. None of the community facilities are within DAC tract 3060.02. Two day care centers are located within 0.1 mile of the DAC. The library is located along the City's southern boundary, while the other community facilities are generally centrally located. The parks are generally concentrated in the southern and central portions of the City near residential developments.

Food Access

Food access encompasses the following three interrelated topics:

- Nutritionally adequate, culturally appropriate, and affordable food;
- Income sufficient to purchase healthy food; and
- Proximity and ability to travel to a food source that offers affordable, nutritionally adequate, and culturally appropriate food.

Ensuring adequate food access is challenging in many communities. Many communities, and especially low-income areas, lack retailers with a sufficient selection of healthy foods. Consequently, many residents lack access to nutritional

foods, known as "food insecurity", resulting in public health challenges and poor health outcomes. Affected populations cope with food insecurity by consuming nutrient-poor, but calorie-rich foods. This may result in malnutrition; obesity; cognitive, behavioral, and mental health problems in children; and physical and mental health problems and birth complications among pregnant women. Children and communities of color are often disproportionally affected by food insecurity.

Food Insecurity and Cost

No existing conditions data for food insecurity and cost exists at the City level. As the best possible alternative, these topics were evaluated on the County level, using the United States Department of Agriculture (USDA) 2017 American Community Survey, Feeding America.

- 113,940 people, or 10.1% of the population in Contra Costa County experienced food insecurity in 2017. This is below the statewide rate of 11.0% and countrywide rate 12.5%, and marks a 1.0% decline from the previous year. Of Contra Costa County's affected population, 39,250 were children, marking a child food insecurity rate of 15.0% This rate is below the statewide rate of 18.1% and the countrywide rate of 17.0%.
- The average cost of a home-cooked meal in Contra Costa County is $3.61. This is higher than the statewide average of $3.20 and the countrywide average of $3.02.
- Of the food insecure population within Contra Costa County, 63% of individuals and 54% of children were from households with incomes below the Federal poverty threshold for nutrition assistance programs, potentially qualifying those individuals for food assistance from the federal government[1]. In part, this can help defray the relatively high cost of purchasing food in Contra Costa County. Individuals who qualify for federal nutrition assistance programs can utilize assistance at any store that accepts Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Supplemental Nutrition Assistance Program (SNAP) purchases.

Access to Food Retailers

Figure 4 illustrates the Planning Area's supermarket and grocery store locations and census tracts that qualify as food deserts. The map categorizes supermarkets as larger food retailers that serve the community, grocery stores as the range of smaller food retailers that serve individual neighborhoods or cater to specific groups, and food deserts as low-income tracts where a substantial number or share of residents has low access to a supermarket that sells affordable and nutritious food.

Three supermarkets and three grocery stores exist within the Planning Area. All three supermarkets are located in DAC tract 3020.05, and two grocery stores lie on the border of this DAC census tract. No supermarkets or grocery stores are located in DAC tract 3060.02.

The lack of proximate grocery stores has the greatest affect in locations where residences do not own vehicles or have sufficient access to transit. Table 4 lists the number of and percent of households without vehicles within the city and the census tracts. With the exception of Keller's Mini-Mart, the Planning Area's grocery stores and supermarkets are located along major streets and transit routes, helping to ensure access to the stores by all residents, including those in DAC tract

[1] Gundersen, C., et al. (2017). Map the Meal Gap 2016: Food insecurity and child food insecurity estimates at the county level. Feeding America. Accessable at: http://www.feedingamerica.org/research/map-the-meal-gap/2016/overall/CA_AllCounties_CDs_MMG_2016.pdf

3020.05. All of the households in DAC tract 3020.05 have one or more vehicles available. Therefore, due to the nearby locations of the food retailers and the 100% vehicle access, access to food for DAC tract 3020.05 is not viewed as an issue. Within DAC tract 3060.02, 3.0 percent of households do not have a vehicle. As noted above, this DAC tract also does not have any supermarkets or grocery stores. Therefore, access to food for DAC tract 3060.02 is viewed as an issue; however, there appear to be a limited number of lower income households in Oakley within this tract based on a review of the housing within this DAC.

In addition to the proximity of grocery and food sources within an area, the types of food sources available are important for determining adequacy of food access. The USDA Food Research Atlas data shows that there were approximately 196 grocery stores in Contra Costa County as of 2014, and approximately 491 SNAP-authorized food retailers. In addition, the same data set shows that the County had 644 fast food restaurants as of 2014.

TABLE 4: CAR OWNERSHIP

CITY/CENSUS TRACT	# OF HOUSEHOLDS	# OF HOUSEHOLDS WITHOUT VEHICLES	% OF HOUSEHOLDS WITHOUT VEHICLES
CITYWIDE			
City of Oakley	10,727	545	5.1%
CENSUS TRACT			
3010	1,804	25	1.4%
3020.05	2,317	0	0.0%
3020.06	1,237	30	2.4%
3020.07	2,091	19	0.9%
3020.08	2,172	59	2.7%
3020.10	3,244	81	2.5%
3031.02	2,593	8	0.3%
3060.02	1,040	31	3.0%

NOTE: CENSUS TRACT 3020.05 IS A DAC.
SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN FACT FINDER, 2017 ESTIMATES.

HOUSING CONDITIONS

The condition of the housing stock in a DAC may have negative impacts on the well-being of its residents. These health impacts stem from issues such as poor indoor air quality, toxic building materials, exposure to climate variation such as excess heat or cold, improper ventilation, and structural insecurity. Unsafe housing conditions can be a result of the age of the dwelling structure, which increases the likelihood of incorporation of dangerous materials like lead and asbestos that have significant negative health impacts.[2] DACs often have a larger amount of older units within their housing stock and therefore, residents of these communities are more likely to be exposed to the harmful health impacts that are associated with older housing. Other factors that can contribute to unsafe housing conditions include; improper regulation and overcrowding. Ensuring the safety and sanitation of housing stock within a community ensures that there are proper living conditions for all residents, including those living in DACs.

[2] SB 1000 Toolkit

This section summarizes the existing housing conditions and cost of housing throughout the city. While the conditions apply on a citywide level, they can reasonably be extrapolated to understand housing conditions in the DACs.

Housing Stock Conditions

Housing conditions are considered substandard when conditions are found to be below the minimum standard of living conditions defined in the California Health and Safety Code. Households living in substandard conditions are considered to be in need of housing assistance, even if they are not seeking alternative housing arrangements, due to the threat to health and safety.

In addition to structural deficiencies and standards, the lack of infrastructure and utilities often serves as an indicator for substandard conditions. According to the 2017 American Community Survey, all of the 11,671 occupied housing units in Oakley have complete plumbing and kitchen facilities. Only 225 of the housing units had no telephone service available.

Overcrowding

Overcrowding within a housing unit is a primary cause of unsafe housing conditions. The World Health Organization notes that overcrowding is a potential health risk as it contributes to the transmission of disease by creating unsanitary conditions.[3] A housing unit is considered overcrowded if there is more than one person per room and severely overcrowded if there are more than 1.5 persons per room. Table 5, based upon data obtained from the U.S. Census 2017 American Community Survey, depicts the city's overcrowding conditions.

Table 5: Overcrowding by Tenure

City/ Census Tract	Persons Per Room						Total Units	Overcrowding Condition	
	1.00 or Less		1.01 to 1.50		1.51 or More				
	#	%	#	%	#	%		#	%
Citywide									
City of Oakley	11,181	95.8%	247	2.1%	243	2.1%	11,671	490	4.2%
Census Tract									
3010	1,759	97.5%	45	2.5%	0	0.0%	1,804	45	2.5%
3020.05	2,122	91.6%	60	2.6%	135	5.8%	2,317	195	8.4%
3020.06	1,207	97.6%	30	2.4%	0	0.0%	1,237	30	2.4%
3020.07	1,978	94.6%	22	1.1%	91	4.4%	2,091	113	5.4%
3020.08	2,099	96.6%	73	3.4%	0	0.0%	2,172	73	3.4%
3020.10	3,192	98.4%	52	1.6%	0	0.0%	3,244	52	1.6%
3031.02	2,479	95.6%	109	4.2%	5	0.2%	2,593	114	4.4%
3060.02	1,002	96.3%	10	1.0%	28	2.7%	1,040	38	3.7%

Note: DACs include Census Tract 3020.05 and a portion of 3060.02.
Source: United States Census Bureau, American Fact Finder, 2017 Estimates.

[3] World Health Organization (WHO). Accessed on September 5, 2018. Water Sanitation and Hygiene. What are the health risks related to overcrowding?". Available at: http://www.who.int/water_sanitation_health/emergencies/qa/emergencies_qa9/en/

According to the American Community Survey's overcrowding data, five of the census tracts experienced overcrowding at a higher rate than at the citywide rate of 4.2%. DAC tract 3060.02 experiences overcrowding at a lower rate than the citywide rate, with 96% of rooms containing one or fewer persons. DAC tract 3020.05 has the highest rate of overcrowding in the City at 8.4 percent (at the census tract level).

Housing Affordability

As what is typically the most expensive component of a household's budget, housing cost (rent or mortgage, utilities, homeowner or renter insurance, and property taxes for homeowners only) is a preeminent factor in determining if the household is "cost burdened" or negatively impacted by its expenses. This consideration takes on even greater importance in California, a place where housing costs far exceed the national average, and the San Francisco Bay Area, one of the most expensive regions for housing in the state.

Traditionally, housing affordability has been assessed by the "maximum rent standard." According to the standard, households that spend more than 30% of income on housing costs may be cost burdened. Taken from the most recent U.S. Department of Housing and Urban Development (HUD) Comprehensive Housing Affordability Strategy (CHAS) data which is an aggregation of ACS data, Table 6 describes the cost burden for the city's low- to moderate-income residents.

Table 6: Housing Affordability

Income Level	Owner-Occupied		Renter-Occupied		Total Occupied Housing Units	
	Units	%	Units	%	Units	%
Extremely Low (30% or less AMI)	630	7.4%	925	31.3%	1,555	13.6%
Very Low (30-50% AMI)	850	10.0%	620	20.9%	1,470	12.8%
Low (50-80% AMI)	1,210	14.2%	465	15.7%	1,675	14.6%
Moderate (80-100% AMI)	985	11.6%	300	10.1%	1,285	11.2%
High (100% or more AMI)	4,825	56.7%	650	22.0%	5,475	47.8%
Total	**8,505**	**100%**	**2,960**	**100%**	**11,465**	**100%**

Source: HUD CHAS data, 2012-2016

"Housing problems" are considered a household that has one or more of the following conditions: lacks complete plumbing, lacks complete kitchen facilities, more than one person per room, and cost burden greater than 30 percent. The 2012-2016 HUD CHAS data indicates that 4,585 of 11,465 households have at least one housing problem. The majority of housing problems in the City occur in households earning extremely low income (28%) and in very low income households (25%).

Physical Activity

Residents of DACs are often more likely to experience negative health outcomes. Increased physical activity levels are associated with a decreased risk for numerous health conditions and chronic illnesses. The built environment in DACs can often be limited by land use planning and lack of investment, leaving less opportunities for formal and informal physical activity. Increasing the opportunity for physical activity within a community can work to positively impact the physical health of residents living in DACs.

This section summarizes the use of active transportation modes and the state and distribution of pedestrian and bicycle facilities and facilities conducive to physical activity in the DACs.

Active Transportation Use

Active transportation is any form of transportation that is non-motorized. The use of active transportation during a daily commute increases physical activity levels, yielding a number of positive health benefits, including mortality risk reduction, disease prevention, cardiorespiratory fitness, and metabolic health. DACs often have disproportionately poorer health outcomes. Increasing opportunities for active transportation within a City can improve the overall health outcomes of DACs.

Data from the 2019 California Department of Finance (DOF) Population and Housing Estimate Report and 2013-2017 American Community Survey (ACS) were utilized to illustrate journey to work (JTW) statistics for the city. Table 7 provides an overview of Oakley's JTW mode split data compared to county and statewide statistics.

Table 7: Commuting Transportation Modes

Population	City of Oakley		Contra Costa County		State of California	
Total[1]	41,759		1,155,879		39,927,315	
Employed[2]	18,071		520,162		17,589,758	
Mode Split	Number	%	Number	%	Number	%
Active Transportation Modes						
Walked	126	0.7%	8,800	1.7%	470,101	2.7%
Bicycled	72	0.4%	2,577	0.5%	186,321	1.1%
Total - Active Transportation Modes	198	1.1%	11,377	2.2%	656,422	3.7%
Powered Transportation Modes						
Drove Alone	13,734	76.0%	353,988	68.1%	12,950,487	73.6%
Carpooled	2,422	13.4%	61,025	11.7%	1,830,958	10.4%
Public Transit	506	2.8%	53,698	10.3%	909,679	5.2%
Taxicab, Motorcycle, or Other Means	361	2.0%	7,483	1.4%	264,165	1.5%
Total - Powered Transportation Modes	17,023	94.2%	476,194	91.5%	15,955,289	90.7%
Worked at Home	867	4.8%	32,591	6.3%	978,047	5.6%

[1]Population data obtained from 2019 California Department of Finance Population and Housing Estimate Report.
[2]Employment And Modal Choice Data Obtained From 2013-2017 American Community Survey 5-Year Estimates.

The ACS reports that the majority of workers living in Oakley, 76%, drove to work alone, whereas other powered transportation modes accounted for approximately 18.2.0% of commute trips. This data also indicates that most commuters in Oakley do not use active transportation as a means of getting to work; only 0.7% of commuters reported walking to work and 0.4% rode a bike to work. By comparison, 89.4% of all trips made by the city's employed residents involve the use of an automobile by either driving alone or carpooling. Utilizing active transportation is an effective way of engaging in physical exercise and can be a factor in improving community health outcomes in DACs.

Facilities Conducive to Physical Activity

The Planning Area is home to 34 parks facilities. Table 8 lists the parks and their amenities, including facilities for physical activity, and indicates whether the parks are in a DAC. The parks' locations and buffer distances of 0.25 and 0.5 miles, illustrating the reasonable walking distance to the facilities, are illustrated on Figure 5.

TABLE 8: PLANNING AREA PARK FACILITIES

PARK	ADDRESS	AMENITIES	DAC?
Big Break Regional Shoreline	69 Big Break Rd.	Grass Areas, Picnic Areas, Benches, Kayak Launch, Visitor Center	No
Briarwood Park	100 Michaelangelo Dr. / Dalia Court	Grass Area, Playground, ½ Court Basketball, BBQs, Picnic Tables, Water Fountain (people and dogs), Bicycle Rack	No
Civic Center Park	Main St. / Morcross Ln.	Amphitheater, Walking Path, Picnic Tables	Yes
Claremont Bay Park	4676 Bayside Way	Climbing Rock, Picnic Tables	No
Creekside Park	3900 Creekside Way	Large Grass Area, Playground, Picnic Tables, BBQs, BMX Park (Closed), Waterplay Feature (2PM-7PM), Walking Path, Group, Picnic Area, Basketball Court, Sports Fields, Bocce Ball Courts	No
World of Discovery at Crockett Park	Richard Way	Large Grass Area, All- Abilities play structure, Picnic Tables, BBQs, BMX Park (Closed), Benches, Tennis Court, Basketball Court	No
Cypress Grove Park	4001 Frank Hengel Way	Large Grass Area, Playground, Tables, BBQs, Drinking Fountain (people and dog)	No
Cypress Grove Pond	38 Crane Ct.	Picnic Tables, Walking Paths, Benches	No
Daffodil Park	590 Daffodil Dr.	Grass Area, Playground, Picnic Tables, ½ Court Basketball	No
Dewey Park	100 Acme St.	Grass Area, Benches	No
Emerson Ranch Park	Hansford Way / Shearwater Way	Lake Area, Grass Area, Benches, Playground	No
Freedom Basin Park	O'Hara Ave. / Neroly Rd.	Large Grass Area, Trail, Picnic Tables, Forebay and wetland area with an overview deck to watch wildlife	No
Harvest Park	Harvest Cr.	Grass Area, BBQ, Picnic Tables	No
Heartwood Park	240 Heartwood Dr,	Grass Area, Playground Picnic Tables	No
Heather Park	Canterbury Ln. / Claremont Ln.	Grass Area, BBQ, Picnic Tables, Bench, Drinking Fountain	Yes
Holly Creek Park	4758 Hagar Ct.	Large Grass Area, BBQ, Picnic Tables, Playground, Shade Area, Bicycle and Walking Trail	No
Lakewood Park	1882 Lakewood Dr.	Small Grass Area, BBQ, Picnic Tables, Playground, Benches, Bicycle Rack	No
Lakeside Park	E. Summer Lake Dr.	Grass Area, Benches, Playground, Picnic Tables	N
Laurel Ball Fields Park	850 Laurel Rd.	Benches, Sports Fields, Picnic Tables, Basketball Court, Skate Feature, Restrooms, Parking Lot, Walking Trail, Playground	No
Laurel Park	Nutmeg Dr.	Grass Area	No
Live Oak Ranch Park	19 Solitude Ct.	Grass Area, Benches	No
Main Street Park	Main St. / Gardenia Ave.	Grass Area, Benches	Yes
Magnolia Park	Daffodil Dr. / Everlasting Way	Large Grass Area, Playground, Picnic tables, Benches, Sports Fields, Skate Feature, Trail	No
Manresa Park	1088 Clear Lake Dr.	Tables, Benches	No
Marsh Creek Glenn Park	430 Hill Ave.	Large Grass Area, Playground, Picnic tables, Benches, Sports Fields, Skate Feature, Trail	No
Novarina Park	100 Brown St.	Large Grass Area, Playground with dinosaur dig feature, Picnic Tables	No
Nunn-Wilson Family Park	100 Oxford Dr.	Playground, Adult Fitness Area, Water Feature (limited hours open Wed-Sun 11-7pm beginning), Grass Area, Picnic Tables, BBQ, ½ Basketball Court	No
Nutmeg Park	1068 Nutmeg Dr.	Grass Area, Playground, Picnic Tables, Benches, Basketball, BBQ, Skate Area, Walking Path	No
Oak Grove Park	403 White Oak Ct.	Grass Area, Playground, Tables, Benches, BBQ	No

Park	Address	Amenities	DAC?
Riata Park	607 Saddlebrook Way	Grass Area, Play Areas, Tables, Benches	No
Shady Oak Community Park	Cedar Glenn Dr. / Shady Oak Dr.	Grass Area, Playground, Table with checkers and chess board, Water Feature (Closed due to drought), Bocce Court, Sports Field, Basketball Court, Drinking Fountain	No
Simoni Ranch Open Space	Simoni Ranch Rd.	Grass Area, Picnic Tables	No
Summer Lake Park	4020 Summer Lake Dr.	Grass Area, Picnic Tables, Benches, Trail Access, Sports Field, Playground, Tennis Court, Restroom	No
Sycamore Park	1799 Park Pl.	Grass Area, Picnic Tables, Benches	No

Source: https:// www.ci.oakley.ca.us/parks-and-trails/city-parks/.

Four of the of the City's 34 park facilities are located in one of the City's DACs (3020.05) and the other DAC (3060.02) has no park facilities. There are four parks within census tract 3020.05 and households within this DAC are also within the ¼- and ½-mile buffer areas of multiple parks located in the vicinity of this DAC as shown in Figure 5. There are no park facilities located within or within a ¼- or ½-mile buffer distance of census tract 3060.02. This appears to affect households located north of Oakley Road as homes located south of Oakley Road are on generally on one-acre lots with large yards that include a variety of opportunities for at-home active recreation, including swimming pools, tennis courts, lawns, and play areas.

Civic Engagement

An important aspect of planning for environmental justice is the development of effective policies and programs that enable all residents to participate in local decision making. DACs can often be excluded from decision-making when officials and policies do not focus on involving these communities in a strategic manner. SB 1000 emphasizes that community engagement must be promoted in a local jurisdiction through the development of objectives and policies that seek to specifically involve residents of DACs. By engaging DACs in decision-making processes, policy-makers can effectively meet the needs of these community members. DACs often have culturally-specific needs, distinct from those of the general population, that must be made a priority within local policy to ensure community success. The US EPA Environmental Justice Policy requires the "… meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." The establishment of appropriate opportunities for those who are low-income, minorities, and linguistically isolated to engage in local decision making will help ensure that environmental justice issues are identified and resolved. In addition, community programs that address the needs of DACs are critical to ensuring environmental justice is achieved for these communities within a city.

This section summarizes the levels of civic engagement, based upon voter registration and turnout, and demographics that may influence civic engagement in Oakley's DAC.

Levels of Civic Engagement

The primary means of measuring a community's level of civic engagement is the assessment of voter participation. This includes the percentage of voting age residents registered to vote and the percentage of registered voters who cast ballots. A summary of both metrics for Oakley and Contra Costa County is as follows:

Voter Registration

During the 15 days prior to the 2018 general election, there were 621,309 registered voters in Contra Costa County, including 20,898 registered votes residing in Oakley. According to the ACS 2013-2017 five-year estimate, the most recent range for which data is available, 743,847 people of voting age resided in the county, including 28,846 people of voting age in the city. This equates to voter registration rates of approximately 72.4% in Oakley and 71% across the county.

Voter Participation

According to the Contra Costa County Recorder's Office, for the 2018 general election there were 619,963 registered votes in Contra Costa County, including 20,898 registered voters residing in Oakley. Additionally, 423,348 votes were cast across the county, including 12,052 votes in the city's precincts. This equates to voter turnout rates of 57.7% in Oakley and 68.3% across Contra Costa County. By comparison, for the 2016 general election, the most recent presidential election, the voter turnout rate for the city was 79.1% and for the county was 77.9%. This is consistent with increased voter turnout during presidential election years.

Based upon the most recent voting metrics, the city's residents are similarly engaged as county residents as a whole. Given the relatively lower levels of civic engagement in DACs, it is reasonable to extrapolate that that the Planning Area's DAC experienced similar, if not lower, voter involvement than the citywide rates.

Demographics That May Influence Civic Engagement

Certain demographic categories can help predict a community's likely level of civic engagement. This section assesses three demographic categories: resident age, language spoken at home, and educational attainment. The assessments are based upon tables that compare the demographic categories at the county, city, and DAC tract levels.

Resident Age

Age distribution can help predict the likelihood of a community participating in civic activities and identify constraints associated with engaging different members of the community. A disproportionately high percentage of residents under the age of 18 suggests the significant presence of families. Parents of minors are generally busy raising their children, making them less likely to participate in civic activities. Encouraging the use of virtual outreach tools, such as social media and online surveying, and outreach approaches at other community events, such as farmers markets, fairs, and sporting events, can help increase participation among this group. Conversely, a disproportionately high percentage of seniors, a group that generally has fewer commitments and less time constraints, suggests that the community may participate in conventional civic activities, at a higher rate. Because seniors are less familiar with technology than their younger counterparts, the group is less likely to utilize virtual outreach tools.

As reflected by Table 9, Oakley's residents are somewhat younger than the county as a whole. In the instance of the City's DAC tracts, tract 3020.05 is younger than the county as a whole, while tract 3060.02 is older than the county as a whole. The city's tracts that do not qualify as a DAC tract reveal varied ages compared to the County.

Table 9: Resident Age

Location	Total Population	Age					
		Under 18 years		18 to 64 year		65 years and over	
		Number	%	Number	%	Number	%
Contra Costa County	1,123,678	261,503	23.3%	698,404	62.1%	163,771	14.6%
City of Oakley	39,950	11,104	27.8%	25,009	62.6%	3,477	8.7%

Location	Total Population	Age					
		Under 18 years		18 to 64 year		65 years and over	
		Number	%	Number	%	Number	%
Census Tracts							
3010	4,784	910	19.0%	3,090	64.6%	784	16.4%
3020.05	7,131	2,043	28.6%	4,187	58.8%	901	12.6%
3020.06	3,873	985	25.4%	2,653	68.5%	235	6.1%
3020.07	7,050	1,910	27.1%	4,643	65.9%	497	7.0%
3020.08	8,126	2,370	29.2%	5,104	92.8%	652	8.0%
3020.10	11,648	3,234	27.8%	7,421	63.7%	993	8.5%
3031.02	8,930	2,676	30.0%	5,511	61.7%	743	8.3%
3060.02	3,344	688	20.6%	2,105	62.9%	551	16.5%

Note: DACs include Census Tract 3020.05 and a portion of 3060.02.
Source: United States Census Bureau, American Fact Finder, 2017 Estimates.

Language Access

Language is a critical signifier of a population's likely participation in civic activities. Non-native English speakers, and especially those individuals with limited English fluency, are less likely to participate in civic activities. Translation services are critical to reaching and actively communicating with these individuals. In addition, the metric of households who speak languages other than English can help identify the cultural diversity of a community. Civic activities, and the venues where they take place, can be tailored to accommodate the cultural preferences of individual racial, ethnic, and religious groups.

As identified by Table 10, Oakley and most of the census tracts, including both DACs, are home to a more than 30 percent of households where the residents speak languages other than English and/or have limited fluency in English. Of the other household languages spoken, Spanish and various Asian and Pacific Islander languages are most common in Oakley.

Table 10: Languages Spoken at Home

Location	Population 5 years and over	English Only Household	Other Language Spoken at Home	Languages Spoken Other Than English			
				Spanish	Other Indo-European	Asian and Pacific Islander	Other
		Number	Number	Number	Number	Number	Number
		%	%	%	%	%	%
Contra Costa Co.	1,058,105	690,049	368,056	190,059	62,119	103,823	12,055
		65.2%	34.8%	18.0%	5.9%	9.8%	1.1%
City of Oakley	37,135	25,309	11,826	8,710	798	1,868	450
		68.2%	31.8%	23.5%	2.1%	5.0%	1.2%
Census Tracts							
3010	4,477	3,857	620	350	89	110	71
		86.2%	13.8%	7.8%	2.0%	2.5%	1.6%
3020.05	6,639	4,502	2,137	1,912	13	198	14
		67.8%	32.2%	28.8%	0.2%	3.1%	0.2%
3020.06	3,614	2,564	1,050	869	58	101	22
		70.9%	29.1%	24.0%	1.6%	2.8%	0.6%
3020.07	6,593	4,209	2,384	1,790	208	251	135
		63.8%	36.2%	27.2%	3.2%	3.8%	2.0%

Location	Population 5 years and over	English Only Household	Other Language Spoken at Home	Languages Spoken Other Than English			
				Spanish	Other Indo-European	Asian and Pacific Islander	Other
		Number	Number	Number	Number	Number	Number
		%	%	%	%	%	%
3020.08	7,502	4,901	2,601	1,989	333	279	0
		65.3%	34.7%	26.5%	4.4%	3.7%	0.0%
3020.10	10,911	7,991	2,920	1,833	96	783	208
		73.2%	26.8%	16.8%	0.9%	7.2%	1.9%
3031.02	8,450	5,893	2,557	1,230	636	593	98
		69.7%	30.3%	14.6%	7.5%	7.0%	1.2%
3060.02	3,181	2,106	1,075	846	76	153	0
		66.2%	33.8%	26.6%	2.4%	4.8%	0.0%

Note: DACs include Census Tract 3020.05 and a portion of 3060.02.
Source: United States Census Bureau, American Fact Finder, 2017 Estimates.

Educational Attainment

Educational attainment is a strong signifier of a population's likely participation in civic activities. Higher educational attainment generally correlates with increased civic participation. This is reflective of individuals with less educational attainment experiencing underemployment circumstances, such as working for less than a living wage and/or on a part-time basis. This may require individuals to seek out additional employment, reducing the time that they can commit to civic activities. In addition, individuals with lower educational attainment generally make less money. Those individuals who cannot afford to own or otherwise have limited access to an automobile, may be unable to attend civic events. This may also be reflective of individuals with less educational attainment lacking the sufficient literacy level and/or a formal education in civics and government to feel comfortable participating in civic matters.

Based upon Table 11, Oakley's residents and the census tracts' populations educational attainment levels are lower than on the countywide level. On average, a significantly higher percentage of residents completed high school or graduated from high school or attained some post-secondary education, but did not complete college. Of the DAC residents, those that did not complete high school or only obtain a high school degree are of greatest concern. DAC tract 3020.05 residents have lower educational attainment levels compared to the county and city. Specifically, 55.4 percent of DAC tract 3020.05 residents have some college, an associate's degree, bachelor's degree, or higher, compared to 72.0 percent in the county and 58.8 percent in the city. DAC tract 3060.02 residents also have slightly lower educational attainment levels, with 52.2 percent with some college, an associate's degree, bachelor's degree, or higher.

TABLE 11: EDUCATIONAL ATTAINMENT

LOCATION	TOTAL POPULATION (25+ YEARS)	LESS THAN A HIGH SCHOOL GRADUATE		HIGH SCHOOL GRADUATE (OR EQUIVALENT)		SOME COLLEGE OR ASSOCIATE'S DEGREE		BACHELOR'S DEGREE OR HIGHER	
		NUMBER	#	NUMBER	#	NUMBER	#	NUMBER	#
Contra Costa Co.	603,361	65,348	10.8%	105,071	17.4%	184,913	30.6%	248,029	41.1%
City of Oakley	24,506	3,131	12.7%	6,929	28.3%	9,795	39.9%	4,651	18.9%
CENSUS TRACTS									
3010	3,342	390	11.7%	1,016	30.4%	1,240	37.1%	696	20.8%
3020.05	4,516	632	13.5%	1,406	31.1%	2,074	46.0%	424	9.4%
3020.06	2,531	489	19.3%	543	21.5%	1,162	45.9%	337	13.3%
3020.07	4,250	824	19.4%	1,154	27.2%	1,614	38.0%	658	15.5%
3020.08	4,915	621	12.6%	1,456	29.6%	1,510	30.7%	1,327	27.0%
3020.10	6,969	532	7.7%	1,935	27.8%	2,930	42.0%	1,572	22.5%
3031.02	5,470	567	10.4%	774	14.1%	2,226	40.7%	1,903	3.8%
3060.02	2,469	330	13.4%	850	34.4%	882	35.7%	407	16.5%

NOTE: DACS INCLUDE CENSUS TRACT 3020.05 AND A PORTION OF 3060.02.
SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN FACT FINDER, 2017 ESTIMATES.

5. COMMUNITY INPUT

As discussed in the Visioning White Paper, the City hosted two General Plan Update Visioning Workshops in June 2019. The initial Visioning Workshop was the community kick off for the General Plan Update project. The first activity during Visioning Workshop #1 was a Post-It activity. Meeting attendees were provided stacks of blank Post-it notes and asked to write down what they think are Oakley's primary assets and challenges, along with their vision for the future of the City. The second activity during Visioning Workshop #1 was a mapping activity. Community members formed two groups of two people and each group was provided one large map of the City of Oakley, an instruction sheet with nine various icon stickers, and worksheets in order to complete this activity. The large map included predesignated focus areas (1 through 6). The community members were asked to identify the top concerns and top needs for each focus area. Focus Area 1 included DAC tract 3020.05 and the portion of 3020.06 most affected by environmental justice factors.

Workshop #1 - Focus Area 1 Input:

- Top concerns for this area:
  - Need of aesthetic improvements
  - Lack of safe and affordable housing
  - Disparity between one area of Empire and the other
- Top needs for this area:
  - Public facilities
  - Parks and recreation
  - Safe and affordable housing
  - Maintenance and renovation

The second Visioning Workshop provided an overview of the General Plan process and focused on identifying the transportation and mobility issues and concerns in Oakley. The first activity during Visioning Workshop #2 was a mapping activity to identify mobility barriers in the Planning Area. The second activity during Visioning Workshop #2 was a Transportation and Mobility Vision activity which aimed to identify transportation and mobility related priorities. The third activity was a prioritization activity aimed at prioritizing which of the following issues are the top priority: Automobile Improvements, Bicycle Improvements, Pedestrian Improvements, Transit Improvements, and Safety Improvements.

Workshop #2 – Concerns related to Environmental Justice:

- Mobility Barriers:
  - Congestion downtown
  - Safety updates needed
  - Improved bus and transit service needed, particularly near schools and downtown
  - Unsafe and/or limited walkways, particularly for students near schools
- Transportation Vision:
  - Improved access for all

During the Visioning process, an on-line survey was distributed via the City's website, with links also advertised via an email blast, Twitter, and Facebook pages, to encourage additional community input. Full survey results are provided in the Visioning White Paper. The survey included questions related to needs in Focus Area 1, which included the DAC tracts as previously described. The top comments related to Focus Area 1 included:

- Issues of Most Concern - Focus Area 1: Lack of community services (51%), noise (35%), access to affordable and nutritious food (26%)
- Solutions and Amenities Needed – Focus Area 1: Public safety (65%), maintenance and renovation (61%), and parks and recreation (47%)

6. POLICY APPROACHES

The following policies may be used to address environmental justice concerns in Oakley:

- Require future planning decisions, development, and infrastructure and public projects to consider the effects of planning decisions on the overall health and well-being of the community and its residents, with specific consideration provided regarding disadvantaged populations and communities to ensure equitable distribution of amenities, needed infrastructure, and community services and to avoid concentrations of adverse uses in DACs.
- As part of land use decisions, ensure that environmental justice issues related to potential adverse health impacts associated with land use decisions, including methods to reduce exposure to hazardous materials, industrial activity, vehicle exhaust, other sources of pollution, and excessive noise on residents regardless of age, culture, gender, race, socioeconomic status, or geographic location, are considered and addressed.
- When planning for parks, recreational facilities, community gardens, civic facilities, and other uses that improve the quality of life, ensure that environmental justice issues related to the equitable provision of desirable public amenities are considered and addressed.
- Promote broad and balanced participation to ensure that affected residents have the opportunity to participate in the decision-making process, including in decisions that affect their health and well-being such as planning, roadway, parks, infrastructure, and utility projects.
- Support existing health care services and encourage the location of new health care facilities and medical services, particularly in disadvantaged areas, areas with a high rate of special needs populations, and in underserved residential areas. Encourage new facilities to be located in areas that are readily accessible by pedestrians and bicyclists and served by transit.
- Support existing health care services and encourage the location of new health care facilities and medical services, particularly in disadvantaged areas, areas with a high rate of special needs populations, and in underserved residential areas. Encourage new facilities to be located in areas that are readily accessible by pedestrians and bicyclists and served by transit.
- Encourage smoke free workplaces, multifamily housing, parks, and other outdoor gathering places to reduce exposure to secondhand smoke.
- Encourage convenience stores, supermarkets, liquor stores, and neighborhood markets to stock nutritional food choices, including local produce, local meats and dairy, 100% juices, and whole-grain products.
- Encourage sustainable local food systems including farmer's markets, community gardens, edible school yards, community supported agriculture, neighborhood garden exchanges, federal food assistance programs, and healthy food retailers.
- Support schools and other organizations' efforts to encourage students and their families to make healthy food choices through providing fresh, nutritious lunches and providing students and their families access to fresh fruits and vegetables through "edible school yards", holiday meal programs, and sustainable gardening programs.
- As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented in Oakley and used by the public, the City shall review and update its policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network.

Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use and docking, etc.

- Consider implementing vehicle weight limit restrictions on roadways near sensitive uses like schools and residential neighborhoods to discourage cut-through truck traffic.
- Locate site entries, parking areas, storage bays, and service areas of buildings to minimize conflicts with adjacent properties, especially residential neighborhoods.

The following actions may be used to address environmental justice concerns in Oakley:

- Review all development proposals, planning projects, and infrastructure projects to ensure that potential adverse impacts to disadvantaged communities, such as exposure to pollutants, including toxic air contaminants, and unacceptable levels of noise and vibration are reduced to the extent feasible and that measures to improve quality of life, such as connections to bicycle and pedestrian paths, community services, schools, and recreation facilities, access to healthy foods, and improvement of air quality are included in the project. The review shall address both the construction and operation phases of the project.
- Review the City's community outreach programs and public notice requirements to encourage broad-based and meaningful community participation in decisions. The review should address providing measures to promote capacity-building, encourage participation from populations that may have language, health, or other barriers that may reduce their involvement in the decision-making process, and maximize use of technology broaden opportunities for participation.
- Encourage and support local transit service providers to increase and expand services for people who are transit-dependent, including seniors, persons with mobility disabilities, and persons without regular access to automobiles, by improving connections to regional medical facilities, senior centers, and other support systems that serve residents and businesses.
- Encourage the County to promote physical activity, access to healthy food, and address health indicators in local DACs through the Healthy Communities Program.
- Encourage community gardens near high-density housing and encourage the incorporation of community gardens into new and existing high-density housing projects.
- Encourage schools that serve the City to develop school gardens and to develop protocols to facilitate the streamlined development of school gardens from year to year.
- Support local government and non-profit efforts and programs aimed at teen drug, alcohol, and tobacco use prevention.
- Review updates to transportation planning documents and any automated vehicle plans to ensure the benefits of automated mobility are equitably distributed across all segments of the community and that the negative impacts of automated mobility are not disproportionately borne on traditionally marginalized neighborhoods.
- As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.
- Review and update the City's standard plans to ensure that the plans reflect the City's goals and policies for the circulation system, including cross-sections that provide for landscape-separated sidewalks along arterials and non-residential streets, best practices for traffic safety, and accommodate all users.

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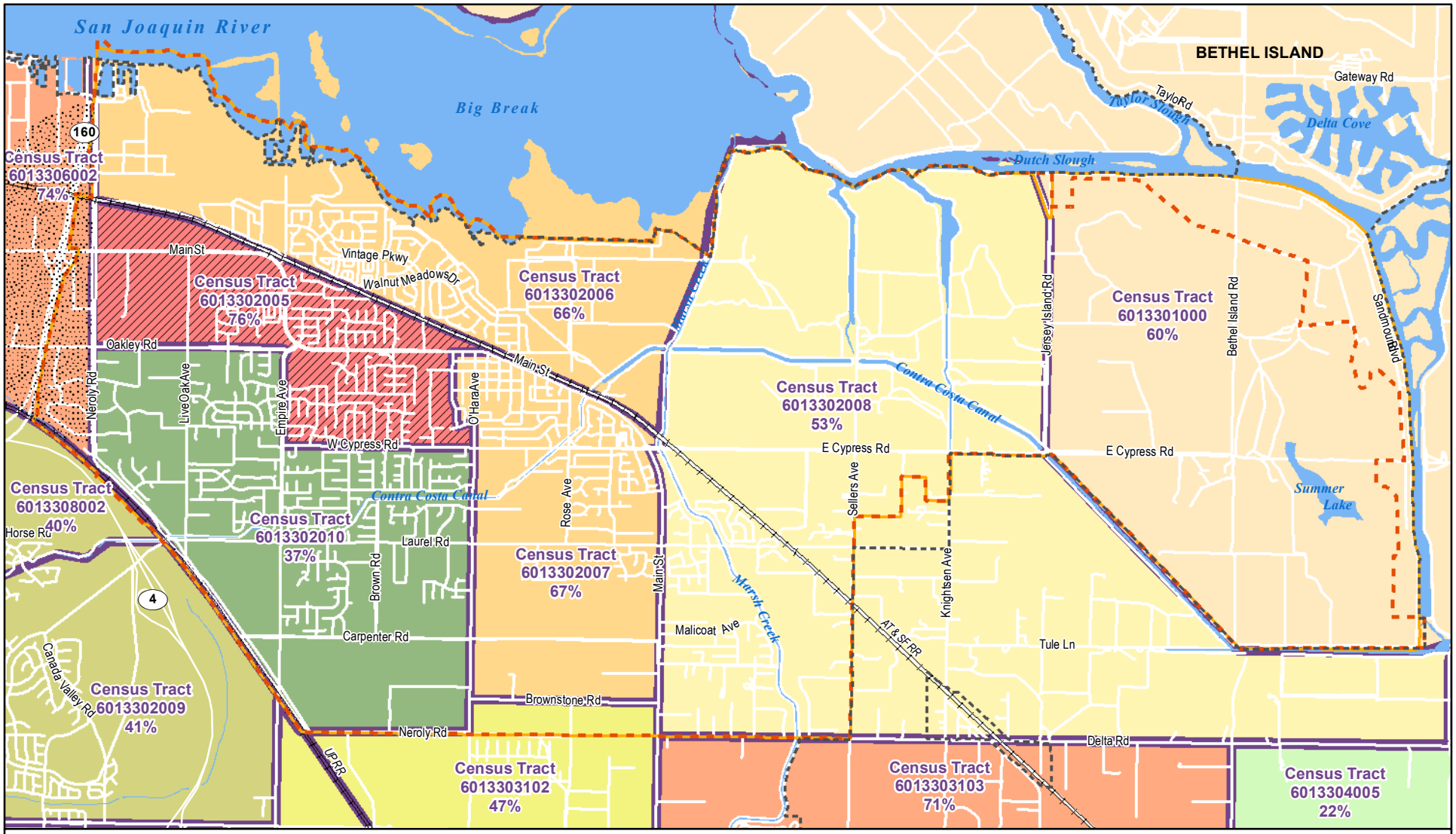
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LEGEND

Disadvantaged

- CalEnviroScreen 3.0 percentile in top 25%
- Low-income area proximate to area burdened by pollution and other factors

CalEnviroScreen 3.0 Percentile Range

1-5%	20-25%	40-45%	60-65%	80-85%
5-10%	25-30%	45-50%	65-70%	85-90%
10-15%	30-35%	50-55%	70-75%	90-95%
15-20%	35-40%	55-60%	75-80%	95-100%

Boundaries

- Oakley City Limit
- Oakley Sphere of Influence
- Urban Limit Line
- Census Tract

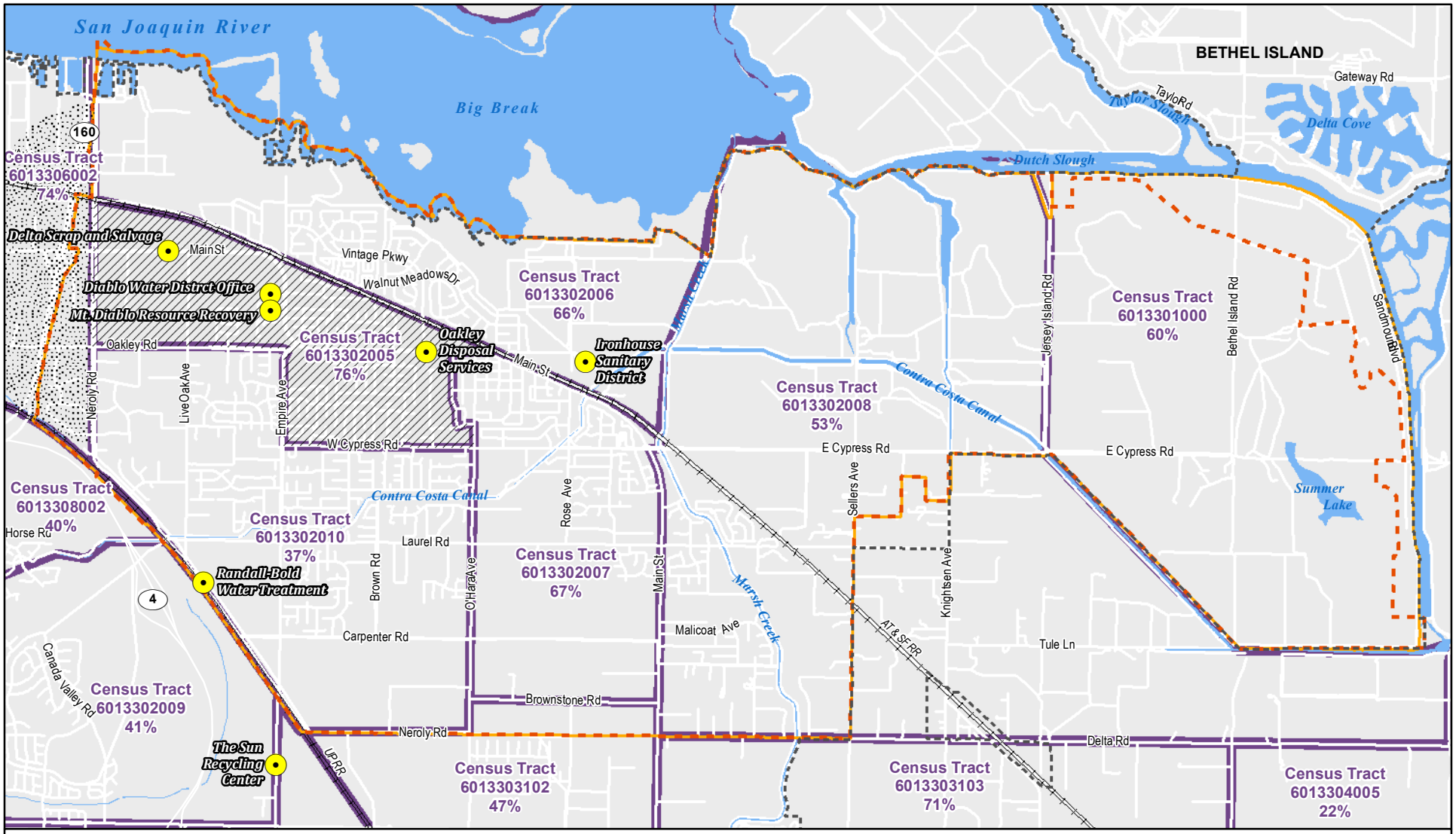
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Source: OEHHA CalEnviroScreen 3.0, June 2018; Contra Costa County GIS. Map date: October 2, 2019.

OAKLEY General Plan

Figure 1.

Disadvantaged Communities



LEGEND

- Public Improvement

Disadvantaged Communities

- CalEnviroScreen 3.0 percentile in top 25%
- Low-income area proximate to area burdened by pollution and other factors

Boundaries

- Oakley City Limit
- Oakley Sphere of Influence
- Urban Limit Line
- Census

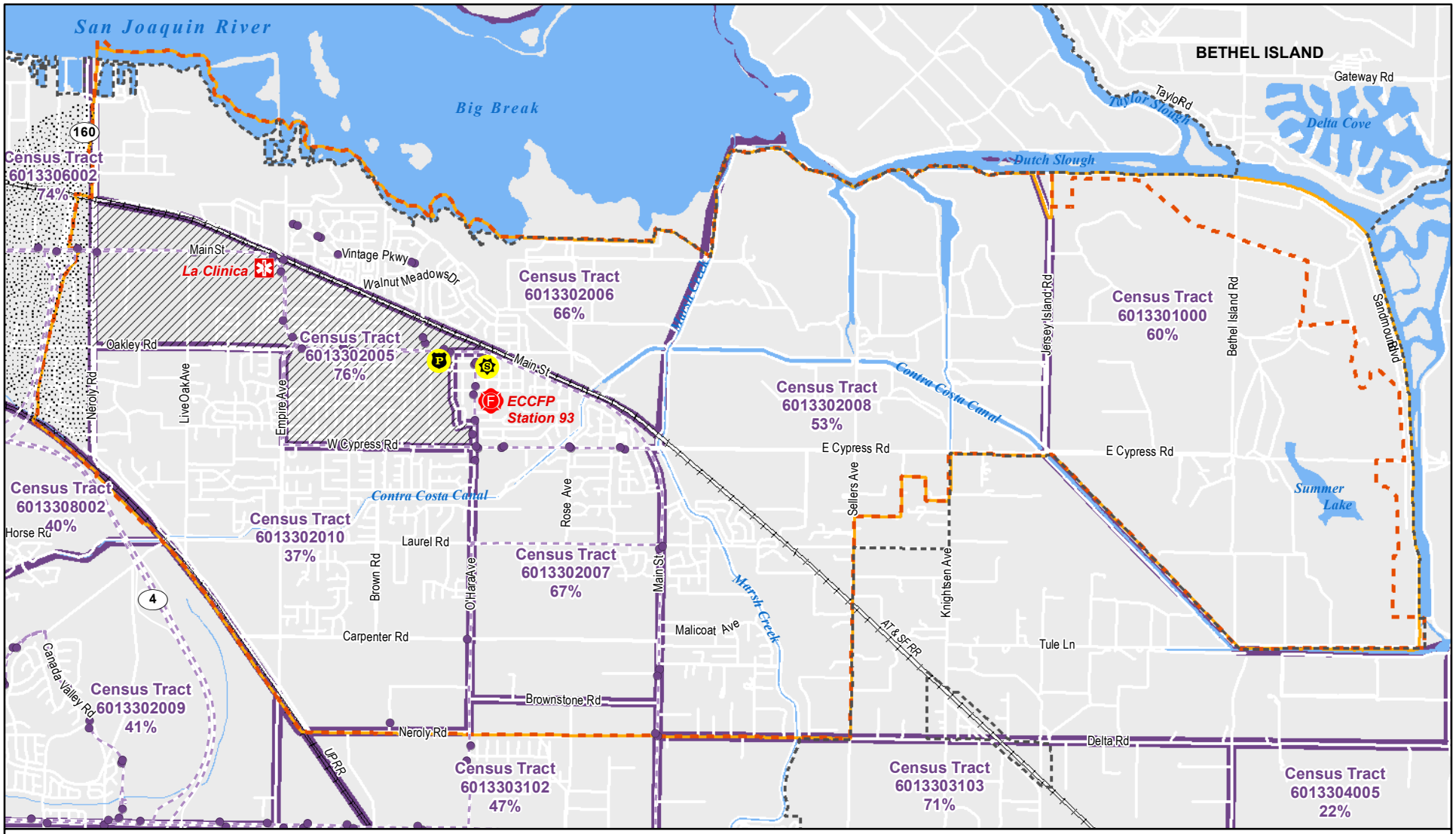
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Source: OEHHA CalEnviroScreen 3.0, June 2018; SB 535; Contra Costa County GIS. Map date: October 2, 2019.

OAKLEY General Plan

Figure 2.

Public Improvements



LEGEND

Public Services
- Fire Station
- Medical Facility
- Police Department
- Sheriff's Office

Disadvantaged
- CalEnviroScreen 3.0 percentile in top 25%
- Low-income area proximate to area burdened by pollution and other factors

Boundaries
- Oakley City Limit
- Oakley Sphere of Influence
- Urban Limit Line
- Census Tract

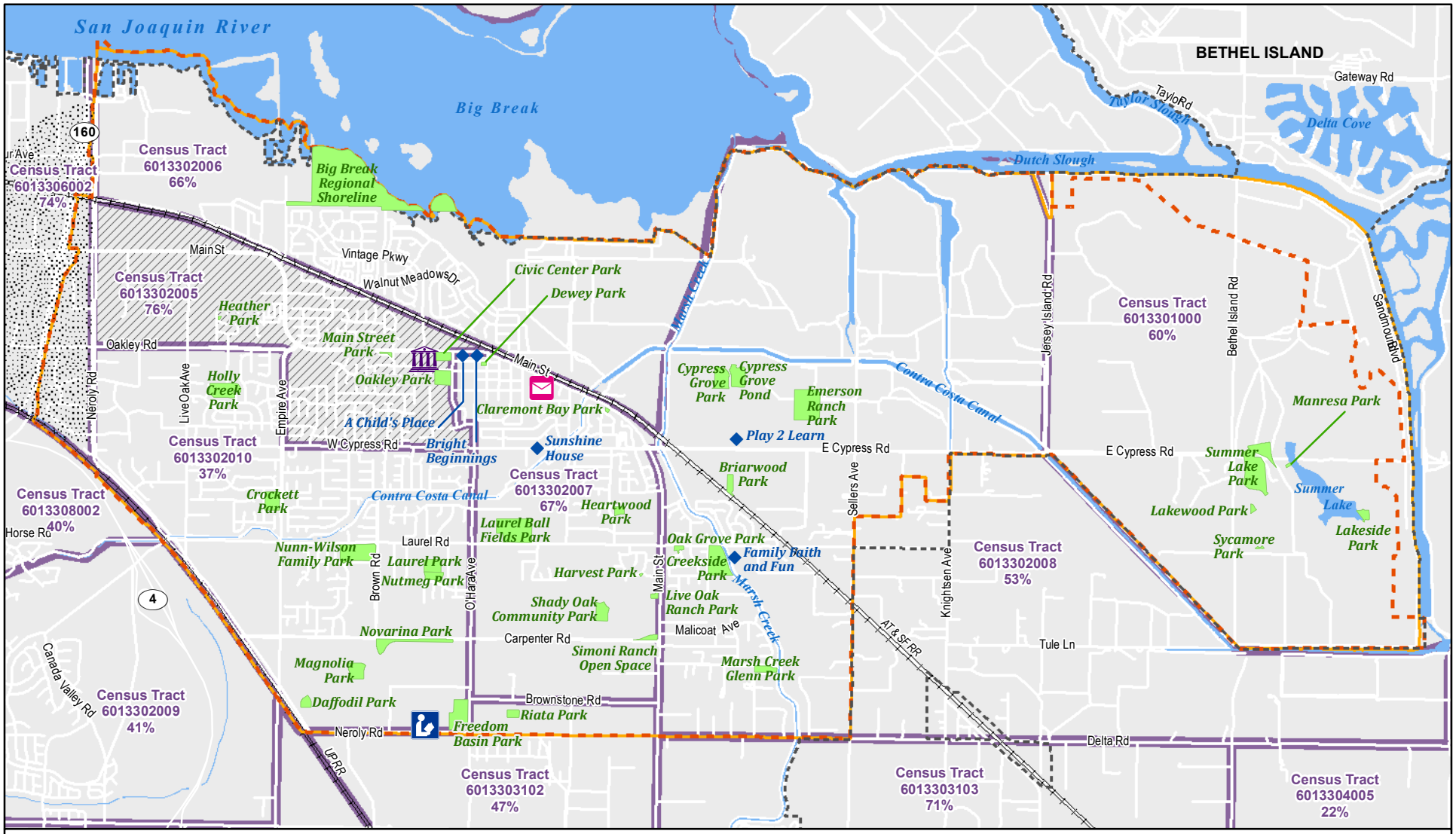
0 ½ 1 Miles

OAKLEY General Plan

Figure 3.

Public Services

Source: OEHHA CalEnviroScreen 3.0, June 2018; SB 535; Contra Costa County GIS. Map date: October 2, 2019.



OAKLEY
General Plan

LEGEND

Community Facilities
- Daycare Center
- Oakley City Hall
- Oakley Library
- United States Post Office
- Park

Disadvantaged Communities
- CalEnviroScreen 3.0 percentile in top 25%
- Low-income area proximate to area burdened by pollution and other factors

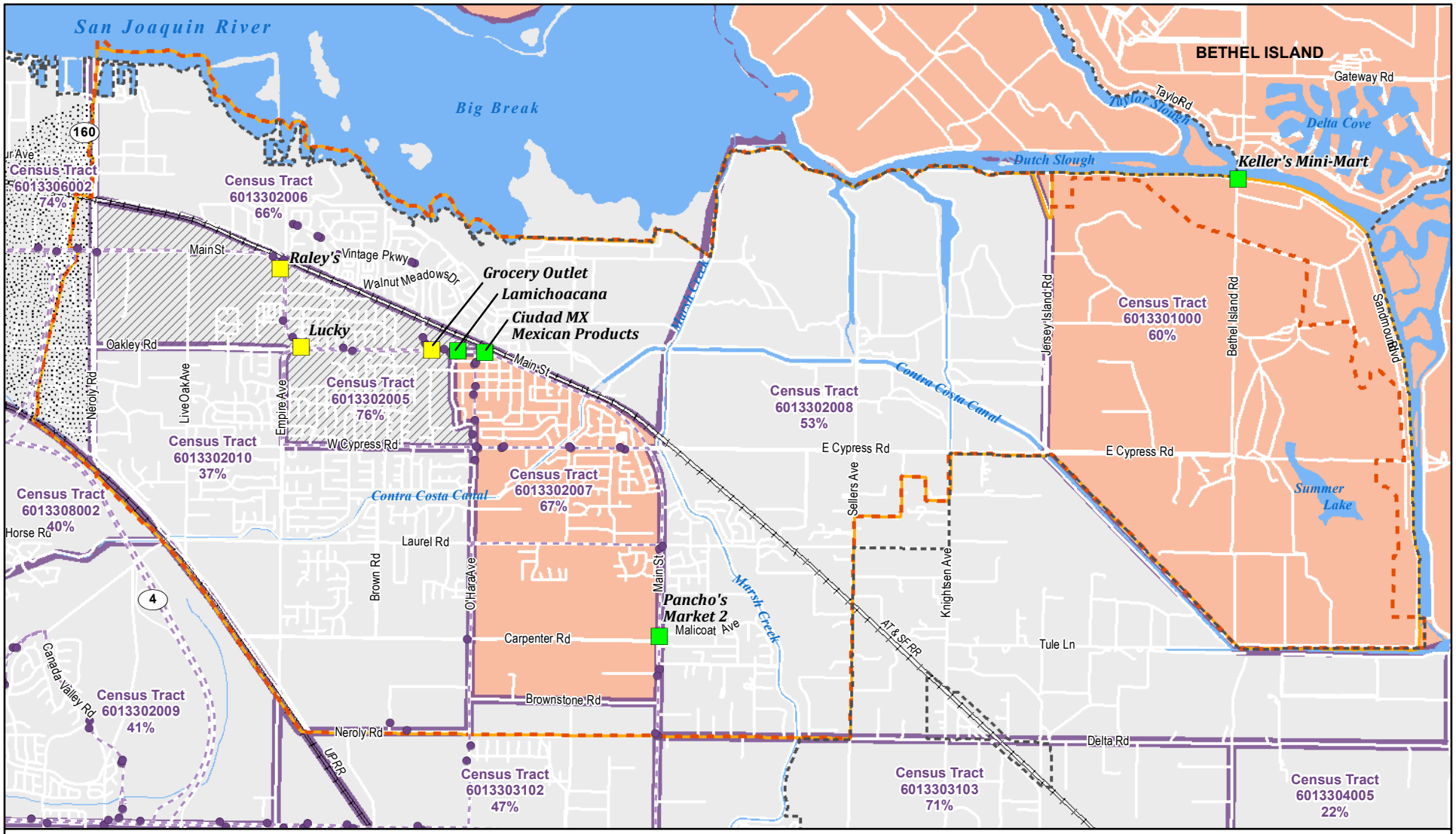
Boundaries
- Oakley City Limit
- Oakley Sphere of Influence
- Urban Limit Line
- Census Tract

0 ½ 1 Miles

Source: OEHHA CalEnviroScreen 3.0, June 2018; SB 535; Contra Costa County GIS; Google Maps. Map date: October 2, 2019.

Figure 4.

Community Facilities



LEGEND

Food Access
- Grocery Store
- Supermarket
- Food Desert
- Bus Stop
- Bus Route

Disadvantaged Communities
- CalEnviroScreen 3.0 percentile in top 25%
- Low-income area proximate to area burdened by pollution and other factors

Boundaries
- Oakley City Limit
- Oakley Sphere of Influence
- Urban Limit Line
- Census Tract

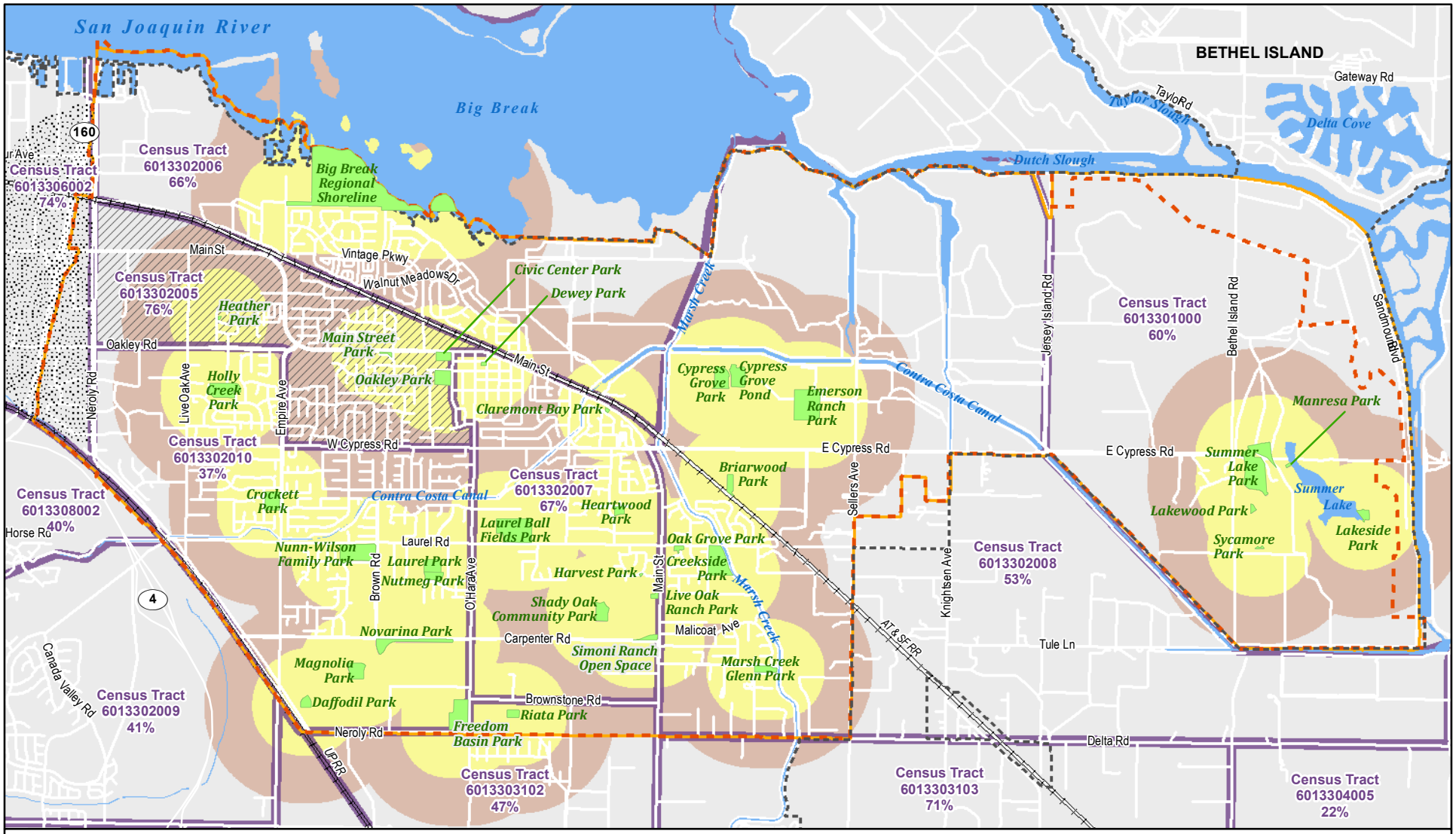
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OAKLEY General Plan

Figure 5.

Food Access Map

Sources: OEHHA CalEnviroScreen 3.0, June 2018; SB 535; Contra Costa County GIS; California Department of Public Health, Nutrition and Obesity Prevention Branch GIS Map Viewer; Google Maps. Map date: October 2, 2019.



LEGEND

Parks Facilities
- Park
- Quarter-Mile Buffer of Parks
- Half-Mile Buffer of Parks

Disadvantaged Communities
- CalEnviroScreen 3.0 percentile in top 25%
- Low-income area proximate to area burdened by pollution and other factors

Boundaries
- Oakley City Limit
- Oakley Sphere of Influence
- Urban Limit Line
- Census Tract

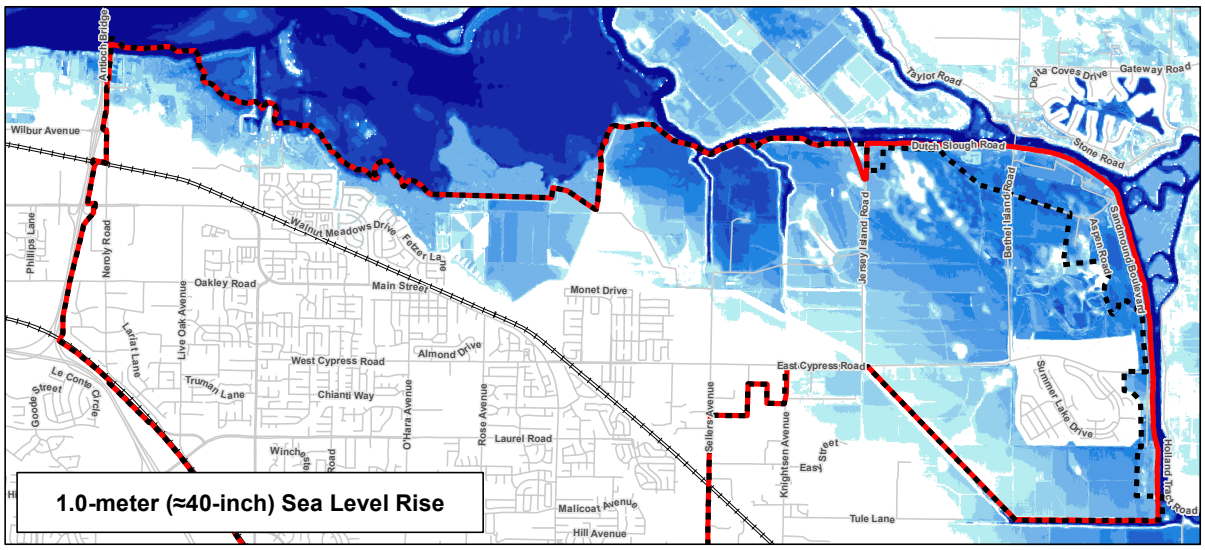
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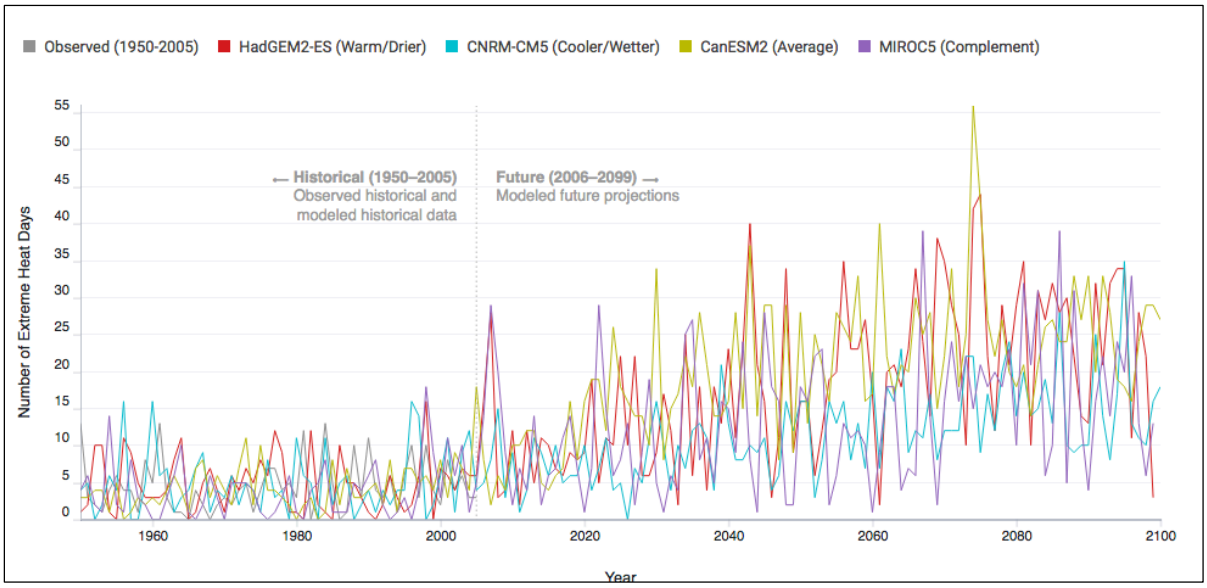
Source: OEHHA CalEnviroScreen 3.0, June 2018; SB 535; Contra Costa County GIS; Google Maps. Map date: October 2, 2019.

OAKLEY General Plan

Figure 6.

Parks and Recreation Facilities





October 2019

CLIMATE ADAPTATION WHITE PAPER

City of Oakley Focused General Plan Update

Table of Contents

Table of Contents 1

1. Background and Regulatory Framework 2
2. Climate Change Linkages and Effects 12
3. Issues and Priorities 28

References 30

1. BACKGROUND AND REGULATORY FRAMEWORK

Background

Climate change contributes to ongoing, escalating impacts on people, the economy, and the environment on both the local and global level. Addressing and preparing for these impacts requires collaboration and transformative action among economic, governmental, social, environmental, and other elements. In recent years, California has been at the forefront of developing approaches to promote resiliency to the effects of climate change and reduce greenhouse gas (GHG) emissions while continuing to foster economic growth, social equity, and environmental protection. This White Paper addresses the federal, state, and regulatory framework related to climate change and greenhouse gas emissions, the status of local climate action efforts, conditions related to climate change, including primary GHG emissions sources, and potential impacts associated with climate change, including sea-level rise, extreme heat, changes in precipitation and drought, increased risk of wildfire and flooding, and other impacts.

This white paper provides an overview of the existing and future impacts of climate change on people and the built environment. This includes descriptions of the regulatory framework relating to climate change. An overview of the regulatory framework is presented first, followed by an assessment climate change impacts on the community, and a discussion of how to address the community's priorities and concerns on climate change, including through mitigation and adaption.

This section identifies terminology associated with climate change and GHG issues and the associated regulatory framework at the federal, state, regional, and local levels.

Key Terms

Acre-feet (AF). A unit of volume equal to the volume of a sheet of water one acre in area and one foot in depth; equivalent to 43,560 cubic feet.

Bay Area Regional Reliability (BARR). A partnership made up of several large water suppliers serving six counties in the San Francisco Bay Area. Partners include Alameda County Water District, Bay Area Water Supply and Conservation Agency, Contra Costa Water District, East Bay Municipal Utility District, Marin Municipal Water District, San Francisco Public Utilities Commission, Santa Clara Valley Water District, and Zone 7 Water Agency.

CALGreen. The State of California mandatory green building code.

Carbon Dioxide-equivalent (CO_2e). A standard unit for measuring carbon footprints, expressed in terms of the amount of carbon dioxide that would create the same amount of global warming.

Cap-and-Trade Program. A Cap-and-Trade Program is a common term for a government regulatory program designed to limit, or cap, the total level of emissions of carbon dioxide as a result of industrial activity. The California Cap-and-Trade Program sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal designed to drive long-term investment in cleaner fuels and more efficient use of energy.

Contra Costa Water District (CCWD). An urban water supplies that owns and operates a public water system, as defined in the California Water Code. CCWD is both a retail and wholesale water supplier. CCWD supplies wholesale untreated water to several municipalities in Contra Costa County and Diablo Water District.

Coastal Storm Monitoring System (CoSMoS). A tool developed by the United States Geologic Survey that can simulate sea-level rise in combination with storm events and other coastal dynamics.

Central Valley Project (CVP). A federal water management project providing irrigation and municipal water to a large portion of California's Central Valley.

Diablo Water District (DWD). The water district that supplies potable water to the City of Oakley.

East Contra Costa Integrated Regional Water Management (ECCC IRWM). A collaborate effort to manage all aspects of water resources in the East Contra Costa region. The East Contra Costa Region is a distinct geographic region, covering 50 square miles, which is isolated from its neighboring regions by the ridge lines of Mt Diablo to the south and west, and the Sacramento-San Joaquin Delta waterways to the north and east.

Federal Clean Air Act (FCAA). A federal law designed to control air pollution on the nation level.

Greenhouse Gas (GHG). A gas that contributes to the global greenhouse effect by absorbing infrared radiation, which include carbon dioxide and chlorofluorocarbons.

Intergovernmental Panel on Climate Change (IPCC). The United Nations body for assessing the science related to climate change.

Ironhouse Sanitary District (ISD) Wastewater Treatment Facility. The ISD wastewater treatment facility is located in the City of Oakley. ISD provides sewage collection, treatment and disposal for the City of Oakley, Bethel Island, and areas outside of the Oakley city limits.

Oakley Regional Board Waste Treatment Plant (RBWTP). The RBWTP in Oakley is jointly owned by CCWD and DWD. The DWD portion of the facility delivers treated water to the City of Oakley.

State Water Project (SWP). The state water management project providing drinking water to more than 23 million people in California.

United States Environmental Protection Agency (EPA). An independent agency of the United States federal government for environmental protection.

Urban Water Management Plan (UWMP). Urban Water Management Plans are prepared by urban water suppliers every 5 year to support long-term resource planning and water supply sustainability.

Vector-borne Disease (VBD). Illnesses caused by parasites, viruses and bacteria that are transmitted by mosquitoes, sandflies, triatomine bugs, blackflies, ticks, tsetse flies, mites, snails, and lice.

Regulatory Framework

Federal

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor National Ambient

Air Quality Standards (NAAQS) vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. As discussed in Section 5.2, the FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria and recognizes the importance for each state to locally carry out the requirements of the FCAA, as consideration of local industries, geography, housing patterns, etc. are needed to address pollution control at the local level.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 required that all vehicles sold in the United States meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Intermodal Surface Transportation Efficiency Act

The Intermodal Surface Transportation Efficiency Act (ISTEA) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that metropolitan planning organizations (MPOs), such as the Metropolitan Transportation Commission (MTC), were to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process was then to address these policies. Another

requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a criterion, along with cost and other values that determine the best transportation solution.

Moving Ahead for Progress in the 21st Century

MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law on July 6, 2012. MAP-21 creates a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The federal government's goal is to reduce the greenhouse gas (GHG) intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide the EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

State

Assembly Bill 1493

In response to Assembly Bill (AB) 1493, the CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961), and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. For passenger cars and light-duty trucks 3,750 pounds or less loaded vehicle weight (LVW), the 2016 GHG emission limits are approximately 37 percent lower than during the first year of the regulations in 2009. For medium-duty passenger vehicles and light-duty trucks 3,751 LVW to 8,500 pounds gross vehicle weight (GVW), GHG emissions are reduced approximately 24 percent between 2009 and 2016.

The CARB requested a waiver of federal preemption of California's Greenhouse Gas Emissions Standards. The intent of the waiver is to allow California to enact emissions standards to reduce carbon dioxide and other greenhouse gas emissions from automobiles in accordance with the regulation amendments to the CCRs that fulfill the requirements of AB 1493. The EPA granted a waiver to California to implement its greenhouse gas emissions standards for cars.

Assembly Bill 1007

AB 1007 (Pavley, Chapter 371, Statutes of 2005) directed the CEC to prepare a plan to increase the use of alternative fuels in California. As a result, the CEC prepared the State Alternative Fuels Plan in consultation with the state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce greenhouse gas emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the state to meet a target for use of biomass electricity.

California Executive Orders S-3-05, S-20-06, and B-30-15, Assembly Bill 32, and Senate Bill 32

On June 1, 2005, then Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that the CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

In April 2015, Governor Jerry Brown signed Executive Order B-30-15, which requires that there be a reduction in GHG emissions to 40% below 1990 levels by 2030. This intermediate target was codified into law by Senate Bill 32 (SB 32), which was signed into law on September 8, 2016.

Climate Change Scoping Plan

On December 11, 2008, the CARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of the CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The CARB updated the Scoping Plan in 2013 (*First Update to the Climate Change Scoping Plan*) (2013 Update) and again in 2017 (the *Final 2017 Scoping Plan Update*) (2017 Update). The 2013 Update built upon the initial Scoping Plan with new strategies and recommendations, and also set the groundwork to reach the long-term goals set forth by the state. The 2017 Update

expanded the scope of the plan further by focusing on the strategy for achieving the state's 2030 GHG target of 40 percent emissions reductions below 1990 levels (to achieve the target codified into law by SB 32), and substantially advances toward the state's 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. The 2017 Update is helping the State of California to:

- Lower GHG emissions on a trajectory to avoid the worst impacts of climate change;
- Support a clean energy economy which provides more opportunities for all Californians;
- Provide a more equitable future with good jobs and less pollution for all communities; and
- Improve the health of all Californians by reducing air and water pollution and making it easier to bike and walk.

The California 2030 GHG reduction target of 40 percent emissions reductions below 1990 levels guides the 2017 Update. The 2017 Update includes a suite of specific actions to meet the State's 2030 GHG reduction target, including additional measures developed or required by legislation since the 2015 Update, such as extending the LCFS to an 18 percent reduction in carbon intensity beyond 2020, and the requirements of SB 350 to increase renewables to 50 percent and to double energy efficiency savings. The 2017 Update also included the Mobile Source Strategy targets for more zero emission vehicles and much cleaner trucks and transit, the Sustainable Freight Action Plan to improve freight efficiency and transition to zero emission freight handling technologies, and the requirements under SB 1383 to reduce anthropogenic black carbon by 50 percent and hydrofluorocarbon and methane emissions by 40 percent below 2013 levels by 2030. The adoption of AB 398 into State law on July 25, 2017, clarifies the role of the Cap-and-Trade Program through December 31, 2030.

Senate Bill 743

SB 743, passed into law in 2013, changes the way that public agencies evaluate the transportation impacts of projects under CEQA through balancing the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHGs. The 2017 Update to the Scoping Plan identified that slower VMT growth from more efficient land use development patterns would promote achievement of the state's climate goals.

As detailed in SB 743, the Governor's Office of Planning and Research (OPR) was tasked with developing potential metrics to measure transportation impacts and replace the use of vehicle delay and level of service (LOS). More detail about SB 743 is provided in the Chapter 2 (Circulation).

In December 2018, OPR released its final changes to the CEQA Guidelines, including the addition of Section 15064.3 that implements SB 743. In support of these changes, OPR published its Technical Advisory on Evaluating Transportation Impacts in CEQA, which recommends that the transportation impact of a project be based on whether it would generate a level of VMT per capita (or VMT per employee) that is 15 percent lower than existing development in the region. OPR's technical advisory explains that this criterion is consistent with Section 21099 of the California Public Resources Code, which states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions". It is also consistent with the statewide per capita VMT reduction target developed by Caltrans in its Strategic Management Plan, which calls for a 15 percent reduction in per capita VMT, compared to 2010 levels, by 2020. Additionally, the California Air Pollution Control Officers Association (CAPCOA) determined that a 15 percent reduction in VMT is typically achievable for projects. CARB's First Update to the Climate Change Scoping Plan also called for local governments to set communitywide GHG reduction targets of 15 percent below then-current levels by 2020. Although not required, a lead agency may elect to be governed by the provisions of Section 15064.3 immediately. However, the provisions of Section 15064.3 do not apply statewide until July 1, 2020.

Executive Order B-48-18: Zero-Emission Vehicles

In January 2018, EO B-48-18 was signed into law and requires all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations (EVCSs) by 2025. It specifies that 10,000 of the EVCSs should be direct current fast chargers. This Executive Order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016) to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential uses through the Low Carbon Fuel Standard Program, and recommend how to ensure affordability and accessibility for all drivers.

California Strategy to Reduce Petroleum Dependence (AB 2076)

In response to the requirements of AB 2076, the CEC and the CARB developed a strategy to reduce petroleum dependence in California. The strategy, *Reducing California's Petroleum Dependence*, was adopted by the CEC and CARB in 2003. The strategy recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future. At the time of this writing, the Governor and Legislature are working to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and sport utility vehicles (SUVs) and increase the use of non- petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

Assembly Bill 2188: Solar Permitting Efficiency Act

Assembly Bill (AB) 2188, enacted in California in 2015, required local governments to adopt a solar ordinance by September 30, 2015 that creates a streamlined permitting process that conforms to the bests practices for expeditious and efficient permitting of small residential rooftop solar systems. The act is designed to lower the cost of solar installations in California and further expand the accessibility of solar to more California homeowners. The bulk of the time and cost savings associated with a streamlined permitting process comes from the use of a standardized eligibility checklist and a simplified plan. This bill also shortens the number of days for those seeking Homeowner's Association (HOA) approval for a written denial of a proposed solar installation.

Governor's Low Carbon Fuel Standard (Executive Order #S-01-07)

Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard. The Low Carbon Fuel Standard is incorporated into the State Alternative Fuels Plan and is one of the proposed discrete early action GHG reduction measures identified by the CARB pursuant to AB 32.

Senate Bill 375

Senate Bill (SB) 375 (SB 375) was built on AB 32 (California's 2006 climate change law). SB 375's core provision is a requirement for regional transportation agencies to develop a Sustainable Communities Strategy (SCS) in order to reduce GHG emissions from passenger vehicles. The SCS is one component of the existing Regional Transportation Plan (RTP). The SCS outlines the region's plan for combining transportation resources, such as roads and mass transit, with a realistic land use pattern, in order to meet a state target for reducing GHG emissions. The strategy must take into account the region's

housing needs, transportation demands, and protection of resource and farmlands. The current RTP/SCS for the San Francisco Bay Area is Plan Bay Area 2040. Plan Bay Area 2040 is the San Francisco Bay Area's roadmap for forecasting transportation needs through the year 2040, preserving the character of diverse communities, and adapting to the challenges of future population growth.

Additionally, SB 375 modified the state's Housing Element Law to achieve consistency between the land use pattern outlined in the SCS and the Regional Housing Needs Assessment allocation. The legislation also substantially improved cities' and counties' accountability for carrying out their housing element plans. Finally, SB 375 amended the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) to ease the environmental review of developments that help reduce the growth of GHG emissions.

Climate Action Program at Caltrans

The California Department of Transportation, Business, Transportation, and Housing Agency, prepared a Climate Action Program in response to new regulatory directives. The goal of the Climate Action Program is to promote clean and energy efficient transportation, and provide guidance for mainstreaming energy and climate change issues into business operations. The overall approach to lower fuel consumption and CO_2 from transportation is twofold: (1) reduce congestion and improve efficiency of transportation systems through mixed-use, higher-density, and transit-oriented development, operational improvements, and Intelligent Transportation Systems; and (2) institutionalize energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

The reasoning underlying the Climate Action Program is the conclusion that "the most effective approach to addressing GHG reduction, in the short-to-medium term, is strong technology policy and market mechanisms to encourage innovations. Rapid development and availability of alternative fuels and vehicles, increased efficiency in new cars and trucks (light and heavy duty), and super clean fuels are the most direct approach to reducing GHG emissions from motor vehicles (emission performance standards and fuel or carbon performance standards)."

Advanced Clean Cars Program

In January 2012, the CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The program will have significant energy demand implications as battery, fuel cell, and/or plug-in hybrid electric vehicle sales increase overtime, creating new demand for electricity services both in residential and commercial buildings (e.g. charging stations) as well as demand for new EV and hydrogen fuel cell charging stations. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. According to the CARB, by 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016.

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. On January 1, 2010, the California Building Standards Commission adopted CALGreen and became the first state in the United States to adopt a statewide green building standards code. CALGreen requires new buildings to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. The California Building Energy Efficiency Standards are updated periodically. The most recent standards are effective as of January 1, 2017.

The next update to the standards (the 2019 California Energy Standards) are planned to take effect on January 1, 2020. Included as part of the 2019 California Energy Standards are rooftop solar power requirements. These requirements mandate that all new homes under three stories high install solar panels (starting January 1, 2020), and that solar systems must be sized to net out the annual kilowatt-hour energy usage of the dwelling. The updated Standards also incentivize "demand-responsive technologies," including battery storage and heat pump water heaters.

CEQA Guidelines

In late 2018, amendments to the CEQA Guidelines were finalized, including changes to CEQA Guidelines Section 15064.4, which addresses the analysis of greenhouse gas emissions. The amendments were approved by the Office of Administrative Law and filed with the Secretary of State. The amendments became effective on December 28, 2018.

The revision of CEQA Guidelines Section 15064.4 clarified several points, including the following:

- Lead agencies must analyze the greenhouse gas emissions of proposed projects.
- The focus of the lead agency's analysis should be on the project's effect on climate change, rather than simply focusing on the quantity of emissions and how that quantity of emissions compares to statewide or global emissions.
- The impacts analysis of greenhouse gas emissions is global in nature and thus should be considered in a broader context. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions.
- Lead agencies should consider a timeframe for the analysis that is appropriate for the project.
- A lead agency's analysis must reasonably reflect evolving scientific knowledge and state regulatory schemes.
- Lead agencies may rely on plans prepared pursuant to Section 15183.5 (Plans for the Reduction of Greenhouse Gases) in evaluating a project's greenhouse gas emissions.
- In determining the significance of a project's impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is consistent with those plans, goals, or strategies.
- The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change.

In addition, in order to assure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. The goal of conserving energy implies the wise and efficient use of energy.

Local

Bay Area Air Quality Management District 2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) 2017 Clean Air Plan is a roadmap for regional efforts to reduce air pollution and protect public health and the global climate. The 2017 Plan identifies potential rules, programs, and strategies to reduce GHG emissions and other harmful air pollutants in the Bay Area. The 2017 Plan complements and supports other important regional and state planning efforts, including Plan Bay Area and the State of California's 2030 Scoping Plan.

This Plan lays out 85 distinct control measures to decrease fossil fuel combustion, improve energy efficiency, and decrease emissions of potent GHGs and other pollutants. Numerous measures reduce multiple pollutants simultaneously, while others focus on a single type of pollutant - for example, "super-GHGs" like methane and black carbon.

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) was created in 1965 to address a shrinking San Francisco Bay due to haphazard filling and to increase shoreline public access. Since the San Francisco Bay is getting larger due to sea level rise, some flood protection strategies are expected to require larger amounts of fill than BCDC has ever previously permitted. In that vein, the BCDC has developed programs and tools to help prepare for and adapt to rising sea levels in the San Francisco Bay Area. It should be noted that while BCDC's jurisdiction does not extend to Oakley, their work is relevant to the entire San Francisco Bay Area.

The Policies for a Rising Bay project is part of the San Francisco Bay Conservation and Development Commission's climate change program, which involves building the region's capacity to plan for sea level rise and ensuring that the Commission's laws and policies support and encourage appropriate resilience and adaptation. Separately, the BCDC unanimously approved an amendment to the San Francisco Bay Plan to address climate change, which is included in the current version of the San Francisco Bay Plan. The BCDC also developed the Adapting to Rising Tides program, which provides guidance, tools, and information to address the specific challenges of climate change on the San Francisco Bay. The Adapting to Rising Tides program includes a Bay Shoreline Flood Explorer tool, which provides interactive mapping that illustrates sea level rise at the local level along the San Francisco Bay.

Oakley 2005 and 2010 Community-wide and Municipal Operations GHG Inventories

In 2011, the City of Oakley (in collaboration with ICLEI – Local Governments for Sustainability) developed baseline year 2005 and 2010 greenhouse gas inventories for the community and for government operations. These GHG inventories provide a "snapshot" of pre-existing GHG emissions within the community and the local government, and includes details to guide decision making. They also serve as a benchmark against which future GHG reductions can be measured.

Oakley Strategic Energy Plan

In the Fall of 2015, the City of Oakley Energy Leadership Team published their Strategic Energy Plan (SEP). The primary purpose of the plan was to help Oakley become a more energy-efficient economy and to move toward a more sustainable future. To meet these challenges, the City of Oakley agreed to participate as a "Pilot City" in the East Bay Energy Watch (EBEW) Strategic Energy Planning Program. EBEW is the Pacific Gas and Electric (PG&E) Local Government Partnership in Alameda and Contra Costa Counties, providing cities in both counties with energy efficiency program and technical assistance services, as well as incentives and rebates for implementing energy savings projects. The SEP outlines a comprehensive and actionable approach for the City to meet its "Energy Vision" and energy-use reduction goals while reflecting the City's unique culture, values, and constraints.

2. CLIMATE CHANGE LINKAGES AND EFFECTS

Greenhouse Gases and Climate Change Linkages

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three greenhouse gases have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial sector (California Energy Commission, 2018).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced approximately 429 million gross metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2016 (California Energy Commission, 2018). By 2020, California would need to produce below 431 $MMTCO_2e$ by 2020 (California Air Resources Board, 2017).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (23%), the electricity generation sector (including both in-state and out of-state sources) (16%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Energy Commission, 2018).

Effects of Global Climate Change

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

The impacts of climate change are already being felt in the San Francisco Bay Area and Northern California. Besides containing secular changes over several decades, the annual temperature record at San Francisco and surrounding San Francisco Bay locations (such as Oakley) also exhibit shorter period variability from time scales of a few years to a few decades. From the observed and from the model historical simulations, it is seen that the model simulations begin to warm more substantially in the 1970s; this is likely a response to effects of GHG increases which began to increase significantly during this time period (California Energy Commission, 2012).

Over the next century, increasing atmospheric GHG concentrations are expected to cause a variety of changes to global climate conditions, including sea level rise and storm surge in coastal areas, increased riverine flooding, and higher temperatures more frequently (leading to extreme heat events and wildfires), particularly in inland areas. Local impacts stemming from climate related conditions range from impacts to extreme temperatures, flooding, public health, wildfires and infrastructure.

For example, if the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

According to the most recent California Climate Change Assessment (*California's Fourth Climate Change Assessment*) (2018), and the Contra Costa Health Services *Climate Change Vulnerability in Contra Costa County: A Focus on Heat* report (2015), the impacts of global warming in California are anticipated to include, but are not limited to, the following:

- Ocean Warming
- Extreme Heat
- Precipitation
- Wildfires
- Flooding & Sea Level Rise
- Water Resources
- Public Health
- Biological Resources
- Agriculture
- Energy Consumption
- Infrastructure

Because local governments largely determine the shape of development through land-use plans, regulations, and implementing decisions, local governments play an important role in developing climate change strategies including resiliency planning and adaptation. Inasmuch as local governments play an important role in adaptation strategies through local land use plans and policies, many climate adaptation strategies will need to be coordinated as part of a larger regional, or statewide strategy requiring cooperation by many local governments, and decision making and regulatory bodies.

This section addresses future conditions anticipated to result from climate change as well as resiliency planning and adaptation strategies at the statewide, regional, and local levels, where applicable. Information in this section is primarily derived from the Adapting to Rising Tides: Contra Costa County Assessment and Adaptation Project, the Bay Area Sea Level Rise Analysis and Mapping Project, and the California Energy Commission's Cal-Adapt tool.

Ocean Warming

California has recently experienced unprecedented events along its coasts including a historic marine heat wave, record harmful algal blooms, fisheries closures, and a significant loss of northern kelp forests. These events increase concern that coastal and marine ecosystems are being transformed, degraded, or lost due to climate change impacts, particularly sea-level rise, ocean acidification, and warming. From 1900 to 2016, California's coastal oceans warmed by 1.26 °F.

"The Blob," a very warm patch of ocean water off the coast of California from 2013-2016, demonstrated that anomalously warm ocean temperatures can produce unprecedented events, including the mass abandonment of sea lion pups and California's record-setting drought. Rising bay water and groundwater levels will also increase salinity intrusion and subsurface flooding. If this groundwater intrudes into sewer systems, treatment processes will become more expensive and wastewater recycling capabilities will be reduced. Additionally, climate change will require improved stormwater management in the Bay Area as extreme storm events increase in size and frequency (State of California, 2018).

Extreme Heat

Temperature is a climate variable, and is directly affected by changes in global atmospheric and oceanic temperatures. While trends in average annual temperature are an important indicator of climate change, extreme temperature events have greater impacts on society due to their episodic nature. Therefore, vulnerability and risk assessment tends to specifically focus on extreme heat events and not on average temperature changes.

The United Nations' Intergovernmental Panel on Climate Change (IPCC) defines extreme heat events as a period of abnormally hot weather. While extreme heat events can have various durations, Cal-Adapt defines an extreme heat event as a period of five or more consecutive extreme heat days. Cal-Adapt defines an extreme heat day in a given region as a day in April through October where the maximum temperature exceeds the 98th historical percentile of maximum temperatures for that region based on daily temperature data from 1961 to 1990. The 98th historical percentile of maximum temperatures varies by locality and inland areas tend to be at a greater risk of extreme heat events when compared to areas near the coast.

There was a major heat wave in California from mid- to late July 2006, with 10 days of record-breaking temperatures. Across the state, at least 140 extreme heat-related deaths were reported, and researchers estimate that the heat wave resulted in over 16,166 more emergency department visits than average and 1,182 more hospitalizations than average (Contra Costa Health Services, 2015).

Increasing numbers of extreme heat days are projected in the coming decades. The California's Changing Climate 2018 report points out that increasing high heat days from climate change have a number of impacts on communities, including direct

heat-related mortalities and worsening of chronic health conditions. The Cal-Adapt tool identifies that average annual temperature in Contra Costa County would increase from approximately 71.4 °F during the period for 1961 to 1990, to 76.5 °F for the period from 2070 to 2099 (California Energy Commission, 2019). The Cal-Adapt tool also identifies that, for Oakley, while there were an average of four days per year of extreme heat days during the historical period from years 1961 to 1990, it is projected that there will be an average of 21 days of extreme heat days per year during the model projections for the period from years 2070 to 2099 (California Energy Commission, 2019).

Precipitation

Precipitation change is a climate variable that is directly affected by changes in global atmospheric and oceanic temperatures. Projected changes in precipitation include annual trend changes as well as extreme precipitation events. An extreme weather event is an occurrence that is significantly different from typical weather at a specific location and time of year. Extreme precipitation events can lead to flooding, mudslides and other damaging events. In a changing climate the frequency and intensity of such events will likely change across California.

The Cal-Adapt tool identifies the estimated intensity and frequency of extreme precipitation events in Oakley. During the historical period from October 1961 through September 1990, the average level of precipitation during an extreme precipitation event (i.e. those precipitation events that are on average exceeded once every 20 years) was approximately 3.1 inches, whereas during the forecasted period from October 2070 through September 2099, precipitation levels during extreme precipitation events are expected to range from approximately 2.8 inches to 4.1 inches (dependent on the model selected).[1] Separately, the Cal-Adapt tool provides that the number of extreme precipitation events in a given year (defined as those events with 2-day rainfall totals above an extreme threshold of 1 inch) in Oakley would increase from approximately 7 per year during the historical period from 1961 to 1990, to 11 per year during the forecasted period from 2070 through 2099 (California Energy Commission, 2019).

Wildfires

Wildfire occurs as a result of conditions affected by complex interactions between primary variables (including precipitation, and temperature) and other factors (including changes in cover type). Wildfires are unplanned, natural occurring fires and may be caused by lightning, accidental human ignitions, arson, or escaped prescribed fires. Weather is one of the most significant factors in determining the severity of wildfires; natural fire patterns are driven by conditions such as drought, temperature, precipitation, and wind, and also by changes to vegetation structure and fuel (i.e., biomass) availability. Wildfires pose a great threat to life and property, particularly when they move from forest or rangeland into developed areas.

Climate change will make forests more susceptible to extreme wildfires. By 2100, if greenhouse gas emissions continue to rise, one study found that the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and that average area burned statewide would increase by 77 percent by the end of the century. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease.

In recent years, the area burned by wildfires has increased in parallel with increasing air temperatures. Wildfires have also been occurring at higher elevations in the Sierra Nevada mountains, a trend which is expected to continue under future

[1] Four models were selected by California's Climate Action Team Research Working Group as priority models for research contributing to California's Fourth Climate Change Assessment: a warm/dry simulation; a cooler/wetter simulation; an average simulation; and the model simulation that is most unlike the first three for the best coverage of different possibilities.

climate change. Climate change will likely modify the vegetation in California, affecting the characteristics of fires on the land. Land use and development patterns also play an important role in future fire activity. Because of these complexities, projecting future wildfires is complicated, and results depend on the time period for the projection and what interacting factors are included in the analysis. Because wildfires are affected by multiple and sometimes complex drivers, projections of wildfire in future decades in California range from modest changes from historical conditions to relatively large increases in wildfire regimes.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the state. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests is also expected to decrease as a result of global warming.

The Cal-Adapt tool identifies that, based on increased precipitation forecasted for the City of Oakley due to climate change, dependent on the climate change scenario selected, the annual mean area burned is forecasted to be reduced from approximately a range of 42.6 to 43.7 hectares per year during the 1961-1990 period to between 23.4 and 26.1 hectares per year for the 2070-2099 period, respectively (California Energy Commission, 2019).

Flooding & Sea Level Rise

Riverine and local flooding is influenced by precipitation and local conditions, such as ground cover and soil conditions. Riverine flooding occurs when heavy rainfall causes rivers or creeks to overtop their banks and inundate surrounding areas during extreme weather events. Urban flooding commonly occurs when local stormwater infrastructure is overwhelmed during extreme precipitation events.

Global models indicate that California will see substantial sea level rise during this century, with the exact magnitude depending on such factors as, global emissions, rate at which oceans absorb heat, melting rates and movement of land-based ice sheets, and local coastal land subsidence or uplift. Sea level rise is virtually certain to increase beyond the 6 inches that much of California experienced in the past century, but there are important questions involving how fast and how extreme the rates of sea-level rise will be. The National Oceanic and Atmospheric Administration models predict that sea level rise will increase by 0.3 to 2.5 meters (12 to 98 inches) by 2100, depending on the future GHG emissions levels (National Oceanic and Atmospheric Administration, 2017). Resultant effects could include increased coastal flooding, saltwater intrusion, and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result.

Statewide damages from rising sea levels could reach nearly $17.9 billion from inundation of residential and commercial buildings under 50 centimeters (~20 inches) of sea-level rise, which is close to the 95th percentile of potential sea-level rise by the middle of this century. A 100-year coastal flood, on top of this level of sea-level rise, would almost double the costs. Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Rising sea levels would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

Building resilience to sea level rise in California requires approaches tailored to communities' needs, climate impacts, and many other factors. Options to protect communities and ecosystems include combinations of armoring, natural infrastructure, and hybrid approaches. Decision-makers need tools to evaluate the economic and environmental costs and benefits of alternative strategies with more complete information. The *California's Fourth Climate Change Assessment* (Fourth

Assessment) contributed to this need by supporting the expansion of CoSMoS, which is a tool that can simulate sea-level rise in combination with storm events and other coastal dynamics.

Coastal protection strategies can include the restoration of tidal marshes, judiciously-placed coastal armoring, and beach renourishment for highly accessed urban locations (e.g., adding large volumes of sand, an expensive solution lasting only 1-2 years). However, by 2050, with increasing sea-level rise and coastal storms, localities may need to begin considering shoreline retreat strategies.

A large-scale tidal restoration project currently underway within Oakley is the Dutch Slough Tidal Restoration Project, implemented by Department of Water Resources (DWR). The Dutch Slough Project is located on the west Delta, within Oakley, and contains three parcels located on the western edge of the Delta. The project is expected to transform 1,187 acres of land into tidal marsh to provide habitat for salmon and other native fish and wildlife. Additionally, 55 acres of the south-central portion of Dutch Slough will be developed by the City of Oakley into a community park. The Dutch Slough project will be the Delta's largest restored fresh water tidal marsh. Construction on two of the parcels started in May 2018 and is expected to be completed in 2019, followed by revegetation planting. Restoration of the third parcel, Burroughs, would begin in 2020.

The restoration of marine plants and seaweeds in coastal environments is a tactic that could increase dissolved oxygen levels, at least for local areas. Ocean and coastal vegetation including marshes also sequester carbon, and quantifying the locations and contributions that marine plants can make to reducing carbon dioxide in local waters is needed. Other actions include reducing nutrient runoff from sewage disposal and excess agricultural fertilizer.

The Cal-Adapt tool identifies forecasted inundation of the San Francisco Bay Area, Sacramento – San Joaquin Delta (Delta), and the California Coast. The Cal-Adapt tool provides the ability to see the areas within Oakley that would be affected by flooding (due to a 100-year storm event), assuming current levels of infrastructure, under the following sea level rise scenarios: 0.5 meters, 1.0 meters, and 1.41 meters of sea level rise. Figure 1.1 illustrates the effects of each the 100-year storm event under each of these three sea level rise scenarios. As shown in Figure 1.1, under the 0.5-meter sea level rise scenario, parts of the northern and eastern portions of Oakley (i.e. in primarily agricultural and residential areas) would be flooded during a 100-year flood event. Under the 1.0-meter and 1.41-meter sea level rise scenarios, flooding would occur over a larger portion of this area. There are two marinas located within Oakley – Driftwood Marina, located in the northwest corner of Oakley, and Big Break Marina, located in the north-central portion of Oakley. As shown in Figure 1.1, each of these marinas would face a significant flooding, even during the 100-year flood event under the 0.5-meter sea level rise scenario (i.e. under the 0.5-meter sea level rise scenario, portions of the marinas could flood up to approximately 3 meters). Moreover, as shown in Figure 1.1, the tidal marshes and low-lying reclaimed land located within and near Oakley would be affected by increased flooding and sea level rise that is forecasted to occur due to climate change (San Francisco Estuary Institute & Aquatic Science Center, 2018). For example, various trails located along the shoreline, such as the Marsh Creek Regional Trail, would be subject to flooding during the 100-year flood under varying sea level rise scenarios. Areas within Oakley located further inland would not be affected by the 100-year flood event under these varying sea level rise scenarios, including all portions of Oakley south of Main Street and the BNSF railroad line.

Additionally, a large low-lying area (the far northeastern portion of Oakley) has been designated as part of the East Cypress Corridor Specific Plan (ECSP). The ECSP outlines the development of a comprehensive levee system for the area for flood control purposes. The levee system is planned to extend completely around the boundaries of ECSP's proposed new development, with interim levees added as full buildout of the ECSP occurs. Although most of the ECSP has not yet been built

out, the Summerlake residential community (located in the east portion of the ECSP) has already been developed, and is completely surrounded by a combination of permanent and interim earthen levees. Due to these levees, the Summerlake community is currently protected from flooding, including during the 100-year flood event under the 1.41-meter sea level rise scenario, as shown in Figure 1.1.[2] Relatedly, although the Cal-Adapt Tool identifies that the currently undeveloped areas of the ECSP would face significant flooding under the various sea level rise scenarios, the risk of flooding within these areas would be minimized for new development in this area due to the implementation of additional flood control measures as further development occurs. Therefore, the level of flooding in the ECSP area would be greatly reduced, compared with the level of flooding provided in Figure 1.1, as the ESCP area is further developed.

Separately, the *Bay Area Sea Level Rise Analysis and Mapping Project* mapped sea level rise scenarios for the area along the northern boundary of the mainland portion of the City limits, using the BCDC's Adapting to Rising Tides tool. Figures 1.2 and 1.3 illustrate the level and location of sea level rise inundation over four sea level rise scenarios, ranging from 12 inches to 83 inches of sea level rise, under two separate datasets (i.e. Figure 1-2 shows sea level rise scenarios under a 100-year flood event, while Figure 1.3 shows sea level rise with no flood event but under average high tide. The scenarios provided by the BCDC tool provide a range of sea level rise nearly consistent with the predictions for sea level rise by the National Oceanic and Atmospheric Administration, which predicts that that sea level rise will increase by 0.3 to 2.5 meters (12 to 98 inches) by 2100, depending on the future GHG emissions levels.[3] Similar to what is provided in Figure 1.1 from the Cal-Adapt tool, the BCDC tool predicts that large portions of the northern and eastern portions of Oakley would be inundated to varying degrees under these scenarios, with the most extreme flooding occurring under the most extreme sea level rise and storm surge scenarios. As shown in Figure 1.2, under the 100-year storm event, although the Summerlake residential community avoids inundation under the 12-inch, 24-inch, and 36-inch sea level rise scenarios, inundation of this community would occur under the most extreme (i.e. 83-inch) sea level rise scenario with the current infrastructure. The remaining portions of the ECSP area under current infrastructure would not flood under the 12-inch sea rise scenario, but would begin to flood under the 24-inch sea level rise scenario. However, the remainder of the ECSP area is expected to be well protected from flooding as buildout occurs in the ESCP area, due to the implementation of new levees and related flood protection measures. Flooding is anticipated at the two marinas in Oakley even under the 12-inch sea level rise scenario. Additionally, although the Ironhouse Sanitary District (ISD) wastewater treatment facility located in the northern portion of the City of Oakley would not be subject to flooding under the 12-inch, 24-inch, or 36-inch sea level rise scenarios, it would be subject to flooding under the most extreme (i.e. 83-inch) sea level rise scenario (as provided by Figure 1.2), if no further is taken to prevent flooding at this facility. Separately, Figure 1-3 shows that under average high tide, flooding under the 12-inch and 24-inch sea level rise scenarios would only occur along small portions of the northern portion of Oakley. However, Figure 1-3 identifies that under average high tide, flooding under the 83-inch scenario would be similar to but slightly reduced compared to the 83-inch scenario under the 100-year year flood event (as shown in Figure 1-2) (e.g. the ISD wastewater treatment facility is not projected to be flooded under average high tide, in comparison to the flooding at this site BCDC projects under the 100-year flood event).

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water

[2] The Summerlake community encompasses the area immediately surrounding Summer Lake Drive, in the far northeastern portion of Oakley.

[3] Data for sea level rise above 84 inches is not currently available from the BCDC for the City of Oakley.

during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

The state's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Delta, a major state fresh water supply.

Current management practices for water supply and flood management in California may need to be revised for a changing climate. This is in part because such practices were designed for historical climatic conditions, which are changing and will continue to change during the rest of this century and beyond. As one example, the reduction in the Sierra Nevada snowpack, which provides natural water storage, will have implications throughout California's water management system. Even under the wetter climate projections, the loss of snowpack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

The San Francisco Bay Area's water agencies rely on a diverse portfolio of local and imported sources. The reliability of these sources will vary dramatically in both the short and long term as the climate changes. Climate impacts – such as earlier melting of snowpack, increasing seawater intrusion into groundwater, increased rates of evapotranspiration, and levee failures or subsidence that contaminate Delta supplies – will affect both the quantity of water available and the quality of supplies (State of California, 2019).

Reliability concerns can be mitigated with more diverse water supply portfolios, additional water storage infrastructure above and belowground, and innovative groundwater management. Strategies for increasing supply reliability are being pursued by individual agencies and as part of a regional effort called the Bay Area Regional Reliability (BARR) partnership made up of several large water suppliers serving six counties. Alternatives under consideration by BARR and other Bay Area agencies include: expanding storage and conveyance infrastructure; increasing non-potable water recycling; implementing potable reuse and/or seawater desalination; promoting groundwater augmentation, banking, and conjunctive use; constructing interties between systems to enable additional water transfers; and harvesting stormwater. Reducing water demand can also increase reliability (State of California, 2019).

The Diablo Water District (DWD) supplies potable water to the City of Oakley. DWD is located in the northeastern corner of Contra Costa County, east of the City of Antioch and north of the City of Brentwood. DWD's service area includes the City of Oakley, the Town of Knightsen, and some of Bethel Island. According to the DWD's UWMP, projected water deliveries is expected to increase from approximately 2,263 million gallons (MG) in 2020 to 5,349 MG in 2040 (CDM Smith, 2016). This represents and increase of nearly 100% over the twenty-year period. Water demand in the City, in particular for industrial purposes, will increase as a result of more frequent, longer, and more extreme heat waves; increased air temperatures; increased atmospheric carbon dioxide levels; changes in precipitation, winds, humidity, atmospheric aerosol and ozone levels; and population growth. DWD does not provide water for agricultural uses, does not sell water to other agencies, and does not participate in exchanges or non- recurring agreements, saline barriers, groundwater banking, or groundwater recharge and conjunctive use programs.

Open space and Delta recreation areas are not irrigated with DWD water. In addition, DWD's policy is to require that large new turf landscape areas use private groundwater wells or non- potable water for irrigation. Landscape irrigation is assumed to increase over existing levels to accommodate small or isolated areas where it is not feasible to provide another source of

irrigation water. The DWD UWMP assumes that parks and landscape areas in new development areas, such as the East Cypress Corridor, will irrigate large landscape areas with groundwater, not with DWD water.

Generally speaking, any water supplies that are dependent on natural hydrology are vulnerable to climate change, especially if the water source originates from mountain snow pack. In addition to water supply impacts, changes in local temperature and precipitation are expected to alter water demand patterns. The generalized impacts of climate change on water supply would likely include increased water demands for irrigation and cooling purposes, and decreased total local surface runoff. Other impacts might include increased fire events that could impact water quality and sedimentation, as well as decreased groundwater recharge due to lower soil moisture (CDM Smith, 2016).

Most studies on climate change impacts to California's water supply have been conducted for the Northern California region, which supplies both the CVP and the SWP. The 2008 Reclamation Central Valley Operations Criteria and Plan evaluated the sensitivity of CVP and SWP deliveries to potential climate change and related sea level rise. Reclamation presented results from the CalSim II model, which simulates key water resources infrastructure in the Central Valley and Bay Delta region, for four different climate change scenarios and one sea level rise assumption. The climate change forecasts range from less warming to more warming, and drier to wetter. The baseline average delivery for these municipal and industrial water contractors is 201,000 AF per year, and with a one- foot sea level rise this baseline delivery is projected to decrease to 196,000 AF due to salinity restrictions and reverse flows in the Delta. The drier with more warming scenario further decreases deliveries to 181,000 AF, and the wetter, less warming scenario has the largest average deliveries at 207,000 AF per year (CDM Smith, 2016).

Water agencies can reduce the impacts of climate change on water resources through adaptation and/or mitigation. For water resources planning, a climate change adaptation strategy involves taking steps to effectively manage the impacts of climate change by making water demands more efficient and relying on supply sources that are less vulnerable to climate change. A mitigation strategy involves proactive measures that reduce greenhouse gas emissions (CDM Smith, 2016).

Public Health

Heat waves, the natural disaster responsible for the most deaths in California over the last 30 years, are an example of the current and future risk climate change poses to people. The 2006 heat wave killed over 600 people, resulted in 16,000 emergency department visits, and led to nearly $5.4 billion in damages. The human cost of these events is already immense, but research suggests that mortality risk for those 65 or older could increase ten-fold by the 2090s because of climate change. Studies show that while air conditioning can reduce mortality and illness from heat, increased electrical demand for cooling due to hotter conditions could also drive up emissions. However, the state is rapidly moving to cleaner electricity generation. Greenhouse gas emissions from electricity generation in 2016 were about 37% lower than emissions in 1990 (State of California, 2018).

Nineteen heat-related events occurred in California from 1999 to 2009 that had significant impacts on human health, resulting in about 11,000 excess hospitalizations. However, the National Weather Service issued Heat Advisories for only six of the events. Heat-Health Events (HHEs), which better predict risk to populations vulnerable to heat, will worsen drastically throughout the state.

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. Climate change poses direct and indirect risks to public health, as people will experience earlier death and

worsening illnesses. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions.

In addition, under the higher warming scenario, there would be a substantial increase in the number of high heat days per year by 2100. For example, in Sacramento, there could be up to 100 more days per year with temperatures above 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

In addition to the health impacts related to air and water quality, warmer temperatures and drought conditions can contribute to the spread of diseases by aiding development and spread of the vectors that transmit them. A vector-borne disease (VBD) is one caused by a virus, bacteria, or protozoan that spends part of its life cycle in a host species (e.g. mosquitoes, ticks, fleas, rodents), which subsequently spreads the disease to other animals and people.

Regional research assessments have previously concluded that climate change and variability are highly likely to influence current VBD spread, including both short-term outbreaks and shifts in long-term disease trends. For example, as temperatures rise, mosquito reproductive cycles are shortened, allowing more breeding cycles each season, and viral transmission rates to rise sharply. Mosquitoes are an increasing vector of concern, particularly those species that have been introduced from other countries because changes in temperature and precipitation conditions can allow exotic species to become established in places where they could not previously survive year-round. Contra Costa Health Services identifies several infectious diseases that may increase due to increase temperatures, including West Nile Virus, Coccidioides, and Vibrio (Contra Costa Health Services, 2015).

Climate change will affect California's diverse people and communities differently, depending on their location and existing vulnerabilities. While research shows that all Californians will likely endure more illness and be at greater risk of early death because of climate change, vulnerable populations that already experience the greatest adverse health impacts will be disproportionately affected.

Biological Resources

The Sacramento-San Joaquin Delta is listed as one of the top 10 habitats to save for endangered species in a warming world. The Delta provides habitat for hundreds of species of fish, birds, and other wildlife and enables the migration of Pacific salmon from spawning grounds in the upper reaches of cold-water rivers to the saline oceans and back again. Regional climate-sensitive populations include salmonid species, migratory bird species, and wetland species.

Projected climate changes are likely to result in a number of interrelated and cascading ecosystem impacts. At present, most projected impacts are primarily associated with increases in air and water temperatures and include increased stress on fisheries that are sensitive to a warming aquatic habitat. Warmer temperatures can compromise the health and resilience of aquatic and terrestrial species and make it more challenging for them to compete with nonnative species for survival. Competition for habitat and food will intensify with climate change. Further, changes in seasonal runoff patterns may place additional stress on native species by affecting, for example, adult and juvenile migrations.

Rising temperatures are likely to increase challenges for providing suitable habitat conditions for salmonid populations. Of specific concern within the Region are Chinook salmon and steelhead, which prefer temperatures of less than 64.4 to 68 degrees Fahrenheit (°F) in mountain streams, although these anadromous fish may tolerate higher temperatures for short

periods. Increased water temperatures could reduce the habitat suitability of California rivers for these species. Additionally, warmer air and water temperatures could potentially improve habitat for invasive species that outcompete natives. Invasive species, including various nonnative fish and plant species, are an ongoing issue within the Region. Some invasive species, such as quagga mussels, may additionally impact maintenance of hydraulic structures. Further, climate change could decrease the effectiveness of measures currently used to control invasive species.

Warmer water temperatures also could spur the growth of algae, which could result in eutrophic conditions in lakes and reservoirs, declines in water quality and changes in species composition. Other warming-related impacts include northward shifts in the geographic range of various species, impacts on the arrival and departure of migratory species, amphibian population declines, and effects on pests and pathogens in ecosystems. Impacts on terrestrial ecosystems have also been observed, including changes in the timing and length of growing seasons, timing of species life cycles, primary production, and species distributions and diversity.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued climate change will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Energy Consumption

Energy is California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are most widely used form of energy in the State. However, renewable source of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 33 percent of electricity generated from renewable resources by 2020 and 50 percent by 2030.

Overall, in 2015, California's per capita energy usage was ranked 49th in the nation (U.S. EIA, 2019), lower than any other state except Hawaii. Additionally, California's per capita rate of energy usage has remained relatively constant since the

1970's. Many State regulations since the 1970's, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that ultimately result in global climate change. Other fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Approximately 71 percent of the electrical power needed to meet California's demand is produced in the state. Approximately 29 percent of its electricity demand is imported from the Pacific Northwest and the Southwest (California Energy Commission, 2019). In 2010, California's in-state generated electricity was derived from natural gas (53.4 percent), large hydroelectric resources (14.6 percent), coal (1.7 percent), nuclear sources (15.7 percent), and renewable resources that include geothermal, biomass, small hydroelectric resources, wind, and solar (14.6 percent) (California Energy Commission, 2019). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 274,985 GWh in 2010. Contra Costa County consumed approximately 9,778 GWh of electricity in 2017, the year for which the latest data is available (California Energy Commission, 2016).

Higher temperatures will increase annual electricity demand for homes, driven mainly by increased use of air conditioning. High demand is projected in inland regions, and more moderate increases are projected in cooler coastal areas. However, in California, the increased annual residential energy demand for electricity is expected to be offset by reduced use of natural gas for space heating. Increases in peak hourly demand during the hot months of the year could be more pronounced than changes in annual demand. This is a critical finding for California's electric system, because generating capacity must match peak electricity demand.

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2009, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (Central Intelligence Agency, 2009). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 96 percent of the state's transportation energy needs (California Energy Commission, 2018).

Natural Gas/Propane

Natural gas supplies are derived from underground sources and brought to the surface at gas wells. Once it is extracted, gas is purified and the odorant that allows gas leaks to be detected is added to the normally odorless gas. Natural gas suppliers, such as PG&E, then send the gas into transmission pipelines, which are usually buried underground. Compressors propel the gas through the pipeline system, which delivers it to homes and businesses.

The state produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2019). Total natural gas demand in California in 2012 was 2,313, billion cubic feet of natural gas (California Energy Commission, 2019). In 2017, Contra Costa County consumed approximately 1,118 million therms of natural gas (California Energy Commission, 2016).

Infrastructure

California's Fourth Climate Change Assessment provides in-depth analyses that support proactive steps to protect California's energy, transportation, and water infrastructure systems and the communities they serve. These systems face increasing risks from climate change as temperatures warm, sea levels rise, and other climate impacts worsen. These systems are interconnected, and disruption in one part can impact other connected parts with both direct and indirect economic effects.

Energy resources can be considered from both supply and demand perspectives. Fourth Assessment studies found infrastructure that supplies energy along the coast – particularly docks, terminals, and refineries – will increasingly be exposed to coastal flooding. Meanwhile, electrical power lines, rails, and roads are primarily at risk from increasing wildfire. Costs and impacts of wildfire to electricity transmission and distribution systems are expected to grow as climate change impacts increase.

California's roads, railroads, pipelines, waterways, ports, and airports are critical for the movement of people and goods. They will be significantly affected by climate change. A growing threat to California's transportation system is wildfire, which can also have cascading effects like landslides and mudslides that occur after rain falls on newly burned areas.

Rising temperatures are also expected to increase road construction costs between 3 and 9%. Adapting roadway materials to withstand higher temperatures is needed to avoid potential costs of over $1 billion by 2070. One-hundred fifteen miles of railroad could be at risk of coastal flooding by 2040, with an additional 285 miles at risk by 2100. Infrastructure located along low-lying areas within Oakley are at the greatest risk of coastal flooding within the City's Planning Area. As shown in Figures 6.2-1 and 6.2-2, due to sea level rise over time, low-lying roadways, especially those near the current water level, are at particular risk during flooding events.

Refineries, pipelines, electrical power distribution (substations) and generation facilities are energy sector assets are also vulnerable to sea level rise. Energy infrastructure provides electricity and natural gas to homes and businesses, as well as fuel for multiple modes of transportation, both within the City's Planning Area, and beyond to other parts of the region, state, and nation. Energy sector assets are considered together because these systems share similar vulnerabilities, and their damage or disruption can have wide ranging consequences on day-to-day community function as well as emergency response capacity (Contra Costa County, 2017).

There is a total of 276 miles of pipeline in Contra Costa County. A total of 55 miles is within the current 100-year floodplain, 12 miles that carry natural gas and 43 miles that carry hazardous liquids. A total of 51 miles of pipeline is within the area potentially exposed to six feet of sea level rise. The majority of these exposed pipelines carry hazardous liquids. Given the shoreline location of many pipelines, many that are exposed to sea level rise are likely within the existing floodplain (Contra Costa County, 2017).

CCWD has water supply infrastructure that could be impacted by flooding and the effects of sea level rise. In Contra Costa County, CCWD has major assets in the existing 100-year flood zone, which could be exposed to more frequent or longer duration flooding due to sea level rise. For example, flooding may impact the Mallard Reservoir and the Shortcut Pipeline,

both of which could be impacted by sea level rise. However, it is challenging to evaluate exposure of the water supply infrastructure below ground (e.g. water mains), since little is known about how sea level rise will impact groundwater levels at a particular location along the shoreline. Additional studies at the site-level and refined site or asset-specific scale analyses will be needed in order to understand risks that water supply assets face from flooding (Contra Costa County, 2017).

Existing Greenhouse Gas Emissions in Oakley

Community and Municipal Operations GHG Emissions Inventories

The City of Oakley, in collaboration with ICLEI – Local Governments for Sustainability, has developed community and municipal operations greenhouse gas inventories for baseline years 2005 and 2010.

2005 Oakley Community GHG Emissions

The community greenhouse gas inventory for 2005 included the following GHG emissions sectors:

- Residential Energy;
- Commercial/Industrial Energy;
- Transportation; and
- Waste Generation

Including all scopes and sectors, the community of Oakley emitted approximately 120,360 metric tons (MT) of CO_2e in the year 2005, as shown in Table 1.1. The Transportation sector (transportation-related gasoline and diesel usage) was by far the largest source of community emissions. Emissions from the Residential sector (due to electricity and natural gas usage) accounted for 32 percent of total community emissions, and electricity and natural gas consumption within the Commercial/Industrial sector generated 7 percent of the community's overall emissions. The remaining 8 percent of emissions came from waste generated by Oakley's residents and business.

Table 1.1: City of Oakley Community GHG Emissions - 2005

Sector	Emissions (MT CO_2E/Year)	Percent of Total Emissions
Residential Energy	37,995	31.6%
Commercial/Industrial Energy	8,736	7.3%
Transportation	63,637	52.9%
Waste	9,991	8.3%
Total	**120,360**	**100%**

MT CO_2E/Year = metric tons of carbon dioxide equivalents per year
Source: City of Oakley 2005 Community-wide Greenhouse Gas Emissions Inventory, 2011.

2010 Oakley Community GHG Emissions

The community greenhouse gas inventory for 2010 included the following GHG emissions sectors:

- Residential Energy;
- Commercial/Industrial Energy;
- Transportation;
- Waste Generation; and
- Wastewater Treatment

Including all scopes and sectors, the community of Oakley emitted approximately 132,494 metric tons (MT) of CO_2e in the year 2010, as shown in Table 1.2. The Transportation sector (transportation-related gasoline and diesel usage) was by far the largest source of community emissions. Emissions from the Residential sector (due to electricity and natural gas usage) accounted for 32 percent of total community emissions, and electricity and natural gas consumption within the Commercial/Industrial sector generated 7 percent of the community's overall emissions. An additional 8 percent of emissions came from waste generated by Oakley's residents and business. A new sector for this inventory year, wastewater treatment, accounted for less than 1% of total emissions.

TABLE 1.2: CITY OF OAKLEY COMMUNITY GHG EMISSIONS – 2010

SECTOR	EMISSIONS (MT CO_2E/YEAR)	PERCENT OF TOTAL EMISSIONS
Residential Energy	42,707	32.2%
Commercial/Industrial Energy	11,061	8.3%
Transportation	75,377	56.9%
Waste	3,197	2.4%
Wastewater Treatment	151	0.1%
Total	**132,494**	**100%**

MT CO_2E/YEAR = METRIC TONS OF CARBON DIOXIDE EQUIVALENTS PER YEAR
NOTE: NUMBERS MAY NOT ADD UP DUE TO ROUNDING.
SOURCE: CITY OF OAKLEY 2005 COMMUNITY-WIDE GREENHOUSE GAS EMISSIONS INVENTORY, 2011.

2005 Oakley Municipal Operations GHG Emissions

The municipal operations greenhouse gas inventory, which attempts to account for the GHG emissions generated by the local government operations, included the following sectors within the 2005 GHG inventory:

- Vehicle Fleet;
- Employee Commute;
- Buildings and Facilities (energy usage);
- Government-generated solid waste;
- Business Travel;
- Public Lighting;
- Water Transport

Table 1.3, below, provides the results of the 2005 Oakley Municipal Operations GHG Inventory.

TABLE 1.3: CITY OF OAKLEY MUNICIPAL OPERATIONS GHG EMISSIONS – 2005

SECTOR	EMISSIONS (MT CO_2E/YEAR)	PERCENT OF TOTAL EMISSIONS
Vehicle Fleet	403	52.7%
Employee Commute	241	31.5%
Buildings and Facilities (energy usage)	52	6.8%
Government-generated Solid Waste	37	4.8%
Business Travel	24	3.1%
Public Lighting	4	0.5%
Water Transport	1	0.2%
Total	**764**	**100%**

MT CO_2E/YEAR = METRIC TONS OF CARBON DIOXIDE EQUIVALENTS PER YEAR
NOTE: NUMBERS MAY NOT ADD UP DUE TO ROUNDING.
SOURCE: CITY OF OAKLEY 2005 GOVERNMENT OPERATIONS GREENHOUSE GAS EMISSIONS INVENTORY, 2011.

2010 Oakley Municipal Operations GHG Emissions

The municipal operations greenhouse gas inventory, which attempts to account for the GHG emissions generated by the local government operations, included the following sectors within the 2010 GHG inventory:

- Vehicle Fleet;
- Employee Commute;
- Buildings and Facilities (energy usage);
- Government-generated solid waste;
- Business Travel;
- Public Lighting;
- Water Transport

Table 1.4, below, provides the results of the 2010 Oakley Municipal Operations GHG Inventory. As shown, there was a significant decrease in municipal operations GHG emissions between 2005 and 2010.

TABLE 1.3: CITY OF OAKLEY MUNICIPAL OPERATIONS GHG EMISSIONS – 2010

SECTOR	EMISSIONS (MT CO_2E/YEAR)	PERCENT OF TOTAL EMISSIONS
Vehicle Fleet	201	52.7%
Employee Commute	266	31.5%
Buildings and Facilities (energy usage)	100	6.8%
Government-generated Solid Waste	7	4.8%
Business Travel	13	3.1%
Public Lighting	143	0.5%
Water Transport	21	0.2%
Total	**752**	**100%**

MT CO_2E/YEAR = METRIC TONS OF CARBON DIOXIDE EQUIVALENTS PER YEAR
NOTE: NUMBERS MAY NOT ADD UP DUE TO ROUNDING. THERE WERE DIFFERENCES IN THE SUBSECTORS INCLUDED BETWEEN THE 2005 BASELINE INVENTORY AND THE 2010 INVENTORY, WHICH IMPACTS THE FINAL EMISSIONS FIGURE. FOR MORE DETAIL, SEE PAGES 19 AND 20 OF THE 2010 COMMUNITY-WIDE & LOCAL GOVERNMENT OPERATIONS GREENHOUSE GAS EMISSIONS INVENTORY UPDATE.
SOURCE: CITY OF OAKLEY 2010 COMMUNITY-WIDE & LOCAL GOVERNMENT OPERATIONS GREENHOUSE GAS EMISSIONS INVENTORY UPDATE

It should be noted that there were differences in the subsectors between the 2005 baseline and 2010 Municipal Operations GHG inventories, which impact the final emissions figures. An adjusted version of the 2005 Municipal Operations Inventory is provided in the City of Oakley 2010 Community-Wide & Local Government Operations Greenhouse Gas Emissions Inventory Update. With adjustments made to the 2005 Inventory, the reduction between the 2005 and 2010 Municipal Operations GHG inventories is further pronounced. In both cases, GHG emissions stemming from Oakley's municipal operations decreased significantly between 2005 and 2010.

3. ISSUES AND PRIORITIES

The Focused General Plan Update will provide a comprehensive approach to addressing climate change, including addressing greenhouse gas emissions and providing proactive measures to address potential effects of climate change, including the effects of sea level rise and increased extreme temperature days.

Recognizing that vehicle emissions are a significant part of greenhouse gas emissions, the Mobility White Paper will address goals, policies, and actions to promote pedestrian and bicycle travel and use of transit and electric vehicles and will provide strategies to address and reduce vehicle miles travelled (VMT).

Potential policies to address greenhouse gas emissions reductions include:

- Require development, infrastructure, and long-range planning projects to support State and local climate goals by demonstrating consistency State greenhouse gas reduction targets and Bay Area Air Quality Management District thresholds for greenhouse gas emissions.
- Promote a sustainable economy that encourages businesses to operate in an environmentally sound and community-friendly manner and that attracts and retains business sectors that support clean and sustainable technologies, including fuels, vehicles, equipment, goods, and services.
- Participate, when appropriate, in efforts of local and regional governments to identify programs that may assist Oakley and the region in reducing GHG emissions and in developing mitigation approaches. Examples of programs may include the Bay Area Regional Energy Network (BayREN) and Energy Upgrade California.
- Encourage and support for infill, mixed use, and higher density development, where appropriate, in order to reduce GHG emissions associated with vehicle travel.

Potential actions to address greenhouse gas emissions reductions include:

- Consider opportunities to enhance existing water efficiency and conservation measures, as feasible, and continue to support programs that encourage recycled water use and water efficiency in order to reduce energy and GHGs associated with water use.
- Provide education and outreach highlighting the benefits of energy conservation to the community and encourage residents and businesses to utilize available PG&E, BAAQMD, and other programs to retrofit structures and upgrade appliances and equipment to reduce emissions.
- Explore methods to increase alternative energy production and consider establishing City-wide measurable goals for alternative energy.
- Where appropriate, remove regulatory or procedural barriers to producing renewable energy in the City's Municipal Code.
- Consider opportunities to reduce urban heat islands through vegetation management and cool/higher-albedo surfaces.
- Continue to review development and infrastructure projects to ensure that the projects address consistency with BAAQMD GHG emissions thresholds and implement feasible best management practices and, when needed, mitigation measures to reduce GHG emissions.

Potential policies to address adaptation to the effects of climate change include:

- Prepare for and adapt to anticipated sea level rise and fluctuations and changes in weather conditions, including addressing impacts on existing and future neighborhoods, infrastructure and facilities, the shoreline, and natural resources.
- Encourage restoration and capacity-building projects that recognize the role of the shoreline, wetlands, and marshlands in adapting to sea level rise.
- Develop flood control and prevention measures to protect the City from rising waters due to climate change.
- To the extent feasible, locate critical facilities and vital infrastructure outside of areas anticipated to be significantly affected by sea level rise.
- Where critical facilities and vital infrastructure are located in areas anticipated to be significantly affected by sea level rise, develop measures to ensure that facilities remain accessible and undamaged during flood events.
- Prioritize improvements and actions that would protect vulnerable populations (e.g., elderly communities, low-income areas), critical facilities, and vital infrastructure, from damage or lack of access due to flooding from sea level rise.

Potential actions to address adaptation to the effects of climate change include:

- Regularly update the City's Emergency Operations Plan, as required by state and federal laws, and ensure that the plan addresses emergency situations, such as flooding, wildfires, and extreme temperature days, that may result from the changing climate.
- Ensure that updates to the Local Hazard Mitigation Plan address anticipated and modeled effects of climate change, including sea level rise, potential changes to areas affected by the 100-year storm event under sea level rise scenarios, extreme weather events, increased wildfire potential, and drought conditions.
- Provide developers with links to the CalAdapt and BCDC model data identifying sea level rise anticipated under potential climate change scenarios to ensure that all scenarios are considered in the design of future projects.
- Require new development projects located along the shoreline or in areas projected to be inundated under sea level rise scenarios to identify projected sea level rise levels in relation to proposed residences, buildings, and important infrastructure.
- Where new development or redevelopment projects are in areas projected to be substantially affected by increased sea levels or expanded 100-year flood areas, identify potential mitigation and adaptation measures prior to approval of development projects to address exposure to substantial flooding hazards during the useful life of structures.
- Monitor BCDC and other regional efforts to adapt to climate change and identify opportunities for participation in strategies and projects, including levees, seawalls, and other shoreline protection measures, to protect critical developed areas along the shoreline from flooding and by identifying opportunities to enhance natural resources, including preserving existing habitat, creek corridors, riparian areas, and the shoreline, reducing shoreline erosion, restoring habitat, and identifying areas where tidal wetlands can migrate landward.
- Maintain improvements and facilities designed to protect against flooding and sea level rise.

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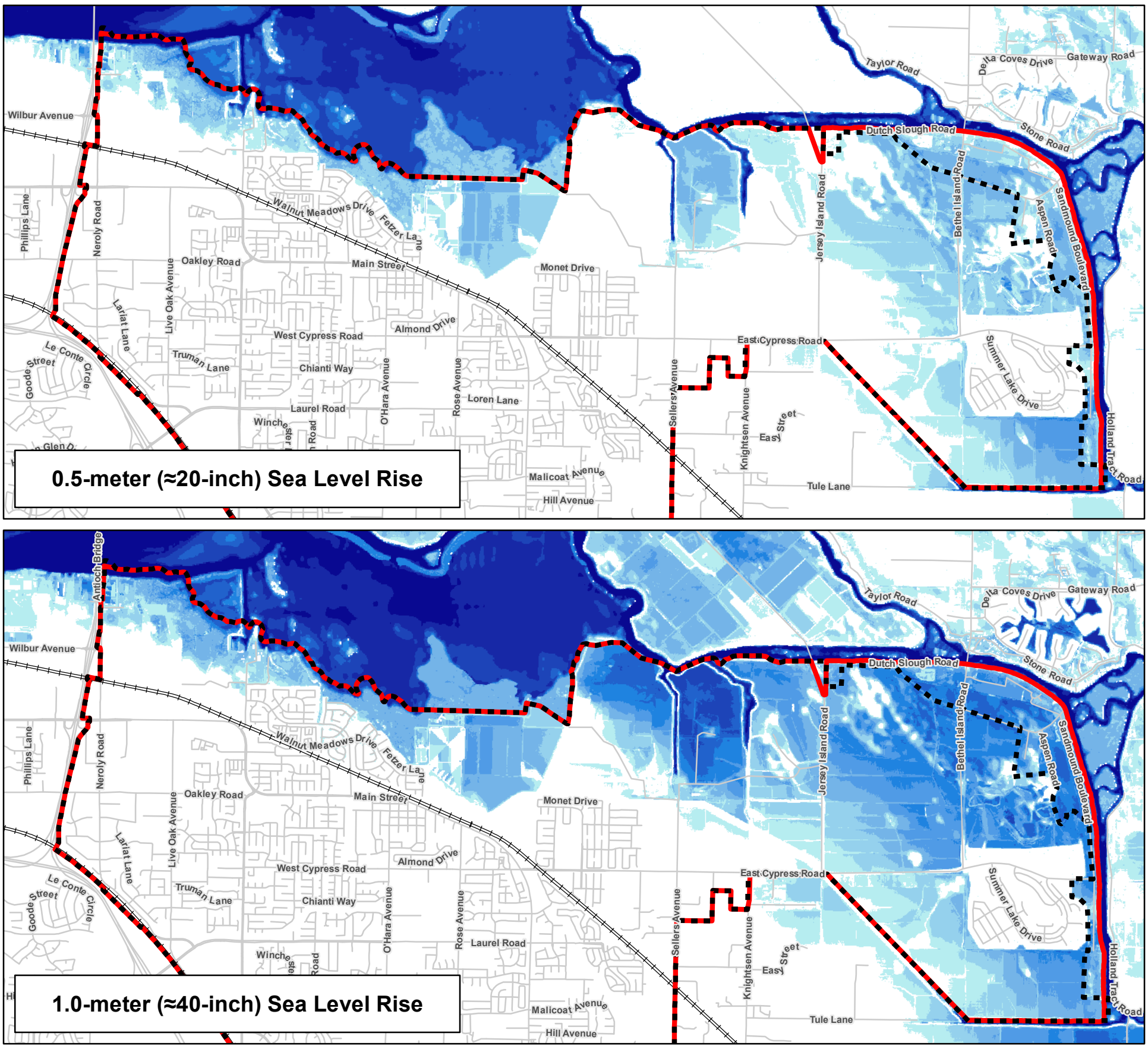
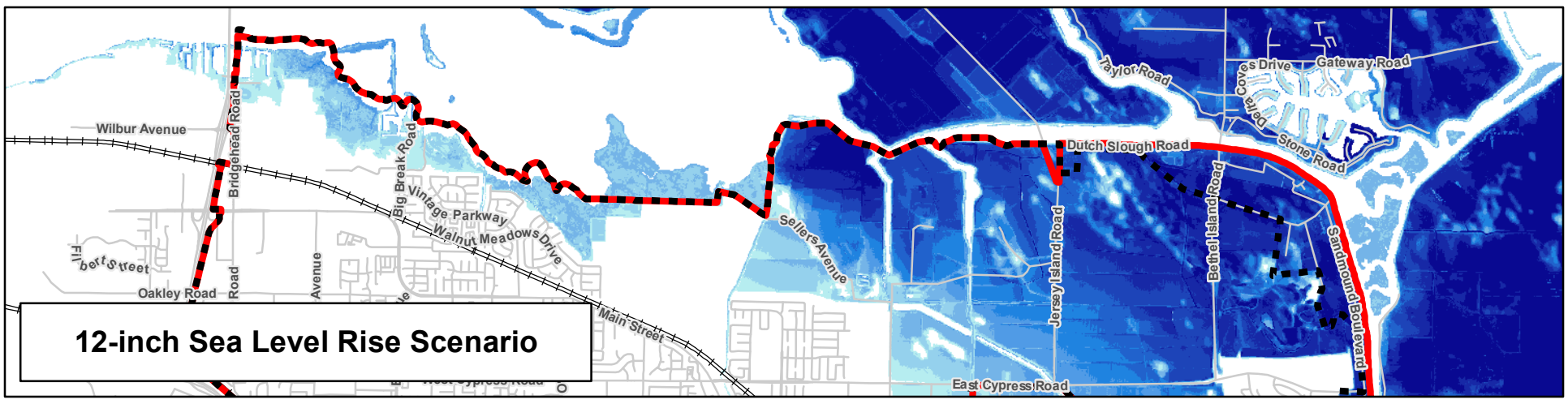
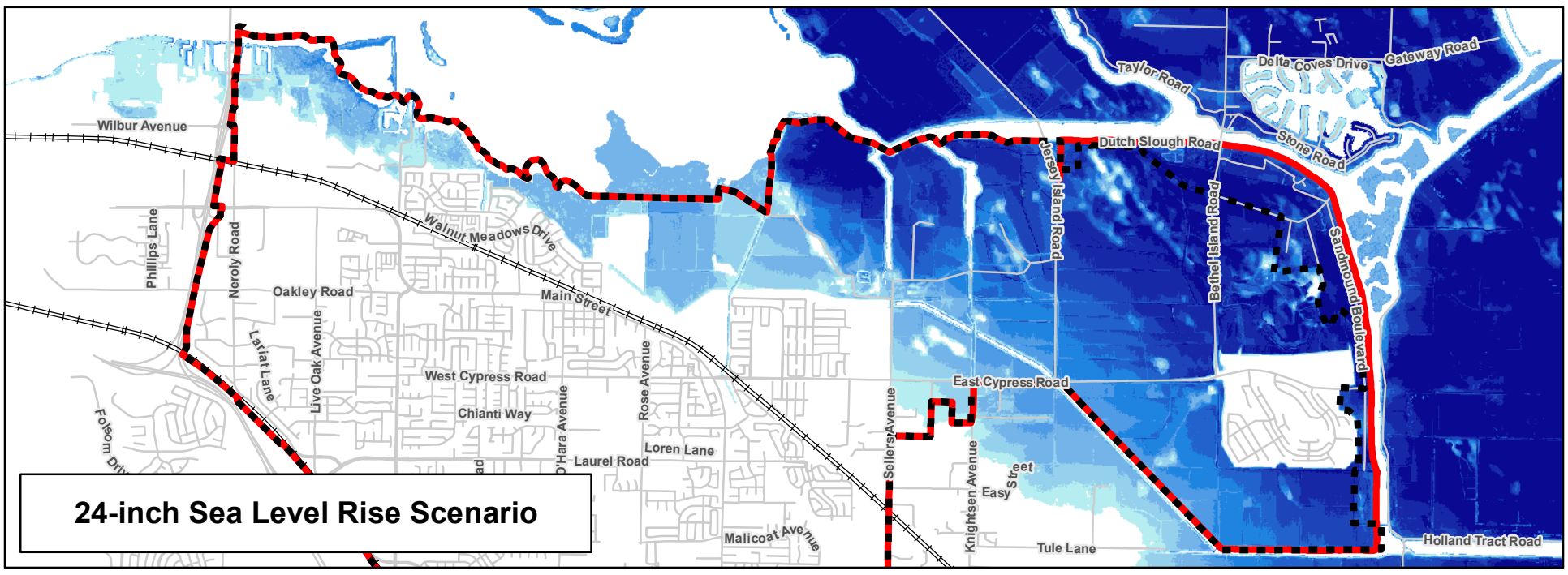


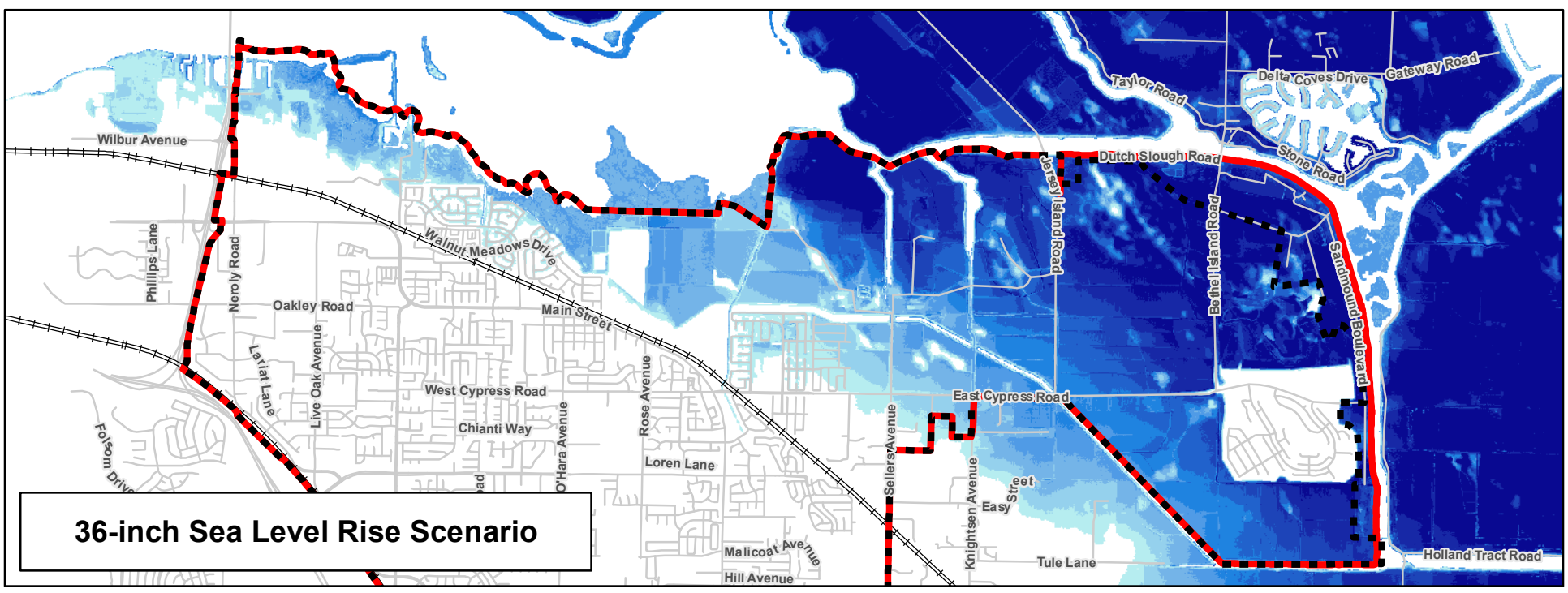
Figure 1.1.
Sea Level Rise Scenarios
(100-year Storm Event)

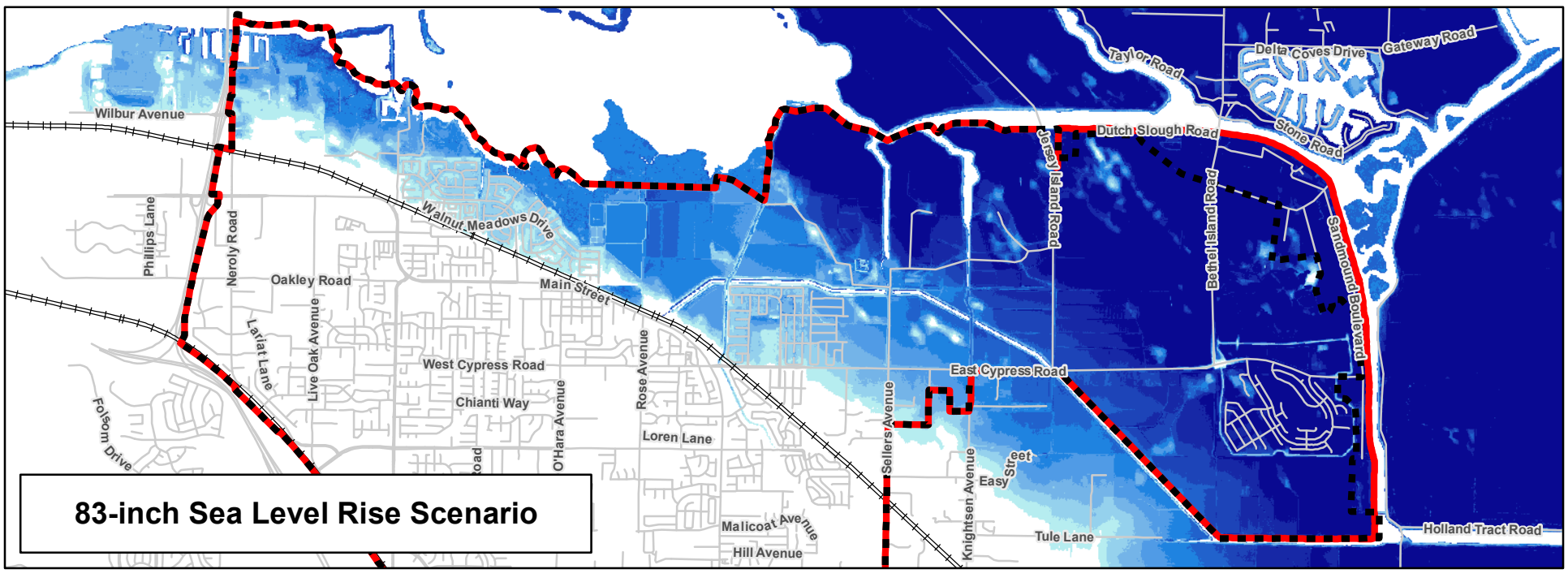
Cal-Adapt - University of California, Berkeley

Source: Inundation Depth Layer Mosaics for Sacramento-San Joaquin Delts, University of California, Berkeley, version 6, May 26, 2016; Contra Costa County. Map date: October 9, 2019









OAKLEY
General Plan

LEGEND

Oakley City Limit

Oakley Sphere of Influence

Depth of Flooding in Feet

(Maximum inundation depth during a likely 100-yr storm under varying sea level rise scenarios)

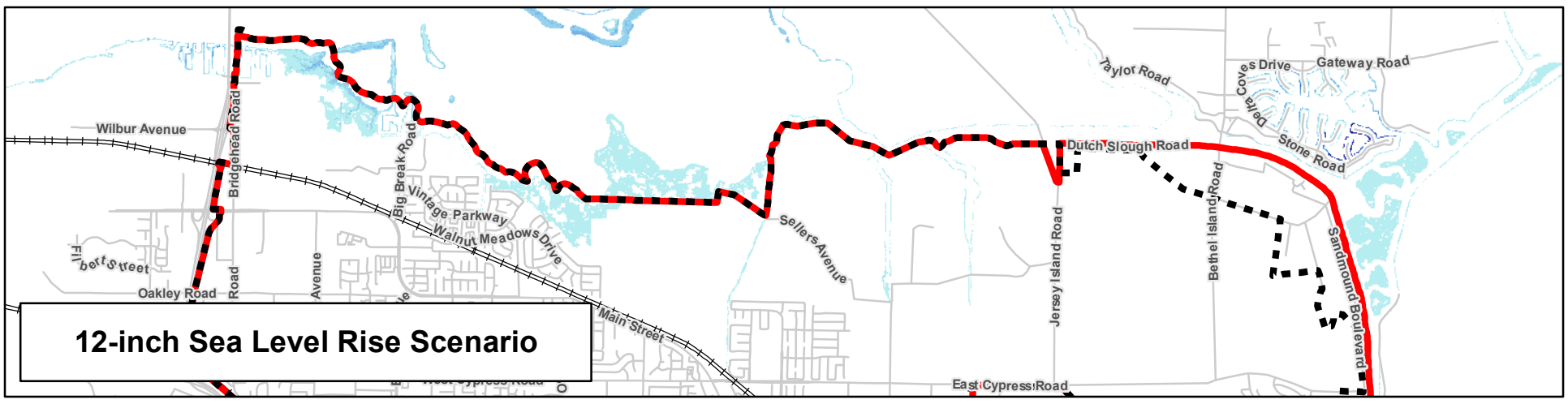
0 - 2	6 - 8	12 - 14
2 - 4	8 - 10	14 - 16
4 - 6	10 - 12	>16

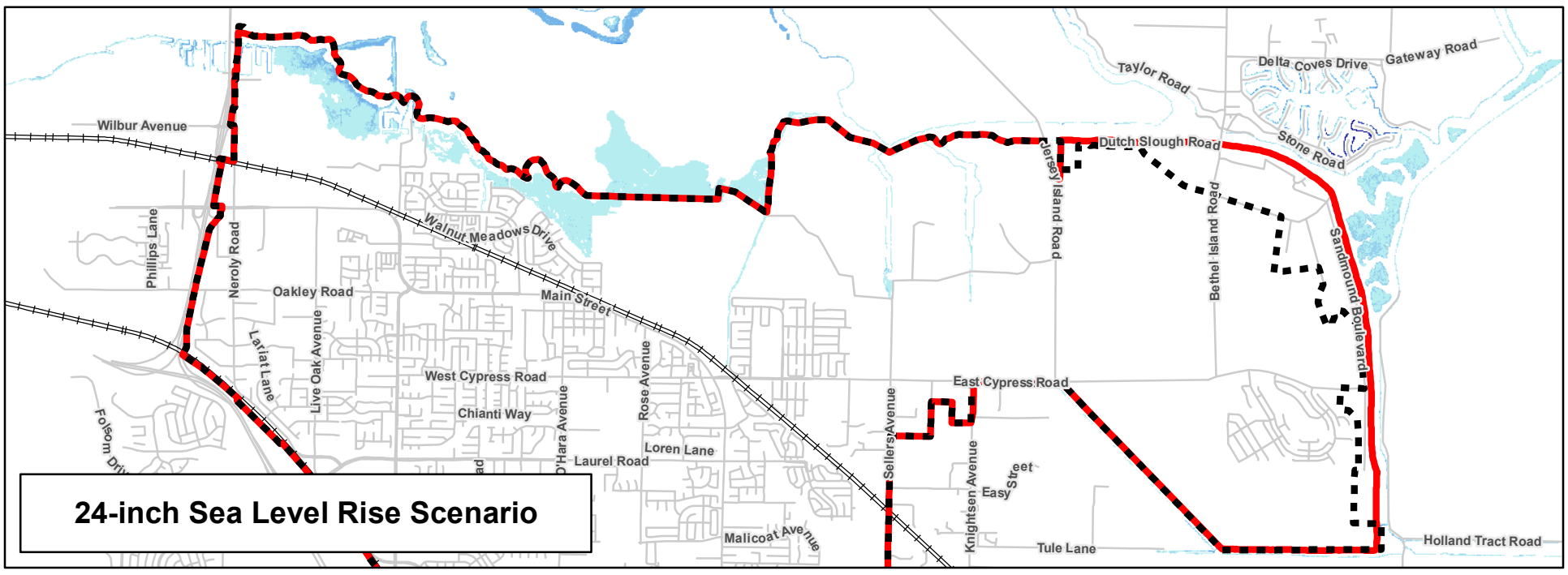
Figure 1.2.
Sea Level Rise Scenarios (100-year Storm Event)

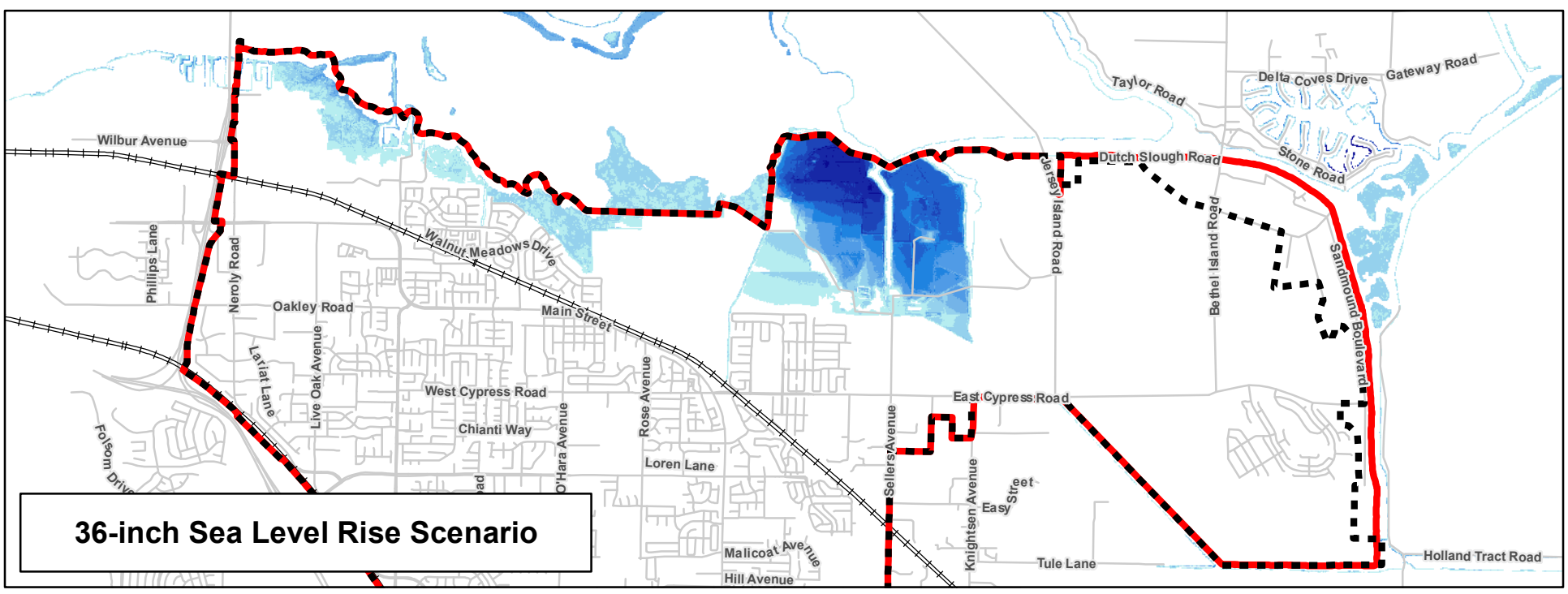
Adapting to Rising Tides - BCDC

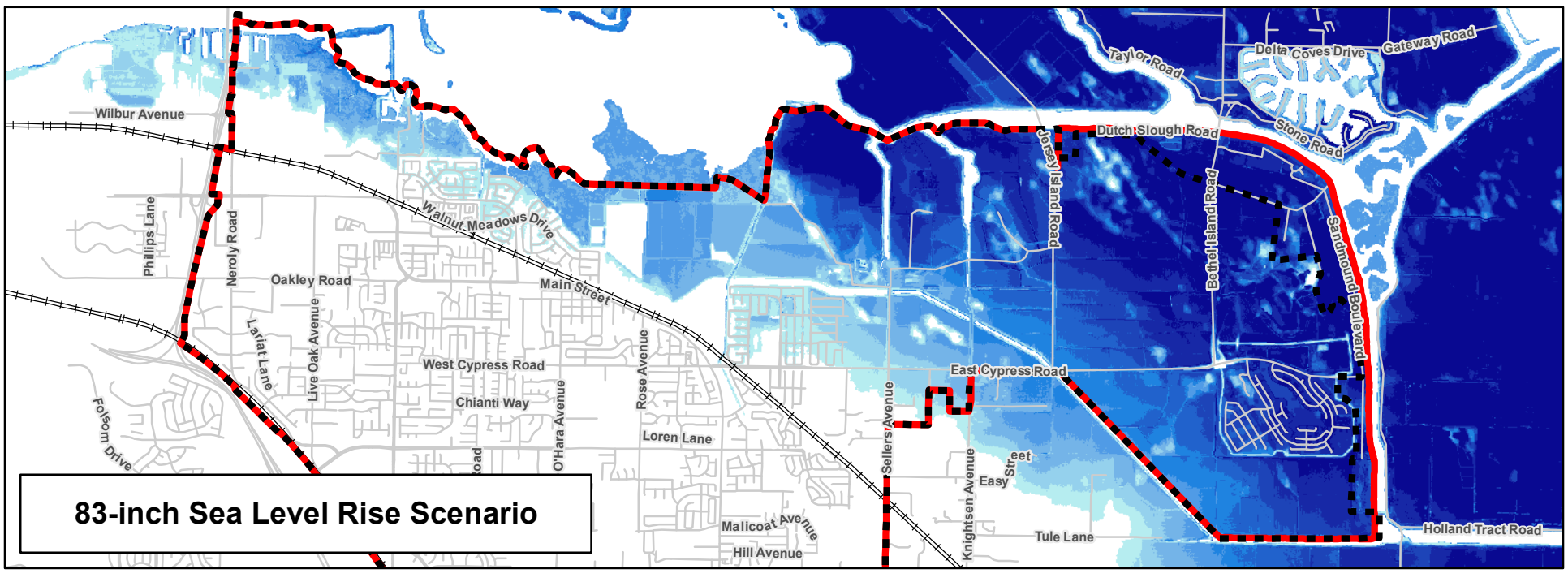
0 ½ 1 Miles

Source: San Francisco Bay Conservation and Development Commission (BCDC) "Adapting to Rising Tides" program, East Contra Costa County; Contra Costa County. Map date: October 10, 2019.









OAKLEY
General Plan

LEGEND

Oakley City Limit

Oakley Sphere of Influence

Depth of Flooding in Feet

(Maximum inundation depth during average high tide under varying sea level rise scenarios)

0 - 2	6 - 8	12 - 14
2 - 4	8 - 10	14 - 16
4 - 6	10 - 12	>16

Figure 1.3. Sea Level Rise Scenarios (Average High Tide)

Adapting to Rising Tides - BCDC

0 ½ 1 Miles

Source: San Francisco Bay Conservation and Development Commission (BCDC) "Adapting to Rising Tides" program, East Contra Costa County; Contra Costa County. Map date: October 11, 2019.