PALMER TOWNSHIP PLANNING COMMISSION
AUGUST 12, 2025
7:00 PM
PLANNING COMMISSION GENERAL MEETING

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1. **CALL TO ORDER**
2. **APPROVAL OF MEETING MINUTES**
3. **PLAN REVIEW**

Review Process for Each Subdivision and/or Land Development Application:

1. Township Staff Presentation
2. Township Engineer Presentation
3. Applicant Presentation
4. Planning Commission Discussion
5. Audience Questions/Comments
6. Planning Commission Decision

a. Presentation: Traditions of America Proposal

b. Sketch Plan: Chick-fil-A (South 25th Street)

c. Preliminary Land Development Plan: Chrin Southeast Quadrant Lot 2

d. Preliminary/Final Land Development Plan: Werner Expansion (2215 Newlins Mill Road)

4. **OTHER BUSINESS**
5. **REPORTS**
6. **PUBLIC COMMENT**
7. **ADJOURNMENT**

Presentation: Traditions of America Proposal

INFORMATION

Traditions of America would like to present to the Planning Commission with their concept plan for a new 55+ community.

ATTACHMENTS:
Concept Plan

SITE DATA

PALMER TOWNSHIP

TOTAL TRACT AREA	43.62 AC.
EXISTING LOTS	4
EXISTING USE	AGRICULTURE
PROPOSED USE	SINGLE FAMILY RESIDENTIAL
PROPOSED UNITS	125 (36 S.F. & 89 TOWNHOMES)

ZONING DATA

PLANNED DEVELOPMENT

	REQUIRED	PROVIDED
MAXIMUM BUILDING HEIGHT	2.5 STORIES	2 STORY
MINIMUM SIDE BUILDING SEPARATION	15 FT.	15 FT.
MINIMUM FRONT SETBACK	20 FT.	20 FT.
MINIMUM REAR SETBACK	30 FT.	30 FT.
DENSITY	5 DU/AC.	2.8 DU/AC.
EXISTING SINGLE FAMILY SETBACK FOR TOWNHOMES	100 FT.	>100 FT.
MAXIMUM IMPERVIOUS COVERAGE	30%	30.0%*
MINIMUM DETACHED UNITS	20%	30%
MINIMUM COMMON OPEN SPACE	25%	40.0% (17.0 AC.)
REQUIRED PARKING		
RESIDENTIAL	339 SPACES****	500 SPACES**
CLUBHOUSE	20 SPACES***	20 SPACES

* 36 SINGLE FAMILY UNITS @ 3,670 S.F. + 89 TOWNHOME UNITS @ 2,695 S.F. + 197,943 S.F. OF STREET, CURBS, SIDEWALKS, AND CLUBHOUSE AREA = 569,918 S.F. TOTAL IMPERVIOUS. (UNIT IMPERVIOUS AREAS HAVE BEEN TAKEN FROM PREVIOUS TOA DEVELOPMENTS)
** 2 GARAGE SPACES AND 2 DRIVEWAY SPACES PER UNIT
*** FROM COMMUNITY CENTER REQUIREMENT UNDER INSTITUTIONAL USES. 1 SPACE PER 250 S.F. + 1 SPACE PER EMPLOYEE (4,500 S.F./250+2 EMPLOYEES=20 SPACES)
**** 2 PER SINGLE FAMILY UNIT = 72
2 PER TOWNHOME UNIT = 178
+0.5 PER EXTRA BEDROOM OVER 1 = 89 (POTENTIAL FOR 3 BEDROOM UNITS)
TOTAL REQUIRED = 339

SITE LAYOUT NOTES:

1. MINIMUM BUILDING SEPARATION IS 15'
2. CARTWAY IS 26' WIDE
3. ALL BUILDING UNITS ARE SETBACK A MINIMUM OF 20' FROM EDGE OF PRIVATE RIGHT-OF-WAY.
4. DRIVEWAYS ARE 18' WIDE
5. THERE ARE NO LOT LINES PROPOSED, LINES SHOWN ARE BUILDING ENVELOPES.
6. ROADS ARE TO BE PRIVATE.
7. SLANT CURB SHOWN IN RESIDENTIAL AREAS WITH 6" STRAIGHT CURB AT CLUBHOUSE.
8. SINGLE FAMILY FOOTPRINTS SHOWN ON PLAN ARE 42' X 87'.
9. TOWNHOME UNITS SHOWN ON PLAN ARE 30' X 67'.
10. THE BUILDING FOOTPRINTS SHOWN ARE TO SHOW MAXIMUM BUILDING AREAS. IMPERVIOUS CALCULATIONS HAVE BEEN BASED ON PREVIOUS TOA DEVELOPMENTS.
11. OPEN SPACE IS SHOWN A MINIMUM OF 25' FROM RESIDENTIAL UNITS.
12. SEWER DEPTH AND LOCATION NEEDS TO BE DETERMINED.

ZONING RELIEF REQUIRED

1. ZONING SECTION 190-404: CONDITION USE REQUIRED FOR PLANNED DEVELOPMENT USE
2. ZONING SECTION 190-602.F & 190-960.E.5: PARKING IN FRONT YARDS

NEWLINS MILL ROAD
TATAMY ROAD
PENNS GRANT ROAD
FRANKLIN LANE
NORTH
50' BUILDING SETBACK
CLUBHOUSE
POOL
20' BUILDING SETBACK (TYP)
50' RIGHT-OF-WAY (TYP)
26' CARTWAY (TYP)
5' SIDEWALK (TYP)
42' X 87' DETACHED UNIT (TYP)
100' BUILDING SETBACK FOR NON SINGLE FAMILY
OPEN SPACE (TYP)
EMERGENCY ACCESS TO TATAMY ROAD
CONNECT TO EXISTING SANITARY SEWER
50' BUILDING SETBACK
STORMWATER BASIN
30' X 67' TOWNHOUSE UNIT (TYP)
20' (TYP)
20' BUILDING SETBACK (TYP)
100' BUILDING SETBACK FOR NON SINGLE FAMILY
STORMWATER BASIN
OPEN SPACE
50' BUILDING SETBACK
n/f Werner Enterprises Inc. Parcel ID: K8 5 9
n/f Anderson C Sr & Viola R Raub Parcel ID: K8 6 1
n/f FR Newlins Logistics Park LLC Parcel ID: K8 12 10A
n/f Anthony III & Abigail Makoski Parcel ID: K8 12 5A
n/f Stephen & Theresa Jones Parcel ID: K8 13 2
n/f Kevin A Gray Revocable Trust of 2014 Parcel ID: K8 12 6
n/f Dean C. Fenstermaker Parcel ID: K8 12 7
n/f Jan Gittings Parcel ID: K8 12 10B
n/f Gary H Fehnel Parcel ID: K8 13 1
n/f Joseph & Jessica Ehrie Parcel ID: K9 10 11
n/f Patrick William Stratton V & Elizabeth Rachel Sarton Parcel ID: K9 10 10
n/f Palmer Township (Rail Trail) Parcel ID: K9 2 1
n/f Issam Y Shote & Yadiya E Tapia Parcel ID: K9 28 20
n/f Nicolas Alfredo Santa Gadea & Stella Ruth Zea Parcel ID: K9 28 21
n/f Palmer Township Parcel ID: K9 7 38
n/f Norman W & Eileen May 27 1
n/f Charles P Jr & Pamela Ann K9 27 2
n/f Edmund & Pamela K9 27 3
n/f Donald M & Jeanne M K9 27 4
n/f William H & Debra E Ackerman Parcel ID: K9 27 5
n/f Michael & Judy Parcel ID: K9 27 6
n/f Sean K Ramirez & Nora A Marcano Parcel ID: K9 27 7
n/f Michelle Kaplan Parcel ID: K9 27 8
n/f Kathryn J Bruner Parcel ID: K9 27 15
n/f Christopher Lutes Parcel ID: K9 27 16
n/f Jon N Mier Parcel ID: K9 27 17
n/f Properties LLC Parcel ID: K9 27 18
n/f Adam E Wilkens Parcel ID: K9 27 20
n/f Thomas W & Lynn D Marchetta Parcel ID: K9 27 19
n/f Barry M Kuhns Jr & Holle Marie Cummings Parcel ID: K9 27 21
n/f Gregory H & Carol J Fehnel Parcel ID: K9 28 2
n/f Parcel ID: K9 28 22
n/f Parcel ID: K9 28 23
n/f Parcel ID: K9 28 24
n/f Parcel ID: K9 28 25
n/f Parcel ID: K9 28 26
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n/f Parcel ID: K9 28 32
n/f Parcel ID: K9 28 33
n/f Parcel ID: K9 28 34
n/f Parcel ID: K9 28 35
n/f Parcel ID: K9 28 36
n/f Parcel ID: K9 28 37

FOR RETTEW ASSOCIATES BY:

NO.	DATE	REVISION

XREFS: 094582032-GIS BASE

MANAGER: D. ERIC BRINSER, RLA
DESIGN BY: ASN
CHKD BY: DEB
SURV. CHIEF: FIELDBOOK NO. DATA COLLECTOR
DRAWN BY: ASN
CHKD BY: DEB
DRAWING REFERENCE: Z:\Shared\Projects\094582032\07. CAD\094582032-LD CONCEPT 11.dwg

CLIENT
TRADITIONS OF AMERICA
1235 WESTLAKES DRIVE
SUITE 300
BERWYN, PA 19312

SCALE
1"=100'
0 50' 100' 200' 300'

RETTEW
RETTEW Associates, Inc.
5031 Richard Ln, Suite 111, Mechanicsburg, PA 17055
Phone: (610) 258-8300
Email: info@rettew.com
Website: www.rettew.com
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

CONCEPT 11
SKETCH PLAN
FOR
TRADITIONS OF AMERICA
AT PALMER
PALMER TOWNSHIP NORTHAMPTON COUNTY, PA

DATE: 8/7/2025
SHEET NO. 1 OF 1
DWG. NO. 094582038

NOT FOR CONSTRUCTION/NOT FOR BIDDING

Sketch Plan: Chick-fil-A (South 25th Street)

INFORMATION

The Applicant is seeking Sketch Plan review and feedback for a proposed Chick-fil-A restaurant to be located at the former Rite-Aid on 25th Street.

ATTACHMENTS:

Staff Report
Township Engineer Review
Township Geotechnical Review
Township Landscape and Lighting Review
Public Works Review
Police Department Review
Fire Department Review
Shade Tree Commission Review
Codes and Zoning Department Review
LANTA Review
LVPC Review
Sketch Plan

TOWNSHIP OF PALMER
NORTHAMPTON COUNTY, PENNSYLVANIA
3 Weller Place, Palmer Township, PA 18045

Staff Report

To:	Palmer Township Planning Commission
From:	Craig Beavers, Director of Planning
Date:	July 30, 2025
Subject:	Chick-fil-A (601 S. 25th Street) Plan Set Dated December 20, 2024 **Request for Sketch Plan Review**
Copy To:	Board of Supervisors, R. Williams, B. DeGerolamo, W. Oetinger, Esq., J. Coyle, D. Wilusz, Applicant, File

LOCATION AND INTENT

Chick-fil-A, Inc. seeks feedback and comments for a Sketch Plan for the development of a fast-food restaurant at 601 S. 25th Street at the former Rite-Aid site. The plan proposes the full demolition of the existing 13,000 sq. ft building and the construction of a 5,500 sq. ft. facility with two drive-thru lanes and 72 parking spaces.

A sketch plan review often allows an applicant to save substantial time and engineering costs, because many concerns about layout and issues concerning Township ordinances can be resolved prior to detailed engineering. As this is informal, no official action is required on a sketch plan. Similarly, the Township is not bound by comments made or not made as part of the sketch plan review.

STAFF ANALYSIS

Based on an analysis of the submitted material, the Staff provides the following general comments:

Existing Conditions

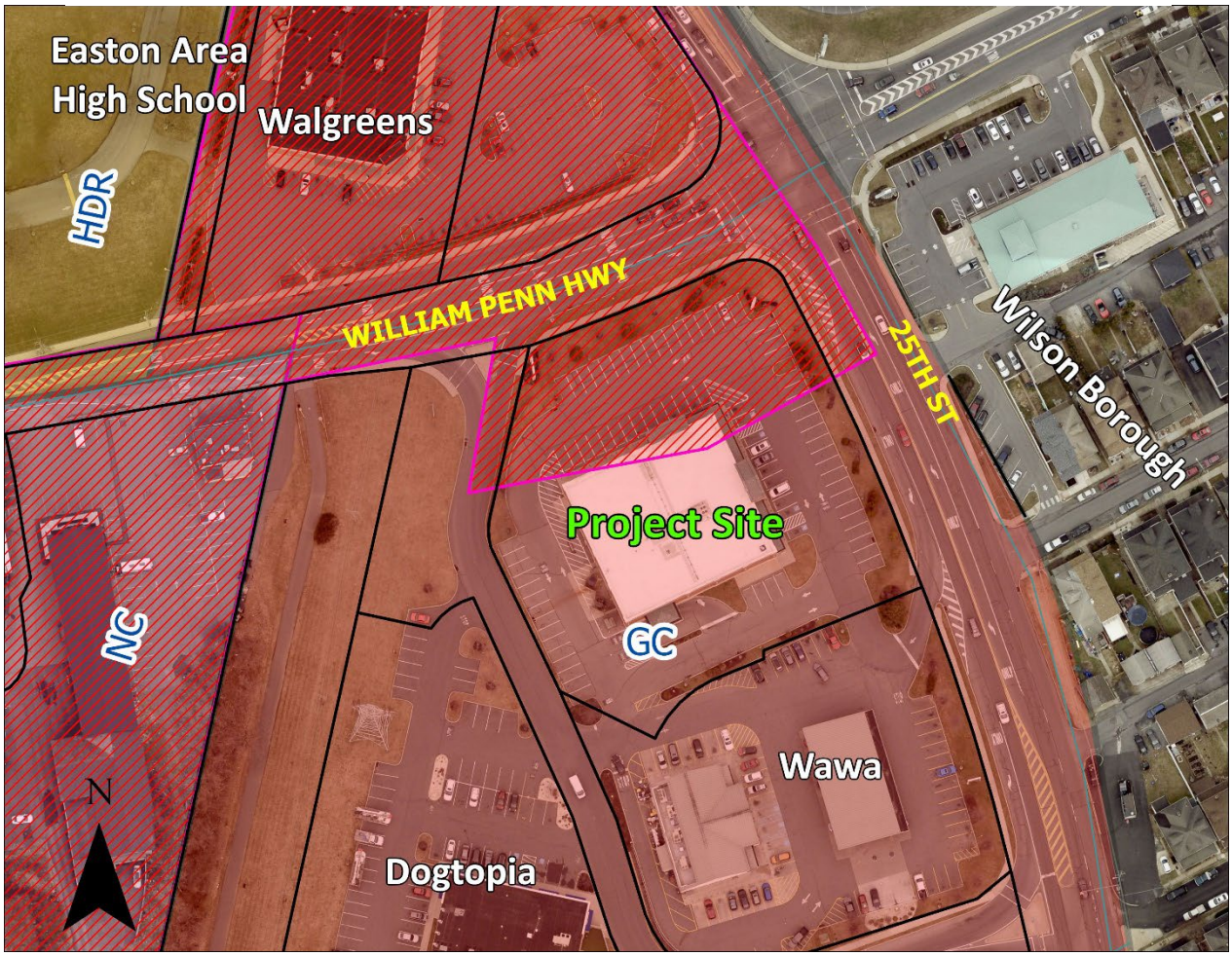
1. The project site is in the lower end of the Township, near the intersection of William Penn Highway and 25th Street.
2. Lands to the north, south, and west are commercial businesses in the GC General Commercial zoning district. Lands to the west are located in Wilson Borough and are primarily commercial uses within their TC Town Center District (Figure 1).
3. The project site is within the Palmer Town Centre, a major shopping center anchored by Giant and Home Depot.

4. The proposed use is the redevelopment of the former Rite-Aid Pharmacy, which closed in 2023.

Zoning Classification

1. The project site is zoned GC General Commercial as well as WPH William Penn Highway Overlay.
2. The purpose of the GC District is to provide for the orderly, integrated development of those uses necessary to meet the community and regional needs for general goods and services, as well as those of a social, cultural and civic nature; and to exclude uses not compatible with such activities. This district is intended to ensure well-planned and well-designed uses while ensuring adequate circulation, access control, and open space and unified and organized arrangement of buildings, service and parking areas.
3. The purpose of the WPH Overlay District is to manage growth and development along William Penn Highway and create a safe and visually unified streetscape. The overlay district aims to facilitate the development of a safe and viable corridor that links a variety of uses through streetscape amenities, design standards, and coordinated signage.

Figure 1: Vicinity map showing project site, abutting land uses, zoning and adjacent streets.



Palmer Township Comprehensive Plan

1. Palmer Township's *2018 Comprehensive Plan* envisions the tract within a Non-Residential Land Use Type, which promotes mixed-use redevelopment as a gateway into the township.

FutureLV: The Regional Plan

1. The Lehigh Valley Planning Commission's *FutureLV: The Regional Plan* envisions this area as an area suitable for Development, according to the General Land Use Plan.

Public Transportation

1. An ADA-accessible transit landing pad shall be installed for the EBS Blue Line station at this site, per the LANTA review letter. Future capital improvements, such as shelters and signage, will be funded by LANTA and PennDOT, but the concrete landing pad is required at this time. An example of the desired improvements at this intersection is shown in the image below.

Figure 2. Proposed public transit improvements for the EBS Station.



Circulation and Traffic Patterns

1. Township staff and consultants are concerned about the potential negative impacts that the proposed restaurant will have on existing circulation and traffic patterns, both internal to the Palmer Town Centre and on the adjacent PennDOT roadways. The existing Rite-Aid building and site layout was designed under different lower-volume traffic assumptions, and with the potential for a significantly higher traffic volume, significant changes will be needed on the site and surrounding driveways to prevent issues.
2. On a site visit in June to the subject site, the following items were observed:
    a. Traffic in the existing Wawa parking lot was nearly at capacity. When parking spaces were occupied on site, vehicles would circle the lot. Vehicles frequently entered the Wawa site at high speeds using the eastern slip lane, which is skewed at an abnormal angle.
    b. The adjacent lot at the Dogtopia building was underutilized, and there is extra capacity available for parking to serve the adjacent buildings.
    c. The western slip lanes are not properly serving the site as intended. While observing its operation, vehicles were queueing up at back to the entrance of the Wawa. This is seemingly because of vehicles making illegal turns at the "Right Turn Only" lane. Township staff observed a vehicle attempting to turn left, blocking traffic and resulting in several near-misses. More frequently, instead of entering the Right Turn Lane on William Penn, vehicles illegally move over to either the Straight or Left Turn Only Lanes, which results in them stopping at the intersection and waiting for an opening rather than fully executing the intended right turn.

d. Pedestrians attempting to cross the slip lane do so at their own risk. The existing layout of this intersection results in vehicles entering at higher speeds that would be appropriate for yielding to pedestrians. On the site visit, two teenagers crossing this area were almost hit by a car who didn't yield while leaving the site.

3. To mitigate potential interior traffic impacts, the following is recommended by the Township:

   a. Coordinate with the site property owner condo association to eliminate the exist slip lane to William Penn Highway to prevent queuing issues and illegal turning.

   b. Coordinate improvements with the site owner for improved intersection near the Home Depot and Wawa intersection; a suggestion was made for a mini-roundabout to allow for traffic to continue through the intersection, preventing back-up at the signal and minimizing traffic safety risks.

Figure 3. Entrance to Wawa site from 25th St.



Figure 4. A vehicle making an illegal left-turn out of the slip lane.



Figure 5. Pedestrians attempting to cross the slip lane.



Figure 6. Queueing vehicles waiting to exit the site.



Sidewalks and Walkways

1. Interior pedestrian crosswalks and sidewalk connections shall be added between the parking lot areas and the building, as well as the existing sidewalk to the building, per Overlay District standards.
2. LANTA's *Transit Supportive Land Use* plan specifically draws attention to this shopping center and its lack of sidewalk connectivity or pedestrian-oriented design. The Applicant should take this opportunity to incorporate as many elements as possible of this plan into the design.

Figure 7. Existing conditions. (Source: LANTA)



Figure 8. Potential improvements. (Source: LANTA)



Figure 9. Existing conditions. (Source: LANTA)



Figure 10. Proposed improvements. (Source: LANTA)



Site Plan and Design Elements

1. The proposed plan includes the full demolition of the existing Rite-Aid building and the construction of a smaller Chick-fil-A restaurant. Because of the significant change of design and site usage, Township staff would request that the applicant provide architectural renderings of the proposed building in relation to the site.

Landscaping, Lighting, and Signage

1. Pedestrian-scale ornamental lighting shall be installed along the sidewalk area for proper sidewalk lighting, per SALDO standards.
2. Street trees shall be added along the site frontage to replace any missing trees that were removed over the past several years.

Figure 11: Example Streetlight



Stormwater Management

1. As this site involves a complete demolition and new layout, the project should incorporate as many elements of green stormwater infrastructure to minimize any potential water runoff from the nearby impervious surfaces.

Additional Comments

1. All of the above-mentioned comments are advisory, but they are strongly recommended to be considered by the Applicant to ensure a smooth review process for this project if it is formally submitted.
2. The Township reserves the right to provide additional comments, especially upon future submissions.



Location Site

Chick-fil-A (601 South 25th Street)

M9-12A-0324

GC General Commercial; WPH William Penn Highway Overlay

June 17, 2025 ***SENT VIA EMAIL***

Craig S. Beavers, Director of Planning
Palmer Township
3 Weller Place
Palmer, PA 18045

Subject: Sketch Plan Application – 601 South 25th Street, Chick-Fil-A (Store #5969)
Parcel ID M9-12A-0324

Dear Mr. Beavers:

Carroll Engineering Corporation is in receipt of documents supporting the above-referenced Sketch Plan application. Pursuant to your request, we have reviewed the application documents against the Palmer Township Subdivision and Land Development Ordinance (SALDO) Chapter 165 and Zoning Ordinance (ZO) Chapter 190.

PROJECT DESCRIPTION

The subject property contains a total of 1.74 acres, on one (1) parcel, as shown on the submitted Sketch Plan-Site, and sketch plan application. The parcel is located at the southwest corner of William Penn Highway and South 25th Street. Wilson Borough adjoins the property along the opposite side of South 25th Street. The Palmer Township bikeway adjoins the property along the western boundary line. A Wawa Food Store and gas station adjoin the site to the south. *(refer to the attached aerial photo)*

The existing subject property is presently a vacant pharmacy building and parking area. The subject property is located in the GC – General Commercial Zoning District. The Applicant proposes to construct one (1) Restaurant Building with 5,483 square feet of floor area and two (2) lanes of drive-through service. Site improvements will include internal access drives, a parking lot, a stormwater management system, public water supply and sanitary sewer. Proposed access to the property is via the existing shared access with the Wawa Store to the south. No proposed site landscaping has been identified on the Sketch Plan.

SUBMITTED DOCUMENTS

We have reviewed the following documents and related information:

1. Palmer Township Subdivision/Land Development Application for Sketch Plan, from Kim Wyatt of Chick-Fil-A, Inc., dated May 21, 2025.

2. Palmer Township Sketch Plan Development Checklist, signed by Kim Wyatt of Chick-Fil-A, Inc., three (3) pages, dated May 20, 2025.

3. "Sketch Plan – Site", prepared by Chris Riggle of Colliers Engineering & Design, three (3) pages, dated December 20, 2024, last revised April 8, 2025.

4. A copy of the Township Zoning Map & Township Zoning Overlay Map, with the site location identified, December 2023.

5. A copy of the Easton, PA, NJ, U.S. Geological Survey Map, with the site location identified, 2023.

We offer the following Sketch Plan comments for the Planning Commission's review and consideration. Please note that these comments are to be considered informational only at this time.

ZONING COMMENTS

1. A restaurant, quick-service, or sit-down, are both principal uses, permitted by right in the GC-General Commercial Zoning District. *ZO §190-Attachment 6:1.*

2. A drive-through facility is an accessory use that is only permitted via a special exception in the GC-General Commercial Zoning District. *ZO §190-Attachment 6:1.* The existing vacant pharmacy building has a drive-through service window and access lanes.

3. The minimum lot size is 30,000 square feet (SF). The plan indicates only 10,000 SF. It is noted that this is for lots created prior to 1987. The Zoning Data section on the sketch plan shall be revised. The Zoning Officer shall be consulted. *ZO §190-Attachment 6:1.*

4. The maximum impervious coverage on the site is 85% in the GC Zoning District. The Zoning Site Data section of the sketch plan indicates 70% and should be revised. *ZO §190-Attachment 6:1.* The plan indicates that the existing on-site impervious coverage is 80.02% and the proposed impervious coverage is 70.37%. How is the proposed impervious coverage reduced by 10%? Please discuss with the Planning Commission.

5. The parking requirements for a quick-service restaurant are one (1) space per two and a half (2.5) seats, with a minimum of twenty (20) spaces, and one (1) space per full-time equivalent employee. The proposed site design includes 46 spaces (based on guests (114 seats / 2.5)) and 25 spaces (based on employees), for a total of 71 spaces required and 72 are proposed. *ZO §190-Attachment 22:5.*

6. Parking areas and circulation patterns shall be adequately striped and marked to facilitate traffic circulation on the property. A minimum of 10 stacking spaces shall be provided for each drive-through lane. Stacking shall not interfere with the normal traffic flow within the lot, nor shall it cause the stopping of vehicles on any public right-of way. *ZO §190-924.E., §190-964.G. & §190-964.H.* The Applicant shall be prepared to discuss the plans for excessive vehicle stacking at the drive-thru lanes. The drive-thru stacking spaces shall be shown on the land development plans.

7. A pedestrian walkway shall be provided between the existing sidewalk and the entrance of the restaurant. *ZO §190-964.E.* There are existing sidewalks along William Penn Highway and South 25th Street. Connection to these sidewalks shall be considered.

SKETCH PLAN REVIEW (SALDO):

1. The sketch plan shall include property boundaries. *SALDO §165-29.E.(1)* Clarification of the southern property line shall be provided. It appears that the Wawa property is impacted by the boundary line. Meets and bounds information shall be included on the land development plans.

2. The sketch plan shall include a location map showing the general location of the project in relation to adjacent lots, streets and waterways (such as from the Township Zoning Map[1] or USGS map, preferably at a scale no smaller than one inch equals 2,000 feet). *SALDO §165-29.E.(8)* The location map has not been included on the sketch plans.

STORMWATER REVIEW COMMENTS

1. The Applicant should provide supporting calculations for the proposed Infiltration Bed and Stormwater Conveyance facilities to determine their compliance with standards identified in this ordinance. *SMO§158-402D&E.* This shall be considered for the Land Development phase of the project application.

2. Per publicly available GIS, it is noted that the site is located within a high karst density area. The Applicant shall prepare a Carbonate Assessment Report in accordance with this section to verify the feasibility of infiltration onsite in accordance with Appendix D of this ordinance. *SMO§158-403A.* This shall be considered for the Land Development phase of the project application.

3. The Applicant shall provide infiltration testing in subsequent submissions to confirm that sufficient infiltration rates are available onsite for the proposed infiltration bed. *SMO§158-403C.* This shall be considered for the Land Development phase of the project application.

TRAFFIC REVIEW COMMENTS

1. Currently this site only has access through and from the Wawa site to the south. All traffic, which leaves the Wawa site, exits through the entrance/exit at the northwest corner of the Wawa building.

   The sketch plan proposes the continuation of this shared access. Based upon safety concerns with this arrangement, we recommend the shared access between the lots be removed under a revised plan. Furthermore, we recommend a new dedicated access be provided for the Chick-Fil-A site along its western boundary. Separate entrance and exit lanes are recommended.

2. A State highway occupancy permit (HOP) is required for all entrances of access drives or driveways onto a state road. *SALDO §165-67.A.* The Applicant shall be prepared to obtain an HOP permit for the site or provide proof that one is on file with the State for the site in the Land Development phase of the design. The HOP permit shall be updated to include the restaurant on the site, in lieu of the previously existing pharmacy.

GENERAL COMMENTS

1. This sketch plan is to be reviewed by the Township Staff, Engineers, Fire Commissioner, Public Works, Zoning Officer, Shade Tree Commission and Planning Commission. No official action shall be required by the Township, nor shall the Township be bound by comments made or not made as part of the sketch plan review. SALDO §165-29.B.

2. The project will ultimately need to comply with the Township Stormwater Management Ordinance.

3. The following items should be discussed with the Commission:
   - Internal vehicular traffic circulation and vehicle stacking
   - Landscaping
   - Lighting
   - Pedestrian sidewalks and multi-use paths

4. A traffic impact assessment shall be considered during the Land Development phase. Crash analysis shall be included in the report. The interchange of South 25th Street / Wood Avenue and the U.S. Route 22 Off-ramp shall be included in the study area, in addition to other adjoining intersections.

An aerial site location photograph is enclosed. Additional comments are reserved pending future submissions.

Should you have any questions or require additional information, please contact this office.

Very truly yours,

CARROLL ENGINEERING CORPORATION

Justin M. Coyle

Justin M. Coyle, P.E.
Township Engineer

JMC/DJW

Enclosures
cc: Robert Williams, Township Manager, Palmer Township
Brenda DeGeralomo, Assistant Township Manager, Palmer Township
Justine Caiazzo-Strouse, Administrative Assistant to Planning, Palmer Township
William Oetinger, Esquire, Grim, Biehn and Thatcher
Kim Wyatt, Chick-Fil-A, Inc.
Chris Riggle, P.E., Colliers Engineering & Design
Daniel J. Wilusz, P.E., Project Manager, CEC


Drug store
Patient First Primary and Urgent Care - Easton
Elm St
Elm St
2020
William Penn Hwy
SITE
Forest St
S 25th St
Wawa
Fast Food
PNC ATM
Google
Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025

June 10, 2025
F110980.00

Palmer Township
3 Weller Place
P.O. Box 3039
Palmer, PA 18043

Attn: Craig S. Beavers, AICP Candidate, CFM, CZO – Director of Planning (via email)

Re: Geotechnical Review, Chick-fil-A Sketch Plan
601 S. 25th Street - Palmer Township, PA

Dear Mr. Beavers:

GAI Construction Monitoring Services, Inc. d/b/a CMT Services Group (CMT) has prepared this letter with respect to our review of documents related to the Chick-fil-A Sketch Plan. We have provided this review at your request in accordance with our revised "Geotechnical Consulting Services" proposal and agreement dated August 18, 2011. Palmer Township provided the following documents for review:

- "Sketch Plan - Site", Sheets 1 through 3 of 3, prepared by Colliers Engineering & Design, Doing Business as Maser Consulting (Maser), issued 12/20/24, no revisions.

CMT offers the following comments:

- The site plan depicts an underground infiltration basin. It is unclear if the basin is existing or proposed. If it is existing, it should be outlined on the ground surface and protected from traffic loading during construction. If it is proposed, additional information is required: a carbonate study, on-site infiltration testing, stormwater management design, etc.
- We have no further comments.

CMT has attempted to prepare this letter using the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical professionals with experience in this geographical area under similar soil conditions. We offer no other warranty, either expressed or implied as to the conclusions and recommendations contained in this letter.

If you have any questions or require additional information, please contact Shawn Casey, P.E. at 610.731.0430, 610.507.5879 (cell), or s.casey@cmtservicesgroup.com.

Sincerely,
CMT Services Group



Shawn Casey, P.E.
Engineering Technical Manager

SC:sc

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

June 10, 2025

File No. 2500614

Craig Beavers, Acting Director of Planning
Palmer Township
3 Weller Place
Palmer, PA 18045

Reference: Chick-fil-A (601 S. 25th Street – Drive Thru Restaurant) – Sketch Plan
Landscape and Exterior Site Lighting Review

Dear Craig:

As requested, Gilmore & Associates, Inc. has reviewed the documents listed below with regard to the Sketch Plan referenced above:

A. Sketch Plans prepared by Colliers Engineering & Design, dated 12/20/2024, last revised 04/08/2025:
   - Three (3) Sheets (SP)

Landscape Review:

It is noted that in addition to the Zoning Ordinance comments below, the applicant will also be required to comply with applicable sections of the Palmer Township Subdivision and Land Development Ordinances and other applicable Ordinances, in the event that the project moves to the Land Development Application phase.

Zoning Ordinance §190:

1. **§ 190-516.A** - Tree preservation. Existing trees on a lot shall be preserved in accordance with the tree preservation requirements of Chapter 165, Subdivision and Land Development, of the Township Code. It appears that existing trees on site may be preserved, but there is no specific information provided. Existing trees shall be preserved to the greatest extent possible.
2. **§190-603.H(1-5)** – Parking lot landscaping will be required in accordance with this section of the Zoning Ordinance and other related requirements. The sketch plans do not provide any information relating to proposed landscape material.
3. **§ 190-805.A** - Ground cover and plan is required. This landscape plan should include the botanical and common names of the plants to be used, the sizes to be planted and the quantity and spacing of each. The sketch plans do not provide any information relating to proposed landscape material.
4. **§ 190-805.D** – Street trees will be required in accordance with this section of the Zoning Ordinance and other related requirements. It appears that there may be existing street trees on the site. Calculations shall be provided to determine whether additional trees are required.

Exterior Site Lighting Review:

It is noted that in addition to the Zoning Ordinance comments below, the applicant will also be required to comply with applicable sections of the Palmer Township Subdivision and Land Development Ordinances and other applicable Ordinances, in the event that the project moves to the Land Development Application phase.

Zoning Ordinance §190:

1. **414.A.3** – It is noted that existing sidewalk and vegetation exist within the streetscape area, however additional amenities such as pedestrian scale lighting for sidewalks may be required to coordinate with the goals of the Township.
2. **414.D.1** – The proposed dumpsters appear to be within an enclosure. Additional details shall be provided regarding enclosure materials and landscape material.
3. **414.E.2** – It appears that existing street trees exist, however calculations shall be provided to determine if they satisfy the requirements.
4. **414.G.2.a, b &c** – Parking area lighting information shall be provided for further review.
5. **513 –** Light and glare control. Required site lighting will need to be provided and designed to comply with this section of the Zoning ordinance and other related requirements.
6. **603.F**– Nighttime illumination shall be provided in accordance with ordinance requirements. Additional information shall be provided for further review.

If you have any questions regarding the above, please contact this office.

Sincerely,



Christopher E. Green, R.L.A., LEED AP
Senior Landscape Architect
Gilmore & Associates, Inc.

cc: Michael Schwartz, P.E. – Municipal Services Manger – Gilmore & Associates, Inc.
Sean Policelli, P.E., Project Manager – Gilmore & Associates, Inc.
Justine Caiazzo-Strouse – Palmer Township

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 601 South 25th Street

Project Name: Chick-fil-A

Submission Date: 05/21/2025

Plan Type: Sketch Plan Submission Dated 04/08/2025

Zoning District: GC General Commercial; WPH William Penn Highway Overlay

Applicant's Name: Chick-fil-A Inc. (c/o Kim Wyatt)

Department of Public Works, Parks, and Public Utility Operations Comments *(attach additional pages as needed)*

Comments related to sanitary sewer, storm sewer, and other relevant utilities:

The original use was allocated 1 edu for sanitary sewer discharge. A new tapping fee worksheet will need to be completed as well as a sewer facilities planning module exemption mailer for the new use. The EAJSA will need to review and provide a capacity letter.

Comments related to maintenance and operations of public improvements (roadways, utilities, signs, lighting, pavement parking, snow removal, leaf collection, etc.):

NO COMMENT/ PENNDOT

Comments related to maintenance and operations of public grounds and recreation (parks, open space, bike paths, athletic facilities, stormwater facilities, right-of-way areas, etc.):

NO COMMENT

Other Comments:

The proposed use will require the installation of a grease interceptor that will need to be properly sized by the building design engineer. Interior building plumbing will need to direct appropriate drain lines to the interceptor.

Signature: Scott Kistler Date: 05/27/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 601 South 25th Street

Project Name: Chick-fil-A

Submission Date: 05/21/2025

Plan Type: Sketch Plan Submission Dated 04/08/2025

Zoning District: GC General Commercial; WPH William Penn Highway Overlay

Applicant's Name: Chick-fil-A Inc. (c/o Kim Wyatt)

Palmer Township Police Department Comments *(attach additional pages as needed)*

Comments related to traffic:

HUGE concern regarding traffic over flow, onto William Penn and or 25th Street.

Comments related to security or enforcement:

Provisions should mandate private property traffic management

Other Comments:

Consideration for an update of the design of the 25th / William Penn intersection.

Signature: Wayne D Smith Date: 6/9/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 601 South 25th Street

Project Name: Chick-fil-A

Submission Date: 05/21/2025

Plan Type: Sketch Plan Submission Dated 04/08/2025

Zoning District: GC General Commercial; WPH William Penn Highway Overlay

Applicant's Name: Chick-fil-A Inc. (c/o Kim Wyatt)

Fire Commissioner / Palmer Municipal Fire Department Comments *(attach additional pages as needed)*

Comments related to fire hydrants or other fire prevention measures:

Hydrants are available on site. However, Sprinkler System will be required for this structure due to more than 5,000 square feet. A hydrant shall be located within 100' of the Fire Department Connection (FDC). FDC and hydrant locations shall be approved.

Comments related to emergency access, truck turning or other site considerations:

Apparatus Access approved

Comments related to Township Fire Prevention Ordinance or IFC Regulations:

None

Other Comments:

None

Signature: Stephen Gallagher Date: 6/9/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 601 South 25th Street

Project Name: Chick-fil-A

Submission Date: 05/21/2025

Plan Type: Sketch Plan Submission Dated 04/08/2025

Zoning District: GC General Commercial; WPH William Penn Highway Overlay

Applicant's Name: Chick-fil-A Inc. (c/o Kim Wyatt)

Shade Tree Commission Comments *(attach additional pages as needed)*

Comments related to location and types of shade trees proposed:

Please consider installing islands in the parking lot with shade trees inside them. Please also consider additional shade trees around the building.

Comments related to landscaping plan and natural features:

Please consider submitting a Landscape Plan for review.

Comments related to impact of existing trees:

Other Comments:

Please reconsider the amount of parking spaces included in this plan as it seems to be alot for the property type.

Signature: Zachary Trexler Date: 6/5/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 601 South 25th Street

Project Name: Chick-fil-A

Submission Date: 05/21/2025

Plan Type: Sketch Plan Submission Dated 04/08/2025

Zoning District: GC General Commercial; WPH William Penn Highway Overlay

Applicant's Name: Chick-fil-A Inc. (c/o Kim Wyatt)

Department of Codes and Zoning Comments *(attach additional pages as needed)*

Comments related to zoning regulations (lot area, setbacks, permitted use, etc.):

No comments at this time.

Comments related to parking requirements or signage regulations (if applicable):

No comments at this time.

Comments related to other code provisions:

No comments at this time.

Other Comments:

No additional comments on the plan. It was already noted of the aisle being too narrow.

Signature: James Raudenbush Date: 06/10/2025

Craig Beavers

From: Molly Wood <mwood@lantabus-pa.gov>
Sent: Tuesday, May 27, 2025 2:10 PM
To: Craig Beavers
Cc: ajordan@lantabus-pa.gov
Subject: LANTA Comments for Chick-fil-A (Rite Aid site)_5.27.25

Caution! This message was sent from outside your organization. Report

Craig,

The Lehigh and Northampton Transportation Authority (LANTA) has reviewed the submitted Sketch Plan for the proposed Chick-fil-A project located at 601 S 25th Street in Palmer Township, and offers the following comments.

LANTA provides fixed-route public transportation directly to the project site, with several bus routes, including an Enhanced Bus Service (EBS) Blue Line route, serving eastbound along the property frontage on William Penn Highway. The existing bus stop ID 1411 is located farside of the William Penn Highway and S 25th Street intersection, however LANTA plans to relocate the bus stop nearside of the intersection, fronting the project site.
Given the high ridership at this bus stop location, LANTA recommends a 45' concrete pad in between the existing sidewalk and the curb for a proper boarding/alighting bus stop landing pad, and to serve as a station pad for future EBS capital investment for additional transit infrastructure at this significant EBS station. In addition, LANTA recommends providing an interior sidewalk and crosswalk network to safely navigate from the 25th St sidewalk to the main entrance of the new facility, as the current sidewalk on S 25th Street stops at the driveway entrance and does not continue into the project site.

LANTA recommends follow up with Molly Wood at mwood@lantabus-pa.gov to discuss any additional bus stop location and details.

Thank you,
Molly

Molly S. Wood, AICP
Planner/Land Use Specialist
Lehigh and Northampton Transportation Authority
1060 Lehigh Street, Allentown, PA 18103
PH: 610-439-1376
mwood@lantabus-pa.gov
www.lantabus.com

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Lehigh Valley Planning Commission

DR. CHRISTOPHER R. AMATO
Chair

CHRISTINA V. MORGAN
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ARMANDO MORITZ-CHAPELLIQUEN
Treasurer

BECKY A. BRADLEY, AICP
Executive Director

Planning for the Future of Lehigh and Northampton Counties at 615 Waterfront Drive, Suite 201, Allentown, PA 18102 ■ (610) 264-4544 ■ lvpc@lvpc.org ■ www.lvpc.org

July 3, 2025

Craig Beavers, Director of Planning
Palmer Township
3 Weller Place
Palmer, PA 18045

Re: Chick Fil A – Sketch Plan
Palmer Township
Northampton County

Dear Mr. Beavers:

The sketch plan application proposes to construct a 5,483-square-foot fast food restaurant building with associated dual lane drive-thru and food delivery lanes at 601 S 25th Street (Parcel Identification Number M9 1 2A). The existing structure is proposed to be demolished.

Site Suitability
According to General Land Use Plan in *FutureLV: The Regional Plan*, the site is in a Development area. These areas have the factors needed to support growth and this project aligns with the intent of FutureLV to 'encourage reuse and redevelopment' (of Policy 1.1 and Density Special Section, page 71).

Transportation
According to the ITE Trip Generation Land-Use code 934 Fast-Food Restaurant, Drive-Thru Fast-Food Restaurant totaling 5,483 square feet will produce approximately 2,562 daily trips. Access to the site is provided by two access driveways both coming from the Wawa parking lot. Additional adequate signage is recommended to be utilized to direct traffic through the parking lots to access the Chick-Fil-A and avoid confusion.

One of the proposed driveways, nearest the site access off 25th Street, is a one-way access and immediately feeds into the Chick-fil-A drive-through line. There are concerns with interactions between vehicles entering the Wawa parking lot and cars waiting in the drive-through line. During peak hours there may be long vehicle lines in the drive-thru that can potentially interfere with site access off 25th Street. It is recommended the applicant provide a truck turning template which illustrates the largest anticipated vehicle that would visit the proposed site.

Centers are opportunities for mixed-use areas and utilize various modes of travel between residential and commercial areas. The LVPC recommends that a bicycle rack

be included in the development plans to help ensure transportation accessibility for all persons, integrate mixed transportation into public space design, and improve connections between bus stops and pedestrian and bicycle infrastructure. Connection from the existing sidewalk to the building is crucial and can further facilitate universal design standards (of Policy 5.2). This is especially crucial for riders of the Lehigh and Northampton Transportation Authority's (LANTA) Blue Route as there are existing bus stops along Butler Street and across 25th Street. There is potential for increased ridership at this site and the recommended pedestrian and transit infrastructure will 'increase social and economic access to daily needs for all people' (Policy 5.2). It is recommended the developer reach out to Molly Wood at mwood@lantabus-pa.gov to discuss any additional bus stop details.

The Wilson Bike Path/Palmer-Bethlehem Twp Bikeway runs behind the site location. Students from both the nearby Easton Area High School and Wilson Area High School utilize this path to access this commercial area. This proposal represents an opportunity to strengthen our region's pedestrian network and improve the crossing at William Penn Highway.

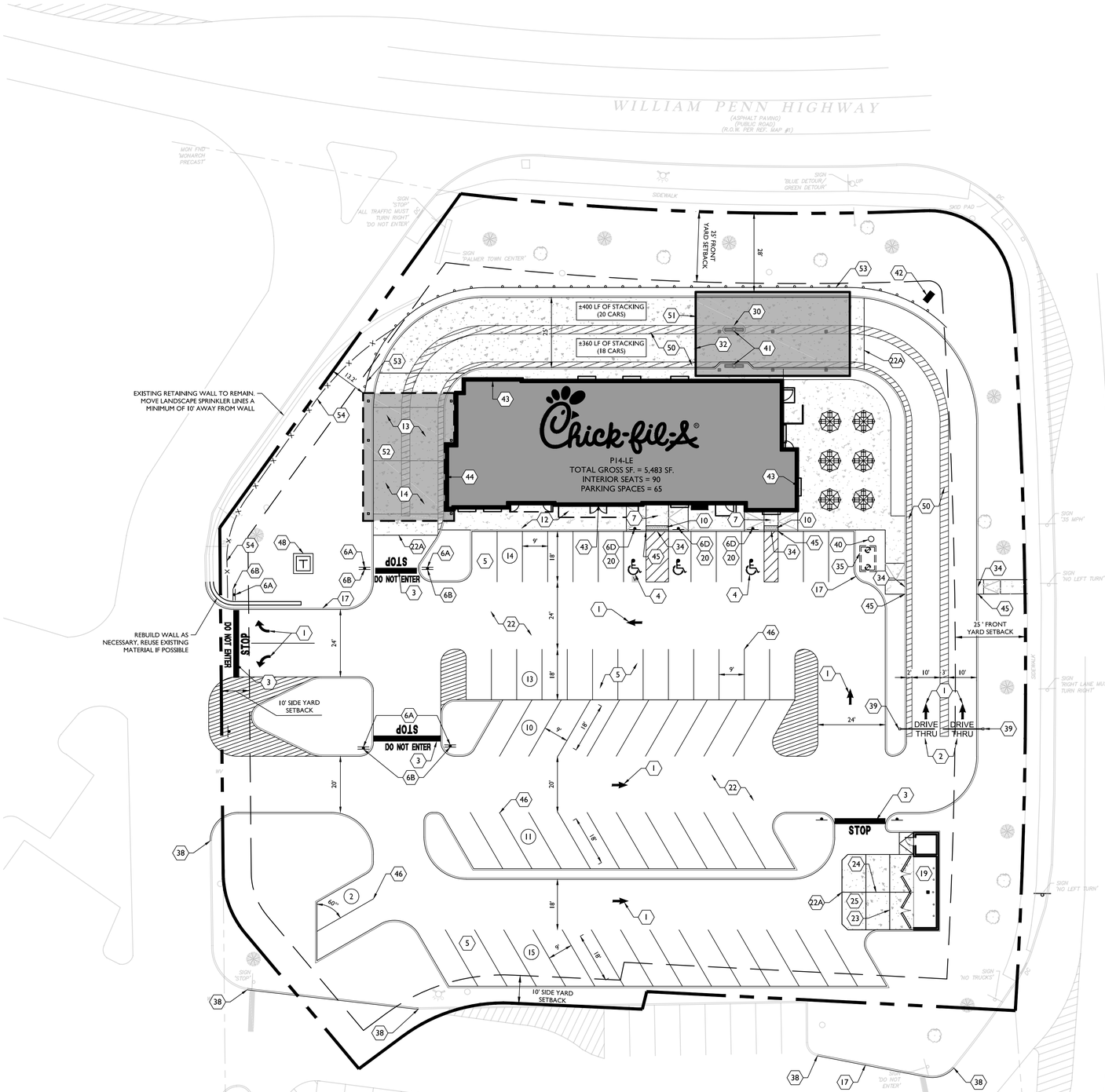
Municipalities, when considering subdivision/land developments, should reasonably attempt to be consistent with *FutureLV: The Regional Plan*, as required by the Pennsylvania Municipalities Planning Code (MPC) [Article 1§105, Article III§303, §304 & §306(a), Article VI§603(j)]. The LVPC review does not include an in-depth examination of plans relative to subdivision design standards or ordinance requirements since these items are covered in the municipal review.

Sincerely,



Joseph Dotta
Regional Planner

cc: Kim Wyatt, Applicant; Chris Riggle, Project Engineer/Surveyor; Justin Coyle, Township Engineer.



LOCATION MAP



GOOGLE EARTH

SCALE: 1"=500' (APPROXIMATE)

ZONE DATA:
ZONE: GENERAL COMMERCIAL DISTRICT (GC)
OVERLAY DISTRICT: WILLIAM PENN HIGHWAY OVERLAY (WPH)
EXISTING USE: COMMERCIAL RETAIL, PERMITTED
PROPOSED USE: QUICK SERVE RESTAURANT, PERMITTED/DRIVE-THRU, SPECIAL EXCEPTION

	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	10,000 SF	75,760 SF	75,760 SF
MINIMUM LOT WIDTH	120 FT	311 FT	311 FT
PRINCIPAL BUILDING			
MINIMUM FRONT YARD	20 FT	94.5 FT	28.0 FT
MINIMUM SIDE YARD	5 FT	45.7 FT	13.2 FT
MAXIMUM BUILDING HEIGHT	40 FT	<40 FT	<40 FT
MAXIMUM LOT COVERAGE	40 %	19.4 %	11.28 %
MAXIMUM IMPERVIOUS COVERAGE	70 %	80.02 % (60,624 SF) **(E)**	69.35 % (52,537 SF)
PARKING			
90° PARKING SPACE SIZE	9 FT X 18 FT	9 FT X 18 FT	9 FT X 18 FT
ONE-WAY TRAFFIC AISLE WIDTH (90° PARKING STALLS)	20 FT	20 FT	20 FT
ONE-WAY TRAFFIC AISLE WIDTH (60° PARKING STALLS)	18 FT	18 FT	18 FT
USE: 1 SPACE/2.5 SEATS + 1 SPACE PER EMPLOYEE (114 SEATS / 2.5) + 35 EMPLOYEES = 71 SPACES REQUIRED	71 SPACES	83 SPACES	65 SPACES (V)
LOADING: 1 SPACE = 14 FT X 60 FT	1 SPACE	1 SPACE	1 SPACE
ADA:	3 SPACES	4 SPACES	3 SPACES
TOTAL	71 SPACES	83 SPACES	65 SPACES

(E) = PRE-EXISTING NON-CONFORMING CONDITION
(V) = VARIANCE REQUIRED

THE FOLLOWING VARIANCES AND/OR DESIGN WAIVERS MAY BE REQUIRED FROM THE FOLLOWING ORDINANCE SECTIONS IF DETERMINED BY THE ZONING BOARD:

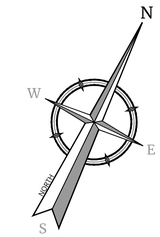
- FROM SECTION 190-924.A - TO ALLOW FOR A DRIVE-THRU AS A SPECIAL EXCEPTION.
- FROM SECTION 190-601.A.1 TABLE 3 - TO ALLOW FOR LESS THAN THE REQUIRED NUMBER OF PARKING SPACES (65 PROPOSED).

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	P V
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

SITE PLAN LEGEND

1	DIRECTIONAL ARROW (TYP.)	1/C9
2	DRIVE-THRU GRAPHICS	2/C9
2A	DRIVE-THRU MULTI-LANE MERGE STRIPING	3/C9
3	STOP LINE GRAPHICS	2/C9
4	PAINTED HANDICAP PARKING SYMBOL (TYP)	4/C9
5	STANDARD PARKING STALL (TYP.)	5/C9
6	DIRECTIONAL SIGNAGE	6/C9
	ALL SIGNS TO CONFORM TO MUTCD LATEST VERSION	
6A	STOP SIGN	
6B	DO NOT ENTER SIGN	
6C	NO RIGHT TURN SIGN	
6D	HANDICAP W/ PENALTY	
7	CHICK-FIL-A MAIN ENTRY HANDICAP RAMP	7/C9
8	HANDICAP RAMP w/FLARED SIDES	8/C9
9	RETURNED CURB HANDICAP RAMP	9/C9
10	TRUNCATED DOMES	10/C9
11	TYPICAL SIDEWALK DETAIL - PICTURE FRAME PATTERN	11/C9
12	TYPICAL SIDEWALK WITH CURB	12/C9
13	DRIVE THRU PLAN VIEW	13/C9
14	DRIVE THRU ISOMETRIC VIEW	14/C9
15	PLASTIC WHEEL STOP (TYP.)	15/C9
16	LANDSCAPE/IRRIGATION PROTECTOR	16/C9
17	18" CONCRETE CURB	17/C9
18	ROLLOVER/MOUNTABLE CURB	18/C9
19	TRASH ENCLOSURE FOUNDATION PLAN	19/C9
20	BOLLARD W/ SIGN	20/C9
21	BOLLARD	21/C9
22	TYPICAL ASPHALT PAVEMENT SECTION	22/C9
22A	PAVEMENT EDGE AT CONCRETE	22A/C9
23	CONTRACTION JOINTS	23/C9
24	CONSTRUCTION JOINTS	24/C9
25	SECTION THRU CONCRETE PAVEMENT AT DUMPSTER	25/C9
26	6" CONCRETE PAVEMENT SECTION AT DRIVE-THRU	26/C9
27	HANDRAIL	27/C9
28	HANDRAIL AND RAMP	28/C9
29	CROSS WALK DETAIL	29/C9
30	DRIVE THRU ORDER POINT ISLAND CURB	30/C9
31	MULTI ORDER POINT MOUNTABLE CURB	31/C9
32	MENU BOARD LOOP DETECTION SYSTEM	32/C9
33	PAVEMENT REPAIR STRIP	33/C9
34	CURB CUT (FLUSH CURB)	34/C9
35	GREASE INTERCEPTOR	35/C9
36	EXTERIOR CLEANOUT (TYP.)	
37	INLET DETAILS	37/C9
37A	PENNDOT TYPE 'C'	
37B	PENNDOT TYPE 'M'	
38	MEET EXISTING CURB	
39	CLEARANCE BAR	32/C9
40	FLAG POLE	40/C9
41	DRIVE-THRU MENU BOARD	
42	MAIN ID SIGN (26.64 SF)	42/C9
43	WALL SIGN (58.75 SF)	43/C9
44	WALL SIGN (36.00 SF)	44/C9
45	CURB TRANSITION FROM FLUSH TO FULL HEIGHT	
46	4" WIDE WHITE STRIPE	
47	LIGHT POLE (SEE LIGHTING PLAN FOR DETAILS)	
48	TRANSFORMER & PAD	
49	SAW CUT LIMIT (TYP.)	
50	DRIVE-THRU STRIPING	
51	FACE TO FACE ORDER CANOPY	
52	MEAL DELIVERY CANOPY	
53	GUARDRAIL	
54	4' HIGH FENCE	



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ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

20 0 20 40
SCALE : 1" = 20'

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998
Telephone 404-765-8000

REV	DATE	DESCRIPTION	DRAWN BY

Seal

Christopher John Riggle
PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER
LICENSE NUMBER: PE075908
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EASTON, PA 18045

PALMER TOWNSHIP
NORTHAMPTON
COUNTY
PENNSYLVANIA

PRELIMINARY & FINAL MAJOR SITE PLAN

SITE PLAN

- ■ Preliminary
- ☐ 80% Submittal
- ☐ For Construction

File No.: 23015640A
Store : 05969
Date : 07/16/25
Drawn By: JEH
Checked By: CJR

Sheet
C 2

2023\23015640A\Engineering\Site Plans\CAD\C 2 Site Plan By: SAMUEL.WILLIAMS

Preliminary Land Development Plan: Chrin Southeast Quadrant Lot 2

INFORMATION

The Applicant is requesting review of a Preliminary Land Development Plan for a retail shopping center split between Palmer Township and Tatamy Borough.

ATTACHMENTS:

Staff Report
Township Engineer Review
Township Landscape and Lighting Review
Township Geotechnical Review
Planning Department Review
Police Department Review
Fire Department Review
Public Works Department Review
Public Services Department Review
Stormwater and MS4 Department Review
LANTA Review
Codes and Zoning Department Review
Land Development Plans

TOWNSHIP OF PALMER
NORTHAMPTON COUNTY, PENNSYLVANIA
3 Weller Place, Palmer Township, PA 18045

Staff Report

To:	Palmer Township Planning Commission
From:	Craig Beavers, Director of Planning
Date:	August 8, 2025
Subject:	Chrin Southeast Quadrant Lot 2 (Main Street and Trolley Line Drive) Plan Set Dated July 17, 2025 SALD-2025-008 **Preliminary Land Development Review – First Submission**
Copy To:	Board of Supervisors, R. Williams, B. DeGerolamo, W. Oetinger, Esq., J. Coyle, D. Wilusz

LOCATION AND INTENT

The Charles Chrin Real Estate Trust seeks approval of a Preliminary Land Development Plan and for the development of a restaurant/retail shopping area split between Palmer Township and Tatamy Borough. On the Palmer side, the plan consists of two quick-service restaurants, driveways, and stormwater management facilities. On the Tatamy side, the plan consists of a 120,000 square foot warehouse, a quick-service restaurant, and two retail buildings. The property is served by public water and public sewer. The Charles Chrin Real Estate Trust is the equitable owner and applicant.

The property is 4.55 acres on the Palmer Township portion (12.95 on the Tatamy Borough portion) and contains minimal slopes. There are no floodplains or wetlands present on the property. It is currently an unused field with no existing structures. To the north is the future NE Quad site. To the east are commercial businesses in Tatamy. To the south is Martin Guitar warehouse in Tatamy. To the west is the existing SE Quad Lot 1.

PREVIOUS TOWNSHIP CONSIDERATION

1. On January 14, 2025, the Planning Commission reviewed a sketch plan for this project. Planning Commission and Staff provided the following comments:
    a. Reevaluate the proposed road network to mitigate traffic impacts and provide adequate access for emergency vehicles, deliveries, and the public.
    b. Provide enhanced interior and exterior pedestrian circulation to allow for safe walkability within the site footprint.
    c. Provide a bike path across the property frontage.
    d. Incorporate gateway elements for enhanced streetscaping for the property frontage.

2. At their June 27, 2006 meeting, the Board of Supervisors granted Final Subdivision Approval for the Chrin Commerce Center Business Park, which carved out the first subdivision of this property, known as “Lot A.” This would later be referred to as the “Southeast Quadrant” or “SE Quad.”

3. At their March 5, 2018 meeting, the Board of Supervisors granted Preliminary/Final Subdivision and Land Development Approval for the Chrin Southeast Quadrant Development, which created the current lot lines on the site. “Lot 1” was granted land development approval as a Planned Community, containing restaurants, a hotel, and a convenience store, as well as the extension of Trolley Line Drive. “Lot 2” contained no land development, aside from public improvements.

REVIEWING AGENCY COMMENTS

A. **Township Engineer –** The comments of the Township Engineer are contained in Mr. Justin Coyle’s review dated August 5, 2025. **The Township Engineer has outstanding comments relating to ordinance compliance, stormwater, and traffic. These comments will need to be addressed prior to Preliminary Plan approval.**

B. **Township Geotechnical Consultant –** The comments from the Township Geotechnical Consultant are contained in Mr. Shawn Casey’s review dated August 8, 2025. **The Township Geotechnical Consultant has outstanding comments relating to carbonate study and infiltration study submission. These comments will need to be addressed prior to Preliminary Plan approval.**

C. **Township Landscape and Lighting Consultant –**The comments from the Township Landscape and Lighting Consultant are contained in Mr. Chris Green’s review dated August 4, 2025. **The Township Landscape and Lighting Consultant has outstanding comments relating to landscaping. These comments will need to be addressed prior to Preliminary Plan approval.**

D. **Planning Department** – The comments from the Planning Department are contained in Mr. Craig Beavers’ review dated August 6, 2025. **The Planning Department has outstanding comments relating to ordinance compliance, waiver requests, plan notations, parks and recreation, shade trees, transportation, public works and utilities, pedestrian and bicycle accommodations, legal comments, and comprehensive plan consistency. These comments will need to be addressed prior to Preliminary Plan approval.**

E. **Public Works Department –** The comments from the Public Works Department are contained in Mr. Scott Kistler’s review dated August 5, 2025. **The Public Works Department has outstanding comments relating to the location of sewer extensions and ownership. These comments will need to be addressed prior to Preliminary Plan approval.**

F. **Fire Department –** The comments of the Fire Department are contained in Commissioner Stephen Gallagher’s review dated August 5, 2025. **The Fire Department has outstanding comments relating to the hydrant locations, emergency access road widths, and sprinklers. These comments will need to be addressed prior to Preliminary Plan approval.**

G. **Police Department –** The comments of the Police Department are contained in Chief Wayne Smith’s review dated July 21, 2025. **The Police Department has no comments for the project at this time.**

H. **Codes and Zoning Department –** The comments from the Codes and Zoning Department are contained in Mr. Scott Kistler’s review dated August 5, 2025. **The Codes and Zoning Department has no comments for the project at this time.**

I. **Public Services Department –** The comments from the Public Services Department are contained in Mr. Phillip Godbout’s review dated August 5, 2025. **The Public Services Department has outstanding comments relating bike path details, lighting, and catch basin design. These comments will need to be addressed prior to Preliminary Plan approval.**

J. **Stormwater and MS4 Department –** The comments from the Stormwater and MS4 Department are contained in Mr. Matthew Gunther's review dated August 7, 2025. **The Stormwater and MS4 Department has outstanding comments relating to operation transitions, karst geology, and pollution control measures. These comments will need to be addressed prior to Preliminary/Final Plan approval.**

K. **Shade Tree Commission –** The Shade Tree Commission has not reviewed the application at the time of writing. Their next meeting is scheduled for August 7th.

L. **Parks and Recreation Advisory Board –** The Parks and Recreation Advisory Board has not reviewed the application at the time of writing. Their next meeting is scheduled for August 19th.

M. **Lehigh Valley Planning Commission (LVPC)** – The comments from the LVPC have not been received at the time of this writing.

N. **Lehigh and Northampton Transportation Authority (LANTA) –** The comments of LANTA are contained in Ms. Molly Wood's review dated July 30, 2025. Her comments pertain to pedestrian access from the roadway to the facility. **LANTA has no other comments for the project at this time.**

O. **Northampton County Conservation District (NCCD) –** The comments of the NCCD have not been received at the time of this writing.

P. **Pennsylvania Department of Environmental Protection –** The comments from the Department of Environmental Protection have not been received at the time of this writing.

Q. **Pennsylvania Department of Transportation –** The comments from the Department of Transportation have not been received at the time of this writing.

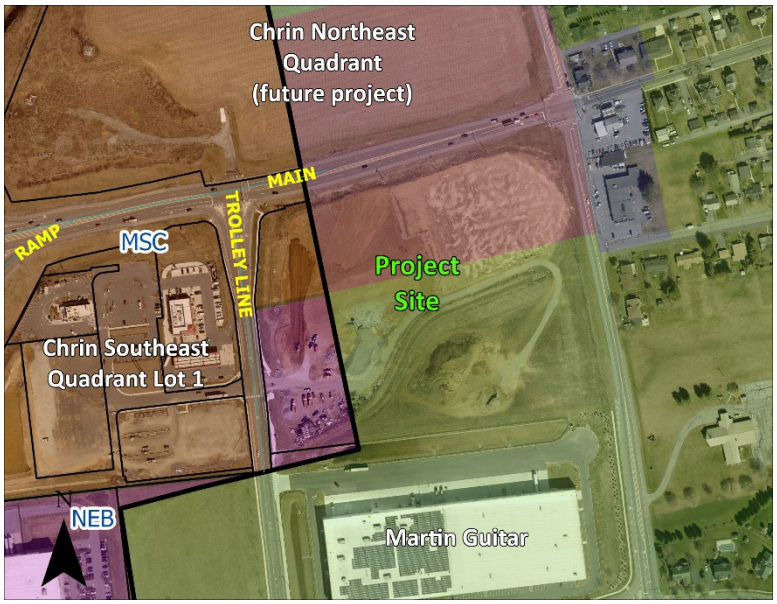
STAFF ANALYSIS

Based on an analysis of the submitted material, the Staff provides the following general comments:

Zoning and Land Use

1. The project site is in the North End, at the intersection of Main Street and Trolley Line Drive.
2. Lands on the north, west, and south of the site are industrial uses in an area zoned for that use. Lands on the east of the project site are zoned MDR Medium Density Residential, providing for more dense residential developments than in lower density neighborhoods (Figure 1).

Figure 1: Vicinity map showing project site, abutting land uses, zoning and adjacent streets.



3. The project site is utilized as the existing Werner Enterprises trucking terminal and driver training center, as well as vacant land near the roadway.
4. The proposed use is a permitted use in this zoning district; however, previous Conditional Use approval for the site required any future expansion of buildings or use to undergo further Conditional Use approval.
5. The project site is in the AHO Airport Hazard Overlay, which restricts the maximum height of structure on the site to prevent interference with the nearby Braden Airpark.

Comprehensive Plan Consistency

1. The Comprehensive Plan envisions the tract within a Non-Residential Land Use Type, serving as an area for commercial and/or industrial use within the community. The proposed retail center would be split between the MSC Main Street Commercial and NEB North End Business zoning districts.
2. The purpose of the MSC District is to allow for the creation of a planned commercial center featuring qualities of a traditional Main Street neighborhood that will benefit the Township and the region, both economically and aesthetically; to provide a mechanism that will allow areas planned for commercial uses to be developed in the northern end of the Township near the Route 33/Main Street interchange; and to allow for prudent business decision-making by future property owners and encourage investments in land and infrastructure to be made with the knowledge that the Township will permit such commercial development to be occupied and to operate.
3. The purpose of the NEB District is to provide sufficient space to meet current and anticipated future regional needs for industrial, office and commercial development that will benefit the Township and the region, both economically and aesthetically; to provide a mechanism that will allow areas planned for industrial, office and commercial uses to be developed in the northern end of the Township along the Route 33 corridor; and to allow for prudent business decision-making by future property owners and encourage investments in land and infrastructure to be made with the knowledge that the Township will permit such industrial, office and commercial development to be occupied and to operate.

4. The 2018 Comprehensive Plan encourages appropriate streetscaping along industrial corridors to increase vibrancy of major corridors, and it additionally recommends the expansion of the Township's pedestrian and bicycle infrastructure for all new developments.
5. The proposed retail center is consistent with the following Comprehensive Plan goals:
    a. *A.3: Support well planned and compatible land uses that are concurrent with infrastructure availability, environmental sensitivities, and surrounding density patterns.*
    b. *B.1: Safeguard the community's established, business-friendly atmosphere.*
    c. *B.2: Encourage compatibility of established development within the Township and new entrepreneurial efforts.*
    d. *C.1: Identify and address pedestrian safety needs, congestion, traffic flow challenges and safety concerns where they exist.*
    e. *C.2: Support integrated, safe bicycle/trail networks to support recreation and connectivity of community assets and neighborhoods.*
    f. *C.3: Improve transit ridership convenience and safety between areas of employment, shopping, neighborhoods, and transit stops.*
    g. *F.2: Reinforce the significance of the community's multiple civic centers or hubs as destinations for recreation, community gathering, and commerce.*
    h. *F.5: Align development with accessible infrastructure service.*
6. The proposed retail center is not consistent with the following Comprehensive Plan goals:
    a. *C.1: Identify and address pedestrian safety needs, congestion, traffic flow challenges and safety concerns where they exist.*
    b. *D.1: Provide a wide range of active and passive recreation areas and facilities that are well-distributed throughout the Township.*
    c. *F.3: Establish a sense of arrival when entering Palmer Township.*
    d. *F.7: Facilitate discussions with neighboring communities when dealing with regionally significant development and improvements.*
    e. *F.9: Promote sustainability as a guiding principle in Township decision-making.*
7. The proposed retail center is either nonapplicable or negligible to the other goals.

Site Plan

1. Staff notes that there are minor typos and omissions in the provided plan set. The Applicant should double-check all plan sheets for errors.
2. Per Commissioner Gallagher's review, the proposed layout needs additional detail to determine suitability for emergency access, hydrant locations, and sprinkler requirements.
3. While the Applicant has received variances for the setbacks from Main Street, we continue to note that the current design does not appear visually appealing or pedestrian friendly from this corridor. A goal of the *2018 Comprehensive Plan* is to develop welcoming gateways to our community. The Applicant should address ways to improve the streetscape of this corridor and coordinate with the Township and Borough for potential welcome signage.

Traffic and Circulation

1. As previously noted, staff has several concerns regarding the proposed traffic layout for this project, largely with the interior circulation patterns. There are numerous intersections within close proximity,

tight radii for trash trucks and delivery vehicles, and potential sight distance conflicts. The Applicant is encouraged to discuss with both the Township Engineer and the Tatamy Borough Engineer about alternatives to alleviate the concerns within the site.

2. The proposed interior pedestrian circulation is commended, and the Applicant clearly took great care to include accommodations for customers who will be walking through the site. Numerous connections are provided between the exterior sidewalks/bike path, as well as between the different pad sites, allowing for safe and convenient access for those without a vehicle.
3. The Applicant is also commended for the inclusion of a 10' wide multi-use trail, which fulfils a recommendation from the *2025 Palmer Township Active Transportation Plan* to develop a connection between Nazareth and Tatamy.

Stormwater Management

1. Staff notes that both the Township Engineer and Township Geotechnical Consultant, as well as several departments, commented on items relating to the proposed stormwater management design. Before action is taken on this plan, these items must be properly addressed.

WAIVER AND DEFERRAL REQUESTS

1. The Applicant requests the following waivers as a part of this application:
    a. *SMO §158.304.M and SALDO §165-63.K.11 - Basin Freeboard*
    b. *SMO §158-305.C.11 – Minimum Pipe Slope*
    c. *SALDO § 165-63.K.(2).(c) - Emergency Spillway Lining*
    d. *SALDO § 165-63.K.3 - Slope of Detention Basin*
    e. *SALDO §165-63.K.5 - Slope of Basin Bottom*
    f. *SALDO §165-63.N(3) – Changing Pipe Sizes*
    g. *SALDO §165-63.N.3 – Minimum Slope of Drainage Swales*
    h. *SALDO §165-73.A.5.a and 165-73.A.7 – Location and Number of Street Trees*
2. Additionally, the Applicant request the following deferral as a part of this application:
    a. *SALDO § 165-75.A – Curbing Along Public Streets*
3. The criteria for granting waivers and deferrals from Chapter 165 Subdivision and Land Development are as follows:

    ***§ 165-7.B Modifications and exceptions**. The Planning Commission shall be given an opportunity to make a recommendation on the matter at a legally advertised meeting. The Board of Supervisors may, by written resolution, grant a waiver or modification concerning a specific provision(s) of this ordinance if the applicant proves that the request meets one or more of the following conditions:*

    a. *Will avoid an undue hardship that was not self-created and that results from the peculiar and uncommon characteristics of the property.*
    b. *Will avoid a clearly unreasonable requirement that would not serve any valid public purpose in this situation.*
    c. *Will allow an alternative standard that is clearly proven by the applicant to provide equal or better results.*
    d. *Will allow a layout of improvements that would clearly be more in the public interest than what would occur if the modification would not be granted.*

e. *Will remove a requirement that is not applicable, especially because of the small size of the proposed project.*

4. The Applicant indicates that the requested waivers would result in an equal or better stormwater management design. Additionally, the required street trees would need to be relocated due to PennDOT and PPL requirements near the right-of-way.
5. While Township Staff defers to the Township Engineer on technical design elements, we agree that if the proposed design elements result in equal or better results, then we are not opposed to the waiver request.
6. Regarding the deferral request, all other projects along Main Street have received the same deferral request due to design criteria from PennDOT.
7. Township Staff do not object to either request.

PLANNING DEPARTMENT RECOMMENDATION

The Department recommends that the Planning Commission votes to table the application to allow the Applicant time to revise their plans to address outstanding comments. This recommendation is contingent upon the Applicant granting a time extension to act on the plan.

Planning Commission deadline date to act on the plan: **October 14, 2025**
Board of Supervisors deadline date to act on the plan: **November 10, 2025**



Location Site

Chrin Southeast Quadrant Lot 2

J8 27A1 0324

Main Street Commercial (MSC) and North End Business (NEB)

August 5, 2025 ***SENT VIA EMAIL***

Craig S. Beavers, Director of Planning
Palmer Township
3 Weller Place
Palmer, PA 18045

Subject: Preliminary Plan Application – Chrin Southeast Quadrant Lot 2
Parcel ID J8 27A1

Dear Mr. Beavers:

Carroll Engineering Corporation is in receipt of documents supporting the above referenced Land Development Plan Application. The documents were submitted to the Township Planning Commission (Commission) by Langan Engineering and Environmental Services, LLC (LEES).

PROJECT DESCRIPTION

The subject property contains a total of 17.498 acres, as shown on the submitted Boundary and Topographic Survey. The submitted land development application indicates that there are two (2) parcels included in this development; the lot in Palmer Township containing 4.55 acres, and the remainder in Tatamy Borough. The Palmer Township parcel is located on Trolley Line Drive and Main Street (SR 1002) and for the purpose of this review, it is considered the subject property *(refer to the attached aerial photo)*.

The existing subject property is presently an undeveloped and maintained lawn/meadow area. The subject property is located in both the NEB – North End Business and MSC Main Street Commercial Zone Districts. The proposed commercial development consists of (2) buildings; a Quick-Serve Restaurant in the MSC Zone to the north and a Quick-Serve Restaurant in the NEB Zone to the south.

In Palmer Township, the Applicant proposes to construct one (1) Restaurant Building (#5) with 5,175 square feet of floor area and (1) Restaurant Building (#6) with 3,500 square feet of floor area. Site improvements will include internal access drives, parking lots for each building, a stormwater management system, public water supply, sanitary sewer, and public gas. Proposed access to the property is via Trolley Line Drive.

The Applicant has submitted a post-construction stormwater management design plan as required by the Palmer Township Stormwater Management Ordinance, the Lehigh Valley Planning Commission (LVPC) Global Act 167 stormwater management requirements, and the Pennsylvania Department of

Environmental Protection's (PADEP) National Pollutant Discharge Elimination System (NPDES) permit.

The cover sheet has been labeled as a Preliminary Land Development, and we have reviewed this application as such. We reviewed the subject property within Palmer Township.

ZONING VARIANCES

Via a decision letter dated January 7, 2025, the Palmer Township Zoning Hearing Board granted relief from the following sections of the Zoning Ordinance (ZO):

1. ZO §190.412 – A zoning variance was granted to allow for a warehouse and quick service restaurant within the North End Business District that already permits warehouses.

2. ZO §190.409.E.9 – A zoning variance was granted to allow parking within 10' of Main Street in which a minimum 50' setback is required.

3. ZO §190.409.J.1.b – A zoning variance was granted to allow for parking between Main Street and the building. Township Ordinances require the parking to be orientated to the rear and/or the side of the structure.

4. ZO §190.409.G.4 – A zoning variance was granted to allow parking 10' from the right of way. Township Ordinances require a 15' setback from the right of way from arterial and collector streets.

5. A zoning variance was granted to allow access from a zoning district, where the proposed use is not permitted. The parcel is in the North End Business and Main Street Commercial Zoning District.

REQUESTED DEFERRALS/WAIVERS

The Applicant has requested waivers from the following sections of the Palmer Township Subdivision and Land Development Ordinance (SALDO) & Stormwater Management Ordinance (SMO) Chapter 158, via plan notation on Sheet GI-100A, sheet 2 of 52:

DEFERRALS

1. SALDO §165-75.A – The referenced section requires curbing along public streets. A waiver is requested to defer this requirement until a time when Palmer Township and PennDOT both agree that curbing needs to be installed along the entire Main Street (SR 1002) Corridor within the Township.

WAIVERS

1. SMO §158-304.N. & SALDO §165.63.K(11) – The referenced Section requires a minimum 1.0 feet of freeboard below the invert of the emergency spillway. A waiver is being requested to allow a minimum freeboard of 0.5 feet to match the basins with Tatamy Borough.

2. SMO §158-305.C.11. – The referenced Section requires a minimum pipe slope of 0.5%. A waiver is requested to allow for a minimum pipe slope of 0.35%.

3. SALDO §165-63.K.2.c – The referenced Section requires emergency spillways to be constructed of reinforced concrete, mortared in plans rip-rap, or concrete rubble. A waiver is requested to permit the construction of the emergency spillway using synthetic landscape matting.

4. SALDO §165-63.K.3 – The referenced Section requires the interior slope of a detention basin to be a maximum of 4:1 slope. A waiver is requested to permit the interior slope of the infiltration basin to be three to one (3:1).

5. SALDO §165-63.K.5 – The referenced Section requires a minimum 3% slope for the bottom of detention basins. A waiver is requested to permit a basin bottom slope of 0%.

6. SALDO §165-63.N(3) – The referenced Section requires the crowns of all drainage pipes to be at the same elevation when changing pipe sizes. A waiver is requested to permit the crowns of drainage pipes to differ when changing pipe sizes.

7. SALDO §165-63.N.3 – The referenced Section requires a minimum longitudinal slope of 2%. A waiver is requested to permit a reduced longitudinal slope of 2%. **-This ordinance section actually indicates a minimum slope of 0.5% for drainage pipes, and a minimum slope of 2.0% for drainage swales and gutters. The Applicant shall clarify the waiver request.**

8. SALDO §165-74.A.5.a and §165-73.A.7 – The referenced Section provides requirements relating to the location and number of street trees along a public right-of-way. A waiver is requested to permit the required trees be placed outside of the right-of-way interior to site.

SUBMITTED DOCUMENTS

We have reviewed the following documents and related information submitted regarding this application:

1. Lehigh Valley Planning Commission Application Submission Cover Letter, prepared by Shaun Haas, P.E., C.P.E.S.C., of Langan Engineering and Environmental Services, LLC, two (2) pages, dated July 17, 2025.

2. Lehigh Valley Planning Commission Subdivision and Land Development Review Application dated July 11, 2025.

3. Palmer Township Submission Cover Letter and Sketch Plan Comment Response Letter, prepared by Shaun Haas, P.E., C.P.E.S.C., of Langan Engineering and Environmental Services, LLC, 24 pages, dated July 17, 2025.

4. Preliminary Land Development Plans titled “Chrin southeast Quadrant-Lot 2 Development”, prepared by Langan Engineering and Environmental Services, LLC, consisting of 52 sheets, dated July 17, 1025, with no revisions.

5. Boundary and Topographic Survey, Chrin Commerce Center-Lot 2, prepared by Langan

Engineering and Environmental Services, LLC,, Not Signed and/or Sealed, one (1) page, dated November 12, 2024, no revisions.

6. Post-Construction Stormwater Management (PCSM) Plan Narrative for Chrin Southeast Quadrant-Lot 2, prepared by Keith S. Ottes, P.E., of Langan Engineering and Environmental Services, LLC, 512 pages, dated July 17, 2025, with no revisions.

7. Transportation Impact Study (TIS), Chrin Southeast Quadrant Lot 2, prepared by AnnMarie Vigilante, P.E., of Langan Engineering and Environmental Services, LLC, 644 pages, dated July 17, 2025, with no revisions.

8. Palmer Township Zoning Hearing Board, Meeting Minutes, two (2) pages, January 7, 2025 Meeting.

9. Palmer Township, Completeness Review Letter, prepared by Craig S. Beavers, Deputy Director of Planning, one (1) page, dated July 17, 2025.

10. Tatamy Borough Zoning Hearing Board Decision Letter dated May 13, 2025 prepared by Goudsouzian Associates.

11. Tatamy Borough Submission Cover Letter prepared by Shaun Haas, P.E., C.P.E.S.C., of Langan Engineering and Environmental Services, LLC, 24 pages, dated July 17, 2025.

Pursuant to your request, we have reviewed the application documents against the Palmer Township Zoning Ordinance Chapter 190, Stormwater Management Ordinance (SMO) Chapter 158, and SALDO Chapter 165.

We offer the following comments to the Commission:

ZONING

1. Off-street parking areas shall be oriented to the rear or side of structures. Parking areas shall not be permitted between the street and the building. For corner lots, the side of the building fronting onto Main Street shall be considered the front, and the side of the building fronting on the secondary street frontage shall be considered the side. A zoning variance was granted to allow for parking to be constructed between the proposed building and Main Street. *ZO §190.409.J.1.b.*

2. Each use shall provide off-street loading facilities sufficient to accommodate the maximum demand generated by the use (as determined by the Zoning Officer or another applicable review agent for the Township), which comply with the regulations contained in this section. *ZO §190-605.A*

3. For proposals disturbing over an area greater than 5,000 square feet or disturbance of slopes of over 15% shall submit in advance a grading plan to the Township and a soil and erosion and sedimentation control plan to the County Conservation District. The erosion control plan shall be revised as needed until it is found acceptable by the Conservation District. Copies of all data submitted to CCD and related correspondence shall be copied to the Township. Compliance with such approved plan shall be a condition of any Township permit, and a Township permit

may be suspended for noncompliance. *ZO §190-507.*

4. Signs described in this section may have a maximum sign face area of 32 square feet and a maximum height of eight feet. These signs and/or structures may be located at up to three of the major entrances to the development from exterior streets. This sign area may be an addition to other sign area limits of this ordinance. Details shall be provided for business identification signs in order to verify compliance with the Township's sign ordinance. *ZO §190 Article VII Signs.*

5. Every principal building shall post its street number (if one has been established) in such a prominent place that it can be clearly viewed from a public street. Lighting of the street number is encouraged. *ZO §190-801.B.*

SALDO

1. A minimum four-foot-high, galvanized or vinyl-clad chain-link metal fence, or any material and fence design acceptable to the municipality, with a self-closing and self-latching gate with a minimum opening of 10 feet shall be provided around stormwater management facilities. *SMO §158-304.N. & §165.63.K(7).*

2. Storm sewers shall have a minimum of two-inch drop between the lowest inlet pipe invert elevation and the outlet pipe invert elevation. *SALDO §158-305.C.13.*

3. All detention basins shall be designed with emergency spillways constructed of reinforced concrete, mortared in plan riprap, or concrete rubble. All emergency spillways shall be constructed so that the detention basin berm is protected against erosion. The Applicant proposes to utilize synthetic landscape matting. A waiver is requested to permit the construction of the emergency spillway using synthetic landscape matting. We do not take exception to this modification provided the spillway is adequately designed and approved by the PADEP. *SALDO §165-63.K.2.c.*

4. The maximum inside slope of earthen detention basin embankments shall be four horizontal to one vertical. The maximum outside slope shall be three to one (3:1). The top or toe of any slope shall be located a minimum of five feet from any property line. Whenever possible, the side slopes and basin shape shall be amenable to the natural topography. Straight side slopes are prohibited. A waiver is requested to permit the interior slope of the infiltration basin to be three to one (3:1). We are not opposed to the granting of this modification request. *SALDO §165-63.K.3.*

5. In order to ensure proper drainage of the detention basin, a minimum grade of 2% shall be maintained for all sheet flow. A minimum grade of 1% shall be maintained for all channel flow, provided that a synthetic low-flow channel of suitable materials is provided. The Applicant has proposed an infiltration basin bottom slope of 0%. A waiver is requested. Due to the lack of supporting documentation, we cannot provide further comment on support of the waiver at this time. *SALDO §165-63.K.5.*

6. The existing points of natural drainage discharge onto adjacent property shall not be altered nor shall the concentration of water runoff be increased because of development without the written

approval of all affected landowners. The Applicant should provide a drainage easement for the subject property to the regional detention basin identified in the stormwater management report in the event the properties do not remain under common ownership. Additionally it is noted that the Applicant proposes a storm outfall on the southwestern corner of the site and should provide a drainage easement for this area should the property owner change. *SALDO §165-63.A(8).*

7. No stormwater runoff or natural drainage water shall be so diverted as to overload existing drainage systems or create flooding or the need for additional drainage structures on other private properties or public lands, without complete approval of provisions being made by the developer for properly handling such conditions, including water runoff impoundments, if necessary. The Applicant should provide a hydrograph routing for the proposed development to the existing regional detention facility to verify the facility has adequate capacity for the proposed development and functions as intended. *SALDO §165-63.A(9).*

8. It is noted that multiple structures have not been provided on the profiles (i.e. EW-300, CB 506, etc.). The Applicant should verify that all storm structures are provided on the profiles. *SALDO §165-63.B(4)(e).*

9. At a minimum, the Applicant shall prove to the satisfaction of the Township Engineer that no increase in peak stormwater discharge will leave the tract during earthmoving, construction or after development than occurred prior to any of these activities, under the following conditions and storm frequencies (considered individually), unless any more restrictive requirements of an applicable official stormwater management plan approved by DEP and the county pursuant to State Act 167 of 1978 for the 2-,5-,10-, and 25-year storms. *SALDO §165-63.C(1).*

10. The stormwater management plan shall show that a one-hundred-year, twenty-four-hour storm can be safely conveyed without jeopardizing any existing or proposed principal building on the site or any existing principal building downstream of the site. For downstream properties, the Applicant shall study areas where the development could have significant impact, considering the size of drainage areas and the amount of runoff from the development. *SALDO §165-63.C(5).*

11. Drainage structures that are located on State highway rights-of-way shall be found to be acceptable to PennDOT, and PennDOT approval shall be a condition of any final approval of the Township. *SALDO §165-63.D(6).*

12. The minimum top width of detention basin berms shall be 10 feet, unless the Township Engineer determines that a greater width is needed for maintenance and/or structural purposes. It is noted that the Applicant proposes rain gardens with a 5-foot berm. Please revise. *SALDO §165-63.K(4).*

13. In order to ensure proper drainage of the detention basin, a minimum grade of 2% shall be maintained for all sheet flow. A minimum grade of 1% shall be maintained for all channel flow, provided that a synthetic low-flow channel of suitable materials is provided. The Applicant has requested a waiver from this section. CEC takes no exception to this waiver request. *SALDO §165-63.K(5).*

14. The Applicant should clarify what type of fencing is to be utilized for basins in accordance with this section. *SALDO §165-63.K(7)(a).*

15. Detention basins shall not be placed within an existing sinkhole or a location known to be highly vulnerable to sinkholes, without a suitable liner. The Board of Supervisors may require a clay liner, where deemed necessary, based upon the recommendations of the Township Engineer and the Township staff. If such liner is required, it shall have a permeability rate of at least 1 x 10-6 centimeters per second. *SALDO §165-63.K(14).* We defer to any comments or considerations from the Township Geotechnical Engineer.

16. Drainage pipes shall have a minimum slope of 0.5%, and drainage swales and gutters 2.0%. As a minimum, the tops of all pipes should be at the same elevation when changing pipe sizes. The Applicant has requested a waiver from this section. CEC takes exception to this waiver request. It is noted that multiple pipe velocities are below 2.5 feet per second. *SALDO §165-63.N(3).*

17. Stormwater facilities shall be designed to require minimal maintenance and shall have suitable access for maintenance. The Applicant shall provide a means of access for proposed BMPs. *SALDO §165-63.N(3).*

18. A Developer's agreement will be required for this land development and shall be coordinated with the Township Solicitor. *SALDO §165-46.*

19. A Performance Guarantee will need to be posted prior to the commencement of construction of this project and shall be coordinated with the Township Solicitor. *SALDO §165-47.*

UTILITIES

1. The sanitary sewer system shall be reviewed by the Township Sanitary Sewer Engineer, as it relates to the proposed commercial uses.

PRELIMINARY PLAN FOR MAJOR SUBDIVSION CHECKLIST

1. Text scales shall be added to the graphic scales on the plan sheets for clarity. Titles of individual profiles shall be legible, i.e. Sheet 25 of 52. *Checklist B.8.*

2. A written scale shall accompany the graphic scales on all sheets. The plan set shall be revised for consistency. *Checklist C.9.*

3. Deed Book volume and page number of existing lot(s) from county records shall be included on the plan. *Checklist C.11.*

4. Identification of any slopes 15% to 25% and greater than 25% shall be shown on the plan. If no steep slopes occur on the parcel, a note stating such shall be added to the plans. *Checklist D.2.*

5. Detailed delineations are required by a qualified professional of any wetlands within areas that could reasonably be suspected of being wetlands, if such areas are proposed to be altered in any way. If there are no wetlands present, a note shall be added to the plan, which states the date, and name of the professional that completed the presence/absence wetland investigation.

Checklist D.4.

6. The plans shall show all rock outcrops, stone fields and sinkholes. If none are present, a note shall be added to the plan. *Checklist D.5.*

7. Location of existing and proposed monuments shall be included on the plans. *Checklist E.2.*

8. Overhead electrical high-voltage lines and rights-of-ways/easements shall be added to the plans, or a note stating such shall be added. *Checklist E.7.*

9. Street center-line information, including bearings and distances shall be included on the plans. *Checklist G.6.*

10. Statement of any street improvements proposed to be installed or funded by the Applicant (such as any acceleration/deceleration lanes, traffic signal, street realignment or widening of abutting streets) shall be added to the plans *Checklist G.10.*

11. It is not clear where curbing begins and ends on the plans. Please clarify. *Checklist G.11.*

12. The plans shall show any proposed sidewalks, with any proposed handicapped access shown as part of any new or reconstructed sidewalks at intersections. *Checklist G.12.*

13. Initial proposed names of new streets shall be added to the plans. *Checklist G.15.*

14. Streets, which are proposed to be dedicated to the township, or to remain private, shall be designated on the plans. *Checklist G.16.*

15. Evidence that a proposed new street or driveway entrance onto a State road will meet PennDOT sight distance requirements, unless a valid highway occupancy permit has already been issued. *Checklist G.17.*

16. Manhole numbers assigned by the Township Municipal Authority shall be included on the plans. *Checklist H.3.f.*

17. It is recommended that illustrative sketches, or renderings of the exterior fronts of proposed buildings are submitted with the Land Development application to be reviewed and discussed with the Planning Commission. (*Checklist J.5*).

18. Erosion and Sedimentation Plans and narrative shall be submitted for review. *Checklist L.*

19. Supporting Documents required for Sewage Planning/Module, Public Water, and Public Sewer shall be submitted. *Checklist P.2-4.*

20. A statement describing the nature of the landowner's and the developer's involvement in the proposed development, and the names of the primary partners or chief officers of any corporate developer shall be included in the plans. *Checklist P.8.*

21. A description of the method to ensure maintenance of any private street shall be included on the plans. *Checklist P.9.*

22. A Carbonate Ordinance Assessment Report shall be submitted to the Township for review and approval. *Checklist Q.*

STORMWATER MANAGEMENT

1. No waiver or modification of any regulated stormwater activity involving earth disturbance greater than or equal to one acre may be granted by the municipality unless that action is approved in advance by the Department of Environmental Protection (DEP) or the delegated county conservation district. SMO§158-110.C

2. Stormwater flows onto adjacent property shall not be created, increased, relocated, significantly concentrated, or otherwise detrimentally altered without written approval from the affected property owner(s). Such stormwater flows shall be subject to the requirements of this ordinance. SMO§158-301.K

3. All regulated activities shall limit surface water runoff or stormwater discharges into areas of karst geology or where karst features are observed. The Applicant should provide locations of all onsite karst features to verify this requirement is met. SMO§158-301.M

4. For regulated activities proposing earth disturbances of greater than or equal to 43,560 square feet, submission of an erosion and sediment control plan to the county conservation district/reviewing authority for NPDES permit approval shall be required. Subsequent evidence of approval shall also be required. SMO§158-301.R

5. Any regulated activities within an existing, known stormwater management problem area, or having the potential to negatively impact an existing, known stormwater management problem area, may be required by the municipality to include additional, reasonable measures beyond those listed within this ordinance in order to ensure that any effects of the regulated activity do not exacerbate or further contribute to the issues affecting said problem area. In no case shall the Applicant be required to resolve the existing, known stormwater management problems beyond the obligations so listed. The Applicant should provide a revised hydrograph routing for the existing regional detention basin with all tributary areas to demonstrate no detrimental effect to downstream conditions will occur as a result of this development. SMO§158-301.S

6. Infiltration for stormwater management is encourage where soils and geology permit, consistent with the provisions or this ordinance and, where appropriate, the Recommendation Chart for Infiltration Stormwater Management BMPs in Carbonate Bedrock in Appendix D.12. The Applicant has indicated that infiltration testing and a carbonate assessment are forthcoming. A calculation in accordance with this section should be provided in subsequent submission. SMO§158-304.A.4

7. The 100-year water surface elevation within any SWM facility shall provide a minimum of 1.0 foot of freeboard below the invert of the emergency spillway. For facilities that do not utilize an emergency spillway, this freeboard shall be provided to the top of the storage facility (i.e., top of berm, top of stone pit, etc.). Per the waiver requests, it appears that the Applicant intended to request a waiver from this section. CEC takes exception to this waiver request. SMO§158-304.M

8. SWM facility bottoms shall be located at least two feet above bedrock and 3 feet above any seasonal high water tables. The Applicant should review their preliminary design and make changes as needed once soil testing results are obtained prior to subsequent submission. SMO§158-304.P

9. Pipes shall have flow velocities greater than or equal to 2.5 feet per second. SMO§158-305.C.10

10. Pipes shall have slopes greater that or equal to 0.5%. The Applicant has requested a waiver from this section. CEC takes exception to this waiver request as pipe velocities are below 2.5 feet per second. SMO§158-305.C.11

11. For regulated activities requiring a major SWM permit, do not increase the post-development total runoff volume for all storms equal to or less than the two-year, twenty-four-hour duration precipitation plus 50%. The Applicant should provide calculations for all design storms verifying this requirement is met. SMO§158-306.B.2.a.2

12. Unless subsurface conditions prevent the use of infiltration BMPs per SMO§158-304A and B, at least the first 1.25 inches of runoff from impervious surfaces and 0.675 inch of runoff from pervious surfaces within the limit of disturbance shall be infiltrated as part of the required volume controls. If this infiltration volume exceeds the volume in SMO§158-306B.2.a.1 above, the infiltration volume itself shall be used as the total runoff volume that must be mitigated. The Applicant should provide a calculation verifying this requirement is met. *SMO§158-306.B.2.a.3*

13. Due to frequent waterway, localized, storm sewer, and overland flooding in Palmer Township clearly showing inadequate downstream capacity for increased peak flows, the Township will not recognize conditional/provisional no-detention stormwater management designs in release rate districts so named; such areas shall comply with *SMO§158-306C.2. See also SALDO§165-63.C(1)*

14. Drainage areas tributary to sinkholes or closed depressions in areas underlain by limestone or carbonate geologic features shall be excluded from the modeled point of analysis defining predevelopment flows. If left undisturbed during construction activities, areas draining to closed depressions may also be removed from peak runoff rates in the post-development analysis. New, additional, contributing runoff shall not be directed to existing sinkholes or closed depressions. *SMO§158-306.C.4.c*

15. Name, address, telephone number, and email address of the Applicant, property owner, and qualified professional responsible for project design should be provided on the plans. *SMO§158-401a.A.3&4*

16. A determination of site conditions in accordance with the BMP Manual should be provided. *SMO§158-401a.H*

17. The Applicant should provide location of all sensitive natural features, including waterways, wetlands, floodplains, significant karst features (including but not limited to sinkholes, rock pinnacles, and closed depressions), and natural slopes over 25%. If no sensitive natural features are present on the site, provide a note as listed in *SMO§*158-401a.X.9 below, and provide

evidence of their absence. See SMO§158-403C below for further requirements on the identification of wetlands. *SMO§158-401a.M*

18. Easements shall be identified with metes and bounds. In the case of conveyance facilities such as pipes and swales, and if desired by the Applicant, a note as listed in § 158-401a.X.12 below may be added to the plan in lieu of metes and bounds stating that easements are to be located and offset from the center of the installed conveyance facility. Subterranean facilities utilizing this alternative easement identification method shall use metal marking tape, or other methods that provide simple identification from the surface as reviewed and accepted by the Municipal Engineer, in order to mark the location of said facilities; subsurface conveyance facilities shall add the identification method to the note required above, and the identification method shall be added to relevant construction details. *SMO§158-401a.T.4*

19. All applicable notes from this section should be added to the plans. *SMO§158-401a.X*

20. Name, address, telephone number, and email address of the Applicant, property owner, and qualified professional responsible for project design should be provided in the report. *SMO§158-402.A.3&4*

21. The Applicant should provide a Carbonate Assessment Report in accordance with this section. *SMO§158-403.A*

22. The Applicant should provide infiltration testing results in accordance with this section. *SMO§158-403.C.*

General Stormwater Comments:

1. It is noted that the Applicant has omitted the Preliminary Site Investigation, Infiltration testing, and geotechnical investigations from this submission. Due to the karst nature of the area, it is anticipated that the stormwater management design may be significantly altered in subsequent submission. CEC reserves the right to further comment on the design pending the submission of supplemental investigation reports. We defer to any comments or considerations from the Township Geotechnical Engineer for any Carbonate Geology related concerns.

2. Existing and proposed ground surface elevation labels on the profiles should be revised for clarity.

3. The Applicant should provide an analysis for the existing box culvert where the site ultimately drain to verify that sufficient capacity exists for the development.

4. The Applicant should provide a means of identifying the pipes in the pipe calculations. It is noted that the current calculations contain overlapping text and no means to identify the line numbers indicated in the calculations.

5. The pipe slope indicated for OCS-300 to MH-300 appears to be incorrectly calculated. Please revise.

6. The Applicant should provide clarification for how they intend to phase the existing storm facility removal and proposed storm facility installation.

7. The Applicant should provide designs for the proposed retaining walls in subsequent submissions.

8. It is noted that the plans identify the existing Lot 1 BMP to be a water quality basin, while the report identifies it as a detention basin. Please clarify.

9. It appears that the rip-rap aprons for the proposed headwalls appear to be shifted. Please revise.

10. The Applicant should provide an oil/water separator due to the truck traffic generated by the proposed warehouse building.

TRAFFIC IMPACT STUDY (TIS)

1. Please provide a sight distance analysis for the access points. This can be a standalone document, if the Applicant does not want to revise the traffic study.

2. The traffic counts for the intersections of Main Street and Route 33 Southbound Ramps and Newlins Mill Road and Tatamy Road were impacted during the count period. We are in agreement with the methodology used to determine the existing volumes at these intersections.

3. Provide vertical curves for roadway profile grade changes exceeding 1% on Sheets 29 and 30. *SALDO§165-59F(3)*

4. Revise the clear sight triangle at the driveway intersection with Trolley Line Drive to reflect the intersection sight distance requirements in the AASHTO Green Book for minor road left and right turns. *SALDO§190-804C.*

5. The existing LANTA bus turnout and bus shelter are proposed to be removed or realigned as part of this project. However, the plans do not provide details regarding mitigation measures for the affected bus stop. As this is a major subdivision or land development, please coordinate with the local public transportation agency to identify an appropriate location for a public bus stop. Provide a narrative outlining how impacts to the LANTA bus stop will be addressed. *SALDO§165-61G(2)*

GENERAL TRAFFIC COMMENTS

1. The internal circulation within the development between Buildings 1, 4, 5, and 6 seems overly complex and confusing. Please consider the following:

    a. Work to reduce the number of individual intersections in the northeastern section of the site.

    b. Consider a mini roundabout instead of multiple intersections for internal circulation in this part of the site.

    c. The Township Engineer is available for consultation, if desired.

    Discussion with the Planning Commission regarding internal circulation is highly suggested.

2. The plans shall be revised to clearly show compliance with ADA requirements. Blow-up scale grading shall be provided to detail the ADA compliant design grades for the parking areas and walkways at each of the individual buildings.

GENERAL

1. All engineering documents submitted to the Township and to our office, including but not limited to Estimates of Quantities & Costs, Reports, Plans, Exhibits, and Legal Descriptions must be signed and sealed by the appropriate registered professional who prepared them in accordance with Engineer, Land Surveyor And Geologist Registration Law Act of May 23, 1945, P.L. 913, No. 367 Cl. 63, Section 7.(a).

2. The following information shall be included on the Record Plan regarding the geotechnical aspects of the site construction as provided in the Geotechnical & Carbonate Assessment report;

   Significant considerations include the underlying carbonate geology and the associated encountered soft soils that will require a proofdrilling and grouting program; the potential to encounter additional soft soils or voids; the potential for difficult excavation of pinnacled rock during deeper excavations depending on the final design; moisture sensitive fine-graded site soils that may require conditioning depending on the time of year of construction; and the potential for the future development of karst features.

   Provisions for having an on-site geotechnical engineer during the site construction activity shall be incorporated in the ultimate improvements estimate.

3. List any deed restrictions and/or covenants on the plan sheet(s) to be recorded.

4. Provide a list of all easements necessary to support the proposed development on the Land Development Plan to be recorded that shows the locations of the areas in question with a corresponding legend. The list shall include identification of the grantor and grantee at the time of plan recording and the type of easement (e.g., sanitary sewer, drainage, etc.). All proposed easements are required to be shown on the Preliminary Land Development Plan set.

5. List all required outside agency permits and approvals on the plans, including, but not limited to:

   a. An intent to serve letter and design approval from Pennsylvania American Water Authority.

   b. An intent to serve letter and design approval from Nazareth Borough Municipal Authority (sanitary sewer).

   c. Lehigh Valley Planning Commission review and approval.

   d. Northampton County Conservation District.
   e. Applications shall be submitted to the departments and indication of approvals or letters of no-interest be provided.

Copies of all correspondence, including all data submitted to outside agencies regarding required permits and approvals, shall be provided to the Township and our office. If certain entities are not required for this application, then a "Letter of No Interest" must be obtained and submitted for documentation from that required entity.

6. We defer to the Township Landscape and Lighting Engineer to review the proposed site lighting and landscaping. *ZO §190-603.H, SALDO §165-32.D(2) and §165-36.E(2).*

7. We defer to the Township Fire Commissioner and EMS regarding the acceptability of emergency access, the requirements for fire protection systems, etc., *SALDO §165-32.C(2)(b) and §165-36.D(2)(c).*

8. The Lehigh Valley Planning Commission should review and comment on the subject land development plan. *Checklist A.7.*

9. Upon submission of plans for recording, sign and seal/notarize all Statements and Certifications as applicable, *SALDO §165-16.*

10. Before approving any subdivision or land development plan for recording, the Township Supervisors should require that the Applicant assure the Township, by means of a proper development agreement and performance guaranty, that the improvements required by this ordinance will be installed in strict accordance with the standards and specifications of this ordinance and the approved development plan. *SALDO §165-44.A.*

We reserve the right to perform additional review and provide comments on this application pursuant to testimony presented at a public hearing and/or the submittal of revised plans and documents.

Should you have any questions, please contact me directly at (610) 989-4940 Ext. 317 or email jcoyle@carrollengineering.com.

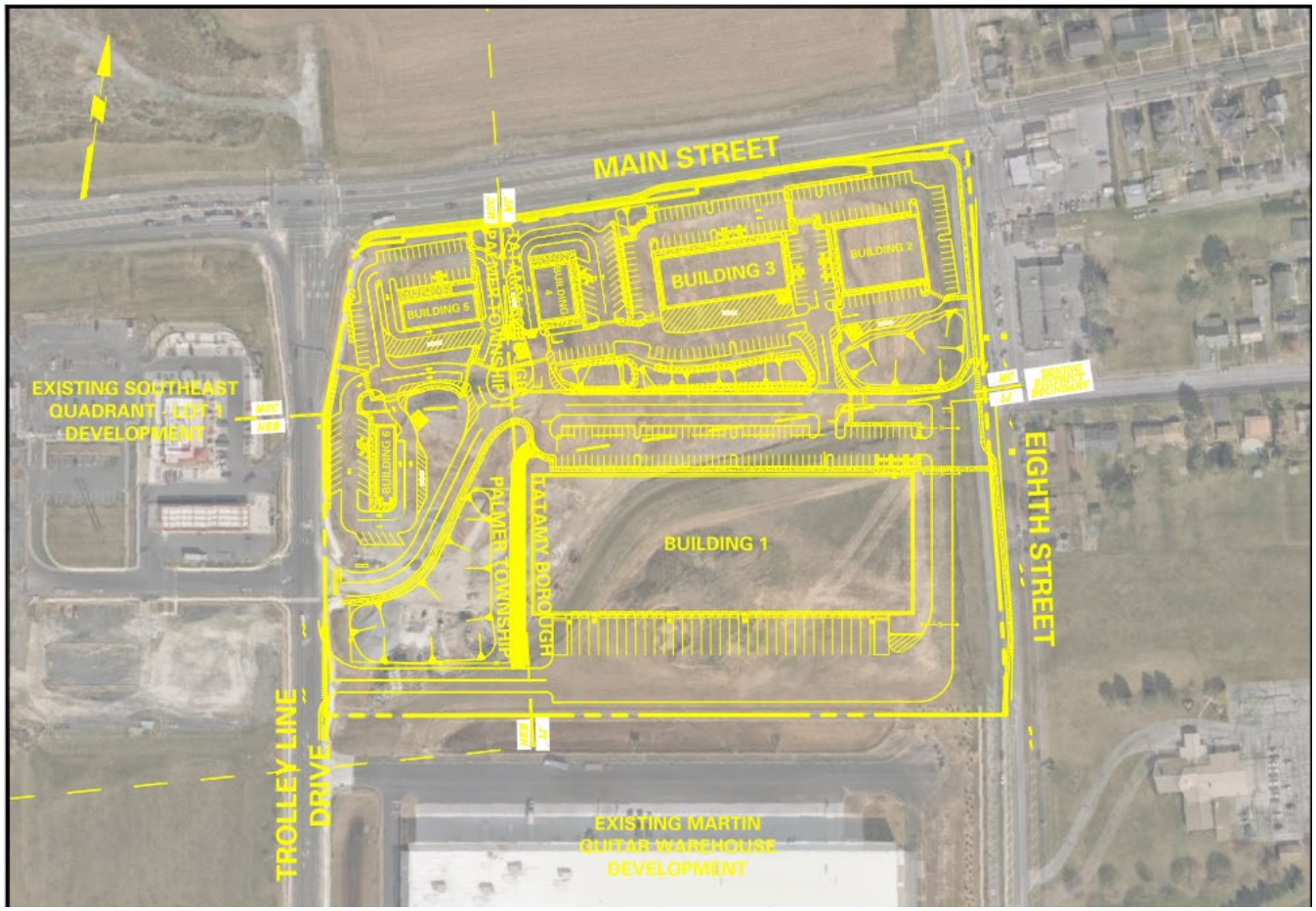
Very truly yours,

CARROLL ENGINEERING CORPORATION

Justin M. Coyle

Justin M. Coyle, P.E.
Township Engineer
DJW/JMC

Attachments
cc: Robert Williams, Township Manager, Palmer Township
Brenda DeGeralomo, Assistant Township Manager, Palmer Township
Justine Caiazzo-Strouse, Administrative Assistant to Planning
William Oetinger, Esquire, Township Solicitor
Shawn Haas, P.E., Langan Engineering and Environmental Services, LLC
Daniel J. Wilusz, P.E., CEC, Project Manager


MAIN STREET
BUILDING 3
BUILDING 2
BUILDING 5
BUILDING 4
BUILDING 6
EXISTING SOUTHEAST QUADRANT - LOT 1 DEVELOPMENT
PALMER TOWNSHIP
HATAMY BOROUGH
BUILDING 1
EIGHTH STREET
TROLLEY LINE DRIVE
EXISTING MARTIN GUITAR WAREHOUSE DEVELOPMENT


Tatamy Boro
Palmer Twp
Main St
The Belvidere
Broad St
Supercharger
Site Location
Sheetz
Show Up Late
Bring Appz
S 8th St
Trolley Line Dr
Commerce Ln

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

August 4, 2025

File No. 24-01214

Craig Beavers, CFM, CZO, Director of Planning
Palmer Township
3 Weller Place
Palmer, PA 18045

Reference: Preliminary Land Development Plans
Chrin Southeast Quadrant Lot 2
Landscape and Exterior Site Lighting Review

Dear Craig:

As requested, Gilmore & Associates, Inc. has reviewed the documents listed below with regard to the Preliminary Land Development plans referenced above:

A. Preliminary Land Development Plans, prepared by Langan Engineering, dated 07/17/2025, specifically:
   - Preliminary Landscape Plans, Sheets LP-100, LP-101, LP-102 & LP-501
   - Preliminary Lighting Plans, Sheets LL-100, LL-101, LL-102 & LL-501

Landscape Review:

Zoning Ordinance §190:

1. **409.F(3) – Specific Regulations for MSC District**: Community Development objective to minimize the adverse visual impact of expansive parking lots by establishing effective building and parking lot orientations and through the use of shade trees, screening, and grade changes. It appears that the proposed parking areas will be highly visible at the intersection of Trolley Line Drive and Main Street. It is noted that a waiver (variance) is being requested for the parking lot screening along Trolley Line Rd. due to conflict between planting and the retaining wall adjacent to the parking lot. If the layout cannot accommodate a landscape buffer, alternate means of screening should be explored to limit the visibility of the parking areas and to block headlight glare onto adjacent roadways.
2. **603.H(4)** – **Parking Lot Landscaping:** One deciduous tree is required for every 15 spaces. It is noted that a waiver (variance) is being requested for the parking lot trees for building 6 due to spatial constraints. It appears that the required quantity is distributed throughout the site. We request specific labeling of those trees that are being utilized to meet the street tree requirements for clarification.

Subdivision & Land Development Ordinance §165:

1. **73(A)(5)(a)** – **Street Trees:** An average of one street tree shall be required for every 50 feet of distance along the street right of way line. It is noted that a waiver has been requested to allow the street trees to be placed outside of the right of way line and elsewhere within the site due to overhead utilities and other site conflicts. It appears that the required quantity is distributed throughout the site. We request specific labeling of those trees that are being utilized to meet the street tree requirements for clarification.

General Comments:

1. **Species selection:** We question the use of *Cornus florida* (Flowering Dogwood) for the trees along Main Street in the parking area. The size of the selected species is appropriate due to the proximity of overhead electric liners; however, this species is a woodland edge plant that requires some shade and will likely not survive due to heat from surrounding paved surfaces. An alternate species shall be selected.
2. **Utility conflicts:** It appears there are multiple conflicts throughout the site where proposed plantings are in close proximity to underground utilities. We recommend that a minimum distance of 10 feet be maintained between trees and underground utilities. The plan shall be revised.

Lighting Review:

1. Currently proposed lighting appears to be compliant with ordinance requirements. We have no comments at this time.

If you have any questions regarding the above, please contact this office.

Sincerely,



Christopher E. Green, R.L.A., LEED AP
Senior Landscape Architect
Gilmore & Associates, Inc.

cc: Michael Schwartz, P.E. – Municipal Services Manger – Gilmore & Associates, Inc.
Sean Policelli, P.E., Project Manager – Gilmore & Associates, Inc.
Justine Caiazzo-Strouse – Palmer Township

July 8, 2025
F110980.00

Palmer Township
3 Weller Place
P.O. Box 3039
Palmer, PA 18043

Attn: Mr. Craig S. Beavers, AICP Candidate, CFM, CZO – Director of Planning (via email)

Re: Geotechnical Review, Preliminary Land Development - Chrin Southeast Quadrant, Lot 2
Trolley Line Drive, Main Street, and Tatamy Road
Palmer Township, PA

Dear Mr. Beavers:

GAI Construction Monitoring Services, Inc. d/b/a CMT Services Group (CMT) has prepared this letter with respect to our review of documents related to the Chrin Southeast Quadrant, Lot 2 development. We have provided this review at your request in accordance with our revised "Geotechnical Consulting Services" proposal and agreement dated August 18, 2011. Palmer Township provided the following documents for review:

- "Preliminary Land Development Plans", Sheets 1 through 52 of 52, prepared by Langan Engineering and Environmental Services, LLC (Langan), dated 7/17/2025, no revisions.
- "Post-Construction Stormwater Management Plan Narrative", prepared by Langan, dated July 17, 2025, no revisions.
- "Application for Preliminary Land Development" letter, prepared by Langan, dated July 17, 2025, no revisions.

CMT offers the following comments:

- We have no general objections to the overall stormwater management scheme. However, as noted in the application letter, a carbonate study and on-site infiltration study must be performed and reviewed before CMT can fully review and endorse the details.
- Plans and structural calculations for the proposed retaining walls must be submitted for review and approval prior to construction.
- We have no further comments.

CMT has attempted to prepare this letter using the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical professionals with experience in this geographical area under similar soil conditions. We offer no other warranty, either expressed or implied as to the conclusions and recommendations contained in this letter.

If you have any questions or require additional information, please contact Shawn Casey, P.E. at 610.731.0430, 610.507.5879 (cell), or s.casey@cmtservicesgroup.com.

Sincerely,
CMT Services Group



Shawn Casey, P.E.
Engineering Technical Manager

SC:sc

TOWNSHIP OF PALMER
NORTHAMPTON COUNTY, PENNSYLVANIA
3 Weller Place, Palmer Township, PA 18045

August 6, 2025

(via e-mail only)

Gregory Chrin
The Charles Chrin Real Estate Trust
400 South Greenwood Avenue
Palmer Township, PA 18045

Re: Chrin Southeast Quadrant Lot 2 (Retail and Restaurant – Main Street)
SALD-2025-008
Preliminary Land Development Plan – First Submission
Plan Dated June 24, 2025

Dear Mr. Chrin:

I have reviewed the preliminary land development application and plans titled "Chrin Southeast Quadrant – Lot 2 Development" prepared by Langan Engineering and Environmental Services dated July 17, 2025. The plan proposes to develop a restaurant/retail use with drive-thru restaurants, retail stores, and a medium-sized logistics facility split between Palmer Township and Tatamy Borough.

This letter is to report non-engineering-related comments to be addressed, in addition to the review letters of the Township Staff and Consultants. These comments are made with the understanding that all features are accurately displayed on the submitted plans and that they comply with all current laws and regulations. Other comments may be added as additional information becomes available or if the information should change.

Subdivision and Land Development Ordinance

1. The following elements of the Subdivision and Land Development Ordinance shall be considered or addressed by the Applicant:
    a. *SALDO §165-46: Development agreement. All applicants proposing any subdivision or land development which provides for the installation of improvements required by this ordinance or any improvements required as a condition of the final plan approval shall be required to enter into a legally binding development agreement with the Township prior to recording of the final plan.*
        i. Once final approval is granted by the Board of Supervisors, the Applicant shall enter into a Development Agreement for the project, which shall be

drafted by the Township Solicitor after all plan conditions, cost estimates, and form of financial security are approved.

b. *SALDO §165-47: Performance guaranty.*

   i. Once final approval is granted by the Board of Supervisors, the Applicant shall provide a form of financial security based off of the approved cost estimate, and the financial security shall be approved by the Township Solicitor prior to acceptance.

c. *SALDO §165-52: Recording of final plan. The applicant is responsible to ensure that the final plan as approved by the Township Supervisors is recorded in the office of the Recorder of Deeds of the county within 90 days of such final approval.*

   i. Once final approval is granted by the Board of Supervisors, the Applicant shall provide signed copies of the approved plans for recording prior to commencing work. Clean-up plans shall be provided after final approval via email to the Township and the Township Engineer to conduct a compliance review. All conditions must be met prior to plan recording. Once approved by the Township, paper and mylar copies of the plans shall be delivered to the Township for signing. The Township will record the plans in the Northampton County Recorder of Deed's office.

d. *SALDO §165-59.G(1): Easements. Drainage, sanitary or domestic water easements shall be provided as indicated and required by the plans.*

   i. Once final approval is granted by the Board of Supervisors, the Applicant shall provide Easement Agreements to the Township, which must be approved by the Township Solicitor. All easements shall include written legal descriptions, exhibits, and closure calculations, which must be approved by the Township Solicitor. The Township will record the agreements in the Northampton County Recorder of Deed's office.

e. *SALDO §165-62.G(2): Any new commercial or industrial subdivision or land development shall be required to dedicate 5% of the buildable area of the tract for recreational purposes.*

   i. Open space dedication, or a recreation fee-in-lieu-of is required for all subdivisions and land developments. This item shall be discussed with the Planning Commission and Board of Supervisors.

Zoning Ordinance

1. An official zoning review will be provided by the Township Zoning Officer at the time of filing for a Zoning and/or Building Permit; the following comments are provided for the applicant's awareness. The Township Zoning Officer shall make all final determinations regarding zoning compliance.
2. As this property is split between Palmer Township and Tatamy Borough, all applicable provisions of Tatamy Borough's Zoning Ordinance shall be followed. If there is a

conflict between the two Zoning Ordinances that would result in an undesirable element of the plan, this shall be discussed with the two municipalities to determine an appropriate solution that would satisfy all parties.

3. All conditions of the Palmer Township Zoning Hearing Board's variance approval shall be complied with, per the decision letter dated January 29, 2025. These approvals shall also be included on the record plan.
4. The proposed restaurant/retail use is located in both the MSC Main Street Commercial District and the NEB North End Business District. The proposed use is permitted by right.
5. The Applicant shall comply with regulations listed under *ZO §190-409: Specific regulations for the MSC Main Street Commercial District* except where a variance has been previously granted.
    a. The Applicant shall incorporate strategies to limit the visibilities of the highly prominent parking areas from Main Street and Trolley Line Drive, as well as to block headlight glare and incorporate landscaping.
6. The Applicant shall comply with regulations listed under *ZO §190-412: Specific regulations for the NEB North End Business District,* except where a variance has been previously granted.
7. The Applicant shall comply with regulations listed under *ZO §190-419: Specific regulations for the AHO Airport Hazard Overlay District,* except where a variance has been previously granted.
8. All signs, whether shown on the plan or not, shall comply with the provisions of *ZO §190-513.L: Signs* as well as *ZO Article VII: Signs.*
9. The Township Zoning Officer shall provide approval for the locations of off-street loading facilities, per *ZO §190-605.A.*
10. The buildings shall post their street number in a prominent place on its façade so that it can be clearly seen from Main Street, per *ZO §190-801.B.*
11. The Applicant shall comply with regulations listed under *ZO §190-964: Restaurant, quick-service.*

Stormwater Management Ordinance

1. An official stormwater management review will be provided by the Township Engineer, Township Geotechnical Engineer, and Director of Stormwater and MS4. All stormwater items, including those from the Lehigh Valley Planning Commission, Northampton County Conservation District, and Pennsylvania Department of Environmental Protection, shall be addressed prior to plan recording.
2. The Applicant shall provide an Operations and Maintenance Plan and enter into a Stormwater Management Operations and Maintenance Agreement, which shall be drafted and approved by the Township Solicitor.

3. The Applicant shall provide all necessary easements for drainage and utilities for the stormwater elements on this site. A blanket easement is recommended.

Waiver Requests

1. The Applicant requests the following waivers as a part of this application:
    a. *SMO §158.304.M and SALDO §165-63.K.11 - Basin Freeboard*
    b. *SMO §158-305.C.11 – Minimum Pipe Slope*
    c. *SALDO § 165-63.K.(2).(c) - Emergency Spillway Lining*
    d. *SALDO § 165-63.K.3 - Slope of Detention Basin*
    e. *SALDO §165-63.K.5 - Slope of Basin Bottom*
    f. *SALDO §165-63.N(3) – Changing Pipe Sizes*
    g. *SALDO §165-63.N.3 – Minimum Slope of Drainage Swales*
    h. *SALDO §165-73.A.5.a and 165-73.A.7 – Location and Number of Street Trees*
2. Additionally, the Applicant requests the following deferral as a part of this application:
    a. *SALDO § 165-75.A – Curbing Along Public Streets*
3. The criteria for granting waivers and deferrals from Chapter 165 Subdivision and Land Development are as follows:

***§ 165-7.B Modifications and exceptions**. The Planning Commission shall be given an opportunity to make a recommendation on the matter at a legally advertised meeting. The Board of Supervisors may, by written resolution, grant a waiver or modification concerning a specific provision(s) of this ordinance if the applicant proves that the request meets one or more of the following conditions:*

a. *Will avoid an undue hardship that was not self-created and that results from the peculiar and uncommon characteristics of the property.*
b. *Will avoid a clearly unreasonable requirement that would not serve any valid public purpose in this situation.*
c. *Will allow an alternative standard that is clearly proven by the applicant to provide equal or better results.*
d. *Will allow a layout of improvements that would clearly be more in the public interest than what would occur if the modification would not be granted.*
e. *Will remove a requirement that is not applicable, especially because of the small size of the proposed project.*

4. The Applicant indicates that the requested waivers would result in an equal or better stormwater management design. Additionally, the required street trees would need to be relocated due to PennDOT and PPL requirements near the right-of-way.
5. While Township Staff defers to the Township Engineer on technical design elements, we agree that if the proposed design elements result in equal or better results, then we are not opposed to the waiver request.
6. Regarding the deferral request, all other projects along Main Street have received the same deferral request due to design criteria from PennDOT.
7. We do not object to either request.

Plan Notations

1. In general, there are several typos and notation errors within the plan set. The Applicant shall review the documents for any errors and correct them for future submissions. The following is a non-comprehensive list of items that should be addressed:
    a. The project box on all plan sheets appears to have overlapping text for the name of the communities.
    b. On the Cover Sheet, the Township Fire Commissioner's email is misspelled.
    c. On the Cover Sheet, please verify the appropriate sewer authority for the site, as it is believed that Nazareth Borough Municipal Authority should be listed.
    d. On the Aerial Map and all sheets where this chart appears, property owner number 3's address is misspelled
    e. On the Planned Community Sheet and all sheets where this appears, the Palmer Township zoning districts are proper districts, not overlays.
    f. On the Information and Notes Sheet, please remove references to the Palmer Township Municipal Authority, which was previously disbanded.

Parks and Recreation

1. The Parks and Recreation Advisory Board has not reviewed this resubmission as of writing. Their next meeting will be on August 19, 2025.

Shade Trees

1. The Shade Tree Commission has not reviewed this resubmission as of writing. Their next meeting will be on August 7, 2025.
2. Please consider the following placement locations for street trees:
    a. Placement over inlets should be avoided.
    b. Provide ample clearance from streetlights and hydrants.

c. Street trees should be located within a grassy buffer between the road and the sidewalk.

3. Adequate landscaping will be required along both road frontages, per previous conditional use approval.

Transportation

1. The proposed interior pedestrian circulation is commended, and the Applicant clearly took great care to include accommodations for customers who will be walking through the site. Numerous connections are provided between the exterior sidewalks/bike path, as well as between the different pad sites, allowing for safe and convenient access for those without a vehicle.
2. The Applicant is also commended for the inclusion of a 10' wide multi-use trail, which fulfils a recommendation from the *2025 Palmer Township Active Transportation Plan* to develop a connection between Nazareth and Tatamy.
3. As noted by the Township Engineer, the internal vehicle circulation does not appear to be logical. The Applicant is highly advised to coordinate directly with the Township Engineer to discuss alternatives.

Public Works and Utilities

1. The applicant is to request approval for water availability and sanitary sewer capacity and conveyance from the Nazareth Borough Municipal Sewer Authority, and Pennsylvania American Water. The applicant must address all water and sewer service issues, and obtain all approvals deemed necessary by the above agencies. You are advised to contact the appropriate parties as soon as possible.
2. The applicant is to obtain PA Department of Environmental Protection approval for a General NPDES Permit for this project.
3. The applicant is to obtain Northampton County Conservation District approval for an Erosion and Sediment Control Plan for this project.
4. The applicant shall forward a plan to PPL for a recommendation on street lighting per Section 165-70 of SALDO.
5. The Applicant shall provide payment for Tapping Fees prior to Building Permit issuance.

Legal and Other

1. All required outside agency approvals and permits shall be noted on the plan.
2. The applicant is advised to contact the Pennsylvania Department of Transportation (PennDOT) to discuss public improvements and HOP requirements along Tatamy Road.
3. Copies of all correspondence, including all data submitted to outside agencies regarding required permits and approvals, should be provided to the Township. If certain entities

are not required for this application, then a "Letter of No Interest" must be obtained and submitted for documentation from that required entity.

4. The Applicant shall apply for and obtain any applicable Township permits related to the project prior to commencement of any construction on the site.
5. A Development Agreement will be required prior to plan recording and shall be coordinated with the Township Solicitor.
6. Financial Security will be required prior to plan recording and shall be coordinated with the Township Solicitor, Township Engineer, and Planning Department. A detailed cost estimate shall be provided by the Applicant's Engineer.
7. The Applicant shall dedicate to the Township a blanket utility easement of sufficient size in an area acceptable to the Township. The dedication shall occur prior to the Final Plan being recorded. The dedication shall be by Deed of Dedication in a form acceptable to the Township Solicitor, and a title policy naming the Township as an insured in for an amount approved by the Township Solicitor shall be submitted indicating that the dedication is free and clear of liens and encumbrances that would affect the Township's use of said property. The Applicant shall furnish to the Township Solicitor a description for the dedication that has been approved by the Township Engineer, and a copy of the current deed for the property showing current ownership and recording information.
8. The Applicant shall execute an Operation and Maintenance Agreement of Stormwater Management Facilities approved by the Township Solicitor for the maintenance of the on-site stormwater management facilities.
9. The dedication of open space, or payment of fees in lieu of, shall be required prior to plan recording. If the applicant wishes to provide a recreation fee, the amount would be $5,500 per total lot acre. Therefore, the fee would be $25,025 (4.55 acres).
10. To offset any traffic increases that may be caused by the development, the Applicant shall consider providing a voluntary traffic contribution. A recommended amount would be $1,000 per PM peak-hour trips generated by the new development. Therefore, the fee to be recommended is $282,000 (282 peak PM trips).

Palmer Township Comprehensive Plan

1. The Comprehensive Plan envisions the tract within a Non-Residential Land Use Type, serving as an area for commercial and/or industrial use within the community. The proposed retail center would be split between the MSC Main Street Commercial and NEB North End Business zoning districts.
2. The purpose of the MSC District is to allow for the creation of a planned commercial center featuring qualities of a traditional Main Street neighborhood that will benefit the Township and the region, both economically and aesthetically; to provide a mechanism that will allow areas planned for commercial uses to be developed in the northern end of the Township near the Route 33/Main Street interchange; and to allow for prudent business decision-making by future property owners and encourage investments in land and infrastructure to be made with the knowledge that the Township will permit such commercial development to be occupied and to operate.

3. The purpose of the NEB District is to provide sufficient space to meet current and anticipated future regional needs for industrial, office and commercial development that will benefit the Township and the region, both economically and aesthetically; to provide a mechanism that will allow areas planned for industrial, office and commercial uses to be developed in the northern end of the Township along the Route 33 corridor; and to allow for prudent business decision-making by future property owners and encourage investments in land and infrastructure to be made with the knowledge that the Township will permit such industrial, office and commercial development to be occupied and to operate.
4. The proposed retail center is consistent with the following Comprehensive Plan goals:
    a. *A.3: Support well planned and compatible land uses that are concurrent with infrastructure availability, environmental sensitivities, and surrounding density patterns*
        1. The proposed retail center is adjacent to existing infrastructure for water, sanitary sewer, and other utility hook-ups, which appears to support this development. While the location of the sanitary sewer needs to be adjusted, the development is occurring in an area that supports future growth. Therefore, this project complies with this goal.
    b. *B.1: Safeguard the community's established, business-friendly atmosphere.*
        1. The proposed retail center would result in the creation of two new businesses in Palmer Township, and several more in neighboring Tatamy Borough. This supports the Township's goal of encouraging business development. Therefore, this project complies with this goal.
    c. *B.2: Encourage compatibility of established development within the Township and new entrepreneurial efforts.*
        1. The proposed retail center would expand upon the existing retail development on Lot 1, providing additional uses along Main Street. The development would also create new jobs and opportunities for business ownership/franchisees, creating more economic opportunities in Palmer Township. Therefore, this project complies with this goal.
    d. *C.1: Identify and address pedestrian safety needs, congestion, traffic flow challenges and safety concerns where they exist*
        1. The proposed retail center would create pedestrian infrastructure to connect Palmer Township to Tatamy Borough; this promotes a key connection to the Palmer Bikeway/Two River Trailway and recreation opportunities in Tatamy and Forks. Additionally, interior pedestrian networks allow shoppers to safely travel inside the center and to the sidewalks. Therefore, this project complies with this goal.
    e. *C.2: Support integrated, safe bicycle/trail networks to support recreation and connectivity of community assets and neighborhoods.*
        1. The proposed retail center would create a bike path along the northern frontage, tying into the existing bike path at the northwest corner of the

site. This would help create a complete bike path connection between Upper Nazareth and Tatamy. Therefore, this project complies with this goal.

f. *C.3: Improve transit ridership convenience and safety between areas of employment, shopping, neighborhoods, and transit stops*

    1. The proposed retail center would be well served by transit, allowing for increased access to employment, shopping, and dining. The area is currently served by LANTA's 214 and 217 bus routes, providing access to Nazareth, central Palmer, Forks, and the Slate Belt. A new ADA landing pad is proposed, allowing for accessible usage of bus service to the site. Therefore, this project complies with this goal.

g. *F.2: Reinforce the significance of the community's multiple civic centers or hubs as destinations for recreation, community gathering, and commerce.*

    1. The proposed retail center would create a major destination for the surrounding areas, hosting restaurants, retail, and other uses. This would also further expand upon the existing uses in the Chrin Commerce Center to become a major hub in Palmer and Tatamy. Therefore, this project complies with this goal.

h. *F.5: Align development with accessible infrastructure service.*

    1. The proposed retail center is adjacent to existing infrastructure for water, sanitary sewer, and other utility hook-ups, which appears to support this development. While the location of the sanitary sewer needs to be adjusted, the development is occurring in an area that supports future growth. Therefore, this project complies with this goal.

5. The proposed retail center is not consistent with the following Comprehensive Plan goals:

    a. *C.1: Identify and address pedestrian safety needs, congestion, traffic flow challenges and safety concerns where they exist*

        1. The proposed retail center has a curvilinear and narrow design to its roadway system. For uses requiring regular delivery and loading services, this may present challenges for larger delivery vehicles to access the designated loading zones, especially if there is vehicle traffic or full parking lots. In order to comply with this goal, the design of the streets should be carefully evaluated to support loading areas, delivery access, and emergency vehicle access.

    b. *D.1: Provide a wide range of active and passive recreation areas and facilities that are well- distributed throughout the Township*

        1. The proposed retail center does not show any recreation on site. In order to comply with this goal, the applicant should discuss plans for recreation dedication or a fee-in-lieu of.

    c. *F.3: Establish a sense of arrival when entering Palmer Township.*

1. The proposed retail center is on the border of Palmer and Tatamy. As a first impression of both municipalities, the project may be better served with additional landscaping and welcome signage. In order to comply with this goal, the applicant should discuss with the Township about appropriate treatments.

d. *F.7: Facilitate discussions with neighboring communities when dealing with regionally significant development and improvements.*

1. The proposed retail center is on the border of Palmer and Tatamy. As with all developments that span multiple municipalities, all efforts should be made to ensure that officials from Tatamy and Palmer are communicating and sharing comments for this project to ensure that a shared vision of this site is created. In order to comply with this goal, all communication from both municipalities should be shared with one another.

e. *Promote sustainability as a guiding principle in Township decision-making.*

1. The proposed retail center contains a significant amount of new development. Numerous parking spaces and building footprints will result in increased impervious surfaces for stormwater and additional heat island effects. In order to comply with this goal, the applicant should consider reducing the size of impervious surfaces, incorporating additional green infrastructure, and alternative energy sources as appropriate.

6. The proposed retail center is either nonapplicable or negligible to the other goals.

Your plan is scheduled to be reviewed by the Planning Commission on Tuesday, August 12, 2025 at 7:00 p.m. in the Public Meeting Room of the Township Municipal Building located at 3 Weller Place, Lower Level, Palmer Township, PA 18045.

If you have any questions, please feel free to reach out.

Sincerely,

Craig Beavers

Craig S. Beavers, AICP Candidate
Director of Planning
Palmer Township, Northampton County

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: Main Street and Trolley Line Drive

Project Name: Chrin Southeast Quadrant Lot 2 (Retail and Restaurant)

Submission Date: July 17, 2025

Plan Type: Preliminary Land Development - First Submission - Plan Dated July 17, 2025

Zoning District: MSC Main Street Commercial District & NEB North End Business District

Applicant's Name: Charles Chrin Real Estate Trust (c/o Greg Chrin)

Palmer Township Police Department Comments

(attach additional pages as needed)

Comments related to traffic:

Comments related to security or enforcement:

Other Comments:

☑ Check here for: "No comments at this time."

☐ Check here for: "All comments have been addressed at this time."

Signature: _____ Date: 07/21/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: Main Street and Trolley Line Drive

Project Name: Chrin Southeast Quadrant Lot 2 (Retail and Restaurant)

Submission Date: July 17, 2025

Plan Type: Preliminary Land Development - First Submission - Plan Dated July 17, 2025

Zoning District: MSC Main Street Commercial District & NEB North End Business District

Applicant's Name: Charles Chrin Real Estate Trust (c/o Greg Chrin)

Fire Commissioner / Palmer Municipal Fire Department Comments *(attach additional pages as needed)*

Comments related to fire hydrants or other fire prevention measures:

No hydrant layout provided. Future submissions shall identify proposed fire hydrant locations.

Comments related to emergency access, truck turning or other site considerations:

Although the submitted plans identify fire truck turning template and access, apparatus access roads shall be a minimum of 20' wide. Future submissions shall identify the emergency access road widths.

Comments related to Township Fire Prevention Ordinance or IFC Regulations:

Building 5 identified as being +/- 5,175 square feet. Depending on the proposed use of Building 5, sprinkler system may be required. A fire hydrant shall be located with 100' of any fire department connections and location shall be approved by the Fire Commissioner.

Other Comments:

☐ Check here for: "No comments at this time."

☐ Check here for: "All comments have been addressed at this time."

Signature: Stephen Gallagher Date: 8/5/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: Main Street and Trolley Line Drive

Project Name: Chrin Southeast Quadrant Lot 2 (Retail and Restaurant)

Submission Date: July 17, 2025

Plan Type: Preliminary Land Development - First Submission - Plan Dated July 17, 2025

Zoning District: MSC Main Street Commercial District & NEB North End Business District

Applicant's Name: Charles Chrin Real Estate Trust (c/o Greg Chrin)

Department of Public Works, Parks, and Public Utility Operations Comments *(attach additional pages as needed)*

Comments related to sanitary sewer, storm sewer, and other relevant utilities:

Building lots within Palmer Township are subject to Treatment, Collection and Conveyance tapping fees. Lots within Tatamy Borough are subject to Collection and Conveyance tapping fees payable to Palmer Township at time that building permits are filed for.

Comments related to maintenance and operations of public improvements (roadways, utilities, signs, lighting, pavement parking, snow removal, leaf collection, etc.):

Comments related to maintenance and operations of public grounds and recreation (parks, open space, bike paths, athletic facilities, stormwater facilities, right-of-way areas, etc.):

Other Comments:

I am not completely comfortable with the proposed path of a sewer extension proposed to Main St. for future extension to the North. Also all sewer installed outside of the public right-away should remain private, similar to sewer service to Sheetz, Wendy's and the Hotel. Further discussion is needed with the Engineer to resolve these concerns.

☐ Check here for: "No comments at this time."

☐ Check here for: "All comments have been addressed at this time."

Signature: Scott Kistler Date: 08/05/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: Main Street and Trolley Line Drive

Project Name: Chrin Southeast Quadrant Lot 2 (Retail and Restaurant)

Submission Date: July 17, 2025

Plan Type: Preliminary Land Development - First Submission - Plan Dated July 17, 2025

Zoning District: MSC Main Street Commercial District & NEB North End Business District

Applicant's Name: Charles Chrin Real Estate Trust (c/o Greg Chrin)

Department of Public Services Comments *(attach additional pages as needed)*

Comments related to roadway improvements and related infrastructure:

Consider widening bicycle path to 12', if asphalt. Current plan with 10' wide concrete sidewalk is acceptable. Include detail to remove ambiguity of proposed bike path.

Comments related to lighting, signal, signage, and related infrastructure:

Include lighting for bike path to be powered by owner outside PennDOT R.O.W

Comments related to natural and environmental infrastructure:

Catch Basins near loading zones/dumpsters/etc should have sumps and snouts to prevent contamination. For example CB-115 and CB-102. Please use some kind of in-line filtration for common road pollutants in high-risk areas.

Other Comments:

☐ Check here for: "No comments at this time."

☐ Check here for: "All comments have been addressed at this time."

Signature: Phillip Godbout Date: 8/5/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: Main Street and Trolley Line Drive

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Zoning District: MSC Main Street Commercial District & NEB North End Business District

Applicant's Name: Charles Chrin Real Estate Trust (c/o Greg Chrin)

Director of Stormwater and MS4 Comments *(attach additional pages as needed)*

Comments related to stormwater management plan:

Provide sequence of operations for the transition between existing SWM controls and proposed.

Comments related to drainage or detention basins:

Provide locations of known karst features or sinkholes for the proposed development area

Comments related to stormwater construction and E&S measures:

See above

Other Comments:

Utilization of an oil/water separator due to the nature of the site shall be considered due to the nature of proposed activities. Include provisions in the operation and maintenance plan for periodic inspection and servicing of the selected pollution control measure.

☐ Check here for: "No comments at this time."

☐ Check here for: "All comments have been addressed at this time."

Signature: Matthew Hunter Date: 8/7/25

Craig Beavers

From: Molly Wood <mwood@lantabus-pa.gov>
Sent: Wednesday, July 30, 2025 1:26 PM
To: Craig Beavers
Cc: ajordan@lantabus-pa.gov
Subject: LANTA Comments for Chrin SE Quadrant Lot 2_7.30.25

Caution! This message was sent from outside your organization. Report

Craig,

The Lehigh and Northampton Transportation Authority (LANTA) has reviewed the submitted Preliminary Site Plan for the proposed Chrin SE Quadrant Lot 2 located in Palmer Township, and offers the following comments.

LANTA provides fixed-route public transportation directly to the project site, with an active route serving northbound on Trolley Line Drive along the property frontage. The existing bus stop includes a bus pull-over and bus shelter, both respectively provided by the developer when road was initially constructed. The developer, project engineer, and the Township have collectively engaged with LANTA in previous months to discuss the feasibility of relocating the existing bus stop ID 6460 further north on Trolley Line Drive, farside of the new proposed driveway entrance to the project site. As discussed with the project team in March 2025, LANTA does not require a bus pull over or bus shelter at the relocated bus stop location, as that would be up to the developer's discretion. The only requirement LANTA had requested was a new 5x8 accessible landing pad in between the raised curb and existing sidewalk network on Trolley Line Drive. LANTA appreciates efforts to include this recommendation in the proposed site plan, as well as a proposed internal sidewalk network throughout the project site.

For follow up, please contact Molly Wood at mwood@lantabus-pa.gov for further discussion and coordination of bus stop details.

Thank you,
Molly

Molly S. Wood, AICP
Planner/Land Use Specialist
Lehigh and Northampton Transportation Authority
1060 Lehigh Street, Allentown, PA 18103
PH: 610-439-1376
mwood@lantabus-pa.gov
www.lantabus.com

Follow LANta on: Facebook | Twitter | LinkedIn | YouTube

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: Main Street and Trolley Line Drive

Project Name: Chrin Southeast Quadrant Lot 2 (Retail and Restaurant)

Submission Date: July 17, 2025

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Zoning District: MSC Main Street Commercial District & NEB North End Business District

Applicant's Name: Charles Chrin Real Estate Trust (c/o Greg Chrin)

Department of Codes and Zoning Comments *(attach additional pages as needed)*

Comments related to zoning regulations (lot area, setbacks, permitted use, etc.):

Chrin SE quad should follow all the conditions set by the Palmer Township Zoning Hearing Board.

Comments related to parking requirements or signage regulations (if applicable):

Comments related to other code provisions:

Other Comments:

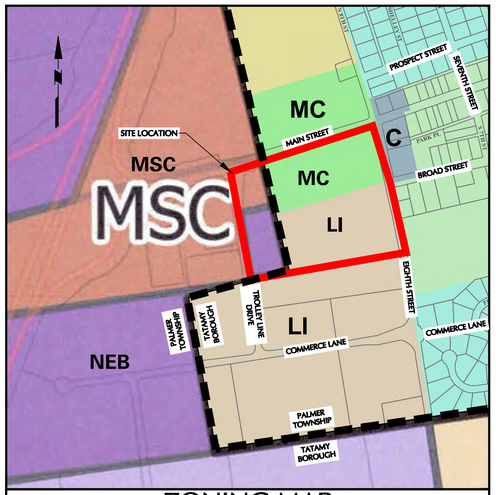
☐ Check here for: "No comments at this time."

☐ Check here for: "All comments have been addressed at this time."

Signature: James Raudenbush Date: 08/05/2025

CHRIN SOUTHEAST QUADRANT - LOT 2 DEVELOPMENT

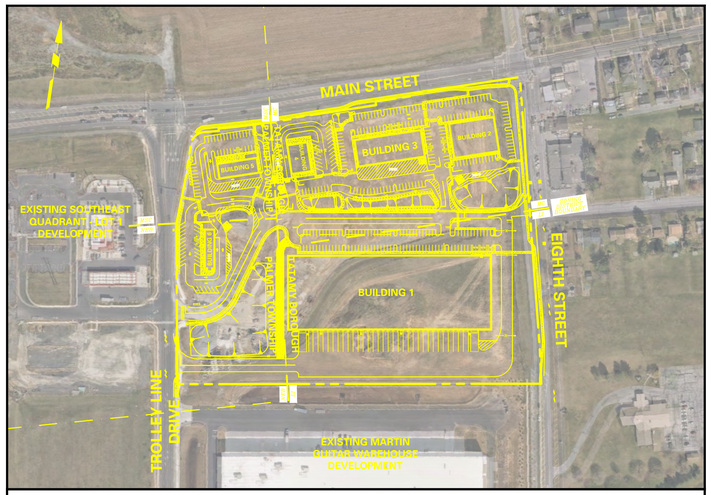
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY, PENNSYLVANIA
PRELIMINARY LAND DEVELOPMENT PLANS
PARCEL ID: #J8-27A1



ZONING MAP

REFERENCE: BOROUGH OF TATAMY, NORTHAMPTON COUNTY, PA ZONING MAP (DATED 2015)
REFERENCE: TOWNSHIP OF PALMER, NORTHAMPTON COUNTY, PA ZONING MAP (DATED 2023)

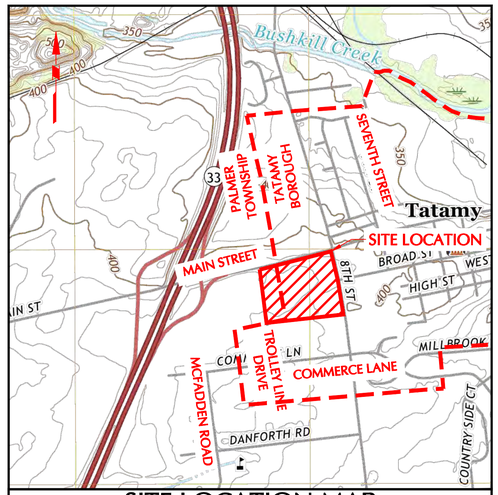
SCALE: 1" = 500'



SITE PLAN

REFERENCE: MICROSOFT, DATED 2025

SCALE: 1" = 200'



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019)

SCALE: 1" = 1000'

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED, TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND
(10) WORKING DAYS IN DESIGN STAGE
— STOP & CALL —

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192

CIVIL ENGINEER, TRAFFIC ENGINEER, AND SURVEYOR

LANGAN

ENGINEERING & ENVIRONMENTAL SERVICES

2700 Kelly Road, Suite 200
Warrington, PA 18976-3653
P: 215.491.6500 F: 215.491.6501
CONTACT: KEITH OTTES
EMAIL: KOTTES@LANGAN.COM

RECORDING INFORMATION

RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____, PAGE NO. ___ ON _____, 20 ___.

ANTICIPATED ADDRESSES
500 AND 600 TROLLEY LINE DRIVE,
PALMER, PA 18045 & 700, 800, 900, 1,000
TROLLEY LINE DRIVE, TATAMY, PA 18045

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

ANTICIPATED DEVELOPMENT SCHEDULE:
PROJECT RELATED CONSTRUCTION IS ANTICIPATED TO BEGIN FALL 2026 AND END SPRING 2028

DRAWING LIST

Page No.	Drawing No.	Drawing Title	Scale	Date Revised
1	GI-100	**PRELIMINARY COVER SHEET (RECORD PLAN)***	N.T.S.	7/17/2025
2	GI-100A	**PRELIMINARY SIGNATURE SHEET (RECORD PLAN)***	N.T.S.	7/17/2025
3	GI-101	PRELIMINARY AERIAL MAP	1"=70'	7/17/2025
4	VT-100	PRELIMINARY MASTER EXISTING CONDITIONS PLAN	1"=80'	7/17/2025
5-6	VT-101-102	PRELIMINARY EXISTING CONDITIONS PLAN	1"=50'	7/17/2025
7	CB-200	**PRELIMINARY TROLLEY LINE DRIVE PLANNED COMMUNITY UNIT LINE PLAN (RECORD PLAN)***	1"=60'	7/17/2025
8	CB-201	**PRELIMINARY EASEMENT PLAN (RECORD PLAN)***	1"=60'	7/17/2025
9	CS-100	**PRELIMINARY MASTER SITE PLAN (RECORD PLAN)***	1"=60'	7/17/2025
10	CS-100A	PRELIMINARY ZONING NOTES	N.T.S.	7/17/2025
11-12	CS-101-102	**PRELIMINARY SITE PLAN (RECORD PLAN)***	1"=40'	7/17/2025
13-16	CS-201-204	PRELIMINARY TRUCK TURN PLAN	AS SHOWN	7/17/2025
,17-18	CS-501-502	PRELIMINARY SITE DETAILS	N.T.S.	7/17/2025
19	CP-101	PRELIMINARY PAVEMENT PLAN	1"=50'	7/17/2025
20	CG-100	PRELIMINARY MASTER GRADING AND DRAINAGE PLAN	1"=60'	7/17/2025
21-22	CG-101-102	PRELIMINARY GRADING PLAN	1"=40'	7/17/2025
23-24	CG-103-104	PRELIMINARY DRAINAGE PLAN	1"=40'	7/17/2025
25-28	CG-201-204	PRELIMINARY DRAINAGE & UTILITY PROFILES	AS SHOWN	7/17/2025
29-30	CG-205-206	PRELIMINARY ROADWAY AND UTILITY PROFILES	AS SHOWN	7/17/2025
31	CG-300	**PRELIMINARY MASTER POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (RECORD PLAN)***	1"=60'	7/17/2025
32-33	CG-301-302	**PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (RECORD PLAN)***	1"=40'	7/17/2025
34-36	CG-501-503	PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN DETAILS	N.T.S.	7/17/2025
37	CU-100	PRELIMINARY MASTER UTILITY PLAN	1"=60'	7/17/2025
38-39	CU-101-102	PRELIMINARY UTILITY PLAN	1"=40'	7/17/2025
40	CU-201	PRELIMINARY SANITARY SEWER PROFILES	AS SHOWN	7/17/2025
41-44	CU-501-504	PRELIMINARY UTILITY DETAILS	N.T.S.	7/17/2025
45	LP-100	PRELIMINARY MASTER LANDSCAPE PLAN	1"=60'	7/17/2025
46-47	LP-101-102	PRELIMINARY LANDSCAPE PLAN	1"=40'	7/17/2025
48	LP-501	PRELIMINARY LANDSCAPE NOTES AND DETAILS	AS SHOWN	7/17/2025
49	LL-100	PRELIMINARY MASTER LIGHTING PLAN	1"=60'	7/17/2025
50-51	LL-101-102	PRELIMINARY LIGHTING PLAN	1"=40'	7/17/2025
52	LL-501	PRELIMINARY LIGHTING NOTES AND DETAILS	AS SHOWN	7/17/2025

*** PLAN TO BE RECORDED**

CONTACTS

TELEPHONE
VERIZON
JAMES ZIONOWSKI
ENGINEER
1350 WELSH ROAD
NORTH WALES, PA 19414
PHONE: 1-800-640-4155
james.zionkowski@verizon.com

WATER
PENNSYLVANIA AMERICAN WATER COMPANY
DAVID LENTOWSKI
SENIOR PROJECT MANAGER
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WYOMISSING, PA 19610
PHONE: 610-670-7789
David.Lentowski@amwater.com

ELECTRIC
MET ED ELECTRIC
2121 SULLIVAN TRAIL
EASTON, PA 18040
PHONE: 610-250-2840

TATAMY BOROUGH
MARK SAGINARIO
BOROUGH MANAGER
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P.O. BOX 218
TATAMY, PA 18085
PHONE: 610-252-7123
manager@tatamypa.gov

PALMER TOWNSHIP
CRAIG BEAVERS
DIRECTOR OF PLANNING
3 WELLER PLACE
P.O. BOX 3039
PALMER, PA 18043
PHONE: 610-253-7191
CBeavers@palmertwp.com

TATAMY BOROUGH FIRE CHIEF
SHAWN McDONALD
PHONE: 484-291-4360
shawncf700@yahoo.com

GAS
UGI
CHARLES LOEFFLER
NEW CONSTRUCTION REP
2121 CITY LINE ROAD
BETHLEHEM, PA 18017
PHONE: 610-807-3113
cloeffler@ugi.com

EASTON AREA JOINT SEWER AUTHORITY
50-A SOUTH DELAWARE DRIVE
EASTON, PA 18042-9405
PHONE: 610-250-6707

AT&T GLOBAL IMAGING CENTER
P.O. BOX 16795
MESA, AZ 85211
PHONE: 1-800-222-0300

TATAMY BOROUGH ENGINEER
HANOVER ENGINEERING
BRIEN KOCHER/JIM MILOT
252 BRODHEAD ROAD
SUITE 100
BETHLEHEM, PA 18017-8944
PHONE: 610-691-5644
bkocher@hanovereng.com

PALMER TOWNSHIP ENGINEER
CARROLL ENGINEERING
JUSTIN COYLE/DAN WILUSZ
101 LARRY HOLMES DR., SUITE 201
EASTON, PA 18042
PHONE: 610-989-4940
jcoyle@carrollengineering.com
dwiluszc@carrollengineering.com

PALMER TOWNSHIP FIRE COMMISSIONER
STEVE GALLAGHER
PHONE: 610-559-9809
sgallahher@palmertwp.com

REQUIRED APPROVALS:

THE PROJECT REQUIRES THE FOLLOWING PERMITS AND APPROVALS:

PALMER TOWNSHIP
- PRELIMINARY LAND DEVELOPMENT APPROVAL
- FINAL LAND DEVELOPMENT APPROVAL
- ENGINEERING CONSISTENCY LETTER

TATAMY BOROUGH
- PRELIMINARY LAND DEVELOPMENT APPROVAL
- FINAL LAND DEVELOPMENT APPROVAL
- ENGINEERING CONSISTENCY LETTER

LEHIGH VALLEY PLANNING COMMISSION
- LAND DEVELOPMENT RECOMMENDATION
- ACT 167 CONSISTENCY

NORTHAMPTON COUNTY CONSERVATION DISTRICT (NCCD)
- EROSION AND SEDIMENT POLLUTION CONTROL CERTIFICATION
- NPDES PERMIT

PADEP
- GENERAL NPDES PERMIT
- SEWAGE FACILITIES PLANNING MODULE EXEMPTION

TATAMY BOROUGH AND PALMER TOWNSHIP SEWER AUTHORITIES
- TREATMENT AND CAPACITY CONFIRMATION
- DESIGN APPROVAL

EASTON AREA JOINT SEWER AUTHORITY (EAJSA)
- TREATMENT AND CAPACITY CONFIRMATION

PENNSYLVANIA AMERICAN WATER COMPANY
- SERVICE AND DESIGN APPROVAL

PENNSYLVANIA POWER AND LIGHTING (PPL)
- ENCROACHMENT AND RELOCATION APPROVAL
- SERVICE AND DESIGN APPROVAL

UNITED GAS IMPROVEMENT COMPANY (UGI)
- SERVICE AND DESIGN APPROVAL

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT)
- DRIVEWAY HIGHWAY OCCUPANCY PERMIT

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY COVER SHEET (RECORD PLAN)

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SH

Drawing No. GI-100

Sheet 1 of 52

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LANGAN 77 Project No. 200168301

APPROVAL/REVIEW:

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION

LVPC STAFF PERSON RESPONSIBLE FOR REVIEW — DATE

REVIEWED BY THE TATAMY BOROUGH ENGINEER

BOROUGH ENGINEER — DATE

REVIEWED BY THE TATAMY BOROUGH PLANNING COMMISSION

CHAIRPERSON — SECRETARY — DATE

APPROVED BY RESOLUTION OR MOTION OF THE TATAMY BOROUGH COUNCIL AND ACCEPTED FOR RECORDING

CHAIRPERSON — SECRETARY — DATE

REVIEWED BY THE PALMER TOWNSHIP ENGINEER

TOWNSHIP ENGINEER — DATE

PLANNING COMMISSION

REVIEWED BY PALMER TOWNSHIP PLANNING COMMISSION

CHAIRPERSON — SECRETARY

DATE OF RECOMMENDATION OF PLAN APPROVAL

DATE OF PLAN SIGNATURE

BOARD OF SUPERVISORS

APPROVED BY THE PALMER TOWNSHIP BOARD OF SUPERVISORS FOR RECORDING

CHAIRPERSON — SECRETARY

DATE OF PLAN APPROVAL

DATE OF PLAN SIGNATURE

APPROVED ZONING RELIEF

PALMER TOWNSHIP

THE FOLLOWING ZONING RELIEF WAS GRANTED AT THE JANUARY 7, 2025 ZONING HEARING BOARD MEETING

- **SECTION 190-412 - TO ALLOW FOR A WAREHOUSE AND QUICK SERVICE RESTAURANT WITHIN THE NORTH EAST BUSINESS DISTRICT (NEB) THAT ALREADY PERMITS WAREHOUSES.**
- **SECTION 190-409.E.9 - TO ALLOW PARKING WITHIN 0' OF MAIN STREET FROM WHICH A MINIMUM 50' SETBACK IS REQUIRED.**
- **SECTION 190-409.J.1.b - TO ALLOW PARKING BETWEEN MAIN STREET AND THE BUILDING. TOWNSHIP ORDINANCES REQUIRE THE PARKING TO BE ORIENTED TO THE REAR AND/OR SIDE OF THE STRUCTURE.**
- **SECTION 190-603.G.4 - TO ALLOW PARKING 10' FROM THE RIGHT OF WAY. TOWNSHIP ORDINANCES REQUIRE A 15' SETBACK FROM THE RIGHT OF WAY FROM ARTERIAL AND COLLECTOR STREETS.**
- **TO ALLOW FOR ACCESS FROM A ZONING DISTRICT, WHERE PROPOSED USE IS NOT PERMITTED.**

TATAMY BOROUGH

THE FOLLOWING ZONING RELIEF WAS GRANTED AT TWO ZONING BOARD HEARINGS ON JANUARY 13, 2025 AND MARCH 13, 2025.

- **ARTICLE III SECTION 307.A - TO ALLOW FOR IMPERVIOUS COVERAGE OF UP TO 82.5% FROM THE BOROUGH CODE ALLOWED 72.5%.**
- **ARTICLE 263-2014 SECTION 2014-006.B - TO ALLOW FOR THE CONSTRUCTION OF A 165 FT WIDE 2 WAY DRIVEWAY FROM THE BOROUGH CODE ALLOWED 75 FT MAXIMUM DRIVEWAY WIDTH.**
- **ARTICLE 264-2014 SECTION 2014-006.B - TO ALLOW FOR THE CONSTRUCTION OF A 28 SPACE PARKING LOT WITHIN THE MSC DISTRICT TO SERVICE PROPOSED WAREHOUSE WITHIN LI DISTRICT.**
- **ARTICLE 263-2014 SECTION 2014-006.B - TO ALLOW FOR THE CONSTRUCTION OF AN INGRESS ONLY DRIVEWAY FROM EIGHTH STREET.**
- **ARTICLE 263-2014 SECTION 2014-0016.B.7.(b) - TO PERMIT A STACKING LANE OF SEVEN VEHICLES RATHER THAN THE TEN VEHICLES REQUIRED BY THE BOROUGH ORDINANCE.**

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

PALMER TOWNSHIP NOTE:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATED TO LAND USE AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING, BUT NOT LIMITED TO, SOIL AND WATER QUALITY, KARST GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHAEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR. THE TOWNSHIP, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND WHO ARE ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE.

DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION, CONSISTENCY, CLOSURE, AND AREA (ONLY). THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, STREET RIGHTS-OF-WAY, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

PLAN PREPARER'S STATEMENTS

I, _____, A REGISTERED SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE PLAN, PREPARED FROM A FIELD SURVEY DURING _____ CORRECTLY REPRESENTS THE PROPERTY BOUNDARY OF THE PROPOSED SUBDIVISION OR LAND DEVELOPMENT.

DATE — REGISTERED SURVEYOR'S SIGNATURE

2700 KELLY ROAD.
SUITE 200
WARRINGTON PA, 18976 — SHAUN HIGGINS, PLS

ADDRESS — PRINTED NAME

I, _____, A LICENSED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND ACCURATE, TO THE BEST OF MY KNOWLEDGE.

DATE — PLAN PREPARER'S SIGNATURE

2700 KELLY ROAD.
SUITE 200
WARRINGTON PA, 18976 — KEITH S. OTTES, PE

ADDRESS — PRINTED NAME

REQUESTED WAIVERS/DEFERRALS

PALMER TOWNSHIP

THE APPLICANT RESPECTFULLY REQUESTS A DEFERRAL FROM THE FOLLOWING SECTIONS OF THE PALMER TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

- **SECTION 165-75.A - THE REFERENCED SECTION REQUIRES CURBING ALONG PUBLIC STREETS. A WAIVER IS REQUESTED TO DEFER THIS REQUIREMENT UNTIL A TIME WHEN PALMER TOWNSHIP AND PENNDOT BOTH AGREE THAT CURBING NEEDS TO BE INSTALLED ALONG THE ENTIRE MAIN STREET (SR 1002) CORRIDOR WITHIN THE TOWNSHIP.**

THE APPLICANT RESPECTFULLY REQUESTS WAIVERS FROM THE FOLLOWING SECTIONS OF THE PALMER TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

- **SECTION 158-304.N & 165-63.K.11 - THE REFERENCED SECTION REQUIRES A MINIMUM 1.0 FT OF FREEBOARD BELOW THE INVERT OF THE EMERGENCY SPILLWAY. A WAIVER IS BEING REQUESTED TO ALLOW A MINIMUM FREE BOARD OF 0.5 FT TO MATCH THE BASINS WITHIN TATAMY BOROUGH.**
- **SECTION 158-305.C.11 - THE REFERENCED SECTION REQUIRES A MINIMUM PIPE SLOPE OF 0.5%. A WAIVER IS REQUESTED TO TO ALLOW FOR A MINIMUM PIPE SLOPE OF 0.35%**
- **SECTION 165-63.K.2.c = THE REFERENCED SECTION REQUIRES EMERGENCY SPILLWAYS TO BE CONSTRUCTED OF REINFORCED CONCRETE, MORTARED IN PLANS RIP-RAP OR CONCRETE RUBBLE. A WAIVER IS REQUESTED TO PERMIT THE CONSTRUCTION OF EMERGENCY SPILLWAY LINING USING SYNTHETIC LANDSCAPE MATTING.**
- **SECTION 165-63.k.3 - THE REFERENCED SECTION REQUIRES THE INTERIOR SLOP OF DETENTION BASINS TO BE A MAXIMUM OF FOUR TO ONE (4:1) SLOPE. A WAIVER IS REQUESTED TO PERMIT THE INTERIOR SLOPE OF THE INFILTRATION BASINS TO BE THREE TO ONE (3:1).**
- **SECTION 165-63-K.5 - THE REFERENCED SECTION REQUIRES A MINIMUM 3% SLOPE FOR THE BOTTOM OF DETENTION BASINS, A WAIVER IS REQUESTED TO PERMIT A BASIN BOTTOM SLOPE OF 0%,**
- **SECTION 165-63.N.(3) - THE REFERENCED SECTION REQUIRES THE CROWNS OF ALL DRAINAGE PIPES TO BE AT THE SAME ELEVATION WHEN CHANGING PIPE SIZES . A WAIVER IS REQUESTED TO PERMIT THE CROWNS OF DRAINAGE PIPES TO DIFFER WHEN CHANGING SIZES.**
- **SECTION 165-63.N.3 - THE REFERENCED SECTION REQUIRES A MINIMUM LONGITUDINAL SLOPE OF 2%. A WAIVER IS REQUESTED TO PERMIT A REDUCED LONGITUDINAL SLOPE OF 2%.**
- **SECTION 165-73.A.5.a AND SECTION 165-73.A.7 - THE REFERENCED SECTION PROVIDES REQUIREMENTS RELATING TO THE LOCATION AND NUMBER OF STREET TREES ALONG A PUBLIC RIGHT-OF-WAY. A WAIVER IS REQUESTED TO PERMIT THE REQUIRED TREES BE PLACED OUTSIDE OF THE RIGHT-OF-WAY INTERIOR TO SITE.**

TATAMY BOROUGH

THE APPLICANT RESPECTFULLY REQUESTS WAIVERS FORM THE FOLLOWING SECTIONS OF THE TATAMY BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

- **SECTION 154-174(A) - THE REFERENCED SECTION PROVIDES REQUIREMENTS RELATING TO THE LOCATION AND NUMBER OF STREET TREES ALONG A PUBLIC RIGHT-OF-WAY. A WAIVER IS REQUESTED TO PERMIT THE REQUIRED TREES BE PLACED OUTSIDE OF THE RIGHT-OF-WAY INTERIOR TO SITE.**

THE APPLICANT RESPECTFULLY REQUESTS WAIVERS FORM THE FOLLOWING SECTIONS OF THE TATAMY BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

- **SECTION 154.162(K)(C) - THE REFERENCED SECTION REQUIRES EMERGENCY SPILLWAY BE CONSTRUCTED OF REINFORCED CONCRETE, VEGETATED EARTH, OR CONCRETE RUBBLE. A WAIVER IS REQUESTED TO PERMIT CONSTRUCTION OF THE EMERGENCY SPILLWAYS USING SYNTHETIC LANDSCAPE MATTING.**
- **SECTION 154.162(K)(3) - THE REFERENCE SECTION REQUIRES THE INTERIOR SLOPE OF THE DETENTIONS BASINS TO BE A MAXIMUM OF FOUR TO ONE (4:1) SLOPE. A WAIVER IS REQUESTED TO PERMIT THE INTERIOR SLOPE OF THE INFILTRATION BASIN TO BE THREE TO ONE (3:1).**
- **SECTION 154.162(K)(5) - THE REFERENCED SECTION REQUIRES A MINIMUM BOTTOM SLOPE OF 2% FOR ALL DETENTION BASINS, A WAIVER IS REQUESTED TO PERMIT A BASIN BOTTOM SLOPE OF 0%.**
- **SECTION 154.162(N)(3) - THE REFERENCED SECTION REQUIRES A MINIMUM PIPE SLOPE OF 0.5%. A WAIVER IS REQUESTED TO ALLOW FOR A MINIMUM PIPE SLOPE OF 0.35%.**

OWNER'S STATEMENT

WE, THE OWNERS OF THE LAND INVOLVING THE ACCOMPANYING PLANS, BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY WE ARE THE SOLE OWNERS OR ARE THE AUTHORIZED OFFICERS OF THE CORPORATION THAT IS THE SOLE OWNERS OF THIS PROPERTY IN PEACEFUL POSSESSION OF IT, AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE OF SAME, AND THAT WE ACKNOWLEDGE AND ENDORSE THE ACCOMPANYING PLANS, AND THAT ALL IMPROVEMENTS IDENTIFIED AS PROPOSED PUBLIC PROPERTY (NOT INCLUDING IMPROVEMENTS LABELED AS "NOT FOR DEDICATION") ARE PROPOSED FOR DEDICATION TO THE PUBLIC USE, AND THAT WE PROPOSE THE ATTACHED RECORD PLAN FOR RECORDING (AS APPLICABLE) AFTER RECEIVING ALL REQUIRED MUNICIPAL APPROVALS.

OWNER'S OR AUTHORIZED CORPORATE OFFICER'S SIGNATURE

DATE

SS
COMMONWEALTH OF PENNSYLVANIA

COUNTY OF _____

ON THE ____ DAY OF ____, 20 ____, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED GREG CHRIN, WHO ACKNOWLEDGED HIMSELF TO BE THE REPRESENTATIVE OF THE CHARLES CHRIN REAL ESTATE TRUST, A CORPORATION, AND THAT AS SUCH REPRESENTATIVE, BEING AUTHORIZED TO DO SO, HE EXECUTED THE FOREGOING PLAN BY SIGNING THAT THE SAID CORPORATION IS THE REGISTERED OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY APPROVALS OF THE PLAN HAVE BEEN OBTAINED AND IS ENDORSED THEREON, AND THAT HE DESIRES THAT THE FOREGOING PLAN BE RECORDED ACCORDING TO LAW.

NOTARY PUBLIC

MY COMMISSION EXPIRES _____

(SEAL)

RECORDING INFORMATION

RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____, PAGE NO. ___ ON _____, 20 ___.

PLANS TO BE RECORDED

- **GI-100 - PRELIMINARY COVER SHEET - SHEET NO. 1**
- **GI-100A - PRELIMINARY SIGNATURE SHEET - SHEET NO. 2**
- **CB-200 - PRELIMINARY TROLLEY LINE DRIVE PLANNED COMMUNITY UNIT LINE PLAN - SHEET NO. 7**
- **CB-201 - PRELIMINARY EASEMENT PLAN - SHEET NO. 8**
- **CS-100 - PRELIMINARY MASTER SITE PLAN - SHEET NO. 9**
- **CS-101 - PRELIMINARY SITE PLAN - SHEET NO. 11**
- **CS-102 - PRELIMINARY SITE PLAN - SHEET NO. 12**
- **CG-300 - PRELIMINARY MASTER POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - SHEET NO. 31**
- **CG-301 - PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - SHEET NO. 32**
- **CG-302 - PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - SHEET NO. 33**

GENERAL SITE NOTES:

1. THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITEWORK CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
2. THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER AND ENGINEER MAKE NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY INFORMATION THAT WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL: MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS; CORRELATE CONDITIONS WITH THE DRAWINGS; AND, RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL PERFORM ADDITIONAL TOPOGRAPHIC SURVEYS HE/SHE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
3. THE CONTRACTOR SHALL, WHEN HE/SHE DEEMS NECESSARY, PROVIDE A WRITTEN REQUEST FOR INFORMATION (RFI) TO THE OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM. THE (RFI) SHALL BE IN A FORM ACCEPTABLE TO OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF THREE WORK DAYS FOR A WRITTEN REPLY. RFIS SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITEWORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
4. INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO BID. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO BID.
5. THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL THESE DOCUMENTS.
6. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL CONSTRUCTION STAKEOUT FOR THIS PROJECT MUST BE COMPLETED FROM THE SITE SPECIFIC SURVEY CONTROL (HORIZONTAL AND VERTICAL) UPON WHICH THE DESIGN IS BASED. THE CONTRACTOR SHOULD NOT RELY ON OR RE-ESTABLISH SURVEY CONTROL BY GPS OR OTHER METHODS FOR USE IN CONSTRUCTION STAKEOUT OR ANY OTHER PURPOSE FOR THIS PROJECT. ANY DISCREPANCIES BETWEEN THE EXISTING HORIZONTAL OR VERTICAL DATA SHOWN ON THESE DRAWINGS AND THAT ENCOUNTERED IN THE FIELD MUST BE REPORTED TO THE DESIGN TEAM PRIOR TO CONSTRUCTION FOR RESOLUTION.

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — KEITH S. OTTES — ENGINEER — 074526
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

CIVIL ENGINEER, TRAFFIC ENGINEER, AND SURVEYOR

LANGAN

ENGINEERING & ENVIRONMENTAL SERVICES

2700 Kelly Road, Suite 200
Warrington, PA 18976-3653
P: 215.491.6500 F: 215.491.6501
CONTACT: KEITH OTTES
EMAIL: KOTTES@LANGAN.COM

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY SIGNATURE SHEET (RECORD PLAN)

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SH

Drawing No. GI-100A
Sheet 2 of 52

LANGAN 78
Project No. 200168301

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PROPERTY OWNERS WITHIN 200 FT				
Number	Parcel	Owner	Property Location	Mailing Address
1	J8 27A1J	NORTH STREET REAL ESTATE LLC	110-130 COMMERCE LN	510 SYCAMORE ST PO BOX 329, NAZARETH PA 18064-1000
2	J8 23A1	CHARLES CHRIN REAL ESTATE TRUST	MAIN ST	400 S GREENWOOD AVE, EASTON PA 18045
3	J8 27A1R-3	CHRIN GREENWOOD REALITY LLC	100 TROLLEY LINE DR	400 S GREENWOOD AVE, ASTON PA 18045-3776
4	J8 27A1R-4	CHARLES CHRIN REAL ESTATE TRUST	400 TROLLEY LINE DR	400 S GREENWOOD AVE, EASTON PA 18045
5	J8 27A1R	CHARLES CHRIN REAL ESTATE TRUST	TROLLEY LINE DR	400 S GREENWOOD AVE, EASTON PA 18045
6	J8 27A1H	CHARLES CHRIN REAL ESTATE TRUST	150 COMMERCE LN	400 S GREENWOOD AVE, EASTON PA 18045-3776
7	J8 28 2A	HOPE LUTHERAN CHURCH OF TATAMY	240 S 8TH ST	240 S 8TH ST, TATAMY PA 18085
8	J8 28 3A-1	DEFRANCESCO FRANK S III & JILL A	126 8TH ST	126 S 8TH ST, TATAMY PA 18085-7045
9	J8 28 3A-2	REED CYNTHIA	104 S 8TH ST	104 S 8TH ST, TATAMY PA 18085
10	J8SE3A 4 2	FEC LLC	50 -70 8TH ST	50 S 8TH ST, EASTON PA 18045
11	J8SE3A 4 2A	CHARLES CHRIN REAL ESTATE TRUST	30 S 8TH ST	400 S GREENWOOD ST, EASTON PA 18045-3776
12	J8SE3A 4 1	SINGH INVESTMENT GROUP LLC	788 MAIN ST	PO BOX 458, TATAMY PA 18085-04588

CHRIN NORTHEAST QUADRANT (CURRENTLY UNDEVELOPED)

TATAMY BOROUGH PALMER TOWNSHIP

PRINCIPAL BOUNDARY LINE

RAIN GARDEN 2

MAIN STREET

RAIN GARDEN 1

MSC

MC

BUILDING 5 (QSR)

BUILDING 4 (QSR)

BUILDING 3 (RETAIL)

BUILDING 2 (RETAIL)

BASIN 1

BASIN 2

BASIN 3

MC
LI

ZONING DISTRICT BOUNDARY

BROAD STREET

CHRIN SOUTHEAST QUADRANT LOT 1 RETAIL DEVELOPMENT

MSC
NEB

UG BASIN 5

BUILDING 1 (WAREHOUSE)

S 8TH STREET

TROLLEY LINE DRIVE

BASIN 4

NEB
LI

PROPERTY LINE (TYP.)

PALMER TOWNSHIP
TATAMY BOROUGH

CHRIN COMMERCE CENTRE LOT 10/11 DEVELOPMENT

CHRIN COMMERCE CENTRE LOT 9 (CURRENTLY UNDEVELOPED)

1 2 3 4 5 6 7 8 9 10 11 12

AERIAL REFERENCE: MICROSOFT, DATED: 2025

SCALE IN FEET: 70 0 35 70

Date	Description	No.
Revisions		

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY AERIAL MAP

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SH

Drawing No. GI-101
Sheet 3 of 52

LANGAN 79
Project No. 200168301
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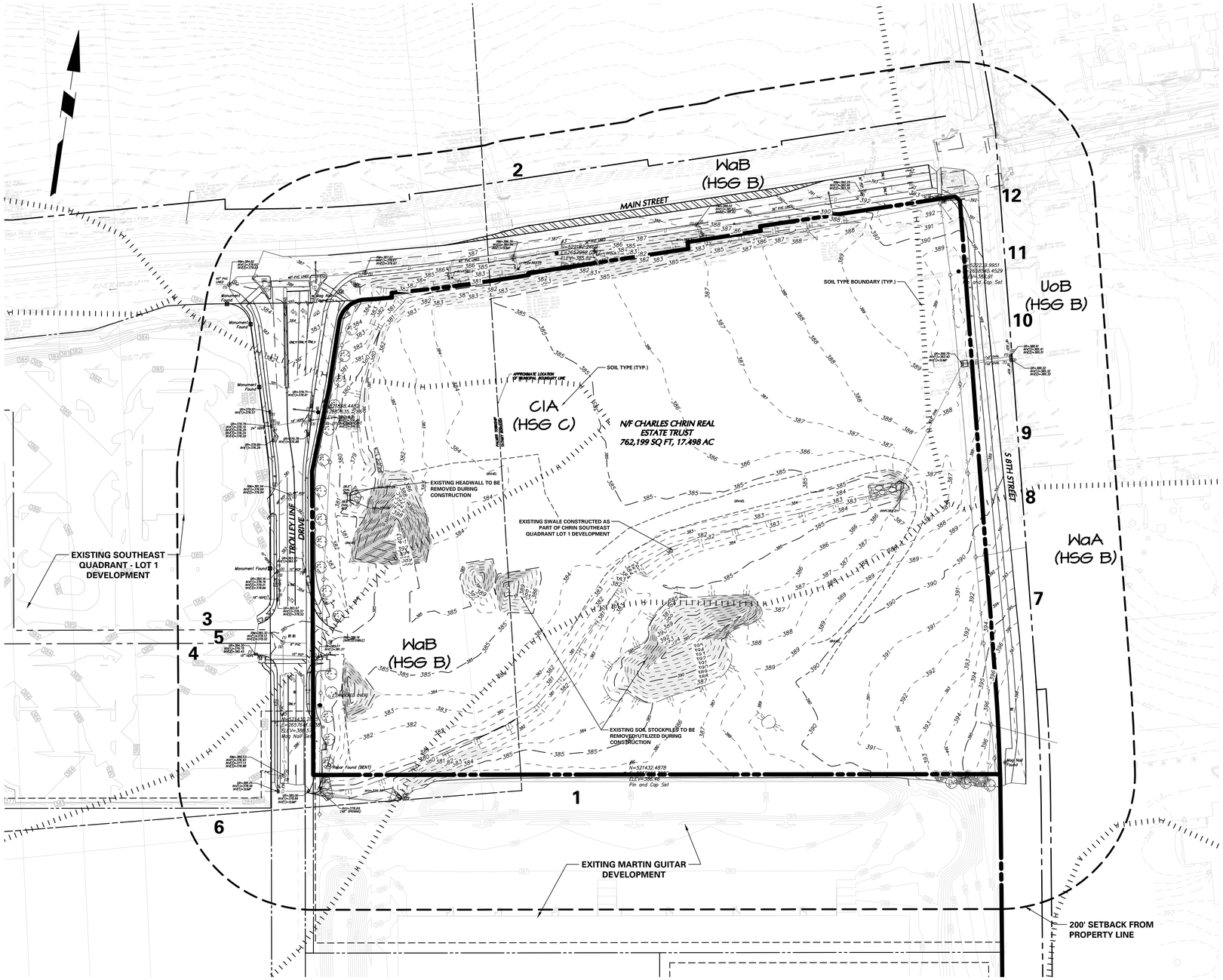
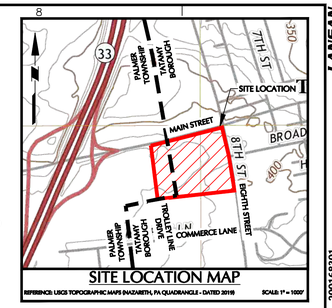


LEGEND OF SYMBOLS & ABBREVIATIONS

HYDRANT	BOLLARD	D	STORM DRAIN
STREET LIGHT	PEDESTRIAN WALK SIGNAL	S	SANITARY LINE
AREA LIGHT	DOOR	COMB	COMBINED UTILITY LINE
SIGNAL POLE	DOUBLE DOOR	UNK	UNKNOWN UTILITY LINE
POLE	OVERHEAD DOOR	G	GAS LINE
GUY WIRE	PARKING METER	W	WATER LINE
ANCHOR POLE	METAL COVER	E	ELECTRIC LINE
MANHOLE	ELECTRIC BOX	T	TELEPHONE LINE
MANHOLE (DRAINAGE)	SOIL BORING	C	CABLE TV LINE
MANHOLE (SANITARY SEWER)	MONITORING WELL	ST	STEAM LINE
MANHOLE (ELECTRIC)	TEST PIT	FM	FORCE MAIN
MANHOLE (WATER)	BENCHMARK	FO	FIBER OPTIC
MANHOLE (NATURAL GAS)	ROOF DRAIN	(_)*	REFERENCED UTILITY LINE (TYPE AS NOTED) BASED ON RECORD MAPPING
MANHOLE (TELEPHONE)	SPOT ELEVATION		
MANHOLE (FORCE MAIN)	CONCRETE CURB		OVERHEAD WIRE
MANHOLE (STEAM)	CONCRETE		GUIDE RAIL(TYPE AS NOTED)
MANHOLE (UNKNOWN UTILITY)	DETECTABLE PAD		CHAIN LINK FENCE
WATER VALVE	DROP CURB		WOOD/STOCKADE FENCE
GAS VALVE	BROKEN WHITE STRIPE		WIRE FENCE
SHRUB	SINGLE YELLOW STRIPE		IRON FENCE
CATCH BASIN	DOUBLE YELLOW STRIPE		TREE LINE
CLEAN OUT	SINGLE WHITE STRIPE		EASEMENT LINE
TREE	REINFORCED CONCRETE PIPE		PROPERTY LINE
SIGN	DUCTILE IRON PIPE		RIGHT-OF-WAY LINE
	CORRUGATED METAL PIPE		CONTOUR LINE
	NO VISIBLE PIPE		
	EDGE OF PAVEMENT		
	LANDSCAPED AREA		
	SURVEY BEARING & DISTANCE		
	DEED BEARING & DISTANCE		



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

PROPERTY OWNERS WITHIN 200 FT

Number	Parcel	Owner	Property Location	Mailing Address
1	J8 27A1J	NORTH STREET REAL ESTATE LLC	110-130 COMMERCE LN	510 SYCAMORE ST PO BOX 329, NAZARETH PA 18064-1000
2	J8 23A1	CHARLES CHRIN REAL ESTATE TRUST	MAIN ST	400 S GREENWOOD AVE, EASTON PA 18045
3	J8 27A1R-3	CHRIN GREENWOOD REALITY LLC	100 TROLLEY LINE DR	400 S GREENWOOD AVE, ASTON PA 18045-2776
4	J8 27A1R-4	CHARLES CHRIN REAL ESTATE TRUST	400 TROLLEY LINE DR	400 S GREENWOOD AVE, EASTON PA 18045
5	J8 27A1R	CHARLES CHRIN REAL ESTATE TRUST	TROLLEY LINE DR	400 S GREENWOOD AVE, EASTON PA 18045
6	J8 27A1H	CHARLES CHRIN REAL ESTATE TRUST	150 COMMERCE LN	400 S GREENWOOD AVE, EASTON PA 18045-3776
7	J8 28 2A	HOPE LUTHERAN CHURCH OF TATAMY	240 S 8TH ST	240 S 8TH ST, TATAMY PA 18085
8	J8 28 3A-1	DEFRANCESCO FRANK S III & JILL A	126 8TH ST	126 S 8TH ST, TATAMY PA 18085-7045
9	J8 28 3A-2	REED CYNTHIA	104 S 8TH ST	104 S 8TH ST, TATAMY PA 18085
10	J8SE3A 4 2	FEC LLC	50 -70 8TH ST	50 S 8TH ST, EASTON PA 18045
11	J8SE3A 4 2A	CHARLES CHRIN REAL ESTATE TRUST	30 S 8TH ST	400 S GREENWOOD ST, EASTON PA 18045-3776
12	J8SE3A 4 1	SINGH INVESTMENT GROUP LLC	788 MAIN ST	PO BOX 458, TATAMY PA 18085-04588

ON-SITE SOIL TYPE DESCRIPTIONS

Map Symbol	Soil	Hydrologic Soil Group	Depth to Seasonal High Water Table (Ft)	Depth to Bedrock (Ft)	Soil Limitations	Resolutions
CIA	Clarksburg silt loam, 0-3% slopes	C	1.5-3	>5.0	Moderately well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; low available water capacity (about 4.2 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sediment Filter bags shall be utilized to properly drain the area (See Filter Bag Detail). Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
UoB	Urban land-Duffield complex, 0 to 8 percent slopes	B	>6.66	4.0' - 10.0' TO LITHIC ROCK	Well drained; high available water capacity (about 10.4 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
WaA	Washington silt loam, 0-3% slopes	B	>6.67	>5.0	Well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; high available water capacity (about 10.2 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
WaB	Washington silt loam, 3-8% slopes	B	>6.66	>5.0	Well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; high available water capacity (about 10.2 in); medium surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)

*Soils information obtained from USDA-NRCS Web Soil Survey for Northampton County, PA

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

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CALL BEFORE YOU DIG !!
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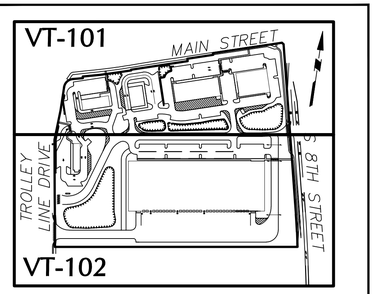
--- STOP & CALL ---

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192



KEY MAP 1"=300

GENERAL NOTES

1. THIS PLAN WAS PREPARED WITH RESPECT TO THE FOLLOWING REFERENCES:
   - A. BOUNDARY AND TOPOGRAPHIC SURVEY, TITLED "CHRIN COMMERCE CENTER LOT 2", PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, LAST REVISED NOVEMBER 12, 2024."
   - B. LIDAR, CURRENT AERIAL AND HISTORICAL AERIAL INFORMATION PROVIDED THROUGH LANGAN'S ESRI ARCGIS SOFTWARE LICENSING AND ARCGIS ONLINE.
   - C. SOILS LINEWORK AND INFORMATION PROVIDED BY USDA NRCS WEB SOIL SURVEY WEBSITE.
   - D. PLANS TITLED "CHRIN SOUTHEAST QUADRANT DEVELOPMENT " LAST REVISED JANUARY 30, 2020;
   - E. PLANS TITLED "CHRIN LOTS 10 & 11)" RECORDED FEBRUARY 28, 2020
2. MERIDIAN IS REFERENCED TO PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, ZONE SOUTH, NAD 83.
3. VERTICAL DATUM IS BASED ON NAVD 88.
4. BASED ON FEMA COMMUNITY PANEL NO. 42095C0257E EFFECTIVE DATE JULY 16, 2014, FOR THE TOWNSHIP OF PALMER AND BOROUGH OF TATAMY, PENNSYLVANIA, THE SUBJECT PROPERTY IS NOT LOCATED IN A REGULATED FLOODPLAIN..
5. UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE THE SURVEYOR CANNOT AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES. ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC.) DATA MAY BE SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS, UNLESS SPECIFICALLY NOTED HEREON THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON. PRIOR TO ANY DESIGN OR CONSTRUCTION THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.

SLOPES TABLE

NUMBER	MIN. SLOPE	MAX. SLOPE	AREA (SF)	COLOR
1	15.0%	24.9%	51,151	
2	25.0%	99999999.0%	20,875	

80 0 40 80
SCALE IN FEET

Date	Description	No.
	Revisions	

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER PROVINCE
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP NORTHAMPTON COUNTY TATAMY BOROUGH PENNSYLVANIA

Drawing Title
PRELIMINARY MASTER EXISTING CONDITIONS PLAN

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SH

Drawing No. VT-100
Sheet 4 of 52

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Date: 7/16/2025 Time: 19:45 User: bsoltys Style Table: Langan.stb Layout: VT-100 Document Code: 200168301-0503-VT101-0101

LANGAN 80
Project No. 200168301

ON-SITE SOIL TYPE DESCRIPTIONS

Map Symbol	Soil	Hydrologic Soil Group	Depth to Seasonal High Water Table (Ft)	Depth to Bedrock (Ft)	Soil Limitations	Resolutions
CIA	Clarksburg silt loam, 0-3% slopes	C	1.5-3	>5.0	Moderately well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; low available water capacity (about 4.2 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sediment Filter bags shall be utilized to properly drain the area (See Filter Bag Detail), Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
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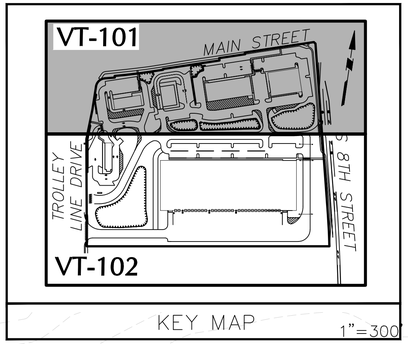

KEY MAP 1"=300'

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Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192

LEGEND OF SYMBOLS & ABBREVIATIONS

HYDRANT, STREET LIGHT, AREA LIGHT, SIGNAL POLE, POLE, GUY WIRE, ANCHOR POLE, MANHOLE, MANHOLE (DRAINAGE), MANHOLE (SANITARY SEWER), MANHOLE (ELECTRIC), MANHOLE (WATER), MANHOLE (NATURAL GAS), MANHOLE (TELEPHONE), MANHOLE (FORCE MAIN), MANHOLE (STEAM), MANHOLE (UNKNOWN UTILITY), WATER VALVE, GAS VALVE, SHRUB, CATCH BASIN, CLEAN OUT, TREE, SIGN

BOLLARD, PEDESTRIAN WALK SIGNAL, DOOR, DOUBLE DOOR, OVERHEAD DOOR, PARKING METER, METAL COVER, ELECTRIC BOX, SOIL BORING, MONITORING WELL, TEST PIT, BENCHMARK, ROOF DRAIN, SPOT ELEVATION, CONCRETE CURB, CONCRETE, DETECTABLE PAD, DROP CURB, BROKEN WHITE STRIPE, SINGLE YELLOW STRIPE, DOUBLE YELLOW STRIPE, SINGLE WHITE STRIPE, REINFORCED CONCRETE PIPE, DUCTILE IRON PIPE, CORRUGATED METAL PIPE, NO VISIBLE PIPE, EDGE OF PAVEMENT, LANDSCAPED AREA, SURVEY BEARING & DISTANCE, DEED BEARING & DISTANCE

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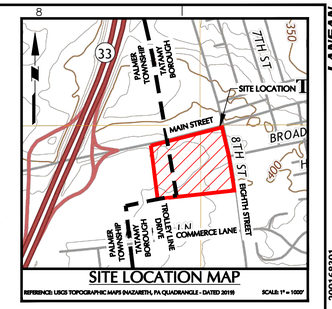
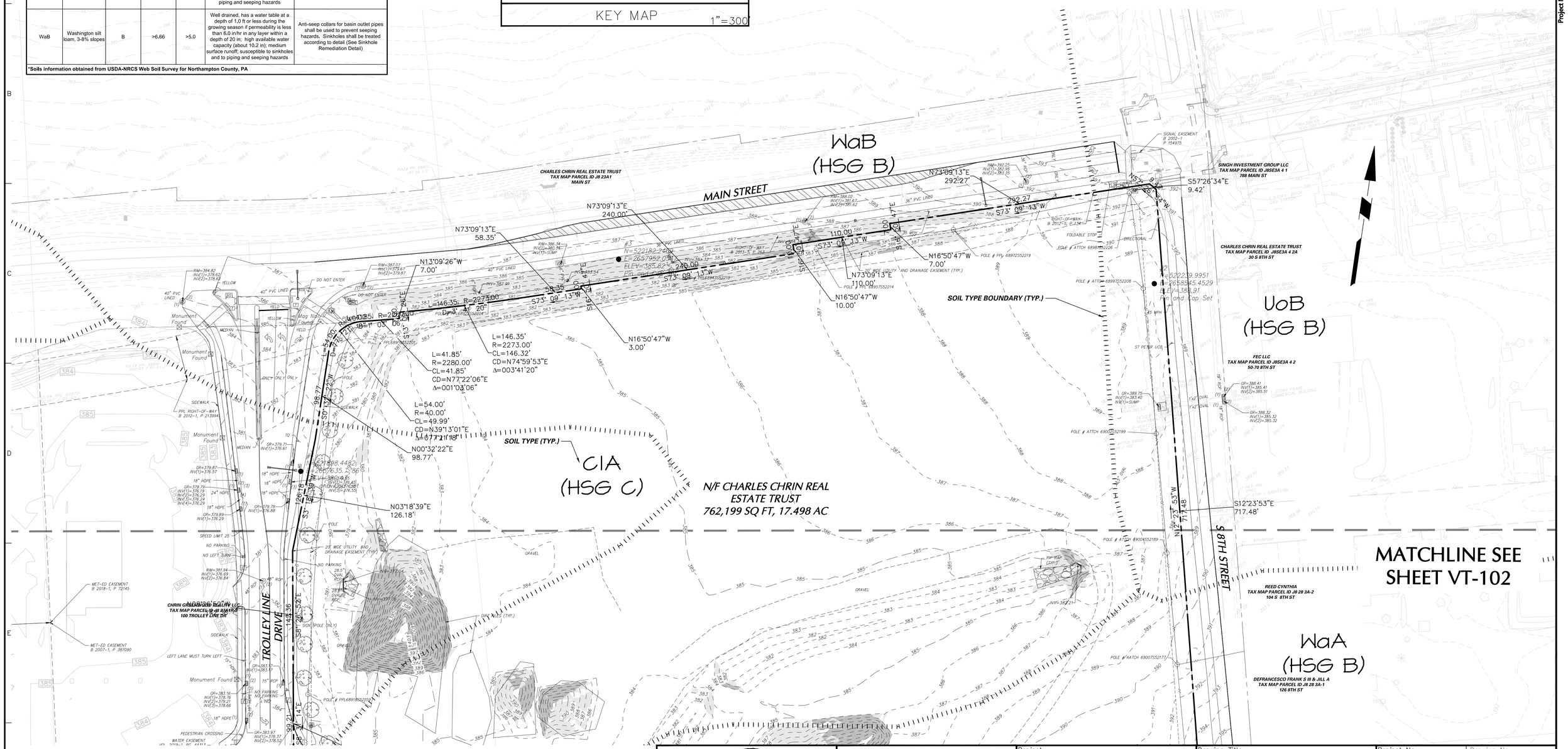


SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



NOTE:
SEE SHEET VT-100 FOR EXISTING CONDITION PLAN NOTES

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Date	Description	No.
Revisions		

KEITH S. OTTES
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA
KEITH S.OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND EASTON BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY EXISTING CONDITIONS PLAN

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. VT-101
Sheet 5 of 52

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Date: 7/16/2025 Time: 17:41 User: bsoltys Style Table: Langan.stb Layout: VT-101 Document Code: 200168301-0503-VT101-0102

Project No. 200168301

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SERIAL NUMBER, 20251501191
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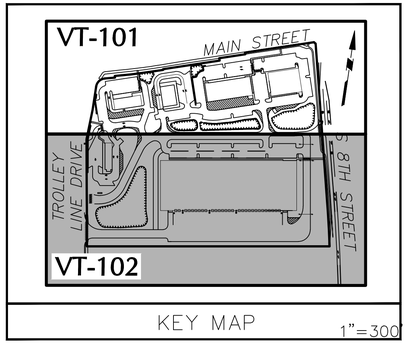

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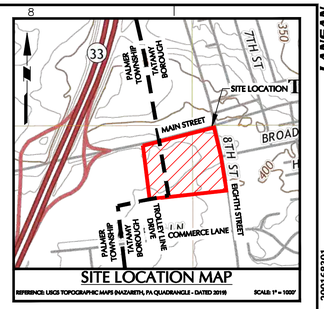

SITE LOCATION MAP

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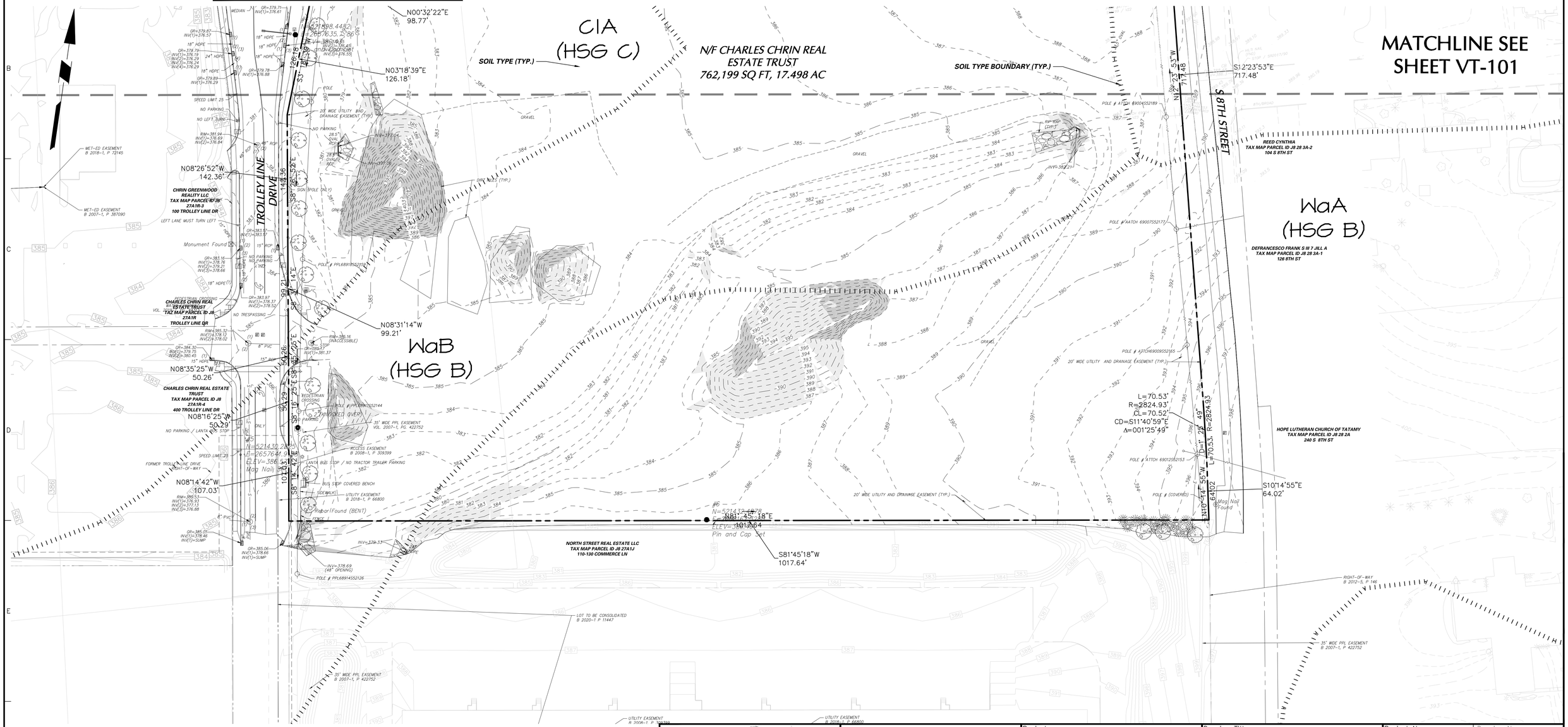

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2	25.0%	99999999.0%	20,875	

50 0 12.5 31.25 50
SCALE: 1 INCH = 50 FEET

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP / TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY EXISTING CONDITIONS PLAN

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. VT-102
Sheet 6 of 52

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Date: 7/16/2025 Time: 19:55 User: bsoltys Style Table: Langan.stb Layout: VT-102 Document Code: 200168301-0503-VT101-0103

LANGAN 82
Project No. 200168301

TATAMY BOROUGH PARKING CALCULATION						
UNIT	USE	PARKING REQUIREMENT	CALCULATION	REQUIRED	PROVIDED	ORDINANCE
6	Warehouse/ Distribution/Office	1 sp. per 225 SF of Floor Area (Office) 0.9 sp. per employee working on-site + 1 sp. per employee not working on-site but driving a company vehicle based at the site (Warehouse)	7,800 SF Office * (1sp/225 SF) = 35 sp 38 on-site employees * (0.9 sp/on-site employee) + 4 off-site employees * (1 sp/off-site employee) = 39 sp	74	105	Article VI Table 6.1
7	Retail	1 sp. Per 175 SF of total floor area; except 1 per 225 SF of total leasable floor area if such is greater than 20,000 SF	13,000 SF * (1 sp/175 SF) = 75 sp	75	75	Article VI Table 6.1
8	Retail	1 sp. Per 175 SF of total floor area; except 1 per 225 SF of total leasable floor area if such is greater than 20,000 SF	15,033 SF * (1 sp/175 SF) = 86 sp	86	86	Article VI Table 6.1
9	Quick Service Restaurant	1 sp. Per 175 SF of total floor area; except 1 per 225 SF of total leasable floor area if such is greater than 20,000 SF	5,080 SF * (1 sp/175 SF) = 22 sp	29	29	Article VI Table 6.1
			TOTAL	264	295	

PALMER TOWNSHIP PARKING CALCULATION						
UNIT	USE	PARKING REQUIREMENT	CALCULATION	REQUIRED	PROVIDED	ORDINANCE
10	Quick Service Restaurant	1 sp per 2.5 seats (min. 20 sp) + 1 sp. Per full-time equivalent employees	75 seats * (1 sp/2.5 seats) + 7 full time equivalent employees * (1 sp/employee) = 37 sp	37	37	ZO Att. 22 Table 3
11	Quick Service Restaurant	1 sp per 2.5 seats (min. 20 sp) + 1 sp. Per full-time equivalent employees	50 seats * (1 sp/2.5 seats) + 7 full time equivalent employees * (1 sp/employee) = 27 sp	27	27	ZO Att. 22 Table 3
			TOTAL	64	64	

RECORDING INFORMATION

RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____, PAGE NO. ___ ON _____, 20 ___.

PLANNED COMMUNITY ACT SECTION 5210 CERTIFICATION

THE UNDERSIGNED, KEITH STUART OTTES, AN INDEPENDENT PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, HEREBY DECLARES THAT THE PLANTS AND PLANS FOR THE TROLLEY LINE PLANNED COMMUNITY TO WHICH THIS CERTIFICATIONS IS AFFIXED (CONSISTING OF 51 SHEETS, KNOWN AS THE CHRIN SOUTHEAST QUADRANT - LOT 2 LAND DEVELOPMENT PLANS ACCOMPANYING EXHIBITS TO THE DECLARATION) CONTAINS THE INFORMATION REQUIRED BY SECTION 5210 OF THE PENNSYLVANIA UNIFORM PLANNED COMMUNITY ACT.

DATE

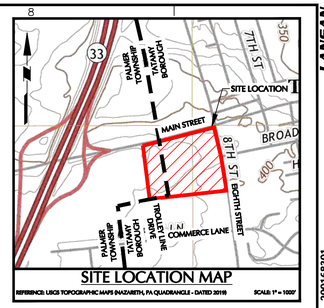
PLAN PREPARERS' SIGNATURE

PRINTED NAME

SITE SUMMARY TABLE					
	AREA (SF)	AREA (AC.)	PERCENTAGE	PROVIDED PARKING SPACES	REQUIRED PARKING SPACES
PLANNED COMMUNITY UNIT 6 PLANNED	397,091.94	9.12	52.10%	106	74
COMMUNITY UNIT 7 PLANNED	82,847.00	1.90	10.87%	75	75
COMMUNITY UNIT 8 PLANNED	81,812.92	1.88	10.73%	86	86
COMMUNITY UNIT 9 PLANNED	49,548.08	1.14	6.50%	29	29
COMMUNITY UNIT 10 PLANNED	45,885.61	1.05	6.02%	37	37
COMMUNITY UNIT 11 PLANNED	45,896.20	1.05	6.02%	27	27
COMMUNITY COMMON ELEMENT 2 PLANNED	44,175.85	1.01	5.80%	0	N/A
COMMUNITY LIMITED COMMON ELEMENT 1 PLANNED	8,430.88	0.19	1.11%	0	N/A
COMMUNITY LIMITED COMMON ELEMENT 2	6,440.36	0.15	0.85%	0	N/A
TOTAL	762,128.84	17.50	100.00%	360	328

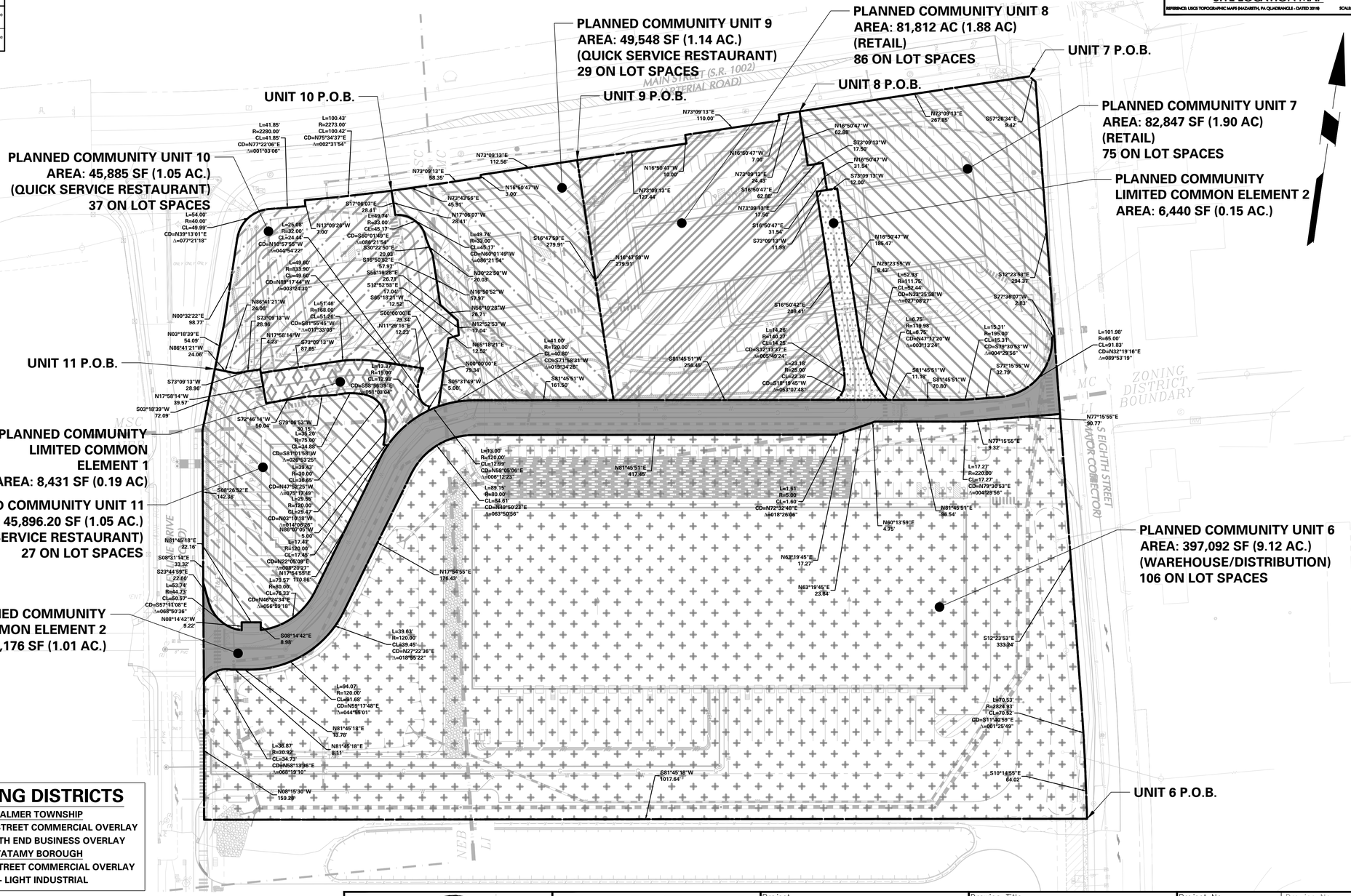
NOTES:

1. ALL IMPROVEMENTS WITHIN THE COMMON ELEMENTS, AND THOSE LOCATED OUTSIDE OF THE PLANNED COMMUNITY PROPERTY AND/OR WITHIN THE RIGHT-OF-WAY OF AN ADJACENT STREET MUST BE BUILT
2. ANY IMPROVEMENT OTHER THAN THE COMMON ELEMENTS, OR AS DESCRIBED IN LOT 1, NEED NOT BE BUILT. THE LOCATION AND DIMENSIONS OF IMPROVEMENTS WHICH MUST BE BUILT OR WHICH NEED NOT BE BUILT ARE DEPICTED ON THE LAND DEVELOPMENT PLANS (AS DEFINED IN THE DECLARATION OF PLANNED COMMUNITY TO WHICH THIS PLAN IS ATTACHED), WHICH LAND DEVELOPMENT PLANS ARE INCORPORATED HEREIN BY REFERENCE.
3. UNITS OWNED BY THE DECLARANT MAY BE CONVERTED TO CREATE TWO OR MORE UNITS (WHICH MAY INCLUDE CONTROLLED FACILITIES) AND/OR COMMON ELEMENTS IN ACCORDANCE WITH THE PROVISIONS OF THE DECLARATION OF PLANNED COMMUNITY AND SECTION 5215 OF THE ACT.
4. THE SITE LAYOUT DEPICTED ON THIS PLAN IS A RESULT OF THE LAYOUT SHOWN ON THE CHRIN SOUTHEAST QUADRANT LOT 2 LAND DEVELOPMENT PLANS, LAST REVISED JULY 17, 2025



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



HATCH LEGEND

- PLANNED COMMUNITY UNIT 6
- PLANNED COMMUNITY UNIT 7
- PLANNED COMMUNITY UNIT 8
- PLANNED COMMUNITY UNIT 9
- PLANNED COMMUNITY UNIT 10
- PLANNED COMMUNITY UNIT 11
- PLANNED COMMUNITY COMMON ELEMENT 2
- PLANNED COMMUNITY LIMITED COMMON ELEMENT 1
- PLANNED COMMUNITY LIMITED COMMON ELEMENT 2

PALMER TOWNSHIP NOTE:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER , AND TOWNSHIP SOLICITOR FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATED TO LAND USE AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS CLARITY OF TITLE SUBSURFACES CONDITIONS INCLUDING, BUT NOT LIMITED TO, SOIL AND WATER QUALITY, KARST GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHAEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR. THE TOWNSHIP, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATED, AND WHO ARE ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE.

DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION CONSISTENCY, CLOSURE AND AREA (ONLY). THE RESEARCH FOR AND DETERMINATION AND LOCATIONS OF PROPERTY LINES, STREET RIGHTS-OF-WAY, AND OTHER EASEMENTS, ET.C ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

ZONING DISTRICTS

PALMER TOWNSHIP

MSC - MAIN STREET COMMERCIAL OVERLAY

NEB - NORTH END BUSINESS OVERLAY

TATAMY BOROUGH

MC - MAIN STREET COMMERCIAL OVERLAY

LI - LIGHT INDUSTRIAL

SURVEYOR, CIVIL & TRAFFIC ENGINEER

LANGAN

ENGINEERING & ENVIRONMENTAL SERVICES

2700 Kelly Road, Suite 200

Warrington, PA 18976-3653

P: 215.491.6500 F: 215.491.6501

APPLICANT/OWNER

CHARLES CHRIN REAL ESTATE TRUST

400 SOUTH GREENWOOD AVENUE

EASTON, PA 18045

PHONE: 610-253-9665

60 0 30 60

SCALE IN FEET

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER

KEITH S. OTTES

PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN

Langan Engineering and Environmental Services, Inc.

Stone Manor Corporate Center, 2700 Kelly Road, Suite 200

Warrington, PA 18976

T: 215.491.6500 F: 215.491.6501 www.langan.com

Project

CHRIN SOUTHEAST QUADRANT - LOT 2

PALMER TOWNSHIP AND TATAMY BOROUGH

NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title

PRELIMINARY TROLLEY LINE PLANNED COMMUNITY UNIT LINE PLAN (RECORD PLAN)

Project No.	200168301
Date	7/17/2025
Drawn By	PLPH
Checked By	SMH

Drawing No. CB-200

Sheet 7 of 52

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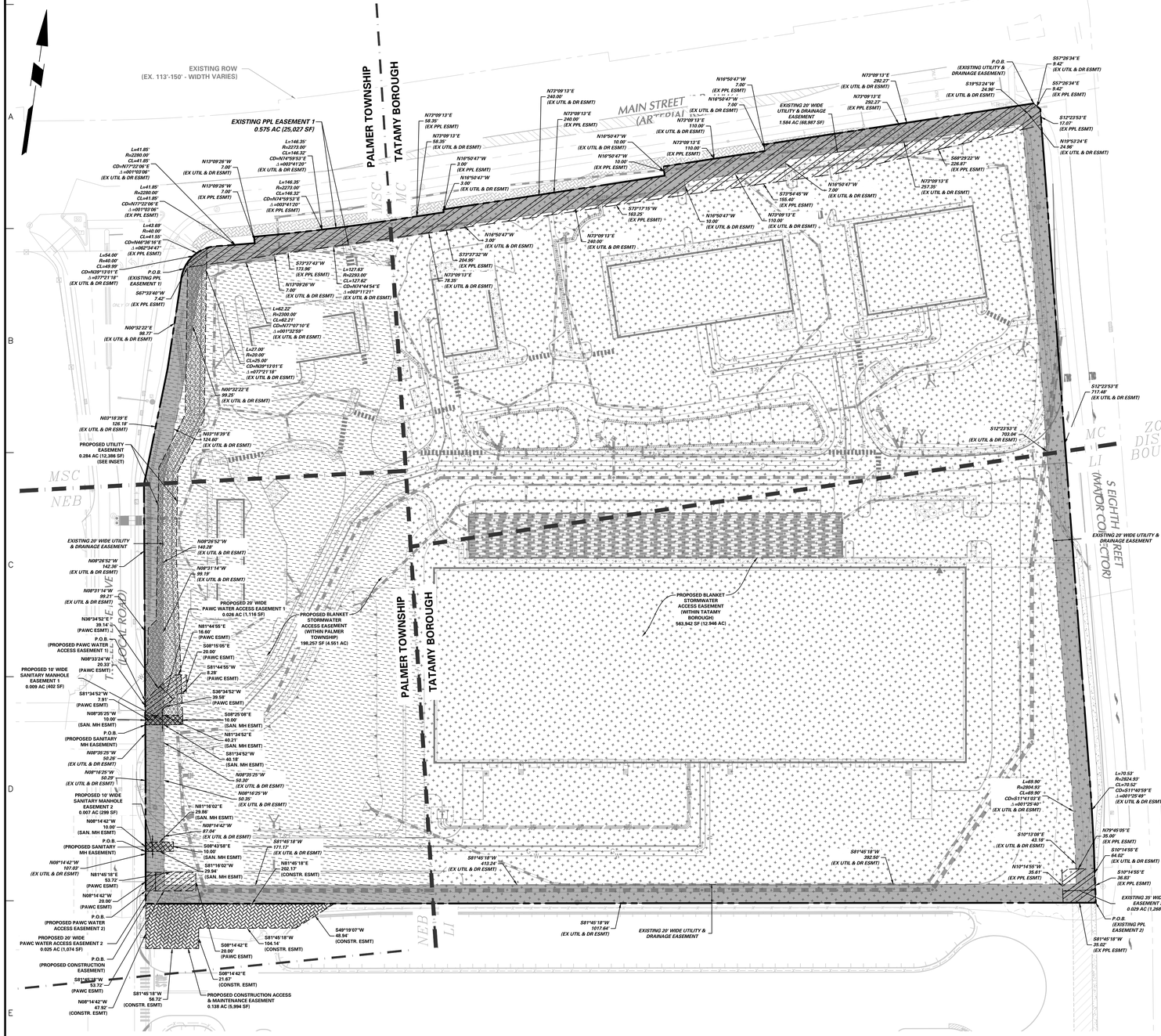
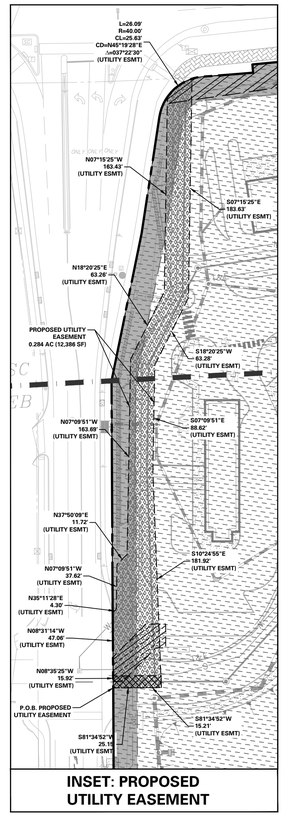
Date: 7/16/2025 Time: 20:12 User: bsoltys Style Table: Langan.stb Layout: CB-200 Document Code: 200168301-0503-CB102-0101

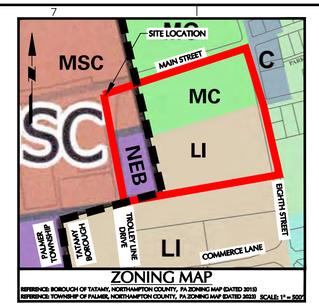
LANGAN 83

Project No. 200168301



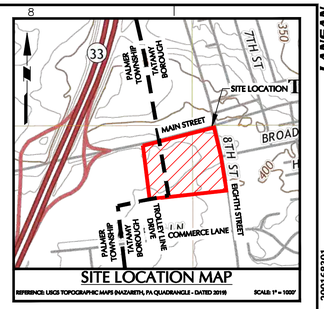


INSET: PROPOSED UTILITY EASEMENT



ZONING MAP

REFERENCE: BOROUGH OF TATAMY, NORTHAMPTON COUNTY, PA ZONING MAP (DATED 2019)
REFERENCE: TOWNSHIP OF PALMER, NORTHAMPTON COUNTY, PA ZONING MAP (DATED 2020) SCALE: 1" = 500'



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

EASEMENT DEDICATION LEGEND

MAP SYMBOL	DESCRIPTION	GRANTOR	GRANTEE	TOTAL AREA (ACRES)
	EXISTING PPL EASEMENT 1	CHARLES CHRIN REAL ESTATE TRUST	PPL	0.575
	EXISTING PPL EASEMENT 2	CHARLES CHRIN REAL ESTATE TRUST	PPL	0.029
	EXISTING UTILITY AND DRAINAGE EASEMENT	CHARLES CHRIN REAL ESTATE TRUST	-	1.584
	PROPOSED SANITARY MANHOLE EASEMENT 1	CHARLES CHRIN REAL ESTATE TRUST	EASTON AREA JOINT SEWER AUTHORITY	0.009
	PROPOSED SANITARY MANHOLE EASEMENT 2	CHARLES CHRIN REAL ESTATE TRUST	EASTON AREA JOINT SEWER AUTHORITY	0.007
	PROPOSED PAWC WATER ACCESS EASEMENT 1	CHARLES CHRIN REAL ESTATE TRUST	PA AMERICAN WATER COMPANY	0.026
	PROPOSED PAWC WATER ACCESS EASEMENT 2	CHARLES CHRIN REAL ESTATE TRUST	PA AMERICAN WATER COMPANY	0.025
	PROPOSED CONSTRUCTION ACCESS AND MAINTENANCE EASEMENT	NORTH STREET REAL ESTATE LLC	CHARLES CHRIN REAL ESTATE TRUST	0.138
	PROPOSED BLANKET STORMWATER ACCESS EASEMENT	CHARLES CHRIN REAL ESTATE TRUST	TATAMY BOROUGH	12.946
	PROPOSED BLANKET STORMWATER ACCESS EASEMENT	CHARLES CHRIN REAL ESTATE TRUST	PALMER TOWNSHIP	4.551
	PROPOSED UTILITY EASEMENT	CHARLES CHRIN REAL ESTATE TRUST	TBD	0.284

LEGEND

SITE SYMBOLS

EXISTING LEGAL RIGHT-OF-WAY/EXISTING PROPERTY LINE (ADJACENT PARCELS)
EXISTING ULTIMATE RIGHT-OF-WAY
PROPOSED SITE PROPERTY LINE
EXISTING EASEMENT
PROPOSED EASEMENT
BUILDING SETBACK
PARKING SETBACK
EXISTING FENCE
PROPOSED FENCE
SURFACE STORMWATER BASIN
UNDERGROUND STORMWATER BASIN
CURB LINE
FLOW CURB
DRIVE AISLE CENTERLINE
PROPOSED BUILDING LINE
LOCATION OF MAIL/NEWSPAPERS
PROPOSED LIGHT POLE
PROPOSED TRANSFORMER PAD
PROPOSED MONUMENT

SITE SYMBOLS (CONT.)

ADA CURB RAMP WITH DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK
CROSSWALK
SIGN
PARKING COUNT ROW/LOT

GRADING/ DRAINAGE SYMBOLS

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
ACT 167 BOUNDARY
TRM 400 EMERGENCY SPILLWAY LINER
BASIN KEY TRENCH
SWALE LINER
EROSION CONTROL BLANKET

SOILS SYMBOLS

SOILS BOUNDARY
SOIL TYPE (UudB)

UTILITY SYMBOLS

EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING GAS MAIN
EXISTING WATER MAIN
EXISTING OVERHEAD/UNDERGROUND ELECTRIC
PROPOSED STORM SEWER MH/CLEANOUT/PIPE/HEADWALL
PROPOSED SANITARY SEWER MANHOLE/PIPE
PROPOSED GAS MAIN/VALVE
PROPOSED WATER METER PIT/MAIN/VALVE
PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY POLE
PROPOSED HYDRANT
EXISTING SANITARY SEWER MANHOLE
EXISTING FIRE HYDRANT
EXISTING GAS VALVE
EXISTING STORM INLET
EXISTING WATER VALVE
EXISTING MANHOLE
EXISTING ELECTRIC POLE

STORMWATER MAINTENANCE AND ACCESS BLANKET EASEMENT NOTES:

1. THE MAINTENANCE OF STORMWATER FACILITIES ON THE SUBJECT SITE SHALL BE THE OWNER'S RESPONSIBILITY. THE OWNER'S DEED, AND THE DEED TO ANY SUBSEQUENT OWNER SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES. PALMER TOWNSHIP AND TATAMY BOROUGH SHALL BE PERMITTED TO INSPECT THE STORMWATER FACILITIES ON AT LEAST AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS PERFORMED IN A TIMELY MANNER. THE BLANKET EASEMENT AS IT IS RELATED TO STORMWATER FACILITIES PROVIDES FOR THE FLOW OF STORMWATER ACROSS PROPERTIES, AND MAY NOT BE ALTERED WITHOUT THE WRITTEN PERMISSION OF THE TOWNSHIP ENGINEER. EXCAVATION AND THE PLACING OF FILL OR STRUCTURES AND ANY OTHER ALTERATIONS THAT MAY ADVERSELY AFFECT THE FLOW OF STORMWATER WITHIN ANY PORTION OF THE EASEMENT ARE PROHIBITED. NO OBSTRUCTIONS SUCH AS PLANTING BERMS OF FENCES WITHOUT SUFFICIENT PROVISION FOR THE PASSAGE OF STORMWATER, AND ANY SUCH PROPOSED PROVISION SHALL BE PERMITTED UNLESS APPROVED IN WRITING BY THE TOWNSHIP ENGINEER. IF PALMER TOWNSHIP OR TATAMY BOROUGH REQUIRE ACCESS TO THE SITE AS DEFINED ABOVE, THEY SHALL BE ABLE TO DO SO WITH 24-HOURS PRIOR NOTIFICATION FOR MAINTENANCE. IN EMERGENCY SITUATIONS, NO PRIOR NOTIFICATION IS REQUIRED.

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

60 0 20 40 60
SCALE: 1 INCH = 60 FEET

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND
(10) WORKING DAYS IN DESIGN STAGE
-- STOP & CALL --

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192

PALMER TOWNSHIP NOTE:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATED TO LAND USE AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING, BUT NOT LIMITED TO, SOIL AND WATER QUALITY, KARST GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHAEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR. THE TOWNSHIP, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND WHO ARE ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE.

DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION, CONSISTENCY, CLOSURE, AND AREA (ONLY). THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, STREET RIGHTS-OF-WAY, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

PLAN PREPARER'S STATEMENTS

I, _____, A REGISTERED SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE PLAN PREPARED FROM A FIELD SURVEY DURING _____ CORRECTLY REPRESENTS THE PROPERTY BOUNDARY OF THE PROPOSED SUBDIVISION OR LAND DEVELOPMENT.

DATE _____ REGISTERED SURVEYOR'S SIGNATURE

2700 KELLY ROAD.
SUITE 200
WARRINGTON PA, 18976 SHAUN HIGGINS, PLS

ADDRESS PRINTED NAME

I, _____, A LICENSED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND ACCURATE, TO THE BEST OF MY KNOWLEDGE.

DATE _____ PLAN PREPARER'S SIGNATURE

2700 KELLY ROAD.
SUITE 200
WARRINGTON PA, 18976 KEITH S. OTTES, PE

ADDRESS PRINTED NAME

OWNER'S STATEMENT

WE, THE OWNERS OF THE LAND INVOLVING THE ACCOMPANYING PLANS, BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY WE ARE THE SOLE OWNERS OR ARE THE AUTHORIZED OFFICERS OF THE CORPORATION THAT IS THE SOLE OWNERS OF THIS PROPERTY IN PEACEFUL POSSESSION OF IT, AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE OF SAME, AND THAT WE ACKNOWLEDGE AND ENDORSE THE ACCOMPANYING PLANS, AND THAT ALL IMPROVEMENTS IDENTIFIED AS PROPOSED PUBLIC PROPERTY (NOT INCLUDING IMPROVEMENTS LABELED AS "NOT FOR DEDICATION") ARE PROPOSED FOR DEDICATION TO THE PUBLIC USE, AND THAT WE PROPOSE THE ATTACHED RECORD PLAN FOR RECORDING (AS APPLICABLE) AFTER RECEIVING ALL REQUIRED MUNICIPAL APPROVALS.

_____
OWNER'S OR AUTHORIZED CORPORATE OFFICER'S SIGNATURE

_____
DATE

SS
COMMONWEALTH OF PENNSYLVANIA

COUNTY OF _____

ON THE ____ DAY OF _____, 20 _____, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED GREG CHRIN, WHO ACKNOWLEDGED HIMSELF TO BE THE REPRESENTATIVE OF THE CHARLES CHRIN REAL ESTATE TRUST, A CORPORATION, AND THAT AS SUCH REPRESENTATIVE, BEING AUTHORIZED TO DO SO, HE EXECUTED THE FOREGOING PLAN BY SIGNING THAT THE SAID CORPORATION IS THE REGISTERED OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY APPROVALS OF THE PLAN HAVE BEEN OBTAINED AND IS ENDORSED THEREON, AND THAT HE DESIRES THAT THE FOREGOING PLAN BE RECORDED ACCORDING TO LAW.

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

(SEAL)

RECORDING INFORMATION

RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____, PAGE NO. ___ ON _____ 20 __

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEITH S. OTTES
ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP / TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY EASEMENT PLAN (RECORD PLAN)

Project No. 200168301
Date 7/17/2025
Drawn By MR
Checked By SH

Drawing No. CB-201
Sheet 8 of 52

LANGAN 84
Project No. 200168301

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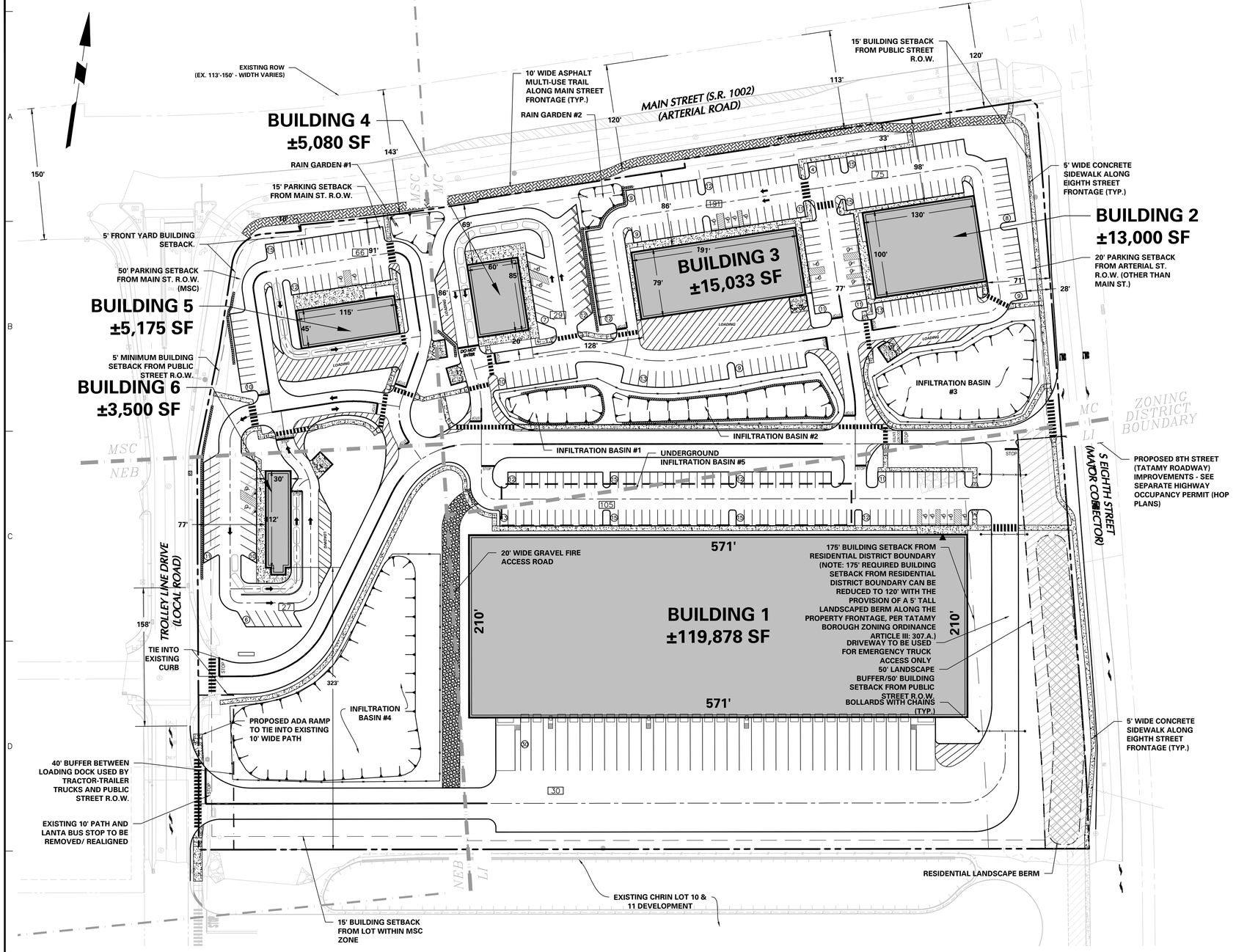
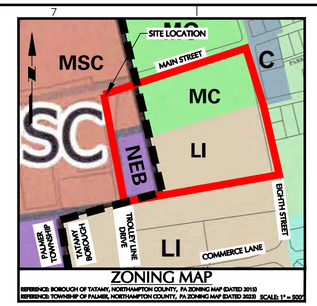
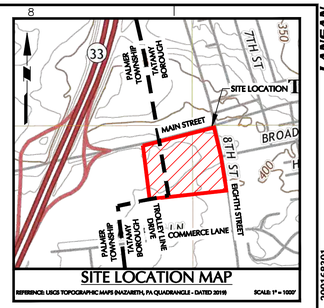
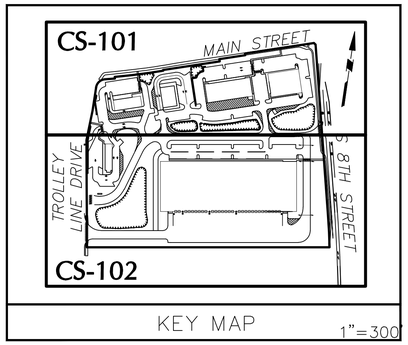
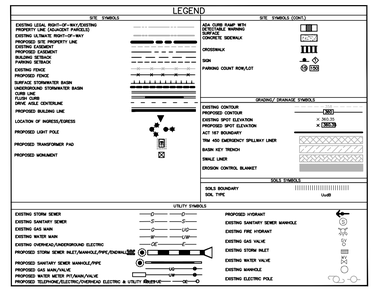
Date: 7/16/2025 Time: 18:35 User: bsoltys Style Table: Langan.stb Layout: CS-100 Document Code: 200168301-0503-CB101-0201











ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF UTILITIES, CONTACT DIRECTLY BEFORE EXCAVATION. CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

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Pennsylvania One Call System, Inc.
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SERIAL NUMBER: 20251501191
20251501192

SCALE: 1 INCH = 60 FEET

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

RECORDING INFORMATION
RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____, PAGE NO. ___ ON _____, 20 __.

Date	Description	No.
Revisions		

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY MASTER SITE PLAN (RECORD PLAN)

Project No.	200168301
Date	7/17/2025
Drawn By	MJW
Checked By	SH

Drawing No.
CS-100
Sheet 9 of 52

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Date: 7/16/2025 Time: 20:22 User: bsoltys Style Table: Langan.stb Layout: CS-100 Document Code: 200168301-0503-CS101-0101

LANGAN 85 Project No. 200168301

TATAMY BOROUGH ZONING DATA TABLE

ITEM	ZONING DISTRICT: LI - LIGHT INDUSTRIAL PERMITTED / REQUIRED	PROPOSED	COMPLIANCE	ORDINANCE SECTION (PAGE)	ZONING DISTRICT: MC - MAIN STREET COMMERCIAL PERMITTED / REQUIRED	PROPOSED	COMPLIANCE	ORDINANCE SECTION (PAGE)
Land Use:	Warehousing (other than truck terminal); Distribution (other than truck terminal); office	Industrial / Warehouse, office	C	Article III §306.A.	Commercial (Retail)	Commercial (Retail); Industrial/Warehouse	V	263-2014: 2014-006
Min. Lot Area[4]:	87,000 SF (2 Acres)	7.06 AC LI (17.50 AC Tot.)	C	Article III §307.A.	2 Acres	5.89 AC MC (17.50 AC Tot.)	C	Ord. No. 305-2024, 263-2014: 2014-007.A.
Min, Lot Width[5]								
At Front Yard Setback Line	200 FT	917 FT	C	Article III §307.A.	150 FT	917 FT	C	263-2014: 2014-007.B.
At Street ROW Line	250 FT	889 FT	C	Article III §307.A.	N/A	N/A	N/A	N/A
Min. Building Setbacks[6]								
Min. Front Yard	35 FT	115 FT(LI)	C	Article III §307.A.	N/A	N/A	N/A	N/A
Min. Side Yard (each side)	10 FT	150 FT (LI)	C	Article III §307.A.	N/A	N/A	N/A	N/A
Min. Rear Yard	20 FT	N/A (LI)	C	Article III §307.A.	N/A	N/A	N/A	N/A
Min. from Public Street ROW	50 FT	115 FT (LI)	C	Article III §307.A.	15 FT	69 FT	C	Ord. No. 305-2024: Section 1
Min. from lot not within MC zone	N/A	N/A (LI)	N/A	N/A	25 FT	N/A	N/A	263-2014: 2014-007.D(2)
Min. from lot within MC zone	N/A	N/A (LI)	N/A	N/A	15 FT	N/A	N/A	263-2014: 2014-007.D(3)
From Res, Dist, Or Res, Struc,	175 FT	175 FT		Article III §307.A.	N/A	N/A	N/A	N/A
Building Separation (More than 1 bldg, on lot)[7]	N/A	N/A	N/A	N/A	25 FT	77 FT	C	263-2014: 2014-006.C(1)(b)
Building Height:	40 FT (2.5 Stories)	<40 FT	C	Article III §307.A.	35 FT	<35 FT	C	263-2014: 2014-007.F
Max. Building Coverage[5]	40%	38.98% LI **(27.13% Total Tatamy)**	C	Article III §307.A.	35%	12.91% MC **(27.13% Total Tatamy)**	C	263-2014: 2014-007.C(1)
Max. Impervious Coverage[5]	75%	80.04% LI **(72.78% Total Tatamy)**	V	Article III §307.A.	80%	64.08% MC **(72.78% Total Tatamy)**	C	263-2014: 2014-007.C(2)
Min, Landscaped Area	N/A	N/A	N/A	N/A	20%	35.92% MC	C	263-2014: 2014-007.C(3)
Drive Thru Stacking	N/A	N/A	N/A	N/A	10 Cars	10 Cars	C	263-2014: 2014-006.A.(3)
Parking:								
Min. Number of Accesible Spaces (3% of total spaces)	3	4	C	Article VI § 603.J.1	7	11	C	Article VI § 603.J.1
Accesible Space Size	13 FT X 18 FT	13 FT X 18 FT	C	Article VI § 603.J.3	13 FT X 18 FT	13 FT X 18 FT	C	Article VI § 603.J.3
Standard Space Size	9 FT x 18 FT	9 FT X 18 FT	C	Article VI § 603.B.1	9 FT x 18 FT	9 FT X 18 FT	C	Article VI § 603.B.1
Min, Number of Parking Spaces (office use)	SEE PARKING TABLE		C	Article VI Table 6.1 D.16	SEE PARKING TABLE		C	Article VI Table 6.1 D.16
Min. Number of Parking Spaces (warehouse use)								
Maximum Number of Parking Stalls Between Landscape Areas	15 Stalls	15 Stalls	C	Article VI § 603.H.2	15 Stalls	15 Stalls	C	Article VI § 603.H.2
Trailer Parking								
Min, Off-Street Loading Space	12 FT X 50 FT	12 FT X 60 FT	C	Article VI § 605.B.1	12 FT X 50 FT	14 FT X 60 FT	C	Article VI § 605.B.1
Sidewalks:								
Min Width Along Artertial Streets	5 FT	5 FT	C	Article X § 1014.C.3	5 FT	5 FT	C	Article X § 1014.C.3
Min. Width Along Local Streets	4 FT	5 FT	C	Article X § 1014.C.3	4 FT	5 FT	C	Article X § 1014.C.3
Min, planting strip between curb and sidewalk	3 FT	4 FT	C	Article X § 1014.C.2	3 FT	4 FT	C	Article X § 1014.C.2
Parking Setbacks:								
Building:	5 FT	10 FT	C	Article VI § 603.G.6	5 FT	5 FT	C	Article VI § 603.G.6
Arterial Street Right-of-way Line (>2 acres impervious coverage)	20 FT	114 FT	C	Article VI § 603.G.3	10 FT (Main Street ROW), 20 FT (Other Arterials)	13 FT (Main St), 28 FT (8th St)	C	Ord. No. 305-2024: Section 1, Article VI § 603.G.3
Collector or Local Street	5 FT	N/A	N/A	Article VI § 603.G.3	5 FT	N/A	N/A	Article VI § 603.G.3
Aisles:								
Minimum Width:								
Two -way	24 FT	24 FT	C	Article VI § 603.C.2	24 FT	24 FT	C	Article VI § 603.C.2
Maximum Length:	200 FT	200 FT	C	Article VI § 603.C.3	200 FT	200 FT	C	Article VI § 603.C.3
Width of Driveway/Accessway at entrance onto public street (2 way)	12-50 FT	165 FT (8th St. Driveway)	V	Article VI § 603.D.1	12-50 FT	165 FT (8th St. Driveway)	V	Article VI § 603.D.1
Min. Seperation Between Driveways	50 FT	N/A	N/A	Article VI § 603.D.4	50 FT	N/A	N/A	Article VI § 603.D.4
Separation from Intersection	75 FT	438 FT	C	Article VI § 603.D.5	300 FT (Main Street)	438 FT	C	263-2014: 2014-012.B(3)(a)
Buffers:								
Industrial: Abutting Residential District or within 250 feet of an existing dwelling	50 FT	50 FT	C	Article VIII § 803.D.1	50 FT	N/A	C	Article VIII § 803.D.1
Commercial: Abutting Residential District or within 250 feet of an existing dwelling	30 FT	N/A	C	Article VIII § 803.D.1	30 FT	N/A	C	Article VIII § 803.D.1

Notes:
1. With public sewerage service; without public sewage service, 60% max impervious is permitted.
2. Assumes 7,800 SF of office space within the building.
3. Assumes 38 employees working on-site + 4 employees not working on-site but driving a company vehicle based at the site.
4. Proposed lot area is reported as: Area within Subject Zoning District (Total Lot Area)
5. Proposed lot widths are reported for the entire lot.
6. Provided building setbacks are reported as the setbacks provided within the subject zoning district.

PALMER TOWNSHIP ZONING DATA TABLE

ITEM	ZONING DISTRICT: MSC - MAIN STREET COMMERCIAL OVERLAY DISTRICT PERMITTED / REQUIRED	PROPOSED	COMPLIANCE	ORDINANCE SECTION (PAGE)	ZONING DISTRICT: NEB - NORTH END BUSINESS OVERLAY DISTRICT PERMITTED / REQUIRED	PROPOSED	COMPLIANCE	ORDINANCE SECTION (PAGE)
Land Use:	Restaurant, quick-service	Restaurant, quick-service	C	190-409.A.	Warehouse/Distribution	Restaurant (quick-service), Warehouse/Distribution	V	190-412
Min. Lot Area[1]:	2 Acres	1.47 AC MSC (17.50 AC Tot.)	C	190-409.E.1.	10 Acres	3.08 AC NEB (17.50 AC Tot.)	C	190-412.E.1.
Min. Lot Width[2]	150 ft	917 FT	C	190-409.E.2.	350 ft	917 FT	C	190-412.E.2.
Min. Building Setbacks from Exterior Lot Lines[3]								
Front Yard	5 ft	91 FT	C	190-409.E.5.	15 ft	77 FT	C	
Min. from Lot not within same zone	25 ft	N/A	N/A	190-409.E.6. & E.7.	25 ft	N/A	N/A	190-412.E.5. & 6.
Min. from Lot within same zone	15 ft	N/A	N/A	190-409.E.6. & E.7.	15 ft	323 FT	C	190-412.E.5. & 6.
Building Height:	2.5 Stories or 35 ft	< 35 FT	C	190-409.E.8.	60 ft	<60 FT	C	190-412.E.7.
Max. Building Coverage:	35%	8.08% MSC **(4.38% Total Palmer)**	C	190-409.E.3.	45%	2.61% NEB **(4.38% Total Palmer)**	C	190-412.E.3.
Max. Impervious Coverage:	80%	64.61% MSC **(43.77% Total Palmer)**	C	190-409.E.3.	75%	33.84% NEB **(43.77% Total Palmer)**	C	190-412.E.3.
Min, Landscaped Area	20%	35.4%	C	190-409.E.4.	N/A	N/A	N/A	N/A
Parking Setback (Per MSC)	Min. 50 ft. from Main Street	10 FT	V	190-409.E.9.	N/A	N/A	N/A	N/A
Parking Setback (Per Article VI)	Min 15 ft. from (1) Curbline or (2) Legal ROW of Minor Arterial	10 FT from Legal ROW of Main St. (No Curb)	V	190-603.G.4.	Min 15 ft. from (1) Curbline or (2) Legal ROW of Minor Arterial	N/A	N/A	190-603.G.4.
Drive Thru Stacking	10 Cars	10 Cars	C	190-409.H.3.	N/A	N/A	N/A	N/A
Standard Parking Space Size	9'x18'	9'x18'	C	190-603.B.1	9'x18'	9'x18'	C	190-603.B.1
Number of Parking Spaces	SEE PARKING TABLE	SEE PARKING TABLE	C	190-601	SEE PARKING TABLE	SEE PARKING TABLE	C	190-601
Two-Way Aisle Width	25 FT	25 FT	C	190-603.C.2.	25 FT	25 FT	C	190-603.C.2.
Maximum Aisle Length	200 FT	200 FT	C	190-603.C.3.	200 FT	200 FT	C	190-603.C.3.
Maximum Driveway Width	25 - 50 FT	158 FT (Trolley Line Driveway)	ENC	190-603.D.1.a.	25 - 50 FT	158 FT (Trolley Line Driveway)	ENC	190-603.D.1.a.
Parking Setback from Building	10 FT	10 FT	C	190-603.G.3.	10 FT	10 FT	C	190-603.G.3.
Off-Street Loading Space Size	14'x60'	14'x60'	C					
Buffer: Between Loading Dock Routinely Used for Tractor Trailer Trucks and Public Street R.O.W.	N/A	N/A	N/A	N/A	40 FT	40 FT	C	

Legend:
C - Compliance
V - Requires Variance
ZA - Zoning Ammendment Required
NOTES:
1. Proposed lot area is reported as: Area within Subject Zoning District (Total Lot Area)
2. Proposed lot widths are reported for the entire lot.
3. Provided building setbacks are reported as the setbacks provided within the subject zoning district.

TATAMY BOROUGH PARKING CALCULATION

BUILDING	USE	PARKING REQUIREMENT	CALCULATION	REQUIRED	PROVIDED	ORDINANCE
1	Warehouse/ Distribution/Office	1 sp, per 225 SF of Floor Area (Office) 0.9 sp. per employee working on-site + 1 sp, per employee not working on-site but driving a company vehicle based at the site (Warehouse)	7,800 SF Office * (1sp/225 SF) = 35 sp 38 on-site employees * (0.9 sp/on-site employee) + 4 off-site employees * (1 sp/off-site employee) = 39 sp	74	105	Article VI Table 6.1
2	Retail	1 sp, Per 175 SF of total floor area; except 1 per 225 SF of total leasable floor area if such is greater than 20,000 SF	13,000 SF * (1 sp/175 SF) = 75 sp	75	75	Article VI Table 6.1
3	Retail	1 sp, Per 175 SF of total floor area; except 1 per 225 SF of total leasable floor area if such is greater than 20,000 SF	15,033 SF * (1 sp/175 SF) = 86 sp	86	86	Article VI Table 6.1
4	Quick Service Restaurant	1 sp, Per 175 SF of total floor area; except 1 per 225 SF of total leasable floor area if such is greater than 20,000 SF	5,080 SF * (1 sp/175 SF) = 22 sp	29	29	Article VI Table 6.1
			TOTAL	264	295	

PALMER TOWNSHIP PARKING CALCULATION

BUILDING	USE	PARKING REQUIREMENT	CALCULATION	REQUIRED	PROVIDED	ORDINANCE
5	Quick Service Restaurant	1 sp per 2.5 seats (min, 20 sp) + 1 sp, Per full-time equivalent employees	75 seats * (1 sp/2.5 seats) + 7 full time equivalent employees * (1 sp/employee) = 37 sp	37	37	ZO Att. 22 Table 3
6	Quick Service Restaurant	1 sp per 2.5 seats (min, 20 sp) + 1 sp, Per full-time equivalent employees	50 seats * (1 sp/2.5 seats) + 7 full time equivalent employees * (1 sp/employee) = 27 sp	27	27	ZO Att. 22 Table 3
			TOTAL	64	64	

GENERAL NOTES:

1. THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOT ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR THE SITEWORK CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
2. THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER AND ENGINEER MAKE NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY INFORMATION THAT WAS OBTAINED DURING THESE INVESTIGATIONS. THE CONTRACTOR SHALL: MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS; CORRELATE CONDITIONS WITH THE DRAWINGS; AND , RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL PERFORM ADDITIONAL TOPOGRAPHIC SURVEYS HE/SHE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
3. THE CONTRACTOR SHALL, WHEN HE/SHE DEEMS NECESSARY, PROVIDE A WRITTEN REQUEST FOR INFORMATION (RFI) TO THE OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE , AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM. THE (RFI) SHALL BE IN A FORM ACCEPTABLE TO THE OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF THREE WORK DAYS FOR A WRITTEN REPLY. RFIs SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SITEWORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS
4. INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC,) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO BID. ANY INCONSISTENCIES AND DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO BID.
5. THERE ARE ADDITIONAL NOTES, SPECIFICATION AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN REVIEW AND ADHERE TO ALL OF THESE DOCUMENTS.
6. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL CONSTRUCTION STAKEOUT FOR THIS PROJECT MUST BE COMPLETED FROM THE SITE SPECIFIC SURVEY CONTROL (HORIZONTAL AND VERTICAL) UPON WHICH THE DESIGN IS BASED. THE CONTRACTOR SHOULD NOT RELY ON OR RE-ESTABLISH SURVEY CONTROL BY GPS OR OTHER METHODS FOR USE IN CONSTRUCTION STAKEOUT OR ANY OTHER PURPOSE FOR THIS PROJECT. ANY DISCREPANCIES BETWEEN THE EXISTING HORIZONTAL OR VERTICAL DATA SHOWN ON THESE DRAWINGS AND THAT ENCOUNTERED IN THE FIELD MUST BE REPORTED TO THE DESIGN TEAM PRIOR TO CONSTRUCTION FOR RESOLUTION.

SITE NOTES:

1. THIS PLAN IS NOT VALID UNLESS EMBOSSED OR STAMPED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
2. TOPOGRAPHIC INFORMATION SHOWN HEREON ARE BASED ON BOUNDARY AND TOPOGRAPHIC SURVEY PREFORMED BY LANGAN ENGINEERING FOR "CHRIN COMMERCE CENTER - LOT 2" DATED NOVEMBER 12, 2024.
3. IT IS IMPERATIVE THAT THE UTILITY COMPANIES ARE NOTIFIED PRIOR TO ANY EXCAVATION AND / OR CONSTRUCTION. CALL 1-800-242-1776 TO ORDER UTILITY MARKOUTS.
4. CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM IF ANY SPECIFIC SITEWORK ITEM DEPICTED ON THE PLANS WARRANTS ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION AND IS NOT RELATED TO THE MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITE WORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
5. MERIDIAN IS REFERENCED TO PA SPCS NAD83.
6. VERTICAL DATA SHOWN IS BASED ON NAVD88 DATUM.
7. THE PROPOSED USES OF THE DEVELOPMENT ARE WAREHOUSE/DISTRIBUTION, RETAIL, AND QUICK-SERVICE RESTAURANT.
8. THE PURPOSE OF THE PLAN IS TO DEVELOP AN EXISTING LOT INTO 3 QUICK-SERVICE RESTAURANTS, 2 RETAIL BUILDINGS, AND 1 WAREHOUSE/DISTRIBUTION BUILDING.
9. COMPLIANCE WITH THE PARKING REGULATIONS AND SUMMARY OF BUILDING AREAS ARE SHOWN IN THE PARKING TABLE. SITE'S IMPERVIOUS AREA IS PROVIDED WITHIN THE ZONING TABLE.
10. THE PROPOSED DEVELOPMENTS IS TO BE SERVICE BY PUBLIC SEWER (EASTON AREA JOINT SEWER AUTHORITY, PALMER TOWNSHIP MUNICIPAL AUTHORITY, AND TATAMY BOROUGH MUNICIPAL AUTHORITY) AND PUBLIC WATER (PENNSYLVANIA AMERICAN WATER AUTHORITY).
11. WATER AND SEWER SERVICES ARE TO BE PROVIDED THROUGH CONNECTIONS TO THE EXISTING WATER AND SEWER MAINS IN TROLLEY LINE DRIVE.
12. SEWAGE DISPOSAL SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARDS OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS.
13. THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE SWALES.
14. ALL CURB RAMPS SHALL MEET CURRENT PENNDOT ADA STANDARDS.
15. PRIOR TO ALL WORK WITHIN THE RIGHT-OF-WAY, PERMITS MUST BE OBTAINED FROM PALMER TOWNSHIP AND TATAMY BOROUGH.
16. THIS PROJECT WILL MEET THE SANITARY SEWER PRE-TREATMENT REQUIREMENTS OF THE PADEP.
17. ALL CONSTRUCTION OF STORM SEWAGE SYSTEMS AND ALL CONSTRUCTION WITH BOROUGH/TOWNSHIP RIGHTS-OF-WAY ARE TO BE IN ACCORDANCE WITH THE BOROUGH/TOWNSHIP STANDARD CONSTRUCTION DOCUMENTS.
18. THE BOROUGH/TOWNSHIP STANDARD CONSTRUCTION DETAILS ARE A MINIMUM STANDARD FOR ALL CONSTRUCTION WITHIN THE BOROUGH/TOWNSHIP. INCORPORATION OF PORTION SOR ALL OF THEM ON THE PLAN CONSTITUTES AN ACCEPTANCE AND ENDORSEMENT OF THOSE STANDARDS BY THE DEVELOPER AND THE DEVELOPER'S ENGINEER.
19. ELECTRIC POWER, TELEPHONE, AND NATURAL GAS DISTRIBUTION WILL BE PLACED UNDERGROUND.
20. BASED ON FEMA FLOOD INSURANCE RATE MAP (FIRM), COMMUNITY PANEL NO. 42095C0257E. EFFECTIVE DATE JULY 16, 2014, THE SUBJECT PROPERTY IS LOCATED OUTSIDE OF ANY REGULATED FLOOD PLAINS.
21. NO STORAGE OF TRASH, GARBAGE, REFUSE, HIGHLY EXPLOSIVE OR FLAMMABLE MATERIAL, HAZARDOUS OR HIGHLY TOXIC SUBSTANCES, ANIMALS, ANIMAL CARCASSES OR SIMILAR ITEMS SHALL BE PERMITTED.
22. NO OUTDOOR STORAGE SHALL BE PERMITTED.
23. ANY FUTURE EXTERIOR SOLID WASTE CONTAINERS SHALL BE SCREENED IN ACCORDANCE WITH THE BOROUGH/TOWNSHIP' S ZONING ORDINANCE.
24. THE LOCATION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE DEVELOPER/DESIGN ENGINEER AND THE LOCATIONS OF SUCH FACILITIES HAVE NOT BEEN REVIEWED BY THE TOWNSHIP ENGINEER. THE DEVELOPER/DESIGN ENGINEER IS RESPONSIBLE FOR CONFIRMING THE LOCATION OF ALL UTILITIES AND TO AVOID CONFLICTS OF THE SAME WITH PROPOSED IMPROVEMENTS. SIGNIFICANT EFFORTS TO RESOLVE SUCH CONFLICTS, INCLUDING BUT NOT NECESSARILY LIMITED TO REDESIGN, CONSTRUCTION DELAY, UTILITY RELOCATIONS, ETC., MAY RESULT IF CONFLICTS WITH EXISTING UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION.
25. ANY STREET IMPROVEMENTS PROPOSED TO BE INSTALLED SHALL BE FUNDED BY THE APPLICANT (SUCH AS ANY ACCELERATION/DECELERATION LANES, TRAFFIC SIGNAL, STREET REALIGNMENT, OR WIDENING OF ABUTTING STREETS. THIS EXCLUDES THE PROPOSED 10' WIDE ASPHALT MULTI-USE TRAIL.

APPLICANT/OWNER
CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER PROVINCE
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP & TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY ZONING INFORMATION AND NOTES

Project No. 200168301
Date 7/17/2025
Drawn By MJW
Checked By SH

Drawing No. CS-100A
Sheet 10 of 52

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LANEAN 86 Project No. 200168301

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND
(10) WORKING DAYS IN DESIGN STAGE
--- STOP & CALL ---

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER: 20251501191
20251501192

SIGNAGE LEGEND

1. STOP (R1-1)
2. ACCESSIBLE PARKING (R7-8) & PARKING PENALTIES (R7-8P)
3. RESERVED PARKING (R7-8), VAN ACCESSIBLE PARKING (R7-8P) & PARKING PENALTIES (R7-8F)
4. NO TRUCKS (R5-2)
5. PEDESTRIAN CROSSING (W11-2) & DIAGONAL DOWNWARD POINTING ARROW (W16-7P)
6. NO TRUCK IDLING
7. TRUCK (M4-4) & NO LEFT TURN (R3-2)
8. DO NOT ENTER (R5-1)
9. NO RIGHT TURN (R3-1)
10. LEFT TURN ONLY (R3-5)
11. NO LEFT TURN (R3-2)

LEGEND

SITE SYMBOLS
- EXISTING LEGAL RIGHT-OF-WAY/EXISTING PROPERTY LINE (ADJACENT PARCELS)
- EXISTING ULTIMATE RIGHT-OF-WAY
- PROPOSED SITE PROPERTY LINE
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- BUILDING SETBACK
- PARKING SETBACK
- EXISTING FENCE
- PROPOSED FENCE
- SURFACE STORMWATER BASIN
- UNDERGROUND STORMWATER BASIN
- CURB LINE
- FLUSH CURB
- DRIVE AISLE CENTERLINE
- PROPOSED BUILDING LINE
- LIMITS OF DISTURBANCE
- PROPOSED LIGHT POLE
- PROPOSED TRANSFORMER PAD
- PROPOSED MONUMENT

SITE SYMBOLS (CONT.)
- ADA CURB RAMP WITH DETECTABLE WARNING
- CONCRETE
- CONCRETE SIDEWALK
- CROSSWALK
- SIGN
- PARKING COUNT ROW/LOT

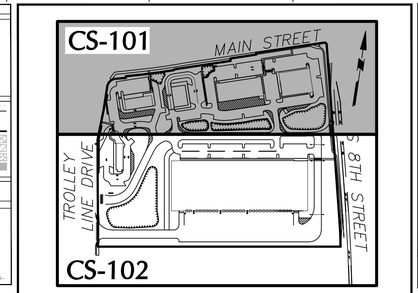
GRADING/ DRAINAGE SYMBOLS
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- ACT 167 BOUNDARY
- TRN 400 EMERGENCY SPILLWAY LINER
- BASIN KEY TRENCH
- SWALE LINER
- EROSION CONTROL BLANKET

SOILS SYMBOLS
- SOILS BOUNDARY
- SOIL TYPE (e.g. UuaB)

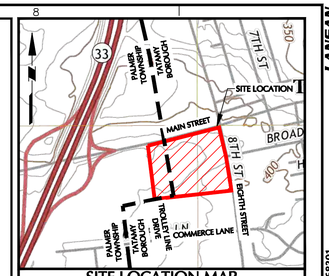
UTILITY SYMBOLS
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING GAS MAIN
- EXISTING WATER MAIN
- EXISTING OVERHEAD/UNDERGROUND ELECTRIC
- PROPOSED STORM SEWER INLET/MANHOLE/PIPE/ENDWALL
- PROPOSED SANITARY SEWER MANHOLE/PIPE
- PROPOSED GAS MAIN/VALVE
- PROPOSED WATER METER PIT/MAIN/VALVE
- PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY RISER/VLT
- PROPOSED HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING STORM INLET
- EXISTING WATER VALVE
- EXISTING MANHOLE
- EXISTING ELECTRIC POLE

RECORDING INFORMATION
RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____, PAGE NO. ___ ON _____, 20 ___.



KEY MAP 1"=300'



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

TATAMY BOROUGH MUNICIPAL BOUNDARY LINE
PALMER TOWNSHIP

EXISTING ROW
(EX. 113'-150' - WIDTH VARIES)

MAIN STREET (S.R. 1002)
(ARTERIAL ROAD)

10' WIDE ASPHALT MULTI-USE TRAIL ALONG MAIN STREET FRONTAGE (TYP.)
EXISTING STRIPING (TYP.)
RAIN GARDEN #2
BUMPER BLOCKS (TYP.)
RIGHT-OF-WAY LINE (TYP.)
10' WIDE CONCRETE SIDEWALK
RETAINING WALL (TYP.)
RAIN GARDEN #1
BUILDING 3 PARKING COUNT
10' PARKING SETBACK FROM MAIN ST. R.O.W.
15' BUILDING SETBACK FROM PUBLIC STREET R.O.W.
TIE SIDEWALK INTO EXISTING RAMPS
EXISTING UTILITY POLE TO BE RELOCATED
6" REVEAL CONCRETE CURB (TYP.)
5' WIDE CONCRETE SIDEWALK ALONG EIGHTH STREET FRONTAGE (TYP.)
BUILDING 5 PARKING COUNT
TIE INTO EXISTING TROLLEY LINE DRIVE SIDEWALK
15' PARKING SETBACK FROM MAIN ST. R.O.W.
CROSSWALK (TYP.)
5' FRONT YARD BUILDING SETBACK
50' PARKING SETBACK FROM MAIN ST. R.O.W. (MSC)
18' WIDE CONCRETE SIDEWALK
ADA SPACE (TYP.)
PROPOSED BUILDING 4 (QUICK-SERVICE RESTAURANT) (±5,080 SF)
PROPOSED BUILDING 3 (RETAIL) (±15,033 SF)
PROPOSED BUILDING 2 (RETAIL) (±13,000 SF)
BUILDING 2 PARKING COUNT
DUMPSTER AREA (TYP.)
5' WIDE CONCRETE SIDEWALK
20' PARKING SETBACK FROM ARTERIAL ST. R.O.W. (OTHER THAN MAIN ST.)
PROPOSED BUILDING 5 (QUICK-SERVICE RESTAURANT) (±5,175 SF)
RETAINING WALL (TYP.)
5' MINIMUM BUILDING SETBACK FROM PUBLIC STREET R.O.W.
5' WIDE CONCRETE SIDEWALK
CROSSWALK (TYP.)
6" REVEAL CONCRETE CURB (TYP.)
LOADING
DO NOT ENTER
BUILDING 4 PARKING COUNT
PROPOSED 4' HIGH BASIN FENCE (TYP.)
INFILTRATION BASIN #1
INFILTRATION BASIN #2
INFILTRATION BASIN #3
PROPOSED 8TH STREET (TATAMY ROADWAY) IMPROVEMENTS - SEE SEPARATE HIGHWAY OCCUPANCY PERMIT (HOP PLANS)
ZONING DISTRICT BOUNDARY
MSC
NEB
TROLLEY LINE DRIVE
S EIGHTH STREET (MAJOR COLLECTOR)
BUILDING 1 PARKING COUNT
6" REVEAL CONCRETE CURB (TYP.)
RETAINING WALL (TYP.)
PROPOSED 5' X 8' LANTA ADA ACCESSIBLE PAD
DUMPSTER AREA (TYP.)
ADA SPACE (TYP.)
5' WIDE CONCRETE SIDEWALK
EXISTING HEADWALL AND RIPRAP APRON (TO BE REMOVED)
BOLLARDS WITH CHAINS (TYP.)
6' WIDE CONCRETE SIDEWALK
UNDERGROUND INFILTRATION BASIN #5
20' WIDE GRAVEL FIRE ACCESS ROAD
571'
175' BUILDING SETBACK FROM
MATCHLINE SEE SHEET CS-102

SCALE: 1 INCH = 40 FEET

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP & TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY SITE PLAN (RECORD PLAN)

Project No.	200168301
Date	7/17/2025
Drawn By	MJW
Checked By	SH

Drawing No. CS-101
Sheet 11 of 52

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Date: 7/16/2025 Time: 20:30 User: bsoltys Style Table: Langan.stb Layout: CS-101 Document Code: 200168301-0503-CS101-0102

LANGAN 87
Project No. 200168301

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE, AND
(10) WORKING DAYS IN DESIGN STAGE
— STOP & CALL —

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER: 20251501191
20251501192

SIGNAGE LEGEND

1. STOP (R1-1)
2. ACCESSIBLE PARKING (R7-8) & PARKING PENALTIES (R7-8F)
3. RESERVED PARKING (R7-8), VAN ACCESSIBLE PARKING (R7-8P) & PARKING PENALTIES (R7-8F)
4. NO TRUCKS (R5-2)
5. PEDESTRIAN CROSSING (W11-2) & DIAGONAL DOWNWARD POINTING ARROW (W16-7P)
6. NO TRUCK IDLING
7. TRUCK (M4-4) & NO LEFT TURN (R3-2)
8. DO NOT ENTER (R5-1)
9. NO RIGHT TURN (R3-1)
10. LEFT TURN ONLY (R3-5)
11. NO LEFT TURN (R3-2)

LEGEND

SITE SYMBOLS
- EXISTING LEGAL RIGHT-OF-WAY/EXISTING PROPERTY LINE (ADJACENT PARCELS)
- EXISTING ULTIMATE RIGHT-OF-WAY
- PROPOSED SITE PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED EASEMENT
- BUILDING SETBACK
- PARKING SETBACK
- EXISTING FENCE
- PROPOSED FENCE
- SURFACE STORMWATER BASIN
- UNDERGROUND STORMWATER BASIN
- CURB LINE
- FLUSH CURB
- DRIVE AISLE CENTERLINE
- PROPOSED BUILDING LINE
- LOCATION OF INGRESS/EGRESS
- PROPOSED LIGHT POLE
- PROPOSED TRANSFORMER PAD
- PROPOSED MONUMENT

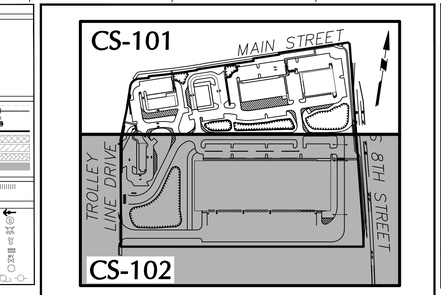
SITE SYMBOLS (CONT.)
- ADA CURB RAMP WITH DETECTABLE WARNING
- CONCRETE
- CONCRETE SIDEWALK
- CROSSWALK
- SIGN
- PARKING COUNT ROW/LOT

GRADING/ DRAINAGE SYMBOLS
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- ACT 167 BOUNDARY
- TRN 450 EMERGENCY SPILLWAY LINER
- BASIN KEY TRENCH
- SWALE LINER
- EROSION CONTROL BLANKET

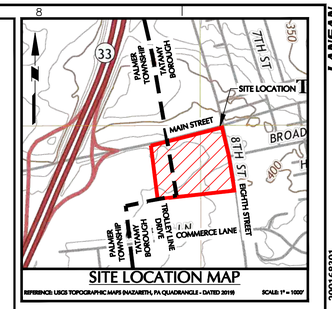
SOILS SYMBOLS
- SOILS BOUNDARY
- SOIL TYPE (UseB)

UTILITY SYMBOLS
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING GAS MAIN
- EXISTING WATER MAIN
- EXISTING OVERHEAD/UNDERGROUND ELECTRIC
- PROPOSED STORM SEWER INLET/MANHOLE/PIPE/ENDWALL
- PROPOSED SANITARY SEWER MANHOLE/PIPE
- PROPOSED GAS MAIN/VALVE
- PROPOSED WATER METER PIT/MAIN/VALVE
- PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY RISER/VAULT
- PROPOSED HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING STORM INLET
- EXISTING WATER VALVE
- EXISTING MANHOLE
- EXISTING ELECTRIC POLE

RECORDING INFORMATION
RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE
IN VOL NO. ____, PAGE NO. ___ ON _____, 20 ___.



KEY MAP 1" = 300'



SITE LOCATION MAP
REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

MATCHLINE SEE SHEET CS-101

TROLLEY LINE DRIVE (LOCAL ROAD)

S EIGHTH STREET (MAJOR COLLECTOR)

INFILTRATION BASIN #1

INFILTRATION BASIN #2

INFILTRATION BASIN #3

UNDERGROUND INFILTRATION BASIN #5

INFILTRATION BASIN #4

PROPOSED BUILDING 1
(WAREHOUSE)
(±119,878 SF)
PROPOSED HEIGHT 50 FT
30 DOCKING SPACES
105 CAR SPACES

PROPOSED BUILDING 6
(QUICK-SERVICE RESTAURANT)
(±3,500 SF)

5' WIDE CONCRETE SIDEWALK
CROSSWALK (TYP.)
24' 6" REVEAL CONCRETE CURB (TYP.)
R25'
25'
R15'
STOP
RETAINING WALL (TYP.)
PROPOSED 5' X 8' LANTA ADA ACCESSIBLE PAD
DUMPSTER AREA (TYP.)
ADA SPACE (TYP.)
30'
10'
12'
18'
LOADING
EXISTING UTILITY POLE
EXISTING 10' BIKE PATH
FREESTANDING SIGN
BUILDING 6 PARKING COUNT
TIE INTO EXISTING CURB
PROPOSED 4' HIGH BASIN FENCE (TYP.)
PROPOSED ADA RAMP TO TIE INTO EXISTING 10' WIDE MULTI-USE TRAIL
EXISTING STRIPING TO BE ERADICATED.
40' BUFFER BETWEEN LOADING DOCK USED BY TRACTOR-TRAILER TRUCKS AND PUBLIC STREET R.O.W.
EXISTING 10' PATH AND LANTA BUS STOP TO BE REMOVED/ REALIGNED
R70'
R35'
BY/4"
75
TIE INTO EXISTING CURB
TIE INTO EXISTING ADA RAMP
5' WIDE CONCRETE SIDEWALK
RETAINING WALL (TYP.)
6" REVEAL CONCRETE CURB (TYP.)
BUILDING 1 PARKING COUNT
R20'
R13'
R5'
105
R12'
EXISTING HEADWALL AND RIPRAP APRON (TO BE REMOVED)
BOLLARDS WITH CHAINS (TYP.)
CROSSWALK (TYP.)
R10'
6' WIDE CONCRETE SIDEWALK
R15'
R70'
IMPROVEMENTS - SEE SEPARATE HIGHWAY OCCUPANCY PERMIT (HOP PLANS)
ZONING DISTRICT BOUNDARY
MC
LI
NEB
MSC
571'
210'
20' WIDE GRAVEL FIRE ACCESS ROAD
175' BUILDING SETBACK FROM RESIDENTIAL DISTRICT BOUNDARY (NOTE: 175' REQUIRED BUILDING SETBACK FROM RESIDENTIAL DISTRICT BOUNDARY CAN BE REDUCED TO 120' WITH THE PROVISION OF A 5' TALL LANDSCAPED BERM ALONG THE PROPERTY FRONTAGE, PER TATAMY BOROUGH ZONING ORDINANCE ARTICLE III: 307.A.)
20' PARKING SETBACK FROM ARTERIAL ST. R.O.W. (OTHER THAN MAIN ST.)
DRIVEWAY TO BE USED FOR EMERGENCY TRUCK ACCESS ONLY
50' LANDSCAPE BUFFER/50' BUILDING SETBACK FROM PUBLIC STREET R.O.W.
BOLLARDS WITH CHAINS (TYP.)
5' WIDE CONCRETE SIDEWALK ALONG EIGHTH STREET FRONTAGE (TYP.)
6" CURB (CONNECT TO EXISTING CURBLINE)
60'
14'
70'
130'
30
BUILDING 1 DOCKING SPACE COUNT
DEPRESSED CURB
R20'
R10'
6" REVEAL CONCRETE CURB (TYP.)
15' BUILDING SETBACK FROM LOT WITHIN MSC ZONE
RESIDENTIAL LANDSCAPE BERM
EXISTING CHRIN LOT 10 & 11 DEVELOPMENT
TATAMY BOROUGH MUNICIPAL BOUNDARY LINE
PALMER TOWNSHIP

SCALE: 1 INCH = 40 FEET (40 0 10 25 40)

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP / TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY SITE PLAN (RECORD PLAN)

Project No. 200168301
Date 7/17/2025
Drawn By MJW
Checked By SH

Drawing No. CS-102
Sheet 12 of 52

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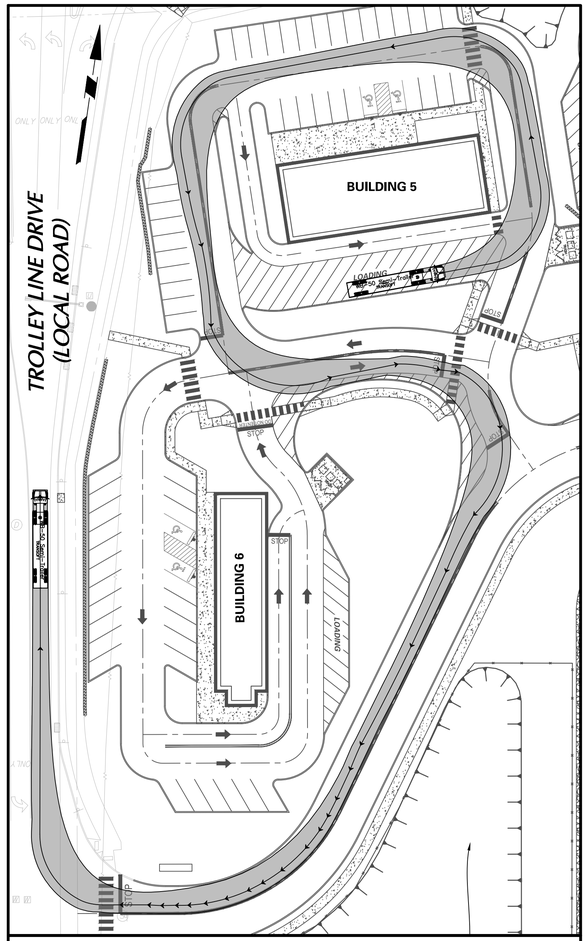
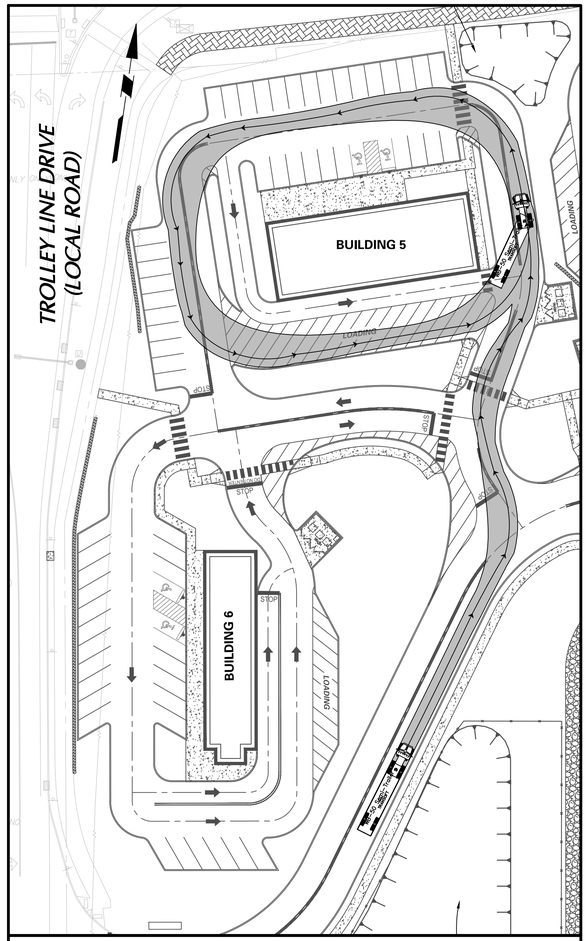
Date: 7/16/2025 Time: 20:35 User: bsoltys Style Table: Langan.stb Layout: CS-102 Document Code: 200168301-0503-CS101-0103

LANGAN 88
Project No. 200168301



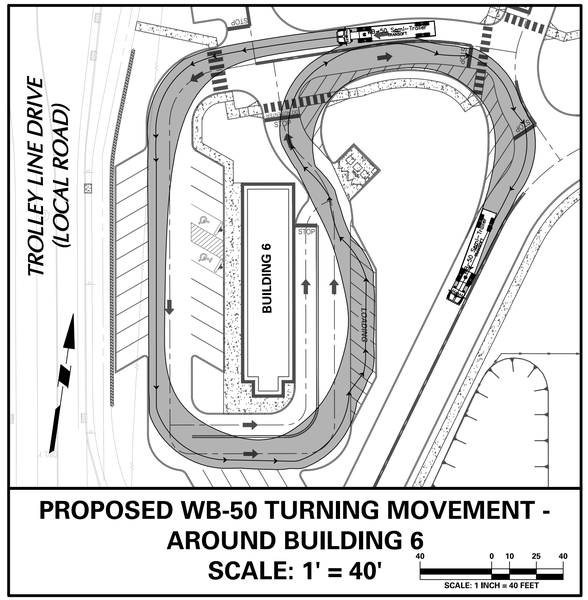
PROPOSED WB-50 TURNING MOVEMENT - BUILDING 5 TO TROLLEY LINE DRIVE
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



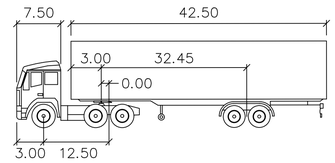
PROPOSED WB-50 TURNING MOVEMENT - AROUND BUILDING 5
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



PROPOSED WB-50 TURNING MOVEMENT - AROUND BUILDING 6
SCALE: 1' = 40'

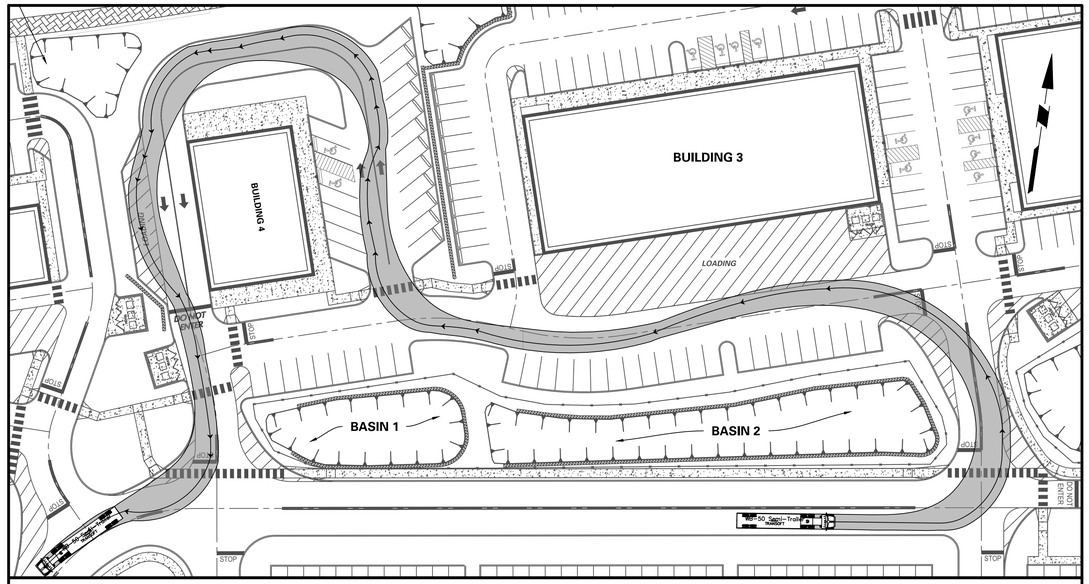
40 0 10 25 40
SCALE: 1 INCH = 40 FEET



WB–50 Semi–Trailer

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WB-50 TYPICAL PROFILE
N.T.S.



PROPOSED WB-50 TURNING MOVEMENT - AROUND BUILDING 4 AND ONTO ACCESS DRIVE
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET

APPLICANT/OWNER
CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER PROVINCE
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE–074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY TRUCK TURN PLAN

Project No. 200168301
Date 7/17/2025
Drawn By MJW
Checked By SH

Drawing No. CS-201
Sheet 13 of 52

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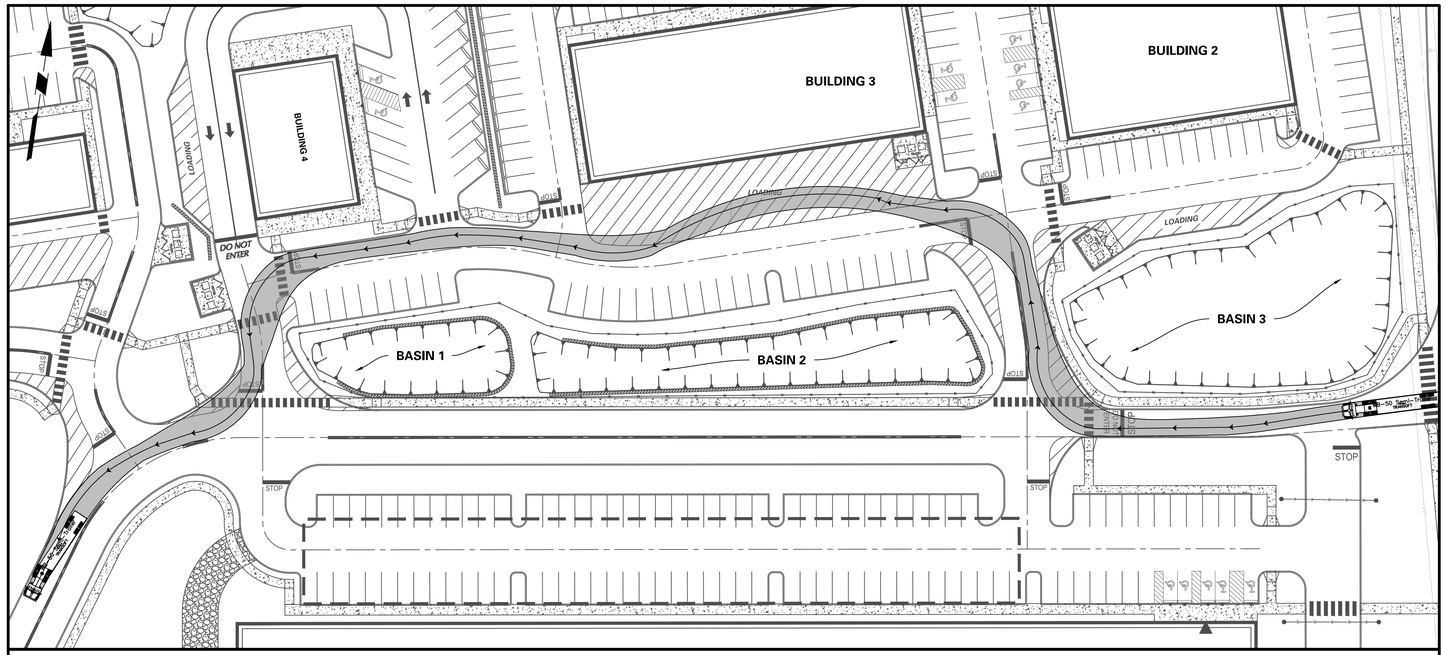
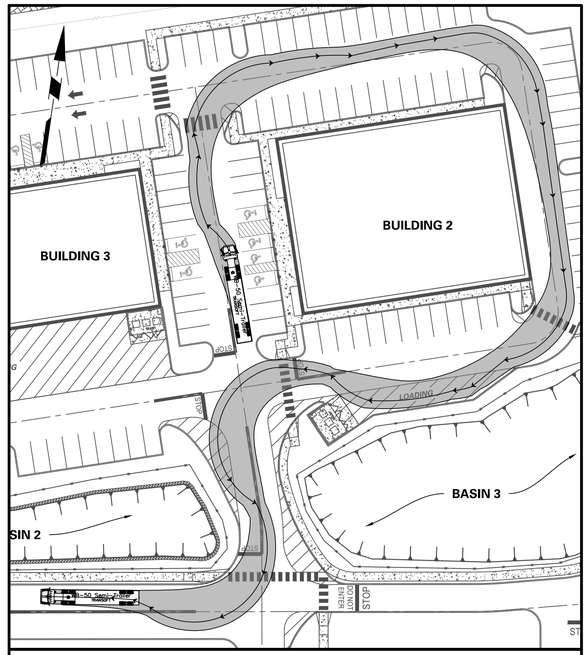
LANGAN 89 Project No. 200168301



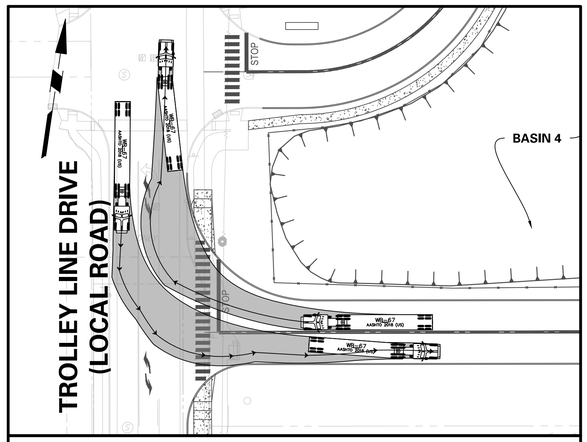
PROPOSED WB-50 TURNING MOVEMENT FROM ACCESS DRIVE THROUGH PARKING LOTS OF BUILDINGS 3 AND 4
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



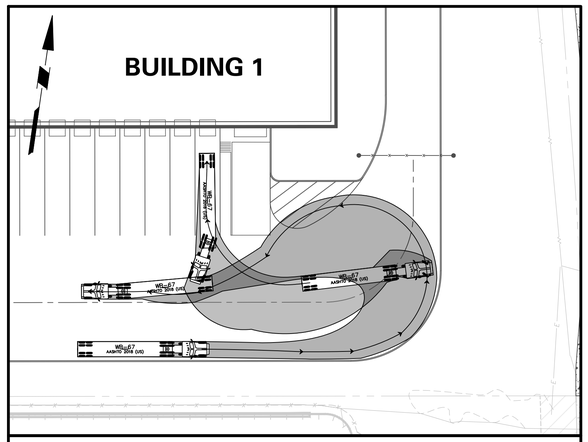
PROPOSED WB-50 TURNING MOVEMENT - AROUND BUILDING 2
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



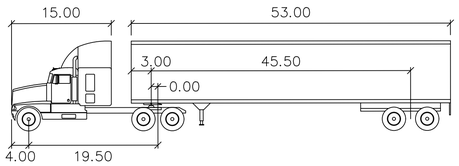
PROPOSED WB-67 TURNING MOVEMENT - TROLLEY LINE DRIVE
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



PROPOSED WB-67 LOADING SPACE MOVEMENT AROUND BUILDING 1
SCALE: 1' = 40'

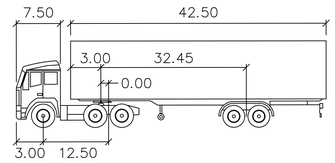
40 0 10 25 40
SCALE: 1 INCH = 40 FEET



WB-67

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

WB-67 TYPICAL PROFILE
N.T.S.



WB-50 Semi-Trailer

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WB-50 TYPICAL PROFILE
N.T.S.

APPLICANT/OWNER
CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY TRUCK TURN PLAN

Project No.	200168301
Date	7/17/2025
Drawn By	MJW
Checked By	SH

Drawing No. CS-202
Sheet 14 of 52

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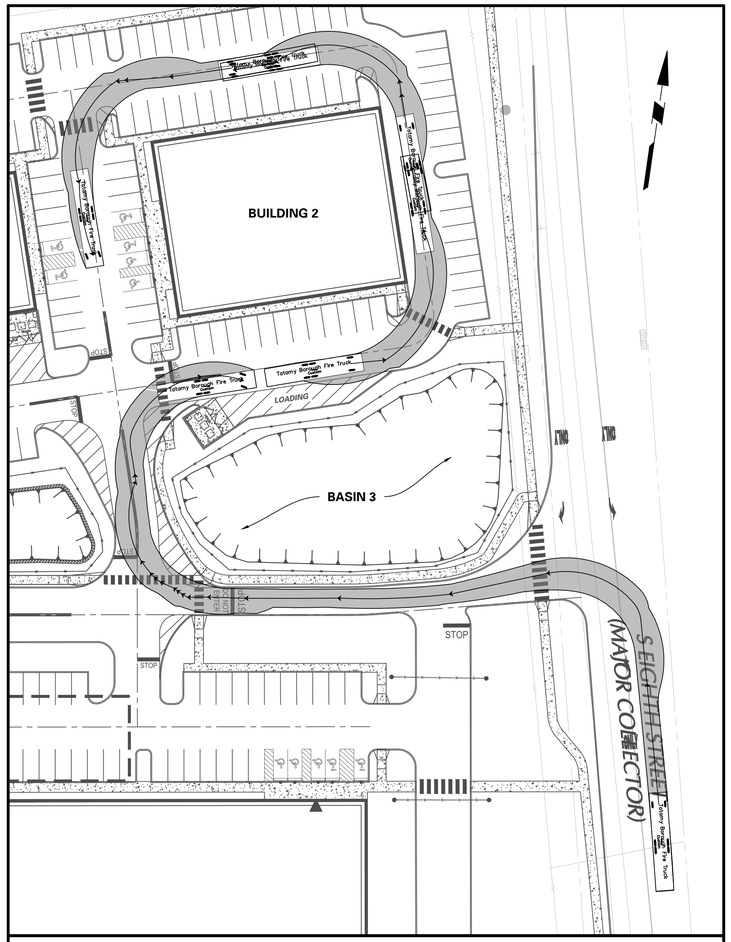
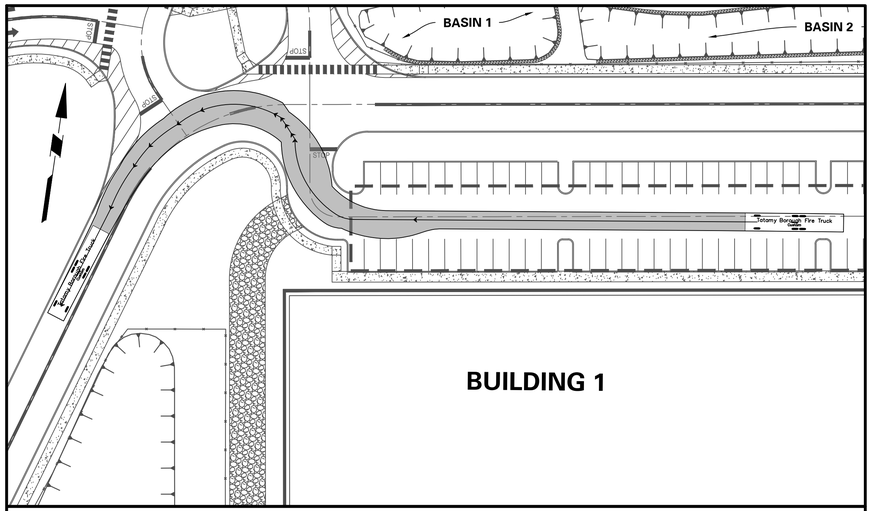
LANEAN 90
Project No. 200168301



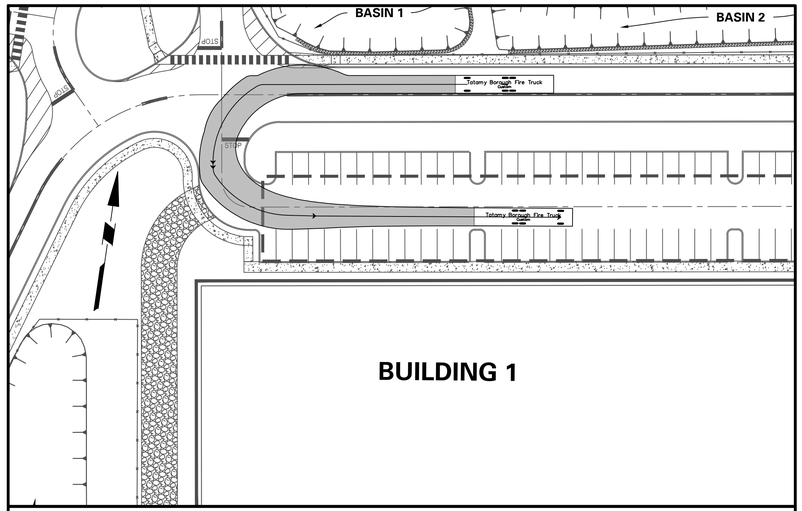
PROPOSED TATAMY BOROUGH FIRE TRUCK TURNING MOVEMENT - AROUND BUILDING 2
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



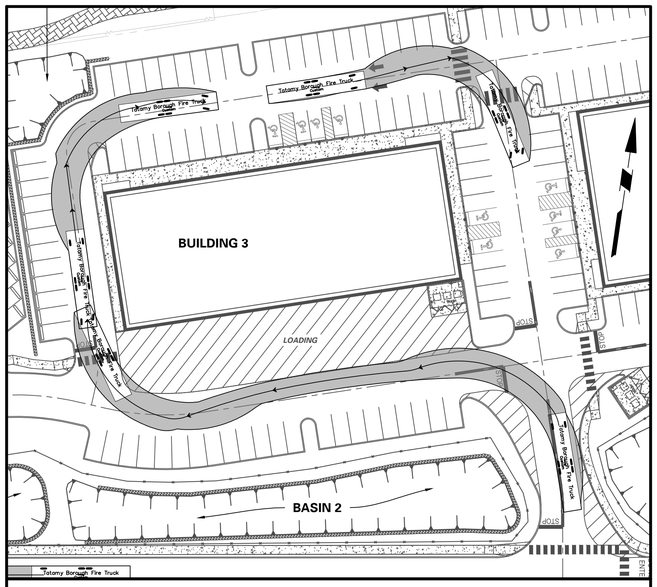
PROPOSED TATAMY BOROUGH FIRE TRUCK TURNING MOVEMENT - EXITING NORTHWEST OF BUILDING 1
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



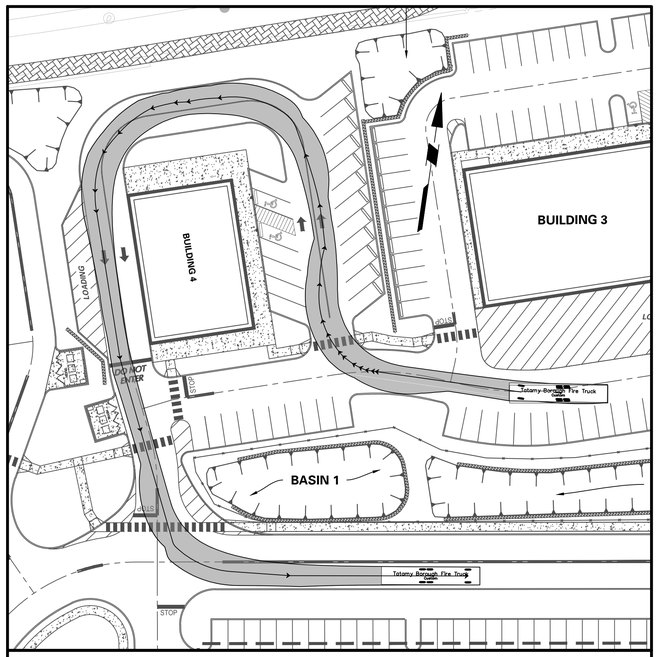
PROPOSED TATAMY BOROUGH FIRE TRUCK TURNING MOVEMENT - ENTERING NORTHWEST OF BULIDING 1
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



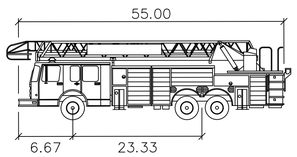
PROPOSED TATAMY BOROUGH FIRE TRUCK TURNING MOVEMENT - AROUND BUILDING 3
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



PROPOSED TATAMY BOROUGH FIRE TRUCK TURNING MOVEMENT - AROUND BUILDING 4
SCALE: 1' = 40'

40 0 10 25 40
SCALE: 1 INCH = 40 FEET



TATAMY BOROUGH FIRE TRUCK

	feet
Width	: 10.00
Track	: 8.00
Lock to Lock Time	: 5.0
Steering Angle	: 28.0

TATAMY BOROUGH FIRE TRUCK PROFILE
N.T.S.

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER KEITH S. OTTES
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY TRUCK TURN PLAN

Project No. 200168301
Date 7/17/2025
Drawn By MJW
Checked By SH

Drawing No. CS-203
Sheet 15 of 52

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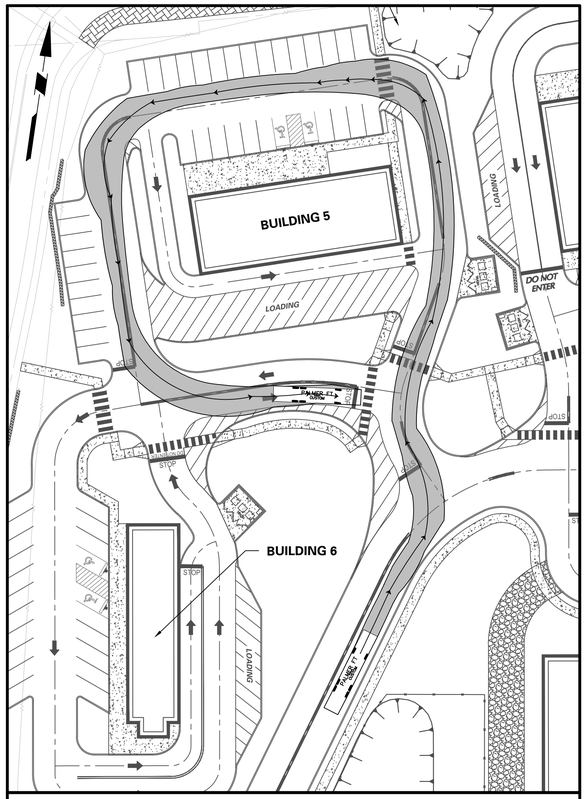
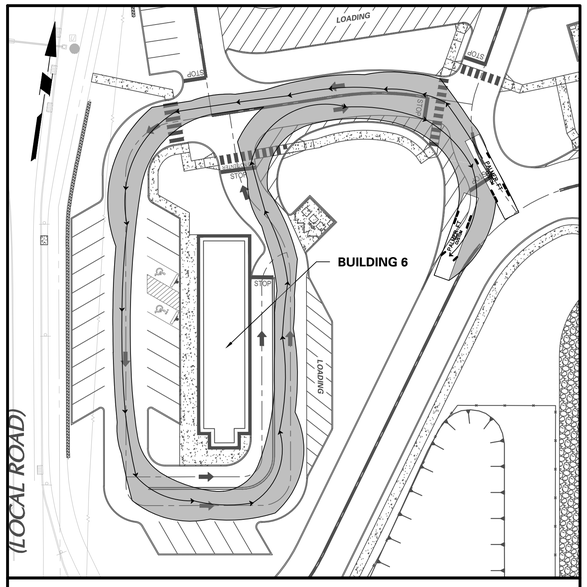
Date: 7/16/2025 Time: 19:09 User: bsoltys Style Table: Langan.stb Layout: CS-203 Document Code: 200168301-0503-CS101-0108

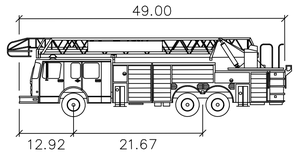
LANGAN 91 Project No. 200168301



PROPOSED PALMER TOWNSHIP FIRE TRUCK TURNING MOVEMENT - AROUND BUILDING 5
SCALE: 1' = 40'
SCALE: 1 INCH = 40 FEET



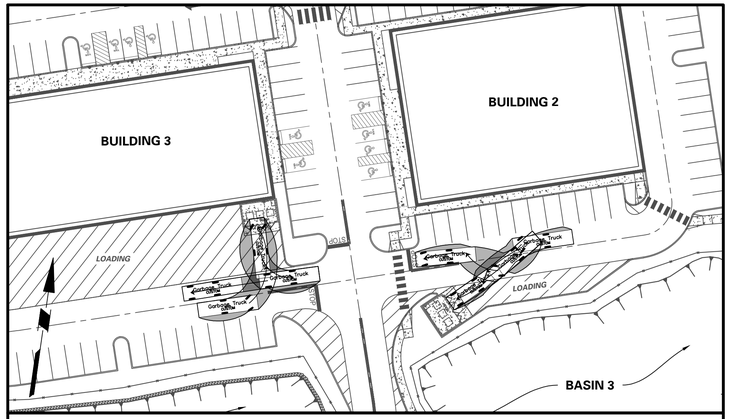
PROPOSED PALMER TOWNSHIP FIRE TRUCK TURNING MOVEMENT - AROUND BUILDING 6
SCALE: 1' = 40'
SCALE: 1 INCH = 40 FEET



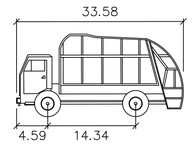
PALMER TOWNSHIP FIRE TRUCK

	feet
Width	: 8.67
Track	: 8.25
Lock to Lock Time	: 5.0
Steering Angle	: 39.0

PALMER TOWNSHIP FIRE TRUCK TYPICAL PROFILE
N.T.S.



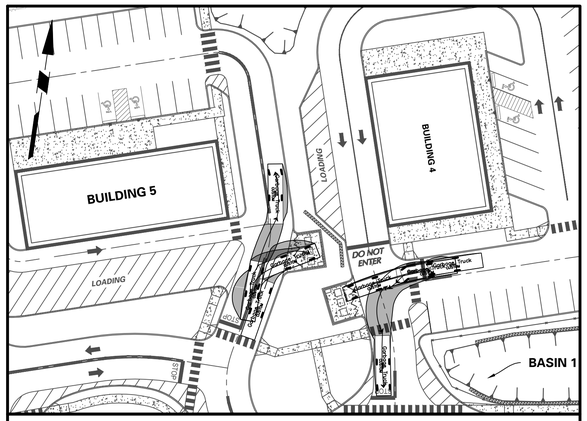
PROPOSED GARBAGE TRUCK TURNING MOVEMENT - BUILDING 2 AND 3
SCALE: 1' = 40'
SCALE: 1 INCH = 40 FEET



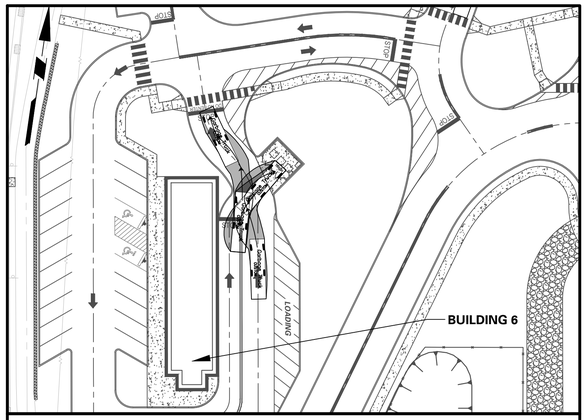
Garbage Truck

	feet
Width	: 8.20
Track	: 7.84
Lock to Lock Time	: 6.0
Steering Angle	: 41.8

GARBAGE TRUCK TYPICAL PROFILE
N.T.S.



PROPOSED GARBAGE TRUCK TURNING MOVEMENT - BUILDING 4 AND 5
SCALE: 1' = 40'
SCALE: 1 INCH = 40 FEET



GARBAGE TRUCK TURNING MOVEMENT BUILDING 5
SCALE: 1' = 40'
SCALE: 1 INCH = 40 FEET

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER PE074526

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
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NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY TRUCK TURN PLAN

Project No. 200168301
Date 7/17/2025
Drawn By MJW
Checked By SH

Drawing No. CS-204
Sheet 16 of 52

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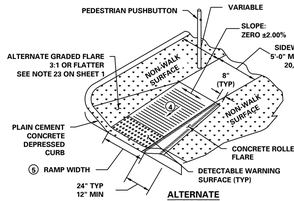
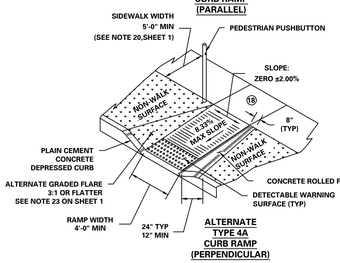
Date: 7/16/2025 Time: 19:16 User: bsoltys Style Table: Langan.stb Layout: CS-204 Document Code: 200168301-0503-CS101-0107

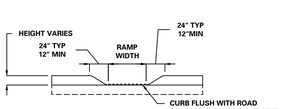
LANGAN 92
Project No. 200168301



ALTERNATE TYPE 4A CURB RAMP (PARALLEL)



ALTERNATE TYPE 4A CURB RAMP (PERPENDICULAR)



TYPE 4A NON-TRAVERSABLE ROLLED FLARES

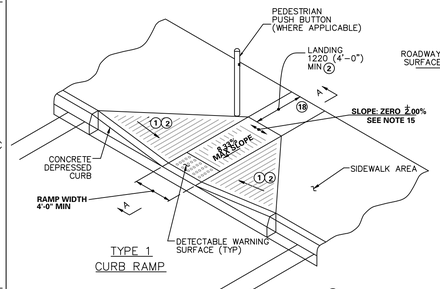
TYPICAL ELEVATIONS FOR DEPRESSED CURBS

① SIDE FLARES 10.00% MAX SLOPE.
④ 8.33% MAX RAMP SLOPE. SEE NOTE 8 SHEET 1.
⑤ CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO THE MINIMUM 4'-0"
⑥ SLOPE VARIES SEE RAMP DETAILS
⑱ CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

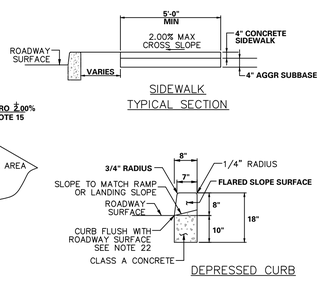
PAGE 1 NOTES

20. SIDEWALK WIDTH MAY BE REDUCED TO 4'-0", WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.
22. CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE. AT THE JOINT BETWEEN DEPRESSED CURB AND ROADWAYS, REMOVE EXCESS JOINT SEALER AND COVER THE SEALED AREA WITH A LIGHT APPLICATION OF DRY SAND.
23. CHEEK WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 OR FLATTER. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN PATH.

PENNDOT TYPE 4A CURB RAMPS



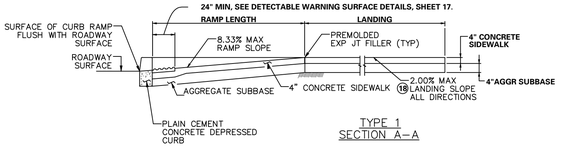
TYPE 1 CURB RAMP



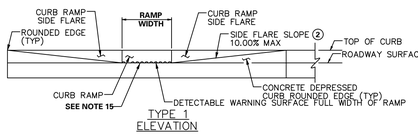
SIDEWALK TYPICAL SECTION

DEPRESSED CURB

① SIDE FLARES 10.00% MAX SLOPE
② IF THE LANDING IS INDICATED TO BE LESS THAN 4'-0", CONSTRUCT SIDE FLARES 8.33% MAX. SLOPE.
⑱ CURB RAMPS REQUIRE A 4'-0" MINIMUM LANDING WITH A MAXIMUM SLOPE OF 2.00% IN ALL DIRECTIONS WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS.



TYPE 1 SECTION A–A

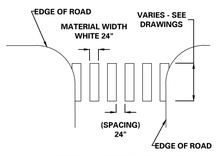


TYPE 1 ELEVATION

PERCENT SLOPE	EQUIVALENT SLOPE
10.00%	1:10
8.33%	1:12
7.14%	1:14
2.00%	1:50
1.00%	1:100

EQUIVALENT SLOPES

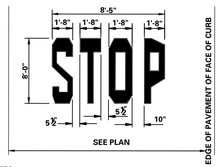
PENNDOT TYPE 1 CURB RAMP



TYPE C - PERPENDICULAR

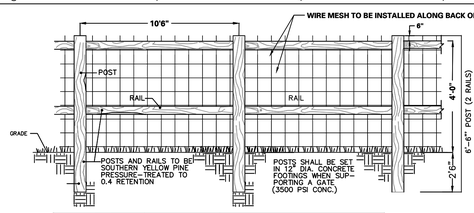
NOTES:
1. MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 111 TRAFFIC CONTROL, MOST RECENTLY REVISED.
2. ALL PAVEMENT MARKINGS SHALL BE REFLECTORIZED.
3. APPLY ALL PAINTED CENTER LINES, LANE LINES AND LEGENDS AT 15 MILS WET THICKNESS.
4. CROSSWALK MARKING GEOMETRY AND PAINT SPECIFICATIONS TO COMPLY WITH ALL PADOT REQUIREMENTS AS WELL AS PUB. 111 TRAFFIC CONTROL, MOST RECENTLY REVISED JUNE 2013.

CROSSWALK MARKING



GENERAL NOTES:
1. MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, UNLESS NOTED OTHERWISE.
2. REFLECTORIZE ALL PAVEMENT MARKINGS
3. EDGE LINES SHOULD BE 4" WIDE SOLID LINE OF THE COLOR INDICATED AND PLACED 4 INCHES INSIDE THE EDGE OF THE PAVEMENT SHOULDER
4. APPLY ALL PAINTED CENTER LINES, LANE LINES, AND LEGENDS AT 15 MILS WET THICKNESS
5. APPLY PAINTED EDGE LINES AT 12 MILS WET THICKNESS

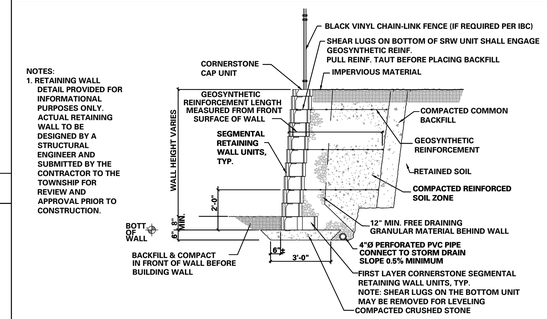
STOP LEGEND DETAIL



HEIGHT	4'0" (MIN.)	HEIGHT FROM GROUND TO TOP OF RAILS
DEPTH	2'6"	DEPTH OF POST SET INTO GROUND
LENGTH	10'6"	POST SPACING, CENTER TO CENTER
RAILS	3–1/4" sq x 11'	2 EACH, 0.11 WALL THICKNESS
SPACE	7–11/16"	BETWEEN RAILS
STEEL REINFORCEMENT	NO	
POST SIZE	5" SQUARE	0.16 WALL THICKNESS

(NOT TO SCALE)

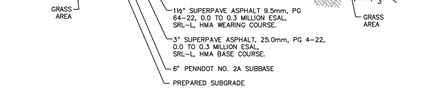
POST AND RAIL FENCE



NOTES:
1. RETAINING WALL DETAIL PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ACTUAL RETAINING WALL TO BE DESIGNED BY A STRUCTURAL ENGINEER AND SUBMITTED BY THE CONTRACTOR TO THE TOWNSHIP FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

SEGMENTAL RETAINING WALL CONSTRUCTION DETAILS AND SPECIFICATIONS TO BE PREPARED BY A FIRM SPECIFIED BY THE DEVELOPERS. PLANS ARE TO BE USED SOLELY TO PROVIDE RETAINING WALL LOCATIONS AND ELEVATIONS. PRIOR TO TOWNSHIP PERMITTING SITE CONSTRUCTION TO BEGIN, SHOP DRAWINGS AND SPECIFICATIONS (INCLUDING COLOR PHOTOGRAPHS OF WALL MATERIAL) PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL. THE DEVELOPER IS TO RETAIN THE SERVICES OF A PROFESSIONAL EXPERIENCED GEOTECHNICAL ENGINEER TO INSPECT AND CERTIFY COMPLIANCE WITH WALL CONSTRUCTION, RETAINING WALL BACKFILL, STRUCTURAL SPECIFICATIONS AND SUBGRADE BEARING CAPACITY. TOWNSHIP IS TO BE NOTIFIED AS TO WHO WILL BE PERFORMING THIS SERVICE PRIOR TO CONSTRUCTION OF WALL. THE DEVELOPER OR IT'S CONTRACTOR IS TO OBTAIN A BUILDING PERMIT PRIOR TO CONSTRUCTION OF ALL RETAINING WALLS.

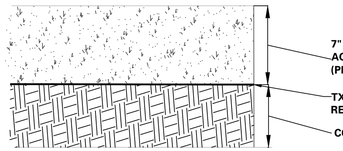
PROPOSED RETAINING WALL SECTION SCHEMATIC



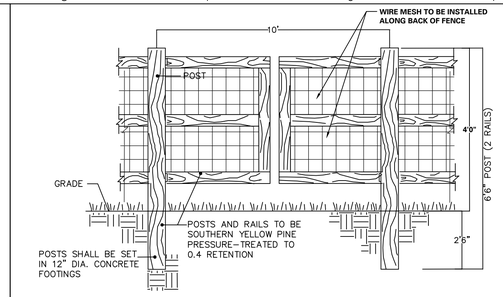
BICYCLE PATH CROSS SECTION

MULTI-USE TRAIL CROSS SECTION

NOTE: CONTRACTOR TO REVIEW AND VERIFY CONSISTENCY BETWEEN PROVIDED PAVEMENT SECTIONS AND FINAL GEOTECHNICAL ENGINEERING REPORT FOR ON-SITE PAVING.

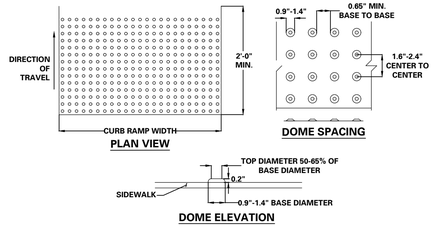


GRAVEL DETAIL



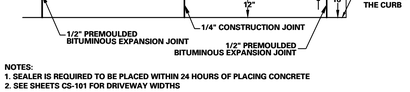
** POSTS AND RAILS TO BE SOUTHERN YELLOW PINE WOOD OR SUITABLE EQUIVALENT MATERIAL.
** POSTS AND RAILS TO BE PRESSURE TREATED TO 0.4 RETENTION

POST AND RAIL GATE



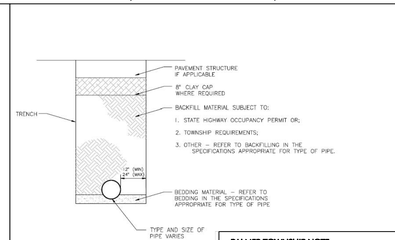
NOTES:
1. DETECTABLE WARNINGS SHALL BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS.
2. DETECTABLE WARNINGS SHALL BE 24" MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
3. DETECTABLE WARNING AREA CAN BE SQUARE WHERE USED IN A CURB RADIUS.
4. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID PARALLEL ALIGNMENT IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO TRAVEL BETWEEN DOMES.
5. DETECTABLE WARNING DOMES SHALL BE PLACED SO THE EDGE NEAREST THE CURB IS 6 INCHES TO 8 INCHES FROM CURB LINE.
6. DETECTABLE WARNING SURFACES AT PLATFORM EDGES SHALL BE 24 INCHES WIDE AND SHALL EXTEND THE FULL LENGTH OF THE PUBLIC USE AREA OF THE PLATFORM.
7. MAT EDGES SHALL BE BEVELED TO ELIMINATE TRIP HAZARD.
8. DETECTABLE WARNING COLOR SHALL CONTRAST WITH ADJOINING SURFACES PER CURRENT ADA REGULATIONS. CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR APPROVAL.
9. CONTRACTOR SHALL OBTAIN LOCAL AUTHORITY, OWNER'S ENGINEER, AND OWNER'S APPROVAL FOR COLOR AND MANUFACTURER PRIOR TO INSTALLATION.

ADA DETECTABLE WARNING SURFACE



NOTES:
1. SEALER IS REQUIRED TO BE PLACED WITHIN 24 HOURS OF PLACING CONCRETE
2. SEE SHEETS CS-101 FOR DRIVEWAY WIDTHS

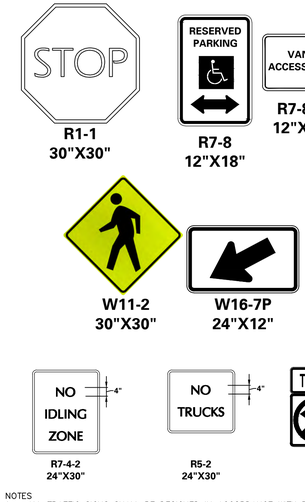
FLUSH CURB DETAIL



STANDARD TRENCH
NO SCALE

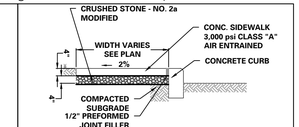
PALMER TOWNSHIP NOTE:
1. DETAILS ARE THE MINIMUM STANDARD FOR ALL CONSTRUCTION WITHIN THE TOWNSHIP
2. INCORPORATION OF PORTIONS OR ALL OF TOWNSHIP STANDARD CONSTRUCTION DETAILS ON THE PLANS CONSTITUTES AN ACCEPTANCE OF AND ENDORSEMENT OF THOSE STANDARDS BY THE DEVELOPER AND THE DEVELOPER'S ENGINEER.

STANDARD TRENCH DETAIL (PALMER TOWNSHIP)



NOTES
1. ALL TRAFFIC SIGNS SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF PENNDOT PUBLICATION 236, "HANDBOOK OF APPROVED SIGNS"
2. ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123–78 (OR LATEST REVISED).
3. POSTS MAY BE STEEL, ALUMINUM, OR TWO–PIECE U–POST.
4. SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
5. BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
6. ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL CURRENT AMENDMENTS.
7. ALL SIGNS SHALL BE HI–INTENSITY.

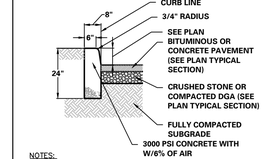
TRAFFIC CONTROL SIGNS



NOTES:
1. THE FORMS AND DIVIDERS SHALL BE OF STEEL OR WOOD AND OF SUFFICIENT STRENGTH TO RESIST SPRINGING OUT OF SHAPE; DEPTH OF FORMS SHALL BE AT LEAST THE THICKNESS OF CONCRETE AS SPECIFIED ON THIS DRAWING. WALK SHALL BE OF MONOLITHIC CONSTRUCTION FOUR (4) INCHES THICK. TRANSVERSE SURFACE GROOVES MUST BE PROVIDED FOR AT RIGHT ANGLES TO THE SIDEWALK AND AT INTERVALS EQUAL TO WIDTH OF THE SIDEWALK. AFTER THE CONCRETE IS PLACED IT SHALL BE TAMPED, SCREENED AND FINISHED TO TRUE GRADE AND SURFACE. THE FINISH SHALL BE MADE WITH A WOOD FLOAT, FOLLOWED BY A BRUSHING WITH A WET SOFT HAIR BRUSH TO A NEAT WORKMANLIKE SURFACE. TRANSVERSE EXPANSION JOINTS 1/2 INCH WIDE SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN 20 FEET AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER. SCORE LINES SHALL BE EVERY FIVE (5) FEET OR TO MATCH EXISTING ADJACENT SIDEWALK. LONGITUDINAL JOINTS 1/2 INCH WIDE SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS AND SHALL BE FILLED WITH PREFORMED BITUMINOUS TYPE FILLER. DRIVEWAY APRON AND SIDEWALK AT DRIVEWAY SHALL BE 3,000 P.S.I. AIR ENTRAINED CONCRETE SIX (6) INCHES THICK.
2. UNLESS OTHERWISE STATED HEREIN, CONSTRUCTION OF CEMENT CONCRETE SIDEWALKS SHALL MEET THE REQUIREMENTS OF SECTION 676 – CEMENT CONCRETE SIDEWALKS, PENNDOT SPECIFICATIONS, PUBLICATION 408, CURRENT EDITION.

*ALL PROPOSED SIDEWALK WITHIN TATAMY BOROUGH SHALL CONFORM TO BOROUGH STANDARDS

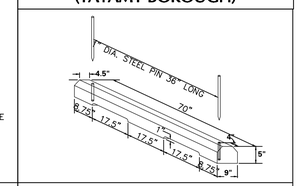
SIDEWALK DETAIL



NOTES:
1. CONCRETE TO TEST 3,000 P.S.I. MINIMUM ON 28 DAY TEST. AIR ENTRAINMENT 5% TO 7%, SLUMP TO BE 3"±1".
2. EXPOSED CONCRETE SURFACE IS TO BE RUBBED TO PROVIDE SMOOTH FINISHED SURFACE, HAVING AN EXPOSED FACE BETWEEN 6 AND 8 INCHES.
3. ALL SUBSOIL SHALL BE FULLY COMPACTED TO 95% OF MODIFIED PROCTOR DRY DENSITY PER ASTM D1557.
4. EXPANSION JOINTS SHALL BE PROVIDED A MINIMUM OF EVERY 30 FEET. EACH EXPANSION JOINT SHALL CONTAIN 0.5 INCH PREFORMED BITUMINOUS EXPANSION JOINT MATERIALS. CONTRACTION JOINTS SHALL BE PROVIDED A MINIMUM OF EVERY 10 FEET.
5. GUTTER DESIGN SHALL BE SUBJECT TO THE APPROVAL OF THE BOROUGH ENGINEER BASED UPON STANDARD ENGINEERING PRACTICES.
6. THIS DETAIL IS TO BE USED FOR THE CONSTRUCTION OF THE STANDARD 8" CURB, IF THE UNDERLYING SOILS ARE SUITABLE FOR STABILIZATION.

*ALL PROPOSED CURB WITHIN TATAMY BOROUGH SHALL CONFORM TO BOROUGH STANDARDS

CONCRETE CURB DETAIL (TATAMY BOROUGH)



CONCRETE BUMPER BLOCK

Date	Description	No.
Revisions		

KEITH S. OTTES
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY SITE DETAILS

Project No.	200168301
Date	7/17/2025
Drawn By	MJW
Checked By	SH

Drawing No. CS-501
Sheet 17 of 52

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Date: 7/16/2025 Time: 20:40 User: bsoltys Style Table: Langan.stb Layout: CS-501 Document Code: 200168301-0503-CS101-0109

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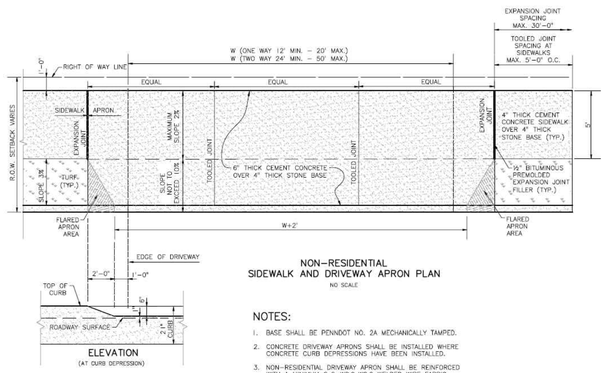
Project No. 200168301



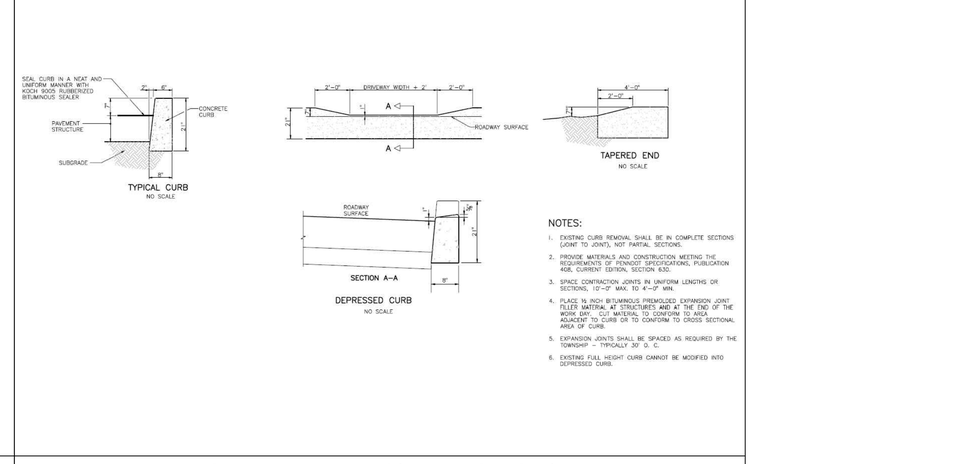
NON-RESIDENTIAL SIDEWALK AND DRIVEWAY APRON PLAN

NO SCALE

NOTES:

1. BASE SHALL BE PENNDOT NO. 2A MECHANICALLY TAMPED.
2. CONCRETE DRIVEWAY APRONS SHALL BE INSTALLED WHERE CONCRETE CURB DEPRESSIONS HAVE BEEN INSTALLED.
3. NON-RESIDENTIAL DRIVEWAY APRON SHALL BE REINFORCED WITH A MINIMUM 6x6-W2.9xW2.9 WELDED WIRE FABRIC. TERMINATE REINFORCING AT EXPANSION JOINTS. REINFORCING SHALL BE AS SPECIFIED BY DESIGN ENGINEER BASED ON SPECIFIC USE/LOADING REQUIREMENTS.
4. PROVIDE DRIVEWAY APRONS AT ACCESS POINTS TO UTILITY EASEMENTS AT LOCATIONS AS DIRECTED BY THE TOWNSHIP.
5. THE EDGE OF A DRIVEWAY SHALL BE NO CLOSER THAN 8 FEET FROM THE CENTERLINE OF AN INLET.

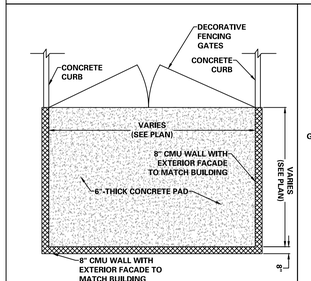
NON-RESIDENTIAL SIDEWALK AND DRIVEWAY APRON DETAIL



NOTES:

1. EXISTING CURB REMOVAL SHALL BE IN COMPLETE SECTIONS (JOINT TO JOINT), NOT PARTIAL SECTIONS.
2. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PENNDOT SPECIFICATIONS, PUBLICATION 408, CURRENT EDITION, SECTION 630.
3. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS, 10'-0" MAX. TO 4'-0" MIN.
4. PLACE ¼ INCH BITUMINOUS PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. MATERIAL TO CONFORM TO HEIGHT ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
5. EXPANSION JOINTS SHALL BE SPACED AS REQUIRED BY THE TOWNSHIP - TYPICALLY 30' O. C.
6. EXISTING FULL HEIGHT CURB CANNOT BE MODIFIED INTO DEPRESSED CURB.

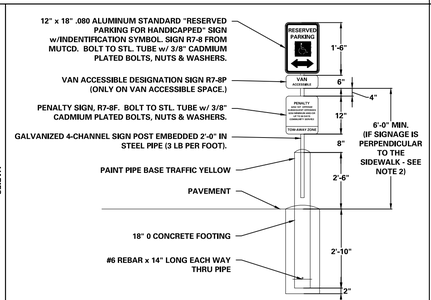
CONCRETE CURB DETAILS (PALMER TOWNSHIP)



NOTES:

1. TRASH ENCLOSURES MUST BE SUFFICIENTLY SIZED TO CONTAIN DUMPSTERS/CONTAINERS FOR TRASH AND RECYCLABLE MATERIALS. COORDINATE FINAL SIZE WITH TRASH REMOVAL COMPANY PRIOR TO ENCLOSURE CONSTRUCTION.
2. TRASH ENCLOSURE SHALL BE MASONRY STRUCTURES WITH AN EXTERIOR FACADE TO MATCH THE PRINCIPAL BUILDINGS.
3. TRASH ENCLOSURE GATES SHALL BE DECORATIVE FENCING MATERIALS WITH A STEEL FRAME AND SELF CLOSING.
4. TRASH ENCLOSURES SHALL BE A MINIMUM OF SIX FEET IN HEIGHT.
5. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS ON DIMENSIONS, FINISHING, ETC.

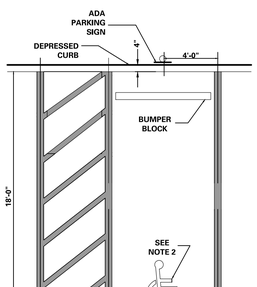
TRASH ENCLOSURE DETAIL



NOTES:

1. ADA PARKING SIGN SHALL CONFORM WITH CURRENT STATE & LOCAL CODES AND REGULATIONS.
2. THE BOTTOM OF R7-8P SIGN SHALL BE MOUNTED A MINIMUM OF 60 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN SIGN IS PARALLEL TO SIDEWALK AND A MINIMUM OF 72 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN SIGN IS PERPENDICULAR TO SIDEWALK.
3. THE R7-8 SIGN SHALL BE CENTERED AND MOUNTED AT THE HEAD OF EACH PARKING SPACE.
4. WHERE PARKING SPACES RESERVED FOR PERSONS WITH DISABILITIES ARE DESIGNATED TO ACCOMMODATE WHEEL CHAIR VANS, SIGN R7-8P SHOULD BE MOUNTED BELOW THE R7-8 SIGN.

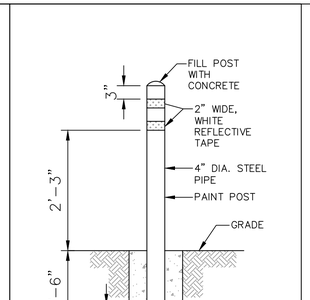
ADA ACCESSIBLE PARKING SIGN



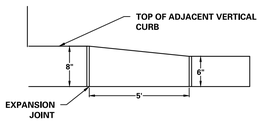
NOTES:

1. STRIPING NEXT TO ADA PARKING SPACE IS 5'-0" FOR STANDARD SPACES AND 8'-0" FOR VAN ACCESSIBLE SPACES
2. DESIGNATE ADA PARKING w/INTERNATIONAL SYMBOL OF ACCESS. COLOR PER LOCAL REQMT'S
3. STALLS SHALL CONSIST OF 4" WIDE PAINTED STRIPES

ACCESSIBLE PARKING STALL

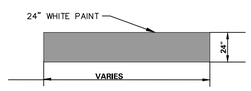


BOLLARD DETAIL



NOTE: TRANSITION LENGTH VARIES IF CONNECTING TO AN ADJACENT ADA RAMP

8" TO 6" CURB TRANSITION



STOP BAR

No.	Description	Date
	Revisions	

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRILIMINARY SITE DETAILS

Project No. 200168301
Date 5/23/2025
Drawn By MJW
Checked By SH

Drawing No. CS-502
Sheet 18 of 52

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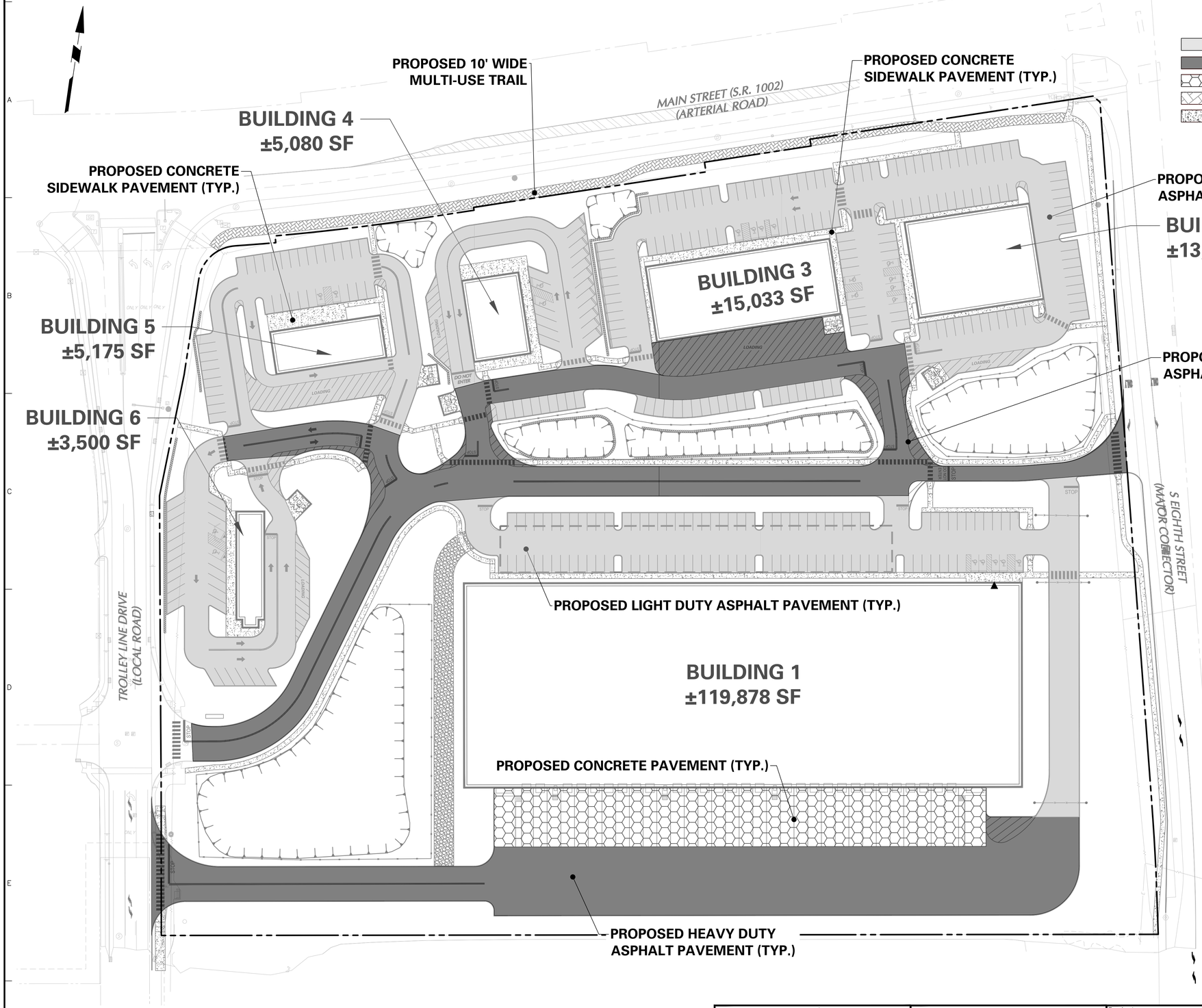
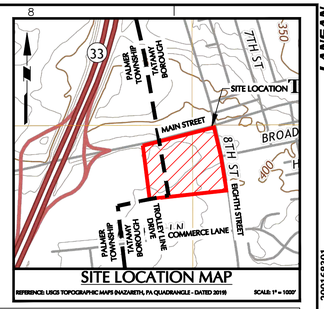
Project No. 200168301



PAVEMENT LEGEND

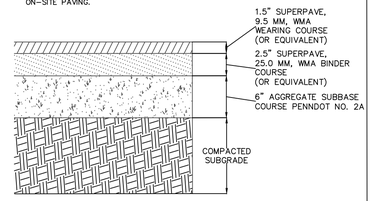
- PROPOSED LIGHT-DUTY ASPHALT PAVEMENT
- PROPOSED HEAVY-DUTY ASPHALT PAVEMENT
- PROPOSED CONCRETE
- PROPOSED ASPHALT MULTI-USE TRAIL
- PROPOSED CONCRETE SIDEWALK PAVEMENT



SITE LOCATION MAP

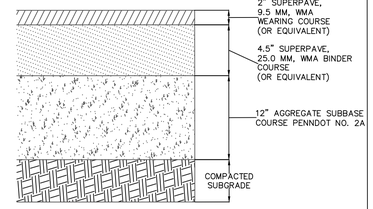
REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

NOTE: CONTRACTOR TO REVIEW AND VERIFY CONSISTENCY BETWEEN PROVIDED PAVEMENT SECTIONS AND FINAL GEOTECHNICAL ENGINEERING REPORT FOR ON-SITE PAVING.



LIGHT-DUTY ASPHALT PAVEMENT DETAIL

NOTE: CONTRACTOR TO REVIEW AND VERIFY CONSISTENCY BETWEEN PROVIDED PAVEMENT SECTIONS AND FINAL GEOTECHNICAL ENGINEERING REPORT FOR ON-SITE PAVING.



HEAVY-DUTY ASPHALT PAVEMENT DETAIL

NOTE: CONTRACTOR TO REVIEW AND VERIFY CONSISTENCY BETWEEN PROVIDED PAVEMENT SECTIONS AND FINAL GEOTECHNICAL ENGINEERING REPORT FOR ON-SITE PAVING.

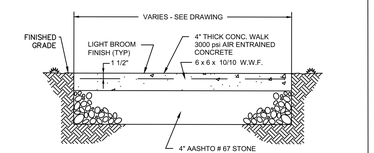


CONCRETE PAVING SECTION

NOT TO SCALE

CONCRETE PAVEMENT DETAIL

NOTE: CONTRACTOR TO REVIEW AND VERIFY CONSISTENCY BETWEEN PROVIDED PAVEMENT SECTIONS AND FINAL GEOTECHNICAL ENGINEERING REPORT FOR ON-SITE PAVING.



CONCRETE WALK DETAIL

NOT TO SCALE

NOTE: USE FOR ON-SITE SIDEWALK CONSTRUCTION ONLY. USE MUNICIPAL AND/OR PENNDOT STANDARDS & SPECIFICATIONS FOR OFF-SITE SIDEWALK (PUBLIC) CONSTRUCTION.

CONCRETE SIDEWALK DETAIL

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

NOTE:
SEE SHEET CS-501 FOR MULTI USE TRAIL AND GRAVEL ROAD DETAILS.

50 0 25 50
SCALE: 1 INCH = 50 FEET

No.	Description	Date
	Revisions	

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER PROVISIONAL

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY PAVEMENT PLAN

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CP-101
Sheet 19 of 52

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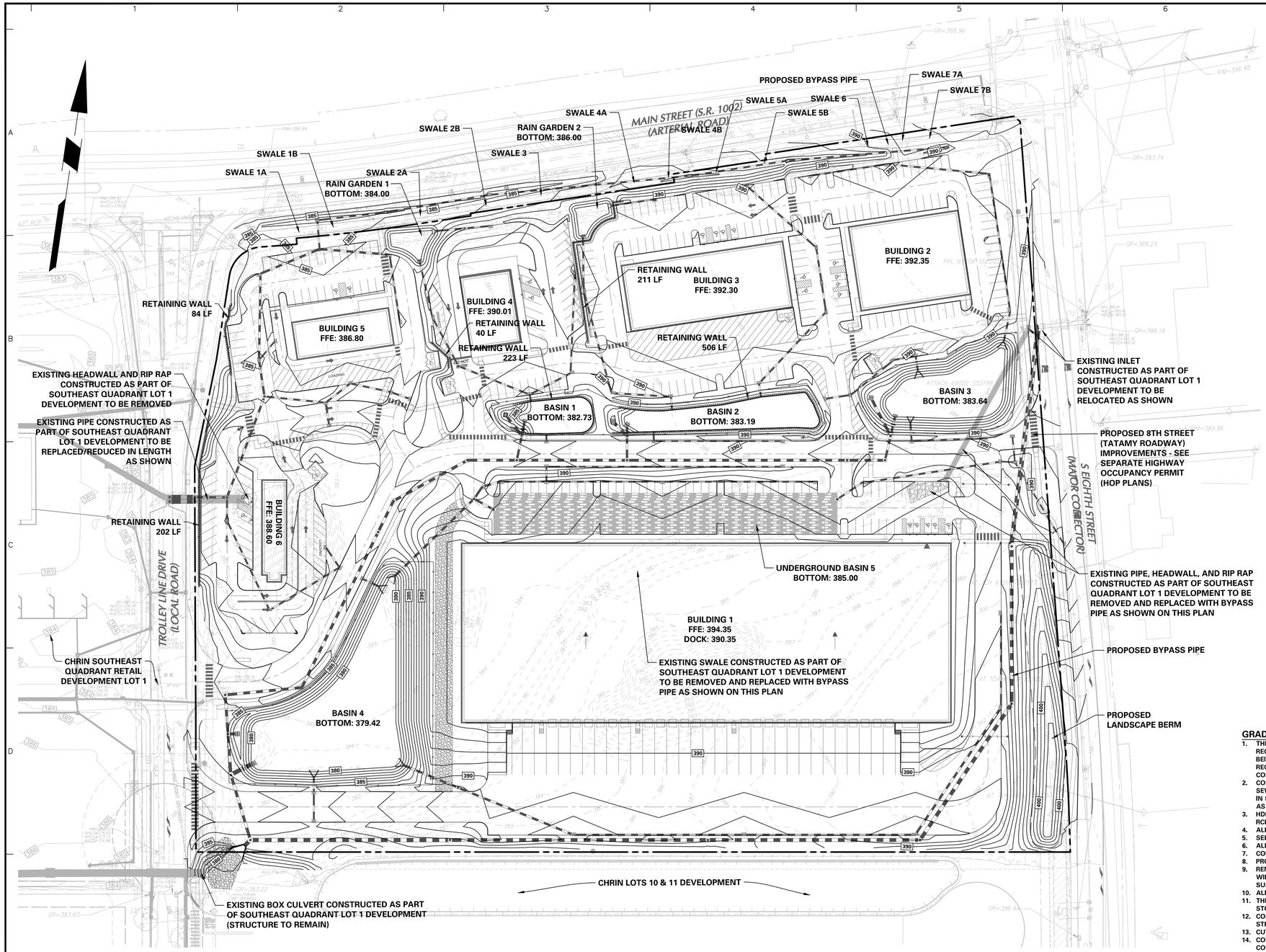
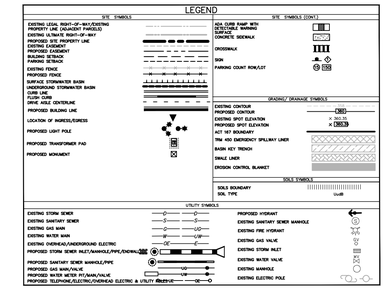
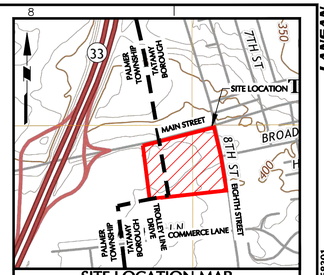
Date: 7/16/2025 Time: 17:50 User: bsoltys Style Table: Langan.stb Layout: CP-101 Document Code: 200168301-0503-CP101-0101

Project No. 200168301 LANGAN 95



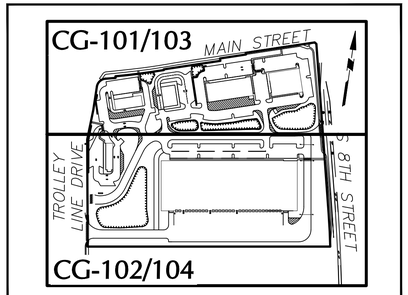
LEGEND





SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



KEY MAP 1"=300'

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE, AND
(10) WORKING DAYS IN DESIGN STAGE
— STOP & CALL —

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192

GRADING AND DRAINAGE PLAN NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES, WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
3. HDPE = HIGH DENSITY POLYETHYLENE PIPE
   RCP = REINFORCED CONCRETE PIPE
4. ALL STORMWATER FACILITIES SHALL BE CONSTRUCTED WITH WATER TIGHT JOINTS.
5. SEE DETAIL DRAWINGS FOR ALL PROPOSED STRUCTURE DETAILS.
6. ALL STORM DRAINAGE FACILITIES SHALL CONFORM TO THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, AS LATEST REVISED.
7. COMPACTION CRITERIA FOR FILL PLACEMENT SHALL MEET THE REQUIREMENTS SET FORTH BY THE GEOTECHNICAL ENGINEER OF RECORD.
8. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
9. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ONSITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS SECTION.
10. ALL CONCRETE, UNLESS OTHERWISE NOTED OR SPECIFIED BY REGULATORY AUTHORITIES, SHALL BE A MINIMUM OF 4,000 PSI.
11. THE PROPERTY OWNER WILL BE RESPONSIBLE FOR LONG TERM MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING ALL STORMWATER BASINS AND SWALES.
12. CONTRACTOR TO PROVIDE APPROPRIATE SIZE MANHOLE, INLET STRUCTURES, AND CATCH BASIN SUMPS TO ACCOMMODATE PIPES ENTERING AND EXITING STRUCTURES, AS APPROPRIATE.
13. CUT AND FILL SOIL SLOPES SHALL NOT BE STEEPER THAN 3:1.
14. CONTRACTOR SHALL PROVIDE LOW PROFILE INLETS/GRATES WHERE CALLED OUT ON THE PLANS AND WHERE NECESSARY DUE TO LIMITED COVER CONDITIONS.
15. CONTRACTOR TO VERIFY ALL PIPE MATERIAL AND PIPE BURIAL DEPTHS PRIOR TO ORDERING AND INSTALLATION OF THE STORM CONVEYANCE SYSTEM.
16. NO SUBSTANTIAL GRADING SHALL OCCUR AND NO BUILDING PERMITS SHALL BE ISSUED FOR ANY BUILDING UNLESS DOWNSTREAM PROTECTIONS ARE IN PLACE IN ASSOCIATION WITH AN APPROVED EROSION AND SEDIMENT CONTROL DESIGN, POST-CONSTRUCTION STORMWATER MANAGEMENT DESIGN AND THE ISSUANCE OF A NPDES PERMIT.
17. ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE PADEP E&S MANUAL, PADEP BMP MANUAL, PENNDOT PUBLICATION 408, AND PENNDOT PUBLICATION 72M, ALL AS AMENDED AND UPDATED, UNLESS WRITTEN REQUESTS FOR DEVIATION HAVE BEEN REVIEWED AND EXPLICITLY APPROVED BY THE MUNICIPAL ENGINEER.
18. PALMER TOWNSHIP AND/OR TATAMY BOROUGH ARE NOT RESPONSIBLE FOR THE MAINTENANCE OF ANY AREA NOT DEDICATED TO AND ACCEPTED FOR PUBLIC USE.
19. THE OPERATION AND MAINTENANCE AGREEMENT IS PART OF THE PLAN. IF THE OWNER FAILS TO ADHERE TO THE TERMS OF THE AGREEMENT, THE MUNICIPALITY MAY PERFORM THE SERVICES REQUIRED AND CHARGE THE OWNER THE APPROPRIATE FEES.
20. THE KNOCKING OUT OF INLET OR OTHER STRUCTURE CORNERS IS PROHIBITED.
21. THE SWM REPORT IS A PART OF THIS PLAN.
22. ALL INLETS MUST INCLUDE THE 24" X 3" TROUT LOGO PLATE AND TAGS DISPLAYING A DUMPING WARNING AS MANUFACTURED BY EAST JORDAN IRON WORKS (CATALOG NO. 7003PLI)

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

SCALE: 1 INCH = 60 FEET

Date	Description	No.
Revisions		

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
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Project
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PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY MASTER GRADING AND DRAINAGE PLAN

Project No.	Drawing No.
200168301	CG-100
Date: 5/23/2025	
Drawn By: MJW	
Checked By: SH	Sheet 20 of 52

LANGAN 96
Project No. 200168301

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ACT 287 AS AMENDED

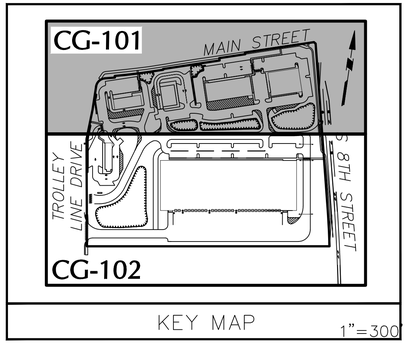
UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND
(10) WORKING DAYS IN DESIGN STAGE
--- STOP & CALL ---

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192



KEY MAP 1"=300'

LEGEND

SITE SYMBOLS

EXISTING LOW, RIGHT-OF-WAY/EXISTING LOW, DOUBLE DOORWAY/RELOCATED
EXISTING ULTIMATE RIGHT-OF-WAY
PROPOSED SITE PROPERTY LINE
EXISTING EASEMENT
PROPOSED EASEMENT
BUILDING SETBACK
PARKING SETBACK
EXISTING FENCE
PROPOSED FENCE
SURFACE STORMWATER BASIN
UNDERGROUND STORMWATER BASIN
CURB LINE
FLUSH CURB
DRIVE AISLE CENTERLINE
PROPOSED BUILDING LINE
LOCATION OF SHORED EXCAVATION
PROPOSED LIGHT POLE
PROPOSED TRANSFORMER PAD
PROPOSED MONUMENT

SITE SYMBOLS (CONT.)

ADA CURB RAMP WITH DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK
CROSSWALK
SIGN
PARKING COUNT ROW/LOT

GRADING/ DRAINAGE SYMBOLS

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
ACT 167 BOUNDARY
TRN 400 EMERGENCY SPILLWAY LINER
BASIN KEY TRENCH
SWALE LINER
EROSION CONTROL BLANKET

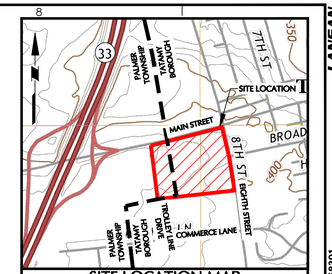
SOILS SYMBOLS

SOILS BOUNDARY
SOIL TYPE

UTILITY SYMBOLS

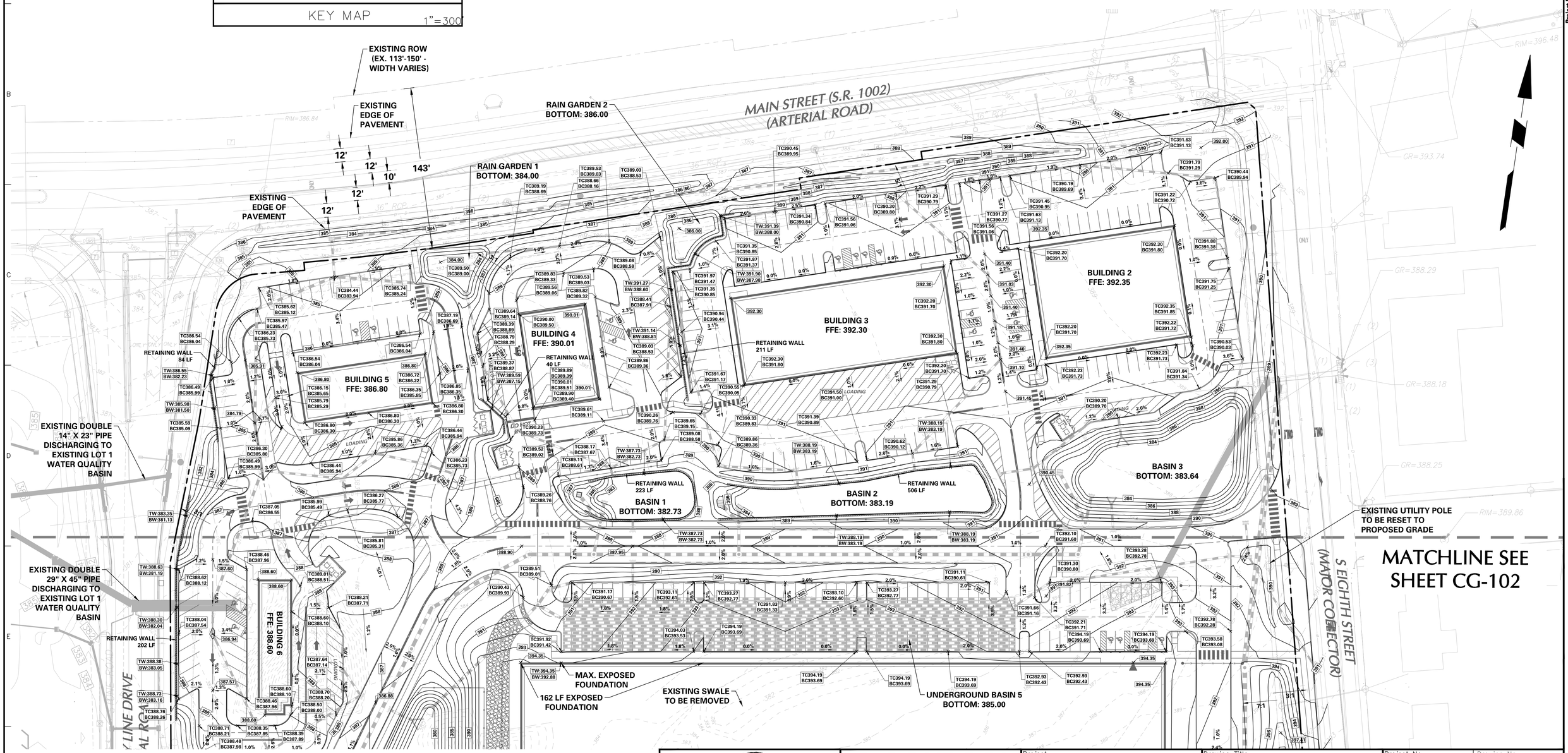
EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING GAS MAIN
EXISTING WATER MAIN
EXISTING OVERHEAD/UNDERGROUND ELECTRIC
PROPOSED STORM SEWER INLET/MANHOLE/PIPE/ENDWALL
PROPOSED SANITARY SEWER MANHOLE/PIPE
PROPOSED GAS MAIN/VALVE
PROPOSED WATER MAIN/ FITTING/VALVE
PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY POLE

PROPOSED HYDRANT
EXISTING SANITARY SEWER MANHOLE
EXISTING FIRE HYDRANT
EXISTING GAS VALVE
EXISTING STORM INLET
EXISTING WATER VALVE
EXISTING MANHOLE
EXISTING ELECTRIC POLE



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



NOTE:
SEE SHEET CG-100 FOR GRADING PLAN NOTES.

SCALE: 1 INCH = 40 FEET

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY GRADING PLAN

Project No.	Drawing No.
200168301	CG-101
Date: 7/17/2025	
Drawn By: TLP	
Checked By: SH	

Sheet 21 of 52

LANGAN 97
Project No. 200168301

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Date: 7/16/2025 Time: 17:53 User: bsoltys Style Table: Langan,stb Layout: CG-101 Document Code: 200168301-0503-CG101-0102

ACT 287 AS AMENDED

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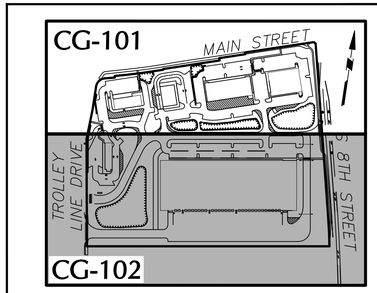


KEY MAP 1"=300'

LEGEND

SITE SYMBOLS

EXISTING LEGAL RIGHT-OF-WAY/EXISTING CARTWAY LINE (BOUNDARY MONUMENTED)
EXISTING ULTIMATE RIGHT-OF-WAY
PROPOSED SITE PROPERTY LINE
EXISTING EASEMENT
PROPOSED EASEMENT
BUILDING SETBACK
PARKING SETBACK
EXISTING FENCE
PROPOSED FENCE
SURFACE STORMWATER BASIN
UNDERGROUND STORMWATER BASIN
CURB LINE
FLUSH CURB
DRIVE AISLE CENTERLINE
PROPOSED BUILDING LINE
LOCATION OF INDEX/EXPRESS
PROPOSED LIGHT POLE
PROPOSED TRANSFORMER PAD
PROPOSED MONUMENT

SITE SYMBOLS (CONT.)

ADA CURB RAMP WITH DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK
CROSSWALK
SIGN
PARKING COUNT ROW/LOT

GRADING/ DRAINAGE SYMBOLS

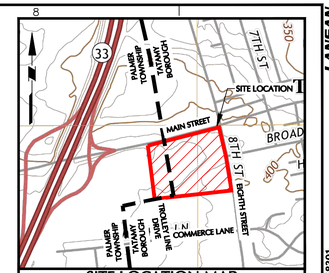
EXISTING CONTOUR
PROPOSED CONTOUR
PROPOSED SPOT ELEVATION
PROPOSED SPOT ELEVATION
ACT 167 BOUNDARY
TRN 400 EMERGENCY SPILLWAY LINER
BASIN KEY TRENCH
SWALE LINER
EROSION CONTROL BLANKET

SOILS SYMBOLS

SOILS BOUNDARY
SOIL TYPE

UTILITY SYMBOLS

EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING GAS MAIN
EXISTING WATER MAIN
EXISTING OVERHEAD/UNDERGROUND ELECTRIC
PROPOSED STORM SEWER INLET/MANHOLE/PIPE/ENDWALL
PROPOSED SANITARY SEWER MANHOLE/PIPE
PROPOSED GAS MAIN/VALVE
PROPOSED WATER MAIN/ FH/ VALVE/VALVE
PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY POLE
PROPOSED HYDRANT
EXISTING SANITARY SEWER MANHOLE
EXISTING FIRE HYDRANT
EXISTING GAS VALVE
EXISTING STORM INLET
EXISTING WATER VALVE
EXISTING MANHOLE
EXISTING ELECTRIC POLE



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

EXISTING LOT 1 WATER QUALITY BASIN

EXISTING DOUBLE 29" X 45" PIPE DISCHARGING TO EXISTING LOT 1 WATER QUALITY BASIN

RETAINING WALL 202 LF

BUILDING 6 FFE: 388.60

TROLLEY LINE DRIVE (LOCAL ROAD)

RETAINING WALL 223 LF

BASIN 1 BOTTOM: 382.73

BASIN 2 BOTTOM: 383.19

RETAINING WALL 506 LF

BASIN 3 BOTTOM: 383.64

MAX. EXPOSED FOUNDATION

162 LF EXPOSED FOUNDATION

EXISTING SWALE TO BE REMOVED

UNDERGROUND BASIN 5 BOTTOM: 385.00

BUILDING 1 FFE: 394.35 DOCK: 390.35

BASIN 4 BOTTOM: 379.42

EXISTING 48"X 96" BOX CULVERT DISCHARGING TO EXISTING LOT 1 WATER QUALITY BASIN

EXISTING LOT 10/11 STORMWATER BASIN

EXISTING CULVERT AND LOW AREA

S EIGHTH STREET (MAJOR COLLECTOR)

PROPOSED 5' HIGH LANDSCAPE BERM

MATCHLINE SEE SHEET CG-101

NOTE:
SEE SHEET CG-100 FOR GRADING PLAN NOTES.

SCALE: 1 INCH = 40 FEET

No.	Description	Date
	Revisions	

KEITH S. OTTES
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY GRADING PLAN

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SH

Drawing No. CG-102
Sheet 22 of 52

LANGAN 98
Project No. 200168301
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Date: 7/16/2025 Time: 17:55 User: bscltys Style Table: Langan,stb Layout: CG-102 Document Code: 200168301-0503-CG101-0103

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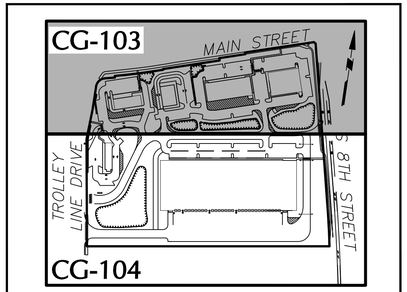
(10) WORKING DAYS IN DESIGN STAGE
--- STOP & CALL ---

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192



KEY MAP 1"=300'

LEGEND

SITE SYMBOLS

EXISTING LEGAL RIGHT-OF-WAY/EXISTING PROPERTY LINE (BOUNDARY MONUMENTED)
EXISTING ULTIMATE RIGHT-OF-WAY
PROPOSED SITE PROPERTY LINE
EXISTING EASEMENT
PROPOSED EASEMENT
BUILDING SETBACK
PARKING SETBACK
EXISTING FENCE
PROPOSED FENCE
SURFACE STORMWATER BASIN
UNDERGROUND STORMWATER BASIN
CURB LINE
FLUSH CURB
DRIVE AISLE CENTERLINE
PROPOSED BUILDING LINE
LOCATION OF INSPECT.&/OR ACCESS
PROPOSED LIGHT POLE
PROPOSED TRANSFORMER PAD
PROPOSED MONUMENT

SITE SYMBOLS (CONT.)

ADA CURB RAMP WITH DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK
CROSSWALK
SIGN
PARKING COUNT ROW/LOT

GRADING/ DRAINAGE SYMBOLS

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
ACT BOUNDARY
TBM 450 EMERGENCY SPILLWAY LINER
BASIN KEY TRENCH
SWALE LINER
EROSION CONTROL BLANKET

SOILS SYMBOLS

SOILS BOUNDARY
SOIL TYPE

UTILITY SYMBOLS

EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING GAS MAIN
EXISTING WATER MAIN
EXISTING OVERHEAD/UNDERGROUND ELECTRIC
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PROPOSED SANITARY SEWER MANHOLE/PIPE
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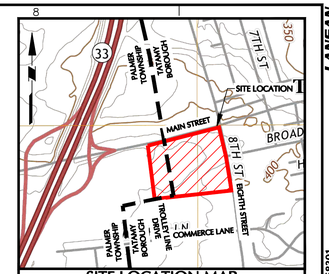
EXISTING FIRE HYDRANT
EXISTING GAS VALVE
EXISTING STORM INLET
EXISTING WATER VALVE
EXISTING MANHOLE
EXISTING ELECTRIC POLE



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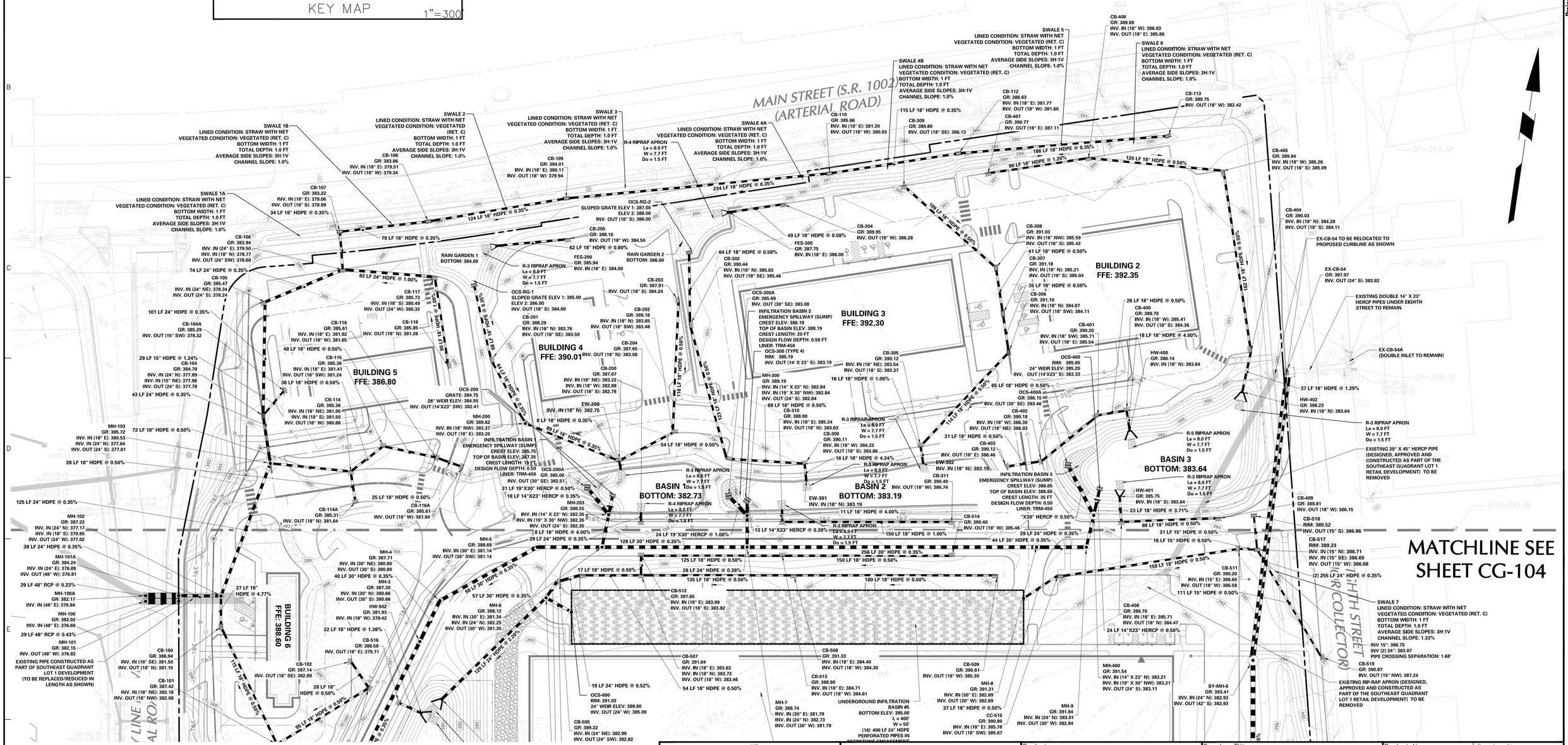

NOTE:
SEE SHEET CG-100 FOR DRAINAGE PLAN NOTES.

SCALE: 1 INCH = 40 FEET

Date	Description	No.
Revisions		

KEITH S. OTTES
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER PROVISIONAL
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND FORKS TOWNSHIP / EASTON BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE PLAN

Project No.	200168301
Date	7/17/2025
Drawn By	TLP
Checked By	SH

Drawing No. CG-103
Sheet 23 of 52

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Date: 7/16/2025 Time: 17:57 User: bsollys Style Table: Langan.stb Layout: CG-103 Document Code: 200168301-0503-CG201-0102

LANGAN 99 Project No. 200168301

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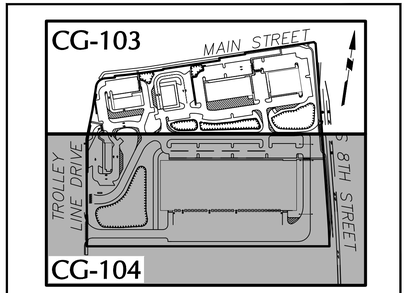
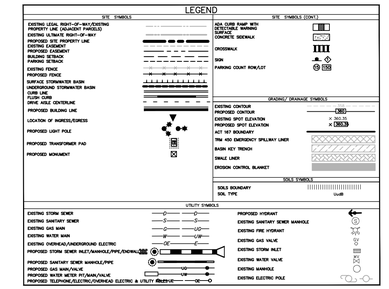
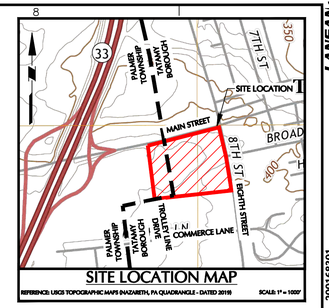
Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192



KEY MAP 1"=300'





LANGAN100

Project No. 20016830 1

NOTE:
SEE SHEET CG-100 FOR DRAINAGE PLAN NOTES.

SCALE: 1 INCH = 40 FEET

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP / TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE PLAN

Project No.	Drawing No.
200168301	CG-104
Date: 7/17/2025	
Drawn By: TLP	
Checked By: SH	Sheet 24 of 52

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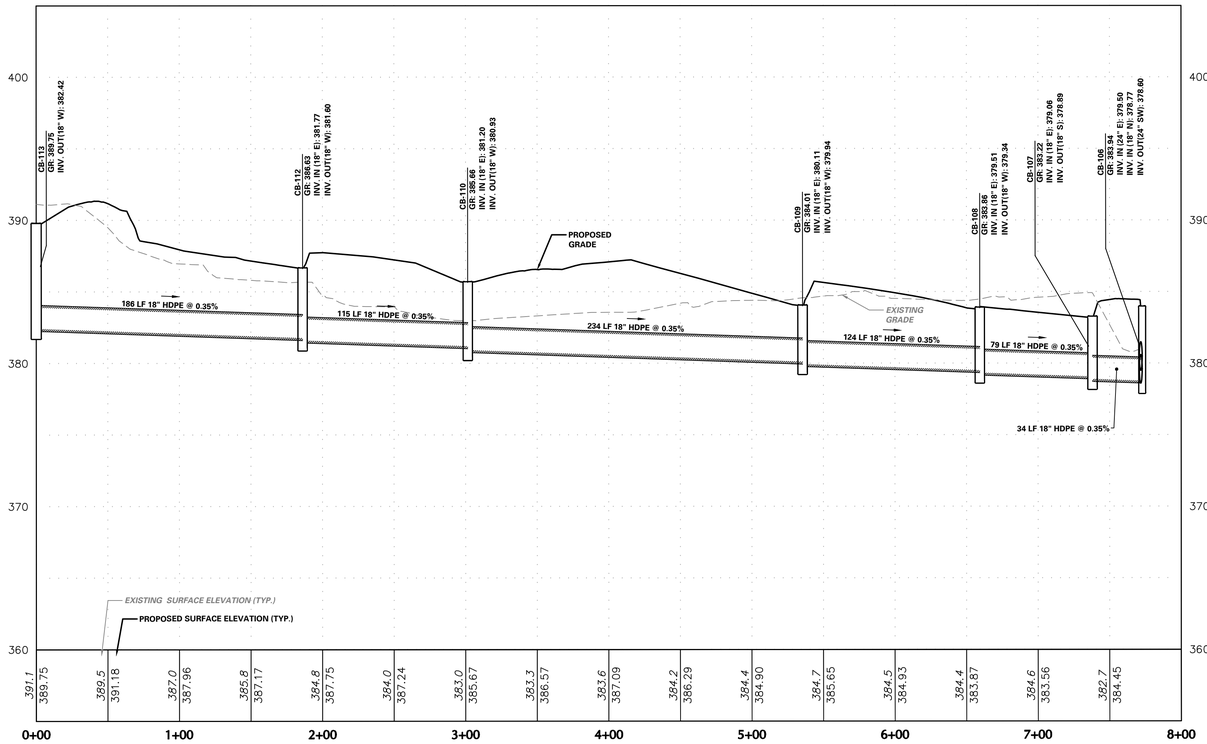
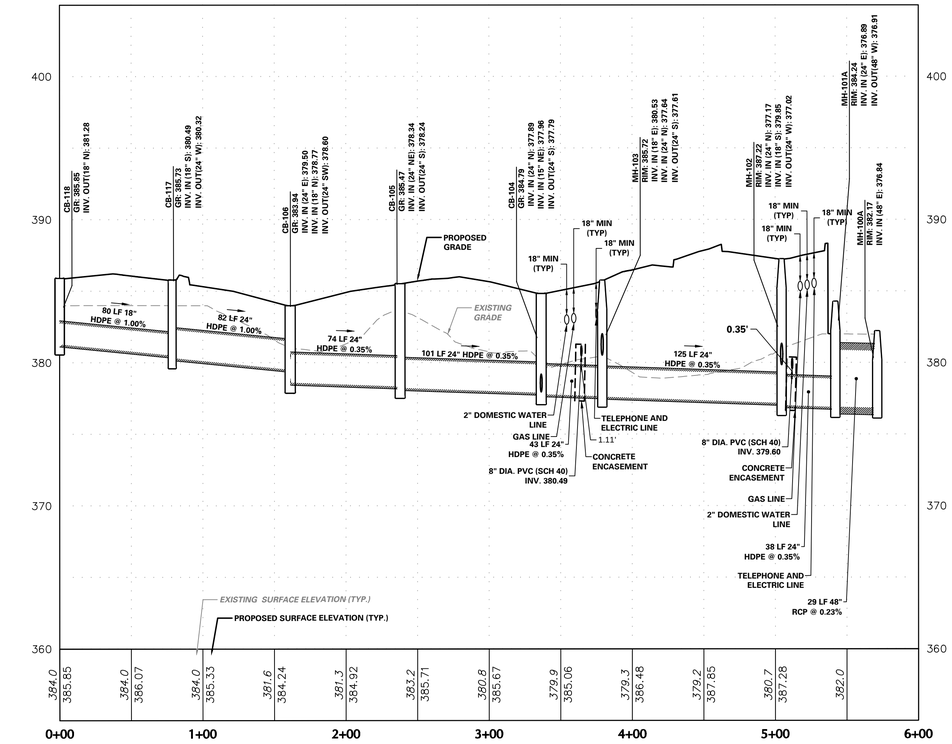
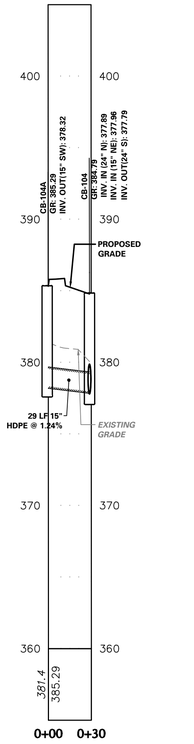


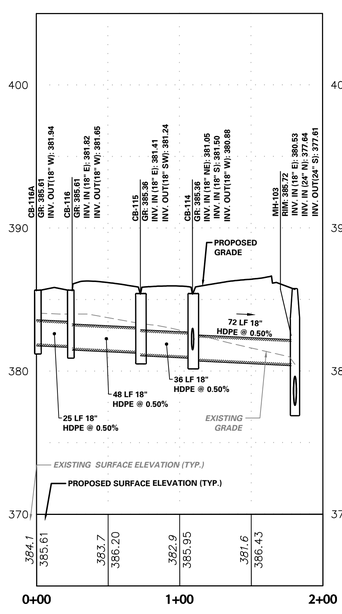
CB-113 TO CB-106 PROFILE



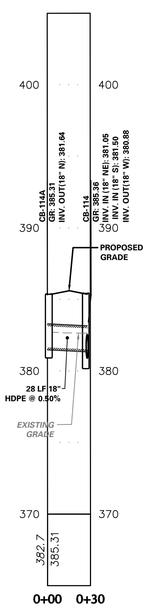
CB-118 TO MH-100A PROFILE



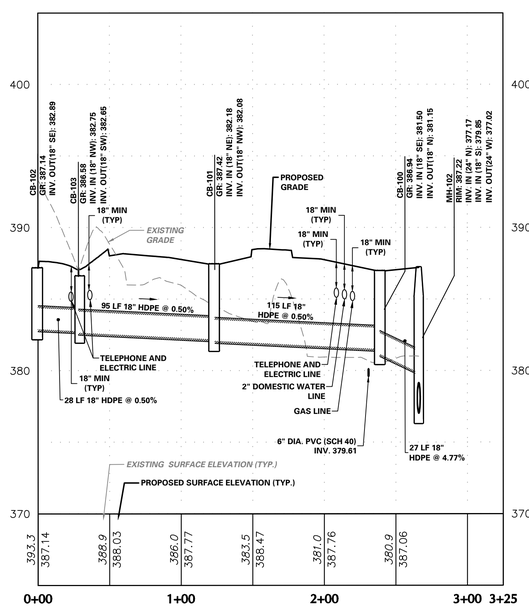
CB-104A TO CB-104 PROFILE



CB-116A TO MH-103 PROFILE



CB-114A TO CB-114 PROFILE



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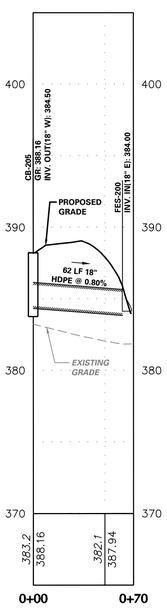
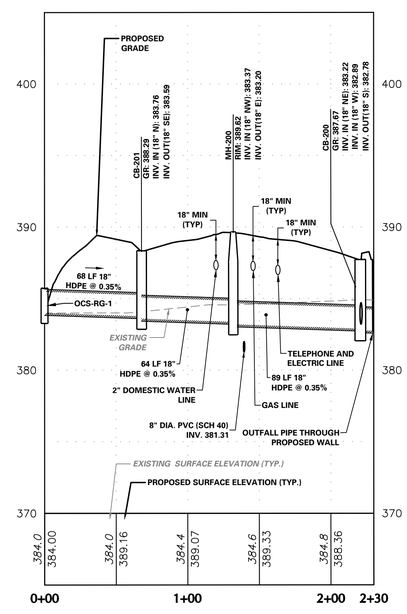
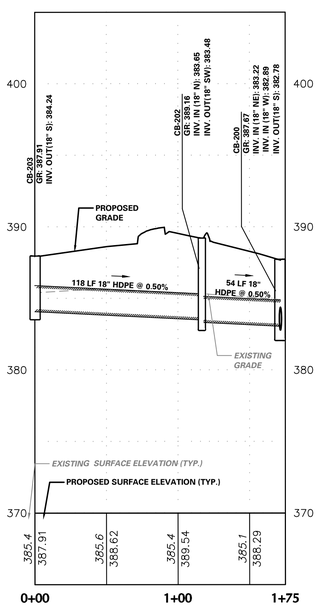


CB-205 TO FES-200 PROFILE



OCS-RG-1 TO EW-200 PROFILE



CB-203 TO CB-200 PROFILE

50 0 25 50
HORIZONTAL SCALE IN FEET

5 0 1 2 5
VERTICAL SCALE IN FEET

No.	Description	Date
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER POSITION

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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PALMER TOWNSHIP NORTHAMPTON COUNTY TATAMY BOROUGH PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE AND UTILITY PROFILES

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CG-201
Sheet 25 of 52

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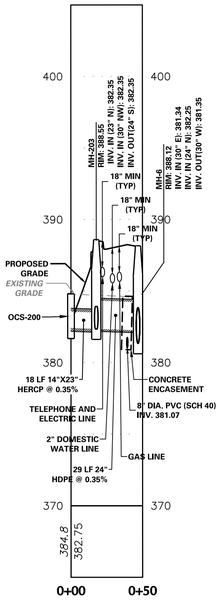
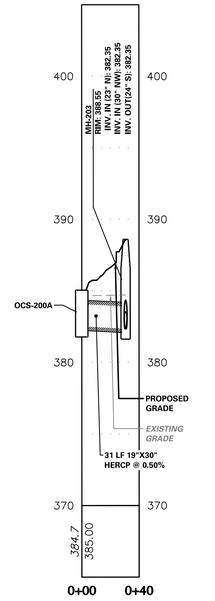
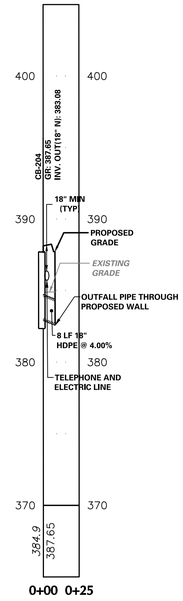
LANGAN 101 Project No. 200168301



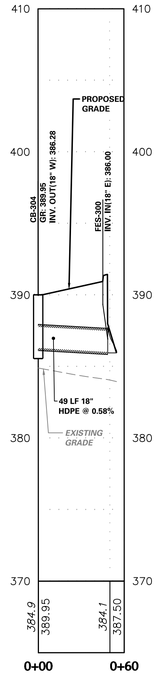
OCS-200 TO MH-6 PROFILE



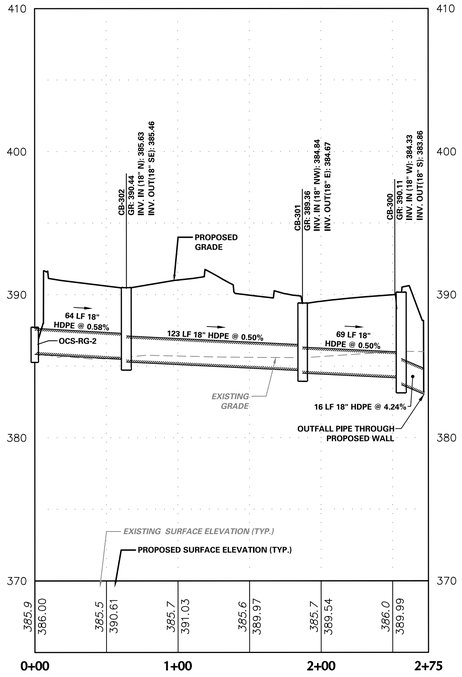
OCS-200A TO MH-203 PROFILE



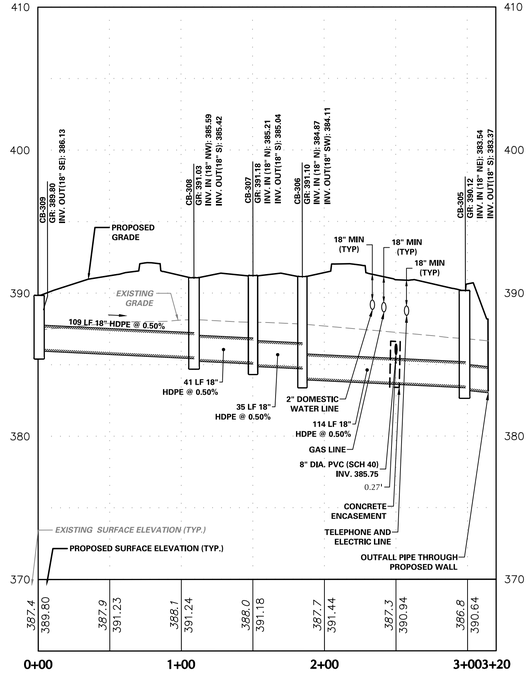
CB-204 TO EW-201 PROFILE



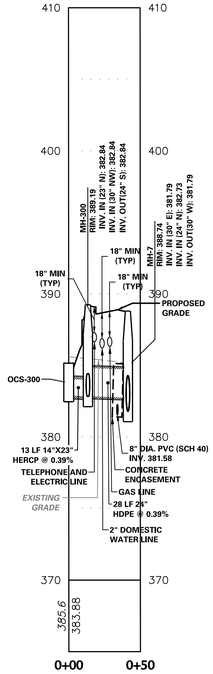
CB-304 TO FES-300 PROFILE



OCS-RG-2 TO EW-301 PROFILE



CB-309 TO EW-302 PROFILE



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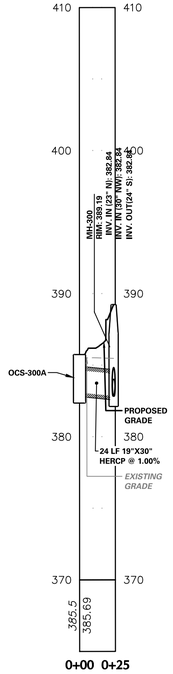

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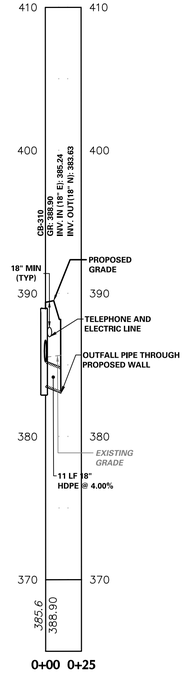
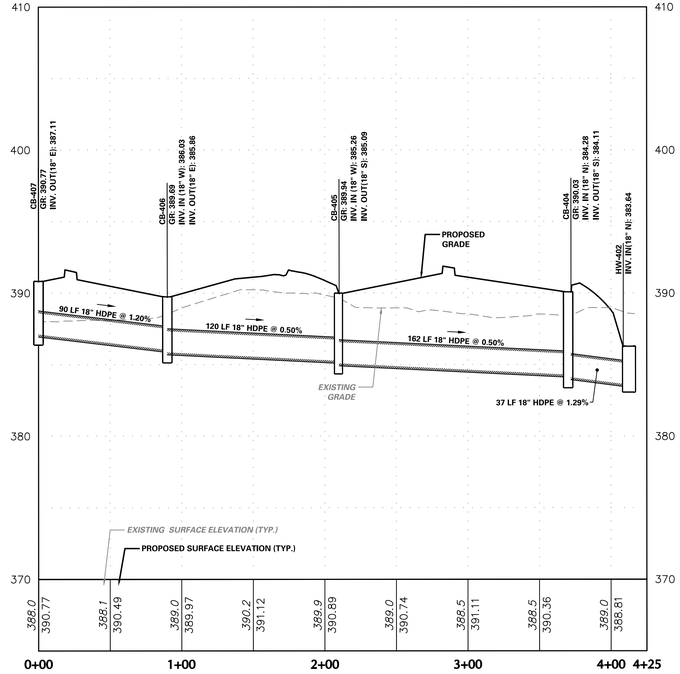


CB-310 TO EW-300 PROFILE



CB-407 TO HW-402 PROFILE

50 0 25 50
HORIZONTAL SCALE IN FEET

5 0 1 2 5
VERTICAL SCALE IN FEET

No.	Description	Date
	Revisions	

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP, TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE AND UTILITY PROFILES

Project No. 200168301
Date 05/15/2025
Drawn By TLP
Checked By SMH

Drawing No. CG-202
Sheet 26 of 52

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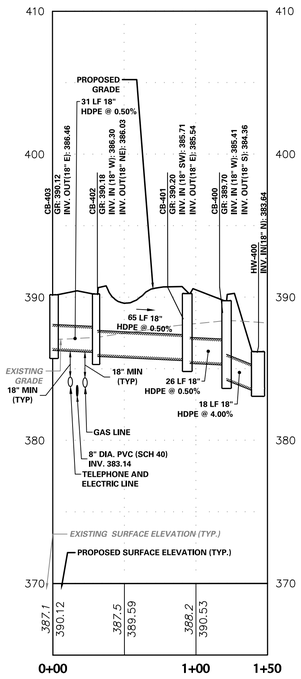
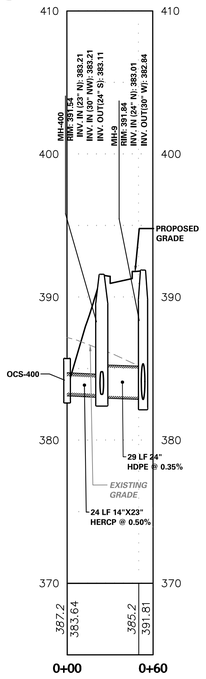
LANGAN 102
Project No. 200168301

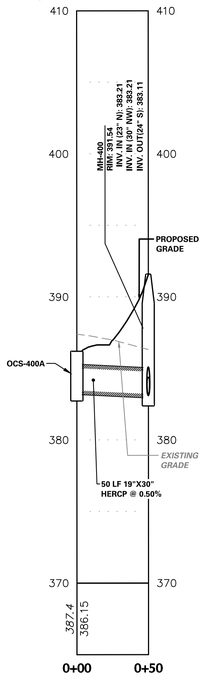
Date: 7/16/2025 Time: 18:00 User: bsoltys Style Table: Langan.stb Layout: CG-202 Document Code: 200168301-0503-CG301-0102



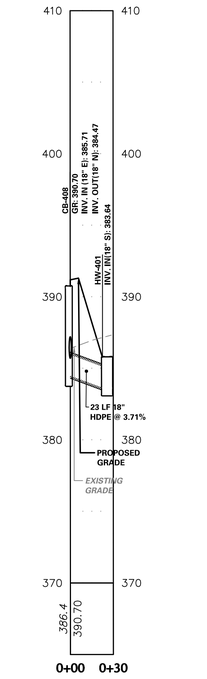
CB-403 TO HW-400 PROFILE



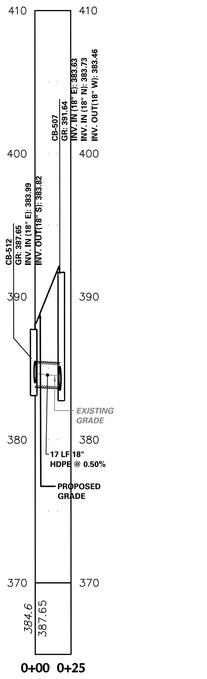
OCS-400 TO MH-9 PROFILE



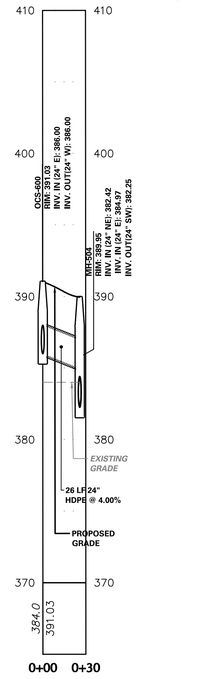
OCS-400A TO MH-400 PROFILE



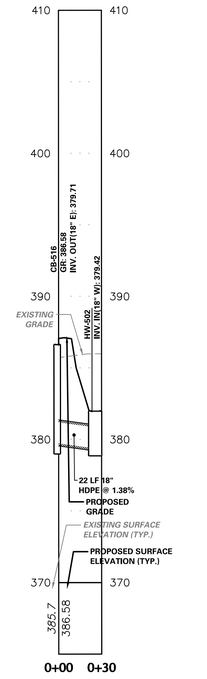
CB-408 TO HW-401 PROFILE



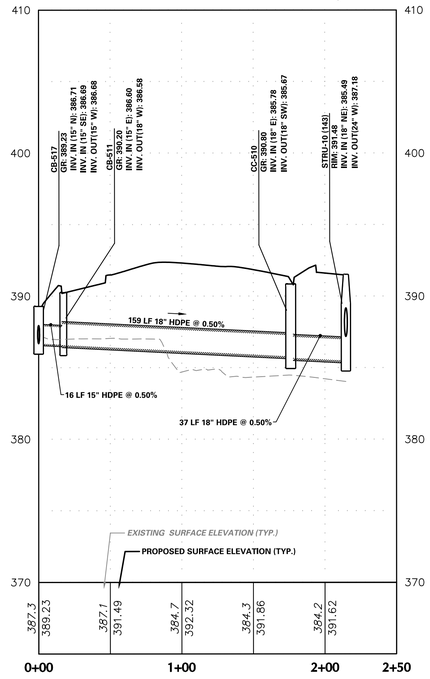
CB-512 TO CB-507 PROFILE



MH-503 TO MH-504 PROFILE



CB-516 TO FES-502 PROFILE



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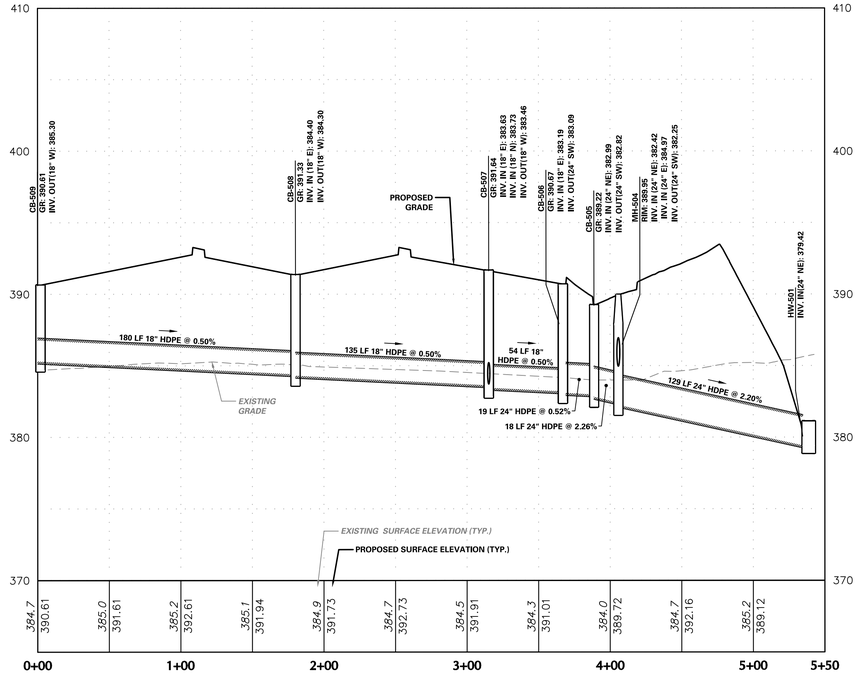

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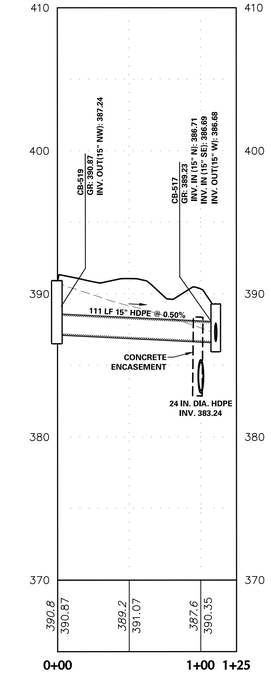

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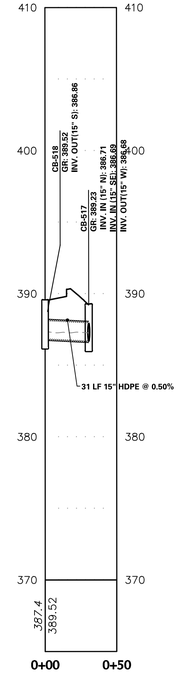

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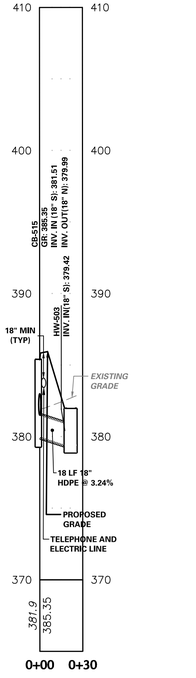

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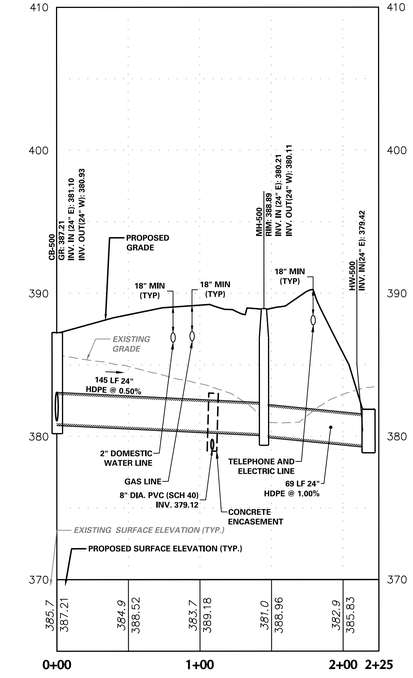

CB-500 TO HW-500 PROFILE

HORIZONTAL SCALE IN FEET: 50 0 25 50

VERTICAL SCALE IN FEET: 5 0 1 2 5

No.	Description	Date
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER PE074526

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE AND UTILITY PROFILES

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CG-203
Sheet 27 of 52

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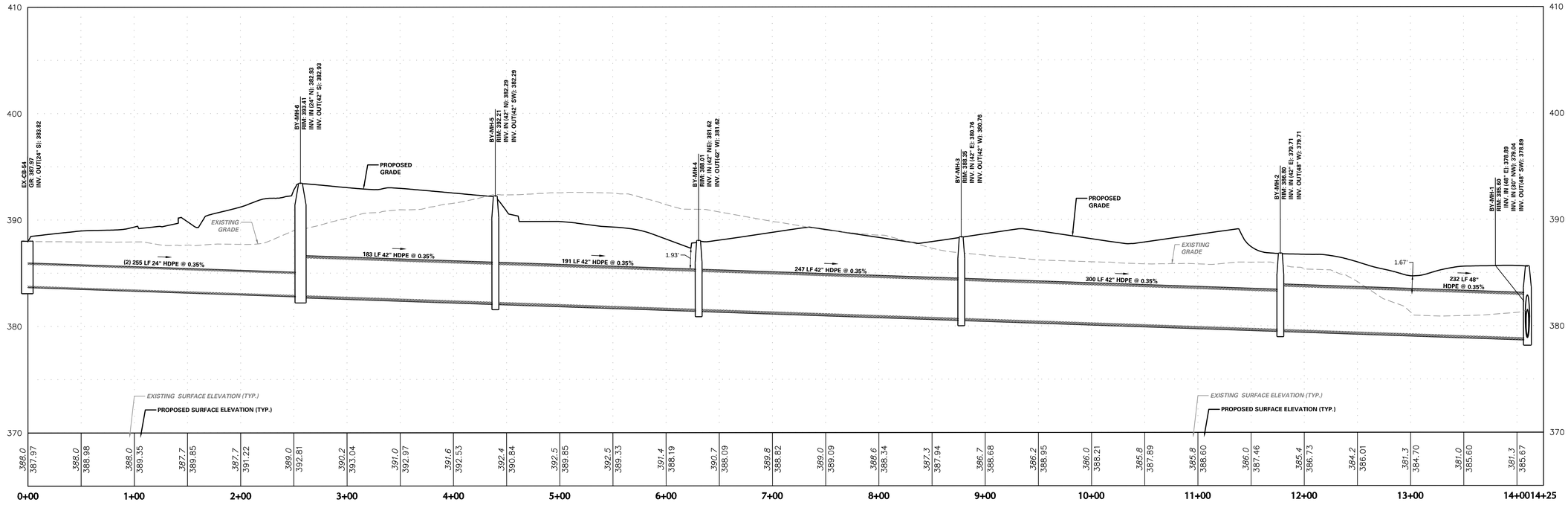
LANGAN 103 Project No. 200168301



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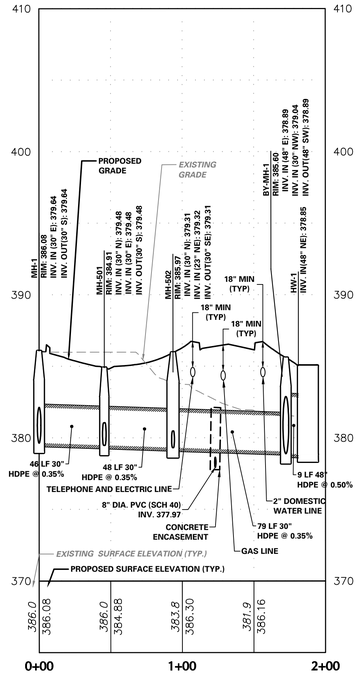
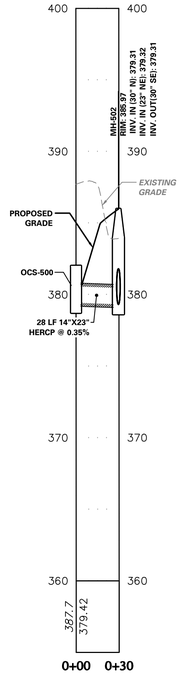
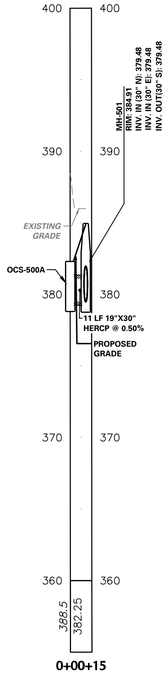


MH-1 TO HW-1 PROFILE



OCS-500 TO MH-502 PROFILE



OCS-500A TO MH-501 PROFILE

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HORIZONTAL SCALE IN FEET

5 0 1 2 5
VERTICAL SCALE IN FEET

No.	Description	Date
	Revisions	

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER POSITION
KEITH S. MOTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE AND UTILITY PROFILES

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CG-204
Sheet 28 of 52

LANGAN 104
Project No. 200168301
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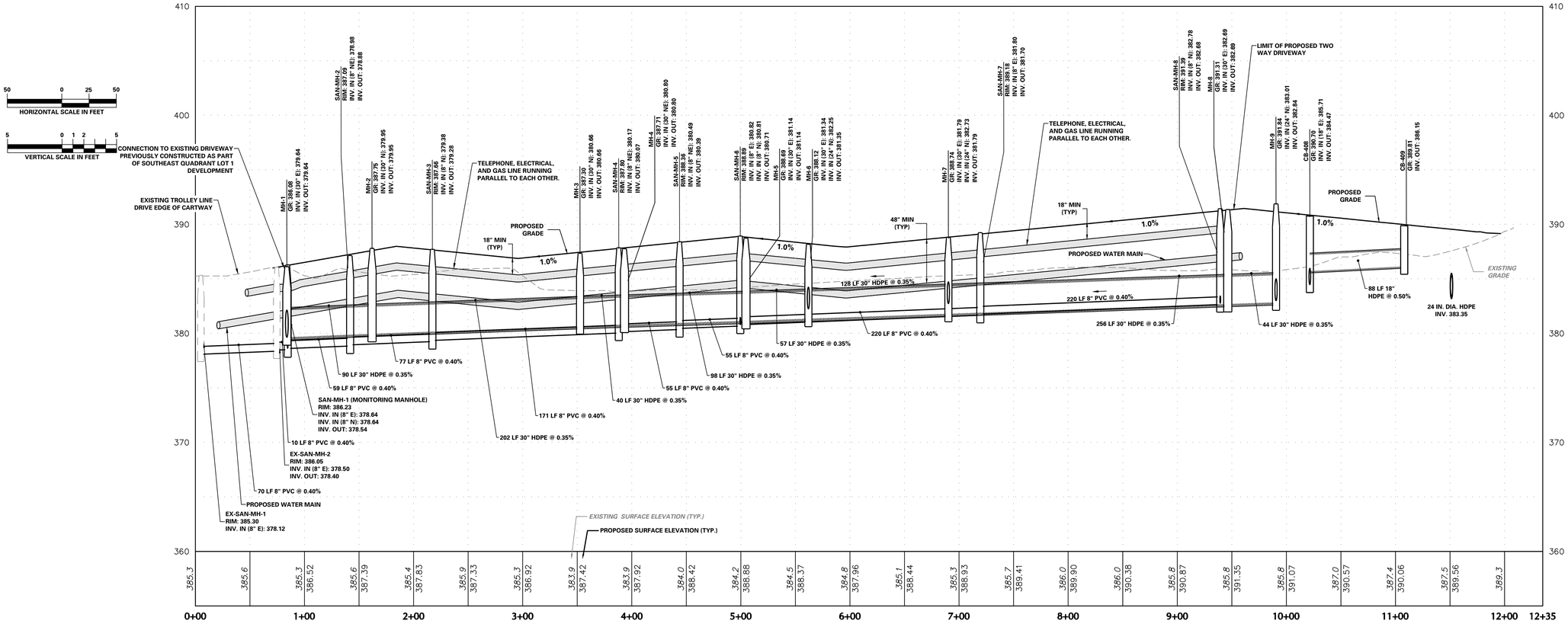
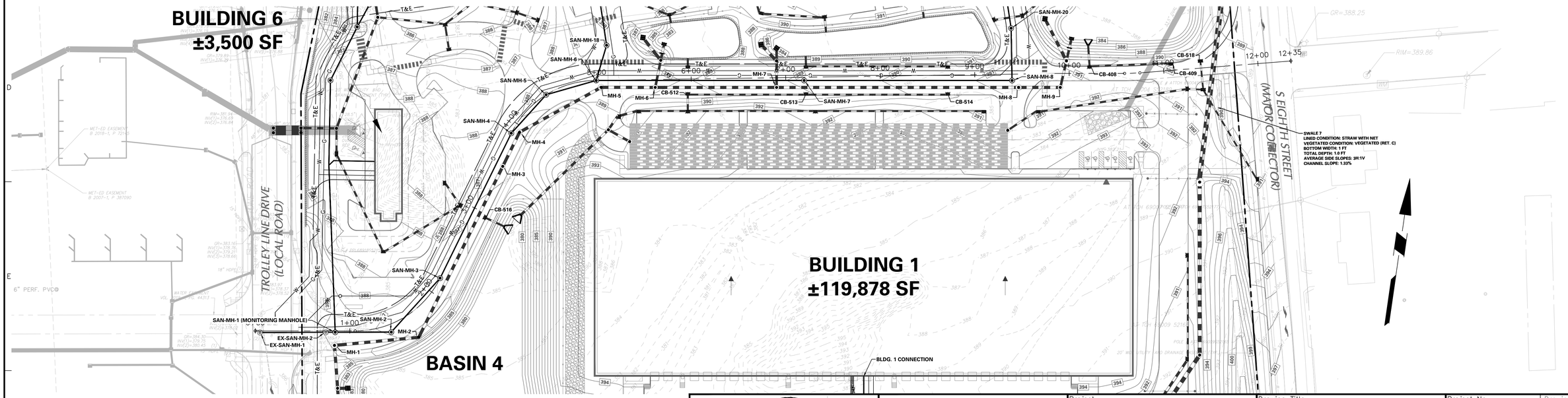
Date: 7/16/2025 Time: 20:02 User: phaley Style Table: Langan.stb Layout: CG-204 Document Code: 200168301-0503-CG301-0104



MAIN ACCESS ROAD UTILITY AND STORM PROFILE



Date	Description	No.
	Revisions	

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND STATE TAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE AND UTILITY PROFILES

Project No.	200168301
Date	7/17/2025
Drawn By	TLP
Checked By	SH

Drawing No. CG-205

Sheet 29 of 52

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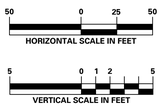
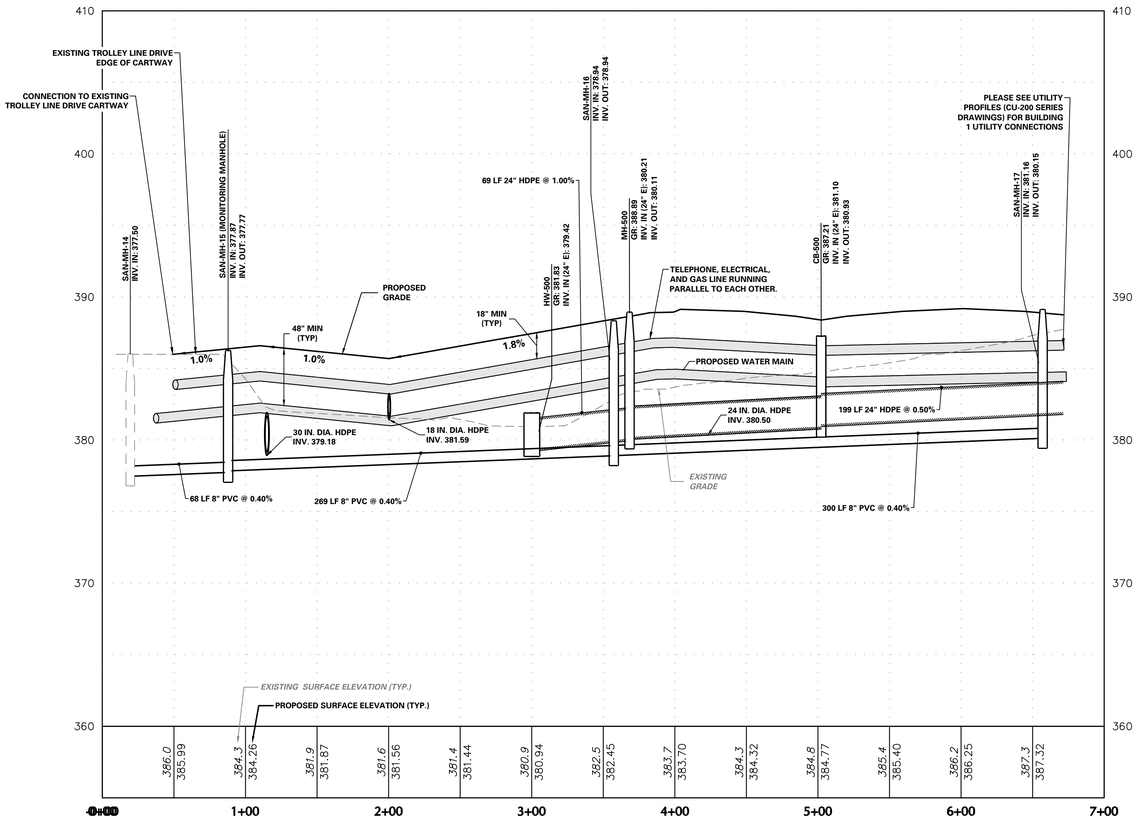
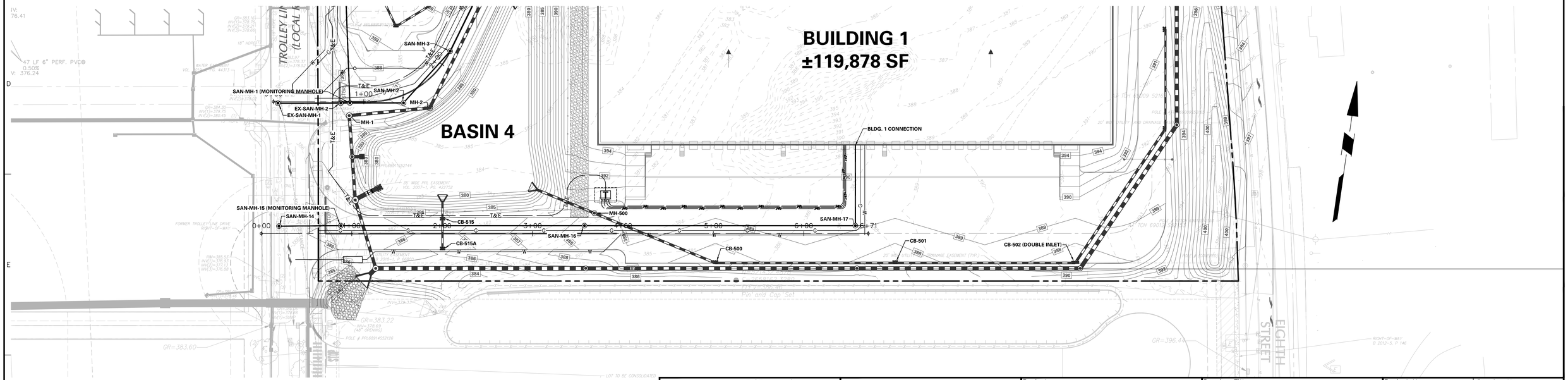
Date: 7/16/2025 Time: 20:47 User: phaley Style Table: Langan.stb Layout: CG-205 Document Code: 200168301-0503-CG401-0101

LANGAN 105
Project No. 200168301





WAREHOUSE ACCESS ROAD PROFILE



Date	Description	No.
Revisions		

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND LOWER TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY DRAINAGE AND UTILITY PROFILES

Project No.	200168301
Date	7/17/2025
Drawn By	TLP
Checked By	SH

Drawing No. CG-206
Sheet 30 of 52

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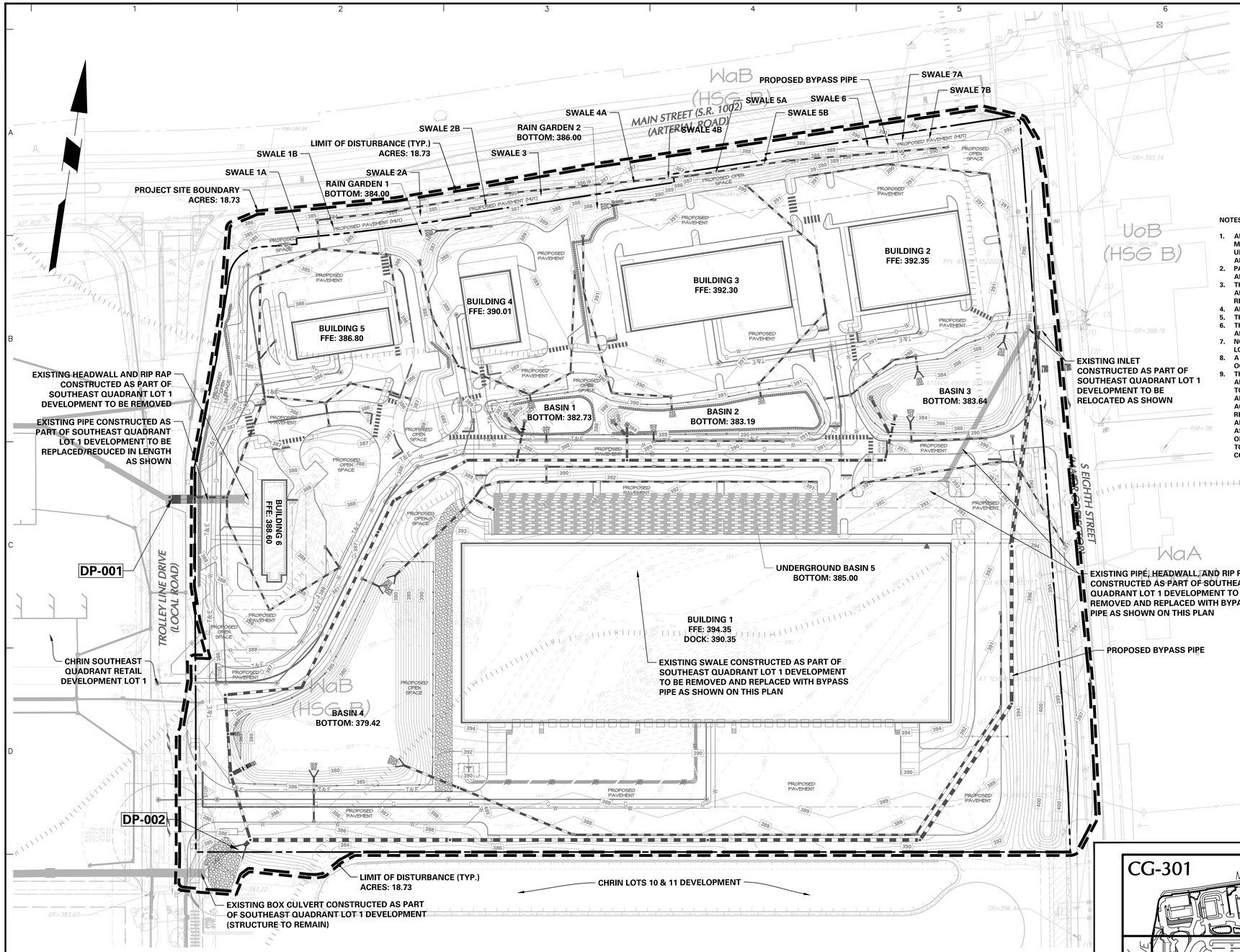
LANGAN 106
Project No. 200168301



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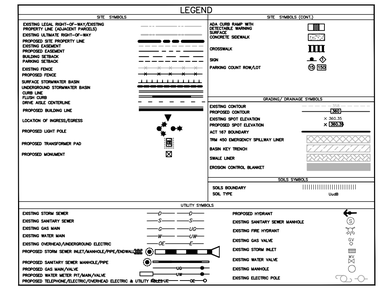
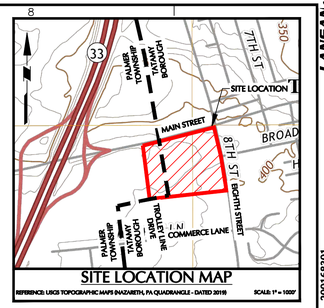




SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

NOTES:

1. ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE PADEP E&S MANUAL, PADEP BMP MANUAL, PENNDOT PUBLICATION 408, AND PENNDOT PUBLICATION 72M, ALL AS AMENDED AND UPDATED, UNLESS WRITTEN REQUESTS FOR DEVIATION HAVE BEEN REVIEWED AND EXPLICITLY APPROVED BY THE MUNICIPAL ENGINEER.
2. PALMER TOWNSHIP AND TATAMY BOROUGH ARE NOT RESPONSIBLE FOR THE MAINTENANCE OF ANY AREA NOT DEDICATED TO AND ACCEPTED FOR PUBLIC USE.
3. THE OPERATION AND MAINTENANCE AGREEMENT IS PART OF THE PLAN. IF THE OWNER FAILS TO ADHERE TO THE TERMS OF THE AGREEMENT, THE MUNICIPALITY MAY PERFORM THE SERVICES REQUIRED AND CHARGE THE OWNER APPROPRIATE FEES.
4. ALL STORMWATER CONVEYANCE FACILITIES SHALL BE CONSTRUCTED WITH WATERTIGHT JOINTS.
5. THE KNOCKING OUT OF INLET OR OTHER STRUCTURE CORNERS IS PROHIBITED.
6. THE LANDOWNER HEREBY GRANTS PERMISSION TO THE MUNICIPALITY, ITS AUTHORIZED AGENTS, AND EMPLOYEES ACCESS TO ANY AND ALL SWM CONSERVATION EASEMENTS ON THE PROPERTY.
7. NOTHING SHALL BE PLACED, STORED, ERECTED, CONSTRUCTED OVER, PLANTED, OR OTHERWISE LOCATED WITHIN AN EASEMENT OTHER THAN THE SWM FACILITIES WITHIN THE EASEMENT.
8. A COPY OF THE RECORDED AS-BUILT PLAN WILL BE PROVIDED TO THE MUNICIPALITY PRIOR TO OCCUPANCY AND/OR THE RELEASE OF FINANCIAL SECURITY.
9. THE APPLICANT, INCLUDING ITS AGENTS, HEIRS, ASSIGNS AND ANYONE ON BEHALF OF WHOM THE APPLICATION IS SUBMITTED, DOES HEREBY INDEMNIFY, DEFEND, AND HOLD HARMLESS PALMER TOWNSHIP, TATAMY BOROUGH AND THEIR RESPECTIVE ASSIGNS, OFFICIALS, OFFICERS, EMPLOYEES, AND AGENTS, FROM AND AGAINST ANY AND ALL DEMANDS, CLAIMS, ACTIONS, OR CAUSES OF ACTION, ASSESSMENTS, LOSSES, DAMAGES, LIABILITIES, COSTS, AND EXPENSES, INCLUDING REASONABLE FEES AND EXPENSES OF COUNSEL, OTHER EXPENSES OF INVESTIGATION, HANDLING, AND LITIGATION, AND SETTLEMENT AMOUNTS, TOGETHER WITH INTEREST AND PENALTIES ASSERTED AGAINST, RESULTING TO, IMPOSED UPON, OR INCURRED BY THE APPLICANT AND ANYONE ON BEHALF OF WHOM THE APPLICATION IS SUBMITTED OR RAISED AGAINST THE TOWNSHIP/BOROUGH, DIRECTLY OR INDIRECTLY, BY REASON OF, RESULTING FROM, OR ARISING IN CONNECTION WITH ANY RESULT FROM CARBONATE SITE CONDITIONS.

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE, AND
(10) WORKING DAYS IN DESIGN STAGE
— STOP & CALL —

Pennsylvania One Call System, Inc.
1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP, CALL BEFORE YOU DIG!

SERIAL NUMBER, 20251501191
20251501192

RECORDING INFORMATION

RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____, PAGE NO. ___ ON _____, 20 ___.

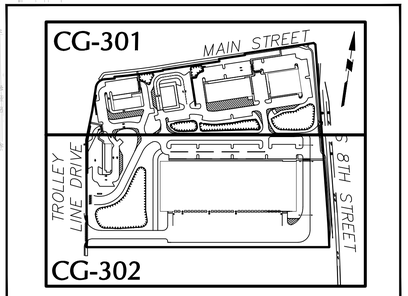
PRINCIPLES OF PCSM PLANNING AND DESIGN

THE MANAGEMENT OF POST CONSTRUCTION STORMWATER WILL BE UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING PRINCIPLES:

- PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM
- PREVENT ANY INCREASE IN THE RATE OF STORMWATER RUNOFF
- MINIMIZE ANY INCREASE IN STORMWATER VOLUME
- MINIMIZE IMPERVIOUS AREAS
- MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION
- MINIMIZE LAND CLEARING AND GRADING
- MINIMIZE SOIL COMPACTION
- UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMPS THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF

RECEIVING WATERS AND CLASSIFICATION: SCHOENECK CREEK (WWF, MF)

PROJECT SITE BOUNDARY: 18.73 AC
LIMIT OF DISTURBANCE: 18.73 AC



KEY MAP 1"=300'

ON-SITE SOIL TYPE DESCRIPTIONS

Map Symbol	Soil	Hydrologic Soil Group	Depth to Seasonal High Water Table (Ft)	Depth to Bedrock (Ft)	Soil Limitations	Resolutions
ClA	Clarksburg silt loam, 0-3% slopes	C	1.5-3	>5.0	Moderately well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; low available water capacity (about 4.2 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sediment Filter bags shall be utilized to properly drain the area (See Filter Bag Detail). Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
UoB	Urban land-Duffield complex, 0 to 8 percent slopes	B	>6.66	4.0' - 10.0' TO LITHIC ROCK	Well drained; high available water capacity (about 10.4 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
WaA	Washington silt loam, 0-3% slopes	B	>6.67	>5.0	Well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; high available water capacity (about 10.2 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
WaB	Washington silt loam, 3-8% slopes	B	>6.66	>5.0	Well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; high available water capacity (about 10.2 in); medium surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)

*Soils information obtained from USDA-NRCS Web Soil Survey for Northampton County, PA

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

60 0 20 40 60
SCALE: 1 INCH = 60 FEET

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY MASTER POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (RECORD PLAN)

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CG-300
Sheet 31 of 52

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Date: 7/16/2025 Time: 17:36 User: phaley Style Table: Langan,stb Layout: CG-300 Document Code: 200168301-0503-CG601-0101

LANGAN 107
Project No. 200168301

ON-SITE SOIL TYPE DESCRIPTIONS

Map Symbol	Soil	Hydrologic Soil Group	Depth to Seasonal High Water Table (Ft)	Depth to Bedrock (Ft)	Soil Limitations	Resolutions
ClA	Clarksburg silt loam, 0-3% slopes	C	1.5-3	>5.0	Moderately well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; low available water capacity (about 4.2 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sediment Filter bags shall be utilized to properly drain the area (See Filter Bag Detail), Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
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***Soils information obtained from USDA-NRCS Web Soil Survey for Northampton County, PA**

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER P.A. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE, AND,
(10) WORKING DAYS IN DESIGN STAGE
— STOP & CALL —

Pennsylvania One Call System, Inc.
1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG

SERIAL NUMBER: 20251501191
20251501192

RECORDING INFORMATION
RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE
IN VOL NO. _____ PAGE NO. ____ ON _____ 20 ___

LEGEND

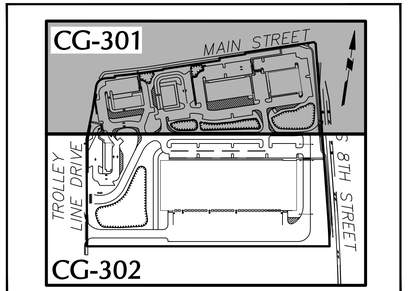
SITE SYMBOLS
EXISTING LEGAL RIGHT-OF-WAY/EXISTING PROPERTY LINE (ADJACENT PARCELS)
EXISTING ULTIMATE RIGHT-OF-WAY
PROPOSED SITE PROPERTY LINE
EXISTING EASEMENT
PROPOSED EASEMENT
BUILDING SETBACK
PARKING SETBACK
EXISTING FENCE
PROPOSED FENCE
SURFACE STORMWATER BASIN
UNDERGROUND STORMWATER BASIN
CURB LINE
FLUSH CURB
DRIVE AISLE CENTERLINE
PROPOSED BUILDING LINE
LOCATION OF INGRESS/EGRESS
PROPOSED LIGHT POLE
PROPOSED TRANSFORMER PAD
PROPOSED MONUMENT

SITE SYMBOLS (CONT.)
ADA CURB RAMP WITH DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK
CROSSWALK
SIGN
PARKING COUNT ROW/LOT

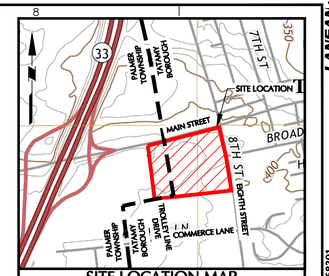
GRADING/ DRAINAGE SYMBOLS
EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
ACT 167 BOUNDARY
TRK 450 EMERGENCY SPILLWAY LINER
BASIN KEY TRENCH
SWALE LINER
EROSION CONTROL BLANKET

SOILS SYMBOLS
SOILS BOUNDARY
SOIL TYPE — UoB

UTILITY SYMBOLS
EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING GAS MAIN
EXISTING WATER MAIN
EXISTING OVERHEAD/UNDERGROUND ELECTRIC
PROPOSED STORM SEWER INLET/MANHOLE/PIPE/ENDWALL
PROPOSED SANITARY SEWER MANHOLE/PIPE
PROPOSED GAS MAIN/VALVE
PROPOSED WATER METER PIT/MAIN/VALVE
PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY POLE
PROPOSED HYDRANT
EXISTING SANITARY SEWER MANHOLE
EXISTING FIRE HYDRANT
EXISTING GAS VALVE
EXISTING STORM INLET
EXISTING WATER VALVE
EXISTING MANHOLE
EXISTING ELECTRIC POLE



KEY MAP 1" = 300'



SITE LOCATION MAP
REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

WaB (HSG B)
MAIN STREET (S.R. 1002) (ARTERIAL ROAD)
UoB (HSG B)
WaA (HSG B)

SWALE 1A
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 1B
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 2
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 3
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 4A
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 4B
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 5
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 6
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.0%

SWALE 7
LINED CONDITION: STRAW WITH NET
VEGETATED CONDITION: VEGETATED (RET. C)
BOTTOM WIDTH: 1 FT
TOTAL DEPTH: 1.0 FT
AVERAGE SIDE SLOPES: 3H:1V
CHANNEL SLOPE: 1.33%
INV 15": 386.75
INV (2) 24": 383.07
PIPE CROSSING SEPARATION: 1.68'

BUILDING 2
FFE: 392.35
INFILTRATION BASIN 3
EMERGENCY SPILLWAY (SUMP)
CREST ELEV: 386.65
TOP OF BASIN ELEV: 388.65
CREST LENGTH: 35 FT
DESIGN FLOW DEPTH: 0.50
LINER: TRM-450

BUILDING 3
FFE: 392.30

BUILDING 4
FFE: 390.01

BUILDING 5
FFE: 386.80

BUILDING 6
FFE: 386.60

INFILTRATION BASIN 2
EMERGENCY SPILLWAY (SUMP)
CREST ELEV: 386.19
TOP OF BASIN ELEV: 388.19
CREST LENGTH: 20 FT
DESIGN FLOW DEPTH: 0.50
LINER: TRM-450
OCS-300
RIM: 385.10
8" WEIR: 385.00
INV. OUT (14' X 23" S): 383.19

INFILTRATION BASIN 1
EMERGENCY SPILLWAY (SUMP)
CREST ELEV: 385.75
TOP OF BASIN ELEV: 387.35
CREST LENGTH: 15 FT
DESIGN FLOW DEPTH: 0.50
LINER: TRM-450
OCS-200
GRATE: 384.75
28" WEIR ELEV: 384.55
INV. OUT (14'X23" SW): 382.41

BASIN 1
BOTTOM: 382.73

BASIN 2
BOTTOM: 383.19

BASIN 3
BOTTOM: 383.64

UNDERGROUND INFILTRATION BASIN #5
BOTTOM ELEV: 385.00
L = 400'
W = 50'
(16) 400 LF 24" HDPE PERFORATED PIPES IN

FES-200
RAIN GARDEN 1
BOTTOM: 384.00

RAIN GARDEN 2
BOTTOM: 386.00

FES-300

R-1 RIPRAP APRON
La = 8.0 FT
W = 7.7 FT
Do = 1.5 FT

R-2 RIPRAP APRON
La = 8.0 FT
W = 7.7 FT
Do = 1.5 FT

R-3 RIPRAP APRON
La = 8.0 FT
W = 7.7 FT
Do = 1.5 FT

R-4 RIPRAP APRON
La = 8.0 FT
W = 7.7 FT
Do = 1.5 FT

R-5 RIPRAP APRON
La = 8.0 FT
W = 7.7 FT
Do = 1.5 FT

EXISTING PIPE CONSTRUCTED AS PART OF SOUTHEAST QUADRANT LOT 1 DEVELOPMENT (TO BE REPLACED/REDUCED IN LENGTH AS SHOWN)

EX-CB-54 TO BE RELOCATED TO PROPOSED CURBLINE AS SHOWN

EX-CB-54

EXISTING DOUBLE 14" X 23" HERCP PIPES UNDER EIGHTH STREET TO REMAIN

EX-CB-54A
(DOUBLE INLET TO REMAIN)

EXISTING 29" X 45" HERCP PIPE (DESIGNED, APPROVED AND CONSTRUCTED AS PART OF THE SOUTHEAST QUADRANT LOT 1 RETAIL DEVELOPMENT) TO BE REMOVED

EXISTING RIP-RAP APRON (DESIGNED, APPROVED AND CONSTRUCTED AS PART OF THE SOUTHEAST QUADRANT LOT 1 RETAIL DEVELOPMENT) TO BE REMOVED

LIMIT OF DISTURBANCE (TYP.)
ACRES: 18.74

DP-001

MATCHLINE SEE SHEET CG-602

NOTE:
SEE SHEET CG-501 - 503 FOR PCSM PLAN NOTES.

SCALE: 1 INCH = 40 FEET

Date	Description	No.
Revisions		

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (RECORD PLAN)

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SH

Drawing No. CG-301
Sheet 32 of 52

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Date: 7/16/2025 Time: 17:40 User: phaley Style Table: Langan,stb Layout: CG-301 Document Code: 200168301-0503-CG601-0102

LANGAN 108
Project No. 200168301

LEGEND

SITE SYMBOLS

EXISTING LEGAL RIGHT-OF-WAY/EXISTING PROPERTY LINE (ADJACENT PARCELS)
EXISTING ULTIMATE RIGHT-OF-WAY
PROPOSED SITE PROPERTY LINE
EXISTING EASEMENT
PROPOSED EASEMENT
BUILDING SETBACK
PARKING SETBACK
EXISTING FENCE
PROPOSED FENCE
SURFACE STORMWATER BASIN
UNDERGROUND STORMWATER BASIN
CURB LINE
FLUSH CURB
DRIVE AISLE CENTERLINE
PROPOSED BUILDING LINE
LOCATION OF INGRESS/EGRESS
PROPOSED LIGHT POLE
PROPOSED TRANSFORMER PAD
PROPOSED MONUMENT
ADA CURB RAMP WITH DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK
CROSSWALK
SIGN
PARKING COUNT SIGN/LOT

GRADING / DRAINAGE SYMBOLS

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
ACT 167 BOUNDARY
TRK 450 EMERGENCY SPILLWAY LINER
BASIN KEY TRENCH
SWALE LINER
EROSION CONTROL BLANKET

SOILS SYMBOLS

SOILS BOUNDARY
SOIL TYPE

UTILITY SYMBOLS

EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING GAS MAIN
EXISTING WATER MAIN
EXISTING OVERHEAD/UNDERGROUND ELECTRIC
PROPOSED STORM SEWER INLET/MANHOLE/PIPE/ENDWALL
PROPOSED SANITARY SEWER MANHOLE/PIPE
PROPOSED GAS MAIN/VALVE
PROPOSED WATER METER PIT/MAIN/VALVE
PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY POLE/GUY
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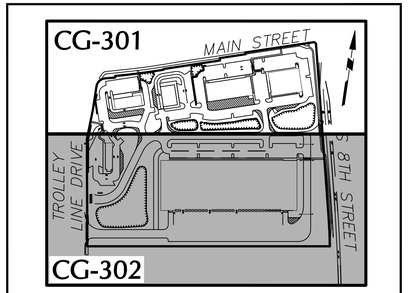
EXISTING SANITARY SEWER MANHOLE
EXISTING FIRE HYDRANT
EXISTING GAS VALVE
EXISTING STORM INLET
EXISTING WATER VALVE
EXISTING MANHOLE
EXISTING ELECTRIC POLE



KEY MAP 1"=300'

PALMER TOWNSHIP NOTE:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATED TO LAND USE AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING, BUT NOT LIMITED TO, SOIL AND WATER QUALITY, KARST GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHAEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP. THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR. THE TOWNSHIP, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNERS AS APPROPRIATE, AND WHO ARE ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE.

DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION, CONSISTENCY, CLOSURE, AND AREA (ONLY). THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, STREET RIGHTS-OF-WAY, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

PLAN PREPARER'S STATEMENTS

I, _____ A REGISTERED SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE PLAN, PREPARED FROM A FIELD SURVEY DURING _____ CORRECTLY REPRESENTS THE PROPERTY BOUNDARY OF THE PROPOSED SUBDIVISION OR LAND DEVELOPMENT.

DATE — REGISTERED SURVEYOR'S SIGNATURE

2700 KELLY ROAD, SUITE 200 WARRINGTON PA. 18976 — SHAUN HIGGINS, PLS

ADDRESS — PRINTED NAME

I, _____ A LICENSED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND ACCURATE, TO THE BEST OF MY KNOWLEDGE.

DATE — PLAN PREPARER'S SIGNATURE

2700 KELLY ROAD, SUITE 200 WARRINGTON PA. 18976 — KEITH S. OTTES, PE

ADDRESS — PRINTED NAME

OWNER'S STATEMENT

WE, THE OWNERS OF THE LAND INVOLVING THE ACCOMPANYING PLANS, BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY WE ARE THE SOLE OWNERS OR ARE THE AUTHORIZED OFFICERS OF THE CORPORATION THAT IS THE SOLE OWNERS OF THIS PROPERTY IN PEACEFUL POSSESSION OF, IT, AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE OF SAME, AND THAT WE ACKNOWLEDGE AND ENDORSE THE ACCOMPANYING PLANS, AND THAT ALL IMPROVEMENTS IDENTIFIED AS PROPOSED PUBLIC PROPERTY (NOT INCLUDING IMPROVEMENTS LABELED AS "NOT FOR DEDICATION") ARE PROPOSED FOR DEDICATION TO THE PUBLIC USE, AND THAT WE PROPOSE THE ATTACHED RECORD PLAN FOR RECORDING (AS APPLICABLE) AFTER RECEIVING ALL REQUIRED MUNICIPAL APPROVALS.

OWNER'S OR AUTHORIZED CORPORATE OFFICER'S SIGNATURE

DATE

SS
COMMONWEALTH OF PENNSYLVANIA

COUNTY OF _____

ON THE _____ DAY OF _____ 20 ____ BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED GREG CHRIN, WHO ACKNOWLEDGED HIMSELF TO BE THE REPRESENTATIVE OF THE CHARLES CHRIN REAL ESTATE TRUST, A CORPORATION, AND THAT AS SUCH REPRESENTATIVE, BEING AUTHORIZED TO DO SO, HE EXECUTED THE FOREGOING PLAN BY SIGNING THAT THE SAID CORPORATION IS THE REGISTERED OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY APPROVALS OF THE PLAN HAVE BEEN OBTAINED AND IS ENDORSED THEREON, AND THAT HE DESIRES THAT THE FOREGOING PLAN BE RECORDED ACCORDING TO LAW.

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

(SEAL)

RECORDING INFORMATION

RECORDED IN THE NORTHAMPTON COUNTY RECORDER OF DEEDS OFFICE

IN VOL NO. ____ PAGE NO. ___ ON _____ 20___

ON-SITE SOIL TYPE DESCRIPTIONS

Map Symbol	Soil	Hydrologic Soil Group	Depth to Seasonal High Water Table (Ft)	Depth to Bedrock (Ft)	Soil Limitations	Resolutions
ClA	Clarksburg silt loam, 0-3% slopes	C	1.5-3	>5.0	Moderately well drained, has a water table at a depth of 1.0 ft or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 in; low available water capacity (about 4.2 in); low surface runoff; susceptible to sinkholes and to piping and seeping hazards	Anti-seep collars for basin outlet pipes shall be used to prevent seeping hazards. Sediment Filter bags shall be utilized to properly drain the area (See Filter Bag Detail). Sinkholes shall be treated according to detail (See Sinkhole Remediation Detail)
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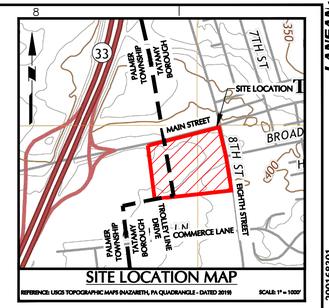
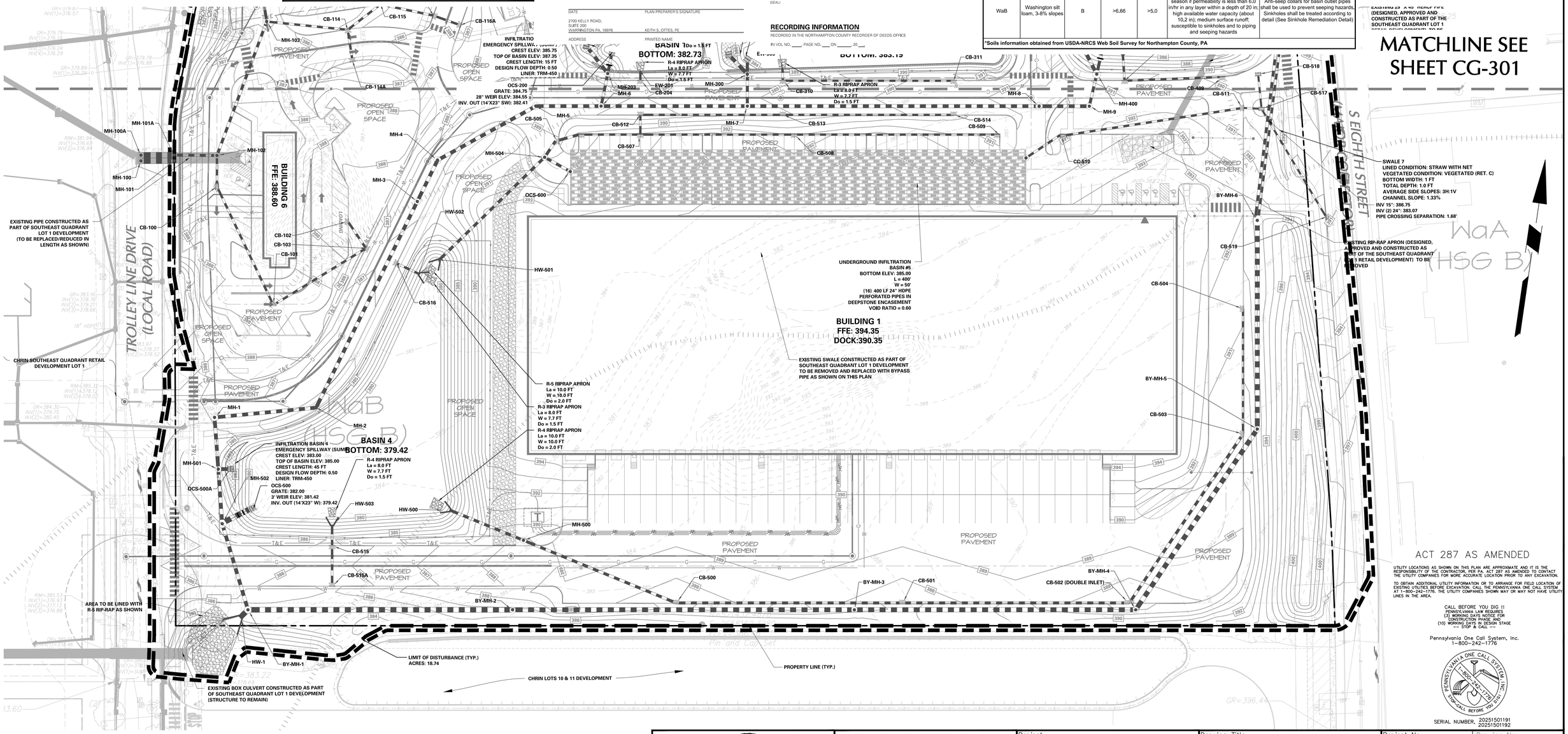
*Soils information obtained from USDA-NRCS Web Soil Survey for Northampton County, PA



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE, AND
(10) WORKING DAYS IN DESIGN STAGE
--- STOP & CALL ---

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192

NOTE:
SEE SHEET CG-300 FOR PCSM PLAN NOTES.

SCALE: 1 INCH = 40 FEET (40 0 10 25 40)

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (RECORD PLAN)

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SH

Drawing No. CG-302
Sheet 33 of 52

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BMP SPECIFIC MAINTENANCE PLAN

1. AN ANNUAL REPORT SHALL BE SUBMITTED TO THE TOWNSHIP STATING THE FOLLOWING MAINTENANCE HAS BEEN PERFORMED. THE PCSM PLAN, INSPECTION REPORTS, AND MONITORING RECORDS MUST BE AVAILABLE FOR REVIEW AND INSPECTION BY THE PADEP OR CONSERVATION DISTRICT.
2. PROPERTY OWNER IS RESPONSIBLE FOR MAINTENANCE OF THE ON-LOT STORMWATER CONVEYANCE SYSTEM, AND ALL OTHER ON-LOT PROPOSED BMP'S.
3. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES. VEHICLES SHALL NOT BE PARKED OR DRIVEN OVER INFILTRATION BMPS.

STORMWATER CONVEYANCE SYSTEM

1. CATCH BASINS, MANHOLES AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST TWICE ANNUALLY AS WELL AS AFTER EVERY STORM EXCEEDING 1-INCH OF RAINFALL.
2. ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING, AND DETERIORATION AT LEAST TWICE ANNUALLY.

STORMWATER MANAGEMENT CATCH BASINS

1. CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTER RUNOFF EVENTS.
2. THE VEGETATION ALONG THE SURFACE OF THE DETENTION BASIN SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED AS SOON AS POSSIBLE.
3. VEHICLES SHOULD NOT BE PARKED OR DRIVEN ON A DETENTION BASIN, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
4. INSPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITO'S SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
5. ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN BERMS.
6. MOW ONLY AS APPROPRIATE FOR VEGETATIVE COVER SPECIES.

INFILTRATION BASINS (BMP ID #1, #2, #3 & #4)

1. THE PROJECT SITE IS UNDERLAIN BY CARBONATE ROCKS AND AREAS IN THE VICINITY OF THE PROJECT HAVE BEEN ASSOCIATED WITH SINKHOLE ACTIVITY. SIGNS OF POTENTIAL SINKHOLE DEVELOPMENT INCLUDE AREAS OF PONDING WATER AND LOCALIZE DEPRESSIONS. IF SINKHOLES DEVELOP WITHIN THE INFILTRATION FACILITY, THE SINKHOLES SHOULD BE STABILIZED VIA A REVERSE FILTER TECHNIQUE. PLEASE REFER TO "SINKHOLES WITHIN AN INFILTRATION FACILITY" PROVIDED ON THE SINKHOLE PREVENTION AND REMEDIATION NOTES AND DETAILS WITHIN THE POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS. THE BASIN BOTTOM SHOULD BE INSPECTED FOR SINKHOLE DEVELOPMENT AFTER EACH RUNOFF EVENT GREATER THAN 1 INCH, AND AT LEAST 4 TIMES ANNUALLY.
2. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
3. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF EACH GROWING SEASON.
4. MOW ONLY AS APPROPRIATE FOR VEGETATIVE COVER SPECIES. MOWING AND/OR TRIMMING VEGETATION SHOULD BE PERFORMED AS NECESSARY TO SUSTAIN THE SYSTEM, BUT ALL DETRITUS SHOULD BE REMOVED FROM THE BASIN. VEGETATED AREAS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY FOR EROSION. VEGETATED AREAS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY FRO UNWANTED GROWTH OF EXOTIC/INVASIVE SPECIES. VEGETATIVE COVER SHOULD BE MAINTAINED AT A MINIMUM OF 95%.. IF VEGETATIVE COVER HAS BEEN REDUCED BY 10% VEGETATION SHOULD BE REESTABLISHED.
5. TREES AND SHRUBS SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATE HEALTH.
6. VEHICLES SHOULD NOT BE PARKED OR DRIVEN ON AN INFILTRATION BASINS, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
7. INSPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN72 HOURS. MOSQUITOS SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOS REQUIRE CONSIDERABLY LONGER BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
8. ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, SINKHOLES, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGN OF WATER CONTAMINATION/SPILLS AND SLOPE STABILITY IN BERMS.
9. REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. SEDIMENT REMOVAL, SHOULD BE CONDUCTED WHEN BASIN IS COMPLETELY DRY, RESTORE ORIGINAL CROSS SECTION AND DISPOSE OF SEDIMENT IN ACCORDANCE WITH APPLICABLE REGULATIONS. DISTURBED AREAS RESULTING FROM SEDIMENT REMOVAL NEED TO BE IMMEDIATELY STABILIZED AND REVEGETATED.
10. ALL BASIN STRUCTURES EXPECTED TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHOULD BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST FOUR TIMES PER YEAR, AS WELL AS AFTER EVERY RUNOFF EVENT GREATER THAN 1 INCH. STRUCTURES INCLUDE BASIN BOTTOMS, TRASH RACKS OUTLET STRUCTURES, RIPRAP OR GABION STRUCTURES, AND INLETS.

UNDERGROIND INFILTRATION BASIN (BMP ID #7)

1. THE PROJECT SITE IS UNDERLAIN BY CARBONATE ROCKS AND AREAS IN THE VICINITY OF THE PROJECT HAVE BEEN ASSOCIATED WITH SINKHOLE ACTIVITY. SIGNS OF POTENTIAL SINKHOLE DEVELOPMENT INCLUDE AREAS OF PONDING WATER AND LOCALIZE DEPRESSIONS. IF SINKHOLES DEVELOP WITHIN THE INFILTRATION FACILITY, THE SINKHOLES SHOULD BE STABILIZED VIA A REVERSE FILTER TECHNIQUE. PLEASE REFER TO "SINKHOLES WITHIN AN INFILTRATION FACILITY" PROVIDED ON THE SINKHOLE PREVENTION AND REMEDIATION NOTES AND DETAILS WITHIN THE POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS. THE BASIN BOTTOM SHOULD BE INSPECTED FOR SINKHOLE DEVELOPMENT AFTER EACH RUNOFF EVENT GREATER THAN 1 INCH, AND AT LEAST 4 TIMES ANNUALLY.
2. MANHOLES AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST TWICE ANNUALLY AS WELL AS AFTER STORM EVENT EXCEEDING 1-INCH OF RAINFALL.
3. THE OUTLET CONTROL STRUCTURE AND ASSOCIATED WEIR SHALL BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST TWICE ANNUALLY AS WELL AS AFTER EVERY STORM EVENT EXCEEDING 1-INCH OF RAINFALL.
4. ENSURE THAT RUNOFF DRAINS DOWN WITHIN 7 DAYS FOLLOWING ALL STORM EVENTS EXCEEDING 1-INCH OF RAINFALL. IF DRAW DOWN TIMES ARE EXCEEDING 7 DAYS, DRAIN THE SUBSURFACE BASIN VIA PUMPING THROUGH A SEDIMENT FILTER BAG AND CLEAN OUT PERFORATE D PIPING. IF SLOW DRAINAGE PERSISTS, THE SYSTEM MAY NEED REPLACING.
5. ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING, AND DETERIORATION AT LEAST TWICE ANNUALLY.
6. SEDIMENTS REMOVAL SHOULD TAKE PLACE WHEN ALL RUNOFF HAS DRAINED AND THE BASIN IS REASONABLY DRY
7. THE CONDITIONS OF THE SURROUNDING AREAS SHOULD BE INSPECTED FOR EVIDENCE OF FAILURES OR DETERIORATION OF THE UNDERGROUND SYSTEM.
8. IF STANDING WATER IS ENCOUNTERED IN THE SUBSURFACE FACILITY, THE WATER SHOULD BE PUMPED DOWNSTREAM THROUGH A SEDIMENT FILTER BAG. AFTER STANDING WATER IS REMOVED, THE FACILITY SHOULD BE INSPECTED AS USUAL.

BIOFILTRATION/RAIN GARDEN AREAS/ET RAIN GARDENS (BMP ID #5 & #6)

1. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
2. DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
3. MULCH SHOULD BE RE-SPREAD WHEN EROSION IS EVIDENT AND BE REPLENISHED AS NEEDED. ONCE EVERY 2 TO 3 YEARS THE ENTIRE AREA MAY REQUIRE MULCH REPLACEMENT.
4. BIORETENTION AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
5. DURING PERIODS OF EXTENDED DROUGHT, BIORETENTION AREAS MAY REQUIRE WATERING.
6. TREES AND SHRUBS SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATE HEALTH.
7. IN THE EVENT THAT VEGETATION WITHIN RAIN GARDEN DIES, VEGETATION MUST BE REPLACED AND RETURNED TO PRIOR STATE.

VEGETATED SWALES

1. MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT (> 1 INCH RAINFALL DEPTH):
2. MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION; DISPOSE OF CUTTINGS IN LOCAL COMPOSTING FACILITY;
3. MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING.
4. INSPECT FOR LITTER; REMOVE PRIOR TO MOWING.
5. INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (WHEN >3 INCHES AT ANY SPOT COVERS VEGETATION).
6. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS AND GULLIES, CORRECT AS NEEDED.
7. INSPECT FOR POOLS OF STANDING WATER, INWATER AND DISCHARGE TO A STORM SEWER AT AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE.
8. INSPECT FOR UNIFORMITY IN CROSS-SECTION AND LONGITUDINAL SLOPE, CORRECT AS NEEDED.
9. INSPECT SWALE INLET (CURB CUTS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED.
10. MAINTENANCE ACTIVITIES TO BE DONE AS NEEDED:
11. PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT.
12. RESEED BARE AREAS; INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE FORMING.
13. ROTOTILL AND REPLANT SWALE IF DRAW DOWN TIME IS LESS THAN 48 HOURS.
14. WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY.
15. MAINTENANCE DURING WINTER CONDITIONS:
16. INSPECT SWALE IMMEDIATELY AFTER THE SPRING MELT, REMOVE RESIDUALS (E.G. SAND) AND REPLACE DAMAGED VEGETATION WITHOUT DISTURBING REMAINING VEGETATION.
17. IF PARKING LOT RUNOFF IS DIRECTED TO THE SWALE, MULCHING AND/OR SOIL AERATION/MANIPULATION MAY BE REQUIRED IN THE SPRING TO RESTORE SOIL STRUCTURE AND MOISTURE CAPACITY AND TO REDUCE THE IMPACTS OF DEICING AGENTS.
18. USE NON-TOXIC, ORGANIC DEICING AGENTS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS OR AS PRETREATED SALT.
19. USE SALT-TOLERANT VEGETATION IN SWALES

BMP CONSTRUCTION SEQUENCE

INFILTRATION BASIN CONSTRUCTION SEQUENCE (BMP ID# #1, #2, #3, & #4)

1. PROTECT INFILTRATION BASIN AREA FROM COMPACTION PRIOR TO CONSTRUCTION.
2. FOR BASINS THAT ARE TO BE CONVERTED FROM A SEDIMENT BASIN, FOLLOW THE BASIN CONVERSION SEQUENCE PROVIDED ON THE E&S PLANS.
3. IF POSSIBLE, INSTALL INFILTRATION BASIN DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT-LADEN WATER FROM ENTERING INLETS AND PIPES.
4. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
5. IF NECESSARY, EXCAVATE INFILTRATION BASIN BOTTOM TO AN UN-COMPACTED SUB-GRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUB-GRADE.
6. INSTALL OUTLET CONTROL STRUCTURES AND DOWNSTREAM PIPES TO CONNECTION WITH PROPOSED STORMWATER CONVEYANCE SYSTEM.
7. EXCAVATE BASIN AND BRING TO FINAL GRADE. MEETING OVER-EXCAVATION FOR BASIN BOTTOM ELEVATIONS, PROPOSED SIDE SLOPES, SPILLWAY ELEVATIONS AND WIDTHS AND BERM WIDTHS AS SHOWN ON THE PLANS. THE FOLLOWING SHALL BE CONSIDERED DURING EXCAVATION OF THE INFILTRATION BASIN:
   7.1. WHERE FINE-GRAINED SOILS ARE ENCOUNTERED, THE SUBGRADE SHALL BE MIXED WITH A GRANULAR INFILTRATION MEDIA TO INCREASE THE PERMEABILITY OF THE SUBGRADE SOILS AND PREVENT CLOGGING. INFILTRATION MEDIA SHALL MEET THE INFILTRATION BASIN MEDIA SPECIFICATIONS ON DRAWING CG-501.
   7.2. IN AREAS WHERE WEATHERED OR FRACTURED ROCK IS ENCOUNTERED WITHIN 2 FEET OF THE BASIN SUBGRADE, INFILTRATION MEDIA MAY BE REQUIRED TO SLOW INFILTRATION TO LESS THAN 10 INCHES/HOUR.
   7.3. THE INFILTRATION BASIN BOTTOM SHALL BE LEVEL, WITH LESS THAN 1% SLOPE.
   7.4. AFTER GRUBBING AND ROUGH GRADING, CONTRACTOR TO TILL WITH A DISC OR CHISEL PLOW TO A DEPTH OF 18 INCHES, FOLLOWED BY A LEVELING DRAG. THIS WILL RESTORE THE SOILS TO A LOOSE CONDITION TO PROMOTE INFILTRATION.
   7.5. IF ANY ROCK PINNACLES ARE ENCOUNTERED WITHIN THE BASIN FOOTPRINT, THEY SHALL BE REMOVED TO A DEPTH OF 24 INCHES BELOW THE BASIN BOTTOM AND REPLACED WITH INFILTRATION MEDIA OR ONSITE SOILS THAT MEET THE DESIGN INFILTRATION RATE, UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER OF RECORD FOR THE PROJECT.
7. INSTALL BASIN SIDE SLOPE EROSION CONTROL BLANKETS AND ANY PROPOSED SWALE LINERS THAT ARE PROPOSED TO EXTEND TO THE BOTTOM ELEVATION OF THE BASIN.
8. SEED AND STABILIZE THE ENTIRE BASIN. UNLESS OTHERWISE SPECIFIED, SEED PER THE PERMANENT SEEDING SPECIFICATIONS PROVIDED IN THESE DETAILS. (VEGETATE IF APPROPRIATE WITH NATIVE PLANTINGS).
9. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

UNDERGROUND INFILTRATION BASIN - CONSTRUCTION SEQUENCE (BMP ID# 7)

A LICENSED PROFESSIONAL ENGINEER SHOULD PROVIDE APPROPRIATE CONSTRUCTION SEQUENCING FOR THE UNDERGROUND INFILTRATION BASIN. GUIDANCE SHOULD BE BASED ON THE STORMWATER BMP MANUAL TO THE GREATEST DEGREE POSSIBLE. CONSTRUCTION SEQUENCING SHOULD BE PROJECT-SPECIFIC, BUT AT A MINIMUM SHOULD INCLUDE THE FOLLOWING:

1. FOR BASINS THAT ARE TO BE CONVERTED FROM A SEDIMENT BASIN, FOLLOW THE BASIN CONVERSION SEQUENCE PROVIDED ON THE E&S PLANS.
2. INSTALL THE BASIN DURING FINAL PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT-LADEN WATER FROM ENTERING THE FACILITY.
3. INSTALL AND MAINTAIN PROPER E&S BMPS DURING CONSTRUCTION.
4. EXCAVATE BASIN TO PROPOSED BASIN BOTTOM (BOTTOM OF STONE ENVELOPE), MEETING OVER-EXCAVATION FOR BASIN BOTTOM ELEVATIONS. THE BASIN BOTTOM SHOULD BE UN-COMPACTED, FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT THE SUBGRADE.THE FOLLOWING SHALL BE CONSIDERED DURING EXCAVATION OF THE INFILTRATION BASIN:
   4.1. WHERE FINE-GRAINED SOILS ARE ENCOUNTERED, THE SUBGRADE SHALL BE MIXED WITH A GRANULAR INFILTRATION MEDIA TO INCREASE THE PERMEABILITY OF THE SUBGRADE SOILS AND PREVENT CLOGGING. INFILTRATION MEDIA SHALL MEET THE INFILTRATION BASIN MEDIA SPECIFICATIONS ON DRAWING CG-501.
   4.2. IN AREAS WHERE WEATHERED OR FRACTURED ROCK IS ENCOUNTERED WITHIN 2 FEET OF THE BASIN SUBGRADE, INFILTRATION MEDIA MAY BE REQUIRED TO SLOW INFILTRATION TO LESS THAN 10 INCHES/HOUR.
   4.3. THE INFILTRATION BASIN BOTTOM SHALL BE LEVEL, WITH LESS THAN 1% SLOPE.
   4.4. AFTER BASIN EXCAVATION, CONTRACTOR TO TILL WITH A DISC OR CHISEL PLOW TO A DEPTH OF 18 INCHES, FOLLOWED BY A LEVELING DRAG. THIS WILL RESTORE THE SOILS TO A LOOSE CONDITION TO PROMOTE INFILTRATION.
   4.5. IF ANY ROCK PINNACLES ARE ENCOUNTERED WITHIN THE BASIN FOOTPRINT, THEY SHALL BE REMOVED TO A DEPTH OF 24 INCHES BELOW THE BASIN BOTTOM AND REPLACED WITH INFILTRATION MEDIA OR ONSITE SOILS THAT MEET THE DESIGN INFILTRATION RATE, UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER OF RECORD FOR THE PROJECT.
8. INSTALL OUTLET CONTROL STRUCTURES, BASIN PIPING, STONE BED, CLEANOUTS, ETC.
9. PLACE INFILTRATION BASIN MEDIA GENTLY. COMPACT MEDIA PER THE SPECIFICATIONS PROVIDED ON DRAWING CG-501, BUT TAKE CARE NOT TO OVER-COMPACT. THE PLACEMENT OF THE MEDIA SHOULD BE DONE FROM OUTSIDE THE BMP FOOTPRINT TO AVOID COMPACTION BY CONSTRUCTION EQUIPMENT. EQUIPMENT SHOULD NEVER DRIVE OVER PLACED SOIL MEDIA WITHOUT CONSTRUCTION MATTING.
10. SEED AND STABILIZE DISTURBED AREA. VEGETATE WITH NATIVE PLANTINGS.
11. MAINTAIN INLET PROTECTION AND OTHER E&S CONTROLS UNTIL THE SITE IS FULLY STABILIZED.

RAIN GARDEN AREAS - CONSTRUCTION SEQUENCE (BMP #5 & 6)

1. INSTALL TEMPORARY SEDIMENT CONTROL BMPS AS SHOWN ON THE PLANS.
2. COMPLETE SITE GRADING. IF APPLICABLE, CONSTRUCT CURB CUTS OR INFLOW ENTRANCE BUT PROVIDE PROTECTION SO THAT DRAINAGE IS PROHIBITED FROM ENTERING CONSTRUCTION AREA.
3. STABILIZE GRADING WITHIN THE LIMIT OF DISTURBANCE EXCEPT WITH THE RAIN GARDEN AREA. RAIN GARDEN BED AREAS MAY BE USED AS TEMPORARY SEDIMENT TRAPS PROVIDED THAT THE PROPOSED FINISH ELEVATION OF THE BED IS 12 INCHES LOWER THAN THE BOTTOM ELEVATION OF THE SEDIMENT TRAP.
4. EXCAVATE RAIN GARDEN TO PROPOSED INVERT DEPTH AND SCARIFY THE EXISTING SOIL SURFACES. DO NOT COMPACT IN-SITU SOILS.
5. BACKFILL RAIN GARDEN WITH AMENDED SOIL AS SHOWN ON PLANS AND SPECIFICATIONS. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY.
6. PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION.
7. COMPLETE FINAL GRADING TO ACHIEVE PROPOSED DESIGN ELEVATIONS, LEAVING SPACE FOR UPPER LAYER OF COMPOST, MULCH OR TOPSOIL AS SPECIFIED ON PLANS.
8. PLANT VEGETATION ACCORDING TO PLANTING PLAN.
9. MULCH AND INSTALL EROSION PROTECTION AT SURFACE FLOW ENTRANCES WHERE NECESSARY.

VEGETATED SWALE - CONSTRUCTION SEQUENCE

1. BEGIN VEGETATED SWALE CONSTRUCTION ONLY WHEN THE UPGRADIENT SITE HAS BEEN SUFFICIENTLY STABILIZED AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE. VEGETATED SWALES SHOULD BE CONSTRUCTED AND STABILIZED VERY EARLY IN THE CONSTRUCTION SCHEDULE, PREFERABLY BEFORE MASS EARTHWORK AND PAVING INCREASE THE RATE AND VOLUME OF RUNOFF. (EROSION AND SEDIMENT CONTROL METHODS SHALL ADHERE TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, LATEST EDITION.)
2. ROUGH GRADE THE VEGETATED SWALE. EQUIPMENT SHALL AVOID EXCESSIVE COMPACTION AND/OR LAND DISTURBANCE. EXCAVATING EQUIPMENT SHOULD OPERATE FROM THE SIDE OF THE SWALE AND NEVER ON THE BOTTOM. IF EXCAVATION LEADS TO SUBSTANTIAL COMPACTION OF THE SUBGRADE (WHERE AN INFILTRATION TRENCH IS NOT PROPOSED), 18 INCHES SHALL BE REMOVED AND REPLACED WITH A BLEND OF TOPSOIL AND SAND TO PROMOTE INFILTRATION AND BIOLOGICAL GROWTH. AT THE VERY LEAST, TOPSOIL SHALL BE THOROUGHLY DEEP PLOWED INTO THE SUBGRADE IN ORDER TO PENETRATE THE COMPACTED ZONE AND PROMOTE AERATION AND THE FORMATION OF MACROPORES. FOLLOWING THIS, THE AREA SHOULD BE DISKED PRIOR TO FINAL GRADING OF TOPSOIL.
3. CONSTRUCT CHECK DAMS, IF REQUIRED.
4. FINE GRADE THE VEGETATED SWALE. ACCURATE GRADING IS CRUCIAL FOR SWALES. EVEN THE SMALLEST NON-CONFORMITIES MAY COMPROMISE FLOW CONDITIONS.
5. SEED AND VEGETATE ACCORDING TO LANDSCAPE PLAN. PLANT THE SWALE AT A TIME OF THE YEAR WHEN SUCCESSFUL ESTABLISHMENT WITHOUT IRRIGATION IS MOST LIKELY. HOWEVER, TEMPORARY IRRIGATION MAY BE NEEDED IN PERIODS OF LITTLE RAIN OR DROUGHT. VEGETATION SHOULD BE ESTABLISHED AS SOON AS POSSIBLE TO PREVENT EROSION AND SCOUR.
6. ONCE ALL TRIBUTARY AREAS ARE SUFFICIENTLY STABILIZED, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS. IT IS VERY IMPORTANT THAT THE SWALE BE STABILIZED BEFORE RECEIVING UPLAND STORMWATER FLOW.

*NOTE: IF A VEGETATED SWALE IS USED FOR RUNOFF CONVEYANCE DURING CONSTRUCTION, IT MUST BE REGRADED AND RESEEDED IMMEDIATELY AFTER CONSTRUCTION AND STABILIZATION HAS OCCURRED. ANY DAMAGED AREAS MUST BE FULLY RESTORED TO ENSURE FUTURE FUNCTIONALITY OF THE SWALE.

SEEDING & STABILIZATION NOTES:

TEMPORARY SEEDING

A) THE FOLLOWING SURFACES OF THE SITE SHALL BE TEMPORARILY SEEDED AND
   1) THE SURFACE OF TOPSOIL STOCKPILES.
   2) THE SURFACE OF EXPOSED EARTH AREAS NOT SUBJECT TO CONSTRUCTION
B) SEEDING SHALL OCCUR IMMEDIATELY AFTER THE ESTABLISHMENT OF THE TOPSOIL STOCKPILES OR ROUGH GRADED AREAS. THE FOLLOWING SEED SHALL BE PLANTED:
   RYEGRASS - BLUE TAG CERTIFIED - 100% - 4 TO 5 LBS. PER 1,000 SQUARE FOOT.
   ANNUAL TYPE - TYPICAL
   PERENNIAL TYPE - NOT APPLICABLE
C) PREPARE AREAS TO BE SEEDED AS FOLLOWS:
   1) REMOVE ALL DEBRIS, INCLUDING LARGE STONE. TILL SOIL TO A DEPTH OF FOUR INCHES TO SIX INCHES. APPLY PULVERIZED AGRICULTURAL GRADED LIME AT A RATE OF 40 LBS. PER 1,000 SQUARE FEET.
   2) BEFORE AUGUST, SEPTEMBER OR OCTOBER SEEDING, APPLY 12.5 LBS. OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. BEFORE FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY OR NOVEMBER SEEDING, APPLY 40 LBS. OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. WORK INTO TOP INCH OF SOIL.
      a) SOW SEED AT THE INDICATED RATE. DIVIDE SEED INTO TWO EQUAL LOTS. SOW ONE LOT IN ONE DIRECTION. SOW SECOND LOT AT RIGHT ANGLE TO FIRST LOT. RAKED SEEDED AREA SLIGHTLY. ROLL SURFACE LIGHTLY TO FIRM SOIL AROUND SEED.
      b) PLACE CLEAN, DRY STRAW OF HAY MULCH WITHIN 48 HOURS AFTER SEEDING. PLACE AT THE RATE OF 1,200 LBS. PER 1,000 SQUARE YARDS.

TEMPORARY MULCHING

A) MULCH PROPOSED LANDSCAPE AREAS OR TOPSOIL STOCKPILES IF EARTHWORK IS COMPLETED OUTSIDE OF THE RECOMMENDED PLANTING SEASONS FOR TEMPORARY SEEDING OR DUE TO UNFAVORABLE WEATHER CONDITIONS.
B) MULCH SHALL BE APPLIED IMMEDIATELY FOLLOWING THE ESTABLISHMENT OF TOPSOIL STOCKPILE OR ROUGH GRADING.
C) MULCH WITH SUITABLE FIBROUS GROUND, SHREDDED AGED HARDWOOD, PINEWOOD BARK, STRAW, OR HAY UNIFORMLY AND CONTINUOUSLY TO A LOOSED DEPTH OF 3 INCHES MINIMUM. ANCHOR AS REQUIRED.
D) PROPERLY MAINTAIN MULCHED AREAS UNTIL PERMANENT STABILIZATION MEASURES ARE COMPLETE. REAPPLY MULCH MATERIALS WHICH BECOME DISLODGED AT INITIAL OR MODIFIED RATES AS NECESSARY. IF A SLOPE FAILURE OCCURS WHICH REQUIRES REDRESSING, EXCAVATION, OR THE ESTABLISHMENT OF A NEW SLOPE, REPLACE MULCH AS NECESSARY.

PERMANENT SEEDING

A) PERMANENT SEEDING SHALL OCCUR IMMEDIATELY AFTER THE FINAL GRADING IS COMPLETED. THE FOLLOWING SEED SHALL BE PLACED UNLESS OTHERWISE SPECIFIED ON THE PLANS OR DIRECTED IN THE FIELD.
   FORMULA B, BLUE TAG CERTIFIED, CONSISTS OF:
   - 50% KENTUCKY BLUEGRASS MIXTURE
   - 30% CREEPING RED FESCUE
   - 20% PERENNIAL RYEGRASS MIXTURE

   SPREAD AT A RATE OF 21.0 LBS. PER 1,000 SQUARE YARDS
B) REMOVE ALL DEBRIS, INCLUDING LARGE STONES. TILL SOIL TO A DEPTH OF FOUR INCHES TO SIX INCHES. APPLY LIME AT A RATE OF 6 TONS PER ACRE. BEFORE JUNE 15, APPLY 1,000 LBS. OF 10-20-20 FERTILIZER PER ACRE. WORK FERTILIZER INTO TOP INCH OF SOIL.
C) SEED ONLY AT THE FOLLOWING TIMES: MARCH 15 TO JUNE 1, AND AUGUST 1 TO OCTOBER 15.
D) APPLY SEED AT A RATE OF 21.0 LBS. PER 1,000 SQUARE YARDS. DIVIDE SEED INTO TWO EQUAL LOTS. SOW ONE LOT IN ONE DIRECTION. SOW SECOND LOT AT RIGHT ANGLE TO FIRST LOT. RAKE SEEDED AREA SLIGHTLY. ROLL SURFACE LIGHTLY TO FIRM SOIL AROUND SEED.
E) MULCH SEEDED AREAS WITH STRAW OR HAY AT THE RATE OF 3 TONS PER ACRE. ANCHOR MULCH. COMPLY WITH THE REQUIREMENTS OF SECTION 805 MULCHING, PENNDOT PUBLICATION 408. ANCHOR MUST BE SPECIFIED.

PERMANENT SEEDING IN RAIN GARDENS/INFILTRATION BASINS SHALL BE AS FOLLOWS:

NOTE: PLEASE SEE THE INCLUDED LANDSCAPE PLANS FOR DETAILED PLANTING SPECIFICATIONS.

INFILTRATION BASINS 1, 2, 3, AND 4 ARE TO BE PLANTED WITH MIXES "A" AND "B", RAIN GARDENS 1 AND 2 ARE TO BE PLANTED WITH MIX 'C".

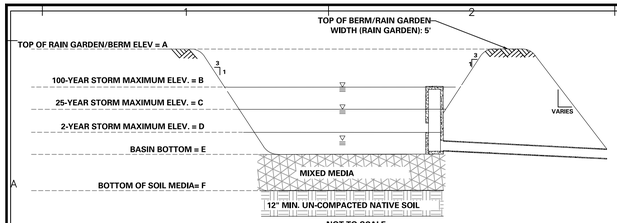
MEADOW SEED MIX "A" - ERNST SEED MIX ERNMX-181 "NATIVE STEEP SLOPE MIX W/ ANNUAL RYEGRASS"

29.0%	ANDROPOGON GERARDII, 'PRAIRIE VIEW'-IN ECOTYPE	BIG BLUESTEM, 'PRAIRIE VIEW'-IN ECOTYPE	
20.0%	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS	
15.0%	SORGHASTRUM NUTANS, NY4 ECOTYPE	INDIANGRASS, NY4 ECOTYPE	
14.0%	ELYMUS VIRGINICUS, MADISON-NY ECOTYPE	VIRGINIA WILDRYE, MADISON-NY ECOTYPE	
6.6%	ELYMUS CANADENSIS	CANADA WILDRYE	
4.8%	PANICUM VIRGATUM, 'SHAWNEE'	SWITCHGRASS, 'SHAWNEE'	
4.0%	AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE	AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE	
2.8%	PANICUM CLANDESTINUM, TIOGA	DEERTONGUE, TIOGA	
1.0%	RUDBECKIA HIRTA	BLACKEYED SUSAN	
0.7%	COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	
0.7%	ECHINACEA PURPUREA	PURPLE CONEFLOWER	
0.7%	HELIOPSIS HELIANTHOIDES, PA ECOTYPE	OXEYE SUNFLOWER, PA ECOTYPE	
0.2%	ASTER PILOSUS, PA ECOTYPE	HEATH ASTER, PA ECOTYPE	
0.2%	MONARDA FISTULOSA	WILD BERGAMOT	
0.1%	APOCYNUM CANNABINUM, PA ECOTYPE	INDIANHEMP, PA ECOTYPE	
0.1%	ASCLEPIA SYRIACA	COMMON MILKWEED	
0.1%	SOLIDAGO RUGOSA, PA ECOTYPE	WRINKLELEAF GOLDENROD, PA ECOTYPE	

1. SEED AT A RATE OF 60 LBS./ACRE.
2. FOR SPRING SEEDING, APPLY A NURSE CROP OF OATS AT A RATE OF 20 LBS./ACRE.
3. FOR FALL SEEDING, APPLY A NURSE CROP OF BARLEY AT A RATE OF 20 LBS./ACRE.

MEADOW SEED MIX "B" - ERNST SEED MIX ERNMX-183 "NATIVE DETENTION AREA MIX"

26.0%	PANICUM CLANDESTINUM, TIO



NOT TO SCALE

BASIN	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)
RAIN GARDEN 1	386.00	385.10	385.02	384.64	384.00	381.00
RAIN GARDEN 2	388.00	387.18	387.05	386.81	386.00	383.00

MIXED MEDIA SPECIFICATIONS

- MIXED MEDIA LAYER MIX TO BE MEASURED BY-WEIGHT: 50% SAND-50% TOPSOIL.
- MIXED MEDIA SHALL NOT CONTAIN GREATER THAN 10% CLAY.
- MIXED MEDIA SHALL BE PLACED AT A BULK DENSITY NOT EXCEEDING 90 POUNDS PER CUBIC FOOT. FIELD DENSITY TESTING SHALL BE PERFORMED TO VERIFY THAT THIS BULK DENSITY IS NOT EXCEEDED.
- MIXED MEDIA SHALL BE CAPABLE OF ACHIEVING THE DESIGN INFILTRATION RATE AND HAVE A VOID RATIO OF NOT LESS THAN 0.2.

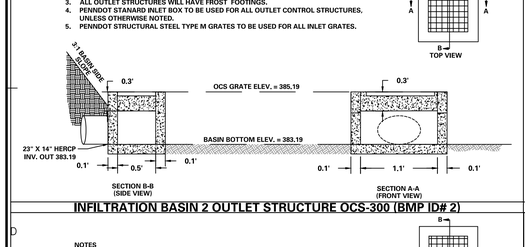
MAINTENANCE AND INSPECTION NOTES

- CATCH BASINS AND INLETS (UPGRADIENT OF RAIN GARDEN) SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTER RUNOFF EVENTS.
- THE VEGETATION ALONG THE SURFACE OF THE RAIN GARDEN SHOULD BE MAINTAINED IN GOOD CONDITION AND ANY BARE SPOTS REVEGETATED AS SOON AS POSSIBLE.
- VEHICLES SHOULD NOT BE PARKED OR DRIVEN ON AN RAIN GARDEN, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
- INSPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOUR.
- ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, SINKHOLES, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS AND SLOPE STABILITY IN BERMS.
- MOW ONLY AS APPROPRIATE FOR VEGETATIVE COVER SPECIES.
- REMOVE ACCUMULATED SEDIMENT FROM BASINS AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND DISPOSE OF SEDIMENT IN ACCORDANCE WITH APPLICABLE REGULATIONS.

TYPICAL RAIN GARDEN CROSS SECTION

NOTES

1. CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR REVIEW BY DESIGN ENGINEER PRIOR TO CONSTRUCTION/ORDERING
2. TRASH RACK MUST BE REMOVABLE AND ALL EDGES MUST BE CHAMFERED 1".
3. ALL OUTLET STRUCTURES WILL HAVE FROST FOOTINGS.
4. PENNDOT STANARD INLET BOX TO BE USED FOR ALL OUTLET CONTROL STRUCTURES, UNLESS OTHERWISE NOTED.
5. PENNDOT STRUCTURAL STEEL TYPE M GRATES TO BE USED FOR ALL INLET GRATES.



INFILTRATION BASIN #1 OUTLET STRUCTURE OCS-200 (BMP ID# 1)

NOTES

1. CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR REVIEW BY DESIGN ENGINEER PRIOR TO CONSTRUCTION/ORDERING
2. TRASH RACK MUST BE REMOVABLE AND ALL EDGES MUST BE CHAMFERED 1".
3. ALL OUTLET STRUCTURES WILL HAVE FROST FOOTINGS.
4. PENNDOT STANARD INLET BOX TO BE USED FOR ALL OUTLET CONTROL STRUCTURES, UNLESS OTHERWISE NOTED.
5. PENNDOT STRUCTURAL STEEL TYPE M GRATES TO BE USED FOR ALL INLET GRATES.

INFILTRATION BASIN 2 OUTLET STRUCTURE OCS-300 (BMP ID# 2)

NOTES

1. CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR REVIEW BY DESIGN ENGINEER PRIOR TO CONSTRUCTION/ORDERING
2. TRASH RACK MUST BE REMOVABLE AND ALL EDGES MUST BE CHAMFERED 1".
3. ALL OUTLET STRUCTURES WILL HAVE FROST FOOTINGS.
4. PENNDOT STANARD INLET BOX TO BE USED FOR ALL OUTLET CONTROL STRUCTURES, UNLESS OTHERWISE NOTED.
5. PENNDOT STRUCTURAL STEEL TYPE M GRATES TO BE USED FOR ALL INLET GRATES.

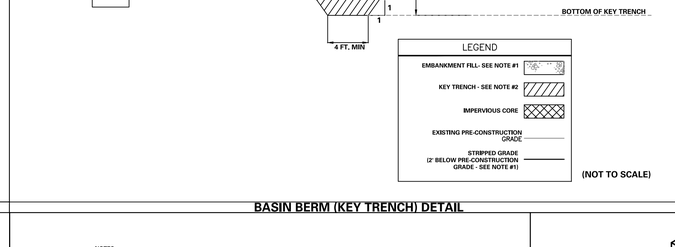
INFILTRATION BASIN #3 OUTLET STRUCTURE OCS-400 (BMP ID# 3)

NOTES

1. CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR REVIEW BY DESIGN ENGINEER PRIOR TO CONSTRUCTION/ORDERING
2. TRASH RACK MUST BE REMOVABLE AND ALL EDGES MUST BE CHAMFERED 1".
3. ALL OUTLET STRUCTURES WILL HAVE FROST FOOTINGS.
4. PENNDOT STANARD INLET BOX TO BE USED FOR ALL OUTLET CONTROL STRUCTURES, UNLESS OTHERWISE NOTED.
5. PENNDOT STRUCTURAL STEEL TYPE M GRATES TO BE USED FOR ALL INLET GRATES.

INFILTRATION BASIN #4 OUTLET STRUCTURE OCS-500 (BMP ID# 4)

NOTES:
1. ALL BASIN EMBANKMENTS SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 . THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. EMBANKMENTS SHALL BE COMPACTED TO A MINIMUM OF 95% DRY DENSITY. COMPACTION TESTS SHALL BE PERFORMED USING THE MODIFIED PROCTOR METHOD IN ACCORDANCE WITH ASTM-D-1557.
2. KEY TRENCH SHALL HAVE A MINIMUM DEPTH OF FILL MATERIAL THAT IS 2' BELOW THE STRIPPED GRADE (OR SHALLOWER IF BEDROCK IS ENCOUNTERED), MINIMUM BOTTOM WIDTH=4', MAXIMUM SIDE SLOPE STEEPNESS IS 1H:1V AND FILLED WITH HIGHLY IMPERVIOUS AND WELL COMPACTED CLAY MATERIAL. THE TRENCH MUST BE INSTALLED IN ALL AREAS OF FILL AND EXCAVATED UNDER THE ENTIRE LENGTH OF THE BERM AND LOCATED AT OR UPSTREAM OF THE CENTERLINE OF THE BERM. COMPACTION REQUIREMENTS SHOULD BE THE SAME AS THOSE FOR THE EMBANKMENT. THE TRENCH SHOULD BE DEWATERED DURING BACKFILLING AND COMPACTION OPERATIONS.



LEGEND

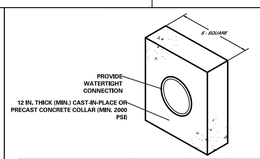
- EMBANKMENT FILL- SEE NOTE #1
- KEY TRENCH - SEE NOTE #2
- IMPERVIOUS CORE
- EXISTING PRE-CONSTRUCTION GRADE
- STRIPPED GRADE (2' BELOW PRE-CONSTRUCTION GRADE - SEE NOTE #1)

(NOT TO SCALE)

BASIN BERM (KEY TRENCH) DETAIL

NOTES
1) DIAMETER OF MANHOLE SHALL BE REVIEWED BY THE CONTRACTOR TO DETERMINE A LEGEND OF STANDARD MANHOLE DIMENSIONS WITH RESPECT TO PROPOSED PIPE SIZES, NUMBER AND GEOMETRY. OVER SIZE MANHOLES SHALL BE PROVIDED IF MINIMUM 6" WALL DIMENSION BETWEEN PIPES IS NOT MAINTAINED.
2) MANHOLES SHALL BE STANDARD PRECAST CONCRETE UNITS AND SHALL BE DESIGNED AND CONSTRUCTED BY THE MANUFACTURER TO SUPPORT TRUCK HS20 LOADING.
3) OUTLET CONTROL STRUCTURE SHALL BE MADE OF REINFORCED PRECAST CONCRETE. CONTRACTOR SHALL PROVIDE SUBMITTAL OF SAME PRIOR TO CONSTRUCTION.
4) ALL JOINTS SHALL BE WATERTIGHT.

INFILTRATION BASIN 5 OUTLET CONTROL STRUCTURE (OCS-600)



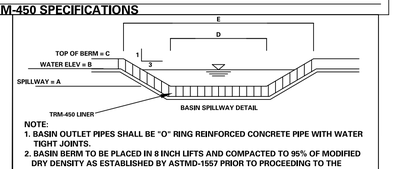
NOTES:

ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.

COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

Basin No.	Pipe Size (in)	COLLAR DIM. (in.)	No. of Collars	Distance Riser to 1st Collar (ft)	Collar Spacing (ft)
INFILTRATION BASIN 1	14 X 23	44 X 53	1	8.5	N/A
INFILTRATION BASIN 2	14 X 23	50 X 59	1	8.16	N/A
INFILTRATION BASIN 3	14 X 23	50 X 59	1	8.5	N/A
INFILTRATION BASIN 4	14 X 23	38 X 47	2	7.0	5.0

ANTI-SEEP COLLAR



NOTE:
1. BASIN OUTLET PIPES SHALL BE "O" RING REINFORCED CONCRETE PIPE WITH WATER TIGHT JOINTS.
2. BASIN BERM TO BE PLACED IN 8 INCH LIFTS AND COMPACTED TO 95% OF MODIFIED DRY DENSITY AS ESTABLISHED BY ASTMD-1557 PRIOR TO PROCEEDING TO THE NEXT LIFT.

BASIN	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)
INFILTRATION BASIN 1	385.75	386.25	387.35	15.00	24.60
INFILTRATION BASIN 2	386.19	386.69	388.19	20.00	32.00
INFILTRATION BASIN 3	386.65	387.15	388.65	35.00	47.00
INFILTRATION BASIN 4	383.00	383.50	385.00	45.00	57.00

EMERGENCY SPILLWAY

LANDLOK® BY PROPEX

Product Data
LANDLOK® 450

LANDLOK® 450 turf reinforcement mat (TRM) ***features X3® technology*** *that* consists of a dense web of crimped, interlocking, multi-lobed polypropylene fibers positioned between two biaxially oriented nets and mechanically bound together by parallel stitching with polypropylene thread. The TRM is designed to accelerate seedling emergence, exhibit high resiliency, and possess strength and elongation properties to limit stretching in a saturated condition. Every component of **LANDLOK 450** is stabilized against chemical and ultraviolet degradation which are normally found in a natural soil environment. Furthermore, the TRM contains no biodegradable components.

LANDLOK 450 conforms to the property values listed below[1] and is manufactured at a Propex facility having achieved ISO 9001:2000 certification. Propex performs internal Manufacturing Quality Control (MQC) tests that have been accredited by the Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP). This product NTPEP approved for AASHTO standards.

PROPERTY	TEST METHOD	MARV[2] ENGLISH	MARV[2] METRIC
ORIGIN OF MATERIALS			
% U.S. Manufactured Inputs		100%	100%
% U.S. Manufactured		100%	100%
PHYSICAL			
Mass/Unit Area	ASTM D-6566	10.0 oz/yd^2	340 g/m^2
Thickness	ASTM D-6525	0.40 in	10.1 mm
Light Penetration (% Passing)	ASTM D-6567	20%	20%
Color	Visual	Green or Tan	
MECHANICAL			
Tensile Strength (Grab)	ASTM D-6818	400 x 300 lb/ft	5.8 x 4.3 kN/m
Elongation	ASTM D-6818	50% (max)	50% (max)
Resiliency	ASTM D-6524	90%	90%
Flexibility	ASTM D-6575	0.026 in-lb (avg)	30,000 mg-cm (avg)
ENDURANCE			
UV Resistance % Retained 1000 hrs	ASTM D-4355	80%	80%
PERFORMANCE			
Velocity[3] (Vegetated)	Large Scale	18 ft/s	5.5 m/s
Shear Stress[3] (Vegetated)	Large Scale	10 lb/ft^2	479 Pa
Manning's "n"[4] (Unvegetated)	Calculated	0.025	0.025
Seedling Emergence[4]	ECTC Draft Method #4	409%	409%
ROLL SIZES		6.5 ft x 138.5 ft	2.0 m x 42.2 m

NOTES:
1. The property values listed are effective 04/2011 and are subject to change without notice.
2. MARV indicates minimum average roll value calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any sample taken during quality assurance testing will exceed the value reported.
3. Maximum permissible velocity and shear stress has been obtained through vegetated testing programs featuring specific soil types, vegetation classes, flow conditions, and failure criteria. These conditions may not be relevant to every project nor are they replicated by other manufacturers. Please contact Propex for further information.
4. Calculated as typical values from large-scale flexible channel lining test programs with a flow depth of 6 to 12 inches.

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TRM-450 SPECIFICATIONS

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER 076526

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN DETAILS

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CG-502
Sheet 35 of 52

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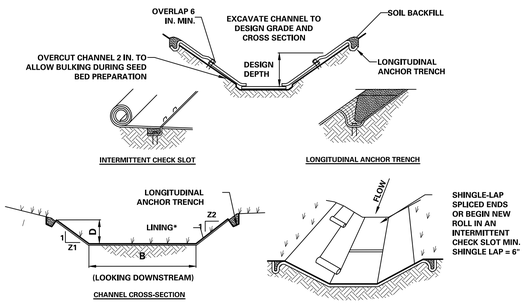
Date: 7/16/2025 Time: 17:45 User: phaley Style Table: Langan.stb Layout: CG-502 Document Code: 200168301-0503-CG701-0102

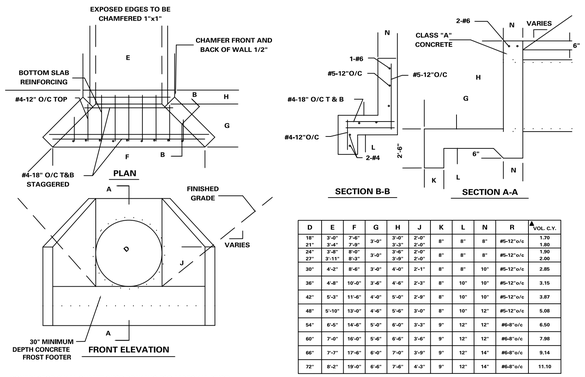
LANGAN 111
Project No. 200168301



NOT TO SCALE

CHANNEL	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	DRAINAGE AREA (AC)	LINED CONDITION	VEGETATED CONDITION
SWALE 1A	1	1	7	3	3	0.11	STRAW WITH NET	VEGETATED (RET. C)
SWALE 1B	1	1	7	3	3	0.12	STRAW WITH NET	VEGETATED (RET. C)
SWALE 2	1	1	7	3	3	0.15	STRAW WITH NET	VEGETATED (RET. C)
SWALE 3	1	2	13	3	3	0.29	STRAW WITH NET	VEGETATED (RET. C)
SWALE 4A	1	1	7	3	3	0.18	STRAW WITH NET	VEGETATED (RET. C)
SWALE 4B	1	1.33	9	3	3	0.22	STRAW WITH NET	VEGETATED (RET. C)
SWALE 5	1	1	7	3	3	0.29	STRAW WITH NET	VEGETATED (RET. C)
SWALE 6	1	1	7	3	3	0.14	STRAW WITH NET	VEGETATED (RET. C)
SWALE 7	1	1	7	3	3	0.13	STRAW WITH NET	VEGETATED (RET. C)

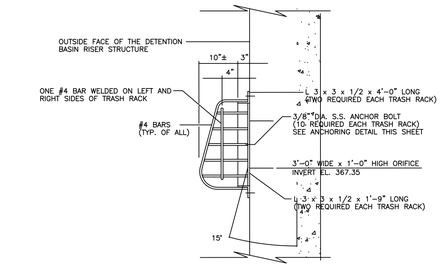
VEGETATED SWALE DETAIL

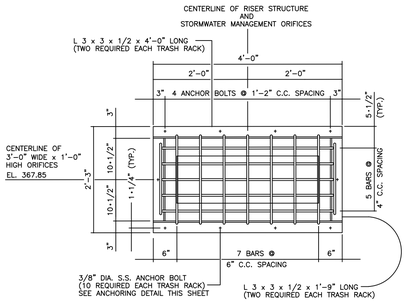


D	E	F	G	H	J	K	L	N	R	A VOL. C.Y.
18"	3'-0"	7'-6"	3'-0"	3'-0"	2'-0"	8"	8"	8"	#5-12"o/c	1.70
21"	3'-4"	7'-9"		3'-3"	2'-0"					1.80
24"	3'-8"	8'-0"	3'-0"	3'-6"	2'-0"	8"	8"	8"	#5-12"o/c	1.90
27"	3'-11"	8'-3"		3'-9"	2'-0"					2.00
30"	4'-3"	8'-6"	3'-0"	4'-0"	2'-1"	8"	8"	10"	#5-12"o/c	2.05
36"	4'-8"	10'-0"	3'-6"	4'-6"	2'-3"	8"	10"	10"	#5-12"o/c	3.15
42"	5'-3"	11'-6"	4'-0"	5'-0"	2'-9"	8"	10"	10"	#5-12"o/c	3.87
48"	5'-10"	13'-0"	4'-6"	5'-6"	3'-0"	8"	10"	12"	#5-12"o/c	5.08
54"	6'-5"	14'-6"	5'-0"	6'-0"	3'-3"	9"	12"	12"	#6-8"o/c	6.50
60"	7'-0"	16'-0"	5'-6"	6'-6"	3'-6"	9"	12"	12"	#6-8"o/c	7.98
66"	7'-7"	17'-6"	6'-0"	7'-0"	3'-9"	9"	12"	14"	#6-8"o/c	9.14
72"	8'-2"	19'-0"	6'-6"	7'-6"	4'-3"	9"	12"	14"	#6-8"o/c	11.10

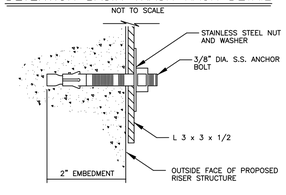
BASED ON 3:1 CHANNEL SIDE SLOPES.

HEADWALL DETAIL





DETENTION BASIN TRASH RACK DETAIL



ANCHOR BOLT DETAIL FOR TRASH RACK

NOT TO SCALE

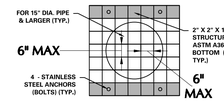
TRASH RACK NOTES:

TRASH RACK TO BE GALVANIZED. WELDING AND DRILLING OF BOLT HOLES TO BE PERFORMED PRIOR TO GALVANIZING.

PROVIDE STAINLESS STEEL ANCHOR BOLTS AND LOCK WASHERS.

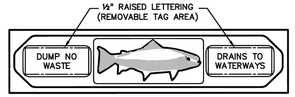
THREE TRASH RACKS REQUIRED. PROVIDE ONE TRASH RACK OVER EACH OF THE THREE UPPER 3'-0" WIDE x 1'-0" HIGH ORIFICES.

TRASH RACK DETAILS



*ALL MATERIAL TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION

OPEN HEADWALL PROTECTION DETAIL



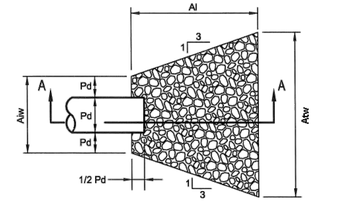
NO SCALE

TROUT LOGO PLATE

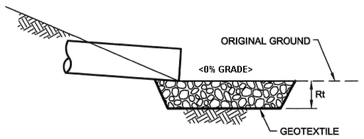
ALL INLETS MUST CONTAIN THE 24"X3" TROUT LOGO PLATE AND TAGS DISPLAYING A DUMPING WARNING AS MANUFACTURED BY EAST JORDAN IRON WORKS INC. (CATALOG NO. 7003PLI)

INLET TROUT LOGO PLATE DETAIL

STANDARD CONSTRUCTION DETAIL # 9-2
Riprap Apron at Pipe Outlet without Flared Endwall



PLAN VIEW



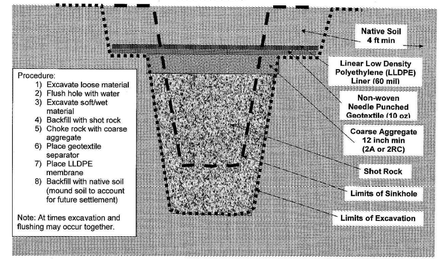
SECTION A - A

Adapted from USDOT, FHA HEC-14

NO:	PIPE DIA Do (IN)	TAILWATER COND. (MAX OR MIN)	MAN 'n' FOR PIPE	PIPE SLOPE (FT/FT)	Q (CFS)	V (FPS)	RIP-RAP SIZE (Rx)	Rt* (IN)	Al (FT)	Aw (FT)	Atw (FT)
EW-200	18	Max.	0.012	0.0035	3.88	4.01	**R-3**	9	8.0	4.5	7.7
EW-201	18	Max.	0.012	0.0400	0.89	6.58	**R-4**	18	8.0	4.5	7.7
FES-200	18	Max.	0.012	0.0080	0.74	3.58	**R-3**	9	8.0	4.5	7.7
EW-300	18	Max.	0.012	0.0400	0.64	5.94	**R-3**	9	8.0	4.50	7.7
EW-301	18	Max.	0.012	0.0424	2.96	9.17	**R-5**	27	8.0	4.5	7.7
EW-302	18	Max.	0.012	0.0109	6.87	6.87	**R-4**	18	8.0	4.5	7.7
FES-300	18	Max.	0.012	0.0058	1.25	3.49	**R-4**	18	8.0	4.5	7.7
HW-400	18	Max.	0.012	0.0400	3.11	9.29	**R-5**	27	8.0	4.5	7.7
HW-401	18	Max.	0.012	0.0371	0.63	5.84	**R-3**	9	8.0	4.5	7.7
HW-402	18	Max.	0.012	0.0129	3.19	3.44	**R-3**	9	8.0	4.5	7.7
HW-500	24	Max.	0.012	0.0100	14.88	8.21	**R-4**	18	10.0	6.0	10.0
HW-501	24	Max.	0.012	0.0220	15.73	11.13	**R-5**	27	10.0	6.0	10.0
HW-502	18	Max.	0.012	0.0138	1.34	4.85	**R-3**	9	8.0	4.5	7.7
HW-503	18	Max.	0.012	0.0326	2.49	7.92	**R-4**	18	8.0	4.5	7.7

RIP-RAP DETAIL

Sinkhole Repair Detail
Sinkhole in Soil – No Infiltration Desired
Not to Scale

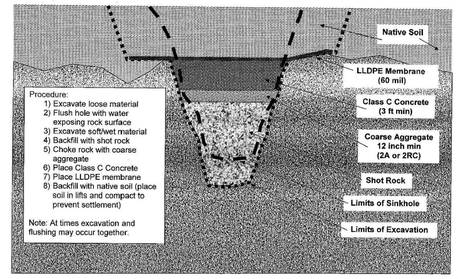


(N.T.S)

NOTES:
1. A PROFESSIONAL ENGINEER, OR GEOLOGIST, WITH EXPERIENCE IN SINKHOLES REMEDIATION, SHALL BE CONSULTED BEFORE REMEDIAL ACTIVITIES
2. THE PALMER TOWNSHIP GEOTECHNICAL ENGINEER AND THE NORTHAMPTON COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED WHEN A SINKHOLE OCCURS ON SITE, BOTH DURING AND AFTER CONSTRUCTION, TO PROVIDE ADDITIONAL GUIDANCE AND CONCURRENCE WITH THE PROFESSIONAL'S RECOMMENDATIONS.

SINKHOLE REPAIR DETAIL - SINKHOLE IN SOIL

Sinkhole Repair Detail
Sinkhole in Rock – No Infiltration Desired
Not to Scale



(N.T.S)

NOTES:
1. A PROFESSIONAL ENGINEER, OR GEOLOGIST, WITH EXPERIENCE IN SINKHOLES REMEDIATION, SHALL BE CONSULTED BEFORE REMEDIAL ACTIVITIES
2. THE PALMER TOWNSHIP GEOTECHNICAL ENGINEER AND THE NORTHAMPTON COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED WHEN A SINKHOLE OCCURS ON SITE, BOTH DURING AND AFTER CONSTRUCTION, TO PROVIDE ADDITIONAL GUIDANCE AND CONCURRENCE WITH THE PROFESSIONAL'S RECOMMENDATIONS.

SINKHOLE REPAIR DETAIL - SINKHOLE IN ROCK

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND UPPER NAZARETH TOWNSHIP/LOWER NAZARETH TOWNSHIP/EASTON BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN DETAILS

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CG-503
Sheet 36 of 52

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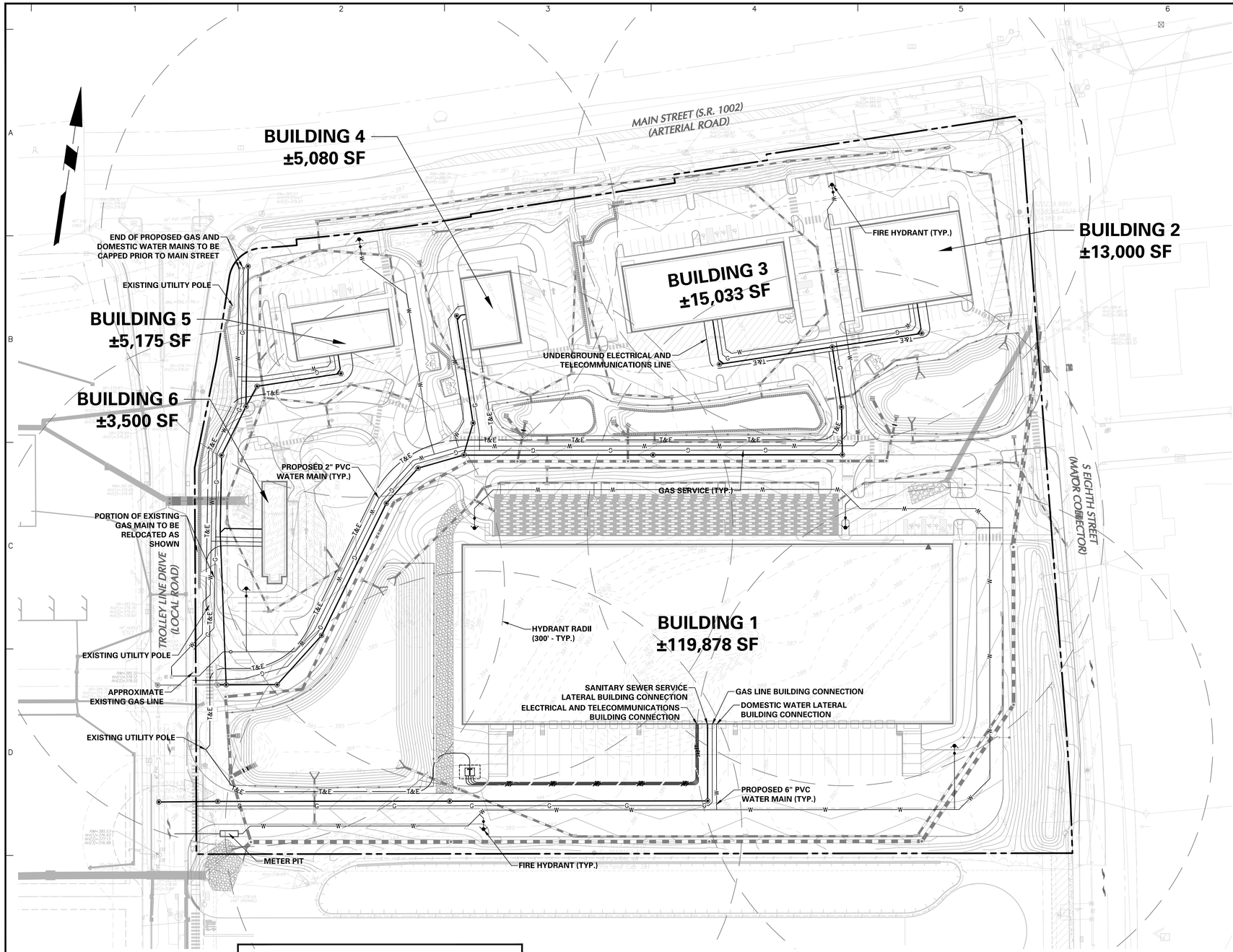
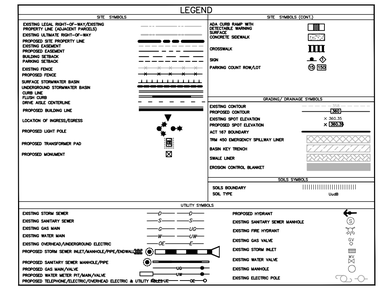
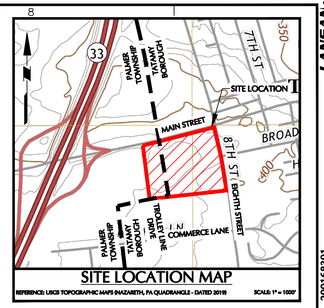
Date: 7/16/2025 Time: 17:46 User: phaley Style Table: Langan,stb Layout: CG-703 Document Code: 200168301-0503-CG701-0103

LANGAN 112
Project No. 200168301







UTILITY PLAN NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, LIGHTING, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
3. THE LOCATION OF THE EXISTING GAS MAIN IS APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION.
4. ALL GAS WORK AND OTHER ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS.
5. THE LOCATION OF OVERHEAD ELECTRIC LINES ARE APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION.
6. ALL ELECTRICAL WORK, TRANSFORMER PAD, AND ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS. MINIMUM DEPTH OF COVER OVER ELECTRIC, GAS, AND CABLE SHALL BE 2 FT.
7. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN BY THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
8. ALL WATER MAINS ARE TO HAVE A MINIMUM COVER OF 4 FEET FROM THE TOP OF THE PIPE.
9. PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 10 FT BETWEEN SANITARY SEWER MAINS AND WATER MAINS. PROVIDE A 5 FT MINIMUM HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER MAINS AND ALL OTHER UTILITIES. PROVIDE A 5 FT. MINIMUM HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER MAINS AND CONCRETE CURBS.
10. ALL INSTALLED UTILITIES SHALL BE CLEARLY MARKED IN THE FIELD AS PER GOVERNING AGENCY.
11. TEMPORARY ALL-WEATHER SURFACE ACCESS ROADS CAPABLE OF SUPPORTING 30 TON EMERGENCY VEHICLES SHALL BE PROVIDED AT ALL TIMES FOR FIRE DEPARTMENT ACCESS TO ALL STRUCTURES UNDER CONSTRUCTION AND STORAGE OF COMBUSTIBLE CONSTRUCTION MATERIALS. ACCESS TO SUCH LOCATIONS SHALL BE WITHIN 125 FT AT ALL TIMES. THE FIRE PROTECTION WATER SUPPLY SYSTEM SHALL BE INSTALLED AND IN SERVICE PRIOR TO PLACING COMBUSTIBLE BUILDING MATERIALS ON THE PROJECT SITE OR UTILIZING THEM IN THE CONSTRUCTION OF BUILDING STRUCTURES.
12. THE CONTRACTOR MUST COMPLY WITH ALL STATE AND FEDERAL CONFINED SPACE RULES.
13. FIRE LINES WILL BE SUBJECT TO MORE STRINGENT PRESSURE TESTING THAN THE OTHER WATER MAINS AS PRESCRIBED BY THE FIRE SUB-CODE OFFICIAL.
14. PROVIDE MINIMUM 18 INCH CLEARANCE BETWEEN WATER AND SANITARY SEWER LINES AND 12 INCH CLEARANCE BETWEEN WATER AND STORM SEWER LINES AT ALL CROSSINGS OR PROVIDE CONCRETE ENCASEMENTS.
15. CONTRACTOR IS RESPONSIBLE FOR COORDINATING A PRE-CONSTRUCTION MEETING WITH ALL UTILITY COMPANIES PRIOR TO WORK.
16. CONTRACTOR SHALL MAINTAIN RECORDS OF INSTALLED UTILITY LINES AND PROVIDE TO OWNER, OWNER'S ENGINEER AND UTILITY COMPANIES FOR PURPOSES OF COMPLETING AS-BUILT PLANS FOR THE PROJECT. CONTRACTOR MUST PROVIDE LOCATIONS AND ELEVATIONS TO TOP OF CONDUIT AT 50 FOOT INTERVALS ALONG STRAIGHT SECTIONS OF UTILITY, AND AT ALL BENDS AND APPURTENANCES ALONG THE UTILITY LINES.
17. FOR ALL DRIVEWAYS, CONTRACTOR SHALL VERIFY THE VERTICAL DISTANCE FROM PAVEMENT SURFACE TO THE LOWEST POINT ALONG THE OVERHEAD WIRES, AND COORDINATE WITH UTILITY COMPANY TO RAISE WIRE IF VERTICAL DISTANCE IS LESS THAN 17 FT.
18. SANITARY SEWER IS TO BE CONSTRUCTED WITH SDR-35 PVC PIPE.
19. REFER TO ARCHITECTURAL PLANS FOR ELECTRICAL LAYOUT AND ALL SERVICE LOCATIONS AT THE BUILDINGS, INCLUDING METER LOCATIONS AND WIREWAYS.
20. FIRE HYDRANTS SHALL MEET THE SPECIFICATIONS OF THE TOWNSHIP/BOROUGH FIRE DEPARTMENT.
21. ALL CONSTRUCTION MATERIALS, RESTORATION AND METHODS OF INSTALLATION IN STATE ROADS SHALL BE SUBJECT TO THE REQUIREMENTS AND APPROVAL OF MUNICIPALITY AND STATE.
22. THE CONTRACTOR SHALL PAY ALL FEES INCLUDING INSPECTION FEES, AND GIVE NOTICES NECESSARY FOR AND INCIDENTAL TO THE EXECUTION OF THE PROJECT.
23. INSPECTION OF OR FAILURE TO INSPECT ANY MATERIALS OR WORKMANSHIP BY STATE, COUNTY OR TOWNSHIP/BOROUGH OFFICIALS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM THE WORK IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND LAWS.
24. ALL CLEANOUTS IN PAVEMENT AREAS SHALL HAVE A PROTECTION BOX.
25. WATER PIPES SHALL BE CONSTRUCTED USING C900 PVC PIPE OR APPROVED EQUAL. CONTRACTOR SHALL CONFIRM ALL PROPOSED WATER PIPE SIZES AND MATERIALS WITH THE OWNER, MEP ENGINEER, AND FIRE PROTECTION ENGINEER.
26. THE FIRE RISER LATERALS MUST BE DUCTILE IRON PIPE (DIP). THE CONTRACTOR WILL BE RESPONSIBLE FOR TRANSITIONING FROM CPVC TO DIP OUTSIDE THE BUILDING AND INSTALLING THE RISERS. CPVC MUST BE CONVERTED TO DIP A MINIMUM OF 5' BEFORE THE PIPE ENTERS THE BUILDING.
    CPVC = SCHEDULE 80 CHLORINATED POLYVINYL CHLORIDE
    DIP = DUCTILE IRON PIPE
27. SANITARY SEWERS SHALL CONFORM TO PALMER TOWNSHIP/TATAMY BOROUGH STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR SANITARY SEWER EXTENSIONS (LATEST EDITION)
28. ALL PROPOSED FIRE DEPARTMENT CONNECTIONS SHALL HAVE 5" STORZ CONNECTION ON A LARGE DIAMETER OUTLET, AND HAVE A 30 DEGREE TURN DOWN.
29. FIRE DEPARTMENT CONNECTIONS SHALL BE PROPERLY MARKED. A METAL 1 SIGN WITH WHITE REFLECTIVE BACKGROUND WITH 4" RED LETTERING SHALL BE PROVIDED. THE SIGN SHOULD READ "FIRE DEPARTMENT" ON THE TOP LINE AND "CONNECTION" ON THE BOTTOM LINE. THE SIGN SHALL BE MOUNTED ABOVE THE FDC AT A MINIMUM HEIGHT 12 FT ABOVE FINISHED GRADE OR THE ROOF LINE.
30. BUILDING PLANS SHOWING A GREASE TRAP AND/OR OIL WATER SEPARATOR AND REGULAR SEWER CONNECTIONS SHALL BE REVIEWED BY THE PALMER TOWNSHIP/TATAMY BOROUGH FATS, OILS AND GREASE (FOG) CONSULTANT PRIOR TO SUBMISSION FOR BUILDING PERMITS.
31. THE LOCATION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE DEVELOPER/DESIGN ENGINEER. THE DEVELOPER/DESIGN ENGINEER IS RESPONSIBLE FOR CONFIRMING THE LOCATION OF ALL UTILITIES AND TO AVOID CONFLICTS OF THE SAME WITH PROPOSED IMPROVEMENTS. SIGNIFICANT EFFORTS TO RESOLVE SUCH CONFLICTS, INCLUDING BUT NOT NECESSARILY LIMITED TO REDESIGN, CONSTRUCTION DELAYS, UTILITY RELOCATIONS, ETC., MAY RESULT IF CONFLICTS WITH EXISTING UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION.
32. UGI GAS MAIN REQUIRES 5 FT MINIMUM HORIZONTAL SEPARATION FROM OTHER UTILITIES. UGI GAS MAIN AND SERVICE LATERALS REQUIRE A 1 FT MINIMUM VERTICAL SEPARATION WHEN CROSSING OTHER UTILITIES. UGI GAS MAIN AND SERVICE LATERALS REQUIRE 36 INCH MINIMUM COVER. UGI GAS METER MUST MAINTAIN 5 FT MINIMUM SEPARATION FROM ELECTRIC METER, 3 FT MINIMUM SEPARATION FROM OPERABLE WINDOWS OR DOORS, AND 10 FT MINIMUM SEPARATION FROM FRESH AIR INTAKES.

ACT 287 AS AMENDED

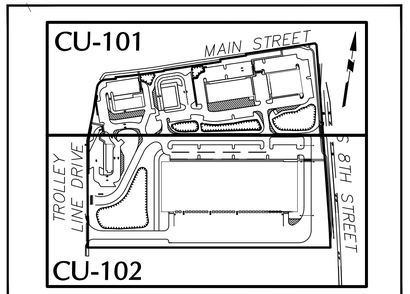
UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE, AND
(10) WORKING DAYS IN DESIGN STAGE
-- STOP & CALL --

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192



KEY MAP 1"=300'

60 0 20 40 60
SCALE: 1 INCH = 60 FEET

APPLICANT/OWNER
THE CHARLES CHRIN REAL ESTATE TRUST
400 SOUTH GREENWOOD AVENUE
EASTON, PA 18045
PHONE: 610-253-9665

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY MASTER UTILITY PLAN

Project No.	Drawing No.
200168301	CU-100
Date: 7/17/2025	
Drawn By: TLP	
Checked By: SMH	
Sheet 37 of 52	

LANGAN 113
Project No. 200168301

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Date: 7/16/2025 Time: 17:48 User: phaley Style Table: Langan,stb Layout: CU-100 Document Code: 200168301-0503-CU101-0101

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER P.A. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

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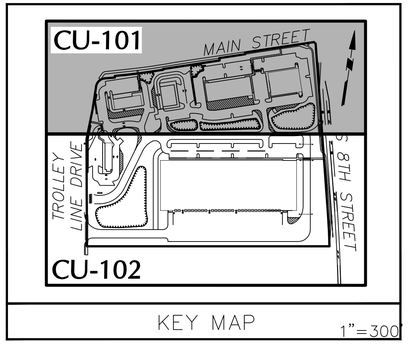
Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192



KEY MAP 1"=300'

LEGEND

SITE SYMBOLS

EXISTING LEAD RIGHT-OF-WAY/EXISTING ULTIMATE RIGHT-OF-WAY/OLD
EXISTING ULTIMATE RIGHT-OF-WAY
PROPOSED SITE PROPERTY LINE
EXISTING EASEMENT
PROPOSED EASEMENT
BUILDING SETBACK
PARKING SETBACK
EXISTING FENCE
PROPOSED FENCE
SURFACE STORMWATER BASIN
UNDERGROUND STORMWATER BASIN
CURB LINE
FLUSH CURB
DRIVE AISLE CENTERLINE
PROPOSED BUILDING LINE
LOCATION OF MARKED/EXPRESS
PROPOSED LIGHT POLE
PROPOSED TRANSFORMER PAD
PROPOSED MONUMENT

SITE SYMBOLS (CONT.)

ADA CURB RAMP WITH DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK
CROSSWALK
SIGN
PARKING COUNT ROW/LOT

GRADING/ DRAINAGE SYMBOLS

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
ACT 167 BOUNDARY
TRN 450 EMERGENCY SPILLWAY LINER
BASIN KEY TRENCH
SWALE LINER
EROSION CONTROL BLANKET

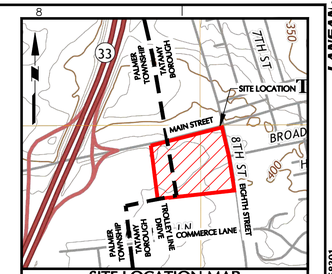
SOILS SYMBOLS

SOILS BOUNDARY
SOIL TYPE

UTILITY SYMBOLS

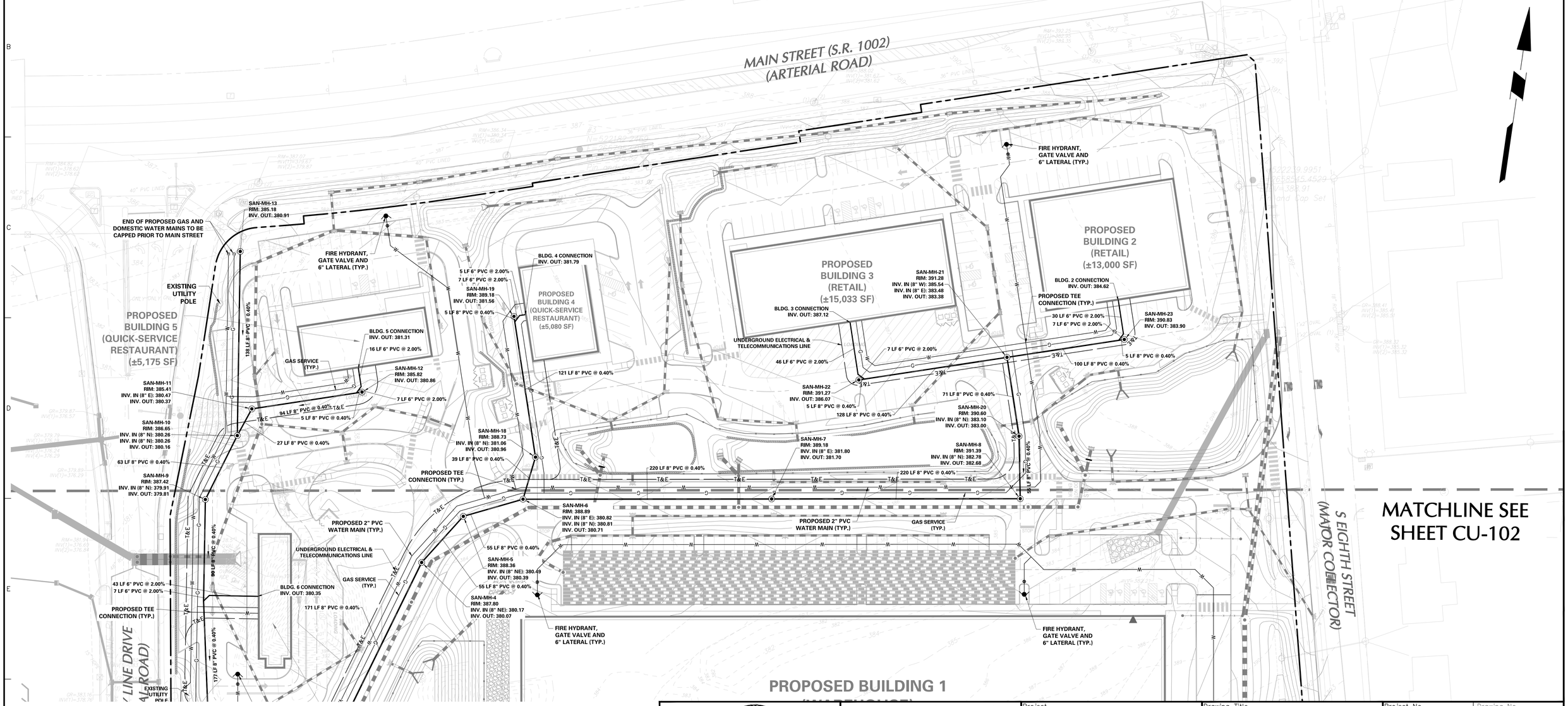
EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING GAS MAIN
EXISTING WATER MAIN
EXISTING OVERHEAD/UNDERGROUND ELECTRIC
PROPOSED STORM SEWER INLET/MANHOLE/PIPE/ENDWALL
PROPOSED SANITARY SEWER MANHOLE/PIPE
PROPOSED GAS MAIN/VALVE
PROPOSED WATER METER PIT/MAIN/VALVE
PROPOSED TELEPHONE/ELECTRIC/OVERHEAD ELECTRIC & UTILITY POLE

PROPOSED HYDRANT
EXISTING SANITARY SEWER MANHOLE
EXISTING FIRE HYDRANT
EXISTING GAS VALVE
EXISTING STORM INLET
EXISTING WATER VALVE
EXISTING MANHOLE
EXISTING ELECTRIC POLE



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



MATCHLINE SEE SHEET CU-102

NOTE:
SEE SHEET CU-100 FOR UTILITY PLAN NOTES.

SCALE: 1 INCH = 40 FEET

No.	Description	Date
	Revisions	

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY UTILITY PLAN

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CU-101
Sheet 38 of 52

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Date: 7/16/2025 Time: 17:52 User: phaley Style Table: Langan.stb Layout: CU-101 Document Code: 200168301-0503-CU101-0102

LANGAN 114
Project No. 200168301

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

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--- STOP & CALL ---

Pennsylvania One Call System, Inc.
1-800-242-1776

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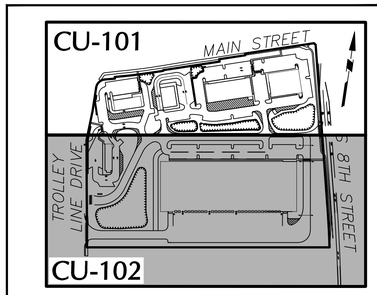
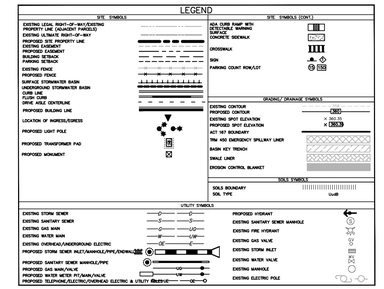
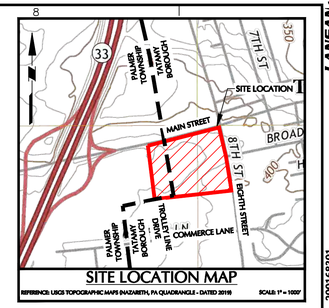
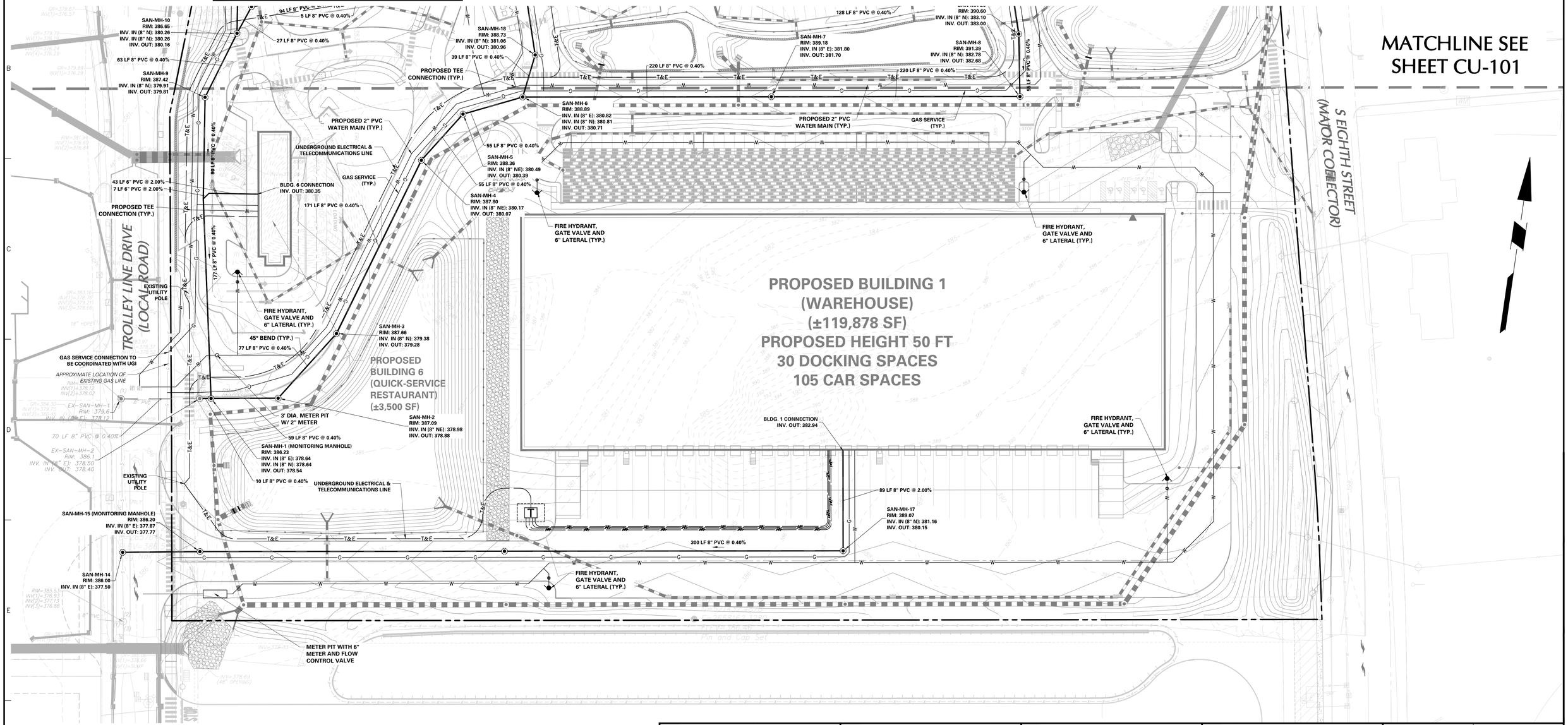


KEY MAP 1"=300'







NOTE:
SEE SHEET CU-100 FOR UTILITY PLAN NOTES.

SCALE: 1 INCH = 40 FEET

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER
KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY UTILITY PLAN

Project No.	200168301
Date	7/17/2025
Drawn By	TLP
Checked By	SMH

Drawing No. CU-102
Sheet 39 of 52

LANGAN 115
Project No. 200168301
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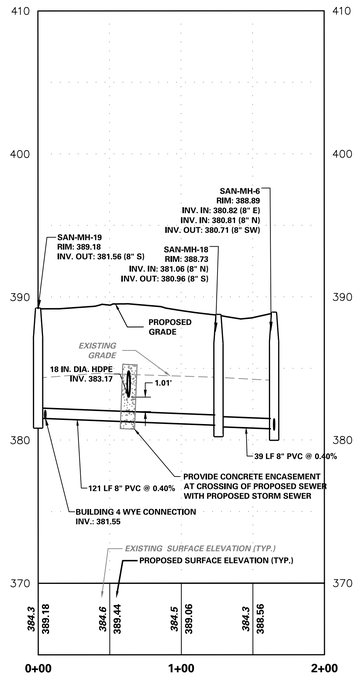
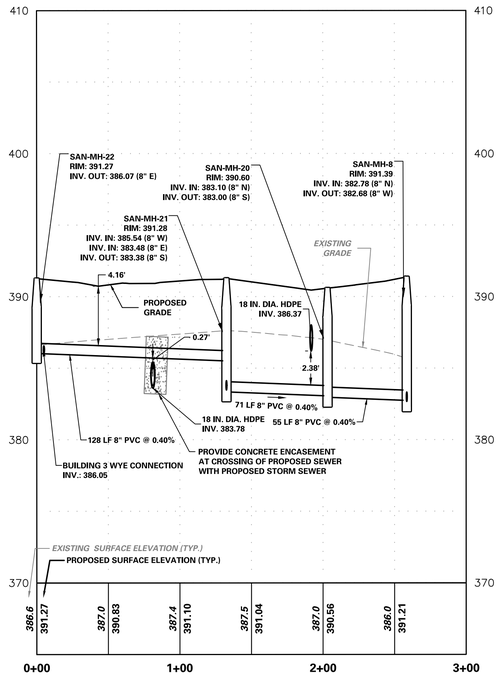
Date: 7/16/2025 Time: 19:13 User: phaley Style Table: Langan.stb Layout: CU-102 Document Code: 200168301-0503-CU101-0103



BUILDING 4 SANITARY SEWER LATERAL PROFILE



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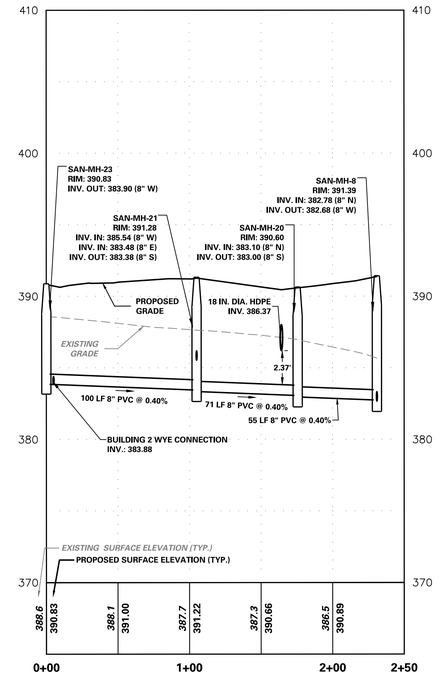

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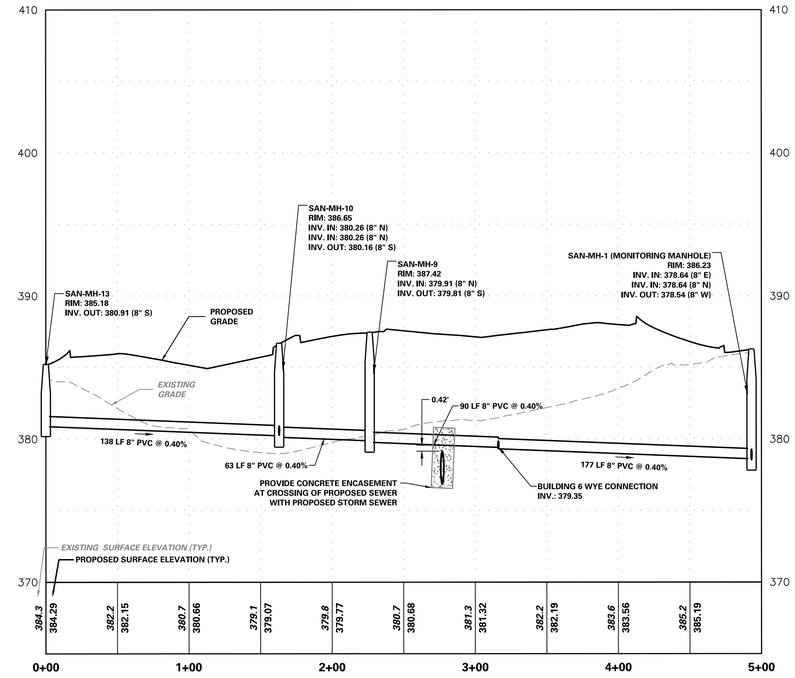
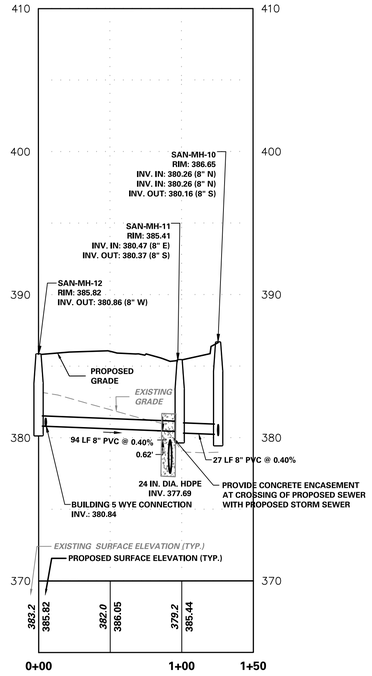


TROLLEY LINE DRIVE SEWER EXTENSION PROFILE



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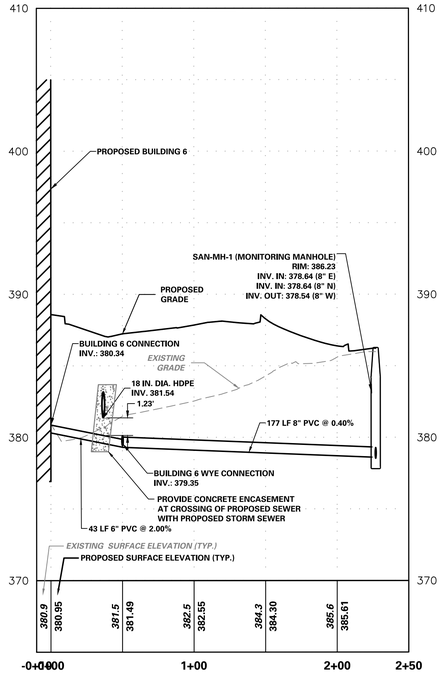
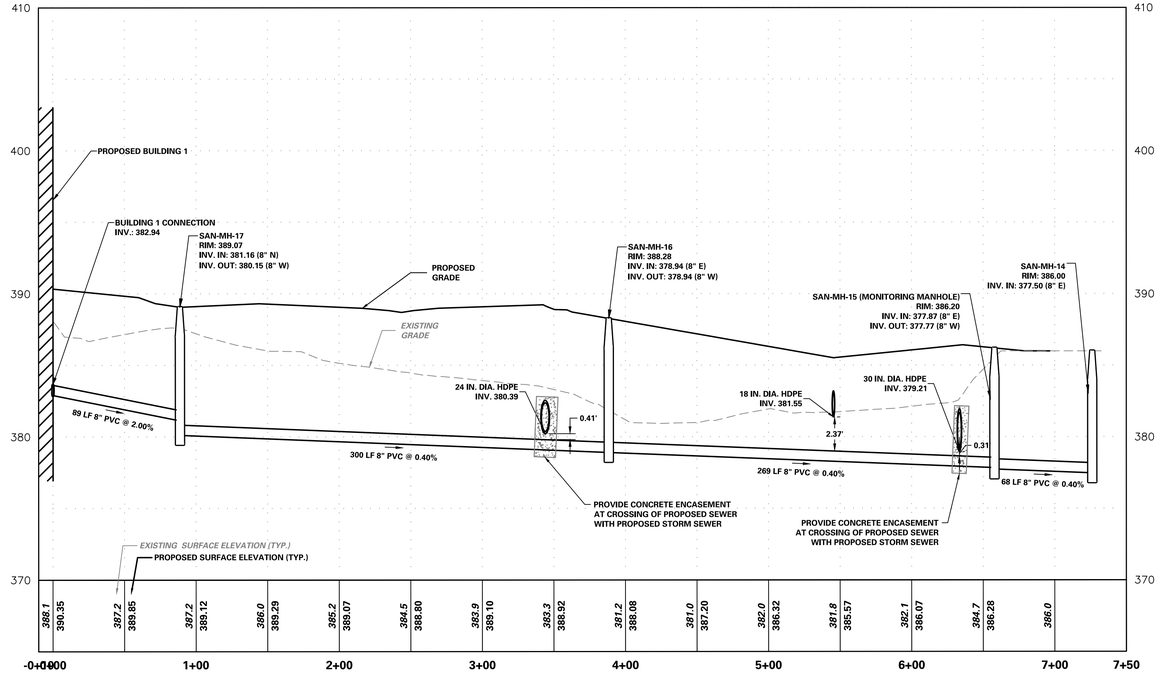


BUILDING 6 SEWER LATERAL PROFILE



BUILDING 1 SANITARY SEWER CONNECTION PROFILE

50 0 25 50
HORIZONTAL SCALE IN FEET

5 0 1 2 5
VERTICAL SCALE IN FEET

No.	Description	Date
	Revisions	

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
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PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY SANITARY SEWER PROFILES

Project No.	200168301
Date	7/17/2025
Drawn By	PLPH
Checked By	SMH

Drawing No. CU-201

Sheet 40 of 52

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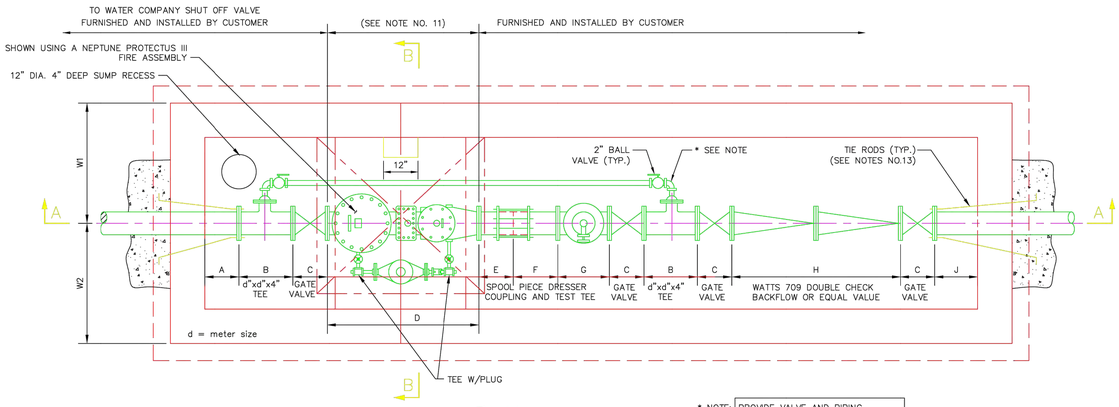
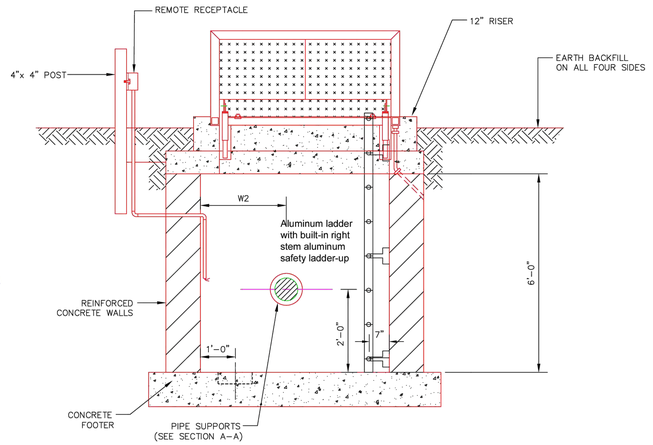
Date: 7/16/2025 Time: 17:56 User: phaley Style Table: Langan.stb Layout: CU-201 Document Code: 200168301-0503-CU201-0101

LANGAN 116
Project No. 200168301

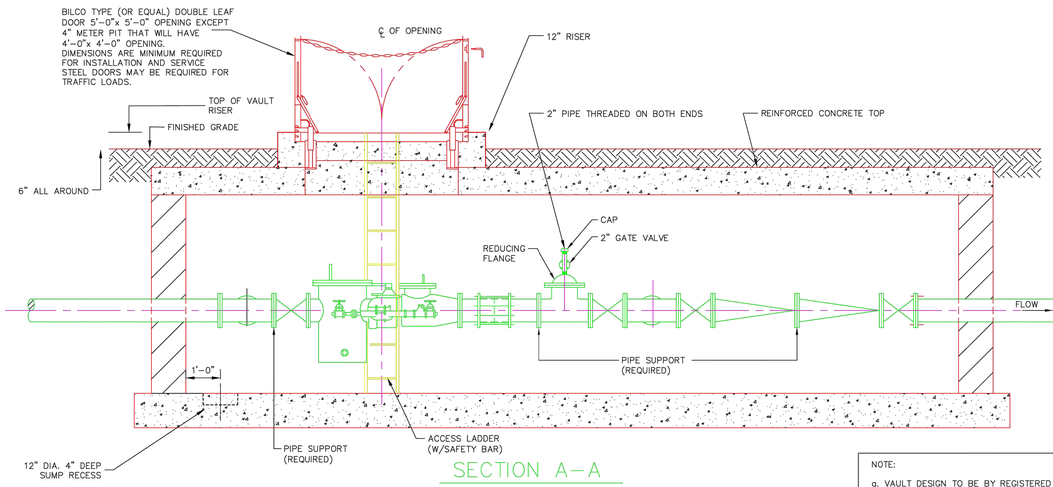


PLAN

* NOTE: PROVIDE VALVE AND PIPING SIZED TO MATCH PIPING ON METER BY – PASS.



SECTION B–B



SECTION A–A

DOOR LATCH TYPE		PENTAHEAD (Wyomissing)		SNAP TIGHT (Horne)		CASTLE LOCK (Blue Mt.)		(Coatesville)

SENSUS F2 COMPACT FIRELINE METER
LAYING LENGTHS

METER SIZE	W1	W2	A	B	C	D	E	F	G	H		J	TOTAL
4"	30"	24"	12"	13"	9"	33"	6"	SEE NOTE 12	13"	37 1/8"		18"	16'–0"
6"	36"	30"	12"	16"	10 1/2"	45"	9"	SEE NOTE 12	16"	44 1/2"		18"	19'–6"
8"	36"	30"	12"	18"	11 1/2"	53"	12"	SEE NOTE 12	18"	55 3/4"		18"	22'–6"
10"	36"	30"	12"	22"	13 1/2"	68"	15"	SEE NOTE 12	22"	66 5/8"		18"	27'–0"

NOTES:

1. CUSTOMER TO CONSTRUCT METERING VAULT AS SHOWN TO MINIMUM DIMENSIONS AND GENERAL CONFIGURAITON.
2. PIPE SUPPORTS, TIE RODS, ANCHORS AND THRUST BRACING AT FITTINGS AND VALVES SHALL BE PROVIDED SUFFICIENT, TO ALLOW PIPING TO STAND WITH REMOVAL OF METERS, FRICTION CLAMPS ARE NOT PERMITTED FOR RESTRAINT OF PIPING SYSTEMS.
3. DOUBLE CHECK BACKFLOW PREVENTION DEVICE IS REQUIRED AS SHOWN AND/OR BACKFLOW PREVENTION DEVICE OF REDUCED PRESSURE. PRINCIPAL DESIGN MAY BE REQUIRED. THIS TYPE OF DEVICE IS TO BE INSTALLED ON THE SERVICE LINE, INSIDE AND AT THE POINT WHERE IT ENTERS THE BUILDING. (TYPE AND MANUFACTURES OF BACKFLOW DEVICE MAY AFFECT DIMENSIONS.)
4. 2" VALVES AND UNDER ARE I.P.S. 4" VALVES AND OVER ARE FLANGED – 125 P.S.I. CLASS FLANGE W/125 P.S.I. DRILLING.
5. IT WILL BE NECESSARY FOR THE CUSTOMER TO INSTALL PROPER DRAINAGE OR OTHER MECHANICAL MEANS TO KEEP VAULT DEWATERED.
6. WATER SERVICE WILL NOT BE PROVIDED UNTIL VAULT IS COMPLETED AS DETAILED. WATER COMPANY TO REVIEW FINAL DESIGN OF VAULT BY CUSTOMER FOR DIMENSIONS AND OVERALL CONFIGURATION.
7. GATE VALVES AND PIPING MUST BE SAME SIZE AS METER.
8. ALL VALVES AND BACKFLOW PREVENTORS TO BE MAINTAINED BY CUSTOMER.
9. BILCO TYPE DOOR SHALL BE CENTERED OVER METER ASSEMBLY AND ACCESS LADDER
10. METER ASSEMBLY WILL NOT BE INSTALLED UNTIL ALL PIPING IS COMPLETED IN THE VAULT. A FILLER PIECE SHOULD BE INSTALLED TO ASSURE PROPER ALIGNMENT OF FLANGES. METER ASSEMBLY FURNISHED AND INSTALLED BY PENNSYLVANIA – AMERICAN WATER COMPANY.
11. MUST BE SUFFICIENT TO CLEAR BREAK IN PIPING W/DRESSER COUPLING RING.
12. TIE RODS TO BE EMBEDDED IN CONCRETE OR BOLTED TO STEEL ON PLATES ON EXTERIOR WALLS. WATER COMPANY TO INSPECT BEFORE BACKFILLING.

SE REGION SPECIFIC NOTES:

a. EXTERIOR COATING OF COOPER'S CREEK C4–SP BITUMASTIC WATERPROOFING SHALL BE APPLIED TO ENTIRE EXTERIOR.

b. INTERIOR SHALL HAVE A COATING OF COOPER'S CREEK BREATHABLE WHITE ENAMEL EPOXY.

c. ALL METER PITS SHALL HAVE AT LEAST A 12" RISER FOR THE DOOR.

d. OMNI–SLEEVES SHALL BE INSTALLED WHERE PIPE PENETRATES THE VAULT WALL.

e. A SEPARATE DOMESTIC LINE CAN BE SPLIT OFF AFTER THE BYPASS LINE AND BEFORE THE BACKFLOW PREVENTER A SEPARATE BACKFLOW PREVENTER MUST BE INSTALLED ON THE DOMESTIC LINE.

f. VAULT MANUFACTURER WILL DETERMINE THE FINAL SIZE OF THE METER VAULT. 10" METER VAULTS REQUIRE 6'–6" INSIDE HEIGHT.

NOTE:

a. VAULT DESIGN TO BE BY REGISTERED PROFESSIONAL ENGINEER; IF TRAFFIC LOADS ARE EXPECTED, DESIGN FOR AASHO H20 LOADING. DESIGN MUST PROVIDE FOR ALL EXPECTED FIELD CONDITIONS, INCLUDING SAFE WORKING EVIRONMENT FOR WATER COMPANY PERSONNEL.

b. PA. AMERICAN WATER CO. MAY REQUIRE IN THE VAULT TELEPHONE AND/OR POWER (120 VAC, 15 AMP) FOR "AMR" INSTALLATION OR SUMP PUMP FOR DRAINAGE.

c. IF PIT IS PROVIDED WITH ELECTRICAL SUPPLY PLEASE SUPPLY OUTSIDE DISCONNECT AND PROVISIONS FOR SUMP PUMP (FUTURE).

d. PRE–CAST VAULTS ARE AVAILABLE AND CUSTOMERS SHOULD VERIFY DESIGN BY THEIR ENGINEER.

e. VAULT AND METER INSTALLATION IS PA. AMERICAN WATER CO. STANDARD FOR OPTIMUM PERFORMACE AND DESIGN FOR INSTALLATION AND SERVICING. ALTERNATE DESIGNS MAY BE REQUIRED, PLEASE CONTACT PA. AMERICAN WATER CO. PERSONAL FOR REVIEW AND APPROVAL.

REVISIONS
Rev By: CBD SE Region Mods 11/25/02 SE Region Mods

MASTER METERING FOR COMBINED SERVICES
(WITH BACKFLOW DEVICE IN PIT)
SHOWN USING NEPTUNE PROTECTUS III FIRE ASSY.

PENNSYLVANIA–AMERICAN WATER COMPANY
SE REGION OPERATIONS

PENNSYLVANIA–AMERICAN WATER COMPANY
SE REGION ENGINEERING
4 WELLINGTON BLVD. WYOMISSING, PA 19610

REV. BY: CBD
PROJECT ENG'R:
APPROVED:
DATE: 6/05/02
PROJECT:
USE DIMENSIONS ONLY
SCALE: NOT TO SCALE

USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES

METER PIT DETAIL

N.T.S.

Date	Description	No.
Revisions		

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PALMER TOWNSHIP AND FORKS TOWNSHIP EASTON, PENNSYLVANIA
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY UTILITY DETAILS

Project No. 200168301
Date 7/17/2025
Drawn By TLP
Checked By SMH

Drawing No. CU-501
Sheet 41 of 52

LANGAN 117
Project No. 200168301
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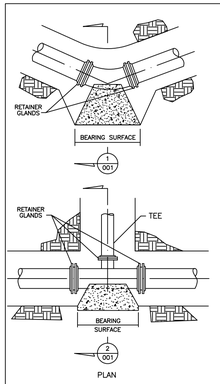
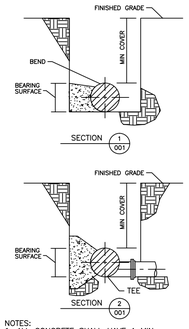


PLAN



NOTES:
1. ALL CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 2500 P.S.I. AT THE END OF 28 DAYS.
2. NO COUPLING OR JOINTS SHALL BE COVERED WITH CONCRETE.
3. FOR BEARING SURFACE DIMENSIONS SEE TABLES FOR VARIOUS PIPE SIZES.
4. BEARING SURFACE MUST BE UNDISTURBED EARTH.
5. PIPING SHALL BE WRAPPED WITH POLYETHYLENE PRIOR TO PLACEMENT OF CONCRETE.

HORIZONTAL THRUST BLOCKING
150 PSI WORKING PRESSURE
(FOR USE UPSTREAM OF PUMP HOUSE/WATER TANK)

PIPE SIZES	6" AND 8"				10" AND 12"			
TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS	DEGREE BEND OR DEFLECTION				DEGREE BEND OR DEFLECTION			
	11 1/4°	22 1/2°	45°	90°	11 1/4°	22 1/2°	45°	90°
SAND 1 TON/SQ.FT. SOFT CLAY 1 TON/SQ.FT.	1.50	3.00	6.00	12.00	3.00	6.00	12.00	24.50
SAND & GRAVEL 2 TON/SQ.FT.	1.00	1.50	3.00	6.00	1.50	3.00	6.00	12.00
CLAY 3 TON/SQ.FT.	1.00	1.00	2.00	4.00	1.00	2.00	4.00	8.00
SOFT ROCK 5 TON/SQ.FT.	1.00	1.00	1.00	2.50	1.00	1.00	2.50	5.00
ROCK 20 TON/SQ.FT.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PIPE SIZES	14 AND 16"			
TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS	DEGREE BEND OR DEFLECTION			
	11 1/4°	22 1/2°	45°	90°
SAND 1 TON/SQ.FT. SOFT CLAY 1 TON/SQ.FT.	5.50	11.00	21.50	43.00
SAND & GRAVEL 2 TON/SQ.FT.	2.50	5.50	11.00	21.50
CLAY 3 TON/SQ.FT.	2.00	3.50	7.00	14.00
SOFT ROCK 5 TON/SQ.FT.	1.00	2.00	4.50	8.50
ROCK 20 TON/SQ.FT.	1.00	1.00	1.00	2.00

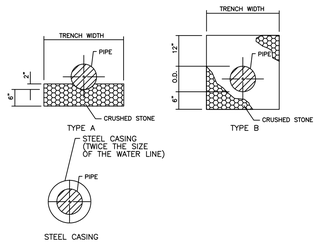
NOTE:
BEARING SURFACE AREAS SHOWN ARE MINIMUMS FOR THE VARIOUS PIPE SIZES.

HORIZONTAL THRUST BLOCKING AND
VERTICAL THRUSTS DOWNWARD BEARING
SURFACE AREA

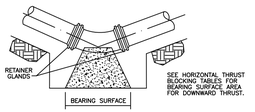
PIPE SIZE	6" AND 8"			10" AND 12"			14" AND 16"		
DEGREE BEND OR DEFLECTION	11 1/4°	22 1/2°	45°	11 1/4°	22 1/2°	45°	11 1/4°	22 1/2°	45°
LENGTH	3.00	4.00	6.00	4.50	6.00	8.00	6.00	8.00	11.00
WIDTH	3.00	3.00	3.00	3.00	3.00	4.00	3.50	3.50	5.00
DEPTH	2.00	3.00	4.00	3.00	4.50	5.00	3.50	5.00	5.00
SQ. IN. REINFORCING	0.17	0.33	0.65	0.37	0.74	1.46	0.66	1.32	2.60

BAR NO.	5	6	7	8	9	10	11
CROSS-SECTION IN² PER BAR	0.31	0.44	0.60	0.79	1.00	1.27	1.56
VERTICAL IMBEDMENT	15"	19"	26"	35"	44"	56"	68"

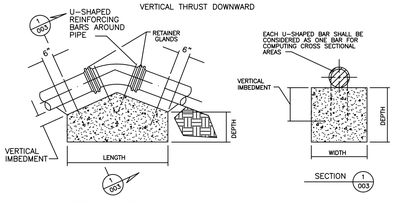
VERTICAL THRUST BLOCKING –
UPWARD THRUSTS SCHEDULE OF DIMENSIONS
150 P.S.I. WORKING PRESSURE



TYPES OF CRUSHED STONE PIPE
CRADLES AND STEEL CASING



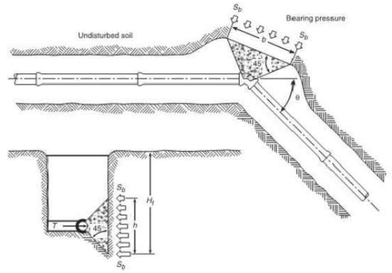
VERTICAL THRUST DOWNWARD



VERTICAL THRUST UPWARD

NOTES:
1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 P.S.I. AT THE END OF 28 DAYS.
2. PAINT ALL EXPOSED STEEL WITH TWO COATS OF ASPHALT PAINT.
3. NO COUPLING OR JOINTS SHALL BE COVERED WITH CONCRETE.
4. ALL RODS AND STRAPS WITH PIPE STRAPS MAY BE USED IN PLACE OF REINFORCING BARS.
5. ALL THRUST BLOCKS SHOWN ARE INTENDED AS A GUIDE AND SHALL WITHSTAND THE REQUIRED PRESSURE.
6. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
7. CERTAIN SITUATIONS MAY WARRENT THE USE OF TIE RODS, AUTHORIZED BY THE WATER COMPANY ONLY.

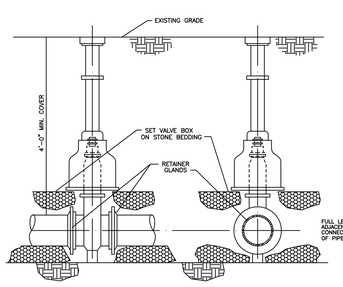
VERTICAL THRUST BLOCKING



T = thrust force resulting from the change in direction of flow
S_b = horizontal bearing strength of the soil
h = block height
H_t = total depth to bottom of block

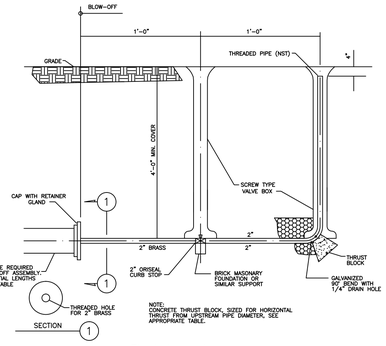
FIGURE A.10.8.2(b) Bearing Thrust Block. [24:Figure A.10.8.2(b)]

HORIZONTAL THRUST BLOCKING
175 PSI WORKING PRESSURE
(FOR USE DOWNSTREAM OF PUMP HOUSE/WATER TANK)

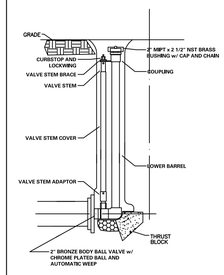


NOTES:
1. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
2. VALVE BOX SHALL BE 2 PIECE SCREW TYPE.

GATE VALVE INSTALLATION

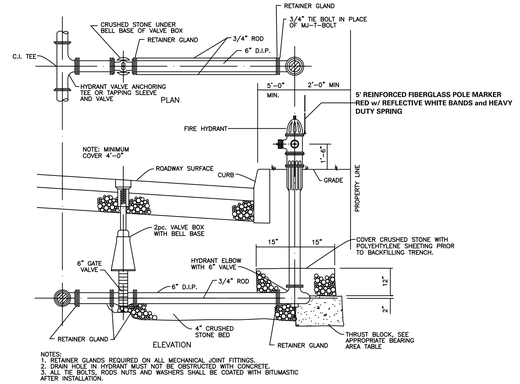


Field Assembled



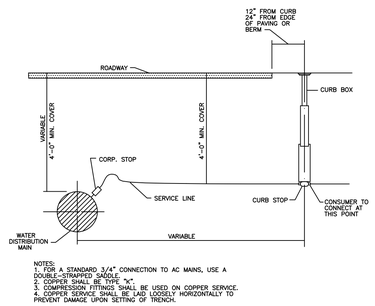
Pre–Assembled

2" BLOW–OFF ASSEMBLY



NOTES:
1. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
2. DRAIN HOLE IN HYDRANT MUST NOT BE OBSTRUCTED WITH CONCRETE.
3. ALL TIE BOLTS, RODS NUTS AND WASHERS SHALL BE COATED WITH BITUMASTIC AFTER INSTALLATION.

FIRE HYDRANT DETAIL



NOTES:
1. FOR A STANDARD 3/4" CONNECTION TO AC MAINS, USE A DOUBLE–STRAPPED SADDLE.
2. COPPER SHALL BE TYPE "K".
3. COMPRESSION FITTINGS SHALL BE USED ON COPPER SERVICE.
4. COPPER SERVICE SHALL BE LAID LOOSELY HORIZONTALLY TO PREVENT DAMAGE UPON SETTING OF TRENCH.

WATER LINE
SERVICE CONNECTION

PA AMERICAN WATER COMPANY - GENERAL NOTES

1. ALL WATER FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNSYLVANIA AMERICAN WATER COMPANY (PAWC) WATER EXTENSION AGREEMENT SPECIFICATIONS.
2. LOCATION OF EXISTING WATER FACILITIES SHOWN ARE APPROXIMATE. ANY UTILITIES NOT SHOWN, OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THECONTRACTOR TO DENY RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. EXACT LOCATION SHALL BE VERIFIED IN THE FIELD.
3. ALL WATER MAINS REQUIRE A MINIMUM OF 4' COVER UNLESS OTHERWISE APPROVED BY PENNSYLVANIA AMERICAN WATER COMPANY (PAWC).
4. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF TEN (10) FEET HORIZONTAL SEPARATION UNLESS OTHERWISE APPROVED BY PAWC AND LOCAL AUTHORITY.
5. WATER AND STORM SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET HORIZONTAL SEPARATION UNLESS OTHERWISE APPROVED BY PAWC AND LOCAL AUTHORITY.
6. SANITARY AND STORM SEWER LINES SHALL HAVE A MINIMUM OF EIGHTEEN (18) INCH VERTICAL SEPARATION FROM THE WATER LINE UNLESS OTHERWISE APPROVED BY PAWC.
7. HYDRANT QUANTITY AND LOCATION IS SUBJECT TO THE APPROVAL OF THE TOWNSHIP FIRE MARSHAL.
8. ONLY PAWC PERSONNEL SHALL OPERATE MAIN LINE VALVES FOR THE CONTRACTOR.
9. EASEMENTS, IN A FORM SATISFACTORY TO PAWC, SHALL BE REQUIRED FOR ALL WATER FACILITIES LOCATED OUTSIDE THE PUBLIC RIGHT OF WAY.
10. ALL FIRE HYDRANTS SHALL INCLUDE A 6" GATE VALVE ON THE HYDRANT LATERAL.
11. THE USE OF FITTINGS SHALL BE MINIMIZED AND MUST BE APPROVED BY PAWC. CONTRACTOR SHALL DEFLECT PIPE SEGMENTS AS NECESSARY PER AWWA STANDARDS.
12. CONTRACTOR TO COORDINATE SHUTDOWN OF WATER WITH PAWC AND FIELD VERIFY ALL APPURTENANCES AND RESTRAINTS PRIOR TO CONNECTION.
13. THE CONTRACTOR MUST CONSULT WITH PAWC FIELD PERSONNEL FOR THE INSTALLATION OF WATER MAIN AT DEPTHS GREATER THAN 4 FEET. IT IS AT THE DISCRETION OF PAWC FIELD PERSONNEL WHEN BENDS SHOULD BE INSTALLED VERSUS BENDING PIPE GRADUALLY.
14. PAWC FIELD PERSONNEL ARE REQUIRED TO BE PRESENT DURING THE TIE-IN TO EXISTING MAINS.
15. ALL BLOW-OFF'S SHALL BE INSTALLED INSIDE THE ROADWAY UNLESS OTHERWISE DIRECTED FROM PAWC FIELD PERSONNEL.
16. ALL EASEMENTS REQUIRE BLUE LINE MARKERS AT EACH BEND AS APPROVED BY PAWC.
17. AT THE REQUEST OF PAWC MANUAL AIR RELEASE ASSEMBLIES SHALL BE INSTALLED.
18. WATER MAIN DEPTH CAN BE ADJUSTED TO ACCOMMODATE CROSSING OTHER FACILITIES WITH PRIOR APPROVAL FROM PAWC. IF DEPTH GREATER THAN 72" OF COVER IS REQUIRED, 45° BENDS MUST BE USED TO DROP MAIN BELOW CONFLICTING FACILITY AS PER SPECIFICATIONS.
19. MAIN LINE VALVE OPERATING NUTS GREATER THAN 48" IN DEPTH SHALL HAVE AN APPROVED EXTENSION SHAFT INSTALLED TO WITHIN 36" OF ROAD GRADE.
20. CONCRETE THRUST BLOCKS SHALL BE FORMED TO PREVENT COVERING ANY PORTION OF THE JOINT MATERIALS.
21. ANY EXCAVATION OVER 60" IN DEPTH MUST BE PROPERLY SHORED OR SHELVED PER OSHA REGULATIONS.
22. CONTRACTOR MUST HAVE A EMPLOYEE ON-SITE WHO HAS COMPLETED THE OSHA REQUIRED COMPETENT PERSON TRAINING.
23. FIRE HYDRANT NOTES:

	Thread	Barrel	Bonnet	Cap
Municipality	Specification	Color	Color	Color
Palmer Township	Easton Suburban	Brilliant Yellow	White	White

1. ALL HYDRANTS SHALL BE MUELLER MODEL A-421 WITH A 4" PUMPER NOZZLE AND TWO (2), 2 1/2" HOSE NOZZLES.
2. HYDRANT VALVE OPENING SHALL BE 5 1/4".
3. HYDRANT SHOE SHALL BE 6" MECHANICAL JOINT.
4. ALL HYDRANTS SHALL OPEN LEFT.
5. ALL HYDRANTS SHALL BE EQUIPPED WITH A 5 FOOT REINFORCED FIBERGLASS POLE MARKER WITH RED AND WHITE REFLECTIVE BANDS. THE POLE MARKER SHALL HAVE A FLEXIBLE SHAFT, HEAVY DUTY SPRING, AND INTEGRAL MOUNTING BRACKET REFERENCE MODEL 22516 FROM USA BLUE BOOK.

N.T.S.

***DETAILS PROVIDED BY PENNSYLVANIA AMERICAN WATER COMPANY (PAWC)**

THRUST BLOCK DETAIL

Date	Description	No.
Revisions		

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE–074526

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP TOWNSHIP TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY UTILITY DETAILS

Project No.	Drawing No.
200168301	CU-502
Date: 05/15/2025	
Drawn By: TLP	
Checked By: SMH	
	Sheet 42 of 52

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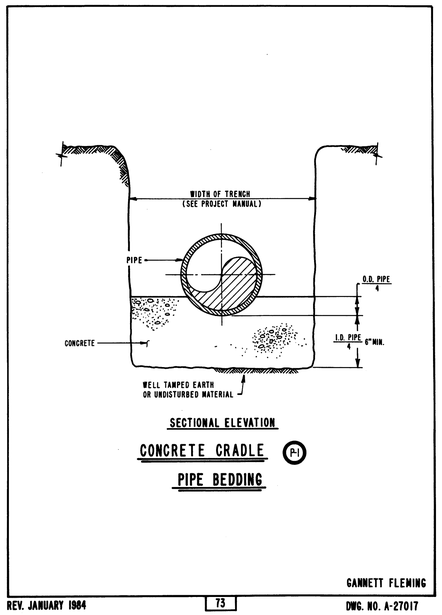
LANGAN 118 Project No. 200168301



SECTIONAL ELEVATION

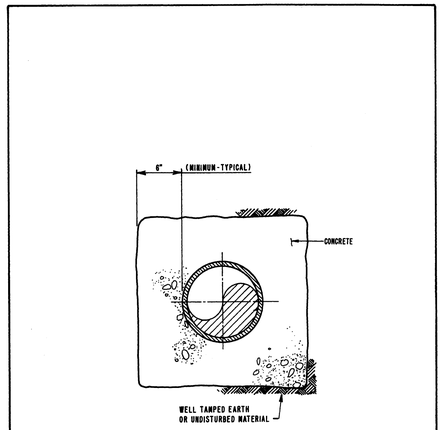
CONCRETE CRADLE P-1

PIPE BEDDING

GANNETT FLEMING

REV. JANUARY 1984 | 73 | DWG. NO. A-27017

CONCRETE CRADLE PIPE BEDDING



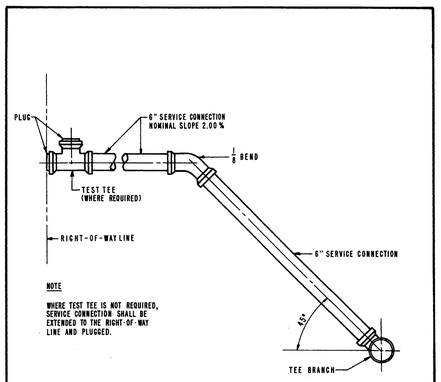
SECTIONAL ELEVATION

CONCRETE ENCASEMENT P-2

GANNETT FLEMING

REV. APRIL 1983 | 74 | DWG. NO. A-27018

CONCRETE ENCASEMENT



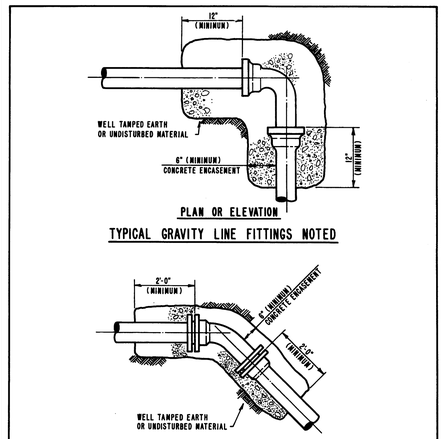
ELEVATION

SERVICE CONNECTION
DEEP SEWER S-37

GANNETT FLEMING

REV. JANUARY 1983 | 94 | DWG. NO. A-31498

DEEP SEWER CONNECTION

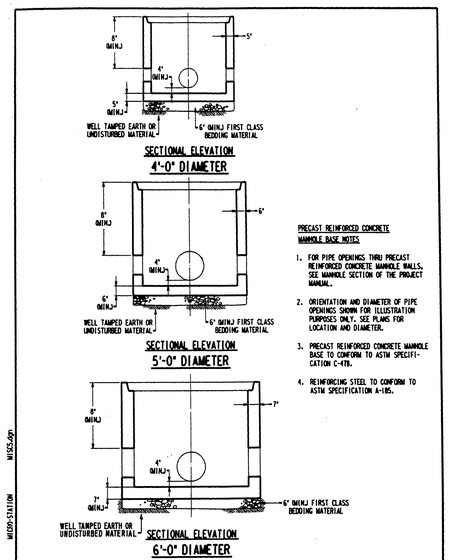


CONCRETE THRUST BLOCKS C-6

GANNETT FLEMING

REV FEBRUARY 1983 | 26 | DWG NO A-27016

CONCRETE THRUST BLOCKS

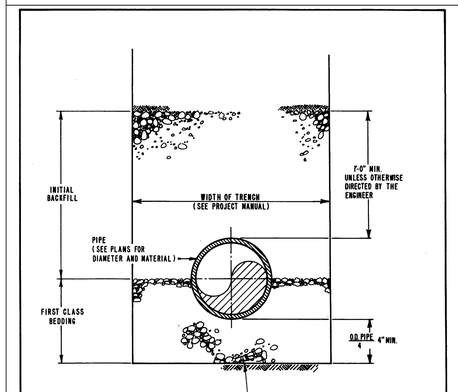


PRECAST REINFORCED CONCRETE MANHOLE BASES M-3

GANNETT FLEMING

REV. JANUARY 1991 | 63 | DWG. No. A-27065

MANHOLE BASES



SECTIONAL ELEVATION

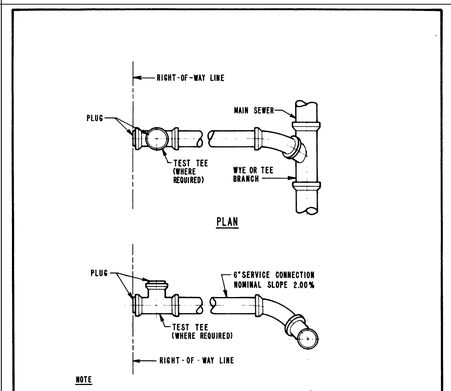
FIRST CLASS BEDDING AND INITIAL BACKFILL P-3

PIPE BEDDING

GANNETT FLEMING

REV. JANUARY 1983 | 75 | DWG. NO. A-27038

PIPE BEDDING



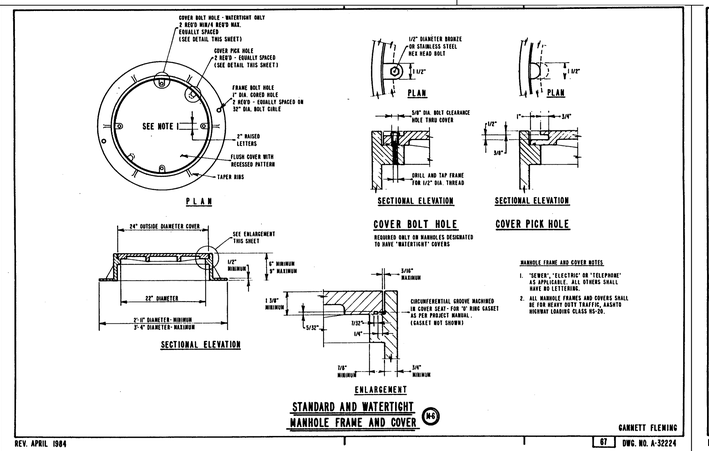
ELEVATION

SERVICE CONNECTION
SHALLOW SEWER S-35

GANNETT FLEMING

REV. JANUARY 1983 | 92 | DWG. NO. A-28074

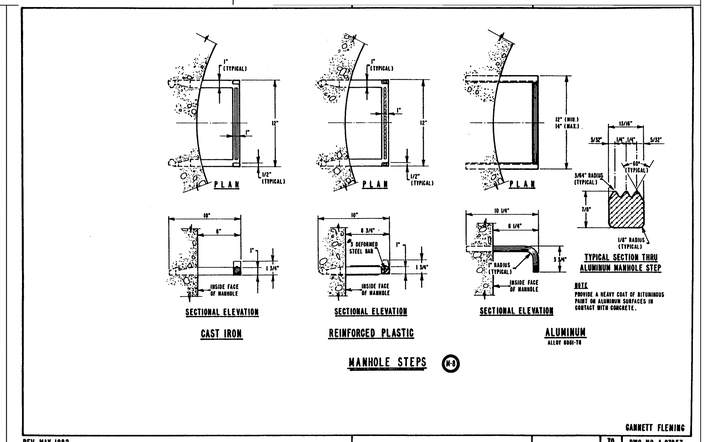
SHALLOW SEWER CONNECTION



GANNETT FLEMING

REV. APRIL 1984 | 67 | DWG. NO. A-32224

MANHOLE FRAME AND COVER



MANHOLE STEPS M-5

GANNETT FLEMING

REV. MAY 1982 | 70 | DWG. NO. A-27057

MANHOLE STEPS

NOTES:
1. ALL DETAILS ON THIS DRAWING WERE OBTAINED FROM PALMER TOWNSHIP SEWER DEPARTMENT.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MOST CURRENT APPLICABLE CONSTRUCTION DETAILS FROM PALMER TOWNSHIP SEWER DEPARTMENT.

No.	Description	Date
	Revisions	

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER PE-074526

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY UTILITY DETAILS

Project No. 200168301
Date 05/15/2025
Drawn By TLP
Checked By SMH

Drawing No. CU-503
Sheet 43 of 52

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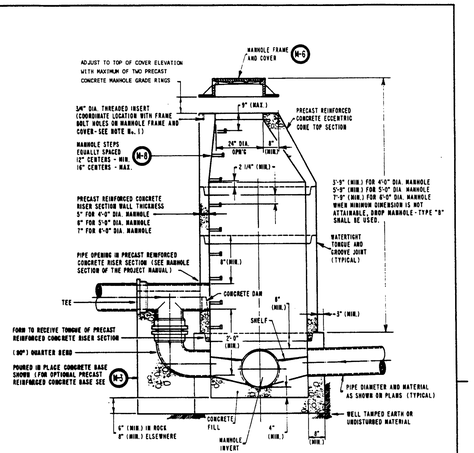
Date: 7/16/2025 Time: 17:56 User: phaley Style Table: Langan.stb Layout: CU-503 Document Code: 200168301-0503-CU101-0106

LANGAN 119 Project No. 200168301 M1505.dgn M1209-21A1.tbl PRS/MB

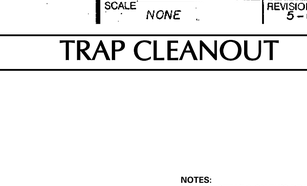
REV APRIL 1982



SECTIONAL ELEVATION

DROP MANHOLE-TYPE "A" NOTES

1. MANHOLE FRAME TO BE BOLTED IN PLACE WITH TWO 3/4" DIA. BOLTS AND FLAT WASHERS.
2. ORIENTATION OF PIPES SHOWN FOR ILLUSTRATION PURPOSES ONLY. FOR ACTUAL LOCATIONS SEE PLANS.
3. THE SHELF SHALL SLOPE TOWARD THE INVERT CHANNEL AT THE RATE OF 1" PER FOOT (MINIMUM).
4. FOR PIPE CONNECTION TO CONCRETE BASE, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
5. FOR LENGTH OF PIPE CONNECTIONS TO MANHOLES, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
6. THE DEPTH OF THE INVERT CHANNEL SHALL BE NOT LESS THAN 3/4 OF THE DIAMETER OF THE PIPE.
7. FOR MANHOLES HAVING 5'-0" OR 6'-0" DIAMETER BASE, REDUCTION IN DIAMETER TO 4'-0" SHALL START AT THE FIRST JOINT ABOVE THE UPPERMOST PIPE CONNECTION TO WALL (WHERE DEPTH IS SUFFICIENT).
8. FINISHED GRADE SHALL BE FLUSH WITH TOP OF COVER ON MANHOLE FRAME AND COVER, UNLESS OTHERWISE NOTED.

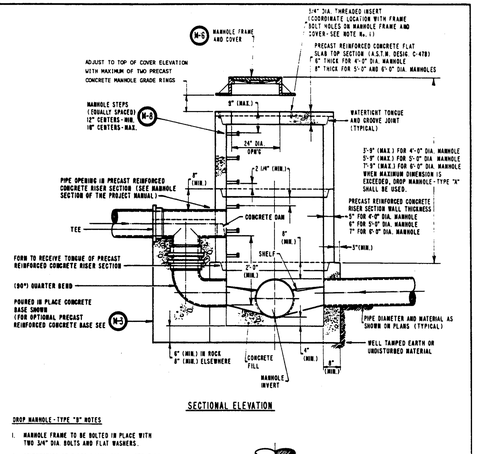


PLAN BELOW ECCENTRIC CONE TOP SECTION

DROP MANHOLE - TYPE "A" (M-1)

60 GARRETT FLEMING DWG. NO. A-27030A NEWTOWN PALMER

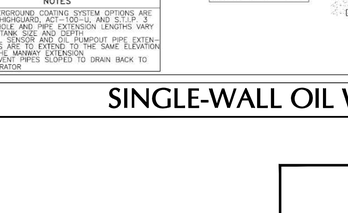
REV APRIL 1982



SECTIONAL ELEVATION

DROP MANHOLE-TYPE "B" NOTES

1. MANHOLE FRAME TO BE BOLTED IN PLACE WITH TWO 3/4" DIA. BOLTS AND FLAT WASHERS.
2. ORIENTATION OF PIPES SHOWN FOR ILLUSTRATION PURPOSES ONLY. FOR ACTUAL LOCATIONS SEE PLANS.
3. THE SHELF SHALL SLOPE TOWARD THE INVERT CHANNEL AT THE RATE OF 1" PER FOOT (MINIMUM).
4. FOR PIPE CONNECTION TO CONCRETE BASE, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
5. FOR LENGTH OF PIPE CONNECTIONS TO MANHOLES, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
6. THE DEPTH OF THE INVERT CHANNEL SHALL BE NOT LESS THAN 3/4 OF THE DIAMETER OF THE PIPE.
7. FINISHED GRADE SHALL BE FLUSH WITH TOP OF COVER ON MANHOLE FRAME AND COVER, UNLESS OTHERWISE NOTED.

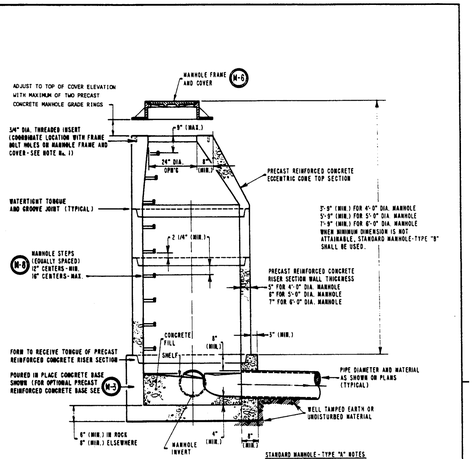


PLAN BELOW FLAT SLAB TOP SECTION

DROP MANHOLE - TYPE "B" (M-2)

61 GARRETT FLEMING DWG. NO. A-27031A NEWTOWN PALMER

REV MAY 1982



SECTION M-4



PLAN BELOW ECCENTRIC CONE TOP SECTION

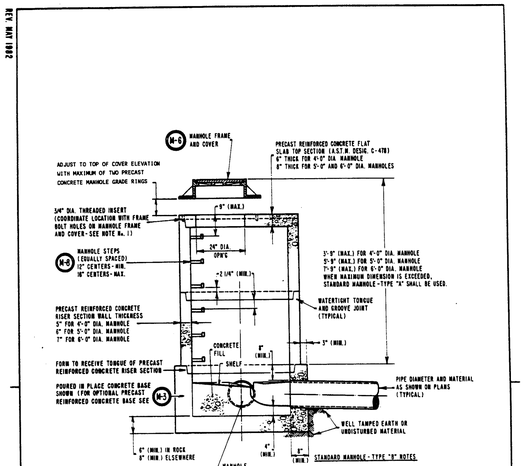
STANDARD MANHOLE-TYPE "A" NOTES

1. MANHOLE FRAME TO BE BOLTED IN PLACE WITH TWO 3/4" DIA. BOLTS AND FLAT WASHERS.
2. FOR PIPE CONNECTION TO CONCRETE BASE, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
3. ORIENTATION OF PIPES SHOWN FOR ILLUSTRATION PURPOSES ONLY. FOR ACTUAL LOCATIONS SEE PLANS.
4. THE SHELF SHALL SLOPE TOWARD THE INVERT CHANNEL AT THE RATE OF 1" PER FOOT (MINIMUM).
5. THE DEPTH OF THE INVERT CHANNEL SHALL BE NOT LESS THAN 3/4 OF THE DIAMETER OF THE PIPE.
6. FOR MANHOLES HAVING 5'-0" OR 6'-0" DIAMETER BASE, REDUCTION IN DIAMETER TO 4'-0" SHALL START AT THE FIRST JOINT ABOVE THE UPPERMOST PIPE CONNECTION TO WALL (WHERE DEPTH IS SUFFICIENT).
7. FOR LENGTH OF PIPE CONNECTIONS TO MANHOLES, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
8. FINISHED GRADE SHALL BE FLUSH WITH TOP OF COVER ON MANHOLE FRAME AND COVER, UNLESS OTHERWISE NOTED.

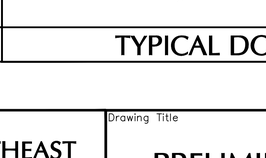
STANDARD MANHOLE - TYPE "A" (M-4)

64 GARRETT FLEMING DWG. NO. A-27032A NEWTOWN PALMER

REV MAY 1982



SECTION M-5



PLAN BELOW FLAT SLAB TOP SECTION

STANDARD MANHOLE-TYPE "B" NOTES

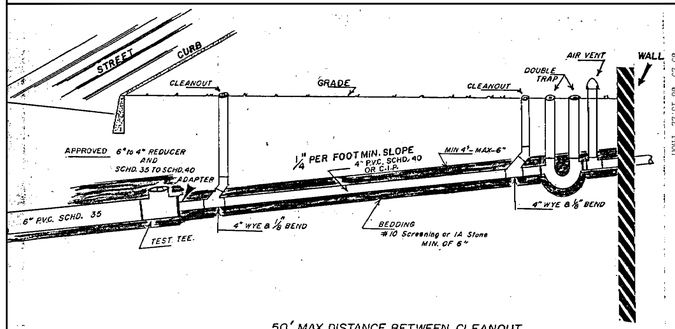
1. MANHOLE FRAME TO BE BOLTED IN PLACE WITH TWO 3/4" DIA. BOLTS AND FLAT WASHERS.
2. FOR PIPE CONNECTION TO CONCRETE BASE, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
3. ORIENTATION OF PIPES SHOWN FOR ILLUSTRATION PURPOSES ONLY. FOR ACTUAL LOCATIONS SEE PLANS.
4. THE SHELF SHALL SLOPE TOWARD THE INVERT CHANNEL AT THE RATE OF 1" PER FOOT (MINIMUM).
5. THE DEPTH OF THE INVERT CHANNEL SHALL BE NOT LESS THAN 3/4 OF THE DIAMETER OF THE PIPE.
6. FOR LENGTH OF PIPE CONNECTIONS TO MANHOLES, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
7. FINISHED GRADE SHALL BE FLUSH WITH TOP OF COVER ON MANHOLE FRAME AND COVER, UNLESS OTHERWISE NOTED.

STANDARD MANHOLE - TYPE "B" (M-5)

65 GARRETT FLEMING DWG. NO. A-27081A NEWTOWN PALMER

DROP MANHOLES

STANDARD MANHOLES



50' MAX DISTANCE BETWEEN CLEANOUT

— TOWNSHIP of PALMER —
NORTHAMPTON COUNTY, PA.
ENGINEERING DEPARTMENT
3245 FREEMANSBURG AVENUE PALMER, PA 18043

SEWER BUILDING DRAIN DETAIL

SCALE	REVISION	DATE
NONE	5-6-92	5-6-92

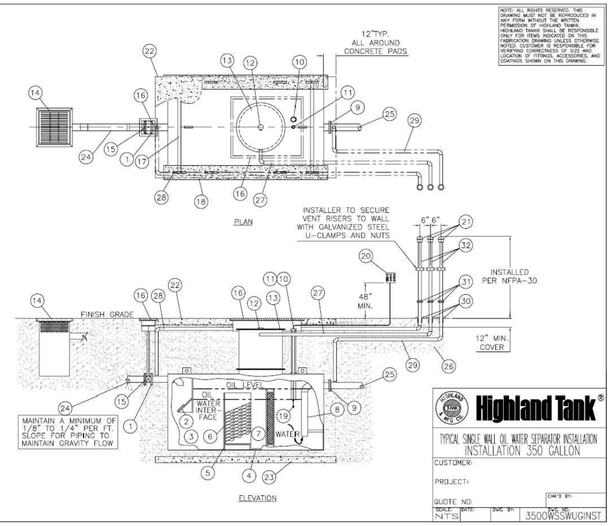
03-29-'93 13:22 FROM- T-945 P002/002 F-717

TRAP CLEANOUT

HIGHLAND TANK STANDARD EQUIPMENT	
1	FLANGED INLET
2	UNDERFLOW BAFFLE
3	SEDIMENT CHAMBER
4	STRIKER PLATE
5	SLUDGE BAFFLE
6	CORELIA™ PARALLEL CORRUGATED PLATE COALESCER
7	PETROSCREEN COALESCER (HTC MODEL ONLY)
8	OUTLET DOWNCOMER PIPE
9	FLANGED OUTLET
10	2" INTERFACE LEVEL SENSOR FITTING WITH EXTENSION PIPE
11	4" OIL PUMPOUT FITTING WITH INTERNAL PIPE EXTENSION PIPE
12	GAUGE PORT
13	30" FLANGED MANWAY AND COVER WITH BOLT ON EXTENSION
HIGHLAND TANK OPTIONAL EQUIPMENT	
14	HIGHLAND CB SERIES SOLIDS CATCH BASIN
15	INLET VALVE
16	HIGHLAND GLM SERIES GRADE MANWAY WITH COVER
17	HOLD DOWN STRAPS
18	HIGHLAND CDA SERIES CONCRETE DEADMAN HOLD DOWN ANCHORS
19	HIGHLAND HTF/HTSF SERIES OIL INTERFACE LEVEL SENSOR
20	ALARM CONTROL PANEL
21	MUSHROOM VENTS
INSTALLER PROVIDED EQUIPMENT	
22	CONCRETE GRADE PAD
23	CONCRETE HOLD DOWN PAD
24	INLET PIPING
25	OUTLET PIPING
26	BACKFILL AS REQUIRED
27	MANWAY VENT PIPING
28	INLET VENT PIPING
29	OUTLET VENT PIPING
30	EPOXY COATED STEEL RISER CLAMPS
31	GALVANIZED UNIONS
32	GALVANIZED STEEL VENT PIPES ABOVEGRADE

NOTES

1. UNDERGROUND COATING SYSTEM OPTIONS ARE THE HIGHGUARD, ACT-100-U, AND S.T.I.P. 3
2. MANHOLE AND PIPE EXTENSION LENGTHS VARY PER TANK SIZE AND DEPTH.
3. LEVEL SENSOR AND OIL PUMPOUT PIPE EXTENSIONS ARE TO EXTEND TO THE SAME ELEVATION AS THE MANWAY EXTENSION.
4. ALL ASSOCIATED PIPES SLOPED TO DRAIN BACK TO SEPARATOR



NOTE: ALL RIGHTS RESERVED. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANK. HIGHLAND TANK SHALL BE RESPONSIBLE ONLY FOR THE CONTENTS OF THIS FABRICATION DRAWING UNLESS OTHERWISE NOTED. CUSTOMER IS RESPONSIBLE FOR THE FOUNDATION DESIGN, THE SELECTION AND LOCATION OF FITTINGS, ACCESSORIES, AND COATINGS SHOWN ON THIS DRAWING.

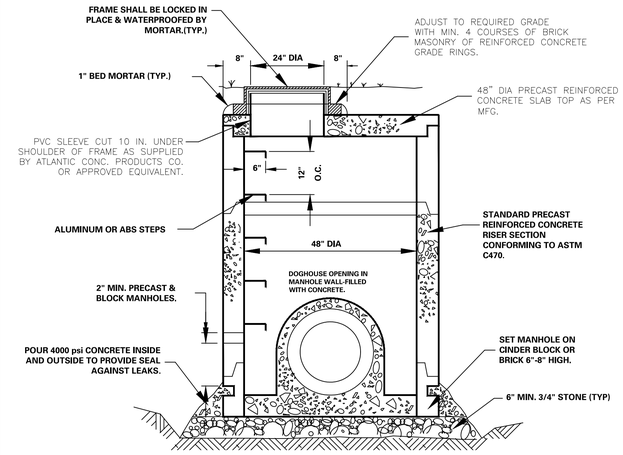
Highland Tank®

TYPICAL SINGLE WALL OIL WATER SEPARATOR INSTALLATION
INSTALLATION 350 GALLON

CUSTOMER:
PROJECT:
QUOTE NO.
CHK'D BY:
SCALE: N.T.S. DATE: DWG. BY: MC-SW
350DWSWSUGINST

SINGLE-WALL OIL WATER SEPARATOR (OR APPROVED EQUAL)

NOTE: THIS DETAIL IS PROVIDED AS A REFERENCE ONLY. THE ACTUAL SIZING AND A SPECIFIC OIL/WATER SEPARATOR MODEL ARE TO BE COORDINATED WITH THE FUTURE TENANT AND THEIR SPECIFIC USE, UPON SIGNING A LETTER OF AGREEMENT WITH THE APPLICANT. ADDITIONALLY, THE SIZE AND SPECIFICATIONS FOR THE PROPOSED OIL/WATER SEPARATOR ARE TO BE REVIEWED/APPROVED BY THE APPROPRIATE PARTY UPON SUBMISSION OF THE BUILDING PERMIT PLANS.



NOTES:
1. CONSTRUCTION OF DOGHOUSE MANHOLE SHALL BE IN ACCORDANCE WITH PENNDOT RC-38M (SHEET 2 – SANITARY SEWER MANHOLES – GENERAL NOTES) AND RC-39M (SHEET 3 – STORMWATER MANHOLE – GENERAL NOTES – DOGHOUSE MANHOLE NOTES), UNLESS OTHERWISE NOTED.

TYPICAL DOGHOUSE MANHOLE

NOTES:
1. ALL DETAILS ON THIS DRAWING WERE OBTAINED FROM PALMER TOWNSHIP SEWER DEPARTMENT.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MOST CURRENT APPLICABLE CONSTRUCTION DETAILS FROM PALMER TOWNSHIP SEWER DEPARTMENT.

Date	Description	No.
Revisions		

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEITH S. OTTES ENGINEER EXPIRES 12/31/2025

KEITH S. OTTES
PROFESSIONAL ENGINEER PA LIC. No. PE-074526

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Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP NORTHAMPTON COUNTY TATAMY BOROUGH PENNSYLVANIA

Drawing Title
PRELIMINARY UTILITY DETAILS

Project No.	Drawing No.
200168301	CU-504
Date: 7/17/2025	
Drawn By: TLP	
Checked By: SMH	
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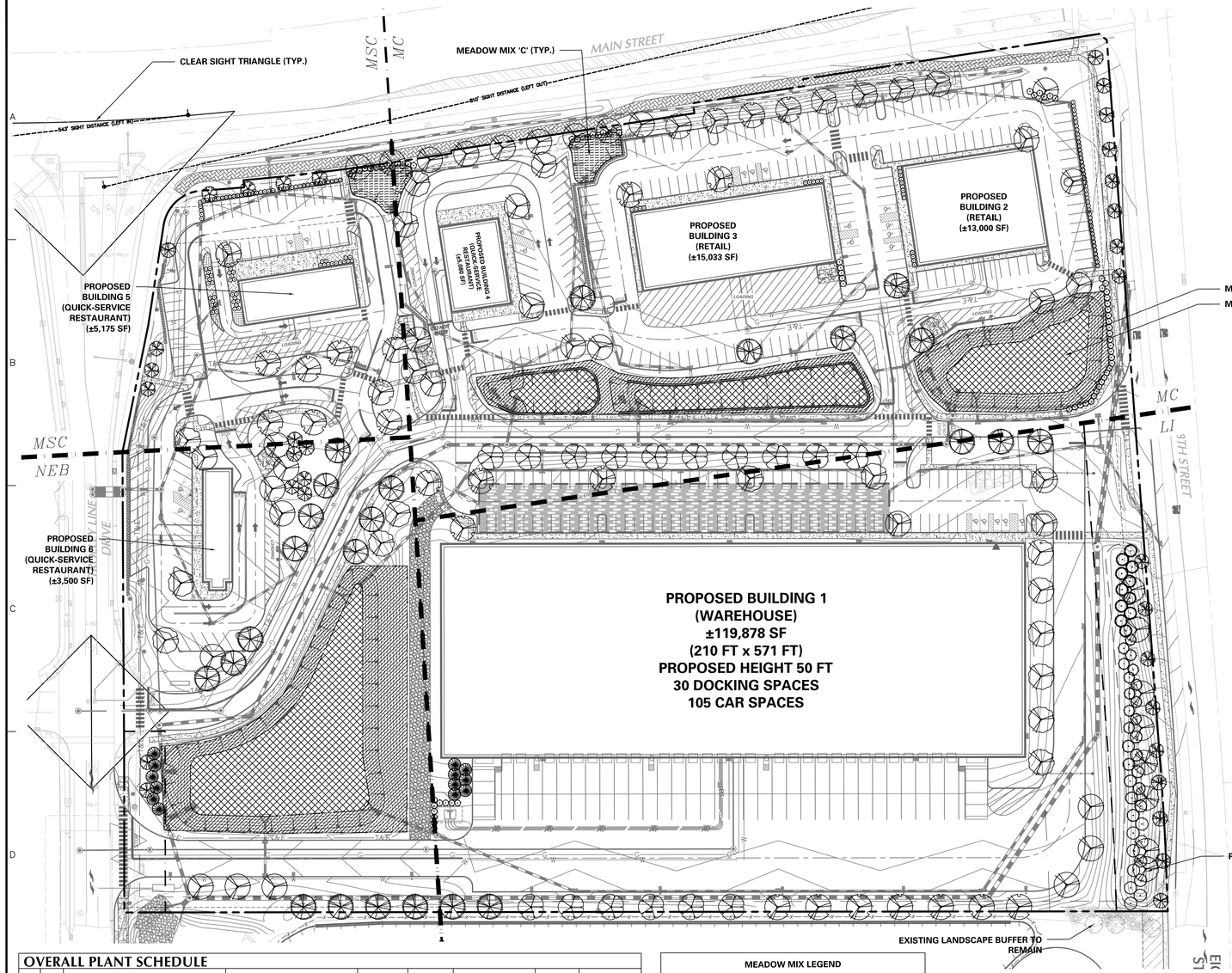
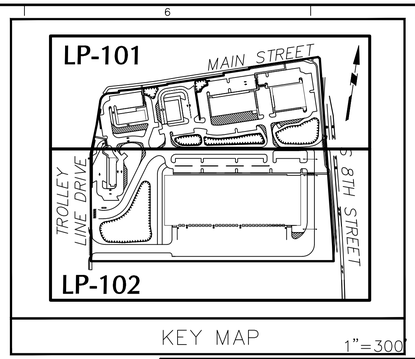
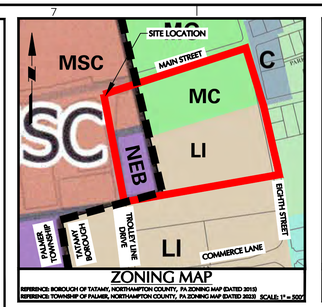
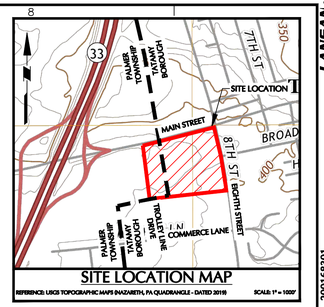
Date: 7/16/2025 Time: 17:57 User: phaley Style Table: Langan.stb Layout: CU-504 Document Code: 200168301-0503-CU101-0107

LANGAN 120 Project No. 200168301









BOROUGH OF TATAMY, PA - ORDINANCE COMPLIANCE CHART

SECTION		REQUIREMENT	REQUIRED/PROPOSED	COMPLIANCE
SALDO § 1008 - STORMWATER MANAGEMENT	(K)(8)(a)	A DETENTION BASIN SHALL BE SCREENED FROM VIEW OF EXISTING RESIDENCES, A RESIDENTIAL ZONING DISTRICT OR A PUBLIC STREET, UNLESS THE BASIN WOULD MEET BOTH OF THE FOLLOWING CONDITIONS: IT WOULD HAVE AN AVERAGE INSIDE SLOPE OF LESS THAN FIVE TO ONE (5:1) ON THE OUTSIDE OF THE BASIN, AND BOTH THE INSIDE AND OUTSIDE WOULD BE PLANTED IN GRASS AND INTENDED TO BE MOWED OR WOULD BE DESIGNED TO CLOSELY RESEMBLE A NATURAL POND. IT WOULD NOT BE SURROUNDED BY A PRIMARILY METAL FENCE.	DETENTION BASIN SCREEN PROPOSED WHERE APPLICABLE	COMPLIES
SALDO §154.172 - LANDSCAPING AND STREET TREES	(A)(5)(a)	WITHIN AND ABUTTING ALL LAND DEVELOPMENTS AND MAJOR SUBDIVISIONS, ALONG ANY STREET (OR ANY ACCESS DRIVE SERVING MORE THAN ONE COMMERCIAL, INDUSTRIAL OR INSTITUTIONAL PRINCIPAL USE), AN AVERAGE OF ONE DECIDUOUS STREET TREE SHALL BE REQUIRED FOR EVERY 50 FEET OF DISTANCE ALONG THE STREET RIGHT-OF-WAY LINE ON EACH AFFECTED SIDE OF THE STREET OR ACCESS DRIVE.	± 820 FT ALONG S EIGHTH STREET / 50 = 17 STREET TREES REQUIRED 17 STREET TREES PROPOSED [1,2] ± 660 LF ALONG MAIN STREET / 50 = 14 STREET TREES REQUIRED 14 STREET TREES PROPOSED [1] ± 880 LF ACCESS DRIVE / 50 = 18 X 2 = 36 STREET TREES REQUIRED 36 STREET TREES PROPOSED [3]	WAIVER
ZONING §603 - DESIGN STANDARDS FOR OFF-STREET PARKING	H	ONE DECIDUOUS TREE SHALL BE REQUIRED FOR EVERY 3,000 SQUARE FEET OF PAVED AREA.	BUILDING 1: ± 31,600 SF PAVED AREA / 3,000 = 11 TREES REQUIRED 11 PARKING LOT TREES PROPOSED [3] BUILDING(S) 2, 3, 4: ± 99,700 SF PAVED AREA / 3,000 = 30 TREES REQUIRED 30 PARKING LOT TREES PROPOSED [3]	WAIVER
	I	PARKING AREAS WITHIN 150 FEET OF A DWELLING SHALL HAVE AN EVERGREEN SCREEN.	PARKING AREA SCREENED FROM ADJACENT DWELLINGS	COMPLIES
ZONING §803 - BUFFER YARDS	D.1	20 FOOT BUFFER SHALL BE PROVIDED BETWEEN ANY NEWLY DEVELOPED OR EXPANDED INDUSTRIAL OUTDOOR STORAGE OR ARE ROUTINELY USED FOR THE PARKING OF 4 OR MORE TRACTOR TRAILERS ABUTTING THE EXISTING RIGHT-OF-WAY OF AN EXPRESSWAY, ARTERIAL OR COLLECTOR STREET.	TRACTOR TRAILER PARKING BUFFER PROPOSED	COMPLIES
	D.4	FULL LENGTH EVERGREEN SCREEN AND ONE (1) DECIDUOUS TREE FOR EVERY 50 FEET OF BUFFER LENGTH	380 LF BUFFER / 50 = 8 DECIDUOUS TREES REQUIRED FULL LENGTH EVERGREEN BUFFER AND 8 DECIDUOUS TREES PROPOSED.	COMPLIES
	D.6	IF MORE THAN 25 EVERGREEN PLANTS ARE PROPOSED TO MEET REQUIREMENTS OF THIS SECTION, A MAXIMUM OF 50% OF SUCH PLANTS SHALL BE OF ONE SPECIES.	51 EVERGREEN TREES PROPOSED X 50% = 25 MAXIMUM OF ONE SPECIES REQUIRED 12 MAXIMUM OF ONE SPECIES PROPOSED	COMPLIES

NOTE(S):
1. DUE TO THE VICINITY OF OVERHEAD WIRES, SPECIES PROPOSED HAVE LIMITED MATURE HEIGHT AND ARE APPROVED BY PPL ELECTRIC UTILITIES.
2. A WAIVER HAS BEEN REQUESTED TO PLACE STREET TREES OUTSIDE THE RIGHT-OF-WAY ALONG MAIN STREET AND S 8TH STREET, THE REQUIRED NUMBER OF STREET TREES IS STILL PROVIDED.
3. A WAIVER HAS BEEN REQUESTED TO PLACE STREET TREES ELSEWHERE ON SITE DUE TO SITE CONSTRAINTS. THE REQUIRED NUMBER OF TREES IS STILL PROVIDED.

TOWNSHIP OF PALMER, PA - ORDINANCE COMPLIANCE CHART

SECTION		REQUIREMENT	REQUIRED/PROPOSED	COMPLIANCE
SALDO § 165-73 - STREET TREES, TREE PRESERVATION AND HISTORIC BUILDINGS	(A)(5)(a)	WITHIN AND ABUTTING ALL LAND DEVELOPMENTS AND MAJOR SUBDIVISIONS, ALONG ANY STREET (OR ANY ACCESS DRIVE SERVING MORE THAN ONE COMMERCIAL, INDUSTRIAL OR INSTITUTIONAL PRINCIPAL USE), AN AVERAGE OF ONE DECIDUOUS STREET TREE SHALL BE REQUIRED FOR EVERY 50 FEET OF DISTANCE ALONG THE STREET RIGHT-OF-WAY LINE ON EACH AFFECTED SIDE OF THE STREET OR ACCESS DRIVE.	± 630 LF ALONG TROLLEY LINE DRIVE / 50 = 13 TREES REQUIRED 13 TREES PROPOSED [1,2] ± 200 LF ALONG MAIN STREET / 50 = 4 TREES REQUIRED 4 TREES PROPOSED [1] ±630 LF ACCESS DRIVE / 50 = 13 X 2 = 26 STREET TREES REQUIRED 26 STREET TREES PROPOSED [3]	WAIVER
SALDO § 165-63 - STORMWATER MANAGEMENT	(K)(8)(a)	A DETENTION BASIN SHALL BE SCREENED FROM VIEW OF EXISTING RESIDENCES, A RESIDENTIAL ZONING DISTRICT OR A PUBLIC STREET, UNLESS THE BASIN WOULD MEET BOTH OF THE FOLLOWING CONDITIONS: IT WOULD HAVE AN AVERAGE INSIDE SLOPE OF LESS THAN FIVE TO ONE (5:1) ON THE OUTSIDE OF THE BASIN, AND BOTH THE INSIDE AND OUTSIDE WOULD BE PLANTED IN GRASS AND INTENDED TO BE MOWED OR WOULD BE DESIGNED TO CLOSELY RESEMBLE A NATURAL POND. IT WOULD NOT BE SURROUNDED BY A PRIMARILY METAL FENCE.	DETENTION BASIN SCREEN PROPOSED WHERE APPLICABLE	COMPLIES
ZONING §190-409 - COMMUNITY DEVELOPMENT OBJECTIVES	F.3	TO MINIMIZE THE ADVERSE VISUAL IMPACT OF EXPANSIVE PARKING LOTS BY ESTABLISHING EFFECTIVE BUILDING AND PARKING LOT ORIENTATIONS AND THROUGH THE USE OF SHADE TREES, SCREENING AND GRADE CHANGES	PARKING LOT SCREEN PROPOSED WHERE FEASIBLE. RELIEF IS REQUESTED WHERE SITE RETAINING WALLS ARE ADJACENT TO PARKING	WAIVER
ZONING §190-603 - PARKING LOT LANDSCAPING	H.1	ALL AREAS NOT SERVING AS PARKING SPACES, AISLES, ACCESS DRIVES, OR PEDESTRIAN WALKWAYS SHALL BE COVERED WITH AN ALL SEASON GROUND COVER AND BE WELL MAINTAINED.	ALL SEASON GROUND COVER PROPOSED	COMPLIES
	H.3	ANY LOT WITH MORE THAN 30 PARKING SPACES SHALL HAVE A LANDSCAPE AREA A MINIMUM OF 5% OF THE TOTAL PAVED AREA.	BUILDING 5: ± 23,900 SF PAVED AREA X 5% = 1,195 SF LANDSCAPE AREA REQUIRED ± 1,675 SF LANDSCAPE AREA PROPOSED	COMPLIES
	H.4	ONE (1) DECIDUOUS TREE SHALL BE REQUIRED FOR EVERY 15 SPACES.	BUILDING 5: 37 PARKING SPACES / 15 = 3 PARKING LOT TREES REQUIRED 3 PARKING LOT TREES PROPOSED [3] BUILDING 6: 27 PARKING SPACES / 15 = 2 PARKING LOT TREES REQUIRED 2 PARKING LOT TREES PROPOSED [3]	WAIVER

NOTE(S):
1. 190-805.D.3. ANY STREET TREES PLANTED UNDER OR NEAR OVERHEAD WIRES SHALL BE OF A SPECIES WITH LIMITED MATURE HEIGHT AND MEET ANY REQUIRED UTILITY COMPANY SETBACKS.
2. A WAIVER HAS BEEN REQUESTED TO PLACE STREET TREES OUTSIDE THE RIGHT-OF-WAY ALONG MAIN STREET AND TROLLEY LINE DRIVE. THE REQUIRED NUMBER OF STREET TREES IS STILL PROVIDED.
3. A WAIVER HAS BEEN REQUESTED TO PLACE STREET TREES ELSEWHERE ON SITE DUE TO SITE CONSTRAINTS. THE REQUIRED NUMBER OF TREES IS STILL PROVIDED.

OVERALL PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	APPROXIMATE SIZE AT TIME OF PLANTING	MATURE HEIGHT	REMARKS
SHADE TREE(S)								
AO	37	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2"-2 1/2" CAL.	B&B	12-14'	40-70'	
CO	24	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2"-2 1/2" CAL.	B&B	12-14'	40-60'	
GI	26	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYCOLE THORNLESS HONEY LOCUST	3"-3 1/2" CAL.	B&B	14-16'	60-80'	
LR	21	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	ROUND-LOBED SWEET GUM	3"-3 1/2" CAL.	B&B	14-16'	60-80'	
LT	2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2"-2 1/2" CAL.	B&B	12-14'	70-90'	
PB	16	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	3"-3 1/2" CAL.	B&B	14-16'	60-80'	
QR	4	QUERCUS RUBRA	NORTHERN RED OAK	3"-3 1/2" CAL.	B&B	14-16'	60-75'	
ORNAMENTAL TREE(S)								
AG	14	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE APPLE SERVICEBERRY	2"-2 1/2" CAL.	B&B	12-14'	15-25'	SINGLE STEM
CE	15	CERCIS CANADENSIS	EASTERN REDBUD	2"-2 1/2" CAL.	B&B	12-14'	20-30'	SINGLE STEM
CF	4	CORNUS FLORIDA	FLOWERING DOGWOOD	2"-2 1/2" CAL.	B&B	12-14'	15-30'	SINGLE STEM
EVERGREEN TREE(S)								
JE	13	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	6-7'	B&B	6-7'	30-65'	
PG	10	PICEA GLAUCA	WHITE SPRUCE	6-7'	B&B	6-7'	40-60'	
PC	7	PICEA PUNGENS	COLORADO SPRUCE	6-7'	B&B	6-7'	30-60'	
PM	9	PSEUDOTSUGA MACROCARPA	DOUGLAS FIR	6-7'	B&B	6-7'	40-80'	
EVERGREEN SHRUB(S)								
IGC	85	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	24-30"	CONTAINER	24-30"	3-4'	
KE	42	KALMIA LATIFOLIA 'ELF'	ELF DWARF MOUNTAIN LAUREL	24-30"	CONTAINER	24-30"	2-3'	
VC	72	VIBURNUM RHYTIDOPHYLLUM 'CREE'	LEATHERLEAF VIBURNUM	24-30"	CONTAINER	24-30"	6-10'	
GROUND COVERS								
JW	73	JUNIPERUS HORIZONTALIS 'WILTONII'	BLUE RUG JUNIPER	1 GAL.	CONTAINER	1 GAL.	4-6"	SPACED AT 36" O.C.
RG	29	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	1 GAL.	CONTAINER	1 GAL.	18-36"	SPACED AT 36" O.C.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

MEADOW MIX LEGEND

- MEADOW MIX 'A' - NATIVE STEEP SLOPE MIX WITH ANNUL RYEGRASS
- MEADOW MIX 'B' - NATIVE DETENTION AREA MIX
- MEADOW MIX 'C' - RAIN GARDEN MIX

NOTES

1. REFER TO SHEET LP-101 AND LP-102 FOR LANDSCAPE PLANTING PLANS, AND LP-501 FOR LANDSCAPE NOTES AND DETAILS.
2. TREES SHALL BE OF SYMMETRICAL GROWTH, FREE OF INSECT PESTS AND DISEASE AND DURABLE.
3. TREES WHICH HAVE DIED OR HAVE BECOME DISEASED OR PEST-RIDDEN WITHIN 18 MONTHS FROM THE TIME OF PLANTING SHALL BE REPLACED.
4. TREES SHALL BE PLANTED AND STAKED IN CONFORMANCE WITH GOOD LANDSCAPE PRACTICES.
5. REQUIRED TREES SHALL BE PROPERLY MAINTAINED AND SHALL NOT BE REMOVED WITHOUT BEING REPLACED BY ANOTHER TREE THAT MEETS THE REQUIREMENTS OF PALMER TOWNSHIP CODE.

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE, AND
(10) WORKING DAYS IN DESIGN STAGE
~~ STOP & CALL ~~

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER: 20251501191
20251501192

Date	Description	No.
Revisions		

STEVEN M. LAUDATI
N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00092900

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY MASTER LANDSCAPE PLANTING PLAN

Project No.	200168301
Date	7/17/2025
Drawn By	ML
Checked By	RP
Drawing No.	LP-100
Sheet	45 of 52

LANGAN 121
Project No. 200168301

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ACT 287 AS AMENDED

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Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER: 20251501191
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NOTES

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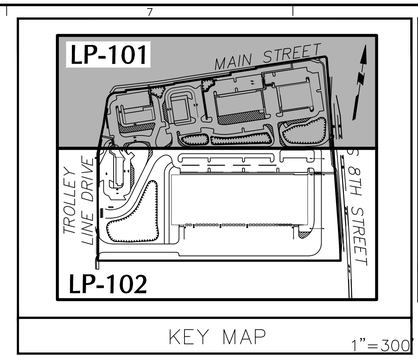

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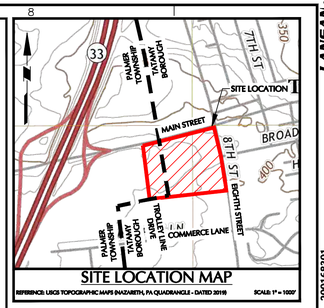
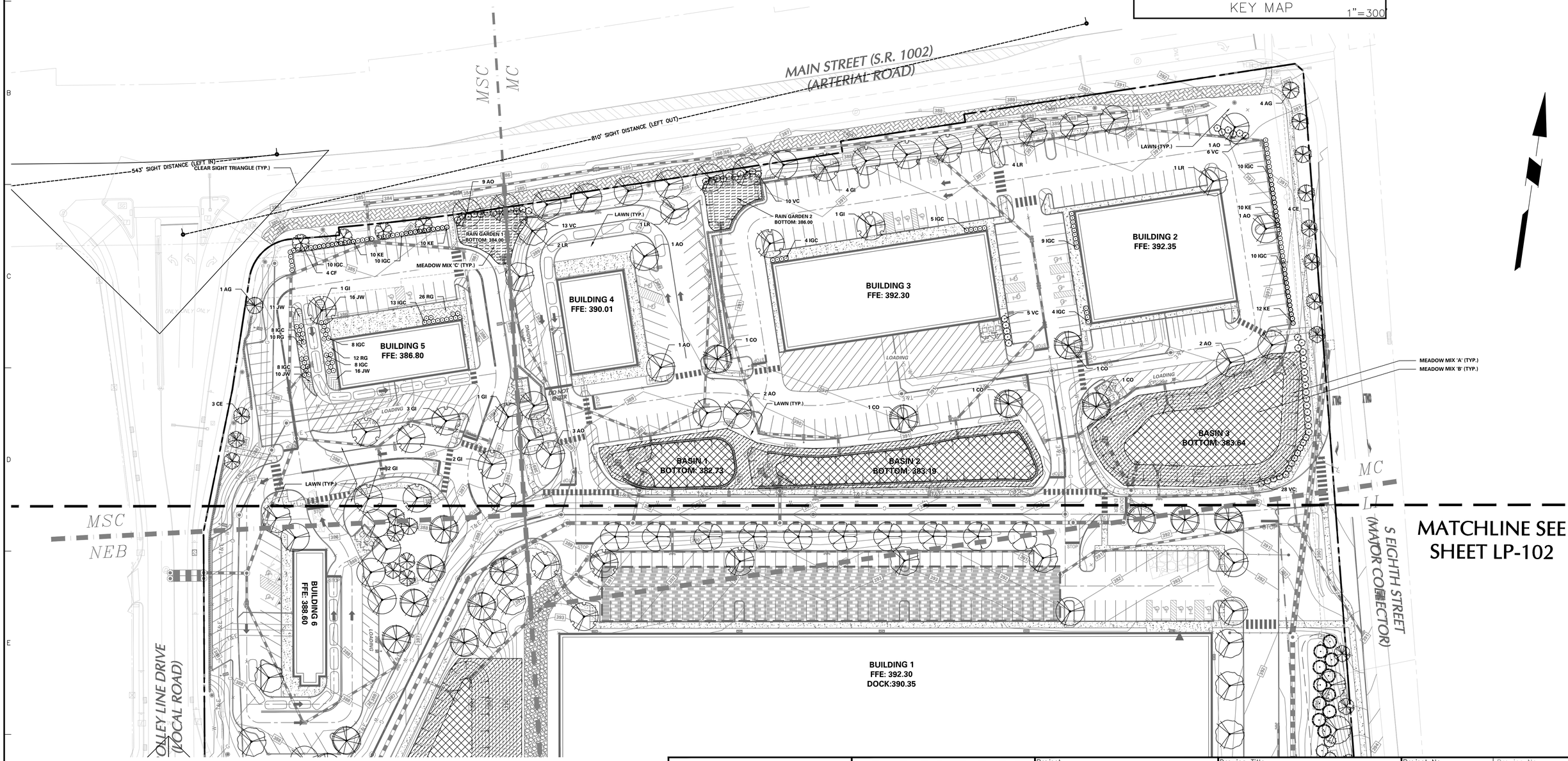


SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



MATCHLINE SEE SHEET LP-102

SCALE: 1 INCH = 40 FEET

Date	Description	No.
Revisions		

STEVEN M. LAUDATI
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Drawing Title
PRELIMINARY LANDSCAPE PLANTING PLAN

Project No. 200168301
Date 7/17/2025
Drawn By ML
Checked By RP

Drawing No. LP-101

Sheet 46 of 52

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Date: 7/16/2025 Time: 18:52 User: phaley Style Table: Langan.stb Layout: LP-101 Document Code: 200168301-0503-LP101-0102

LANGAN 122 Project No. 200168301

ACT 287 AS AMENDED

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1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG!!

SERIAL NUMBER, 20251501191 20251501192

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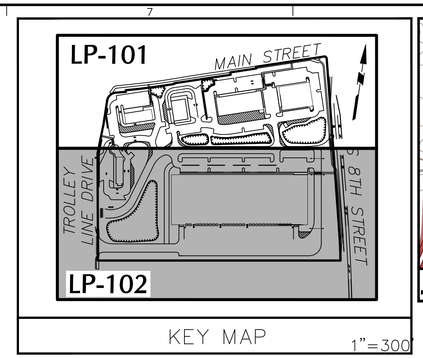

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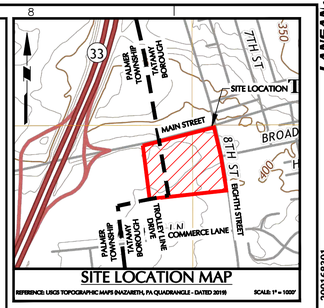

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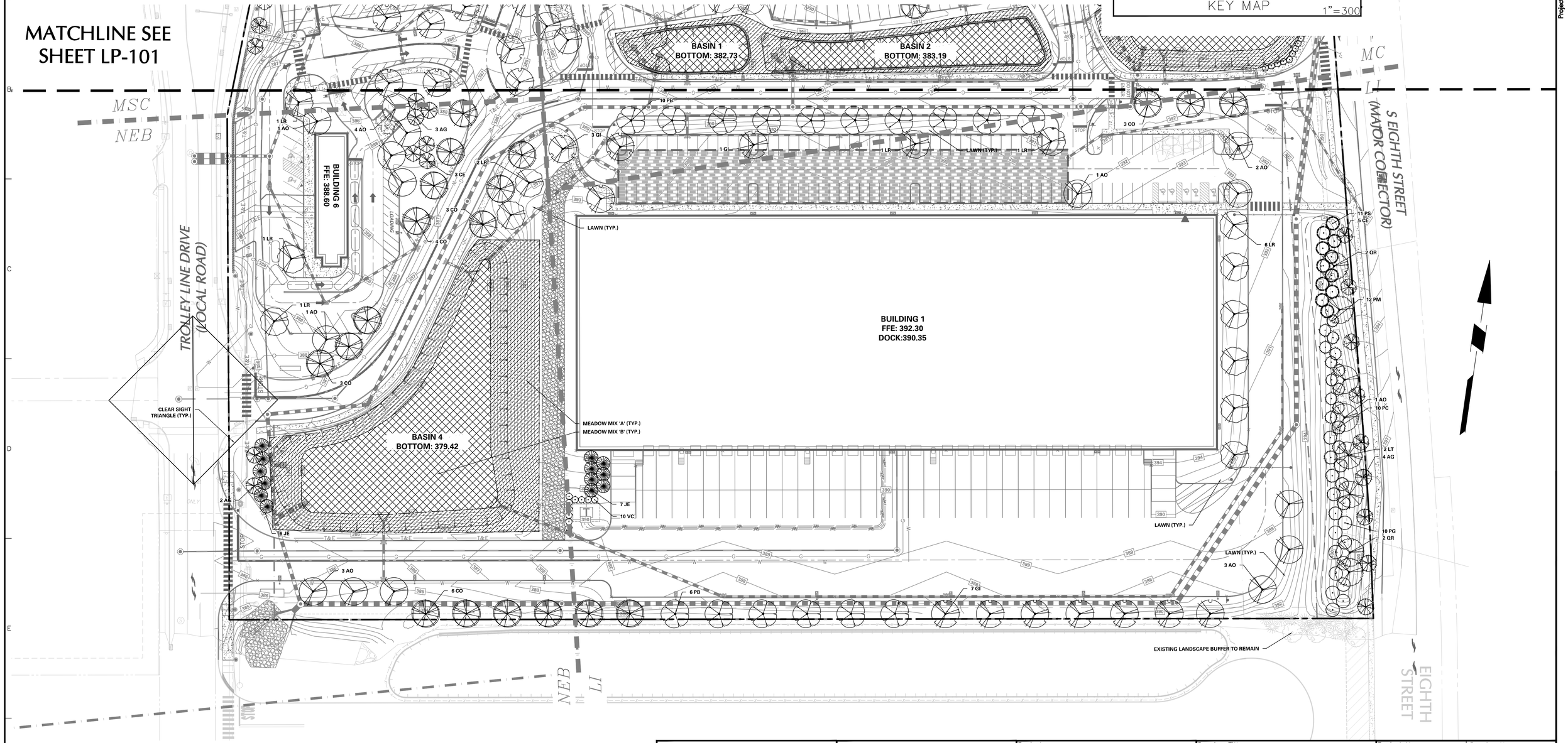

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Drawing Title
PRELIMINARY LANDSCAPE PLANTING PLAN

Project No. 200168301
Date 7/17/2025
Drawn By ML
Checked By RP

Drawing No. LP-102

Sheet 47 of 52

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Project No. 200168301

LANGAN 123

GENERAL LANDSCAPE PLANTING NOTES:

PLANTING MATERIALS

1. NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.

2. STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.

3. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.

4. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.

5. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.

PLANTING SOILS

1. REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOD, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS

2. SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BOGS, MARSHES OR CONTAMINATED SITES.

3. IF DEPTH OF PLANTING SOILS AND TOPSOIL IS NOT INDICATED IN PLANS OR DETAILS, A MINIMUM 18" DEPTH SHALL BE PROVIDED FOR ALL TREES AND LARGE SHRUBS; MINIMUM 12" DEPTH SHALL BE PROVIDED FOR GROUNDCOVERS, HERBACEOUS AND MEADOW OR ORNAMENTAL GRASS AREAS AND A MINIMUM 6" LAYER SHALL BE INSTALLED IN ALL LAWN AREAS. TOPSOIL AND PLANTING SOIL DEPTH INDICATED ON PLANS AND PLANTING DETAILS AND NARRATIVE SPECIFICATIONS SHALL GOVERN DEPTH WHEN PROVIDED.

4. WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES.

5. IF THE QUANTITY OF SOILS FROM THE SITE IS NOT ADEQUATE TO FILL PLANTING AREAS TO THE DEPTH INDICATED IN THE PLANS AND DETAILS, CONTRACTOR SHALL FURNISH PLANTING SOILS THAT ARE FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER AND COMPLY WITH THE FOLLOWING CRITERIA:
-SOILS SHALL MEET ALL APPLICABLE SOIL REMEDIATION STANDARDS
-ORGANIC CONTENT: 2-5% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS
-SOLUBLE SALTS: LESS THAN 0.5 MM HOS/CM
-SOIL PH: 4.5-7 TO BE AMENDED PER SOIL TEST RESULTS
-PHYSICAL (SIEVE) ANALYSIS/ SOIL TEXTURE
SAND: 40-60% SILT: 25-60% CLAY: 5-20%
-NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE.

6. ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED BY ADDING AMENDMENTS, THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.

7. IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATTER. ORGANIC AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8; MOISTURE CONTENT 35-55% BY WEIGHT 100% PASSING THROUGH 1" SIEVE; SOLUBLE SALT CONTENT LESS THAN 0.5 MM HOS/CM; MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL; FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER

8. SCARIFY AND/OR TILL ALL COMPACTED SUBSOILS PRIOR TO ADDING PLANTING SOIL OR TOPSOIL. PLANTING SOILS AND TOPSOIL SHALL BE PLACED IN 12-18" LIFTS THAT ARE LOOSELY COMPACTED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.

DELIVERY, STORAGE, AND HANDLING

1. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.

2. TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSIT. DO NOT DROP OR BREAK BALLED STOCK DURING DELIVERY OR HANDLING.

3. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT BALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8" INTO THE PLANTING HOLE. WITH CONTAINER-GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.

4. THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

INSTALLATION

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.

2. THE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.

3. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.

4. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.

5. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.

6. THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.

7. AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.

8. MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.

9. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY OWNER AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.

10. AFTER COMPLETION OF A PROJECT, ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A SHREDDED HARDWOOD BARK OR APPROVED EQUAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.

11. CONTRACTOR SHALL SUPPLY SUPPLEMENTARY IRRIGATION UNTIL ACCEPTANCE BY OWNER.

12. CONTRACTOR SHALL ASSESS THE NEED FOR DEER PROTECTION ON SITE. IF DEEMED NECESSARY, SHADE AND ORNAMENTAL TREES SHALL BE PROTECTED THROUGH WINTER WITH SPIRAL WRAP TREE GUARDS, OR APPROVED EQUAL. PROTECTION LENGTH TO BE FROM BELOW THE LOWEST BRANCH AND DOWN TO WITHIN A FEW INCHES OF THE GROUND. THE GUARDS CAN BE REMOVED IN SPRING AND SAVED FOR RE-INSTALLATION DURING THE FOLLOWING WINTERS AS PART OF A MAINTENANCE PROGRAM.

GUARANTEE

1. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF 18 MONTHS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

MEADOW SEEDING NOTES:

1. MEADOW SEED MIX "A" - ERNST SEED MIX ERNMX-181 "NATIVE STEEP SLOPE MIX W/ ANNUAL RYEGRASS"

29.0%	ANDROPOGON GERARDII, 'PRAIRIE VIEW'-IN ECOTYPE	BIG BLUESTEM, 'PRAIRIE VIEW'-IN ECOTYPE
20.0%	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS
15.0%	SORGHASTRUM NUTANS, NY4 ECOTYPE	INDIANGRASS, NY4 ECOTYPE
14.0%	ELYMUS VIRGINICUS, MADISON-NY ECOTYPE	VIRGINIA WILDRYE, MADISON-NY ECOTYPE
6.6%	ELYMUS CANADENSIS	CANADA WILDRYE
4.8%	PANICUM VIRGATUM, 'SHAWNEE'	SWITCHGRASS, 'SHAWNEE'
4.0%	AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE	AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE
2.8%	PANICUM CLANDESTINUM, TIOGA	DEERTONGUE, TIOGA
1.0%	RUDBECKIA HIRTA	BLACKEYED SUSAN
0.7%	COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS
0.7%	ECHINACEA PURPUREA	PURPLE CONEFLOWER
0.7%	HELIOPSIS HELIANTHOIDES, PA ECOTYPE	OXEYE SUNFLOWER, PA ECOTYPE
0.2%	ASTER PILOSUS, PA ECOTYPE	HEATH ASTER, PA ECOTYPE
0.2%	MONARDA FISTULOSA	WILD BERGAMOT
0.1%	APOCYNUM CANNABINUM, PA ECOTYPE	INDIANHEMP, PA ECOTYPE
0.1%	ASCLEPIA SYRIACA	COMMON MILKWEED
0.1%	SOLIDAGO RUGOSA, PA ECOTYPE	WRINKLELEAF GOLDENROD, PA ECOTYPE

NOTES:

1. SEED AT A RATE OF 60 LBS./ACRE.
2. FOR SPRING SEEDING, APPLY A NURSE CROP OF OATS AT A RATE OF 20 LBS./ACRE.
3. FOR FALL SEEDING, APPLY A NURSE CROP OF BARLEY AT A RATE OF 20 LBS./ACRE.

2. MEADOW SEED MIX "B" - ERNST SEED MIX ERNMX-183 "NATIVE DETENTION AREA MIX"

26.0%	PANICUM CLANDESTINUM, TIOGA	DEERTONGUE, TIOGA
25.0%	PANICUM VIRGATUM, 'SHAWNEE'	SWITCHGRASS, 'SHAWNEE'
21.0%	ELYMUS VIRGINICUS	VIRGINIA WILDRYE
20.0%	CAREX VULPINOIDEA, PA ECOTYPE	FOX SEDGE, PA ECOTYPE
4.0%	AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE	AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE
2.0%	JUNCUS EFFUSUS	SOFT RUSH
1.0%	JUNCUS TENUIS, PA ECOTYPE	PATH RUSH, PA ECOTYPE
1.0%	PANICUM RIGIDULUM, PA ECOTYPE	REDTOP PANICGRASS, PA ECOTYPE

NOTES:

1. SEED AT A RATE OF 20 LBS./ACRE.
2. FOR SPRING SEEDING, APPLY A NURSE CROP OF OATS AT A RATE OF 20 LBS./ACRE.
3. FOR FALL SEEDING, APPLY A NURSE CROP OF BARLEY AT A RATE OF 20 LBS./ACRE.

3. MEADOW SEED MIX "C" - ERNST SEED MIX ERNMX-180 "RAIN GARDEN MIX"

33.4%	SCHIZACHYRIUM SCOPARIUM, 'ITASCA,' NN ECOTYPE, LITTLE BLUESTEM
20.0%	ELYMUS VIRGINICUS, 'MADISON,' VIRGINIA WILDRYE
7.0%	CAREX VULPINOIDEA, PA ECOTYPE, FOX SEDGE
5.6%	CHASMANTHIUM LATIFOLIUM, WV ECOTYPE, RIVER OATS
5.5%	ECHINACEA PURPUREA, PURPLE CONEFLOWER
3.0%	CHAMAECRSTA FASCICULATA, PA ECOTYPE, PARTRIDGE PEA
3.0%	COREOPSIS LANCEOLATA, LANCELEAF COREOPSIS
3.0%	PANICUM CLANDESTINUM, TIOGA, DEERTONGUE
3.0%	PANICUM RIGIDULUM, PA ECOTYPE, REDTOP PANICGRASS
3.0%	RUDBECKIA HIRTA, BLACKEYED SUSAN
3.0%	VERBENA HASTATA, PA ECOTYPE, BLUE VERVAIN
2.0%	HELIOPSIS HELIANTHOIDES, PA ECOTYPE, OXEYE SUNFLOWER
1.8%	ASCLEPIAS INCARNATA, PA ECOTYPE, SWAMP MILKWEED
1.0%	CAREX SCOPARIA, PA ECOTYPE, BLUNT BROOM SEDGE
1.0%	SENNA HEBECARPA, VA & WV ECOTYPE, WILD SENNA
0.6%	HELENIUM AUTUMNALE, PA ECOTYPE, COMMON SNEEZEWEED
0.5%	ASTER NOVAE-ANGLIAE, PA ECOTYPE, NEW ENGLAND ASTER
0.5%	ASTER PRENANTHOIDES, PA ECOTYPE, ZIGZAG ASTER
0.5%	BAPTISIA AUSTRALIS, SOUTHERN WV ECOTYPE, BLUE FALSE INDIGO
0.5%	PYCNANTHEMUM TENUIFOLIUM, NARROWLEAF MOUNTAIN MINT
0.5%	ZIZIA AUREA, GOLDEN ALEXANDERS
0.4%	MONARDA FISTULOSA, FORT INDIANTOWN GAP-PA ECOTYPE, WILD BERGAMOT
0.3%	EUPATORIUM PERFOLIATUM, PA ECOTYPE, BONESET
0.3%	JUNCUS TENUIS, PA ECOTYPE, PATH RUSH
0.2%	JUNCUS EFFUSUS, SOFT RUSH
0.2%	SOLIDAGO NEMORALIS, PA ECOTYPE, GRAY GOLDENROD
0.2%	SOLIDAGO RUGOSA, PA ECOTYPE, WRINKLELEAF GOLDENROD

NOTES:

1. SEED AT A RATE OF 20 LBS./ACRE.
2. FOR SPRING SEEDING, APPLY A NURSE CROP OF OATS AT A RATE OF 20 LBS./ACRE.
3. FOR FALL SEEDING, APPLY A NURSE CROP OF BARLEY AT A RATE OF 20 LBS./ACRE.

4. GENERAL SEEDING NOTES :

1. SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 1) OR THE FALL (SEPTEMBER 1 TO OCTOBER 1).
2. ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A BROAD-SPECTRUM NON-SELECTIVE HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
3. IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRUAX-TYPE DRILL WHERE APPLICABLE.
4. CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION.

5. WEED CONTROL/MAINTENANCE NOTES :

1. DURING THE ESTABLISHMENT YEAR, CONTRACTOR SHALL MOW SEEDING IF WEED HEIGHT EXCEEDS MEADOW MIX HEIGHT. MOW AT A HEIGHT OF 8"-10". DO NO MOW CLOSE, AS SOME OF THE MEADOW MIX MAY BE DAMAGED.
2. AFTER THE FIRST GROWING SEASON, AND IF MEADOW MIX IS WELL ESTABLISHED, THE MEADOW MIX SHALL BE MOWED ONLY ONCE ANNUALLY, ANNUAL MAINTENANCE MOWING SHALL BE DONE IN LATE WINTER DURING THE MONTH OF MARCH.
3. MOW IN WETLAND AND WETLAND TRANSITION AREAS DURING DRIER SITE CONDITIONS WHEN SOIL DISTURBANCE WILL NOT OCCUR. MAINTENANCE FOR WETLAND AND WETLAND TRANSITION AREAS SHALL OCCUR DURING LATE SUMMER (JULY 1 TO AUGUST 15) WHEN THE WATER TABLE IS USUALLY AT ITS LOWEST POINT OF THE YEAR. DO NOT MOW IN WETLAND OR WETLAND TRANSITION AREAS ESTABLISHMENT OF MEADOW MIX.

LAWN SEED NOTES:

1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
2. THE FOLLOWING SEED MIX SHALL BE SOWN AT THE RATES AS DEPICTED:

RED FESCUE	1 1/2 LBS./1,000 SF
PERENNIAL RYEGRASS	1 LBS./1,000 SF
KENTUCKY BLUEGRASS	1 1/2 LBS./1,000 SF
SPREADING FESCUE	1 LBS./1,000 SF

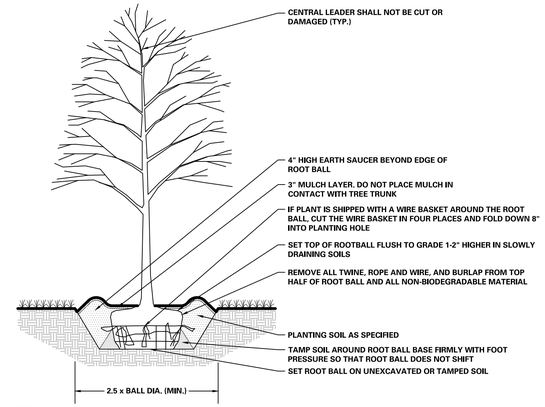
3. SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS/AC OR 90 LBS/1,000 SF
4. SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:

SPRING: APRIL 1 - MAY 31
FALL: AUGUST 16 - OCTOBER 31

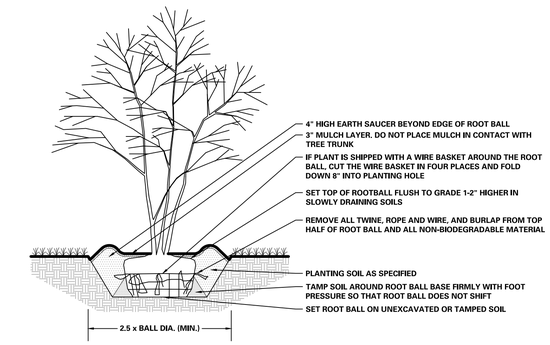
5. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

MISCELLANEOUS NOTES:

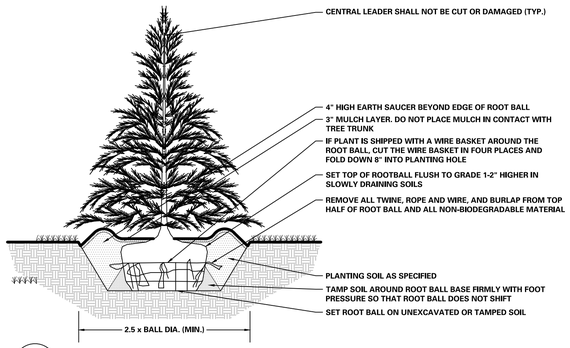
1. TREES SHALL BE OF SYMMETRICAL GROWTH, FREE OF INSECT PESTS AND DISEASE AND DURABLE.
2. TREES WHICH HAVE DIED OR HAVE BECOME DISEASED OR PEST-RIDDEN WITHIN 18 MONTHS FROM THE TIME OF PLANTING SHALL BE REPLACED.
3. TREES SHALL BE PLANTED AND STAKED IN CONFORMANCE WITH GOOD LANDSCAPE PRACTICES.
4. REQUIRED TREES SHALL BE PROPERLY MAINTAINED AND SHALL NOT BE REMOVED WITHOUT BEING REPLACED BY ANOTHER TREE THAT MEETS THE REQUIREMENTS OF PALMER TOWNSHIP CODE.



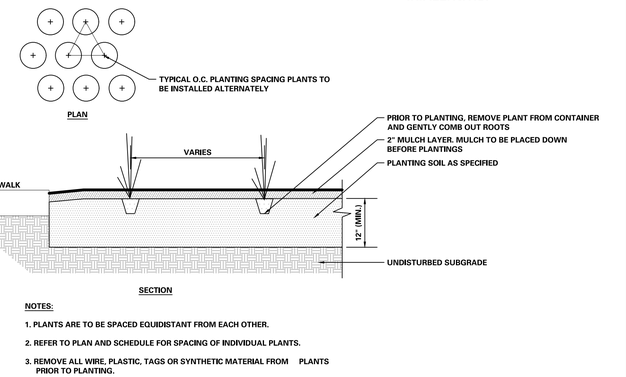
1 SHADE TREE DETAIL — SCALE: N.T.S.



2 ORNAMENTAL TREE DETAIL — SCALE: N.T.S.



3 EVERGREEN TREE DETAIL — SCALE: N.T.S.

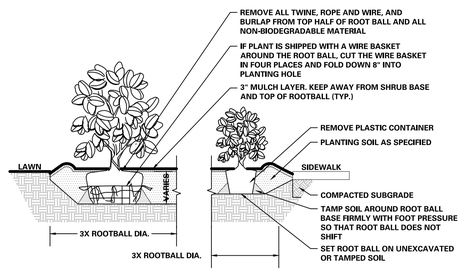


NOTES:

1. PLANTS ARE TO BE SPACED EQUIDISTANT FROM EACH OTHER.
2. REFER TO PLAN AND SCHEDULE FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

4 PERENNIAL AND GRASS DETAIL — SCALE: N.T.S.

LARGE SHRUB — SMALL SHRUB (CONTAINER)



NOTES:

1. ALL SHRUBS TO BE SET PLUMB.
2. REFER TO LANDSCAPE PLAN FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

5 SHRUB DETAIL — SCALE: N.T.S.

REFER TO SHEET LP-100 FOR MASTER LANDSCAPE PLANTING PLAN, PLANT SCHEDULE AND COMPLIANCE CHART, AND LP-101 THROUGH LP-102 FOR LANDSCAPE PLANTING PLANS

Date	Description	No.
Revisions		

STEVEN M. LAUDATI
N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00092900

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Project: CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP / EASTON / TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title: **PRELIMINARY LANDSCAPE NOTES AND DETAILS**

Project No. 200168301
Date 7/17/2025
Drawn By
Checked By

Drawing No. **LP-501**
Sheet 48 of 52

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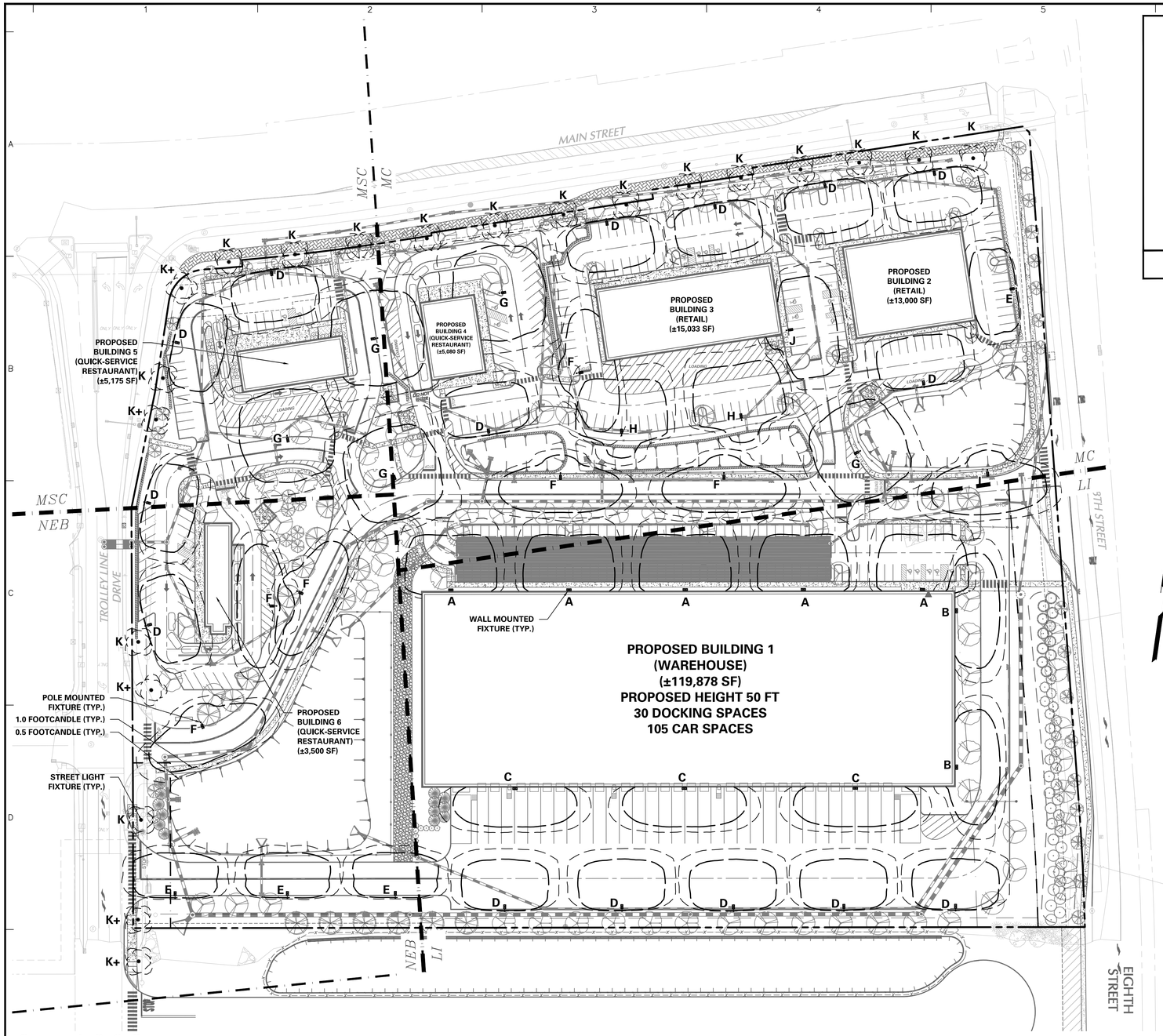
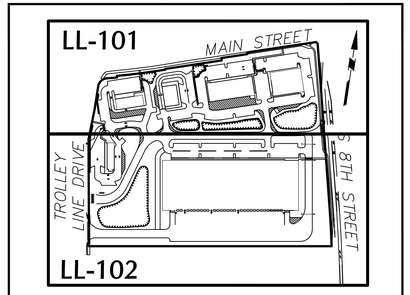
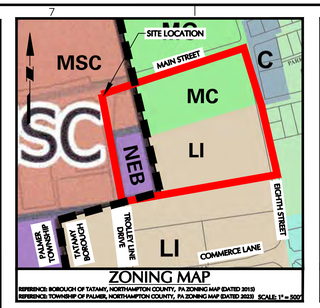
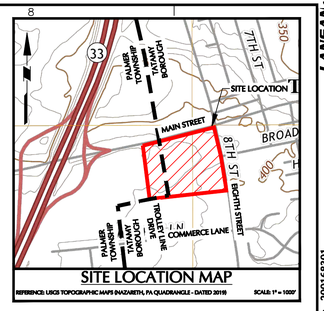






REFERENCE: BOROUGH OF TATAMY, NORTHAMPTON COUNTY, PA ZONING MAP (DATED 2019)
REFERENCE: TOWNSHIP OF PALMER, NORTHAMPTON COUNTY, PA ZONING MAP (DATED 2022) SCALE: 1" = 500'



REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

OVERALL SITE LIGHTING SCHEDULE

SYMBOL	KEY	QTY.	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	FIXTURE MOUNTING HEIGHT	LAMP	COLOR TEMPERATURE	OPTICS	LUMENS	LLF	FIXTURE CATALOGUE NO.	POLE MANUFACTURER	POLE DESCRIPTION	POLE LENGTH	POLE CATALOGUE NO.
▬	A	5	LITHONIA LIGHTING	DSX2	WALL MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE TFTM	24,440	0.9	DSX2-LED-P2-30K-70CRI-TFTM-WBA-PIR-DBXLD	–	–	–	–
▬	B	2	LITHONIA LIGHTING	DSX2	WALL MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE 3M	23,915	0.9	DSX2-LED-P4-30K-70CRI-T3M-WBA-PIR-DBXLD	–	–	–	–
▬	C	3	LITHONIA LIGHTING	DSX2	WALL MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE 2M	23,641	0.9	DSX2-LED-P2-30K-70CRI-T2M-WBA-PIR-DBXLD	–	–	–	–
▬■	D	15	LITHONIA LIGHTING	DSX2	POLE MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE BLC4	17,966	0.9	DSX2-LED-P2-30K-70CRI-BLC4-RPA-PIR-DBXLD	LITHONIA LIGHTING	ROUND STRAIGHT ALUMINUM	17'-0"	RSA-17-5G-DM19AS-FBC-DBXLD
▬■	E	4	LITHONIA LIGHTING	DSX2	POLE MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE BLC3	17,395	0.9	DSX2-LED-P2-30K-70CRI-BLC3-RPA-PIR-DBXLD	LITHONIA LIGHTING	ROUND STRAIGHT ALUMINUM	17'-0"	RSA-17-5G-DM19AS-FBC-DBXLD
▬■	F	6	LITHONIA LIGHTING	DSX2	POLE MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE 2M	23,641	0.9	DSX2-LED-P2-30K-70CRI-T2M-RPA-PIR-DBXLD	LITHONIA LIGHTING	ROUND STRAIGHT ALUMINUM	17'-0"	RSA-17-5G-DM19AS-FBC-DBXLD
▬■	G	5	LITHONIA LIGHTING	DSX2	POLE MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE 5W	25,377	0.9	DSX2-LED-P2-30K-70CRI-T5W-RPA-PIR-DBXLD	LITHONIA LIGHTING	ROUND STRAIGHT ALUMINUM	17'-0"	RSA-17-5G-DM19AS-FBC-DBXLD
▬■	H	2	LITHONIA LIGHTING	DSX2	POLE MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE TFTM	24,440	0.9	DSX2-LED-P2-30K-70CRI-TFTM-RPA-PIR-DBXLD	LITHONIA LIGHTING	ROUND STRAIGHT ALUMINUM	17'-0"	RSA-17-5G-DM19AS-FBC-DBXLD
▬■	I	1	LITHONIA LIGHTING	DSX2	POLE MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE 3M	23,915	0.9	DSX2-LED-P2-30K-70CRI-T3M-RPA-PIR-DBXLD	LITHONIA LIGHTING	ROUND STRAIGHT ALUMINUM	17'-0"	RSA-17-5G-DM19AS-FBC-DBXLD
▬■	J	1	LITHONIA LIGHTING	DSX2	POLE MOUNTED AREA LIGHTING	20'	272.6W LED	3000K	TYPE 4M	24,272	0.9	DSX2-LED-P2-30K-70CRI-T4M-RPA-PIR-HS-DBXLD	LITHONIA LIGHTING	ROUND STRAIGHT ALUMINUM	17'-0"	RSA-17-5G-DM19AS-FBC-DBXLD
●	K	16	ARCHITECTURAL AREA LIGHTING	FGS	STREET LIGHT	21'	61W LED	4000K	TYPE 5	4,593	0.9	FGS-RB-SAL-1T-36LED-4K-450-BLS	TO BE COORDINATED WITH PALMER TOWNSHIP AND PENNDOT			
●	K+	5	ARCHITECTURAL AREA LIGHTING	FGS	EXISTING STREET LIGHT RELOCATED OR RESET	21'	EXISTING FIXTURE(S) TO BE RELOCATED OR RESET									

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING VOLTAGES AND SITE ELECTRIFICATION LAYOUT.
2. FINAL LOCATION OF BUILDING MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL PLANS.
3. ALL POLES TO BE FACTORY CUT TO LENGTH WHERE NOTED.
4. ALL MOUNTING METHODS, CONDUITS, WIRING AND THE SUPPLY OF THE CORRECT ELECTRICAL POWER IN ACCORDANCE WITH ALL LOCAL CODES IS THE RESPONSIBILITY OF THE INSTALLER.

STATISTICS

DESCRIPTION	AVG.	MAX.	MIN.	MAX./MIN.	AVG./MIN.
INDUSTRIAL WAREHOUSE – TATAMY BOROUGH	1.70 fc	6.0 fc	0.5 fc	12.00:1	3.40:1
PAD BUILDING 2 – TATAMY BOROUGH	2.14 fc	6.7 fc	0.5 fc	13.40:1	4.28:1
PAD BUILDING 3 – TATAMY BOROUGH	2.27 fc	6.8 fc	0.5 fc	13.60:1	4.54:1
PAD BUILDING 4 – TATAMY BOROUGH	1.69 fc	5.9 fc	0.5 fc	11.80:1	3.38:1
PAD BUILDING 5 – PALMER TOWNSHIP	1.81 fc	6.5 fc	0.5 fc	13.00:1	3.62:1
PAD BUILDING 6 – PALMER TOWNSHIP	1.89 fc	6.4 fc	0.5 fc	12.00:1	3.78:1

LIGHT PHOTOMETRY AND CALCULATIONS FOR EXISTING AND ADJACENT LIGHTING TO REMAIN ARE NOT INCLUDED IN THE ABOVE STATISTICS.

PHOTOMETRIC LIGHTING TEMPLATE:



NOTE: THE PHOTOMETRIC TEMPLATE REPRESENTS LIGHT THROW FOR EACH INDIVIDUAL FIXTURE. IT DOES NOT REPRESENT LIGHT COMING FROM OTHER SOURCES.

NOTE(S):

1. REFER TO SHEET LL-101 AND LL-102 FOR LIGHTING PLANS AND LL-501 FOR LIGHTING NOTES AND DETAILS
2. CONTRACTOR SHALL INSPECT ALL ASPECTS OF EXISTING LIGHTS AND POLES TO BE RESET OR RELOCATED ON SITE. PRIOR TO REMOVAL, CONTRACTOR SHALL CONFIRM MATERIALS ARE SUITABLE FOR SUCH ACTIVITIES AND IDENTIFY, IN WRITING, PRIOR TO DISTURBANCE OF ANY DEFECTS OR CONCERNS WHICH MAY NEGATIVELY IMPACT THE OPERATION OR STRUCTURAL STABILITY OF THESE ITEMS. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN CONDITION OF LIGHT POLES AND FIXTURES FROM THE TIME THEY ARE REMOVED UNTIL THEY ARE REINSTALLED.

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND
(10) WORKING DAYS IN DESIGN STAGE
— STOP & CALL —

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER, 20251501191
20251501192

ORDINANCE COMPLIANCE TABLE
ZONING DISTRICT (PALMER TOWNSHIP) MSC - MAIN STREET COMMERCIAL OVERLAY AND NEB - NORTH END BUSINESS OVERLAY

ITEM	REQUIRED	PROVIDED	COMPLIES	ORDINANCE SECTION (PAGE)
GENERAL DESIGN REQUIREMENTS				
LIGHT FIXTURE MOUNTING HEIGHT	NO FIXTURE WITHIN 200 FEET OF A DWELLING OR RESIDENTIAL DISTRICT SHALL EXCEED 20 FEET, IN OTHER SITUATIONS NO FIXTURE SHALL EXCEED 30 FEET.	20' MOUNTING HEIGHT	YES	ZONING 190-513-C.
LIGHT SPILLOVER	THE MAXIMUM FOOTCANDLES MEASURED AT ANY LOCATION ALONG THE HORIZONTAL AND PROJECTED VERTICAL LOT LINE SHALL NOT EXCEED 0.1 FOOTCANDLE	MAXIMUM ILLUMINATION AT ANY LOCATION ALONG THE LOT LINE IS 0.1 FC WITH EXCEPTION TO INTERSECTIONS ADJOINING ADJACENT ROADWAYS .	YES	ZONING 190-603-1.
ILLUMINANCE	THE MINIMUM ILLUMINATION OF SUCH PARKING SPACES AND AISLES SHALL BE 0.75 FOOTCANDLE, EXCEPT THAT A MINIMUM OF 0.5 FOOTCANDLE IS PERMITTED FOR INDUSTRIAL USES	MAXIMUM ILLUMINATION FOR PARKING SPACES AND DRIVE AISLES IS 0.8 FC AND ABOVE	YES	ZONING 190-603-1.

ORDINANCE COMPLIANCE TABLE
ZONING DISTRICT (BOROUGH OF TATAMY) LI - LIGHT INDUSTRIAL AND MC- MAIN STREET COMMERCIAL

ITEM	REQUIRED	PROVIDED	COMPLIES	ORDINANCE SECTION (PAGE)
GENERAL DESIGN REQUIREMENTS				
LIGHT FIXTURE MOUNTING HEIGHT	NO FIXTURE WITHIN 200 FEET OF A DWELLING OR RESIDENTIAL DISTRICT SHALL EXCEED 40 FEET,	20' MOUNTING HEIGHT	YES	ZONING ARTICLE V - 511, C
PROPERTY LINE	NO LIGHT SOURCE SHALL SPILL OVER PROPERTY LINE AS FOLLOWS: - 0.3 FC AT 10 FEET INSIDE RESIDENTIAL LOT LINE BETWEEN HOURS OF 10PM AND 6AM - 1.0 FC AT 10 FEET INSIDE RESIDENTIAL LOT LINE BETWEEN HOURS OF 7PM AND 10PM	MAXIMUM ILLUMINATION AT RESIDENTIAL LOT LINE IS 0 FC.	YES	ZONING ARTICLE V - 511, F

Date	Description	No.
Revisions		

STEVEN M. LAUDATI
N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00092900

LANGAN
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Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY MASTER LIGHTING PLAN

Project No.	200168301
Date	7/17/2025
Drawn By	SW
Checked By	RP

Drawing No. LL-100

Sheet 49 of 52

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Date: 7/16/2025 Time: 18:44 User: phaley Style Table: Langan.stb Layout: LL-100 Document Code: 200168301-0503-LL101-0101

LANGAN 125 Project No. 200168301

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
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(10) WORKING DAYS IN DESIGN STAGE
--- STOP & CALL ---

Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER: 20251501191
20251501192

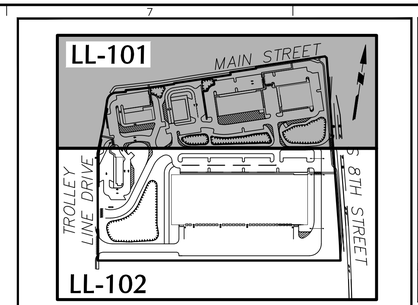
PHOTOMETRIC LIGHTING TEMPLATE:



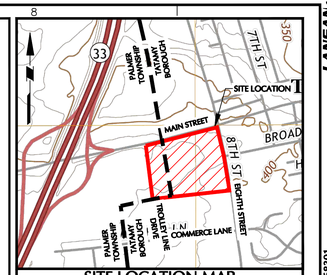
NOTE: THE PHOTOMETRIC TEMPLATE REPRESENTS LIGHT THROW FOR EACH INDIVIDUAL FIXTURE, IT DOES NOT REPRESENT LIGHT COMING FROM OTHER SOURCES.

NOTE(S):

1. REFER TO SHEET LL-100 FOR MASTER LIGHTING PLAN, LIGHTING SCHEDULE AND COMPLIANCE CHART, AND LL-501 FOR LIGHTING NOTES AND DETAILS.
2. CONTRACTOR SHALL INSPECT ALL ASPECTS OF EXISTING LIGHTS AND POLES TO BE RESET OR RELOCATED ON SITE. PRIOR TO REMOVAL, CONTRACTOR SHALL CONFIRM MATERIALS ARE SUITABLE FOR SUCH ACTIVITIES AND IDENTIFY, IN WRITING, PRIOR TO DISTURBANCE OF ANY DEFECTS OR CONCERNS WHICH MAY NEGATIVELY IMPACT THE OPERATION OR STRUCTURAL STABILITY OF THESE ITEMS. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN CONDITION OF LIGHT POLES AND FIXTURES FROM THE TIME THEY ARE REMOVED UNTIL THEY ARE REINSTALLED.



KEY MAP 1"=300'



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'



MATCHLINE SEE SHEET LL-102

40 0 10 25 40
SCALE: 1 INCH = 40 FEET

No.	Description	Date
	Revisions	

STEVEN M. LAUDATI
N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00092900

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NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY LIGHTING PLAN

Project No. 200168301
Date 7/17/2025
Drawn By SW
Checked By RP

Drawing No. LL-101
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Date: 7/16/2025 Time: 18:47 User: phaley Style Table: Langan.stb Layout: LL-101 Document Code: 200168301-0503-LL101-0102

LANEAN-126
Project No. 200168301

ACT 287 AS AMENDED

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 287 AS AMENDED TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

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Pennsylvania One Call System, Inc.
1-800-242-1776

SERIAL NUMBER: 20251501191
20251501192

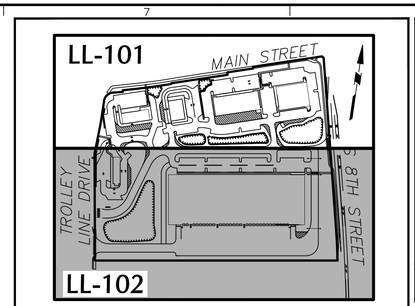
PHOTOMETRIC LIGHTING TEMPLATE:



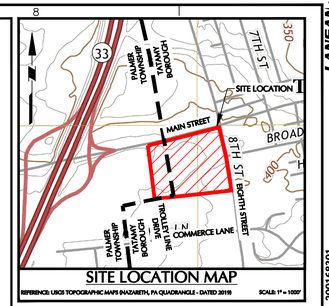
NOTE: THE PHOTOMETRIC TEMPLATE REPRESENTS LIGHT THROW FOR EACH INDIVIDUAL FIXTURE. IT DOES NOT REPRESENT LIGHT COMING FROM OTHER SOURCES.

NOTE(S):

1. REFER TO SHEET LL-100 FOR MASTER LIGHTING PLAN, LIGHTING SCHEDULE AND COMPLIANCE CHART, AND LL-501 FOR LIGHTING NOTES AND DETAILS.
2. CONTRACTOR SHALL INSPECT ALL ASPECTS OF EXISTING LIGHTS AND POLES TO BE RESET OR RELOCATED ON SITE. PRIOR TO REMOVAL, CONTRACTOR SHALL CONFIRM MATERIALS ARE SUITABLE FOR SUCH ACTIVITIES AND IDENTIFY, IN WRITING, PRIOR TO DISTURBANCE OF ANY DEFECTS OR CONCERNS WHICH MAY NEGATIVELY IMPACT THE OPERATION OR STRUCTURAL STABILITY OF THESE ITEMS. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN CONDITION OF LIGHT POLES AND FIXTURES FROM THE TIME THEY ARE REMOVED UNTIL THEY ARE REINSTALLED.



KEY MAP 1"=300'



SITE LOCATION MAP

REFERENCE: USGS TOPOGRAPHIC MAPS (NAZARETH, PA QUADRANGLE - DATED 2019) SCALE: 1" = 1000'

MATCHLINE SEE SHEET LL-101

MATCHLINE SEE SHEET LL-101

MSC

NEB

POST MOUNTED FIXTURE, TYP.

EXISTING LIGHT FIXTURE AND FOUNDATIONS TO BE REMOVED. EXISTING FIXTURE AND POLE TO BE RELOCATED. REFER TO NOTES THIS SHEET.

BUILDING 6
FFE: 388.60

0.5 FOOTCANDLE, TYP.
1.0 FOOTCANDLE, TYP.

TROLLEY LINE DRIVE (LOCAL ROAD)

EXISTING LIGHT FIXTURE AND FOUNDATIONS TO BE RESET TO MATCH NEW GRADE, AS NEEDED

STREET LIGHT FIXTURE, TYP.

EXISTING LIGHT FIXTURE AND FOUNDATIONS TO BE REMOVED. EXISTING FIXTURE AND POLE TO BE RELOCATED. REFER TO NOTES THIS SHEET.

1.0 FOOTCANDLE, TYP.
0.5 FOOTCANDLE, TYP.

FINAL LOCATION OF WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL PLANS

BUILDING 1
FFE: 392.30
DOCK:390.35

FINAL LOCATION OF WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL PLANS

0.5 FOOTCANDLE, TYP.
1.0 FOOTCANDLE, TYP.

POST MOUNTED FIXTURE, TYP.

S. EIGHTH STREET (MAJOR COLLECTOR)

MC

LI

NEB

MIS

40 0 10 25 40
SCALE: 1 INCH = 40 FEET

Date	Description	No.
Revisions		

STEVEN M. LAUDATI
N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00092900

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Project
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PALMER TOWNSHIP AND EASTON BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY LIGHTING PLAN

Project No.	200168301
Date	7/17/2025
Drawn By	SW
Checked By	RP

Drawing No. LL-102

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LANGAN 127

Project No. 200168301

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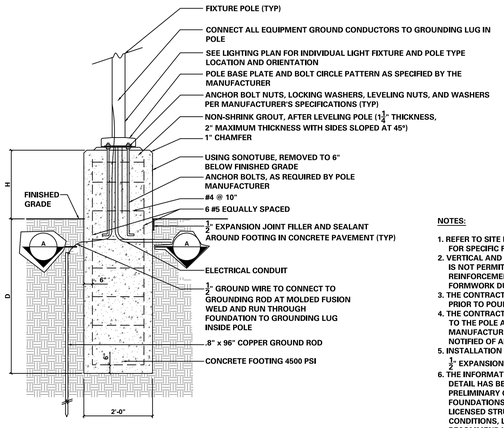
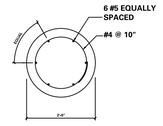
LIGHTING NOTES:

1. POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES SHOWN ON THE PLANS ARE NOT AN INDICATION OF THE INITIAL LIGHT INTENSITIES OF THE LAMPS. THESE VALUES ARE AN APPROXIMATION OF THE MAINTAINED INTENSITIES DELIVERED TO THE GROUND PLANE USING INDUSTRY ACCEPTABLE LIGHT LOSS FACTORS (LLF) WHICH COVER LAMP DEGRADATION AND NATURAL BUILDUP ON THE FIXTURE LENS. THE LIGHTING PLAN IS DESIGNED WITH AN INDUSTRY ACCEPTABLE LLF TO ENSURE ADEQUATE LIGHT INTENSITIES OVER YEARS OF USE AND WEAR. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. THEREFORE, AS-BUILT LIGHT INTENSITIES MAY VARY, IN EITHER DIRECTION, FROM WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS.
2. PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE.
3. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.
4. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.
5. AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.
6. CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MEP, ARCHITECT, AND/OR OWNER.
7. INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.
8. POINT SPACING ON PLACE OF CALCULATION IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM. POINT BY POINT CALCULATIONS ARE BASED ON A 0.90 MAINTENANCE FACTOR.
9. POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES REPRESENTED ON THE PLANS PRESENT AN APPROXIMATION OF THE MAINTAINED LIGHT LEVELS DELIVERED TO THE GROUND PLANE. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, LAMP DEGRADATION, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. GIVEN THIS, AS-BUILT VALUES MAY VARY, GREATER THAN OR LESS THAN, WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS
10. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.
11. SITE ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
12. SITE ELECTRICAL CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO INSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.
13. SITE ELECTRICAL CONTRACTOR SHALL CONFIRM THAT LIGHT FIXTURES MATCH SPECIFICATIONS ON THE PLANS.
14. REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.
15. SITE ELECTRICAL CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.
16. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.
17. ELECTRICIAN AND INSTALLATION OF WALL MOUNTED FIXTURES SHALL BE COORDINATED WITH THE ARCHITECTURAL, STRUCTURAL, AND SITE DRAWINGS FOR SAFETY AND TO PROVEN EXPOSED WIRING.
18. LIGHTING SUBSTITUTION REQUIREMENTS:
    ALL LIGHTING SUBSTITUTIONS MUST BE MADE WITHIN 14 DAYS PRIOR TO THE BID DATE TO PROVIDE AMPLE TIME FOR REVIEW AND TO ISSUE AN ADDENDUM INCORPORATING THE SUBSTITUTION WITH THE FOLLOWING REQUIREMENTS:
    A. ANY SUBSTITUTION TO LIGHTING FIXTURES, POLES, ETC. MUST BE APPROVED BY THE OWNER, ENGINEER AND TENANTS. ANY COST ASSOCIATED WITH REVIEW AND/OR APPROVAL OF THE SUBSTITUTIONS SHALL BE ENTIRELY BORNE BY THE CONTRACTOR
    B. COMPUTER PREPARED PHOTOMETRIC LAYOUT OF THE PROPOSED LIGHTED AREA WHICH INDICATES, BY ISOFOOTCANDLE, THE SYSTEM'S PERFORMANCE.
    C. A PHOTOMETRIC REPORT FROM A NATIONAL INDEPENDENT TESTING LABORATORY WITH REPORT NUMBER, DATE, FIXTURE CATALOG NUMBER, LUMINAIRE AND LAMP SPECIFICATIONS; IES CALCULATIONS, CANDLEPOWER TABULATIONS, ZONE LUMEN SUMMARY, ISOLUX PLOT, AND CATALOGUE CUTS. CATALOGUE CUTS MUST IDENTIFY, BUT NOT LIMITED TO, OPTICS, LAMP TYPE, DISTRIBUTION TYPE, REFLECTOR, LENS, BALLASTS, WATTAGE, VOLTAGE, FINISH AND HOUSING DESCRIPTION.
    D. POLE MANUFACTURER AASHTO CALCULATIONS INDICATING THE POLE AND ANCHOR BOLTS BEING SUBMITTED ARE CAPABLE OF SUPPORTING THE POLE AND FIXTURE SYSTEMS BEING UTILIZED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
    E. THE UNDERWRITERS LABORATORY LISTING AND FILE NUMBER FOR THE SPECIFIC FIXTURE(S) TO BE UTILIZED.
    F. A COLOR PHOTOGRAPH THAT CLEARLY SHOWS THE REPLACEMENT FIXTURE POLE MOUNTED, THE FIXTURE'S COLOR, FINISH, AND PHYSICAL CHARACTERISTICS.





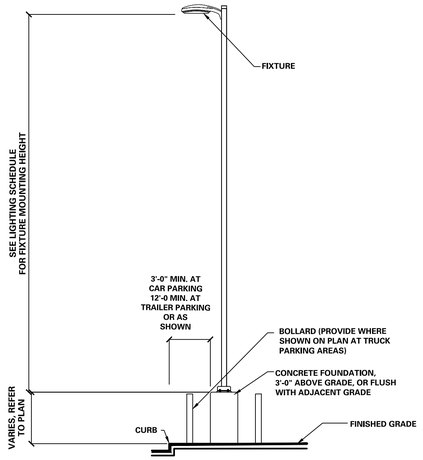
SECTION A-A

NOTES:

1. REFER TO SITE LIGHTING PLANS AND SITE LIGHTING SCHEDULE FOR SPECIFIC FOUNDATION LOCATIONS.
2. VERTICAL AND HORIZONTAL BARS SHALL BE FIELD TIED. WELDING IS NOT PERMITTED. THE CONTRACTOR SHALL SUPPORT REINFORCEMENT IN ITS PROPER LOCATION FROM THE FORMWORK DURING CONCRETE OPERATION.
3. THE CONTRACTOR SHALL REMOVE WATER PRESENT IN HOLE PRIOR TO POURING CONCRETE.
4. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PERTAINING TO THE POLE AND FIXTURE INSTALLATION WITH THE MANUFACTURER, THE ENGINEER AND/OR OWNER TO BE NOTIFIED OF ANY DISCREPANCIES.
5. INSTALLATION OF POLE FOOTING IN CONCRETE PAVING REQUIRES ½" EXPANSION JOINT FILLER SEALED WITH JOINT SEALANT.
6. THE INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAILED BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURERS RECOMMENDATIONS.
7. PRIOR TO ORDERING OR FORMING FOUNDATIONS, CONTRACTOR SHALL CONFIRM BOLT TEMPLATE WITH MANUFACTURER.

MOUNTING HEIGHT	FOOTING DEPTH "D"	FOOTING DIAMETER	EXPOSED HEIGHT "H"	VERTICAL REINFORCEMENT
20'	6'-6"	2'-0"	3'-0"	6 #5 BARS
21'	6'-6"	2'-0"	FLUSH	6 #5 BARS

1 LIGHT POLE FOUNDATION DETAIL — SCALE: N.T.S.



SECTION

2 LIGHT POLE DETAIL — SCALE: N.T.S.



D-Series Size 2
LED Area Luminaire

Catalog Number
Notes
Type

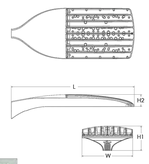
Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.
The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of up to 80% vs. 1000W HID and expected service life of over 100,000 hours.

Specifications

EPA:	1.06 ft² (0.10 m²)
Length:	40.59" (103.1 cm)
Width:	16.76" (42.6 cm)
Height H1:	8.11" (20.6 cm)
Height H2:	3.96" (10.1 cm)
Weight:	46 lbs (20.9 kg)



Design Select options indicated by this color background.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

Ordering Information

EXAMPLE: DSX2 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX2 LED

Series	LEDs	Color temperature	Color Rendering Index	Distribution	Voltage	Mounting
DSX2 LED	**Forward optics**: P1 P5, P2 P6, P3 P7, P4 P8; **Rotated optics**: P10[1] P13[1], P11[1] P14[1], P12[1]	(this section 70CRI only): 30K 3000K, 40K 4000K, 50K 5000K; 27K 2700K, 30K 3000K, 35K 3500K, 40K 4000K, 50K 5000K	70CRI; 80CRI, 80CRI, 80CRI, 80CRI, 80CRI	AFR Automotive front row; T1S Type I short; T2M Type II medium; T3M Type III medium; T3LG Type III low glare[2]; T4M Type IV medium; T4LG Type IV low glare[2]; T5FTM Forward throw medium; T5M Type V medium; T5LG Type V low glare; T5W Type V wide; BLC3 Type III backlight control[3]; BLC4 Type IV backlight control[3]; LCCO Left corner cutoff[3]; RCCO Right corner cutoff[3]	MVOLT (120V-277V)[4,5]; HVOLT (347V-480V)[5,6]; XVOLT (277V - 480V)[5,6]; 120 [4,26]; 208 [4,26]; 240 [4,26]; 277 [4,26]; 347 [4,26]; 480 [4,26]	**Shipped included**: SPA Square pole mounting (4ft drilling), RPA Round pole mounting (4ft drilling), SPA5 Square pole mounting #5 drilling[4], RPA5 Round pole mounting #5 drilling[4], SPA8N Square narrow pole mounting #8 drilling; WBA Wall bracket [4]; MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options		Other options		Finish (required)	
Shipped installed: NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8–40' mounting height, ambient sensor enabled at 25fc [7,8,26]; PIR High/low, motion/ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc [7,8,26]; PER NEMA twist-lock receptacle only (controls ordered separate) [9]; PERS Five-pin receptacle only (controls ordered separate) [9,27]	PER7 Seven-pin receptacle only (controls ordered separate) [9,10]; FAO Field adjustable output [11,27]; BL30 Bi-level switched dimming, 30% [9,27]; BL50 Bi-level switched dimming, 50% [9,27]; DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately) [9]; DS Dual switching [9,10,27]	**Shipped installed**: SPD20KV 20KV surge protection; HS Houseside shield (black finish standard) [12]; L90 Left rotated optics [1]; R90 Right rotated optics [1]; CCE Coastal Construction [23]; HA 50°C ambient operation [28]; BAA Buy America(n) Act and/or Build America Buy America Qualified; SF Single fuse (120, 277, 347V) [4]; DF Double fuse (208, 240, 480V) [4]; 3G Vibration rated for 3G [29]	**Shipped separately**: EGSR External Glare Shield (reversible, field install required, matches housing finish); BSDB Bird Spikes (field install required)	DDBXD Dark Bronze; DBLXD Black; DNAXD Natural Aluminum; DWHXD White; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white	

LITHONIA LIGHTING
COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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DSX2-LED
Rev. 04/29/25
Page 1 of 10

3 LIGHT FIXTURE CUTSHEET — SCALE: N.T.S.

LITHONIA LIGHTING

FEATURES & SPECIFICATIONS

INTENDED USE — **These specifications are for USA standards only.** Round Straight Aluminum is a general purpose light pole for up to 30-foot mounting heights. This pole provides a lighter and naturally corrosion-resistant option for mounting area light fixtures and floodlights.

CONSTRUCTION —

Pole Shaft: The pole shaft is of uniform wall thickness and is one-piece extruded 6063 aluminum alloy with T6 temper. The shaft is uniform in cross-section down length of pole with no taper. Available shaft diameters are 4", 4.5" 5", and 6".

Pole Top: Options include 4" tall tenon top, drilled for side mount fixture, tenon with drilling (includes extra handhole) and open top. A removable cast aluminum top cap with set screws is provided for all poles that will receive drilling patterns for side-mount luminaire arm assemblies or when ordered with open top (PT) option. The top cap resists intrusion of moisture and environmental contaminants.

Handhole: A non-reinforced handhole with grounding provision is provided near the base. Standard positioning varies with shaft width as follows: 4", 4.5", and 5" shaft, handhole at 12"; 6" shaft, handhole at 18". Positioning the handhole lower than standard may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. All handholes for a pole specified with openings for 4" through 6" shaft width has nominal dimension of 2" x 4" with surface mount overlap design. Standard and extra handholes come with cover and attachment hardware.

Bolt Caps/Base Cover: Pole base plate utilizes cast aluminum A365 bolt caps to cover anchor bolt and nut assembly. 1 piece, spun aluminum base cover available as an option.

Anchor Base/Bolts: Anchor base is cast from A356 alloy aluminum and is heat treated to a T6 temper after welding. Anchor bolts are manufactured to ASTM F1554 Standards Grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Upper portion of anchor bolt is galvanized per ASTM A-153; bolts have an "L" bend on bottom end and are galvanized a minimum of 12" on the threaded end. Each hot-dipped galvanized anchor bolt is furnished with two hex nuts and two flat washers.

HARDWARE — All structural and non-structural fasteners are stainless-steel.

FINISH — Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets 5A and 5B classifications of ASTM D3359. Standard powder-coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Other finishes include Brushed Aluminum, and Anodized Dark Bronze, Anodized Natural Aluminum and Anodized Black. Architectural Colors and Special Finishes are available by quote and include, but are not limited to RAL Colors, Custom Colors and Extended Warranty Finishes. Factory-applied primer paint finish is available for customer field-paint applications.

GROUNDING — Grounding provision is located in handhole near the base. Grounding hardware is not included (provided by others).

INSTALLATION — **Do not** erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for the foundation design.

WARRANTY — 1-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

Catalog Number
Notes
Type

Anchor Base Poles

RSA

ROUND STRAIGHT ALUMINUM

OUTDOOR — POLE-RSA

4 LIGHT POLE CUTSHEET — SCALE: N.T.S.

architectural area lighting

FGS
DECORATIVE & POST TOP

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

ORDERING GUIDE

CATALOG # _____ **Example:** FGS-RB-Y3-36LED-4K-450-BLS-SCP-TRA1M

HOUSING

FGS Luminaire	Decorative Style	Globe Style	Optical System	Color Temperature	Driver	Color
FGS Federal Globe (Small scale housing - LED) Slips over a 4"/100mm O.D. pole	RB 90-Fitter Design; LF Leaf Fitter Design	Standard Acorn Globe; SAL One-piece globe	Y2-36LED Type II; Y3-36LED Type III; Y4-36LED Type IV; Y5-36LED Type V	3K Warm White, 3000K, 70 CRI; 4K Neutral White, 4000K, 70 CRI; 5K Bright White, 5000K, 70 CRI	450 450mA drive current, 53 watts	**Color**: BLS Black Gloss Smooth; BLT Black Matte Textured; DBS Dark Bronze Gloss Smooth; DBT Dark Bronze Matte Textured; GTT Graphite Matte Textured; LGS Light Grey Gloss Smooth; LGT Light Grey Matte Textured; PSS Platinum Silver Gloss Smooth; VGT Verde Green Matte Textured; WHS White Gloss Smooth; WHT White Matte Textured. **Color Option**: CC[1] Custom Color

Options	Mounting (Optional)
FS1 Single fuse holder, fuse by others	**Pole Mount** Bolts to the side of a 4"/100mm DIA. or 5"/125mm DIA. pole
FS2 Double fuse holder, fuse by others	TRA1M TRA1M
TA3 Tenon adaptor slips over a 3"/75 mm O.D. by 4"/100 mm tenon	TRA1L TRA1L
AD5 Adaptor to slip over a 5"/125mm O.D. pole and is 4"/100mm long. Secures to the pole with four stainless steel set screws	TRA5U TRA5U
	TRA6U TRA6U
	TRA5S TRA5S
TA23 Tenon adaptor, slips over a 2 3/8" O.D. by 4"/100mm tenon	TRA56 TRA56 (4" only)
ALF Cast filigree basket	TRA57 TRA57
PHC Integral button type photo control sensor. Specify line voltage 120/277V)	**Wall Mount**
347 347VAC input	WMA1M WMA1M
480 480VAC input	WMA1L WMA1L
SCP Sensor Control Programmable pole accessory is available to provide occupancy detection for outdoor applications meeting California Title 24	WMA3 WMA3
	WMA35U WMA35U
	WMA36U WMA36U
	WMA55 WMA55
	WMA56 WMA56
	WMA57 WMA57

Federal Globe™



Federal Globe Small

Notes:
1 Consult factory for custom color, marine and corrosive finish options

Current

currentlighting.com/aal

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Page 2 of 3
Rev. 11/12/24
aal_fgs_led_spec_RO2

5 STREET LIGHT CUTSHEET — SCALE: N.T.S.

REFER TO SHEET LL-100 FOR MASTER LIGHTING PLAN, LIGHTING SCHEDULE AND COMPLIANCE CHART AND LL-101AND LL-102 FOR LIGHTING PLANS

Date	Description	No.
Revisions		

STEVEN M. LAUDATI
N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00092900

LANGAN
Langan Engineering and Environmental Services, Inc.
Stone Manor Corporate Center, 2700 Kelly Road, Suite 200
Warrington, PA 18976
T: 215.491.6500 F: 215.491.6501 www.langan.com

Project
CHRIN SOUTHEAST QUADRANT - LOT 2
PALMER TOWNSHIP AND TATAMY BOROUGH
NORTHAMPTON COUNTY PENNSYLVANIA

Drawing Title
PRELIMINARY LIGHTING NOTES AND DETAILS

Project No. 200168301
Date 7/17/2025
Drawn By
Checked By

Drawing No. LL-501
Sheet 52 of 52

LANGAN
Project No. 200168301

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Preliminary/Final Land Development Plan: Werner Expansion (2215 Newlins Mill Road)

INFORMATION

The Applicant is requesting recommendation of a Preliminary/Final Land Development Plan and Lot Line Adjustment for a parking lot expansion for the existing trucking terminal facility on Newlins Mill Road.

ATTACHMENTS:

Staff Report
Township Engineer Review
Township Landscape and Lighting Review
Township Geotechnical Review
Planning Department Review
Fire Department Review
Police Department Review
Public Works Department Review
Codes and Zoning Department Review
Public Services Department Review
Stormwater and MS4 Department Review
LVPC Review
LANTA Review
LD Plan Set
Revised Landscape & Lighting Plan

TOWNSHIP OF PALMER

NORTHAMPTON COUNTY, PENNSYLVANIA

3 Weller Place, Palmer Township, PA 18045

Staff Report

To:	Palmer Township Planning Commission
From:	Craig Beavers, Director of Planning
Date:	August 8, 2025
Subject:	Werner Enterprises Expansion (2215 Newlins Mill Road) Plan Set Dated June 24, 2025 SALD-2024-001 **Preliminary/Final Land Development / LLA Review – Third Submission**
Copy To:	Board of Supervisors, R. Williams, B. DeGerolamo, W. Oetinger, Esq., J. Coyle, D. Wilusz

LOCATION AND INTENT

Werner Enterprises, Inc. seeks recommendation for approval of a Preliminary/Final Land Development Plan and Lot Line Adjustment Plan for an expansion of an existing tractor-trailer training/maintenance facility. The plan proposes the consolidation of lots K8 5 9 and K8 5 2 into one new parcel. Additionally, the plan proposes the creation of 107 trailer spaces and 38 tractor spaces. The property is served by public water and public sewer and is zoned IOC Industrial/Office Commercial. Werner Enterprises Inc. is the equitable owner and applicant.

The property is 49.18 acres and contains areas of slopes under 15%. There are no floodplains or wetlands present on the property. It is currently an unused field with no existing structures. To the north is the Palmer Industrial Park. To the east is Raub Farms. To the south is the construction site of First Park 33. To the west is Coherent Industries.

PREVIOUS TOWNSHIP CONSIDERATION

1. On August 8, 2023, the Planning Commission reviewed a sketch plan for this project. Planning Commission and Staff provided the following comments:
    a. Proper vehicle parking to prevent stacking will be required
    b. Landscaping and berms will need to be provided
    c. All outstanding deferrals will need to be addressed with development plan submission
    d. Lighting control to prevent glare will need to be addressed
    e. All previous Conditional Use approval conditions will need to be complied with
2. On October 24, 2017, the Board of Supervisors granted Conditional Use Approval, subject to the following conditions:

a. The Applicant must comply with all comments of the Township Engineer's letters.

b. Newlins Mill Road shall be rehabilitated using either full-depth reclamation or reconstruction.

c. The area of Newlins Mill Road east of the proposed eastern Werner driveway shall not be improved as a part of this Project. We anticipate that this length of pavement would be improved in conjunction with the future development of the Werner corner parcel, and/or the vacant parcel along the south side of Newlins Mill Road.

d. The Werner traffic study projects minimal impacts at the Tatamy Road/ Newlins Mill Road intersection. As the current Werner proposal creates a separate 11.5 acre± lot at the corner, any future improvements (including signalization) shall be tied to the development of that parcel as well as the remaining three vacant corners.

e. Frontage improvements (road widening, curb, sidewalk, street trees) along the remaining Werner frontages on Newlins Mill Road and Tatamy Road will be deferred until further adjacent development occurs.

f. Werner shall make a cash contribution in the amount of $16,400.00 Dollars to be applied to the future traffic signal at the Van Buren Road / Hollo Road intersection commensurate with its traffic volumes compared to overall traffic volumes at the intersection.

g. No future Tatamy Road driveway access for ingress and egress purposes shall be permitted for this use.

h. Any further expansion of the buildings or use on this Property shall require further approval by the Palmer Township Board of Supervisors as a conditional use.

3. Additionally, they received approval on August 28, 2018 from the Board of Supervisors for the preliminary/final land development with the following deferrals:

a. SALDO §165-69 - construction of a sidewalk along the road frontage subject to the Lot 1 frontage sidewalk being installed within the road right of way

b. SALDO §165-75 - construction of curbing on Tatamy Road

c. SALDO §165-73.A(1) - installation of street trees for both street frontages for Lot 2

d. SALDO §165-59.K(1) - requiring Tatamy Road for Lot 1 and both street frontages for Lot 2 to be improved to Township standards

REVIEWING AGENCY COMMENTS

A. **Township Engineer –** The comments of the Township Engineer are contained in Mr. Justin Coyle's review dated August 5, 2025. **The Township Engineer has outstanding comments relating to zoning, stormwater management, and traffic. These comments will need to be addressed prior to Preliminary/Final Plan approval.**

B. **Township Geotechnical Consultant –** The comments from the Township Geotechnical Consultant are contained in Mr. Shawn Casey's review dated August 7, 2025. **The Township Geotechnical Consultant has outstanding comments relating to the hydrogeologic report, stormwater report, and cross sections. These comments will need to be addressed prior to Preliminary/Final Plan approval.**

C. **Township Landscape and Lighting Consultant –**The comments from the Township Landscape and Lighting Consultant are contained in Mr. Chris Green's review dated July 31, 2025. **The Township Landscape and Lighting Consultant has outstanding comments relating to landscaping and lighting. These comments will need to be addressed prior to Preliminary/Final Plan approval.**

D. **Planning Department** – The comments from the Planning Department are contained in Mr. Craig Beavers' review dated August 6, 2025. **The Planning Department has outstanding comments relating to ordinance compliance, waiver requests, parks and recreation, shade trees, public works and utilities, pedestrian and bicycle accommodations, legal comments, and comprehensive plan consistency. These comments will need to be addressed prior to Preliminary/Final Plan approval.**

E. **Public Works Department –** The comments from the Public Works Department are contained in Mr. Scott Kistler's review dated July 10, 2025. **The Public Works Department has no comments for the project at this time.**

F. **Fire Department –** The comments of the Fire Department are contained in Commissioner Stephen Gallagher's review dated August 5, 2025. **The Fire Commissioner has no comments for the project at this time.**

G. **Police Department –** The comments of the Police Department are contained in Chief Wayne Smith's review dated July 21, 2025. **The Police Department has no comments for the project at this time.**

H. **Codes and Zoning Department –** The comments from the Codes and Zoning Department are contained in Mr. James Raudenbush's review dated August 5, 2025. **The Codes and Zoning Department has outstanding comments relating to zoning compliance. These comments will need to be addressed prior to Preliminary/Final Plan approval.**

I. **Public Services Department –** The comments from the Public Services Department are contained in Mr. Phillip Godbout's review dated August 5, 2025. **The Public Services Department has no comments for the project at this time.**

J. **Stormwater and MS4 Department –** The comments from the Stormwater and MS4 Department are contained in Mr. Matthew Gunther's review dated August 7, 2025. **The Stormwater and MS4 Department has outstanding comments relating to stormwater design. These comments will need to be addressed prior to Preliminary/Final Plan approval.**

K. **Shade Tree Commission –** The Shade Tree Commission has not reviewed the application at the time of writing. Their next meeting is scheduled for August 7th.

L. **Parks and Recreation Advisory Board –** The Parks and Recreation Advisory Board reviewed the application at their September 18, 2024 meeting. **Per §165-62 of the SALDO, they recommend the payment of fees-in-lieu of open space dedication.**

M. **Lehigh Valley Planning Commission** – The comments from the Lehigh Valley Planning Commission are contained in Mr. Joseph Dotta, Mr. Geoggrey Reese, and Mr. Denjam Khadka's review dated August 16, 2024. **The Act 167 Drainage Plan is not approved at this time.**

N. **Lehigh and Northampton Transportation Authority (LANTA) –** The comments of LANTA are contained in Ms. Molly Wood's review dated July 31, 2024. Her comments pertain to pedestrian access from the roadway to the facility. **LANTA has no other comments for the project at this time.**

O. **Northampton County Conservation District (NCCD) –** The comments of the NCCD are contained in Mr. Jonathan Fox's review dated April 28, 2025. **There are several outstanding comments relating to the submission of their ESCP Application and Individual NPDES permit.**

P. **Pennsylvania Department of Environmental Protection –** The comments from the Department of Environmental Protection have not been received at the time of this writing.

Q. **Pennsylvania Department of Transportation –** The comments from the Department of Transportation have not been received at the time of this writing.

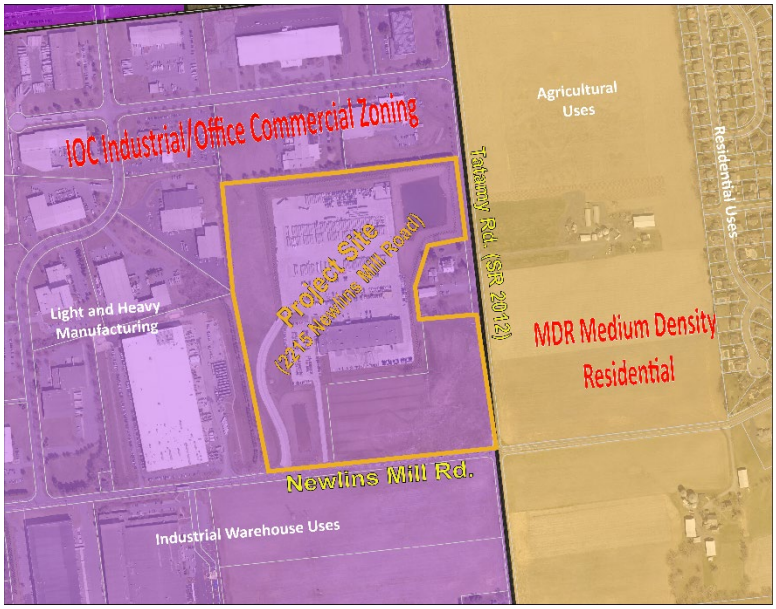
STAFF ANALYSIS

Based on an analysis of the submitted material, the Staff provides the following general comments:

Zoning and Land Use

1. The project site is in the North End, at the intersection of Tatamy Road and Newlins Mill Road.
2. Lands on the north, west, and south of the site are industrial uses in an area zoned for that use. Lands on the east of the project site are zoned MDR Medium Density Residential, providing for more dense residential developments than in lower density neighborhoods (Figure 1).

Figure 1: Vicinity map showing project site, abutting land uses, zoning and adjacent streets.



3. The project site is utilized as the existing Werner Enterprises trucking terminal and driver training center, as well as vacant land near the roadway.
4. The proposed use is a permitted use in this zoning district; however, previous Conditional Use approval for the site required any future expansion of buildings or use to undergo further Conditional Use approval.
5. The project site is in the AHO Airport Hazard Overlay, which restricts the maximum height of structure on the site to prevent interference with the nearby Braden Airpark.

Comprehensive Plan Consistency

1. The 2018 Comprehensive Plan envisions the tract within a Non-Residential Land Use Type, serving as an area for commercial and/or industrial use within the community. The proposed trucking terminal expansion is located in the IOC Industrial/Office Commercial Zoning District.
2. The purpose of the IOC District is to provide sufficient space in appropriate locations to meet current and anticipated future regional needs for industrial and large-site commercial development appropriate to the community; to encourage industrial and commercial development that will benefit the community and the region, both economically and aesthetically; and to permit investment in a development that will provide for the location of several plants and/or planned commercial establishments to ensure safe and efficient access to public streets.
3. The 2018 Comprehensive Plan encourages appropriate streetscaping along industrial corridors to increase vibrancy of major corridors, and it additionally recommends the expansion of the Township's pedestrian and bicycle infrastructure for all new developments
4. The proposed trucking terminal expansion is consistent with the following Comprehensive Plan goals:
    a. *B.1: Safeguard the community's established, business-friendly atmosphere.*
    a. *C.2: Support integrated, safe bicycle/trail networks to support recreation and connectivity of community assets and neighborhoods.*
5. The proposed trucking terminal expansion is either nonapplicable or negligible to the other goals.

Site Plan

1. Staff notes that there are minor typos and omissions in the provided plan set. The Applicant should double-check that all ordinance references match the 2023 Zoning Ordinance.
2. The Applicant indicates that landscaping within the proposed parking lot for the trucking terminal would not work well with the intended traffic. While staff does not disagree, the Planning Commission should determine if the proposed alternative placement in the passenger vehicle parking lot satisfies this requirement. If not, the Applicant will be required to obtain a variance from the Zoning Hearing Board
3. Staff commend the applicant's intention to install a 10' wide multi-use path with a vegetative tree buffer. This enhanced users' experience and safety, as well as providing a visually attractive streetscape.
    a. To enhance this action, we suggest the installation of decorative, pedestrian-scale lamps matching the same aesthetic of streetlights existing along Main Street and Van Buren Road.

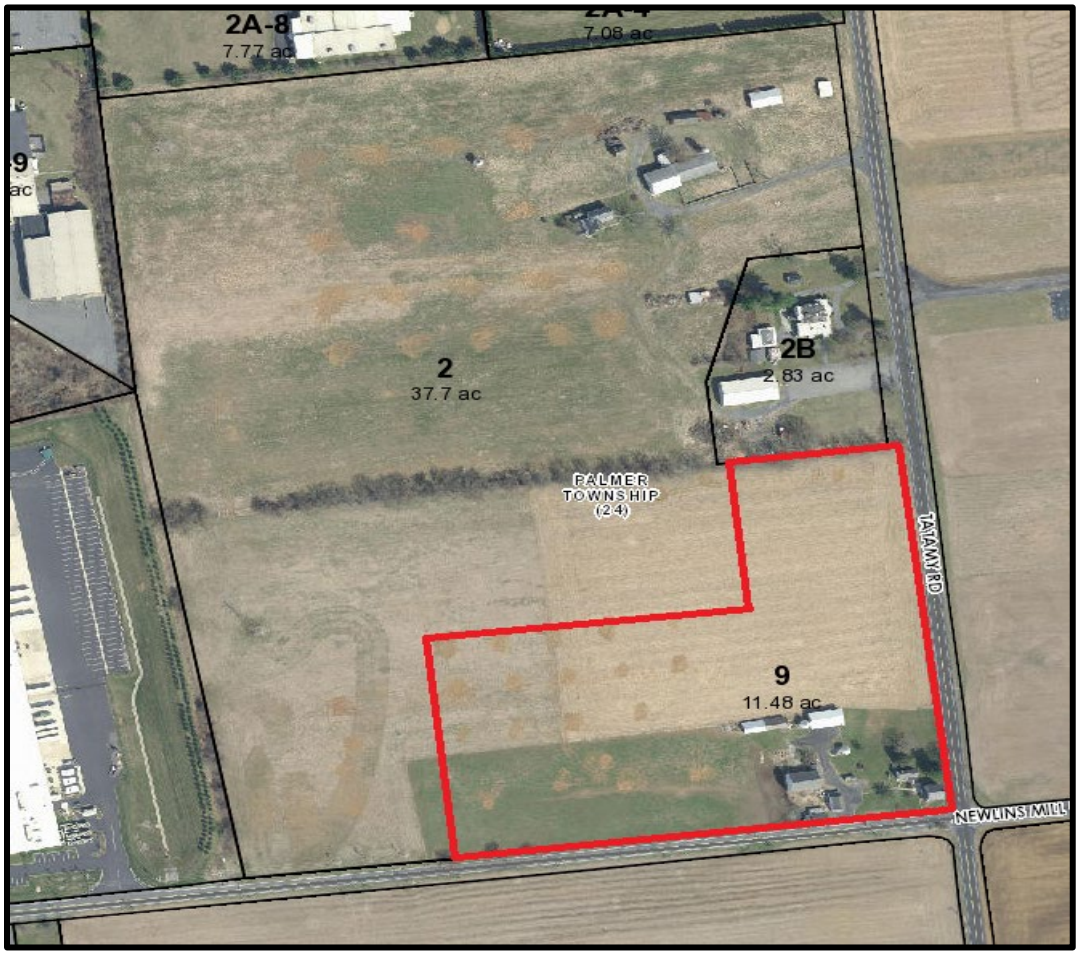
Stormwater Management

1. Staff notes that both the Township Engineer and Township Geotechnical Consultant report several outstanding items relating to the proposed stormwater management design. As this proposed expansion consists primarily of impervious surfaces and stormwater facilities, all items shall be adequately addressed before preliminary plan approval can be given.

PLANNING DEPARTMENT RECOMMENDATION

The Department recommends that the Planning Commission votes to table the application to allow the Applicant time to revise their plans to address outstanding comments.

Planning Commission deadline date to act on the plan:	**None (Waiver Granted)**
Board of Supervisors deadline date to act on the plan:	**None (Waiver Granted)**



Location Site

Werner Expansion (2215 Newlins Mill Road)

K8-5-2-0324

Industrial/Office/Commercial (IOC)

August 5, 2025 ***SENT VIA EMAIL***

Craig S. Beavers, Director of Planning
Palmer Township
3 Weller Place
Palmer, PA 18045

Subject: Preliminary Land Development Plan and Minor Plan Application – 3rd Review
2215 Newlins Mill Road – Trailer Parking Expansion, Werner Enterprises, Inc.
Parcels #K8-5-2 0324 & K8-5-9 0324

Dear Mr. Beavers:

Carroll Engineering Corporation is in receipt of revised documents supporting the subject Land Development and Lot Consolidation plan application. These properties were subject to a Sketch Plan Application before the Planning Commission at the regular August 8, 2023, Public Meeting. Pursuant to your request, we have reviewed the application documents against the Palmer Township Zoning Ordinance (ZO) Chapter 190, the Stormwater Management Ordinance (SMO) Chapter 158, and the Subdivision and Land Development Ordinance (SALDO) Chapter 165. We offer the following comments:

PROJECT DESCRIPTION

The subject properties contain a total of 49.18 acres in two (2) separate adjacent parcels and are located at the northwestern corner of the Tatamy Road (SR2017) and Newlins Mill Road intersection (refer to the attached aerial photo). The existing property is presently developed with the Lehigh Valley Training and Maintenance Facility and is bordered by existing Industrial use adjoining its western and northern boundaries and existing Agricultural use adjoining its eastern and southern boundaries. The property is in the Township Industrial/Office/Commercial (IOC) Zoning District.

The Applicant proposes to consolidate the two (2) existing parcels into one (1) lot to expand the existing maintenance and training facility parking lot to add (38) additional tractor spaces and (107) trailer spaces. The intended hours of operation for the facility are as follows:

- Maintenance Facility - 24 hours a day, 7 days a week is possible, depending on need.
- Training Facility - 7 am - 5 pm (M-F); 7 am - 12pm (SAT)

A stormwater management facility is proposed at the southeast corner of the property. The existing development is presently served by public sewer and water. The parking area and the proposed infiltration basin are shown to be buffered by landscape plantings on the south side along Newlins Mill Road and the east side along Tatamy Road (SR2017).

The Applicant is seeking Preliminary and Final Land Development Plan approval from the Township Planning Commission. This is our 3rd review of the Preliminary Application.

SUBMITTED DOCUMENTS

We have reviewed the following revised documents and related information:

1. Application for Erosion and Sediment Pollution Control Plan for Northampton County Conservation District Application, one (1) page, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., signed June 26, 2025.

2. National Pollutant Discharge Elimination System (NPDES) Individual Permit Application, five (5) pages, prepared by Chad Harrington, Sr Director of Facilities & Maintenance, Werner Enterprises, signed February 3, 2025.

3. National Pollutant Discharge Elimination System (NPDES) Individual Permit Application, five (5) pages, prepared by Chad Harrington, Sr Director of Facilities & Maintenance, Werner Enterprises, unsigned.

4. General Information Form (GIF)- Authorization Package, ten (10) pages, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., signed February 20, 2025.

5. Pennsylvania Natural Diversity Inventory (PNDI) Results, five (5) pages, date of review- January 11, 2025, unsigned, undated.

6. Pennsylvania State Historic Preservation Office (PA-SHPO) review letter, two (2) pages, dated February 18, 2025.

7. Intent to Submit letter, five (5) pages, to the Lehigh Valley Planning Commission (LVPC), prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated May 1, 2025.

8. LVPC Notification Response letter, two (2) pages, dated June 13, 2025.

9. One (1) set of Erosion Control Plan, Notes and Details, four (4) plans, sheets 12, 13, 14, and 15 of 21, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated July 16, 2024, last revised June 24, 2025.

10. One (1) set of Stormwater Drainage Plans, three (3) plans, sheets 19, 20, and 21 of 21, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated July 16, 2024, last revised June 24, 2025.

11. One (1) set of Post Construction Stormwater Management Plans, two (2) plans, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated July 16, 2024, last revised June 24, 2025.

12. Discharges of Stormwater Associated with Construction Activities, Erosion and Sediment Control (E&S) Module 1, five (5) pages, prepared by Michael Minervini of Benchmark Civil Engineering Services, Inc., signed June 9, 2025.

13. Discharges of Stormwater Associated with Construction Activities, Erosion and Sediment Control (E&S) Module 2, five (5) pages, prepared by Michael Minervini of Benchmark Civil Engineering Services, Inc., signed June 9, 2025.

14. Post-Construction Stormwater Management and Drainage Calculations Report, fifty-eight (58) pages, prepared by Michael Minervini of Benchmark Civil Engineering Services, Inc., dated July 15, 2024, last revised January 19, 2025.

15. Chapter 102, Pre-Development Site Characterization Spreadsheet, one (1) page, prepared by Paul Scott of GTA Associates, undated.

16. Erosion Potential Analysis for Chapter 102 Permits, one (1) page, prepared by Michael Minervini of Benchmark Civil Engineering Services, Inc., signed June 9, 2025.

17. Northampton County Conservation District (NCCD) Review comment response letter, eight (8) pages, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated June 26, 2025.

18. One (1) set of Preliminary/Final Land Development Plans for Werner Enterprises, Inc., Trailer Parking Expansion, twenty-one (21) sheets, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated July 16, 2024, last revised June 24, 2025.

19. Township Engineer's Review comment response letter, nineteen (19) pages, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated July 8, 2025.

20. Township Lighting and Exterior Site Lighting Review comment response letter, eight (8) pages, prepared by Paul Szewczak, of Benchmark Civil Engineering Services, Inc., dated June 26, 2025.

WAIVERS

The Applicant has requested waivers from the following sections of the Palmer Township Subdivision and Land Development Ordinance (SALDO), via plan notation on the "Notes Sheet", plan sheet 2 of 21:

1. A waiver from requiring driveway aprons. *SALDO§165-64.G.* **-To be revised to section SALDO§165-69.G**

2. A waiver from requiring interior slopes of a detention basin to be graded at 4:1. *SALDO§165-*

63.K(3).

3. A waiver from requiring spillways to be constructed of reinforced concrete, mortared in place rip-rap, or concrete rubble. *SALDO§165-63.K(2)C.*

4. A waiver from requiring the top of storm pipes to be at the same elevation when changing pipe sizes. *SALDO§165-63(N)3.*

5. The Applicant indicates that waivers are to be requested for providing Common Open Space, on the Preliminary Land Development Checklist (PC) (PC F.3., 4., & 5.).

6. The Applicant must submit a SALDO Waiver Application to the Township for any waivers necessary and/or being requested as part of this application.

DEFFERALS

The Applicant has requested deferrals from the following sections of the Palmer Township Subdivision and Land Development Ordinance (SALDO), via plan notation on the "Notes Sheet", plan sheet 2 of 21:

1. A deferral from requiring sidewalks along the Tatamy Road frontage of Lot 1 and Lot 2 and along the Newlins Mill Road frontage. *SALDO§165-69.*

2. A deferral from requiring curbing along the Tatamy Road frontage of Lot 1 and Lot 2 and along the Newlins Mill Road frontage. *SALDO§165-75.*

3. A deferral from requiring street tree to be planted along both street frontages for Lot 2. *SALDO§165-73.A(1).*

4. A deferral from requiring streets to be improved to the Township Street improvement standards along both frontages for Lot 2 and along Tatamy Road for Lot 1. *SALDO§165-59.K(1).*

ZONING REVIEW

1. The proposed Industrial use appears to be permitted use in the current zoning district. Any further expansion of the buildings or use on this property shall require further approval by the Palmer Township Board of Supervisors as a conditional use. *(Ref. Item D.9. in the Palmer Township Approval Decision Letter, dated October 24, 2017).* **-This comment is still outstanding.**

2. The Minimum Landscape Coverage required is 20% of the lot area and only 4.58% was proposed on the original Site Plan sheet dated July 16, 2024. The revised Site Plan now indicates both the proposed and existing landscaped areas to be 46.58% (997,887 square feet) of the property. The current Landscape Plan does not indicate that nearly 50% of the property is landscaped. The Landscaping Plan sheet should be revised to clearly depict the specific proposed and existing landscaped areas on the property to demonstrate compliance with ZO §190-411.F.4. **-The**

Applicant states that all areas of the site, which are not paved are to be landscaped, and the site/zoning data on the Site Plan (Sheet 6 of 21) lists the proposed impervious coverage to be 47.5%. We differ to the Township Landscape and Lighting engineer regarding compliance with any SALDO or Zoning landscaping requirements.

3. The proposed lot consolidation and parking lot expansion does not appear to comply with ZO §190-603.C.3. "No aisle shall exceed 200 feet in length." The applicant's Engineer states that the aisles have been revised, but apparently no changes have been made to the plan sheets. **-This comment has been addressed.**

4. The proposed lot consolidation and parking lot expansion does not appear to comply with ZO §190-603.H.3. "Any lot that would include more than 30 parking spaces shall be required to provide landscaped areas within the paved area. This required landscaped area shall be equal to a minimum of 5% of the total paved area." No landscaping is proposed within the proposed parking lot. **-The Applicant has now proposed landscape islands to be covered in stone. We differ to the Township Landscape and Lighting engineer regarding compliance with any SALDO, or Zoning requirements for landscaped island planting.**

5. An updated Traffic Impact Statement (TIS) must be provided and include both present site traffic patterns and those generated by the proposed land development improvements. ZO §190-980.C.5. A TIS has not been submitted to date and this item remains outstanding. **-This comment has not been addressed. The Township previously requested that the Applicant submit a revised traffic study to reflect the new site operations necessitating an increase in on-site parking. The Applicant's response indicates that the future site operations are not changing from the originally submitted TIS in 2017, and that the expansion is simply to ease on-site over-crowding. (Please see Traffic Review comment below.)**

6. A Pennsylvania Natural Heritage Program study (PNDI Receipt) dated within two (2) years of the submission of an application for conditional use or subdivision and land development, whichever is first, as well as any state agency clearance letters required thereby, shall be provided to the Township. ZO §190-983.D.2.a. This document has not been submitted to date and this item remains outstanding. **-This comment has been addressed.**

7. The Site Lighting Plan should be modified to indicate compliance related to illumination, color temperature, and mounting height of fixtures. ZO §190-983.D.6.d, f., & g. The Site Lighting Plan has been revised to include construction details for a typical area light pole and base. Future revised plans shall include the following:

   a. The required maximum mounting height of 20 feet shall be specified in the Luminaire Schedule. **-This comment has been addressed.**

   b. The required maximum lighting temperature of 3000K shall be specified in the Luminaire Schedule. **-This comment has been addressed.**

   c. Light pole, fixture, and base details shall be provided for the proposed streetlights along

Tatamy Road. **-This comment has been addressed.**

-However, we differ to the Township Landscape and Lighting engineer regarding compliance with any SALDO, or Zoning landscaping requirements.

8. The Applicant may need to demonstrate compliance related to buffer yard requirements contained within ZO §190-983.E.1.a. Any large warehouse/logistics use where vehicle parking, outdoor storage and/or loading/unloading areas are visible from beyond the exterior lot lines of the use shall be screened by a buffer yard in accordance with this section. No buffer yard is shown along Newlins Mill Road and only a partial length 60-foot-wide buffer yard is proposed along Tatamy Road. **-The Applicant has revised the grading and adjusted the proposed landscaping. We differ to the Township Landscape and Lighting engineer regarding compliance with any SALDO or Zoning landscaping requirements.**

10. The buffer yard shall include a dense landscape buffer consisting of the planting requirements of ZO §190-983.E.1.h. The Landscaping Plan does not appear to comply with this section. **-We differ to the Township Landscape and Lighting engineer regarding compliance with any SALDO, or Zoning landscaping requirements.**

11. Any vehicle or tractor-trailer truck parking, outdoor storage and/or loading/unloading areas that are visible from and are within 250 feet of the exterior lot lines of the use shall be separated from such lot lines by an earthen berm in accordance with this section. The berm shall average a minimum of 15 feet in height above the adjacent average ground level (disregarding any drainage channel) on the outside of the berm. ZO §190-983.E.2.a & 2.b. The applicant's Engineer states that berms have been provided, yet none appear to be shown around the proposed parking area expansion. **-This comment has been addressed.**

12. The Township Zoning Officer shall be consulted regarding the compliance of the proposed land development with the Township Zoning Ordinance.

DEFERRALS

1. There are several deferrals associated with the original land development application approval for this project and listed as follows *(Ref. minutes from Board of Supervisors General Meeting 8/28/18)*: **-The deferrals listed on the plan have been revised as shown on the June 24, 2025 plan.**

    a. §165-69 - Requiring the construction of sidewalk (Tatamy Road). **-The plan now states, "Requiring sidewalks to be placed along Lot 1 Tatamy Road frontage, and also along the Lot 2 Tatamy Road and Newlins Mill Road frontages." -The requirement for sidewalks along roadway frontages shall be discussed with the Planning Commission. The plans show curbing as both proposed and "by others". The plan shall be clarified.**

b. §165-75 - Requiring the construction of curbing (Tatamy Road). **-The plan now states "Requiring curbing to be placed along the Lot 1 Tatamy Road frontage, and also along the Lot 2 Tatamy Road and Newlins Mill Road frontages." -The requirement for curbing along roadway frontages shall be discussed with the Planning Commission. The plans show curbing as both proposed and "by others". The plan shall be clarified.**

c. §165-73.A(1) - Requiring the installation of street trees (both street frontages for Lot 2). **- The plan now states, "Requiring street trees to be planted along both street frontages for Lot #2." - The requirement for street trees along roadway frontages shall be discussed with the Planning Commission. The street trees shall be proposed as required by the Township Lighting and Landscape Engineer.**

d. §165-59.K(1) - Requiring streets to be improved to Township standards (Tatamy Road for Lot 1, both street frontages for Lot 2). **-The plan now states, "Requiring streets to be improved to the Township street improvement standards along both street frontages for Lot #2 and along Tatamy Road for Lot #1." -The requirement for roadway improvements along roadway frontages shall be discussed with the Planning Commission. The plans show roadway improvements as both proposed and "by others". The plan shall be clarified.**

These deferrals remain outstanding and are recommended for discussion with the Planning Commission. The Applicant's Engineer states that the submitted plans propose to install the above deferred items; however, the plans are not clear, as some of the improvements are listed as "by others".

SALDO REVIEW

1. A developer's agreement will be required for this land development and shall be coordinated with the Township Solicitor. SALDO §165-46. **-Acknowledged by Applicant and remains outstanding.**

2. A Performance Guarantee will need to be posted prior to the commencement of construction of this project and shall be coordinated with the Township Solicitor. SALDO §165-47. **-Acknowledged by applicant and remains outstanding.**

3. Provide easements in accordance with SALDO §165-59.G(1). Any proposed easements shall be shown clearly on the plan sheet to be recorded. A drainage easement shall be provided for the above-ground infiltration basin or the Applicant shall consider providing a blanket drainage easement for the entire development and coordinating same with the Township Solicitor (see Deferral Item #1.d, as previously requested). Any and all easements shall include a written legal description, an exhibit, and closure calculations. An Easement Plan clearly defining all proposed easements should be provided including tabulated metes & bounds for all easements. **-This comment remains outstanding. The Applicant has indicated that a drainage easement has**

been proposed. The boundaries of this drainage easement shall be more clearly depicted on the Lot Consolidation / Record Plan.

4. Roadway improvements associated with the First Park 33 Land Development consist of full-depth reconstruction of Newlins Mill Road from the intersection of Tatamy Road to the east driveway to the site. Street trees shall be provided in accordance with Township Standards along Newlins Mill Road frontage of proposed Lot 1. Werner Enterprises is proposing sidewalk along Newlins Mill Road. *(Ref. Sect. D.5. of the Decision Letter from Township Board of Supervisors 10/24/17)*. SALDO §165-73.A. See Deferral Item #1.c, as previously requested. **-This comment remains outstanding. The Applicant indicates that all Newlins Mill Road improvements have been coordinated with the First Park development. However, the land development plans still indicate that the roadway improvements along Newlins Mill Road are to be completed "By Others" in several locations and are not shown on the Utility Plan or Grading Plan.**

5. Area and location of any proposed common open space should be shown. The Applicant should indicate whether an "in-lieu-of" fee is being considered. SALDO §165-62. The applicant is considering an "in-lieu-of" recreation fee under SALDO §165-62.G.(2). The fee amount shall be discussed further with the Planning Commission. **-This comment remains outstanding for discussion with the Township.**

SALDO WAIVER REQUESTS:

1. The Applicant has requested a waiver from requiring driveway aprons. *SALDO§165-64.G.* **-The section which requires driveway aprons is SALDO§165-69.G. The waiver request shall be revised as necessary. The requirement for driveway aprons shall be discussed with the Planning Commission.**

2. The Applicant has requested a waiver from requiring interior slopes of a detention basin to be graded at 4:1. *SALDO§165-63.K(3).* **-The basin is surrounded by a fence, and an interior access drive has been proposed. CEC is not opposed to the granting of this modification request.**

3. The Applicant has requested a waiver from requiring spillways to be constructed of reinforced concrete, mortared in place rip-rap, or concrete rubble. *SALDO§165-63.K(2)C.* **- The Applicant proposes utilizing synthetic landscape matting. A waiver is requested to permit the construction of the emergency spillway using synthetic landscape matting. CEC does not take exception to this modification provided the spillway is adequately designed and approved by the PADEP.**

4. The Applicant has requested a waiver from requiring the top of storm pipes to be at the same elevation when changing pipe sizes. *SALDO§165-63(N)3.* **The requirement for matching pipe crowns shall be discussed with the Planning Commission.**

5. The Applicant indicates that waivers are to be requested for providing Common Open Space, on the Preliminary Land Development Checklist (PC) (PC F.3., 4., & 5.). **The requirement for providing Common Open Space shall be discussed with the Planning Commission.**

6. The Applicant must submit a SALDO Waiver Application to the Township for any waivers necessary and/or being requested as part of this application.

GENERAL ENGINEERING COMMENTS

1. All engineering documents submitted to the Township and to our office, including but not limited to Estimates of Quantities & Costs, Reports, Plans, Exhibits, and Legal Descriptions shall be signed and sealed by the appropriate registered professional who prepared them in accordance with Engineer, Land Surveyor and Geologist Registration Law Act of May 23, 1945, P.L. 913, No. 367 Cl. 63, Section 7.(a). -**Acknowledged by Applicant and remains outstanding.**

2. The Applicant shall consider comments from the Landscape and Lighting Engineer, Gilmore & Associates. -**Acknowledged by Applicant and remains outstanding.**

3. The Applicant shall consider comments from the Director of Public Works, Parks, and Public Utilities, per letter dated 12/16/24. -**Acknowledged by Applicant and remains outstanding.**

4. The Applicant shall consider comments from the Fire Commissioner, per letter dated 12/16/24. -**Acknowledged by Applicant and remains outstanding.**

5. Legal Descriptions and exhibits for all proposed lots and easements shall be submitted to the Township Solicitor for review. -**Acknowledged by Applicant and remains outstanding.**

6. The accuracy of the boundary survey, with an error not to exceed 1 in 10,000, should be stated on the Lot Consolidation Plan. A note was added to the Lot Consolidation Plan, however, the note indicates that a survey has not yet been performed. This item remains outstanding.- **This comment has been addressed.**

7. A statement of proposed street improvements should be included on the plans. The roadway improvements note provided on the site plan sheet does not mention the required improvements to Tatamy Road and should be revised to include same. -**This comment has been addressed.**

8. The plans should contain a signed and notarized owner's statement. -**Acknowledged by applicant and remains outstanding.**

9. The submitted Hydrogeological Report dated May 20, 2021, does not include any data for findings pertaining to the proposed infiltration basin. The study and report shall be updated to include the area of the proposed basin. The report shall also include an updated Carbonate Assessment. -**This comment remains outstanding.**

10. The title of plan Sheet 1 of 18 should be revised to "Preliminary" Land development Plans. This item remains outstanding. **-The plans have been revised to indicate "Preliminary/Final". This is a preliminary submission.**

11. Setback distances for the proposed parking area shall be clearly labeled on the "Site Plan". The applicant's Engineer indicates this item has been addressed; however, this item remains outstanding. **-This comment has been addressed.**

12. The Lighting Plan shall be revised to show the maximum fixture height of 20' and color temperature of 3,000K. The amount of each respective fixture type shall be shown on the table provided. The Site Lighting Plan has been revised to include construction details for a typical area light pole and base. Future revised plans shall include the following:

    a. The required maximum mounting height of 20 feet shall be specified in the Luminaire Schedule. -**This comment has been addressed.**

    b. The required maximum lighting temperature of 3000K shall be specified in the Luminaire Schedule. -**This comment has been addressed.**

    c. Light pole, fixture, and base details shall be provided for the proposed street lights along Tatamy Road. **-This comment has been addressed.**

    -We differ to the Township Landscape and Lighting engineer regarding compliance with any SALDO, or Zoning landscaping requirements

13. The plans should include the following construction details:

    f. Revised fence detail indicating a 6' height. A detail has been provided indicating a total height of 7 feet. This shall be revised to indicate a total height of 6 feet. -**This comment has been addressed.**

    g. Provide design details of the proposed retaining wall adjacent to Newlins Mill Road. A typical section detail has been provided. Additional design calculations are required to be provided. -**This comment has been addressed.**

19. The Applicant shall consider comments from the Township Geotechnical Engineer, per letter dated 1/8/25. -**Acknowledged by applicant and remains outstanding.**

STORMWATER MANAGEMENT REVIEW

1. Structures and other obstructions to flow (except fences made of such materials and so placed as to not obstruct flow) shall be prohibited within stormwater easements. Such easements shall grant the Township the right to enter the easement to accomplish maintenance work, although the Township assumes no responsibility for such work. A note to this effect shall be added to the plans. A blanket easement shall be considered. SALDO§165-63.O.2. -**This comment has**

been addressed. The boundaries of this drainage easement shall be more clearly depicted on the Lot Consolidation / Record Plan.

2. Drainage pipes shall have a minimum slope of 0.5%, and drainage swales and gutters 2.0%. As a minimum, the tops of all pipes should be at the same elevation when changing pipe sizes. The Applicant has requested a waiver from this section. SALDO§165-63.N(3). The pipe slopes have been modified; however, the vertical pipe alignments have not changed. **-This comment remains outstanding. The crown elevations of stormwater conveyance pipes should be matched when changing pipe size.**

3. The Applicant shall provide an Operations and Maintenance Plan in accordance with the requirements of this section. SALDO§165-63.Q The Applicant's Engineer has stated that they will comply with this requirement. **-This comment remains outstanding.**

4. Stormwater flow onto adjacent property shall not be created, increased, relocated, significantly concentrated, or otherwise detrimentally altered without written approval from the affected property owner(s). Such stormwater flows shall be subject to the requirements of this Ordinance. Due to the proposed emergency spillway's discharge adjacent to Tatamy Road (SR2017), we recommend PennDOT provide comment. SMO§158-301.K **-The spillway has been relocated to the Newlins Mill Road side of the site, however the emergency spillways outflows have not been addressed. Any emergency flows will enter the conveyance pipe and eventually flow into the drainage features on the First Park 33 site. An analysis of this impact on the downstream basin shall be provided. This comment remains outstanding.**

5. No stormwater or other related discharges shall discharge directly into a public right-of-way or onto paved surfaces intended for vehicular or pedestrian travel. The Applicant shall consider an alternative location for the proposed emergency spillway due to its proximity to Tatamy Road (SR2017) and the proposed multi-use trail. SMO§158-301.L. **-See comment #4 above. This comment remains outstanding.**

6. All regulated activities shall limit surface water runoff or stormwater discharges into areas of karst geology or where karst features are observed. The Applicant shall provide a karst features report in accordance with comment 33 in the Act 167 review to verify the applicability of this section. SMO§158-301.M. **- The Applicant references correspondence from a geotechnical engineer, but it has not been provided with this submission. All applicable geotechnical correspondence/reports should be provided. This comment remains outstanding.**

7. All stormwater discharges with pipe sizes greater than or equal to 12" shall be provided with either reinforced concrete headwalls or plastic end sections and shall also include outlet protection consistent with the E&S Manual. The Applicant shall provide locations and supporting calculations for the proposed inflow points for the proposed basin. SMO§158-301.N. **-The Applicant has revised the plans to show the proposed rip-rap outlet protection however calculations have not been provided. This comment remains outstanding.**

8. For regulated activities proposing earth disturbances of greater than or equal to 43,560 SF,

submission of an erosion and sediment control plan to the county conservation district/reviewing authority for NPDES permit approval shall be required. Subsequent evidence of approval shall also be required. It is noted that the Applicant has indicated that an amendment to the existing NPDES permit will be requested. SMO§158-301.R. **-This comment remains outstanding.**

9. Infiltration facilities shall be spread out, made as shallow as practicable, and located to maximize use of natural on-site infiltration features while still meeting the other requirements of this Ordinance. SMO§158-304.A.1. **-The Applicant references correspondence from a geotechnical engineer, but it has not been provided with this submission. All applicable geotechnical correspondence/reports should be provided. This comment remains outstanding.**

10. Infiltration facilities shall be set back 50 feet from a geologic contact with carbonate bedrock unless a Carbonate Assessment Report is done and shows either the absence of special geologic features within 50 feet of the proposed infiltration area or provides recommendations on the means of acceptability for infiltration. It is noted that the Hydrogeologic Evaluation identifies a closed depression within the limits of the proposed basin. The Applicant shall provide alternative means for stormwater management to eliminate the risk of sinkhole formation as infiltration is not recommended in the vicinity of special geologic features. SMO§158-304.A.4.f . **-The Applicant references correspondence from a geotechnical engineer, but it has not been provided with this submission. All applicable geotechnical correspondence/reports should be provided. This comment remains outstanding.**

11. Anti-seep collars shall be provided on all outflow culverts in accordance with the methodology in the E&S Manual. An increase in seepage length of 15 percent must be used in accordance with the requirements for permanent anti- seep collars. SMO§158-304.F. Storm sewer plans and profiles shall show the locations of anti-seep collar installations. **-The Applicant has added the location of the anti-seep collars to the plan view but shall also show them on the profiles. This comment remains outstanding.**

12. Embankment side slopes shall be no steeper than 3:1. SMO§158-304.H. The grading along the south side of the proposed parking lot appears to be greater than 3:1. This condition shall be revised. **-Slope cannot be greater than 3:1 on any part of the site. This comment remains outstanding.**

13. The proposed infiltration basin does not incorporate a primary outflow structure other than an emergency spillway. Please revise the plans to include a primary outflow structure. SMO§158-304.J.4. **-The Applicant has indicated that per HCT 164, no stormwater discharge is allowed. The Applicant shall provide explanation for "HCT 164". This comment remains outstanding.**

14. All facilities shall drain over a period of time not less than 24 hours and not more than 72 hours from the end of the facility' s inflow hydrograph unless, at the sole discretion of the Municipal Engineer, the BMP is specifically designed to function with differing timeframes (for example, wet ponds, constructed wetlands, etc.). The Applicant should provide dewatering calculations

for the proposed basin. SMO§158-304.K. **-The applicant has provided dewatering calculations, however the infiltration rate used should be revised to reflect the geometric mean of the infiltration tests with a factory of safety included as per the recommendation of the geotechnical engineer. This comment remains outstanding.**

15. Stormwater facility bottom elevations shall be located at least 2 feet above bedrock and 3 feet above the seasonal high-water table. It is noted that the Applicant has provided an infiltration hydrogeologic evaluation, but the area of the proposed basin has not been tested/evaluated. SMO§158-304.P.1. & 2. **-The Applicant references correspondence from a geotechnical engineer (GTA), but it has not been provided with this submission. All applicable geotechnical correspondence/reports should be provided. This comment remains outstanding.**

16. The Applicant shall provide conveyance calculations for the proposed storm sewer demonstrating that the system can convey the 25-year design storm without erosion or hazard. SMO§158-305.A. Pipe conveyance calculations are provided for the 100-year storm, but do not consider the 25-year storm. **The pipe conveyance calculations provided are illegible and the 25-year storm isn't provided. This comment remains outstanding.**

17. The SWM report should be revised to include existing and proposed time of concentration calculations. SMO§158-306.A.2. The calculations are not provided. **-This comment remains outstanding.**

18. The Applicant shall provide a volume control calculation in accordance with the Design Storm Method outlined in this section. SMO§158-306.B. **-This comment remains outstanding.**

19. Drainage areas tributary to sinkholes or closed depressions in areas underlain by limestone or carbonate geologic features shall be excluded from the modeled point of analysis defining pre-development flows. If left undisturbed during construction activities, areas draining to closed depressions may also be removed from peak runoff rates in the post-development analysis. New, additional, contributing runoff shall not be directed to existing sinkholes or closed depressions. It is noted that the Applicant is proposing an infiltration basin over an existing closed depression. Per this section, the Applicant should pursue alternative means for stormwater management. SMO§158-306.4.C. **-This comment remains outstanding.**

20. The Applicant's telephone number and email address shall be provided on the plans. SMO§158-401.a.A.3. **-This comment has been addressed.**

21. The Applicant shall provide the location of all karst features on the plans. Per publicly available GIS, it is noted that numerous Karst features are located onsite. Additionally, please see comment 33 regarding a Carbonate Assessment Report. SMO§158-401.a.M. **-The Carbonate features have been provided on the PCSM Plans; however the Carbonate Assessment Report has not been provided.**

22. Applicable notes from this section shall be added to the plans. SMO§158-401.a.X. **-This**

comment has been addressed.

23. The Applicant shall revise the SWM report to detail pre-development conditions, post-development conditions, philosophy of the SWM design, and an expected project time schedule. SMO§158-402.B. **-This comment remains outstanding.**

24. Breakouts of Tc calculation segments and input data for each segment, including but not limited to slope, length, Manning's N values, etc., shall be provided in the SWM Report. SMO§158-402.D.4. **-This comment remains outstanding.**

25. The Applicant shall provide supporting calculations for the E&S design. It is noted that currently the E&S design appears to be incomplete. SMO§158-402.D.8. **-This comment remains outstanding.**

26. The Applicant shall provide all applicable worksheets from other regulatory agencies and associate permits within the SWM Report. SMO§158-402.D.11. **-The Applicant has provided additional information, however there are still missing worksheets, i.e. DEP's PCSM Spreadsheet. This comment remains outstanding.**

27. The labels on the Drainage Area Plans shall be revised to match the corresponding Hydrographs for consistency. SMO§158-402.E.2. - **The labels shown on the plan and in the PCSM Report do not match. This comment remains outstanding.**

28. The Drainage Area Plans shall be revised to show the time of concentration flow paths for the existing and proposed condition. SMO§158-402.E.3. **-This comment remains outstanding.**

29. The Post Development Drainage Area Map shall be revised to include BMP labels that correspond to the hydrographs for consistency. SMO§158-402.E.5. **-The labels shown on the plan and in the PCSM Report do not match. This comment remains outstanding.**

30. The Applicant shall provide a Carbonate Assessment Report in accordance with this section. It is noted that per publicly available GIS that numerous karst features are located onsite. Additionally, the report should address whether infiltration is an allowable SWM method for this site. SMO§158-403.A. **-The Applicant references information from Geo-Technology Associates (GTA), but it has not been provided with this submission. All applicable geotechnical correspondence/reports should be provided. This comment remains outstanding.**

31. Should the findings of a Carbonate Assessment Report permit the use of infiltration testing, infiltration testing shall be provided in accordance with this section for the proposed infiltration Basin. SMO§158-403.C. **-The Applicant references information from Geo-Technology Associates (GTA), but it has not been provided with this submission. All applicable geotechnical correspondence/reports should be provided. This comment remains outstanding.**

32. The Applicant shall submit an Operations and Maintenance Plan in accordance with Article V of this ordinance. SMO§158-501 & 502. **-This comment has been addressed.**

GENERAL STORMWATER MANAGEMENT COMMENTS

7. The Post Development Drainage area map shall be revised to remove the proposed vehicle turning movements for legibility. **-This comment has been addressed.**

8. The Applicant shall consider alternative means to dewater the proposed basin. A lined MRC basin shall be considered. **-The Applicant indicates that per Act 167, no discharge is permitted. This is not the case. Subarea 106 of the Bushkill Creek Act 167 is a 30/100 release district. The post development 2-year storm is to be reduced to 30% of the pre-development 2-year storm. The other post development storms' release rates are required to be reduced to pre-development levels. This comment remains outstanding.**

9. Multiple stormwater structures exceed 10 feet in depth. This is a safety concern for access and maintenance of the system. Please revisit. **-This comment has been addressed. The parking lot has been revised to provide steep grading throughout portions of the parking area. The Applicant should investigate if flatter grading can be provided, as the steep grading will make parking maneuvers uncomfortable for the drivers.**

10. The proposed storm conveyance design should be revised to eliminate drops more than 10 feet. **-This comment has been addressed.**

11. The Applicant shall provide details for how the existing subsurface basin is to be maintained as the development proposal increases the depth of fill over the system. **-The Applicant has generally reduced the amount of fill over the basin but there are still areas of increase along with adding the proposed truck loading. This comment remains outstanding.**

12. Details concerning the existing stormwater systems and any impacts from the proposed stormwater system shall be indicated on the plans. **-This comment remains outstanding.**

13. The rip rap apron detail shall be revised to include dimensions for Endwall 1 & 2. **-This comment has been addressed.**

14. The Applicant shall confirm the existing outflow structures and piping for the existing underground infiltration basin (under the proposed new parking area) will remain intact. If not, the existing structures should be re-designed, and the plans revised as appropriate. **-The Applicant's response letter indicates that redesign has been performed to maintain the existing outflows. This redesign shall be shown on the plans, and additional information shall be provided. This comment remains outstanding.**

15. We have noted numerous technical deficiencies with the stormwater management calculations and methodology. In the design's current configuration, a detailed review of the Stormwater Management Design could not be completed at this time. We have enumerated these items above

and reserve further comments on the supporting technical design data until such time that these comments have been addressed, as they are anticipated to significantly alter the stormwater management design in its present configuration. -**This comment remains outstanding.**

16. The proposed pipe velocities from Inlet-6 to MH-2 at 25.6 fps and Inlet-3 to MH-1 at 25.12 fps are excessive. These pipe runs should be redesigned to have velocities of 10 fps or less. -**These portions of the stormwater management report are illegible. This comment remains outstanding.**

Additional Comments (8/5/2025)

17. The existing storm pipes and headwalls that are proposed to be removed (HW4101 & HW4100) are displayed throughout the plan set i.e. Utility Plan, Landscaping Plan, etc. The plans should be revised accordingly to only show these removed features on the Existing Features Plan.

TRAFFIC REVIEW

Provide a brief trip generation narrative. It is assumed that the Applicant needs to expand the parking lot due the growth of business over the years and that there is also an increase in trips generated by the site. -**This comment remains outstanding. The Township previously requested that the Applicant submit a revised traffic study to reflect the new site operations necessitating an increase in on-site parking. The Applicant's response indicates that the future site operations are not changing from the originally submitted TIS in 2017, and that the expansion is simply to ease on-site over-crowding. If this is the case, please provide the Township with a detailed narrative on the reasons for the on-site overcrowding. In theory the original application would have been reviewed on behalf of the Township and if there were concerns about overcrowding the issue would have been addressed at that time. If the operations of the site have not changed since 2017, please help the Township to understand why there is a need for expansion. While the Township acknowledges that parking calculations are trips generated are not directly linked, it is reasonable to assume that if more parking is needed, it is because the operations of the site have increased from the originally approved 2017 traffic study. In addition, the Trip Generation Post Development Analysis (Benchmark, October 2022) indicates that traffic volumes at the site in 2022 were by 11% less overall than the trips anticipated by the 2017 TIS. If these trips were even less than originally projected it again begs the question, why is there now a need for parking expansion?**

POLICY AND INFORMATION

1. List any deed restrictions and/or covenants on the plan sheet(s) to be recorded. The applicant's Engineer states there are no restrictions.

2. Provide a list of all easements necessary to support the proposed development on the Land Development Plan to be recorded that shows the locations of the areas in question with a corresponding legend. The list should include identification of the grantor and grantee at the

time of plan recording and the type of easement (*e.g.*, sanitary sewer, drainage, etc.). All proposed easements are required to be shown on the Preliminary Land Development Plan set.

3. List all required outside agency permits and approvals on the plans, including, but not limited to:

   a. Lehigh Valley Planning Commission design review and approval.

   b. Northampton County Conservation District and NPDES Permit Approval from PADEP. Applications should be submitted to the departments and indication of approval or letters of no-interest be provided.

   c. PennDOT approval for improvements to Tatamy Road (SR2017), as necessary.

   Copies of all correspondence, including all data submitted to outside agencies regarding required permits and approvals, should be provided to the Township and our office. If certain entities are not required for this application, then a "Letter of No Interest" must be obtained and submitted for documentation from that required entity. This item remains outstanding.

4. We defer to the Township Geotechnical Consultant for review of all geotechnical aspects of the proposal, SALDO §165-32.D(2), and §165-36.E(2).

5. We defer to the Township Landscape and Lighting Engineer to review the proposed site lighting and landscaping. SALDO §165-32.D(2) and §165-36.E(2).

6. We defer to the Township Fire Commissioner and EMS regarding the acceptability of emergency access, the requirements for fire protection systems, etc. SALDO §165-32.C(2)(b) and §165-36.D(2)(c).

7. Comments from the Township Shade Tree Commission, MS4 Coordinator, and Township Planning Department shall be considered.

8. Upon submission of plans for recording, sign and seal/notarize all Statements and Certifications as applicable. SALDO §165-16.

An aerial site location photograph is attached to this letter. We reserve the right to perform additional review and provide comments on this application pursuant to testimony presented at a public hearing and/or the submittal of revised plans and documents.

Should you have any questions or require additional information regarding this review, please feel free to contact me at 610-989-4940, Extension 317 or jcoyle@carrollengineering.com.

Very truly yours,

CARROLL ENGINEERING CORPORATION

Justin M. Coyle

Justin M. Coyle, P.E.
Township Engineer

CDB/DJW/JMC
Attachments
cc: Robert Williams, Township Manager, Palmer Township
Brenda DeGerolamo, Assistant Manager, Palmer Township
Justine Caiazzo-Strouse, Administrative Assistant to Planning, Palmer Township
William Oetinger, Esquire, Grim Biehn & Thatcher
Paul A. Szewczak, Benchmark Civil Engineering Services, Inc.
Joseph A. Fitzpatrick, Jr., Esquire, Fitzpatrick, Lentz, & Bubba, P.C.
Chad Harrington, Werner Enterprises
Daniel J. Wilusz, P.E., Project Manager, CEC




Search Google Maps
2237 Newlins Mill Rd
Easton, Pennsylvania
Google Street View
Nov 2021
See more dates
Terminal
Mill Rd
Google

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

July 31, 2025

File No. 2023-06072

Craig Beavers, CFM, CZO, Director of Planning
Palmer Township
3 Weller Place
Palmer, PA 18045

Reference: Preliminary/Final Land Development Plan
2215 Newlins Mill Road – Parking Lot
Landscape and Exterior Site Lighting Review

Dear Mr. Beavers:

As requested, Gilmore & Associates, Inc. has reviewed the documents listed below with regard to the Preliminary/Final Plan Submission referenced above:

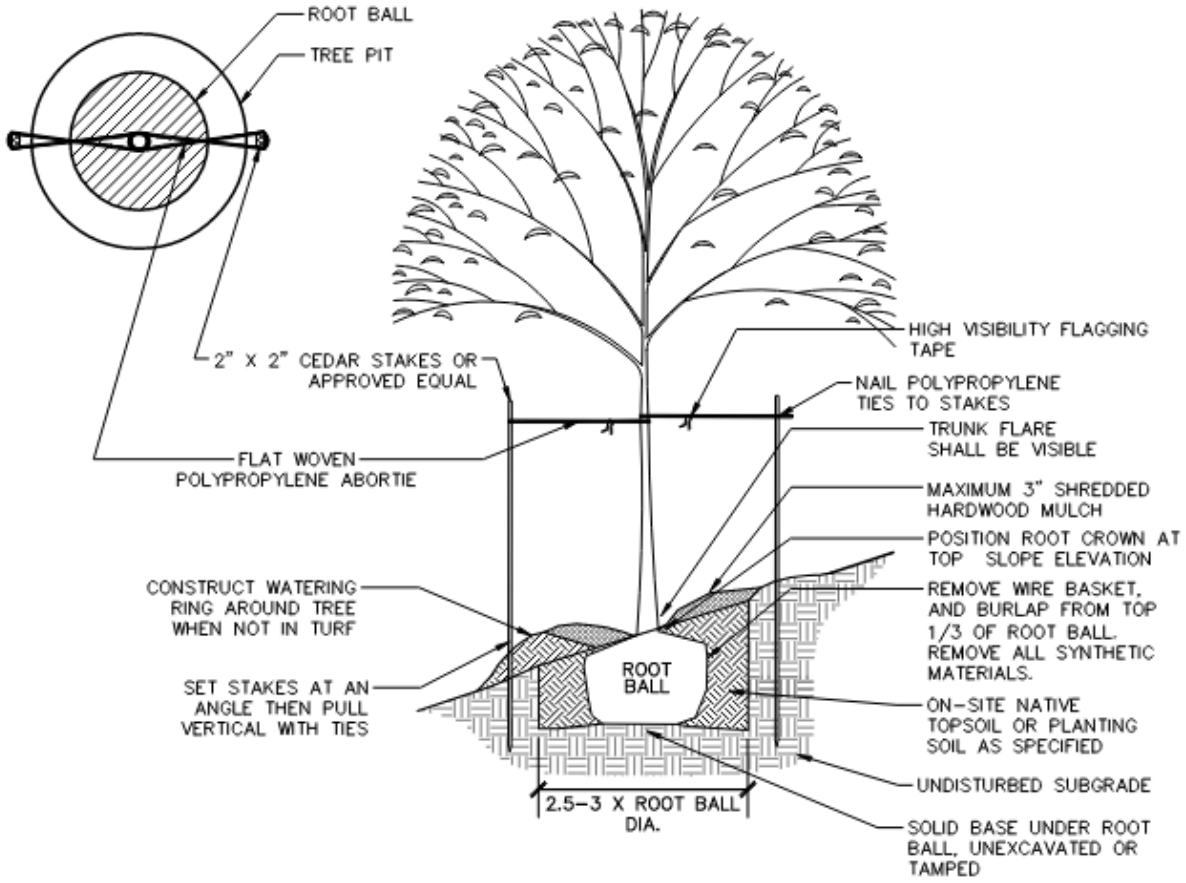
A. Preliminary/Final Land Development Plans: Werner Enterprises, Inc. Trailer Parking Expansion plans prepared by Benchmark Civil Engineering Services, Inc, dated 07/16/24, last revised 06/24/25:

- Sheets 1-21 of 21, specifically
  - Landscape Plan (Sheet 9 of 21)
  - Site Lighting Plan (Sheet 10 of 21)

Landscape Review:

Zoning Ordinance:

1. **§190-603.H(3)** - Any lot that would include more than 30 parking spaces shall be required to provide landscaped areas within the paved area. This required landscaped area shall be equal to a minimum of 5% of the total paved area. Calculations provided on Sheet 9 of 21 are inconsistent with what is depicted on the plan. In addition, the areas identified on the plan are not within the paved area as required and a majority of the areas identified are not landscaped. They are primarily beds of river stone. *It is noted that the applicant has indicated that they are requesting a waiver (variance) from this requirement due to maintenance concerns. Clarification shall be provided as the Landscape Calculations provided on Sheet 9 appear to indicate compliance with the requirement. It is recommended that accurate calculations are provided in the Landscape Calculations chart on Sheet 9 to clearly indicate the amount of internal landscape area provided and the extent of the variance request.*
2. **§190-603.H(4)** One deciduous tree of a minimum caliper of 1.5 inches shall be required for every 15 required off-street parking spaces. The trees shall be of the same species as listed in the Township Subdivision and Land Development Ordinance. *This item remains outstanding from the previous review. Landscape Calculations provided on Sheet 9 indicate that there are 150 parking spaces, requiring 10 trees. It is unclear where the parking count is derived from, and which trees are contributing to this requirement. Plant schedules and calculations shall be revised to clarify how the parking count is determined, and which trees are being used to satisfy the requirement.*
3. **§190-804.D(4)(b)(iii)** – The plant screen shall be permanently maintained. It is noted that the evergreen plantings that are located between Newlins Mill Road and the proposed parking area appear to be placed on a significant slope. Given the slope, and inability to hold water to support the plant material, we question the long-term viability of the plantings and recommend that details be provided to show how these plantings will be installed and maintained. *It is noted that a detail for planting on slopes has been added on Sheet 16. The detail shall be revised to incorporate most current ISA recommendations as shown below:*



DECIDUOUS TREE PLANTING DETAIL ON 3:1 SLOPE

NOT TO SCALE

NOTES:
1. TREE STAKING & GUYING SHALL NOT BE IMPLEMENTED UNLESS SITE CONDITIONS SUCH AS UNSTABLE SOILS, EXCESSIVE WIND, AND STEEP SLOPES (3:1 OR GREATER) EXIST. STAKING SHALL NOT BE INSTALLED WITHOUT THE APPROVAL OF THE TOWNSHIP LANDSCAPE ARCHITECT. ALL STAKES SHALL BE PAINTED ORANGE, AND ALL TIES SHALL BE FLAGGED WITH HIGH-VISIBILITY FLAGGING TAPE.
2. SPECIFIED ARBORTIE GREEN (OR WHITE) STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL. 3/4" (19.05MM) WIDE 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE. (WWW.DEEPROOT.COM
3. STAKES AND TIES SHALL BE REMOVED AFTER ONE (1) FULL GROWING SEASON. WHEN REMOVED, STAKES SHALL BE DRIVEN BELOW GROUND LEVEL OR REMOVED FROM THE SITE ENTIRELY.

Subdivision and Land Development Ordinance:

1. **§165-73.A(1)(b)** – Variety of species shall be in accordance with the table provided in order to promote diversity and reduce the spread of pests and disease in plant material. According to the plant schedules provided on Sheet 9, There appear to be a total of 54 street trees (16 existing + 38 proposed). A minimum of four species are required, with a maximum of 30% of any one species. It is recommended that non-fruit bearing selections to utilized reduce keep sidewalks and roadway clear from debris (alternative species to the proposed Red Oaks (acorns)).

General Landscape Comments:

1. There appears to be multiple conflicts between proposed landscape and utility infrastructure. Although several conflicts have been resolved, others remain. Specifically, underground electric line appears to be in directly conflict with evergreen buffer planting along Newlins Mill Road. Locations shall be coordinated to avoid conflicts. *This item remains outstanding.*
2. Existing Street Tree Schedule on Sheet 9 – Key indicates “RP” but plan shows “FA”. Please provide clarification.

Exterior Site Lighting Review:

Zoning Ordinance:

1. **§ 190-513.A** - All uses shall direct, deflect and shield lights and control the intensity of lights and illuminated signs to avoid nuisances and prevent glare onto other properties and streets. It appears that lighting is being proposed for the multi-use trail along Tatamy Road. The proposed light fixtures appear to be the same type/height as the site lighting fixtures. It is recommended that a more pedestrian scale fixture be used when illuminating trail areas for focus light on the trail and reduce spill/glare on roadway uses. *This item remains outstanding. It is noted that a note was added to the luminaire schedule on Sheet 10 regarding the shielding of light fixtures for the multi-use trail, however the location of the seven (7) fixtures is no longer indicated on the plan, and the type/height of the lights remain the same as the area lights being utilized for the parking areas within the site.*
2. **§190-603.F(2)** - All luminaires shall be adequately shielded and directed to protect adjacent dwellings and motorists on public streets from glare. See comment #1 above regarding mounting height and fixture selection for multi-use trail lighting. *This item remains outstanding.*

If you have any questions regarding the above, please contact this office.

Sincerely,



Christopher E. Green, R.L.A., LEED AP
Senior Landscape Architect
Gilmore & Associates, Inc.

cc: Michael Schwartz, P.E. – Municipal Services Manger – Gilmore & Associates, Inc.
Sean Policelli, P.E., Project Manager – Gilmore & Associates, Inc.
Justine Caiazzo-Strouse – Palmer Township

August 7, 2025
F110980.00

Palmer Township
3 Weller Place
P.O. Box 3039
Palmer, PA 18043

Attn: Craig Beavers, AICP Candidate, CFM, CZO – Director of Planning (via email)

Re: Geotechnical Review, Werner Parking Lot
2215 Newlins Mill Road
Palmer Township, PA

Dear Mr. Baird:

GAI Construction Monitoring Services, Inc. d/b/a CMT Services Group (CMT) has prepared this letter with respect to our review of documents related to the proposed Additional Parking Lot, located at 2215 Newlins Mill Road. We have provided this review at your request in accordance with our revised "Geotechnical Consulting Services" proposal and agreement dated August 18, 2011. Palmer Township provided the following documents for review:

- "Preliminary/Final Land Development Plans", Sheets 1 through 21 of 21, prepared by Benchmark Civil Engineering Services, Inc. (Benchmark), dated 07/16/24, last revised 06/24/25.
- "Post-Construction Stormwater Management and Drainage Calculations", prepared by Benchmark, dated July 15, 2024, last revised January 19, 2025.

CMT offers the following comments.

- The previously provided hydrogeologic report does not provide a mean field infiltration rate, nor a recommended design infiltration rate. In addition it does not provide the information necessary to function as a carbonate report. Since the site development is relatively recent and the regional geologic conditions are well known, a full carbonate study is not necessary. However, at a minimum, a new site reconnaissance should be performed and documented. Of particular concern would be any sinkholes that have formed in the proposed parking lot and basin area since the completion of the original site development. This comment remains from our previous reviews. No new geotechnical or carbonate information was provided for this submission.
- The stormwater report provides draw down information based on an infiltration rate with no backup data. No other information on the infiltration of stormwater in the basin was provided: design infiltration rate, loading ratios, etc. Based on a cursory review of the infiltration rates shown on the plans, the infiltration rate contained in the drawdown calculations appears to be too high. CMT cannot fully evaluate the stormwater management design without these items. This comment remains from our previous reviews.
- The cross-section of the proposed stormwater infiltration basin provided is not to scale and does not include all of the requested information: construction notes, including surface preparation, acceptable soil types and compaction, amended soil (if any), seeding requirements, the use of (and conversion from) a sediment basin to an infiltration basin, etc.
- We have no further comments.

CMT has attempted to prepare this letter using the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical professionals with experience in this geographical area under similar soil conditions. We offer no other warranty, either expressed or implied as to the conclusions and recommendations contained in this letter.

If you have any questions or require additional information, please contact Shawn Casey, P.E. at 610.731.0430, 610.507.5879 (cell), or s.casey@cmtservicesgroup.com.

Sincerely,
CMT Services Group



Shawn Casey, P.E.
Engineering Technical Manager

SC:sc

TOWNSHIP OF PALMER
NORTHAMPTON COUNTY, PENNSYLVANIA
3 Weller Place, Palmer Township, PA 18045

August 6, 2025

(via e-mail only)

Chad Harrington
Werner Enterprises
14507 Frontier Road
Omaha, NE 68138

Re: Werner Expansion (2215 Newlins Mill Road – Trucking Terminal)
SALD-2024-001
Preliminary/Final Land Development and LLA – Third Submission
Plan Dated June 24, 2025

Dear Mr. Harrington

I have reviewed the preliminary/final land development and lot consolidation application and plans titled "Preliminary/Final Land Development Plans – Werner Enterprises Inc. – Trailer Parking Expansion" prepared by Benchmark Civil Engineering Services, Inc. dated July 16, 2024 and last revised June 24, 2025. The plan proposes to expand the existing truck and trailer parking area and consolidate the existing parcels into one plot.

This letter is to report non-engineering-related comments to be addressed, in addition to the review letters of the Township Staff and Consultants. These comments are made with the understanding that all features are accurately displayed on the submitted plans and that they comply with all current laws and regulations. Other comments may be added as additional information becomes available or if the information should change.

Subdivision and Land Development Ordinance

1. The following elements of the Subdivision and Land Development Ordinance shall be considered or addressed by the Applicant:
    a. *SALDO §165-36.A(2): A final plan shall only be submitted after a preliminary plan has been approved by the Board of Supervisors.*
        i. The Applicant has submitted a combined Preliminary/Final Plan but did not indicate any request for waiver relief from this requirement; in general, large projects such as this are discouraged from submitting combined plans, as it eliminates significant portions of the review process. To comply with this regulation, the Applicant should agree for this

application to be considered Preliminary or submit a Waiver Application indicating why there is a hardship to this ordinance provision.

b. *SALDO §165-46: Development agreement. All applicants proposing any subdivision or land development which provides for the installation of improvements required by this ordinance or any improvements required as a condition of the final plan approval shall be required to enter into a legally binding development agreement with the Township prior to recording of the final plan.*

    i. Once final approval is granted by the Board of Supervisors, the Applicant shall enter into a Development Agreement for the project, which shall be drafted by the Township Solicitor after all plan conditions, cost estimates, and form of financial security are approved.

c. *SALDO §165-47: Performance guaranty.*

    i. Once final approval is granted by the Board of Supervisors, the Applicant shall provide a form of financial security based off of the approved cost estimate, and the financial security shall be approved by the Township Solicitor prior to acceptance.

d. *SALDO §165-52: Recording of final plan. The applicant is responsible to ensure that the final plan as approved by the Township Supervisors is recorded in the office of the Recorder of Deeds of the county within 90 days of such final approval.*

    i. Once final approval is granted by the Board of Supervisors, the Applicant shall provide signed copies of the approved plans for recording prior to commencing work. Clean-up plans shall be provided after final approval via email to the Township and the Township Engineer to conduct a compliance review. All conditions must be met prior to plan recording. Once approved by the Township, paper and mylar copies of the plans shall be delivered to the Township for signing. The Township will record the plans in the Northampton County Recorder of Deed's office.

e. *SALDO §165-59.G(1): Easements. Drainage, sanitary or domestic water easements shall be provided as indicated and required by the plans.*

    i. Once final approval is granted by the Board of Supervisors, the Applicant shall provide Easement Agreements to the Township, which must be approved by the Township Solicitor. All easements shall include written legal descriptions, exhibits, and closure calculations, which must be approved by the Township Solicitor. The Township will record the agreements in the Northampton County Recorder of Deed's office.

f. *SALDO §165-62.G(2): Any new commercial or industrial subdivision or land development shall be required to dedicate 5% of the buildable area of the tract for recreational purposes.*

i. Open space dedication, or a recreation fee-in-lieu-of is required for all subdivisions and land developments. This item shall be discussed with the Planning Commission and Board of Supervisors.

g. SALDO §165-69: Sidewalks, pathways, driveway aprons and fences.

i. The proposed Grading Plan does not show any change in grading on the 10' wide multi-use path on the northern portion of the property along Tatamy Road. The Applicant shall revise the plan to show the required grading, stormwater improvements and relocation, and other items involved for the proper construction of this path to Township standards.

ii. The proposed path shall be properly illuminated through pedestrian scale street lighting to ensure safety for path users.

h. SALDO §165-73.A(1)(b): Street trees.

i. The Applicant shall provide the required variation in species for street trees, including non-fruit producing trees.

Zoning Ordinance

1. An official zoning review will be provided by the Township Zoning Officer at the time of filing for a Zoning and/or Building Permit; the following comments are provided for the applicant's awareness. The Township Zoning Officer shall make all final determinations regarding zoning compliance.
2. All Conditions must be complied with, per the Conditional Use decision letter dated October 24, 2017. These approvals shall also be included on the record plan.
    a. Per Item D.9 in the above decision letter, any further expansion of the buildings or use on this property shall require further approval as a conditional use.
3. The proposed trucking terminal expansion is located in the IOC Industrial/Office/ Commercial Zoning District. The proposed use is permitted by right.
4. The Applicant shall comply with regulations listed under *ZO §190-411: Specific regulations for the IOC Industrial/Office/Commercial District.*
5. The Applicant shall comply with regulations listed under *ZO §190-603: Design standards for off-street parking facilities.*
    a. The Applicant has indicated they are seeking a variance from provisions relating to landscaping within parking areas. An approval from the Zoning Hearing Board must be obtained for this variance prior to Preliminary Plan approval.
6. The Applicant shall comply with regulations listed under *ZO §190-980: Truck, rail, or freight terminal.*
    a. The Applicant shall provide an updated TIS for this project, regardless of the negative, neutral, or positive increase in traffic volume for this project.

Stormwater Management Ordinance

1. An official stormwater management review will be provided by the Township Engineer, Township Geotechnical Engineer, and Director of Stormwater and MS4. All stormwater items, including those from the Lehigh Valley Planning Commission, Northampton County Conservation District, and Pennsylvania Department of Environmental Protection, shall be addressed prior to plan recording.
2. The Applicant shall provide an Operations and Maintenance Plan and enter into a Stormwater Management Operations and Maintenance Agreement, which shall be drafted and approved by the Township Solicitor.
3. The Applicant shall provide all necessary easements for drainage and utilities for the stormwater elements on this site. A blanket easement is recommended.

Plan Notations

1. On the "Notes Sheet, 2 of 21" under General Notes, Item #6 should be corrected to cite the correct section of the 2023 Zoning Ordinance, which would be §190-804.C.
2. The proposed roadway improvements identified on the "Site Plan, 6 of 21" should be shown on all plan sheets.
3. The plan set indicates that a Traffic Impact Study, as well as a post-construction analysis, will be conducted for this project. The Applicant shall verify this information.
4. The plan indicates that deferrals are requested; however, these appear to be a holdover from a previous plan. The Applicant shall remove any mention of deferred improvements, including improvements by others, and ensure that the required improvements are clearly shown on the plan.

Waiver Requests

1. The plan indicates that waivers are requested. The Applicant shall provide a Waiver Request Application with the appropriate application fee before the Township will consider the requests.

Parks and Recreation

1. At their September 17, 2024 meeting, the Parks and Recreation Advisory Board reviewed the proposed plan for the requirements of Section 165-62 of the Subdivision and Land Development Ordinance and determined the following:
    a. That the applicant pays fees-in-lieu-of open space dedication. For nonresidential developments, the fee shall be $5,500 per acre according to the 2025 Township Fee Schedule. Therefore, the fee to be charged is $63,134.50 (11.479 acres).

Shade Trees

1. The Shade Tree Commission has not reviewed this resubmission as of writing. Their next meeting will be on August 7, 2025.
2. Please consider the following placement locations for street trees:
    a. Placement over inlets should be avoided.
    b. Provide ample clearance from streetlights and hydrants.
    c. Street trees should be located within a grassy buffer between the road and the sidewalk.
3. Adequate landscaping will be required along both road frontages, per previous conditional use approval.

Public Works and Utilities

1. The applicant is to request approval for water availability and sanitary sewer capacity and conveyance from the Nazareth Borough Municipal Sewer Authority, and Pennsylvania American Water. The applicant must address all water and sewer service issues, and obtain all approvals deemed necessary by the above agencies. You are advised to contact the appropriate parties as soon as possible.
2. The applicant is to obtain PA Department of Environmental Protection approval for an Individual NPDES Permit for this project.
3. The applicant is to obtain Northampton County Conservation District approval for an Erosion and Sediment Control Plan for this project.
4. The applicant shall forward a plan to Met-Ed for a recommendation on street lighting per Section 165-70 of SALDO.
5. The Applicant shall provide payment for Tapping Fees prior to Building Permit issuance.

Legal and Other

1. All required outside agency approvals and permits shall be noted on the plan.
2. The applicant is advised to contact the Pennsylvania Department of Transportation (PennDOT) to discuss public improvements and HOP requirements along Tatamy Road.
3. Copies of all correspondence, including all data submitted to outside agencies regarding required permits and approvals, should be provided to the Township. If certain entities are not required for this application, then a "Letter of No Interest" must be obtained and submitted for documentation from that required entity.
4. The Applicant shall apply for and obtain any applicable Township permits related to the project prior to commencement of any construction on the site.
5. A Development Agreement will be required prior to plan recording and shall be coordinated with the Township Solicitor.

6. Financial Security will be required prior to plan recording and shall be coordinated with the Township Solicitor, Township Engineer, and Planning Department. A detailed cost estimate shall be provided by the Applicant's Engineer.
7. The Applicant shall dedicate to the Township a blanket utility easement of sufficient size in an area acceptable to the Township. The dedication shall occur prior to the Final Plan being recorded. The dedication shall be by Deed of Dedication in a form acceptable to the Township Solicitor, and a title policy naming the Township as an insured in for an amount approved by the Township Solicitor shall be submitted indicating that the dedication is free and clear of liens and encumbrances that would affect the Township's use of said property. The Applicant shall furnish to the Township Solicitor a description for the dedication that has been approved by the Township Engineer, and a copy of the current deed for the property showing current ownership and recording information.
8. The Applicant shall execute an Operation and Maintenance Agreement of Stormwater Management Facilities approved by the Township Solicitor for the maintenance of the on-site stormwater management facilities.
9. The dedication of open space, or payment of fees in lieu of, shall be required prior to plan recording.
10. To offset any traffic increases that may be caused by the development, the Applicant should consider providing a voluntary traffic contribution. A recommended amount would be $1,000 per peak PM trip generated by the development.
11. The Applicant should coordinate the installation of the 10' wide multi-use trail with the owners of 1460 Tatamy Road, as there is an active deferral as a result of the previous subdivision for the Werner Enterprises project.

Palmer Township Comprehensive Plan

1. The Comprehensive Plan envisions the tract within a Non-Residential Land Use Type, serving as an area for commercial and/or industrial use within the community. The proposed trucking terminal expansion is located in the IOC Industrial/Office Commercial Zoning District.
2. The purpose of the IOC District is to provide sufficient space in appropriate locations to meet current and anticipated future regional needs for industrial and large-site commercial development appropriate to the community; to encourage industrial and commercial development that will benefit the community and the region, both economically and aesthetically; and to permit investment in a development that will provide for the location of several plants and/or planned commercial establishments to ensure safe and efficient access to public streets.
3. The proposed trucking terminal expansion is consistent with the following Comprehensive Plan goals:
    a. *B.1: Safeguard the community's established, business-friendly atmosphere.*

1. The proposed expansion would create additional economic development opportunities by expanding operations at this site. The project complies with this goal.

b. *C.2: Support integrated, safe bicycle/trail networks to support recreation and connectivity of community assets and neighborhoods.*

1. The proposed expansion proposes bike path and sidewalk facilities on Newlins Mill and Tatamy Roads, providing multi-modal access for different road users. This complies with this goal.

4. The proposed trucking terminal expansion is either nonapplicable or negligible to the other goals.

Your plan is scheduled to be reviewed by the Planning Commission on Tuesday, August 12, 2025 at 7:00 p.m. in the Public Meeting Room of the Township Municipal Building located at 3 Weller Place, Lower Level, Palmer Township, PA 18045.

If you have any questions, please feel free to reach out.

Sincerely,

Craig Beavers

Craig S. Beavers, AICP Candidate
Director of Planning
Palmer Township, Northampton County

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 2215 Newlins Mill Road

Project Name: Werner Expansion

Submission Date: July 9, 2025

Plan Type: Preliminary Land Development and Lot Line Adjustment - Plan Dated June 24, 2025

Zoning District: IOC Industrial/Office/Commercial

Applicant's Name: Werner Enterprises, Inc.

Fire Commissioner / Palmer Municipal Fire Department Comments *(attach additional pages as needed)*

Comments related to fire hydrants or other fire prevention measures:

Approved

Comments related to emergency access, truck turning or other site considerations:

Approved

Comments related to Township Fire Prevention Ordinance or IFC Regulations:

No additional comments

Other Comments:

Signature: Stephen Gallagher Date: 8/5/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 2215 Newlins Mill Road

Project Name: Werner Expansion

Submission Date: July 9, 2025

Plan Type: Preliminary Land Development and Lot Line Adjustment - Plan Dated June 24, 2025

Zoning District: IOC Industrial/Office/Commercial

Applicant's Name: Werner Enterprises, Inc.

Palmer Township Police Department Comments

(attach additional pages as needed)

Comments related to traffic:

No Comments

Comments related to security or enforcement:

No Comments

Other Comments:

No Comments

Signature: Wayne D Sieg

Date: 07/21/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 2215 Newlins Mill Road

Project Name: Werner Expansion

Submission Date: July 9, 2025

Plan Type: Preliminary Land Development and Lot Line Adjustment - Plan Dated June 24, 2025

Zoning District: IOC Industrial/Office/Commercial

Applicant's Name: Werner Enterprises, Inc.

Department of Public Works, Parks, and Public Utility Operations Comments *(attach additional pages as needed)*

Comments related to sanitary sewer, storm sewer, and other relevant utilities:

NO COMMENT

Comments related to maintenance and operations of public improvements (roadways, utilities, signs, lighting, pavement parking, snow removal, leaf collection, etc.):

ALL ITEMS ADDRESSED

Comments related to maintenance and operations of public grounds and recreation (parks, open space, bike paths, athletic facilities, stormwater facilities, right-of-way areas, etc.):

NO COMMENT

Other Comments:

Signature: Scott Kistler Date: 07/10/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 2215 Newlins Mill Road

Project Name: Werner Expansion

Submission Date: July 9, 2025

Plan Type: Preliminary Land Development and Lot Line Adjustment - Plan Dated June 24, 2025

Zoning District: IOC Industrial/Office/Commercial

Applicant's Name: Werner Enterprises, Inc.

Department of Codes and Zoning Comments *(attach additional pages as needed)*

Comments related to zoning regulations (lot area, setbacks, permitted use, etc.):

Please see zoning comments in Township Engineer review.

Comments related to parking requirements or signage regulations (if applicable):

Please see zoning comments in Township Engineer review.

Comments related to other code provisions:

Other Comments:

Signature: James Raudenbush Date: 08/05/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 2215 Newlins Mill Road

Project Name: Werner Expansion

Submission Date: July 9, 2025

Plan Type: Preliminary Land Development and Lot Line Adjustment - Plan Dated June 24, 2025

Zoning District: IOC Industrial/Office/Commercial

Applicant's Name: Werner Enterprises, Inc.

Department of Public Services Comments *(attach additional pages as needed)*

Comments related to roadway improvements and related infrastructure:

No Comments

Comments related to lighting, signal, signage, and related infrastructure:

No Comments

Comments related to natural and environmental infrastructure:

No Comments

Other Comments:

No Comments

Signature: Phillip Godbout Date: 08/05/2025

PALMER TOWNSHIP
PLAN REVIEW COMMENT FORM

Project Information

Project Address: 2215 Newlins Mill Road

Project Name: Werner Expansion

Submission Date: July 9, 2025

Plan Type: Preliminary Land Development and Lot Line Adjustment - Plan Dated June 24, 2025

Zoning District: IOC Industrial/Office/Commercial

Applicant's Name: Werner Enterprises, Inc.

Director of Stormwater and MS4 Comments *(attach additional pages as needed)*

Comments related to stormwater management plan:

Refer to Township Engineer review comments.

Comments related to drainage or detention basins:

Refer to Township Engineer review comments.

Comments related to stormwater construction and E&S measures:

Refer to Township Engineer review comments.

Other Comments:

Signature: Matt Hemmerich Date: 8/7/25

Lehigh Valley Planning Commission

DR. CHRISTOPHER R. AMATO
Chair

CHRISTINA V. MORGAN
Vice Chair

ARMANDO MORITZ-CHAPELLIQUEN
Treasurer

BECKY A. BRADLEY, AICP
Executive Director

Planning for the Future of Lehigh and Northampton Counties at 615 Waterfront Drive, Suite 201, Allentown, PA 18102 ■ (610) 264-4544 ■ lvpc@lvpc.org ■ www.lvpc.org

August 16, 2024

Kent Baird, Manager
Palmer Township
3 Weller Place
Palmer, PA 18045

Re: Werner Enterprises Trailer Parking Expansion – Land Development
Palmer Township
Northampton County

Dear Mr. Baird:

The subject application proposes a lot consolidation of two existing parcels into one and the construction of a trailer parking lot expansion located at 2215 Newlins Mill Road (PINs K8-5-2 and K8-5-9). The new parcel will total 49.18 acres and expand parking spaces for Werner Enterprises Terminal.

The LVPC offers the following comments:

Background
According to the Palmer Township Zoning Map, the project parcel is zoned for Industrial/Office/Commercial (IOC). The existing use is not expected to change. Adjacent properties include other industrial uses, a nearby dairy farm and single-family residential.

Transportation
The proposed 10-foot-wide trail helps 'strengthen sidewalk, bike route and trail infrastructure' (*FutureLV: The Regional Plan,* of Policy 5.3). Extending this trail to Tatamy Road provides easier access to Raub's Farm Market next door and improves access to fresh produce. The LVPC encourages opportunities to extend this trail further east and connect to Palmer Bikeway to 'develop a mixed-transportation network' *FutureLV: The Regional Plan,* Policy 2.1).

Environment
Mapping provided by the Bureau of Topographic and Geologic Survey at the Pennsylvania Department of Conservation and Natural Resources indicates the extensive presence of karsts in the form of surface depressions on the site. The LVPC advises the applicant to ensure proper geotechnical testing prior to any land development, to 'minimize environmental impacts of development to protect the health, safety and welfare of the public' (*FutureLV: The Regional Plan,* Policy 3.2).

Sustainable Systems
The LVPC encourages the developer to consider opportunities for incorporating sustainable energy systems that reduce overhead operational costs and 'minimize environmental impacts of development' (*FutureLV: The Regional Plan,* Policy 3.1).

Municipalities, when considering subdivision/land developments, should reasonably attempt to be consistent with *FutureLV: The Regional Plan*, as required by the Pennsylvania Municipalities Planning Code (MPC) [Article 1§105, Article III§303, §304 & §306(a), Article VI§603(j)]. The LVPC review does not include an in-depth examination of plans relative to subdivision design standards or ordinance requirements since these items are covered in the municipal review.

Sincerely,

Joseph Dotta
Regional Planner

cc: Werner Enterprises Inc., Applicant; Benchmark Civil Engineering Services Inc., Project Engineer/Surveyor; Justin Coyle, Township Engineer.

ATTACHMENT 1

Act 167 Drainage Plan Review

August 16, 2024

Re: Werner Enterprises Trailer Parking Expansion
Plans Dated July 16, 2024
Palmer Township
Northampton County

The proposed storm drainage concept presented in the plans dated July 16, 2024 and storm drainage calculations dated July 15, 2024 has been reviewed for consistency with the *Bushkill Creek Watershed Act 167 Storm Water Management Ordinance*, May 1992. A checklist of the Act 167 review items is attached for your information. As indicated on the checklist, each item of the Drainage Plan has been reviewed for consistency with the Act 167 Ordinance. A brief narrative of the review findings is as follows:

> The proposed development is located within drainage district 106 of the Bushkill Creek Watershed as delineated in the Act 167 Plan. As such, the runoff control criteria for the site are a 30% Release Rate for the 2-year storm and a 100% Release Rate for the 10-, 25- and 100-year return period storms. Based on review of the plans and calculations, the following deficiencies are noted. All the existing drainage area to headwall 4100 that discharges to underground basin 2 needs to be included in the drainage design. The proposed infiltration basin grading creates a closed depression along Tatamy Road that could result in a concentrated discharge to the road. Further, a portion of the drainage area to existing headwall 4101 will now discharge to catch basin 106 and likely increase peak runoff offsite. Therefore, the Drainage Plan has been found to be inconsistent with the Act 167 requirements.

Note that only those details of the Drainage Plan included on the checklist have been covered by this review. Therefore, notable portions of the Drainage Plan not reviewed include any aspect of the post-construction storm water management plan concerning water quality, the details and design of any proposed water quality BMPs, the Erosion and Sedimentation Control Plan and the details of the runoff collection system (piping). These items are reviewed by the municipal engineer and/or others, as applicable.

Once the outlined issues have been addressed, the revised plans and calculations will need to be resubmitted to our office. Please call with any questions regarding these comments.

Sincerely yours,

Geoffrey A. Reese, PE
Master Planner and Engineer

Denjam Khadka
Senior Civil/Environmental Engineer

Attachment

LVPC ACT 167 REVIEW CHECKLIST

Development Name: Werner Enterprises Trailer Parking Expansion
Municipality: Palmer Township
Date: August 16, 2024

Watershed: Bushkill Creek
Reviewers: Denjam Khadka
Checked by: Geoffrey A. Reese, PE

Ordinance Reference	Item	Consistency w/Ordinance Yes	No	N/A	Comment
301.A-G.	General storm water management requirements		X		See Attachment 1 for details.
H.	Consideration of volume controls	X			

302.A,B. Applicable Storm Water Management Provisions

Subarea(s)	106			
Criteria	30% / 100% RR			

Criteria Key: RR = release rate; PND = provisional no detention

303.A.	Design consistency with applicable provisions from 302.A. and B		X		See Attachment 1 for details.
B.	Mapping of Storm Water Management District Boundaries	X			
C.	Downstream capacity analysis			X	
D.	Multiple discharge points within a single subarea			X	
E,F.	Multiple discharge points within multiple subareas			X	
G.	Documentation of "no harm" downstream			X	
H.	Regional or subregional detention analysis			X	
I.	Capacity improvements analysis			X	
304.A.	Computation method (rational or soil-cover-complex)	X			Soil-cover-complex method used.
B.	Verification of detention design by routing	X			
	Check rational method detention volume vs. TR55			X	
C.	Minimum detention pond freeboard specifications	X			
D.	Soil-cover-complex method design rainfall	X			
E.	Rainfall intensities for rational method			X	
F.	Curve Numbers for soil-cover-complex method	X			
G.	Runoff coefficients for the rational method			X	
H.	Manning equation to calculate watercourse capacity			X	
403.	Drainage Plan Contents		X		See Attachment 1 for details.

Craig Beavers

From: Molly Wood <mwood@lantabus-pa.gov>
Sent: Wednesday, July 31, 2024 10:32 AM
To: Craig Beavers
Cc: ajordan@lantabus-pa.gov
Subject: LANTA Comments for 2215 Newlins Mill Road – 7.31.24

Caution! This message was sent from outside your organization. Report

Craig,

The Lehigh and Northampton Transportation Authority (LANTA) has reviewed the submitted Site Plan for the proposed project located at 2215 Newlins Mill Road in Palmer Township, and offers the following comments.

LANTA provides fixed-route public transportation in the vicinity of the project site, with two routes serving on Newlins Mill Road before serving a southbound and northbound bus stop pairing at the intersection of McFadden Road and Newlins Mill Road, approximately .30 miles west of the main entrance driveway of the project site.

While LANTA has no plans at this time to serve directly along the property frontage of the project site, LANTA appreciates the efforts made to include new sidewalks along the full property length on Newlins Mill Road, matching to the existing sidewalk line of the adjacent property to the west, to the intersection of Newlins Mill Road and Tatamy Road to the east. LANTA also commends the inclusion of a proposed 10' wide multi-use trail along the property frontage on Tatamy Road. This new pedestrian network will allow pedestrians greater access to the nearby transit network, and will set the foundation to consider additional bus stops along the property frontage if service alignment changes in the future.

Given the large size of the project site and location of the Training & Maintenance Facility in relation to Newlins Mill Road and Tatamy Road, respectively, LANTA recommends additional pedestrian connectivity from the proposed new sidewalk on Newlins Mill Road along the entrance driveways to connect with the main entrance of the facility.

LANTA recommends follow up with Molly Wood at mwood@lantabus-pa.gov to discuss any additional LANTA service details.

Thank you,
Molly

From: Craig Beavers <CBeavers@palmertwp.com>
Sent: Friday, July 19, 2024 9:34 AM
To: Molly Wood <mwood@lantabus-pa.gov>
Cc: Robert Williams <rwilliams@palmertwp.com>; Brenda DeGerolamo <BDeGerolamo@PalmerTwp.com>; Justine Caiazzo-Strouse <JCaiazzo-Strouse@palmertwp.com>; Kent Baird <KBaird@palmertwp.com>; woetinger@grimlaw.com; jcoyle@carrollengineering.com; Daniel Wilusz <dwilusz@carrollengineering.com>
Subject: Request for Review: 2215 Newlins Mill Road – Parking Lot and LLA (Werner)

Warning! This email has been received from an external domain. Do not click any links or open any attachments unless you are expecting such a message with an attachment from this sender. Original Message:
Good morning Molly,

Palmer Township respectfully requests your review of the Preliminary/Final Plan materials submitted for the above project. This is an application for a lot consolidation and parking lot expansion at the Werner Enterprise Facility. Plans also include sidewalks and bike paths.

The SharePoint link to the plan is provided below.

2024-07-19 PLD and LLA Submission

We would appreciate you sharing any comments you may have for this project. Ideally, we would appreciate any comments prior to August 2nd.

If you have any questions, or need any additional information, please let us know.

Thank you in advance,
Craig

Craig S. Beavers, CFM, CZO (he/him)
Assistant Director of Planning
Department of Planning | Palmer Township
3 Weller Place
Palmer, PA, 18045
+1 (610) 253-7191 x1122
CBeavers@palmertwp.com

American Planning Association
Pennsylvania Chapter
Lehigh Valley-Berks Section

This message contains confidential information and is intended only for the intended recipients. If you are not an intended recipient you should not disseminate, distribute, or copy this e-m
and delete this e-mail from your system.

Please consider the environment before printing this e-mail.

PRELIMINARY/FINAL LAND DEVELOPMENT PLANS

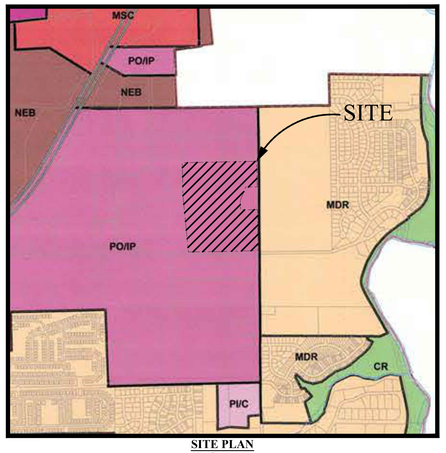
WERNER ENTERPRISES INC.

TRAILER PARKING EXPANSION

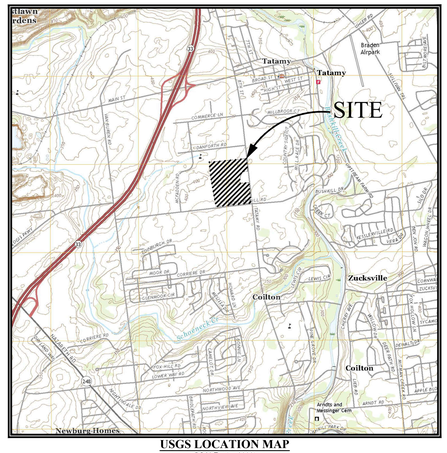
2201 & 2215 NEWLINS MILL ROAD
PALMER TOWNSHIP,
NORTHAMPTON COUNTY, PENNSYLVANIA

DRAWING INDEX

SHEET #	TITLE	LAST REV. DATE
1 OF 21**	COVER SHEET	NO REVISIONS
2 OF 21**	NOTES SHEET	NO REVISIONS
3 OF 21	EXISTING FEATURES PLAN	NO REVISIONS
4 OF 21**	LOT CONSOLIDATION PLAN	NO REVISIONS
5 OF 21	SETBACK PLAN	NO REVISIONS
6 OF 21**	SITE PLAN	NO REVISIONS
7 OF 21	GRADING PLAN	NO REVISIONS
8 OF 21	UTILITY PLAN	NO REVISIONS
9 OF 21	LANDSCAPE PLAN	NO REVISIONS
10 OF 21	SITE LIGHTING PLAN	NO REVISIONS
11 OF 21	TRUCK TURNING PLAN	NO REVISIONS
12 OF 21	EROSION CONTROL PLAN	NO REVISIONS
13 OF 21	EROSION CONTROL NOTES PLAN	NO REVISIONS
14 OF 21	EROSION CONTROL DETAILS PLAN	NO REVISIONS
15 OF 21	EROSION CONTROL DETAILS PLAN	NO REVISIONS
16 OF 21	CONSTRUCTION DETAILS PLAN	NO REVISIONS
17 OF 21	CONSTRUCTION DETAILS PLAN	NO REVISIONS
18 OF 21	UTILITY PROFILES PLAN	NO REVISIONS
19 OF 21	PRE-DEVELOPMENT DRAINAGE AREA PLAN	NO REVISIONS
20 OF 21	POST-DEVELOPMENT DRAINAGE AREA PLAN	NO REVISIONS
21 OF 21	POST-DEVELOPMENT INLET DRAINAGE AREA PLAN	NO REVISIONS
	SEE ALSO PLANS	
1 OF 2**	POST CONSTRUCTION STORMWATER PLAN	NO REVISIONS
2 OF 2**	POST CONSTRUCTION STORMWATER NOTES AND DETAILS PLAN	NO REVISIONS



SITE PLAN
SCALE: 1" = 1,000'
PALMER TOWNSHIP ZONING MAP



USGS LOCATION MAP
SCALE: 1" = 2000'
NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

GENERAL LEGEND

EXISTING		PROPOSED
	STREET ADDRESS EDGE OF WATER	
	SANITARY MANHOLE & CLEANOUT	
SAN	SANITARY SEWER	SAN
W	WATER MAIN	W
OE	OVERHEAD UTILITIES	OE
E	UNDERGROUND UTILITIES	E
SD	STORM SEWER	
GAS	GAS LINE	GAS
	TREE ROW	
	WATER LINE FEATURES	
	STORM INLETS	
	GAS VALVES	
	STORM SEWER ENDWALL	
	FLARED END SECTION	
	STORM MANHOLE	
	EASEMENT	
	PROPERTY LINE	
	ADJONER PROPERTY LINE	
	PENNDOT RIGHT-OF-WAY	
	EDGE OF PAVEMENT	
	CURBING	
	PAVEMENT	
	MUNICIPAL BOUNDARY	
	ZONING BOUNDARY PHASE LINE	
	MATCH LINE	
	SOIL BOUNDARY	
	WETLANDS	
BRL	BUILDING RESTRICTION LINE	
	BUFFER YARD	
	LIMITS OF CONSTRUCTION	
977.24	SPOT GRADE	1000.00 / 1000.00
	BUILDING	
	CONCRETE SIDEWALK	
	FOOTCANDLE INTENSITY	1.0
	EXTERIOR LIGHT	
	UTILITY POLE	
	TRANSFORMER	
	SIGNS	
	BENCHMARK	
	IRON PIN & CONC. MON.	
250	CONTOUR LINE	1250
	GUIDERAIL	
	FENCE	
	DRAINAGE STUDY POINTS	
207	DRAINAGE AREA DELINEATION	201
	DRAINAGE FLOW PATH	
	WATERSHED BOUNDARY	
	TREE LOCATION	
	TREE PROTECTION FENCE	
	SOIL TEST PIT	
AT-5	AIR TRACK SOIL TEST LOCATION	
TW-1	TEST WELL	
	OBSERVATION HOLES	B-10
	TEST PITS	TP-1
		SD-1
	SURFACE DEPRESSION	
TBR	TO BE REMOVED	
TBRR	TO BE REMOVED & REPLACED	

SLANTED TEXT DENOTES EXISTING FEATURES
STRAIGHT TEXT DENOTES PROPOSED FEATURES

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:
WERNER ENTERPRISES INC.
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:

Benchmark
CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:
COVER SHEET

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 1 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE:.	DWG. FILE: 835001	

MUNICIPAL ENGINEER CERTIFICATION:
MUNICIPAL ENGINEER, ON THIS DATE, (SIGNATURE DATE), HAS REVIEWED AND HEREBY CERTIFIES THAT THE STORMWATER MANAGEMENT SITE PLAN APPEARS TO MEET ALL DESIGN STANDARDS AND CRITERIA OF THE STORMWATER MANAGEMENT ORDINANCE. STRICT COMPLIANCE WITH THE STORMWATER MANAGEMENT ORDINANCE, HOWEVER, IS THE RESPONSIBILITY OF THE APPLICANT.

MUNICIPAL ENGINEER _____ DATE _____

STORM SEWER OWNER CERTIFICATION:
"(APPLICANT OR OWNER), ON THIS DATE, (SIGNATURE DATE), ACKNOWLEDGES THAT STORMWATER MANAGEMENT AND CONVEYANCE FACILITIES ARE DESIGNED AS PERMANENT FACILITIES AND MAY NOT BE MODIFIED, REMOVED, FILLED, LANDSCAPED, OR OTHERWISE ALTERED WITHOUT WRITTEN APPROVAL OF PALMER TOWNSHIP."

OWNER _____ DATE _____

ENGINEER CERTIFICATION:
"(QUALIFIED PROFESSIONAL) RESPONSIBLE FOR PROJECT DESIGN, ON THIS DATE, (SIGNATURE DATE), CERTIFIES THAT THIS PLAN COMPLIES WITH THE ORDINANCES, PROVISIONS, AND REGULATIONS OF THE MUNICIPALITY AND ANY OTHER APPLICABLE ENTITIES." A SEAL WITH DATED SIGNATURE SHALL ACCOMPANY THIS STATEMENT.

PETER A. TERRY, P.E. _____
ENGINEER DATE _____

CALL BEFORE YOU DIG
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
1-800-242-1776
1-CALL NO. 20241731212 DATE: 06/21/24
811 Know what's below. Call before you dig.

GENERAL NOTES

1. TOPOGRAPHIC INFORMATION SHOWN IS BASED ON A FIELD SURVEY.

2. TOPOGRAPHIC INFORMATION CONCERNING UNDERGROUND UTILITIES HAVE BEEN COMPILED FROM OBSERVABLE FIELD EVIDENCE AND EXISTING MUNICIPAL DATA. PRIOR TO ANY EXCAVATIONS, UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY CALLING THE PA. 1 CALL SYSTEM : 1-800-242-1776

3. SUBSURFACE, ENVIRONMENTAL, GEOLOGICAL, AND ARCHEOLOGICAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.

4. THIS PARCEL IS SUBJECT TO ANY AND ALL RECORDED (AND POSSIBLY UNRECORDED) EASEMENTS, RESTRICTIONS, AND COVENANTS.

5. THESE PLANS WERE PREPARED IN CONFORMANCE WITH THE CURRENT STANDARDS, SPECIFICATIONS AND ORDINANCES OF PALMER TOWNSHIP

6. IN ACCORDANCE WITH PALMER TOWNSHIP ZONING ORDINANCE SECTION 190-1804, A TRIANGULAR AREA SHALL BE GRADED AND SHALL BE KEPT FREE OF SIGHT OBSTRUCTIONS BETWEEN THE GROUND LEVEL AND A HEIGHT OF 10 FEET ABOVE THE CENTERLINE GRADE OF THE INTERSECTING STREETS, INCLUDING STRUCTURES, NON-TRANSPARENT FENCES, VEGETATION AND SIGNS (BUT NOT INCLUDING: MOWED GRASS, POSTS OF OFFICIAL SIGNS WHICH MUST BE LOCATED IN THE SIGHT TRIANGLE BECAUSE OF THEIR FUNCTION, OR TRUNKS OF EXISTING DECIDUOUS TREES WHOSE BRANCHES ARE KEPT CLEAR OF THE SIGHT TRIANGLE).

7. ALL MISSING PROPERTY CORNERS SHALL BE SET PRIOR TO FINAL SITE CONSTRUCTION.

8. FROM A FIELD INVESTIGATION AND FROM REVIEWING BOTH THE SOILS INFORMATION AND THE NATIONAL WETLANDS INVENTORY MAPS; THERE DOES NOT APPEAR TO BE ANY WETLANDS PRESENT ON SITE.

9. IN ACCORDANCE WITH SECTION 165-62.G.(2) OF THE PALMER TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE; THE APPLICANT AGREES TO CONFINE THE CONSTRUCTION AREA OF LAND; FOR THEIR PORTION OF THE RECREATION FEE WHICH IS REQUIRED.

10. BOUNDARY INFORMATION SHOWN ON THIS PLAN HAS BEEN COMPILED FROM INFORMATION BASED ON RECORDED DEEDS ON FILE AT THE NORTHAMPTON COUNTY COURTHOUSE.

11. ALL CONSTRUCTION OF STORM SEWERAGE SYSTEMS AND ROADS ARE TO BE IN ACCORDANCE WITH THE TOWNSHIP SPECIFICATIONS AND STANDARDS FOR CONSTRUCTION.

12. NO ROCK OUT CROPS, STONE FIELDS AND/OR SINKHOLES EXIST ON THIS SITE.

13. BUILDINGS ARE TO BE SPRINKLED.

14. A KNOX BOX IS REQUIRED.

15. THE PROPOSED BUILDING EXTERIOR IS TO BE FINISHED WITH MASONRY OR CONCRETE.

16. ALL CONSTRUCTION OF STORM SEWERAGE SYSTEMS AND ROADS ARE TO BE IN ACCORDANCE WITH THE TOWNSHIP SPECIFICATIONS AND STANDARDS FOR CONSTRUCTION. THE DETAILS ARE A MINIMUM STANDARD FOR ALL CONSTRUCTION WITHIN THE TOWNSHIP, AND NOTWITHSTANDING THE PROVISIONS OF THE TOWNSHIPS STANDARD CONSTRUCTION DETAILS ON THE PLANS CONSTITUTES AN ACCEPTANCE OF AND ENDORSEMENT OF THOSE STANDARDS BY THE DEVELOPER AN THE DEVELOPERS ENGINEER.

17. NOTICE – PENNDOT HIGHWAY OCCUPANCY PERMIT(S) FOR PROPOSED UTILITY CONNECTIONS WITHIN THE TATAMY ROAD PENNDOT RIGHT-OF-WAY IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (P.L. 1242, NO. 428), KNOWN AS THE "STATE HIGHWAY LAW." BEFORE DRIVEWAY ACCESS TO A STATE HIGHWAY OR PERMITTING ACCESS TO THE STATE HIGHWAY SHALL BE ONLY AS AUTHORIZED BY A PENNDOT HIGHWAY OCCUPANCY PERMIT. NO BUILDING PERMITS, ZONING PERMITS OR CERTIFICATES OF OCCUPANCY SHALL BE ISSUED FOR ANY LOT UNTIL SUCH TIME AS A PENNDOT HIGHWAY OCCUPANCY PERMIT HAS BEEN SECURED AND FILED WITH THE TOWNSHIP. TOWNSHIP SHALL NOT BE HELD LIABLE FOR DAMAGES TO PERSONS OR PROPERTY ARISING OUT OF ISSUANCE OR DENIAL OF A HIGHWAY OCCUPANCY PERMIT BY THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, PURSUANT TO SECTION 508 OF THE MUNICIPALITIES PLANNING CODE.

18. PROPOSED SIGNS SHOWN ON THIS PLAN ARE FOR PLANNING PURPOSES ONLY. THE APPLICANT IS TO SUBMIT TO THE MUNICIPAL ZONING OFFICE A SEPARATE PROGRAM MANUAL FOR SIGN INSTALLATION.

19. ANY PROPOSED FENCES ARE TO BE SETBACK A MINIMUM OF 0.5 FEET FROM THE PROPERTY LINE.

20. NO BUILDING, STRUCTURE, GRADE, PLANTINGS OR OTHER OBSTRUCTIONS BETWEEN GRADE & 10 FEET HIGH ABOVE THE INTERSECTION OF CENTERLINES OF THE STREETS SHALL BE PLACED WITHIN THE REQUIRED SIGHT TRIANGLES.

21. THERE IS NO REMAINING LAND ASSOCIATED WITH THIS PLAN.

22. DESIGNATED OPEN SPACE IS NOT PROPOSED.

23. THE MUNICIPAL BOUNDARIES AS SHOWN ON THE PLAN(S) HAVE BEEN OBTAINED FROM THE PALMER TOWNSHIP ZONING MAP.

24. THE PROJECT SHALL CONFORM TO SECTION 190-983.D.8. OF THE PALMER TOWNSHIP ZONING ORDINANCE.

GEOTECHNICAL RECOMMENDATIONS:

THE FOLLOWING INFORMATION WAS TAKEN FROM A REPORT ENTITLED "WERNER ENTERPRISES LEHIGH VALLEY TRAINING AND MAINTENANCE FACILITY" DATED FEBRUARY 2016, AS PREPARED BY GEO-TECHNOLOGY ASSOCIATES INC. (GTA). SEE THE REPORT FOR MORE INFORMATION.

CONCLUSIONS AND RECOMMENDATIONS

BASED ON OUR EVALUATION, IT IS OUR OPINION THAT DEVELOPMENT OF THIS SITE WITH THE PROPOSED TRAINING AND MAINTENANCE FACILITY IS FEASIBLE, GIVEN THAT THE GEOTECHNICAL RECOMMENDATIONS ARE FOLLOWED, AND THAT THE STANDARD LEVEL OF CARE IS MAINTAINED DURING CONSTRUCTION. GEOTECHNICAL ISSUES RELATED TO SITE DEVELOPMENT INCLUDE THE FOLLOWING:

- LOCALIZED EXISTING FILL MATERIALS WITHIN PAVEMENT AREAS ALONG THE EASTERN PORTION OF THE SITE.
- LOCALIZED SOILS THAT WILL REQUIRE OVER-EXCAVATION BELOW FOUNDATION ELEMENTS TO CONTROL TOTAL AND DIFFERENTIAL SETTLEMENT.
- FINE-GRAINED, MOISTURE SENSITIVE SOILS THAT MAY REQUIRE MOISTURE CONDITIONING PRIOR TO COMPACTION AND ADDITIONAL CARE DURING PREPARATION OF SUBGRADE, STONE SLABS, PAVEMENT, AND FOUNDATIONS.
- VARIABLE BEARING MATERIALS (I.E. ROCK AND SOIL) AT THE FOOTING LOCATIONS THAT MAY REQUIRE EXCAVATION OF SOILS AND/OR ROCK TO CREATE A UNIFORM BEARING SURFACE.
- DIFFICULT EXCAVATION CONDITIONS ARE ANTICIPATED WITHIN THE UNDULATING TOP OF ROCK SURFACE WITH PINNACLES, SOIL FILLED TROUGHS, AND LARGE BOULDERS.
- THE POTENTIAL TO ENCOUNTER KARST RELATED SOLUTION FEATURES THAT WILL REQUIRE STABILIZATION. THE LIMITED EXPLORATION PROGRAM AT THIS SITE DOES NOT PERMIT DESIGN AND CONSTRUCTION MEASURES TO REDUCE THE POTENTIAL FOR INDUCING SINKHOLE DEVELOPMENT.

A DISCUSSION OF THESE ISSUES AND GEOTECHNICAL RECOMMENDATIONS RELATED TO THE DESIGN AND CONSTRUCTION OF THE PROPOSED BUILDING AND ASSOCIATED INFRASTRUCTURE ARE INCLUDED IN THE FOLLOWING SECTIONS.

SITE PREPARATIONS

CLEARING, GRUBBING, THE STRIPPING OF ORGANIC SURFACE SOILS, AND THE REMOVAL OF UNSUITABLE MATERIALS SHOULD BE PERFORMED IN ADVANCE OF CONSTRUCTION IN AREAS TO BE FILLED OR STRUCTURAL AREAS. WE RECOMMEND AN AVERAGE STRIPPING THICKNESS OF 12 INCHES WITH A MINIMUM STRIPPING THICKNESS OF 6 INCHES. THE ACTUAL STRIPPING THICKNESS WILL BE DEPENDENT ON TOPSOIL AND VEGETATION DEVELOPMENT, SOIL MOISTURE, CONSTRUCTION TRAFFIC DISTURBANCE, AND CONSTRUCTION TIMING. A THICKER DEPTH OF STRIPPING SHOULD BE ANTICIPATED WITHIN THE LOW LYING VALLEYS AND IN AREAS WHERE SOIL WITH HIGHER MOISTURE CONTENTS ARE PRESENT AT THE SURFACE. IT SHOULD BE NOTED THAT UP TO 4 FT OF EXISTING FILL WAS ENCOUNTERED WITHIN THE EASTERN PORTION OF THE SITE. ADDITIONAL STRIPPING MAY BE REQUIRED IN THESE AREAS AND SHOULD BE EVALUATED FOR SATISFACTORY STABILITY PRIOR TO NEW FILL PLACEMENT. DEPENDING ON THE RESULTS OF THESE EVALUATIONS, FULL OR PARTIAL REMOVAL OF THE FILL MATERIALS MAY BE REQUIRED.

TOP-DOWN STRIPPING AREAS TO RECEIVE FILL SHOULD BE PROOF-ROLLED WITH A LOADED TANDEM-AXLE DUMP TRUCK OR MINIMUM 10-TON ROLLER UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE. PROOF-ROLLING IS INTENDED TO ASSIST IN DETECTING SOFT, YIELDING SOILS THAT MAY REQUIRE REMEDIATION BASED ON MOISTURE SENSITIVE AND WILL HAVE LOW STRENGTH AND STABILITY IF DISTURBED IN THE PRESENCE OF WATER, EQUIPMENT, CONSTRUCTION TRAFFIC, AND/OR FREEZE-THAW CONDITIONS. DURING CONSTRUCTION EQUIPMENT, UNDERCUTTING OF THE SUBGRADE SOILS WILL LIKELY BE REQUIRED PRIOR TO FILL PLACEMENT BASED ON THE SUBGRADE EXPOSURES. UNDERCUTTING OR STABILIZATION OF THE UPPER 2 FEET OF SOFT SURFICIAL SOILS WITHIN FILL AREAS AND AREAS TO RECEIVE STRUCTURAL LOADS SHOULD BE ANTICIPATED. DEPENDING ON OVER-EXCAVATIONS, THE USE OF GEOGRID REINFORCEMENT, OR CHEMICAL STABILIZATION USING CEMENT SHOULD ALSO BE ANTICIPATED TO STABILIZE THE SOFT SUBGRADE SOILS LOCATED WITHIN THE CLOSED DEPRESSION AREA.

DRYING OF THE FINE-GRAINED SURFACE SOILS WILL ONLY BE FEASIBLE DURING THE WARM, DRY SEASON OF THE YEAR AND WILL BE WEATHER DEPENDENT. MECHANICAL METHODS OF DRYING TO ADEQUATELY DRY THE SOILS TO A MOISTURE CONTENT THAT IS ACCEPTABLE FOR COMPACTION AMONG EXISTING STRUCTURES, WILL BE VERY DIFFICULT AND INEFFICIENT FROM LATE FALL THROUGH EARLY SPRING. ALTERNATIVELY, DRYING USING LIME OR CEMENT CAN BE EFFECTIVE TO ADEQUATELY STABILIZE SUBGRADE SOILS FOR SUBSEQUENT PAVEMENT AND FILL. PLACEMENT OF CRUSHED ROCK MAY ALSO BE USED TO STABILIZE SOFT AREAS WITHIN BUILDING AND PAVEMENT AREAS.

ROCK EXCAVATION

FOR THE RESIDUAL SOILS CAN BE EXCAVATED WITH TRADITIONAL EARTHMOVING EQUIPMENT. HOWEVER, ROCK EXCAVATION MAY BE REQUIRED FOR THIS PROJECT, PARTICULARLY WITHIN THE UNDERGROUND STORMWATER MANAGEMENT AREAS. IN ADDITION, THE ROCK IS EXPECTED TO BE HARD AND DIFFICULT EXCAVATION WITH RIPPING AND BLASTING MAY BE REQUIRED AND ANTICIPATED OVER THE FORESEEABLE LEVELS OF ROCK EXCAVATION. THE USE OF A HYDRAULIC HOE-RAMMING OR BLASTING WILL BE REQUIRED FOR EXCAVATION AND REMOVAL OF BULK EXCAVATION SHOULD BE PERFORMED USING *heavy-duty construction* EQUIPMENT CAPABLE OF RIPPING AND REMOVING WEATHERED ROCK AND WEATHERED ROCK BOULDERS WITHIN THE SITE.

THE EXPLORATION LOGS MAY BE USED TO ESTIMATE ROCK EXCAVATION BASED ON THE REFUSAL DEPTHS; HOWEVER, REFUSAL SHOULD NOT BE CONSIDERED TO BE A DEFINITE INDICATOR OF ROCK EXCAVATION BY MEANS OF MACHINE EXCAVATION. BECAUSE OF THE GEOLOGIC FACTORS AFFECTING THE DIFFICULTY OF EXCAVATION INCLUDE ROCK HARDNESS, WEATHERING, FRACTURE, FOLIATION, JOINT AND FRACTURE SPACING AND DEGREE OF WEATHERING. THE EASE OF EXCAVATION WILL ALSO BE GOVERNED BY THE TYPE OF EXCAVATION EQUIPMENT UTILIZED AND THE EXCAVATION TECHNIQUE USED. BY MEANS OF EXCAVATION TO ITS FULL POTENTIAL. ROCK EXCAVATION IS EXPECTED TO VARY DUE TO VARIATION IN GEOLOGIC FACTORS AND EXCAVATION POINTS. FOR THIS REASON, WE RECOMMEND PROSPECTIVE EARTHWORK CONTRACTORS BE PROVIDED THE OPPORTUNITY TO PERFORM THEIR OWN EXCAVATION DRILLING TO FURTHER DELINEATE ROCK DEPTHS.

CARE SHOULD BE EXERCISED DURING BLASTING AS OVERBREAK BELOW FOOTING SUBGRADE WILL REQUIRE REMOVAL AND REPLACEMENT WITH COMPACTED FILL OR LEAN CONCRETE. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR ENSURING THAT THE BLASTING PROGRAM MINIMIZES OVERBREAK.

BLASTING MAY CREATE THE POTENTIAL FOR INDUCING LARGER VOIDS OR FRACTURES WITHIN THE UNDERLYING BEDROCK MASS, WHICH CAN INCREASE THE RISK FOR SINKHOLE DEVELOPMENT. IF BLASTING IS UTILIZED FOR ROCK FRACTURING AND REMOVAL, IT SHOULD BE CAREFULLY CONTROLLED WITHIN ABOUT TWO FEET OF FINISHED GRADE IN AN EFFORT TO REDUCE THE POTENTIAL FOR CREATING LARGER FRACTURES AND OVER BLASTING, WHICH COULD REQUIRE ADDITIONAL BLASTING, BACKFILLING TO PLANNED DESIGN GRADES WITH DENSE-GRADED CRUSHED STONE. THIS WORK SHOULD BE PERFORMED BY A CONTRACTOR EXPERIENCED IN BLASTING TECHNIQUES THAT CAN SHOW A HISTORY OF SUCCESSFUL PERFORMANCE ON SIMILAR PROJECTS IN CARBONATE GEOLOGY.

IF BLASTING IS PERFORMED, WE RECOMMEND THAT IT BE COMPLETED PRIOR TO STARTING BUILDING CONSTRUCTION TO MINIMIZE THE POTENTIAL FOR FLYING SHOT ROCK AND THE POSSIBILITY OF DAMAGING WORK IN PROGRESS. VIBRATIONS SHOULD BE MONITORED TO EVALUATE THE POTENTIAL FOR INDUCING SINKHOLES OR DAMAGE TO ADJACENT STRUCTURES AND UTILITIES. IT SHOULD BE NOTED THAT BLASTING VIBRATIONS CAN HAVE DETRIMENTAL EFFECTS ON FRESHLY PLACED CONCRETE DEPENDING ON TIMING, DISTANCE, AND BLAST DESIGN. THEREFORE, GTA RECOMMENDS A PRECONSTRUCTION MEETING TO BE HELD IN ADVANCE OF ANY BUILDING CONSTRUCTION TO REVIEW THE SEQUENCE OF CONSTRUCTION AND THE BLASTING DESIGN.

FOR CONTRACTUAL PURPOSES, WE RECOMMEND THAT YOUR AGREEMENT INCLUDE A CLEAR DEFINITION OF ROCK SO THAT THE PROJECT IS BID AS "UNCLASSIFIED". AN EXAMPLE DEFINITION IS PRESENTED BELOW:

> ROCK IS DEFINED AS MASSIVE BEDROCK WHICH CANNOT BE DISLODGED BY A LARGE CATERPILLAR TRACTOR, OR EQUIVALENT, EQUIPPED WITH A SINGLE-SHANK RIPPING ATTACHMENT, OR BY MEANS OF A CHOCK-BLOCKED EXCAVATOR, OR EQUIVALENT, WITHOUT THE USE OF HOE RAMS OR OTHER BREAKING TECHNIQUES. BOULDERS OR MASSES OF ROCK EXCEEDING 1 CUBIC YARD IN VOLUME SHALL ALSO BE CONSIDERED ROCK EXCAVATION. THIS CLASSIFICATION DOES NOT INCLUDE MATERIALS SUCH AS LOOSE ROCK, CONCRETE OR OTHER MATERIALS THAT CAN BE REMOVED BY MEANS OTHER THAN BREAKING BY HOE RAMS, ETC., BUT WHICH FOR REASONS OF ECONOMY IN EXCAVATING THE CONTRACTOR CHOOSES TO REMOVE BY OTHER METHODS.

REFER TO THE EXPLORATION LOGS AND EXPLORATION SUMMARY TABLE INCLUDED IN APPENDIX B FOR ADDITIONAL INFORMATION REGARDING ESTIMATED DEPTHS OF ROCK.

STRUCTURAL FILL AND BACKFILL

EFFICIENT USE OF ON-SITE MATERIALS WILL INCLUDE EXCAVATED SOIL AND ROCK FOR USE AS COMPACTED STRUCTURAL FILL AND BACKFILL. THESE MATERIALS WILL HAVE DIFFERENT ENGINEERING CHARACTERISTICS IN THE EXCAVATION, PLACEMENT, AND COMPACTION, WHICH ARE DETAILED IN THE FOLLOWING SECTIONS.

PRIOR TO PLACEMENT OF ANY COMPACTED STRUCTURAL FILL, THE SUBGRADE AREAS SHOULD BE PREPARED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE SITE PREPARATIONS SECTION OF THIS REPORT.

ROCK FILLS

IN ORDER TO EFFICIENTLY REUSE THE EXCAVATED ROCK MATERIALS IN FILLS, THE BLASTING PROGRAM SHOULD BE DESIGNED TO ADEQUATELY BREAK THE ROCK INTO A USABLE GRADATION. BEDROCK THAT IS EXCAVATED BY RIPPING OR BLASTING MAY NOT BREAK DOWN INTO PARTICLE SIZES SUITABLE FOR RE-USE WITHOUT FURTHER PROCESSING. THE FINAL PARTICLE SIZE WILL VARY DEPENDING ON THE BEDDING CHARACTERISTICS AND TYPE OF BEDROCK ENCOUNTERED, AS WELL AS THE REMOVAL METHOD USED BY THE CONTRACTOR. ULTIMATELY, MECHANICAL CRUSHING MAY BE NECESSARY TO PRODUCE USABLE MATERIAL FOR USE IN FILLS. FOR USE IN SPECIALIZED AREAS SUCH AS GRANULAR FILLS BEHIND RETAINING WALLS, OR AS BASE COURSES BELOW PAVEMENT AND SLABS, ADDITIONAL PROCESSING, SCREENING, AND BLENDING MAY BE REQUIRED. IT IS EXPECTED THAT MOST OF THE EXCAVATED ROCK WILL BE SUITABLE FOR THESE PURPOSES.

CARE SHOULD BE TAKEN DURING ROCK EXCAVATION AND PROCESSING TO DEVELOP STRUCTURAL FILL HAVING A WELL-GRADED MIXTURE OF ROCK FRAGMENTS AND SOIL TO LIMIT VOIDS WITHIN THE MATRIX. THE MAXIMUM PARTICLE SIZE IN ROCK FILLS SHOULD GENERALLY BE LIMITED TO 18 INCHES. WHERE ROCK FILL IS USED, IT WILL BE CRITICAL TO PROVIDE A SUITABLE GRADED PARTICLE FILTER OR A SEPARATION BARRIER TO PREVENT ADJACENT NATURAL SOILS OR SOIL FILL MATERIALS FROM MIGRATING INTO THE ROCK FILL. THEREFORE, CREATING A SUITABLE ROCK FILL GRADATION BY BLENDING WITH SOIL OR CHOKING THE ROCK FILL WITH PROGRESSIVELY FINER AGGREGATE SIZE WILL BE NECESSARY.

BASED ON INDUSTRY PRACTICE AND OUR EXPERIENCE WITH ROCK FILL, NUCLEAR DENSITY TESTING CANNOT BE USED TO EVALUATE COMPACTION OF ROCK FILL MATERIAL. THEREFORE, THE EVALUATION OF ADEQUATE COMPACTION SHOULD INCLUDE VISUAL OBSERVATIONS OF LIFT THICKNESS, GRADATION, MOISTURE OF THE MATERIALS, COMPACTIVE EFFORT, AND NON-MOVEMENT UNDER COMPACTION EQUIPMENT AND PROOF-ROLLING. THE APPROPRIATE PROCEDURE TO EVALUATE COMPACTION OF ROCK FILLS SHOULD BE DEVELOPED AND IMPLEMENTED BY THE GEOTECHNICAL ENGINEER BASED ON THE MATERIALS OBSERVED DURING CONSTRUCTION.

PLACEMENT OF EXCAVATED ROCK WITHIN AREAS OF FUTURE EXCAVATION, SUCH AS FOUNDATION AND UTILITY TRENCHES, WILL MAKE THE SUBSEQUENT EXCAVATION MORE DIFFICULT. GENERALLY THE 18-INCH ROCK FILL SHOULD NOT BE PLACED WITHIN THE UPPER 3 FEET OF THE FINAL SURFACE. GREATER DEPTHS ARE RECOMMENDED IN AREAS OF UNDERGROUND UTILITIES AND STORMWATER MANAGEMENT. PROCESSED ROCK OR SOIL FILL WITH A MAXIMUM PARTICLE SIZE OF 3 INCHES SHOULD BE USED ABOVE THESE DEPTHS. ROCK FILLS MAY BE NECESSARY IN THE FILL SLOPES TO INCREASE SLOPE STABILITY. A MATERIAL HANDLING PLAN IS RECOMMENDED TO BE DEVELOPED DURING A PRECONSTRUCTION MEETING TO DIRECT THE PLACEMENT OF ROCK FILL IN VARIOUS SITE AREAS.

SOIL FILLS

THE ON-SITE RESIDUAL SOILS MEETING USCS DESIGNATIONS CL, ML, OR MORE GRANULAR ARE GENERALLY CONSIDERED SUITABLE FOR USE IN FILL CONSTRUCTION, PROVIDED THAT THE MATERIAL IS CONDITIONED TO THE PROPER MOISTURE CONTENT FOR COMPACTION. THE MAXIMUM PARTICLE SIZE IN STRUCTURAL SOIL FILLS SHOULD GENERALLY BE LIMITED TO 6 INCHES FOR BULK FILLS AND 3 INCHES IN THE VICINITY OF UTILITIES, FOUNDATION AND RETAINING WALL BACKFILL, AND THE UPPER 3 FEET OF THE FINAL SURFACE. IT SHOULD BE ANTICIPATED THAT SEGREGATING OVERSIZE ROCK MATERIALS, CRUSHING, AND BLENDING WITH FINER MATERIALS WILL BE REQUIRED TO PRODUCE MATERIAL THAT IS ACCEPTABLE FOR USE AS SOIL FILL. ON-SITE MATERIALS WITH UNACCEPTABLE FRACTIONS OF ORGANICS OR DEBRIS, INCLUDING TOPSOIL, WILL NEED TO BE PLACED IN NON-STRUCTURAL AREAS OR REMOVED FROM THE SITE.

EXCAVATED MATERIALS WILL NEED TO BE WITHIN THREE PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT BEFORE COMPACTIVE EFFORT IS APPLIED. DRYING MAY BE REQUIRED DEPENDING UPON THE MOISTURE CONTENT OF THE EXCAVATED SOILS AND THE PREVAILING WEATHER CONDITIONS. MOISTURE CONDITIONING WILL REQUIRE AERATING IN THIN LIFTS AND PROVIDING FOR ADEQUATE DRYING TIME UNDER FAVORABLE WEATHER CONDITIONS. DRYING OF THE FINE-GRAINED SURFACE SOILS WILL ONLY BE FEASIBLE DURING THE WARM, DRY SEASON OF THE YEAR AND MAY REQUIRE EXTENDED DRYING TIMES AND DISCING EFFORT TO ADEQUATELY DRY THE SOILS TO A MOISTURE CONTENT THAT IS ACCEPTABLE FOR COMPACTION. NATURAL DRYING PROCESSES WILL BE VERY DIFFICULT AND INEFFICIENT FROM LATE FALL THROUGH EARLY SPRING. ALTERNATIVELY, DRYING OF WET SOILS CAN BE MORE QUICKLY ACCOMPLISHED BY BLENDING THE SOILS WITH DRIER SOILS OR ROCK, OR BY USING CHEMICAL ADDITIVES, SUCH AS QUICK LIME.

OFF-SITE BORROW, IF REQUIRED, SHOULD MEET USCS DESIGNATIONS SC, SM, GC, OR GM, AND BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO USE. MATERIALS MEETING THE CLASSIFICATION OF ML OR CL ARE LESS DESIRABLE, AS FINE-GRAINED SOILS ARE MORE SUSCEPTIBLE TO INSTABILITY. THESE FINE-GRAINED SOILS SHOULD BE REVIEWED BY THE ENGINEER PRIOR TO USE.

STRUCTURAL FILL SHOULD BE PLACED ON A STABLE, NEARLY LEVEL SUBGRADE FOLLOWING THE SUBGRADE EVALUATION AND PREPARATION PREVIOUSLY DESCRIBED ABOVE. ALL STRUCTURAL FILL AND BACKFILL SHOULD BE CONSTRUCTED IN MAXIMUM 8-INCH THICK LOOSE LIFTS WHERE LARGE VIBRATORY ROLLERS ARE USED. WHERE SMALLER COMPACTION EQUIPMENT IS USED SUCH AS WALK-BEHIND ROLLERS, JUMPING JACK TYPE HAND OPERATED EQUIPMENT, AND SMALL ROLLERS LESS THAN 10 TONS, THE LOOSE LIFT THICKNESS SHOULD NOT EXCEED 4 INCHES. STRUCTURAL FILL SHOULD BE COMPACTED TO THE FOLLOWING MINIMUM SPECIFICATIONS BASED UPON THE STANDARD PROCTOR (ASTM D698), UNLESS SUPERSEDED BY STRICTER MUNICIPAL SPECIFICATIONS:

COMPACTION SPECIFICATIONS

STRUCTURE / FILL LOCATION COMPACTION / MOISTURE SPECIFICATION

BELOW FOUNDATIONS, RETAINING WALLS, FLOOR SLABS, AND WITHIN WALL BACKFILL OR SLOPES STEEPER THAN 5H:1V(5% OF ASTM D-698

MOISTURE: ± 3% OF OPTIMUM TOP 1 FOOT OF PAVEMENT SUBGRADEBS OF ASTM D-698

MOISTURE: ± 2% OF OPTIMUM

NEW FILLS CONSTRUCTED ON EXISTING SLOPES STEEPER THAN 5H:1V (HORIZONTAL TO VERTICAL) SHOULD BE KEYED INTO EXISTING SLOPES FOR STABILITY CONSIDERATIONS. ALL PROPOSED FILL SLOPES STEEPER THAN 5H:1V SHOULD BE PLACED AS STRUCTURAL FILL AND BE CONTROLLED AND COMPACTED TO THE DENSITIES SPECIFIED IN THIS SECTION. THE USE OF EXCAVATION ON FILL SLOPES STEEPER THAN 5H:1V WILL REQUIRE ADDITIONAL ENGINEERING EVALUATION, INCLUDING SLOPE STABILITY ANALYSIS, PRIOR TO CONSTRUCTION.

GRADING OPERATIONS WITHIN STRUCTURAL AREAS, INCLUDING PAVEMENT, AND UTILITY TRENCH AND WALL BACKFILL SHOULD BE OBSERVED AND TESTED ON A FULL-TIME BASIS BY A GTA TECHNICIAN UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER. IF SUFFICIENT EFFORT SHOULD BE VERIFIED BY IN-PLACE DENSITY TESTING, WE RECOMMEND THAT FINAL SUBGRADES BE PROOF-ROLLED IMMEDIATELY PRIOR TO PLACEMENT OF SUBBASE STONE, CONCRETE SLABS, OR ASPHALT PAVEMENT TO EVALUATE STABILITY OF THE SUBGRADE, WHICH MAY HAVE BEEN IMPACTED BY EXPOSURE TO WET WEATHER AND CONSTRUCTION TRAFFIC SUBSEQUENT TO MASS GRADING. THIS PROCEDURE WILL ALLOW FOR IDENTIFICATION OF ANY SOFT OR OTHERWISE UNSTABLE AREAS PRIOR TO PLACEMENT OF BASE COURSES, CONCRETE, AND/OR ASPHALT PAVEMENT.

MOISTURE SENSITIVE SOILS ARE PRESENT AT THE SURFACE AND WILL ENCOMPASS A MAJORITY OF THE ON-SITE SOILS TO BE USED AS FILL. DUE TO THE TENDENCY OF THESE SOILS TO BECOME UNSTABLE THROUGHOUT THE CURRENT PERIOD OF EXPOSURE FROM PRECIPITATION AND CONSTRUCTION TRAFFIC, THE DEVELOPER MAY ELECT TO CHEMICALLY STABILIZE THE SUBGRADE SOILS AGAINST WET WEATHER PRESENCE AT THE START OF THE PROJECT TO PROVIDE ADDITIONAL DURABILITY UNTIL FINAL ASPHALT, AND CONCRETE SLAB PLACEMENT. BASED ON OUR EXPERIENCE WITH SIMILAR SOILS AND SIMILAR SOIL CONDITIONS, THE AMOUNT OF CHEMICAL ADDITIVE REQUIRED FOR APPROXIMATELY 20 TO 30 PERCENT SHOULD BE ADEQUATE TO STABILIZE THE SUBGRADE SOILS. ADDITIONAL ADDITIVE MAY BE REQUIRED BY LOCAL CODE.

EXCAVATIONS FOR UTILITIES MAY ENCOUNTER BOULDERS, WEATHERED ROCK AND/OR BEDROCK DEPENDING ON THE FINAL INVERT ELEVATIONS. THEREFORE, EXCAVATION FOR UTILITIES SHOULD BE PERFORMED USING HEAVY-DUTY CONSTRUCTION EQUIPMENT CAPABLE OF RIPPING AND REMOVING BOULDERS AND WEATHERED ROCK. WHERE MORE COMPETENT FORMATION IS ENCOUNTERED, DEPOSITS MAY REQUIRE BLASTING. THE USE OF EXCAVATION TECHNIQUES SUCH AS HYDRAULIC HOE-RAMMING AND/OR BLASTING WILL BE REQUIRED TO FRACTURE AND REMOVE BEDROCK. BLASTING WILL LIKELY BE REQUIRED FOR TRENCH EXCAVATIONS BELOW THE REGOLITH DEPTHS NOTED ON THE EXPLORATION LOGS.

CONTROLLED FILL PLACEMENT AND COMPACTION BASED ON THE SUBSURFACE EXPLORATIONS, UNDERCUTTING OR STABILIZATION OF THE UPPER 2 FEET OF SOFT SURFICIAL SOILS WITHIN FILL AREAS AND AREAS TO RECEIVE STRUCTURAL LOADS SHOULD BE ANTICIPATED. DEPENDING ON OVER-EXCAVATIONS, THE USE OF GEOGRID REINFORCEMENT, OR CHEMICAL STABILIZATION USING CEMENT SHOULD ALSO BE ANTICIPATED TO STABILIZE THE SOFT SUBGRADE SOILS LOCATED WITHIN THE CLOSED DEPRESSION AREA.

DRYING OF THE FINE-GRAINED SURFACE SOILS WILL ONLY BE FEASIBLE DURING THE WARM, DRY SEASON OF THE YEAR AND WILL BE WEATHER DEPENDENT. MECHANICAL METHODS OF DRYING TO ADEQUATELY DRY THE SOILS TO A MOISTURE CONTENT THAT IS ACCEPTABLE FOR COMPACTION AMONG EXISTING STRUCTURES, WILL BE VERY DIFFICULT AND INEFFICIENT FROM LATE FALL THROUGH EARLY SPRING. ALTERNATIVELY, DRYING OF WET SOILS CAN BE MORE QUICKLY ACCOMPLISHED BY BLENDING THE SOILS WITH DRIER SOILS OR ROCK, OR BY USING CHEMICAL ADDITIVES, SUCH AS QUICK LIME.

OFF-SITE BORROW, IF REQUIRED, SHOULD MEET USCS DESIGNATIONS SC, SM, GC, OR GM, AND BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO USE. MATERIALS MEETING THE CLASSIFICATION OF ML OR CL ARE LESS DESIRABLE, AS FINE-GRAINED SOILS ARE MORE SUSCEPTIBLE TO INSTABILITY. THESE FINE-GRAINED SOILS SHOULD BE REVIEWED BY THE ENGINEER PRIOR TO USE.

STRUCTURAL FILL SHOULD BE PLACED ON A STABLE, NEARLY LEVEL SUBGRADE FOLLOWING THE SUBGRADE EVALUATION AND PREPARATION PREVIOUSLY DESCRIBED ABOVE. ALL STRUCTURAL FILL AND BACKFILL SHOULD BE CONSTRUCTED IN MAXIMUM 8-INCH THICK LOOSE LIFTS WHERE LARGE VIBRATORY ROLLERS ARE USED. WHERE SMALLER COMPACTION EQUIPMENT IS USED SUCH AS WALK-BEHIND ROLLERS, JUMPING JACK TYPE HAND OPERATED EQUIPMENT, AND SMALL ROLLERS LESS THAN 10 TONS, THE LOOSE LIFT THICKNESS SHOULD NOT EXCEED 4 INCHES. STRUCTURAL FILL SHOULD BE COMPACTED TO THE FOLLOWING MINIMUM SPECIFICATIONS BASED UPON THE STANDARD PROCTOR (ASTM D698), UNLESS SUPERSEDED BY STRICTER MUNICIPAL SPECIFICATIONS:

COMPACTION SPECIFICATIONS

STRUCTURE / FILL LOCATION COMPACTION / MOISTURE SPECIFICATION

BELOW FOUNDATIONS, RETAINING WALLS, FLOOR SLABS, AND WITHIN WALL BACKFILL OR SLOPES STEEPER THAN 5H:1V(5% OF ASTM D-698

MOISTURE: ± 3% OF OPTIMUM TOP 1 FOOT OF PAVEMENT SUBGRADEBS OF ASTM D-698

MOISTURE: ± 2% OF OPTIMUM

NEW FILLS CONSTRUCTED ON EXISTING SLOPES STEEPER THAN

LOCATION MAP

SCALE: 1" = 2000'
NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

ADJACENT PROPERTY OWNERS LIST

SYMBOL	OWNER	ADDRESS	PARCEL ID	DEED ID #
A	CARIBOU 2231 NEWLINS MILL ROAD LLC	2231 NEWLINS MILL RD.	K8-5-8	2020-1-256388
B	JOSEPH LEE ET AL BOUCHER	10 MCFADDEN RD.	K8-5-2A-12	2021-1-309251
C	CONGDON INVESTMENTS LLC	8 MCFADDEN RD.	K8-5-2A-9	2020-1-249866
D	D D & R PARTNERS C/O SUSSEX WARE INC.	3 DANFORTH RD.	K8-5-2A-8	2010-1-163912
E	MARINO TERRA FIRMA LLC	2 DANFORTH DR.	K8-5-2A-4	2006-1-203955
F	ANDERSON C. DE & VIOLA R. RAUB	1660 TATAMY RD.	K8-5-2B	2016-1-270670
G	WERNER ENTERPRISES INC.	2201 NEWLINS MILL RD.	K8-5-9	2016-1-234827
H	ANDERSON C. DE & VIOLA R. RAUB	1450 TATAMY RD.	K8-6-1	2011-1-236467
I	FR NEWLINS LOGISTICS PARK LLC	2300-2240 NEWLINS MILL RD.	K8-12-10A	2023-1-122719
J	MCS INDUSTRIES INC.	2280 NEWLINS MILL RD.	K8-12-9A-1	2019-1-230776
K	RUSSELL & LINDA SMITH	2281 NEWLINS MILL RD.	K8-5-7A	2005-1-208039
L	FR MCFADDEN PROPERTY HOLDING LP	2780 COMMERCE DR. STE 100	K8-5-7	2004-1-47441
M	BCORE SHIELD LLC	2300 NEWLINS MILL RD.	K8-12-3	2020-1-343186
N	KAREN E. & MICHAEL L. MILLER	2310 NEWLINS MILL RD.	K8-12-3A	19942-002208
O	EATER LP	2320 NEWLINS MILL RD.	K8-12-2	2020-1-370879
P	CARSON LEHIGH LLC	2311 NEWLINS MILL RD.	K8-5-6	2019-1-156652
Q	CARSON LEHIGH LLC	2325-40 NEWLINS MILL RD.	K8-5-5	2019-1-156652

INFILTRATION RATE TESTING CHART

OBSERVATION HOLE NUMBER	ESTIMATED SURFACE ELEV. BASED OFF SITE PLAN TOPOGRAPHY (FT)	APPROX. TOTAL DEPTH (FT)	ESTIMATED BOTTOM ELEVATION (FT)	PRELIMINARY RAW INFILTRATION RATE EST. (IN/HR)
B-1	385	23	362	6.1
B-2*	384	30	354	9.9
B-3	385	22.5	362.5	5.2
B-4	381	17	364	33.6
B-5	380	17	363	1.8
B-7	377	13.5	363.5	0.2
B-8*	377	24	353	6.1
B-9	380	17	363	12.6
B-10	375	11.5	363.5	2.7
B-11	407	44	363	31.2
B-12	407	50	357	3.4
B-13*	405	48	357	3.4
B-14*	375	30	345	5.9
B-15*	375	20	355	3.2
TP-1 SHALLOW	374	10	364	0.7
TP-1 DEEP*	374	21	353	2.1
TP-2	378	14.5	363.5	2.4
TP-4	376	13	363	2.6

1. OBSERVATION HOLES 1, 3, 4 , 5, 7, 9, 10, AND 11 ARE SCREENED ACROSS OR NEAR PLANNED SWM BOTTOM ELEVATION.
2. DEEPER OBSERVATION HOLES 2, 8, 13, 14, AND 15 ARE SCREENED BELOW PLANNED SWM BOTTOM ELEVATION.
3. TP = TEST PITS
4. * TEST INTERVAL WAS DEEPER THAN PROPOSED SWM BOTTOM ELEVATION.

GENERAL LEGEND

EXISTING		PROPOSED
	STREET ADDRESS	2325
	EDGE OF WATER	
	SANITARY MANHOLE & CLEANOUT	SAN
	SANITARY SEWER	SAN
	WATER MAIN	W
	OVERHEAD UTILITIES	OE
	UNDERGROUND UTILITIES	E
	STORM SEWER	
	GAS LINE	
	TREE ROW	
	WATER LINE FEATURES	
	STORM INLETS	
	GAS VALVES	
	STORM SEWER ENDWALL	
	FLARED END SECTION	
	STORM MANHOLE	
	EASEMENT	
	PROPERTY LINE	
	ADJOINER PROPERTY LINE	
	PENNDOT RIGHT-OF-WAY	
	EDGE OF PAVEMENT	
	CURBING	
	PAVEMENT	
	MUNICIPAL BOUNDARY	
	ZONING BOUNDARY	
	PHASE LINE	
	MATCH LINE	
	SOIL BOUNDARY	
	WETLANDS	
	BUILDING RESTRICTION LINE	
	BUFFER YARD	
	LIMITS OF CONSTRUCTION	
397.34	SPOT GRADE	395.00 / 394.50
	BUILDING	
	CONCRETE SIDEWALK	
	FOOTCANDLE INTENSITY	
	EXTERIOR LIGHT	
	UTILITY POLE	
	TRANSFORMER	
	SIGNS	
	BENCHMARK	
	IRON PIN & CONC. MON.	
350	CONTOUR LINE	1000
	GUIDERAIL	
	FENCE	
207	DRAINAGE STUDY POINTS	
	DRAINAGE AREA DELINEATION	20T
	DRAINAGE FLOW PATH	
	WATERSHED BOUNDARY	
	TREE LOCATION	
	TREE PROTECTION FENCE	
	SOIL TEST PIT	
AT-5	AIR TRACK SOIL TEST LOCATION	
	TEST WELL	

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR FOR COMPLIANCE WITH LOCAL, FEDERAL, AND STATE REGULATIONS AND ORDINANCES RELATING TO LAND USAGE, AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS: CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND ROCK CONDITIONS, THE EXISTENCE OF ANY CULTURAL, HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES AS APPROPRIATE; THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER. THE TOWNSHIP, THE TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS. COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER. ADDITIONALLY, THE TOWNSHIP DOES NOT REVIEW AS A MATTER OF PRACTICE, DIMENSIONING AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION, CONSISTENCY, CLOSURE, AND AREA (ONLY). THE TOWNSHIP DOES NOT REVIEW AND IS NOT RESPONSIBLE FOR PROPERTY LINES, STREET RIGHT-OF-WAYS, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT: **WERNER ENTERPRISES INC.**
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE: **EXISTING FEATURES PLAN**

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 3 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: -	DWG. FILE: 835001	

CALL BEFORE YOU DIG
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
1-800-242-1776
1-CALL NO. 20241731212 DATE: 06/21/24
811 Know what's below. Call before you dig.

Scale: 1"=50'

SURVEY NOTE:

1. THE PROPERTY BOUNDARY HAS BEEN SURVEYED TO A ERROR NOT TO EXCEED 1 IN 10,000.

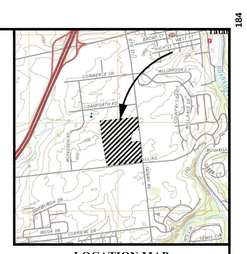
CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

1-CALL NO. 20241731212 DATE: 06/21/24

811 Know what's below. Call before you dig.



LOCATION MAP

SCALE: 1" = 2000'

NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

STATEMENT OF INTENT

THE INTENT OF THIS PLAN IS TO COMBINE THE EXISTING LOTS 1 & 2 AS SHOWN ON THE PLANS INTO ONE LOT.

EXISTING FEATURES NOTE:

THIS SITE DOES NOT CONTAIN ANY WETLANDS OR FLOODPLAINS.

LEGEND

LEGEND SHOWN ON SHEET 1

ENGINEER'S CERTIFICATION

I, MICHAEL MINERVINI, P.E., DO HEREBY CERTIFY THAT I AM A PROFESSIONAL ENGINEER LICENSED AND REGISTERED TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF PENNSYLVANIA, PURSUANT TO THE PENNSYLVANIA PROFESSIONAL ENGINEERS REGISTRATION LAW, ACT OF MAY 23, 1945, P.L. 913, AS AMENDED AS FOUND AT 63 P.S. SECTION 148 ET SEQ., AND THAT THE ENGINEERING ASPECTS OF THE PLAN ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, AND I DO FURTHER CERTIFY THAT THE PLAN COMPLIES WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCES OF PALMER TOWNSHIP.

MICHAEL MINERVINI P.E. 071233 DATE

LIBERTY ENGINEERING, INC.
7150 WINDSOR DR., SUITE 5
ALLENTOWN, PA. 18106
(484)223-1761 - FAX (484)223-1768

SURVEYOR'S CERTIFICATION

I, MICHAEL A. HOUSTEN, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED AND REGISTERED TO PERFORM SURVEYS IN THE COMMONWEALTH OF PENNSYLVANIA, PURSUANT TO THE PENNSYLVANIA PROFESSIONAL ENGINEERS REGISTRATION LAW, ACT OF MAY 23, 1945, P.L. 913, AS AMENDED AS FOUND AT 63 P.S. SECTION 148 ET SEQ., AND DO HEREBY CERTIFY THAT THE PLAN, PREPARED FROM A FIELD SURVEY, CORRECTLY REPRESENTS THE PROPOSED LOTS AS SURVEYED BY ME FOR THE OWNERS AND THAT THE PLAN COMPLIES WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCES OF PALMER TOWNSHIP.

MICHEAL A. HOUSTEN, PLS PA-SU075182 DATE

ARTHUR A SWALLOW ASSOCIATES, LLC
1003-1005 NORTH 19TH STREET
ALLENTOWN, PA 18104

LOT CONSOLIDATION NOTES

LOT 1
PARCEL ID# K8 5 2 0324
2215 NEWLINS MILL ROAD
37.698 ACRES

LOT 2
PARCEL ID# K8 5 9 0324
2201 NEWLINS MILL ROAD
11.479 ACRES

NEW CONSOLIDATED LOT
2215 NEWLINS MILL ROAD
49.177 ACRES

LOT AREA TABLE

EXISTING LOTS:
LOT 1: 1,642,126 SQ. FT. OR 37.698 ACRES
LOT 2: 500,015 SQ. FT. OR 11.479 ACRES
TOTAL: 2,142,141 SQ. FT. OR 49.177 ACRES

PROPOSED LOT
LOT 1: 2,142,141 SQ. FT. OR 49.177 ACRES

RESPONSIBLE PARTY DATA:

DEVELOPER/ APPLICANT: WERNER ENTERPRISES, INC.
14507 FRONTIER ROAD
OMAHA, NE 68138
CONTACT PERSON:
CHAD HARRINGTON (DIRECTOR OF FACILITIES MAINTENANCE AND CONSTRUCTION)
SIGNING AUTHORITY:
MARTY NORDLUND, SR. EVP & COO

SITE ADDRESS: 1470 TATAMY ROAD
2021 NEWLINS MILL ROAD
EASTON, PA 18045

PARCEL INFORMATION:

UNIFORM PARCEL IDENTIFIER (UPI) TAX PARCEL ID# K8-5-2
MUNICIPALITY: PALMER TWP. COUNTY: NORTHAMPTON
LOT(S): 1 UNIT(S): N/A ADDRESS: 1470 TATAMY ROAD
2201 NEWLINS MILL ROAD

PROJECT INFORMATION:

PROJECT NAME: WERNER ENTERPRISES LEHIGH VALLEY TRAINING AND MAINTENANCE FACILITY
PROPERTY OWNER NAME: WERNER ENTERPRISES, INC.

SIGNATURE:_____ DATE:_____
MARTY NORDLUND, SR. EVP &COO

NOTARY INFORMATION:

STATE OF _____)
COUNTY OF _____)SS:

ON THIS, THE DAY OF 20
BEFORE ME, A NOTARY PUBLIC, PERSONALLY APPEARED MARTY NORDLUND, HAVING A TITLE OF SR. EVP & COO WITHIN THE BUSINESS WERNER ENTERPRISES, INC., THE PROPERTY OWNER OF THE PREMISES DESCRIBED IN THIS PCSM FILING NOTICE, KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING DOCUMENT, AND ACKNOWLEDGED THAT HE/SHE EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEALS.

_____ _____
NOTARY PUBLIC COMMISSION EXPIRES

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP SOLICITOR AND TOWNSHIP ENGINEER FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USE, BULK AND DIMENSIONAL REQUIREMENTS OF ZONING, INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS (SUCH AS, BUT NOT LIMITED TO, FLOODPLAIN, WETLANDS, SOILS, ETC., BUT NOT LIMITED TO, NON- AND WATER QUALITY, KARST GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, TOWNSHIP SOLICITOR OR TOWNSHIP ENGINEER. THE TOWNSHIP, TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND ENGAGED IN THE APPROPRIATE FIELD OF STUDY. THE TOWNSHIP, TOWNSHIP SOLICITOR AND TOWNSHIP ENGINEER, AND ANY INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, BUT NOT FOR ACCURACY OF CONTENT. THE TOWNSHIP, THE SOLICITOR, THE ENGINEER OR ANY DESIGNATION AND LOCATION OF PROPERTY LINES, STREET RIGHT-OF-WAYS, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

OFFER OF DEDICATION

THE UNDERSIGNED OWNER(S) OFFER TO DEDICATE TO THE TOWNSHIP OF PALMER FOR PUBLIC USE THE FOLLOWING STREET RIGHTS-OF-WAYS FOR THE FOLLOWING STREET: TATAMY ROAD, UTILITY EASEMENTS SHOWN ON THE APPROVED PLANS; AND ALL PUBLIC OPEN SPACES AND ALL OTHER IMPROVEMENTS STATED AS PROPOSED TO BE PUBLIC ON THE PLANS OR ACCOMPANYING DOCUMENTS OR REQUIRED TO BE DEDICATED UNDER TOWNSHIP REQUIREMENTS

_____ _____
MARTY NORDLUND, SR. EVP & COO DATE

ACCEPTANCE OF DEDICATION

THE BOARD OF SUPERVISORS OF PALMER TOWNSHIP HEREBY ACCEPT THE THE STREET-RIGHT-OF-WAY INDICATED HEREON FOR PUBLIC USE.

_____ _____
CHAIRPERSON, BOARD OF SUPERVISORS DATE

_____ _____
TOWNSHIP SECRETARY DATE

THE STORMWATER BMPS AS DEPICTED ON THESE SET OF PLANS, INCLUDING BUT NOT LIMITED TO EROSION CONTROL PLANS, AND POST CONSTRUCTION STORMWATER MANAGEMENT PLANS, CANNOT BE ALTERED OR REMOVED WITHOUT APPROVAL OF THE MUNICIPALITY.

_____ _____
MARTY NORDLUND, SR. EVP & COO DATE

LEHIGH VALLEY PLANNING COMMISSION:

_____ _____
LVPC STAFF PERSON RESPONSIBLE FOR REVIEW DATE

RECORDER OF DEEDS

RECORDED IN THE NORTHAMPTON CO. RECORDER OF DEEDS OFFICE IN

DEED BOOK VOL #_____PAGE_____ON_____

TOWNSHIP ENGINEER
REVIEWED BY THE TOWNSHIP ENGINEER.

_____ _____ _____
TOWNSHIP ENGINEER DATE OF PLAN SIGNATURE

PLANNING COMMISSION
REVIEWED BY THE PALMER TOWNSHIP PLANNING COMMISSION

_____ _____ _____ _____
CHAIRPERSON SECRETARY
DATE OF RECOMMENDATION OF PLAN APPROVAL DATE OF PLAN SIGNATURE

BOARD OF SUPERVISORS
APPROVED BY THE PALMER TOWNSHIP BOARD OF SUPERVISORS FOR RECORDING

_____ _____ _____ _____
CHAIRPERSON SECRETARY
DATE OF PLAN APPROVAL DATE OF PLAN SIGNATURE

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:
WERNER ENTERPRISES INC.
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:
LOT CONSOLIDATION PLAN

DESIGN: PAS | PLAN DATE: 07/16/24 | DWG. NO.: 4 of 21
DRAWN: NJM | SCALE: AS NOTED
SURVEY DATE: . | DWG. FILE: 835001

0 50' 100'
Scale: 1"=50'

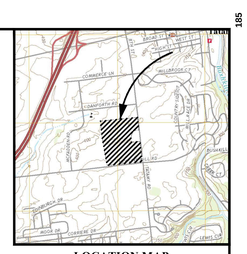
CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24



LOCATION MAP

SCALE: 1" = 2000'

NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

STATEMENT OF INTENT

THE INTENT OF THIS PLAN IS TO COMBINE THE EXISTING LOTS 1 & 2 AS SHOWN ON THE PLANS INTO ONE LOT.

EXISTING FEATURES NOTE:

THIS SITE DOES NOT CONTAIN ANY WETLANDS OR FLOODPLAINS.

LEGEND

LEGEND SHOWN ON SHEET 1

ENGINEER'S CERTIFICATION

I, MICHAEL MINERVINI, P.E., DO HEREBY CERTIFY THAT I AM A PROFESSIONAL ENGINEER LICENSED AND REGISTERED TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF PENNSYLVANIA, PURSUANT TO THE PENNSYLVANIA PROFESSIONAL ENGINEERS REGISTRATION LAW, ACT OF MAY 23, 1945, P.L. 913, AS AMENDED AS FOUND AT 63 P.S. SECTION 148 ET SEQ., AND THAT THE ENGINEERING ASPECTS OF THE PLAN ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, AND I DO FURTHER CERTIFY THAT THE PLAN COMPLIES WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCES OF PALMER TOWNSHIP.

MICHAEL MINERVINI P.E. 071233 DATE

LIBERTY ENGINEERING, INC.
7150 WINDSOR DR., SUITE 5
ALLENTOWN, PA. 18106
(484)223-1761 - FAX (484)223-1768

SURVEYOR'S CERTIFICATION

I, MICHAEL A. HOUSTEN, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED AND REGISTERED TO PERFORM SURVEYS IN THE COMMONWEALTH OF PENNSYLVANIA, PURSUANT TO THE PENNSYLVANIA PROFESSIONAL ENGINEERS REGISTRATION LAW, ACT OF MAY 23, 1945, P.L. 913, AS AMENDED AS FOUND AT 63 P.S. SECTION 148 ET SEQ., AND DO HEREBY CERTIFY THAT THE PLAN, PREPARED FROM A FIELD SURVEY, CORRECTLY REPRESENTS THE PROPOSED LOTS AS SURVEYED BY ME FOR THE OWNERS AND THAT THE PLAN COMPLIES WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCES OF PALMER TOWNSHIP.

MICHEAL A. HOUSTEN, PLS PA-SU075182 DATE

ARTHUR A SWALLOW ASSOCIATES, LLC
1003-1005 NORTH 19TH STREET
ALLENTOWN, PA 18104

LOT CONSOLIDATION NOTES

LOT 1
PARCEL ID# K8 5 2 0324
2215 NEWLINS MILL ROAD
37.698 ACRES

LOT 2
PARCEL ID# K8 5 9 0324
2201 NEWLINS MILL ROAD
11.479 ACRES

NEW CONSOLIDATED LOT
2215 NEWLINS MILL ROAD
49.177 ACRES

LOT AREA TABLE

EXISTING LOTS:
LOT 1: 1,642,126 SQ. FT. OR 37.698 ACRES
LOT 2: 500,015 SQ. FT. OR 11.479 ACRES
TOTAL: 2,142,141 SQ. FT. OR 49.177 ACRES

PROPOSED LOT:
LOT 1: 2,142,141 SQ. FT. OR 49.177 ACRES

RESPONSIBLE PARTY DATA:

DEVELOPER/ APPLICANT: WERNER ENTERPRISES, INC.
14507 FRONTIER ROAD
OMAHA, NE 68138
CONTACT PERSON:
CHAD HARRINGTON (DIRECTOR OF FACILITIES MAINTENANCE AND CONSTRUCTION)
SIGNING AUTHORITY:
MARTY NORDLUND, SR. EVP & COO

SITE ADDRESS: 1470 TATAMY ROAD
2021 NEWLINS MILL ROAD
EASTON, PA 18045

PARCEL INFORMATION:

UNIFORM PARCEL IDENTIFIER (UPI)/ TAX PARCEL ID# K8-5-2
MUNICIPALITY: PALMER TWP. COUNTY: NORTHAMPTON
LOT(S): 1 UNIT(S): N/A ADDRESS: 1470 TATAMY ROAD;
2201 NEWLINS MILL ROAD

PROJECT INFORMATION:

PROJECT NAME: WERNER ENTERPRISES LEHIGH VALLEY TRAINING AND MAINTENANCE FACILITY
PROPERTY OWNER NAME: WERNER ENTERPRISES, INC.

SIGNATURE:_____ DATE:_____
MARTY NORDLUND, SR. EVP &COO

NOTARY INFORMATION:

STATE OF _____)
COUNTY OF _____)SS:

ON THIS, THE _____ DAY OF _____, 20____, BEFORE ME, A NOTARY PUBLIC, PERSONALLY APPEARED MARTY NORDLUND, HAVING A TITLE OF SR. EVP & COO WITHIN THE BUSINESS WERNER ENTERPRISES, INC., THE PROPERTY OWNER OF THE PREMISES DESCRIBED IN THIS PCSM FILING NOTICE, KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING DOCUMENT, AND ACKNOWLEDGED THAT HE/SHE EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEALS.

_____
NOTARY PUBLIC COMMISSION EXPIRES

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER AND TOWNSHIP SOLICITOR FOR COMPLIANCE WITH TOWNSHIP REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS: CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOILS AND GEOLOGY, ENVIRONMENTAL CONDITIONS, AND HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER. THE TOWNSHIP, THE TOWNSHIP SOLICITOR AND THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE AND ENGAGED IN THE APPROPRIATE FIELD OF EXPERTISE. ALL APPROVALS GRANTED BY THE TOWNSHIP REGARDING LOTS AND INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED AND CONFORM TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEFECTION, CONSISTENCY, CLOSURE, AND AREA (ONLY). THE ACCURACY OF THE LOCATION OF EXISTING LOT LINES, STREET LINES, STREET RIGHT-OF-WAYS, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

TOWNSHIP ENGINEER
REVIEWED BY THE TOWNSHIP ENGINEER.

TOWNSHIP ENGINEER DATE OF PLAN SIGNATURE

PLANNING COMMISSION
REVIEWED BY THE PALMER TOWNSHIP PLANNING COMMISSION

CHAIRPERSON SECRETARY
DATE OF RECOMMENDATION OF PLAN APPROVAL DATE OF PLAN SIGNATURE

BOARD OF SUPERVISORS
APPROVED BY THE PALMER TOWNSHIP BOARD OF SUPERVISORS FOR RECORDING

CHAIRPERSON SECRETARY
DATE OF PLAN APPROVAL DATE OF PLAN SIGNATURE

OFFER OF DEDICATION

THE UNDERSIGNED OWNER(S) OFFER TO DEDICATE TO THE TOWNSHIP OF PALMER FOR PUBLIC USE THE FOLLOWING STREET RIGHTS-OF-WAYS FOR THE FOLLOWING STREET: TATAMY ROAD; UTILITY EASEMENTS SHOWN ON THE APPROVED PLANS; AND ALL PUBLIC OPEN SPACES AND ALL OTHER IMPROVEMENTS STATED AS PROPOSED TO BE PUBLIC ON THE PLANS OR ACCOMPANYING DOCUMENTS OR REQUIRED TO BE DEDICATED UNDER TOWNSHIP REQUIREMENTS

MARTY NORDLUND, SR. EVP & COO DATE

ACCEPTANCE OF DEDICATION

THE BOARD OF SUPERVISORS OF PALMER TOWNSHIP HEREBY ACCEPT THE THE STREET-RIGHT-OF-WAY INDICATED HEREON FOR PUBLIC USE.

CHAIRPERSON, BOARD OF SUPERVISORS DATE

TOWNSHIP SECRETARY DATE

THE STORMWATER BMPS AS DEPICTED ON THESE SET OF PLANS, INCLUDING BUT NOT LIMITED TO EROSION CONTROL PLANS, AND POST CONSTRUCTION STORMWATER MANAGEMENT PLANS, CANNOT BE ALTERED OR REMOVED WITHOUT APPROVAL OF THE MUNICIPALITY.

MARTY NORDLUND, SR. EVP & COO DATE

LEHIGH VALLEY PLANNING COMMISSION:

LVPC STAFF PERSON RESPONSIBLE FOR REVIEW DATE

RECORDER OF DEEDS

RECORDED IN THE NORTHAMPTON CO. RECORDER OF DEEDS OFFICE IN

DEED BOOK VOL. #_____PAGE_____ON_____

0 50' 100'
Scale: 1"=50'

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:
WERNER ENTERPRISES INC.
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:
SETBACK PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 5 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE:.	DWG. FILE: 835001	

SITE DATA:

OWNER/APPLICANT: WERNER ENTERPRISES
141568 FRONTIER ROAD
OMAHA, NE 68138
402-895-6640

SITE ADDRESS: 1470 TATAMY ROAD
EASTON, PA 18045

DEED BOOK VOLUME: 2016-1 PAGE: 234827
2016-1 232407

TAX MAP: K8-5-9-0324; K8-5-2-0324

TOTAL LOT AREA: 2,142,141 SQ. FT. OR 49.18 ACRES

TOTAL NUMBER OF EXISTING LOTS: 2

TOTAL NUMBER OF PROPOSED LOTS: 1

PROPOSED WATER SERVICE: PUBLIC

PROPOSED SANITARY SERVICE: PUBLIC

CONSTRUCTION SCHEDULE:

CONSTRUCTION IS ANTICIPATED TO BEGIN FALL 2025

ZONING DATA:

ZONING DISTRICT (I-OC) INDUSTRIAL/OFFICE/COMMERCIAL
PROPOSED USE: TRUCK TERMINAL

	EXISTING LOT #1	ALLOWABLE/ REQUIRED	PROPOSED LOT #1
MINIMUM TRACT AREA: (Z.O. SEC 190-411 - F.1.)	37.698 ACRES 1,642,126 SQ. FT.	15.00 ACRES	49.16 ACRES 2,142,141 SQ. FT.
MINIMUM LOT AREA: (Z.O. SEC 190-411 - F.1.)	37.698 ACRES	5.00 ACRES	
MINIMUM LOT WIDTH: (Z.O. SEC 190-411 - F.2.)	399.13 AT SETBACK 399.13 AT R.O.W. (NEWLINS MILL FRONTAGE)	100' AT SETBACK 250' AT R.O.W.	2428.36 AT SETBACK 2477.09' AT R.O.W.
MAXIMUM BLDG. COVERAGE: (Z.O. SEC 190-411 - F.3.)	4.25% 69,805 SQ. FT.	40%	3.26% 69,805 SQ. FT.
MAXIMUM LOT COVERAGE: (Z.O. SEC 190-411 - F.3.)	45.50% 747,151 SQ. FT.	65%	47.54% 997,887 SQ. FT.
MINIMUM COVERAGE: LANDSCAPE (Z.O. SEC 190-411 - F.4.)	45.50% 747,151 SQ. FT.	20%	46.58% 997,887 SQ. FT.
MAX. PROP. BLDG. HEIGHT: (Z.O. SEC 190-411 - F.6.)	34 FEET	45 FEET	34 FEET
PARKING SETBACK:	20'	20' 75' FOR TRUCKS ABUTTING A RESIDENTIAL LOTLINE (IF LESS THAN 200' BERM REQ'D)	20'

MINIMUM YARD REQUIREMENTS
(Z.O. SEC 190-126.E & F & G)

FRONT:	40'
EXCEPT WHEN A RESIDENTIAL LOTLINE IS ABUTTING OR ACROSS A STREET:	75'
SIDE:	15'
EXCEPT WHEN A RESIDENTIAL LOTLINE IS ABUTTING OR ACROSS A STREET:	150'
REAR:	15'
EXCEPT WHEN A RESIDENTIAL LOTLINE IS ABUTTING OR ACROSS A STREET:	150'

TOWNSHIP NOTE:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR FOR CONSISTENCY ONLY WITH TOWNSHIP REGULATIONS AND ORDINANCES RELATING TO DESIGN REQUIREMENTS FOR ON-SITE STORMWATER MANAGEMENT FACILITIES AND/OR OFF-SITE STORMWATER FACILITIES PROPOSED TO SERVE ON-SITE STORMWATER COLLECTION AND CONVEYANCE FACILITIES. ANY CHANGES TO OFF-SITE RUNOFF RESULTING FROM THIS DEVELOPMENT INCLUDING, BUT NOT LIMITED TO, CHANGES IN ACT 167 WATERSHED AND SUBAREA BOUNDARIES, POST-DEVELOPMENT RATES AND/OR VOLUMES OF RUNOFF, AND ON-SITE OR OFF-SITE IMPROVEMENTS WHICH MAY AFFECT FLOW RATES AND VOLUMES WITHIN THE WATERSHED, ARE REGIONAL MATTERS NOT REVIEWED BY THE TOWNSHIP STAFF AND CONSULTANTS AND ARE FOR REVIEW AND APPROVAL BY THE LVPC. SIMILARLY, THE TOWNSHIP STAFF AND CONSULTANTS HAVE NOT REVIEWED THE PLANS FOR ANY IMPACTS TO OR FROM STATE HIGHWAY RIGHTS-OF-WAY, AND WILL RELY ON THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION'S (PENNDOT) REVIEW OF STORMWATER MANAGEMENT FACILITIES PROPOSED IN STATE HIGHWAY RIGHT-OF-WAY OR DETERMINING CONFORMANCE WITH REQUIREMENTS AND ADEQUACY OF THOSE FACILITIES WITHIN STATE HIGHWAY RIGHTS-OF-WAY. THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR HAVE NOT INDEPENDENTLY REVIEWED, AND MAKE NO REPRESENTATIONS AS TO, THE REQUIREMENTS FOR, OR ADEQUACY OF, ANY FACILITY TO BE REVIEWED BY LVPC AND/OR PENNDOT, NOR OF ANY OFF-SITE PROJECT STORMWATER IMPACT.

ROADWAY IMPROVEMENTS NOTE:

1. A 15-FOOT WIDE MULTI-USE TRAIL HAS BEEN ADDED BEHIND THE ROW LINE OF TATAMY ROAD ON THE CLIENTS PROPERTY.
2. WE ARE SHOWING THE ROADWAY IMPROVEMENTS TO THE NORTHERN WIDENING PORTION OF NEWLINS MILL ROAD ON THE PLANS AS REQUIRED.

REQUIRED EASEMENTS NOTE:

THE FOLLOWING EASEMENTS ARE PROPOSED FOR THIS LAND DEVELOPMENT:

1. A PROPOSED DRAINAGE EASEMENT - 205,359 SF.
2. A PROPOSED ACCESS EASEMENT-1 FOR THE MULTI-USE TRAIL - 17,740 SF.
3. A PROPOSED ACCESS EASEMENT-2 FOR MULTI-USE TRAIL - 10,924 SF.

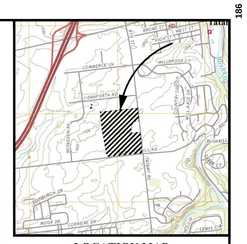
CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24



LOCATION MAP

SCALE: 1" = 2000'
NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

STATEMENT OF INTENT

PROPOSED EXPANSION OF TRUCK & TRAILER PARKING AREA.

HOURS OF OPERATION:
MAINTENANCE FACILITY - 24 HOURS A DAY, 7 DAYS A WEEK IS POSSIBLE, DEPENDING ON NEED.
TRAINING FACILITY - 7 AM-5 PM (M-F); 7 AM-12PM (SAT.)

EXISTING FEATURES NOTE:

THIS SITE DOES NOT CONTAIN ANY WETLANDS OR FLOODPLAINS

PARKING REQUIREMENTS:

PER ORDINANCE:
1.2 SPACES PER EMPLOYEE WORKING ON THE LARGEST SHIFT.
OR 1 SPACE PER 470 SQ. FT. OF GROSS FLOOR AREA.
WHICHEVER IS GREATER, PLUS 1 SPACE PER COMPANY VEHICLE.

75,105 SQ. FT. GROSS FLOOR AREA=160 SPACES REQUIRED.
60 EMPLOYEES REQUIRE 72 PARKING SPACES.
173 TOTAL SPACES PROVIDED

PLAN NOTES

1. ALL PROPERTY CORNERS ARE SET.
2. ALL UTILITIES (WATER & SANITARY SEWER) ARE PUBLIC.
3. SOUND
   A. FOR PURPOSES OF THIS SECTION, THE COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) IS DEFINED AS THE TWENTY-FOUR-HOUR A-WEIGHTED AVERAGE SOUND LEVEL FROM MIDNIGHT TO MIDNIGHT, OBTAINED AFTER THE ADDITION OF 5 DB TO SOUND LEVELS OCCURRING IN THE EVENING FROM 7:00 P.M. TO 10:00 P.M. AND AFTER THE ADDITION OF 10 DB TO SOUND LEVELS OCCURRING IN THE NIGHT BETWEEN 10:00 P.M. AND 7:00 A.M.
   B. THE COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) AT THE BOUNDARY OF ANY PROPERTY CONTAINING A SENSITIVE RECEPTOR, AS DEFINED IN PARAGRAPH (7)(A) ABOVE, SHALL NOT EXCEED 60 DBA.
   C. THE COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) AT THE BOUNDARY OF ANY DEVELOPED PROPERTY NOT CONTAINING A SENSITIVE RECEPTOR SHALL NOT EXCEED 70 DBA.
   D. SOUND THAT IS PRODUCED FOR NOT MORE THAN A CUMULATIVE PERIOD OF ONE MINUTE IN ANY HOUR MAY EXCEED THE STANDARDS ABOVE BY UP TO 10 DBA.
   E. THE MAXIMUM SOUND LEVELS LISTED ABOVE DO NOT APPLY TO EMERGENCY ALERTS, EMERGENCY WORK TO PROVIDE ELECTRICITY, WATER, OR OTHER PUBLIC UTILITIES WHEN PUBLIC HEALTH OR SAFETY IS INVOLVED, SNOW REMOVAL OR ROAD REPAIR.

LEGEND

LEGEND SHOWN ON SHEET 2

ENGINEER'S CERTIFICATION

I, MICHAEL MINERVINI, P.E., DO HEREBY CERTIFY THAT I AM A PROFESSIONAL ENGINEER LICENSED AND REGISTERED TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF PENNSYLVANIA, PURSUANT TO THE PENNSYLVANIA PROFESSIONAL ENGINEERS REGISTRATION LAW, ACT OF MAY 23, 1945, P.L. 913, AS AMENDED AS FOUND AT 63 P.S. SECTION 148 ET SEQ., AND THAT THE ENGINEERING ASPECTS OF THE PLAN ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, AND I DO FURTHER CERTIFY THAT THE PLAN COMPLIES WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCES OF PALMER TOWNSHIP.

MICHAEL MINERVINI P.E. 071233 DATE
LIBERTY ENGINEERING, INC.
7150 WINDSOR DR., SUITE 5
ALLENTOWN, PA. 18106
(484)223-1761 - FAX (484)223-1768

SURVEYOR'S CERTIFICATION

I, MICHAEL A. HOUSTEN, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED AND REGISTERED TO PERFORM SURVEYS IN THE COMMONWEALTH OF PENNSYLVANIA, PURSUANT TO THE PENNSYLVANIA PROFESSIONAL ENGINEERS REGISTRATION LAW, ACT OF MAY 23, 1945, P.L. 913, AS AMENDED AS FOUND AT 63 P.S. SECTION 148 ET SEQ., AND DO HEREBY CERTIFY THAT THE PLAN, PREPARED FROM A FIELD SURVEY, CORRECTLY REPRESENTS THE PROPOSED LOTS AS SURVEYED BY ME FOR THE OWNERS AND THAT THE PLAN COMPLIES WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCES OF PALMER TOWNSHIP.

MICHEAL A. HOUSTEN, PLS PA-SU075182 DATE
ARTHUR A SWALLOW ASSOCIATES, LLC
1003-1005 NORTH 19TH STREET
ALLENTOWN, PA 18104

OPERATION AND MAINTENANCE CERTIFICATION

THE OWNERS, THEIR HEIRS, ASSIGNEES, AND/OR GRANTEES OF THE PROPERTY SHOWN ON THIS PLAN SHALL BE RESPONSIBLE FOR THE OPERATION, MAINTENANCE, REPAIR, RECONSTRUCTION AND/OR REPLACEMENT OF THE STORMWATER MANAGEMENT FACILITIES, INCLUDING BUT NOT LIMITED TO INLETS, OUTLETS, DRAINAGE PIPE(S), ENERGY DISSIPATION FACILITIES, FENCING, DRAINAGE SWALE(S), INFILTRATION PRACTICE FACILITIES, BEST MANAGEMENT PRACTICE (BMP) FACILITIES, DETENTION FACILITIES, NATURAL WATERCOURSES AND POND(S), WHICH ARE LOCATED WITHIN THE BOUNDARIES OF THE PROPERTY. SAID MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO CLEANING, REMOVAL OF POLLUTANTS AND DEBRIS, REPAIR OF EROSION CONDITIONS, CLOSURE OF SINKHOLES, AND MAINTENANCE OF VEGETATION. NO BUILDING OR STRUCTURE SHALL BE CONSTRUCTED WITHIN THE DRAINAGE EASEMENTS SHOWN ON THE PLANS, NOR SHALL THE STORMWATER MANAGEMENT FACILITIES PLANNED FOR THE DRAINAGE EASEMENTS BE ALTERED FROM DESIGN CONDITIONS SHOWN ON PLANS AS APPROVED BY THE GOVERNING MUNICIPALITY WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE GOVERNING MUNICIPALITY.

WERNER ENTERPRISES, INC.
141568 FRONTIER ROAD
OMAHA, NE 68136

RESPONSIBLE PARTY DATA:

DEVELOPER/ APPLICANT: WERNER ENTERPRISES, INC.
141568 FRONTIER ROAD
OMAHA, NE 68138
CONTACT PERSON:
CHAD HARRINGTON (DIRECTOR OF FACILITIES MAINTENANCE AND CONSTRUCTION)
CHHARRINGTON@WERNER.COM
402-894-3333
SIGNING AUTHORITY:
MARTY NORDLUND, SR. EVP & COO

SITE ADDRESS: 1470 TATAMY ROAD
EASTON, PA 18045

PROJECT INFORMATION:

PROJECT NAME: WERNER ENTERPRISES LEHIGH VALLEY TRAINING AND MAINTENANCE FACILITY
PROPERTY OWNER NAME: WERNER ENTERPRISES, INC.

SIGNATURE:_____ DATE:_____
MARTY NORDLUND, SR. EVP &COO

NOTARY INFORMATION:

STATE OF _____)
COUNTY OF _____)SS:

ON THIS, THE _____ DAY OF _____, 20____, BEFORE ME, A NOTARY PUBLIC, PERSONALLY APPEARED MARTY NORDLUND, HAVING A TITLE OF SR. EVP & COO WITHIN THE BUSINESS WERNER ENTERPRISES, INC., THE PROPERTY OWNER OF THE PREMISES DESCRIBED IN THIS PCSM FILING NOTICE, KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING DOCUMENT, AND ACKNOWLEDGED THAT HE/SHE EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEALS.

_____
NOTARY PUBLIC COMMISSION EXPIRES

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT: **WERNER ENTERPRISES INC.**
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE: **SITE PLAN**

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 6 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR FOR CONSISTENCY WITH TOWNSHIP REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS: (LARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND ROCK CONDITIONS, GROUNDWATER CONDITIONS, AND HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER. THE TOWNSHIP, THE TOWNSHIP SOLICITOR AND THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE. DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY EASEMENTS OR RIGHTS-OF-WAY SHOWN ON THIS PLAN HAVE BEEN SET TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEFINITION, CONSISTENCY, CLOSURE, AND AREA (ONLY). THE LOCATIONS OF EXISTING STREET RIGHT-OF-WAYS, LOT LINES, AND STREET RIGHT-OF-WAYS, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

PARCEL INFORMATION:

UNIFORM PARCEL IDENTIFIER (UPI) TAX PARCEL ID# K8-5-2
MUNICIPALITY: PALMER TWP. COUNTY: NORTHAMPTON
LOT(S): 1 UNIT(S): N/A ADDRESS: 1470 TATAMY ROAD; 2201 NEWLINS MILL ROAD

TOWNSHIP ENGINEER
REVIEWED BY THE TOWNSHIP ENGINEER.
TOWNSHIP ENGINEER DATE OF PLAN SIGNATURE

PLANNING COMMISSION
REVIEWED BY THE PALMER TOWNSHIP PLANNING COMMISSION
CHAIRPERSON SECRETARY
DATE OF RECOMMENDATION OF PLAN APPROVAL DATE OF PLAN SIGNATURE

BOARD OF SUPERVISORS
APPROVED BY THE PALMER TOWNSHIP BOARD OF SUPERVISORS FOR RECORDING
CHAIRPERSON SECRETARY
DATE OF PLAN APPROVAL DATE OF PLAN SIGNATURE

ACCEPTANCE OF DEDICATION
THE BOARD OF SUPERVISORS OF PALMER TOWNSHIP HEREBY ACCEPT THE THE STREET-RIGHT-OF-WAY INDICATED HEREON FOR PUBLIC USE.
CHAIRPERSON, BOARD OF SUPERVISORS DATE
TOWNSHIP SECRETARY DATE

OFFER OF DEDICATION
THE UNDERSIGNED OWNER(S) OFFER TO DEDICATE TO THE TOWNSHIP OF PALMER FOR PUBLIC USE THE FOLLOWING STREET RIGHTS-OF-WAYS FOR THE FOLLOWING STREET; NEWLINS MILL ROAD; UTILITY EASEMENTS SHOWN ON THE APPROVED PLANS; AND ALL PUBLIC OPEN SPACES AND ALL OTHER IMPROVEMENTS STATED AS PROPOSED TO BE PUBLIC ON THE PLANS OR ACCOMPANYING DOCUMENTS OR REQUIRED TO BE DEDICATED UNDER TOWNSHIP REQUIREMENTS
MARTY NORDLUND, SR. EVP & COO DATE

STORMWATER BMP'S CERTIFICATION:

THE STORMWATER BMPS AS DEPICTED ON THESE SET OF PLANS, INCLUDING BUT NOT LIMITED TO EROSION CONTROL PLANS, AND POST CONSTRUCTION STORMWATER MANAGEMENT PLANS, CANNOT BE ALTERED OR REMOVED WITHOUT APPROVAL OF THE MUNICIPALITY.
MARTY NORDLUND, SR. EVP & COO DATE

LEHIGH VALLEY PLANNING COMMISSION:
LVPC STAFF PERSON RESPONSIBLE FOR REVIEW DATE

RECORDER OF DEEDS
RECORDED IN THE NORTHAMPTON CO. RECORDER OF DEEDS OFFICE IN
DEED BOOK VOL. #_____PAGE____ON_____
STAMP OF NOTARY PUBLIC

OWNERS STATEMENT

WE, THE OWNERS OF THE LAND INVOLVING ACCOMPANYING PLANS, BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY WE ARE THE SOLE OWNERS OR ARE THE AUTHORIZED OFFICERS OF THE CORPORATION THAT IS THE SOLE OWNERS OF THIS PROPERTY IN PEACEFUL POSSESSION OF IT, AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE OF SAME, AND THAT WE ACKNOWLEDGE AND ENDORSE THE ACCOMPANYING PLANS, AND THAT ALL IMPROVEMENTS IDENTIFIED AS PROPOSED PUBLIC PROPERTY (NOT INCLUDING IMPROVEMENTS LABELED "NOT FOR DEDICATION") ARE PROPOSED FOR DEDICATION TO THE PUBLIC USE, AND THAT WE PROPOSED THE ATTACHED RECORD PLAN FOR RECORDING (AS APPLICABLE), AFTER RECEIVING ALL REQUIRED MUNICIPAL APPROVALS.

OWNER'S OR AUTHORIZED CORPORATE OFFICERS SIGNATURES DATE

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Scale: 1"=50'

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CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24

STORM SEWER NOTE:

1. THE EXISTING AND PROPOSED STORM SEWER SYSTEMS SHALL REMAIN PRIVATE
2. STRUCTURES AND OTHER OBSTRUCTIONS TO FLOW (EXCEPT FENCES MADE OF SUCH MATERIALS AND SO PLACED AS TO NOT OBSTRUCT FLOW) SHALL BE PROHIBITED WITHIN STORMWATER EASEMENTS. SUCH EASEMENTS SHALL GRANT THE TOWNSHIP THE RIGHT TO ENTER THE EASEMENT TO ACCOMPLISH MAINTENANCE WORK, ALTHOUGH THE TOWNSHIP ASSUMES NO RESPONSIBILITY FOR SUCH WORK.

STORMWATER MANAGEMENT NOTES:

1. "ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE PADEP E&S MANUAL, PADEP BMP MANUAL, PENNDOT PUBLICATION 408, AND PENNDOT PUBLICATION 72M, ALL AS AMENDED AND UPDATED, AND NO PORTION HEREOF SHALL BE CONSTRUCTED UNTIL REVIEWED AND EXPLICITLY APPROVED BY THE MUNICIPAL ENGINEER."
2. "PALMER TOWNSHIP IS NOT RESPONSIBLE FOR THE MAINTENANCE OF ANY AREA NOT DEDICATED TO AND ACCEPTED FOR PUBLIC USE."
3. "THE OPERATION AND MAINTENANCE AGREEMENT IS A PART OF THE PLAN. IF THE OWNER FAILS TO ADHERE TO THE TERMS OF THE AGREEMENT, THE MUNICIPALITY MAY PERFORM THE SERVICES REQUIRED AND CHARGE THE OWNER APPROPRIATE FEES."
4. IF CONVEYANCE FACILITIES ARE PROPOSED THAT REQUIRE WATERTIGHT JOINTS, "ALL STORMWATER CONVEYANCE FACILITIES SHALL BE CONSTRUCTED WITH WATERTIGHT JOINTS."
5. IF INLETS OR OTHER STRUCTURES ARE PROPOSED, "THE KNOCKING OUT OF INLET OR OTHER STRUCTURE CORNERS IS PROHIBITED."
6. IF NO SENSITIVE NATURAL FEATURES ARE PRESENT ON THE SITE PER § 158-401A.M ABOVE, "(QUALIFIED PROFESSIONAL RESPONSIBLE FOR PROJECT DESIGN), ON THIS DATE, (SIGNATURE DATE), CERTIFIES THAT THERE ARE NO SENSITIVE NATURAL FEATURES ON THE PROJECT SITE, INCLUDING WATERWAYS, WETLANDS, FLOODPLAINS, SIGNIFICANT KARST FEATURES, AND NATURAL SLOPES OVER 25%."
7. IF SWM CONSERVATION EASEMENTS AND/OR RIPARIAN BUFFER EASEMENTS ARE REQUIRED ON THE SITE PER §158-303G AND/OR §158-401A.T ABOVE, "THE LANDOWNER HEREBY GRANTS PERMISSION TO THE MUNICIPALITY, ITS AUTHORIZED AGENTS, AND EMPLOYEES ACCESS TO ANY AND ALL SWM CONSERVATION EASEMENTS AND RIPARIAN BUFFER EASEMENTS ON THE PROPERTY."
8. IF SWM CONSERVATION EASEMENTS ARE REQUIRED ON THE SITE PER § 158-401 A.T ABOVE, "NOTHING SHALL BE PLACED, STORED, ERECTED, CONSTRUCTED OVER, PLANTED, OR OTHERWISE LOCATED WITHIN AN EASEMENT OTHER THAN THE SWM FACILITIES WITHIN THE EASEMENT."
9. IF ANY EASEMENTS ON THE SITE ARE TO BE LOCATED BASED UPON THE LOCATION OF CONVEYANCE FACILITIES PER § 158-401A.T.4 ABOVE, "SWM CONSERVATION EASEMENTS FOR CONVEYANCE FACILITIES SHALL BE LOCATED AND OFFSET FROM THE CENTER OF THE RESPECTIVE CONVEYANCE FACILITY AS INSTALLED." IF THE CONVEYANCE FACILITIES ARE SUBTERRANEAN, ALSO ADD, "UNDERGROUND CONVEYANCE FACILITIES CAN BE IDENTIFIED FROM THE SURFACE VIA (IDENTIFICATION METHOD)."
10. IF NO OUTSIDE PERMITS ARE REQUIRED PER§ 158-401A.Y ABOVE, "(QUALIFIED PROFESSIONAL RESPONSIBLE FOR PROJECT DESIGN), ON THIS DATE, (SIGNATURE DATE), CERTIFIES THAT NO STORMWATER MANAGEMENT, EROSION AND SEDIMENT CONTROL, WATERWAYS AND WETLANDS, AND/OR OTHER RELEVANT PLAN AUTHORIZATIONS/PERMITS ARE REQUIRED OTHER THAN THOSE OF THE MUNICIPALITY."
11. IF AN AS-BUILT PLAN IS REQUIRED PER§ 158-410 BELOW, "A COPY OF THE RECORDED AS-BUILT PLAN WILL BE PROVIDED TO THE MUNICIPALITY PRIOR TO OCCUPANCY AND/OR THE RELEASE OF FINANCIAL SECURITY."
12. "THE SWM REPORT IS A PART OF THE PLAN."
13. IF AN INDEMNIFICATION STATEMENT IS REQUIRED FOR CARBONATE SITE CONDITIONS PER§ 158-403B BELOW, "THE APPLICANT, INCLUDING ITS AGENTS, HEIRS, ASSIGNS AND ANYONE ON BEHALF OF WHOM THE APPLICATION IS SUBMITTED, DOES HEREBY INDEMNIFY, DEFEND, AND HOLD HARMLESS PALMER TOWNSHIP AND ITS RESPECTIVE ASSIGNS, OFFICIALS, OFFICERS, EMPLOYEES, AND AGENTS, FROM AND AGAINST ANY AND ALL DEMANDS, CLAIMS, ACTIONS, OR CAUSES OF ACTION, ASSESSMENTS, LOSSES, DAMAGES, LIABILITIES, COSTS, AND EXPENSES, INCLUDING REASONABLE FEES AND EXPENSES OF COUNSEL, OTHER EXPENSES OF INVESTIGATION, HANDLING, AND LITIGATION, AND SETTLEMENT AMOUNTS, TOGETHER WITH INTEREST AND PENALTIES ASSERTED AGAINST, RESULTING TO, IMPOSED UPON, OR INCURRED BY THE APPLICANT AND ANYONE ON BEHALF OF WHOM THE APPLICATION IS SUBMITTED OR RAISED AGAINST THE TOWNSHIP, DIRECTLY OR INDIRECTLY, BY REASON OF, RESULTING FROM, OR ARISING IN CONNECTION WITH ANY RESULT FROM CARBONATE SITE CONDITIONS."
14. IF AN INDEMNIFICATION STATEMENT IS REQUIRED FOR THE UTILIZATION OF INFILTRATION SWM BMPS PER §158-403C BELOW, "THE APPLICANT, INCLUDING ITS AGENTS, HEIRS, ASSIGNS AND ANYONE ON BEHALF OF WHOM THE APPLICATION IS SUBMITTED, DOES HEREBY INDEMNIFY, DEFEND, AND HOLD HARMLESS PALMER TOWNSHIP AND ITS RESPECTIVE ASSIGNS, OFFICIALS, OFFICERS, EMPLOYEES, AND AGENTS, FROM AND AGAINST ANY AND ALL DEMANDS, CLAIMS, ACTIONS, OR CAUSES OF ACTION, ASSESSMENTS, LOSSES, DAMAGES, LIABILITIES, COSTS, AND EXPENSES, INCLUDING REASONABLE FEES AND EXPENSES OF COUNSEL, OTHER EXPENSES OF INVESTIGATION, HANDLING, AND LITIGATION, AND SETTLEMENT AMOUNTS, TOGETHER WITH INTEREST AND PENALTIES ASSERTED AGAINST, RESULTING TO, IMPOSED UPON, OR INCURRED BY THE APPLICANT AND ANYONE ON BEHALF OF WHOM THE APPLICATION IS SUBMITTED OR RAISED AGAINST THE TOWNSHIP, DIRECTLY OR INDIRECTLY, BY REASON OF, RESULTING FROM, OR ARISING IN CONNECTION WITH THE UTILIZATION OF INFILTRATION SWM BMPS."

USGS LOCATION MAP

SCALE: 1" = 2000'

NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP SOLICITOR AND TOWNSHIP ENGINEER FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS. THIS REVIEW DOES NOT INCLUDE ENVIRONMENTAL, SOIL AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS: CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO, SOIL AND WATER QUALITY, KARST, GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES AS MAY EXIST ON THE SITE WHICH ARE NOT READILY APPARENT TO, AND HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER. THE TOWNSHIP, THE TOWNSHIP SOLICITOR AND THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE. DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND PROPOSED IMPROVEMENTS ARE REVIEWED FOR GENERAL CONFORMITY TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION, CONSISTENCY, CLOSURE, AND AREA ONLY. THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, STREET RIGHT-OF-WAYS, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE PLAN PREPARER. THE INFORMATION SHOWN ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

MUNICIPAL ENGINEER CERTIFICATION:

MUNICIPAL ENGINEER OR MUNICIPAL DESIGNEE ON THIS DATE,

SIGNATURE _____ DATE _____ HAS REVIEWED AND HEREBY CERTIFIES THAT THE SWM SITE PLAN APPEARS TO MEET ALL DESIGN STANDARDS AND CRITERIA OF THE STORMWATER MANAGEMENT ORDINANCE. STRICT COMPLIANCE WITH THE STORMWATER MANAGEMENT ORDINANCE, HOWEVER, IS THE RESPONSIBILITY OF THE APPLICANT."

OWNER STORMWATER CERTIFICATION:

WE THE APPLICANT OR OWNER, ON THIS DATE,

SIGNATURE _____ DATE _____ ACKNOWLEDGES THAT SWM AND CONVEYANCE FACILITIES ARE PERMANENT FIXTURES AND MAY NOT BE MODIFIED, REMOVED, FILLED, LANDSCAPED, OR OTHERWISE ALTERED WITHOUT WRITTEN APPROVAL OF PALMER TOWNSHIP."

DESIGN ENGINEER CERTIFICATION:

QUALIFIED PROFESSIONAL RESPONSIBLE FOR PROJECT DESIGN, ON THIS DATE,

SIGNATURE _____ DATE _____ CERTIFIES THAT THIS PLAN COMPLIES WITH THE ORDINANCES, PROVISIONS, AND REGULATIONS OF THE MUNICIPALITY AND ANY OTHER APPLICABLE ENTITIES." A SEAL WITH DATED SIGNATURE SHALL ACCOMPANY THIS STATEMENT.

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT: **WERNER ENTERPRISES INC.**

14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

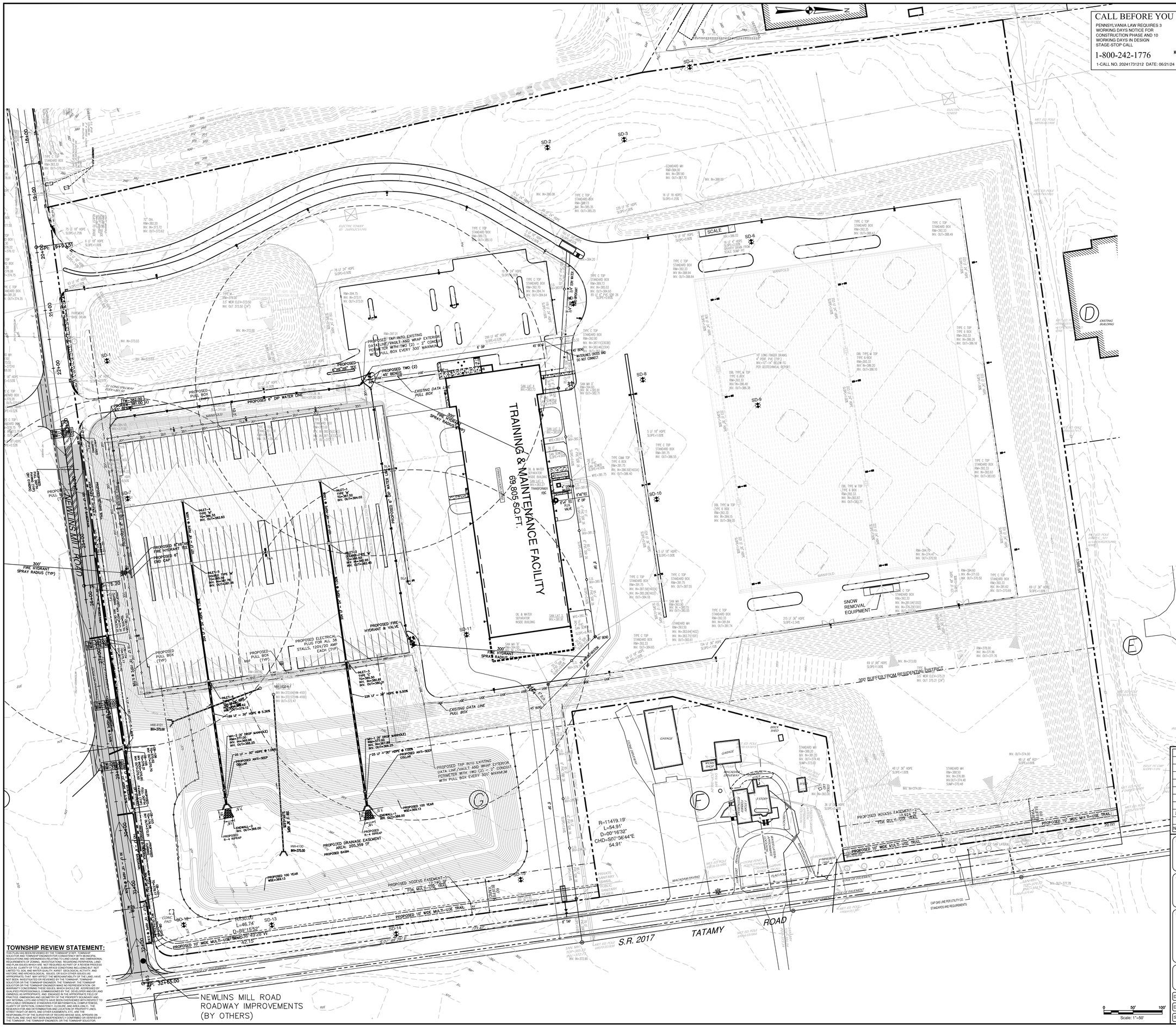
PREPARER:

Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE: **GRADING PLAN**

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 7 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	

Scale: 1"=50'



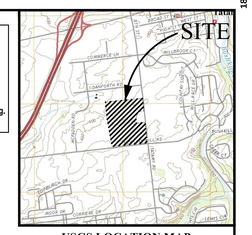
CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

1-CALL NO. 20241731212 DATE: 06/21/24

811 Know what's below. Call before you dig.



USGS LOCATION MAP
SCALE: 1" = 2000'
NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

STORM SEWER NOTE:
THE EXISTING AND PROPOSED STORM SEWER SYSTEMS SHALL REMAIN PRIVATE.

TOWNSHIP REVIEW STATEMENT:
THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF. TOWNSHIP SOLICITOR AND TOWNSHIP ENGINEER FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING. INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO, SOIL AND WATER QUALITY, KARST GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP. TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER, THE TOWNSHIP, THE TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNERS (AS APPROPRIATE), AND ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE. DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY INTERNAL LOTS AND STREETS HAVE BEEN OVERVIEWED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION, CONSISTENCY, CLOSURE, AND AREA ONLY. THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, STREET RIGHT OF WAYS, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:
WERNER ENTERPRISES INC.
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
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PREPARER:
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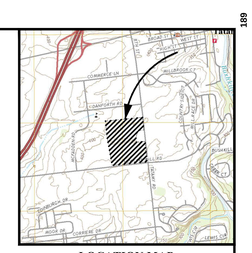
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:
UTILITY PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.:
DRAWN: NJM	SCALE: AS NOTED	8 of 21
SURVEY DATE: .	DWG. FILE: 835001	



LOCATION MAP

SCALE: 1" = 2000'
NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

EXISTING STREET TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
16	RP	ROBINIA PSEUDOACACIA	BLACK LOCUST	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED

EXISTING TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
2	AA	AMELANCHIER ARBOREA	SHADBLOW SERVICEBERRY	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
16	AR	ACER REDRUM	RED MAPLE	2 1/2"–3" MIN. CALIPER	BALLED & BURLAPPED
4	BN	BETULA NIGRA	RIVER BIRCH	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
2	CO	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
3	CR	CORNUS FLORIDA REPANDICS CHAMAECYPARIS THYOIDES	FLOWERING DOGWOOD	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
5	CT		ATLANTIC WHITE CEDAR	6' – 8' HEIGHT	BALLED & BURLAPPED
4	LT	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
15	PP	PICEA PUNGENS	BLUE SPRUCE	6' – 8' HEIGHT	BALLED & BURLAPPED
2	PS	PINUS STROBUS	WHITE PINE	6' – 8' HEIGHT	BALLED & BURLAPPED
4	QP	QUERCUS PALUSTRIS	PIN OAK	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
3	SM	MAGNOLIA VIRGINIA	SWEETBAY MAGNOLIA	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
3	TA	TILIA AMERICANA	AMERICAN LINDEN	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED

EXISTING BUFFER TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
200	PP	PICEA PUNGENS	BLUE SPRUCE	6' – 8' HEIGHT	BALLED & BURLAPPED
200	PS	PINUS STROBUS	WHITE PINE	6' – 8' HEIGHT	BALLED & BURLAPPED

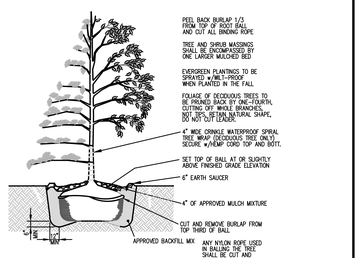
PROPOSED TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
137	PP	PICEA PUNGENS	BLUE SPRUCE	6' – 8' HEIGHT	BALLED & BURLAPPED
138	PS	PINUS STROBUS	WHITE PINE	6' – 8' HEIGHT	BALLED & BURLAPPED
12	AR	ACER RUBRUM	RED MAPLE	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED

PROPOSED STREET TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
38	QR	QUERCUS RUBRA	RED OAK	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED

* IN LIEU OF REQUIRED ISLAND TREES IN THE PARKING AREA, 8 STREET TREES WILL BE PLANTED BEHIND THE SIDEWALK ALONG NEWLINS MILL ROAD.



TREE PLANTING

CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP SOLICITOR AND TOWNSHIP ENGINEER FOR CONSISTENCY WITH MUNICIPAL ORDINANCES. THE REVIEW DOES NOT INCLUDE ANY OTHER LOCAL, STATE OR FEDERAL REQUIREMENTS OF ZONING, INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS INCLUDING, BUT NOT LIMITED TO, FLOOD PLAIN, WETLANDS, TRAFFIC, BUT NOT LIMITED TO, MSS, AND WATER QUALITY ASPECTS, GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (AS APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND. HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, TOWNSHIP ENGINEER OR TOWNSHIP SOLICITOR. APPROVAL BY THE TOWNSHIP ENGINEER OR SOLICITOR OR THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND ENGAGED IN THE APPROPRIATE FIELD OF EXPERTISE. THE TOWNSHIP ENGINEER AND SOLICITOR HAVE NOT VERIFIED THAT ANY INTERNAL LOTS AND STREETS HAVE BEEN DERIVED/MEET WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEFICTION, CONSISTENCY, CLOSURE, AND AREA ONLY). THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, RIGHTS-OF-WAY, AND EASEMENTS SHOWN ON THIS PLAN IS THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER OR THE TOWNSHIP SOLICITOR.

NEWLINS MILL ROAD
ROADWAY IMPROVEMENTS
(BY OTHERS)

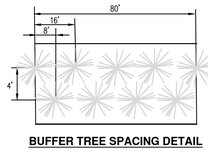
LANDSCAPE CALCULATIONS:

REQUIRED LANDSCAPE AREA SHALL BE 5% OF THE TOTAL PAVED AREA OF THE PARKING LOT.
TRUCK PARKING LOT 194,469 SQ. FT. REQUIRES 9,723 SQ. FT.

TOTAL REQUIRED = 33,421 SQ. FT.
TOTAL PROPOSED = 43,144 SQ. FT.

STREET TREES:
ONE TREE REQUIRED FOR EVERY 50 FEET OF LOT FRONTAGE.
474' LOT FRONTAGE TATAMY ROAD, 399' NEWLINS MILL ROAD
REQUIRES 16 TREES.
16 STREET TREES PROVIDED

ONE TREE REQUIRED FOR EVERY 15 REQUIRED OFF STREET PARKING SPACES
150 SPACES REQUIRE 10 TREES



BUFFER TREE SPACING DETAIL

BUFFER BERM TREE NOTE

THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DISTRIBUTING AND PLANTING THE TREES WITHIN THE BERM AS REQUIRED AS PER THE TREE COUNTS.

Scale: 1"=50'

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT: **WERNER ENTERPRISES INC.**
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE: **LANDSCAPE PLAN**

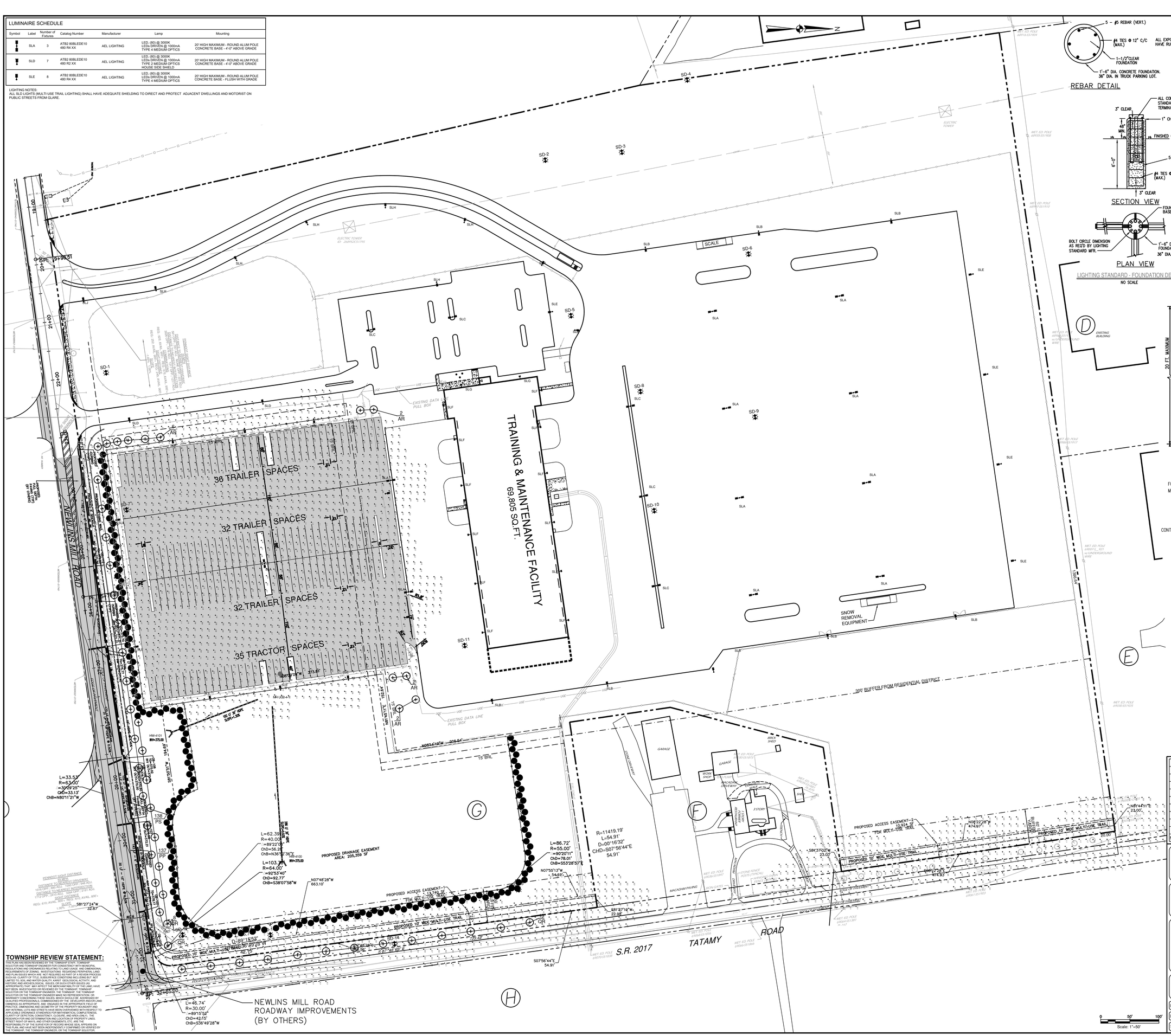
DESIGN: PAS	PLAN DATE: 07/16/24
DRAWN: NJM	SCALE: AS NOTED
SURVEY DATE: .	DWG. FILE: 835001

DWG. NO.: 9 of 21

LUMINAIRE SCHEDULE

Symbol	Label	Number of Fixtures	Catalog Number	Manufacturer	Lamp	Mounting
	SLA	3	ATB2 80BLEDE10 480 R4 XX	AEL LIGHTING	LED, (80) @ 3000K LEDs DRIVEN @ 1000mA TYPE 4 MEDIUM OPTICS	20' HIGH MAXIMUM - ROUND ALUM POLE CONCRETE BASE - 4'-0" ABOVE GRADE
	SLD	7	ATB2 80BLEDE10 480 R2 XX	AEL LIGHTING	LED, (80) @ 3000K LEDs DRIVEN @ 1000mA TYPE 2 MEDIUM OPTICS HOUSE SIDE SHIELD	20' HIGH MAXIMUM - ROUND ALUM POLE CONCRETE BASE - 4'-0" ABOVE GRADE
	SLE	8	ATB2 80BLEDE10 480 R4 XX	AEL LIGHTING	LED, (80) @ 3000K LEDs DRIVEN @ 1000mA TYPE 4 MEDIUM OPTICS	20' HIGH MAXIMUM - ROUND ALUM POLE CONCRETE BASE - FLUSH WITH GRADE

LIGHTING NOTES:
ALL SLD LIGHTS (MULTI USE TRAIL LIGHTING) SHALL HAVE ADEQUATE SHIELDING TO DIRECT AND PROTECT ADJACENT DWELLINGS AND MOTORIST ON PUBLIC STREETS FROM GLARE.


SD-1
SD-2
SD-3
SD-4
SD-5
SD-6
SD-7
SD-8
SD-9
SD-10
SD-11
SD-12
SD-13
SD-14
SLA
SLB
SLC
SLD
SLE
SLF
SLG
SLH
36 TRAILER SPACES
32 TRAILER SPACES
32 TRAILER SPACES
35 TRACTOR SPACES
TRAINING & MAINTENANCE FACILITY
69,805 SQ.FT.
NEWLINS MILL ROAD
S.R. 2017
TATAMY ROAD
SNOW REMOVAL EQUIPMENT
300' BUFFER FROM RESIDENTIAL DISTRICT
PROPOSED ACCESS EASEMENT-2
10,924 SF
FOR MULTI-USE TRAIL
PROPOSED 10' WIDE MULTI-USE TRAIL
PROPOSED ACCESS EASEMENT-1
13,746 SF
FOR MULTI-USE TRAIL
PROPOSED DRAINAGE EASEMENT
AREA: 205,359 SF
EXISTING DATA LINE PULL BOX
EXISTING BUILDING
GARAGE
BRICK SHED
SHED
SPOON SHOP
MACADAM DRIVEWAY
STONE FENCE POSTS (TYPICAL)
MACADAM PAVING
STONE WALL
CONCRETE CURB
ELECTRIC TOWER
ID: 2WRQC5171PS
MET. ED POLE #2935/5531904
MET. ED POLE #2935/5531908
MET. ED POLE #2935/5531910
MET. ED POLE #2935/5531915
MET. ED POLE #2935/5531917
MET. ED POLE #2935/5531923
MET. ED POLE #2935/5531925
MET. ED POLE #2935/5531942
MET. ED POLE #2935/5531947
MET. ED POLE #2935/5531861
MET. ED POLE #2935/5531865
MET. ED POLE #2935/5531881
MET. ED POLE #2935/5531938
MET. ED POLE #6003/5_1421
W/ UNDERGROUND WIRE
MET. ED POLE #6003/5_1422
W/ UNDERGROUND WIRE
MET. ED POLE #6003/5_1423
W/ UNDERGROUND WIRE
MET. ED POLE #6003/5_1424
W/ UNDERGROUND WIRE
PENNDOT SIGHT DISTANCE
DISTANCE TO NEAREST DRIVEWAY
1016' OPP. - 1048 RD
DISTANCE TO NEAREST INTERSECTION
1172' OPP. - 2101 RD
RIGHT DISTANCE
REQ.- 610' AVAIL. 900'+
LEFT DISTANCE
REQ.- 610' AVAIL. 900'+
GRADES
1.00%
S81°27'24"W 32.87'
S81°27'16"W 22.98'
S81°37'32"W 23.00'
N08°22'28"E 474.93'
N08°22'28"E 474.93'
N81°41'41"E 23.00'
S07°56'44"E 54.91'
N07°55'13"W 54.69'
N07°48'28"W 663.10'
S07°48'28"E 663.10'
N08°14'47"W 205.84'
S08°07'09"W 373.41'
L=33.53'
R=63.00'
=30°29'25"
CHD=33.13'
ChB=N80°11'21"W
L=62.39'
R=40.00'
=89°22'00"
CHD=56.24'
ChB=N36°32'36"E
L=103.78'
R=64.00'
=92°53'40"
CHD=92.77'
ChB=S38°07'58"W
L=86.72'
R=55.00'
=90°20'11"
CHD=78.01'
ChB=S53°28'57"E
R=11419.19'
L=54.91'
D=00°16'32"
CHD=S07°56'44"E
54.91'
L=46.74'
R=30.00'
=89°15'52"
CHD=42.15'
ChB=S36°49'28"W
D=89°15'52"
42.15'
S44°49'28"E
42.15'
N44°49'28"W
42.15'
HW-4101
WV=375.00
HW-4100
WV=375.00
HW-4102
WV=375.00
HW-4103
WV=375.00
HW-4104
WV=375.00
HW-4105
WV=375.00
HW-4106
WV=375.00
HW-4107
WV=375.00
HW-4108
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HW-4109
WV=375.00
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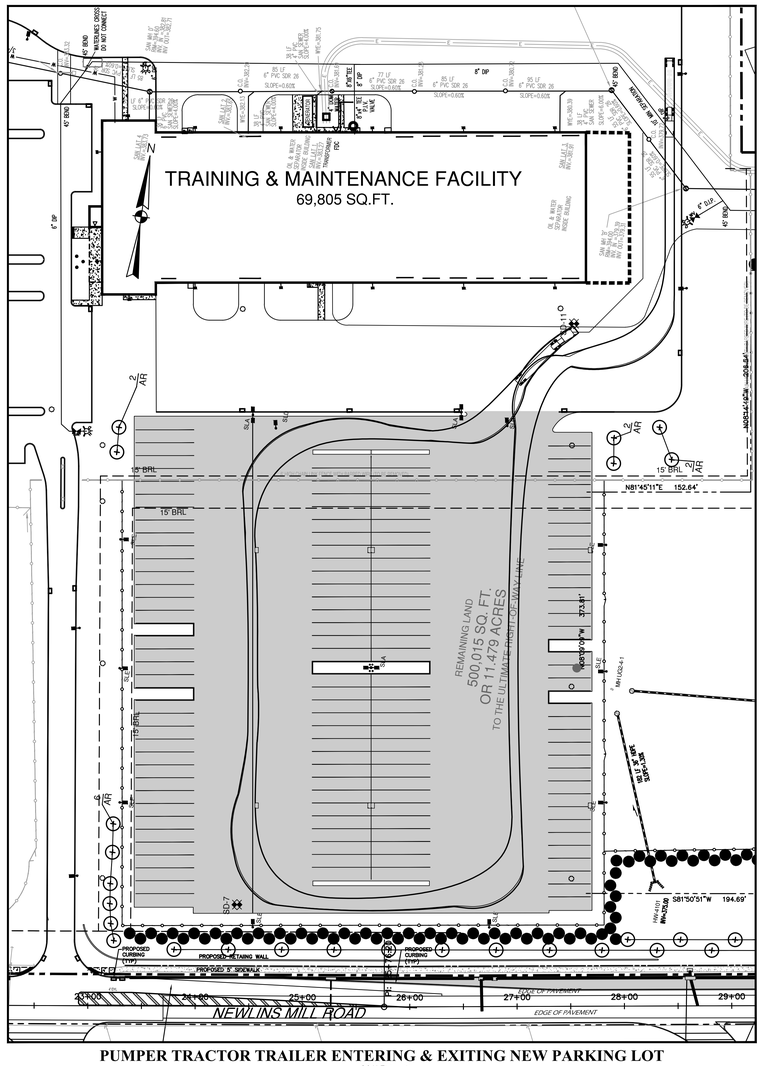
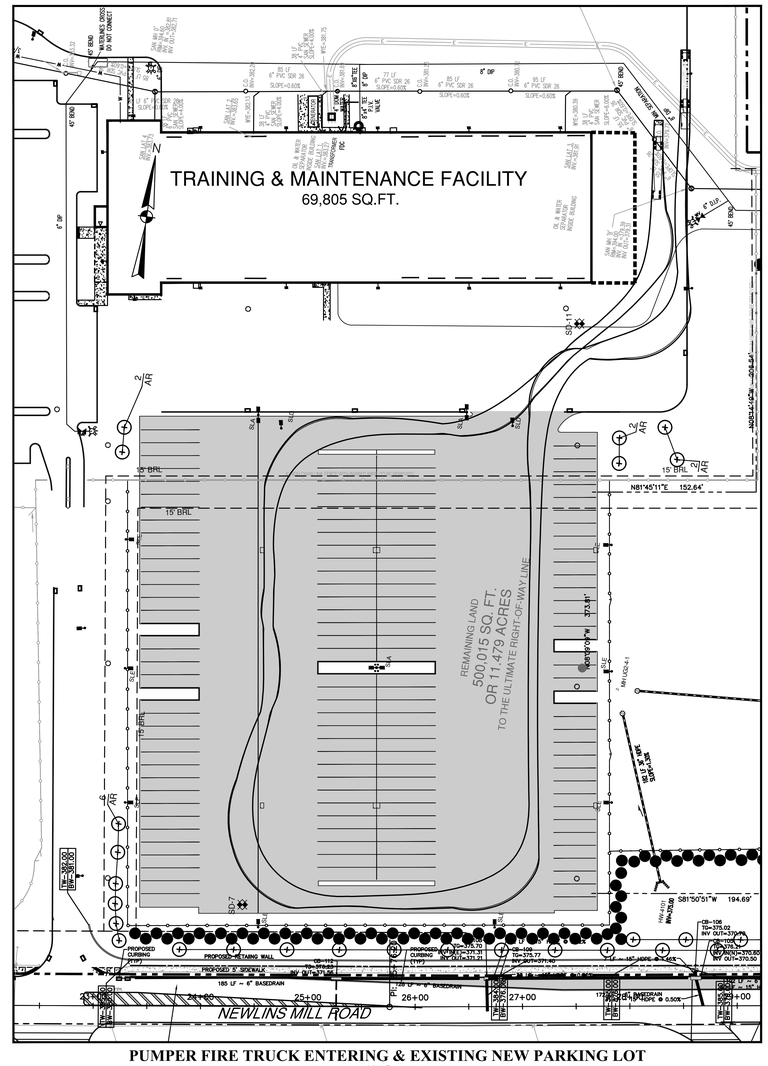
HW-4121
WV=375.00



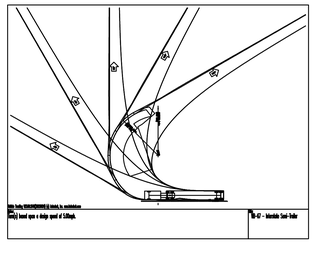
PUMPER TRACTOR TRAILER ENTERING & EXITING NEW PARKING LOT

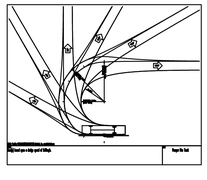
SCALE: 1" = 50'



PUMPER FIRE TRUCK ENTERING & EXISTING NEW PARKING LOT

SCALE: 1" = 50'





0 50' 100'

Scale: 1"=50'

TOWNSHIP REVIEW STATEMENT:

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CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:

WERNER ENTERPRISES INC.

14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:

Benchmark
CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
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TITLE:

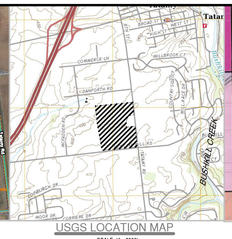
TRUCK TURNING PLAN

DESIGN: PAS	PLAN DATE: 07/16/24
DRAWN: NJM	SCALE: AS NOTED
SURVEY DATE: .	DWG. FILE: 835001

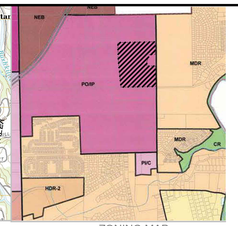
DWG. NO.: 11 of 21



SOILS MAP
NOT TO SCALE



USGS LOCATION MAP
SCALE 1" = 2000'



ZONING MAP
SCALE 1" = 2000'

SOIL CLASSIFICATION

TAKEN FROM THE SOIL SURVEY OF NORTHAMPTON CO., PA PERFORMED BY THE U.S. DEPT. OF AGRICULTURE SOIL CONSERVATION SERVICE, DATED JULY 1974, THIS SITE IS FOUND ON MAP PAGE 35.

WaA — WASHINGTON SILT LOAM, 0 - 3% SLOPES
SUITABILITY:
WINTER GRADING - FAIR
ROAD FILL - POOR TO FAIR
TOPSOIL - GOOD
SUSCEPTIBILITY TO FROST HEAVING - MEDIUM
DEPTH TO BEDROCK - > 6'

WaB — WASHINGTON SILT LOAM, 3 - 8% SLOPES
SUITABILITY:
WINTER GRADING - FAIR
ROAD FILL - POOR TO FAIR
TOPSOIL - GOOD
SUSCEPTIBILITY TO FROST HEAVING - MEDIUM
DEPTH TO BEDROCK - > 6'

CALL BEFORE YOU DIG

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1-800-242-1776

1-CALL NO. 20241731212 DATE: 06/21/24

811 Know what's below. Call before you dig.

RESPONSIBLE PARTY DATA:

DEVELOPER/ APPLICANT: WERNER ENTERPRISES
14507 FRONTIER ROAD
OMAHA, NE 68138
CONTACT PERSON:
CHAD HARRINGTON (DIRECTOR OF FACILITIES MAINTENANCE AND CONSTRUCTION)

SITE ADDRESS: 1470 TATAMY ROAD
EASTON, PA 18045

RECEIVING WATERCOURSE

POI ROAD & SITE

- CHAPTER 93 RECEIVING WATEMATCHRSHED – BUSHKILL CREEK
- CHAPTER 93 CLASSIFICATION – HQ-CWF, MF, (HIGH QUALITY COLD WATER FISHERY- MIGRATORY FISHES)

PLAN PREPARER

MICHAEL MINERVINI, PE
BENCHMARK CIVIL ENGINEERIG SERVIVES, INC
1727 JONATHAN STREET
ALLENTOWN, PA 18104
(610) 776-6700

SLOPE MATTING

ALL 3:1 SLOPES ARE TO BE MATTED USING NAG S75BN STAPLE PATTERN C

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP SOLICITOR AND TOWNSHIP ENGINEER FOR CONSISTENCY WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS. THE TOWNSHIP DOES NOT REVIEW OR APPROVE ENGINEERING AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS SUCH AS: CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT, NOT LIMITED TO, ROCK, SOILS, GROUNDWATER, ENVIRONMENTAL, HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES AS ARE APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP. TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER. THE TOWNSHIP, THE TOWNSHIP SOLICITOR AND THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND ENGAGED IN THE APPROPRIATE FIELD OF PRACTICE. DIMENSIONS AND GEOMETRY OF THE PROPERTY BOUNDARY AND ANY EASEMENTS ON THIS PLAN ARE REVIEWED FOR CONFORMANCE TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEPICTION, CONSISTENCY, CLOSURE, AND AREA (ONLY). THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, STREET RIGHT-OF-WAYS, AND OTHER EASEMENTS, ETC. ARE THE RESPONSIBILITY OF THE PLAN PREPARER WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER, OR THE TOWNSHIP SOLICITOR.

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT: **WERNER ENTERPRISES INC.**
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PREPARER:
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www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE: **EROSION CONTROL PLAN**

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.:
DRAWN: NJM	SCALE: AS NOTED	12 of 21
SURVEY DATE: .	DWG. FILE: 835001	

EROSION AND SEDIMENTATION CONTROL NOTES

1) ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN, A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

2) AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE PCSM PLANNER AND THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.

3) AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

4) ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.

5) AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.

6) CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN AREAS OF STAGE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT AREA HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

7) AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.

8) TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATIONS SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.

9) IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.

10) ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THIS SITE.

11) ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

12) THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

13) ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.

14) ALL CONSTRUCTION TRAFFIC (VEHICLES AND EQUIPMENT) SHALL BE VIA THE PROPOSED ROCK CONSTRUCTION ENTRANCE TO AVOID TRACKING SEDIMENT OFFSITE. ANY UNSTABILIZED ACCESS POINTS CANT BE USED FOR THE SITE ACCESS.

15) UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. THE OPERATOR WILL MAINTAIN AND MAKE AVAILABLE TO NORTHAMPTON COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

16) A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

17) SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

18) ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.

19) AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.

20) ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

21) ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

22) FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

23) FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

24) FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

25) SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

26) ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE, CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.

27) IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

28) PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR MOTHER MOVEMENTS.

29) EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

30) UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.

31) AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

32) UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.

33) FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW, THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

34) IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE NORTHAMPTON COUNTY CONSERVATION DISTRICT WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.

35) THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

36) THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

37) THE E&S CONTROL PLAN MAPPING MUST DISPLAY A PA ONE CALL SYSTEM INCORPORATED SYMBOL INCLUDING THE SITE IDENTIFICATION NUMBER. (THIS IS A NUMBERED SYMBOL NOT A NOTE.)

38) AT STREAM CROSSINGS, 50' BUFFER AREAS SHOULD BE MAINTAINED. ON BUFFERS, CLEARING, SOD DISTURBANCES, EXCAVATION, AND EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF BUFFERS.

39) ALL WETLANDS MUST BE DELINEATED AND PROTECTED WITH ORANGE SAFETY FENCE PRIOR TO ANY EARTHMOVING ACTIVITY.

40) STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN

41) CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.

42) ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.

43) UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.

44) CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.

45) SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.

46) SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.

47) BAFFLES MUST BE INSTALLED TO ALLOW BASIN MAINTENANCE AND CLEAN OUT.

48) ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.

49) UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

50) EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER, WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

51) FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN MAXIMUM ____8"_____ LAYERED LIFTS AT _____95_____ % DENSITY.

MAINTENANCE PROGRAM

THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.

MAINTENANCE ITEMS INCLUDE:

ROCK CONSTRUCTION ENTRANCE WITH WASHRACK - THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACING UNDER WASH RACK SHALL KEEP OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE CONDUITS IS NOT ACCEPTABLE.

TOPSOIL STOCKPILE - STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER. SEDIMENT REMOVED FROM ALL ESPC FACILITIES SHALL BE PLACED ON TOPSOIL STOCKPILE AND SEEDED AND MULCHED IMMEDIATELY.

COMPOST FILTER SOCK: CLEANOUT UPON SEDIMENT REACHING ONE HALF THE SOCK HEIGHT, REPLACING ANY DAMAGED POSTS OR SOCKS IMMEDIATELY.

ROCK FILTER AND MODIFIED ROCK FILTER – SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE FILTER. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER AND STABILIZE ANY DISTURBANCE.

CONCRETE WASHOUT FACILITY - MUST BE MAINTAINED SO THAT NO WASH WATER MAY FROM THE VEHICLES REACH ANY SURFACE WATERS. NO WASH WATER WITHIN 50' OF STORM DRAINS, OPEN DITCHES, OR SURFACE WATERS. ONCE FULL PROPERLY DISPOSE OF THE MATERIALS BY RECYCLING.

PUMPED WATER FILTER BAG - A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL. THEY SHALL BE LOCATED IN WELL-VEGETATED AREAS, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS WITH SLOPES NO GREATER THAN 5%. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PUNCTURES ARISE, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

ROCK FILTER OUTLET - THE ROCK FILTER OUTLET SHALL BE REMOVED WHEN CLOGGED WITH SEDIMENTS. MATERIALS MUST BE WASHED COMPLETELY FREE OF ALL FOREIGN MATERIALS OR NEW ROCK USED TO REBUILD THE FILTER. UNDER NO CIRCUMSTANCES IS THE SEDIMENT REMOVED FROM THE FILTER DURING CLEANING TO BE WASHED OFF THE SITE.

TEMPORARY SEEDING AND MULCHING - ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED SHALL BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDATION RATES. REFER TO SPECIFICATIONS FOR SEEDING AND MULCHING.

SEDIMENT REMOVED DURING BMP MAINTENANCE - SEDIMENT REMOVED FROM BMPS SHALL BE PLACED ON THE TOPSOIL STOCKPILE AND STABILIZED IMMEDIATELY.

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. MAINTENANCE MUST INCLUDE INSPECTION OF ALL ESPC FACILITIES AFTER EACH RUNOFF EVENT AND ON A MINIMUM OF A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR; REPLACEMENT, RE-GRADING, RESEEDING, AND RE-MULCHING MUST BE PERFORMED IMMEDIATELY. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF CONTAINING SEDIMENT FROM THE ON-SITE FLOWS PRIOR TO DISCHARGE, OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.

INSPECTIONS FOR ALL E&S BMPS SHALL BE DONE BY QUALIFIED PERSONNEL TO ENSURE THAT THE E&S BMPS ARE WORKING CORRECTLY. A LOG SHOWING DATES THAT ALE&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

RECYCLING/ DISPOSAL OF PROJECT WASTES NOTE

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES SHALL BE BURIED, DUMPED, OR DISCHARGED AT THIS SITE.

"PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH DEPARTMENT REGULATIONS.

INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE DISPOSAL FROM CONSTRUCTION WASTE INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL. WHENEVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL.

HAZARDOUS MATERIALS OR WASTES ARE NOT ANTICIPATED FROM THE CONSTRUCTION OF THE SITE. THE SITE CONTRACTOR MUST HOWEVER MAKE PROVISIONS FOR WASTE ASSOCIATE WITH EARTHMOVING AND CONSTRUCTION EQUIPMENT AS REQUIRED AND IN ACCORDANCE WITH REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DEPARTMENT OF ENVIRONMENTAL RESOURCES, FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS GOVERNING THE TRANSPORTATION, STORAGE, AND USE OF FUELS, CONSTRUCTION MATERIALS, AND EQUIPMENT.

SHOULD IT BE REQUIRED THAT RECYCLING OR DISPOSAL OF MATERIALS BE REQUIRED, THE CONTRACTOR MUST CONTACT THE COUNTY CONSERVATION DISTRICT AND/OR THE LOCAL PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICES FOR FURTHER ASSISTANCE TO OBTAIN THE REQUIRED INSTRUCTIONS AND/OR PERMITS THAT MAY INVOLVE COOLING TIME PRIOR TO REACHING WATERS OF THE COMMONWEALTH.

MATERIALS ASSOCIATED WITH BMP INSTALLATION AND REMOVAL SHALL BE REMOVED FROM SITE AT THE END OF FINAL STABILIZATION. MATERIAL WHICH CANNOT BE RECYCLED BY THE CONTRACTOR FOR FUTURE USE MUST BE DISPOSED OF IN AN APPROPRIATE MANNER AS DICTATED BY DEPARTMENT REGULATIONS. THESE MAY INCLUDE PLASTIC AND ARTIC LINERS, CONCRETE, EXTRANEOUS MATERIALS, AND OTHER NON-REUSABLE ITEMS. MATERIALS SUCH AS SUPER SILT FENCE, CHAIN LINK FENCE, TREE PROTECTION, OR OTHER MATERIALS, WHICH HAVE NOT BEEN USED OR CAN BE RETAINED BY THE CONTRACTOR FOR FUTURE USE, UPON APPROVAL AND AGREEMENT OF THE OWNER, AND BE REMOVED FROM THE SITE IN AN APPROPRIATE MANNER.

EXTRANEOUS SOIL AND ROCK MATERIAL DUE TO BMP INSTALLATION, USE, AND REMOVAL SHALL BE DISPOSED OF IN A PROPER MANNER. IT IS RECOMMENDED THAT THESE MATERIALS EITHER BE DISTRIBUTED THROUGHOUT THE SITE AS NEEDED, OR A MINOR STOCKPILE LOCATED ON THE SITE BE PROVIDED, SHOULD THESE MATERIALS BE REQUIRED FOR MAINTENANCE OF IMPLEMENTED BMPS.

THE OWNER SHALL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.

BMP SEDIMENT REMOVAL NOTE

SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.

PLAN NOTES:

102.4(B)(5)(XIII) IDENTIFICATION OF THE NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION DURING EARTH DISTURBANCE ACTIVITIES AND INCLUDE BMPS TO AVOID OR MINIMIZE POTENTIAL POLLUTION AND ITS IMPACTS FROM SUCH FORMATIONS.

THE SOILS THAT EXISTING ONSITE ARE OF THE WASHINGTON SERIES. ONE LIMITATION OF THE WASHINGTON SERIES IS THAT THEY ARE SUSCEPTIBLE TO SINKHOLE FORMATION. A SINKHOLE REMEDIATION DETAIL HAS BEEN ADDED TO THE PLAN SET. PROPER CARE SHOULD BE TAKEN TO PREVENT SINKHOLE FORMATION. SINKHOLES, IF DEVELOP, SHOULD BE APPROPRIATELY HANDLED.

IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST, TOWNSHIP AND TOWNSHIP ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE NORTHAMPTON COUNTY CONSERVATION DISTRICT WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. PERMITTED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE AND WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED OR WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

102.4(B)(5)(XIII) IDENTIFICATION OF POTENTIAL THERMAL IMPACTS TO SURFACE WATERS OF THIS COMMONWEALTH IN FROM THE EARTH DISTURBANCE ACTIVITY INCLUDING BMPS TO AVOID, MINIMIZE OR MITIGATE POTENTIAL POLLUTION FROM THERMAL IMPACTS.

THE USE OF AT GRADE THAT DISCHARGE TO UNDERGROUND INFILTRATION BEDS PRE-CLUDES BMPS FROM REACHING WATER OF THE COMMONWEALTH, WITH THE EXCEPTION OF TEH NET INCREASE IN THE 2-YEAR STORM EVENT WHICH WILL BE SPRAY IRRIGATED ACROSS GARSEY LANDS WHICH WILL PROVIDE COOLING TIME PRIOR TO REACHING WATERS OF THE COMMONWEALTH.

DIRECTING THE WATER INTO THE GROUND SHALL MODERATE THE TEMPERATURE OF STORMWATER AND PREVENT THE STORMWATER FROM BEING WARMED (TO A GREATER LEVEL) THAT WOULD NATURALLY OCCUR) BY SURFACE TEMPERATURES PRIOR TO RECHARGING THE BASE FLOW OF STREAMS AND OTHER SURFACE WATER FEATURES.

DURING CONSTRUCTION COMPOST SILT SOCKS SHALL BE UTILIZED,WHEN THE SOCKS START TO SHOW SIGNS THEY'RE SLOW THE RATE OF RUNOFF, REDUCING PEAK FLOWS AND THEY DO NOT STORE OR IMPOUND THE STORM RUNOFF THEREFORE USING THE COMPOST FILTER SOCKS MINIMIZE THE THERMAL IMPACTS ASSOCIATED WITH THE PROJECT.

102.4(B)(5)(XIV) .E&S PLAN CONSISTENT WITH PCSM PLAN.
THE E&S PLAN SHALL BE PLANNED, DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH THE PCSM PLAN UNDER § 102.8 (RELATING TO PCSM REQUIREMENTS), UNLESS OTHERWISE APPROVED BY THE DEPARTMENT, THE E&S PLAN SEPARATE FROM THE PCSM PLAN AND LABELED "EROSION AND SEDIMENT CONTROL PLAN" AND BE THE FINAL PLAN SUBMITTED.

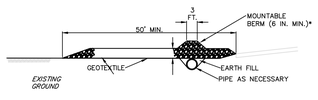
102.4(B)(5)(XV) IDENTIFICATION OF EXISTING AND PROPOSED RIPARIAN FOREST BUFFERS.
THERE ARE NO EXISTING OR PROPOSED RIPARIAN FOREST BUFFERS ASSOCIATED WITH THIS PROJECT.

LAND USE

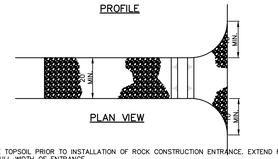
Past land use was farm land
Present land use is warehousing
Proposed land use is warehousing with expanded trailer parking

STABILIZATION NOTES

UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STA



PROFILE



PLAN VIEW

NOTES:

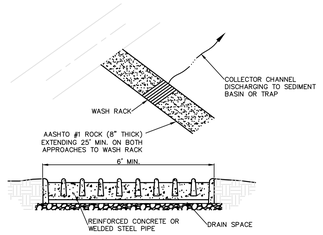
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE



NOTES:

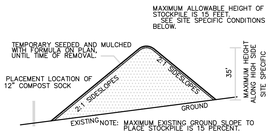
WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.

WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.

A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

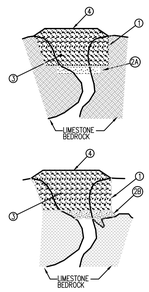
STANDARD CONSTRUCTION DETAIL #3-2
ROCK CONSTRUCTION ACCESS WITH WASH RACK



STOCKPILED (TOPSOIL AND SUBSOIL) & FILL MATERIAL

NO SCALE

MAINTENANCE:
1. THE STOCKPILED TOPSOIL AND FILL MATERIAL WILL BE INSPECTED ON A DAILY BASIS AND AFTER EVERY RUNOFF EVENT. ALL NECESSARY REPAIRS WILL BE MADE IMMEDIATELY.
2. ALL STOCKPILES WILL BE TEMPORARILY SEEDED AND MULCHED AT ALL TIMES.



1. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.

2A. IF NO ROCK IS ENCOUNTERED: PLUG SOIL THROAT WITH GROUT OR CONCRETE. IF A CLEARLY DEFINED THROAT IS NOT ENCOUNTERED AFTER 10 FEET; STOP EXCAVATION, GENERALLY; A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH 4 FEET OF CONCRETE EXTENDING AT LEAST 1 FOOT INTO FIRM SOIL. IF THE SOFT ZONE IS LARGER (>3 FT.), REINFORCING STEEL SHOULD BE INCLUDED WITHIN THE CONCRETE CAP.

IN BUILDING STRUCTURAL AREAS, IF ROCK IS NOT ENCOUNTERED, COMPACTION GROUTING IS RECOMMENDED.

2B. IF ROCK IS ENCOUNTERED; CLEAN SURFACE AND PLACE HIGH-SLUMP CEMENT GROUT INTO OPEN VOIDS AND CREVICES UNTIL VOIDS ARE FILLED. IF SEVERAL CUBIC YARDS OF GROUT DO NOT FILL VOIDS, USE A STIFFER, LEAN CONCRETE MIX. IF A SINKHOLE IS ENCOUNTERED POST-CONSTRUCTION, COMPACTION GROUTING IS RECOMMENDED

3. AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERMEABLE SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER. TWO COMPLETE COVERAGES SHOULD BE USED ON EACH LIFT.

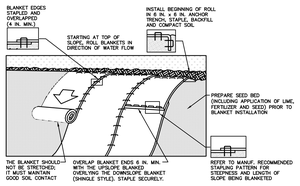
4. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.

5. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.

6. SINKHOLE REMEDIATION SHOULD BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER.

7. PALMER TOWNSHIP GEOTECHNICAL CONSULTANT AND NORTHAMPTON COUNTY CONSERVATION DISTRICT STAFF SHOULD BE NOTIFIED IMMEDIATELY IF ANY SINKHOLES ENCOUNTER ON SITE DURING OR AFTER CONSTRUCTION. REPAIRS SHALL BE CONDUCTED WITH THE CONCURRENT GEOTECHNICAL ENGINEER.

SINKHOLE CONDITIONS



NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

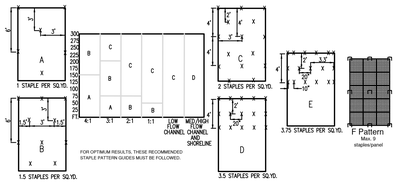
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION

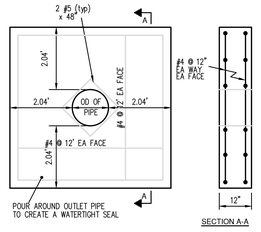
NOT TO SCALE



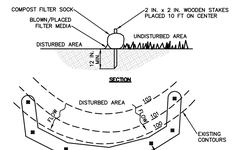
GENERAL STAPLE PATTERN GUIDE

SLOPE MATTING

ALL 3:1 SLOPES ARE TO BE MATTED USING NAG S75BN STAPLE PATTERN C



ANTI-SEEP COLLAR



PLAN VIEW

NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE, BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURERS SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE

TABLE #4-1

COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE *	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12"* 18"* 24"* 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING			HDPE BIAXIAL NET CONTINUOUSLY ROUND EXTRUDED JUNCTURES 3/4" X 3/4" MAX APERTURE SIZE		
OUTER FILTRATION MESH			COMPOSITE POLYPROPYLENE FABRIC (WOVEN SLEEVE AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH) 3/16" MAX. APERTURE SIZE		
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.					

* INDICATES THE LINING TYPE TO BE USED IN THIS PROJECT.

TABLE 4.2
COMPOST STANDARDS

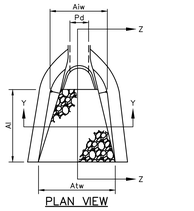
ORGANIC MATTER CONTENT	35% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5-8.5
MOISTURE CONTENT	35%-55%
PARTICLE SIZE	30%-80% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DSM (MINIMUM) MAXIMUM

FILTREXX SOXX
PROVIDER/INSTALLER
HILLTOP SERVICE INC.
16403 POTTSVILLE PIKE
HAMBURG, PA 19526
(610)-562-3124
FAX: (610)-562-9653

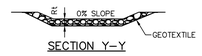
TABLE #11-1

CUBIC YARDS OF TOPSOIL REQUIRED FOR APPLICATION TO VARIOUS DEPTHS

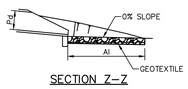
DEPTH (IN.)	PER 1,000 SQUARE FEET	PER ACRE
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806
7	21.7	940
8	24.8	1,074



PLAN VIEW



SECTION Y-Y



SECTION Z-Z

NOT TO SCALE

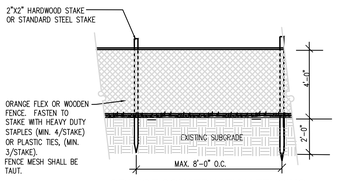
OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP				APRON	
		MAN. "n" FOR PIPE	PIPE SLOPE (FT/FT)	SIZE R-_	THICK. Rt (IN)	LENGTH Al (FT)	INITIAL WIDTH Alw (FT)	TERMINAL WIDTH Atw (FT)
EW-1	30	0.013	0.01	R-4	18	16	7.5	18
EW-2	30	0.013	0.01	R-4	18	16	7.5	18

NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRON AT PIPE OUTLET
WITH FLARED END SECTION OR ENDWALL



ORANGE CONSTRUCTION FENCING

CALL BEFORE YOU DIG
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
1-800-242-1776
1-CALL NO. 20241731212 DATE: 06/21/24
811 Know what's below. Call before you dig.

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

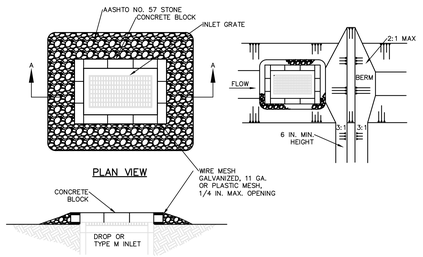
PROJECT: PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:
WERNER ENTERPRISES INC.
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark
CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:
EROSION CONTROL DETAILS PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 14 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	



SECTION A—A

NOTES:

MAXIMUM DRAINAGE AREA =1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

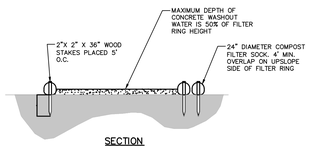
TOP OF BLOCK SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

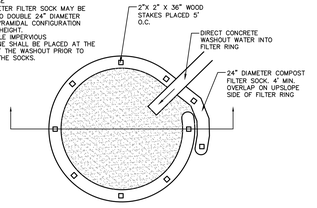
STANDARD CONSTRUCTION DETAIL #4-18
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE M INLET

NOT TO SCALE



SECTION

NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" DIAMETER FILTER SOCK MAY BE STAKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
3. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

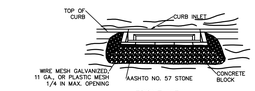


ADAPTED FROM FILTREXX

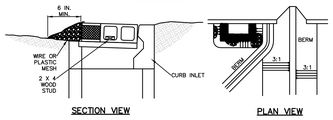
PLAN

TYPICAL COMPOST SOCK WASHOUT INSTALLATION

NOT TO SCALE



FRONT VIEW



SECTION VIEW PLAN VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

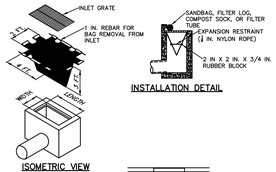
FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE.

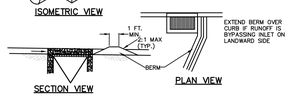
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-17
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE C INLET

NOT TO SCALE

USE FOR INLET :1—4





NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

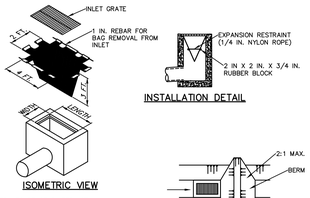
INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

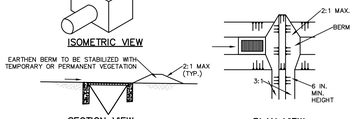
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 290 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 60 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET





NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

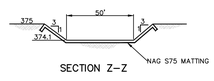
ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 290 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 60 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

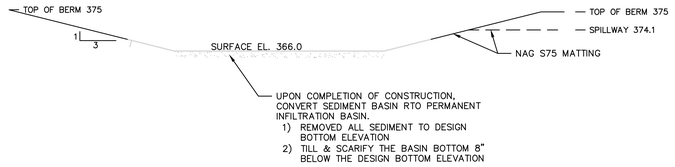
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET



SEDIMENT BASIN/ INFILTRATION BASIN SPILLWAY

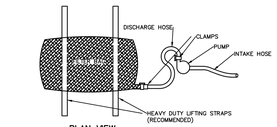
NOT TO SCALE

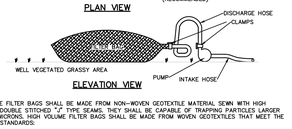


SECTION

SEDIMENT BASIN

NOT TO SCALE





NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS, % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%, FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG

CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:

WERNER ENTERPRISES INC.

14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE: (800) 228-2240

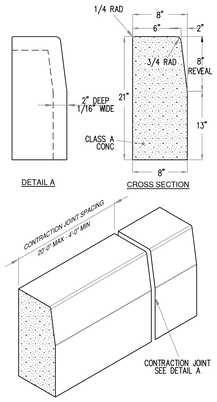
PREPARER:

Benchmark
CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:

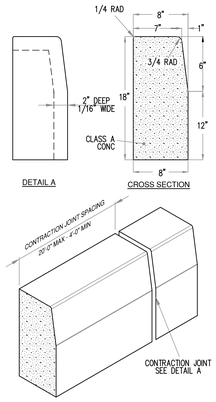
EROSION CONTROL DETAILS PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 15 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	



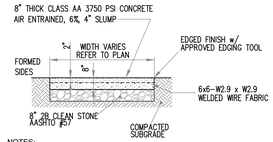
ON SITE PLAIN CONCRETE CURB (8" REVEAL)

FOR USE WITHIN THE TRUCK PARKING LOT AND TRUCK DRIVEWAY



ON SITE PLAIN CONCRETE CURB (6" REVEAL)

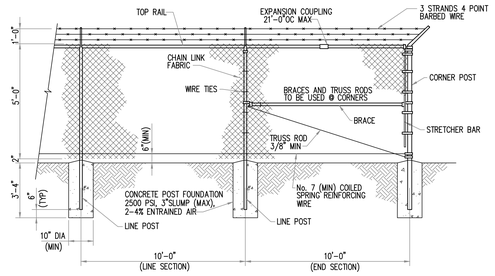
FOR USE WITHIN THE CAR PARKING LOT AND CAR DRIVEWAY



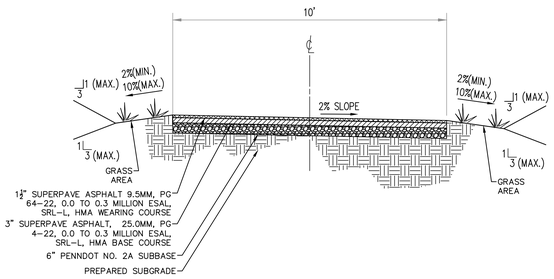
NOTES:

1.) THERE SHALL BE A CONSTRUCTION JOINT AT THE END OF THE POUR.
2.) BROOM FINISH.
3.) CONCRETE SHALL BE 4000 PSI, (AIR ENTRAINED)
4.) CONTRACTION JOINTS ARE TO BE A MAXIMUM OF 15' ON-CENTER OR IN DIRECTION OF PARKING LOTS AND DRIVEWAYS.
5.) EXPANSION JOINTS ARE TO BE DISCUSSED WITH THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

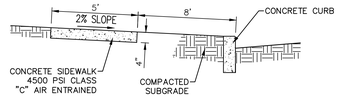
REINFORCED CONCRETE PARKING AREA



CHAIN LINK FENCE WITH BARBED WIRE



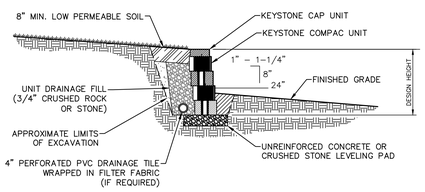
BITUMINOUS MULTI-USE TRAIL CROSS SECTION



NOTES:

THE FORMS AND DIVIDERS SHALL BE OF STEEL OR WOOD AND OF SUFFICIENT STRENGTH TO RESIST SPRINGING OUT OF SHAPE; DEPTH OF FORMS SHALL BE AT LEAST THE THICKNESS OF CONCRETE AS SPECIFIED ON THIS DRAWING. WALK SHALL BE OF MONOLITHIC CONSTRUCTION FOUR (4) INCHES THICK. TRANSVERSE SURFACE GROOVES MUST BE PROVIDED FOR AT RIGHT ANGLES TO THE SIDEWALK AND AT INTERVALS EQUAL TO WIDTH OF THE SIDEWALK. AFTER THE STONE IS PLACED IT SHALL BE TAMPED, SCREENED AND FINISHED TO TRUE GRADE AND SURFACE. THE CONCRETE FINISH SHALL BE MADE WITH A WOOD FLOAT, FOLLOWED BY A BRUSHING WITH A WET SOFT HAIR BRUSH TO A NEAT WORKMANLIKE SURFACE. TRANSVERSE EXPANSION JOINTS 1/2 INCH WIDE SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN 20 FEET AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER. SCORE LINES SHALL BE EVERY FIVE (5) FEET OR TO MATCH EXISTING ADJACENT SIDEWALK. LONGITUDINAL JOINTS 1/2 INCH WIDE SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS AND SHALL BE FILLED WITH PREFORMED BITUMINOUS TYPE FILLER. DRIVEWAY APRON AND SIDEWALK AT DRIVEWAY SHALL BE 4500 P.S.I. AIR ENTRAINED CONCRETE SIX (6) INCHES THICK.

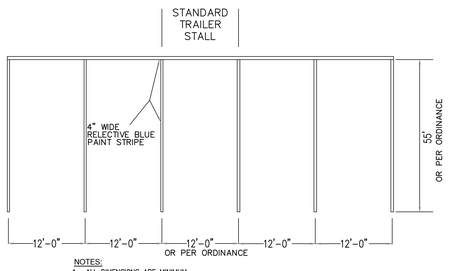
CONCRETE SIDEWALK DETAIL



NOTES:

THIS WALL DETAIL IS FOR APPROVAL PURPOSES ONLY. WHEN REQUIRED BY THE TOWNSHIP, A WALL CONSULTANT WILL PROVIDE WALL PLANS AND DESIGN CALCULATIONS AS REQUIRED.

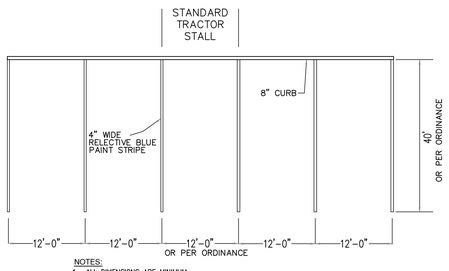
Typical Gravity Wall Section



NOTES:

1. ALL DIMENSIONS ARE MINIMUM.
2. SEE MUNICIPAL ORDINANCES FOR SIZE RESTRICTIONS.
3. PAVEMENT SLOPES IN ALL DIRECTIONS SHALL NOT EXCEED 2.00% IN ACCESSIBLE SPACES.
4. BUILT-UP CURB RAMPS ARE NOT ALLOWED TO PROJECT INTO THE SPACES OR AISLES.
5. PROVIDE ACCESSIBLE ROUTE AS REQUIRED.
6. PROVIDE SIGNAGE AS REQUIRED.

TYPICAL TRAILER PARKING STALLS STRIPING DETAILS



NOTES:

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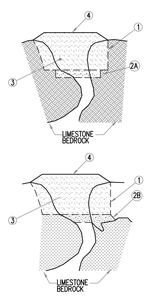
4. BUILT-UP CURB RAMPS ARE NOT ALLOWED TO PROJECT INTO THE SPACES OR AISLES.
5. PROVIDE ACCESSIBLE ROUTE AS REQUIRED.
6. PROVIDE SIGNAGE AS REQUIRED.

TYPICAL TRACTOR PARKING STALLS STRIPING DETAILS



1. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.

2A. IF NO ROCK IS ENCOUNTERED: PLUG SOIL THROAT WITH GROUT OR CONCRETE. IF A CLEARLY DEFINED THROAT IS NOT ENCOUNTERED AFTER 10 FEET; STOP EXCAVATION. GENERALLY, A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH 4 FEET OF CONCRETE EXTENDING AT LEAST 1 FOOT INTO FIRM SOIL. IF THE SOFT ZONE IS LARGER (>3 FT.), REINFORCING STEEL SHOULD BE INCLUDED WITHIN THE CONCRETE CAP.

IN BUILDING STRUCTURAL AREAS, IF ROCK IS NOT ENCOUNTERED, COMPACTION GROUTING IS RECOMMENDED.

2B. IF ROCK IS ENCOUNTERED: CLEAN SURFACE AND PLACE HIGH-SLUMP CEMENT GROUT INTO OPEN VOIDS AND OPENINGS UNTIL VOIDS ARE FILLED. IF SEVERAL CUBIC YARDS OF GROUT DO NOT FILL VOIDS, USE A STIFFER, LEAN CONCRETE MIX. IF A SINKHOLE IS ENCOUNTERED POST-CONSTRUCTION, COMPACTION GROUTING IS RECOMMENDED

3. AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERMEABLE SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER. TWO COMPLETE COVERAGES SHOULD BE USED ON EACH LIFT.

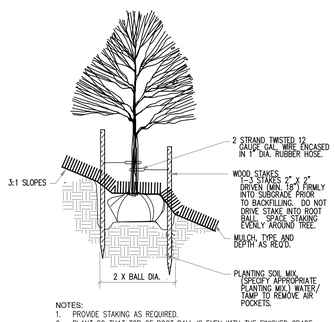
4. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.

5. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.

6. SINKHOLE REMEDIATION SHOULD BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER.

7. PALMER TOWNSHIP GEOTECHNICAL CONSULTANT AND NORTHAMPTON COUNTY CONSERVATION DISTRICT STAFF SHOULD BE NOTIFIED IMMEDIATELY IF ANY SINKHOLES ENCOUNTER ON SITE DURING OR AFTER CONSTRUCTION. REPAIRS SHALL BE CONDUCTED WITH THE CONCURRENT GEOTECHNICAL ENGINEER.

SINKHOLE CONDITIONS



NOTES:

1. PROVIDE STAKING AS REQUIRED.
2. PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.
3. PAINT ALL CUTS OVER 1" DIA.
4. REMOVE ALL CONTAINERS, BASKETS, BURLAP, ETC., FROM SHRUB ROOT BALLS.

TREE PLANTING ON SLOPES

CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

811 Know what's below. Call before you dig.

1-800-242-1776

1-CALL NO. 20241731212 DATE: 06/21/24

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:

WERNER ENTERPRISES INC.

14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

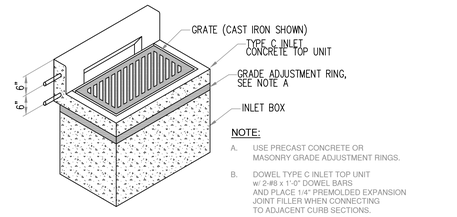
PREPARER:

Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:

CONSTRUCTION DETAIL PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 16 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	



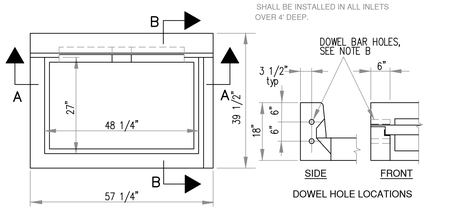
NOTE:

A. USE PRECAST CONCRETE OR MASONRY GRADE ADJUSTMENT RINGS.

B. DOWEL TYPE C INLET TOP UNIT w/ 2-#8 x 1'-0" DOWEL BARS AND PLACE 1/4" PREMOLDED EXPANSION JOINT FILLER WHEN CONNECTING TO ADJACENT CURB SECTIONS.

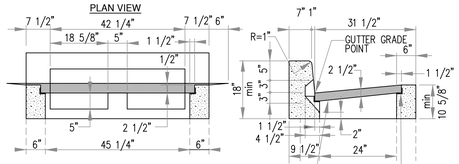
C. PROVIDE A "BICYCLE SAFE" GRATE

D. ALL INLETS ARE TO HAVE A POURED CONCRETE INVERT, AND LADDER BARS SHALL BE INSTALLED IN ALL INLETS OVER 4' DEEP.



PLAN VIEW

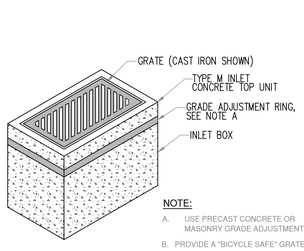
DOWEL HOLE LOCATIONS



SECTION A-A

SECTION B-B

TYPE C INLET



NOTE:

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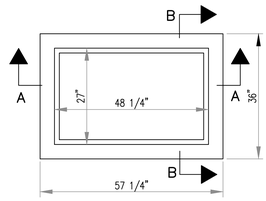
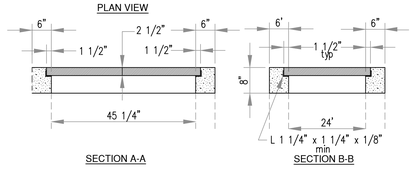


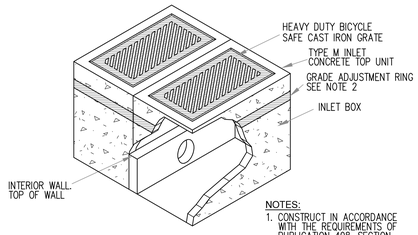
PLAN VIEW



SECTION A-A

SECTION B-B

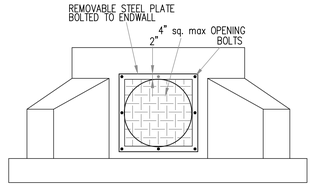
TYPE M INLET



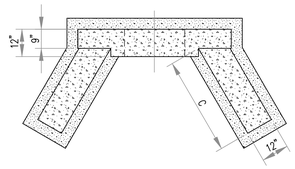
NOTES:

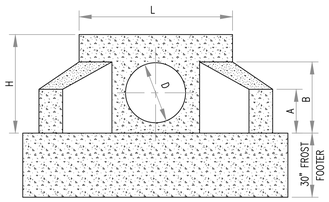
1. CONSTRUCT IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 605, FOR INLET ASSEMBLIES.
2. GRADE ADJUSTMENT RINGS SHALL BE MASONRY OR PRE-CAST CONCRETE CONSTRUCTION.

DOUBLE TYPE M INLET



CHILD PROOF GRATE

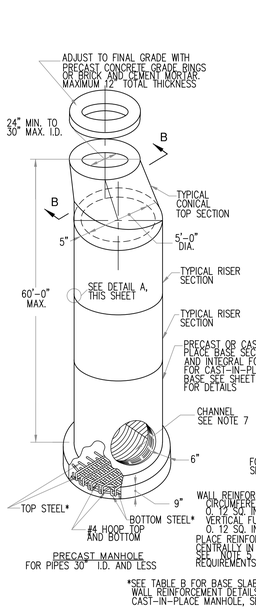




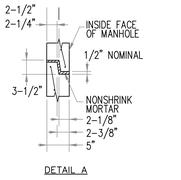
PRECAST HEADWALL DIMENSION GUIDE

PIPE SIZE	"D"	"H"	"L"	"A"	"B"	"C"
12"	19"	2'-9"	3'-2"	0'-11"	1'-9"	2'-10"
15"	22"	2'-9"	3'-2"	0'-11"	1'-9"	2'-10"
18"	26"	2'-9"	3'-2"	0'-11"	1'-9"	2'-10"
21"	30"	3'-7"	4'-6"	1'-4"	2'-3"	4'-3"
24"	34"	3'-7"	4'-6"	1'-4"	2'-3"	4'-3"
27"	37"	3'-7"	4'-6"	1'-4"	2'-3"	4'-3"
30"	42"	4'-9"	5'-10"	1'-10"	4'-0"	4'-7"
36"	48"	4'-9"	5'-10"	1'-10"	4'-0"	4'-7"
42"	56"	5'-5"	5'-10"	1'-10"	4'-8"	5'-7"
48"	64"	5'-11"	5'-10"	1'-11"	5'-2"	6'-7"

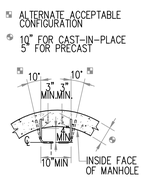
TYPE D-W HEADWALL WITH FROST FOOTER



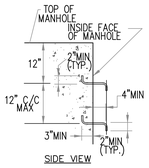
*SEE TABLE B FOR BASE SLAB STEEL REQUIREMENTS. PROVIDE WALL REINFORCEMENT DETAILS AT BASE SLAB TYPICAL OF CAST-IN-PLACE MANHOLE, SEE SHEET 1 OF 5.



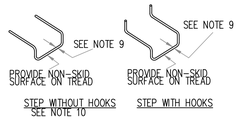
DETAIL A



PLAN VIEW



SIDE VIEW

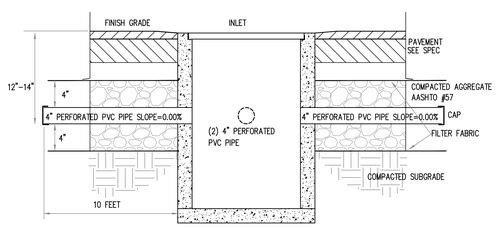


TYPICAL STEP CONFIGURATION MANHOLE STEPS

NOTES:

1. PRECAST MANHOLES, MEETING THE REQUIREMENTS OF PUBLICATION 408 SPECIFICATIONS, SECTION 714, MAY BE SUBSTITUTED FOR THE STANDARD CAST-IN-PLACE MANHOLE.
2. FOR CONSTRUCTION REQUIREMENTS SEE NOTE 1, SHEET 1 OF 5. FOR DESIGN REQUIREMENTS SEE NOTE 1, SHEET 5 OF 5.
3. FOR PERMISSIBLE LOCATION OF PIPES SEE PLAN VIEW AND NOTE 3, SHEET 1 OF 5.
4. FOR RISERS OR BASE SECTIONS WITH OPENINGS, PROVIDE A MINIMUM HEIGHT OF SECTION EQUAL TO TWO TIMES THE LARGEST OPENING. CENTER OF OPENING TO BE LOCATED AT LEAST ONE TIMES THE OPENING FROM THE CLOSEST JOINT BETWEEN RISERS.
5. FOR PRECAST RISER OR BASE SECTIONS WITH ONE OPENING LOCATED AT DEPTHS TO 60', OR FOR SECTIONS WITH TWO OR MORE OPENINGS, LOCATED AT A DEPTH 15 FEET AND LESS, PROVIDE CIRCUMFERENTIAL REINFORCEMENT IN ACCORDANCE WITH SECTION B-B.
   FOR RISERS OR BASE SECTIONS WITH TWO OR MORE OPENINGS, LOCATED AT A DEPTH GREATER THAN 15 FEET, BUT LESS THAN OR EQUAL TO 30 FEET, PROVIDE CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.44 SQ. IN./VERTICAL FOOT FOR THE DEPTH OF THE RISER OR BASE SECTION.
   FOR RISERS OR BASE SECTIONS WITH TWO OR MORE OPENINGS, LOCATED AT DEPTHS GREATER THAN 30 FEET, USE A 10 INCH THICK WALL RISER OR BASE SECTION WITH CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. /VERTICAL FOOT EACH FACE.
   RISERS OR BASE SECTIONS WITH HOLES TO BE CLEARLY MARKED WITH MAXIMUM ALLOWABLE DEPTH.
6. PROVIDE ADDITIONAL REINFORCEMENT BARS AROUND OPENINGS AS SHOWN ON REINFORCEMENT DETAILS AT OPENINGS SHEET 1 OF 5.
7. FOR CHANNEL DETAILS IN PRECAST MANHOLE SEE CAST-IN-PLACE MANHOLE SHEET 1 OF 5.
8. PROVIDE MANHOLE STEPS MEETING THE REQUIREMENTS OF PUBLICATION 408 SPECIFICATIONS, SECTION 605.2(C). ALTERNATE CONFIGURATIONS AND DIMENSIONS, AS APPROVED BY THE ENGINEER, MAY BE USED.
9. PROVIDE MINIMUM 1" SECTION DIMENSION FOR METAL STEPS. PROVIDE MINIMUM 3/4" SECTION DIMENSION FOR NON-DETERIORATING MATERIAL STEPS.
10. MECHANICAL ANCHOR REQUIRED FOR INSTALLATION OF STEPS WITHOUT HOOKS.

STANDARD MANHOLES, PRECAST MANHOLES AND MANHOLE STEPS



NOTES:

A. ALL CATCH BASINS AND INLETS ON SITES WITH COHESIVE SOILS SHALL HAVE FOUR (4") INCH DIAMETER, TEN (10') FOOT LONG, PERFORATED RADIAL FINGER DRAINS. STRUCTURES COMPLETELY SURROUNDED BY PAVEMENT SHALL HAVE FOUR (4) BLEEDERS AND ALL OTHERS SHALL HAVE TWO (2) BLEEDERS. THE INVERT OF THESE BLEEDERS SHALL BE 12"-14" BELOW FINISH GRADE.

B. ALL FRAMES AND COVERS FOR DRAINAGE STRUCTURES SHALL BE NON-ROCKING AND MADE OF HEAVY DUTY CAST IRON.

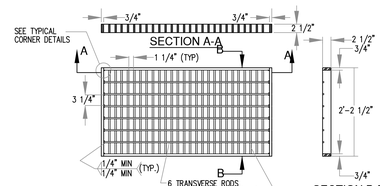
FINGER DRAINS AT INLET



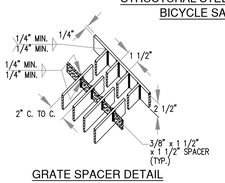
SECTION

INFILTRATION BASIN

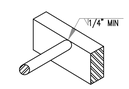
NOT TO SCALE



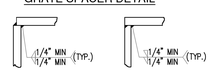
STRUCTURAL STEEL GRATE BICYCLE SAFE



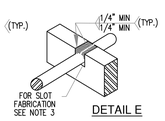
GRATE SPACER DETAIL



DETAIL D



TYPICAL CORNER DETAILS



DETAIL E

NOTES:

1. THIS SHEET DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. ONLY GRATES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED. FOR A BULLETIN 15 LISTING, SUBMIT A 22" X 36" REPRODUCIBLE SHOP DRAWING TO THE BUREAU OF CONSTRUCTION AND MATERIALS, MATERIALS AND TESTING DIVISION FOR REVIEW AND APPROVAL.

2. PROVIDE BICYCLE-SAFE, INLET GRATES IN ALL INLETS.

3. FABRICATE SLOTS BY BURNING, DRILLING, SHEARING, OR PUNCHING. HAVE THE BOTTOM OF ALL BURNED OR DRILLED SLOTS CONFORM TO THE SHAPE OF THE ROD.

4. PROVIDE STRUCTURAL STEEL GRATES WITH THE GRATE SPACERS LOCATED FLUSH ALONG THE TOP SURFACE OF THE GRATE.

5. DO NOT USE CAST IRON GRATES WITHIN THE TRAVEL LANES. THESE GRATES ARE PERMITTED AT THE EDGE OF OUTSIDE SHOULDERS, SWALES, WIDE MEDIAN SWALES, AND INFIELD AREAS THAT ARE OUTSIDE THE TRAVEL LANES OR CURB TO CURB ROADWAYS.

6. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105, 031 R1.

7. PROVIDE TRANSVERSE BARS, MEETING THE REQUIREMENTS OF PUB. 408.

INLET GRATE DETAILS
(PENN. DOT RC-34)

CALL BEFORE YOU DIG
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
1-800-242-1776
1-CALL NO. 20241731212 DATE: 06/21/24
811 Know what's below. Call before you dig.

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

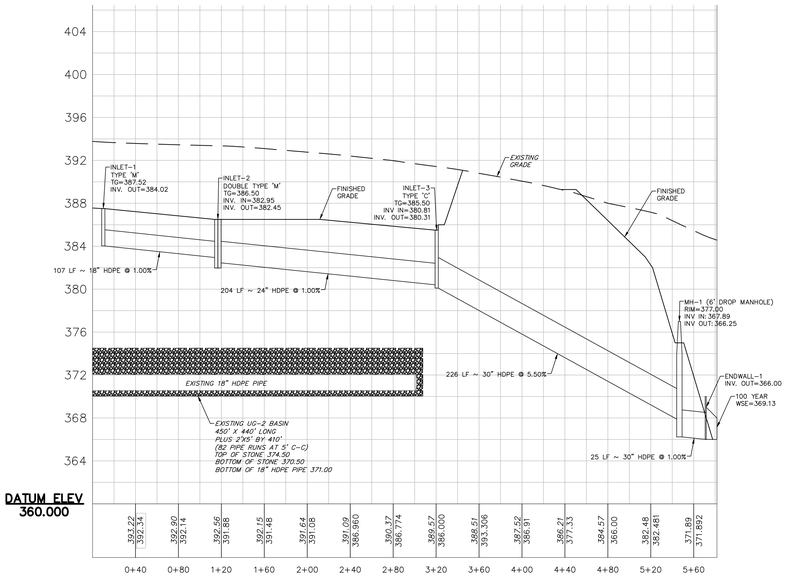
CLIENT: **WERNER ENTERPRISES INC.**

14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark
CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

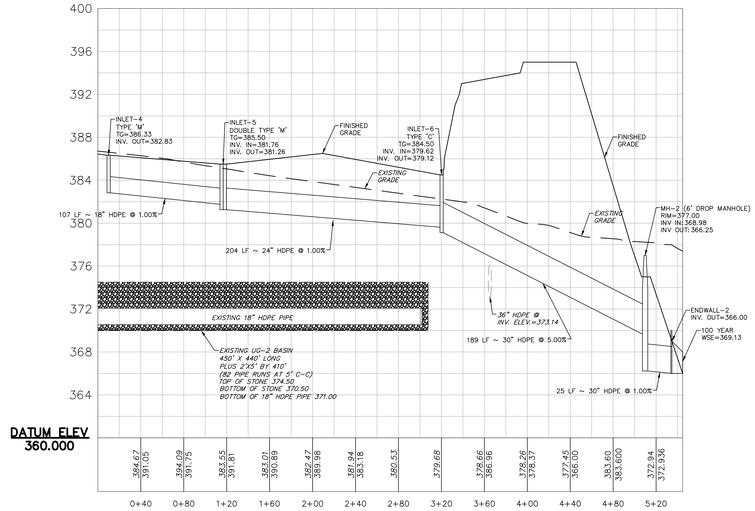
TITLE: **CONSTRUCTION DETAIL PLAN**

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 17 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	



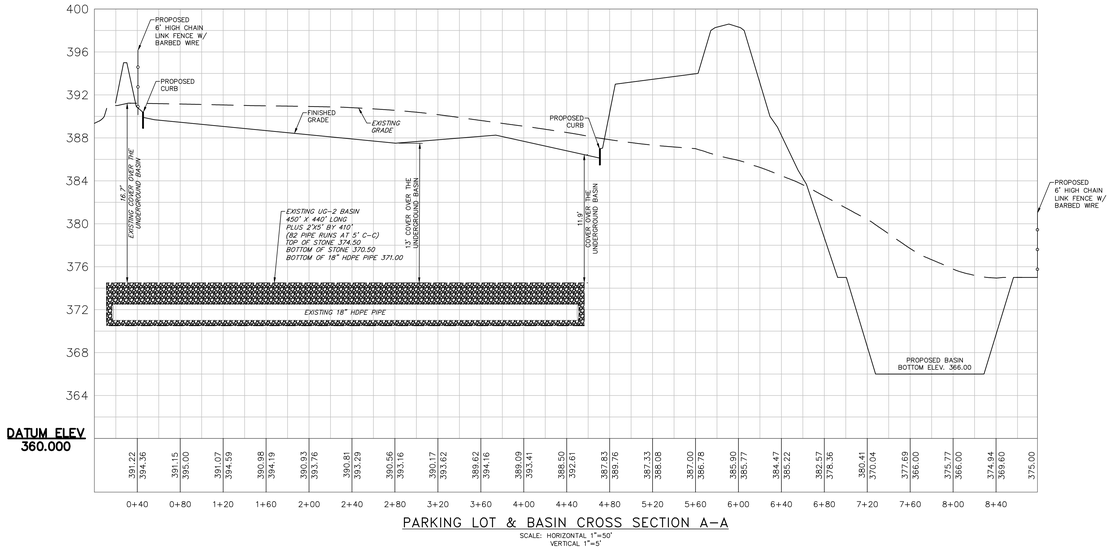
STORM SEWER PROFILE INLET-1 TO ENDWALL-1

SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=5'



STORM SEWER PROFILE INLET-3 TO ENDWALL-2

SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=5'



PARKING LOT & BASIN CROSS SECTION A-A

SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=5'

CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:

WERNER ENTERPRISES INC.

14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:

Benchmark
CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:

PROFILES PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 18 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	

POI NW

N08°19'08"W 624.29'

N12°48'05"W 280.38'

N12° 16' 21"W 762.53'

N 81°39'39" E 298.25'

S 82°00'51" W 546.36'

N 82°00'51" E 546.36'

N 81°22'24" E 322.43'

N 07°48'28" W 680.56'

N 08°22'28" W 1425.64'

S 08°22'28" E 174.52'

S 14°40'40" W 215.53'

S 08°22'28" E 366.00'

S 08°22'28" E 840.93'

S 08°26'45" E 316.44'

N 82°33'15" W 546.36'

N 81°37'11" E

S 87°37'32" W

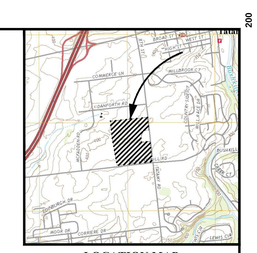
S 08°22'28" E

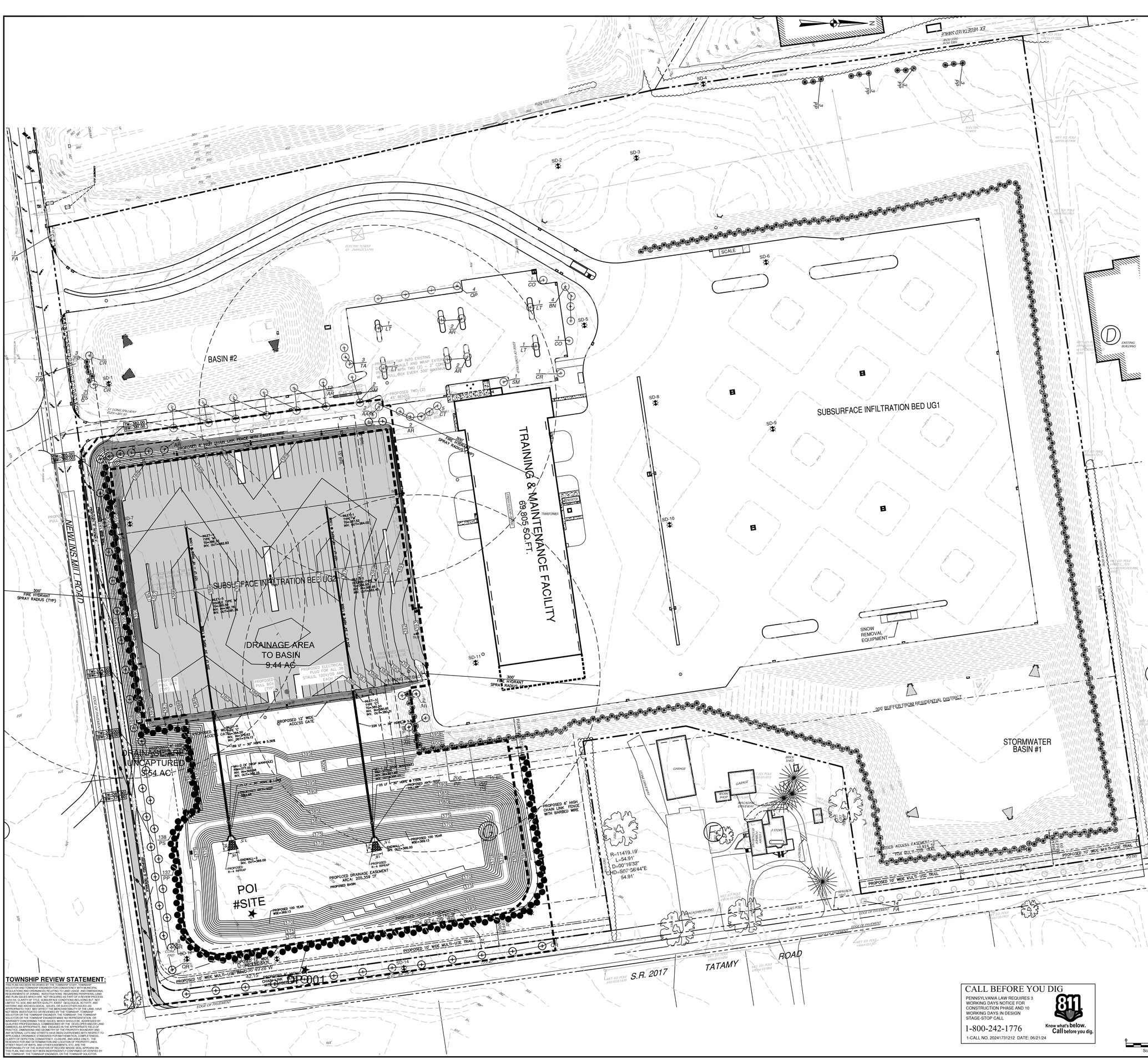
N 08°22'28" W

S 08°22'28" E

S 08°22'28" E

S 08°22'28" E




BASIN #2
DRAINAGE AREA TO BASIN 9.44 AC
DRAINAGE AREA UNCAPTURED 0.54 AC
SUBSURFACE INFILTRATION BED UG2
SUBSURFACE INFILTRATION BED UG1
TRAINING & MAINTENANCE FACILITY 69,805 SQ.FT.
STORMWATER BASIN #1
POI #SITE
NEWLINS MILL ROAD
TATAMY ROAD
S.R. 2017
EDGE OF PAVEMENT
300' BUFFER FROM RESIDENTIAL DISTRICT
PROPOSED 10' WIDE MULTI-USE TRAIL
PROPOSED 12' WIDE ACCESS GATE
PROPOSED 6' HIGH CHAIN LINK FENCE WITH BARBED WIRE
PROPOSED DRAINAGE EASEMENT AREA: 200,359 SF
PROPOSED ACCESS EASEMENT-2 10,923 SF
PROPOSED ACCESS EASEMENT-1 10,923 SF
SNOW REMOVAL EQUIPMENT
300' FIRE HYDRANT SPRAY RADIUS (TYP)
PROPOSED ELECTRICAL PLUG FOR ALL 48 STALLS, 120V/20 AMP, 1 ADA
PROPOSED PULL BOX FOR ELECTRICAL
PROPOSED 6" SPRAP
PROPOSED 100 YEAR WSE=368.13
PROPOSED ANTI-SEEP COLLAR
PROPOSED TWO (2) 45° BENDS
PROPOSED 6" DIP WATERLINE
PROPOSED TAP INTO EXISTING
PROPOSED 6" VALVE AND WRAP EXTERIOR
DRILL AND TAP WITH TWO (2) 1" CORPORATION STOPS, 60X EVERY 300' MAXIMUM
51' LONG SPILLWAY ELEV=381.50
EX. VEGETATED SWALE
EX. 8" WATER LINE
EX. 12" WATER LINE
EX. 8" GAS LINE
EX. 12" GAS LINE
EX. 8" SANITARY LINE
EX. 12" SANITARY LINE
EX. 8" STORM LINE
EX. 12" STORM LINE
EX. 24" STORM LINE
EX. 30" STORM LINE
EX. 36" STORM LINE
EX. 42" STORM LINE
EX. 48" STORM LINE
EX. 54" STORM LINE
EX. 60" STORM LINE
EX. 66" STORM LINE
EX. 72" STORM LINE
EX. 78" STORM LINE
EX.

SITE DATA:

OWNER/APPLICANT: WERNER ENTERPRISES
14507 FRONTIER ROAD
OMAHA, NE 68138
402-895-6640

SITE ADDRESS: 1470 TATAMY ROAD
2201 NEWLINS MILL ROAD

DEED BOOK VOLUME: 2016-1 PAGE: 234827
2016-1 232407

TAX MAP: K8-5-9-0324; K9-5-2-0324

TOTAL LOT AREA: 2,142,141 SQ. FT. OR 49.18 ACRES

TOTAL NUMBER OF EXISTING LOTS: 2

TOTAL NUMBER OF PROPOSED LOTS: 1

PROPOSED WATER SERVICE: PUBLIC

PROPOSED SANITARY SERVICE: PUBLIC

CONSTRUCTION SCHEDULE:

CONSTRUCTION IS ANTICIPATED TO BEGIN SPRING 2022

ZONING DATA:

ZONING DISTRICT (PO/IP) PLANNED OFFICE/INDUSTRIAL PARK

PROPOSED USE: TRUCK TERMINAL

	EXISTING LOT #1	ALLOWABLE/ REQUIRED	PROPOSED LOT #1
MINIMUM TRACT AREA: (Z.O. SEC 190-126.A.2)	37.698 ACRES 1,642,126 SQ. FT.	15.00 ACRES	49.18 ACRES 2,142,141 SQ. FT.
MINIMUM LOT AREA: (Z.O. SEC 190-126.B)	37.698 ACRES	3.00 ACRES	
MINIMUM LOT WIDTH: (Z.O. SEC 190-126.C)	399.13 AT SETBACK 399.13 AT R.O.W. (NEWLINS MILL FRONTAGE)	100' AT SETBACK 250' AT R.O.W.	2428.36 AT SETBACK 2477.09' AT R.O.W.
MAXIMUM BLDG. COVERAGE: (Z.O. SEC 190-126.D)	4.25% 69,805 SQ. FT.	40%	3.26% 69,805 SQ. FT.
MAXIMUM LOT COVERAGE: (Z.O. SEC 190-126.D)	45.50% 747,151 SQ. FT.	65%	4.58% 997,887 SQ. FT.
MAX. PROP. BLDG. HEIGHT: (Z.O. SEC 190-126.H)	34 FEET	2.5 STORIES OR 40 FEET**	34 FEET
PARKING SETBACK:	20'	20'	20'

75' FOR TRUCKS ABUTTING A RESIDENTIAL LOTLINE (IF LESS THAN 200' BERM REQ'D)

MINIMUM YARD REQUIREMENTS
(Z.O. SEC 190-126.E & F & G)

FRONT: 40'
EXCEPT WHEN A RESIDENTIAL LOTLINE IS ABUTTING OR ACROSS A STREET: 75'

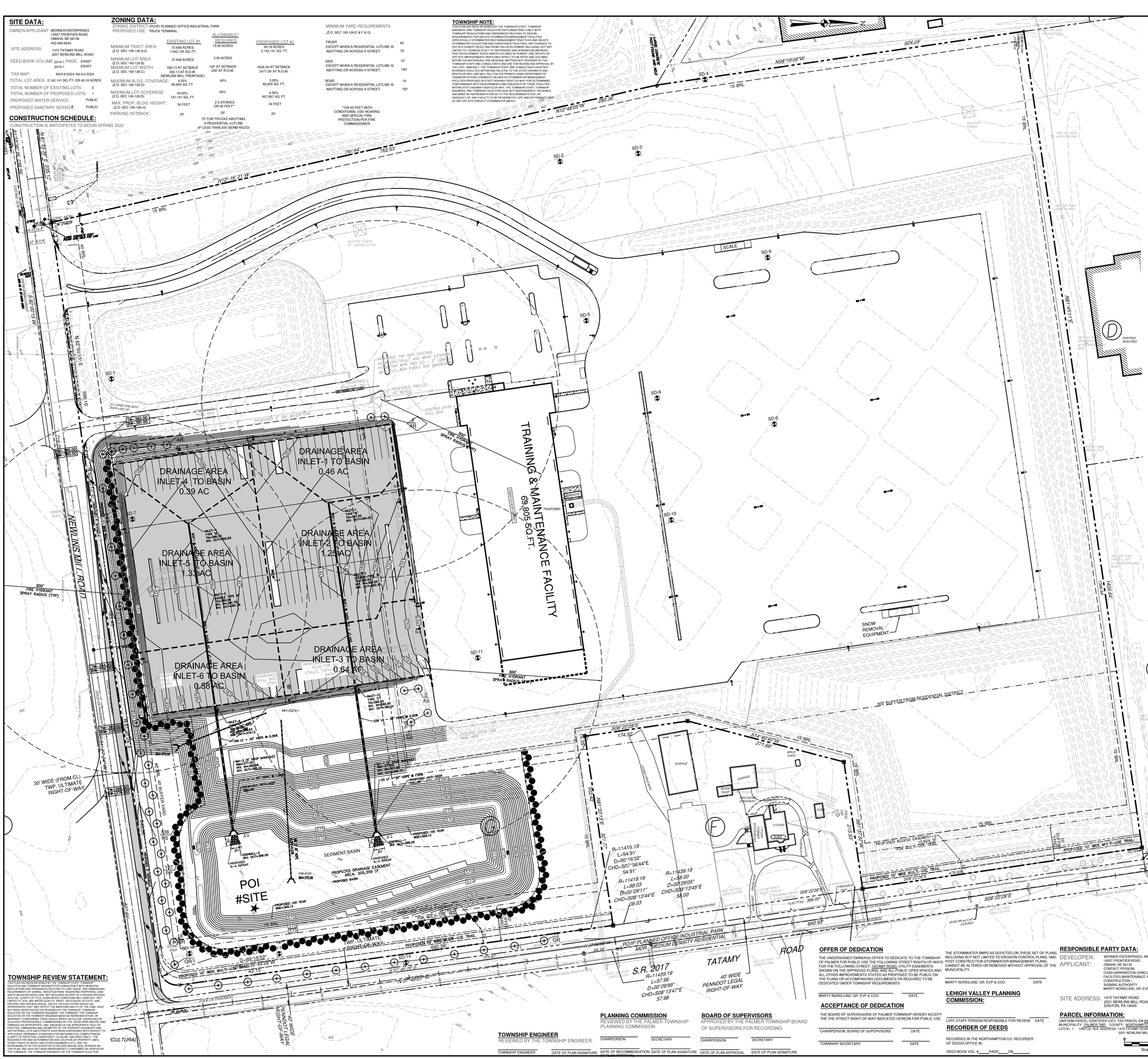
SIDE: 15'
EXCEPT WHEN A RESIDENTIAL LOTLINE IS ABUTTING OR ACROSS A STREET: 150'

REAR: 15'
EXCEPT WHEN A RESIDENTIAL LOTLINE IS ABUTTING OR ACROSS A STREET: 150'

**OR 60 FEET WITH CONDITIONAL USE HEARING AND SPECIAL FIRE PROTECTION PER FIRE COMMISSIONER

TOWNSHIP NOTE:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR FOR CONSISTENCY ONLY WITH TOWNSHIP REGULATIONS AND ORDINANCES RELATING TO DESIGN REQUIREMENTS FOR ON-SITE STORMWATER MANAGEMENT FACILITIES (SPECIFICALLY STORMWATER BEST MANAGEMENT PRACTICES AND ON-SITE STORMWATER COLLECTION AND CONVEYANCE FACILITIES). ANY CHANGES TO OFF-SITE RUNOFF RESULTING FROM THIS DEVELOPMENT, INCLUDING, BUT NOT LIMITED TO, CHANGES IN THE TIMING OF RUNOFF, PEAK RUNOFF RATES, POST-DEVELOPMENT RATES AND/OR VOLUMES OF RUNOFF, AND ON-SITE OR OFF-SITE IMPROVEMENTS WHICH MAY AFFECT FLOW RATES AND VOLUMES WITHIN THE WATERSHED, ARE REGIONAL MATTERS NOT REVIEWED BY THE TOWNSHIP STAFF AND CONSULTANTS AND ARE FOR REVIEW AND APPROVAL BY THE LVPC. SIMILARLY, THE TOWNSHIP STAFF AND CONSULTANTS HAVE NOT REVIEWED FACILITIES WITHIN AND RELATED TO THE STATE HIGHWAYS AND ARE NOT RESPONSIBLE FOR THE PENNDOT (PENNSYLVANIA DEPARTMENT OF TRANSPORTATION) REVIEW OF STORMWATER MANAGEMENT FACILITIES PROPOSED IN STATE HIGHWAY RIGHT-OF-WAY FOR DETERMINING CONFORMANCE WITH REQUIREMENTS AND ADEQUACY OF THOSE FACILITIES WITHIN STATE HIGHWAY RIGHTS-OF-WAY. THE TOWNSHIP STAFF, TOWNSHIP ENGINEER, AND TOWNSHIP SOLICITOR HAVE NOT INDEPENDENTLY REVIEWED, AND MAKE NO REPRESENTATION AS TO THE REQUIREMENTS FOR, OR ADEQUACY OF, ANY FACILITY TO BE REVIEWED BY LVPC AND/OR PENNDOT, NOR OF ANY OFF-SITE PROJECT STORMWATER IMPACT.


DRAINAGE AREA INLET-1 TO BASIN 0.46 AC
DRAINAGE AREA INLET-4 TO BASIN 0.39 AC
DRAINAGE AREA INLET-2 TO BASIN 1.28 AC
DRAINAGE AREA INLET-5 TO BASIN 1.35 AC
DRAINAGE AREA INLET-3 TO BASIN 0.64 AC
DRAINAGE AREA INLET-6 TO BASIN 0.55 AC
TRAINING & MAINTENANCE FACILITY 69,805 SQ.FT.
SEDIMENT BASIN
POI #SITE
PROPOSED DRAINAGE EASEMENT AREA 205,359 SF
PROPOSED BASIN
PROPOSED ACCESS EASEMENT
PROPOSED 10' WIDE MULTI-USE TRAIL
PROPOSED 100 YEAR WSE=369.13
PROPOSED TAP INTO EXISTING 8" GAS LINE/VAULT AND WRAP EXTERIOR PIPE WITH TWO (2) — 2" CONDUIT AND PULL BOX EVERY 300' MAXIMUM
PROPOSED TWO(2) 45° BENDS
EXISTING DATA LINE PULL BOX
PROPOSED 6" DIP WATER LINE
PROPOSED 8" DIP WATER LINE
PROPOSED 12" DIP WATER LINE
PROPOSED 8" GAS LINE
PROPOSED 4" GAS LINE
PROPOSED GAS METER
PROPOSED GAS VALVE
PROPOSED GAS LINE MARKER
PROPOSED GAS LINE TO BE ABANDONED
PROPOSED GAS LINE TO BE REMOVED
PROPOSED GAS LINE TO BE RELOCATED
PROPOSED GAS LINE TO BE RETIRED
PROPOSED GAS LINE TO BE RENEWED
PROPOSED GAS LINE TO BE REPLACED
PROPOSED GAS LINE TO BE REPAIRED
PROPOSED GAS LINE TO BE REMOVED AND REPLACED
PROPOSED GAS LINE TO BE REMOVED AND RELOCATED
PROPOSED GAS LINE TO BE REMOVED AND RETIRED
PROPOSED GAS LINE TO BE REMOVED AND RENEWED
PROPOSED GAS LINE TO BE REMOVED AND REPAIRED
PROPOSED GAS LINE TO BE REMOVED AND REPLACED AND RELOCATED
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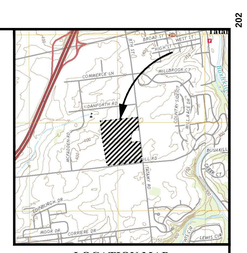


LOCATION MAP

SCALE: 1" = 2000'
NAZARETH, PA. U.S.G.S. QUADRANGLE, PA.

EXISTING STREET TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
16	FA	ROBINIA PSEUDOACACIA	BLACK LOCUST	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED

EXISTING TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
2	AA	AMELANCHIER ARBOREA	SHADBLOW SERVICEBERRY	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
16	AR	ACER REDRUM	RED MAPLE	2 1/2"–3" MIN. CALIPER	BALLED & BURLAPPED
4	BN	BETULA NIGRA	RIVER BIRCH	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
2	CO	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
3	CR	CORNUS FLORIDA REPANDICS CHAMAECYPARIS THYOIDES	FLOWERING DOGWOOD	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
5	CT		ATLANTIC WHITE CEDAR	6' – 8' HEIGHT	BALLED & BURLAPPED
4	LT	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
15	PP	PICEA PUNGENS	BLUE SPRUCE	6' – 8' HEIGHT	BALLED & BURLAPPED
2	PS	PINUS STROBUS	WHITE PINE	6' – 8' HEIGHT	BALLED & BURLAPPED
4	QP	QUERCUS PALUSTRIS	PIN OAK	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
3	SM	MAGNOLIA VIRGINIA	SWEETBAY MAGNOLIA	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED
3	TA	TILIA AMERICANA	AMERICAN LINDEN	2 1/2" – 3" MIN. CALIPER	BALLED & BURLAPPED

EXISTING BUFFER TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
200	PP	PICEA PUNGENS	BLUE SPRUCE	6' – 8' HEIGHT	BALLED & BURLAPPED
200	PS	PINUS STROBUS	WHITE PINE	6' – 8' HEIGHT	BALLED & BURLAPPED

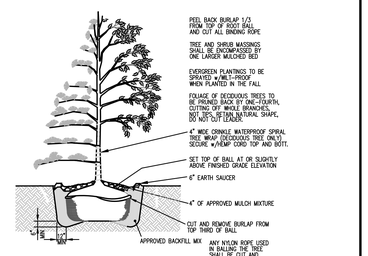
PROPOSED TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
137	PP	PICEA PUNGENS	BLUE SPRUCE	6' – 8' HEIGHT	BALLED & BURLAPPED
138	PS	PINUS STROBUS	WHITE PINE	6' – 8' HEIGHT	BALLED & BURLAPPED
12	AR	ACER RUBRUM	RED MAPLE	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED

PROPOSED STREET TREE SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
8	AR	ACER RUBRUM	AMERICAN RED MAPLE	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED
9	FG	FAGUS GRANDIFLORA	AMERICAN BEECH	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED
9	QA	QUERCUS ALBA	WHITE OAK	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED
12	TA	TILIA AMERICANA	AMERICAN LINDEN	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED
12	AN	ACER NIGRUM	BLACK MAPLE	2–1/2"–3" MIN. CALIPER	BALLED & BURLAPPED

* IN LIEU OF REQUIRED ISLAND TREES IN THE PARKING AREA, 8 STREET TREES WILL BE PLANTED BEHIND THE SIDEWALK ALONG NEWLINS MILL ROAD.



TREE PLANTING

CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

1-800-242-1776

811 Know what's below. Call before you dig.

1-CALL NO. 20241731212 DATE: 06/21/24

TOWNSHIP REVIEW STATEMENT:

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP STAFF, TOWNSHIP SOLICITOR AND TOWNSHIP ENGINEER FOR CONSISTENCY WITH MUNICIPAL ORDINANCES. THE REVIEW DOES NOT INCLUDE ANY OTHER LOCAL, STATE OR FEDERAL REQUIREMENTS OF ZONING, INVESTIGATIONS REGARDING PERIPHERAL LAND AND PLAN ISSUES WHICH ARE NOT REQUIRED AS PART OF A REVIEW PROCESS (SUCH AS, BUT NOT LIMITED TO, SOIL AND GEOLOGICAL ACTIVITY, BUT NOT LIMITED TO, MSS, AND WATER QUALITY, KARST GEOLOGICAL ACTIVITY, AND HISTORIC AND ARCHEOLOGICAL ISSUES, OR SUCH OTHER ISSUES (IN APPROPRIATE) THAT MAY AFFECT THE MERCHANTABILITY OF THE LAND, HAVE NOT BEEN INVESTIGATED OR REVIEWED BY THE TOWNSHIP, TOWNSHIP ENGINEER OR TOWNSHIP SOLICITOR. THE TOWNSHIP, TOWNSHIP ENGINEER, TOWNSHIP SOLICITOR OR THE TOWNSHIP ENGINEER MAKE NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES, WHICH SHOULD BE, ADDRESSED BY QUALIFIED PROFESSIONALS, COMMISSIONED BY THE DEVELOPER AND/OR LAND OWNER(S) AS APPROPRIATE, AND ENGAGED IN THE APPROPRIATE FIELD OF STUDY. THE TOWNSHIP, TOWNSHIP ENGINEER AND TOWNSHIP SOLICITOR MAKE NO ANY INTERNAL LOTS AND STREETS HAVE BEEN DERIVED/MED WITH RESPECT TO APPLICABLE ORDINANCE STANDARDS FOR MATHEMATICAL COMPLETENESS, CLARITY OF DEFICTION, CONSISTENCY, CLOSURE, AND AREA ONLY). THE RESEARCH FOR AND DETERMINATION AND LOCATION OF PROPERTY LINES, EASEMENTS, AND RIGHTS-OF-WAY SHOWN ON THIS PLAN IS THE RESPONSIBILITY OF THE SURVEYOR OF RECORD WHOSE SEAL APPEARS ON THIS PLAN, AND HAVE NOT BEEN INDEPENDENTLY CONFIRMED OR VERIFIED BY THE TOWNSHIP, THE TOWNSHIP ENGINEER OR THE TOWNSHIP SOLICITOR.

LANDSCAPE CALCULATIONS:

REQUIRED LANDSCAPE AREA SHALL BE 5% OF THE TOTAL PAVED AREA OF THE PARKING LOT, TRUCK PARKING LOT AREA= 190,869 SQ. FT.
190,869 SF X .05 = 9,543.45 SF

TOTAL LANDSCAPE AREA REQUIRED 9,543 SF

TOTAL REQUIRED LANDSCAPE AREA REQUESTED FOR WAIVER = 9,543 SF

STREET TREES:
ONE TREE REQUIRED FOR EVERY 50 FEET OF LOT FRONTAGE.
474' LOT FRONTAGE TATAMY ROAD; 399' NEWLINS MILL ROAD

474' + 399' = 873 FEET
873' / 50' = 17.46 OR 17 TREES REQUIRED

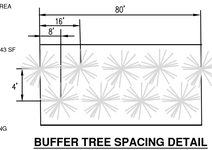
46 STREET TREES PROVIDED

ONE TREE REQUIRED FOR EVERY 15 REQUIRED OFF STREET PARKING SPACES:

135 SPACES / 15 SPACES = 9 TREES REQUIRED

TOTAL TREES REQUIRED 17 + 9 = 26 TREES

TOTAL TREES PROVIDED = 46 TREES



BUFFER TREE SPACING DETAIL

BUFFER BERM TREE NOTE

THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DISTRIBUTING AND PLANTING THE TREES WITHIN THE BERM AS REQUIRED AS PER THE TREE COUNTS.

0 50' 100'
Scale: 1"=50'

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT:
PROPOSED
TRAILER PARKING EXPANSION
2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:
WERNER ENTERPRISES INC.
14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:
Benchmark CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:
LANDSCAPE PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.:	9 of 21
DRAWN: NJM	SCALE: AS NOTED		
SURVEY DATE: .	DWG. FILE: 835001		

LUMINAIRE SCHEDULE

Symbol	Label	Number of Fixtures	Catalog Number	Manufacturer	Lamp	Mounting
	SLA	3	ATB2 80BLEDE10 480 R4 XX	AEL LIGHTING	LED, (80) @ 3000K LEDs DRIVEN @ 1000mA TYPE 4 MEDIUM OPTICS	20' HIGH MAXIMUM - ROUND ALUM POLE CONCRETE BASE - 4'-0" ABOVE GRADE
	SLE	8	ATB2 80BLEDE10 480 R4 XX	AEL LIGHTING	LED, (80) @ 3000K LEDs DRIVEN @ 1000mA TYPE 4 MEDIUM OPTICS	20' HIGH MAXIMUM - ROUND ALUM POLE CONCRETE BASE - FLUSH WITH GRADE

LIGHTING NOTES:
ALL LIGHTING SHALL HAVE ADEQUATE SHIELDING TO DIRECT AND PROTECT ADJACENT DWELLINGS AND MOTORIST ON PUBLIC STREETS FROM GLARE.


SCALE
SD-1
SD-2
SD-3
SD-4
SD-5
SD-6
SD-7
SD-8
SD-9
SD-10
SD-11
SD-12
SD-13
SD-14
SLA
SLB
SLC
SLD
SLE
SLF
SLG
SLH
36 TRAILER SPACES
32 TRAILER SPACES
32 TRAILER SPACES
35 TRACTOR SPACES
TRAINING & MAINTENANCE FACILITY
69,805 SQ.FT.
NEWLINS MILL ROAD
S.R. 2017
TATAMY ROAD
EXISTING BUILDING
SNOW REMOVAL EQUIPMENT
300' BUFFER FROM RESIDENTIAL DISTRICT
PROPOSED ACCESS EASEMENT-1 FOR MULTI-USE TRAIL 17,740 SF
PROPOSED ACCESS EASEMENT-2 FOR MULTI-USE TRAIL 10,924 SF
PROPOSED 10' WIDE MULTI-USE TRAIL
PROPOSED DRAINAGE EASEMENT AREA: 205,359 SF
NEWLINS MILL ROAD ROADWAY IMPROVEMENTS (BY OTHERS)
EXISTING DATA LINE PULL BOX
ELECTRIC TOWER
MET. ED POLE
GARAGE
BRICK SHED
MACADAM DRIVEWAY
MACADAM PAVING
EDGE OF PAVEMENT
CHAIN LINK FENCE
STONE FENCE POSTS (TYPICAL)
W/ CHAINING CHAIN
IRON GATES
SHED
SPOON SHOP
J.T.CHOY
GAMAGE
PENNDOT SIGHT DISTANCE
DISTANCE TO NEAREST DRIVEWAY
1016' OPP. - 1080' SAME SIDE
DISTANCE TO NEAREST INTERSECTION
1172' OPP. - 2151' SAME SIDE
SIGHT DISTANCE
REQ.- 610' AVAIL. 800'+
REQ.- 610' AVAIL. 800'+
SLOPE
1.00%
1.00%
S81°27'24"W 32.87'
S81°37'19"W 22.98'
S81°37'32"W 23.00'
N08°22'28"W 474.97'
S08°22'28"E 474.93'
N81°44'11"E 23.00'
N07°55'13"W 54.69'
S07°56'44"E 54.91'
N08°48'28"W 663.10'
S08°48'28"E 663.10'
N08°47'47"W 205.84'
S08°47'09"W 373.41'
S 81°12'51" W 92.15'
D=89°15'52"
R=11419.19'
L=54.91'
D=00°16'32"
CHD=S07°56'44"E
54.91'
L=86.72'
R=55.00'
=90°20'11"
CHD=78.01'
ChB=S53°28'57"E
L=62.39'
R=40.00'
=89°22'06"
CHD=56.24'
ChB=N36°32'36"E
L=103.74'
R=64.00'
=92°53'40"
CHD=92.77'
ChB=S38°07'58"W
L=33.53'
R=63.00'
=30°29'25"
CHD=33.13'
ChB=N80°11'21"W
L=46.74'
R=30.00'
=89°15'52"
CHD=42.15'
ChB=S36°49'28"W
HW-4101 WW=375.00
HW-4100 WW=375.00
HW-4102 WW=375.00
HW-4103 WW=375.00
HW-4104 WW=375.00
HW-4105 WW=375.00
HW-4106 WW=375.00
HW-4107 WW=375.00
HW-4108 WW=375.00
HW-4109 WW=375.00
HW-4110 WW=375.00
HW-4111 WW=375.00
HW-4112 WW=375.00
HW-4113 WW=375.00
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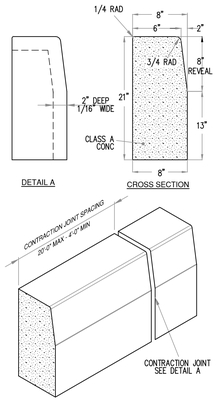
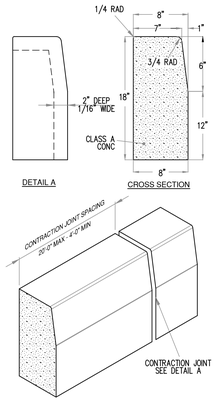
HW-4119 WW=375.00
HW-4120 WW=375.00
HW-4121 WW=375.00



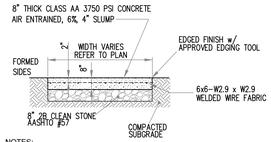
ON SITE PLAIN CONCRETE CURB (8" REVEAL)

FOR USE WITHIN THE TRUCK PARKING LOT AND TRUCK DRIVEWAY



ON SITE PLAIN CONCRETE CURB (6" REVEAL)

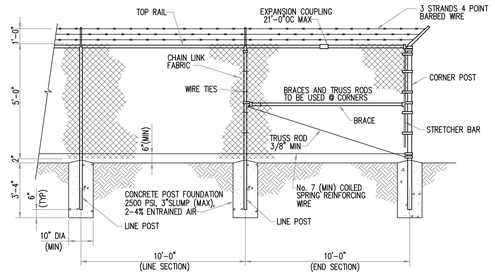
FOR USE WITHIN THE CAR PARKING LOT AND CAR DRIVEWAY



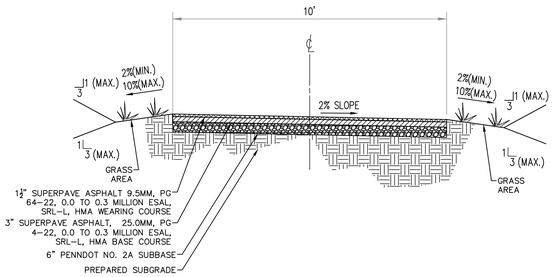
NOTES:

1.) THERE SHALL BE A CONSTRUCTION JOINT AT THE END OF THE POUR.
2.) BROOM FINISH.
3.) CONCRETE SHALL BE 4000 PSI, (AIR ENTRAINED)
4.) CONTRACTION JOINTS ARE TO BE A MAXIMUM OF 15' ON-CENTER OR IN DIRECTION OF PARKING LOTS AND DRIVEWAYS.
5.) EXPANSION JOINTS ARE TO BE DISCUSSED WITH THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

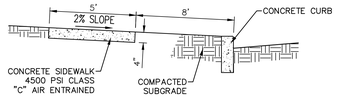
REINFORCED CONCRETE PARKING AREA



CHAIN LINK FENCE WITH BARBED WIRE



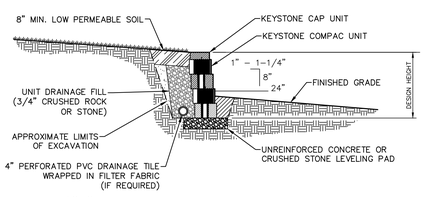
BITUMINOUS MULTI-USE TRAIL CROSS SECTION



NOTES:

THE FORMS AND DIVIDERS SHALL BE OF STEEL OR WOOD AND OF SUFFICIENT STRENGTH TO RESIST SPRINGING OUT OF SHAPE; DEPTH OF FORMS SHALL BE AT LEAST THE THICKNESS OF CONCRETE AS SPECIFIED ON THIS DRAWING. WALK SHALL BE OF MONOLITHIC CONSTRUCTION FOUR (4) INCHES THICK. TRANSVERSE SURFACE GROOVES MUST BE PROVIDED FOR AT RIGHT ANGLES TO THE SIDEWALK AND AT INTERVALS EQUAL TO WIDTH OF THE SIDEWALK. AFTER THE STONE IS PLACED IT SHALL BE TAMPED, SCREENED AND FINISHED TO TRUE GRADE AND SURFACE. THE CONCRETE FINISH SHALL BE MADE WITH A WOOD FLOAT, FOLLOWED BY A BRUSHING WITH A WET SOFT HAIR BRUSH TO A NEAT WORKMANLIKE SURFACE. TRANSVERSE EXPANSION JOINTS 1/2 INCH WIDE SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN 20 FEET AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER. SCORE LINES SHALL BE EVERY FIVE (5) FEET OR TO MATCH EXISTING ADJACENT SIDEWALK. LONGITUDINAL JOINTS 1/2 INCH WIDE SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS AND SHALL BE FILLED WITH PREFORMED BITUMINOUS TYPE FILLER. DRIVEWAY APRON AND SIDEWALK AT DRIVEWAY SHALL BE 4500 P.S.I. AIR ENTRAINED CONCRETE SIX (6) INCHES THICK.

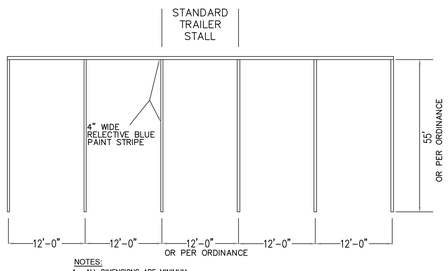
CONCRETE SIDEWALK DETAIL



NOTES:

THIS WALL DETAIL IS FOR APPROVAL PURPOSES ONLY. WHEN REQUIRED BY THE TOWNSHIP, A WALL CONSULTANT WILL PROVIDE WALL PLANS AND DESIGN CALCULATIONS AS REQUIRED.

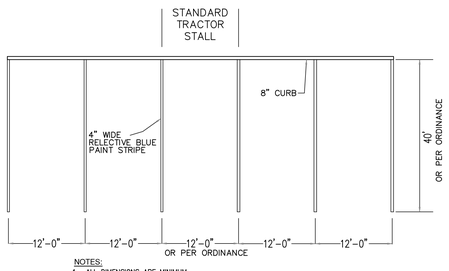
Typical Gravity Wall Section



NOTES:

1. ALL DIMENSIONS ARE MINIMUM.
2. SEE MUNICIPAL ORDINANCES FOR SIZE RESTRICTIONS.
3. PAVEMENT SLOPES IN ALL DIRECTIONS SHALL NOT EXCEED 2.00% IN ACCESSIBLE SPACES.
4. BUILT-UP CURB RAMPS ARE NOT ALLOWED TO PROJECT INTO THE SPACES OR AISLES.
5. PROVIDE ACCESSIBLE ROUTE AS REQUIRED.
6. PROVIDE SIGNAGE AS REQUIRED.

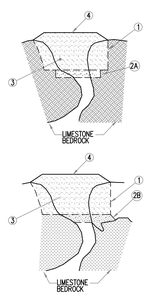
TYPICAL TRAILER PARKING STALLS STRIPING DETAILS



NOTES:

1. ALL DIMENSIONS ARE MINIMUM.
2. SEE MUNICIPAL ORDINANCES FOR SIZE RESTRICTIONS.
3. PAVEMENT SLOPES IN ALL DIRECTIONS SHALL NOT EXCEED 2.00% IN ACCESSIBLE SPACES.
4. BUILT-UP CURB RAMPS ARE NOT ALLOWED TO PROJECT INTO THE SPACES OR AISLES.
5. PROVIDE ACCESSIBLE ROUTE AS REQUIRED.
6. PROVIDE SIGNAGE AS REQUIRED.

TYPICAL TRACTOR PARKING STALLS STRIPING DETAILS



1. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.

2A. IF NO ROCK IS ENCOUNTERED: PLUG SOIL THROAT WITH GROUT OR CONCRETE. IF A CLEARLY DEFINED THROAT IS NOT ENCOUNTERED AFTER 10 FEET; STOP EXCAVATION. GENERALLY, A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH 4 FEET OF CONCRETE EXTENDING AT LEAST 1 FOOT INTO FIRM SOIL. IF THE SOFT ZONE IS LARGER (>3 FT.), REINFORCING STEEL SHOULD BE INCLUDED WITHIN THE CONCRETE CAP.

IN BUILDING STRUCTURAL AREAS, IF ROCK IS NOT ENCOUNTERED, COMPACTION GROUTING IS RECOMMENDED.

2B. IF ROCK IS ENCOUNTERED: CLEAN SURFACE AND PLACE HIGH-SLUMP CEMENT GROUT INTO OPEN VOIDS AND OBVIOUS UNTIL VOIDS ARE FILLED. IF SEVERAL CUBIC YARDS OF GROUT DO NOT FILL VOIDS, USE A STIFFER, LEAN CONCRETE MIX. IF A SINKHOLE IS ENCOUNTERED POST-CONSTRUCTION, COMPACTION GROUTING IS RECOMMENDED

3. AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERMEABLE SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER. TWO COMPLETE COVERAGES SHOULD BE USED ON EACH LIFT.

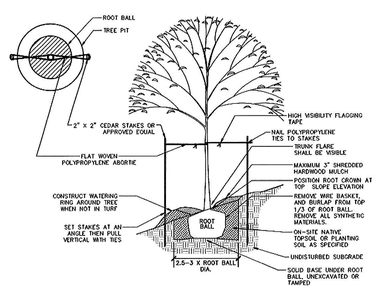
4. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.

5. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.

6. SINKHOLE REMEDIATION SHOULD BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER.

7. PALMER TOWNSHIP GEOTECHNICAL CONSULTANT AND NORTHAMPTON COUNTY CONSERVATION DISTRICT STAFF SHOULD BE NOTIFIED IMMEDIATELY IF ANY SINKHOLES ENCOUNTER ON SITE DURING OR AFTER CONSTRUCTION. REPAIRS SHALL BE CONDUCTED WITH THE CONCURRENT GEOTECHNICAL ENGINEER.

SINKHOLE CONDITIONS



DECIDUOUS TREE PLANTING DETAIL ON 3:1 SLOPE

NOT TO SCALE

NOTES:

1. TREE STAKING & GUYING SHALL NOT BE IMPLEMENTED UNLESS SITE CONDITIONS SUCH AS UNSTABLE SOILS, EXCESSIVE WIND, AND STEEP SLOPES (3:1 OR GREATER) EXIST. STAKING SHALL NOT BE INSTALLED WITHOUT THE APPROVAL OF THE TOWNSHIP LANDSCAPE ARCHITECT. ALL STAKES SHALL BE PAINTED ORANGE, AND ALL TIES SHALL BE FLAGGED WITH HIGH-VISIBILITY FLAGGING TAPE.
2. SPECIFIED ARBORTIE GREEN (OR WHITE) STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL 3/4" (19.05MM) WIDE 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE. (WWW.DEEPROOT.COM
3. STAKES AND TIES SHALL BE REMOVED AFTER ONE (1) FULL GROWING SEASON. WHEN REMOVED, STAKES SHALL BE DRIVEN BELOW GROUND LEVEL OR REMOVED FROM THE SITE ENTIRELY.

CALL BEFORE YOU DIG

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

811 Know what's below. Call before you dig.

1-800-242-1776

1-CALL NO. 20241731212 DATE: 06/21/24

NO	REVISION	BY	DATE
2	PER REVIEW LETTERS	NJM	06/24/25
1	PER REVIEW LETTERS	NJM	12/13/24

PROJECT: PROPOSED

TRAILER PARKING EXPANSION

2215 NEWLINS MILL ROAD, EASTON, PA 18045
PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

CLIENT:

WERNER ENTERPRISES INC.

14507 FRONTIER ROAD, P.O. BOX 45308,
OMAHA, NE 68145-0308
PHONE (800) 228-2240

PREPARER:

Benchmark
CIVIL ENGINEERING SERVICES, INC.
1727 JONATHAN STREET
ALLENTOWN, PA 18104
610.776.6700 610.776.1190 FAX
www.bencivil.com
• CIVIL ENGINEERING • TRAFFIC ENGINEERING • SURVEYING

TITLE:

CONSTRUCTION DETAIL PLAN

DESIGN: PAS	PLAN DATE: 07/16/24	DWG. NO.: 16 of 21
DRAWN: NJM	SCALE: AS NOTED	
SURVEY DATE: .	DWG. FILE: 835001	