WORCESTER TOWNSHIP PLANNING COMMISSION
Meeting Minutes – January 22, 2026

CALL TO ORDER
The Worcester Township Planning Commission held its regular business meeting on the above date at the Worcester Township Community Hall. The meeting was called to order by Chair Tony Sherr. A quorum was present. Members present included Chair Tony Sherr, Vice Chair Michelle Greenawalt, Bob Andorn, Jen Taylor, and Lee Koch. Township Manager Dan DeMeno was present.

REORGANIZATION

Chair
Motion was made by Bob Andorn and seconded by Lee Koch to nominate Tony Sherr to serve as Chair of the Planning Commission for 2026. Motion carried 5-0.

Vice Chair
Motion was made by Bob Andorn and seconded by Lee Koch to nominate Michelle Greenawalt to serve as Vice Chair of the Planning Commission for 2026. Motion carried 5-0.

APPROVAL OF MINUTES
Motion was made by Tony Sherr and seconded by Michelle Greenawalt to approve the minutes of the December 18, 2025 Planning Commission meeting, as amended to clarify references and terminology discussed during the review. Motion carried 5-0.

ITEMS FOR DISCUSSION

Trooper Ridge Subdivision — DEP Sewage Facilities Planning Module Review
The Planning Commission reviewed the Sewage Facilities Planning Module (SPM) submitted for the proposed Trooper Ridge Subdivision as part of the Pennsylvania Department of Environmental Protection planning process. Township staff explained that the planning module includes separate review components for the Township Planning Commission, County Planning Commission, and Health Department, and that Planning Commission action constitutes a recommendation only. Final approval will occur at the Board of Supervisors level as part of the subdivision approval process.

Motion was made by Tony Sherr and seconded by Lee Koch to recommend approval and authorization to sign the Planning Commission component of the Sewage Facilities Planning Module for the Trooper Ridge Subdivision and to forward the recommendation to the Board of Supervisors for consideration. Motion carried 5-0.

Sign Ordinance Update — Illuminated and Digital Signs
The Planning Commission continued its review of potential amendments to the Township sign ordinance, focusing on illuminated and digital signage as previously directed by the Board of Supervisors. Township Manager DeMeno presented a redline draft intended to address illumination provisions specifically rather than a comprehensive rewrite of the entire ordinance.

Commission members discussed whether the scope should remain limited to illuminated signage or expand to a broader review of the full ordinance. Several members indicated they had reviewed additional sections and identified areas that may be overly prescriptive or internally inconsistent. Discussion included sign regulations for residential subdivisions, monument versus wall-mounted signs, limits on signage at sports facilities, parking lot directional signage standards, and the practical visibility of height and size restrictions for drivers.

The Commission also discussed the balance between clear regulatory standards and providing reasonable administrative flexibility to the Zoning Officer, while avoiding ambiguity that could lead to inconsistent interpretation or legal challenges. Concerns were raised regarding glare from externally illuminated signage and potential impacts on motorists. Members emphasized the importance of enforceability, fairness, and practical application.

Reference was made to model ordinances from Montgomery County and Franconia Township, which had been distributed electronically for review. The Commission agreed that additional revisions would be necessary and that comments could be submitted through a shared electronic document to facilitate continued review between meetings. No formal action was taken.

ADJOURNMENT
The meeting adjourned at 8:01 PM.

Respectfully submitted,

Dan DeMeno
Township Manager

ARRO Consulting, Inc.
4259 West Swamp Road, Suite 410
Doylestown, PA 18902
P: 215.340.0600
www.arroconsulting.com

Via Email

March 19, 2026
Ref: #7550

Township of Worcester
1721 Valley Forge Road
PO Box 767
Worcester, PA 19490-0767

Attention: Dan DeMeno, Township Manager

Reference: 2974 W. Germantown Pike
Parcel No. 67-00-01606-00-1
BT Worcester LLC – City View Land Development
Planning Module Component 4A

Dear Dan:

Our office is in receipt of your request for review of a Preliminary Completed Planning Module for the above-referenced project site.

The attached Component 4A is the first step of DEP's required Sanitary Sewer Planning Module approval process. The Township's Planning Commission is required to review Component 4A and determine if the previously recommended plan is consistent with the Township Land Development requirements. I have reviewed the attached and recommend that it is discussed at the Planning Commission meeting on March 26, 2026.

Please do not hesitate to contact me with any questions of concerns.

Very truly yours,
ARRO Consulting, Inc.
Township Engineers

John W. Evarts, P.E.

JWE/paf
Enclosure
cc: File

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

# INSTRUCTIONS FOR COMPLETING COMPONENT 4A
# MUNICIPAL PLANNING AGENCY REVIEW

***Remove and recycle these instructions prior to mailing component to the approving agency.***

## Background

This component, Component 4, is used to obtain the comments of planning agencies and/or health departments having jurisdiction over the project area. It is used in conjunction with other planning module components appropriate to the characteristics of the project proposed.

## Who Should Complete the Component?

The component should be completed by any existing municipal planning agency, county planning agency, planning agency with areawide jurisdiction, and/or health department having jurisdiction over the project site. It is divided into sections to allow for convenient use by the appropriate agencies.

The project sponsor must forward copies of this component, along with supporting components and data, to the appropriate planning agency(ies) and health department(s) (if any) having jurisdiction over the development site. These agencies are responsible for responding to the questions in their respective sections of Component 4, as well as providing whatever additional comments they may wish to provide on the project plan. After the agencies have completed their review, the component will be returned to the applicant. The agencies have 60 days in which to provide comments to the applicant. If the agencies fail to comment within this 60 day period, the applicant may proceed to the next stage of the review without the comments. The use of registered mail or certified mail (return receipt requested) by the applicant when forwarding the module package to the agencies will document a date of receipt.

After receipt of the completed Component 4 from the planning agencies, or following expiration of the 60 day period without comments, the applicant must submit the entire component package to the municipality having jurisdiction over the project area for review and action. If approved by the municipality, the proposed plan, along with the municipal action, will be forwarded to the approving agency (Department of Environmental Protection or delegated local agency). The approving agency, in turn, will either approve the proposed plan, return it as incomplete, or disapprove the plan, based upon the information provided.

## *Instructions for Completing Planning Agency and/or Health Department Review Component*

### Section A. Project Name

Enter the project name as it appears on the accompanying sewage facilities planning module component (Component 2, 2m, 3, 3s or 3m).

### Section B. Review Schedule

Enter the date the package was received by the reviewing agency, and the date that the review was completed.

### Section C. Agency Review

1. Answer the yes/no questions and provide any descriptive information necessary on the lines provided. Attach additional sheets, if necessary.

2. Complete the name, title, and signature block.

### Section D. Additional Comments

The Agency may provide whatever additional comment(s) it deems necessary, as described in the form. Attach additional sheets, if necessary.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #:

# SEWAGE FACILITIES PLANNING MODULE
# COMPONENT 4A - MUNICIPAL PLANNING AGENCY REVIEW

**Note to Project Sponsor:** To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the local municipal planning agency for their comments.

**SECTION A. PROJECT NAME** (See Section A of instructions)

Project Name

BT Worcester LLC - City View

**SECTION B. REVIEW SCHEDULE** (See Section B of instructions)

1. Date plan received by municipal planning agency 12/30/2025
2. Date review completed by agency 3/26/2026

**SECTION C. AGENCY REVIEW** (See Section C of instructions)

| Yes | No | | |
|---|---|---|---|
| ☒ | ☐ | 1. | Is there a municipal comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101, *et seq*.)? |
| ☒ | ☐ | 2. | Is this proposal consistent with the comprehensive plan for land use?<br>If no, describe the inconsistencies |
| ☒ | ☐ | 3. | Is this proposal consistent with the use, development, and protection of water resources?<br>If no, describe the inconsistencies |
| ☒ | ☐ | 4. | Is this proposal consistent with municipal land use planning relative to Prime Agricultural Land Preservation? |
| ☐ | ☒ | 5. | Does this project propose encroachments, obstructions, or dams that will affect wetlands?<br>If yes, describe impacts |
| ☐ | ☒ | 6. | Will any known historical or archaeological resources be impacted by this project?<br>If yes, describe impacts |
| ☒ | ☐ | 7. | Will any known endangered or threatened species of plant or animal be impacted by this project?<br>If yes, describe impacts Conservation and Avoidance Measures are required. |
| ☒ | ☐ | 8. | Is there a municipal zoning ordinance? |
| ☒ | ☐ | 9. | Is this proposal consistent with the ordinance?<br>If no, describe the inconsistencies |
| ☐ | ☒ | 10. | Does the proposal require a change or variance to an existing comprehensive plan or zoning ordinance? |
| ☒ | ☐ | 11. | Have all applicable zoning approvals been obtained? |
| ☒ | ☐ | 12. | Is there a municipal subdivision and land development ordinance? |

**SECTION C. AGENCY REVIEW** (continued)

| Yes | No | | |
|---|---|---|---|
| ☒ | ☐ | 13. | Is this proposal consistent with the ordinance?<br>If no, describe the inconsistencies _____ |
| ☒ | ☐ | 14. | Is this plan consistent with the municipal Official Sewage Facilities Plan?<br>If no, describe the inconsistencies _____ |
| ☐ | ☒ | 15. | Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?<br>If yes, describe _____ |
| ☐ | ☒ | 16. | Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision? |
| ☒ | ☐ | | If yes, is the proposed waiver consistent with applicable ordinances? |
| | | | If no, describe the inconsistencies |

17. Name, title and signature of planning agency staff member completing this section:

Name: Tony Sherr

Title: Chairman

Signature: _____

Date: _____

Name of Municipal Planning Agency: Worcester Township Planning Commission

Address 1721 South Valley Forge Road, P.O. Box 767, Worcester PA 19490

Telephone Number: 610-584-1410

**SECTION D. ADDITIONAL COMMENTS** (See Section D of instructions)

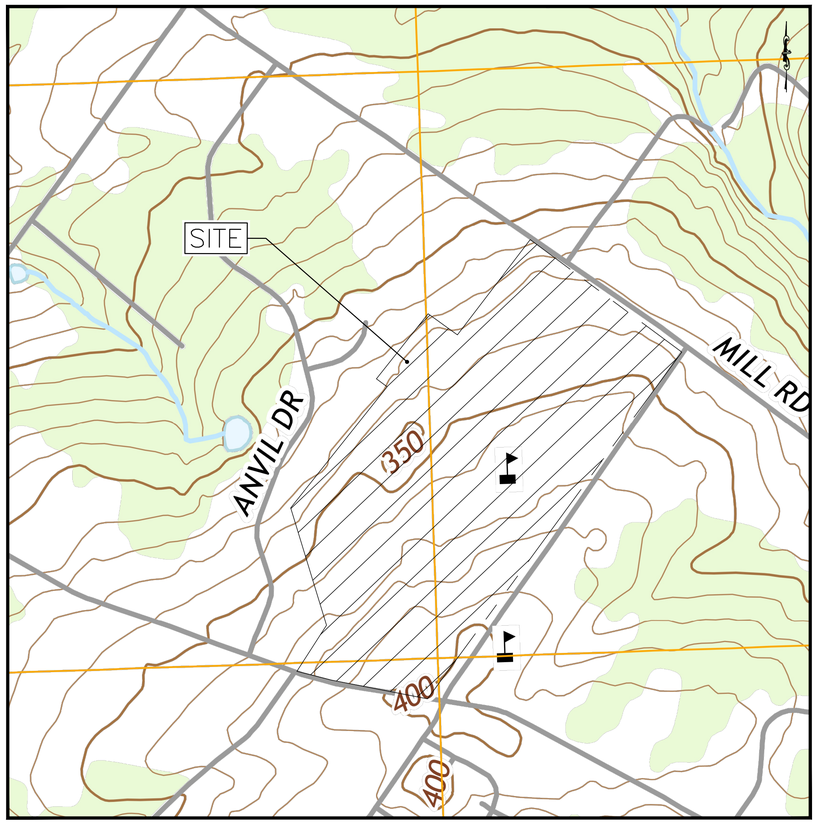
This component does not limit municipal planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The planning agency must complete this component within 60 days.

This component and any additional comments are to be returned to the applicant.

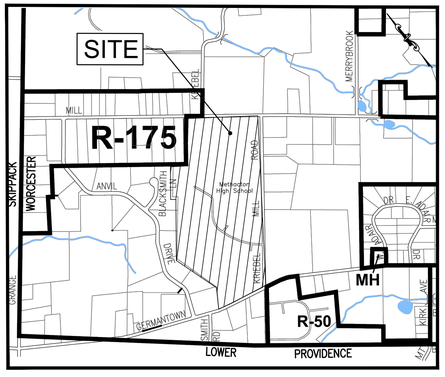
# SKETCH PLAN
## FOR
# METHACTON HIGH SCHOOL

WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA




*CONTEXT MAP*
SCALE: 1"=400'

*LOCATION MAP*
SCALE: 1"=1,000'




*ZONING MAP*
SCALE: 1"=1,000'

| SITE & ADJACENT ZONING DISTRICT | | |
|---|---|---|
| | DESIGNATION | ZONING CLASSIFICATION |
| SITE | AGR | AGRICULTURAL |
| | R-175 | RESIDENTIAL |
| | R-50 | RESIDENTIAL |

## OWNER/APPLICANT:

METHACTON SCHOOL DISTRICT
1001 KRIEBEL MILL ROAD
NORRISTOWN, PA 19408-1047

## SITE ADDRESS:

METHACTON HIGH SCHOOL
PARID: 670001393007
1005 KRIEBEL MILL ROAD
NORRISTOWN, PA 19408-1047

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

CHRISTOPHER W. JENSEN, PE
LICENSED PROFESSIONAL ENGINEER

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

METHACTON HIGH SCHOOL CAMPUS
REDEVELOPMENT
1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

COVER SHEET


T&M ASSOCIATES
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2000 MARKET STREET, SUITE 800
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

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| DESIGNED BY | JPK |
| CHECKED BY | DS |
| DRAWN BY | JPK |
| DATE | 12/23/2025 |
| SCALE | AS SHOWN |
| PROJ. NO. | SGAL00083 |
| DRAWING | CVR |
| SHEET | 1 OF 12 |

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LAST SAVED DATE: ANVIL, 22 Dec 2025, 9:38AM
LAST SAVE BY: EPosnak


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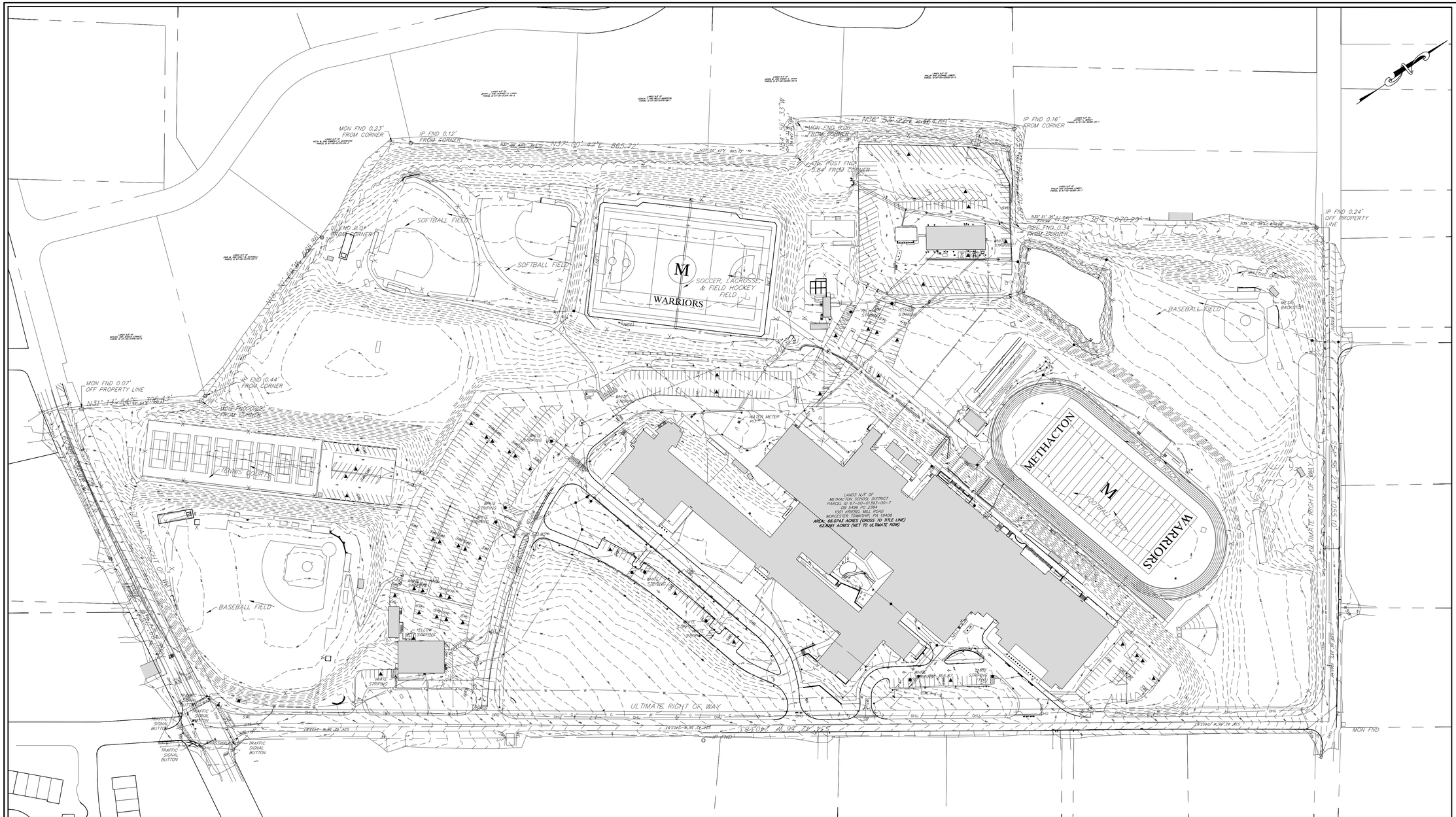


100' 50' 0 100' 200'

1" = 100'

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**CHRISTOPHER W. JENSEN, PE**
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METHACTON SCHOOL DISTRICT

# METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

## EXISTING CONDITIONS MASTER PLAN

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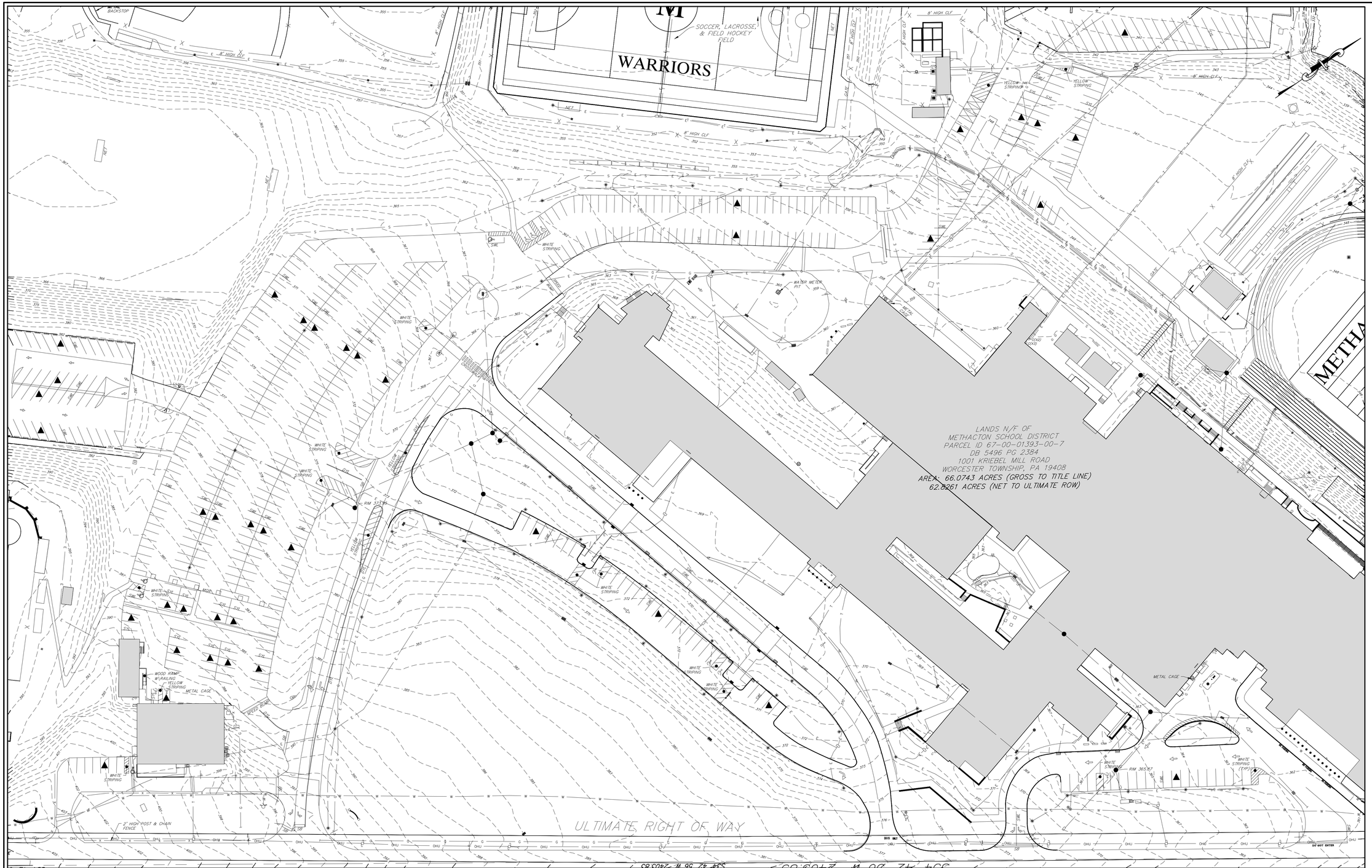
SHEET 2 OF 12

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METHACTON SCHOOL DISTRICT

# METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

## EXISTING CONDITIONS PHASE 1 PLAN


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| DRAWN BY | JPK |
| DATE | 12/23/2025 |
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| SHEET | 3 OF 12 |


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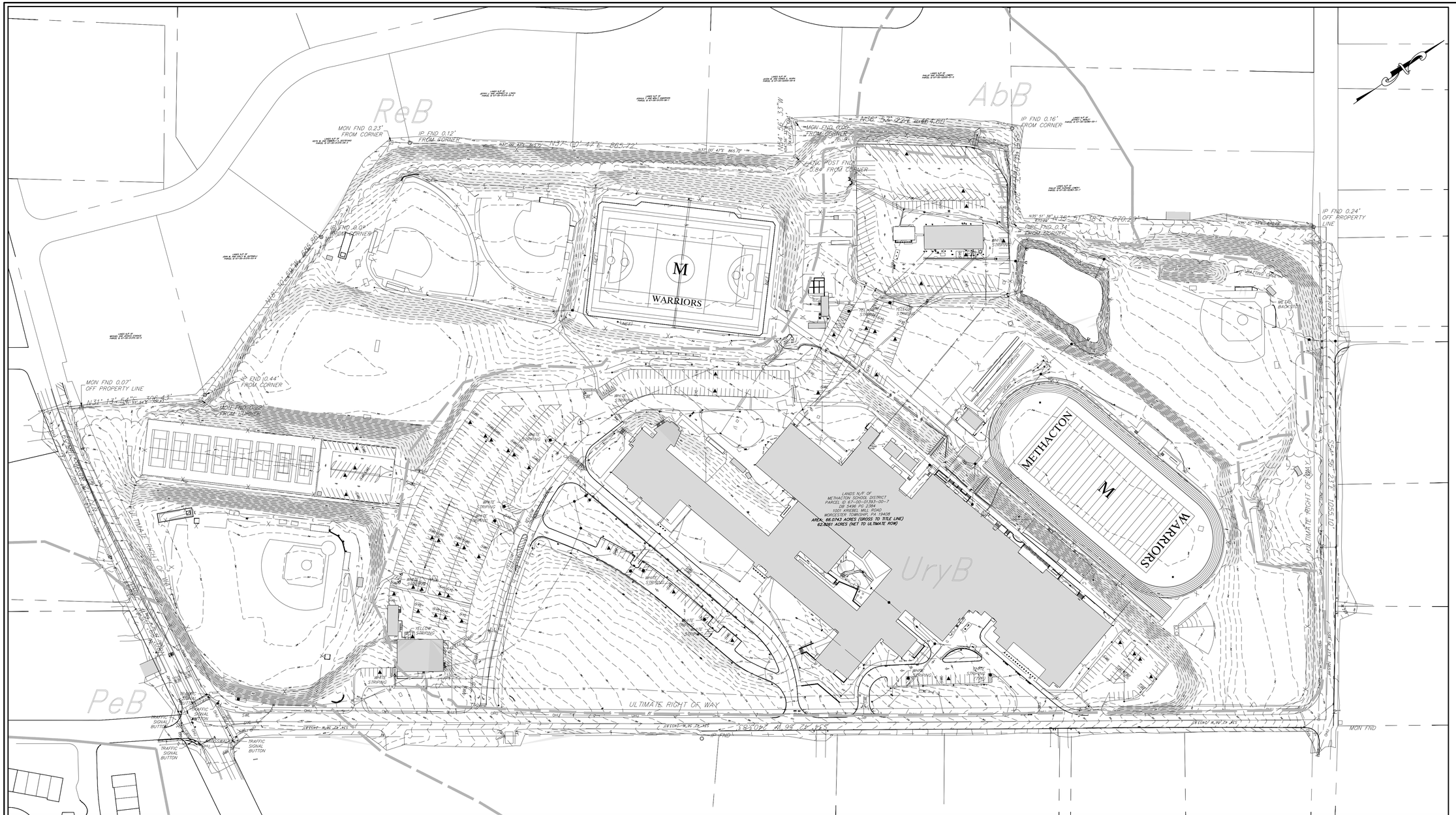


## PROPERTY INFORMATION

EQUITABLE OWNER: FIDELITY NATIONAL TITLE INSURANCE CO.
TAX PARCELS: 67-00-01393-00-7
AREA TO TITLE LINE: 66.0743 ACRES
AREA TO LEGAL R.O.W. LINE: 62.8261 ACRES
SITUATE: 1001 KRIEVEL MILL ROAD, WORCESTER, PA

## EXISTING DATA SOURCE NOTES:

1. EXISTING FEATURES SHOWN ARE BASED ON A SURVEY PLAN PREPARED BY CARROLL ENGINEERING CORP. DATED SEPTEMBER 13, 2024. BOUNDARY INFORMATION SHOWN IS FROM ACTUAL FIELD SURVEYS PERFORMED BY CARROLL ENGINEERING CORP.
2. ELEVATIONS ARE BASED UPON (NAV 88) DATUM ESTABLISHED ONSITE UTILIZING GLOBAL POSITIONING SYSTEM DATA COLLECTION.

## GENERAL ERSA NOTES

1. THE PENNSYLVANIA NATURAL DIVERSITY INVENTORY DICTATE A TREE REMOVAL AVOIDANCE MEASURE BETWEEN MAY 15 TO AUGUST 15 TO PRESERVE THE NORTHERN LONG-EARED BAT.
2. THE PROPOSED SITE DOES NOT INCLUDE ANY SCENIC OR VIEW SHED AREAS AS SHOWN IN THE TOWNSHIP MASTER PLAN.
3. THE PROPOSED SITE DOES NOT HAVE VERIFIED WETLAND AREAS.
4. THE PROPOSED SITE IS WITHIN THE FEMA FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP, MAP NO. 42091C0245G.

TABLE E.1

LIMITATIONS OF PENNSYLVANIA SOILS PERTAINING TO EARTHMOVING PROJECTS

| SOIL NAME | CUTBANKS CAVE | CORROSIVE TO CONCRETE/STEEL | DROUGHTY | EASILY ERODIBLE | FLOODING | DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE | HYDRIC/ HYDRIC INCLUSIONS | LOW STRENGTH / LANDSLIDE PRONE | SLOW PERCOLATION | PIPING | POOR SOURCE OF TOPSOIL | FROST ACTION | SHRINK - SWELL | POTENTIAL SINKHOLE | PONDING | WETNESS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABBOTTSTOWN, 3% TO 8% SLOPES | X | C/S | | X | | X | X | X | X | X | X | X | | | | X |
| PENN SILT LOAM, 3% TO 8% SLOPES | X | C | X | | | X | X | | X | X | X | | | | | |
| READINGTON SILT LOAM, 3% TO 8% SLOPES | X | C/S | | X | | X | X | X | X | X | X | X | | | | X |
| URBAN LAND-READINGTON COMPLEX 0%-8% SLOPES | X | C/S | | X | | X | X | X | X | X | X | X | | | | X |

LEGEND

15-25% SLOPE

>25% SLOPE

100' 50' 0 100' 200'

1" = 100'

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER W. JENSEN
NO. PE76464
COMMONWEALTH OF PENNSYLVANIA

**CHRISTOPHER W. JENSEN, PE**
LICENSED PROFESSIONAL ENGINEER

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT
1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

EXISTING RESOURCES MASTER PLAN

YOUR GOALS. OUR MISSION.

2000 MARKET STREET, SUITE 800
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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| DRAWN BY JPK | SHEET 4 |
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| SCALE AS SHOWN | |
| PROJ. NO. SGAL00083 | |

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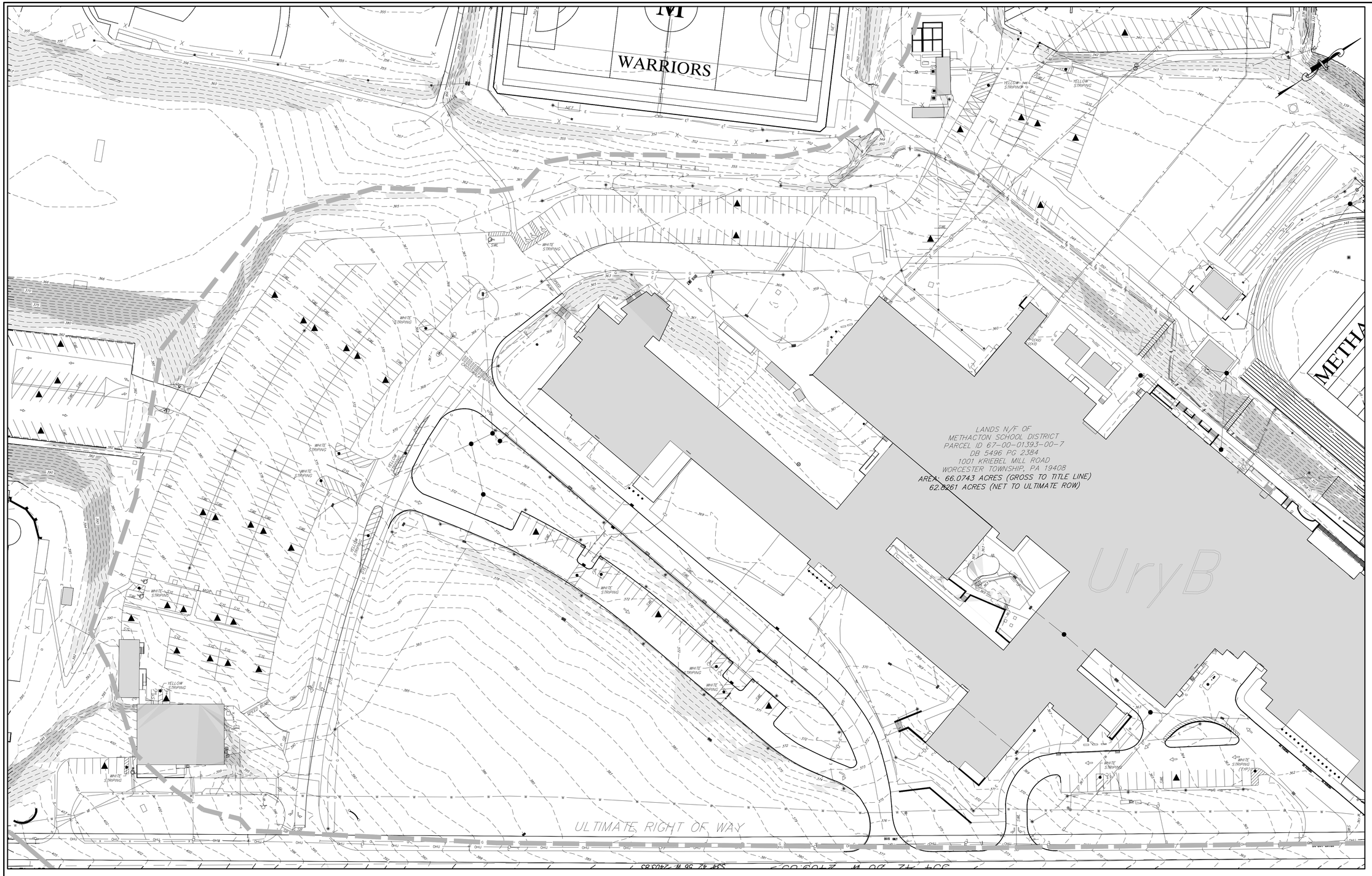


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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER W. JENSEN
NO. PE76464

**CHRISTOPHER W. JENSEN, PE**
LICENSED PROFESSIONAL ENGINEER

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

# METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

## EXISTING RESOURCES PHASE 1 PLAN

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FAX 215-627-3459

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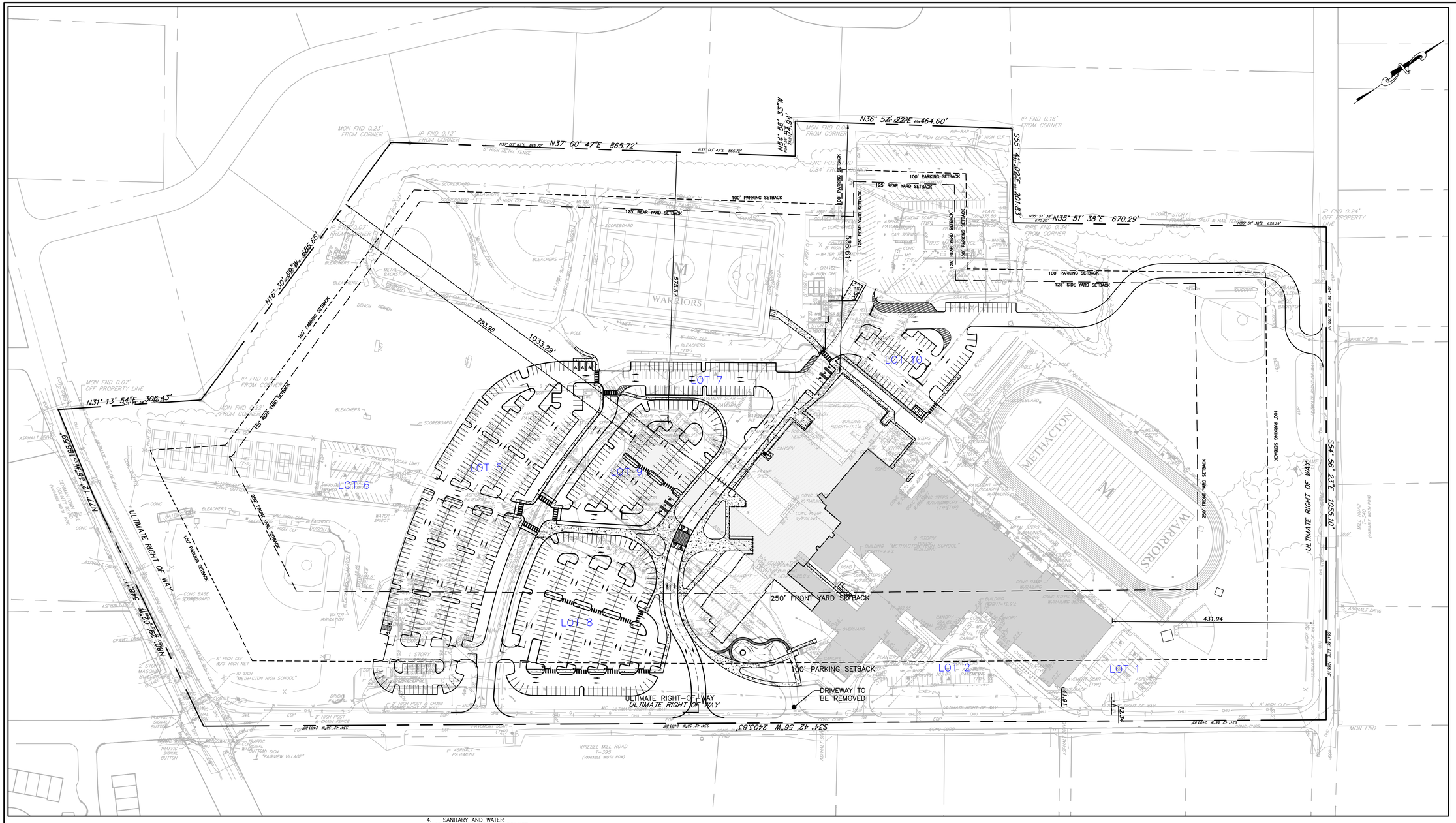
| DESIGNED BY | JPK |
| CHECKED BY | DS |
| DRAWN BY | JPK |
| DATE | 12/23/2025 |
| SCALE | AS SHOWN |
| PROJ. NO. | SGAL00083 |
| DRAWING | ER-P1 |
| SHEET | 5 OF 12 |




## ZONING DATA

1. ZONING DISTRICT CLASSIFICATION: AGR AGRICULTURAL DISTRICT
   TOTAL TRACT AREA = 62.9 ACRES
2. EXISTING USE: PUBLIC SCHOOL (PERMITTED BY CONDITIONAL USE)
   PROPOSED USE: PUBLIC SCHOOL
3. ZONING REQUIREMENTS TABLE:

| STANDARDS | ZONING SECTION | REQUIRED | EXISTING | PROPOSED PHASE 1 | PROPOSED MASTER PLAN |
|---|---|---|---|---|---|
| MINIMUM LOT AREA (ACRES) | 150-12.A | 25 | 62.9 | 62.9 | 62.9 |
| MAXIMUM BUILDING COVERAGE (% OF TRACT) | 150-14.A | 15 | 8.7 | 9.1 | 9.1 |
| MAXIMUM IMPERVIOUS COVERAGE (% OF TRACT) | 150-14.B | 40 | 40 | 40.0 | 40.0 |
| MAXIMUM HEIGHT, PRINCIPAL STRUCTURES (FT) | 150-15 | 35 | <35 | <35 | <35 |
| MAXIMUM NUMBER OF STORIES | 150-15 | 2.5 | 2 | 2 | 2 |
| MINIMUM LOT WIDTH (FT) | 150-12.B | 250 | 752 | 752 | 752 |
| MINIMUM SETBACKS FROM STREETS (FT): | | | | | |
| FRONT YARD SETBACK (FT) | 150-13.B | 250 | 41.9** | 41.9** | 41.9** |
| SIDE YARD SETBACK (FT) | 150-13.B | 125 | 793.9 | 1033.4 | 1033.4 |
| REAR YARD SETBACK (FT) | 150-13.B | 125 | 575.5 | 536.6 | 536.6 |
| PARKING SETBACK (FT) | 150-16.B | 100 | 12.3** | 12.3** | 12.3** |

**EXISTING NON-CONFORMITY TO REMAIN

4. SANITARY AND WATER
EXISTING SANITARY SEWER: PRIVATE
EXISTING WATER: PUBLIC

PROPOSED SANITARY SEWER: PUBLIC
PROPOSED WATER: PUBLIC

5. STEEP SLOPES

MAN MADE STEEP SLOPES WILL BE DISTURBED BY THE PROPOSED IMPROVEMENTS SHOWN HEREON.

6. PARKING REQUIREMENTS/TABULATION:

REQUIRED

ONE SPACE FOR EVERY THREE SEATS PROVIDED FOR ASSEMBLY. IN THE CASE OF A SCHOOL
WITH INDOOR AND OUTDOOR ASSEMBLY, THE OUTDOOR AND INDOOR SPACES SHALL BE COUNTED SEPARATELY, AND THE GREATER OF THE TWO NUMBERS SHALL BE UTILIZED TO COMPUTE THE SCHOOL'S PARKING REQUIREMENT. IN ADDITION, THE INDOOR AND OUTDOOR ASSEMBLY AREAS SHALL NOT BE USED SIMULTANEOUSLY IN A MANNER WHICH RENDERS THE AVAILABLE PARKING ON THE PROPERTY INADEQUATE.

PARKING SHALL NOT OCCUPY ANY OF THE FRONT, SIDE OR REAR YARDS (EXISTING NON-CONFORMITY ON KRIEBEL MILL AND MILL ROADS)

NO PARKING AREA OR DRIVEWAY SHALL BE LOCATED WITHIN 100 FT OF ANY PROPERTY LINE
FOR ANY USE EXCEPT AS REQUIRED FOR NORMAL INGRESS OR EGRESS.

DRIVEWAYS FOR ALL NONRESIDENTIAL USES SHALL BE LOCATED NOT LESS THAN 300 FT FROM A STREET
INTERSECTION MEASURING FROM THE NEAR SIDE OF THE DRIVEWAY TO THE NEAR CURBLINE OF EACH STREET.

ANY NON-RESIDENTIAL USE SHALL BE PROVIDED WITH OFF-STREET LOADING AND UNLOADING SPACE WHICH
SHALL BE COMPLETELY SEPARATE AND DISTINCT FROM THE REQUIRED OFF-STREET PARKING SPACES.

PARKING TABLES

| EXISTING | | | |
|---|---|---|---|
| EXISTING PARKING LOT NO. | PROPOSED PARKING LOT NO. | PARKING SPACES PROVIDED | REVISIONS PROPOSED |
| 1 | | 50 | N/A |
| 2 | | 21 | N/A |
| 3 | | 31 | N/A |
| 4 | | 8 | N/A |
| 5 | | 302 | N/A |
| 6 | | 45 | N/A |
| 7 | | 154 | N/A |
| | 8 | N/A | |
| | 9 | N/A | |
| | total | 611 | |

| PARKING COUNTS – PHASE 1 | | | |
|---|---|---|---|
| EXISTING PARKING LOT NO. | PROPOSED PARKING LOT NO. | PARKING SPACES PROVIDED | REVISIONS PROPOSED |
| 1 | | 50 | NO |
| 2 | | 17 | NO |
| 3 | | 0 | YES |
| 4 | | 0 | YES |
| 5 | | 307 | YES |
| 6 | | 45 | NO |
| 7 | | 52 | YES |
| | 8 | 206 | |
| | 9 | 127 | |
| | 10 | 68 | |
| | Total | 872 | |

| PARKING COUNTS – MASTERPLAN | | | |
|---|---|---|---|
| EXISTING PARKING LOT NO. | PROPOSED PARKING LOT NO. | PARKING SPACES PROVIDED | REVISIONS PROPOSED |
| 1 | | 50 | NO |
| 2 | | 17 | NO |
| 3 | | 0 | YES |
| 4 | | 0 | YES |
| 5 | | 315 | YES |
| 6 | | 45 | NO |
| 7 | | 52 | YES |
| | 8 | 206 | |
| | 9 | 127 | |
| | 10 | 75 | |
| | Total | 887 | |

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

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER W. JENSEN
NO. PE76464

**CHRISTOPHER W. JENSEN, PE**
LICENSED PROFESSIONAL ENGINEER

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT
# METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT
1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

SITE MASTER PLAN


YOUR GOALS. OUR MISSION.
2000 MARKET STREET, SUITE 800
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA


| | |
|---|---|
| DESIGNED BY | JPK |
| CHECKED BY | DS |
| DRAWN BY | JPK |
| DATE | 12/23/2025 |
| SCALE | AS SHOWN |
| PROJ. NO. | SGAL00083 |
| DRAWING | STE-0A |
| SHEET | 6 OF 12 |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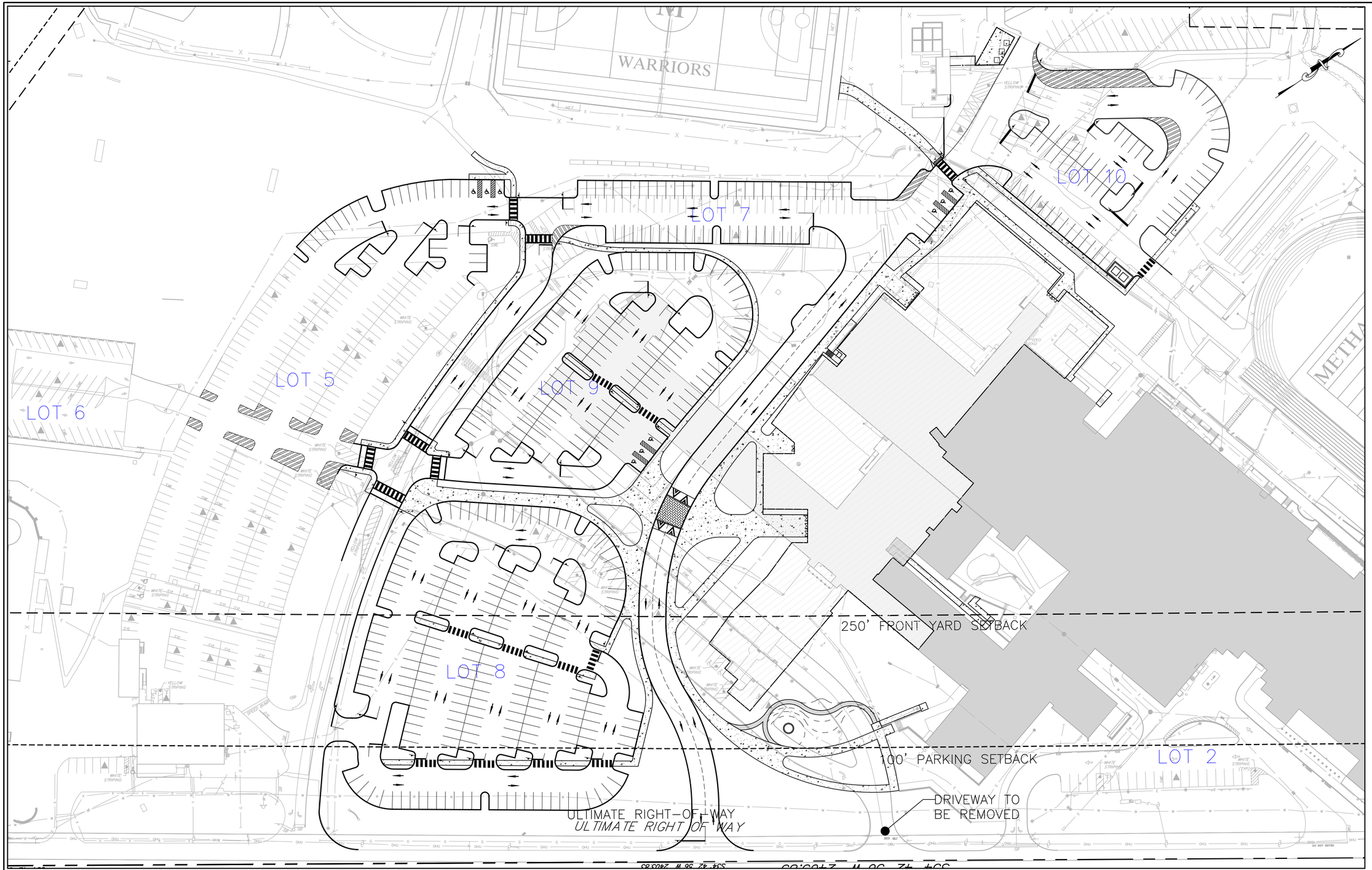
LAST SAVE BY: EPasnik




LEGEND

- PROPOSED CONCRETE
- PROPOSED BUILDING ADDITION
- PROPOSED RAISED CROSSWALK
- PROPERTY LINE
- SETBACK LINE
- PROPOSED CURB

50' 25' 0 50' 100'

1" = 50'

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

**CHRISTOPHER W. JENSEN, PE**
LICENSED PROFESSIONAL ENGINEER

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STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

# METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

## SITE PHASE 1 PLAN


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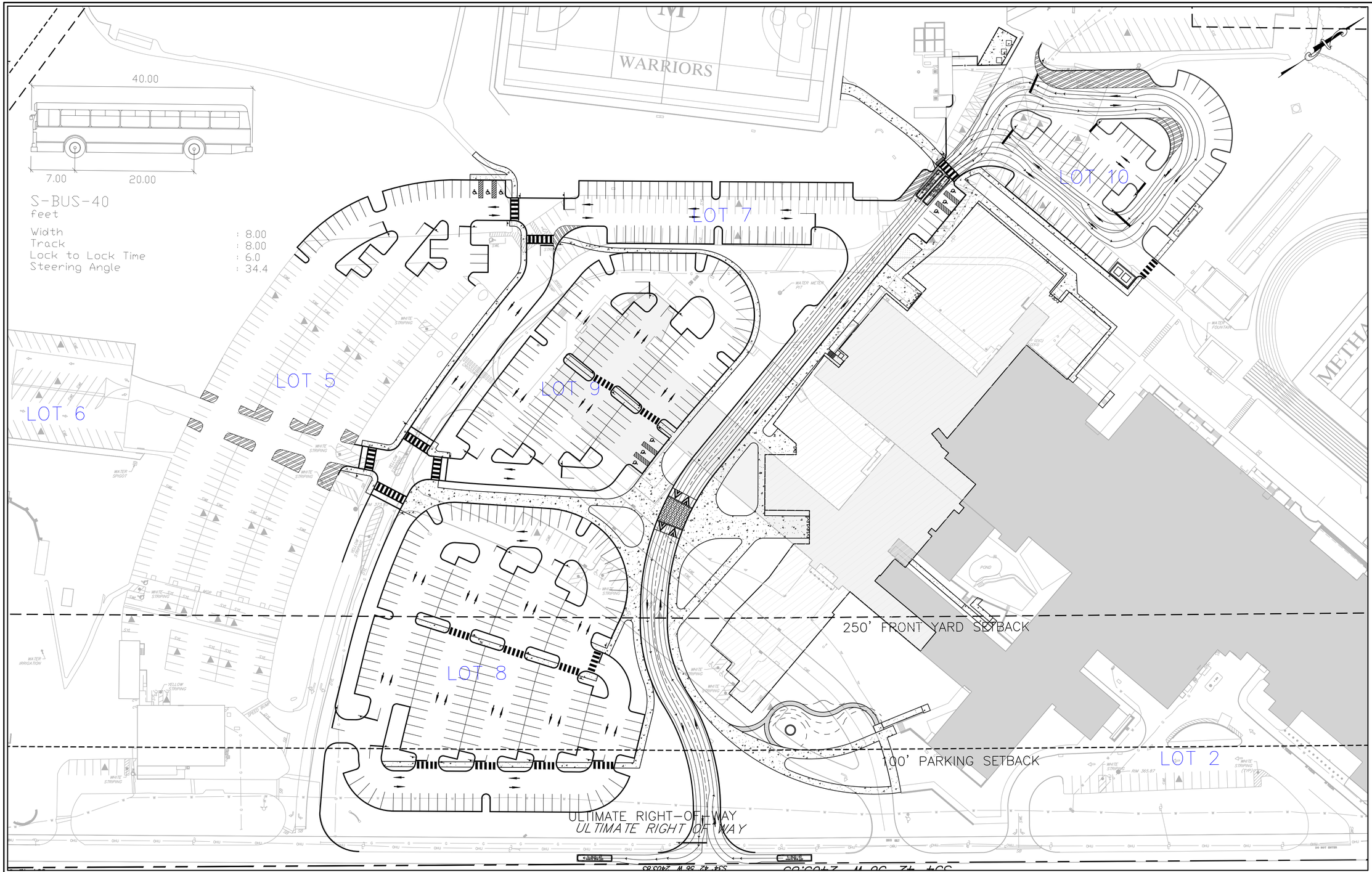


50' 25' 0 50' 100'
1" = 50'

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STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

# AUTO TURNING PLAN - BUS

YOUR GOALS. OUR MISSION.
2000 MARKET STREET, SUITE 800
PHILADELPHIA, PA 19103
TEL 215-282-7850
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| DATE | 12/23/2025 |
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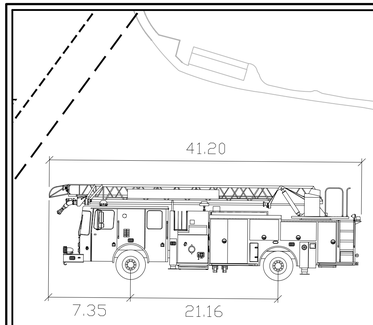
| PROJ. NO. | SGAL00083 |
| DRAWING | ATO-1 |
| SHEET | 8 OF 12 |




WORCESTOR

| | feet |
|---|---|
| Width | : 8.00 |
| Track | : 8.00 |
| Lock to Lock Time | 6.0 |
| Steering Angle | : 30.0 |

WARRIORS

LOT 5

LOT 6

LOT 7

LOT 8

LOT 9

LOT 10

LOT 2

METHA

250' FRONT YARD SETBACK

100' PARKING SETBACK

ULTIMATE RIGHT-OF-WAY

*ULTIMATE RIGHT OF WAY*

POND

WATER FOUNTAIN

WATER METER PIT

WATER SPIGOT

WATER IRRIGATION

SPEED BUMP

YELLOW STRIPING

WHITE STRIPING

RIM 365.87

50' 25' 0 50' 100'

1" = 50'

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

CHRISTOPHER W. JENSEN, PE
LICENSED PROFESSIONAL ENGINEER

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

# AUTO TURNING PLAN - FIRE

YOUR GOALS. OUR MISSION.

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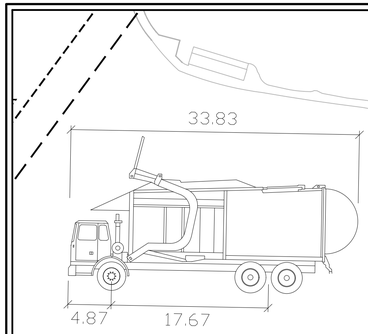
| DRAWING | ATO-2 |
| SHEET | 9 OF 12 |




Wayne Titan

| | feet |
|---|---|
| Width | : 8.46 |
| Track | : 8.00 |
| Lock to Lock Time | 6.0 |
| Steering Angle | : 45.0 |



50' 25' 0 50' 100'
1" = 50'

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| | | | | |

COMMONWEALTH OF PENNSYLVANIA
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CHRISTOPHER W. JENSEN
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NO. PE76464

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STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

# METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

## AUTO TURNING PLAN - TRASH


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| SCALE | AS SHOWN |
| PROJ. NO. | SGAL00083 |
| DRAWING | AT0-3 |
| SHEET | 10 OF 12 |


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S-BUS-40

feet

| | |
|---|---|
| Width | : 8.00 |
| Track | : 8.00 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 34.4 |




S-BUS-23

feet

| | |
|---|---|
| Width | : 7.22 |
| Track | : 7.22 |
| Lock to Lock Time | 6.0 |
| Steering Angle | : 41.6 |




VAN-20

feet

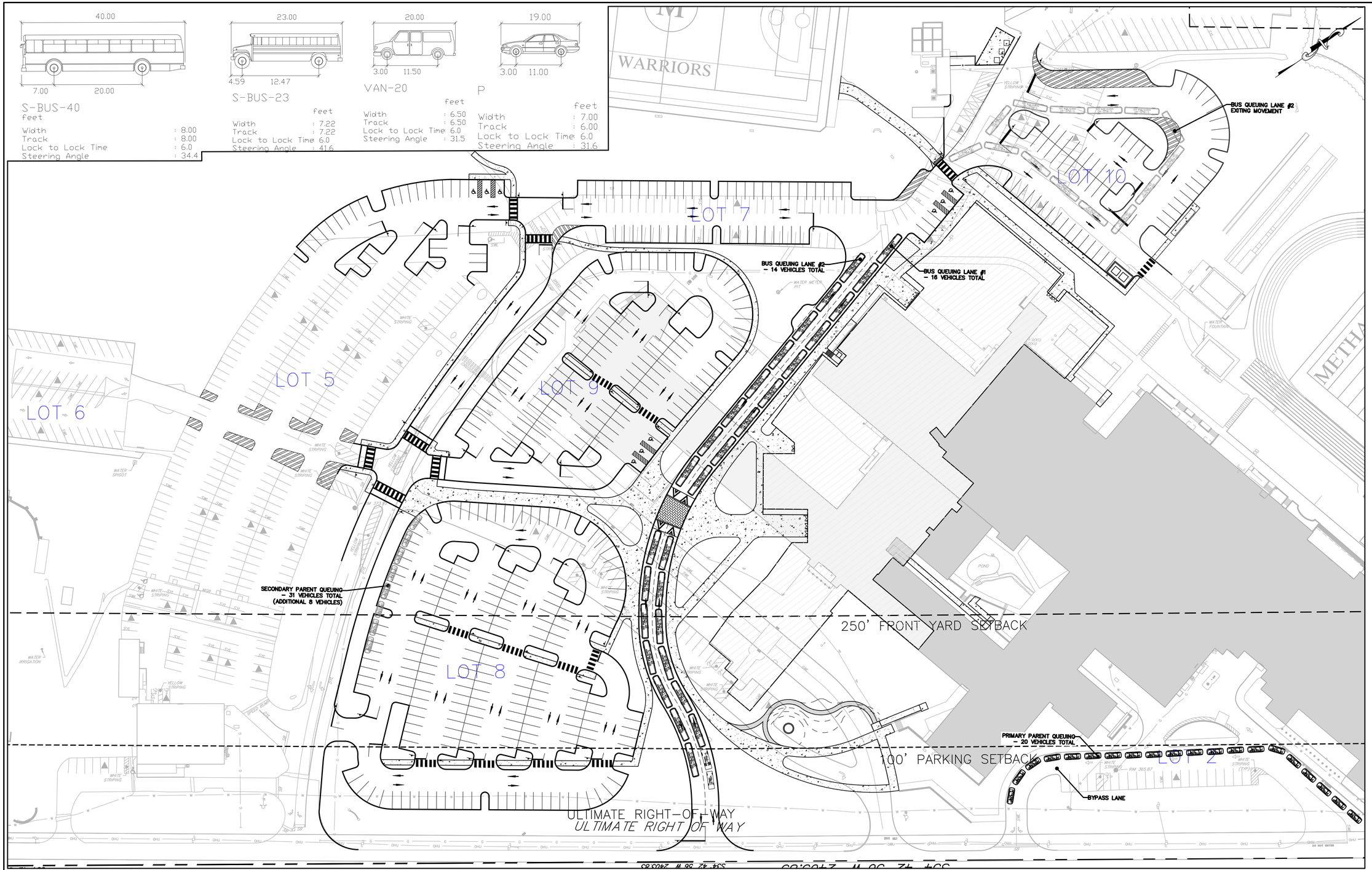
| | |
|---|---|
| Width | : 6.50 |
| Track | : 6.50 |
| Lock to Lock Time | 6.0 |
| Steering Angle | : 31.5 |




P

feet

| | |
|---|---|
| Width | : 7.00 |
| Track | : 6.00 |
| Lock to Lock Time | 6.0 |
| Steering Angle | : 31.6 |




50' 25' 0 50' 100'

1" = 50'

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

**CHRISTOPHER W. JENSEN, PE**
LICENSED PROFESSIONAL ENGINEER

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

METHACTON SCHOOL DISTRICT

METHACTON HIGH SCHOOL CAMPUS
REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

AUTO TURNING PLAN - STACKED


YOUR GOALS. OUR MISSION.

2000 MARKET STREET, SUITE 800
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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| | |
|---|---|
| DESIGNED BY | JPK |
| CHECKED BY | DS |
| DRAWN BY | JPK |
| DATE | 12/23/2025 |
| SCALE | AS SHOWN |
| PROJ. NO. | SGAL00083 |

DRAWING AT0-4

SHEET 11 OF 12


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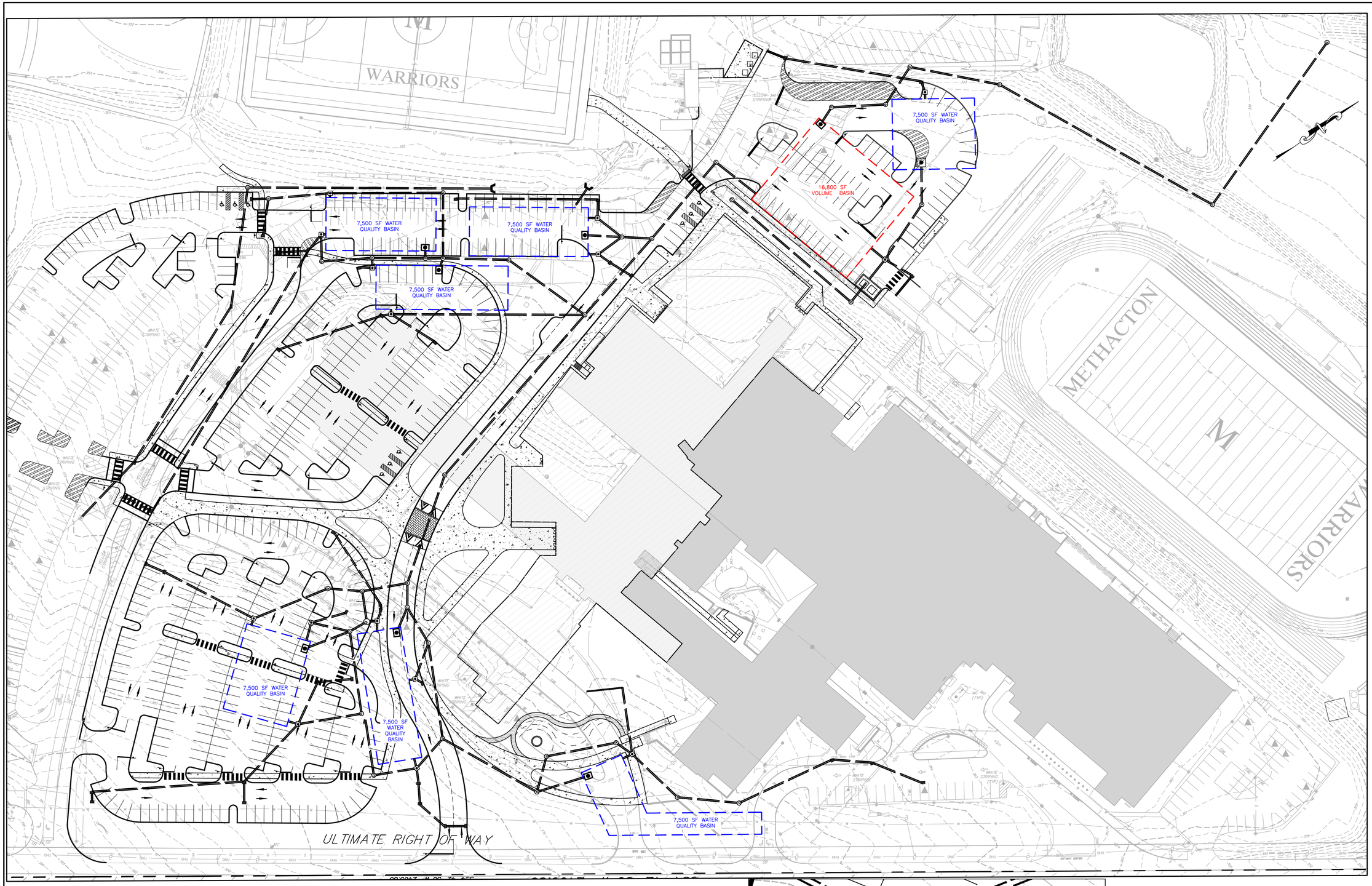


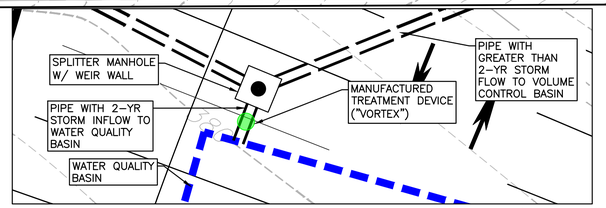


INSET 1: TYPICAL WATER QUALITY BASIN INFLOW STRUCTURES DETAIL (SCALE: 1"=10')

50' 25' 0 50' 100'
1" = 50'

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464


**CHRISTOPHER W. JENSEN, PE**
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LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464


METHACTON SCHOOL DISTRICT

# METHACTON HIGH SCHOOL CAMPUS REDEVELOPMENT

1005 KRIEBEL MILL ROAD, EAGLEVILLE, PA 19403
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

## DRAINAGE PHASE 1 PLAN


YOUR GOALS. OUR MISSION.

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TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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| | |
|---|---|
| DESIGNED BY | JPK |
| CHECKED BY | DS |
| DRAWN BY | JPK |
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| DRAWING | DRN |
| SHEET | 12 OF 12 |


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Bowman

February 5, 2026

Mr. Dan Demeno
Township Manager
Worcester Township
1721 Valley Forge Road
P.O. Box 767
Worcester, PA 19490

Attention: Christian R. Jones, Assistant Township Manager
Mr. Robert D'Hulster, Public Works Director

RE: **Traffic Review #3 – Sketch Plan – Phase 1 Redevelopment**
Methacton High School Campus Site Modifications
Worcester Township, Montgomery County, PA
Project No. 313982-24-005

Dear Dan:

In response to the Township's request, Bowman Consulting Group (Bowman) has completed our third (3rd) traffic engineering review associated with the proposed site modifications at the Methacton High School campus located at 1005 Kriebel Mill Road in Worcester Township, Montgomery County, PA. While this is our third review, the campus master plan has been reshaped and rephased over time. It is our understanding from this latest sketch plan submitted that the proposed project (Phase 1) involves the demolition of the existing west wing of the Methacton High School and the construction of a new west wing for the high school building, parking lot modifications, circulation roads, and modified access points. Access to the campus, upon completion of the master plan, is proposed to be provided via five driveways (four existing driveways and one relocated driveway) along Kriebel Mill Road and one proposed driveway along Mill Road as the 4th leg opposite the existing T-intersection of the northern leg of Kriebel Mill Road. Under Phase 1, only access modifications along Kriebel Mill Road are proposed.

The following document was reviewed in preparation of our comments:

- Sketch Plan – Methacton High School, prepared by T and M Associates, dated December 23, 2025.

Based on our review of the document listed above, Bowman offers the following comments for consideration by the Township and action by the applicant:

**General**

1. Based on our review, the applicant must address the comments below and provide revisions to the plans in any formal land development submission to the Township and our office for further review and approval recommendations, should the Township Supervisors grant approval of the sketch plan. The applicant's engineer must **provide a response letter that describes how each specific review comment has been addressed, where each can be found in the plan set or materials**, as opposed to general responses. This will aid in the detailed review and subsequent review timeframes.

2. According to the Township's Roadway Sufficiency Analysis completed to determine the capital improvement program for area roadways and the transportation impact fee, the proposed development is located in Transportation Service Area South, which has a corresponding impact fee of $3,125 per "new" weekday afternoon peak hour trip and the applicant will be required to pay a Transportation Impact Fee in accordance with the Township's Transportation Impact Fee Ordinance. In order to determine if a transportation impact fee is applicable for the proposed site modifications, the applicant must minimally provide details on the existing number of students/faculty/staff at Methacton High School on a typical school day, as well as the increase in the number of students/faculty/staff during the weekday afternoon peak hour that is expected upon completion of the site proposed modifications. A final determination of the transportation impact fee will be calculated upon submission of land development plans.

3. A Montgomery County Highway Occupancy Permit (HOP) will be required for any work that may be completed within the legal right-of-way on West Germantown Pike. Kriebel Mill Road (T-395) and Mill Road (T-340) are Township owned and maintained roads that will involve Township and Township consultant review and approvals. Furthermore, if modifications will be required to the signal at West Germantown Pike and Kriebel Mill Road to mitigate development impacts, optimize the signal efficiency for school peak periods or to accommodate other improvements to the intersection, a PennDOT modified signal permit approval will be required. Also, if improvements are to be implemented at any off-site intersection with a state roadway, then a PennDOT HOP permit would be required.. The Township and our office must be copied on all HOP and signal plan submissions, as well as correspondence between the applicant, Montgomery County, and PennDOT and invited to any and all meetings between the applicant team and these parties**.**

4. Upon resubmission, our office will evaluate the information in concert with Montgomery County and will provide additional reviews of engineering and supplemental submission details as we receive them.

**Sketch Plan**

5. As previously mentioned in comment #2, the applicant must provide details on the existing number of students/faculty/staff at Methacton High School on a typical school day, as well as the increase in the number of students/faculty/staff and activities during the weekday morning and weekday afternoon peak hours that is expected upon completion of the proposed site modifications for Phase 1, as well as expected for the full master plan. Upon receipt of this information, our office will review it and determine if the applicant will be required to submit a transportation impact study (TIS) in conjunction with the currently proposed site modifications for this phase concurrently with any formal land development submission.

6. The submitted sketch plan is assumed to be for Phase 1 improvements only to the Methacton High School campus. The applicant should provide a written description with information on the anticipated additional phases of redevelopment that are being planned at the campus, and if so, when those additional phases are expected to occur and to be implemented. Upon receipt of this information, our office will determine the timing for when the applicant must prepare a master plan TIS that incorporates the phases of redevelopment for the campus that are either currently proposed or will be proposed at a future date.

7. The applicant should provide additional information on what type uses (i.e. classrooms, cafeteria, swimming pool, etc.) will be provided in the new west wing.

8. Provide a plan sheet showing how parking, parent drop-off/pick-up and bus operations during the morning arrival and afternoon dismissal will be accommodated for the high school after construction of the site modifications to the Methacton High School campus, within and around the parking and drop-off/pick-up areas. The plan should show the expected internal travel routes and graphically depict the queuing areas with vehicles for the buses and parents in order to show that operations will work efficiently. A narrative on how the operations will be managed by the high school for safe and efficient vehicular and pedestrian operations with the proposed site redevelopment, especially at peak arrival and dismissal times, should accompany the next submission.

9. The vehicle owners to be permitted to be parked in the various parking lots must be provided. For instance in Lot #10, there is parking in the center of the proposed bus drop-off/pick up location. The use of parking fields must be clarified and noted how they will be posted and enforced for use by the vehicles permitted.

10. Document/provide information on the number of high school-based pedestrians and their walking paths to/from the school, and how any patterns must be redirected during construction and/or upon completion of the project.

11. The applicant should provide information on the approximate number of visitors that can be expected to attend large events such as sporting events at the football stadiums and fields, back-to-school night, school concerts, and other large events to confirm that the proposed parking supply on-site can accommodate the proposed parking demand of these large events. Of concern is the possibility of visitors attending these large events to park along the site frontage of Kriebel Mill Road and/or Mill Road which may then create unsafe conditions for vehicles traveling along Kriebel Mill Road and Mill Road, vehicles exiting the school with restricted sight distances, and the safety of pedestrian activity in the vicinity of the site.

12. Should this phase 1 project move into land development, the applicant should provide details, with a narrative and any supporting plans, for the expected on-site traffic operations **during the construction phase(s)** on the campus. Of concern is vehicular and pedestrian activity for students/faculty/staff/visitors of the site interacting with construction vehicles and equipment and that safe conditions can be provided.

13. We have concerns with the current design of the future Mill Road site access shown on sheet #6, particularly regarding the current design/sharp curvature of the site access as it approaches Mill Road. Due to the layout and width on the site access approach, there is the potential for an egressing vehicles to encroach across the centerline as they stack to exit while vehicles using the inbound lane of the driveway may not be able to enter the site easily, thus creating a queue onto Mill Road, or sideswipes/near misses to happen on the access. The design and curvature of this site access must be modified to promote more efficient flow and safer traffic operations in this area of the site and access.

14. The cartway width along the West Germantown Pike, Kriebel Mill Road, and Mill Road site frontages must be clearly labeled on the plans and be in accordance with **Section 130-16.C** of the **Subdivision and Land Development Ordinance.**

15. A note must be added to the plans stating that the area between legal right-of-way line and ultimate right-of-way line along the West Germantown Pike, Kriebel Mill Road, and Mill Road site frontages will be offered for dedication to the authority having jurisdiction over the road as required by **Section 130-16.C(2)(c)** of the **Subdivision and Land Development Ordinance.**

16. Adequate sight distance measurements must be shown on the plans for the driveways along Kriebel Mill Road and Mill Road as required by **Section 130-17.B(1)** of the **Subdivision and Land Development Ordinance**. Specifically, vehicular egress sight distances looking in both directions must be provided, as well as for the ingressing left-turn vehicle sight distance to the front and rear, and achievable sight distances must be sufficient for the speed and conditions to allow for all ingress and egress turning movements and the roadway/driveway locations as they exist/are proposed on the plan. Vegetation and physical restrictions along the property frontage must be cleared and maintained for clear driver visibility to allow for no less than the minimum safe stopping distances to be achieved at 10 feet back from the edge of the road for the proposed driveways.

17. According to **Section 130-18.A** of the **Subdivision and Land Development Ordinance,** sidewalk is to be provided along the site frontages of West Germantown Pike, Kriebel Mill Road, and Mill Road. The plans currently do not show any sidewalk along the West Germantown Pike, Kriebel Mill Road, and Mill Road site frontages, thereby not satisfying the ordinance requirement. The plans should be either be revised to show sidewalk along the West Germantown Pike, Kriebel Mill Road, and Mill Road site frontages, or a waiver must be requested from the ordinance requirement. We do note that there is currently no sidewalk along either side of West Germantown Pike, Kriebel Mill Road, and Mill Road in the vicinity of the site. <u>While we recommend sidewalk be provided along West Germantown Pike, Kriebel Mill Road, and Mill Road under this application with the provision of any necessary grading and barriers to protect pedestrians using the walkway from steep grades</u>, the Board of Supervisors may consider deferring this obligation that is required of the applicant until such a time as may be required by the Township for the future phases of this redevelopment or if the land is sold for other development of this property, whether under present or future land ownership, and at no cost to Worcester Township, or the Township may desire to consider a fee in lieu of sidewalk to be kept in escrow for future sidewalk installations in the Township and/or area of these properties.

18. According to **Section 130-18.B** of the **Subdivision and Land Development Ordinance,** curbing is to be provided along the site frontages of West Germantown Pike, Kriebel Mill Road, and Mill Road. The plans currently do not show any curbing along the West Germantown Pike, Kriebel Mill Road, and Mill Road site frontages, thereby not satisfying the ordinance requirement. The plans should either be revised to show curbing along the site frontages of West Germantown Pike, Kriebel Mill Road, and Mill Road, or a waiver or partial waiver, as applicable, must be requested from this ordinance requirement. There is currently no curbing provided along either side of West Germantown Pike, the western side of Kriebel Mill Road, and the southern side of Mill Road in the vicinity of the site. However, curb is provided along the eastern side of Kriebel Mill Road from the southern property line for 1050 Kriebel Mill Road to Mill Road, and along the northern side of Mill Road from the eastern leg of Kriebel Mill Road to western leg of Kriebel Mill Road. Alternatively,

the Board of Supervisors may consider deferring this obligation that is required of the applicant until such a time as may be required by the Township for this property, whether under present or future land ownership, and at no cost to Worcester Township, or may desire to consider a fee in lieu of curb to be kept in escrow for future curb installations in the Township and/or area of these properties.

19. The curb radii are to be labeled on the plans at the driveway intersections with Kriebel Mill Road and Mill Road and be in accordance with **Section 130-17.B(3)** of the **Subdivision and Land Development Ordinance.**

20. The curb radii throughout the parking areas are to be shown on the plans and be in accordance with **Section 130-17.D(10)** of the **Subdivision and Land Development Ordinance.**

21. The parking space and drive aisle dimensions are to be shown on the plans throughout the parking areas on site and be in accordance with **Section 130-17.D(11)** of the **Subdivision and Land Development Ordinance.**

22. According to **Section 150-153.B(1)** of the **Zoning Ordinance,** one space per every 3 seats provided for the greater of the indoor or outdoor assembly area is the required number of parking for a school. Based on 1600 seats provided in the stadium, the required number of parking spaces for the site is 534. The plans show 872 parking spaces for Phase 1, thereby satisfying the ordinance requirements.

23. All existing and proposed ADA parking spaces should be labeled on the plans to confirm the number of ADA parking spaces for the site meets current ADA requirements upon completion of the site modifications.

24. ADA ramps should be shown on the plans at all locations where the sidewalk meets the drive aisles/parking lots, as well as in the immediate vicinity of all existing and proposed ADA parking spaces.

25. All curb ramps and pedestrian routes (i.e., sidewalks, crosswalks, etc.) are to be constructed in accordance with the current Federal and PennDOT ADA standards. Bowman has not reviewed any ramps internal to the site, as the applicant's engineer will be responsible for their design satisfying the required ADA standards.

26. The Township Fire Marshal should review the proposed site modifications for accessibility and circulation needs of emergency apparatus. Ensure that any correspondence, including any review comments and/or approvals, is included in subsequent submissions.

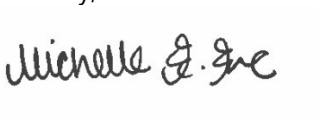
27. All existing and proposed signs should be clearly labeled on the plans. Aseparate signing and pavement marking plan should be provided in all subsequent submissions. Additional comments pertaining to the signing and pavement markings for this site will be provided upon receipt and review of the signing and pavement marking plan(s).

28. Clarification should be given to the "Secondary Parent Queuing -31 vehicles total" label located in proposed Lot 8 on Sheet 11.

29. A more detailed review of the site and all transportation-related engineering elements on the plan will be conducted, if and as the application advances into and through the land development process at the Township. Additional comments should be expected to be raised upon submission of any detailed land development plans and associated studies, as well as how the comments herein are satisfactorily addressed.

We trust that this review letter responds to your request. If you or the Township have any questions, or require clarification, please Michelle Eve, P.E., our project manager, or me.

Sincerely,



Michelle Eve, P.E
Assistant Project Manager - Transportation

BMJ/MEE/CAM

cc: John Evarts, P.E., CKS Engineers (Township Engineer)
Wendy Feiss McKenna, Esq. (Township Solicitor)
Susan Guisinger-Colon, TPD, Inc. (Montgomery County Review Consultant)
Mirlene Saintval, PennDOT District 6-0
Nidhi Medra, PennDOT District 6-0
Dr. David Zerbe, Methacton School District (Applicant)
David Stewart, T and M Associates (Applicant's Engineer)
Christopher Jensen, P.E., T and M Associates (Applicant's Engineer)

V:\313982 - Worcester Twp PA\313982-24-005 (TRA) - Methacton HS – Redevelopment Master Plan\Engineering\Submissions\2026-01-06 Sketch Plan\Review\2026-02-05 Review Letter #3 – Methacton High School (finalized).docx

ARRO Consulting, Inc.
4259 West Swamp Road, Suite 410
Doylestown, PA 18902
P: 215.340.0600
www.arroconsulting.com

February 11, 2026
Ref: #7563

Worcester Township
1721 Valley Forge Road
PO Box 767
Worcester, PA 19490-0767

Attention: Dan DeMeno, Township Manager

Reference: Methacton High School
Sketch Plan Review
TMP No. 67-00-01393-00-7

Dear Dan:

We have reviewed the Sketch Plan pertaining to the above-referenced Land Development that you forwarded to our office for review. The subject plan consists of twelve (12) sheets prepared by T&M Associates (hereinafter "T&M") dated December 23, 2025, with no revisions, and an ALTA Land Title Survey consisting of seven (7) sheets prepared by Caroll Engineering Corporation (hereinafter "CEC") dated September 13, 2024, last revised March 5, 2025.

Relative to this matter, we note the application proposes partial demolition of an existing two-story school building and construction of an addition on an approximately 62.9-acre site located on Kriebel Mill (T-395) Road between W. Germantown Pike (County Route 6170) and Mill Road (T-340). The site is in the AGR – Agricultural Zoning District. The plan suggests that work will be phased, with the first phase resulting in the high school addition, parking reconfiguration/expansion, and related improvements. In a subsequent phase, identified as the "Master Plan", the existing Education Center and trailers appear to be demolished, with additional parking improvements made to the southerly parking areas of the site. The master plan also considers construction of an access driveway to Mill Road, leading to the existing bus depot and maintenance area. In both phases, the existing sports fields, including the baseball fields, tennis courts, soccer fields, track and football field are shown to remain.

We have performed a cursory review in accordance with the Worcester Township Zoning, Subdivision and Land Development and Stormwater Management Ordinances and offer the following comments for consideration by Township officials:

## I. ZONING

1. The existing and proposed use of the site, public school, is allowed by conditional use. We note that the site currently contains an active high school. After a discussion with the Township staff, it has been determined that given the school currently exists, the existing conditional use approval is still active. Should the scope of demolition change, this determination may no longer apply.

2. An existing non-conforming front yard setback remains for the portion of the high school building that will not be demolished, but the new building addition encroaches the required 250-foot front setback in two locations, albeit to lesser degree than existing. The Township Zoning Officer should determine if zoning relief will be required. (150-13.B.2 & 150-162.1)

3. Existing setbacks to the bus depot maintenance building must be noted on future plan submissions. It appears that this building has existing non-conforming yards which will not be affected by the Phase 1 improvements nor the Master Plan layout. (150-162 & 150-13.B.2)

4. Parking may not be located within 100 feet of any property line or occupy required yards. Several proposed spaces in Phase 1 and the Master Plan configuration encroach these areas at the Kriebel Mill Road frontage. As some existing parking scheduled to remain at Lots 1 and 2 presently encroach the parking and front yard setback, the Zoning Officer must determine if variance relief will be necessary for the portion of Lot 8 parking spaces to be established in Phase 1. The Master Plan phase generally replaces parking in the same area where spaces currently exist at the Education Center's front parking lot but still encroaches the setback. We note that in the Master Plan phase, the existing westernmost driveway access to Kriebel Mill Road is shown to be removed in conjunction with the Education Center demolition and replacement parking. (150-16.B.1, 150-16.B.2 and 150-162.1)

5. The Parking Tables on Sheet 6 should be revised as follows:

   a. Phase 1 Lot 9 total increased from 127 to 128
   b. Phase 1 Lot 10 total reduced from 68 to 67
   c. Master Plan Lot 9 total increased from 127 to 128
   d. Master Plan grand total increased from 887 to 888

6. The applicant summarizes parking requirements on Sheet 6 but does not indicate the number of assembly seats provided for indoor and outdoor spaces. Therefore, we are unable to perform an evaluation of the parking requirements. Using the parking tables provided on Sheet 6, at a rate of one space per three assembly seats, the Phase 1 configuration having 872 parking spaces could support 2,616 assembly seats. The Master Plan configuration having 888 parking spaces could support 2,664 assembly seats. Future Record Plans should include a note mandating that simultaneous use of indoor and outdoor assembly spaces is prohibited. (150-153.B.1)

7. The quantity of available bus parking spaces at the bus depot must be listed on future plans.

8. The location of off-street loading space(s) must be shown on the plan. The applicant should also comment if box trucks and combination vehicles will be permitted to access the site from Mill Road once the driveway is installed in the Master Plan configuration. (150-156)

9. This site will routinely accommodate oversized vehicles, specifically school buses. Sheet 11 depicts 15 buses and two vans circulating the drop-off/pickup driveway in queuing lane no. 1 but the notation states 16 buses. Further, queuing lane no. 2 specifies 14 buses but 15 are shown. Notations for both queuing lanes should be revised. The applicant should further clarify if queuing lane no. 2 is the intended egress stacking only or if simultaneous use (of up to 30 buses) is expected. The exiting queue turnaround at Lot 10 appears to accommodate no more than 12 buses between stop bars, but other traffic entering this area is expected to be limited. We

recommend Lot 10 be limited to use for employee and bus operator parking only (e.g. no student or parent/guardian parking). (150-160)

10. Due to the ultimate right-of-way width of W. Germantown Pike being greater than 75 feet (100 feet), this road must be considered a "highway." Therefore, the front yard setback requirement is to be doubled from 250 feet to 500 feet along this street frontage. While the available building envelope will be reduced, it appears the proposed school building's addition location will still be compliant with the increased setback. (150-199)

11. As previously noted, existing on-site athletic fields fall outside of the scope of improvements shown in either phase. Therefore, proposed lighting may only be that necessary for building and parking lot illumination. Future submissions must demonstrate that proposed exterior lighting is not to be placed higher than 12 feet above grade and will be screened so the source of illumination is not visible off premises. (150-200.A)

## II. SUBDIVISION & LAND DEVELOPMENT

1. The sketch plan makes no indication if waivers from the Township's Subdivision and Land Development Ordinance will be necessary. On future submissions, the applicant must detail their waiver request(s), if any. Justification in support of the waiver requests must also be provided.

2. If the project is to be phased as suggested by certain sheets referencing "Phase 1" and "Master Plan", the applicant should highlight and provide narrative details for the improvements that are to be encompassed within each phase. (130-20.B.4)

   Generally, it is our understanding that the following may occur in each phase:

| Phase | Scope of Improvements per Sketch Plan |
|---|---|
| Phase 1 | Partial Building Demolition, Construction of Building Addition, Circulation Loop and Creation of Parking Lots 7, 8, 9 and 10. Removal of Curb Cut at Kriebel Mill Road. |
| Master Plan | Construction of Driveway Access to Mill Road with New Curb Cut, Demolition of Education Center and Trailers, Removal of Curb Cut at Kriebel Mill Road, Modifications to Parking Lots 5 and 10. |

3. The applicant should indicate if areas between the title lines and ultimate rights-of-way lines will be offered for dedication to Montgomery County and/or the Township. (130-16.C.2.c)

4. We note that no new curbing or sidewalks are proposed at the existing street frontages. Given the expected phasing of the project and potential impacts to Kriebel Mill Road and Mill Road in the different phases, the Township should determine the extent of sidewalk which may be warranted. The School District may wish to provide information regarding what percentage of the student body is located within reasonable walking distance to the property as justification for the absence of any new frontage sidewalk. (130-16.C.1.a.6.a and 130-18)

5. In the current configuration, two proposed parking lots provide limited access for ingress/egress. Lot 9 has one point of access for motorists and provides parking for a total of 128 vehicles.

Additionally, Lot 8 provides one point of access and provides parking for 206 vehicles. We defer to the Township Traffic Engineer if a single point of ingress/egress is suitable given the quantity of spaces in each lot. As vehicles egressing from these lots will likely be making left turns onto the internal Kriebel Mill Road driveway access, the potential for egress queuing could become significant, especially at Lot 8.

6. The Township shall require the developer to verify the presence of existing trees on a site by field investigation or by the use of aerial photographs. With future submissions, a separate tree survey plan at a scale of not less than one inch to 50 feet shall be submitted showing the location of existing live trees with DBH of six inches or more. (130-28.E.1.a)

7. Future submissions will need to show proposed plantings on a landscaping plan prepared by a Registered Landscape Architect. Lighting plans will also be required. (130-28)

8. We note that a significant number of mature trees will be subject to removal to accommodate proposed parking lots. While the interior circulation network of sidewalks in the parking areas is appropriate, separator islands with sidewalk may not be able to accommodate tree plantings. The applicant may wish to widen parking islands to facilitate planting of shade trees. Stormwater piping may also preclude island plantings at certain locations.

9. Proposed utility connections must be shown on future plan submissions. Respective authorities or agencies must provide “will serve” letters indicating that capacity required by the proposed improvements is available to support the proposed development.

## III. STORMWATER MANAGEMENT, GRADING, EROSION & SEDIMENT CONTROL

1. Sheet 12 conceptually illustrates the locations of seven subsurface stormwater management facilities dispersed throughout the site.

2. It appears that in Master Plan phase, a new driveway access to Mill Road with some additional parking will be constructed near the bus loop. As configured, the driveway will pass through an existing aboveground stormwater management facility. A conceptual location for the proposed modification to and/or creation of a new control measure to support the impervious area increase due to this future driveway and parking area must be identified on the Master Plan. If the seven proposed facilities will be designed in anticipation for this future improvement, the applicant’s intentions should be discussed with the Township.

## IV. SANITARY SEWER

1. Sheet 6 indicates that the site is currently served by existing private sanitary sewer and the proposed sewer service is to be public. Currently, the sanitary sewer from the existing high school is treated on site by a small package wastewater treatment plant and the building is connected to public water. Existing and proposed sewer flows must be provided on future submissions. Additionally, sewage planning will be required and an update to the Township’s 537 Plan may also be necessary. The applicant is encouraged to discuss sewer service options with the Township early in the land development process. If indeed the project is to be served by public sewer, future plans must include the proposed sewer main to an existing connection pipe and the plans must include how the existing package WWTP is decommissioned.

2. All utilities, existing and proposed, must be shown on future plan submissions

3. In a prior application, the applicant's design considered complete replacement of the school building and expansion of outdoor assembly spaces, including construction of a field house. This new sketch plan no longer contemplates complete building replacement. The quantity of proposed indoor assembly seating must be specified, indicating if in Phase 1 will be increased, decreased, or maintained. Should any assembly occur in the Education Center to be demolished per the Master Plan, this reduction should also be included in the zoning parking calculations.

## V. GENERAL ENGINEERING

The following are general comments and considerations generated during the course of our review:

1. The applicant should determine if there are any deed restrictions or covenants that may affect the proposed development.

2. Additional information regarding item 19 under Schedule B Part II Exception, as stated on Sheet 1 of the ALTA Survey, must be provided under what the easement refers to and could be an impact on the subject development.

3. The gross floor area of the existing building to remain and that of the proposed addition must be noted on future plans.

4. Architectural elevations and renderings should be shown to the Township to ensure that the building design conforms to the Township's character and compliments the existing portion of the school building to remain.

5. The applicant may wish to designate a certain number of spaces to provide electric vehicle charging stations dispersed throughout the site.

6. There appears to be some sort of landscape feature or similar improvement in the front yard. The applicant should specify if this will be a fountain, courtyard, or similar feature. This area must be detailed on future submissions.

7. The "secondary parent queuing area for 8 additional vehicles" shown on Sheet 11 must be clarified as it occupies a row of parking spaces in Lot 8. The referenced total of 31 vehicles must also be explained as the primary area only has 20 queue spaces.

8. Approval by the Township Traffic Engineer will be required.

9. Approval by the Township Fire Marshal will be required.

10. Review by the agencies will be required:

    a. Montgomery County Planning Commission
    b. Montgomery County Conservation District
    c. Montgomery County Road and Bridge Department
    d. PADEP Sewage Facilities Planning

The above represents our comments on the submitted Sketch Plan. Please do not hesitate to contact our office with any questions.

Very truly yours,
ARRO CONSULTING, INC.
Township Engineer

John W. Evarts, P.E.

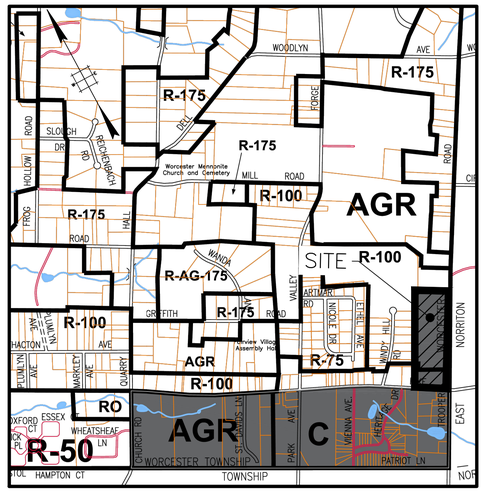
JWE/klk

cc: Christian Jones, Assistant Township Manager
Wendy F. McKenna, Esq., Township Solicitor
Karen Miller, Robert L. Brant & Associates
Casey Moore, PE, Township Traffic Engineer
Dr. David Zerbe, Methacton School District (Applicant)
David Stewart, T&M Associates
Emma Pasnak, T&M Associates
File

# FINAL LAND DEVELOPMENT PLANS
## FOR
# TROOPER RIDGE SUBDIVISION
## WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

| SHEET LIST TABLE | | |
|---|---|---|
| SHEET NUMBER | SHEET TITLE | |
| 1 | COVER SHEET | * |
| 2 | LEGEND AND NOTES SHEET | |
| 3 | EXISTING CONDITIONS PLAN | |
| 4 | EXISITING CONDITIONS PLAN–2 | |
| 5 | EXISTING RESOURCES PLAN | |
| 6 | DEMOLITION PLAN | * |
| 7 | SITE PLAN | * |
| 8 | SITE PLAN | |
| 9 | RECORD PLAN | * |
| 10 | GRADING PLAN | |
| 11 | UTILITY PLAN | |
| 12 | DRAINAGE PLAN | |
| 13 | LANDSCAPE PLAN | |
| 14 | LIGHTING PLAN | |
| 15 | EROSION AND SEDIMENT CONTROL PLAN – A | * |
| 16 | EROSION AND SEDIMENT CONTROL PLAN – DRAINAGE AREA PLAN | * |
| 17 | NATURAL RESOURCES PROTECTION PLAN | |
| 18 | POST CONSTRUCTION STORMWATER MANAGEMENT PLAN | |
| 19 | STORM PROFILE–1 | |
| 20 | STORM PROFILE–2 | |
| 21 | STORM PROFILE–3 | |
| 22 | STORM PROFILE–4 | |
| 23 | SANITARY PROFILE–5 | |
| 24 | SANITARY PROFILE–6 | |
| 25 | WATER PROFILE | |
| 26 | UTILITY ALIGNMENTS | |
| 27 | ROAD PROFILE– CENTERLINE | |
| 28 | ROAD PROFILE– NORTH LOOP | |
| 29 | ROAD PROFILE– SOUTH LOOP | |
| 30 | CONSTRUCTION SITE DETAILS–1 | |
| 31 | CONSTRUCTION SITE DETAILS–2 | |
| 32 | STORM SEWER DETAILS–1 | |
| 33 | STORM SEWER DETAILS–2 | |
| 34 | UTILITY DETAILS–1 | |
| 35 | UTILITY DETAILS–2 | |
| 36 | UTILITY DETAILS–3 | |
| 37 | LANDSCAPE DETAILS | |
| 38 | LANDSCAPE SCHEDULE | |
| 39 | LIGHTING DETAILS | |
| 40 | EROSION AND SEDIMENT CONTROL DETAILS–1 | * |
| 41 | EROSION AND SEDIMENT CONTROL DETAILS–2 | |
| 42 | EROSION AND SEDIMENT CONTROL DETAILS–3 | * |
| 43 | EROSION AND SEDIMENT CONTROL DETAILS–4 | |
| 44 | POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS–1 | |
| 45 | POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS–2 | |
| 46 | POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS–3 | |
| 47 | FIRETRUCK TURNING TEMPLATE | |
| 48 | FIRETRUCK TURNING TEMPLATE–2 | |
| 49 | TRASH TRUCK TURNING TEMPLATE | |
| 50 | BOX TRUCK TURNING TEMPLATE | |
| "*" SHEETS INDICATED TO BE INCLUDED IN RECORD PLAN SET | | |

*CONTEXT MAP*
SCALE: 1"=400'




*ZONING MAP*
SCALE: 1"=1,000'

| SITE & ADJACENT ZONING DISTRICT | | |
|---|---|---|
| | DESIGNATION | ZONING CLASSIFICATION |
| | AGR | AGRICULTURAL |
| | R–175 | RESIDENTIAL |
| | R–150 | RESIDENTIAL |
| | R–100 | RESIDENTIAL |
| | R–75 | RESIDENTIAL |
| | R–50 | RESIDENTIAL |
| | RO | RESIDENTIAL OFFICE |
| | R–AG–175 | RESIDENTIAL AGRICULTURAL |
| | R–AG–200 | RESIDENTIAL AGRICULTURAL |
| | C | COMMERCIAL |
| | LI | LIMITED INDUSTRIAL |
| | LPD | LAND PRESERVATION DISTRICT |
| | SC | SHOPPING CENTER |
| | MH | MOBILE HOME DEVELOPMENT |
| | | MULTI–RESIDENTIAL USE OVERLAY DISTRICT |
| | AQRC | AGE QUALIFIED RESIDENTIAL COMMUNITY |

## WAIVERS REQUESTED

§129–18 – A PARTIAL WAIVER IS REQUESTED FROM THIS SECTION TO ALLOW FOR HDPE STORM PIPE IN LIEU OF CONCRETE

## LEGAL OWNER:

JAMES O'DONNELL
1035 TROOPER ROAD
NORRISTON, PA 19403

## EQUITABLE OWNER/APPLICANT:

COMMERCIAL PURSUIT CAPITAL, LLC
1300 VIRGINIA DRIVE, SUITE 215
FORT WASHINGTON, PA 19034
(901) 755–4737

## COMMONWEALTH OF PENNSYLVANIA, COUNTY OF MONTGOMERY:

ON THIS THE _____ DAY OF _____, 20____, BEFORE ME, THE SUBSCRIBER, PERSONALLY APPEARED **COMMERCE PURSUIT CAPITAL, LP**, AND THAT AS MUCH TO DO SO, HE/SHE EXECUTED THE FOREGOING PLAN BY SIGNING THE NAME OF SAID CORPORATION BY HIMSELF/HERSELF AS _____, THAT THE SAID CORPORATION IS THE OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY APPROVAL OF THE PLAN HAS BEEN OBTAINED AND ENDORSED THEREON AND THAT THE SAID CORPORATION DESIRES THAT THE FOREGOING PLAN MAY BE DULY RECORDED.

BY: _____
OWNER
**COMMERCE PURSUIT CAPITAL, LP**

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES ON THIS _____ DAY OF _____ , 20 ____.

## CERTIFICATE OF CONFORMANCE – P.E.

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THESE PLANS ARE IN CONFORMITY WITH ENGINEERING, ZONING, BUILDING, SANITATION AND OTHER APPLICABLE TOWNSHIP ORDINANCES AND REGULATIONS.

_____
CHRISTOPHER W. JENSEN, P.E.
LICENSE NO. PE076464

## APPROVED

APPROVED THIS _____ DAY OF _____ 20____, BY THE BOARD OF SUPERVISORS OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

ATTEST: _____
SIGNATURE, CHAIRMAN

_____
DATE SIGNED

_____
SIGNATURE, SECRETARY

_____
DATE SIGNED

(TOWNSHIP NOTARY SEAL) _____

## REVIEWED

REVIEWED THIS _____ DAY OF_____, 20____, BY THE PLANNING COMMISSION OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY PA.

ATTEST: _____
SIGNATURE

_____
DATE SIGNED

REVIEWED BY THE TOWNSHIP ENGINEER OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

TOWNSHIP ENGINEER: _____ DATE:_____

## UTILITY USER LIST
## ACT NUMBER 287 OF 1974 AS AMENDED

**COMCAST**
1250 HADDONFIELD–BERLIN RD
CHERRY HILL, NJ. 08034
CONTACT: WYATT PARRISH
EMAIL: WYATT_PARISH@CABLE.COMCAST.COM
PHONE: 484–368–4391

**MONTGOMERY COUNTY – PA**
1 MONTGOMERY PLZ–ASST & INF–RD & BRG
PO BOX 311–SUITE 613
NORRISTOWN, PA. 19404
CONTACT: MORGAN ROUSCHER
EMAIL: MORGAN.ROUSCHER@MONTGOMERYPA.GOV
PHONE: 610–278–5173

**PENNSYLVANIA AMERICAN WATER**
171 W JOHNSON HIGHWAY
NORRISTOWN, PA 19401
CONTACT: SITI YEARWOOD
EMAIL: SITI.YEARWOOD@AMWATER.COM
PHONE: 610–292–3575

**PECO ENERGY**
C/O USIC LLC
450 S HENDERSON RD SUITE B
KING OF PRUSSIA, PA. 19406
CONTACT: NIKKIA SIMPKINS
EMAIL: NIKKIASIMPKINS@USICLLC.COM
PHONE: 484–681–5720

**VERIZON BUSINESS FORMERLY MCI**
700 WESTON PKWY
CARY, NC. 27513
CONTACT: VICTOR WOOD
EMAIL: VICTOR.S.WOOD@VERIZON.COM
PHONE: 919–414–2782

**WORCESTER TOWNSHIP**
1721 SOUTH VALLEY FORGE ROAD
P.O. BOX 767
WORCESTER, PA 19490
CONTACT: ROBERT DHULSTER
EMAIL: BDHULSTER@WORCESTERTWP.COM
PHONE: 610–584–1410 EXT. 114


PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_CVR.dwg
LAST SAVED DATE: Jan 23, 2026, 4:40PM
LAST SAVE BY: jgatzendanner

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ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THIS DOES NOT IMPLY COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION. OF UNDERGROUND FACILITIES. OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2000, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL FOR UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
1–800–242–1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

COVER SHEET


T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA


| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | CVR |
| SHEET | 1 OF 50 |

# LEGEND

(ORIENTATION & SIZE MAY VARY)

- EX. CONCRETE CURB LINE
- EX. EDGE OF PAVEMENT
- ZONING DISTRICT BOUNDARY
- EX. TREE
- EX. WATER VALVE
- EX. VENT
- EX. TREELINE
- PROPERTY LINE
- EX. RIGHT-OF-WAY LINE
- EX. SANITARY SEWER
- EX. WATER LINE
- EX. OVERHEAD UTILITY LINES
- EX. UNDERGROUND TELEPHONE
- EX. STORM SEWER
- EX. INLET
- EX. MANHOLE
- EX. SIGN
- EX. LIGHT POLE
- EX. FIRE HYDRANT
- EX. POLE
- EX. CONTOUR
- EX. BUILDING
- STEEP SLOPES (15%-25%)
- STEEP SLOPES (>25%)

- NEW CONCRETE CURB LINE
- NEW BELGIAN BLOCK CURB LINE
- NEW FENCE LINE
- NEW TREELINE
- NEW SANITARY PIPE
- NEW WATER MAIN
- NEW SPOT ELEVATION
- NEW INDEX CONTOUR
- NEW INTERMEDIATE CONTOUR
- NEW STORM PIPE
- NEW STORM STRUCTURES
- NEW BUILDING
- NEW CONCRETE AREA
- NEW ASPHALT
- NEW REINFORCED TURF

WATER SUPPLY: WATER SERVICE TO BE PROVIDED BY PENNSYLVANIA AMERICAN WATER COMPANY. CONNECTION POINT TO BE AT THE EXISTING WATER MAIN AT HERITAGE DRIVE AND WEST GERMANTOWN PIKE.

SANITARY SEWER: SANITARY SEWER SERVICE TO BE PROVIDED BY WORCESTER TOWNSHIP.

## ZONING DATA

**EXISTING ZONING DISTRICT CLASSIFICATION: R-100 AND C WITH MULTI-RESIDENTIAL USE OVERLAY DISTRICT (MR)**

**EXISTING USE: ONE SINGLE-FAMILY DETACHED DWELLING**

**PROPOSED USE: MULTI-FAMILY RESIDENTIAL**

ZONING REQUIREMENTS:

| ZONING (BY DISTRICT:) | MULTI RESIDENTIAL (MR) TOWNHOMES | | MULTI RESIDENTIAL (MR) SINGLE FAMILY LOT | |
|---|---|---|---|---|
| | REQUIRED | PROPOSED | REQUIRED | PROPOSED |
| MINIMUM LOT AREA | 5.0 ACRES | 11.26 ACRES | N/A | 0.94 ACRES |
| MINIMUM LOT WIDTH | 300 FEET | 958+ FEET | N/A | |
| MAXIMUM BUILDING COVERAGE | 20% | 14.29% | 20% | 7.7% |
| MAXIMUM IMPERVIOUS COVERAGE | 50% | 3.35 AC/12.17 AC = 28% | 40% | 0.36 AC/1.17 AC = 31% |
| SETBACK BUFFER | 75 FEET | 75 FEET | N/A | |
| MINIMUM FRONT YARD SETBACK | N/A | | 75 FEET | 0 FEET*** |
| MINIMUM SIDE YARD SETBACK | N/A | | 75 FEET | 108 ± FEET |
| MINIMUM REAR YARD SETBACK | N/A | | 75 FEET | 135 ± FEET |
| MAXIMUM BUILDING HEIGHT / STORIES | 30 FEET / 2 STORIES | 30 FEET* | N/A | |
| MAXIMUM BUILDING SIZE (LENGTH) | 200 FEET | <200 FEET | N/A | |
| MINIMUM ACCESSORY STRUCTURE SETBACK | N/A | | 30 FEET FROM REAR OR SIDE YARDS | 30 FEET |
| MAXIMUM DENSITY (SEE DEVELOPABLE AREA CHART ON THIS SHEET) | 4 UNITS x DEVELOPABLE AREA (12.17 X 4 = 48 UNITS) | 45 UNITS | N/A | |
| MINIMUM BUILDING TO BUILDING SEPARATE | 30 FEET | 30 FEET | N/A | |
| MINIMUM PARKING SETBACK FROM BOUNDARY | 75 FEET | >75 FEET | N/A | |
| NUMBER PARKING SPACES PER UNIT | 2 SPACES | 4 SPACES** | N/A | |
| GUEST PARKING SPACES | 0.52 SPACES PER UNIT | 0.6 SPACES PER UNIT | N/A | |
| TRAIL SETBACK | 40 FEET | N/A | N/A | |
| DETENTION BASIN SETBACK | 25 FEET FROM PROPERTY LINES, 30 FEET FROM UNITS | 25 FEET FROM PROPERTY LINES, 30 FEET FROM UNITS | N/A | |
| DETENTION BASIN MAX. % OF YARD AREA | 35% | 6% | N/A | |
| SCREEN PLANTING STRIP | 20 FEET WIDE | 20 FEET WIDE | N/A | |
| | | | N/A | |

* – UNITS WILL HAVE BASEMENTS WITH A MAJORITY OF BASEMENT WALL AREA BELOW FINISHED GRADE

** – EACH UNIT WILL HAVE A TWO CAR GARAGE AND TWO DRIVEWAY SPACES

*** – EXISTING NON-CONFORMITY

**TABLE OF TOTAL EXISTING AND PROPOSED IMPERVIOUS SURFACE AREAS BY LOT**

| | LOT 1 | LOT 2 |
|---|---|---|
| GROSS AREA | 1.47 AC | 13.65 AC |
| AREA WITHIN EX AND ULT R.O.W. | 0.30 AC | 1.46 AC |
| 50% OF SLOPES 15% TO 25% | 0.16 AC | 0.86 AC |
| 100% OF SLOPES >25% | 0.02 AC | 0.07 AC |
| NET LOT AREA | 0.99 AC | 11.26 AC |

NOTE: IF AND WHEN LOT 1 IS TO BE CONNECTED TO PUBLIC SEWER AND WATER, APPROVAL MUST BE OBTAINED FROM THE TOWNSHIP AND PA AMERICAN WATER COMPANY. ANY ADDITIONAL FEES, INCLUDING THE APPROPRIATE TAPPING FEES, MUST BE PAID PRIOR TO CONNECTION. THE ENDS OF THE LATERAL AND WATER SERVICE MUST BE PERMANENTLY MARKED IN THE FIELD TO ALLOW FOR LOCATION IN THE FUTURE.

# GENERAL NOTES

1. TWO HIGHWAY OCCUPANCY PERMITS (PENNDOT AND COUNTY) ARE REQUIRED FOR THIS PROJECT BEFORE ACCESS IS GRANTED TO THE (PENNDOT) STATE ROAD (SR3002) AND THE COUNTY ROAD (WEST GERMANTOWN PIKE).
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS, SPECIFICATIONS, AND REFERENCED DOCUMENTS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT OR DISCREPANCY WITH THE DRAWINGS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE CONSTRUCTION MEETS ALL APPLICABLE CODE REQUIREMENTS.
3. ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVEGROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL AND VERTICAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF THE PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974, AS AMENDED BY ACT 181 OF 2006, CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK. PA LAW REQUIRES THREE WORKING DAYS NOTICE FOR CONSTRUCTION PHASE. CALL THE PA ONE CALL SYSTEM AT 1-800-242-1776. SERIAL NO. 20243371817 WAS PLACED FOR DESIGN PURPOSES ONLY.
4. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
5. ALL PROPOSED IMPROVEMENTS SHALL COMPLY WITH "THE AMERICAN DISABILITIES ACT", "ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES", AND "THE PENNSYLVANIA UNIVERSAL ACCESSIBILITY ACT".
6. THIS PLAN SHALL NOT BE USED FOR BUILDING STAKEOUT PURPOSES. PROPOSED BUILDING LOCATION AS DEPICTED IS WITHIN ACCEPTABLE TOLERANCES FOR SITE WORK ONLY. PLEASE REFER TO ARCHITECTURAL/STRUCTURAL PLANS FOR EXACT BUILDING PLACEMENT.
7. THE BUILDING FOOTPRINTS DEPICTED HEREON HAVE BEEN TRANSPOSED FROM ARCHITECTURAL PLANS. FINAL BUILDING DIMENSIONS MAY VARY SLIGHTLY FROM THOSE DEPICTED HEREON BUT SHALL ULTIMATELY CONFORM TO ALL APPLICABLE ZONING SETBACKS, IMPERVIOUS SURFACE COVERAGE RATIOS, ETC. CONTRACTOR SHALL NOTIFY PROJECT ENGINEER IF FINAL BUILDING FOOTPRINTS SUBSTANTIALLY VARY FROM THE FOOTPRINTS HEREON.
8. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH PENNDOT "PUBLICATION 408", LATEST EDITION, MUNICIPAL STANDARDS AND SPECIFICATIONS, AND UTILITY AUTHORITY/CO. STANDARDS AND SPECIFICATIONS, WHICHEVER ARE MORE RESTRICTIVE.
9. SIGNED/SEALED STRUCTURAL DESIGN CALCULATIONS AND CONSTRUCTION DETAILS OF PROPOSED RETAINING WALL(S) SHALL BE SUBMITTED BY THE CONTRACTOR TO THE PROJECT ENGINEER AND MUNICIPALITY FOR APPROVAL PRIOR TO CONSTRUCTION.
10. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS AND COMPLETE ALL WORK INDICATED OR IMPLIED ON THE PROJECT PLANS AND/OR SPECIFICATIONS THAT ARE NOT EXISTING ON THE PROJECT SITE AND THAT ARE NOT SPECIFICALLY NOTED AS 'FUTURE' OR 'NOT IN CONTRACT (NIC)', 'BY OTHERS', 'BY OTHER CONTRACTORS', 'BY EC', 'BY PC', 'BY MC'.
11. THE CONTRACTOR SHALL BE FAMILIAR WITH AND RESPONSIBLE FOR ANY/ALL CERTIFICATIONS, INSPECTIONS, ETC. REQUIRED BY ALL GOVERNING JURISDICTIONAL AGENCIES DURING AND AFTER CONSTRUCTION FOR SIGN-OFF AND CERTIFICATE OF OCCUPANCY ISSUANCE INCLUDING BUT NOT LIMITED TO PROCUREMENT OF SERVICES, SCHEDULING OF OBSERVATIONS AND COORDINATION WITH REPRESENTATIVES OF THE APPROPRIATE PARTIES. CONTRACTOR IS RESPONSIBLE TO COORDINATE CERTIFICATIONS, SIGN-OFFS, ETC. NECESSARY FOR JOB CLOSEOUT AND ISSUANCE OF CERTIFICATE OF OCCUPANCY.
12. THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DISCREPANCY BETWEEN GEOTECHNICAL REPORT AND PLANS, ETC.
13. THE PROPERTY SURVEY AS CERTIFIED SHALL BE CONSIDERED A PART OF THESE PLANS.
14. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO OUR OFFICE AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THE ENGINEER IN WRITING IF ACTUAL SITE CONDITIONS DIFFER FROM THAT SHOWN ON THE PLAN, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER EXISTING SITE FEATURES.
15. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK DUE TO DISCREPANCIES OR CONFLICTS ON THE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN PRIOR TO THE START OF WORK AND MATERIALS PROCUREMENT.
16. ADA RAMPS ARE SHOWN WITH RAMP TYPE.
17. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/MEPP PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY SERVICE LOCATIONS AND SITE ELECTRICAL DESIGN.
18. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES. CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF HAZARDOUS/UNSUITABLE MATERIAL IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES AND LAWS.
19. THE CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION AND SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS, AS WELL AS ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.
20. THE CONTRACTOR IS TO EXERCISE CARE WHEN PERFORMING WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES AND FACILITIES THAT ARE TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES AS NECESSARY TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT TO REMAIN, AND PROVIDE A SAFE WORK AREA.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ALL SIGNAL INTERCONNECTION CABLE, CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION.
22. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO EXISTING ITEMS DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, SIDEWALK, ETC. REPAIR SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO PROVIDE DOCUMENTATION OF THE CONDITION OF EXISTING ITEMS TO THE OWNER'S DESIGNATED REPRESENTATIVE PRIOR TO CONSTRUCTION START.
23. CONCRETE SHALL HAVE THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS INDICATED IN SPECIFICATIONS AND REFERENCE DOCUMENTS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.
24. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS/MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS NOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM THE SAME. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND NOTIFICATION OF OWNER AND ENGINEER OF RECORD IN WRITING WHEN A CONFLICT IS IDENTIFIED.
25. NEITHER THE PROFESSIONAL ACTIVITIES OF T&M ASSOCIATES NOR THE PRESENCE OF T&M ASSOCIATES OR ITS EMPLOYEES AND SUB-CONSULTANTS AT A CONSTRUCTION/PROJECT SITE, SHALL RELIEVE THE CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. T&M ASSOCIATES AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE CONTROL OVER THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE ENGINEER OF RECORD HEREIN IS NOT RESPONSIBLE FOR JOB SITE SAFETY NOR HAS HE BEEN RETAINED FOR SUCH PURPOSES. T&M ASSOCIATES SHALL BE INDEMNIFIED BY THE CONTRACTOR AND SHALL BE MADE AN ADDITIONAL INSURED UNDER THE CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE.
26. T&M ASSOCIATES SHALL REVIEW AND COMMENT OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION SHOWN IN THE CONSTRUCTION MEANS OR METHODS. COORDINATION OF THE WORK WITH OTHER TRADES AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. T&M ASSOCIATES' REVIEW SHALL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT T&M ASSOCIATES HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. T&M ASSOCIATES SHALL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT BROUGHT TO THE ATTENTION OF T&M IN WRITING BY THE CONTRACTOR. T&M ASSOCIATES SHALL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OR CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
27. THIS SHEET IS PART OF A LAND DEVELOPMENT PLAN SET ON RECORD AT THE MUNICIPALITY OF JURISDICTION.
28. ALL CURB RADII SHALL BE MIN. 5' UNLESS OTHERWISE NOTED OR DIMENSIONED.
29. AN AS-BUILT PLAN SHALL BE PREPARED FOR THE PROJECT INDICATING ACTUAL LOCATIONS, DIMENSIONS, AND ELEVATIONS OF ALL COMPLETED IMPROVEMENTS. THE PLAN SHALL BE PREPARED BY A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF PENNSYLVANIA AND CERTIFIED BY THE ENGINEER WHO PREPARED THE FINAL PLAN. THE AS-BUILT PLAN SHALL BE FILED WITH THE TOWNSHIP NO LATER THAN NINETY (90) DAYS AFTER THE DATE OF SUBSTANTIAL COMPLETION OF THE DEVELOPMENT.
30. THE OWNER/EQUITABLE OWNER OF THE PROPERTIES WILL BE RESPONSIBLE FOR THE ONGOING INSPECTIONS, OPERATION, REPAIR, AND MAINTENANCE OF THE STORMWATER MANAGEMENT BMP'S AND CONVEYANCE SYSTEMS AFTER COMPLETION OF CONSTRUCTION.
31. A BLANKET STORMWATER MANAGEMENT EASEMENT OVER LOT 2 IS PROPOSED TO BE GRANTED TO THE TOWNSHIP TO ALLOW LEGAL ACCESS AND MAINTENANCE VEHICLE ACCESS FOR MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES SHOULD THE NEED ARISE.
32. ALL PROPOSED PEDESTRIAN FACILITIES WITHIN THE SITE AND WITHIN THE PUBLIC RIGHT-OF-WAY (INCLUDING CURB RAMPS AND PEDESTRIAN ACCESS ROUTES) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE U.S. ACCESS BOARD, PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) OF THE ACCESSIBILITY GUIDELINES OF BUILDINGS AND FACILITIES (ADAAG), PENNDOT DESIGN MANUAL PART 2 CHAPTER 6, AND PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION (PUBLICATION 72M, RC-67M). UNLESS SPECIFIED OTHERWISE THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO INSTALLATION.
33. WORK ON SITE IS ALLOWED FROM 7AM TO 7PM, MONDAY THROUGH SATURDAY. NO WORK IS ALLOWED ON SUNDAY. WORK HOURS WILL BE STRICTLY ENFORCED BY THE TOWNSHIP.
34. FIRE SPRINKLER SYSTEMS ARE PROPOSED TO BE INSTALLED WITHIN THE MULTI-FAMILY BUILDINGS
35. ALL PROPOSED UTILITIES WILL BE INSTALLED UNDERGROUND

# GENERAL DEMOLITION NOTES

1. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AS WELL AS ALL FEDERAL, STATE AND LOCAL REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS IDENTIFIED BY THE CONTRACTOR SHALL BE REPORTED TO THE ENGINEER IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF ACTIVITY.
2. THE FIRM OR ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS AND OTHER FEDERAL, STATE, AND LOCAL REGULATIONS, TO ENSURE THE PUBLIC AND CONTRACTOR SAFETY.
3. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR/TO:
   - A. ENSURE COPIES OF ALL PERMITS AND APPROVALS ARE ON SITE FOR REVIEW.
   - B. THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO SITE DISTURBANCE.
   - C. ALL EXISTING UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE, SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
   - D. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED DURING DEMOLITION ACTIVITIES.
   - E. FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AND RELOCATION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
   - F. COORDINATE WITH UTILITY COMPANIES AND TOWNSHIP REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT OF THE AFFECTED PARTIES.
   - G. ANY AND ALL CONTAMINANTS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. DOCUMENTATION OF ANY AND ALL ENVIRONMENTAL WORK INCLUDING HAZARDOUS MATERIAL, SOILS, ASBESTOS, OR OTHER WORK REFERENCED OR IMPLIED HEREIN IS SOLELY THE RESPONSIBILITY OF THE OWNER'S ENVIRONMENTAL CONSULTANT.
4. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES AND ANY OTHER IMPROVEMENTS TO REMAIN ON OR OFF SITE.
5. IN ABSENCE OF WRITTEN SPECIFICATION, THE CONTRACTOR SHALL PERFORM EARTH MOVING ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH DIRECTION BY OWNER'S GEOTECHNICAL ENGINEER.
6. EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF THE OWNER. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY FEDERAL, STATE, AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES. APPROVAL FROM WORCESTER TOWNSHIP IS REQUIRED FOR ANY BLASTING.
7. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH: THE "MANUAL ON UNIFORM TRAFFIC CONTROL," AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHT-OF-WAYS.
8. CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
9. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINES, WITHOUT WRITTEN PERMISSION OF THE OWNER, AND/OR APPROPRIATE GOVERNMENT AGENCY.
10. USE DUST CONTROL MEASURES TO LIMIT THE AMOUNT OF AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR TO WITHIN FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
11. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
12. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
13. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF HIS ACTIVITIES. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION.
14. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES. CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF HAZARDOUS/UNSUITABLE MATERIAL IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, AND LAWS.
15. THE CONTRACTOR SHALL COORDINATE SERVICE SHUTOFF AND DISCONNECT/REMOVAL PROCEDURES WITH EACH RESPECTIVE UTILITY COMPANY FOR THE EXISTING UTILITIES SHOWN TO BE REMOVED.
16. THE DEMOLITION PLAN IS NOT INTENDED TO SHOW EROSION CONTROL MEASURES. FOR SUCH GUIDELINES AND DETAILS, SEE THE EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.
17. ALL EXISTING FEATURES WITHIN THE LIMIT OF DISTURBANCE (AS DEFINED ON THE PLAN SET) ARE TO BE REMOVED (UNLESS OTHERWISE NOTED) AT NO ADDITIONAL COST TO THE OWNER WHETHER OR NOT EXPLICITLY DEPICTED ON THIS PLAN. FEATURES TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO ALL TREES, VEGETATION, STRUCTURES, ABANDONED UTILITIES, AND ABANDONED IRRIGATION PIPE AND SYSTEM COMPONENTS. CONTRACTOR SHALL ABANDON ANY WELLS PRESENT WITHIN THE LIMIT OF DISTURBANCE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.

# STORM SEWER NOTES

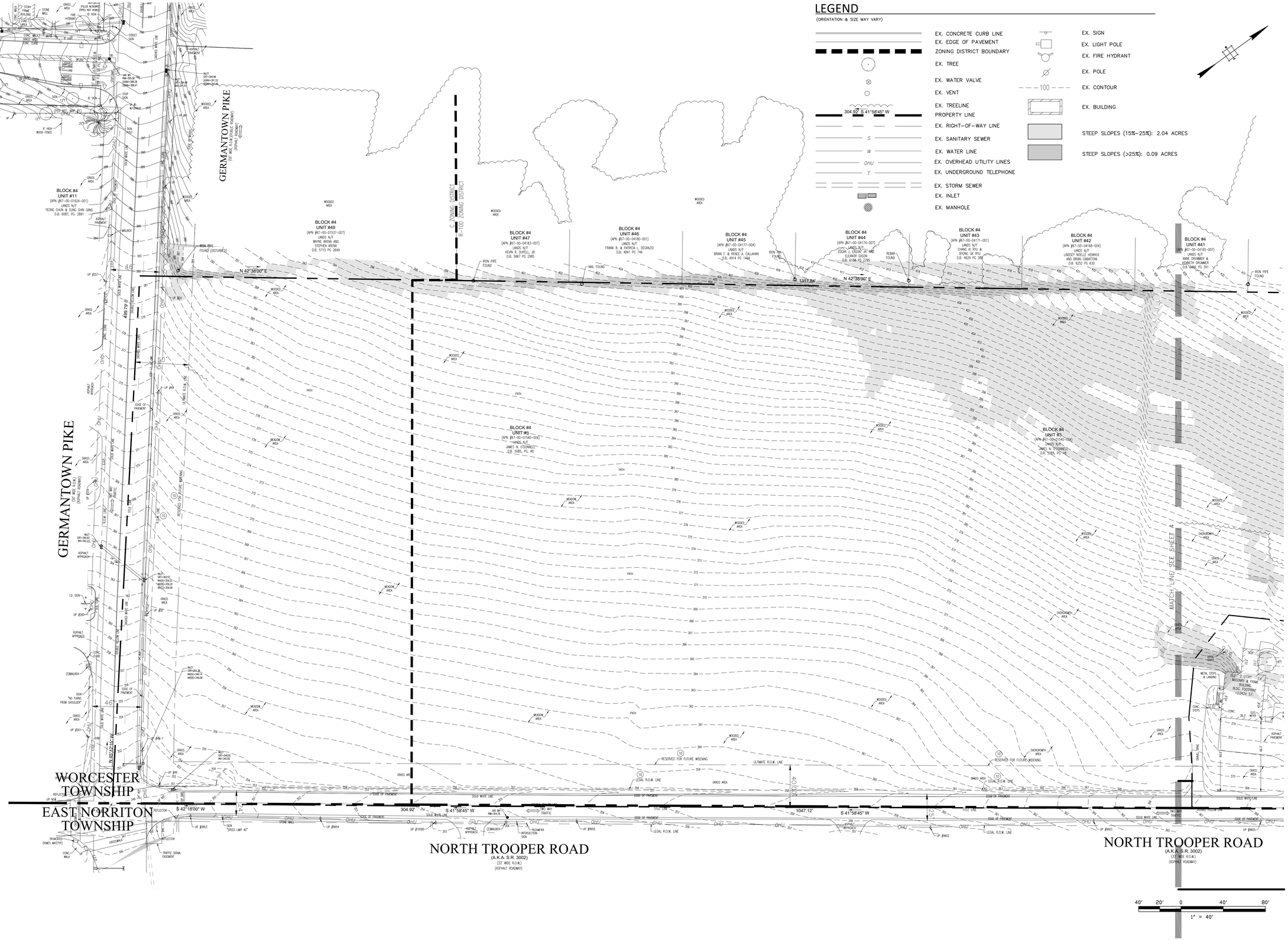
1. ROOF LEADERS SHALL BE CONNECTED DIRECTLY TO THE PROPOSED STORMWATER MANAGEMENT SYSTEM OR DIRECTED VIA SURFACE GRADES TO INLETS/STORMWATER MANAGEMENT SYSTEMS. LEAF TRAPS, GUTTER GUARDS, AND/OR CLEANOUTS TO BE PROVIDED TO PREVENT CLOGGING BY UNWANTED DEBRIS.
2. ALL STORM CONVEYANCE PIPE SHALL BE SMOOTH LINED DOUBLE WALLED HIGH DENSITY POLYETHYLENE PIPE (HDPE), UNLESS OTHERWISE SPECIFIED. ALL ROOF LEADERS SHALL BE SCHEDULE 40 PVC.

ALL DETENTION AND RETENTION BASIN EMBANKMENTS SHALL BE PLACED IN 8 INCH MAXIMUM LIFTS TO A MINIMUM 95% DRY DENSITY. PRIOR TO PROCEEDING TO THE NEXT LIFT, COMPACTION SHALL BE CHECKED BY THE MUNICIPAL ENGINEER OR AN APPROVED GEOTECHNICAL ENGINEER WHO SHALL PROVIDE THE MUNICIPAL ENGINEER WITH A WRITTEN REPORT. COMPACTION TESTS SHALL BE PERFORMED USING THE MODIFIED PROCTOR METHOD IN ACCORDANCE WITH ASTM D-1577-07. COMPACTION TESTS SHALL BE RUN ON THE LEADING AND TRAILING EDGE AS WELL AS THE TOP OF THE BERM.

4. ANTI-SEEP COLLARS SHALL BE INSTALLED AROUND THE PIPE BARREL WITHIN THE NORMAL SATURATION ZONE OF THE DETENTION BASIN BERMS. THE ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE PIPE BARRELS SHALL BE WATERTIGHT. THE ANTI-SEEP COLLARS SHALL EXTEND A MINIMUM OF TWO FEET BEYOND THE OUTSIDE OF THE PRINCIPAL PIPE BARREL. THE MAXIMUM SPACING BETWEEN COLLARS SHALL BE FOURTEEN (14) TIMES THE MINIMUM PROJECTION OF THE COLLAR MEASURED PERPENDICULAR TO THE PIPE. A MINIMUM OF TWO (2) ANTI-SEEP COLLARS SHALL BE INSTALLED ON EACH OUTLET PIPE. ANTI-SEEP COLLAR SHALL BE CAST-IN-PLACE.
5. IF A CONFLICT ARISES DURING THE INSTALLATION OF ANY PART OF THE STORM SEWER SYSTEM THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY IN WRITING.

LANDSCAPING, FENCES AND STRUCTURES SHALL BE PLACED A MINIMUM OF 5 FEET AWAY FROM STORM SEWERS OUTSIDE OF THE RIGHT OF WAY OF STREETS.

7. REFER TO SITE / RECORD PLAN FOR ADDITIONAL NOTES.
8. ALL STORM SEWER INLETS MUST BE IDENTIFIED WITH A STORM DRAIN MARKER. STORM DRAIN MARKERS SHALL BE STAINLESS STEEL AFFIXED TO THE INLET HOOD WITH ADHESIVE, RIVETS, OR BOLTS. (MARKER MAY BE BOLTED TO THE GRATE IN OFF-ROAD LOCATIONS). MARKER SHALL HAVE A

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PA ONE CALL SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
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CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464


COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

EXISTING CONDITIONS PLAN


T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA


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| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
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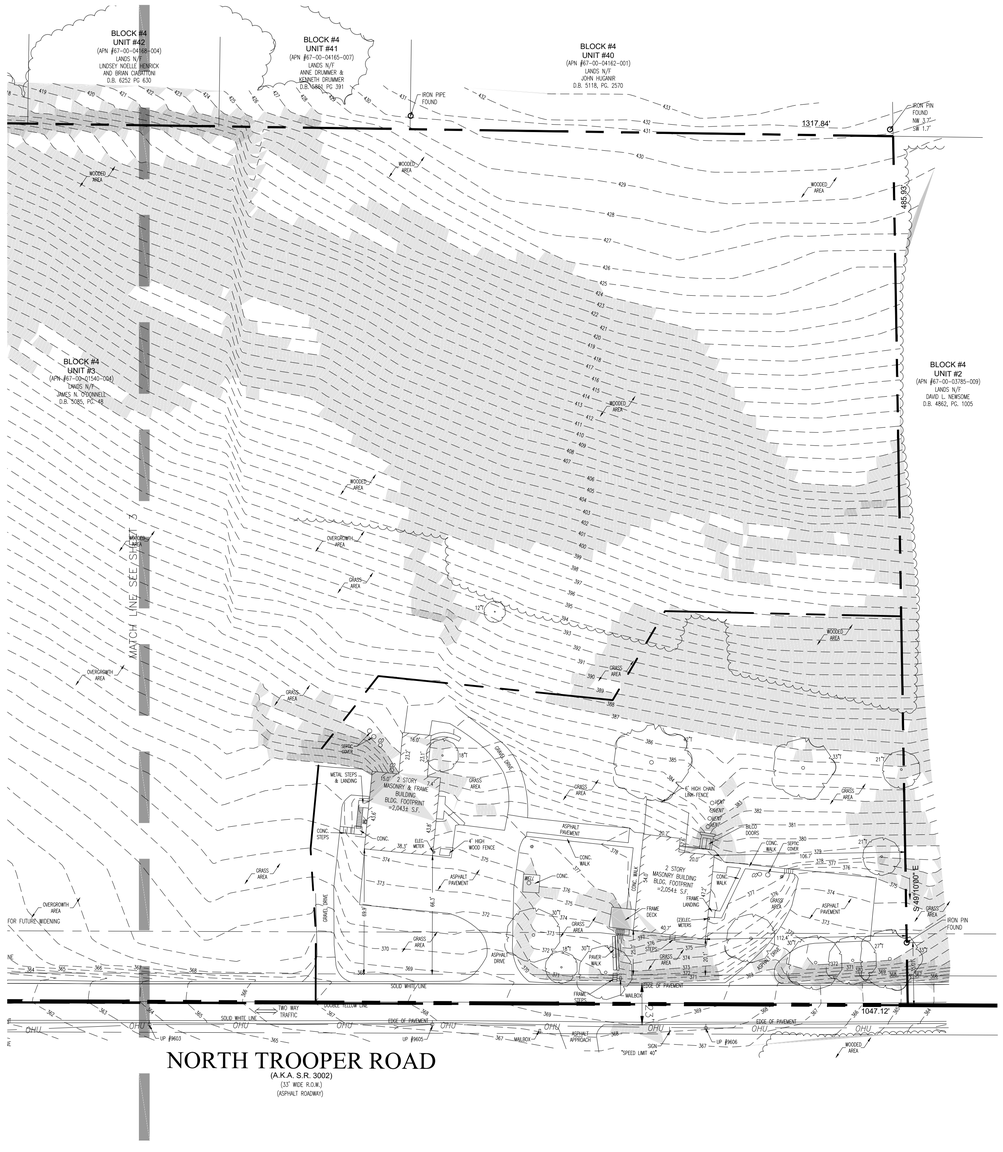


## LEGEND

(ORIENTATION & SIZE MAY VARY)

- EX. CONCRETE CURB LINE
- EX. EDGE OF PAVEMENT
- ZONING DISTRICT BOUNDARY
- EX. TREE
- EX. WATER VALVE
- EX. VENT
- EX. TREELINE
- PROPERTY LINE (304.92' S 41°58'45" W)
- EX. RIGHT-OF-WAY LINE
- EX. SANITARY SEWER (S)
- EX. WATER LINE (W)
- EX. OVERHEAD UTILITY LINES (OHU)
- EX. UNDERGROUND TELEPHONE (T)
- EX. STORM SEWER
- EX. INLET
- EX. MANHOLE
- EX. SIGN
- EX. LIGHT POLE
- EX. FIRE HYDRANT
- EX. POLE
- EX. CONTOUR (100)
- EX. BUILDING
- STEEP SLOPES (15%-25%): 2.04 ACRES
- STEEP SLOPES (>25%): 0.09 ACRES

40' 20' 0 40' 80'

1" = 40'

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LAST PLOT DATE AND TIME: Jan 20, 2026, 5:14PM
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SERIAL NO.
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
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CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# EXISITING CONDITIONS PLAN-2

T&M AND ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

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| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | EXC-2 |
| SHEET | 4 OF 50 |

## PROPERTY INFORMATION

EQUITABLE OWNER: COMMERCIAL PURSUIT CAPITAL, LLC
TAX PARCELS: 67-00-01540-00-4
AREA TO TITLE LINE: 15.11 ACRES
AREA TO LEGAL R.O.W. LINE: 14.30 ACRES
SITUATE: 1035 N TROOPER ROAD, NORRISTOWN, PA

## EXISTING DATA SOURCE NOTES:

1. EXISTING FEATURES SHOWN ARE BASED ON A SURVEY PLAN PREPARED BY BLUE MARSH ASSOCIATES, INC., DATED MARCH 10, 2022. BOUNDARY INFORMATION SHOWN IS FROM ACTUAL FIELD SURVEYS PERFORMED BY BLUE MARSH ASSOCIATES, INC.
2. ELEVATIONS ARE BASED UPON (NAV 88) DATUM ESTABLISHED ONSITE UTILIZING GLOBAL POSITIONING SYSTEM DATA COLLECTION.

## GENERAL ERSA NOTES

1. THE PENNSYLVANIA NATURAL DIVERSITY INVENTORY DICTATE A TREE REMOVAL AVOIDANCE MEASURE BETWEEN MAY 15 TO AUGUST 15 TO PRESERVE THE NORTHERN LONG-EARED BAT.
2. THE PROPOSED SITE DOES NOT INCLUDE ANY SCENIC OR VIEW SHED AREAS AS SHOWN IN THE TOWNSHIP MASTER PLAN.
3. THE SITE HAS BEEN FIELD INVESTIGATED FOR WETLANDS BY VALLEY ENVIRONMENTAL SERVICES, INC. ON JULY 13, 2024 AND NONE WERE FOUND TO EXIST.
4. THE PROPOSED SITE IS WITHIN THE FEMA FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP, MAP NO. 42091C0261G.

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| AbB | Abbottstown silt loam, 3 to 8 percent slopes | 15.8 | 25.9% |
| Bo | Bowmansville-Knauers silt loams | 5.1 | 8.4% |
| LaD | Lansdale loam, 15 to 25 percent slopes | 0.6 | 0.9% |
| PlB | Penn-Lansdale complex, 3 to 8 percent slopes | 3.1 | 5.1% |
| PlC | Penn-Lansdale complex, 8 to 15 percent slopes | 9.5 | 15.5% |
| ReB | Readington silt loam, 3 to 8 percent slopes | 11.2 | 18.4% |
| RhB | Reaville silt loam, 3 to 8 percent slopes | 1.5 | 2.5% |
| RhC | Reaville silt loam, 8 to 15 percent slopes | 13.6 | 22.2% |
| UusD | Urban land-Udorthents, shale and sandstone complex, 8 to 25 percent slopes | 0.0 | 0.0% |
| W | Water | 0.7 | 1.1% |
| **Totals for Area of Interest** | | **61.1** | **100.0%** |

## LEGEND

(ORIENTATION & SIZE MAY VARY)

- SOIL TYPE BOUNDARY
- RhC — SOIL TYPE SYMBOL
- STEEP SLOPES (15%–25%)
- STEEP SLOPES (>25%)

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

TABLE E.1

LIMITATIONS OF PENNSYLVANIA SOILS PERTAINING TO EARTHMOVING PROJECTS

| SOIL NAME | CUTBANKS CAVE | CORROSIVE TO CONCRETE/STEEL | DROUGHTY | EASILY ERODIBLE | FLOODING | DEPTH TO SATURATED ZONE / SEASONAL HIGH WATER TABLE | HYDRIC/ HYDRIC INCLUSIONS | LOW STRENGTH / LANDSLIDE PRONE | SLOW PERCOLATION | PIPING | POOR SOURCE OF TOPSOIL | FROST ACTION | SHRINK - SWELL | POTENTIAL SINKHOLE | PONDING | WETNESS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PENN–LANSDALE COMPLEX, 3% TO 8% SLOPES (PlB), 8% TO 15% SLOPES (PlC) | X | C | X | | | | X | X | | X | X | X | | | | |
| ABBOTTSTOWN, 3% TO 6% SLOPES | X | C/S | | X | | X | X | X | X | X | X | X | | | | X |
| LANSDALE, 15% TO 25% SLOPES | X | C | X | | | | | X | X | | X | X | | | | |
| READINGTON SILT LOAM, 3% TO 8% SLOPES | X | C/S | | X | | X | X | X | X | X | X | X | | | | X |
| BOWMANSVILLE | X | C/S | | | X | X | X | X | X | X | X | X | | | | X |
| REAVILLE, 8% TO 15% SLOPES (RhB), 3% TO 8% | X | C/S | X | X | | X | X | | X | X | X | X | X | | | X |

PROJECT INFORMATION:
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FILE NAME: WDV00004_ER.dwg
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1-800-242-1776
20243171817

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CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# EXISTING RESOURCES PLAN

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

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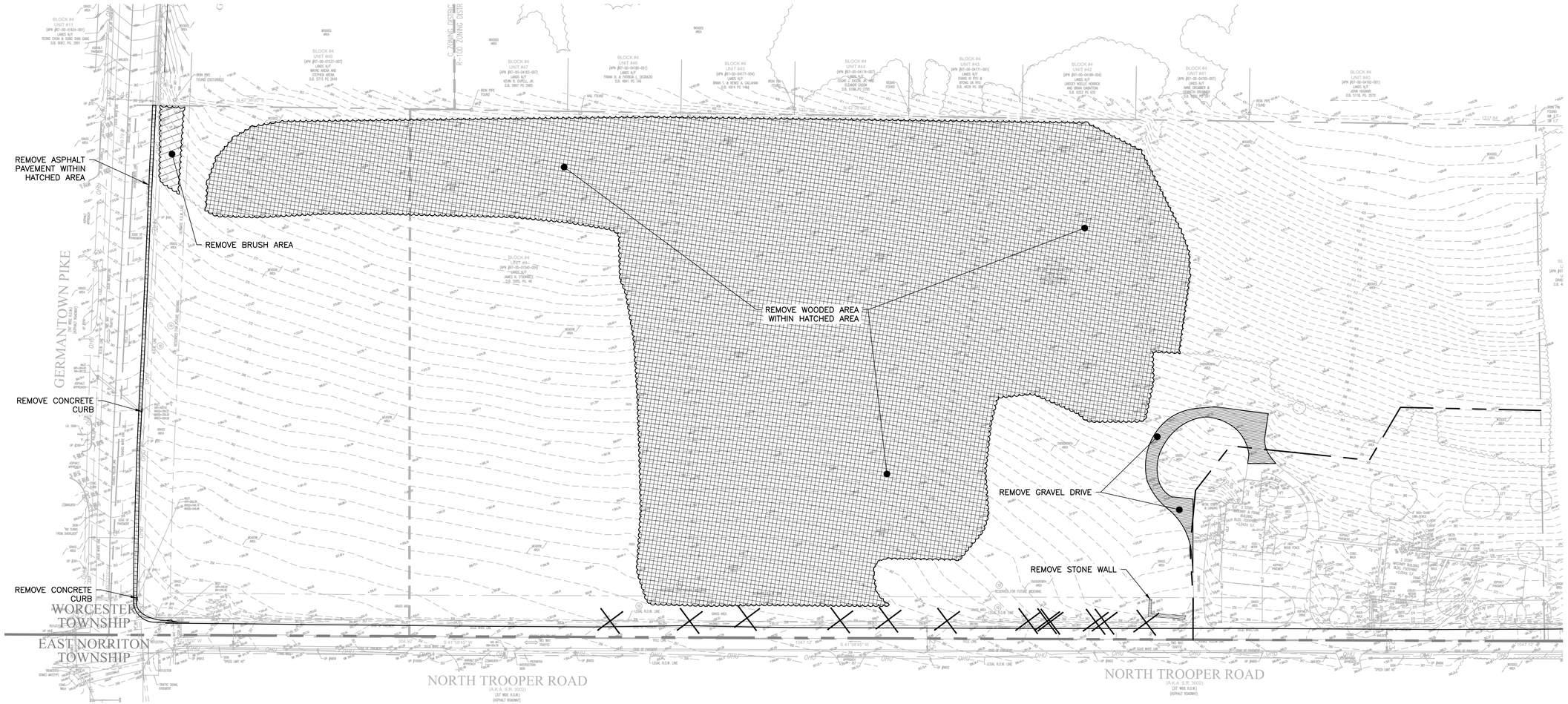
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | ER |
| SHEET | 5 OF 50 |




## LEGEND

(ORIENTATION & SIZE MAY VARY)

- EX. CONCRETE CURB LINE
- EX. EDGE OF PAVEMENT
- ZONING DISTRICT BOUNDARY
- EX. TREE
- EX. WATER VALVE
- EX. VENT
- EX. TREELINE
- PROPERTY LINE
- EX. RIGHT-OF-WAY LINE
- EX. SANITARY SEWER
- EX. WATER LINE
- EX. OVERHEAD UTILITY LINES
- EX. UNDERGROUND TELEPHONE
- EX. STORM SEWER
- EX. INLET
- EX. MANHOLE
- EX. SIGN
- EX. LIGHT POLE
- EX. FIRE HYDRANT
- EX. POLE
- EX. CONTOUR
- EX. BUILDING
- TREE REMOVAL

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LAST PLOTTED: 22-Jan-2026, 9:42AM
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PA ONE CALL SERIAL NO.
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
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CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
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12/19/2024

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COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

DEMOLITION PLAN

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

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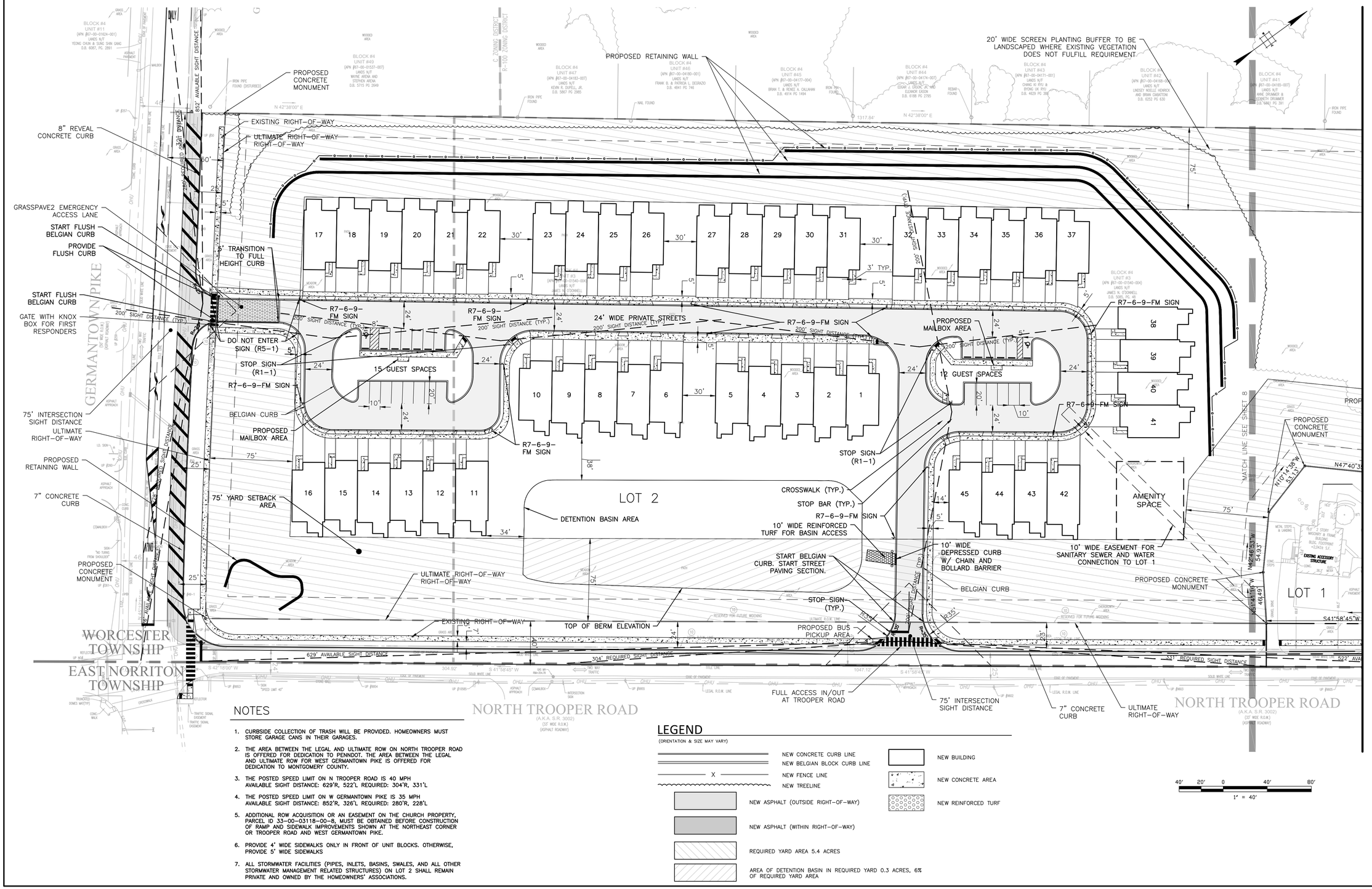
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | DEM |
| SHEET | 6 OF 50 |




## NOTES

1. CURBSIDE COLLECTION OF TRASH WILL BE PROVIDED. HOMEOWNERS MUST STORE GARAGE CANS IN THEIR GARAGES.
2. THE AREA BETWEEN THE LEGAL AND ULTIMATE ROW ON NORTH TROOPER ROAD IS OFFERED FOR DEDICATION TO PENNDOT. THE AREA BETWEEN THE LEGAL AND ULTIMATE ROW FOR WEST GERMANTOWN PIKE IS OFFERED FOR DEDICATION TO MONTGOMERY COUNTY.
3. THE POSTED SPEED LIMIT ON N TROOPER ROAD IS 40 MPH
   AVAILABLE SIGHT DISTANCE: 629'R, 522'L REQUIRED: 304'R, 331'L
4. THE POSTED SPEED LIMIT ON W GERMANTOWN PIKE IS 35 MPH
   AVAILABLE SIGHT DISTANCE: 852'R, 326'L REQUIRED: 280'R, 228'L
5. ADDITIONAL ROW ACQUISITION OR AN EASEMENT ON THE CHURCH PROPERTY, PARCEL ID 33-00-03118-00-8, MUST BE OBTAINED BEFORE CONSTRUCTION OF RAMP AND SIDEWALK IMPROVEMENTS SHOWN AT THE NORTHEAST CORNER OR TROOPER ROAD AND WEST GERMANTOWN PIKE.
6. PROVIDE 4' WIDE SIDEWALKS ONLY IN FRONT OF UNIT BLOCKS. OTHERWISE, PROVIDE 5' WIDE SIDEWALKS
7. ALL STORMWATER FACILITIES (PIPES, INLETS, BASINS, SWALES, AND ALL OTHER STORMWATER MANAGEMENT RELATED STRUCTURES) ON LOT 2 SHALL REMAIN PRIVATE AND OWNED BY THE HOMEOWNERS' ASSOCIATIONS.

## LEGEND

(ORIENTATION & SIZE MAY VARY)

- NEW CONCRETE CURB LINE
- NEW BELGIAN BLOCK CURB LINE
- NEW FENCE LINE
- NEW TREELINE
- NEW ASPHALT (OUTSIDE RIGHT-OF-WAY)
- NEW ASPHALT (WITHIN RIGHT-OF-WAY)
- REQUIRED YARD AREA 5.4 ACRES
- AREA OF DETENTION BASIN IN REQUIRED YARD 0.3 ACRES, 6% OF REQUIRED YARD AREA
- NEW BUILDING
- NEW CONCRETE AREA
- NEW REINFORCED TURF

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_SITE.dwg
PLOTTED: DATE: 23 Jan. 2026, TIME: 5:01PM
LAST SAVE BY: JKelley

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1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

SITE PLAN

T&M AND ASSOCIATES
YOUR GOALS. OUR MISSION.
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PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

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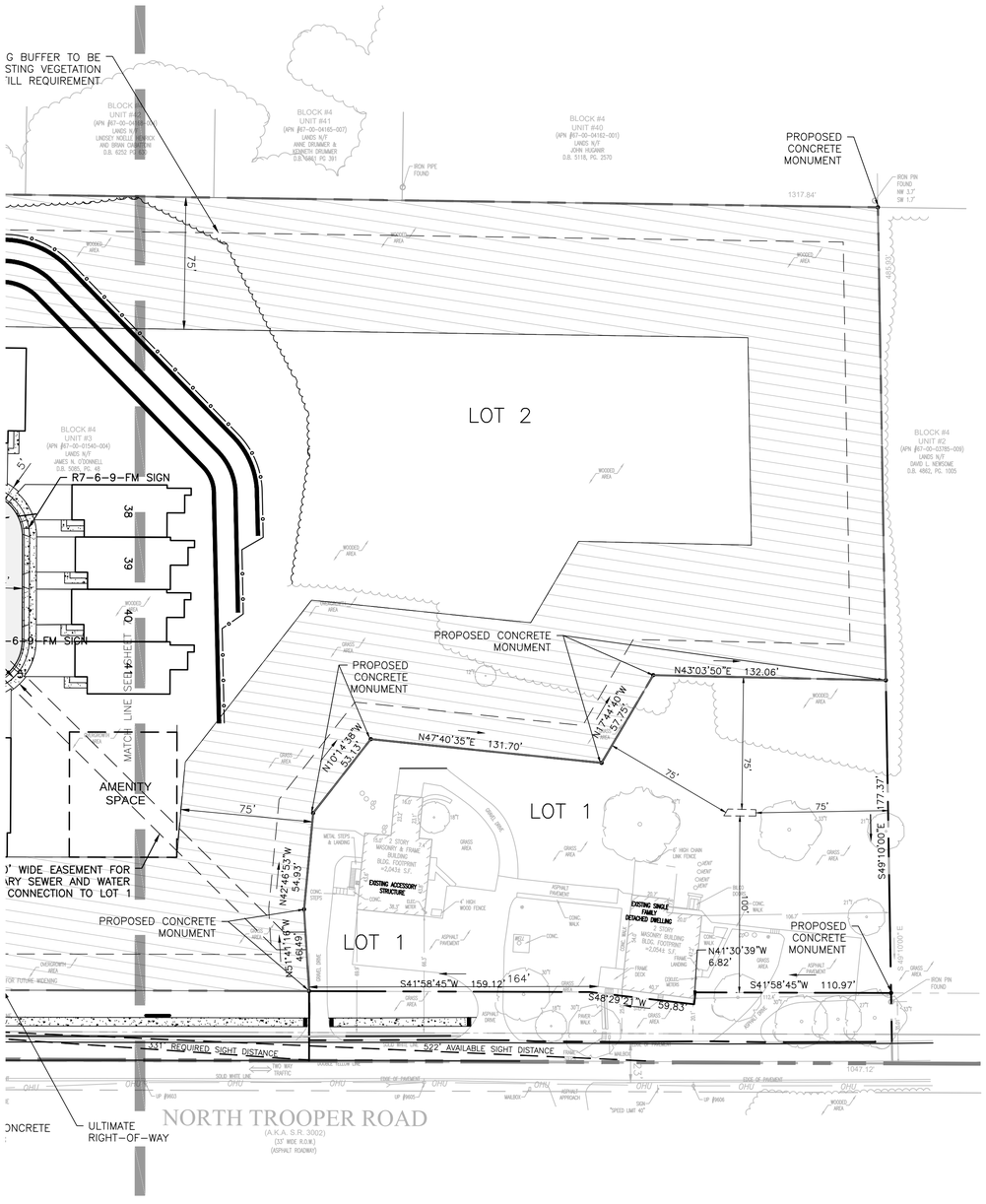
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | STE |
| SHEET | 7 OF 50 |




## LEGEND

- INTERNAL ACCESS DRIVE PAVING DETAIL
- PUBLIC PAVING DETAIL
- REQUIRED YARD AREA 5.4 ACRES
- AREA OF DETENTION BASIN IN REQUIRED YARD 0.3 ACRES, 6% OF REQUIRED YARD AREA

40' 20' 0 40' 80'

1" = 40'

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_STE.dwg
LAST PLOTTED: 23 Jan 2026, 5:01PM
LAST SAVE BY: JKelley

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1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

**CHRISTOPHER W. JENSEN, P.E.**
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

# TROOPER RIDGE SUBDIVISION

1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

SITE PLAN

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PHILADELPHIA, PA 19103
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FAX 215-627-3459

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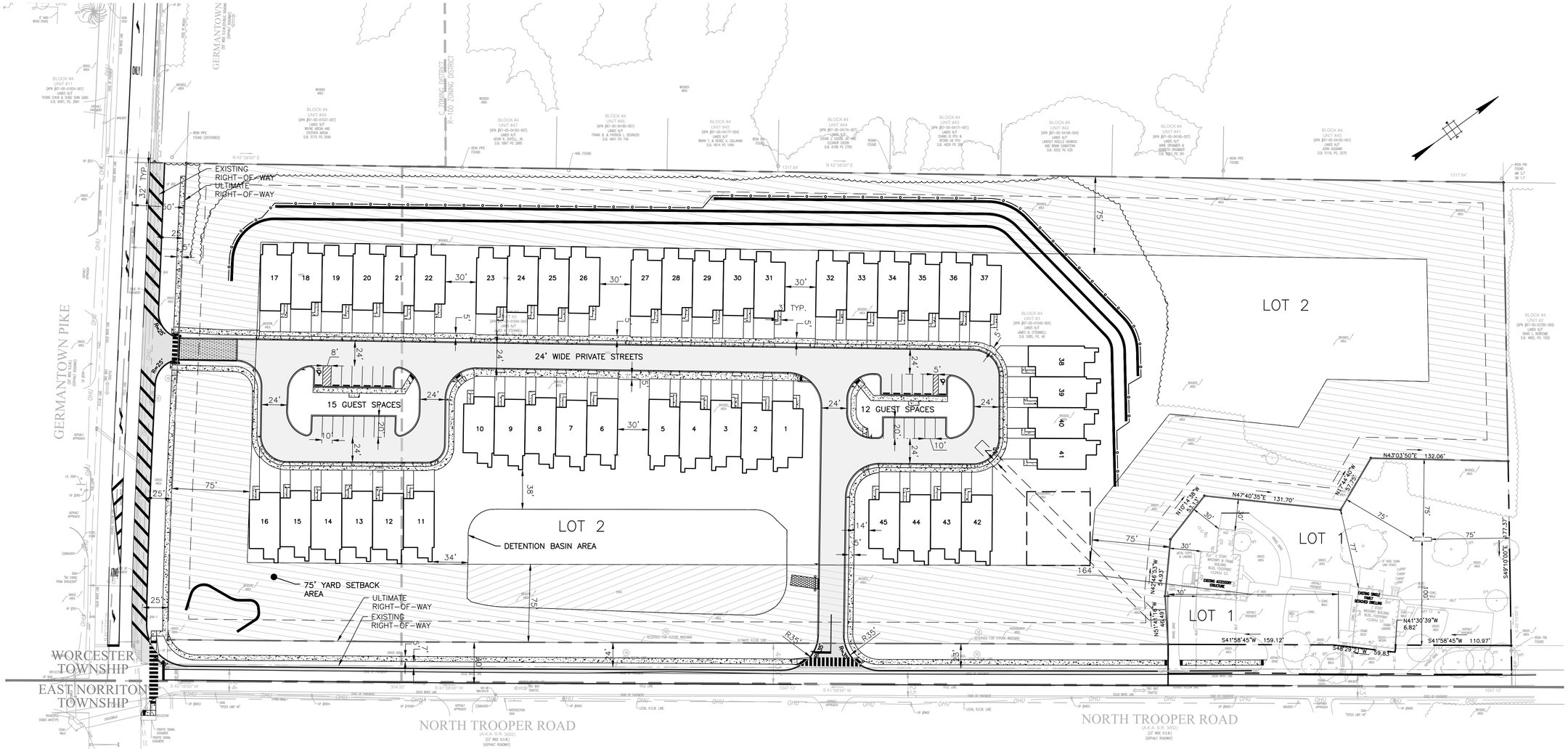
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | STE-2 |
| SHEET | 8 |
| OF | 50 |




## LEGEND

(ORIENTATION & SIZE MAY VARY)

- NEW CONCRETE CURB LINE
- NEW BELGIAN BLOCK CURB LINE
- NEW FENCE LINE
- NEW TREELINE
- NEW ASPHALT (OUTSIDE RIGHT-OF-WAY)
- NEW ASPHALT (WITHIN RIGHT-OF-WAY)
- REQUIRED YARD AREA 5.4 ACRES
- AREA OF DETENTION BASIN IN REQUIRED YARD 0.3 ACRES, 6% OF REQUIRED YARD AREA
- NEW BUILDING
- NEW CONCRETE AREA
- NEW REINFORCED TURF

50' 25' 0 50' 100'

1" = 50'

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_SITE RECORD.dwg
ESTIMATED PLOT DATE AND TIME: 23 Jan 2026, 5:01PM
LAST SAVE BY: JKelley

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1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
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12/19/2024
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STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

# TROOPER RIDGE SUBDIVISION

1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# RECORD PLAN

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TEL 215-282-7850
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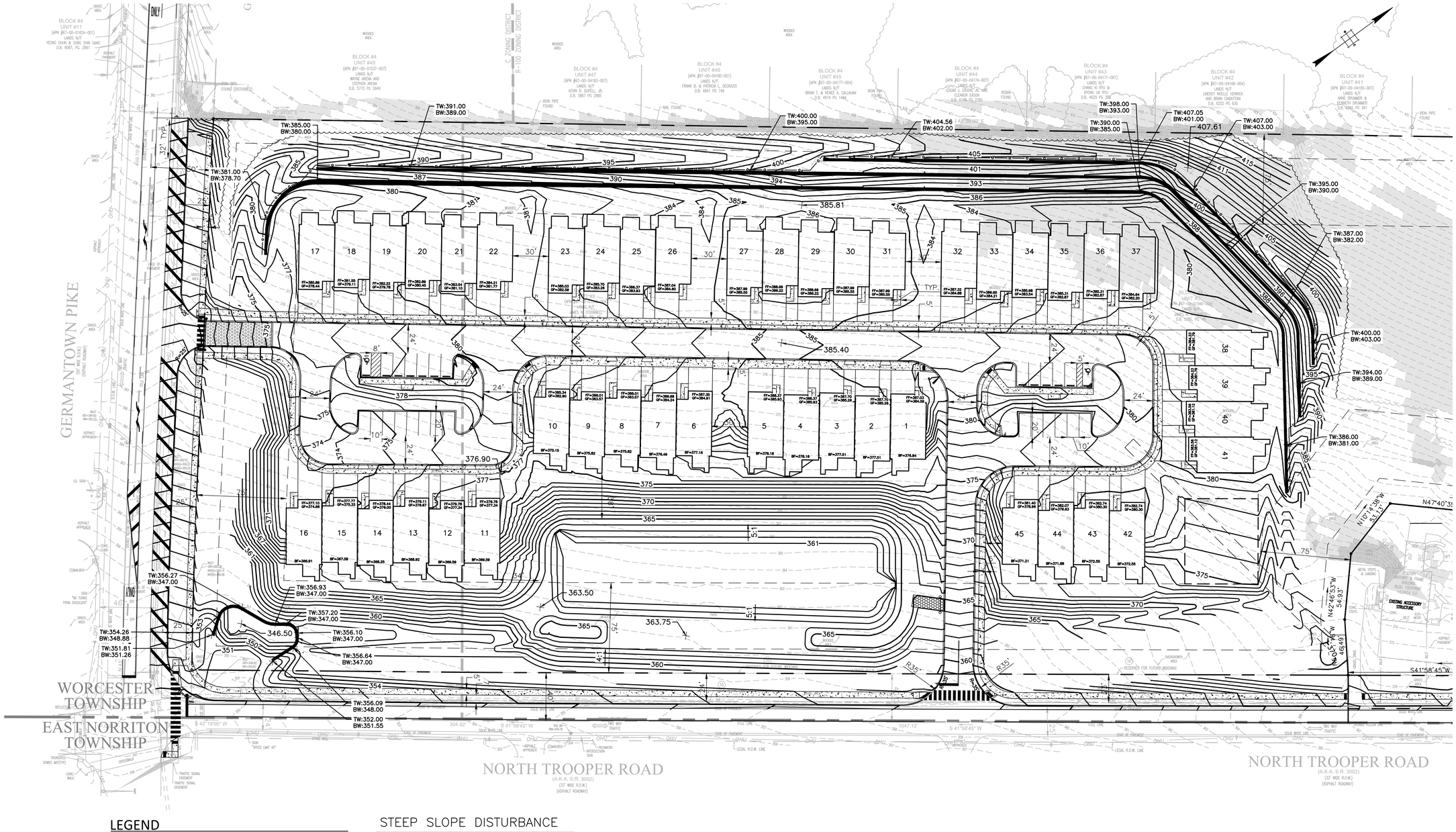
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | REC |
| SHEET | 9 |
| OF | 50 |




## LEGEND

(ORIENTATION & SIZE MAY VARY)

- 343.00 — NEW SPOT ELEVATION
- 340 — NEW INDEX CONTOUR
- 343 — NEW INTERMEDIATE CONTOUR
- 5:1 — NEW SLOPE LABEL
- STEEP SLOPES (15%–25%)
- STEEP SLOPES (>25%)

## STEEP SLOPE DISTURBANCE

1. DISTURBANCE IN SLOPES 15% TO 25% = 0.74 AC
2. DISTURBANCE IN SLOPES GREATER THAN 25% = 0 AC

40' 20' 0 40' 80'

1" = 40'

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20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
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12/19/2024

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STATE OF PA LICENSE No. PE076464


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MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# GRADING PLAN


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| DESIGNED BY JPK/CKS/CMR/ROP/ZHR | DRAWING GRD |
| CHECKED BY BGS/ZHR | |
| DRAWN BY SCR/CKS/RAM | SHEET 10 |
| DATE 1/23/2026 | OF 50 |
| SCALE AS NOTED | |
| PROJ. NO. WDEV00004 | |


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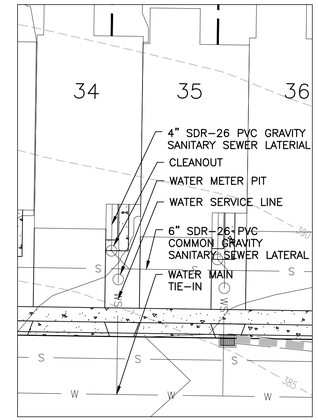
PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_GRD.dwg
LAST SAVED: Monday, February 09, 2026, 9:35AM
LAST SAVE BY: JKelley

## WATER LINE CONSTRUCTION NOTES

1. PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE WITH CEMENT LINING AND POLY WRAP.
2. 2A STONE IS REQUIRED FOR BACKFILL OF THE PIPE TRENCH. NATIVE MATERIALS WILL NOT BE ACCEPTED.
3. IF CONDITIONS WARRANT IT (STREAMS, WETLAND AREAS, SINKHOLE PRONE AREAS) A GRIPPING GASKET WILL BE REQUIRED FOR THE PIPE.
4. GRIPPING GASKETS ARE REQUIRED FOR 2 JOINTS IN ALL DIRECTIONS FROM ANY FITTING INSTALLED REGARDLESS OF SITE CONDITIONS.
5. PIPE DEPTH OF COVER SHALL BE 4 FT AT ALL TIMES
6. ONLY PAWC PERSONNEL SHALL OPERATE MAIN LINE VALVES FOR THE CONTRACTOR.
7. EASEMENTS, IN A FORM SATISFACTORY TO PAWC, SHALL BE REQUIRED FOR ALL WATER FACILITIES LOCATED OUTSIDE THE PUBLIC RIGHT OF WAY.
8. TYPE K COPPER SERVICE LINES ARE REQUIRED UP TO EACH METER PIT
9. MUELLER THERMAL-COIL METER PITS OR EQUIVALENT (1" DIAMETER) ARE REQUIRED FOR EACH RESIDENTIAL SERVICE. PREFERRED PLACEMENT IS JUST BEYOND THE CURB. METER PITS MAY NOT BE PLACED WITHIN PAVED AREAS AND MUST BE EQUIPPED WITH A COMPOSITE LID.
10. HYDRANTS MUST BE FACTORY PAINTED IN THE COLOR SCHEME DESIRED BY THE LOCAL FIRE OFFICIAL HAVING JURISDICTION OVER YOUR SITE. FIELD ADJUSTMENT OF HYDRANT COLORS IS NOT PERMITTED.
11. HYDRANT LOCATION IS SUBJECT TO THE APPROVAL OF THE FIRE OFFICIALS CLAIMING JURISDICTION OVER THE PROJECT LOCATION. THE PARTY RESPONSIBLE FOR PAYING THE MONTHLY HYDRANT FEES MUST COMPLETE AN APPLICATION FOR SERVICE TO THE HYDRANTS PRIOR TO ACTIVATION OF THE WATER FACILITIES ASSOCIATED WITH THIS PROJECT.
12. DISINFECTION OF THE MAINS SHALL BE BY LIQUID INJECTION ONLY – NO TABLETS/POWDERS SHALL BE USED. ADDITIONAL TAPS MAY BE REQUIRED FOR DISINFECTION AND SUBSEQUENT FLUSHING OF THE MAINS FOR TESTING.
13. BACTERIOLOGICAL SAMPLES MUST BE COLLECTED BY A CERTIFIED LAB TECHNICIAN AND ANALYZED BY A PADEP CERTIFIED LAB.
14. FLUSHING OF MAINS WILL NOT BE ALLOWED UNTIL THE SITE IS ADEQUATELY STABILIZED AGAINST EROSION.
15. FLUSHED WATER MUST BE DECHLORINATED COMPLETELY PRIOR TO BEING DISCHARGED INTO THE ENVIRONMENT.
16. VALVE CLUSTERS ARE REQUIRED AT EACH INTERSECTION.
17. VALVE BOXES SHALL BE SCREW ADJUSTABLE TYPE WITH LIDS MARKED "WATER"
18. VALVES MUST BE OPEN RIGHT
19. ALL PIPING INDICATED IN THE AGREEMENT MUST BE INSTALLED AND FULLY TESTED BEFORE ANYTHING WILL BE PLACED IN SERVICE.
20. LOCATION OF EXISTING WATER FACILITIES SHOWN ARE APPROXIMATE. ANY UTILITIES NOT SHOWN, OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DENY RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. EXACT LOCATION SHALL BE VERIFIED IN THE FIELD.
21. DEVELOPER SHALL OBTAIN ALL NECESSARY ROAD OPENING PERMITS FOR THE INSTALLATION OF THE WATER FACILITIES AND SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL APPLICATION FEES AND INSPECTION COSTS ASSOCIATED WITH THESE PERMITS.




UNIT DETAIL
1" = 20'



## LEGEND

(ORIENTATION & SIZE MAY VARY)

S — NEW SANITARY PIPE

W — NEW WATER MAIN

40' 20' 0 40' 80'
1" = 40'

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_UTL.dwg
LAST PLOTTED: 26 Feb 2026, 2:33PM
LAST SAVE BY: RAhn

PENNSYLVANIA ONE CALL SYSTEM, INC.
SERIAL NUMBER
20243171817

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CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
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# UTILITY PLAN

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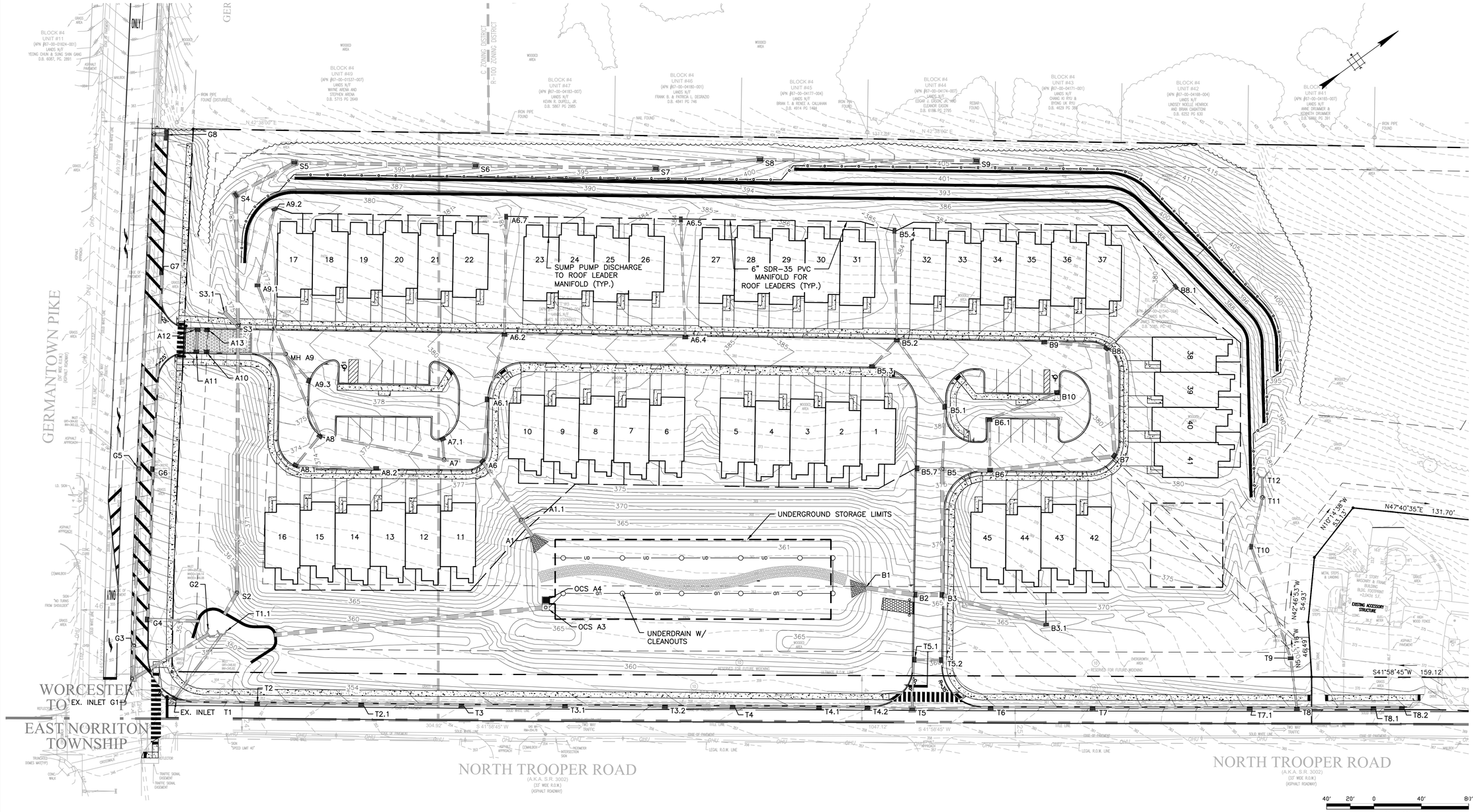
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | UTL |
| SHEET | 11 |
| OF | 50 |




PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_DRN.dwg
PLOT DATE: 23 Jan, 2026, 10:34AM
LAST SAVE BY: JKelley

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| STORM STRUCTURE TABLE | | | |
|---|---|---|---|
| NAME | STRUCTURE DETAILS | TG/RIM | INVERT |
| A1 | D–W EW | 363.75 | 361.00 |
| A1.1 | MH | 367.83 | 361.10 |
| A6 | TYPE C | 376.89 | 365.45 |
| A6.1 | TYPE C | 379.03 | 375.30 |
| A6.2 | TYPE C | 381.06 | 377.41 |
| A6.4 | TYPE C | 384.11 | 379.91 |
| A6.5 | TYPE M | 383.65 | 381.15 |
| A6.7 | TYPE M | 380.65 | 378.15 |
| A7 | MH | 376.60 | 365.85 |
| A7.1 | TYPE C | 376.60 | 373.00 |
| A8 | TYPE C | 373.75 | 366.95 |
| A8.1 | TYPE S | 373.49 | 369.50 |
| A8.2 | TYPE S | 375.09 | 371.03 |
| A9.1 | TYPE M | 376.57 | 372.75 |
| A9.2 | TYPE M | 377.92 | 375.26 |
| A9.3 | TYPE C | 377.00 | 372.17 |
| A10 | TYPE C | 371.90 | 368.15 |
| A11 | TYPE C | 371.09 | 368.40 |
| A12 | TYPE C | 371.10 | 368.70 |
| A13 | TYPE C | 372.04 | 368.95 |
| B1 | D–W EW | 364.29 | 361.00 |
| B2 | TYPE C, 2'X6' BOX | 365.65 | 361.25 |

| STORM STRUCTURE TABLE | | | |
|---|---|---|---|
| NAME | STRUCTURE DETAILS | TG/RIM | INVERT |
| B3 | TYPE C, 4'X6' BOX | 365.66 | 361.60 |
| B3.1 | TYPE M | 365.80 | 362.30 |
| B5 | MH | 376.33 | 370.94 |
| B5.1 | TYPE C | 381.52 | 378.52 |
| B5.2 | TYPE C | 383.71 | 379.12 |
| B5.3 | TYPE C | 384.00 | 380.50 |
| B5.4 | TYPE M | 383.50 | 380.75 |
| B5.7 | TYPE C | 376.32 | 373.30 |
| B6 | TYPE S, TYPE 4 BOX | 377.79 | 372.60 |
| B6.1 | TYPE C | 377.38 | 374.00 |
| B7 | TYPE S HOOD, TYPE 4 BOX | 379.34 | 374.00 |
| B8 | TYPE S HOOD, TYPE 4 BOX | 380.61 | 375.20 |
| B8.1 | TYPE M | 379.15 | 376.00 |
| B9 | TYPE S HOOD, TYPE 4 BOX | 381.57 | 376.50 |
| B10 | TYPE C | 380.96 | 375.50 |
| EX. INLET T1 | TYPE M, TYPE 4 BOX | 349.18 | 345.82 |
| EX. INLET D | INLET | 394.98 | 391.52 |
| EX. INLET G1 | TYPE 4 BOX MANHOLE LID | 350.26 | 346.08 |
| EXIST INL | EXIST INLET | 413.38 | 409.79 |
| G2 | D–W EW | 348.75 | 346.50 |
| G3 | MH | 352.14 | 348.15 |
| G4 | TYPE C | 353.48 | 349.50 |

| STORM STRUCTURE TABLE | | | |
|---|---|---|---|
| NAME | STRUCTURE DETAILS | TG/RIM | INVERT |
| G5 | MH | 362.73 | 357.14 |
| G6 | TYPE C | 362.64 | 356.00 |
| G7 | TYPE C | 373.15 | 368.00 |
| G8 | DOUBLE TYPE M | 380.77 | 376.59 |
| MH A9 | MH | 377.43 | 367.69 |
| NEW STRUCTURE | MH | 381.08 | 376.32 |
| OCS A3 | 6X6 BOX W/ MH TOP | 362.70 | 351.00 |
| OCS A4 | 6X6 BOX W/ TRASH RACK | 362.70 | –3.98 |
| S2 | MH | 361.15 | 346.70 |
| S3 | MH | 374.69 | 367.58 |
| S3.1 | D–W EW | 377.10 | 374.00 |
| S4 | TYPE M, TYPE 4 BOX | 380.85 | 376.26 |
| S5 | TYPE M, TYPE 4 BOX | 385.89 | 379.20 |
| S6 | TYPE M, TYPE 4 BOX | 391.95 | 386.34 |
| S7 | TYPE M, TYPE 4 BOX | 395.95 | 391.22 |
| S8 | TYPE M, TYPE 4 BOX | 398.92 | 394.12 |
| S9 | TYPE M, TYPE 4 BOX | 404.97 | 399.86 |
| T1.1 | D–W EW | 348.75 | 346.50 |
| T2 | TYPE C | 350.74 | 346.77 |
| T2.1 | TYPE C | 353.00 | 347.90 |
| T3 | TYPE C | 354.65 | 349.50 |
| T3.1 | TYPE C | 355.12 | 350.79 |

| STORM STRUCTURE TABLE | | | |
|---|---|---|---|
| NAME | STRUCTURE DETAILS | TG/RIM | INVERT |
| T3.2 | TYPE C | 356.15 | 352.10 |
| T4 | TYPE C | 356.87 | 352.70 |
| T4.1 | TYPE C | 357.58 | 353.70 |
| T4.2 | TYPE C | 358.00 | 354.24 |
| T5 | TYPE M INLET, TYPE 4 BOX | 358.45 | 354.75 |
| T5.1 | TYPE C | 360.14 | 356.89 |
| T5.2 | TYPE C | 360.64 | 357.26 |
| T6 | TYPE C | 359.26 | 355.93 |
| T7 | TYPE C | 361.08 | 357.60 |
| T7.1 | TYPE C | 366.00 | 360.31 |
| T8 | TYPE C | 366.47 | 363.14 |
| T8.1 | TYPE C | 367.89 | 364.50 |
| T8.2 | TYPE C | 368.29 | 365.00 |
| T9 | TYPE M | 370.00 | 364.34 |
| T10 | TYPE M | 375.96 | 372.21 |
| T11 | TYPE M | 380.03 | 376.50 |
| T12 | D–W EW | 382.05 | 378.50 |

| STORM PIPE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| NAME | SIZE | LENGTH | SLOPE | MATL | INV UP | INV DN |
| A1.1 TO A1 | 24" | 16.0' | 0.62% | RCP | 361.10 | 361.00 |
| A3 TO WALL | 36" | 230.5' | 1.95% | RCP | 351.00 | 346.50 |
| A6 TO A1.1 | 24" | 59.3' | 5.32% | RCP | 365.45 | 362.30 |
| A6.1 TO A6 | 15" | 52.9' | 2.66% | RCP | 375.30 | 373.89 |
| A6.2 TO A6.1 | 15" | 57.3' | 2.41% | RCP | 377.41 | 376.03 |
| A6.3 TO A6.2 | 15" | 152.7' | 1.51% | RCP | 379.91 | 377.61 |
| A6.5 TO A6.4 | 15" | 98.8' | 1.00% | RCP | 381.15 | 380.16 |
| A6.7 TO A6.2 | 15" | 98.9' | 0.50% | RCP | 378.15 | 377.66 |
| A7 TO A6 | 24" | 32.9' | 0.61% | RCP | 365.85 | 365.65 |
| A7.1 TO A7 | 15" | 18.1' | 0.83% | RCP | 373.00 | 372.85 |
| A8 TO A7 | 18" | 106.6' | 0.56% | RCP | 366.95 | 366.35 |
| A8.1 TO A8 | 15" | 33.4' | 1.66% | RCP | 369.50 | 368.95 |
| A8.2 TO A8.1 | 15" | 68.4' | 1.94% | RCP | 371.03 | 369.70 |
| A9 TO A8 | 15" | 74.8' | 0.53% | RCP | 367.60 | 367.20 |
| A9.1 TO A9 | 15" | 62.7' | 5.91% | RCP | 372.75 | 369.04 |
| A9.2 TO A9.1 | 15" | 66.0' | 3.43% | RCP | 375.26 | 373.00 |
| A9.3 TO MH A9 | 15" | 30.4' | 0.66% | RCP | 372.17 | 371.97 |
| A10 TO A9 | 15" | 66.6' | 0.53% | RCP | 368.15 | 367.80 |
| A11 to A10 | 15" | 8.7' | 0.58% | RCP | 368.40 | 368.35 |
| A12 TO A11 | 15" | 20.0' | 0.50% | RCP | 368.70 | 368.60 |
| A13 TO A12 | 15" | 7.9' | 0.64% | RCP | 368.95 | 368.90 |

| STORM PIPE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| NAME | SIZE | LENGTH | SLOPE | MATL | INV UP | INV DN |
| B2 TO B1 | 36" | 41.9' | 0.60% | RCP | 361.25 | 361.00 |
| B3 TO B2 | 30" | 23.9' | 0.63% | RCP | 361.60 | 361.45 |
| B3.1 TO B3 | 30" | 91.0' | 0.55% | RCP | 362.30 | 361.80 |
| B5 TO B4.1 | 30" | 106.4' | 8.41% | RCP | 370.94 | 362.00 |
| B5.1 TO B5 | 15" | 52.7' | 9.81% | RCP | 378.52 | 373.35 |
| B5.2 TO B5.1 | 15" | 70.2' | 0.50% | RCP | 379.12 | 378.77 |
| B5.3 TO B5.2 | 15" | 31.5' | 1.59% | RCP | 380.50 | 380.00 |
| B5.4 TO B5.2 | 15" | 91.8' | 1.08% | RCP | 380.75 | 379.76 |
| B5.7 TO B5 | 15" | 21.9' | 1.37% | RCP | 373.30 | 373.00 |
| B6 TO B5 | 30" | 40.4' | 3.23% | RCP | 372.60 | 371.29 |
| B6.1 TO B6 | 15" | 43.9' | 1.37% | RCP | 374.00 | 373.40 |
| B7 TO B6 | 30" | 106.2' | 1.14% | RCP | 374.00 | 372.79 |
| B8 TO B7 | 30" | 92.0' | 1.09% | RCP | 375.20 | 374.20 |
| B8.1 TO B8 | 18" | 77.7' | 0.77% | RCP | 376.00 | 375.40 |
| B9 TO B8 | 24" | 53.1' | 1.51% | RCP | 376.50 | 375.70 |
| B10 TO B9 | 15" | 60.9' | 2.14% | RCP | 375.50 | 374.20 |
| G2 TO G1 | 24" | 74.1' | 0.57% | RCP | 346.50 | 346.08 |
| G4 TO WALL | 24" | 43.3' | 1.16% | RCP | 349.50 | 349.00 |
| G5 TO EX. INLET G1 | 24" | 177.5' | 6.37% | RCP | 346.08 | 357.39 |
| G6 TO G4 | 24" | 127.1' | 4.96% | RCP | 356.00 | 349.70 |
| G6 TO G5 | 24" | 283.2' | 6.62% | RCP | 357.56 | 376.32 |

| STORM PIPE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| NAME | SIZE | LENGTH | SLOPE | MATL | INV UP | INV DN |
| G7 TO G6 | 24" | 166.6' | 7.08% | RCP | 368.00 | 356.20 |
| GE TO EX. PIPE | 24" | 10.2' | 1.00% | RCP | 376.59 | 376.49 |
| Pipe – (91) | 24" | 199.5' | 6.61% | RCP | 378.33 | 391.52 |
| Pipe – (92) | 24" | 241.8' | 7.38% | RCP | 391.95 | 409.79 |
| S2 TO WALL | 30" | 20.9' | 0.96% | HDPE | 346.70 | 346.50 |
| S3 TO S2 | 30" | 225.9' | 5.24% | HDPE | 367.58 | 355.73 |
| S3.1 TO S3 | 36" | 16.4' | 36.68% | HDPE | 374.00 | 368.00 |
| S4 TO S3 | 30" | 110.5' | 7.48% | HDPE | 376.26 | 368.00 |
| S5 TO S4 | 30" | 56.6' | 4.75% | HDPE | 379.20 | 376.51 |
| S6 TO S5 | 30" | 153.1' | 4.50% | HDPE | 386.34 | 379.45 |
| S7 TO S6 | 24" | 152.3' | 2.88% | HDPE | 391.22 | 386.84 |
| S8 TO S7 | 24" | 88.3' | 3.00% | HDPE | 394.12 | 391.47 |
| S9 TO S8 | 18" | 182.8' | 2.90% | HDPE | 399.86 | 394.56 |
| T1.1 TO T1 | 18" | 67.1' | 1.01% | RCP | 346.50 | 345.82 |
| T2 TO T1 | 18" | 69.1' | 1.38% | RCP | 346.77 | 345.82 |
| T2 TO T1 (2) | 18" | 6.5' | 0.00% | RCP | 345.82 | 345.82 |
| T2.1 TO T2 | 18" | 87.8' | 1.06% | RCP | 347.90 | 346.97 |
| T3 TO T2.1 | 18" | 84.9' | 1.62% | RCP | 349.50 | 348.13 |
| T3.1 TO T3 | 18" | 87.4' | 1.19% | RCP | 350.79 | 349.75 |
| T3.2 TO T3.1 | 18" | 84.4' | 1.44% | RCP | 352.10 | 350.89 |
| T4 TO T3.2 | 18" | 57.3' | 0.71% | RCP | 352.70 | 352.30 |

| STORM PIPE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| NAME | SIZE | LENGTH | SLOPE | MATL | INV UP | INV DN |
| T4.2 TO T4.1 | 18" | 73.0' | 1.10% | RCP | 353.70 | 352.90 |
| T4.3 TO T4.2 | 18" | 40.9' | 0.83% | RCP | 354.24 | 353.90 |
| T5 TO T4.3 | 18" | 37.8' | 0.81% | RCP | 354.75 | 354.44 |
| T5.1 TO T5 | 15" | 42.0' | 4.50% | RCP | 356.89 | 355.00 |
| T5.2 TO T5.1 | 15" | 24.1' | 0.50% | RCP | 357.26 | 357.14 |
| T6 TO T5 | 18" | 66.3' | 1.40% | RCP | 355.93 | 355.00 |
| T7 TO T6 | 18" | 86.1' | 1.70% | RCP | 357.60 | 356.13 |
| T7.1 TO T7 | 18" | 132.7' | 1.85% | RCP | 360.31 | 357.85 |
| T8 TO T7 | 18" | 39.9' | 6.58% | RCP | 363.14 | 360.51 |
| T8.1 TO T8 | 18" | 64.7' | 1.79% | RCP | 364.50 | 363.34 |
| T8.2 TO T8.1 | 18" | 24.0' | 1.25% | RCP | 365.00 | 364.70 |
| T9 TO T8 | 18" | 42.2' | 1.07% | HDPE | 364.34 | 363.89 |
| T10 TO T9 | 18" | 100.0' | 6.49% | HDPE | 372.21 | 365.72 |
| T11 TO T10 | 18" | 42.7' | 9.47% | HDPE | 376.50 | 372.46 |
| T12 TO T11 | 18" | 17.4' | 10.03% | HDPE | 378.50 | 376.75 |

## LEGEND

(ORIENTATION & SIZE MAY VARY)

NEW STORM PIPE

NEW ROOF LEADER MANIFOLD

NEW STORM STRUCTURES

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 187 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 811 OR 1-800-242-1776 AT LEAST THREE BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO DESIGNATE THE LOCATION OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
SERIAL #
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# DRAINAGE PLAN

T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

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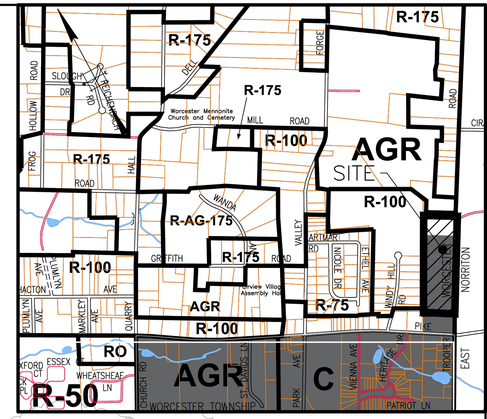
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | DRN |
| SHEET | 12 OF 50 |




LOCATION/ZONING MAP

SCALE: 1"=1,000'

LIMIT OF DISTURBANCE FOR OFF-SITE UTILITY & PAVEMENT RESTORATION ACTIVITIES = 0.18 ACRES

TOTAL PROJECT SITE AREA = 11.86 ACRES

LIMIT OF DISTURBANCE FOR ON-SITE & ROAD IMPROVEMENT ACTIVITIES = 10.71 ACRES

SCREENING BUFFER SUPPLEMENTED BY EXISTING WOODED AREA TO REMAIN

CLEAR SIGHT TRIANGLE

LAWN (TYP)

LIGHTPOLE WITH LUMINAIRE FIXTURE (TYP)

PROVIDE ERNMX-181 SEEDING MIXTURE

PROVIDE ERNMX-126 SEEDING MIXTURE & BASIN PLANTINGS; REFER TO BASIN PLANT SCHEDULE

SPLIT-RAIL FENCE WITH WIRE MESH

EXISTING WOODED AREA TO REMAIN AND PROVIDE SOFTENING BUFFER

4' HIGH BLACK ALUMINUM FENCE

EXISTING ACCESSORY STRUCTURE

SEE NOTE 1

SEE NOTE 1.

GERMANTOWN PIKE

NORTH TROOPER ROAD (A.K.A. S.R. 3002) (30' WIDE R.O.W.) (ASPHALT ROADWAY)

WORCESTER TOWNSHIP

EAST NORRITON TOWNSHIP

## GENERAL LANDSCAPING NOTES:

1. REFER TO LANDSCAPE DETAILS SHEET (37 OF 50) FOR PLANT SCHEDULE AND LANDSCAPE PLANTING DETAILS, NOTES, AND SPECIFICATIONS.

2. SHRUBS PROPOSED IN CLOSE PROXIMITY SHALL BE INSTALLED WITHIN CONTINUOUS MULCH BEDS.

3. MAINTAIN A MINIMUM OF 5 FT HORIZONTAL SEPARATION BETWEEN PROPOSED TREES AND UNDERGROUND UTILITIES. CONTRACTOR TO FIELD VERIFY UNDERGROUND UTILITY LOCATIONS PRIOR TO TREE INSTALLATION. TREES MAY BE SUBJECT TO FIELD RE-LOCATION IN ORDER TO MAINTAIN MINIMUM HORIZONTAL SEPARATION.

## LEGEND

(ORIENTATION & SIZE MAY VARY. REFER TO LANDSCAPE DETAIL SHEETS FOR PLANT SCHEDULE)

SLOPES >10% (WHERE NEW TREES/SHRUBS ARE SHOWN)

40' 20' 0 40' 80'

1" = 40'

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004-LSP.dwg
LAST SAVED: Monday, 02 Feb 2026, 2:51PM
LAST SAVE BY: JGetzendanner

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1-800-242-1776
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

**BARRY G. STINGEL**
REGISTERED LANDSCAPE ARCHITECT

PENNSYLVANIA BARRY G. STINGEL REGISTERED LANDSCAPE ARCHITECT

12/19/2024
REGISTERED LANDSCAPE ARCHITECT
STATE OF PA LICENSE No. LA001345R

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1135 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

PCSM LANDSCAPE PLAN

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www.tandmassociates.com

OFFICES LOCATED IN:
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| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | LSP |
| SHEET | 13 |
| OF | 50 |

**LUMINAIRE SCHEDULE**

| LABEL | QUANTITY | MOUNTING | NOMINAL MOUNTING HEIGHT | DESCRIPTION | CATELOG NUMBER | .IES FILE | LAMP LUMENS | LLF | WATTS PER LUMINAIRE |
|---|---|---|---|---|---|---|---|---|---|
| P4 | 11 | POST-TOP | 12'-0" AFG (9'-0" POLE) | HOLOPHANE LIGHTING (ACUITY BRANDS), PUCL3 UTILITY TAFT SERIES POST-TOP LUMINAIRE FULL CUTOFF LED3, ZERO UP-LIGHT, TYPE 4 | PUCL3-P30-30K-MVOLT-FC4-BK-SK-PCLL-x-CLGL-x-x-x | PUCL3 P30 30K xxxx FC4 CLGL.ies | 6,134 | 0.9 | 58.5 |

*COLOR AND VOLTAGE TO BE SPECIFIED BY OWNER/CONTRACTOR

**POLE**

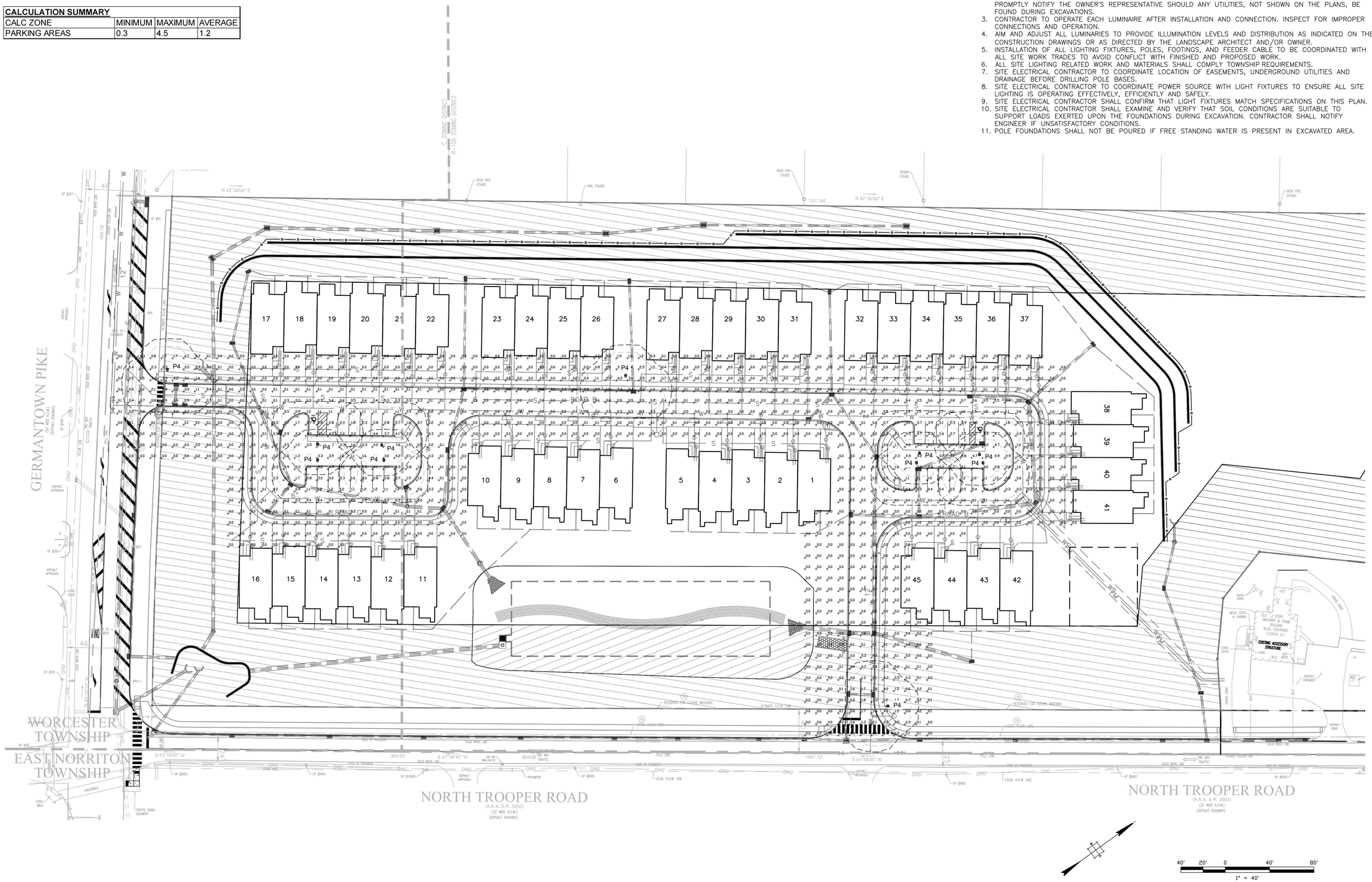
| FIXTURE LABEL | DESCRIPTION | CATALOG NUMBER | FOUNDATION | DETAIL |
|---|---|---|---|---|
| P4 | HOLOPHANE LIGHTING (ACUITY BRANDS) SMA SALEM ALUMINUM POLE, 9'-0" LENGTH | SMA-9'-0"-F4C-09S-C03-BK-GRD-x-AB-26-4-TMP-69 | 3" (SEE DETAIL) | LIGHT POLE & FOUNDATION DETAIL |

**CALCULATION SUMMARY**

| CALC ZONE | MINIMUM | MAXIMUM | AVERAGE |
|---|---|---|---|
| PARKING AREAS | 0.3 | 4.5 | 1.2 |

GENERAL LIGHTING NOTES:

1. PROVIDE CONCRETE BASE FOR LIGHT POLES AT LOCATION INDICATED ON THE PLANS AND IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE.
2. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH THE 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.
3. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.
4. AIM AND ADJUST ALL LUMINARIES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.
5. 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.
6. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY TOWNSHIP REQUIREMENTS.
7. SITE ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
8. SITE ELECTRICAL CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO ENSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.
9. SITE ELECTRICAL CONTRACTOR SHALL CONFIRM THAT LIGHT FIXTURES MATCH SPECIFICATIONS ON THIS PLAN.
10. 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 IF UNSATISFACTORY CONDITIONS.
11. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.





PROJECT INFORMATION:
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FILE NAME: WDEV00004_LTP.dwg
PLOT DATE: Monday, 9 Feb 2026, 1:37AM
LAST SAVE BY: JGetzendanner

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SERIAL NO.
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|


CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464


12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1135 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

LIGHTING PLAN


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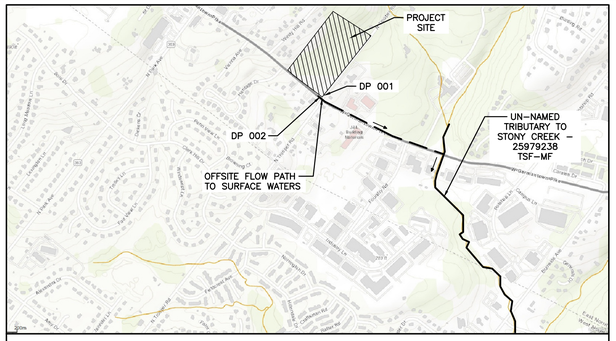
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | LTP |
| SHEET | 14 OF 50 |




LOCATION MAP – WORCESTER PA

SCALE: 1"=1200'

## LEGEND

(ORIENTATION & SIZE MAY VARY)

- TOTAL PROJECT SITE BOUNDARY
- LOD — LIMIT OF DISTURBANCE
- COMPOST FILTER SOCK
- TEMPORARY GRADING
- BMP DRAINAGE AREA
- CtA / CtB — SOIL TYPE BOUNDARY
- SWALE DRAINAGE AREA
- TEMPORARY CONSTRUCTION FENCING
- TREE PROTECTION FENCING
- TEMPORARY SLOPE PIPE
- TEMPORARY BAFFLE
- DP 001 — DISCHARGE POINT
- STOCKPILE
- TEMPORARY ASPHALT BERM
- ROCK FILTER OUTLET
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET NAG-75 SLOPE PROTECTION
- EROSION CONTROL BLANKET SC-150 SWALE LINING
- EROSION CONTROL BLANKET C-350 STORMWATER COLLECTION AREA & BASIN SPILLWAY LINING
- RIP RAP SWALE LINING
- IP — INLET PROTECTION
- CONCRETE WASHOUT
- STONE FILTER BERM
- SKIMMER
- CLEANOUT STAKE
- MOUNTABLE BERM

## USFWS AVOIDANCE MEASURE

PRIOR TO THE START OF EARTH DISTURBANCE ACTIVITIES, PLEASE NOTE THE FOLLOWING AVOIDANCE MEASURE:

THE PROJECT IS LOCATED IN THE VICINITY OF THE NORTHERN LONG-EARNED BAT SPRING STAGING/FALL SWARMING HABITAT. TO ENSURE TAKE IS NOT REASONABLY CERTAIN TO OCCUR, DO NOT CONDUCT TREE REMOVAL FROM MAY 15 TO AUGUST 15.

LIMIT OF SWALE S4 FOR OFF-SITE DRAINAGE & PAVEMENT RESTORATION ACTIVITIES = 0.18 ACRES

TOTAL PROJECT SITE AREA = 11.86 ACRES

LIMIT OF DISTURBANCE FOR ON-SITE & ROAD IMPROVEMENT ACTIVITIES = 10.71 ACRES

SWALE S3.1 DRAINAGE AREA

SWALE S4

SWALE S5

SWALE S6

SWALE S7

SWALE S8

SWALE S9

SWALE T12

SWALE T10 DRAINAGE AREA

SWALE T10

SWALE T9

TREE PROTECTION FENCING (TYP)

PROPOSED RETAINING WALL

ROCK CONSTRUCTION ENTRANCE 2

ROCK CONSTRUCTION ENTRANCE 1

SEE NOTE 1.

SUMP PUMP DISCHARGE TO ROOF LEADER MANIFOLD (TYP.)

6" SDR-35 PVC MANIFOLD FOR ROOF LEADERS (TYP.)

PROP. TEMPORARY CONSTRUCTION FENCE

CONCRETE WASHOUT (TYP.)

COMPOST SOCK DIVERSION 2 18" SOCK

COMPOST SOCK TRAP 2

COMPOST SOCK TRAP 1

COMPOST SOCK DIVERSION 1 12" SOCK

TEMPORARY SOIL STOCKPILE

TEMPORARY SLOPE PIPE

A1.1 TEMPORARY RIPRAP

CLEAN OUT STAKE

SEDIMENT BASIN 1

SKIMMER

TEMPORARY BAFFLE

B2 TEMPORARY RIPRAP

ANTI-SEEP COLLARS

PROP. CONCRETE CRADLE

BASIN SPILLWAY LINING

MOUNTABLE BERM TO DIVERT FLOW TO COMPOST SOCK TR7

TEMPORARY ASPHALT BERM (TYP.)

TEMPORARY SOIL STOCKPILE

STORMWATER COLLECTION AREA SPILLWAY LINING

ROCK FILTER OUTLET

DP 001

DP 002

TW:385.00 BW:380.00

TW:381.00 BW:378.70

TW:391.00 BW:389.00

TW:400.00 BW:395.00

TW:404.56 BW:402.00

TW:398.00 BW:393.00

TW:390.00 BW:385.00

TW:407.05 BW:401.00

TW:407.00 BW:403.00

TW:395.00 BW:390.00

TW:387.00 BW:382.00

TW:400.00 BW:403.00

TW:394.00 BW:389.00

TW:386.00 BW:381.00

TW:356.27 BW:347.00

TW:356.93 BW:347.00

TW:357.20 BW:347.00

TW:354.26 BW:348.88

TW:351.81 BW:351.26

TW:356.10 BW:347.00

TW:356.64 BW:347.00

TW:356.09 BW:348.00

TW:352.00 BW:351.55

NOTE 1:
LIMIT OF DISTURBANCE FOR COMPOST SOCK TRAPS = 0.34 ACRES. THIS AREA IS NOT INCLUDED FOR PADEP/ TOWNSHIP STORMWATER PEAK RATE REDUCTION REQUIREMENTS AS IT'S JUST FOR THE INSTALLATION OF THE COMPOST DIVERSION SOCK AND THE SOCK TRAP AND NO EARTH MOVING/REGRADING WILL OCCUR WHICH WOULD CHANGE THE EXISTING RUNOFF CONDITION. NO EARTH DISTURBANCE IS PROPOSED, AND A CONSTRUCTION FENCE IS PROPOSED TO DEMARCATE THE ACTUAL LIMIT OF EARTH MOVING.

40' 20' 0 40' 80'
1" = 40'

GERMANTOWN PIKE

NORTH TROOPER ROAD (A.K.A. S.R. 3002)

WORCESTER TOWNSHIP

EAST NORRITON TOWNSHIP

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_ENS.dwg
LAST EDIT: 29 JAN 2026, 12:04PM
LAST SAVE BY: JKelley

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PA ONE CALL SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

EROSION AND SEDIMENT CONTROL PLAN – A

T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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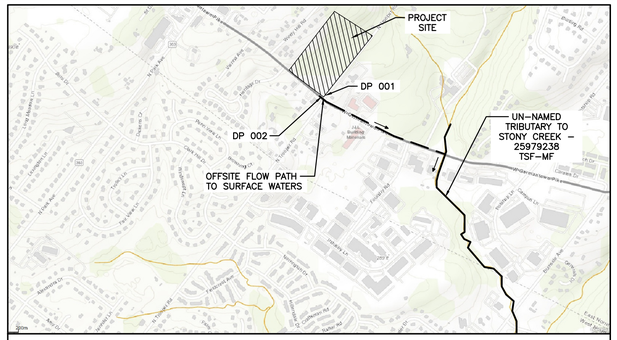
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |

DRAWING ENS-A

SHEET 15 OF 50




LOCATION MAP - WORCESTER PA

SCALE: 1"=1200'

NOTE 1:
LIMIT OF DISTURBANCE FOR COMPOST SOCK TRAPS = 0.34 ACRES. THIS AREA IS NOT INCLUDED FOR PADEP/ TOWNSHIP STORMWATER PEAK RATE REDUCTION REQUIREMENTS AS IT'S JUST FOR THE INSTALLATION OF THE COMPOST DIVERSION SOCK AND THE SOCK TRAP AND NO EARTH MOVING/REGRADING WILL OCCUR WHICH WOULD CHANGE THE EXISTING RUNOFF CONDITION. NO EARTH DISTURBANCE IS PROPOSED, AND A CONSTRUCTION FENCE IS PROPOSED TO DEMARCATE THE ACTUAL LIMIT OF EARTH MOVING.

## USFWS AVOIDANCE MEASURE

PRIOR TO THE START OF EARTH DISTURBANCE ACTIVITIES, PLEASE NOTE THE FOLLOWING AVOIDANCE MEASURE:

THE PROJECT IS LOCATED IN THE VICINITY OF THE NORTHERN LONG-EARNED BAT SPRING STAGING/FALL SWARMING HABITAT. TO ENSURE TAKE IS NOT REASONABLY CERTAIN TO OCCUR, DO NOT CONDUCT TREE REMOVAL FROM MAY 15 TO AUGUST 15.

## LEGEND

(ORIENTATION & SIZE MAY VARY)

- TOTAL PROJECT SITE BOUNDARY
- LOD — LIMIT OF DISTURBANCE
- COMPOST FILTER SOCK
- TEMPORARY GRADING
- BMP DRAINAGE AREA
- CtA / CtB — SOIL TYPE BOUNDARY
- SWALE DRAINAGE AREA
- TREE PROTECTION FENCING
- TEMPORARY CONSTRUCTION FENCING
- TEMPORARY SLOPE PIPE
- TEMPORARY BAFFLE
- DP 001 — DISCHARGE POINT
- STOCKPILE
- TEMPORARY ASPHALT BERM
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET NAG-75 SLOPE PROTECTION
- EROSION CONTROL BLANKET SC-150 SWALE LINING
- EROSION CONTROL BLANKET C-350 STORMWATER COLLECTION AREA & BASIN SPILLWAY LINING
- RIP RAP SWALE LINING
- IP — INLET PROTECTION
- CONCRETE WASHOUT
- STONE FILTER BERM
- SKIMMER
- CLEANOUT STAKE
- TEMPORARY ASPHALT BERM
- ROCK FILTER OUTLET
- MOUNTABLE BERM

60' 30' 0 60' 120'

1" = 60'

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_ENS.dwg
LAST SAVE DATE: Jan 23, 2026, 12:04PM
LAST SAVE BY: JKelley

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1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

EROSION AND SEDIMENT CONTROL PLAN - DRAINAGE AREA PLAN

T&M AND ASSOCIATES
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1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

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| | |
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| DESIGNED BY JPK/CKS/CMR/ROP/ZHR | DRAWING ENS-B |
| CHECKED BY BGS/ZHR | |
| DRAWN BY SCR/CKS/RAM | SHEET 16 |
| DATE 1/23/2026 | |
| SCALE AS NOTED | OF 50 |
| PROJ. NO. WDEV00004 | |

## LEGEND

(ORIENTATION & SIZE MAY VARY)

- SOIL TYPE BOUNDARY
- RhC — SOIL TYPE SYMBOL
- STEEP SLOPES (15%–25%)
- STEEP SLOPES (>25%)

## EXISTING WOODED AREA GROWTH COMMUNITIES

MEADOW GROWTH

1.0 ACRE SAMPLE AREA YIELDED 3 TREES GREATER THAN OR EQUAL TO 6" DBH.

3.3 ACRE AREA YIELD 10 TREES GREATER THAN OR EQUAL TO 6" DBH.

YOUNG GROWTH

WOODED AREA IS PRIMARILY DECIDUOUS VEGETATION WITH HEAVY, INVASIVE UNDERSTORY GROWTH AND MANY DEAD, DYING, DISEASED, AND/OR FALLEN TREES.

1.0 ACRE SAMPLE AREA YIELDED 17 TREES GREATER THAN OR EQUAL TO 6" DBH.

3.9 ACRE AREA YIELDS 67 TOTAL TREES GREATER THAN OR EQUAL TO 6" DBH.

MEDIUM GROWTH

WOODED AREA IS PRIMARILY DECIDUOUS VEGETATION WITH HEAVY, INVASIVE UNDERSTORY GROWTH AND MANY DEAD, DYING, DISEASED, AND/OR FALLEN TREES.

0.9 ACRE SAMPLE AREA (TOTAL AREA TO BE DISTURBED WITHIN MEDIUM GROWTH AREA) YIELDED 21 TREES GREATER THAN OR EQUAL TO 6" DBH.

3.21 ACRE AREA YIELDS 75 TOTAL TREES GREATER THAN OR EQUAL TO 6" DBH.

CALCULATED TOTAL NO. OF EXISTING TREES AND TREES TO BE REMOVED

A TOTAL OF 152 TREES GREATER THAN OR EQUAL TO 6" DBH EXIST ON THE SUBJECT PARCEL.

110 EXISTING TREES GREATER THAN OR EQUAL TO 6" DBH ARE TO BE REMOVED AS PART OF THE PROPOSED DEVELOPMENT AND ASSOCIATED IMPROVEMENTS. SEE THE REPLACEMENT CALCULATION ON SHEET 38.

100' 50' 0 100' 200'

1" = 100'

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004A\Plans\
FILE NAME: WDV00004_NR.dwg
LAST PLOT: Jan 22, 2026, 8:33AM
LAST SAVE BY: Jgetzendanner

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1-800-242-1776
SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

NATURAL RESOURCES PROTECTION PLAN

T&M AND
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
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| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | NR |
| SHEET | 17 OF 50 |

## LEGEND

(ORIENTATION & SIZE MAY VARY)

- TOTAL PROJECT SITE BOUNDARY
- LOD — LIMIT OF DISTURBANCE
- BASIN DRAINAGE AREA
- TP-4 — SOIL TEST PIT LOCATION

## USFWS AVOIDANCE MEASURE

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## NOTE

ALL PROPOSED UTILITIES ARE TO BE INSTALLED UNDERGROUND.




LOCATION MAP – WORCESTER PA

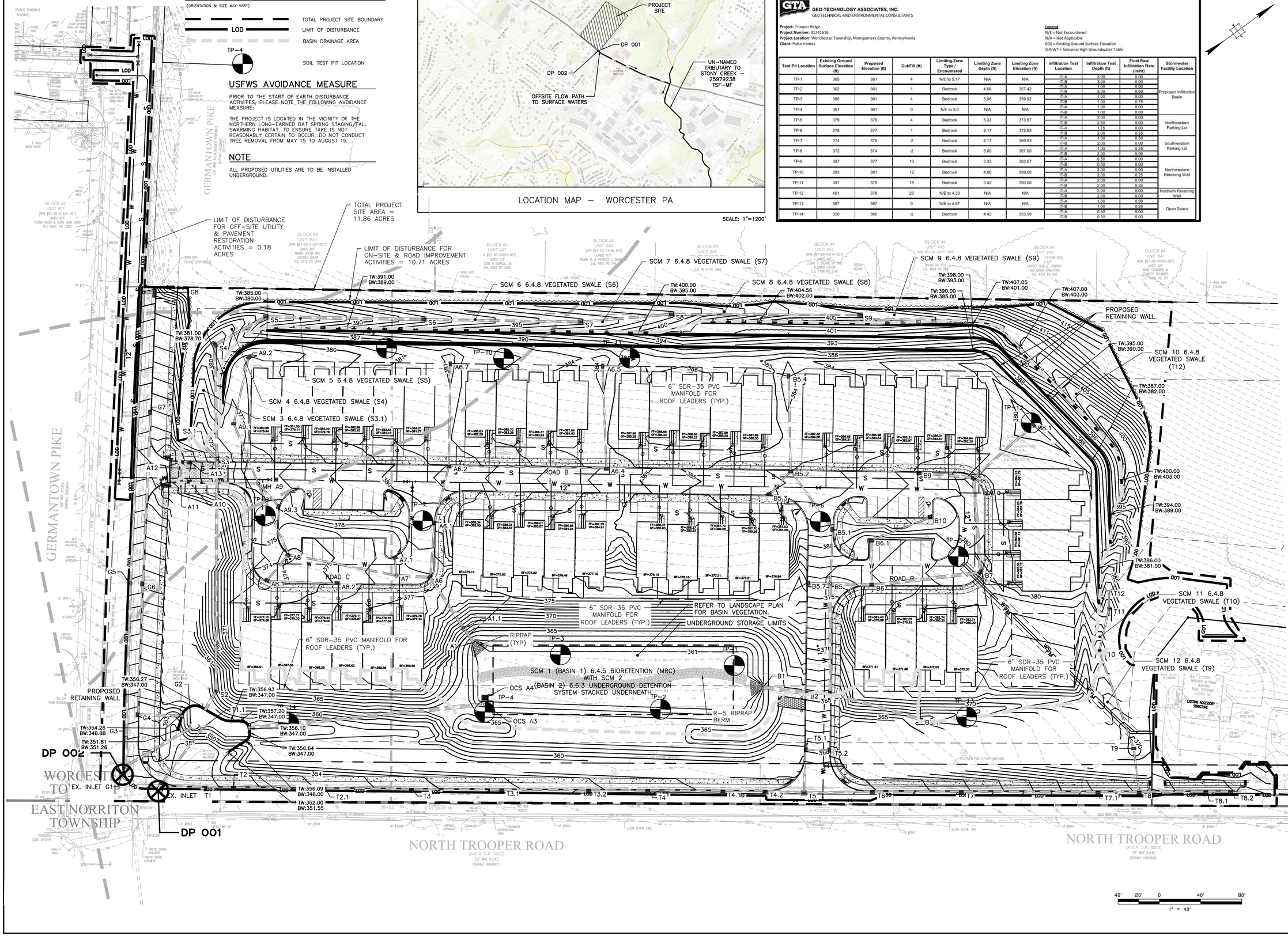
SCALE: 1"=1200'

**GEO-TECHNOLOGY ASSOCIATES, INC.**
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

**Project:** Trooper Ridge
**Project Number:** 31241616
**Project Location:** Worchester Township, Montgomery County, Pennsylvania
**Client:** Pulte Homes

**Legend**
N/E = Not Encountered
N/A = Not Applicable
EGS = Existing Ground Surface Elevation
SHGWT = Seasonal High Groundwater Table

| Test Pit Location | Existing Ground Surface Elevation (ft) | Proposed Elevation (ft) | Cut/Fill (ft) | Limiting Zone Type / Encountered | Limiting Zone Depth (ft) | Limiting Zone Elevation (ft) | Infiltration Test Location | Infiltration Test Depth (ft) | Final Raw Infiltration Rate (in/hr) | Stormwater Facility Location |
|---|---|---|---|---|---|---|---|---|---|---|
| TP-1 | 365 | 361 | 4 | N/E to 5.17 | N/A | N/A | IT-A | 3.00 | 0.00 | Proposed Infiltration Basin |
| | | | | | | | IT-B | 3.00 | 0.00 | |
| TP-2 | 362 | 361 | 1 | Bedrock | 4.58 | 357.42 | IT-A | 1.00 | 0.00 | |
| | | | | | | | IT-B | 3.00 | 0.50 | |
| TP-3 | 365 | 361 | 4 | Bedrock | 5.08 | 359.92 | IT-A | 1.00 | 0.00 | |
| | | | | | | | IT-B | 1.00 | 0.75 | |
| TP-4 | 361 | 361 | 0 | N/E to 5.0 | N/A | N/A | IT-A | 1.00 | 0.00 | |
| | | | | | | | IT-B | 1.00 | 0.00 | |
| TP-5 | 379 | 375 | 4 | Bedrock | 5.33 | 373.67 | IT-A | 2.00 | 0.00 | Northeastern Parking Lot |
| | | | | | | | IT-B | 2.50 | 0.00 | |
| TP-6 | 378 | 377 | 1 | Bedrock | 5.17 | 372.83 | IT-A | 1.75 | 0.00 | |
| | | | | | | | IT-B | 2.00 | 0.25 | |
| TP-7 | 374 | 376 | -2 | Bedrock | 4.17 | 369.83 | IT-A | 1.00 | 0.50 | Southwestern Parking Lot |
| | | | | | | | IT-B | 2.00 | 0.00 | |
| TP-8 | 372 | 374 | -2 | Bedrock | 5.00 | 367.00 | IT-A | 1.00 | 0.25 | |
| | | | | | | | IT-B | 2.00 | 0.00 | |
| TP-9 | 387 | 377 | 10 | Bedrock | 3.33 | 383.67 | IT-A | 0.50 | 0.00 | Northwestern Retaining Wall |
| | | | | | | | IT-B | 0.50 | 0.00 | |
| TP-10 | 393 | 381 | 12 | Bedrock | 4.00 | 389.00 | IT-A | 2.00 | 0.00 | |
| | | | | | | | IT-B | 2.00 | 0.25 | |
| TP-11 | 397 | 379 | 18 | Bedrock | 3.42 | 393.58 | IT-A | 2.00 | 0.00 | |
| | | | | | | | IT-B | 2.00 | 0.25 | |
| TP-12 | 401 | 378 | 23 | N/E to 4.33 | N/A | N/A | IT-A | 2.00 | 0.00 | Northern Retaining Wall |
| | | | | | | | IT-B | 2.00 | 0.00 | |
| TP-13 | 367 | 367 | 0 | N/E to 4.67 | N/A | N/A | IT-A | 1.00 | 0.50 | Open Space |
| | | | | | | | IT-B | 1.00 | 0.25 | |
| TP-14 | 358 | 360 | -2 | Bedrock | 4.42 | 353.58 | IT-A | 0.50 | 0.00 | |
| | | | | | | | IT-B | 0.50 | 0.00 | |





PROJECT INFORMATION:
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FILE NAME: WDEV00004_PCSM.dwg
LAST PLOT: 23 Jan 2026, 12:06PM
LAST SAVE BY: JKelley

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SERIAL #: 20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
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**CHRISTOPHER W. JENSEN, P.E.**
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464


COMMERCE PURSUIT CAPITAL

**TROOPER RIDGE SUBDIVISION**
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

**POST CONSTRUCTION STORMWATER MANAGEMENT PLAN**


T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

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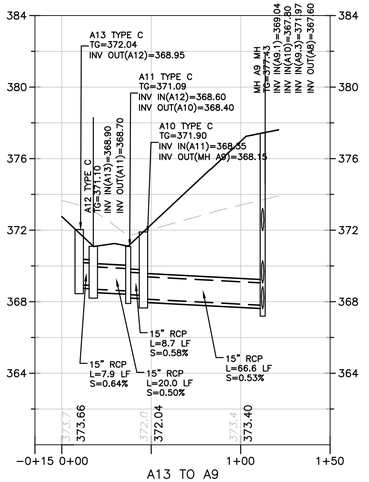
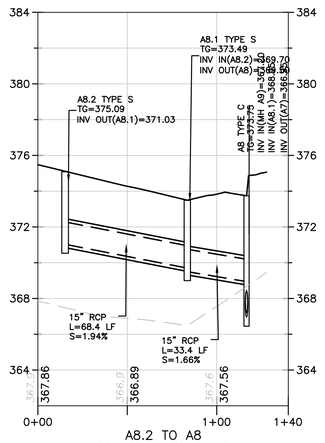
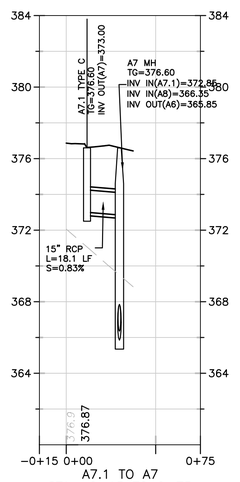
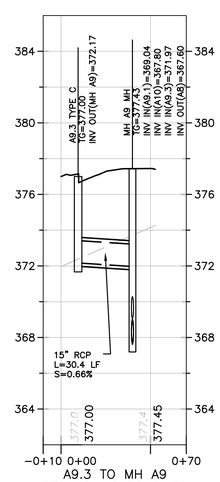
| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PCSM |
| SHEET | 18 |
| OF | 50 |

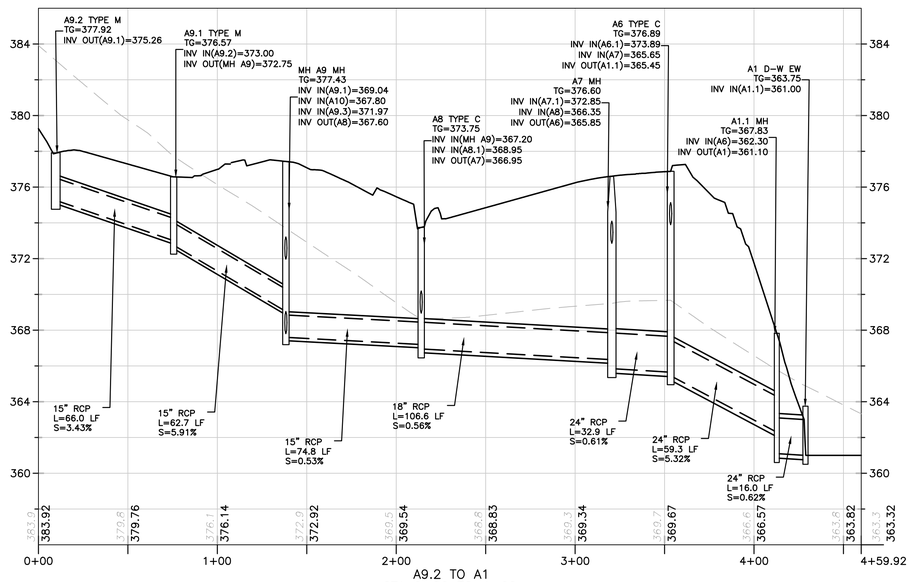
40' 20' 0 40' 80'
1" = 40'

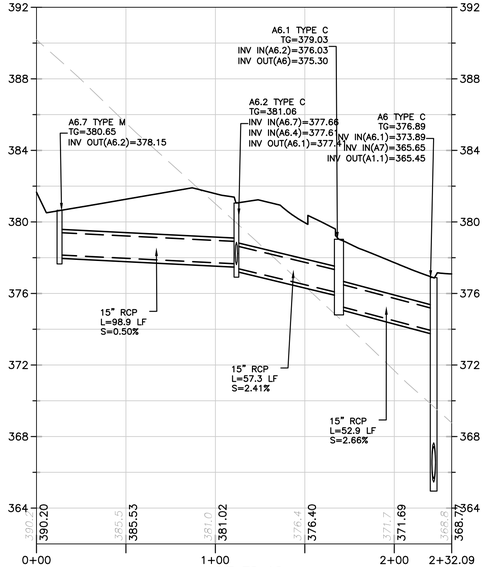


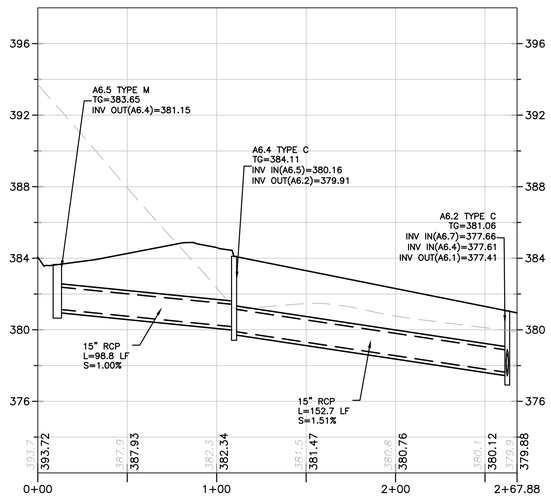



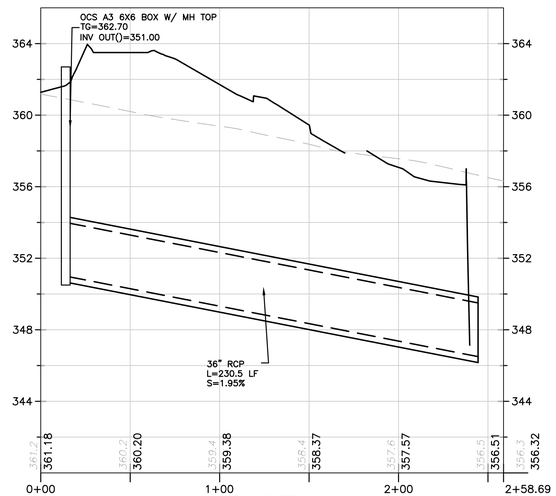




LEGEND

EXISTING GRADE

FINISHED GRADE

GRAPHIC SCALE

40' 20' 0 40' 80'

(IN FEET)

Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE

4' 2' 0 4' 8'

(IN FEET)

Vertical: 1 inch = 4 ft.

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FILE NAME: WDEV00004_PRF.dwg
LAST SAVED: Tue, 04 Nov 2025, 5:03PM
LAST SAVE BY: SEates

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 811 OR 1-800-242-1776 FOR THE LOCATION OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# STORM PROFILE – 1

T&M AND ASSOCIATES
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1700 MARKET STREET, SUITE 3110
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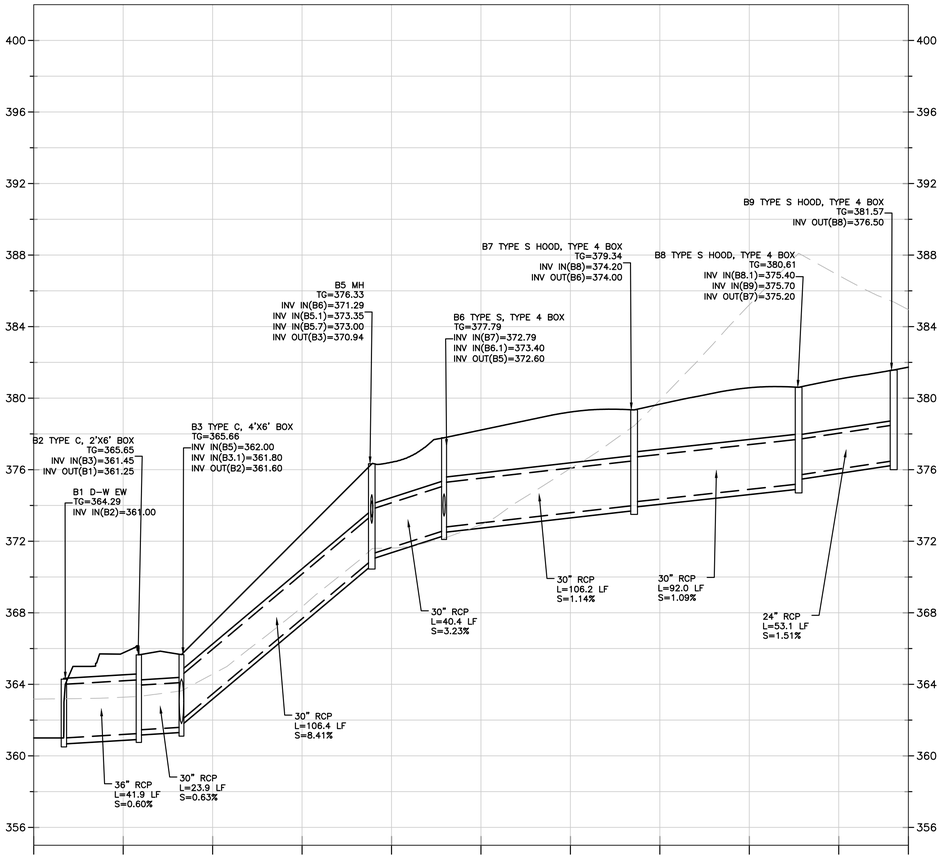
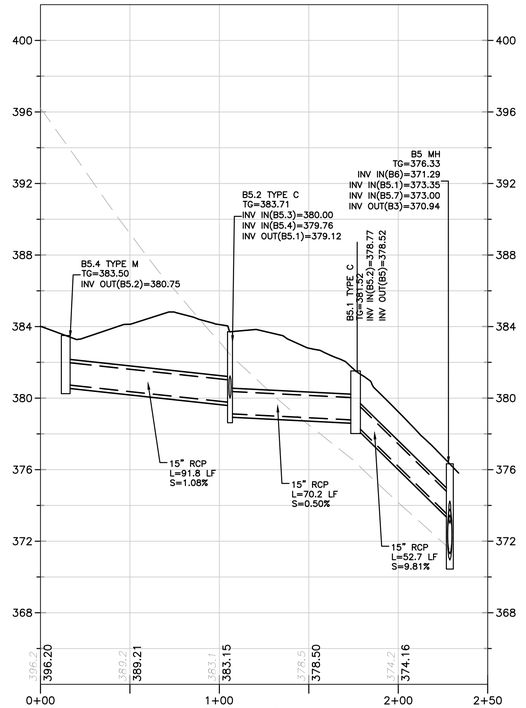
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

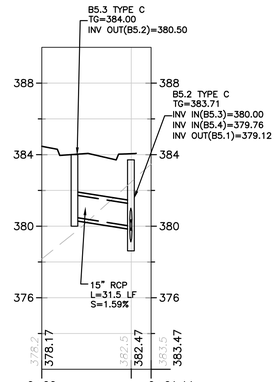
| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PRF-1 |
| SHEET | 19 OF 50 |



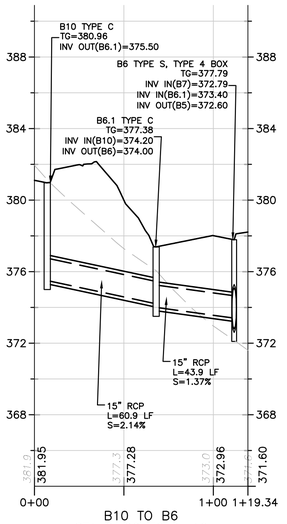

B9 TO B1
STA 0+00 TO 4+89



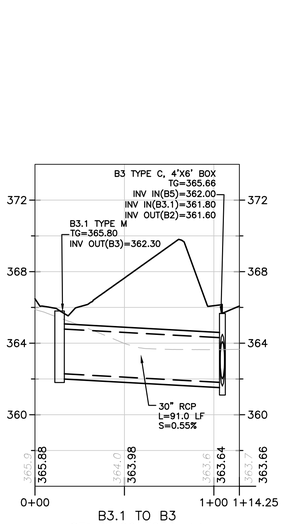

B5.2 TO B5
STA 0+00 TO 2+50



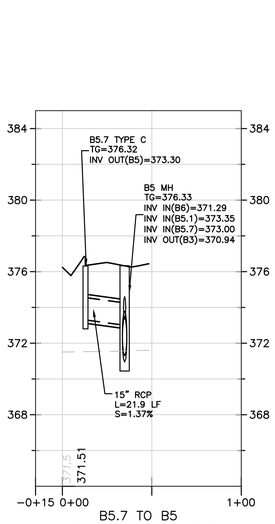

B5.3 TO B5.2
STA 0+00 TO 0+61



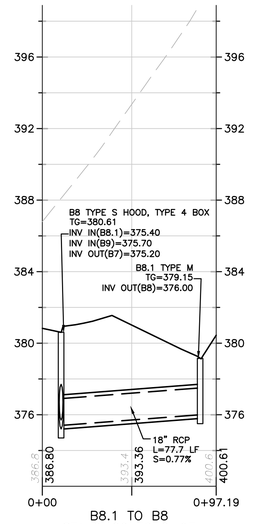

B10 TO B6
STA 0+00 TO 1+19



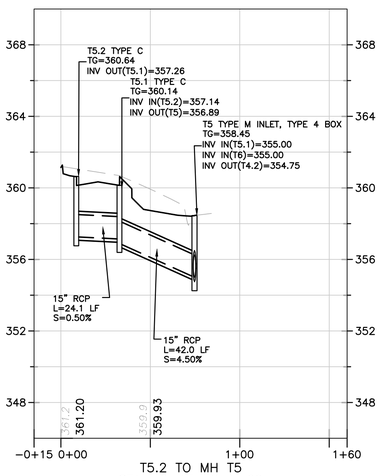

B3.1 TO B3
STA 0+00 TO 1+14




B5.7 TO B5
STA −0+15 TO 1+00




B8.1 TO B8
STA 0+00 TO 0+97




T5.2 TO MH T5
STA −0+15 TO 1+60

LEGEND

EXISTING GRADE

FINISHED GRADE

GRAPHIC SCALE

40' 20' 0 40' 80'

(IN FEET)

Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE

4' 2' 0 4' 8'

(IN FEET)

Vertical: 1 inch = 4 ft.

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_PRF.dwg
LAST SAVED: 23 Dec 2025, 1:14:04 PM
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SERIAL NUMBER
20243771817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE076464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

STORM PROFILE–2

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
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OFFICES LOCATED IN:
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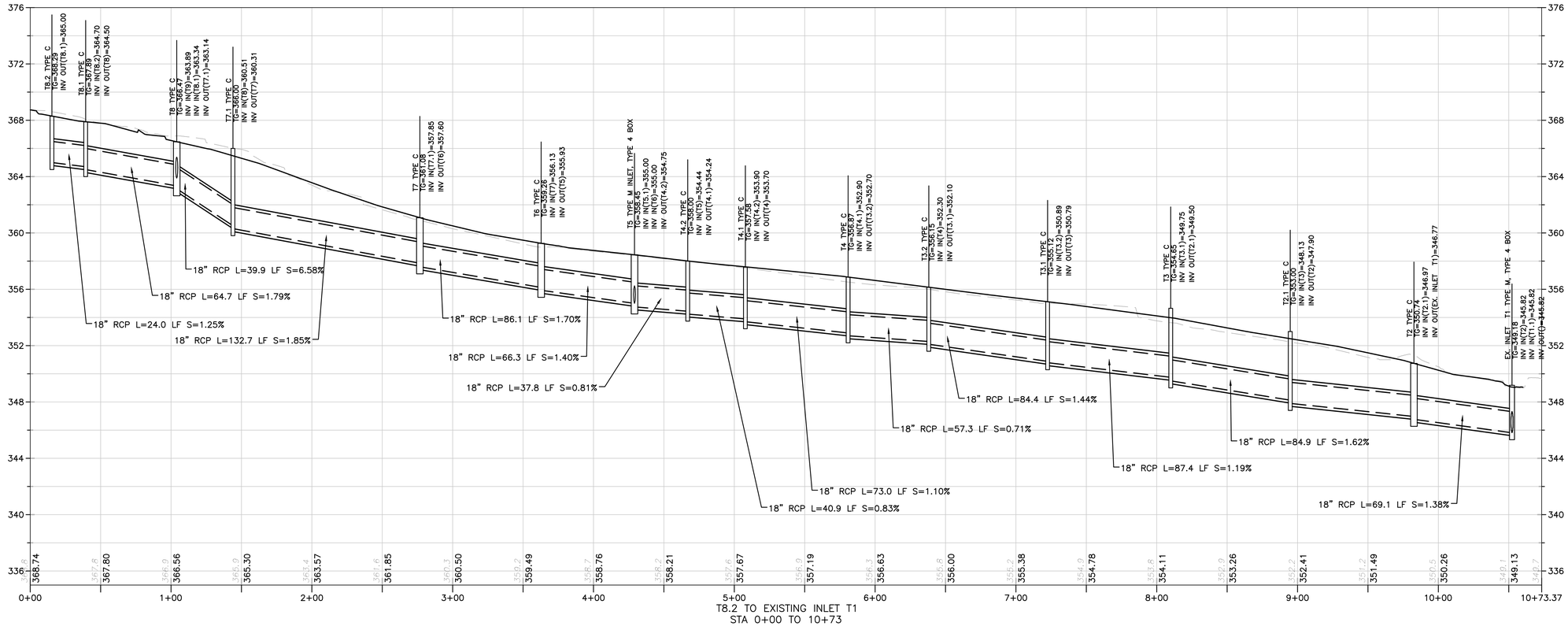
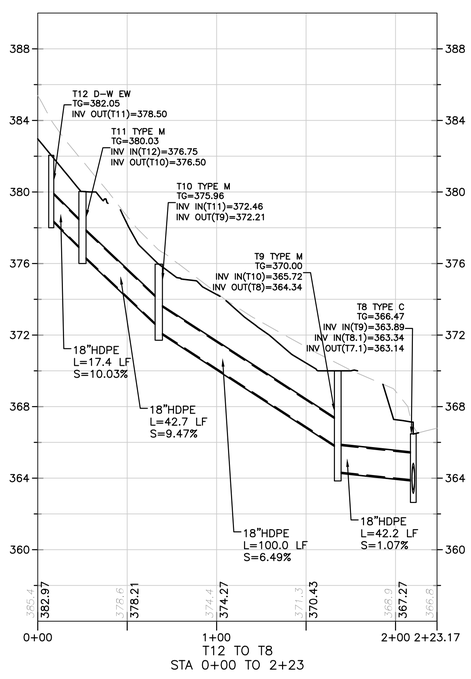
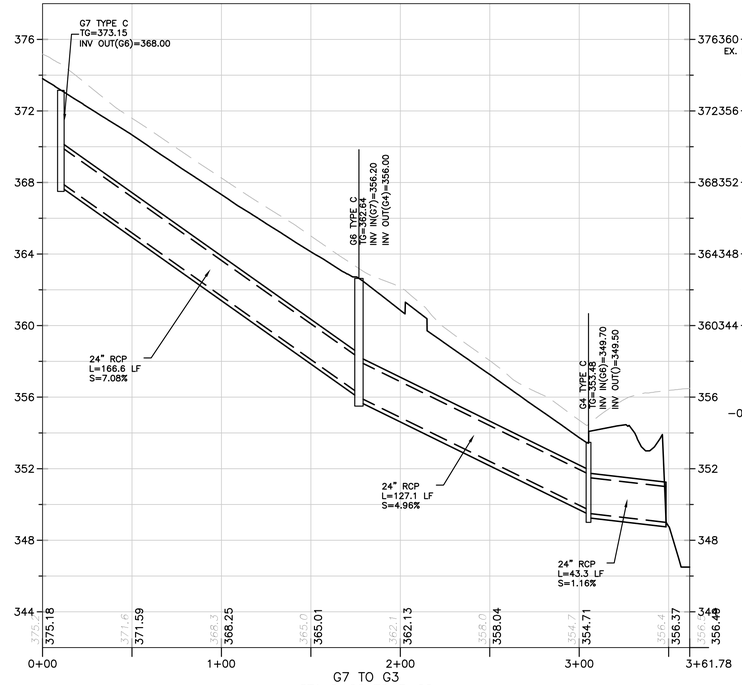
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PRF-2 |
| SHEET | 20 |
| OF | 50 |



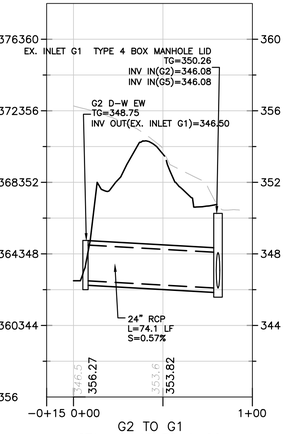

T8.2 TO EXISTING INLET T1
STA 0+00 TO 10+73



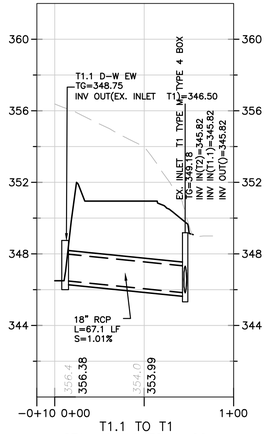

T12 TO T8
STA 0+00 TO 2+23




G7 TO G3
STA 0+00 TO 3+62




G2 TO G1
STA −0+15 TO 1+00




T1.1 TO T1
STA −0+10 TO 1+00

LEGEND

EXISTING GRADE

FINISHED GRADE

GRAPHIC SCALE

40' 20' 0 40' 80'

(IN FEET)

Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE

4' 2' 0 4' 8'

(IN FEET)

Vertical: 1 inch = 4 ft.

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_PRF.dwg
LAST PLOTTED: 04 Nov 2025, 5:03PM
LAST SAVE BY: SEstes

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1-800-242-1776
20243711817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

# TROOPER RIDGE SUBDIVISION

1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# STORM PROFILE – 3

YOUR GOALS. OUR MISSION.
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TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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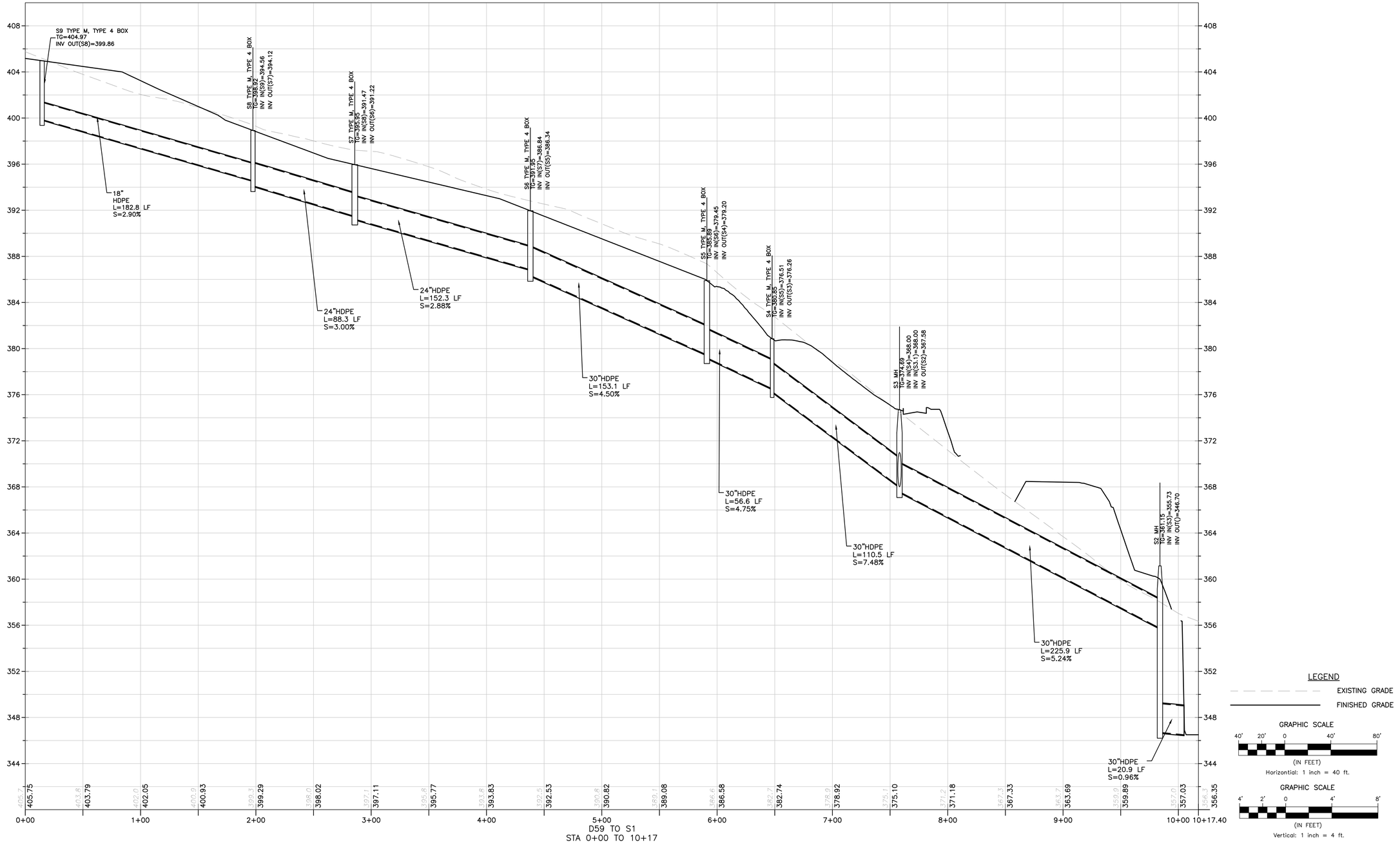
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PRF-3 |
| SHEET | 21 |
| OF | 50 |




PROJECT INFORMATION:
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FILE NAME: WDEV00004_PRF.dwg
LAST PLOTTED: 04 Nov 2025, 5:03PM
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1-800-242-1776
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

STORM PROFILE – 4

T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
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FAX 215-627-3459

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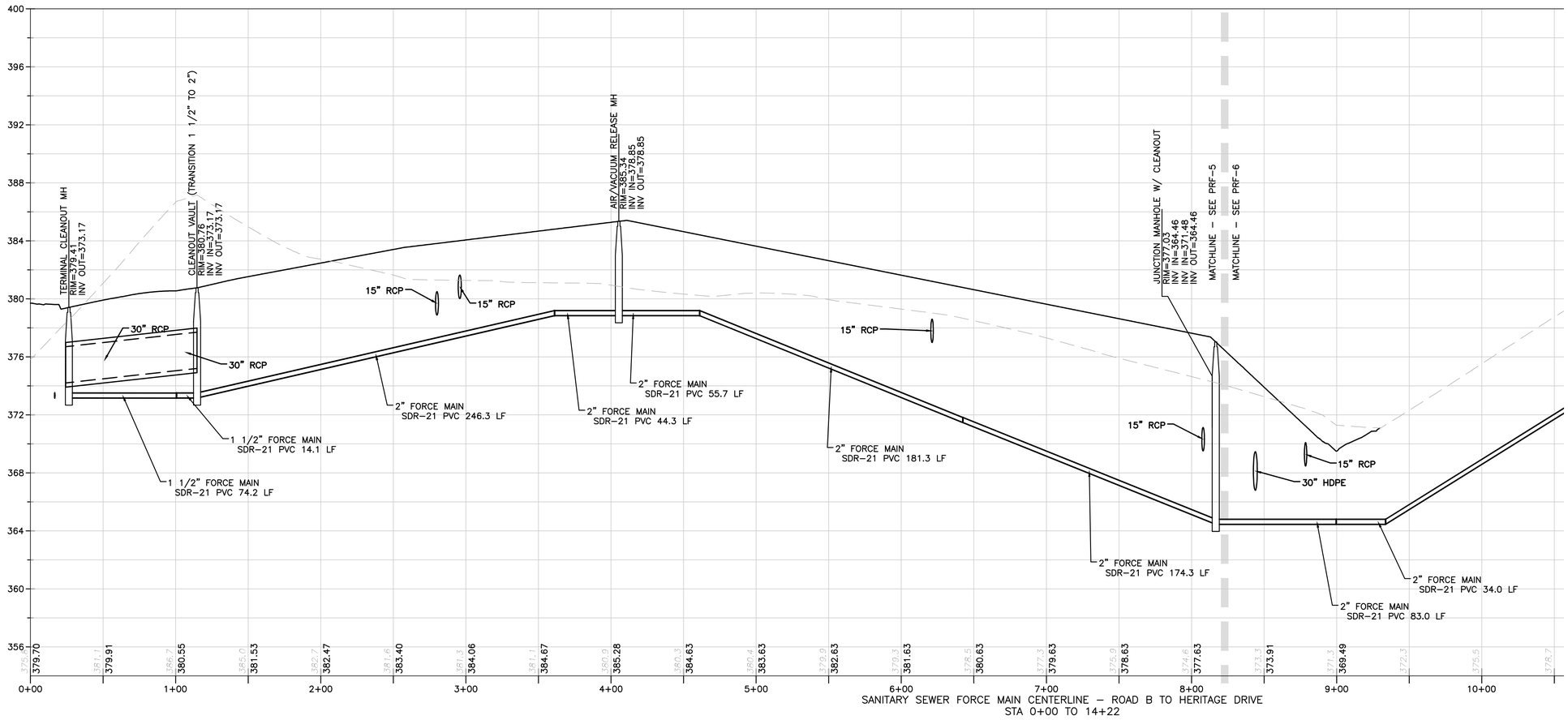
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PRF-4 |
| SHEET | 22 |
| OF | 50 |




SANITARY SEWER FORCE MAIN CENTERLINE – ROAD B TO HERITAGE DRIVE
STA 0+00 TO 14+22

GRAPHIC SCALE
40' 20' 0 40' 80'
(IN FEET)
Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE
4' 2' 0 4' 8'
(IN FEET)
Vertical: 1 inch = 4 ft.

LEGEND
EXISTING GRADE
FINISHED GRADE

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACTNESS, COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 811 OR 1-800-242-1776 AT LEAST THREE BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS PRIOR TO EXCAVATION, DRILLING OR BLASTING TO HAVE UNDERGROUND UTILITIES MARKED.
SERIAL NUMBER
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|


CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464


COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1135 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

SANITARY PROFILE–5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1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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| | |
|---|---|
| DESIGNED BY JPK/CKS/CMR/ROP/ZHR | DRAWING PRF–5 |
| CHECKED BY BGS/ZHR | |
| DRAWN BY SCR/CKS/RAM | SHEET 23 |
| DATE 1/23/2026 | OF 50 |
| SCALE AS NOTED | |
| PROJ. NO. WDEV00004 | |


PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDV00004_PRF.dwg
LAST SAVED: 04 Nov 2025, 5:03PM
LAST PLOTTED: 04 Nov 2025, 5:03PM
LAST SAVE BY: SSteles

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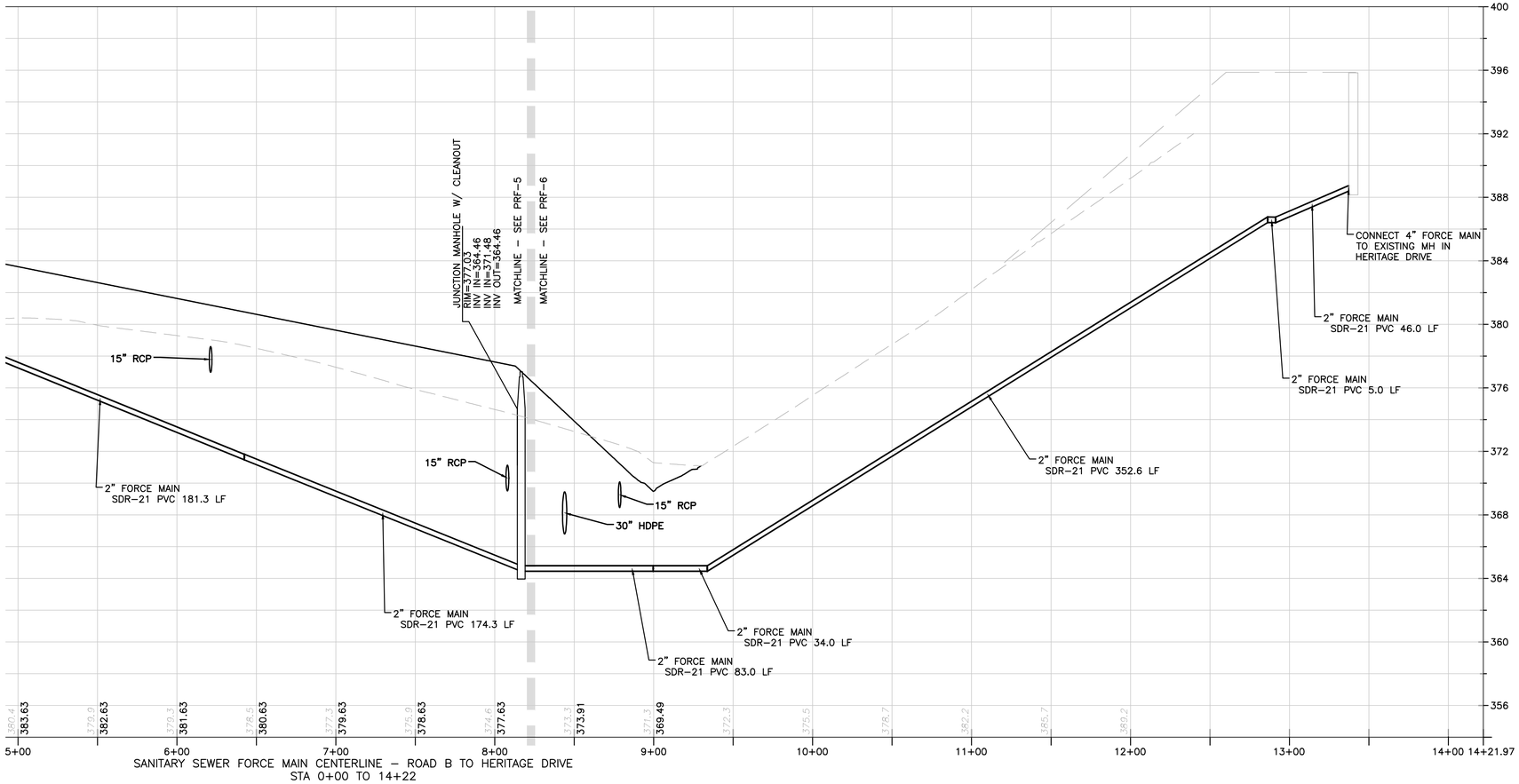
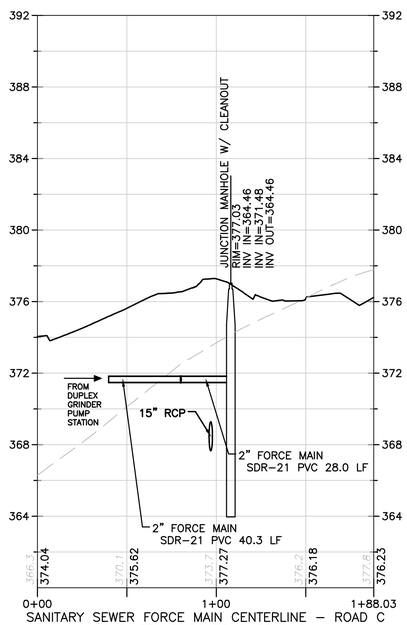



SANITARY SEWER FORCE MAIN CENTERLINE – ROAD B TO HERITAGE DRIVE
STA 0+00 TO 14+22




SANITARY SEWER FORCE MAIN CENTERLINE – ROAD C
STA 0+00 TO 1+88

GRAPHIC SCALE
40' 20' 0 40' 80'
(IN FEET)
Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE
4' 2' 0 4' 8'
(IN FEET)
Vertical: 1 inch = 4 ft.

LEGEND
EXISTING GRADE
FINISHED GRADE

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 811 OR 1-800-242-1776 AT LEAST THREE BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS PRIOR TO START OF WORK.
PA ONE CALL SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|


CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER


COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

SANITARY PROFILE–6


T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PRF-6 |
| SHEET | 24 OF 50 |


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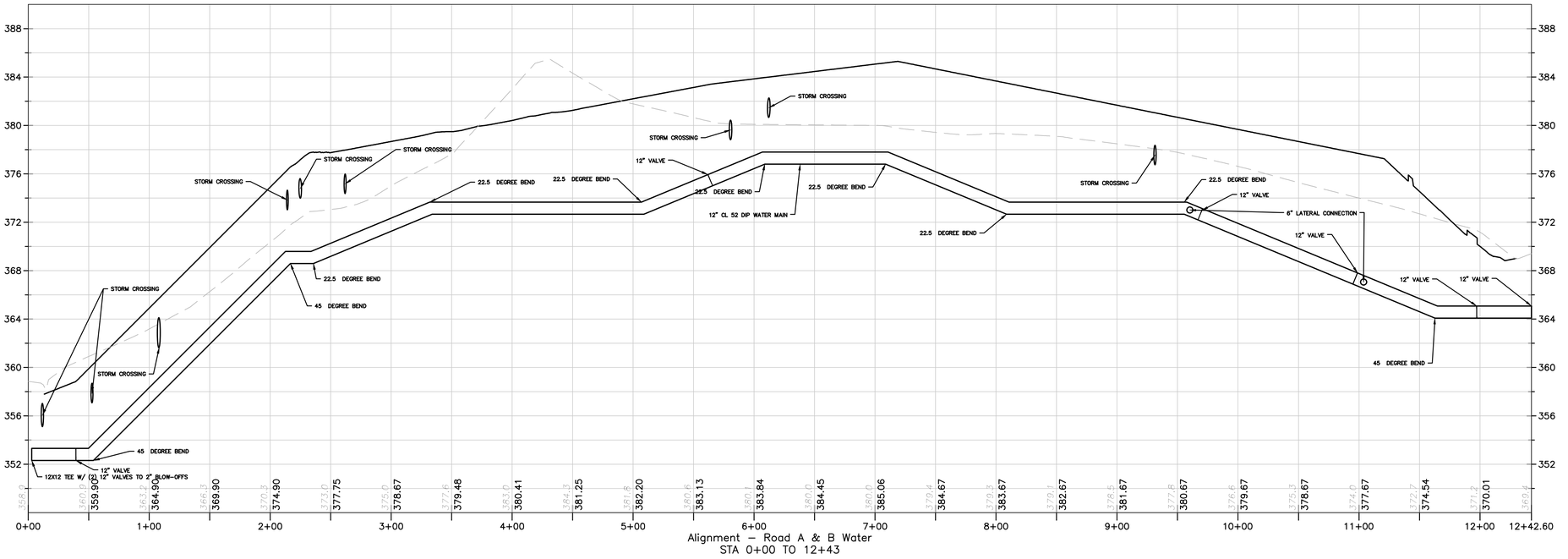
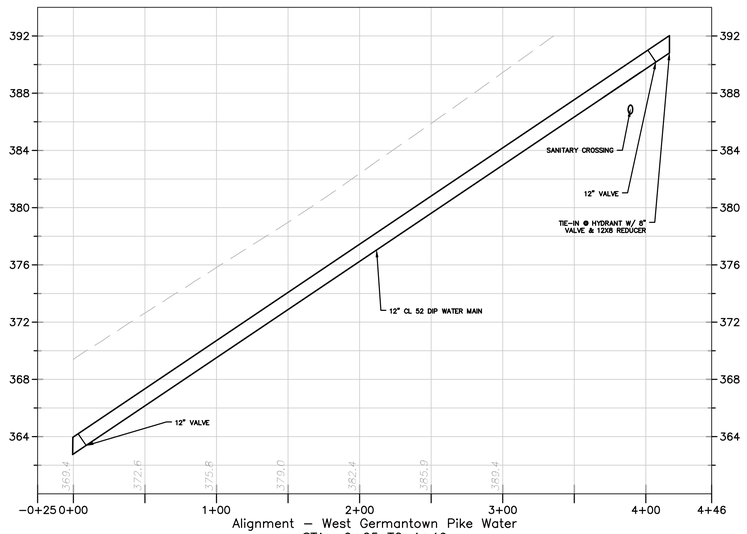
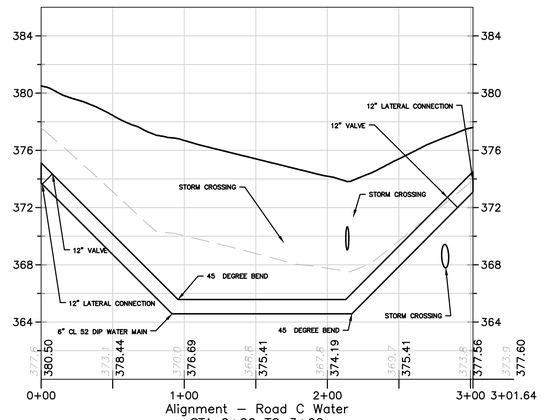
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_PRF.dwg
LAST SAVED DATE AND TIME: 04 Nov 2025, 5:03PM
LAST SAVE BY: SEstes




Alignment – Road A & B Water
STA 0+00 TO 12+43




Alignment – West Germantown Pike Water
STA –0+25 TO 4+46




Alignment – Road C Water
STA 0+00 TO 3+02

GRAPHIC SCALE
50' 25' 0 50' 100'
(IN FEET)
1 inch = 50 ft.

GRAPHIC SCALE
4' 2' 0 4' 8'
(IN FEET)
Vertical: 1 inch = 4 ft.

LEGEND
EXISTING GRADE
FINISHED GRADE

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, CONTACT PA ONE CALL DIAL 811 OR 1-800-242-1776 FOR UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
PA ONE CALL SERIAL NO.
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|


CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER


COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

WATER PROFILE


T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA


| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | WAT |
| SHEET | 25 |
| OF | 50 |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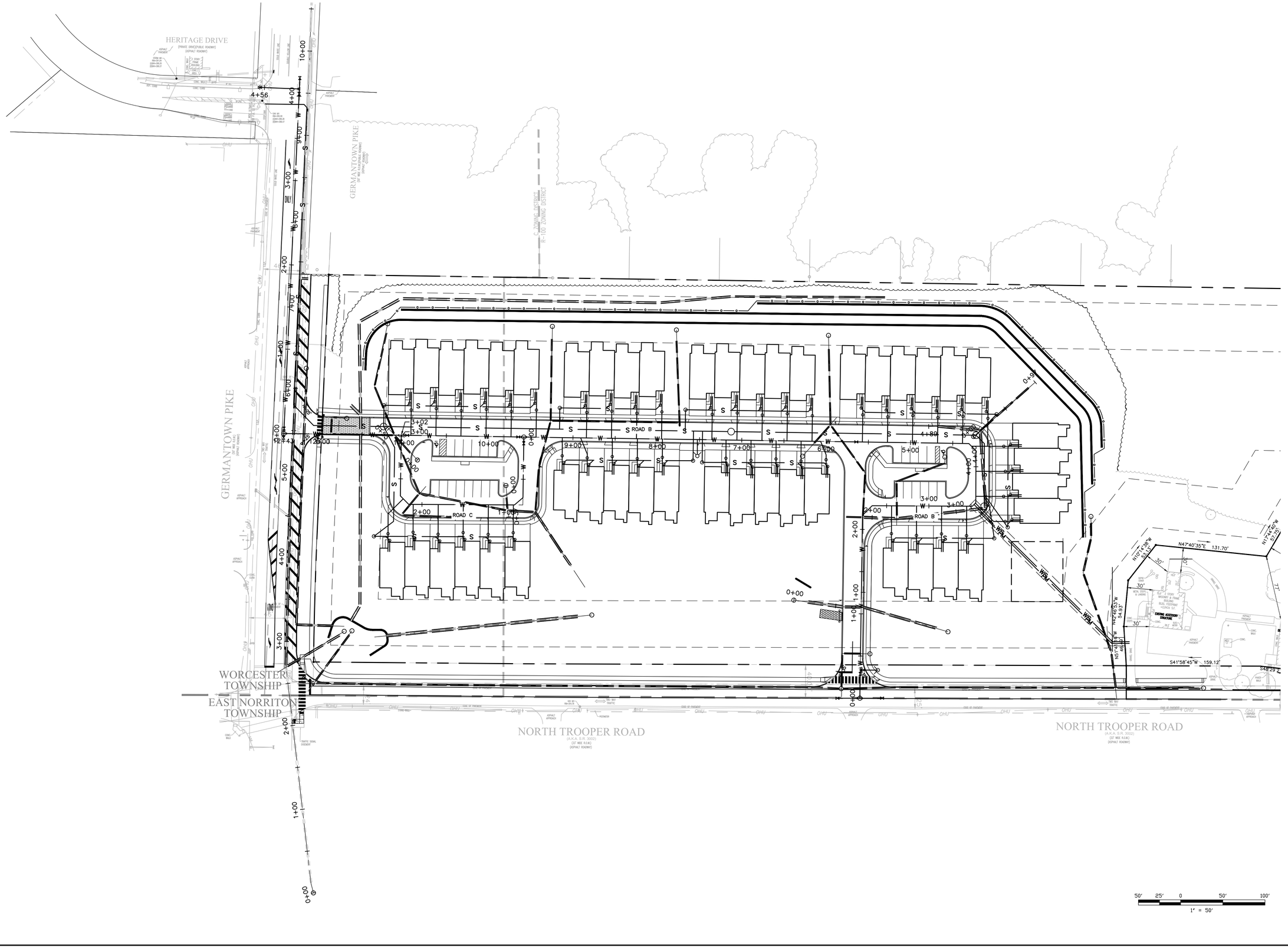


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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_TMP.dwg
LAST SAVED: Nov 06, 2025, 5:03PM
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PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776
ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2000, THE CONTRACTOR IS REQUIRED TO CONTACT ALL OWNERS OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
PA ONE CALL SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# UTILITY ALIGNMENTS

T AND M
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
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|---|---|
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| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | ALGN |
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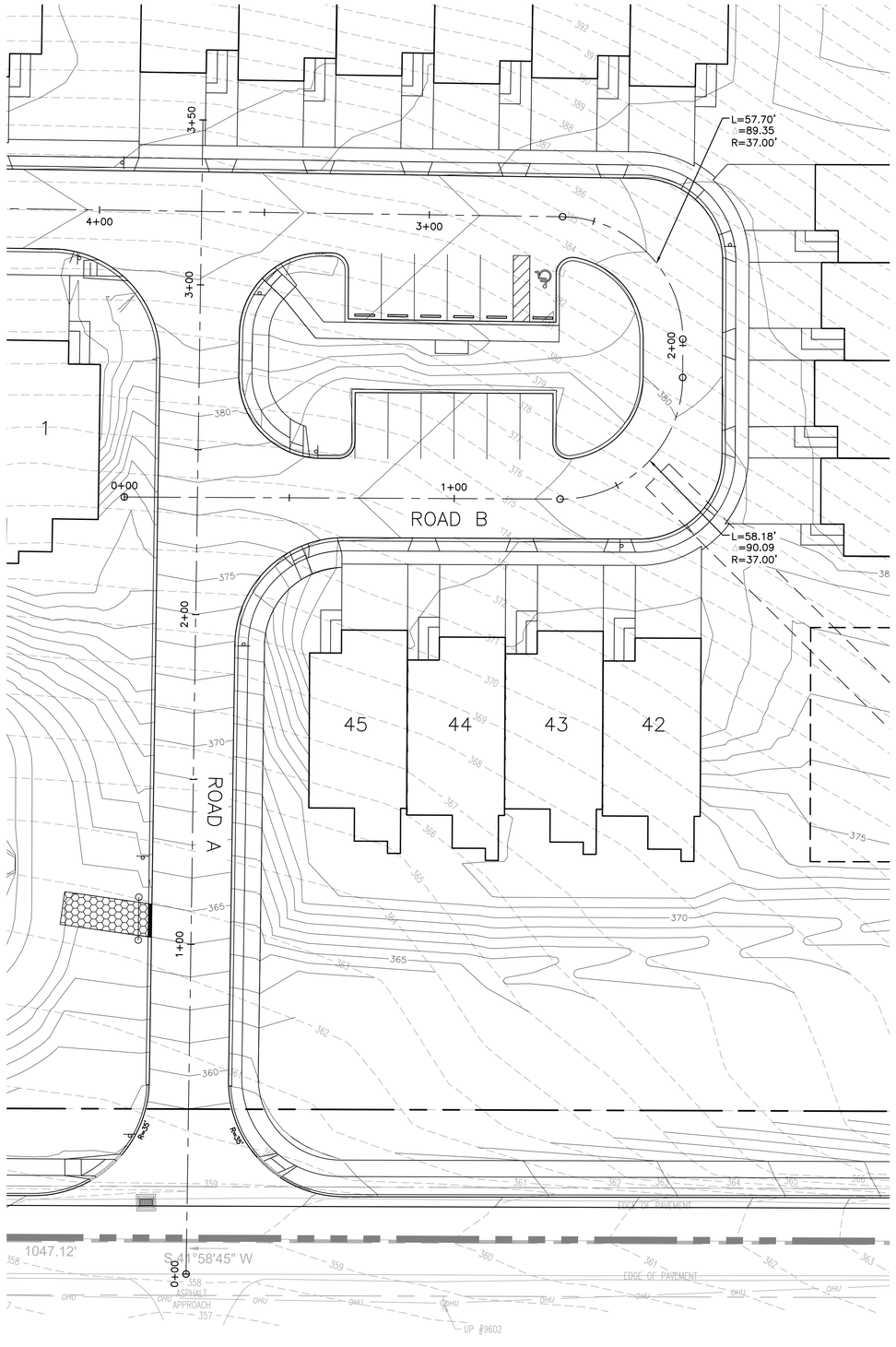
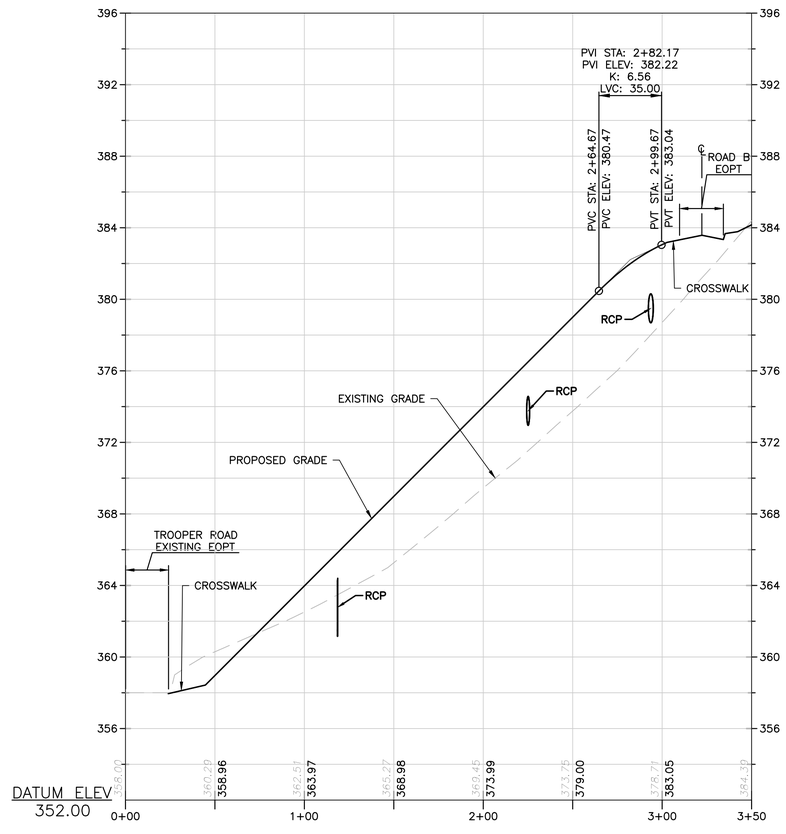
| OF | 50 |




## ROAD A TO ROAD B CENTERLINE
## STA 0+00 TO 3+50

GRAPHIC SCALE
40' 20' 0 40' 80'
(IN FEET)
Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE
4' 2' 0 4' 8'
(IN FEET)
Vertical: 1 inch = 4 ft.

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_PRF -ROAD.dwg
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LAST SAVE BY: JKelley

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SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# ROAD PROFILE– CENTERLINE

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1700 MARKET STREET, SUITE 3110
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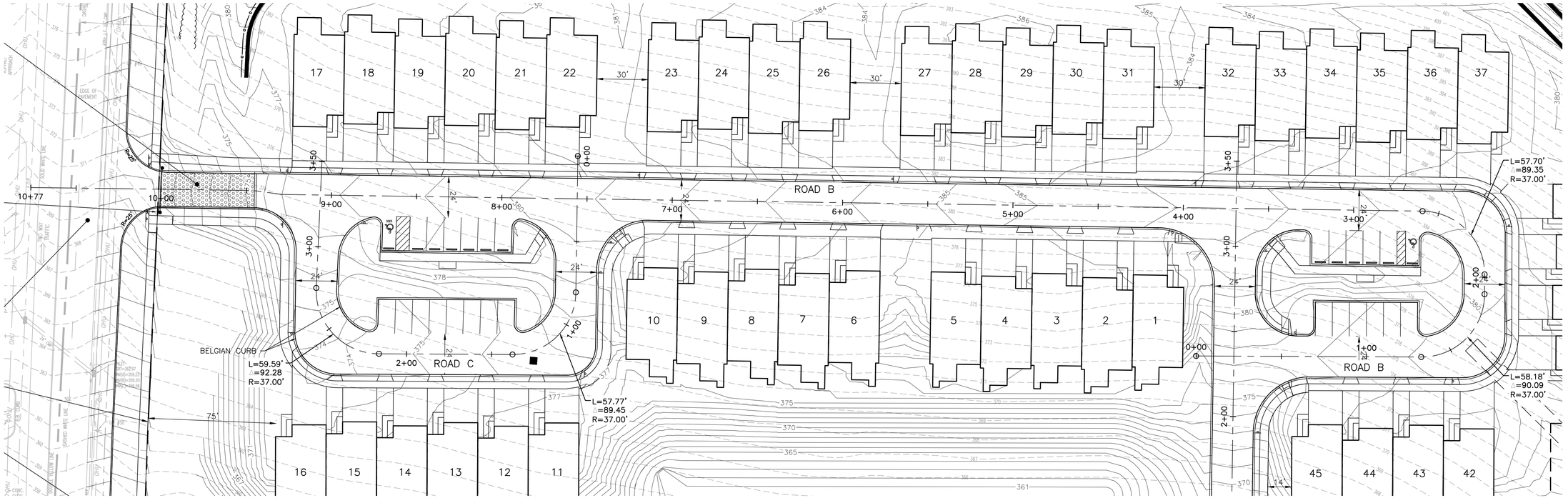
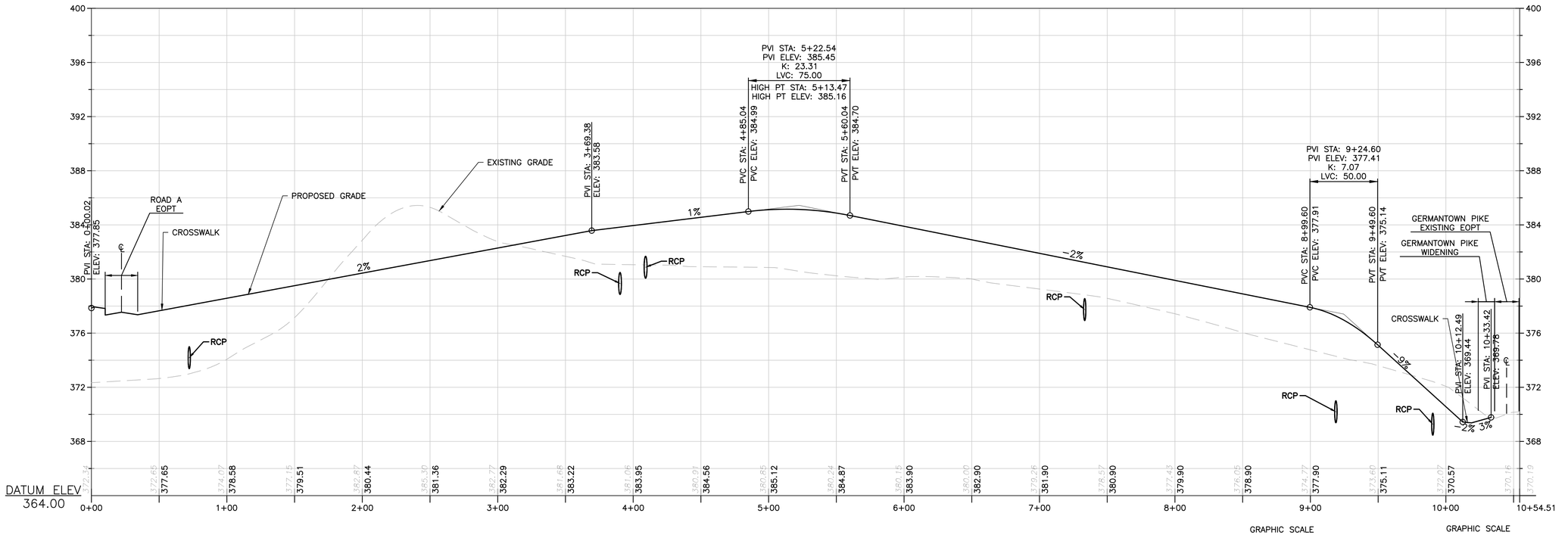
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PRF-7 |
| SHEET | 27 OF 50 |




GRAPHIC SCALE
40' 20' 0 40' 80'
(IN FEET)
Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE
4' 2' 0 4' 8'
(IN FEET)
Vertical: 1 inch = 4 ft.

## ROAD B TO GERMANTOWN PIKE CENTERLINE
## STA 0+00 TO 10+55

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FILE NAME: WDEV00004_PRF-ROAD.dwg
LAST SAVED: 04 Nov 2025, 5:04PM
LAST SAVE BY: JKelley

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SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

**CHRISTOPHER W. JENSEN, P.E.**
**LICENSED PROFESSIONAL ENGINEER**

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024

**LICENSED PROFESSIONAL ENGINEER**
**STATE OF PA LICENSE No. PE076464**

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# ROAD PROFILE– NORTH LOOP

T&M AND ASSOCIATES
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FAX 215-627-3459

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|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
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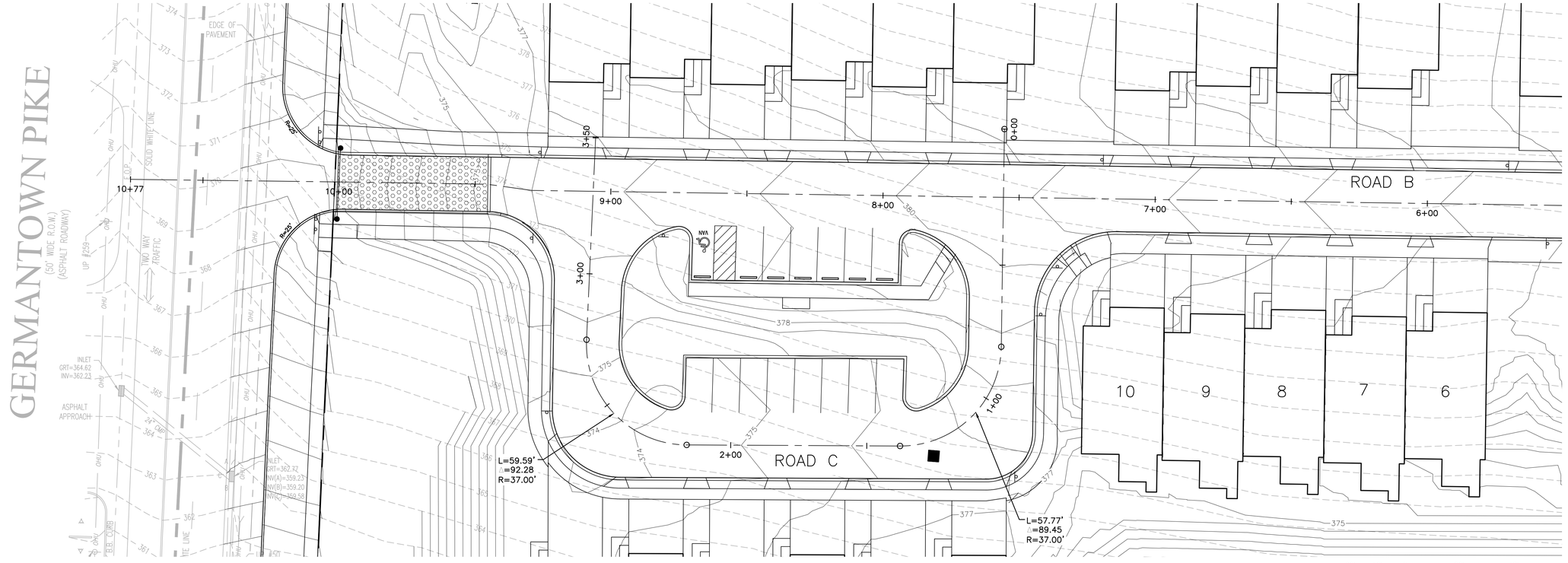
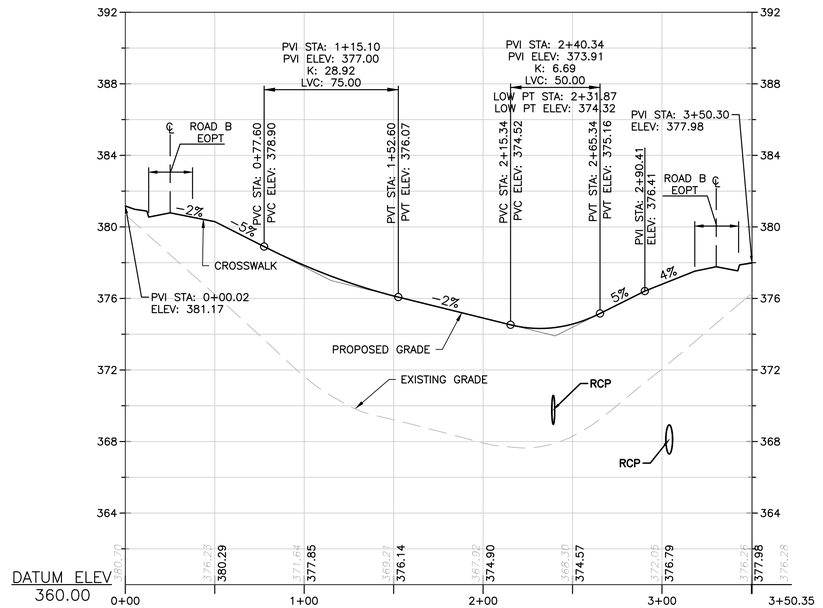
| SHEET | 28 |
| OF | 50 |




ROAD C CENTERLINE
STA 0+00 TO 3+50

GRAPHIC SCALE
40' 20' 0 40' 80'
(IN FEET)
Horizontal: 1 inch = 40 ft.

GRAPHIC SCALE
4' 2' 0 4' 8'
(IN FEET)
Vertical: 1 inch = 4 ft.

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_PRF - ROAD.dwg
LAST SAVED: 04-Nov-2025, 5:04PM
LAST SAVE BY: JKelley

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1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

ROAD PROFILE– SOUTH LOOP

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FAX 215-627-3459

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| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
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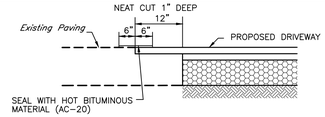
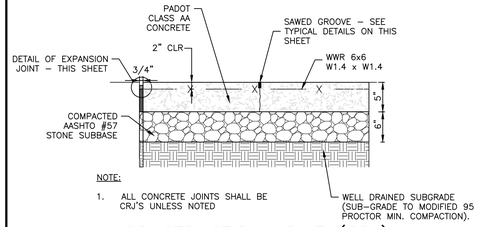



## NEAT CUT DETAIL

NOT TO SCALE

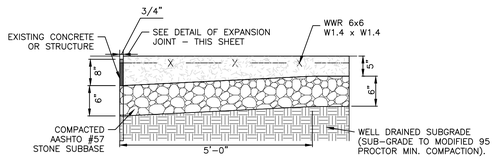



NOTE:

1. ALL CONCRETE JOINTS SHALL BE CRJ'S UNLESS NOTED

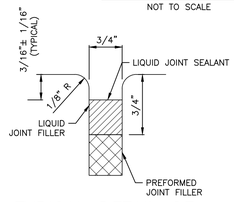
## CONSTRUCTION JOINT (CRJ)

NOT TO SCALE



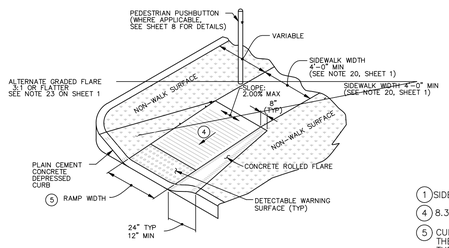

## TYPICAL CONCRETE SECTION AT ISOLATION JOINT

NOT TO SCALE

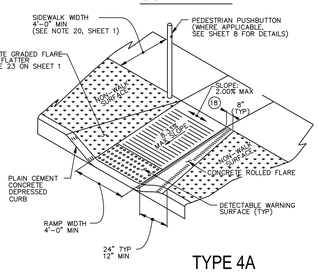



## TYPICAL DETAIL OF EXPANSION JOINTS

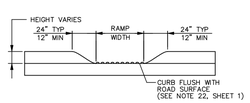
NOT TO SCALE




## TYPE 4A CURB RAMP




## TYPE 4A CURB RAMP (PERPENDICULAR)




## TYPE 4A NON-TRAVERSABLE ROLLED FLARES

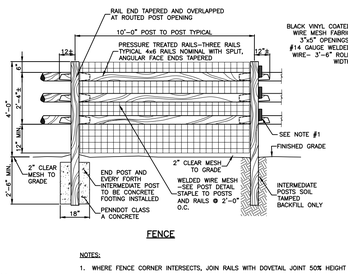
(1) SIDE FLARES 10.00% MAX SLOPE.

(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.



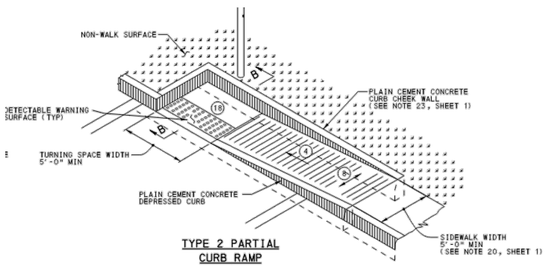

FENCE POST

NOTES:

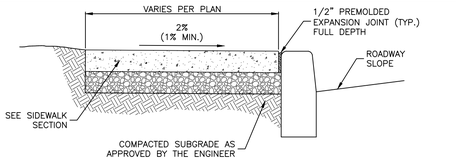
1. WHERE FENCE CORNER INTERSECTS, JOIN RAILS WITH DOVETAIL JOINT 50% HEIGHT OF RAIL AND TOE NAIL TO POST.

## FENCE – SPLIT RAIL

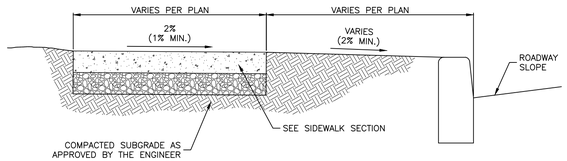
NOT TO SCALE



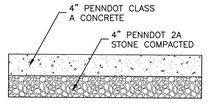

## TYPE 2 PARTIAL CURB RAMP



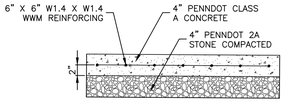

## ELEVATION (W/O GRASS)



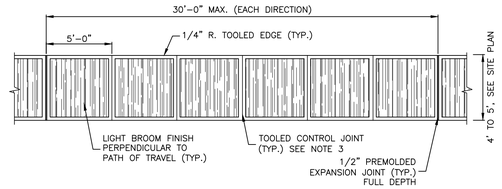

## ELEVATION (WITH GRASS)




## SECTION (UP TO 8' WIDE)




## SECTION (8' WIDE & OVER)



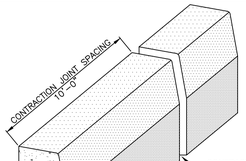

## PLAN

NOTES:

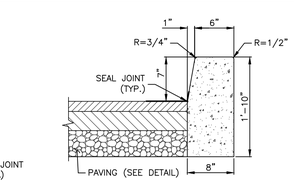
1. ALL CONSTRUCTION, MATERIALS, METHODS OF CONSTRUCTION AND CONTROL OF WORK TO BE GOVERNED BY THE CURRENT EDITION OF PENNDOT SPECIFICATIONS, PUBLICATION 408.
2. PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL FOR THE FULL DEPTH OF THE SIDEWALK AT 30' INTERVALS OPPOSITE EXPANSION JOINTS IN ADJACENT CURB, BETWEEN THE SIDEWALK AND CURB AND BETWEEN THE SIDEWALK AND ANY RIGID STRUCTURES.
3. FORM TRANSVERSE TOOLED CONTROL JOINTS AT 5 FOOT INTERVALS, APPROXIMATELY 1/8" WIDE AND AT LEAST 1" DEEP OR PER SCORING DETAIL PLANS WHEN PROVIDED.
4. ALL EXPOSED CONCRETE SHALL BE SEALED WITH AQURON CPT–2000 OR APPROVED EQUAL.
5. EXISTING CONCRETE TO BE REMOVED, ADJACENT TO EXISTING CONCRETE TO REMAIN, SHALL BE SAW CUT FULL DEPTH AT AN EXISTING CONTROL JOINT.
6. FOR USE WITHIN PEDESTRIAN TRAVEL AREAS.
7. CONCRETE USED IN CURBING WORK SHALL BE AT LEAST 3,000 POUNDS PER SQUARE INCH AT 28 DAYS WITH CERTIFICATION OF THE MIX FURNISHED TO THE TOWNSHIP ENGINEER. CONCRETE SHALL BE PLACED IN FORMS THAT ARE STRAIGHT AND SECURELY BRACED. CARE SHALL BE TAKEN TO CONTROL THE WATER CONTENT TO PREVENT SEPARATION OF THE AGGREGATES. THE CONCRETE SHALL HAVE A BROOM FINISH AND THE EDGES SHALL BE FINISHED WITH AN APPROVED EDGING TOOL

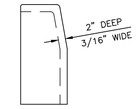
## SIDEWALK – CONCRETE

NOT TO SCALE

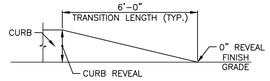



## CURB ADJACENT TO PAVING




## DETAIL A



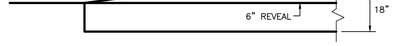

## CURB TAPER

NOTES:

1. CONCRETE SHALL BE PENNDOT CLASS A – MINIMUM.
2. 3/4" PREMOLDED EXPANSION JOINTS SHALL BE PLACED AT STRUCTURES AND AT THE END OF THE WORK DAY.
3. FLEXIBLE FORMS SHALL BE REQUIRED FOR ALL CURB RADII WITH A RADIUS OF LESS THAN 150 FEET.
4. WHERE THE SUBGRADE IS SOFT OR SPONGY, AS DETERMINED BY THE MUNICIPAL ENGINEER, A LAYER OF CRUSHED STONE NOT LESS THAN 4" THICKNESS SHALL BE PLACED UNDER THE CURB.
5. SEAL JOINT WITH 1" WIDE PG64–22 SEALANT OR APPROVED EQUAL (2" UP FACE OF CURB, 10" AWAY FROM CURB).
6. ALL EXPOSED CONCRETE SHALL BE SEALED WITH AQURON CPT–2000 OR APPROVED EQUAL.
7. ALL CONCRETE USED IN THE CONSTRUCTION OF IMPROVEMENTS SHALL BE CERTIFIED TO DEVELOP A COMPRESSIVE STRESS OF AT LEAST 3,000 POUNDS PER SQUARE INCH AT 28 DAYS WITH CERTIFICATION OF THE MIX FURNISHED TO THE TOWNSHIP ENGINEER.

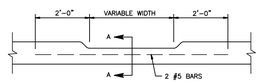
## CURB – CONCRETE PUBLIC STREETS

NOT TO SCALE

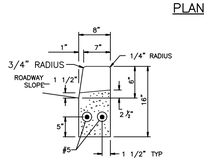



## CURB TAPER DETAIL (SITE INTERIOR)

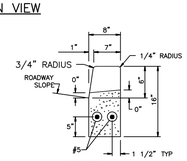
NOT TO SCALE




## PLAN VIEW




## SECTION A–A DEPRESSED



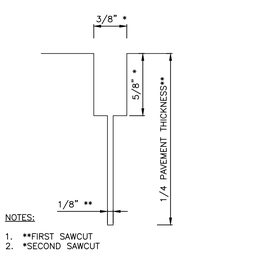

## SECTION A–A FLUSH

NOTES:

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB AND DEPRESSED CURB.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE ½" THICK PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
4. SEE RC–50M FOR PLAIN CEMENT CONCRETE CURB SLOPED TOP TREATMENT AT END OF STRUCTURES.
5. ALL DIMENSIONS ARE IN U.S CUSTOMARY UNITS.

## DEPRESSED AND FLUSH CURB

NOT TO SCALE

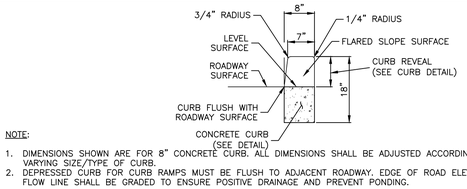



NOTES:

1. **FIRST SAWCUT
2. *SECOND SAWCUT

## TYPICAL DETAIL OF SAWED GROOVE

NOT TO SCALE




NOTE:

1. DIMENSIONS SHOWN ARE FOR 8" CONCRETE CURB. ALL DIMENSIONS SHALL BE ADJUSTED ACCORDINGLY FOR VARYING SIZE/TYPE OF CURB.
2. DEPRESSED CURB FOR CURB RAMPS MUST BE FLUSH TO ADJACENT ROADWAY. EDGE OF ROAD ELEVATIONS AT THE FLOW LINE SHALL BE GRADED TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING.

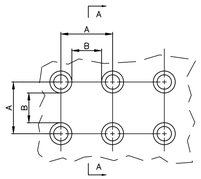
## DEPRESSED CURB AT SIDEWALK CURB RAMPS

NOTES:

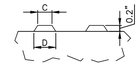
1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PENNDOT PUBLICATION 408. SECTIONS 350, 409, 630, 676, AND 694.
2. PROVIDE EXPANSION JOINT MATERIAL 1/2" THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
3. IF PEDESTRIAN CROSSWALKS ARE NOT WIDE ENOUGH TO PROVIDE MINIMUM 4'–0" X 4'–0" WIDE WHEELCHAIR OVERRUN ZONE AT THE BOTTOM OF THE RAMP, POSITION CROSSWALKS AS INDICATED IN PENNDOT PUBLICATION 72M – RC–67M – DETAIL A. ON SHEET 7.
4. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
5. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF CURB RAMP INCLUDING FLARED SIDE RAMPS.
6. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB ALTERATIONS WHERE THE CURB IS LESS THAN THE STANDARD 8" HEIGHT.
7. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
8. IT MAY BE NECESSARY TO LIMIT THE RUN OF A PARALLEL OR PERPENDICULAR CURB RAMP IN ORDER TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB. RAMP LENGTH NOT TO EXCEED 15'–0", ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT POSSIBLE.
9. WHENEVER POSSIBLE, CONSTRUCT THE TRANSITION SLOPE FROM THE CURB RAMP AND FLARE SIDES TO ADJOINING SURFACES WITH A GRADUAL ROUNDED SHAPE RATHER THAN AN ABRUPT ANGLE. ENSURE CONSTRUCTION IS WITHIN MAXIMUM SLOPE.
10. ALIGN DETECTABLE WARNING DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB.
11. PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT–ON–DARK OR DARK–ON–LIGHT FOR THE FULL WIDTH OF RAMP. DETECTABLE WARNING SURFACES SHALL COMPLY WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 72M – RC–67M AND ADA REQUIREMENTS.
12. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.0% CROSS SLOPE ON THE CURB RAMP OR ACCESSIBLE ROUTE.
13. CONSTRUCT RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWABLE. IT IS STRONGLY RECOMMENDED TO USE THE SLOPES LISTED ABOVE TO ALLOW FOR CONSTRUCTION TOLERANCES.

## CURB RAMP – GENERAL INFORMATION

NOT TO SCALE




## PLAN




## SECTION A–A

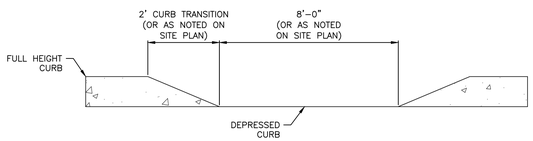
| TRUNCATED DOME DIMENSIONS | | |
|---|---|---|
| DIM | MIN (INCH) | MAX (INCH) |
| A | 1.6 | 2.4 |
| B | 0.65 | 1.5 |
| C | SEE NOTE 1 | SEE NOTE 1 |
| D | 0.9 | 1.4 |

NOTES:

1. THE C DIMENSION SHALL BE 50% TO 65% OF THE D DIMENSION.
2. DETECTABLE WARNING SURFACES SHALL COMPLY WITH ALL REQUIREMENTS OF THE AMERICANS WITH DISABILITES ACT AND PENNDOT PUBLICATION 72M – RC67M.
3. DETECTABLE WARNINGS SHALL BE PROVIDED AT ALL LOCATIONS WHERE A PEDESTRIAN WALK CROSSES OR ADJOINS A VEHICULAR WAY AND THE WALKING SURFACES ARE NOT SEPARATED BY CURBS, RAILINGS, OR OTHER ELEMENTS.
4. DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE WALKING PATH AND BE A MINIMUM OF TWO FEET (2') IN DEPTH.
5. DETECTABLE WARNINGS SHALL BE ARMOR–TILE (TM) TACTILE SYSTEM – CAST IN PLACE SYSTEM, OR APPROVED EQUAL (WWW.ARMOR–TILE.COM).
6. COLOR SHALL BE DARK GRAY (FEDERAL COLOR NO. 36118). COLORS SHALL BE SUBMITTED FOR OWNER'S APPROVAL PRIOR TO ORDERING MATERIAL.

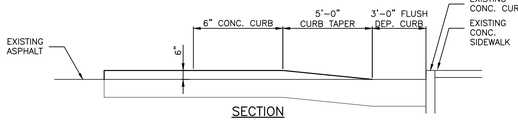
## DETECTABLE WARNING SURFACE

NOT TO SCALE




## CURB CUT DETAIL

NOT TO SCALE




## SECTION

## CURB ISLAND DETAIL

NOT TO SCALE

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_SITE.dwg
LAST SAVED: Thursday, 05 Feb 2026, 2:50PM
LAST SAVE BY: JGetzendanner

PENNSYLVANIA ONE CALL SYSTEM, INC. 811 or 1-800-242-1776

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THIS DOES NOT IMPLY COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION. OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE ONE CALL SYSTEM FOR UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
SERIAL NO.
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

LICENSED PROFESSIONAL ENGINEER

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

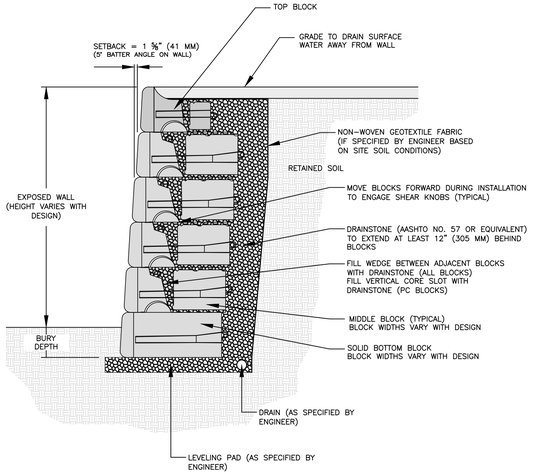
TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

CONSTRUCTION SITE DETAILS–1

T AND M
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | CSD–1 |
| SHEET | 30 OF 50 |

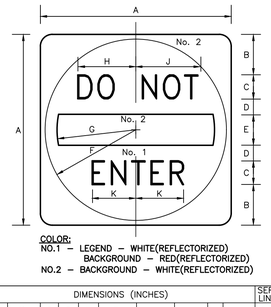



NOTES:

1. GRAVITY BLOCK WALL BY REDI-ROCK OR APPROVED EQUAL MANUFACTURER.
2. COMPLETE DESIGN CALCULATIONS, SHOP DRAWINGS, SPECIFICATIONS, MANUFACTURER AND CONSTRUCTION DETAILS OF THE PROPOSED GRAVITY WALL SYSTEM, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF PENNSYLVANIA, SHALL BE PROVIDED TO AND APPROVED BY THE LOCAL GOVERNING AGENCY PRIOR TO CONSTRUCTION.
3. THE WALLS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, INCLUDING BY NOT LIMITED TO, AASHTO, MUNICIPAL REGULATIONS, BUILDING CODES, AND THE MANUFACTURER'S SPECIFICATIONS.
4. A GEOTECHNICAL ENGINEER SHALL INSPECT THE CONSTRUCTION OF THE WALLS.

## GRAVITY WALL – TYPICAL SECTION

NOT TO SCALE



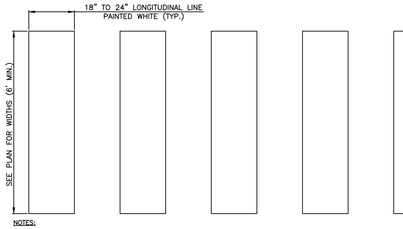

COLOR:
NO.1 – LEGEND – WHITE(REFLECTORIZED)
BACKGROUND – RED(REFLECTORIZED)
NO.2 – BACKGROUND – WHITE(REFLECTORIZED)

| SIGN SIZE | DIMENSIONS (INCHES) | | | | | | | | | | SERIES LINES | | BLANK STD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | J | K | 1 | 2 | |
| 30x30 | 30 | 6 1/2 | 4 | 2 | 5 | 14 1/2 | 12 1/2 | 9 3/4 | 10 7/8 | D | D | B3-30 | |

NOTE:
MOUNTING HEIGHT TO BOTTOM OF SIGN IS 5 FT. UNLESS SIGN IS ADJACENT AND PERPENDICULAR TO SIDEWALK, THEREBY, MOUNTING HEIGHT IS THEN 7 FT TO BOTTOM OF SIGN.

## DO NOT ENTER SIGN (PADOT R5-1)

N.T.S.

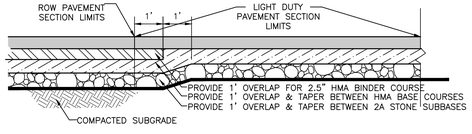



NOTES:

1. THIS TYPE OF MARKING SHOULD BE USED AT LOCATIONS WHERE SUBSTANTIAL NUMBERS OF PEDESTRIANS CROSS WITHOUT ANY OTHER TRAFFIC CONTROL DEVICE. AT LOCATIONS WHERE PHYSICAL CONDITIONS ARE SUCH THAT ADDED VISIBILITY OF THE CROSSWALK IS NECESSARY, OR AT PLACES WHERE PEDESTRIANS MIGHT NOT BE EXPECTED.
2. ALL CROSSWALKS SHALL COMPLY WITH THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AS AMENDED.
3. LONGITUDINAL LINES SHALL BE PERPENDICULAR TO TRAVELED WAY THE EXTEND ACROSS THE FULL WIDTH OF PAVEMENT OR TO THE EDGE OF THE INTERSECTING CROSSWALK TO DISCOURAGE DIAGONAL WALKING BETWEEN CROSSWALKS.
4. ALL CROSSWALK LONGITUDINAL LINES SHALL BE WHITE THERMOPLAST, ALL LINES AND NEUTRAL AREAS SHALL BE OF EQUAL WIDTHS.
5. WARNING SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH MUTCD, AS AMENDED.
6. THE SPACING OF THE LINES SHALL BE SELECTED TO AVOID THE WHEEL PATH.

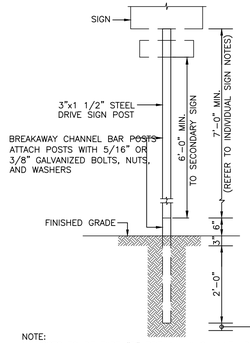
## CROSSWALK STRIPING DETAIL

NOT TO SCALE




## ROW SECTION – ACCESS DRIVE PAVEMENT MATCH DETAIL

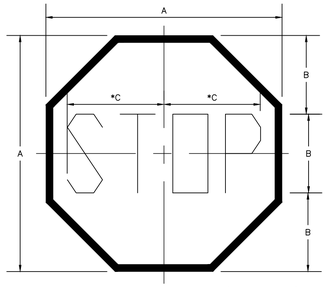
NOT TO SCALE




NOTE:
1. POSTS TO BE TYPE "B" BREAKAWAY CHANNEL BAR POSTS. (SEE PENNDOT TRAFFIC CONTROL SIGNING STANDARDS TC- 7000 SERIES FOR INSTALLATION PROCEDURES.)
2. SIGN POST LOCATIONS TO BE SELECTED IN THE FIELD UNDER THE DIRECT SUPERVISION OF THE ENGINEER.

## SIGN POST DETAIL

NOT TO SCALE



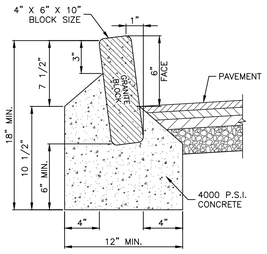

COLOR: LEGEND AND BORDER WHITE (REFLECTORIZED)
BACKGROUND RED (REFLECTORIZED)

| SIGN SIZE | DIMENSIONS | | | SERIES LINE | BOR-DER | BLANK STD. |
|---|---|---|---|---|---|---|
| | A | B | C | | | |
| 30x30 | 30 | 10 | 12 1/2 | C | 3/4 | B1-30 |

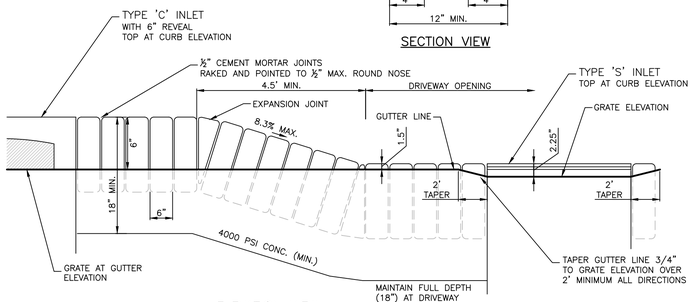
NOTES:
1. MOUNTING HEIGHT TO BOTTOM OF SIGN SHALL BE 4'-0".
2. TO BE MOUNTED ON BREAKAWAY SIGN POST INSTALLED IN ACCORDANCE WITH PENNDOT PUB. 408, SECTION 931 AND SECTION 1103.08.

## STOP SIGN (R1-1) DETAIL

NOT TO SCALE




## SECTION VIEW



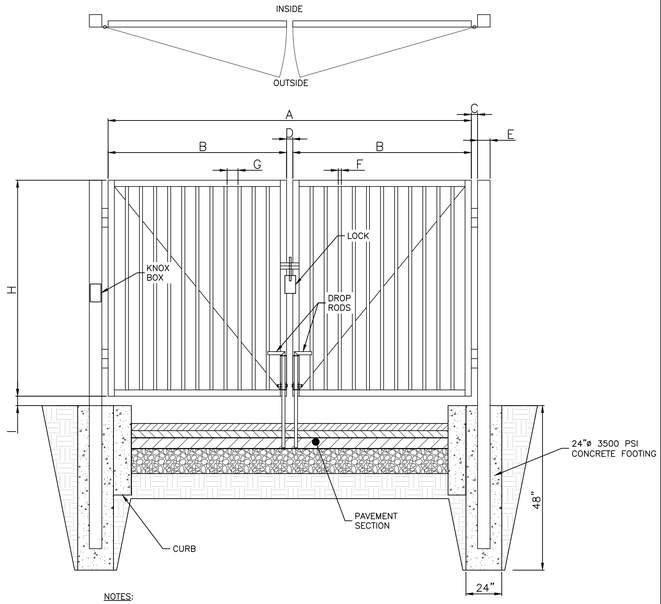

## ELEVATION VIEW

NOTES:

1. BELGIAN BLOCK CURBING SHALL BE SELECTED SO THAT THE BLOCK IS A UNIFORM 4" THICKNESS THROUGHOUT THE SITE.
2. JOINTS WHERE BELGIAN BLOCK CURBING ABUT WITH SOLDIER COURSE PAVER SHALL BE FILLED WITH A MIXTURE OF PORTLAND CEMENT MIXED WITH WHITE SAND (1:1).
3. MORTAR JOINTS BETWEEN BELGIAN BLOCK SHALL BE NO GREATER THAN 1/2" IN WIDTH.
4. JOINTS ARE TO BE GROUTED USING BAKER'S BAG OR SIMILAR AND TOOL STRUCK.
5. JOINTS ARE TO BE TOOL STRUCK WITH 1/4" (MAX.) RODDED FINISH. EXCESS GROUT SHALL BE REMOVED SO THAT JOINT HAS SMOOTH FINISH.
6. BELGIAN CURB TRANSITION AT P.C. OR P.T. INCREASE ANGLE OF GRANITE BLOCK IN EVEN INCREMENTS BEGINNING WITH 11± DEGREES AND ULTIMATELY REACHING 90 DEGREES.
7. STORM INLETS IN FULL HEIGHT AREAS TO UTILIZE 6" HIGH REVEAL MODIFIED TYPE "C" HOOD. STORM INLETS ALONG DEPRESSED AREAS TO UTILIZE PADOT TYPE "S" HOOD.

## CURB – GRANITE – BELGIAN

NOT TO SCALE

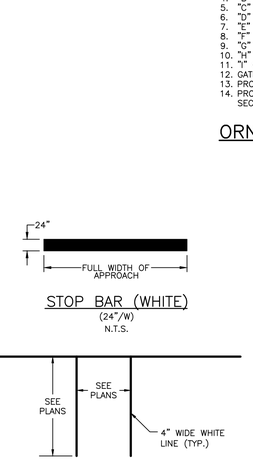



NOTES:

1. ORNAMENTAL STEEL FENCE BY AMERICAN FENCE COMPANY OR APPROVED EQUAL
2. COLOR: BLACK
3. "A" INSIDE TO INSIDE CLEAR OPENING: 22 FT
4. "B" LEAF WIDTH: 10.75 FT
5. "C" HINGE GAP: 2 IN
6. "D" LATCH GAP: 2 IN
7. "E" POST SIZE: 4 IN X 4 IN X 0.125 IN WALL
8. "F" PICKET SIZE: 1 IN X 1 IN X 0.062 IN WALL
9. "G" PICKET INSIDE TO INSIDE SPACING: 3.75 IN
10. "H" GATE LEAF HEIGHT: 4 FT
11. "I" CLEARANCE GAP: 3 IN
12. GATE SWING: OUTSIDE
13. PROVIDE CONCRETE FOOTING AS SHOWN FOR GATE POSTS
14. PROVIDE LOCK AND KNOX BOX FOR EMERGENCY ACCESS. PROVIDE DROP RODS THAT SECURE TO GATE LEAF IN UP POSITION.

## ORNAMENTAL STEEL DRIVEWAY GATE

NOT TO SCALE




SPECIFICATIONS:

UNIT SIZE – 20" X 20" X 1" AVAILABLE IN 9 STANDARD ROLL SIZES
UNIT WEIGHT – 510 GRAMS (18 OZ.) OR 2.0 KG (4.5 POUNDS)
STRENGTH – 402 KG/CM² (5720 PSI)
COLOR – BLACK (STANDARD)
RESIN – HOPE (WITH SOME POST-CONSUMER RECYCLED CONTENT)

NOTE:
1. GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.
2. PER MANUFACTURER'S SPECIFICATIONS AND LAB TEST RESULTS, GRASSPAVE2 IS CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 75,000 POUNDS.
3. INSTALL GRASSPAVE2 PAVERS PER MANUFACTURER'S SPECIFICATIONS.
4. AS MANUFACTURED BY INVISIBLE STRUCTURES, INC. 1600 JACKSON ST., STE. 310 GOLDEN, COLORADO 80401. 800-233-1510 OR 303-233-8383. FAX: 800-233-1522 OR 303-233-8282. www.invisiblestructures.com. OR APPROVED EQUAL.

## TURF REINFORCEMENT DETAIL GRASSPAVE2 (OR APPROVED EQUAL)

NOT TO SCALE




## STOP BAR (WHITE)

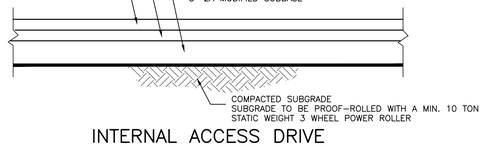
(24"/W)
N.T.S.

## PARKING SPACE LAYOUT

NOT TO SCALE

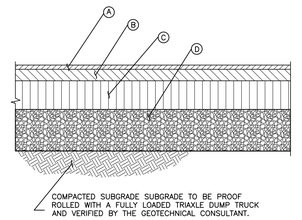
## 12"x18" NO PARKING SIGN (R7-6-9-FM)

OR EQUAL
NOT TO SCALE




## INTERNAL ACCESS DRIVE PAVEMENT SECTION DETAIL

NOT TO SCALE




NOTES:

1. SEE PAVEMENT LEGEND FOR DESCRIPTIONS OF A, B, C, & D.

## PUBLIC RIGHT-OF-WAY PAVEMENT SECTION DETAIL

NOT TO SCALE

PENNDOT PAVING SECTION:

(A) 1.5" SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 10 TO <30 MILLION ESALS, 9.5 MM MIXTURE, SRL-E
(B) 2.5" SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 10 TO <30.0 MILLION ESALS, 19.0 MM MIXTURE
(C) 10" SUPERPAVE ASPHALT MIXTURE DESIGN, PG 64-22 BASE COURSE, 25.0 MM, 0-0.3 MILLION ESALS
(D) 8" SUBBASE (PENNDOT NO. 2A)

## PAVEMENT LEGEND – PENNDOT

NOT TO SCALE

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDV00004_DTL.dwg
LAST PLOTTED: Thursday, 26 Feb 2026, 2:50PM
LAST SAVE BY: JGetzendanner

PENNSYLVANIA ONE CALL SYSTEM, INC.
811 or 1-800-242-1776
ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE HEREBY REQUIRED TO CONTACT THE ABOVE UTILITY LINE LOCATING SERVICE AND FACILITIES PRIOR TO START OF WORK.
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

LICENSED PROFESSIONAL ENGINEER

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

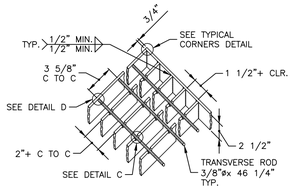
TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

CONSTRUCTION SITE DETAILS-2

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

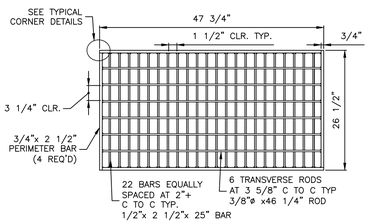
OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | CSD-2 |
| SHEET | 31 |
| OF | 50 |

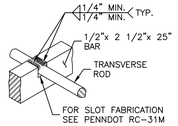



BAR AND ROD SPACER

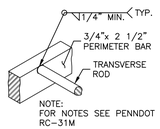
TYPICAL CORNERS




STRUCTURAL STEEL GRATE–BICYCLE SAFE




DETAIL C



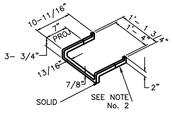

DETAIL D

NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS TO MEET THE REQUIREMENTS OF PENNDOT PUBLICATION 408 AND 72–M (RC–34M), LATEST REVISION.

## STRUCTURAL STEEL GRATE (BICYCLE SAFE)

NOT TO SCALE

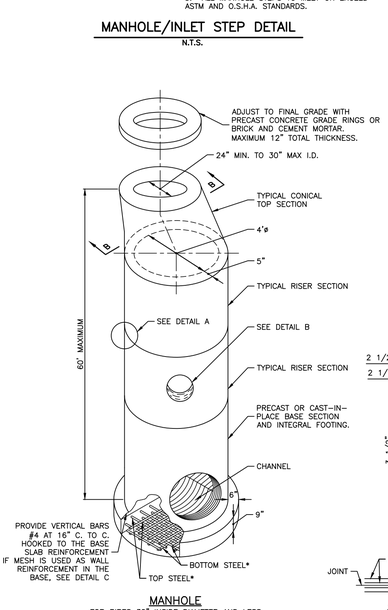



NOTES:

1. STEPS FOR ALL MANHOLES AND INLETS SHALL BE COPOLYMER POLYPROPYLENE PLASTIC MODEL NO. PS–4–B AS MANUFACTURED BY M.A. INDUSTRIES INC. OR EQUAL.
2. THE PORTION TO BE EMBEDDED IN THE CONCRETE SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A. STANDARDS (3" MINIMUM EMBEDMENT)
3. ALL MANHOLE STEPS TO MEET OR EXCEED ASTM AND O.S.H.A. STANDARDS.

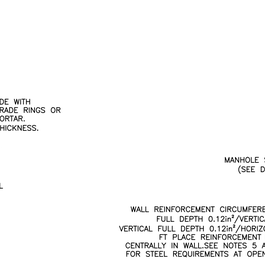
## MANHOLE/INLET STEP DETAIL

N.T.S.

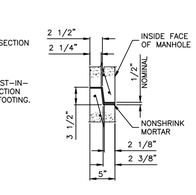



MANHOLE

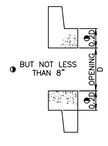
FOR PIPES 30" INSIDE DIAMETER AND LESS
*SEE TABLE B FOR BASE SLAB STEEL REQUIREMENTS. PROVIDE WALL REINFORCEMENT DETAILS AT BASE SLAB TYPICAL OF CAST–IN–PLACE MANHOLE.



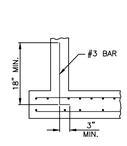

SECTION B–B



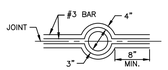

DETAIL A




DETAIL B




DETAIL C




ALTERNATE OPENING REINFORCEMENT
SEE NOTE 11

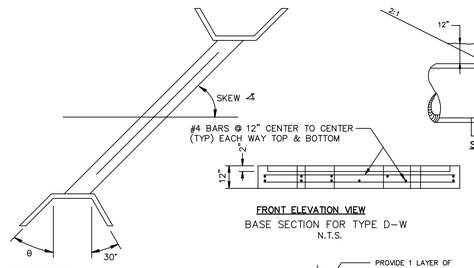
| TABLE B | | |
|---|---|---|
| PRECAST MANHOLE HEIGHT | TOP STEEL REQUIREMENTS | BOTTOM STEEL REQUIREMENTS |
| 0'–0" TO 30'–0" | NO. 4 BARS AT 6" C. TO C. OR 0.33 $IN^2$/FT WWF 6" MAXIMUM SPACING | NO. 4 BARS AT 12" C. TO C. OR 0.16 $IN^2$/FT WWF 6" MAXIMUM SPACING |
| > 30'–0" TO 60'–0" | NO. 5 BARS AT 6" C. TO C. OR 0.56 $IN^2$/FT WWF 6" MAXIMUM SPACING | NO. 4 BARS AT 6" C. TO C. OR 0.27 $IN^2$/FT WWF 6" MAXIMUM SPACING |

NOTES:

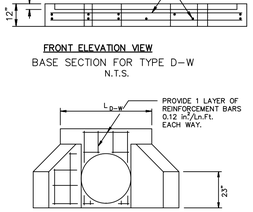
1. PRECAST MANHOLES MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 714, MAY BE SUBSTITUTED FOR THE STANDARD CAST–IN–PLACE MANHOLE. FOR DEVIATION OR MODIFICATION OF THE STANDARDS, SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. FOR RISERS OR BASE SECTIONS WITH OPENINGS, PROVIDE A MINIMUM HEIGHT OF SECTION SO AS TO PROVIDE AN UNCUT WALL EQUAL TO 20% OF THE OPENING, BUT NO LESS THAN 8", BETWEEN THE OPENING AND THE CLOSEST JOINT BETWEEN RISERS – SEE DETAIL B.
3. FOR PRECAST RISER OR BASE SECTIONS WITH ONE OPENING LOCATED AT DEPTHS TO 60', PROVIDE CIRCUMFERENTIAL REINFORCEMENT IN ACCORDANCE WITH SECTION B–B. FOR SECTIONS WITH TWO OR MORE OPENINGS, LOCATED AT DEPTH OF 10' AND LESS, PROVIDE CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.16 $IN^2$/VERTICAL FT. FOR THE HEIGHT OF RISER OR BASE SECTION.
4. FOR RISERS OR BASE SECTIONS WITH ONE OPENING, LOCATED AT A DEPTH GREATER THAN 10', BUT LESS THAN OR EQUAL TO 25', PROVIDE CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.44 $IN^2$/VERTICAL FT. FOR THE HEIGHT OF THE RISER OR BASE SECTION.
5. FOR RISERS OR BASE SECTIONS WITH TWO OR MORE OPENINGS, LOCATED AT DEPTHS GREATER THAN 25', USE A 10" THICK WALL RISER OR BASE SECTION WITH CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.22 $IN^2$/VERTICAL FT. EACH FACE.
6. MARK RISERS OR BASE SECTIONS WITH HOLES CLEARLY WITH MAXIMUM ALLOWABLE DEPTH.
7. PROVIDE ADDITIONAL REINFORCEMENT BARS AROUND OPENINGS AS SHOWN ON REINFORCEMENT DETAILS AT OPENINGS.
8. PROVIDE MANHOLE STEPS MEETING THE REQUIREMENTS OF PUBLICATION 408, 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.
11. THE ALTERNATE OPENING REINFORCEMENT DETAIL IS NOT DESIRABLE BY DESIGN. USE IT TO MEET EXISTING PIPE ELEVATIONS.

## MANHOLE (PRECAST)

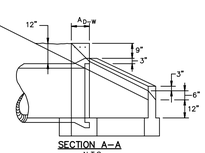
NOT TO SCALE



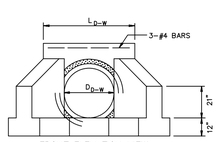

| PIPE DIAMETER | SKEW =90° TO 60° θ = 30° | | | |
|---|---|---|---|---|
| $D_{D-W}$ (IN.) | $L_{D-W}$ (FT.) | $x$ (FT.) | $W_1$ & $W_2$ (FT.) | $A_{D-W}$ (IN.) |
| 18 | 4.0 | 0 | 1.2 | 12 |
| 24 | 4.6 | 0 | 2.3 | 12 |



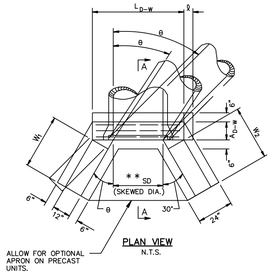

FRONT ELEVATION VIEW
HEAD & WINGWALL SECTION FOR TYPE D–W
N.T.S.




SECTION A–A
N.T.S.




FRONT ELEVATION VIEW
N.T.S.



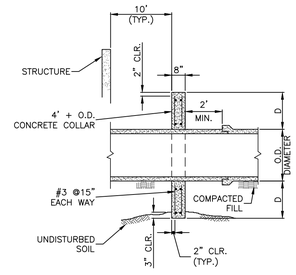

PLAN VIEW
N.T.S.

NOTES:

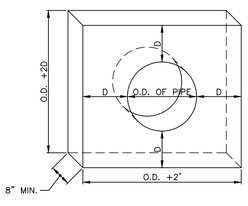
1. ALL MATERIALS AND CONSTRUCTION METHODS TO MEET THE REQUIREMENTS OF PENNDOT PUBLICATION 408 AND 72–M (RC–31M), LATEST REVISION.
2. CHILD SAFETY GRATES SHALL BE PROVIDED ON ALL ENDWALLS.

## TYPE D–W ENDWALL

N.T.S.




SECTION VIEW

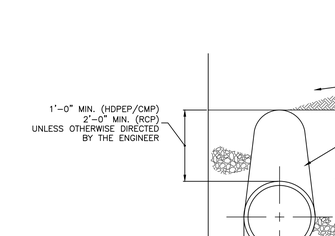



NOTES:

1. USE PENNDOT CLASS A CONCRETE.
2. MAINTAIN A MINIMUM 6" COVER OVER ANTI–SEEP COLLAR.
3. THE CONNECTION OF ANTI–SEEP COLLARS TO OUTLET PIPES SHALL BE WATERTIGHT.
4. O–RING GASKETS SHALL BE USED ON BASIN DISCHARGE PIPES THROUGH BERM AREAS.
5. MAXIMUM SPACING OF ANTI–SEEP COLLARS THROUGH BERM AREAS SHALL BE 40 FEET.
6. MINIMUM REINFORCEMENT SHALL BE PROVIDED USING #3 BARS @ 1'–3" HORIZONTAL AND VERTICAL SPACING.
7. PRECAST ANTI–SEEP COLLARS SHALL NOT BE USED IN PLACE OF CAST–IN–PLACE COLLARS.
8. A QUALITY NON–SHRINK GROUT MATERIAL SHALL BE USED TO SEAL THE ANNULAR SPACE BETWEEN THE COLLAR AND THE PIPE SURFACE. THE GROUT SHALL BE INSTALLED FOR THE FULL THICKNESS OF THE COLLAR.

## ANTI–SEEP COLLAR

NOT TO SCALE

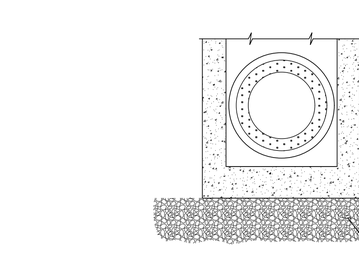



NOTES:

1. IF TRENCH IS EXTREMELY WET DUE TO HIGH GROUNDWATER, USE AASHTO #57 STONE UP TO THE HAUNCHES OF THE PIPE. REMAINDER OF BEDDING TO BE PENNDOT 2A.
2. FOLLOW 'PIPE INSTALLATION PROCEDURES' PER PENNDOT PUBLICATION 72M – RC–30M.

## PIPE BEDDING (STORM SEWER)

NOT TO SCALE

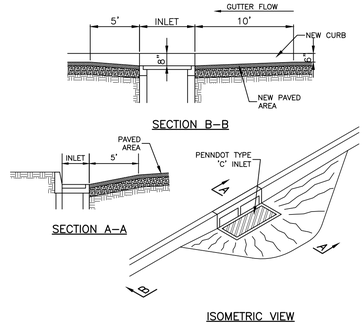



NOTES:

1. CONSTRUCT OR PLACE INLET BOXES LEVEL, UNLESS OTHERWISE INDICATED OR DIRECTED.
2. CONSTRUCT OR PLACE INLET BOXES ON A SUBBASE CONSTRUCTED OF COMPACTED NO. 2A COARSE AGGREGATE. PLACE AND COMPACT IN 4" LAYERS TO PROVIDE A 1'–0" MINIMUM DEPTH.

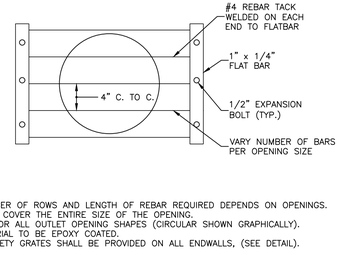
## OUTLET CONTROL BOX – SUBBASE PREPARATION

NOT TO SCALE




## INLET PAVING TAPER

NOT TO SCALE




NOTES:

1. THE NUMBER OF ROWS AND LENGTH OF REBAR REQUIRED DEPENDS ON OPENINGS.
2. REBAR TO COVER THE ENTIRE SIZE OF THE OPENING.
3. TYPICAL FOR ALL OUTLET OPENING SHAPES (CIRCULAR SHOWN GRAPHICALLY).
4. ALL MATERIAL TO BE EPOXY COATED.
5. CHILD SAFETY GRATES SHALL BE PROVIDED ON ALL ENDWALLS, (SEE DETAIL).

## CHILD SAFETY GRATE

NOT TO SCALE

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_DTL.dwg
LAST PLOTTED: Wednesday, February 25, 2026, 2:50PM
LAST SAVE BY: JGetzendanner

PENNSYLVANIA ONE CALL SYSTEM, INC.
811
ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 187 OF 1974 AS AMENDED BY ACT 121 OF 2008, THE CONTRACTOR IS REQUIRED TO NOTIFY THE OWNERS OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
PA ONE CALL SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

LICENSED PROFESSIONAL ENGINEER

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

STORM SEWER DETAILS – 1

T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |

DRAWING STRMD–1

SHEET 32 OF 50

## GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS IN ( ' ) PARENTHESIS.
2. METRIC UNITS INDICATED ARE SOFT CONVERTED FROM U.S. CUSTOMARY UNITS.
3. DESIGN SPECIFICATIONS:
   - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND AS SUPPLEMENTED BY THE DESIGN MANUAL, PART 4, STRUCTURES.
   - DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD).
4. CONSTRUCTION SPECIFICATIONS:
   - PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE CURRENT VERSION OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, AASHTO/AWS BRIDGE WELDING CODE AND THE CONTRACT SPECIAL PROVISIONS.
5. SHOP DRAWINGS FOR INLET TOPS, GRATES, FRAMES, AND GRADE ADJUSTMENT RINGS ARE NOT REQUIRED IF THE ITEM IS CONSTRUCTED/FABRICATED IN ACCORDANCE WITH THIS STANDARD.
6. IF A REQUIRED DETAIL IS NOT FOUND IN THIS STANDARD OR ON THE CONTRACT DRAWINGS A SPECIAL SUBMISSION REQUESTING ACCEPTANCE FOR SPECIFIC DETAILS MUST BE MADE TO THE BUREAU OF DESIGN HIGHWAY QUALITY ASSURANCE DIVISION CHIEF.
7. FOR INLET BOX DETAILS REFER TO RC-46M.

## PLACEMENT NOTES:

1. EACH TYPE OF CONCRETE TOP UNIT OR FRAME IS SUITED FOR A PARTICULAR SITUATION AS FOLLOWS:
   - TYPE C CONCRETE TOP UNIT AND TYPE C ALTERNATE CONCRETE TOP UNIT AND TYPE C FRAME ARE DESIGNATED FOR INSTALLATION WITH NON-MOUNTABLE CURBS.
   - TYPE M CONCRETE TOP UNIT AND TYPE M FRAMES ARE DESIGNATED FOR INSTALLATION IN AREAS ADJACENT TO MEDIANS AND MOUNTABLE CURBS.
   - TYPE S CONCRETE TOP UNIT IS DESIGNATED FOR INSTALLATION IN SHOULDER SWALE AREAS.
   - TYPE D-H CONCRETE TOP UNIT IS DESIGNATED FOR INSTALLATION IN SHOULDER SWALE AREAS WITH A TYPE D-H INLET BOX.
   - TYPE D-H LEVEL CONCRETE TOP UNIT IS DESIGNATED FOR INSTALLATION IN AREAS ADJACENT TO MEDIANS WITH A TYPE D-H INLET BOX.
2. PLACEMENT OF CONCRETE TOP UNITS:
   - TYPE C AND TYPE C ALTERNATE:
     BOXES TO TOP UNIT INTO THE ADJACENT CURB SECTIONS WITH #13 (#4) 300 mm (2'-0") DOWEL BARS. PLACE 20 mm (3/4") WIDE PREMOLDED EXPANSION JOINT FILLER BETWEEN THE TOP UNIT AND ADJACENT CURB.
   - TYPE M:
     PLACE THE TOP UNIT OR FRAME ADJACENT TO THE BACK EDGE OF THE CURB, FLUSH WITH THE PAVEMENT SURFACE, WHEN REQUIRED WITHIN A CONCRETE MOUNTABLE CURB SECTION.
   - TYPE S:
     THE PLACEMENT OF THE TOP UNIT IS DEPENDENT ON THE GUTTER ELEVATION AND THE RATE OF THE BACK SLOPE.
     FOR BACK SLOPES GREATER THAN 1:2 (2:1), LOCATE THE INLET TOP WHERE THE BACK SLOPE LINE INTERSECTS THE BACK, TOP, OUTSIDE CORNER OF THE INLET TOP.
     FOR BACK SLOPES LESS THAN 1:2 (2:1), LOCATE THE INLET TOP WHERE THE BACK SLOPE LINE INTERSECTS THE EDGE OF THE INLET GRATE.
   - TYPE D-H:
     PLACE THE TOP UNIT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY, UNLESS OTHERWISE INDICATED ON THE CONTRACT DOCUMENTS.
4. SET THE PRECAST CONCRETE TOP UNITS ON A NON-SHRINK GROUT PAD TO PROVIDE FULL BEARING ON THE SUPPORTING SURFACE. NON-SHRINK GROUT IS ALSO PERMITTED FOR CROSS SLOPE AND LONGITUDINAL GRADE ADJUSTMENTS.
   - PLACE NON-SHRINK GROUT IN ACCORDANCE WITH PUBLICATION 408, SECTION 1003.
   - MINIMUM GROUT DEPTH = 13 mm (1/2").
   - MAXIMUM GROUT DEPTH = 25 mm (1").

   FOR ALTERNATE GRADE ADJUSTMENT SYSTEMS, WHICH DO NOT REQUIRE NON-SHRINK GROUT, REFER TO NOTE 5 UNDER THE GRADE ADJUSTMENT RING GENERAL NOTES ON SHEET 12.
5. BRICK OR BRICK AND MORTAR ARE NOT ALLOWED FOR GRADE ADJUSTMENTS FOR NEW OR REHABILITATION PROJECTS.

## GENERAL GRATE NOTES:

1. THE FOLLOWING TWO DIFFERENT GRATE DEPTHS ARE SPECIFIED ON THIS STANDARD:
   - STRUCTURAL STEEL GRATES = 89 mm (3½") DEPTH WITH 64 mm (2½") PERIMETER DEPTH
   - CAST IRON GRATES = 64 mm (2½") DEPTH (MINIMUM)
2. THE SELECTION OF THE TYPE OF GRATE MATERIAL IS THE CONTRACTOR'S RESPONSIBILITY, UNLESS OTHERWISE INDICATED ON THE CONTRACT DOCUMENTS.

## CONCRETE TOP UNIT NOTES:

1. SHEETS 2 THRU 6 AND 18 THRU 20 DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS, SUBMIT SHOP DRAWINGS TO THE BUREAU OF DESIGN HIGHWAY QUALITY ASSURANCE DIVISION CHIEF FOR REVIEW AND ACCEPTANCE.
2. PROVIDE PRECAST CONCRETE TOP UNITS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
3. PROVIDE WELDED INLET ANGLE ASSEMBLIES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
4. CAST-IN-PLACE TOP UNITS MAY BE MONOLITHIC WITH THE INLET BOX.
5. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE PUBLICATION 408, SECTIONS 605 AND 714, AASHTO/AWS BRIDGE WELDING CODE AND THE CONTRACT SPECIAL PROVISIONS.
6. THE SIZE OF THE INLET TOP UNITS IS BASED ON THE MINIMUM DIMENSIONS INDICATED FOR THE STANDARD INLET BOX AS SHOWN ON RC-46M.
7. PROVIDE A TOP SLAB TO SUPPORT THE INLET TOP UNITS IF A STANDARD INLET BOX IS NOT SPECIFIED. REFER TO RC-46M FOR ADDITIONAL INFORMATION.
8. FABRICATOR IS RESPONSIBLE FOR LIFTING, HANDLING AND TRANSPORTATION STRESSES.
9. LIFTING DEVICES (IF REQUIRED):
   - PROVIDE GALVANIZED STEEL OR PLASTIC LIFTING DEVICES FOR HANDLING AND INSTALLATION.
   - LIFTING HOLES, WITH A MAXIMUM OUTSIDE DIAMETER EQUAL TO 41 mm (1½"), ARE PERMITTED IN THE TOP UNIT. LOCATE LIFTING HOLES BASED ON THE CENTER OF GRAVITY OF THE FABRICATED INLET TOP.
   - FILL LIFTING DEVICES WITH NON-SHRINK GROUT AFTER INSTALLATION IF THE LIFTING DEVICE IS LOCATED ON THE TOP SURFACE. HOLES IN THE SIDEWALLS ARE NOT REQUIRED TO BE FILLED WITH NON-SHRINK GROUT.
   - PROVIDE LIFTING DEVICES WITH A MINIMUM CAPACITY OF AT LEAST FOUR TIMES THE CALCULATED LOAD ON THE DEVICE.
10. PROVIDE THE FOLLOWING CONCRETE CLASS:
    - CAST-IN-PLACE: CLASS A CEMENT CONCRETE [DESIGN COMPRESSIVE STRENGTH, $f'_c$ = 21 MPa (3,000 PSI)]
    - PRECAST: CLASS AA CEMENT CONCRETE, MODIFIED [DESIGN COMPRESSIVE STRENGTH, $f'_c$ = 28 MPa (4,000 PSI)]
11. A HIGHER STRENGTH OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER STRENGTH OF CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT. SUBMIT MIX DESIGN TO THE DEPARTMENT FOR REVIEW AND ACCEPTANCE.
12. PROVIDE GRADE 420 (GRADE 60) DEFORMED REINFORCEMENT BARS THAT MEET THE REQUIREMENTS OF ASTM A615M (A615) OR ASTM A706M (A706). DO NOT WELD REINFORCEMENT BARS WITHOUT A PENNDOT APPROVED WELDING PROCEDURE.
13. CLEAR COVER FOR STEEL:
    - PRECAST: 38 mm (1½")
    - CAST-IN-PLACE: 50 mm (2")
14. PROVIDE STRUCTURAL STEEL (ANGLES AND PLATES) CONFORMING TO AASHTO M270M (M270) GRADE 250 (36) [ASTM A709M (A709), GRADE 250 (36)].
15. ANCHORING OF ANGLES AND PLATES: PROVIDE EITHER STUDS OR BENT BAR ANCHORS IN ACCORDANCE WITH THE INDICATED DETAILS.
    - STUDS: PROVIDE STUDS CONFORMING TO AASHTO M169 (ASTM A108). WELD STUDS TO ANGLES OR PLATES.
    - BENT BAR ANCHORS: PROVIDE GRADE 420 (GRADE 60) DEFORMED REINFORCEMENT BARS THAT MEET THE REQUIREMENTS OF ASTM A615M (A615) OR ASTM A706M (A706). WELD BARS TO ANGLES OR PLATES USING A PENNDOT APPROVED WELDING PROCEDURE.
16. GALVANIZE PLATES, ANGLES AND STUDS OR BENT BAR ANCHORS (AFTER FABRICATION AND BEFORE INSTALLATION IN FORMS) IN ACCORDANCE WITH PUBLICATION 408, SECTION 1105.02(a).
17. CHAMFER EXPOSED CONCRETE EDGES 12 mm x 12 mm (½" x½"), EXCEPT AS NOTED. (CHAMFERS ARE NOT SHOWN ON THE DETAILS)
18. PRECAST TOP UNITS: TAPERS MAY BE PROVIDED ON THE INSIDE AND/OR OUTSIDE VERTICAL FACES OF THE INLET TOPS TO FACILITATE STRIPPING. TAPERS MAY RESULT IN BOTTOM DIMENSIONS THAT VARY TO A MAXIMUM 50 mm (2").
19. REHABILITATION PROJECTS:
    - PROVIDE CONCRETE TOP UNITS IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEETS 18 THRU 20 IF THE AVAILABLE DEPTH IS LESS THAN THE DEPTHS DETAILED ON SHEETS 2 THRU 4.
    - PROVIDE CONCRETE TOP UNITS IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEETS 2 THRU 4 IF THE AVAILABLE DEPTH IS GREATER THAN THE DEPTHS DETAILED ON SHEETS 2 THRU 4.
    - THE CONTRACTOR IS RESPONSIBLE FOR EXISTING TOP UNIT AND ANY GRADE ADJUSTMENT DEVICES, INCLUDING BRICK AND MORTAR AND GRADE ADJUSTMENT RINGS, DOWN TO THE TOP OF THE EXISTING INLET BOX. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE REQUIRED DEPTH OF THE NEW CONCRETE TOP UNIT BASED ON THE AVAILABLE DEPTH. COST OF THIS WORK IS INCIDENTAL TO THE COST OF THE CONCRETE TOP UNIT.
    - THE DEPTH OF THE CONCRETE TOP UNIT MUST ALWAYS BE MAXIMIZED.
    - FOR A PRECAST CONCRETE TOP UNIT THE CONTRACTOR MUST PROVIDE THE AVAILABLE DEPTH TO THE FABRICATOR FOR FABRICATION IN ACCORDANCE WITH THIS STANDARD.
    - FOR A CAST-IN-PLACE CONCRETE TOP UNIT THE CONTRACTOR IS TO CONSTRUCT THE NEW TOP IN ACCORDANCE WITH THIS STANDARD.

### INDEX OF SHEETS


| SHEET NO. | SHEET TITLE |
|---|---|
| 1 | GENERAL NOTES |
| 2 | CONCRETE TOP UNITS – TYPE M AND TYPE S |
| 3 | CONCRETE TOP UNITS – TYPE C |
| 4 | CONCRETE TOP UNITS – TYPE C ALTERNATE |
| 5 | CONCRETE TOP UNITS – TYPE D-H |
| 6 | CONCRETE TOP UNITS – TYPE D-H LEVEL |
| 7 | STRUCTURAL STEEL GRATE |
| 8 | STRUCTURAL STEEL GRATE – BICYCLE SAFE |
| 9 | CAST IRON GRATES – 1 |
| 10 | CAST IRON GRATES – 2 |
| 11 | CAST IRON VANE GRATE |
| 12 | GRADE ADJUSTMENT RINGS – 1 |
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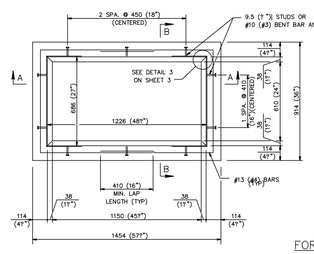
| 20 | CONCRETE TOP UNITS – TYPE C ALTERNATE FOR REHABILITATION PROJECTS |

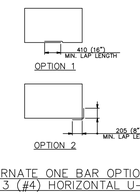

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

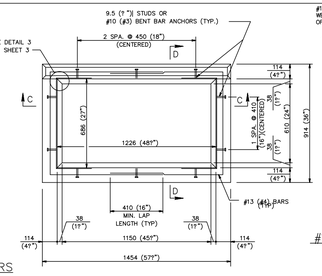
INLET TOPS, GRATES, AND FRAMES
GENERAL NOTES

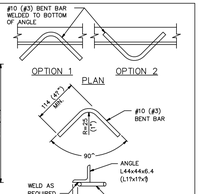
| RECOMMENDED JUN. 1, 2010 | RECOMMENDED JUN. 1, 2010 | SHT 1 OF 20 |
|---|---|---|
| CHIEF, HWY. QA DIVISION | DIRECTOR, BUREAU OF DESIGN | RC-45M |



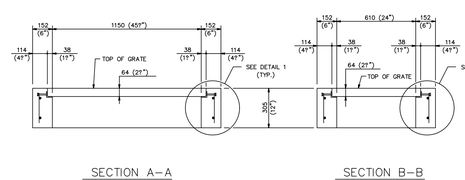



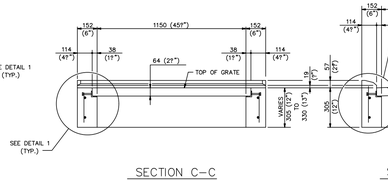

ALTERNATE ONE BAR OPTIONS FOR #13 (#4) HORIZONTAL U-BARS



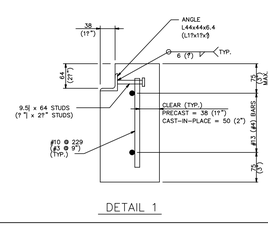



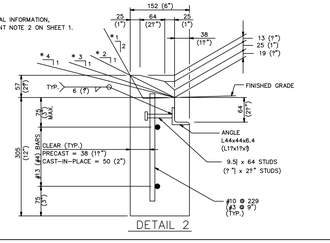

#10 (#3) BENT BAR ANCHOR DETAIL ATTACHED TO ANGLE
ALTERNATE DETAIL IN PLACE OF PROVIDING 9.5 (⅜") STUDS




* FOR ADDITIONAL INFORMATION, SEE PLACEMENT NOTE 2 ON SHEET 1.




NOTES

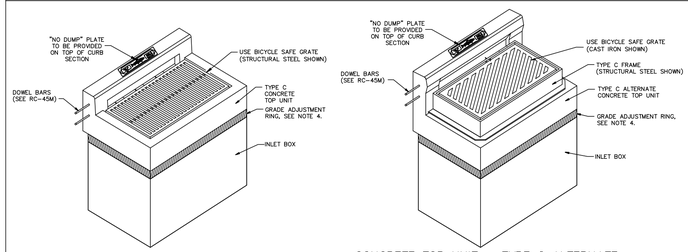
1. FOR ADDITIONAL NOTES, SEE SHEET 1.

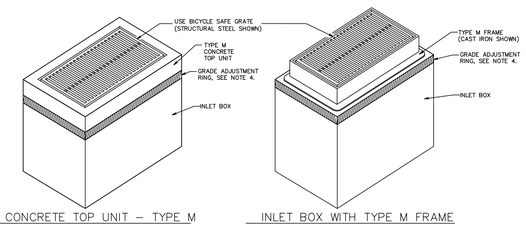
NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

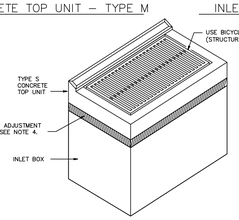
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET TOPS, GRATES, AND FRAMES
CONCRETE TOP UNITS
TYPE M AND TYPE S

| RECOMMENDED JUN. 1, 2010 | RECOMMENDED JUN. 1, 2010 | SHT 2 OF 20 |
|---|---|---|
| CHIEF, HWY. QA DIVISION | DIRECTOR, BUREAU OF DESIGN | RC-45M |

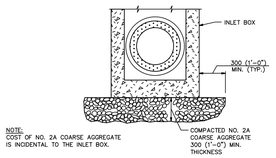


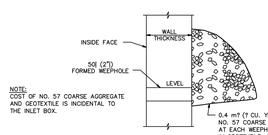

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEETS 1 – 3.
2. STANDARD INLET BOXES SHOWN, PROVIDE TOP SLABS FOR OTHER INLET BOX TYPES.
3. SEE RC-45M FOR DETAILS FOR THE CONCRETE TOP UNITS, FRAMES, AND GRATES.
4. PROVIDE GRADE ADJUSTMENT RINGS WHEN REQUIRED. SEE RC-45M FOR DETAILS.




NOTE: COST OF NO. 2A COARSE AGGREGATE IS INCIDENTAL TO THE INLET BOX.

INLET BOX SUBBASE PREPARATION DETAIL
(SEE FIELD CONSTRUCTION NOTES ON SHEET 1)




NOTE: COST OF NO. 57 COARSE AGGREGATE AND GEOTEXTILE IS INCIDENTAL TO THE INLET BOX.

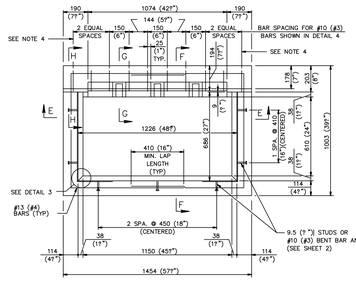
WEEPHOLE DETAIL
(SEE GENERAL NOTE 15 ON SHEET 1)

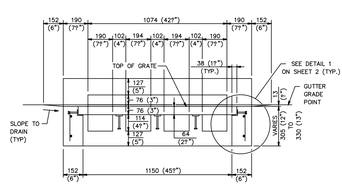
NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

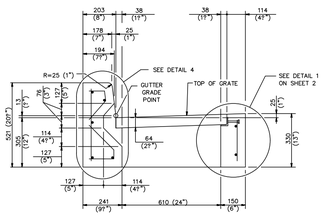
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

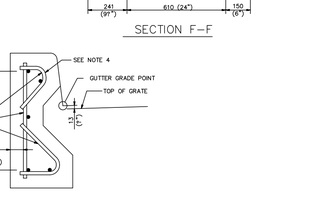
INLET BOXES
INLET ASSEMBLIES – 1

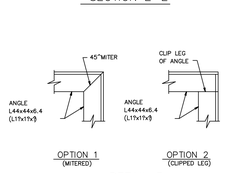
| RECOMMENDED JUN. 1, 2010 | RECOMMENDED JUN. 1, 2010 | SHT 4 OF 45 |
|---|---|---|
| CHIEF, HWY. QA DIVISION | DIRECTOR, BUREAU OF DESIGN | RC-46M |

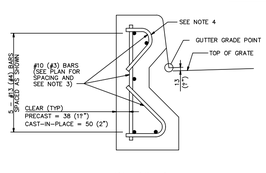


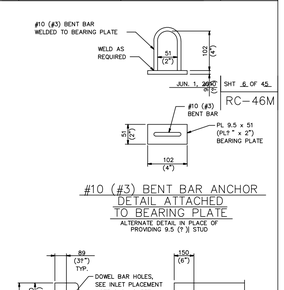



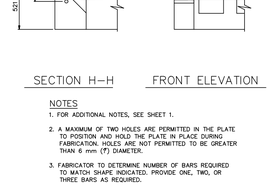




NOTES

1. FOR ADDITIONAL NOTES, SEE SHEET 1.
2. A MAXIMUM OF TWO HOLES ARE PERMITTED IN THE PLATE TO POSITION AND HOLD THE PLATE IN PLACE DURING FABRICATION. HOLES ARE NOT PERMITTED TO BE GREATER THAN 6 mm (¼") DIAMETER.
3. FABRICATOR TO DETERMINE NUMBER OF BARS REQUIRED TO MATCH SHAPE INDICATED. PROVIDE ONE, TWO, OR THREE BARS AS REQUIRED.
4. BEND OUTSIDE STIRRUP TO ACCOMMODATE DOWEL BARS AND STILL MAINTAIN CLEARANCE REQUIREMENTS.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET TOPS, GRATES, AND FRAMES
CONCRETE TOP UNITS
TYPE C

| RECOMMENDED JUN. 1, 2010 | RECOMMENDED JUN. 1, 2010 | SHT 3 OF 20 |
|---|---|---|
| CHIEF, HWY. QA DIVISION | DIRECTOR, BUREAU OF DESIGN | RC-45M |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PROJECT INFORMATION:
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LAST PLOTTED: Feb 26, 2026 - 2:50PM
LAST SAVE BY: JGetzendanner

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE ACCURACY AND COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 811 OR 1-800-242-1776 FOR THE LOCATION OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

LICENSED PROFESSIONAL ENGINEER

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

STORM SEWER DETAILS – 2


T&M ASSOCIATES
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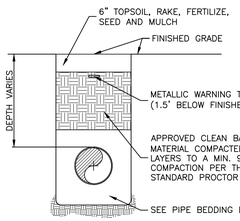
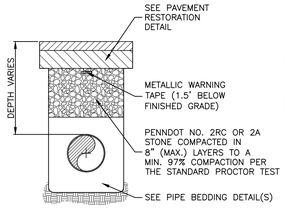
OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

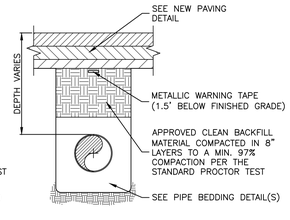

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | STRMD-2 |
| SHEET | 33 OF 50 |




UNPAVED AREAS




EXISTING PAVED AREAS



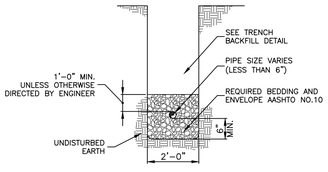

NEW ROADWAYS & PARKING AREAS

NOTES:

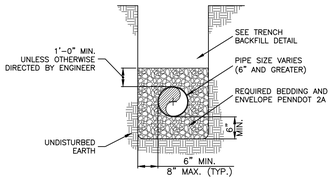
1. TRENCH COMPACTION TO BE TESTED, AT THE DEVELOPER'S EXPENSE, IN ACCORDANCE WITH PENNDOT PUB 408, LATEST REVISION, AS REQUIRED BY THE MUNICIPALITY/AUTHORITY HAVING JURISDICTION.
2. CLEAN FILL MUST BE APPROVED BY THE MUNICIPALITY/AUTHORITY HAVING JURISDICTION PRIOR TO PLACEMENT IN THE TRENCH.
3. AREAS AROUND MANHOLES, INLETS, AND OTHER APPURTENANCES SHALL BE HAND COMPACTED AS DIRECTED BY THE MUNICIPALITY/AUTHORITY HAVING JURISDICTION.
4. NO SLAG MATERIAL PERMITTED.
5. IF WATER IS ENCOUNTERED IN THE EXCAVATION TRENCH, AASHTO #57 AGGREGATE MUST BE USED.
6. ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH PENNDOT SPECIFICATIONS, PUBLICATION 408 AND 67 PA CODE SECTION 459.
7. UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO COLLECT IN EXCAVATED TRENCHES. ANY WATER IN THE TRENCHES SHALL BE REMOVED THROUGH A PUMPED WATER FILTER BAG.

## BACKFILL (TRENCH)

NOT TO SCALE



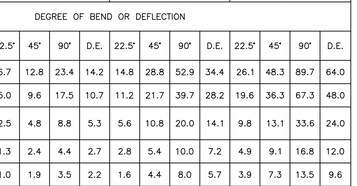

WATER SERVICE




WATER MAIN

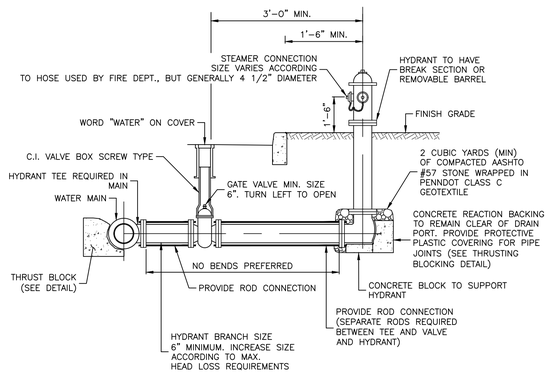
## PIPE BEDDING (WATER MAIN AND SERVICE)

NOT TO SCALE




## TEMPORARY TRENCH RESTORATION

NOT TO SCALE




NOTES:

1. MAXIMUM HEAD LOSS 5 PSI BETWEEN MAIN AND HYDRANT OUTLET FOR 750 GPM FLOW.
2. HYDRANT TO BE PLACED WITH STREAMER CONNECTION FACING STREET @ 1'-6" BEHIND FACE OF CURB OR E.O.P. (TYP.)
3. MEGA-LUG REQUIRED AT VALVE (ON HYDRANT SIDE ONLY IF HYDRANT TEE IS UTILIZED) AND AT HYDRANT.
4. ALL PROPOSED PLUMBING TO BE INSTALLED IN STRICT ACCORDANCE WITH SPECIFICATIONS OF AUTHORITY HAVING JURISDICTION.
5. MINIMUM OF 4'-0" OF COVER OVER ALL PIPES.
6. HYDRANT TO HAVE 5 ¼" SEAT OPENING.

## FIRE HYDRANT

NOT TO SCALE

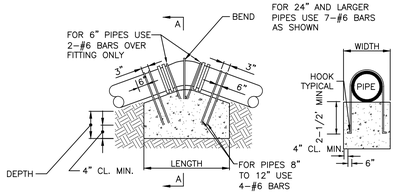
| BEARING SURFACE REQUIRED - SQ.FT. HORIZONTAL THRUST BLOCKING & VERTICAL THRUST DOWNWARD 125 P.S.I. WORKING PRESSURE | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIPE SIZE | 6" & 8" | | | | 10" & 12" | | | | 16" 18" 20" | | | | 24" | | | |
| TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS | DEGREE OF BEND OR DEFLECTION | | | | | | | | | | | | | | | |
| | 22.5° | 45° | 90° | D.E. | 22.5° | 45° | 90° | D.E. | 22.5° | 45° | 90° | D.E. | 22.5° | 45° | 90° | D.E. |
| SAND 0.75 TON/SQ.FT. | 3.4 | 6.0 | 11.0 | 6.4 | 6.7 | 12.8 | 23.4 | 14.2 | 14.8 | 28.8 | 52.9 | 34.4 | 26.1 | 48.3 | 89.7 | 64.0 |
| SOFT CLAY 1 TON/SQ.FT. | 2.6 | 4.6 | 8.2 | 4.8 | 5.0 | 9.6 | 17.5 | 10.7 | 11.2 | 21.7 | 39.7 | 28.2 | 19.6 | 36.3 | 67.3 | 48.0 |
| SAND AND GRAVEL 2 TON/SQ.FT. | 1.3 | 2.3 | 4.1 | 2.4 | 2.5 | 4.8 | 8.8 | 5.3 | 5.6 | 10.8 | 20.0 | 14.1 | 9.8 | 13.1 | 33.6 | 24.0 |
| CLAY 4 TON/SQ.FT. | 1.0 | 1.2 | 2.1 | 1.3 | 1.3 | 2.4 | 4.4 | 2.7 | 2.8 | 5.4 | 10.0 | 7.2 | 4.9 | 9.1 | 16.8 | 12.0 |
| SOFT ROCK 5 TON/SQ.FT. | 1.0 | 1.0 | 1.6 | 1.0 | 1.0 | 1.9 | 3.5 | 2.2 | 1.6 | 4.4 | 8.0 | 5.7 | 3.9 | 7.3 | 13.5 | 9.6 |
| ROCK 15 TON/SQ.FT | – | – | 1.0 | 0.4 | – | 1.0 | 1.2 | 0.8 | 1.0 | 1.4 | 2.6 | 1.9 | 1.3 | 2.4 | 4.5 | 3.2 |
| PIPE SIZE | 30" | | | | 36" | | | | 42" | | | | 48" | | | |
| TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS | DEGREE OF BEND OR DEFLECTION | | | | | | | | | | | | | | | |
| | 22.5° | 45° | 90° | D.E. | 22.5° | 45° | 90° | D.E. | 22.5° | 45° | 90° | D.E. | 22.5° | 45° | 90° | D.E. |
| SAND 0.75 TON/SQ.FT. | 40.3 | 76.5 | 139.0 | 99.1 | 55.5 | 107.5 | 197.5 | 140.0 | 74.3 | 144.7 | 266.5 | 188.7 | 83.2 | 182.3 | 336.2 | 238.0 |
| SOFT CLAY 1 TON/SQ.FT | 30.2 | 57.4 | 104.3 | 74.3 | 41.6 | 80.6 | 148.0 | 105.0 | 55.7 | 108.5 | 200.0 | 141.6 | 70.0 | 136.7 | 252.2 | 178.0 |
| SAND AND GRAVEL 2 TON/SQ.FT. | 15.1 | 28.7 | 52.1 | 37.2 | 20.8 | 40.3 | 74.0 | 52.5 | 27.9 | 54.3 | 100.0 | 70.8 | 35.0 | 68.3 | 126.1 | 89.2 |
| CLAY 4 TON/SQ.FT. | 7.6 | 14.6 | 26 | 18.6 | 10.4 | 20.2 | 37.0 | 26.3 | 14.0 | 27.0 | 50.0 | 35.3 | 17.5 | 34.2 | 63.0 | 44.6 |
| SOFT ROCK 5 TON/SQ.FT. | 6.0 | 11.5 | 20.9 | 14.9 | 8.3 | 16.1 | 29.6 | 21.0 | 11.2 | 21.7 | 40.0 | 28.3 | 14.0 | 27.3 | 50.4 | 35.7 |
| ROCK 15 TON/SQ.FT. | 2.0 | 3.8 | 7.0 | 5.0 | 1.4 | 2.8 | 5.4 | 7.0 | 3.7 | 7.2 | 13.3 | 9.4 | 4.7 | 9.1 | 16.8 | 12.0 |

NOTES:

1. D.E. DENOTES DEAD END.

## WATER-THRUST BLOCKING TABLE

NOT TO SCALE




TYPICAL SECTION - VERTICAL THRUST UPWARD SECTION A-A

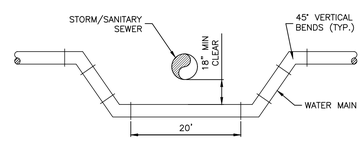
| | CONCRETE BLOCKING DIMENSIONS, VERTICAL THRUST UPWARD 150 P.S.I. WORKING PRESSURE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | LENGTH | | | WIDTH | | | DEPTH | | |
| PIPE SIZES | 11 ¼" | 22 ½" | 45" | 11 ¼" | 22 ½" | 45" | 11 ¼" | 22 ½" | 45" |
| 6" & 8" | 3' | 4' | 6' | 3' | 3' | 3' | 2' | 3' | 4' |
| 10" & 12" | 3.5' | 4' | 7' | 4' | 4' | 4' | 2.5' | 3' | 4' |
| 14" & 16" | 4' | 6' | 9' | 4.5' | 4.5' | 4.5' | 3.5' | 4' | 5' |
| 18" & 20" | 5' | 6.5' | 11.5' | 5' | 5' | 5' | 4' | 5' | 5.5' |
| 24" | 5' | 9' | 12.5' | 5' | 5' | 6' | 4.5' | 5' | 6' |
| 30" | 5.5' | 9' | 13.5' | 5.5' | 6' | 7' | 5.5' | 6' | 7' |
| 36" | 6.5' | 11' | 14' | 5.5' | 6.5' | 7' | 6' | 6.5' | 7' |
| 42" | 9' | 13.5' | 15' | 6' | 7' | 7' | 6' | 7' | 7' |
| 48" | 10' | 14' | 16' | 6' | 7' | 7' | 6' | 7' | 7' |

NOTES:

1. ALL CONC. SHALL HAVE MIN. COMPRESSIVE STRENGTH OF 3000 PSI AT THE END OF 28 DAYS.
2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS. (ASTM GRADE 60)
3. ALL FITTINGS AND JOINTS SHALL BE COVERED WITH POLYETHELENE FILM BEFORE PLACING CONC.
4. PAINT ALL EXPOSED STEEL WITH TWO COATS OF VALDURA PAINT OR APPROVED EQUAL.
5. REINFORCING BARS SHALL BE U-SHAPE AROUND THE PIPE.

## THRUST BLOCKING TABLE-VERTICAL-UPWARD

NOT TO SCALE

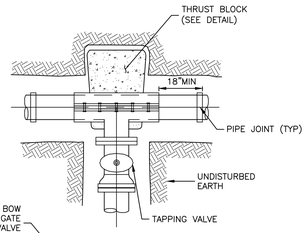


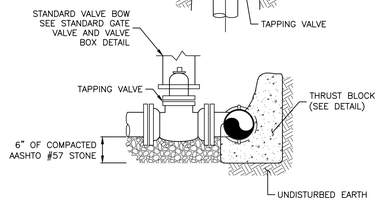

NOTES:

1. ALL PIPE AND FITTINGS SHALL BE RESTRAINED PER AUTHORITY SPECIFICATIONS AND BY DIRECTION OF THE ENGINEER.
2. THE USE OF CONCRETE THRUST BLOCK SHALL BE PER THE DIRECTION OF THE AUTHORITY AND ENGINEER.

## STORM SEWER - SANITARY SEWER WATER CROSSING

NOT TO SCALE



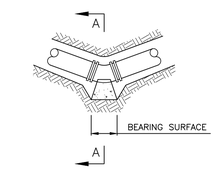




NOTES:

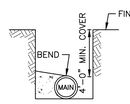
1. TAPPING SLEEVE SHALL BE AIR-TESTED PRIOR TO THE LIVE MAIN BEING TAPPED.

## TAPPING SLEEVE AND VALVE

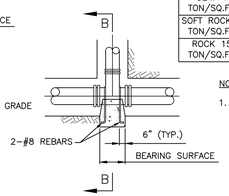
NOT TO SCALE



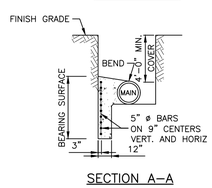

PLAN



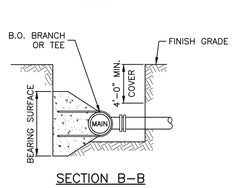

SECTION A-A




PLAN




SECTION A-A



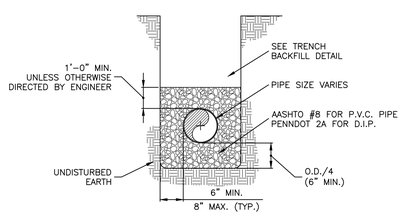

SECTION B-B

NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS (ASTM GRADE 60).
3. ALL FITTINGS AND JOINTS SHALL BE COVERED WITH POLYETHYLENE FILM BEFORE PLACING OF CONCRETE.
4. PAINT ALL EXPOSED STEEL WITH TWO COATS OF BITUMASTIC PAINT OR EPOXY COATING.
5. FOR THE REQUIRED BEARING SURFACE SEE STANDARD THRUST BLOCKING DETAIL.
6. BEARING SURFACE MUST BE UNDISTURBED EARTH.

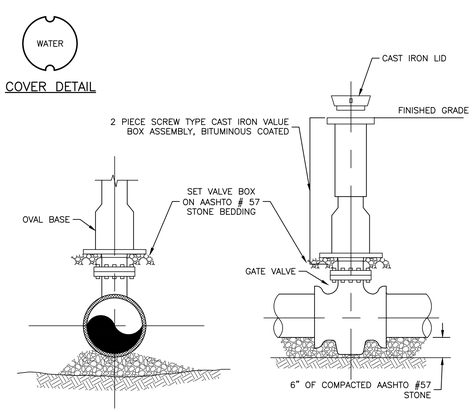
## WATER-HORIZONTAL THRUST BLOCKING

NOT TO SCALE




## PIPE BEDDING (SANITARY MAIN AND LATERAL)

NOT TO SCALE




NOTES:

1. VALVE SHALL NOT COME INTO CONTACT WITH VALVE.

## STANDARD GATE VALVE AND VALVE BOX

NOT TO SCALE

PROJECT INFORMATION:
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FILE NAME: WDEV00004_DTL.dwg
LAST SAVED: Friday, 06 Feb 2026, 2:50PM
LAST SAVE BY: JZetzendorner

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ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE ONE CALL SYSTEM FOR UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK. 2024313771817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

LICENSED PROFESSIONAL ENGINEER

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

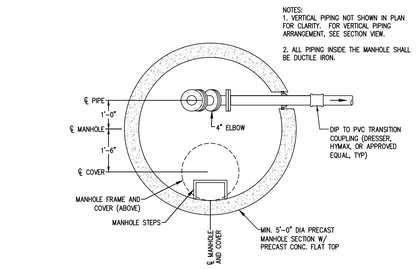
TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

UTILITY DETAILS-1

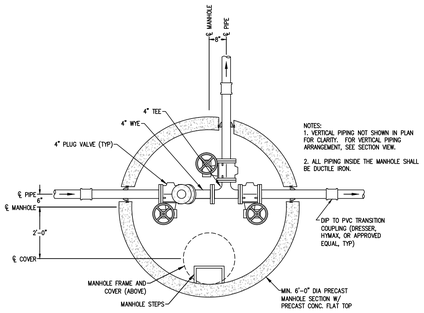
T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

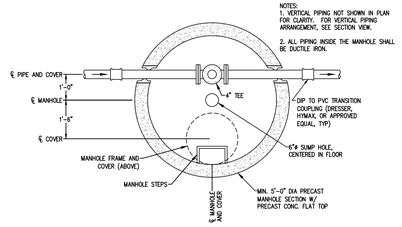
OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

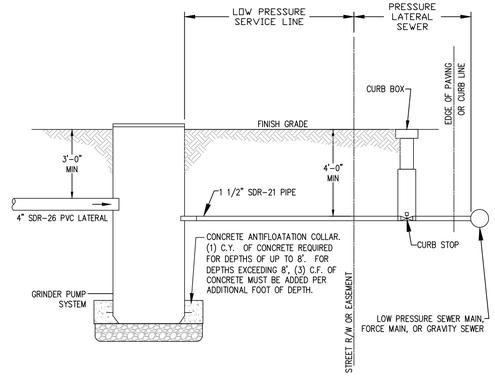
| | |
|---|---|
| DESIGNED BY JPK/CKS/CMR/ROP/ZHR | DRAWING UTLD-1 |
| CHECKED BY BGS/ZHR | |
| DRAWN BY SCR/CKS/RAM | SHEET 34 |
| DATE 1/23/2026 | |
| SCALE AS NOTED | |
| PROJ. NO. WDEV00004 | OF 50 |




LOW PRESSURE SEWER TERMINAL CLEAN OUT MANHOLE
SCALE: 1/2"=1'-0"



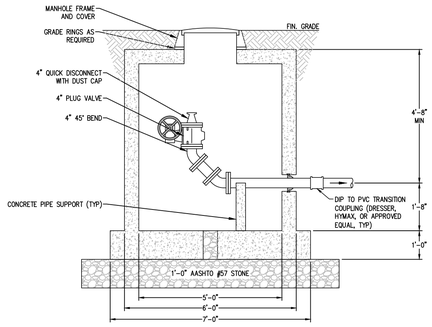



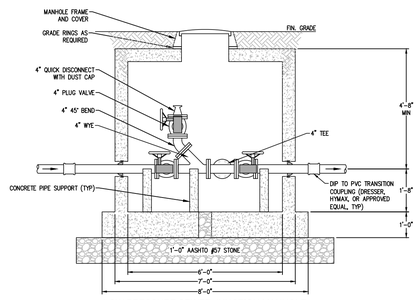

NOTES:

1. A DUPLEX GRINDER PUMP STATION IS REQUIRED FOR COMMERCIAL INSTALLATIONS.
2. GRINDER SYSTEM TANK SHALL BE LOCATED OUTSIDE OF PAVED AREAS.

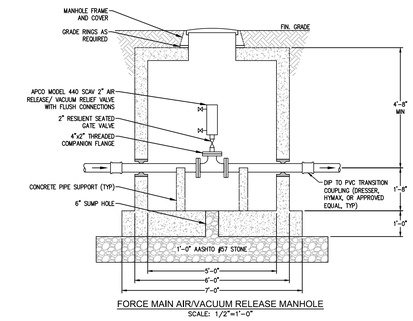
SIMPLEX GRINDER PUMP PLUMBING DETAIL
SCALE: NOT TO SCALE



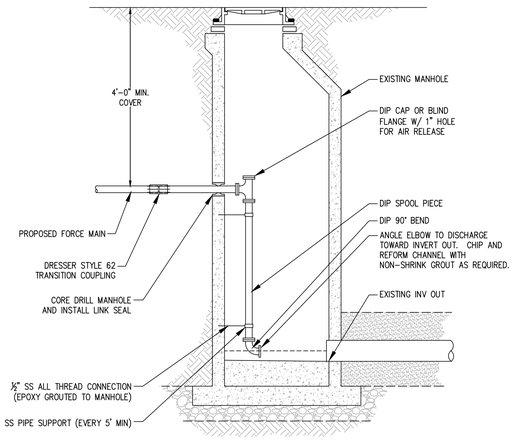

LOW PRESSURE SEWER TERMINAL CLEAN OUT MANHOLE
SCALE: 1/2"=1'-0"



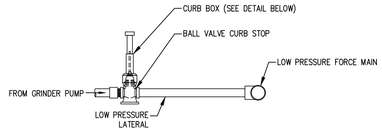

LOW PRESSURE SEWER JUNCTION MANHOLE
SCALE: 1/2"=1'-0"



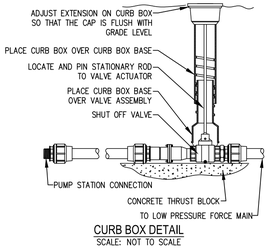

FORCE MAIN AIR/VACUUM RELEASE MANHOLE
SCALE: 1/2"=1'-0"




FORCE MAIN DISCHARGE TO EXISTING MANHOLE
SCALE: NOT TO SCALE

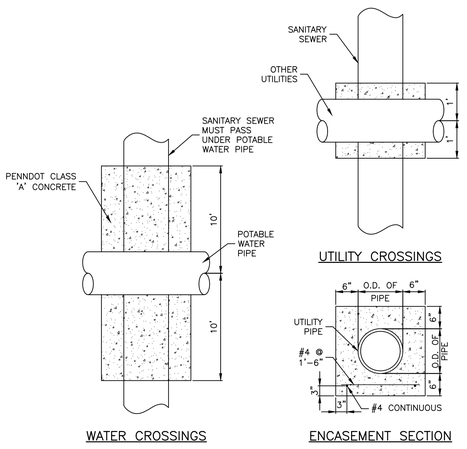



CURB STOP DETAIL
SCALE: NOT TO SCALE




CURB BOX DETAIL
SCALE: NOT TO SCALE

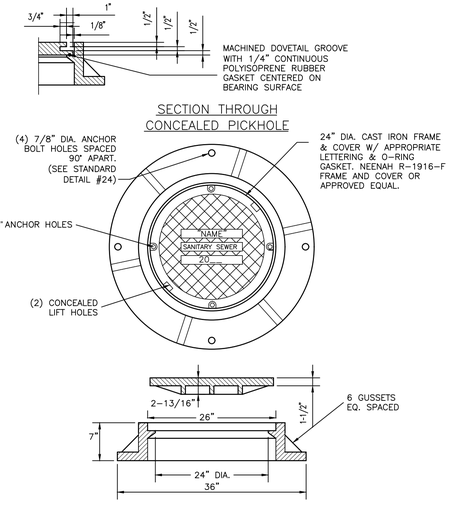
CURB STOP AND CURB BOX
SCALE: NOT TO SCALE




NOTES:

1. PROVIDE REINFORCEMENT AT UTILITY CROSSINGS OR AS DIRECTED BY THE MUNICIPALITY/AUTHORITY HAVING JURISDICTION.

UTILITY CROSSING (CONCRETE ENCASEMENT)
NOT TO SCALE




NOTE: MANHOLE CASTING SHALL HAVE STAINLESS STEEL INSERTS, TETHERLOCK MODEL RAINSTOPPER OR APPROVED EQUAL.

HEAVY DUTY CAST IRON MANHOLE FRAME AND SELF-SEALING COVER
NOT TO SCALE

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_DTL.dwg
LAST SAVED: Monday, February 02, 2026 2:50PM
LAST SAVE BY: JGetzendanner

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1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

LICENSED PROFESSIONAL ENGINEER

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

UTILITY DETAILS-2

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

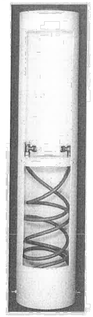
OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | UTLD-2 |
| SHEET | 35 OF 50 |

# MUELLER® / HUNT THERMAL-COIL® METER BOX

Mueller Co. **8F.1**

Rev. 4-99



The MUELLER / Hunt THERMAL-COIL Meter Box provides a means to allow a meter to be read and maintained even though it is set deep in the ground to resist freezing. The THERMAL-COIL Meter Box is designed with the meter installed on a platform that normally sets near the bottom of the box where the ground temperature keeps it warmer. The meter and platform are connected to the service line by coils of polybutylene tubing which allow the meter and platform to be raised to the surface.

The body of the meter box is made from rigid PVC which has a high insulating "R" value to resist frost bridging" inside the box. For extremely cold climates, an optional insulating pad is available which traps the relatively warm air rising from the earth inside the box.

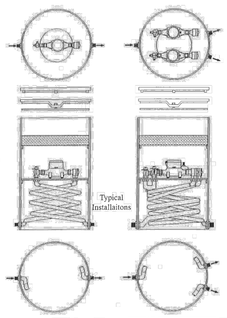
MUELLER / Hunt THERMAL-COIL Meter Boxes are shipped fully assembled, ready for meter installation. Their light weight saves shipping costs and makes installation a one man job in most cases. Every box is factory tested and has a 150 psig maximum working pressure rating.

MUELLER / Hunt THERMAL-COIL Meter Boxes are available for 5/8" to 1" meters. A wide variety of end connections, control valves, box depths, lids and other options provide you with the meter set you need. Due to the almost endless combination of features available, each box is custom built to your specifications. See page 8F.2 for options and ordering instructions.

Manufactured under one or more of the following: U.S. Patent No. 4,614,113; 4,813,281

## MUELLER / Hunt THERMAL-COIL Meter Box Features

- ❑ Rigid .300 minimum wall PVC material holds shape and resists frost bridging
- ❑ Optional insulation pad traps earth's heat to prevent freezing in extremely cold climates
- ❑ White interior aids visibility
- ❑ Meter set is anchored to moveable platform to maintain alignment and stability
- ❑ Platform support and reinforcing ring add rigidity to box
- ❑ Poly coil tubing provides low friction loss equivalent to a typical conventional meter set of the same size and depth
- ❑ Male I.P. thread inlet and outlet connections accept a variety of MUELLER Service Fittings--see section 6
- ❑ Optional aluminum bottom available
- ❑ Large selection of optional lids




**MUELLER Valves and Couplings used in these meter box assemblies are manufactured and tested in accordance with ANSI/AWWA C800.**

8F-PVC/BOXES/VAULTS

# 8F.2 Mueller Co. MUELLER® /HUNT THERMAL-COIL® METER BOX

Rev. 4-99

## MUELLER / Hunt THERMAL-COIL Meter Box ordering instructions

To order a MUELLER / Hunt THERMAL - COIL Meter Box, simply choose the options you require from the eight catagories listed below and place the option code on the appropriate line of the catalog number shown below.

If the box you need is a tandem type, please fill out the tandem information box shown below the options listing and contact the factory for price and delivery information. Phone 1-800-821-3553 or fax 1-615-895- 7686.

**Catalog Number** **PIT MUST HAVE COMPOSITE LID. CANNOT BE LOCATED IN TRAFFIC AREA.**

(1)_____ (2)_____ (3)_____ (4)_____ (5)_____ (6)_____ (7)_____ (8)_____

## Options

**1** Meter size NOTE: Meter is **not** furnished. Order meter separately.

| Meter size | Code number |
|---|---|
| 5/8" | 200 |
| 5/8"X3/4" | 203 |
| 3/4" | 250 |
| 1" | 330 |

**2** Box Style

| Box style | Code number |
|---|---|
| Single meter | CS |
| Double meter | CD |
| Tandem | CT |

**3** Box diameter

| Box diameter | Code number |
|---|---|
| 15" box is for use with: 5/8, 5/8x3/4 or 3/4 single meters 5/8, 5/8x3/4 or 3/4 tandems | 15 |
| 18" box is for use with: 1" single meters 1" tandems 5/8, 5/8x3/4 or 3/4 double meters | 18 |

**4** Box depth

| Depth | Code number | Depth | Code number |
|---|---|---|---|
| 30" | 30 | 66" | 66 |
| 36" | 36 | 72" | 72 |
| 42" | 42 | 78" | 78 |
| 48" | 48 | 84" | 84 |
| 54" | 54 | 90" | 90 |
| 60" | 60 | 96" | 96 |

**5** Meter inlet type

| Meter inlet | Code number |
|---|---|
| Lockwing angle meter stop | L |
| Lockwing angle ball valve (full port) | B |
| Lockwing angle ball valve (reduced port) | R |

**6** Meter outlet type

| Meter outlet | Code number |
|---|---|
| Meter coupling | A |
| Dual check valve | H |
| A.S.S.E. Dual check valve | S |
| A.S.S.E. Top entry vertical check | V |
| Lockwing angle meter stop | L |
| Lockwing angle ball valve (full port.) | F |
| Lockwing angle ball valve ( reduced port) | R |

**7** Box bottom type

| Bottom type | Code number |
|---|---|
| Attached aluminum bottom | A |
| Less bottom | B |

**8** Type of box locking device (box is ordered with device to accept either a non-locking lid, center locking or side locking lid). Lids must be ordered separately.

| Lock type | Code number |
|---|---|
| Non-locking | N |
| Center locking | L |
| Side locking | S |

## Tandem box order information N/A

Type of tandem device (regulator, backflow preventer etc)_____
Size_____ and length_____ of tandem device
Tandem device manufacturer's name_____ Tandem device model number_____

* NOTE: Tandem device is not included and must be purchased separately. ALSO, 3/4" tandems systems when used with certain regulators may need to be placed within a 18" box; list the regulator model when specifying this system. If an ASSE check valve or ball valve is being used in a 3/4" setting then an 18" meter box will be required.

**MUELLER Valves and Couplings used in these meter box assemblies are manufactured and tested in accordance with ANSI/AWWA C800.**

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_DTL.dwg
LAST SAVED: Feb 10, 2026, 2:50PM
LAST SAVE BY: JGetzendanner

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serial #
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
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LICENSED PROFESSIONAL ENGINEER

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

UTILITY DETAILS–3

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY JPK/CKS/CMR/ROP/ZHR | DRAWING UTLD–3 |
| CHECKED BY BGS/ZHR | |
| DRAWN BY SCR/CKS/RAM | SHEET 36 |
| DATE 1/23/2026 | |
| SCALE AS NOTED | |
| PROJ. NO. WDEV00004 | OF 50 |

LANDSCAPE PLANTING NOTES AND SPECIFICATIONS:

1. ALL PLANT MATERIAL SHALL BE PROVIDED AND INSTALLED IN STRICT CONFORMANCE WITH USDA STANDARDS FOR NURSERY STOCK AND THE "AMERICAN NURSERY AND LANDSCAPE ASSOCIATION" STANDARDS LATEST EDITIONS.

2. THE CONTRACTOR SHALL VERIFY ALL UTILITIES WITHIN WORK AREA PRIOR TO COMMENCING WITH ANY EXCAVATIONS AND SHALL BE RESPONSIBLE FOR THEIR PROTECTION.

3. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS SHOWN ON THE DRAWINGS, AS SPECIFIED, AND IN QUANTITIES INDICATED ON THE PLANT LIST. IF A DISCREPANCY SHOULD ARISE BETWEEN THE AMOUNT OF PLANTS SHOWN ON THE PLAN VS. THE PLANT SCHEDULE, THE PLAN SHALL GOVERN.

4. ALL PLANTS SHALL BE NURSERY GROWN.

5. ALL PLANTS SHALL BE HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT.

6. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OR GROWTH. THEY SHALL BE SOUND, HEALTHY AND VIGOROUS WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF THEY SHALL BE FREE OF DISEASE AND INSECT PESTS, EGGS OR LARVAE. THEY SHALL HAVE HEALTHY WELL–DEVELOPED ROOT SYSTEMS.

7. SUBSTITUTIONS: WHEN PLANTS OF A SPECIFIED KIND OR SIZE ARE NOT AVAILABLE WITHIN A REASONABLE DISTANCE, SUBSTITUTIONS MAY BE MADE UPON REQUEST BY THE CONTRACTOR IF APPROVED BY THE LANDSCAPE ARCHITECT AND THE TOWNSHIP ENGINEER.

8. ALL AREAS TO BE SHOWN AS LAWN SHALL BE SEEDED, AS SPECIFIED, AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED WITH A MINIMUM OF 90% COVER PER 5 SQUARE FEET OF LAWN AREA AVERAGE.

9. TREE LOCATIONS MAY NEED TO BE ADJUSTED BASED ON LOCATIONS OF UTILITIES, FIELD CONDITIONS, OR FINAL GRADING. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR THEIR REPRESENTATIVE IF ADJUSTMENTS ARE NECESSARY.

10. ALL SHRUBS TO BE PLANTED IN CONTINUOUS MULCH BEDS UNLESS OTHERWISE NOTED. ALL PLANTING BEDS TO RECEIVE 3" SHREDDED HARDWOOD MULCH.

11. ALL PLANTS DELIVERED TO THE SITE MUST BE INSTALLED WITHIN 24 HOURS. IF PLANTS MUST BE STORED LONGER THAN 24 HOURS THEY ARE TO BE HEELED IN WITH MULCH AND SUFFICIENTLY WATERED TO PREVENT DRYNESS AND DESICCATION. IN NO CASE SHALL PLANTS BE STORED MORE THAN 72 HOURS WITHOUT APPROVAL FROM THE OWNERS REPRESENTATIVE.

12. ROOT BALLS OF ALL PLANTS SHALL BE ADEQUATELY PROTECTED AT ALL TIMES FROM SUN AND DRYING WINDS OR FROST. PLANTS WITH BROKEN ROOT BALLS, TRUNK AND BARK DAMAGE OR EXCESSIVE DAMAGE TO THE CROWN SHALL BE REPLACED PRIOR TO PLANTING.

13. ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP 1/3 OF BURLAP MINIMUM. ALL NON– BIODEGRADABLE MATERIAL SHALL BE TOTALLY REMOVED. WIRE BASKETS SHALL BE CAREFULLY REMOVED ENTIRELY AT THE TIME OF PLANTING, PREFERABLY AFTER THE ROOT BALL HAS BEEN INSTALLED IN THE PLANTING PIT.

14. PREPARATION OF PLANTING: CLEAN SOIL EXCAVATED FROM PLANTING PIT OF ROOTS, PLANTS, STONES LARGER THAN 2", CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL OR TOXIC TO PLANT GROWTH.

15. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.

16. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR HIS/HER EQUAL.

17. INSTALL ALL PLANTS SO THAT THE TOP OF THE ROOTBALL IS SLIGHTLY ABOVE FINISHED GRADE. IN NO CASE SHALL THE PLAN BE INSTALLED WITH NO LESS THAN THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL ROOT CROWN. EXCESS SOIL MAY EXIST AROUND THE ROOT CROWN FROM NURSERY OPERATIONS. THIS EXCESS MATERIAL SHALL BE REMOVED PRIOR TO PLANTING TO DETERMINE THE PROPER BALL INSTALLATION DEPTH.

18. ALL EXISTING TREES THAT ARE TO BE SAVED AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE PROTECTED UNTIL CONSTRUCTION HAS BEEN COMPLETED. AREA WITHIN DRIPLINE SHALL NOT BE TRAVELED ACROSS BY CONSTRUCTION TRAFFIC.

19. TREES PLANTED ALONG STREETS SHALL HAVE A SINGLE STRAIGHT TRUNK THAT DOES NOT FORK BELOW 6'.

20. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL NON–BIODEGRADEABLE ROOT WRAPPING MATERIAL SHALL BE REMOVED AT TIME OF PLANTING.

21. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS MINIMUM.

22. THE CONTRACTOR SHALL LAYOUT WITH IDENTIFIABLE STAKES INDIVIDUAL TREE AND SHRUB LOCATIONS AND AREAS FOR MULTIPLE PLANTING ALONG WITH THE ARRANGEMENTS AND OUTLINE OF PLANTING BEDS AS INDICATED ON DRAWING. THE LAYOUT OF PLANTING WILL THEN BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY EXCAVATION OF PLANT PITS OR PLANT BEDS.

23. AT PLANTING TIME, ALL PLANT MATERIAL SHALL TRIMMED TO REMOVE BROKEN AND/OR DEAD VEGETATIVE MATERIAL.

24. ALL PLANTS SHALL BE INSTALLED AS PER THE PLANTING DETAILS AND THE CONTRACT SPECIFICATIONS, WHERE APPLICABLE.

25. ALL PLANTS SHALL BE INSTALLED PLUMB UNLESS OTHERWISE SPECIFIED.

26. ALL PLANTS SHALL BE THOROUGHLY WATERED TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON.

27. CONDITIONS DETRIMENTAL TO PLANTS: THE CONTRACTOR SHALL NOTIFY THE PROJECT REPRESENTATIVE IN WRITING OF ALL SOIL OR DRAINAGE CONDITIONS WHICH THE CONTRACTOR CONSIDERS DETRIMENTAL TO THE GROWTH OF PLANTS. HE SHALL STATE THE CONDITIONS AND SUBMIT A PROPOSAL FOR CORRECTING THE CONDITIONS INCLUDING ANY CHANGE IN COST FOR REVIEW AND ACCEPTANCE BY THE PROJECT REPRESENTATIVE.

28. WARRANT TREES AND SHRUBS FOR A MINIMUM PERIOD OF EIGHTEEN (18) MONTHS AFTER DATE OF WRITTEN FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT AND/OR THE OWNERS AUTHORIZED REPRESENTATIVE AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MONITOR THE PROJECT PLANTINGS DURING THE WARRANTY PERIOD AND NOTIFY THE OWNER IF PROBLEMS DEVELOP. PLANTS THAT DIE DURING THE WARRANTY PERIOD SHALL BE REMOVED IMMEDIATELY AND REPLACED.

29. ANY TREE OR SHRUB WHICH DIES WITHIN 18 MONTHS OF PLANTING SHALL BE REPLACED IN KIND. ANY TREE OR SHRUB WHICH WITHIN 18 MONTHS OF PLANTING OR REPLANTING IS DEEMED BY THE TOWNSHIP NOT TO BE HEALTHY AND VIGOROUS SHALL BE REPLACED IN KIND. REPLACEMENTS MAY BE OF A SUBSTITUTE SPECIES ONLY WHEN APPROVED BY THE TOWNSHIP.

30. THE TOWNSHIP RESERVES THE RIGHT TO REQUIRE ADDITIONAL LANDSCAPE BUFFER PLANTINGS, FOLLOWING SUBSTANTIAL COMPLETION OF CONSTRUCTION, SHOULD VEGETATION TO BE PRESERVED NOT BE PRESERVED OR NOT OTHERWISE BE AS REPRESENTED ON THE FINAL LANDSCAPE PLAN(S).

EMERGENCY SEEDING RECOMMENDATIONS TOWNSHIP OF WORCESTER

DURING CONSTRUCTION, ALL DISTURBED AREAS SHOULD BE SEEDED ACCORDING TO THE FOLLOWING INSTRUCTIONS:
SEEDING RECOMMENDATION FOR SIX TO TWELVE–MONTHS PERIODS.

1. INSTALL NEEDED WATER–CONTROL MEASURES.
2. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE.
3. LIME ACCORDING TO SOIL TEST OR KNOWLEDGE OF THE SITE OR APPLY TWO TONS OF GROUND LIMESTONE PER ACRE.
4. FERTILIZE ACCORDING TO SOIL TEST OR KNOWLEDGE OF THE SITE OR APPLY 40–40–40 PER ACRE.
5. INCORPORATE LIME AND FERTILIZER INTO THE TOP FOUR INCHES OF SURFACE SOIL BY DISCING OR OTHER SUITABLE MEANS.
6. SEED ONE OF OF THE FOLLOWING MIXTURES AT THE MOST SUITABLE DATE. APPLY UNIFORMLY WITH A DRILL OR BY BROADCASTING:
   a. MARCH 1 TO OCTOBER 1: 20 POUNDS OF ANNUAL RYE GRASS OR FIELD BROMEGRASS PER ACRE.
   b. MARCH 1 TO MAY 30: 20 POUNDS OF ANNUAL RYE GRASS OR FIELD BROMEGRASS AND 64 POUNDS OF SPRING OATS PER ACRE.
   c. AUGUST 1 TO NOVEMBER 1: 20 POUNDS OF ANNUAL RYE GRASS OR FIELD BROMEGRASS AND 112 POUNDS OF WINTER RYE PER ACRE.
7. COVER GRASS AND LEGUME SEEDS ONE–FOURTH–INCH DEEP WITH CULTIPACKER OR HARROW. COVER RYE OR OATS ABOUT TWO INCHES DEEP.
8. MOW RYE OR OATS JUST BEFORE THEY HEAD OUT IF SLOPE PERMITS.

SECTION 130–6 SHALL PREVAIL IN CASES OF CONFLICT WITH THE ABOVE PROVISIONS.

ERNST SEEDS

**Ernst Conservation Seeds**
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

**Date: September 19, 2025**

### Native Steep Slope Mix w/Grain Rye - ERNMX-181-2

| | Botanical Name | Common Name | Price/Lb |
|---|---|---|---|
| 40.00 % | *Secale cereale, Variety Not Stated* | Rye, Variety Not Stated | 0.49 |
| 19.20 % | *Andropogon gerardii, 'Prairie View'-IN Ecotype* | Big Bluestem, 'Prairie View'-IN Ecotype | 14.98 |
| 10.80 % | *Sorghastrum nutans, 'Holt'* | Indiangrass, 'Holt' | 18.58 |
| 10.70 % | *Elymus virginicus, Madison-NY Ecotype* | Virginia Wildrye, Madison-NY Ecotype | 11.22 |
| 5.30 % | *Elymus canadensis* | Canada Wildrye | 14.99 |
| 3.80 % | *Panicum virgatum, 'Habitat'-NJ Ecotype* | Switchgrass, 'Habitat'-NJ Ecotype | 10.81 |
| 3.20 % | *Agrostis perennans, Albany Pine Bush-NY Ecotype* | Autumn Bentgrass, Albany Pine Bush-NY Ecotype | 23.40 |
| 2.20 % | *Panicum clandestinum, Tioga* | Deertongue, Tioga | 23.71 |
| 1.10 % | *Tridens flavus, Fort Indiantown Gap-PA Ecotype* | Purpletop, Fort Indiantown Gap-PA Ecotype | 40.65 |
| 0.80 % | *Chamaecrista fasciculata, PA Ecotype* | Partridge Pea, PA Ecotype | 13.00 |
| 0.80 % | *Rudbeckia hirta* | Blackeyed Susan | 33.80 |
| 0.50 % | *Coreopsis lanceolata* | Lanceleaf Coreopsis | 31.20 |
| 0.50 % | *Echinacea purpurea* | Purple Coneflower | 46.80 |
| 0.40 % | *Helianthoides, PA Ecotype* | Oxeye Sunflower, PA Ecotype | 36.40 |
| 0.30 % | *Aster pilosus, PA Ecotype* | Heath Aster, PA Ecotype | 286.00 |
| 0.20 % | *Monarda fistulosa, Fort Indiantown Gap-PA Ecotype* | Wild Bergamot, Fort Indiantown Gap-PA Ecotype | 104.00 |
| 0.10 % | *Apocynum cannabinum, PA Ecotype* | Indianhemp, PA Ecotype | 234.00 |
| 0.10 % | *Asclepias syriaca, PA Ecotype* | Common Milkweed, PA Ecotype | 104.00 |
| **100.00 %** | | **Mix Price/Lb Bulk:** | **$11.52** |

**Seeding Rate:** 75 lb per acre

Erosion Control & Revegetation; Grasses & Grass-like Species - Herbaceous Perennial; Herbaceous Flowering Species - Herbaceous Perennial

Use this formula with grain rye as a cover crop (from August 1st-February 15th). Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

ERNST SEEDS

**Ernst Conservation Seeds**
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

**Date: December 17, 2024**

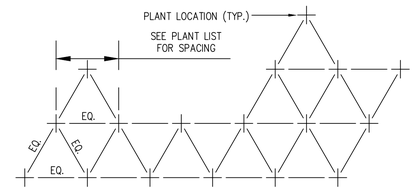
### Retention Basin Floor Mix - Low Maintenance - ERNMX-126

| | Botanical Name | Common Name | Price/Lb |
|---|---|---|---|
| 20.00 % | *Panicum clandestinum, Tioga* | Deertongue, Tioga | 22.27 |
| 20.00 % | *Puccinellia distans, Fults* | Alkaligrass, Fults | 3.84 |
| 18.00 % | *Elymus virginicus, Madison-NY Ecotype* | Virginia Wildrye, Madison-NY Ecotype | 10.46 |
| 15.00 % | *Agrostis stolonifera, 'PC 2.0'* | Creeping Bentgrass, 'PC 2.0' | 14.40 |
| 15.00 % | *Poa palustris* | Fowl Bluegrass | 21.60 |
| 10.00 % | *Carex vulpinoidea, PA Ecotype* | Fox Sedge, PA Ecotype | 31.20 |
| 1.00 % | *Carex scoparia, PA Ecotype* | Blunt Broom Sedge, PA Ecotype | 96.00 |
| 1.00 % | *Juncus effusus* | Soft Rush | 48.00 |
| **100.00 %** | | **Mix Price/Lb Bulk:** | **$17.07** |

**Seeding Rate:** 20-40 lbs per acre, or 0.5-1 lb/1,000 sq ft with a cover crop. For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

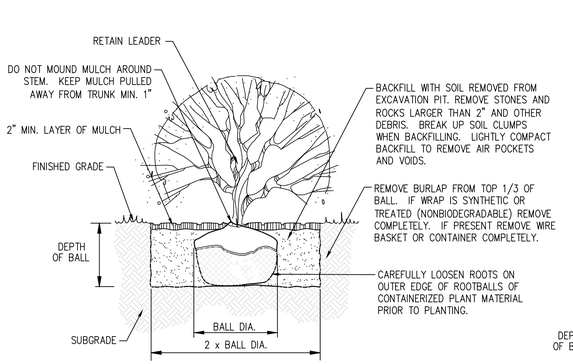
Grasses & Grass-like Species - Herbaceous Perennial; Stormwater Management

The hardy inexpensive grass and grass-like species are ideal for retention basins that may have high salt inflows and where mowing may be required. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.



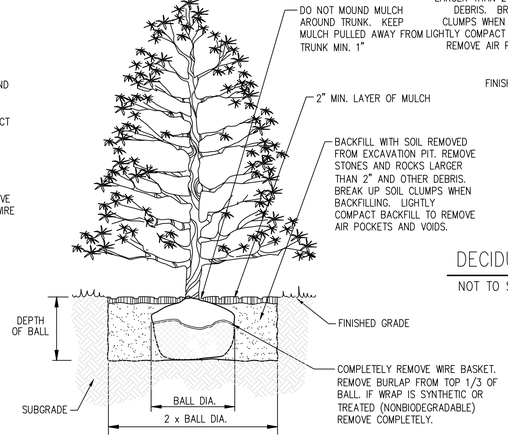

PLANT SPACING DIAGRAM

NOT TO SCALE



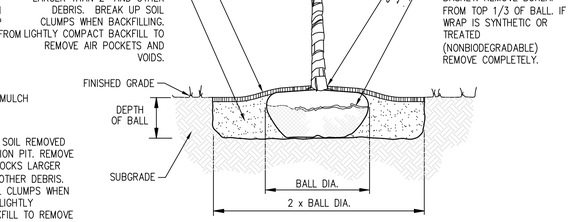

SHRUB PLANTING

NOT TO SCALE



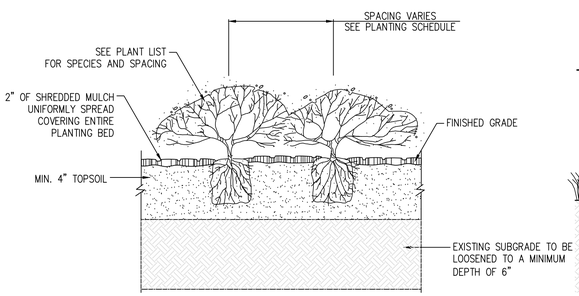

EVERGREEN TREE PLANTING

NOT TO SCALE




DECIDUOUS TREE PLANTING

NOT TO SCALE

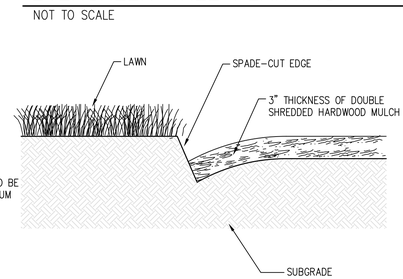



NOTES:

1. GROUND COVER MATERIAL SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE IN THE NURSERY.

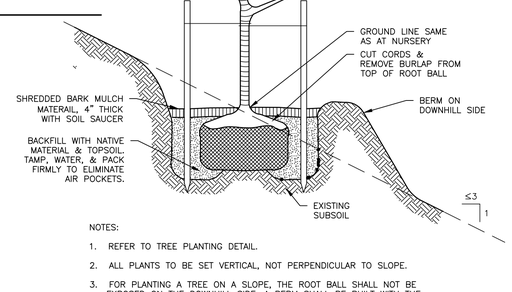
PLUG AND PERENNIAL PLANTING

NOT TO SCALE




EDGING AT MULCH BED

NOT TO SCALE




NOTES:

1. REFER TO TREE PLANTING DETAIL.
2. ALL PLANTS TO BE SET VERTICAL, NOT PERPENDICULAR TO SLOPE.
3. FOR PLANTING A TREE ON A SLOPE, THE ROOT BALL SHALL NOT BE EXPOSED ON THE DOWNHILL SIDE. A BERM SHALL BE BUILT WITH THE MATERIAL EXCAVATED FROM THE TREE PIT TO COVER THE ROOTBALL.

SLOPE PLANTING DETAIL

NOT TO SCALE

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACTNESS OR COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 187 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 811 OR 1-800-242-1776 FOR THE LOCATION OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|


**BARRY G. STINGEL**
REGISTERED LANDSCAPE ARCHITECT

PENNSYLVANIA BARRY G. STINGEL REGISTERED LANDSCAPE ARCHITECT

12/19/2024
REGISTERED LANDSCAPE ARCHITECT
STATE OF PA LICENSE No. LA001345R


COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

PCSM LANDSCAPE DETAILS


T AND M
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA


| | |
|---|---|
| DESIGNED BY JPK/CKS/CMR/ROP/ZHR | DRAWING LSPD |
| CHECKED BY BGS/ZHR | |
| DRAWN BY SCR/CKS/RAM | SHEET 37 |
| DATE 1/23/2026 | OF 50 |
| SCALE AS NOTED | |
| PROJ. NO. WDEV00004 | |

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_LDT.dwg
LAST PLOT: Thursday, February 26, 2026, 2:50PM
LAST SAVE BY: JGetzendanner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# PLANT SCHEDULE

| SYMBOL | CODE | QTY | BOTANICAL NAME | COMMON NAME | ROOT | CALIPER | HEIGHT | SPREAD | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| **EVERGREEN TREES** | | | | | | | | | |
| | JE3 | 18 | JUNIPERUS VIRGINIANA | EASTERN REDCEDAR | B & B | | 10'–12' | 6' MIN | |
| | PA2 | 13 | PICEA ABIES | NORWAY SPRUCE | B & B | | 10'–12' | 6' MIN | |
| | PS | 19 | PINUS STROBUS | WHITE PINE | B & B | | 10'–12' | 6' MIN | |
| **FLOWERING TREES** | | | | | | | | | |
| | CF | 27 | CORNUS FLORIDA | FLOWERING DOGWOOD | B & B | 1.5"–2" CAL. | 8' MIN | 4'–6' | |
| | MB | 20 | MALUS X 'RED BARRON' | RED BARRON CRABAPPLE | B & B | 1.5"–2" CAL. | 8' MIN | 4'–6' | |
| | PK | 10 | PRUNUS SERRULATA 'KWANZAN' | FLOWERING CHERRY | B & B | 1.5"–2" CAL. | 8' MIN | 4'–6' | |
| **PARKING AREA TREES** | | | | | | | | | |
| | PA3 | 3 | PICEA ABIES | NORWAY SPRUCE | B & B | | 10'–12' | 6' MIN | |
| | TI | 9 | THUJA X 'GREEN GIANT' | GREEN GIANT ARBORVITAE | B & B | | 8' MIN | 6' MIN | |
| | TH | 8 | TILIA CORDATA 'HALKA' | SUMMER SPRITE LINDEN | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | STRAIGHT SINGLE LEADER |
| **REPLACEMENT TREES** | | | | | | | | | |
| | AR | 20 | ACER RUBRUM | RED MAPLE | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | |
| | BG | 15 | BETULA NIGRA 'CULLY IMPROVED' | HERITAGE®IMPROVED RIVER BIRCH | B & B | | 10'–12' | 6' MIN | MULTI–TRUNK |
| | CO | 10 | CELTIS OCCIDENTALIS | COMMON HACKBERRY | B & B | 1.5"–2" CAL. | 8'–10' | 6' MIN | |
| | FG2 | 7 | FAGUS GRANDIFOLIA | AMERICAN BEECH | B & B | 2" – 2 1/2" CAL. | 8'–10' | 6' MIN | STRAIGHT SINGLE LEADER |
| | QB | 25 | QUERCUS BICOLOR | SWAMP WHITE OAK | B & B | 3" – 3 1/2" CAL. | 11'–13' | 6'–10' | |
| **SCREENING BUFFER EVERGREEN TREES** | | | | | | | | | |
| | IA | 15 | ILEX OPACA | AMERICAN HOLLY | B & B | | 6'–7' | 6' MIN | FULL FORM TO GROUND |
| | PG | 26 | PICEA GLAUCA | WHITE SPRUCE | B & B | | 6'–7' | 6' MIN | FULL FORM TO GROUND |
| | TI2 | 30 | THUJA X 'GREEN GIANT' | GREEN GIANT ARBORVITAE | B & B | | 8' MIN | 6' MIN | |
| **SOFTENING BUFFER EVERGREEN TREES** | | | | | | | | | |
| | IA2 | 7 | ILEX OPACA | AMERICAN HOLLY | B & B | | 6'–7' | 6' MIN | FULL FORM TO GROUND |
| **SOFTENING BUFFER ORNAMENTAL TREES** | | | | | | | | | |
| | CF2 | 2 | CORNUS FLORIDA | FLOWERING DOGWOOD | B & B | 1.5"–2" CAL. | 8' MIN | 4'–6' | |
| | MB2 | 3 | MALUS X 'RED BARRON' | RED BARRON CRABAPPLE | B & B | 1.5"–2" CAL. | 8' MIN | 4'–6' | |
| **STORMWATER BASIN TREES** | | | | | | | | | |
| | AL | 5 | AMELANCHIER LAEVIS | ALLEGHENY SERVICEBERRY | B & B | 2" – 2 1/2" CAL. | 8' MIN | | STRAIGHT SINGLE LEADER |
| | BN | 5 | BETULA NIGRA | RIVER BIRCH | B & B | 2 1/2" – 3" CAL. | 11'–13' | | STRAIGHT SINGLE LEADER |
| | CE | 5 | CERCIS CANADENSIS | EASTERN REDBUD | B & B | | 8' MIN | 4'–6' | MULTI–TRUNK |
| | CL2 | 6 | CLADRASTIS LUTEA | AMERICAN YELLOWWOOD | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | STRAIGHT SINGLE LEADER |
| | GS | 4 | GLEDITSIA TRIACANTHOS 'SKYLINE' | SKYLINE HONEY LOCUST | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | STRAIGHT SINGLE LEADER |
| | IN | 4 | ILEX X 'NELLIE R STEVENS' | NELLIE STEVENS HOLLY | B & B | | 8' MIN | 6' MIN | FULL FORM TO GROUND |
| | JE2 | 10 | JUNIPERUS VIRGINIANA | EASTERN RED CEDAR | B & B | | 8' MIN | 6' MIN | |
| | LR | 3 | LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA' TM | ROUND–LOBED SWEET GUM | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | STRAIGHT SINGLE LEADER |
| | MS | 4 | MAGNOLIA VIRGINIANA | SWEETBAY MAGNOLIA | B & B | 1.5"–2" CAL. | 8' MIN | 4'–6' | |
| | NW | 6 | NYSSA SYLVATICA 'WILDFIRE' | WILDFIRE TUPELO | B & B | 1.5"–2" CAL. | 8' MIN | 4'–6' | |
| | PA | 4 | PICEA ABIES | NORWAY SPRUCE | B & B | | 10'–12' | 6' MIN | |
| | PO | 5 | PICEA OMORIKA | SERBIAN SPRUCE | B & B | | 10'–12' | 6' MIN | |
| | PB | 2 | PLATANUS X ACERIFOLIA 'BLOODGOOD' | LONDON PLANE TREE | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | STRAIGHT SINGLE LEADER |
| | SL | 5 | SALIX LUCIDA | SHINING WILLOW | B & B | 2 1/2" – 3" CAL. | 10'–12' | | STRAIGHT SINGLE LEADER |
| **STREET TREES** | | | | | | | | | |
| | AA | 14 | ACER RUBRUM 'AUTUMN FLAME' | AUTUMN FLAME MAPLE | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | STRAIGHT SINGLE LEADER |
| | QP | 14 | QUERCUS PALUSTRIS | PIN OAK | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | |
| | UL | 8 | ULMUS AMERICANA 'LIBERTY' | LIBERTY AMERICAN ELM | B & B | 2 1/2" – 3" CAL. | 10'–12' | 6' MIN | |

| SYMBOL | CODE | QTY | BOTANICAL NAME | COMMON NAME | CONT | - | HEIGHT | SPREAD | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| **SHRUBS** | | | | | | | | | |
| | CS | 14 | CORNUS SERICEA 'BAILEYI' | RED TWIG DOGWOOD | 5 GAL | 4' O.C. SPACING | 24"–36" | | MIN. 3 CANES |
| | FG | 12 | FOTHERGILLA GARDENII | DWARF FOTHERGILLA | 3 GAL | 3' O.C. SPACING | 18"–24" | | MIN. 3 CANES |
| | IL | 10 | ITEA VIRGINICA 'LITTLE HENRY' TM | VIRGINIA SWEETSPIRE | 5 GAL | 3' O.C. SPACING | 18"–24" | | MIN. 3 CANES |
| | RC | 18 | RHODODENDRON X 'CONLEC' | AUTUMN ROYALTY®ENCORE®AZALEA | 7 GAL | | 36" MIN | | |
| | SB | 18 | SPIRAEA JAPONICA 'BUMALDA' | BUMALDA JAPANESE SPIREA | 7 GAL | | 30"–36" | | |
| | VA | 3 | VIBURNUM RHYTIDOPHYLLUM 'ALLEGHANY' | ALLEGHANY VIBURNUM | B & B | 6' O.C. SPACING | 36" HT MIN | | MIN. 3 CANES |
| **PARKING SCREENING SHRUBS** | | | | | | | | | |
| | IS2 | 22 | ILEX GLABRA 'SHAMROCK' | INKBERRY | 7 GAL | 3' O.C. SPACING | 36" HT MIN | | MIN. 3 CANES |
| | MP2 | 9 | MYRICA PENSYLVANICA | NORTHERN BAYBERRY | 7 GAL | 6' O.C. SPACING | 36" HT MIN | | MIN. 3 CANES; 1 MALE PER 10 FEMALES |
| | VA2 | 6 | VIBURNUM RHYTIDOPHYLLUM 'ALLEGHANY' | ALLEGHANY VIBURNUM | B & B | 6' O.C. SPACING | 36" HT MIN | | MIN. 3 CANES |
| **SCREENING BUFFER SHRUBS** | | | | | | | | | |
| | IS | 116 | ILEX GLABRA 'SHAMROCK' | INKBERRY | 7 GAL | 3' O.C. SPACING | 36" HT MIN | | MIN. 3 CANES |
| | KL | 50 | KALMIA LATIFOLIA | MOUNTAIN LAUREL | 7 GAL | 6' O.C. SPACING | 36" HT MIN | | MIN. 5 CANES |
| | MP | 47 | MYRICA PENSYLVANICA | NORTHERN BAYBERRY | 7 GAL | 6' O.C. SPACING | 36" HT MIN | | MIN. 3 CANES; 1 MALE PER 10 FEMALES |
| **SOFTENING BUFFER SHRUBS** | | | | | | | | | |
| | IS3 | 16 | ILEX GLABRA 'SHAMROCK' | INKBERRY | 7 GAL | 3' O.C. SPACING | 36" HT MIN | | MIN. 3 CANES |
| | KL2 | 7 | KALMIA LATIFOLIA | MOUNTAIN LAUREL | 7 GAL | 6' O.C. SPACING | 36" HT MIN | | MIN. 5 CANES |

# LANDSCAPE REQUIREMENTS

| No. | Section | | Requirement | Proposed | Variance/Waiver |
|---|---|---|---|---|---|
| 1 | 130-28G (4) (b) | Street Trees:<br>Along primary streets, street trees are to be placed 50 feet O.C. | Germantown Pike:<br>439 LF / 50 = 9 Street trees<br><br>N Trooper Road:<br>938 LF / 50 = 19 Street trees<br><br>Lot 2 Main Access Driveway :<br>185 LF / 50 = 4 x 2 (both sides)<br>=8 Street trees<br><br>(LF excludes access drive widths) | Germantown Pike:<br>9 Street trees<br><br>N Trooper Road:<br>19 Street trees<br><br>Lot 2 Main Access Driveway:<br>8 Street trees | NO |
| 2 | 130-28G (5) (f) | Screening Buffer:<br>Where under applicable sections of Chapter 150 (§150-89E (6), Zoning, screen buffers are required for the entire length of all common boundaries abutting adjacent districts, such sections are hereby amended, and the following landscape requirements shall be adhered to:<br>§130-28G (5) (f) [1]<br>§130-28G (5) (f) [2]<br>§130-28G (5) (f) [3] | Screening buffer along rear and side yards where existing vegetation is insufficient<br><br>At minimum, 1 Evergreen tree and 3 shrubs per 12 LF<br><br>850 LF / 12 = 71 evergreen trees and 213 shrubs | 850 LF Screening buffer in accordance with 130-28G(5)(f)(3) provided along side yard to Northwest<br>71 Evergreen Trees<br>213 Shrubs | NO |
| 3 | 130-28G (5) (b) (1) | Softening Buffer:<br>1 Evergreen tree for every 35 LF, 1 Ornamental or Shade tree for each 50 LF, and 1 shrub for each 10 LF of property line. Informal groupings are encouraged. | Softening Buffer along rear and side yards where existing vegetation is insufficient<br><br>At minimum, 1 Evergreen tree per 35 LF, 1 Ornamental or Shade Tree per 50 LF, and 1 shrub per 10 LF<br><br>230/35= 7 Evergreen Trees<br>230/50= 5 Ornamental or Shade Tree<br>230/10=23 Shrubs | Existing woods along rear and side yards to the North to remain and provide sufficient softening buffer to adjacent properties supplemented by additional plantings to meet the intent of this requirement.<br>7 Evergreen Trees<br>5 Ornamental or Shade Trees<br>23 Shrubs | NO |
| 4 | 130-28G (7) (f) | Basin Perimeter Plantings:<br>Plantings shall be at least 10 feet from the toe of berm. 1 shade tree for every 50 LF of basin perimeter | 770 LF basin perimeter / 50 =<br>15 shade trees. | 15 shade trees around basin perimeters | NO |
| 5 | 129-18 (24) (c) [1] | Drainage area and detention basin landscaping:<br>The perimeter of the retention/detention basin shall be landscaped with a mixture of deciduous trees, evergreens, and shrubs arranged in an informal manner. Retention basin (wet ponds) and artificial wetland basin landscaping shall be designed to create a "natural" appearance. Minimum plant material shall include the following per 100 linear feet of basin perimeter measured at the 100-year water surface elevation:<br><br>[a] Three evergreen trees (minimum height five feet)<br>[b] Two deciduous trees (minimum caliper 2 1/2 inches)<br>[c] Five shrubs (minimum height three feet) | 770 LF basin perimeter / 100 = 7.70<br><br>7.70 x 3 = 23 evergreen trees<br>7.70 x 2 = 15 deciduous trees<br>7.70 x 5 = 39 shrubs | 23 evergreen trees<br>15 deciduous trees<br>39 shrubs | NO |
| 6 | 130-28F (7) (b) | Tree Replacement:<br>If greater than 25% of the existing trees on a site with a trunk diameter of six inches DBH or greater are destroyed because of street alignment, building placement, parking area location, grading or otherwise, then replacement of those trees over the twenty-five-percent threshold shall be required as follows: | 152 total trees over 6" DBH existing on site<br>25% threshold = 38 trees<br>110 existing trees proposed to be removed<br>110-38 = 72 trees to be replaced | 77 replacement trees<br>refer to Replacement Tree Schedule for species and size | NO |
| 7 | 130-28G (9) (b) | Individual Lot Landscaping:<br>Each multifamily dwelling unit shall have one deciduous or evergreen tree as listed in Subsection H. | 45 dwelling units = 45 trees | 45 trees<br>(flowering trees) | NO |
| 8 | 130-28G (6) (a) | Off-Street parking perimeter Landscaping:<br>The perimeters of off-street parking lots in all districts shall be buffered in accordance with the above regulations by means of screening buffers | Western parking lot:<br>82LF / 12 =<br>7 evergreen trees and 21 shrubs<br><br>Eastern parking lot:<br>62 LF / 12 =<br>5 evergreen trees and 16 shrubs | Western parking lot:<br>7 evergreen trees and 21 shrubs<br><br>Eastern parking lot:<br>5 evergreen trees and 16 shrubs | NO |
| 9 | 130-28G (6) (c) | Off-Street parking interior Landscaping:<br>A minimum of 10% of the parking area shall be devoted to landscaping; Lanscaping shall included a minimum of one tree per 15 parking spaces | 15,112 parking lot area x 10% =<br>1,511 interior landscape area<br><br>27 parking spaces / 15 =<br>2 trees | 7,505 SF of parking lot landscaping area<br>8 parking lot trees | NO |

# BASIN PLANTING SCHEDULE

| SYMBOL | CODE | QTY | BOTANICAL NAME | COMMON NAME | CONT | SPACING | REMARKS |
|---|---|---|---|---|---|---|---|
| **GROUND COVERS** | | | | | | | |
| | | 13,767 SF | PLANTING AREA | | | | AREA TO BE PLANTED WITH PLUGS, POTS, & ERNMX–126 SEEDING MIXTURE BY SPACING AS NOTED BELOW. NO MULCH IN THIS AREA. |
| | AAR | 179 | ARONIA ARBUTIFOLIA | RED CHOKEBERRY | #1 POT | 5% @ 24" o.c. | |
| | COB | 358 | CEPHALANTHUS OCCIDENTALIS | BUTTONBUSH | #1 POT | 10% @ 24" o.c. | |
| | SD | 179 | CORNUS AMOMUM | SILKY DOGWOOD | #1 POT | 5% @ 24" o.c. | |
| | EV | 537 | ELYMUS VIRGINICUS | VIRGINIA WILD RYE | 2" PLUG | 15% @ 24" o.c. | |
| | IW | 358 | ILEX VERTICILLATA | WINTERBERRY | #1 POT | 10% @ 24" o.c. | |
| | LBS | 358 | LINDERA BENZOIN | SPICEBUSH | #1 POT | 10% @ 24" o.c. | |
| | PC | 358 | PANICUM CLANDESTINUM | DEER TONGUE | 2" PLUG | 10% @ 24" o.c. | |
| | PP | 537 | POA PALUSTRIS | FOWL BLUEGRASS | 2" PLUG | 15% @ 24" o.c. | |
| | PN | 537 | PUCCINELLIA DISTANS 'FULTS' | FULTS ALKALIGRASS | 2" PLUG | 15% @ 24" o.c. | |
| | RV | 179 | RHODODENDRON VISCOSUM | SWAMP AZALEA | #1 POT | 5% @ 24" o.c. | |

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_LDTL.dwg
LAST SAVED: Monday, 03 Feb 2026, 2:50PM
LAST SAVE BY: JGetzendanner

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1-800-242-1776
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

**BARRY G. STINGEL**
REGISTERED LANDSCAPE ARCHITECT

PENNSYLVANIA BARRY G. STINGEL REGISTERED LANDSCAPE ARCHITECT

12/19/2024
REGISTERED LANDSCAPE ARCHITECT
STATE OF PA LICENSE No. LA001345R

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

PCSM LANDSCAPE SCHEDULE

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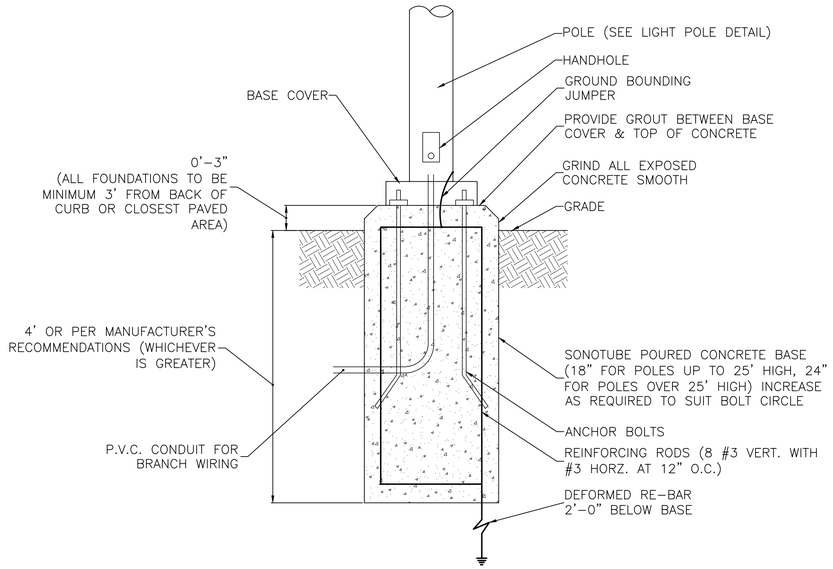
TEL 215-282-7850
FAX 215-627-3459

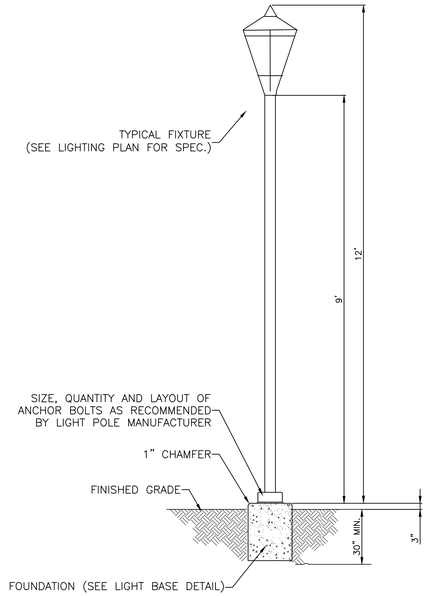
OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | LSPD-2 |
| SHEET | 38 |
| OF | 50 |




## LIGHT BASE

NOT TO SCALE




NOTES:

1. INSTALL ALL ELECTRICAL WORK PER LOCAL REGULATIONS.
2. POLE SELECTION PER FIXTURE MANUFACTURER RECOMMENDATIONS AND LOCAL WIND LOAD REQUIREMENTS.
3. SEE LIGHTING PLAN FOR POLE/FIXTURE SPECIFICATIONS.

## LIGHT POLE

NOT TO SCALE

HOLOPHANE
LEADER IN LIGHTING SOLUTIONS

**PUCL3**

Utility Taft Series Luminaire Full Cutoff LED3

| Catalog Number | |
|---|---|
| Notes | Type |

**Mechanical**
- Heavy grade A360 cast aluminum (<1% copper)
- Tool-less access with a spring-loaded latch
- Hidden hinge door allowing the door to swing open and remain open
- Optional internal or external NEMA twist lock photocontrol receptacle. Housing contains a tempered glass window to allow light to reach the cell for internal versions.
- Mount to slip-fitter that will accept 3" high by 2-7/8" to 3-1/8" O.D. pole tenon
- Decorative top cover contains stainless steel hinge which secures entry the LED optical chamber
- Polyester powder coat paint to ensure maximum durability
- Rigorous multi-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 5,000 hours exposure to salt fog chamber (operated per ASTM B117) on standard and RAL finish options.
- RAL (RALxxxxDOCR) paint colors are Super Durable Corrosion Resistant, 80% gloss.

**Electrical**
- Surge protection meets ANSI/IEEE C62.41.2 10kV/10kA.
- Standard SPD meets 20kV/10kA per ANSI C136.2-2015.
- Quick disconnect connectors for ease of installation and maintenance.
- Three pole terminal block is standard, with optional prewired leads for ease of installation
- LED electronic 0-10v dimmable driver meets maximum total harmonic distortion (THD) of 20%, >0.90 Power Factor and is ROHS compliant.
- Minimum operating temperature is -40°C
- Electronic driver has an estimated minimum life of 100,000 hours at 25°C.

**Optical**
- IP65 rated optical compartment
- LED circuit board located in the top cover
- Asymmetric or Symmetric zero uplight distributions
- 2700K, 3000K and 4000K CCT
- 70CRI Standard

**Control Options**
- Field Adjustable Output (AO) module - Onboard device that adjusts the light output and input wattage to meet site specific requirements. The AO module is preset at the factory to position number 8
- nLight Air rSBOR6 outdoor fixture-mounted motion and photo-sensor, features a dual radio to communicate wirelessly to other nLight Air devices for group response to motion, on/off control in response to daylight and by switch – RSBOR6
- Long life photocontrol, 20 years – PCLL, P34 and P40 with DTL
- 7 pin photocontrol receptacles internally (PR7) or externally (PR7E) mounted in place of the fusal
- DTL DIN dedicated bracket with external mounted antenna - DINBRA

**Manufacturing**
- Manufactured in Crawfordsville, Indiana, ARRA compliant
- 100% electrical testing on all luminaires before shipment
- Ten (10) years minimum experience in manufacturing LED based products

**Certification and Standards**
- Luminaire shall be UL 1598 - Wet Location Safety Listing
- Suitable for operation in an ambient temperature -40°C (40°F) to 40°C (104°F) per UL certification for performance packages P05 thru P100 Type 2, 3 & 5 no glass, P05 thru P40 Type 2, 3, 4 & 5 clear glass and P05 thru P90 Type 3 & 5 frosted glass
- Suitable for operation in an ambient temperature -40°C (40°F) to 35°C (95°F) per UL certification for performance packages P100 Type 4S no glass, P100 Type 2, 3, 4 & 5 clear glass and P100 type 3 & 5 frosted glass
- LM79 compliant
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

**Government Procurement**

BAA – Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations.

BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to www.acuitybrands.com/resources/faq-american for additional information.

**Warranty**

5-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

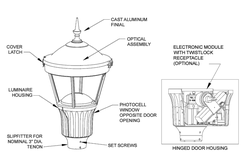
**Note:** Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

**DIMENSIONAL DATA**

Maximum Weight - 35 lbs
Maximum Effective Projected Area - 1.24 sq. ft.



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**SMA**

Salem Aluminum Pole

HOLOPHANE

**ORDERING INFORMATION** **Example:** SMA 14 S4C 13S C03 BK

| Post | Height | Shaft Style | Base | Tenon |
|---|---|---|---|---|
| SMA Salem Aluminum Pole | 06 6' | **Fluted Shaft** | 09S 9" Base, Square Pattern Bolt Circle | B04[1] Tenon, 2.38 O.D. x 4" LG. |
| | 07 7' | F13 Fluted Tapered (Cast), .25 | 13S 13" Base, Square Pattern Bolt Circle | C03 3X3 Tenon, (actual size 2.88 O.D. x 3" LG.) |
| | 08 8' | F3C 3" Diameter, .125 wall | | C04 3X4 Tenon, (actual size 2.88 O.D. X 4" LG.) |
| | 09 9' | F4C 4" Diameter, .125 Wall | | C05 3X5 Tenon, (actual size 2.88 O.D. X 5" LG.) |
| | 10 10' | F4J 4" Diameter, .25 Wall | | C06 3X6 Tenon, (actual size 2.88 O.D. X 6" LG.) |
| | 11 11' | F5J 5" Diameter .25 Wall | | C08 3X8 Tenon, (actual size 2.88 O.D. X 8" LG.) |
| | 12 12' | **Smooth Shaft** | | C09 3X9 Tenon, (actual size 2.88 O.D. X 9" LG.) |
| | 13 13' | S3C 3" Diameter .125 wall | | C12 3X12 Tenon, (actual size 2.88 O.D. X 12" LG.) |
| | 14 14' | S4C 4" Diameter .125 Wall | | C14 3X14 Tenon, (actual size 2.88 O.D. X 14" LG.) |
| | 15 15' | S4J 4" Diameter .25 Wall | | E08 5-1/2X8 Tenon, (actual size 5.5 O.D. X 8" LG.) |
| | 16 16' | S5J 5" Diameter .25 Wall | | G08 6-3/8X8 Tenon, (actual size 6.38 O.D. X 8" LG.) |
| | 17 17' | **Tapered Shaft** | | G12 6-3/8X12 Tenon, (actual size 6.38 O.D. X 12" LG.) |
| | 18 18' | T4C 3" to 4" Diameter .125 Wall | | H19 8-1/2X19 Tenon, (actual size 4.5 O.D. X 19" LG.) |
| | 19 19' | T5C 3" to 5" Diameter .125 Wall | | PLN Pole Cap |
| | 20 20' | **Sitelink** | | VGC Plate |
| | 21 21' | SL4 4.50", .156 wall | | |
| | 22 22' | | | **NOTE** |
| | **NOTE:** Refer to Pole Guide on page 4 for height based on Shaft Style. | | | 2 Only available with SL4 |
| | | | | 3 Not available with F3C or S4C shaft |
| | | | | 4 Only available with T5J & S5J shaft |
| | | | | 5 Not available with F13, F3C, S3C, T4C or T5C shaft styles. |

| Finish | | Options | | Welded Provisions | |
|---|---|---|---|---|---|
| BK | Black | DBB | Factory Installed Direct Burial Base | EXXXX[6] | Provision for eye bolt |
| BZ | Bronze | GRD | 1/2 Copper Grounding Lug | LXXXX[6] | Large provision. Accommodates 1.25" and 1.50" flag pole holder and accommodates 1.25" and 1.50" banner arm |
| CMC | Customer matched color | | | RXXXX | Receptacle Provision in shaft |
| CTBS | Standard color to be determined | | | SXXXX[6] | Small provision. Accommodates .75" and 1.00" flag pole holder and accommodates .75" and 1.00" banner arm |
| DB | Dark Blue | | | SBORXXX[5] | Occupancy sensor provision |
| GH | Graphite | | | | |
| GN | Green | | | **NOTE** | |
| GR | Gray | | | 6 Not available with F3C, SL4 or S3C shaft option. | |
| PP | Prime Painted | | | Replace "XXXX" with height from grade (inches), can be up to 3 digits. Must use whole numbers. Leading zeros are not used. Replace Y with orientation from hand hole (H=0, B=90, C=180, D=270). Add multiple provisions as necessary in cover each location. Must validate EPA restrictions for banners. | |
| RALxxxxDOCR | RAL Super Durable Corrosion Resistant, 80% Gloss Paint, replace xxxx with RAL number. | | | | |
| SL | Silver | | | | |
| WH | White | | | | |

| Accessories: *Order as separate catalog number.* | | | |
|---|---|---|---|
| AB-26-4 | 3/4" Anchor bolt set, galvanized steel, | **Breakaway Kits & Tramps Couplings:** | |
| ADBT51 | 5" Galvanized steel direct burial base. | BWKT 13005 14008C 075AB XX | For use with 13" base. Breakaway Kit for 3/4" anchor bolts, includes Bramic Plate and Skirt (xx=finish). Tramps breakaway couplings shipped as separate line item (TRAKSPO-SPWKIT3KL) |
| ADBT153 | 13" Galvanized steel direct burial base. | TRAKSPO-SPW4075XL | Tramps breakaway coupling for BWKT 13005 14008C 075AB |
| TMP-09 | 9" Bolt Circle, (for 09S Base Option) | **NOTE** | |
| TMP-99 | 14" Bolt Circle, (for 13S Base Option) | 7 The Direct Burial Base and Breakaway Kits & Tramps Couplings cannot be specified together. | |
| TMP40007 | 9" Bolt Circle, (for 09S Base Option) | | |
| TMP40006 | 14" Bolt Circle, (for 13S Base Option) | | |



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PROJECT INFORMATION:
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LAST SAVE BY: JGotzendanner

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE ACCURACY OR COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PA ONE CALL SYSTEM FOR UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

LICENSED PROFESSIONAL ENGINEER

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

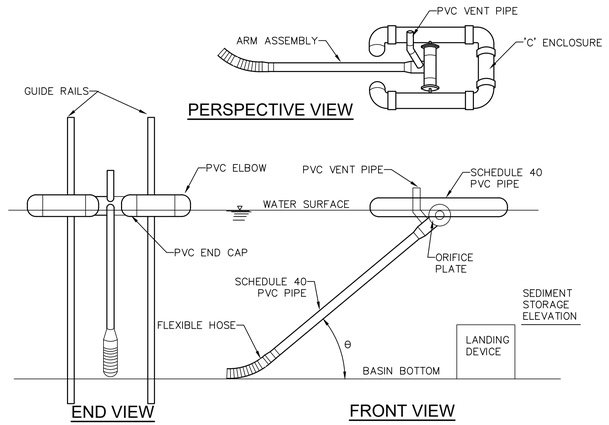
TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

LIGHTING DETAILS


T AND M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA


| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | LTPD |
| SHEET | 39 |
| OF | 50 |




| BASIN NO. | WATER SURFACE ELEVATION (FT) | ARM LENGTH (FT) | ARM DIA. (IN) | ORIFICE DIA. (IN) | TOP OF LANDING DEVICE ELEVATION (FT) | FLEXIBLE HOSE LENGTH (IN) | FLEXIBLE HOSE ATTACHMENT ELEVATION (FT) |
|---|---|---|---|---|---|---|---|
| A | 360.80 | 10 | 3.0 | 2.40 | 357.90 | 48 | 357.00 |
| | | | | | | | |
| | | | | | | | |

NOTES:

ORIFICE DIAMETER MUST BE EQUAL TO OR LESS THAN ARM DIAMETER

A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

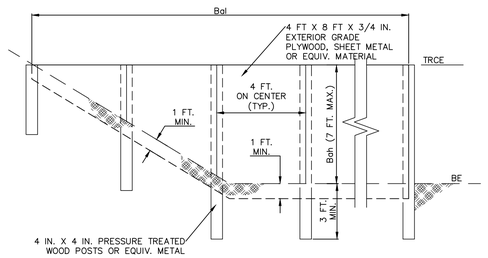
ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE LANDING DEVICE.

A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS (STANDARD CONSTRUCTION DETAIL # 7-3).

## STANDARD CONSTRUCTION DETAIL #7-1
## SKIMMER

NOT TO SCALE




| BASIN OR TRAP NO. | BAFFLE LENGTH Bal (FT) | BAFFLE HEIGHT Bah (FT) | TEMPORARY RISER CREST ELEV. TRCE (FT) | BOTTOM ELEV BE (FT) |
|---|---|---|---|---|
| 1 | 200 | 3.80 | 360.80 | 357.00 |
| | | | | |
| | | | | |

NOTES:

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

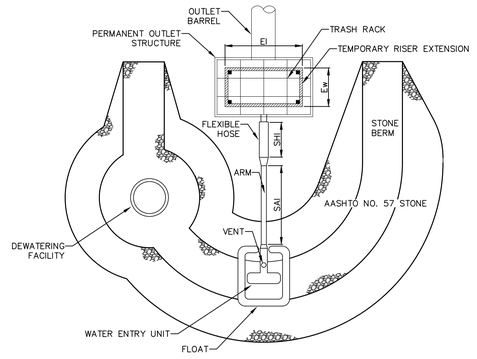
SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

## STANDARD CONSTRUCTION DETAIL #7-14
## BAFFLE

NOT TO SCALE



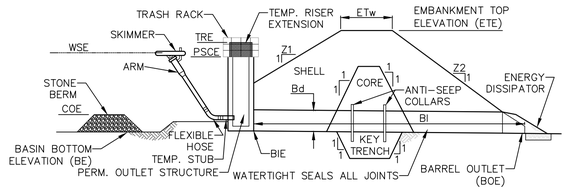

NOTES:

NO GUIDE RAILS SHALL BE REQUIRED FOR THIS INSTALLATION.

THIS DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD CONSTRUCTION DETAILS #7-2 AND #7-4.

## STANDARD CONSTRUCTION DETAIL #7-3
## SKIMMER WITH STONE LANDING BERM

NOT TO SCALE




| BASIN NO. | Z1 (FT) | Z2 (FT) | TEMP RISER EXT. ELEV TRE (FT) | EMBANKMENT TOP ELEV ETE (FT) | EMBANKMENT TOP WIDTH ETw (FT) | EMBANKMENT KEY TRENCH DEPTH (FT) | EMBANKMENT KEY TRENCH WIDTH (FT) | CLEAN OUT ELEV COE (FT) | BOTTOM ELEV BE (FT) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 4 | 360.80 | 365.00 | 10 | 2 | 4 | 357.90 | 357.00 |
| | | | | | | | | | |
| | | | | | | | | | |

| SKIMMER DIA SAd (IN) | SKIMMER LENGTH SAl (FT) | SKIMMER MAT'L | OUTLET BARREL DIA Bd (IN) | OUTLET BARREL INLET ELEV BIE (FT) | OUTLET BARREL MAT'L | OUTLET BARREL LENGTH Bl (FT) | OUTLET ELEV BOE (FT) |
|---|---|---|---|---|---|---|---|
| 3 | 10 | PVC | 24 | 351 | RCP | 230 | 346.50 |
| | | | | | | | |
| | | | | | | | |

NOTES:

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL. 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 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

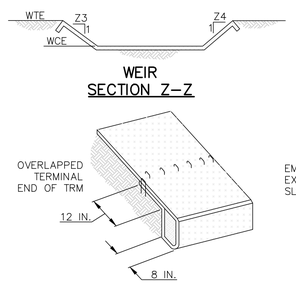
INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

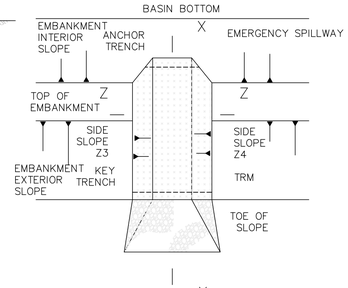
BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY.

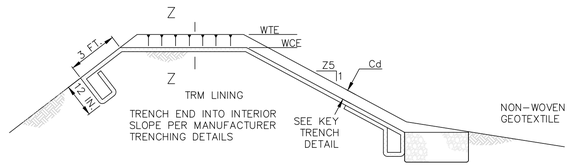
ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

## STANDARD CONSTRUCTION DETAIL #7-4
## SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER

NOT TO SCALE




## EMBANKMENT SECTION ALONG EMERGENCY SPILLWAY SECTION X-X
RIPRAP OUTLET DISSIPATOR

| BASIN NO. | WEIR Z3 (FT) | WEIR Z4 (FT) | WEIR TOP ELEV WTE (FT) | WEIR CREST ELEV WCE (FT) | WEIR WIDTH Ww (FT) | LINING TRM TYPE | LINING STAPLE PATTERN | CHANNEL Z5 (FT) | CHANNEL DEPTH Cd (FT) | DISSIPATOR LENGTH Dl (FT) | DISSIPATOR WIDTH Dw (FT) | DISSIPATOR RIPRAP SIZE (R-_) | DISSIPATOR RIPRAP THICK. DRt (IN) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 4 | 365.00 | 363.75 | 155 | C350 | E | 4 | N/A | N/A | N/A | N/A | N/A |
| 1 | 4 | 4 | 365.00 | 363.50 | 20 | C350 | E | 4 | N/A | N/A | N/A | N/A | N/A |
| | | | | | | | | | | | | | |

NOTES:

HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.

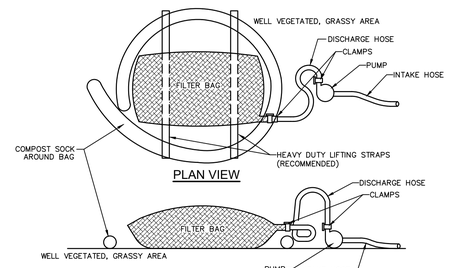
DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.

RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.

THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.

## STANDARD CONSTRUCTION DETAIL #7-13
## SEDIMENT BASIN EMERGENCY SPILLWAY WITH TRM LINING

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.

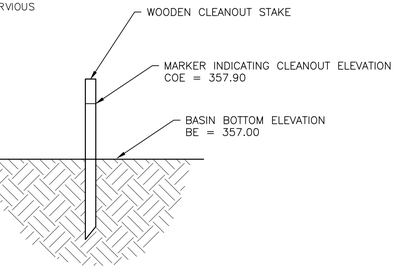
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

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 W/ COMPOST SOCK

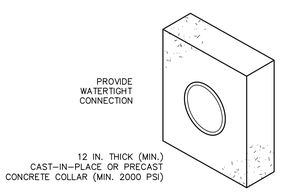
NOT TO SCALE




NOTE: WHEN ACCUMULATED SEDIMENT HAS REACHED THE SEDIMENT CLEANOUT ELEVATION, THE SEDIMENT MUST BE REMOVED, AND THE BASIN RETURNED TO IS ORIGINAL DIMENSIONS.

## CLEANOUT STAKE DETAIL

NOT TO SCALE




| BASIN OR TRAP NO. | PIPE SIZE (IN) | S (IN) | NO. OF COLLARS | RISER TO FIRST COLLAR (FT) | COLLAR SPACING (FT) |
|---|---|---|---|---|---|
| 1 | 24 | 139.80 | 2 | 24.0 | 64.05 |
| | | | | | |

NOTES:

ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.

COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

## STANDARD CONSTRUCTION DETAIL #7-16
## CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS

NOT TO SCALE

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_DTL.dwg
LAST SAVED: Fri, 06 Feb 2026, 2:50PM
LAST SAVE BY: JZetzendorner

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PENNSYLVANIA ONE CALL SYSTEM, INC.
811
IT'S THE LAW!
ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2000, THE CONTRACTOR IS REQUIRED TO NOTIFY THE OWNERS OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
SERIAL NO.
20243171817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

LICENSED PROFESSIONAL ENGINEER

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

EROSION AND SEDIMENT CONTROL DETAILS-1

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
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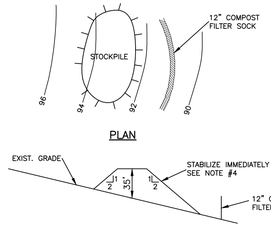
| DRAWING | ENSD-1 |
| SHEET | 40 |
| OF | 50 |




NOTES:

1. INSTALL 12" COMPOST FILTER SOCK DOWNSLOPE OF AREA OF STOCKPILE.
2. PLACE STOCKPILE IN AREAS SHOWN ON EROSION CONTROL PLAN WITHOUT BLOCKING NATURAL DRAINAGE PATTERNS.
3. FOLLOW DIMENSIONS SHOWN ABOVE. HEIGHT SHOULD NOT EXCEED 35 FT. SIDE SLOPES SHOULD NOT BE STEEPER THAN 2(H):1(V).
4. SEED IMMEDIATELY WITH TEMPORARY SEEDING PENNDOT FORMULA "D OR "E". IF MATERIAL IS NOT TO BE USED WITHIN 20 DAYS. FOLLOW "PERMANENT SEEDING, FERTILIZATION SCHEDULE & SPECIFICATIONS."

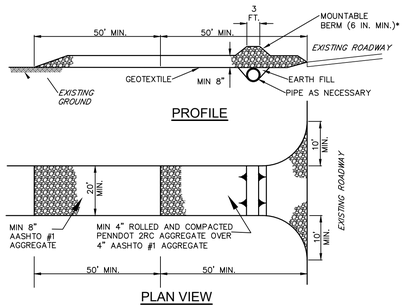
## MATERIAL STOCKPILE AND MAINTENANCE

NOT TO SCALE

| | TEMPORARY SEEDING | | PERMANENT SEEDING |
|---|---|---|---|
| | PennDOT Formula D | PennDOT Formula E | General Seeding / Sod |
| Species | 70% Kentucky 31 Fescue<br>20% Pennlawn Red Fescue<br>10% Weeping Alkali Grass | 100% Annual Rye Grass | 20% turf type perennial ryegrass<br>30% fine red or chewings fescue<br>50% Kentucky bluegrass mixture (poa pratensis) |
| Application Rate/1000 SY | 21 lbs. | 10 lbs. | 8 lbs. (min.) |
| Where Applied | Anywhere | Anywhere | Anywhere |
| Seeding Dates | March 5 – June 1<br>August 1 – October 1 | March 5–Oct.1 | March 5 – October 1 |
| Fert. and Rate/1000 SY | Commercial Fert. (10–20–20) 20 lbs.<br>Pulverized Agricultural Limestone 90 lbs. | Comm. Fert. (10–20–20) 192 lbs.<br>Urea Form (38–0–0) 50 lbs. | Min. 1lb. Nitrogen Per 1000 Sq. Ft. and 4% Phosph. Acid and 2% Potassium (50% of Nitrogen To Be Organic) |
| Mulch: @ Min. 3 ton/ac. | Hay or Straw Mulch * | Hay (As directed) * | * Hay (As directed) |

* OR WOOD CELLULOSE (ON SLOPES 4:1 OR FLATTER), EXCEPT USE HAY

## SOIL, SEEDING, FERTILIZATION SCHEDULE AND SPECIFICATIONS




* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

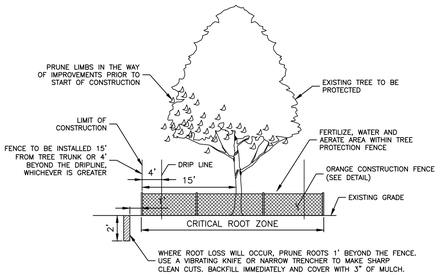
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

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.

## ALTERNATE CONSTRUCTION DETAIL #3-1
## ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE

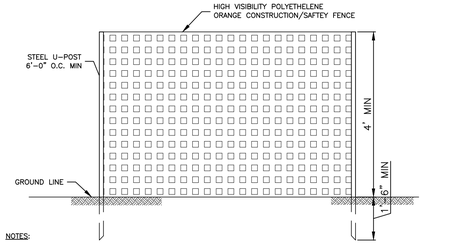



NOTES:

1. NO ENTRY, STORAGE, DISTURBANCE OR ALTERATION SHALL OCCUR IN AREA WITHIN TREE PROTECTION FENCE.

## TREE PROTECTION AND PRUNING

NOT TO SCALE

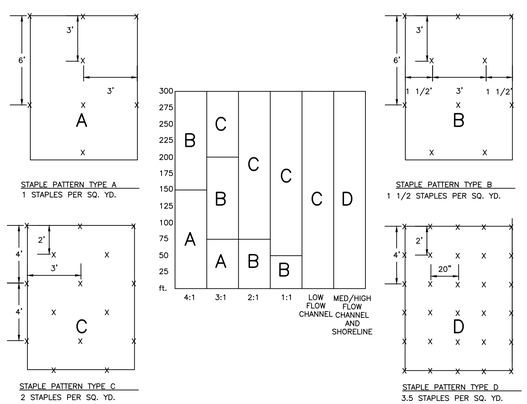



NOTES:

1. CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCE ALONG LIMIT OF DISTURBANCE BOUNDARY PRIOR TO THE START OF ANY EARTHMOVING.
2. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN FENCE THOUGHOUT ENTIRE DURATION OF THE PROJECT.

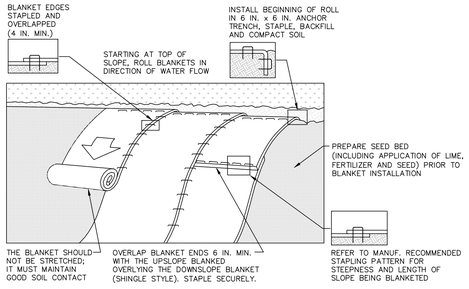
## ORANGE CONSTRUCTION FENCE
## TREE PROTECTION FENCE

NOT TO SCALE




## NORTH AMERICAN GREEN STAPLE PATTERNS

NOT TO SCALE




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.

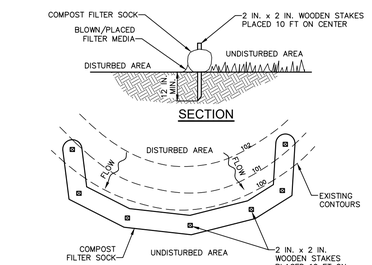
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

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




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 MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

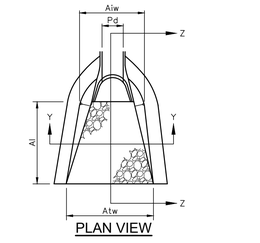
BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

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

| SOCK NO. | DIAMETER (in.) | LOCATION | SLOPE (%) | SLOPE LENGTH ABOVE BARRIER (ft.) |
|---|---|---|---|---|
| GP1 | 24 | SEE ESC PLANS | 8.0 | 415 |
| GP2 | 24 | | 8.0 | 400 |
| GP3 | 24 | | 8.0 | 375 |
| GP4 | 18 | | 8.0 | 350 |
| GP5 | 18 | | 8.0 | 325 |
| GP6 | 18 | | 8.0 | 300 |
| GP7 | 18 | | 8.0 | 275 |
| GP8 | 18 | | 8.0 | 250 |
| GP9 | 18 | | 8.0 | 250 |
| GP10 | 18 | | 8.0 | 250 |
| SC1 | 12 | | 33.0 | 25 |
| SC2 | 12 | | 33.0 | 25 |
| SC3 | 24 | | 8.0 | 395 |
| TR1 | 32 | | 8.0 | 450 |
| TR2 | 32 | | 8.0 | 450 |
| TR3 | 32 | | 8.0 | 450 |
| TR4 | 32 | | 8.0 | 450 |
| TR5 | 32 | | 8.0 | 450 |
| TR6 | 32 | | 8.0 | 450 |
| TR7 | 32 | | 8.0 | 450 |




| OUTLET NO. | PIPE DIA Pd (IN) | RIPRAP SIZE R-- | RIPRAP THICK. Rt (IN) | APRON LENGTH Ai (FT) | APRON INITIAL WIDTH Aiw (FT) | APRON TERMINAL WIDTH Atw (FT) |
|---|---|---|---|---|---|---|
| A1 | 24 | R-5 | 27 | 16 | 6 | 13 |
| TEMP A1.1 | 24 | R-5 | 27 | 16 | 6 | 13 |
| B1 | 24 | R-5 | 27 | 8 | 6 | 10 |
| TEMP B2 | 24 | R-5 | 27 | 8 | 6 | 10 |
| S2 | 30 | R-5 | 27 | 12 | 8 | 13 |
| A2 | 24 | R-5 | 27 | 8 | 6 | 10 |

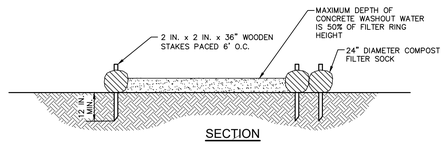
NOTES:

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.

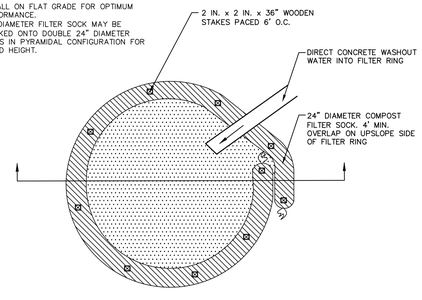
## STANDARD CONSTRUCTION DETAIL #9-1
## RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE




NOTES:

1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.




A SUITABLE IMPERVIOUS GEMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

MAINTENANCE

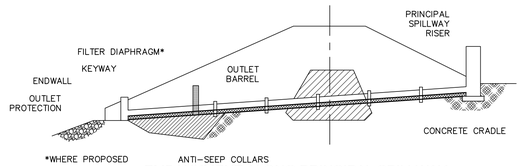
ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.

ACCUMULATED MATERIAL SHOULD BE REMOVED WHEN THEY REACH 75% CAPACITY.

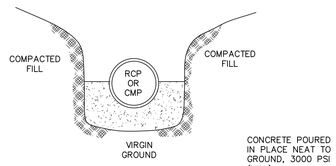
PLASTIC LINERS SHOULD BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.

## TYPICAL COMPOST SOCK CONCRETE WASHOUT INSTALLATION

NOT TO SCALE




## EMBANKMENT ALONG PRINCIPAL SPILLWAY




## CROSS-SECTION AT OUTLET BARREL

NOTES:

A CONCRETE CRADLE MAY BE USED IN CONJUNCTION WITH ANTI-SEEP COLLARS AND/OR FILTER DIAPHRAGM.
ANTI-SEEP COLLAR NUMBER, SIZE AND SPACING SHALL BE AS SHOWN ELSEWHERE IN PLAN.
FILTER DIAPHRAGM LOCATION (Lfd) SHALL BE AS SHOWN IN FIGURE 7.8 OF THE PA DEP EROSION CONTROL MANUAL.

## STANDARD CONSTRUCTION DETAIL #7-17
## CONCRETE CRADLE FOR BASIN OR TRAP OUTLET BARREL

NOT TO SCALE

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_10E.dwg
LAST SAVED: Monday, 02 Feb 2026, 2:50PM
LAST SAVE BY: JGetzendanner

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ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACT COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 811 OR 1-800-242-1776 FOR THE LOCATION OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

LICENSED PROFESSIONAL ENGINEER

12/19/2024

LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

EROSION AND SEDIMENT CONTROL DETAILS-2

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
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OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | ENSD-2 |
| SHEET | 41 |
| OF | 50 |

## GENERAL EROSION & SEDIMENT CONTROL PROCEDURES

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 PREPARED BY T&M ASSOCIATES. 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 SEVEN (7) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS INCLUDING TOWNSHIP ENGINEER, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE OF THE MONTGOMERY COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.

3. AT LEAST THREE (3) DAYS PRIOR TO THE START OF ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED 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 ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE 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 UNLESS REQUIRED TO MINIMIZE DISTURBANCE.

8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN IN THE AMOUNTS NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. TOPSOIL SHOULD CONTAIN ABOUT 45% MINERAL MATERIAL, 50% PORE SPACE, AND 5% ORGANIC MATERIAL. TABLE 11.1 (ON THIS SHEET) GIVES THE APPROPRIATE QUANTITIES OF TOPSOIL FOR VARIOUS DEPTHS. 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 BY THE CONTRACTOR AND RECYCLED OR DISPOSED 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 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 CERTIFIED 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. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE CONSTRUCTION SITE ONTO ANY PUBLIC ROAD. VEHICLES AND EQUIPMENT MAY ENTER AND EXIT THE CONSTRUCTION SITE ONLY VIA A STABILIZED ROCK CONSTRUCTION ENTRANCE.

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 CONTRACTOR WILL MAINTAIN AND MAKE AVAILABLE TO MONTGOMERY COUNTY CONSERVATION DISTRICT UPON REQUEST, 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 ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND AS NEEDED THROUGHOUT THE WORKDAY OR AS DIRECTED BY CONSERVATION DISTRICT OR MUNICIPALITY AND REMOVED AS A 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 A MANNER DESCRIBED ON 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. UPON FINAL GRADING, 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 OF (4) INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 4 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. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

23. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

24. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

25. 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.

26. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT AND UPON RECEIPT OF CLEAN TEST SAMPLES, THE OPERATOR SHALL STABILIZE THOSE AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH OR OTHER PROTECTIVE BLANKETING SHALL BE APPLIED AT THE RECOMMENDED RATES AND METHODS. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR SHALL BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS, WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE RE-DISTURBED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

27. 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 OTHER MOVEMENTS.

28. EROSION AND SEDIMENT CONTROLS (BMP'S) MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE GENERAL SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS. EROSION AND SEDIMENT 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.

29. 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. TEMPORARY CONTROLS MAY BE REMOVED ONLY UPON APPROVAL OF THE MONTGOMERY COUNTY CONSERVATION DISTRICT.

30. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE CONTROLS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVALS/CONVERSIONS ARE TO BE DONE ONLY DURING GERMINATING SEASON.

31. FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTIONS TO RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 605 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA. 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.

32. IN THE EVENT OF SINKHOLE DISCOVERY OR OCCURRENCE, A PROFESSIONAL GEOLOGIST OR ENGINEER SHALL BE CONTACTED CONCERNING MITIGATION. ADDITIONALY, THE MONTGOMERY COUNTY CONSERVATION DISTRICT SHALL BE IMMEDIATELY MADE AWARE OF THE SINKHOLE DISCOVERY.

33. THE CONTRACTOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

34. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, ENVIRONMENTAL PROTECTION, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

35. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.

36. THE OPERATOR / PERMITTEE SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS (BMPS) AND RELATED ITEMS INCLUDED WITHIN THIS PLAN AND NARRATIVE.

37. EROSION AND SEDIMENT BMP CONTROLS MUST BE CONSISTENT WITH STANDARDS AND SPECIFICATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION "EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL" DATED MARCH 2012.

38. ALL EROSION AND SEDIMENTATION CONTROL FACILITIES SHALL BE MAINTAINED IN THE APPROVED DESIGN CONDITION THROUGHOUT THE CONSTRUCTION PERIOD OR UNTIL THE DESIGN AREA IS STABILIZED.

39. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE OPERATOR TO ELIMINATE ALL SUCH PROBLEMS.

40. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE CONTRACTOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE MONTGOMERY COUNTY CONSERVATION DISTRICT.

41. THE CONTRACTOR SHALL NOTIFY THE MONTGOMERY COUNTY CONSERVATION DISTRICT PRIOR TO ANY CESSATION IN EARTHMOVING ACTIVITIES OF MORE THAN TWENTY (20) DAYS.

42. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE APPLICABLE COUNTY CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.

43. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.

44. HAY OR STRAW MULCH MUST BE APPLIED TO ALL SEEDED AREAS AT 3.0 TONS PER ACRE (SEE TABLE 11.6 ON THIS SHEET).

45. CLEAN FILL AND TOPSOIL STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

46. SEDIMENT MUST BE REMOVED FROM STORM WATER INLET PROTECTION AFTER EACH RUNOFF EVENT.

47. 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.

48. ALL VEGETATED AREAS IN UNDISTURBED SECTIONS WILL REMAIN FOR EROSION PROTECTION. CONTRACTORS AND EQUIPMENT WILL BE RESTRAINED FROM VENTURING INTO ALL AREAS NOT BEING GRADED. DISTURBED AREAS WILL REMAIN EXPOSED FOR THE SHORTEST TIME POSSIBLE.

49. DUST WILL BE KEPT WITHIN TOLERABLE LIMITS BY EITHER THE USE OF SPRAYED WATER.

50. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS HAS BEEN ACHIEVED ACROSS THE UPSLOPE AREAS.

51. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, WITH THE EXCEPTION OF REMEDIATION AREAS WITH PENDING TEST SAMPLE RESULTS, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION. (PLEASE NOTE THAT HYDROSEED IS NOT CONSIDERED STABILIZATION UNTIL IT GERMINATES). HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.

## MONITORING, INSPECTION, AND REPORTING REQUIREMENTS

### VISUAL INSPECTIONS

1) THE PERMITTEE AND CO-PERMITTEE(S) MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND WITHIN 24 HOURS AFTER EACH MEASURABLE RAINFALL EVENT THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE RECEIPT AND ACKNOWLEDGEMENT OF THE NOTICE OF TERMINATION (NOT) BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE VISUAL SITE INSPECTIONS AND REPORTS SHALL BE COMPLETED IN A FORMAT PROVIDED BY THE DEPARTMENT, AND CONDUCTED BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT E&S BMPS AND PCSM BMPS ARE PROPERLY CONSTRUCTED AND MAINTAINED TO EFFECTIVELY MINIMIZE POLLUTION TO THE WATERS OF THIS COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE LOGGED ONTO DEP FORM 3150-FM-BWEW0083 DATED 2/2012 AND KEPT ON SITE AT ALL TIMES.

### NONCOMPLIANCE REPORTING

WHERE E&S, PCSM OR PPC BMPS ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION, OR ANY OTHER TIME, THE PERMITTEE AND CO-PERMITTEE(S) SHALL, WITHIN 24 HOURS, CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT, BY PHONE OR PERSONAL CONTACT, FOLLOWED BY THE SUBMISSION OF A WRITTEN REPORT WITHIN 5 DAYS OF THE INITIAL CONTACT. NONCOMPLIANCE REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
1) ANY CONDITION ON THE PROJECT SITE WHICH MAY ENDANGER PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT, OR INVOLVE INCIDENTS WHICH CAUSE OR THREATEN POLLUTION;
2) THE PERIOD OF NONCOMPLIANCE, INCLUDING THE EXACT DATES AND TIMES AND/OR ANTICIPATED TIME WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE;
3) STEPS BEING TAKEN TO REDUCE, ELIMINATE, AND PREVENT RECURRENCE OF THE NONCOMPLIANCE; AND
4) THE DATE OR SCHEDULE OF DATES, AND IDENTIFYING REMEDIES FOR CORRECTING NONCOMPLIANCE CONDITIONS.

### REDUCTION, LOSS, OR FAILURE OF THE BMPS

UPON REDUCTION, LOSS, OR FAILURE OF THE BMPS, THE PERMITTEE AND CO-PERMITTEE(S) SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMPS OR PROVIDE AN ALTERNATE METHOD OF TREATMENT. SUCH RESTORED BMPS OR ALTERNATE TREATMENT SHALL BE AT LEAST AS EFFECTIVE AS THE ORIGINAL BMPS.

## RECYCLING OR DISPOSAL METHODS

1. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTE IN ACCORDANCE WITH ANY AND ALL APPLICABLE MUNICIPAL OR OTHER GOVERNMENT AGENCY CURRENT REGULATIONS INCLUDING BUT NOT LIMITED TO: THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
2. EXCEPT FOR ITEMS OR MATERIALS INDICATED TO BE REUSED, SALVAGED, REINSTALLED, OR OTHERWISE INDICATED TO REMAIN ON THE PROPERTY, DEMOLISHED OR EXCAVATED MATERIALS SHALL BE REMOVED FROM THE SITE. MATERIALS SLATED FOR REMOVAL FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ANY AND ALL APPLICABLE MUNICIPAL OR OTHER GOVERNMENTAL AGENCY CURRENT REGULATIONS.
3. DEBRIS SHALL NOT BE PERMITTED TO ACCUMULATE ON THE JOB-SITE. DUST AND DIRT SHALL BE HELD TO A MINIMUM DURING DEMOLITION, BY WETTING DOWN, AS REQUIRED. ON SITE BURNING OF MATERIALS WILL NOT BE PERMITTED. AT THE COMPLETION OF WORK, THE ENTIRE AREA INVOLVED SHALL BE CLEAN AND LEFT IN A NEAT CONDITION, FREE OF RUBBISH AND DEBRIS.
4. RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THIS PROJECT SITE SHALL BE UNDERTAKEN IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION RULES AND REGULATIONS.
5. SEDIMENT REMOVED FROM CONTROL FACILITIES AS A PART OF REGULAR MAINTENANCE SHALL BE DISPOSED OF UPSLOPE OF CONTROL FACILITIES IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
6. REFER TO THE SITE / RECORD PLAN FOR ADDITIONAL NOTES.

## RESPONSIBILITIES FOR FILL MATERIALS

1. THE OPERATOR MUST USE ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT ANY NECESSARY FILL MATERIAL ASSOCIATED WITH THIS PROJECT QUALIFIES AS CLEAN FILL. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH PADEP'S POLICY "MANAGEMENT OF FILL", DOCUMENT NUMBER 258-2182-773. A COPY OF THIS POLICY IS AVAILABLE ONLINE AT WWW.DEPWEB.STATE.PA.US.
2. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSED, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM THE WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).
3. CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN PADEP'S POLICY "MANAGEMENT OF FILL."
4. ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE PADEP FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT WWW.DEPWEB.STATE.PA.US.
5. ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREEN, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.
6. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF PADEP'S POLICY "MANAGEMENT OF FILL".
7. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE MUNICIPAL OR RESIDUAL WASTE REGULATIONS IN 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.
8. ALL FILLS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SUPPING, EROSION OR EXCESS SATURATION.
9. REFER TO SITE / RECORD PLAN FOR ADDITIONAL NOTES.

## MAINTENANCE OF EROSION CONTROL FACILITIES

1. THE OPERATOR SHALL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THE PLAN HEREWITH. THE CONTRACTOR SHALL SCHEDULE AND CONDUCT HIS OPERATIONS TO MINIMIZE EROSION OF SOILS AND TO PREVENT SILTING AND MUDDYING OF STREAMS, RIVERS AND DRAINAGE SYSTEMS.

2. EROSION AND SEDIMENTATION POLLUTION CONTROL SPECIALISTS' CONTACTS:
MONTGOMERY COUNTY CONSERVATION DISTRICT: (610) 925-4920
PADEP SOUTHEAST REGIONAL OFFICE (484) 250-5900

3. ALL EROSION AND SEDIMENTATION POLLUTION CONTROL MEASURES MUST REMAIN IN PLACE UNTIL THE SITE IS STABILIZED, REGARDLESS IF CONSTRUCTION IS TAKING PLACE OR NOT.

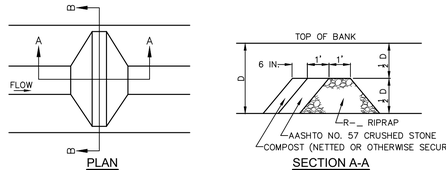
4. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT POLLUTION CONTROLS (BMPS) MUST BE PROPERLY MAINTAINED. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. A WRITTEN REPORT OF EACH INSPECTION SHALL BE LOGGED ONTO DEP FORM 3150-FM-BWEW0083 DATED 2/2012 AND KEPT ON SITE AT ALL TIMES. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT CONTROLS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

5. 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.

6. SEEDED AREAS THAT WASH OUT MUST BE FILLED AND GRADED AS NECESSARY, AND THEN RESEEDED, AN ANCHORING METHOD SHOULD THEN BE USED TO ANCHOR SEED AND MULCH IN PLACE; THIS IS ESPECIALLY IMPORTANT AROUND WATER COURSES, IN SWALES, AND AREAS OF CONCENTRATED FLOWS, AND ON SLOPES.

7. IN THE EVENT OWNERS OF THE PROPERTY OR THE OPERATOR FAILS TO PROPERLY MAINTAIN THE CONTROL FACILITIES, THE TOWNSHIP SHALL HAVE THE RIGHT TO ENTER SAID AREA AND PERFORM THE REQUIRED MAINTENANCE AFTER PROPER NOTIFICATION OF THE OWNERS.

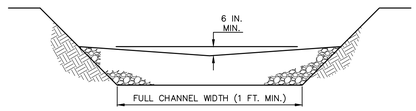
8. IN THE EVENT THAT THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE MONTGOMERY COUNTY CONSERVATION DISTRICT, THE MUNICIPALITY OR THE DESIGN ENGINEER OR THEIR AGENTS DEEM THAT ADDITIONAL CONTROLS, MEASURES OR PROCEDURES BEYOND THOSE SHOWN OR DESCRIBED ARE NECESSARY TO CONTROL OR CORRECT CONDITIONS WHICH WERE UNFORESEEN DURING THE DESIGN STAGE, THE CONTRACTOR SHALL BE RESPONSIBLE TO IMPLEMENT ADDITIONAL CONTROLS, ME




PLAN




SECTION A-A




SECTION B-B

| ROCK FILTER NO. | LOCATION | D (FT) | RIPRAP SIZE (R–_) |
|---|---|---|---|
| 1 | DCS A4 | 2 | R–3 |
| 2 | S3–1 | 2 | R–3 |
| 3 | T12 | 2 | R–3 |

FOR D ≥ 3 FT. – USE R–4
FOR D ≥ 2 FT. TO D < 3 FT. – USE R–3
NOT APPLICABLE FOR D < 2 FT.

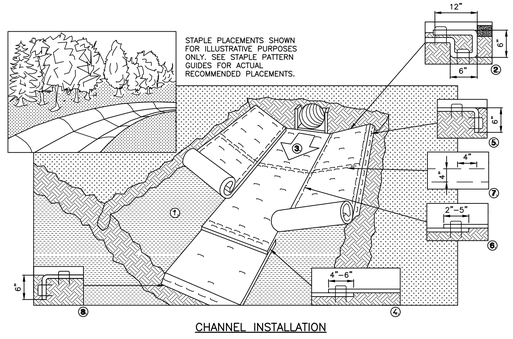
NOTES:

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.

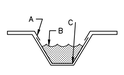
IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

## STANDARD CONSTRUCTION DETAIL #4-14
## ROCK FILTER

NOT TO SCALE




CHANNEL INSTALLATION




CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

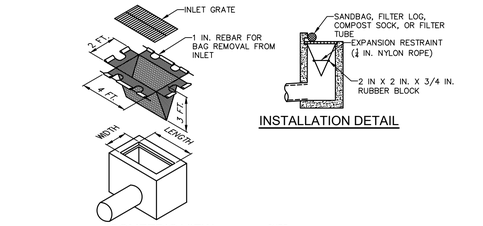
NOTES:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

NOTES:

1. NORTH AMERICAN GREEN OR APPROVED EQUAL.
2. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
3. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
4. ROLL THE RECP's IN DIRECTION OF WATER FLOW IN THE BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM/TM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
5. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" – 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP's.
6. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
7. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (DEPENDING ON RECP's TYPE) AND STAPLED.
8. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
9. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
10. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
11. NORTH AMERICAN GREEN, 14649 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47735. USA 1–800–772–2040, CANADA 1–800–448–2040. WWW.NAGREEN.COM

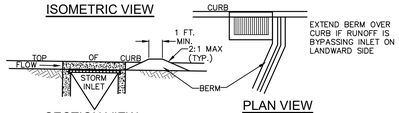
## CHANNEL STABILIZATION/INSTALLATION GUIDELINES

NOT TO SCALE




ISOMETRIC VIEW

INSTALLATION DETAIL




SECTION VIEW

PLAN VIEW

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.

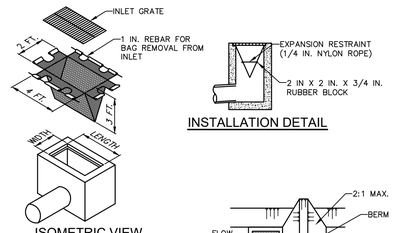
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 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 OF 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.

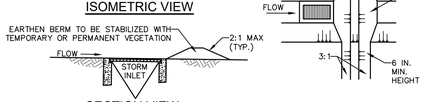
## STANDARD CONSTRUCTION DETAIL #4-15
## FILTER BAG INLET PROTECTION - TYPE C INLET

NOT TO SCALE




ISOMETRIC VIEW

INSTALLATION DETAIL




SECTION VIEW

PLAN VIEW

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.

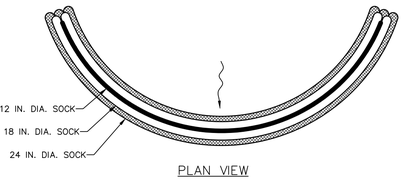
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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.

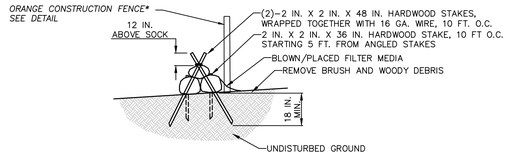
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

## STANDARD CONSTRUCTION DETAIL #4-16
## FILTER BAG INLET PROTECTION - TYPE M INLET

NOT TO SCALE




PLAN VIEW




STAKING DETAIL

DESIGN NOTES:
1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUAL TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS SHOWN ON THE PLAN VIEW.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID–SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

NOTES:
SOCK MATERIAL SHALL MEET THE 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 SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW–THROUGH," NO SPILLWAY IS REQUIRED.

COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.

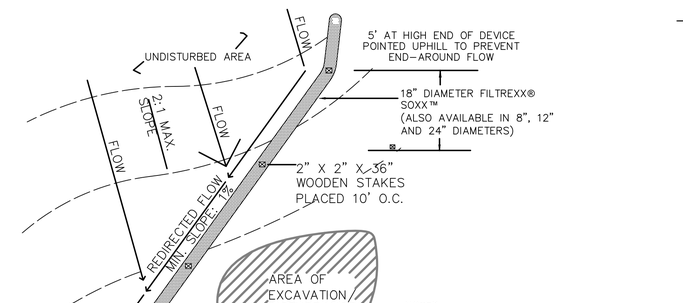
PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

**CONTRACTOR TO INSTALL ORANGE CONSTRUCTION FENCE IN THE INNER COMPOST SOCK FORMING THE BASE PYRAMID TO HELP FACILITATE SEDIMENT REMOVAL FOR MAINTENANCE WITHOUT DAMAGING THE SOCK.*

| CHANNEL NO. | BOTTOM EL. | TOP EL. | SOCK DIA. (IN) | REQ. STORAGE (CF) | PROVIDED STORAGE (CF) |
|---|---|---|---|---|---|
| COMP. TRAP 1 | 361.00 | 364.00 | 2x24" 24H | 1,580 | 2,381 |
| | | | | | |

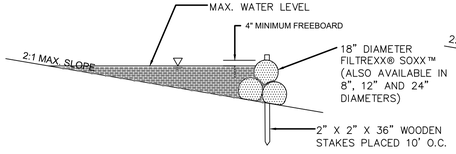
## *ALTERNATE STANDARD CONSTRUCTION DETAIL #3-11*
## *COMPOST SOCK SEDIMENT TRAP*

NOT TO SCALE
*ALTERATIONS ARE ITALICIZED*

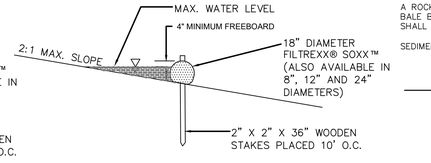



FILTREXX® RUNOFF DIVERSION

NOTES:
1. REMOVE SEDIMENT FROM THE UPSLOPE SIDE OF THE SOXX™ WHEN ACCUMULATION HAS REACHED ½ OF EFFECTIVE HEIGHT OF SOXX™
2. SLOPES GREATER THAN 5% MAY REQUIRE ADDITIONAL STABILIZATION PRACTICES
3. SOXX™ MAY BE SEEDED AT THE TIME OF INSTALLATION
4. EQUIVALENT PRODUCT MAY BE SUBSTITUTE AS APPROVED.



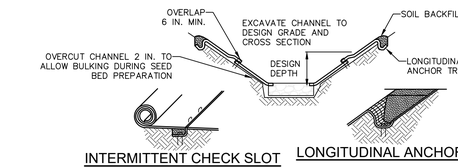

PYRAMID INSTALLATION SECTION
NTS




SINGLE INSTALLATION SECTION
NTS

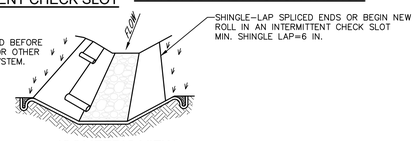
| CHANNEL NO. | STATIONS | BOTTOM WIDTH B (FT) | DEPTH D (FT) | TOP WIDTH W (FT) | Z1 (FT) | Z2 (FT) | LINING |
|---|---|---|---|---|---|---|---|
| CSD 1 | ALL | 0 | 1.0 | 4.6 | 0.1 | 0.1 | NAG S75 / VEG. C |
| CSD 2 | ALL | 0 | 1.25 | 5.8 | 0.1 | 0.1 | NAG S75 / VEG. C |

FILTREXX® RUNOFF DIVERSION SECTIONS
NTS

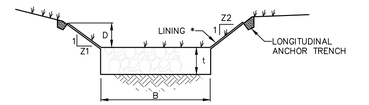



INTERMITTENT CHECK SLOT LONGITUDINAL ANCHOR TRENCH

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS, OR OTHER TEMPORARY CHANNEL LINER SYSTEM.




ISOMETRIC VIEW




* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

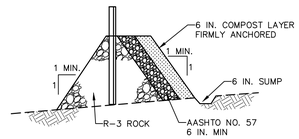
| CHANNEL NO. | STATIONS | BOTTOM WIDTH B (FT) | DEPTH D (FT) | TOP WIDTH W (FT) | Z1 (FT) | Z2 (FT) | RIPRAP GRADATION (R–_) | RIPRAP DEPTH t (IN) | UNDERLAYMENT | UNDER–LAYMENT THICKNESS |
|---|---|---|---|---|---|---|---|---|---|---|
| S3.1 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R–5 | 27 | N/A | N/A |
| S4 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R–5 | 27 | N/A | N/A |
| S5 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R–5 | 27 | N/A | N/A |
| S6 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R–5 | 27 | N/A | N/A |
| S7 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R–5 | 27 | N/A | N/A |
| S8 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R–5 | 27 | N/A | N/A |
| S9 | ALL | 5 | 1.25 | 12.5 | 3 | 3 | R–5 | 27 | N/A | N/A |
| T9 | ALL | 5 | 1.0 | 12.5 | 3 | 3 | R–5 | 27 | N/A | N/A |
| T10 | ALL | 5 | 1.0 | 12.5 | 3 | 3 | R–5 | 27 | N/A | N/A |

NOTES FOR RIPRAP CHANNEL BOTTOM :
- FILTER STONE UNDERLAYMENT FOR BED SLOPES ≥ 0.10 FT/FT (10 %) SHALL BE USED.
- CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER–EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.
- CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.
- DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY. THE
- MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

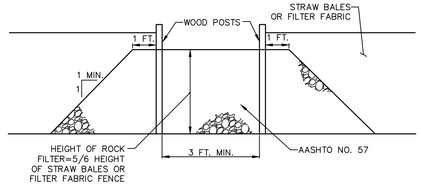
NOTES FOR VEGETATED CHANNEL SIDES:
- ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
- CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
- NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

## *ALTERNATE STANDARD CONSTRUCTION DETAIL #6-3*
## *RIPRAP CHANNEL WITH VEGETATED SIDE SLOPES.*

NOT TO SCALE




OUTLET CROSS-SECTION




UP-SLOPE FACE

NOTES:

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

## STANDARD CONSTRUCTION DETAIL #4-6
## ROCK FILTER OUTLET

NOT TO SCALE

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_DTL.dwg
LAST SAVED: Feb 26, 2026, 2:50PM
LAST SAVE BY: JDeitzendonner

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ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THE EXACTNESS OR COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2000, CONTACT THE ONE CALL SYSTEM AT 811 OR 1–800–242–1776 FOR UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
SERIAL NUMBER
20243711817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

LICENSED PROFESSIONAL ENGINEER

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

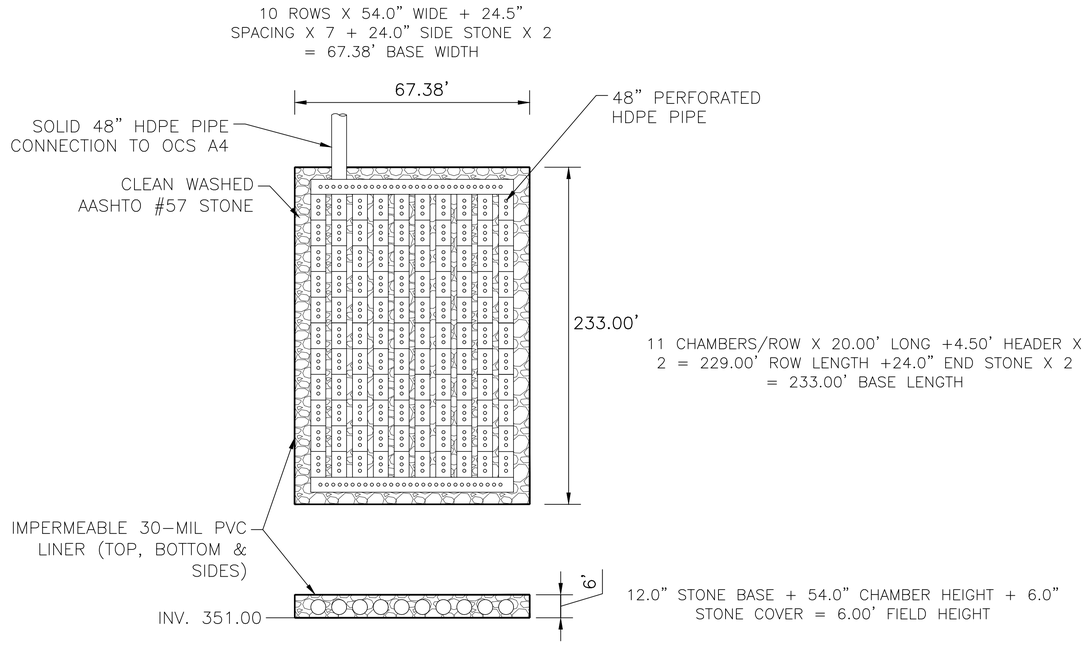
TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

EROSION AND SEDIMENT CONTROL DETAILS–4

T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

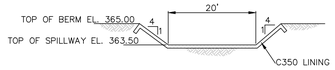
OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | ENS–3 |
| SHEET | 43 |
| OF | 50 |

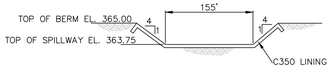



## SCM 2 UNDERGROUND DETENTION
## ADS N-12 PIPE & STONE

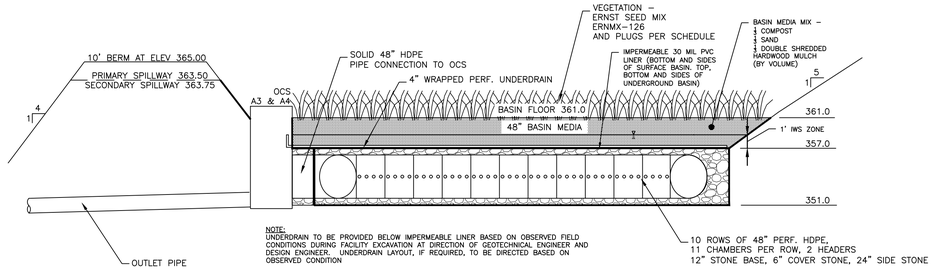
NOT TO SCALE




SPILLWAY TO STORMWATER COLLECTION AREA

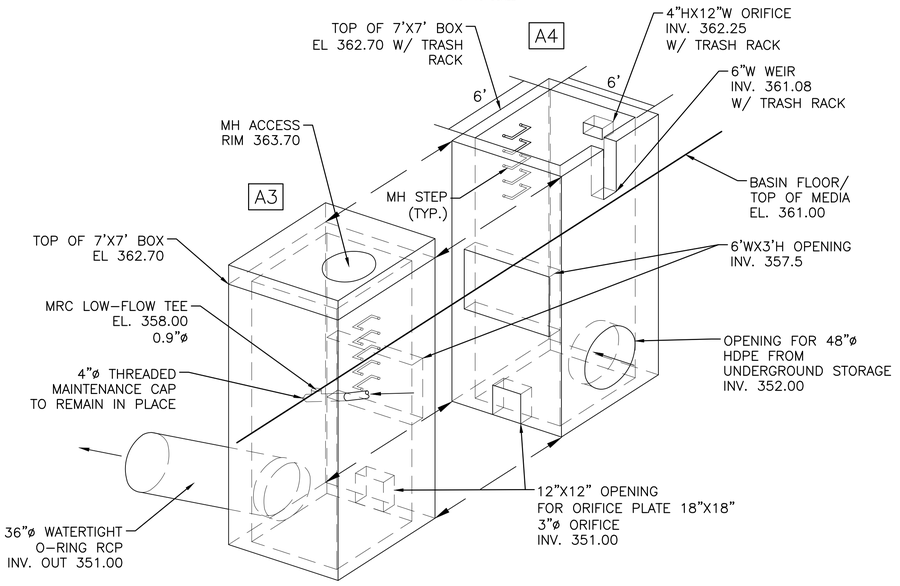



SPILLWAY TO TROOPER ROAD CURBLINE



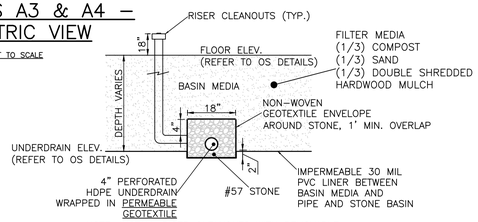

## BASINS 1 & 2 CROSS SECTION

NOT TO SCALE




## BASIN OCS A3 & A4 – ISOMETRIC VIEW

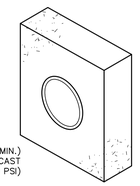
NOT TO SCALE




NOTE: INSTALL RISER CLEANOUTS WITH REMOVABLE CAPS 18" ABOVE FLOOR SURFACE WHERE INDICATED

## BASIN MEDIA UNDERDRAIN DETAIL

N.T.S.




| BASIN OR TRAP NO. | PIPE SIZE (IN) | S (IN) | NO. OF COLLARS | RISER TO FIRST COLLAR (FT) | COLLAR SPACING (FT) |
|---|---|---|---|---|---|
| 1 | 24 | 139.80 | 2 | 24.0 | 64.05 |
| | | | | | |

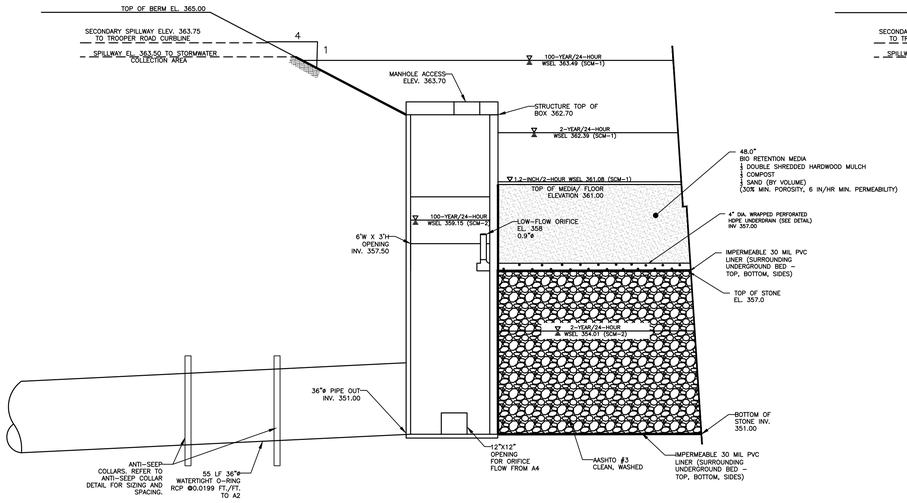
NOTES:

ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.

COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

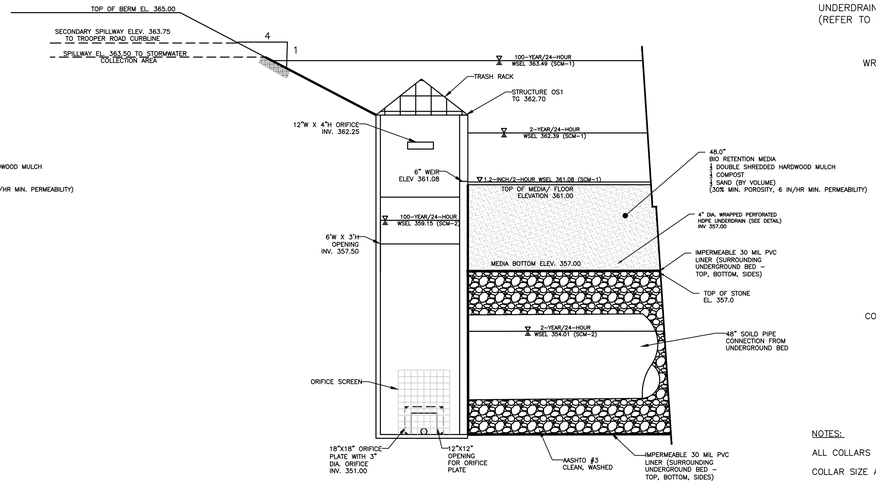
## STANDARD CONSTRUCTION DETAIL #7-16
## CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS

NOT TO SCALE




A3 OCS DETAIL – SIDE VIEW

NOT TO SCALE




A4 OCS DETAIL – SIDE VIEW

NOT TO SCALE

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_PCSM_DTL.dwg
LAST SAVED: Wednesday, Dec 18 Dec 2025, 4:51PM
LAST SAVE BY: JKelley

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SERIAL NUMBER
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
1105 NORTH TROOPER ROAD, WORCESTER TOWNSHIP,
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS-1

T&M AND ASSOCIATES
YOUR GOALS. OUR MISSION.
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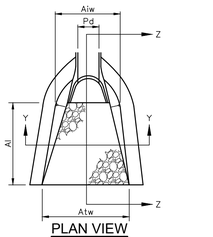
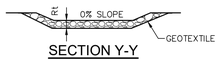
OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

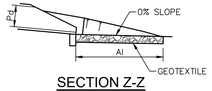
| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | PCSMD-1 |
| SHEET | 44 |
| OF | 50 |




PLAN VIEW




SECTION Y-Y




SECTION Z-Z

| OUTLET NO. | PIPE DIA Pd (IN) | RIPRAP SIZE R-__ | RIPRAP THICK. Rt (IN) | APRON LENGTH Ai (FT) | APRON INITIAL WIDTH Aiw (FT) | APRON TERMINAL WIDTH Atw (FT) |
|---|---|---|---|---|---|---|
| B1 | 120 | R-5 | 27 | 40 | 30 | 46 |
| B4 | 24 | R-5 | 27 | 9 | 6 | 10 |
| B15 | 18 | R-4 | 18 | 31 | 4.5 | 17 |
| C1 | 18 | R-4 | 18 | 8 | 4.5 | 8 |

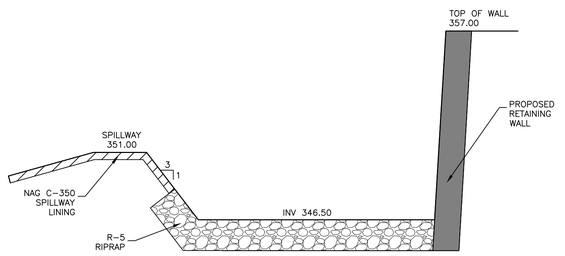
NOTES:

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.

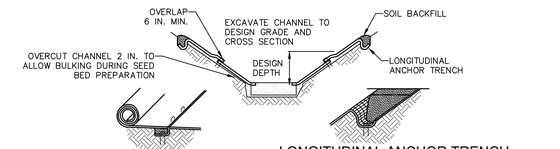
## STANDARD CONSTRUCTION DETAIL #9-1
## RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE



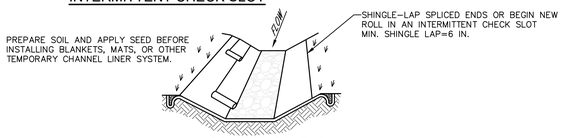

## STORMWATER COLLECTION AREA SECTION DETAIL

NOT TO SCALE

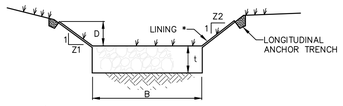



INTERMITTENT CHECK SLOT

LONGITUDINAL ANCHOR TRENCH




ISOMETRIC VIEW




* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

| CHANNEL NO. | STATIONS | BOTTOM WIDTH B (FT) | DEPTH D (FT) | TOP WIDTH W (FT) | Z1 (FT) | Z2 (FT) | RIPRAP GRADATION (R-__) | RIPRAP DEPTH t (IN) | UNDERLAYMENT | UNDER-LAYMENT THICKNESS |
|---|---|---|---|---|---|---|---|---|---|---|
| S3.1 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R-5 | 27 | N/A | N/A |
| S4 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R-5 | 27 | N/A | N/A |
| S5 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R-5 | 27 | N/A | N/A |
| S6 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R-5 | 27 | N/A | N/A |
| S7 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R-5 | 27 | N/A | N/A |
| S8 | ALL | 5 | 1.00 | 11.0 | 3 | 3 | R-5 | 27 | N/A | N/A |
| S9 | ALL | 5 | 1.25 | 12.5 | 3 | 3 | R-5 | 27 | N/A | N/A |
| T9 | ALL | 5 | 1.0 | 12.5 | 3 | 3 | R-5 | 27 | N/A | N/A |
| T10 | ALL | 5 | 1.0 | 12.5 | 3 | 3 | R-5 | 27 | N/A | N/A |

NOTES FOR RIPRAP CHANNEL BOTTOM :

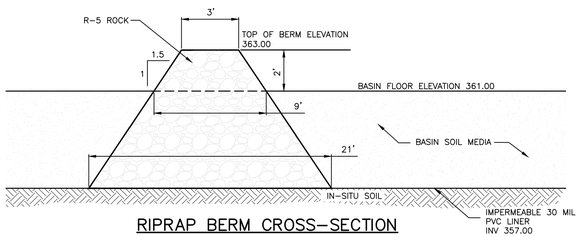
- FILTER STONE UNDERLAYMENT FOR BED SLOPES ≥ 0.10 FT/FT (10 %) SHALL BE USED.
- CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.
- CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.
- DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY. THE
- MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

NOTES FOR VEGETATED CHANNEL SIDES:

- ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
- CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
- NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

## *ALTERNATE STANDARD CONSTRUCTION DETAIL #6-3*
## *RIPRAP CHANNEL WITH VEGETATED SIDE SLOPES.*

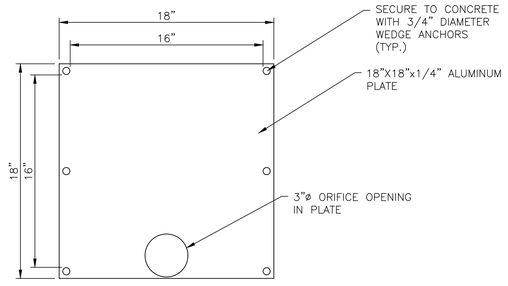
NOT TO SCALE




RIPRAP BERM CROSS-SECTION

## BASIN 1 RIPRAP BERM DETAIL

NOT TO SCALE

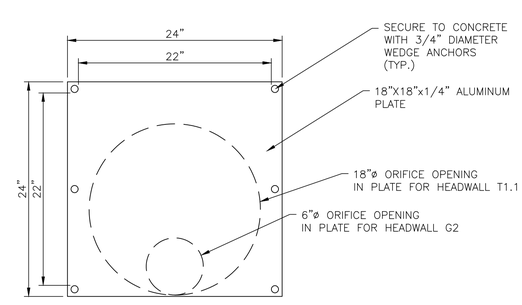



NOTES:

1. SECURE PLATE TO CONCRETE WITH ANCHORS AND SEAL CONNECTION WITH WATERPROOF MASTIC.

## A4 OCS ORIFICE PLATE

NOT TO SCALE

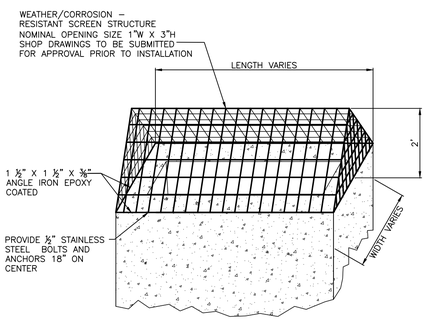



NOTES:

1. SECURE PLATE TO CONCRETE WITH ANCHORS AND SEAL CONNECTION WITH WATERPROOF MASTIC.

## HEADWALL G2 & T1.1 ORIFICE PLATE

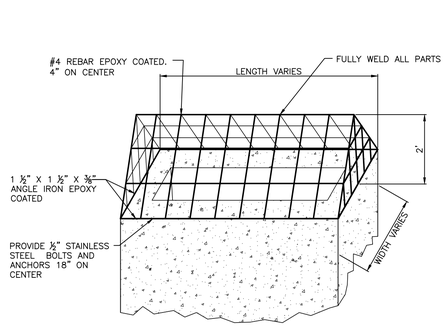
NOT TO SCALE




## STORM STRUCTURE DEBRIS SCREEN

NOT TO SCALE

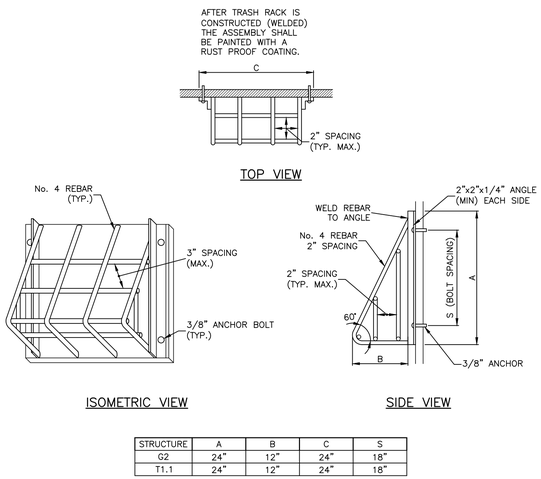
APPLIES TO INLETS S4, S5, S6, S7, S8 AND S9 AND T9.




## OUTLET STRUCTURE TRASH RACK

NOT TO SCALE

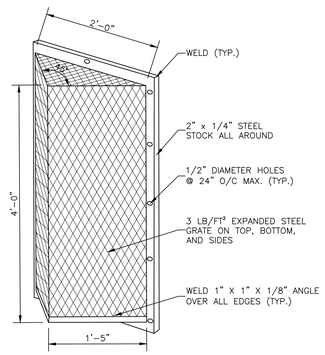
APPLIES TO OCS A4




| STRUCTURE | A | B | C | S |
|---|---|---|---|---|
| G2 | 24" | 12" | 24" | 18" |
| T1.1 | 24" | 12" | 24" | 18" |

## HEADWALL TRASH RACK

NOT TO SCALE




NOTES:

1. TRASH RACK TO BE CENTERED OVER OPENING.
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACE TO BE COATED WITH ZINC COLD GALVANIZING COMPOUND AFTER WELDING.
4. TRASH RACK TO BE FASTENED TO WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK TO BE REMOVABLE.

## ORIFICE DEBRIS SCREEN

NOT TO SCALE

APPLIES TO 3"ø ORIFICE IN A4 OCS

PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_PCSM_DTL.dwg
LAST SAVED: 12/19/2025, 4:51PM
LAST SAVE BY: JKelley

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1-800-242-1776
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
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STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

TROOPER RIDGE SUBDIVISION
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MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

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| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |

DRAWING
PCSMD-2

SHEET
45
OF 50

## BMP SPECIFICATIONS

BMP 6.4.5 BIORETENTION (MRC):

VEGETATION – SEE APPENDIX B OF PA BMP MANUAL

EXECUTION

A. SUBGRADE PREPARATION

1. INITIAL EXCAVATION CAN BE PERFORMED DURING ROUGH SITE GRADING BUT SHALL NOT BE CARRIED TO WITHIN ONE FEET OF THE FINAL BOTTOM ELEVATION. FINAL EXCAVATION SHOULD NOT TAKE PLACE UNTIL ALL DISTURBED AREAS IN THE DRAINAGE AREA HAVE BEEN STABILIZED.
2. WHERE EROSION OF SUB-GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING IN THE GRADED BOTTOM, THIS MATERIAL SHALL BE REMOVED.
3. BRING SUB-GRADE OF MRC AREA TO LINE, GRADE, AND ELEVATIONS INDICATED. INSTALL IMPERMEABLE LINER PER MANUFACTURER'S RECOMMENDATIONS. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING, OR TRAFFIC COMPACTION. ALL MRC AREAS SHALL BE LEVEL GRADE ON THE BOTTOM.
4. HALF EXCAVATION AND NOTIFY ENGINEER IMMEDIATELY IF EVIDENCE OF SINKHOLE ACTIVITY OR PINNACLES OF CARBONATE BEDROCK ARE ENCOUNTERED IN THE MRC AREA.

B. MRC INSTALLATION.

1. UPON COMPLETION OF SUB-GRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT HIS/HER DISCRETION BEFORE PROCEEDING WITH MRC INSTALLATION.
2. FOR THE SUBSURFACE STORAGE BED INSTALLATION, UNDERDRAIN AND FILTER MEDIA SHOULD BE PLACED ON THE BOTTOM TO THE SPECIFIED DEPTH.
3. PLANTING SOIL SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUB-GRADE PREPARATION/BED INSTALLATION. ANY ACCUMULATION OF DEBRIS OR SEDIMENT THAT TAKES PLACE AFTER APPROVAL OF SUB-GRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF PLANTING SOIL AT NO EXTRA COST TO THE OWNER.
4. INSTALL PLANTING SOIL (EXCEEDING ALL CRITERIA) IN 18-INCH MAXIMUM LIFTS AND LIGHTLY COMPACT (TAMP WITH BACKHOE BUCKET OR BY HAND). KEEP EQUIPMENT MOVEMENT OVER PLANTING SOIL TO A MINIMUM – DO NOT OVER COMPACT. INSTALL PLANTING SOIL TO GRADES INDICATED ON THE DRAWINGS.
5. PLANT TREES AND SHRUBS ACCORDING TO SUPPLIER'S RECOMMENDATIONS AND ONLY FROM MID-MARCH THROUGH THE END OF JUNE OR FROM MID-SEPTEMBER THROUGH MID-NOVEMBER.
6. INSTALL 2-3" SHREDDED HARDWOOD MULCH (MINIMUM AGE 6 MONTHS) OR COMPOST MULCH EVENLY AS SHOWN ON PLANS. DO NOT APPLY MULCH IN AREAS WHERE GROUND COVER IS TO BE GRASS OR WHERE COVER WILL BE ESTABLISHED BY SEEDING.
7. PROTECT MRC AREAS FROM SEDIMENT AT ALL TIMES DURING CONSTRUCTION. HAY BALES, DIVERSION BERMS AND/OR OTHER APPROPRIATE MEASURES SHALL BE USED AT THE TOE OF THE SLOPES THAT ARE ADJACENT TO MRC AREAS TO PREVENT SEDIMENT FROM WASHING INTO THESE AREAS DURING SITE DEVELOPMENT.
8. WHEN THE SITE IS FULLY VEGETATED AND THE SOIL MANTLE STABILIZED THE PLAN DESIGNER SHALL BE NOTIFIED AND SHALL INSPECT THE MRC DRAINAGE AREA AT HIS/HER DISCRETION BEFORE THE AREA IS BROUGHT ONLINE AND SEDIMENT CONTROL DEVICES REMOVED.
9. WATER VEGETATION AT THE END OF EACH DAY FOR TWO WEEKS AFTER PLANTING IS COMPLETED. CONTRACTOR SHOULD PROVIDE A ONE-YEAR 80% CARE AND REPLACEMENT WARRANTY FOR ALL PLANTING BEGINNING AFTER INSTALLATION AND INSPECTION OF ALL PLANTS.

BMP 6.6.3 UNDERGROUND DETENTION BASIN:

1. SITE PREPARATION

A. THE AREA IMMEDIATELY ADJACENT TO THE BASIN MUST BE STABILIZED IN ACCORDANCE WITH THE PADEP'S EROSION ANF SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (2012 OR LATEST EDITION) PRIOR TO BASIN CONSTRUCTION.

2. INSTALLATION

A. INSTALL UNDERGROUND CRATE SYSTEM PER MANUFACTURER'S SPECIFICATIONS. INSTALL SURROUNDING INLET AND OUTLET CONTROL STRUCTURES.

3. OPERATION AND MAINTENANCE

A. AN OPERATION AND MAINTENANCE PLAN IN ACCORDANCE WITH LOCAL OR STATE REGULATIONS WILL BE REPAPERED. AT A MINIMUM, AN INSPECTION CHECKLIST SHOULD BE INCLUDED AS PART OF THE OPERATION AND MAINTENANCE PLAN AND PERFORMED AT LEAST ANNUALLY.

## PCSM PLAN GENERAL DESIGN NOTES

1. THIS PCSM PLAN PRESERVES THE INTEGRITY OF STREAM CHANNELS AND MAINTAINS AND PROTECTS THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM BY PROTECTING THE EXISTING NATURAL DRAINAGE FEATURES.
2. THIS PCSM PLAN PREVENTS AN INCREASE IN THE RATE OF STORMWATER RUNOFF AND MINIMIZES ANY INCREASE IN STORMWATER RUNOFF VOLUME BY USE OF STRUCTURAL BMPS TO FACILITATE STORAGE AND MANAGED RELEASE OF STORMWATER.
3. THIS PCSM PLAN MINIMIZES THE EXTENT OF THE PROJECT AREA, IMPERVIOUS AREAS, LAND CLEARING AND GRADING BY CAREFUL SELECTION OF THE USEABLE SITE AREA AND MAINTAINING THE MAJORITY OF THE NATURAL AREA.
4. THE PCSM PLAN MINIMIZES THE DURATION OF EARTH DISTURBANCE BY COMPLETING WORK UNDER THE THE CONSTRUCTION SEQUENCE IN ONE PHASE AND WORKING UNDER AN ACCELERATED CONSTRUCTION SCHEDULE.
5. THE PCSM PLAN MAXIMIZES THE PROTECTION OF THE EXISTING DOWNSTREAM DRAINAGE FEATURES AND VEGETATION BY AVOIDING THE STREAM CHANNEL AND UTILIZING PERIMETER CONTROL BMPS (COMPOST FILTER SOCKS) AROUND THE PROJECT AREA.
6. THE PCSM PLAN MINIMIZES SOIL COMPACTION BY A CAREFUL SELECTION OF THE USABLE SITE AREA REQUIRED FOR THE IMPROVEMENTS AND MINIMIZING THE DISTURBANCE OF VIRGIN SOILS. IT ALSO UTILIZES STRUCTURAL OR NONSTRUCTURAL BMPS THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF AND MAINTAIN STREAM BASEFLOW.
7. POST-CONSTRUCTION THERMAL IMPACTS WILL BE MINIMIZED BY THE INSTALLATION OF THE PROPOSED VEGETATED SWALE AND BIO-RETENTION FACILITIES, WHICH WILL ALLOW MIXING AND COOLING OF RUNOFF. DURING CONSTRUCTION, THERMAL IMPACTS ARE MINIMIZED BY RUNOFF FILTERING THROUGH COMPOST FILTER SOCKS.
8. THERE ARE NO EXISTING WETLANDS ON THE SITE.
9. WATERS OF THE U.S. ARE DESIGNATED AS TSF, MF; THEREFORE, NO SPECIAL PROTECTION IS REQUIRED AND RIPARIAN BUFFERS ARE NOT APPLICABLE. PROTECTION OF WETLANDS WITHIN RIPARIAN FOREST BUFFER AND RIPARIAN BUFFER OFFSET IS NOT SHOWN ON THE PLANS AS THESE FEATURES DO NOT EXIST WITHIN THE LIMIT OF DISTURBANCE OR PERMIT AREA.
10. AREAS PROPOSED FOR INFILTRATION BMPS SHALL BE PROTECTED FROM SEDIMENTATION AND COMPACTION DURING THE CONSTRUCTION PHASE, SO AS TO MAINTAIN THEIR MAXIMUM INFILTRATION CAPACITY.
11. INFILTRATION BMPS SHALL NOT BE CONSTRUCTED NOR RECEIVE RUNOFF UNTIL THE ENTIRE CONTRIBUTORY DRAINAGE AREA TO THE INFILTRATION BMP HAS RECEIVED FINAL STABILIZATION.
12. THE STORMWATER MANAGEMENT SYSTEM IS A PERMANENT FIXTURE THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE MUNICIPALITY, WHICH SHALL BE RECORDED WITH THE RECORD PLAN AND WHICH SHALL BE APPLICABLE TO ALL FUTURE LANDOWNERS.

_____
SIGNATURE OF OWNER

13. I HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE STREE STORMWATER MANAGEMENT SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE WORCESTER TOWNSHIP STORMWATER MANAGEMENT ORDINANCE NO. 278.

_____DATE_____
(DESIGN ENGINEER)

14. THE MUNICIPAL ENGINEER OR HIS MUNICIPAL ASSIGNEE SHALL OBSERVE ALL PHASES OF THE INSTALLATION OF THE PERMANENT STORMWATER MANAGEMENT FACILITIES AS DEEM APPROPRIATE BY THE MUNICIPAL ENGINEER.
15. DURING CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE TOWNSHIP ENGINEER'S OFFICE THREE (3) DAYS PRIOR TO THE CONSTRUCTION OF ANY PROPOSED INFILTRATION BMP STORMWATER FACILITY.
16. THE TOWNSHIP SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT FACILITY.
17. THE STORMWATER MANAGEMENT FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED.

## PCSM RECYCLING/DISPOSAL NOTES

1. AS PART OF THE ROUTINE MAINTENANCE OF POST CONSTRUCTION BMPS, THE RESPONSIBLE ENTITY SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ANY MATERIAL OR DEBRIS THAT MAY ACCUMULATE IN THE BMPS OVERTIME, IN ACCORDANCE WITH ANY AND ALL APPLICABLE MUNICIPAL OR OTHER GOVERNMENT AGENCY CURRENT REGULATIONS INCLUDING BUT NOT LIMITED TO: THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE RESPONSIBLE ENTITY SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY MATERIAL OR DEBRIS AT THE SITE.
2. TRASH OR OTHER WASTE SHALL NOT BE PERMITTED TO ACCUMULATE IN THE BMPS. MATERIALS SLATED FOR REMOVAL FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ANY AND ALL APPLICABLE MUNICIPAL OR OTHER GOVERNMENTAL AGENCY CURRENT REGULATIONS. THESE MATERIALS SHOULD BE RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE REGULATIONS LISTED ABOVE AND/OR THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION RULES AND REGULATIONS.
3. FOLLOW THE OPERATIONS AND MAINTENANCE PROCEDURES AS SPECIFIED FOR THIS SITE STORMWATER BEST MANAGEMENT PRACTICE (BMP'S)/STORMWATER CONTROL MEASURES (SCM'S). DEBRIS SHALL NOT BE PERMITTED TO ACCUMULATE WITHIN THE PCSM BMP'S. DEBRIS, TRASH, LEAVES, AND SILT COLLECTED IN PRETREATMENT FACILITIES (INLET FILTERS, FOREBAYS, ETC), SHALL BE DISPOSED OF IN ORDINARY SITE REFUSE CONTAINER (DUMPSTER), OR DEPENDING ON QUANTITY, DISPOSED OF IN LANDFILL.
4. REFER TO THE PCSM / RECORD PLAN FOR ADDITIONAL NOTES.

## BMP MAINTENANCE & INSPECTION

BMP 6.4.5 BIO-RETENTION (MRC):

PROPERLY DESIGNED AND INSTALLED MRC AREAS REQUIRE SOME REGULAR MAINTENANCE.

- WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
- DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
- 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.
- MRC AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
- DURING PERIODS OF EXTENDED DROUGHT, MRC AREAS MAY REQUIRE WATERING.

TREES AND SHRUBS SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATE HEALTH.

BMP 6.4.8 VEGETATED SWALE:

SWALES SHALL BE KEPT FREE OF ANY BLOCKAGE AT ALL TIMES.

MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT:

- INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN > 3 INCHES AT ANY SPOT OR COVERING VEGETATION)
- INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES, CORRECT AS NEEDED PER AMENDED SOIL SEEDING/MULCHING SPECIFICATION).
- INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE
- INSPECT FOR UNIFORMITY IN CROSS-SECTION AND LONGITUDINAL SLOPE, CORRECT AS NEEDED
- INSPECT SWALE INLET (CURB CUTS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED

MAINTENANCE ACTIVITIES TO BE DONE AS NEEDED:

- PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT
- RESEED BARE AREAS; INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE FORMING
- WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY

WINTER CONDITIONS ALSO NECESSITATE ADDITIONAL MAINTENANCE CONCERNS, WHICH INCLUDE THE FOLLOWING:

- INSPECT SWALE IMMEDIATELY AFTER THE SPRING MELT, REMOVE RESIDUALS (E.G. SAND) AND REPLACE DAMAGED VEGETATION WITHOUT DISTURBING REMAINING VEGETATION.
- IF ROADSIDE 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.

BMP 6.6.3 UNDERGROUND DETENTION BASIN:

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 STORM GREATER THAN 1 INCH.

STRUCTURES INCLUDE BASIN BOTTOMS, OUTLETS STRUCTURES AND INLETS.

SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN THE BASIN IS COMPLETELY DRY. SEDIMENT SHOULD BE DISPOSED OF PROPERLY.

## RESPONSIBILITIES FOR FILL MATERIALS

1. THE OPERATOR MUST USE ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT ANY NECESSARY FILL MATERIAL ASSOCIATED WITH THIS PROJECT QUALIFIES AS CLEAN FILL. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH PADEP'S POLICY "MANAGEMENT OF FILL", DOCUMENT NUMBER 258-2182-773. A COPY OF THIS POLICY IS AVAILABLE ONLINE AT WWW.DEPWEB.STATE.PA.US.
2. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSED, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM THE WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).
3. CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN PADEP'S POLICY "MANAGEMENT OF FILL."
4. ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE PADEP FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT WWW.DEPWEB.STATE.PA.US.
5. ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREEN, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.
6. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF PADEP'S POLICY "MANAGEMENT OF FILL".
7. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE MUNICIPAL OR RESIDUAL WASTE REGULATIONS IN 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.
8. ALL FILLS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SUPPING, EROSION OR EXCESS SATURATION.
9. REFER TO SITE / RECORD PLAN FOR ADDITIONAL NOTES.

## BMP CONSTRUCTION SEQUENCES

BMP 6.4.5 BIORETENTION/MRC BASIN:

THE FOLLOWING IS A TYPICAL CONSTRUCTION SEQUENCE; HOWEVER, ALTERATIONS MIGHT BE NECESSARY DEPENDING ON DESIGN VARIATIONS.

1. INSTALL TEMPORARY SEDIMENT CONTROL BMPS AS SHOWN ON THE PLANS.
2. COMPLETE SITE GRADING. IF APPLICABLE, CONSTRUCT CURB CUTS OR OTHER INFLOW ENTRANCE BUT PROVIDE PROTECTION SO THAT DRAINAGE IS PROHIBITED FROM ENTERING CONSTRUCTION AREA.
3. EXCAVATE BIORETENTION/MRC BASIN TO PROPOSED INVERT DEPTH. INSTALL LINER AS SHOWN ON BASIN DETAILS.
4. BACKFILL BIORETENTION/MRC BASIN WITH FILTER MEDIA AS SHOWN ON PLANS AND SPECIFICATIONS. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY.
5. PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT.
6. COMPLETE FINAL GRADING TO ACHIEVE PROPOSED DESIGN ELEVATIONS, LEAVING SPACE FOR UPPER LAYER OF COMPOST, MULCH OR TOPSOIL AS SPECIFIED ON PLANS.
7. PLANT VEGETATION ACCORDING TO PLANTING PLAN. MULCH AND INSTALL EROSION PROTECTION AT SURFACE FLOW ENTRANCES WHERE NECESSARY.

BMP 6.4.8 VEGETATED SWALE:

1. BEGIN VEGETATED SWALE CONSTRUCTION ONLY WHEN THE UP-GRADIENT TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE. VEGETATED SWALES SHOULD BE CONSTRUCTED AND STABILIZED 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, MARCH 2012 OR 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 NONCONFORMITIES MAY COMPROMISE FLOW CONDITIONS.
5. SEED, MULCH, FERTILIZE AND INSTALL PROTECTIVE LINING AS PER APPROVED PLANS AND ACCORDING TO FINAL PLANTING LIST. 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.
7. FOLLOW MAINTENANCE GUIDELINES, AS DISCUSSED BELOW.

NOTE: IF A VEGETATED SWALE IS USED FOR RUNOFF CONVEYANCE DURING CONSTRUCTION, IT SHOULD BE RE-GRADED AND RESEEDED IMMEDIATELY AFTER CONSTRUCTION AND STABILIZATION HAS OCCURRED. ANY DAMAGED AREAS SHOULD BE FULLY RESTORED TO ENSURE FUTURE FUNCTIONALITY OF THE SWALE.

BMP 6.4.6 UNDERGROUND DETENTION BASIN:

1. EXCAVATE AND INSTALL SYSTEM PER MANUFACTURERS SPECIFICATIONS.
2. INSTALL ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

1.1. IF BASIN IS NOT INTENDED TO RECEIVE FLOWS DURING CONSTRUCTION, INSTALL APPROPRIATE DIVERSION MEASURES.

3. BRING BASIN ON-LINE ONCE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.

ADDITIONAL NOTES:

1. ALL CONSTRUCTION ACTIVITIES FOR THE BMP AREAS SHALL OCCUR WITHIN A SHORT TIME PERIOD TO ENSURE THAT SILT AND SEDIMENT DO NOT ENTER THEM.
2. APPROPRIATE MEASURES ARE TO BE TAKEN IN THE EVENT OF SEDIMENT ENTERING AND CLOGGING THE BMP AREAS. SHOULD UNFAVORABLE CONDITIONS (i.e. GROUNDWATER AND/OR BEDROCK, ETC.) BE ENCOUNTERED DURING THE CONSTRUCTION PROCESS OF THE BMP AREAS, THE DESIGN ENGINEER SHALL BE CONTACTED TO ADDRESS SUCH ISSUES.
3. IF INSPECTION INDICATES THAT SOIL OR SEDIMENT HAS ENTERED ANY OF THE BMP AREAS, APPROPRIATE MEASURES (I.E. CLEARING THE SOIL SEDIMENT FROM BMP AREAS) SHALL BE ADDRESSED.

## SEQUENCE OF CONSTRUCTION

PRIOR TO THE START OF EARTH DISTURBANCE ACTIVITIES, PLEASE NOTE THE FOLLOWING AVOIDANCE MEASURE:

THE PROJECT IS LOCATED IN THE VICINITY OF THE NORTHERN LONG-EARNED BAT SPRING STAGING/FALL SWARMING HABITAT. TO ENSURE TAKE IS NOT REASONABLY CERTAIN TO OCCUR, DO NOT CONDUCT TREE REMOVAL FROM MAY 15 TO AUGUST 15.

SEQUENCE OF CONSTRUCTION

1. STAKE OUT THE LIMIT OF DISTURBANCE AND INSTALL GP AND TR SERIES PERIMETER COMPOST FILTER SOCK SEGMENTS.
2. INSTALL COMPOST SOCK TRAP 1 AND 2 AND COMPOST SOCK DIVERSIONS 1 AND 2.

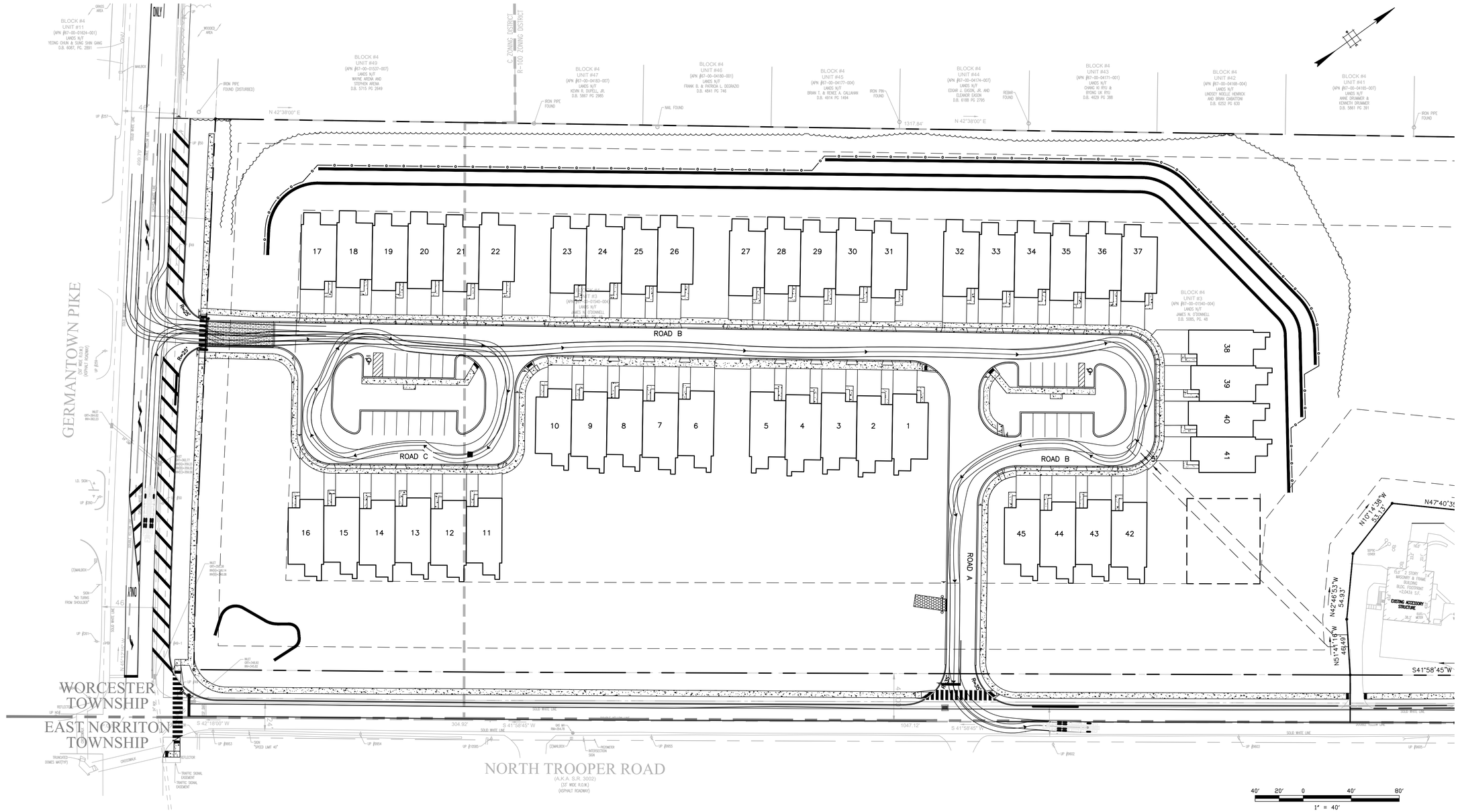
   CRITICAL STAGE – INSPECT PERIMETER COMPOST SOCK AND COMPOST SOCK TRAP .
3. INSTALL ROCK CONSTRUCTION ENTRANCES 1 AND 2. INSTALL MOUNTABLE BERM AT ROCK CONSTRUCTION ENTRANCE 1 AS SHOWN ON THE PLAN. CUT IN CONSTRUCTION ENTRANCES AT PROPOSED GRADE, STOCKPILE EXCAVATION AT LOCATIONS INDICATED.
4. CONSTRUCT TROOPER ROAD CURBING AND STORM SEWER FROM EXISTING INLET T1 UP TO PROPOSED INLET T9. DISTURB NO MORE EARTH IN A DAY WHICH CAN BE STABILIZED AT END OF EACH DAY WITH TOPSOIL, SEED AND EROSION BLANKETS FOR AREAS TO BE PERMANENTLY VEGETATED, OR STONE BACKFILL FOR ROADWAY AREAS. INSTALL AND MAINTAIN INLET PROTECTION AS INLETS ARE PLACED. INSTALL CURBING.

   CRITICAL STAGE – INSPECTION OF TROOPER ROAD IMPROVEMENTS
5. CONSTRUCT STORMWATER COLLECTION AREA AT G2-T1.1-S1-A1 NEXUS. MAKE STORM SEWER CONNECTION TO G1 AND T1. EXCAVATE AREA, INSTALL RETAINING WALL AND PIPE STUBS THROUGH WALL AT S1 AND A1, AND HEADWALLS T1.1 AND G2 (INCLUDING ORIFICE PLATES AND TRASH RACKS). STABILIZE SURROUNDING SURFACES EXTERNAL TO THE COLLECTION AREA WITH EROSION BLANKETS AS INDICATED. INSTALL RIP-RAP WITHIN THE COLLECTION AREA. INSTALL COMPOST FILTER SOCK SC2 AND SC1 BERM IN FRONT OF HEADWALLS G2 AND T1.1 AFTER THE STORMWATER COLLECTION AREA SPILLWAY IS COMPLETE.

   CRITICAL STAGE – INSPECT STORMWATER COLLECTION AREA THAT IT IS STABILIZED AND ONLINE.
6. INSTALL STORM SEWER FROM S1 UP TO S3 AND HEADWALL S3.1.
7. CRITICAL STAGE – INSPECT STORM SEWER RUN FROM S3.1 TO S1 THAT IT IS ONLINE AND CAN RECEIVE RUNOFF FROM THE S-SERIES DIVERSION SWALE SYSTEM.
8. CONSTRUCT THE S4 TO S9 STORM SEWER AND DIVERSION SWALE FROM DOWNSTREAM TO UPSTREAM. SIMULTANEOUSLY CUT IN EMBANKMENT TO CONSTRUCT RETAINING WALLS BETWEEN S4-S9 STORM SEWER AND UNIT BLOCKS 1-4. SIMILARLY AND SIMULTANEOUSLY, INSTALL STORM SEWER AND DIVERSION SWALES FROM T9 TO T12 ALONG THE NORTH, BEHIND UNIT BLOCK 5. CONSTRUCT STORM SEWER INCREMENTALLY FROM STRUCTURE TO STRUCTURE WORKING FROM DOWNSTREAM TO UPSTREAM. DAILY STABILIZE SWALES WITH RIP-RAP BOTTOM LINING, AND TOPSOIL, SEED AND EROSION CONTROL BLANKETS ON SIDE SLOPES. EVERY EFFORT SHALL BE MADE TO WORK IN CONDITIONS WHERE PRECIPITATION IS NOT FORECAST. DISTURBANCE SHALL NOT PRACTICABLY EXCEED WHAT CAN BE STABILIZED DAILY. AS SWALES ARE CONSTRUCTED, THEY WILL RECEIVE AND MUST BE STABLE AND ABLE TO CONVEY RUNOFF FROM OFFSITE. INSTALL TRASH RACKS ON INLETS AND HEADWALLS UPON PLACEMENT.

   CRITICAL STAGE – INSPECT SWALE S3.1 TO S9 SYSTEM AND T12 TO T9 SYSTEM., THAT THEY ARE STABLE AND IN PERMANENT CONFIGURATION, AND ASSOCIATED RETAINING WALL SYSTEMS BELOW ARE PROPERLY CONSTRUCTED.
9. GERMANTOWN PIKE WIDENING MAY OCCUR AT THIS STAGE, OR AT ANY STAGE HEREAFTER. BOX CUT WIDENING FROM TROOPER INTERSECTION UPHILL. DO NOT PERFORM WORK WHEN PRECIPITATION IS FORECAST. DAILY STABILIZE WITH TOPSOIL, SEED AND EROSION BLANKETS FOR PERMANENTLY VEGETATED AREAS, AND AT A MINIMUM, STONE OR BITUMINOUS BINDER COURSE FOR ROADWAYS. INSTALL CURBING AND STORM SEWER STUBS. INSTALL INLET PROTECTION ON STORM SEWER STUBS UPON INLET PLACEMENT.
10. BEGIN CONSTRUCTION OF SEDIMENT BASIN 1 OVER FOOTPRINT OF PERMANENT STORMWATER MANAGEMENT BASIN SYSTEM 001. REMOVE TOPSOIL AND STOCKPILE SEPARATELY. EXCAVATE TO CREATE BASIN VOLUME INCLUDING TEMPORARY EROSION CONTROL GRADING WITHIN SEDIMENT BASIN. CONSTRUCT BERM, BASIN OUTLET PIPING WITH ANTI SEEP COLLARS AND CONCRETE CRADLE AS SHOWN AND OUTLET STRUCTURES TO A1, TEMPORARY SLOPE PIPES AND TEMPORARY RIPRAP APRONS, SWALE A1, BASIN SPILLWAY, SKIMMER AND LANDING PAD AND BAFFLE. BEGIN PERMANENT STABILIZATION PROCESS ON OUTSIDE BASIN BERMS WITH TOPSOIL, SEED AND EROSION CONTROL BLANKETS WHERE INDICATED ON BASIN SLOPES. STABILIZE INTERNAL SEDBASIN SLOPES WITH TOPSOIL, SEED AND EROSION CONTROL BLANKETS WHERE INDICATED.

    CRITICAL STAGE – INSPECT SEDIMENT BASIN 1 (INCLUDING TEMPORARY OPENING CONFIGURATION IN PERMANENT OUTLET STRUCTURE) THAT IT IS ONLINE AND READY TO RECEIVE RUNOFF FROM DEVELOPMENT SITE.
11. BEGIN MASS GRADING OF SITE IN FOLLOWING ORDER: ESTABLISH DRAINAGE PATTERN INTERNAL TO SITE (FROM WALLS TO SEDIMENT BASIN) TO CONVEY RUNOFF TO SEDIMENT BASIN, TEMPORARY COMPOST SOCK DIVERSIONS SHALL BE UTILIZED TO ACHIEVE DRAINAGE PATTERNS UNTIL FINAL GRADES ACHIEVED. BOX CUT INTERNAL DRIVES UP FROM CONSTRUCTION ENTRANCES SIMULTANEOUSLY INSTALLING STORM SEWER FROM A13 TO A5 AND B3.1 TO B1. CONTINUE INTERNAL DRIVE CONSTRUCTION INSTALLING STORM SEWER, BALANCE OF UTILITIES, CURBING, STONE BASE COURSE AND BITUMINOUS BINDER


BLOCK #4
UNIT #11
(APN #67-00-01624-001)
LANDS N/F
YEONG CHUN & SUNG SHIN GANG
D.B. 6087, PG. 2891
BLOCK #4
UNIT #49
(APN #67-00-01537-007)
LANDS N/F
WAYNE ARENA AND
STEPHEN ARENA
D.B. 5715 PG 2649
BLOCK #4
UNIT #47
(APN #67-00-04183-007)
LANDS N/F
KEVIN R. DUPELL, JR.
D.B. 5867 PG 2985
BLOCK #4
UNIT #46
(APN #67-00-04180-001)
LANDS N/F
FRANK B. & PATRICIA L. DEGRAZIO
D.B. 4841 PG 746
BLOCK #4
UNIT #45
(APN #67-00-04177-004)
LANDS N/F
BRIAN T. & RENEE A. CALLAHAN
D.B. 4914 PG 1494
BLOCK #4
UNIT #44
(APN #67-00-04174-007)
LANDS N/F
EDGAR J. EASON, JR. AND
ELEANOR EASON
D.B. 6186 PG 2795
BLOCK #4
UNIT #43
(APN #67-00-04171-001)
LANDS N/F
CHANG XI RYU &
EYONG UK RYU
D.B. 4629 PG 388
BLOCK #4
UNIT #42
(APN #67-00-04168-004)
LANDS N/F
LINDSEY NOELLE HENRICK
AND BRIAN CABALTON
D.B. 6252 PG 630
BLOCK #4
UNIT #41
(APN #67-00-04165-007)
LANDS N/F
ANNE DRUMMER &
KENNETH DRUMMER
D.B. 5861 PG 391
BLOCK #4
UNIT #3
(APN #67-00-01540-004)
LANDS N/F
JAMES N. O'DONNELL
D.B. 5085, PG. 48
C ZONING DISTRICT
R-100 ZONING DISTRICT
N 42°38'00" E
1317.84'
ROAD A
ROAD B
ROAD C
17 18 19 20 21 22
23 24 25 26
27 28 29 30 31
32 33 34 35 36 37
38 39 40 41
10 9 8 7 6
5 4 3 2 1
16 15 14 13 12 11
45 44 43 42
GERMANTOWN PIKE
(SR 4013)
(ASPHALT ROADWAY)
WORCESTER
TOWNSHIP
EAST NORRITON
TOWNSHIP
NORTH TROOPER ROAD
(A.K.A. S.R. 3002)
(33' WIDE R.O.W.)
(ASPHALT ROADWAY)
S 42°18'00" W
S 41°58'45" W
304.92'
1047.12'
N10°14'38"W
53.13'
N42°46'53"W
54.93'
N51°41'19"W
46.49'
S41°58'45"W
N47°40'3
EXISTING ACCESSORY STRUCTURE
1 STORY MASONRY & FRAME BUILDING
FLOOR=+/-2434 S.F.
SEPTIC COVER
WELL COVER
ONE WAY
STOP
SIGN "NO TURNING FROM SHOULDER"
SIGN "SPEED LIMIT 40"
TRAFFIC SIGNAL EASEMENT
TRAFFIC SIGNAL EASEMENT
TRUNCATED DOMES MAT(TYP)
CROSSWALK
REFLECTOR
INTERSECTION SIGN
U.G. SIGN
SOLID WHITE LINE
DOUBLE YELLOW LINE
INLET
DR=346.82
INV=343.82
INLET
DR=346.77
INV(E)=339.23
INV(S)=339.26
INV=339.56
INLET
DR=344.82
INV=340.33
INLET
DR=344.79
INV=334.79
UP #9653
UP #9654
UP #10585
UP #9655
UP #9652
UP #9663
UP #9665
UP #10587
UP #10588
UP #10589
UP #10590
UP #10591
UP #10592
UP #10593
UP #10594
UP #10595
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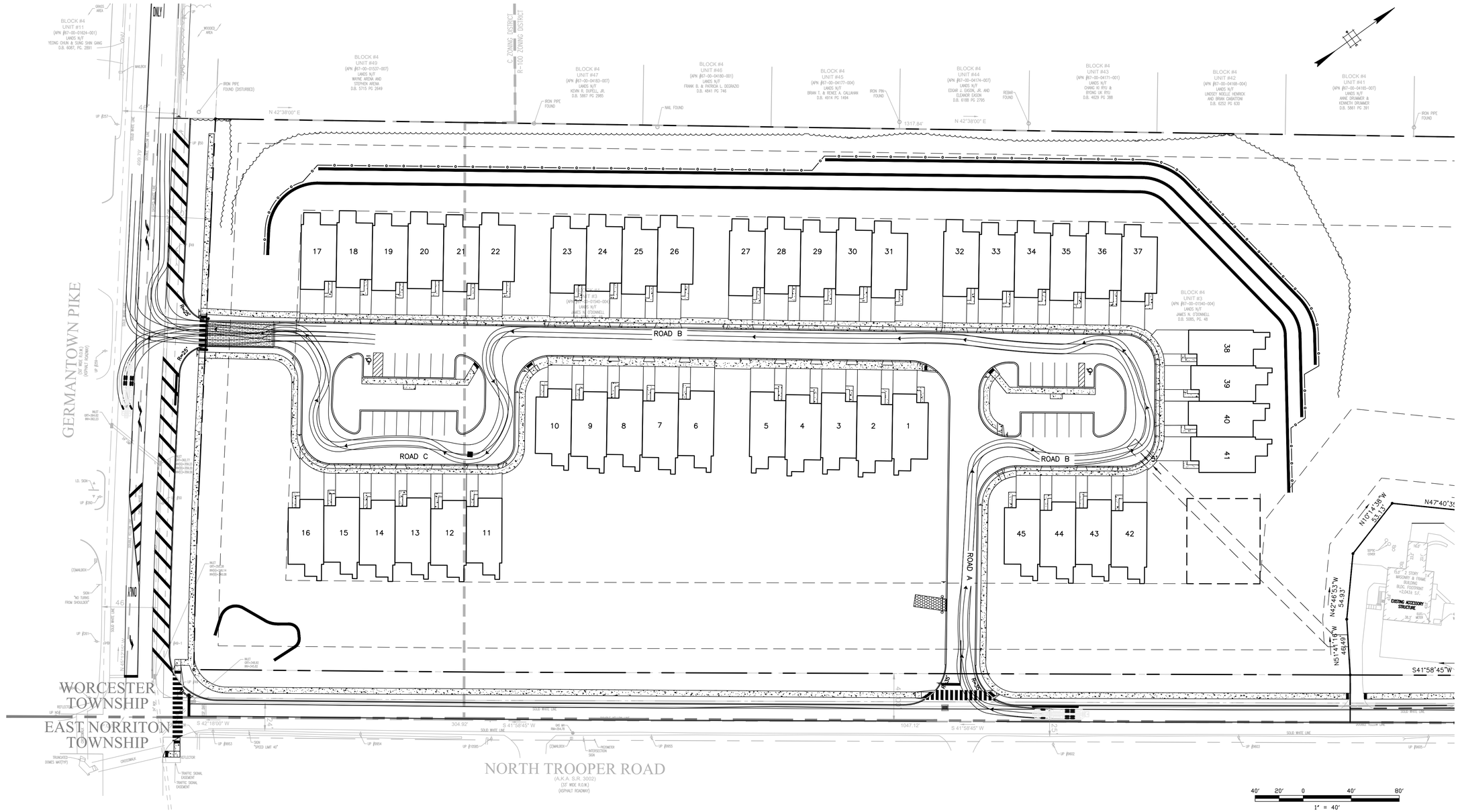
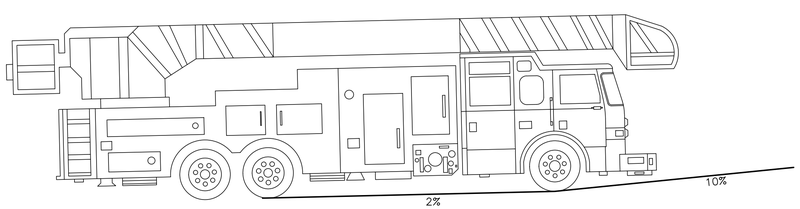
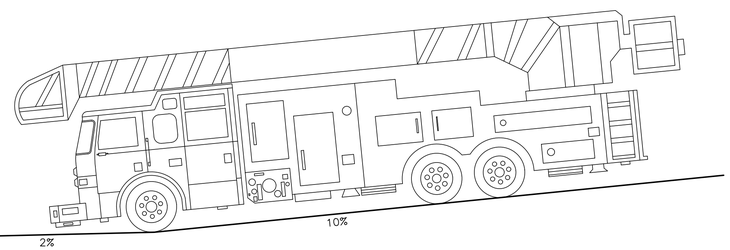
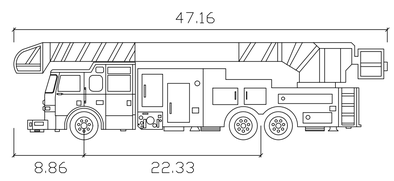
UP #10606
UP




FIRE TRUCK PROFILE
ROAD A ENTER/EXIT
1"=5'




Pierce Arrow XT

| | feet |
|---|---|
| Width | : 8.01 |
| Track | : 8.01 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 45.5 |

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_TT-2.dwg
LAST SAVED: Wednesday, 05 Nov 2025, 10:11AM
LAST SAVE BY: JKelley

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THIS DOES NOT IMPLY COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, YOU ARE REQUIRED TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM, INC. FOR LOCATION OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776
SERIAL #: 20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

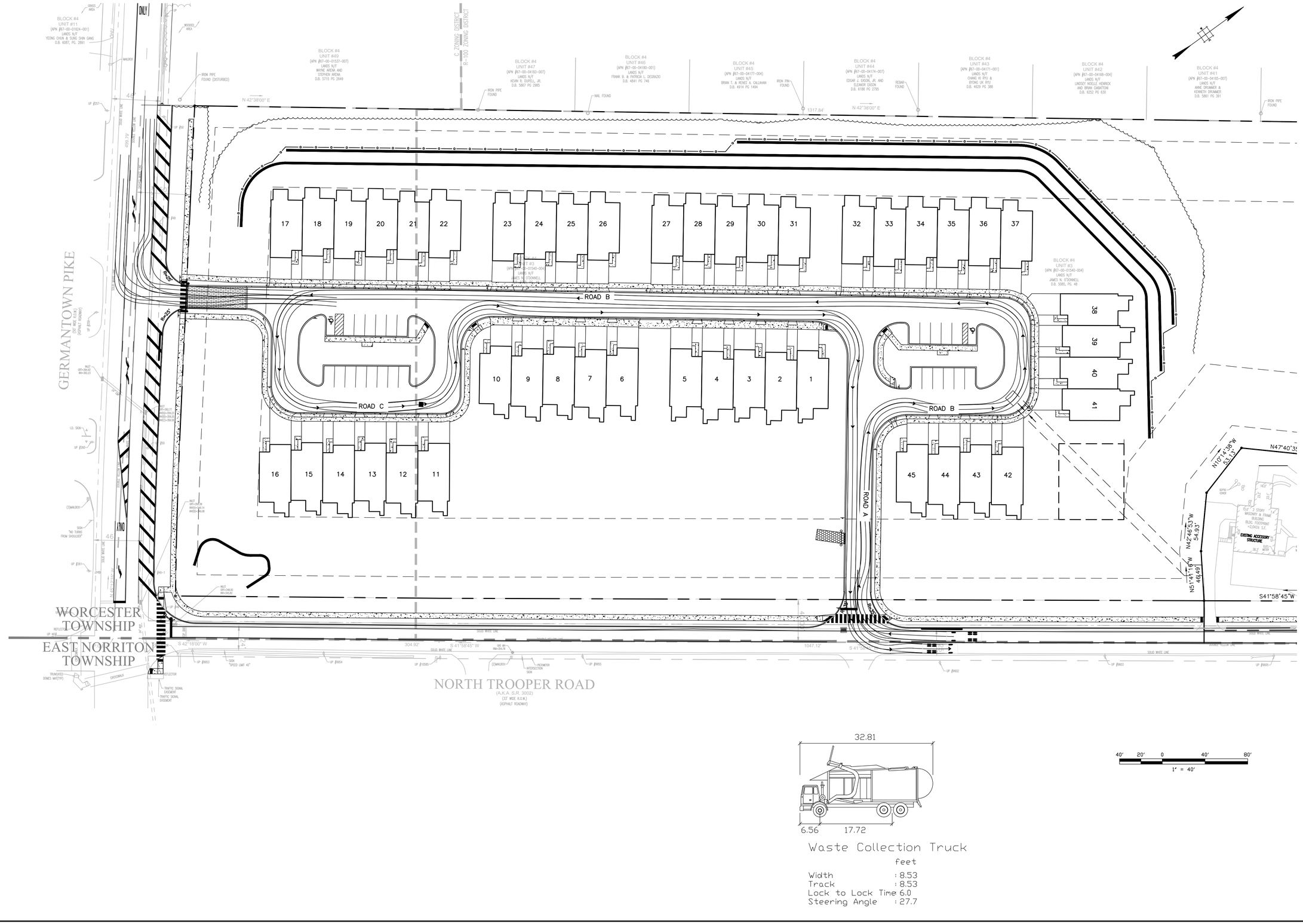
TROOPER RIDGE SUBDIVISION
1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# FIRETRUCK TURNING TEMPLATE–2

T AND M ASSOCIATES
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | TT-2 |
| SHEET | 48 |
| OF | 50 |







Waste Collection Truck

| feet | |
|---|---|
| Width | : 8.53 |
| Track | : 8.53 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 27.7 |

40' 20' 0 40' 80'
1" = 40'

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR FIELD SURVEY INFORMATION. THIS DOES NOT IMPLY COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION. OF UNDERGROUND FACILITIES. OR STRUCTURES. CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, CONTRACTOR SHALL CONTACT 811 FOR FIELD MARKING OF UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
SERIAL #:
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |


CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER


COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

# TROOPER RIDGE SUBDIVISION

1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# TRASH TRUCK TURNING TEMPLATE


T AND M
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA


| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | TT-3 |
| SHEET | 49 |
| OF | 50 |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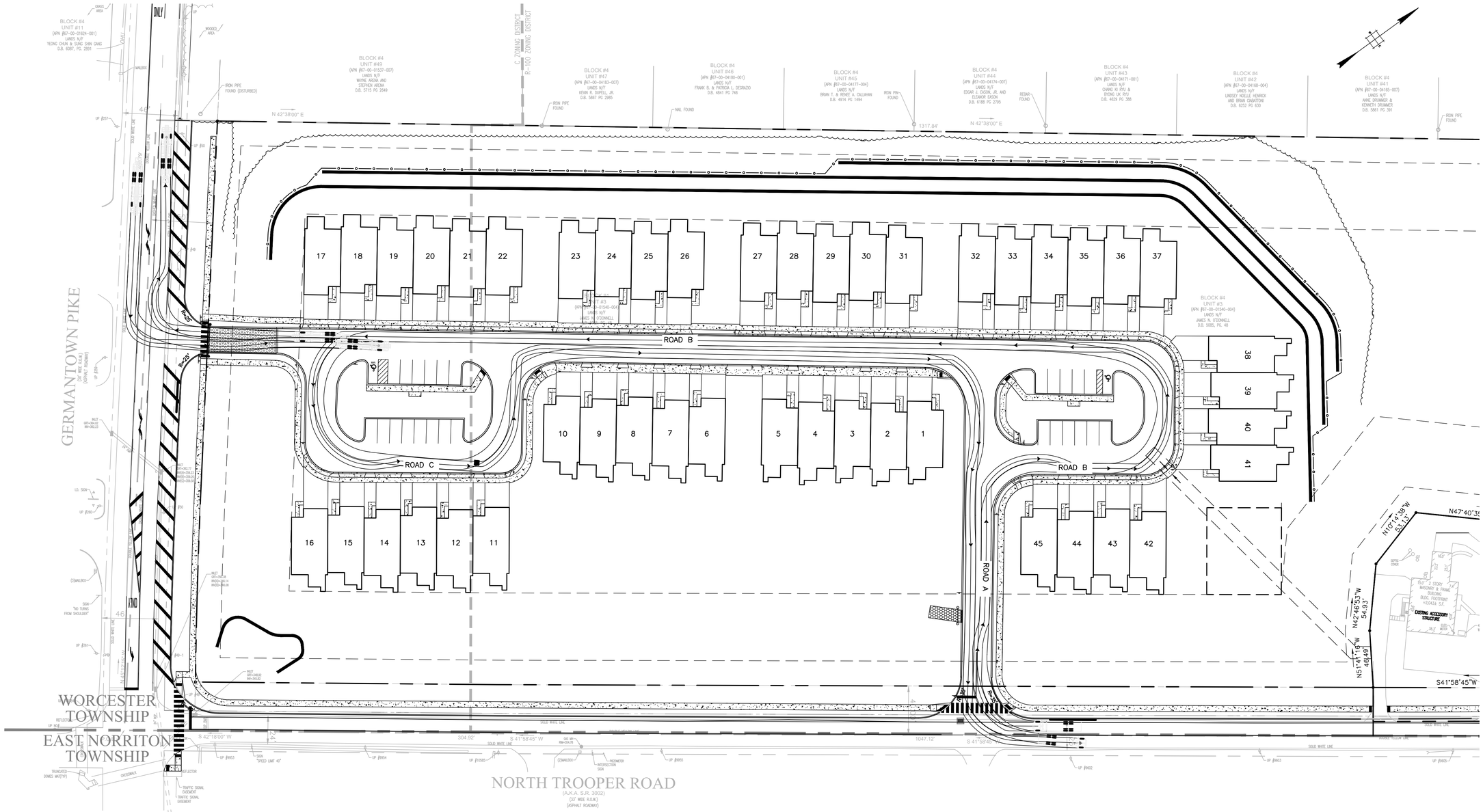
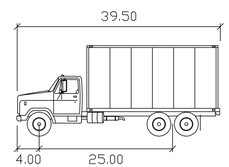
PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_TT.dwg
LAST PLOTTED: Wednesday, 05 Nov 2025, 10:11AM
LAST SAVE BY: JKelley




SU-40

| | feet |
|---|---|
| Width | : 8.00 |
| Track | : 8.00 |
| Lock to Lock Time | 6.0 |
| Steering Angle | : 31.8 |

40' 20' 0 40' 80'

1" = 40'

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PROJECT INFORMATION:
FILE PATH: G:\Projects\WDEV\00004\Plans\
FILE NAME: WDEV00004_TT.dwg
LAST SAVED: Wednesday, 05 Nov 2025, 10:11AM
LAST SAVE BY: JKelley

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PA ONE CALL SERIAL #
20243371817

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| | | | | |

CHRISTOPHER W. JENSEN, P.E.
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. JENSEN
ENGINEER
NO. PE76464

12/19/2024
LICENSED PROFESSIONAL ENGINEER
STATE OF PA LICENSE No. PE076464

COMMERCE PURSUIT CAPITAL

# TROOPER RIDGE SUBDIVISION

1035 NORTH TROOPER ROAD, WORCESTER TOWNSHIP
MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

# BOX TRUCK TURNING TEMPLATE

YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3110
PHILADELPHIA, PA 19103
TEL 215-282-7850
FAX 215-627-3459

OFFICES LOCATED IN:
CALIFORNIA, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

| | |
|---|---|
| DESIGNED BY | JPK/CKS/CMR/ROP/ZHR |
| CHECKED BY | BGS/ZHR |
| DRAWN BY | SCR/CKS/RAM |
| DATE | 1/23/2026 |
| SCALE | AS NOTED |
| PROJ. NO. | WDEV00004 |
| DRAWING | TT-4 |
| SHEET | 50 |
| OF | 50 |

YOUR GOALS. OUR MISSION.

February 6, 2026

Mr. Dan Demeno, Township Manager/Zoning Officer
Worcester Township
1721 South Valley Forge Road
Worcester, PA 19490

RE: **Supplemental Waiver Requests**
**Trooper Ridge Subdivision**
**Final Land Development Plan**

Dear Mr. Demeno:

On behalf of the applicant, Commercial Pursuit Capital, LLC, we respectfully request the following waivers related to the final land development plan design:

**Section 130-16.C(1)(a)[6][b]**: North Trooper Road (S.R. 3002) should have a minimum cartway width of 40 feet.

**Waiver Justification: The plans currently show a cartway width of approximately 24 to 25 feet along the North Trooper Road (S.R. 3002) site frontage. The applicant is proposing to widen Trooper road between 1 and 2 feet for most of the property's frontage to accommodate new storm drainage inlets and curbing to provide a 14 wide travel lane (southbound lane). The applicant's traffic engineer has prepare a Traffic Impact Analysis for the proposed development and has not recommended widening Trooper Road beyond what is currently proposed. The Township's traffic engineer is supportive of a waiver to not widen Trooper Road to a 40 foot width (20 feet from the centerline).**

**Section 129-18.C(11)**: Storm sewer pipes shall enter and exit the sides of inlet boxes and shall not encroach into the corner, wherever possible.

**Waiver Justification: A partial waiver is requested from this requirement for 8 inlets where pipes entering/exiting at the corners of the inlet box are necessary for the drainage design. These 8 inlets have been sized appropriately so that the corner entrance/exit pipes will not adversely affect the constructability or integrity of the box. All other inlets have been oriented so that pipes will enter/exit the sides of the box.**

Thank you very much for your consideration of the requested waivers and please contact me with any questions you may have.

Sincerely,
**T&M Associates**

Barry G. Stingel, PLA
Group Manager

YOUR GOALS. OUR MISSION.

February 12, 2026

Mr. Dan DeMeno, Township Manager
Township of Worcester
1721 Valley Forge Road, PO Box 767
Worcester, PA 19490-0767

**RE: 1035 Trooper Road**
**Parcel No. 67-00-01540-004**
**Westrum Development Company**
**CKS – Preliminary Land Development Plan Review Response**

Dear Mr. DeMeno:

We are in receipt of the CKS Engineers review letter dated May 15, 2025 regarding the above-mentioned Preliminary Plan. On behalf of the applicant, Commerce Pursuit Capital, T&M offers the following responses to the above-mentioned review letter. Our responses are in bold-standard font for clarity.

We offer the following comments for consideration by the Township:

**ZONING:**

The following comments are based upon the Worcester Township Zoning Ordinance:

1. Ordinance No. 285 adopted June 16, 2021 made the MR Multi-Residential Overlay District applicable to this property with underlying zoning districts to remain. The existing 15.12- acre lot consists of two zoning districts, approximately 21% C-Commercial and 79% R-100 Residential. Once subdivided, Lot 1 will be entirely R-100 and Lot 2 will be approximately 29% C-Commercial, with the remainder being zoned R-100 Residential.

   **T&M Response: Comment acknowledged.**

2. The proposed use of Lot 1, single-family detached dwelling with a detached barn for storage and workshop use incidental to the principal dwelling use, is permitted by right in the R-100 Zoning District and Multi-Residential Overlay. (150-67.B, 150-67.C and 150- 83.A)

   **T&M Response: Comment acknowledged.**

3. The use of the accessory structure on Lot 1 must be discussed with the Township. The Zoning Table should be updated to reflect any applicable zoning data related to accessory structures. (150-177.A)

   **T&M Response: Lot 1 has been reconfigured such that the accessory structure meets the setback requirements of Section 150-177.A(d).**

4. Per our previous comments, the plans have been revised to show Lot 2 in its entirety. Due to the proposed lot line of the subdivision, non-conforming yard setbacks may be created at the west and rear of the accessory structure. Dimensions from the proposed lot line to the structure must be added to the plans to evaluate compliance with the zoning ordinance. (150-69)

   **T&M Response: Please see response to Comment 3 above.**

5. The proposed use of Lot 2, multi-family dwellings consisting of 45 townhouses, is permitted in the Multi-Residential District at a density of four units per developable acre. The plan notes a lot area of 11.27 net acres; therefore, 45 townhouses results in a permissible density of 3.99 d.u./acre. (150-83.B and 150-89.E.1)

**T&M Response: A Developable Area Table, in accordance with Section 150-89.E(1) is located on Sheet 2. A Net Lot Area Table is also on Sheet 2.**

6. The twenty units with rears oriented towards Trooper Road will have basements with floor slabs approximately 10 feet below the finished floor elevation at the street side. While the Zoning Data table on Sheet 2 notes a 30-foot proposed height for all structures, we question the asterisk which states, "units will have basements with a majority of the basement wall area below finished grade." The ordinance definition of basement requires the basement floor to be below subgrade on all sides. Additionally, the ordinance defines building height as the vertical distance measured from the average elevation of the existing grade at the location of the building or its highest point of a flat or multi-level roof. A height variance may be required for the units in question if any are to exceed 35 feet or two stories. If any other units will have basements, the proposed floor elevation(s) must be added to Sheet 7. (150-9 and 150-87.A.1)

   The applicant's engineer's response states that all buildings will comply with the Township's height requirements.

   **T&M Response: Building elevations and calculations to demonstrate compliance with building height requirements are included with this submission.**

7. A 20-foot-wide screen planting buffer has been provided in the exterior 50 feet of the 75- foot buffer area. The plan proposes to use existing vegetation towards the buffer. The Township must determine if the existing vegetation is sufficient as a buffer. (150-89.E.6.b)

   **T&M Response: Comment acknowledged. Only wooded areas where no disturbance is proposed to utilize existing vegetation towards the buffer requirement.**

8. If the townhouses are to be operated under a homeowners association, the future association declaration and by-laws may need to include language prohibiting the keeping of recreational vehicles and travel trailers. (150-160)

   **T&M Response: Comment acknowledged; homeowners association documents will be submitted to the Township under separate cover.**

9. All buildings shall be designed as a single architectural scheme. The applicant must provide the Township with renderings of the intended building design scheme for the townhouses to ensure the continued character of the Township. Additionally, elevation views shall be provided of the townhomes backing up to Trooper Road. (150-89.E.2)

   The applicant states that architectural drawings will be provided under separate cover. At the time of issuance of this letter, the Township has not received architectural plans.

   **T&M Response: Architectural renderings of the building design scheme are included with this submission.**

10. The applicant must propose an amenity area. We note that the Township's Open Space Preservation Plan contains an "implementation item" for the consideration of recreational space in the Fairview Village area. We recommend an inclusive facility with elements for all ages and abilities be considered, such as accessible play equipment, benches or similar seating areas, tables, and weather-protected gathering space. At the Board of Supervisors' discretion, the Township may a require a fee-in-lieu of outdoor recreational facilities. The applicant proposes a fee-in-lieu for the amenity space. (150-89.E.7)

    **T&M Response: A potential amenity area has been shown on Sheet 7; however, the applicant would prefer a fee-in-lieu of the amenity space. A concept for the amenity space has been provided with this submission as a separate plan for discussion with the Township.**

SUBDIVISION AND LAND DEVELOPMENT

The following comments are based upon the Worcester Township Subdivision and Land Development Ordinance:

1. The location and water supply must be noted on the plans. (130-33.C.4.c)

   **T&M Response: A note has been added to Sheet 2 naming the water supplier and the connection location.**

2. General ERSA Note No. 3 on Sheet 12 has been revised to indicate that the site does not have wetlands. The consultant that performed the wetland investigation and the date of the investigation must be added to this note. (130-33.C.3.e)

   **T&M Response: The note has been revised to include the consultant and date of the investigation.**

3. Whenever possible, the applicant shall preserve trees, groves, and/or waterways. If more than 25% of the existing trees on site with six-inch DBH or more are destroyed because of development, then all trees over the 25% threshold shall be replaced in addition to other landscaping requirements. The location of the existing trees to be removed must be shown on the plans. (130-14.C) & (130-28.F.7.b)

   **T&M Response: The location of the trees to be removed has been shown on Sheet 6. Replacement tree calculations are provided on Sheet 38.**

4. A portion of the retaining walls are proposed in steep slope areas. Retaining walls are not permitted unless the applicant can demonstrate that steeper slopes or retaining walls can be stabilized and maintained adequately and that they more effectively preserve the landscape in its scenic and/or natural state. The applicant indicates that retaining wall design will be under separate cover. (130-32.1.C.4)

   **T&M Response: The retaining wall design is included in this submission. The wall has been designed specific to this site and the slopes where it is proposed.**

5. Street names must be proposed for consideration by the Township Planning Commission and Board of Supervisors. Proposed names shall not closely resemble any other existing streets. (130-16.A.8)

   **T&M Response: The applicant will provide proposed street names to the Township for approval.**

6. The plans must demonstrate that a 200-foot sight distance is provided along the proposed streets along the centerline, measured at the driver's eye height of five feet. The plans were revised to show 150 ft. of sight distance which must be revised to 200 ft. (130-16.B.1)

   **T&M Response: 200 foot sight distances have been shown on Sheet 7.**

7. It is noted that the area between the title line and ultimate right-of-way is being offered to the Township for dedication. A legal description providing metes and bounds for this area shall be provided. We recommend the portion of the existing dwelling at proposed Lot 1, which encroaches this area, be excluded from the overall area to be offered.

   **T&M Response: The ultimate ROW in front of Lot 1 has been revised to exclude the house. Legal descriptions for the ultimate ROWs to be dedicated to the Township are included with this submission.**

8. If the Township requires an amenity area and not a fee-in-lieu of, the Township shall comment on the appropriateness of the amenity space and consider if its placement effectively preserves the site's natural features. We note the northern end of the site, where it is proposed to be located, contains steep slopes and medium-aged trees, whereas other portions of the site are presently meadow with fewer trees. The applicant may wish to consider a more central location to all proposed dwellings; however, proximity to overflow parking is preferred. (130-21)

**T&M Response: A potential amenity area has been shown on Sheet 7; however the applicant would prefer a fee-in-lieu of the amenity space. A concept for the amenity space has been provided with this submission as a separate plan for discussion with the Township.**

9. A "Tree Survey Plan" was not included with the submission. Relative information is depicted on Sheet 5, Demolition Plan, and Sheet 12, Natural Resources Protection Plan, which is acceptable. Tree counts of sample areas and tree removal calculations are outlined on Sheet 12, Natural Resources Protection Plan. We request that the applicant or their consultant contact this office to arrange a site visit to verify the information provided. Furthermore, the sampling methodology must be submitted to Worcester Township for approval. The applicant's response indicates a site meeting with the Township Engineer will be scheduled in the future once the site meeting has occurred and revised plans have been submitted. Additional comments regarding the "Tree Survey Plan" may be generated in future revisions. (130-28.E.1)

   **T&M Response: T&M and the applicant met with the Township Engineer and Township Landscape Architect on June 3, 2025 to review the proposed tree removal and sampling methodology. The sampling methodology has been provided on Sheet 17. At that meeting, the applicant agreed to revise the tree count for the Meadow Area and 10 additional trees 6" DBH or greater were added to the number of trees to be replaced.**

10. General Landscaping Note Number 1 shall be revised to reflect current plan sheet numbers.

    **T&M Response: The sheet numbers have been revised on the note, see Sheet 13.**

11. The installation detail provided for trees to be installed on steep slopes is difficult to read. The detail must be revised.

    **T&M Response: The detail has been revised as requested, see Sheet 37.**

12. We recommend that a note be added to the Plant Schedule indicating the quantity of male Winterberry shrubs to be provided as pollinators to the female shrubs.

    **T&M Response: Winterberry shrubs are not proposed, however Inkberry and Bayberry shrubs are. It is not intended for the inkberry shrubs to produce berries, however, the Bayberry shrubs have been noted to provide 1 male per 10 female shrubs within the planting schedule**

13. Planting is proposed within an area of vegetation shown to remain. The planting design should be adjusted to eliminate this conflict.

    **T&M Response: The planting design has been adjusted to minimize conflicts between existing vegetation and proposed plantings. In cases where proposed plantings are situated between existing wooded area and proposed swales, the proposed plantings are intended to be planted at the edge of existing canopy as depicted on plan.**

14. Except where precluded altogether by an easement or right-of-way, it is recommended that new trees be installed no closer than 5 feet measured horizontally from any underground utility.

    **T&M Response: Proposed plantings have been revised to maintain 5 foot horizontal clearance with subsurface utilities.**

15. Trees and shrubs shall not be planted within swales. Proposed plantings located in the swale system of B3.1 must be relocated elsewhere.

    **T&M Response: Proposed plantings located within swales have been relocated out of the swale.**

16. Clear sight triangles are to be labeled on the Landscape & Lighting Plan, Sheet 12.

    **T&M Response: Clear sight triangles are shown and labeled on the landscape and lighting plan.**

17. The planting design provides for Softening buffers. Perimeter screen buffer plantings are also required. The plans propose that the existing vegetation will be used towards this requirement.

Landscape Requirement No. 2 must be broken out into screening and softening buffer requirements. (150-89.E.6. and 130-28.G.5.f.)

**T&M Response: Per 130-28.G.5.(b), a softening buffer is not required where a screen buffer is required. Landscape Requirement No. 2 has been broken out into separate requirements. The plans previously were showing existing vegetation to meet softening requirements (Plan-East). However, there is only a need for a screening buffer at Plan- North adjacent to another zoning district. A softening buffer is only required adjacent to property boundaries so we can use existing vegetation to remain to meet the intent of the requirement along plan-east property line.**

18. Due to Serviceberry being a cohost for Cedar Apple Rust, these should not be planted in close proximity to Eastern Red Cedars. One of the species should be switched out.

**T&M Response: Serviceberries have been removed and replace with Sweetbay Magnolias.**

19. The following waivers have been requested by the applicant from the Worcester Township Subdivision and Land Development Ordinance as requested in a letter dated April 4, 2025 prepared by T and M Associates:

a. From Section 129-18.C(2) - requiring all storm sewer piping to be Class III reinforced concrete pipe.

This partial waiver is to allow High Density Poly Ethylene (HDPE) for two storm runs. The storm runs are outside roadways. We take no exception to this waiver request.

b. From Section 129-18.H(12) – requiring emergency spillways that discharge over embankments to be reinforced concrete checker block.

The plans propose the installation of vegetated spillway with a permanent liner. We take no exception to this waiver request.

c. From Section 129-18.H(19) – requiring basins to have a minimum of 6 inches between the emergency spillway and the top of the outlet structure and 6 inches between the 100-year water surface elevation and the top of grade at the outlet structure.

Due to the lack of infiltration rates, the basin was designed as a Managed Release Concept (MRC) basin which makes meeting these ordinances difficult.

d. From Section 130-16.B(2)(a) – requiring horizontal curves for streets to have a minimum radius of 150 ft. for residential streets.

The applicant proposes that the internal roads are to be private streets which will not be dedicated to the Township.

e. From Section 130-16.C(1)(a)[4] – requiring 50-ft. right-of-way for residential streets.

The applicant is proposing a 40-ft.-wide private right-of-way which is the requirement for marginal access streets.

f. From Section 130-16.C(1)(a)[4] – requiring that residential streets have a minimum paved width of 32 feet which may be reduced to 28 or 30 feet if the conditions are unreasonable.

The plans propose a 24-ft.-wide paving width. We note that the plans propose “No Parking Signs” along all streets.

g. From Section 130-17.B(2) – requiring driveways to be located no closer than 40 feet from a street intersection.

We take no exception to this request.

h. From Section 130-17.D.2 – requiring that no angle or perpendicular parking be allowed along local, public, or private streets.

We note four guest parking areas are located perpendicular to private roadways. Since this will be a private road, we take no exceptions to this request.

i. From Section 130-18.A.1 – requiring sidewalks along all streets.

We note this is a partial waiver to not install sidewalk along a 240-ft. portion of Trooper Road at the easterly frontage of proposed Lot 1 only.

The Township may desire a fee-in-lieu of the required sidewalk or a deferral of this requirement until the installation of this sidewalk is warranted.

**T&M Response: The applicant will pay the fee-in-lieu of the 240 feet of sidewalk not constructed as part of this plan.**

j. From Section 130-18.A.3 – requiring sidewalks be located 5 feet from the curb line.

We note the plans propose the sidewalk to be 4 feet from the curb. We take no exception to this request.

k. From Section 130-18.B(1)(a) – requiring all curbing to be concrete.

The plans propose Belgian Block curbing outside the public right-of-way. We note that the roads are proposed to be privately owned. We take no exception to this request.

All waivers must be included on a plan sheet that is to be recorded.

**T&M Response: Except as noted, the requested waivers were approved by the Township with the approval of the Preliminary Plan. The waivers have been listed on Sheet 2. Two additional waivers are requested; please see the Supplemental Waiver Request Letter included with this submission.**

SANITARY SEWER

1. A pressure sanitary sewer extension will be constructed to serve the proposed townhouse development. This pressure sewer extension will be constructed within the development and continue into W. Germantown Pike. The flow from this project will flow through the system to Township MH HD1.1A and flow by gravity to the Heritage Village Pumping Station. This pumping station has been evaluated and determined to have adequate capacity. We note that sewer treatment from this development will be treated at the Berwick Place WWTP. Currently, this plant is projected to have an organic overload within five years. A Corrective Action Plan (CAP) is currently under review by PADEP. No new connections will be allowed until the CAP is approved by PADEP.

   **T&M Response: Comment acknowledged.**

2. The applicant will be required to prepare a Planning Module for this project for sanitary sewer service. This module will need to be submitted to the Pennsylvania Department of Environmental Protection (PADEP) for review and approval in order to revise the Township's current Act 537 Plan. The Township will need to review the planning module prior to submission and execution for PADEP.

   **T&M Response: Comment acknowledged. The applicant's sewer engineer will provide the required documents.**

3. The design of pressure sanitary system, including calculations, must be submitted to the Township for review. The Engineer's response indicates this will be under separate cover.

   **T&M Response: The sanitary sewer design and calculations are included in this submission.**

4. The applicant will be required to purchase sanitary sewer tapping fees from the Township. The Township will determine the adequate number of EDUs required for this project and convey that information to the applicant.

**T&M Response: Comment acknowledged.**

5. Capped sanitary and water laterals from Lot 2 to Lot 1 are capped off at the proposed property boundary. When capped sewers are provided, on-site disposal facilities shall also be provided until connection to Lot 1 is made. A note must be added to the plans that if and when Lot 1 is to be connected to public sewer and water, approval must be obtained from the Township and PA American Water Company. Any additional fees, including the appropriate tapping fees, must be paid prior to connection. Also, the ends of the lateral and water service must be permanently marked in the field to allow for location in the future. (130-26.5)

   **T&M Response: A note has been added to sheet 2 for these requirements.**

6. Metes and bounds must be added to the Utility Easement for Lot 1. A legal description must be provided for review.

   **T&M Response: The legal description for the utility easement for Lot 1 is included with this submission.**

## STORMWATER MANAGEMENT, GRADING, EROSION AND SEDIMENT CONTROL

The following comments are based upon the Worcester Township Stormwater Management Ordinance:

1. An NPDES permit and erosion and sedimentation adequacy letter will be required from the Montgomery County Conservation District and PADEP. (130-32 and 129-20

   **T&M Response: The NPDES permit has been issued for this project, a copy of which is included with this submission.**

2. An O&M agreement will be required for all stormwater facilities, in a form acceptable to the Township Solicitor. (129-39.A)

   **T&M Response: Will comply.**

3. A Stormwater Management Agreement will be required. The Agreement shall be reviewed and approved by the Township Solicitor prior to plan approval. (SMO 129-138)

   **T&M Response: Will comply.**

4. The following storm structures and pipe segments have varying elevations on the Sheet 11 table relative to the storm sewer profiles on Sheets 17 through 25:

   a. A2 - A profile of this pipe must be added to the plans.

   b. MH T5 – T5 is missing from the storm structure table on Sheet 11.

   **T&M Response: The profile A3 to A1 (stormwater collection area) is shown on sheet 19. Structure T5 has been added to the table on Sheet 11.**

5. Multiple inlets are noted to be surcharged within the storm sewer calculations. The calculations and/or plans must be revised to not surcharge inlets. Additionally, design capacity of the pipes must not be less than the calculated capacity to the surcharged pipes. (129-18.C(10))

   **T&M Response: The drainage plan and calculations have been revised accordingly (see updated pipe conveyance calculations in appendix B of the PCSM report).**

6. All inlets in the storm sewer calculations are considered ‘on-sag’. Inlets that are not sumped should be revised to be ‘on grade’ and the calculations updated accordingly. (129- 18.C(10))

   **T&M Response: The storm sewer calculations have been revised accordingly, and gutter spread calculations have been provided for inlets within the roads (see appendix B of the PCSM report).**

7. One foot of freeboard must be provided for all inlets and manholes (129-18.(13))

   **T&M Response: The drainage plan and storm sewer calculations have been revised accordingly (see appendix B of the PCSM report).**

8. As requested, slope labels have been added to the plans. The slopes behind units 1-10 and 37 and 38 are indicated as 2:1. No excavation or fill may be greater than 4:1. (129- 18.G(4) & (5))

   **T&M Response: The slopes behind lots 1-10 and 37/38 have been regraded. Basin fill and cut slopes do not exceed 4:1.**

9. Sump pump discharge locations must be indicated on the plan. (SMO 129-18(C)(20))

   **T&M Response: Sump pump discharge locations have been added to the plan (see sheet 12).**

10. Multiple pipes enter inlet boxes into the corner of inlet boxes. Storm sewer pipes may not enter inlet boxes at the corner of the structure. The plans must be revised.

    **T&M Response: A waiver has been requested from this requirement (see supplemental waiver request letter included with this submission).**

GENERAL ENGINEERING & DRAFTING

The following are general comments and considerations generated during the course of our review:

1. The portion of the existing driveway that Lot 1 utilizes will now be located on Lot 2. The applicant has indicated that the driveway is be removed. We note that a portion of the driveway is still located on Lot 2 and an access easement will be required.

   a. Sheet 37 illustrates truck turning movements for the aerial fire apparatus only. The approach through the emergency access is shown to have a 9% grade. We recommend the designer confirm the apparatus can successfully traverse this slope.

      **T&M Response: Additional information has been provided on Sheet 48 to show that the firetruck can traverse the slope.**

2. The project proposes several retaining walls. Notes on Sheet 2 and 24 are acceptable, however; all walls must be reviewed and approved before construction commences.

   **T&M Response: The retaining wall design has been included in this submission.**

3. As requested, a bus stop location has been shown on the plans. The Township should discuss the need for a bench for seating and weather protection for students and guardians.

   **T&M Response: The applicant discussed the location with the school district and and as noted a bus stop has been provided. The applicant is prepared to discuss any additional items that may be desired by the Planning Commission.**

4. Sheet No. 1 includes a list of utility users. There are other utilities (East Norriton) listed which may or may not be impacted by this project and the applicant should review those and provide an accurate listing of only utilities impacted.

   **T&M Response: The list of utility providers has been updated on Sheet 1.**

5. The proposed split rail fence must be shown on the Record Plan.

   **T&M Response: The split rail fence has been shown on the Record Plan.**

6. The plans must be submitted for review and comment to the following agencies:

   a. Montgomery County Planning Commission – **submitted and reviewed.**

b. Montgomery County Conservation District – **submitted and NPDES permit application approved**.

c. PennDOT – Trooper Road – **submitted and review process underway.**

d. Montgomery County Roads and Bridges Department W. Germantown Pike – **submitted and review process underway.**

e. PADEP – **Planning module submitted and under review.**

f. PA American Water – **submitted and approved.**

g. Township Traffic Engineer – **submitted and reviewed.**

h. Fire Marshal – **submitted and approved.**

**T&M Response: Plans have been submitted to all of the above-listed entities.**

If you have any questions or need any clarification or additional information, please contact me.

Very truly yours,
**T&M Associates**

Barry G. Stingel, PLA
Group Manager

Cc: Commerce Pursuit Capital

Bowman

March 12, 2026

Mr. Dan Demeno
Township Manager
Worcester Township
1721 Valley Forge Road
P.O. Box 767
Worcester, PA 19490

Attention: Christian R. Jones, Assistant Township Manager
Robert D'Hulster, Public Works Director

RE: **Traffic Review #5 – Transportation Impact Assessment, Final Land Development Plans, and Montgomery County Highway Occupancy Permit Plans**
Trooper Ridge Subdivision -1035 North Trooper Road (S.R. 3002) – 45 townhomes
Worcester Township, Montgomery County, PA
Project No. 314086-01-001

Dear Dan:

In response to the Township's request, Bowman Consulting Group (Bowman) has completed our fifth (5th) traffic engineering review associated with the proposed development to be located at 1035 North Trooper Road (S.R. 3002) in Worcester Township, Montgomery County, PA. According to the final land development plans and associated materials provided to our office, the Trooper Ridge Subdivision development is proposed to consist of 45 townhouse units with access being provided via one full-movement access/local road to North Trooper Road (S.R. 3002), as well as an emergency-only access to/from West Germantown Pike with a knox box gating system proposed to be provided for first responders to access the community. The existing single-family home and garage will remain on the northern end of the site and will be subdivided into its own lot (Lot 1).

The following documents were received and reviewed in preparation of our comments:

- Transportation Impact Assessment – Trooper Ridge Townhouse Development, prepared by Horner & Canter Associates, Inc., last revised January 8, 2026.
- Final Land Development Plans – Trooper Ridge Subdivision, prepared by T & M Associates, Inc., dated January 23, 2026.
- Response to Township Traffic Engineer Comments Letter – 1035 Trooper Road, prepared by T & M Associates, Inc., dated February 6, 2026.
- Response to Township Engineer Comments Letter – 1035 Trooper Road, prepared by T & M Associates, Inc., dated February 12, 2026.
- Supplemental Waiver Request Letter – Trooper Ridge Subdivision, prepared by T & M Associates, Inc., dated February 6, 2026.
- PennDOT Highway Occupancy Permit Plans – Commerce Pursuit Capital, prepared by T & M Associates, Inc., dated August 15, 2025.
- Montgomery County Highway Occupancy Permit Plans – Commerce Pursuit Capital, prepared by T & M Associates, Inc., last revised January 15, 2026.

425 Commerce Drive Suite 200, Fort Washington, PA 19034
P: 215.283.9444
**bowman.com**

- Response to PennDOT Cycle 3 Comments Letter – Commerce Pursuit Capital, LP, prepared by Horner & Canter Associates, Inc., dated January 9, 2026.
- PennDOT review comments for Cycle 5, dated March 2, 2026.
- Response to Montgomery County Cycle 2 Comments Letter – Trooper Ridge Subdivision, prepared by T & M Associates, Inc., dated January 15, 2026.
- Traffic Signal Permit Plan – Germantown Pike and Trooper Road (S.R. 3002).

Based on our review of the documents listed above, Bowman offers the following comments for consideration by the Township and action by the applicant.

**General**

1. A response letter **must be provided** with the resubmission detailing how each comment below has been addressed, and where each can be found in the resubmission materials (i.e., page number(s)) to assist in the re-review process. Additional comments may follow upon review of any resubmitted plans and materials during the land development and PennDOT/County HOP/signal review process.

2. **Informational:** According to **Township Resolution 2025-13,** the applicant is required to pay a transportation impact fee of **$81,250**. *Note – If the number of units to be built or the land use changes, a modified transportation impact fee may be appropriate.*

3. The applicant is in the process of securing a **Highway Occupancy Permit (HOP)** for this project from **both PennDOT and Montgomery County** for the proposed site accesses and work that may be completed within the legal right of way on North Trooper Road (S.R. 3002) and West Germantown Pike since North Trooper Road (S.R. 3002) is a State roadway and West Germantown Pike is a County roadway. Additionally, because of changes to the signalized intersection geometry and modification to the existing signal at the intersection of West Germantown Pike and North Trooper Road (S.R. 3002) will also require a modified **Signal Permit Plan** to be completed since any roadway/signal/ADA improvements at the intersection or along North Trooper Road (S.R. 3002) extending into that East Norriton Township (who is owns and maintains this signal) will require the review and approval of that municipality, as well. Worcester Township and our office must be copied on all TIA and HOP/Signal submissions, as well as correspondence between the applicant, PennDOT, Montgomery County, and East Norriton Township, and invited to any and all meetings among these parties.

**Transportation Impact Assessment**

4. Since the site is situated along North Trooper Road (S.R. 3002), which is a State road, and West Germantown Pike, which is a County road, the TIA is being concurrently reviewed by PennDOT and Montgomery County while the Township and our office is reviewing the same. In addition, since the site is located immediately adjacent to East Norriton Township, the TIA has been provided to East Norriton Township for their knowledge of the site access and associated roadway/signal improvements concluded from the study. All comments from PennDOT, Montgomery County, and East Norriton Township should also be coordinated with our office and the Township and evaluated and addressed accordingly.

5. The updated January 8, 2026 TIA presents the following recommendations/conclusions, that will be required of the applicant at a minimum. There may be additional or modified roadway improvements, driveway design considerations, frontage widening alterations, and pedestrian facility design based on the comments in this letter, how they are addressed and accommodated in future plan submission, and/or from detailed reviews being completed from PennDOT and Montgomery County, as the applicant must obtain their concurrence and approvals since North Trooper Road (S.R. 3002) is a State highway and West Germantown Pike is a County highway:

   ***West Germantown Pike and North Trooper Road (S.R. 3002)***

   - Widen West Germantown Pike by a minimum of approximately 12 feet along the site frontage in order to restripe the western leg of this intersection to provide a separate left-turn lane and a shared through/right-turn lane on the eastbound West Germantown Pike approach. *It should be noted that this widening is also intended to provide for a minimum 14-foot curb lane in the westbound direction of West Germantown Pike in the future.* **Please note the applicant's traffic engineer indicates in its response letter that West Germantown Pike is being widened a total of 14 feet while the TIA states that 12 feet of widening will be provided along the West Germantown Pike site frontage. It is noted that the County HOP plans indicate 14' of widening. The applicant's traffic engineer should address this discrepancy and revise the TIA and/or response letter accordingly.**
   - Provide radius widening on the northwest corner of the West Germantown Pike/North Trooper Road (S.R. 3002) intersection and replace the existing signal pole at this corner to accommodate the improvements.
   - Traffic signal timing modifications to provide additional green time to the West Germantown Pike approaches.
   - Install a crosswalk across the northern leg (southbound North Trooper Road (S.R. 3002) approach) at the intersection.
   - Install ADA ramps and associated pedestrian signal equipment on the northeast and northwest corners of the intersection.

6. The 2030 future no-build and build queues at the intersection of West Germantown Pike and Park Avenue/Valley Forge Road (S.R. 0363) for the eastbound and westbound left-turn lanes **exceed the available storage lengths** during the weekday afternoon peak hour according to the queue analysis summary provided in Table 5. Since the roadways at this intersection are owned by PennDOT and Montgomery County, the applicant must address the mitigation guidelines required by PennDOT and Montgomery County to their satisfaction during their HOP review & approval process. **The Township will defer to PennDOT and Montgomery County regarding any requirement for providing additional improvements or the provision of an Alternative Transportation Plan (ATP)** to provide necessary storage and/or alternative infrastructure improvements in the study area that are feasible and will improve transportation (multi-modal) mobility.

7. We request that crash resumes be provided to our office for the crashes summarized in Table 1 of the study at the intersection of West Germantown Pike and North Trooper Road (S.R. 3002) to be further evaluated. The evaluation may help determine if there is a pattern to the angle crashes at

this intersection and if the provision of safety improvements may benefit this intersection and reduce the number of angle crashes that are occurring there. The applicant's review of same should indicate their recommendation, as well. Additionally, crash analysis for the most recent five years of available crash data (i.e., 2020-2024) must be included in the study for the intersection of West Germantown Pike and Park Avenue/Valley Forge Road (S.R. 0363).

8. The applicant's traffic engineer has completed a comprehensive pedestrian study for the existing signalized intersection of West Germantown Pike and North Trooper Road (S.R. 3002) which was included in the PennDOT HOP submission based on information provided by the applicant's traffic engineer in its response letter. This pedestrian study should also be forwarded to the Township and our office for review. Additional comments on the pedestrian study could be provided by our office upon review.

9. The applicant and their engineer are proposing to provide a dedicated left-turn lane for eastbound West Germantown Pike as part of the traffic study and project improvements. We had previously noted in our last review that due to the curve in West Germantown Pike through the intersection and grades, the vehicles waiting to make the left-turn on the eastbound approach may impact the unobstructed view of oncoming through traffic for motorists turning left from westbound West Germantown Pike onto southbound North Trooper Road (S.R. 3002). We also noted that PennDOT may necessitate the implementation of protected-prohibited left-turn phasing for the westbound West Germantown Pike left-turn lane, and that implementation of protected-prohibited phasing would likely impact the traffic analysis results and could potentially require additional mitigation measures to satisfy PennDOT/County. **Since the roadways at this intersection are owned by PennDOT and Montgomery County, we defer to both of these agencies on the appropriate signal phasing to be provided at this intersection.**

   *The applicant's traffic engineer has acknowledged this comment in its response letter.*

10. To reiterate an earlier point, East Norriton Township owns and maintains the traffic signal at the intersection of West Germantown Pike and North Trooper Road (S.R. 3002). All design plans and documents related to the traffic signal and ADA ramps and pedestrian crossings must be also submitted to East Norriton Township for review and approvals.

    *The applicant's traffic engineer has acknowledged this comment in its response letter.*

**Waiver Requests**

11. In addition to the waivers that were previously requested by the applicant and approved by the Board of Supervisors on June 18, 2025, the applicant is requesting an additional waiver from the following traffic-related Subdivision and Land Development Ordinance requirement. Waivers, at the pleasure of the Board of Supervisors, may require that a fee, in lieu of providing such improvements in areas that they could have been required, be provided by the applicant.

    - **Section 130-16.C(1)(a)[6][b]** - requiring a minimum cartway width of 40 feet along the North Trooper Road (S.R. 3002) site frontage. The plans currently show a cartway width of approximately 24 to 25 feet along the North Trooper Road (S.R. 3002) site frontage, thereby

not satisfying the ordinance requirement. The applicant is proposing to widen North Trooper Road (S.R. 3002) between 1 and 2 feet for most of the property's frontage to accommodate new storm drainage inlets and curbing to provide a 14 wide southbound travel lane. *Since the approximate 24 to 25-foot cartway width along the site frontage is consistent with the cartway width along most of North Trooper Road (S.R. 3002) in the vicinity of the site, Bowman is supportive to the granting of this waiver should the Board of Supervisors grant this request.*

**Final Land Development Plans**

12. Detailed ADA designs and CS-4401 forms **must** be submitted for review for all ADA ramps located within the Township, State and County legal right-of-way, along with any necessary TIF forms, for municipal concurrence. Crosswalks across the accesses should be designed to cross in front of the stop bar.

    *The applicant's engineer has acknowledged that this information will be provided in the HOP submissions. Note, this must also be done for the PennDOT and County submission for all new or modified ramps and pedestrian facilities in their right of way.*

13. A total of 27 guest parking spaces are proposed. With the provision of narrower roads and parking to be prohibited except in driveways (approximately 20' to 22' deep and 20' wide, allowing up to two driveway cars not in garage) and in the guest parking spaces, the adequacy of parking should be evaluated and provided by the applicant and their team. Depending on the demographic of residents to live in this community, holiday and special gatherings may require more overflow parking than available in this community, and the roadways and site layout are not designed to allow for on-street parking and two-way travel for other vehicles to circulate. **No parking is to be permitted along West Germantown Pike or North Trooper Road (S.R. 3002), which should be included as a condition of approval for the development. No parking signs should also be considered for placement along Germantown Pike.**

    *The applicant's engineer indicates in its response that the applicant has secured a shared parking agreement with Norristown Presbyterian Church for use of 18 parking spaces for residents and guests of the proposed development.* Documentation of this agreement (i.e., shared parking agreement) between the applicant and the owner of the Norristown Presbyterian Church property must be provided in subsequent submissions. Additionally, the applicant should provide details on the expected route and infrastructure accommodations that will be provided for potential residents/guests to safely cross Trooper Road (S.R. 3002) to/from the site and the Norristown Presbyterian Church parking lot.

14. Condition E of Township **Resolution 2025-13** states that no parking is allowed along the West Germantown Pike and North Trooper Road (S.R. 3002) site frontages and that "No Parking" signs shall be placed along the West Germantown Pike site frontage. Therefore, the plans should be revised to show "No Parking" signs along the West Germantown Pike site frontage.

15. The sidewalk along the West Germantown Pike site frontage should be extended entirely to the westernmost property line.

16. A stop bar should be shown on the plans at all "Stop" sign locations throughout the site.

17. A crosswalk should be shown on the plans at the following locations:
    - Across the western end of the northern access to the 8 guest parking spaces in the vicinity of units 11 to 16 at its intersection with the main site drive aisle leading to/from the emergency access along West Germantown Pike.
    - Across the western end of the main drive aisle leading to/from North Trooper Road (S.R. 3002) at its intersection with the main site drive aisle leading to/from the emergency access along West Germantown Pike.
    - Across southern end of the drive aisle to the west of units 42 to 45 at its intersection with the main drive aisle leading to/from North Trooper Road (S.R. 3002).

**Montgomery County Highway Occupancy Permit Plans**

18. The profile for Access Driveway provided on Sheet 7 does not match the driveway profile provided on Sheet 28 of the Land Development Plans. In addition, an ADA compliant area must be provided for the proposed cross-walk. Please resolve and coordinate plan design to match.

19. Sheet 4 of the plan set identifies a proposed concrete curb with a reveal of 8", however the details provided on Sheet 16 appear to indicate a 6" reveal. The designer should provide the required reveal of the County.

20. The proposed inlet boxes for Inlets G4, G6, and G7 must be constructed as a Type 4 box. The 24" RCP cannot be installed on the side of a standard inlet box. In addition, the designer must review the constructability of G4 and T1; based on the information provided it does not appear that sufficient depth is provided for the structures. Revise design as appropriate.

21. All curb ramps and pedestrian routes (i.e. sidewalks, crosswalks, etc.) are to be constructed in accordance with the current Federal and PennDOT ADA standards. Bowman has not completed a detailed review of any ramps that are located partially or fully within the County (West Germantown Pike)_Legal Right-of-Way, as the review and approval for those infrastructure items will be part of the County review process.

22. Appropriate signage (i.e. Begin/End Center Left Turn Lane, Left Lane Must Turn Left) must be provided on the plans for the proposed left turn lanes and center left turn lane.

**PennDOT Highway Occupancy Permit Plans**

25. The profile for Road A Driveway provided on Sheet 13 does not match the driveway provided on Sheet 27 of the Land Development Plans. In addition, an ADA compliant area must be provided for the proposed cross-walk. Please resolve and coordinate plan design to match.

26. The constructability of Inlet T8 should be investigated; based on the information provided it does not appear that sufficient depth is provided for the structure. Revise design as appropriate.

27. We have concerns that Inlet T5 will be impacted by vehicles exiting the proposed drive on Trooper Road; the designer should investigate providing a manhole in this location or shifting the inlet out of the vehicle wheel path. Revise design.

28. All curb ramps and pedestrian routes (i.e. sidewalks, crosswalks, etc.) are to be constructed in accordance with the current Federal and PennDOT ADA standards. Bowman has not completed a detailed review of any ramps that are located partially or fully within the PennDOT (North Trooper Road) Legal Right-of-Way, as the review and approval for those infrastructure items will be part of the PennDOT review process.

**Traffic Signal Permit Plans (Modified)**

29. The HOP plans show continental style crosswalks across Trooper Road. The crosswalks should be shown on the modified signal permit plans to be the same style as the HOP plan sets.

30. It appears that a traffic signal easement is required on the north (site) corner. PDFs of the executed/recorded Traffic Signal Easements must be provided.

31. It appears the new 45-foot mast arm is proposed to be located on top of a drainage pipe. Review and revise accordingly.

32. Upgrade the Phase 2+5 lead phase operation to the FYA operation.

33. Relocate the pushbutton for crossing Trooper Road to be within 10-feet of the edge of curb.

34. Provide pushbuttons as APS.

35. Provide pushbuttons are also recommended for crossing the southwest leg of Trooper Road, and East Norriton Township and PennDOT should provide further guidance as to the requirement to be provided.

36. Ensure the new pushbuttons on the southeast corner (Germantown Pike as north-south) comply with the ADA reach requirements.

37. Provide labels for the mast arm lengths.

38. Signal Head #6 is missing from the Signal Indications.

39. The left-turn signal phasing and signal head types are subject to further review by PennDOT,
40. Montgomery County, and East Norriton Township that may require more detailed plan changes.

We trust that this review letter responds to your request. If you or the Township have any questions, or require clarification, please contact me, Brian Jones, PTP, TOPS, or Casey A. Moore, P.E., Principal.

Sincerely,

Michelle Eve, P.E
Assistant Project Manager, Transportation

BMJ/MEE/ RAL/CAM

cc: John Evarts, P.E., CKS Engineers (Township Engineer)
Wendy Feiss McKenna, Esq. (Township Solicitor)
Mirlene SaintVal, P.E., PennDOT
Nidhi Medra, P.E., PennDOT
Susan M. Guisinger-Colon, P.E., LEED AP (Montgomery County consultant)
Jeffrey Winterbottom, East Norriton Township Assistant Manager
Michael Maier, Westrum Development Company (Applicant)
Barry Stingel, PLA, T&M Associates (Applicant's Architect)
Chris Jensen, P.E., T&M Associates (Applicant's Engineer)
Dave Horner, P.E., PTOE, Horner & Canter Associates (Applicant's Traffic Engineer)

Q:\PA-FTWA-MC\MCM\eng\WORCETO1\314086-01-001 - 1035 Trooper Road\Submissions\2026-02-13 TIA_LD Plans_HOP Plans\Review\2026-03-12 Review Letter #5 - 1035 North Trooper Road (finalized).docx

pennsylvania
DEPARTMENT OF TRANSPORTATION

**Date:** 03/02/2026

**Subject:** Highway Occupancy Permit Application No. 384374, Cycle No.5 - Returned For Revisions

**To:** Commerce Pursuit Capital, LP
1300 Virginia Drive
Suite 215
Fort Washington, PA 19034

**From:** PennDOT Engineering District 6-0
7000 Geerdes Boulevard
King of Prussia, PA 19406

Dear Applicant,

PennDOT has reviewed your application for completeness, consistency and compliance with applicable Department Regulations. This review has identified issues that must be addressed in order for our review to continue.

The Department's review comments are attached.

Once the comments have been addressed, please resubmit the application and associated material for further review.

Upon resubmission, the applicant's engineer should put together a letter that describes how each comment has been addressed and where each can be found. This will help expedite the review. For guidance on HOP applications refer to 67 PA Code, Chapter 441, Chapter 459 and PennDOT Publication 282, "Highway Occupancy Permit Guidelines". Additional comments may follow upon review of the resubmitted application.

As an alternative to contacting the individual indicated below, the District is offering applicants an opportunity to attend HOP Collaboration Workshop Meetings (held weekly) for clarification on any of the following comments. To sign up, please open the HOP Collaboration Workshop link located in the Links section on the EPS Applications Portal and follow the instructions.

If you have any questions regarding this matter, you may contact Scott Bechard, AICP, at (717) 732-8576 or Scott.Bechard@dawood.net.

pennsylvania
DEPARTMENT OF TRANSPORTATION

**Response Comments**
**Date:** 03/02/2026
**Application Number:** 384374, Cycle No.5

**Form Letter Notes**

(1) * Upon resubmission, the applicant's engineer should put together a letter that describes how each comment has been addressed and where each can be found in the plan set. A copy of these comments and any previously submitted plans should also be provided. Further, if the applicants engineer has made any design changes independent of PennDOT reviewer comments, they must include a section in the response-to-comments letter that describes the additional design changes.

* Additional comments may follow upon review of the resubmitted application. If you have any questions pertaining to the technical aspects of this review, please contact the Department's representative, Scott Bechard, AICP at scott.bechard@woolpert.com or 717.732.8576.

* For guidance on Highway Occupancy Permit applications refer to PA Code Title 67, Chapter 441, Chapter 459 and PennDOT Publication 282. This will help expedite the review.

**General**

(1) Provide PennDOT Form TE-672 with the HOP submission to document the required pedestrian facilities at the Germantown Pike / Trooper Road intersection.
(2) The Department requires written evidence, prior to the issuance of a permit, that East Norriton Township and Worcester Township have had the opportunity to comment. Provide written evidence (e.g. municipal engineering review, council or planning commission meeting minutes, etc.) which is less than one year old, to satisfy this requirement. Also provide County Planning Commission Review Letters if available. PennDOT will consider any comments or recommendations from the municipal and county reviews prior to approving the access permit. In addition, please provide the email address(es) for the appropriate individual(s) at the municipality (i.e. Township Manager, Borough Manager, Mayor, etc.) and at the County Planning Commission on the Application information screen so that a copy of the Departments review letter can be forwarded. The response to comments has acknowledged this requirement.
(3) Please note this Phase 1 Clear Path review only includes a review of the TIA. Upon acceptance of the TIA, the HOP and accessory attachments will be evaluated as part of the Phase 2 review.

**Transportation Impact Study/Transportation Impact Assessment**

(1) Address the following comments related to the TIA document:

1.As previously commented, provide the DM-2 roadway context and typology as illustrated in Section 3.6 of the DM-2 Contextual report. This is used to identify design values during the HOP Phase. The TIS lists the Functional Classification of the roadways but does not list the Typology.

2.On the concept plan, do not begin the broken white line until two full width lanes are present.

3.As previously commented, provide a discussion in the TIA to describe the purpose for the 12 feet of widening along the Germantown Pike site frontage. This discussion could not be located in the TIA.

4.It is recommended the TIA document the available sight distance for the proposed emergency access onto Germantown Pike for Township review.

5.Include the response to comment letters (PennDOT, Township and County) in the correspondence section of the Appendix.

(2) PennDOT crash data is not discoverable through right-to-know requests. Therefore, the specific crash details must be removed from the TIA text and Appendix. A summary of the conclusions of the crash analysis must remain. The detailed crash report and resumes must be submitted in EPS under separate cover. This information will be critical in determining future signal phasing.

(3) The response to comments indicates Montgomery County has accepted the proposed improvements. Provide documentation of the County review in EPS.

(4) As previously commented, the scoping application indicates HCM 7th edition is to be used with the analysis. Update the analysis text and HCS reports as necessary. The Existing Levels of Service section still indicates HCM 6th edition was used.

**MONTGOMERY COUNTY**
**BOARD OF COMMISSIONERS**

Jamila H. Winder, Chair
Neil K. Makhija, Vice Chair
Thomas DiBello, Commissioner

www.montgomerycountypa.gov

**Montgomery County**
**Planning Commission**

Montgomery County • PO Box 311
Norristown, PA 19404-0311

610-278-3722
planning@montgomerycountypa.gov

Scott France, AICP
Executive Director

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4b - COUNTY PLANNING AGENCY REVIEW

February 10, 2026

Dan DeMeno, Manager
Worcester Township
1721 South Valley Forge Road
Worcester, PA 19490

DEP Project Number: 1-46962-231-3J
MCPC 537 Number: 26-2418
Trooper Ridge Development
Worcester Township
Date revision received by MCPC: 12/23/25

Dear Mr. DeMeno:

We have reviewed this application for a revision to the municipality's Sewage Facilities Plan in accordance with regulations issued under Act 537, "The Pennsylvania Sewage Facilities Act," as requested. We are forwarding this letter as a report of our review and recommendations.

**BACKGROUND**

The Trooper Ridge Development project proposes the construction of a 45-unit townhome development in Worcester Township. The site will include associated utilities, landscaping, access drives, parking, and stormwater management systems. The site will be served by water supplied by Pennsylvania American Water Company. Sewage from the proposed development will be treated at the Berwick Place Wastewater Treatment Plant. The estimated wastewater flow for the proposed development is 13,500 gallons per day.

**COMMENTS/ISSUES**

1. We recommend naturalizing the stormwater basins by arranging plantings, such as native grasses and shrubs, within the basins. Plantings within the basins would help filter pollutants out of stormwater runoff and could help the basins better blend into the landscape.

2. The plan proposes the installation of a series of stormwater inlets along the new streets to manage stormwater runoff. We encourage the applicant to consider the addition of bioswales and/or rain gardens to the plan, which would supplement and enhance the proposed stormwater basin by reducing the amount of stormwater entering it.

3. We note that the Department of Conservation and Natural Resources PNDI search for this development proposal revealed that potential sensitive species may be on the site. The applicant should refer to the PNDI responses provided by the PA Game Commission and the U.S. Fish and Wildlife Service for further guidance.

*The following comments refer to the module form*

**Zoning and Subdivision**
Questions 10, 11, and 13 on the DEP form pertain to zoning and subdivision ordinances, and compliance of the proposal to these ordinances. We defer to the municipality for ensuring consistency with the subdivision and land development ordinances and designating zoning approvals.

**RECOMMENDATION**

Once these issues have been addressed to the satisfaction of the municipality and DEP, we have no objection to this 537 Planning Module. Should there be any questions regarding the content of this letter, please contact me at Ryan.Lamberti@montgomerycountypa.gov.

Sincerely,

Ryan Lamberti
Senior Environmental Planner
Montgomery County Planning Commission
Ryan.Lamberti@montgomerycountypa.gov | www.montgomerycountypa.gov/planning
P: 610.278.3729 F: 610.278.3941
PO Box 311, Norristown, PA 19404-0311
425 Swede St., Suite 201, Norristown, PA 19401

c: Elizabeth Mahoney, DEP Southeast Regional Office
Nicole Gambone, Ebert Engineering, Inc.

DEP Code # 1-46962-231-3J

**COMMONWEALTH OF PENNSYLVANIA**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**
**BUREAU OF WATER STANDARDS AND FACILITY REGULATION**

**SEWAGE FACILITIES PLANNING MODULE**
**COMPONENT 4B - COUNTY PLANNING AGENCY REVIEW**
**(or Planning Agency with Areawide Jurisdiction)**

MCPC # 26-2418

**Note to Project Sponsor:** To expedite the review of your proposal, one copy of your completed planning package and one copy of this ***Planning Agency Review Component*** should be sent to the existing county planning agency or planning agency with areawide jurisdiction for their comments.

**SECTION A. PROJECT NAME** (See Section A of instructions)

Project Name
Trooper Ridge Development

**SECTION B. REVIEW SCHEDULE** (See Section B of instructions)

1. Date plan received by county planning agency. 12/23/25
2. Date plan received by planning agency with areawide jurisdiction _____
   Agency name _____
3. Date review completed by agency 2/10/26

**SECTION C. AGENCY REVIEW** (See Section C of instructions)

| Yes | No | | |
|---|---|---|---|
| ☒ | ☐ | 1. | Is there a county or areawide comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101 *et seq*.)? |
| ☒ | ☐ | 2. | Is this proposal consistent with the comprehensive plan for land use? |
| ☒ | ☐ | 3. | Does this proposal meet the goals and objectives of the plan? |
| | | | If no, describe goals and objectives that are not met _____ |
| ☒ | ☐ | 4. | Is this proposal consistent with the use, development, and protection of water resources? |
| | | | If no, describe inconsistency _____ |
| ☒ | ☐ | 5. | Is this proposal consistent with the county or areawide comprehensive land use planning relative to Prime Agricultural Land Preservation? |
| | | | If no, describe inconsistencies: _____ |
| ☐ | ☒ | 6. | Does this project propose encroachments, obstructions, or dams that will affect wetlands? |
| | | | If yes, describe impact _____ |
| ☐ | ☐ | 7. | Will any known historical or archeological resources be impacted by this project? |
| | | | If yes, describe impacts **PHMC LETTER NOT PROVIDED** |
| ☒ | ☐ | 8. | Will any known endangered or threatened species of plant or animal be impacted by the development project? |
| ☐ | ☒ | 9. | Is there a county or areawide zoning ordinance? |
| ☐ | ☐ | 10. | Does this proposal meet the zoning requirements of the ordinance? **SEE ADDENDUM** |
| | | | If no, describe inconsistencies _____ |

| Yes | No | **SECTION C. AGENCY REVIEW** (continued) |
|---|---|---|
| ☐ | ☐ | 11. Have all applicable zoning approvals been obtained? **SEE ADDENDUM** |
| ☐ | ☒ | 12. Is there a county or areawide subdivision and land development ordinance? |
| ☐ | ☐ | 13. Does this proposal meet the requirements of the ordinance? **SEE ADDENDUM** |
| | | If no, describe which requirements are not met _____ |
| ☒ | ☐ | 14. Is this proposal consistent with the municipal Act 537 Official Sewage Facilities Plan? |
| | | If no, describe inconsistency _____ |
| ☐ | ☒ | 15. Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality? |
| | | If yes, describe _____ |
| ☐ | ☒ | 16. Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision? |
| ☐ | ☐ | If yes, is the proposed waiver consistent with applicable ordinances? |
| | | If no, describe the inconsistencies _____ |
| ☒ | ☐ | 17. Does the county have a stormwater management plan as required by the Stormwater Management Act? |
| ☒ | ☐ | If yes, will this project plan require the implementation of storm water management measures? |
| | | 18. Name, Title and signature of person completing this section: |
| | | Name: Ryan Lamberti |
| | | Title: Senior Environmental Planner Signature: Ryan Lamberti |
| | | Date: 2/10/26 |
| | | Name of County or Areawide Planning Agency: Montgomery County Planning Commission |
| | | Address: Court House - PO Box 311, Norristown, PA |
| | | Telephone Number: 610-278-3729 |

**SECTION D. ADDITIONAL COMMENTS** (See Section D of instructions)

This Component does not limit county planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The county planning agency must complete this Component within 60 days.

This Component and any additional comments are to be returned to the applicant.

YOUR GOALS. OUR MISSION.

January 15, 2026

Montgomery County Courthouse
Roads and Bridges Department
P.O. Box 311
Norristown, PA 19404-0311

**Re: Highway Improvements for Germantown Pike (G170) at Trooper Road**
**2nd Submission**
**Trooper Ridge Subdivision**
**1035 N Trooper Road, Norristown, PA**

Dear Roads and Bridges Department,

We are in receipt of the TPD, Inc. review letter dated, November 21, 2025, regarding the above referenced project. We have reviewed the comments contained in the referenced letter and have revised the plans and reports to address all comments.

We offer the following detailed responses in support of the application. For your convenience and to expedite the review and approval process, the original comments are included, and T&M Associates (T&M) and Horner & Canter Associates (HCA) responses are provided in **bold italic font**.

## General

1. Montgomery County must be copied on all submissions to PennDOT and the Township. If any previous review letters or response letters have not been provided to the County, include them in the next submission. The TIA appendix has two review letters from Bowman (Worcester Township), but no responses to the comments.

   T&M Response: ***Comment acknowledged. All submissions to PennDOT and the Township review letters and/or response letters have been provided to the County with this submission.***

2. This project requires the formal conveyance of Right-of-Way (R/W) to Montgomery County along Germantown Pike due to the roadway widening that extends beyond the Legal Right-of-Way Line. The plans must reflect a "REQUIRED RIGHT-OF-WAY LINE TO BE DEEDED TO MONTGOMERY COUNTY" located at a distance of 5' off the proposed edge of pavement/shoulder at a consistent width parallel to the roadway centerline. A Deed of Dedication with accompanying legal description and 8.5" x 11" exhibit depicting the area being offered for dedication must be provided prior to the issuance of a permit. This information will be forwarded to the County Solicitor for review and approval.

   T&M Response: ***A legal description and 8.5" x 11" exhibit depicting the area being offered for dedication has been provided with this submission.***

## Traffic Impact Assessment

3. In the Existing Conditions section of the TIA, the speed limit on Germantown Pike is stated as 45 mph. However, the speed limit on Germantown Pike is posted as 35 mph. 45 mph was utilized for Germantown Pike at the existing intersection with North Trooper Road (S.R. 3002) for the analysis. Please confirm that the analysis utilizes the correct speed limit for Germantown Pike and is consistent with the plans and update any affected analyses and the

TIA accordingly.

HCA Response: *The speed limit on Germantown Pike is posted as 35 mph. 45 mph was utilized for Germantown Pike at the existing intersection with North Trooper Road (S.R. 3002) for the analysis as safety factor.*

4. Table 2 (Sight Distance Summary) appears to only include measured sight distances for the proposed driveway on North Trooper Road (S.R. 3002). While the driveway on Germantown Pike is proposed to be emergency-only access, sight distance measurements for this driveway should also be included in the TIA.

   HCA Response: *Wiil Comply.*

5. The construction of an eastbound left-turn lane on Germantown Pike at North Trooper Road (S.R. 3002) is recommended in the TIA. However, no analyses appear to have been conducted to determine the warranted lane length. As such, please conduct turn lane warrant analyses per PennDOT Publication 46, Chapter 11, SOL 470-08-7. Furthermore, please use Rolling Terrain in the analysis, due to the roadway approach grades on Germantown Pike at North Trooper Road (S.R. 3002).

   HCA Response: *Wiil Comply*

<u>HOP Plans</u>

6. List the County HOP number (25063) on the HOP Plans cover sheet.

   T&M Response: *The County HOP number (25063) has added to the HOP Plans cover sheet.*

7. The ADA improvements shown on the HOP plans do not match the improvements shown on the ADA plans. The HOP plan shows no proposed curb ramps on the northeast corner. Revise the plans to be consistent.

   T&M Response: *ADA improvements shown on the HOP plans have been revised to match the improvements shown on the ADA plans.*

8. The proposed northwest corner signal mast arm shown on the HOP plans is not in the same location as the Signal Plan. Revise the plans to be consistent.

   T&M Response: *The proposed northwest corner signal mast arm shown on the HOP plans has been revised to match the location as the Signal Plan.*

9. Utilize an 8” reveal for all proposed full height, vertical curb.

   T&M Response: *8” reveal curb was utilized for Germantown Pike*

10. The design speed is listed as 50 mph, but the required sight distances were determined using the posted speed limit of 35 mph. Either use the design speed or the 85th percentile speed (by performing a speed study) to determine the required sight distances. Also, the “sight distance note” on the site plan lists distances that do not match the other labels on the plan.

    T&M Response: *The speed limit on Germantown Pike is posted as 35 mph. 45 mph was utilized for Germantown Pike at the existing intersection with North Trooper Road (S.R. 3002) for the analysis. The required sight distances have been revised using 45 mph to determine the required sight distances.*

11. Label the gate in the emergency access driveway.

    T&M Response: *The emergency access driveway has been labelled on the Plans.*

12. The Land Development plans show water and sewer connections in Germantown Pike. All existing and proposed utilities must be shown on the HOP plans. Additionally, separate Highway Occupancy Permit applications must be submitted to the County for the installation/relocation of any utilities within the County's right-of-way.

    T&M Response: *The proposed water and sewer connections in Germantown Pike have been added to the HOP Plans. It is acknowledged that an additional separate Highway Occupancy Permit applications must be submitted to the County for the installation/relocation of utilities within the County's right-of-way.*

13. Stripe a 75' left turn lane on westbound Germantown Pike at Heritage Drive, with a two-way center left turn lane between it and the left turn lane on eastbound Germantown Pike at Trooper Road.

    T&M Response: *A 75' left turn lane on westbound Germantown Pike at Heritage Drive, with a two-way center left turn lane between it and the left turn lane on eastbound Germantown Pike at Trooper Road has been added.*

14. Dimension the turn lane lengths on the Signage and Striping Plan.

    T&M Response: *The turn lane lengths have been dimensioned on the Signage and Striping Plan*

15. The existing Stop sign at Station 1+04 RT is identified as a Do Not Enter sign in the Sign Tabulation.

    T&M Response: *The existing Stop sign at Station 1+04 RT has been revised to be a Stop sign in the Sign Tabulation.*

16. At Station 2+84, move sign C to the end of the widening area, instead of behind the curb.

    T&M Response: *Sign C at Station 2+84 has been moved to Station 2+80 the end of the widening area.*

17. Eliminate sign E from the Signage and Striping Plan. The No U-turn sign will be replaced as part of the mast arm replacement and will be covered by the Signal Plan.

    T&M Response: *Sign E has been removed from the Signage and Striping Plan.*

18. The pavement wearing/binder/base course sections within the County right-of-way shall contain 3 to <10 million design ESALs.

    T&M Response: *The pavement wearing/binder/base course sections within the County right-of-way has been revised to contain 3 to <10 million design ESALs. (Sheet 16 of 21)*

19. Add a note to the Traffic Control Notes that "The Permittee must contact the County at least 72 hours in advance of the work to ensure a County representative is present at the time of work."

    T&M Response: *A note was added to the Traffic Control Notes that "The Permittee must contact the County at least 72 hours in advance of the work to ensure a County representative is present at the time of work." (Sheet 17 of 21)*

<u>Curb Ramps</u>

20. At the Emergency Access Driveway, provide curb ramps and a crosswalk that are more in-line with the proposed sidewalk (further into the driveway than currently designed). This will

eliminate the series of 90 degree turns that would be necessary to navigate the current design.

T&M Response: *The Ramps at the Emergency Access Driveway have been revised.*

21. Eliminate the + and – signs from the slope labels on the ADA Ramp Details. The arrow should be used to determine the direction of the slope (arrow points downhill).

T&M Response: *The + and – signs from the slope labels on the ADA Ramp Details have been eliminated.*

22. Show pedestrian pushbuttons on the ADA Ramp Details and label the lateral reach from the pedestrian path.

T&M Response: *The pedestrian pushbuttons have been added to the ADA Ramp Details and shows the lateral reach from the pedestrian path.*

23. Several slopes on the CS-4401 forms do not match the slopes labeled on the ADA Ramp Details.

T&M Response: *The slopes on the CS-4401 forms have been revised to match the slopes labeled on the ADA Ramp Details.*

24. To allow for construction tolerance, design slopes to be less than the maximum allowable values (i.e. use 7.5% for ramp slope instead of 8.3%).

T&M Response: *The maximum allowable values used 7.5% for ramp slope.*

25. The maximum allowable triangular landing area slope is 2.0%.

T&M Response: *The maximum allowable triangular landing area slope used is 2.0%.*

26. On the ADA Ramp Details, show the DWS at ramps 2 and 3.

T&M Response: *The DWS at ramps 2 and 3 have been added.*

27. On the ADA Ramp Details, display the curb ramps with full-tone lines so that they do not appear to be existing.

T&M Response: *The lines ramps 2 and 3 have been darken, so that they do not appear to be existing.*

28. On the ADA Ramp Details, dimension the distance between the crosswalk and the stop bar on southbound Trooper Road.

T&M Response: *The distance between the crosswalk and the stop bar on southbound Trooper Road has been added.*

## Signal Plan

HCA Response: *Comments 29 thru 39 are acknowledged, Application No. 384374 is currently under review at PennDOT Engineering District 6-0, Phase 1, TIA/TIS Approval Phase, the initial phase where an applicant proposes a project to PennDOT to define the study's scope and submits an application for approval, ensuring the proposed project meets safety/efficiency standards before proceeding to full analysis and design. Upon PennDOT's signoff on this Phase 1 of the application, the Comments 29 & 39 will be evaluated and addressed.*

29. Provide a signal construction plan.

30. Provide a Synchro signal retiming analysis.

31. Add the signatures/dates for revision 3.

32. Label all mast arm lengths.

33. Show the projected volumes in the Count Block.

34. Provide an R10-12A sign next to the flashing yellow arrow signal head.

35. Rotate the proposed mast arm to be perpendicular to the westbound Germantown Pike approach.

36. Provide video detection for the westbound Germantown Pike left turn lane. Update the timing settings for Phase 2+5 accordingly.

37. On the site corner, mount sign F on the mast arm shaft.

38. Label the specific font of sign K (Clearview 1W, 2W, or 3W). A new sign will need to be fabricated for the new mast arm.

39. Clarify where Sign L is located.

## Drainage

40. The designer must clarify the proposed pipes shown on the Grading and Drainage Plan. It appears that parallel pipes are being proposed on westbound Germantown Pike. This is inconsistent with the Land Development Plans.

    T&M Response: *The HOP plans and Land Development plans have been made consistent; the Land Development plans were updated since the last HOP submission. The prior submitted HOP design was more advanced than Land Development at the time.*

41. The designer should evaluate the removal of the existing drainage structures and pipe along Germantown Pike. This will eliminate the need for multiple manholes in the future wheel path.

    T&M Response: *The design must maintain the existing storm sewer in Germantown Pike which conveys flows from upstream offsite areas independent of / not associated with the proposed project. The proposed storm sewer along the new curbline conveys only project-related flows in an independent line. The overall project demonstrates peak rate reductions at the ultimate connection point at the intersection.*

42. Inlet G1 must be replaced with a manhole or an inlet box with a manhole cover.

    T&M Response: *Inlet G1 is to be replaced with an inlet box with a manhole cover.*

43. The designer should evaluate the constructability of Inlet T1. Additionally, the inlet box must be rotated so that it is against the proposed curb radius.

    T&M Response: *Structure T1 has been verified for constructability, the pipe entering from site is 18 inches, represented as 24 inches before. The structure has been set on the*

*curb radius.*

44. The designer should provide more detail in the area of the retaining wall where several storm systems converge. In addition, it appears that the discharge from the basin and flow from the pipe system upstream of Ex Inlet G1 have not been included in the pipe capacity calculations.

T&M Response: Additional plan view and detail of the stormwater collection area is included in Appendix D of the Stormwater Management Report. To clarify, routing calculations from the on-site stormwater management system per previously provided, and the peak outflow from Hydraflow global routing was input into StormCAD conveyance calculations as a known flow. In the presently submitted stormwater report, please refer to pdf pages 204-5 (Hydraflow routing peaks) and page 292 (StormCAD output).

45. Proposed pipe and structure information for all connections to the County Roadway storm system must be shown on the County HOP plans (i.e. basin headwalls/endwalls).

T&M Response: *The proposed pipe and structure information for all connections to the County Roadway storm system are shown on the County HOP plans.*

46. The proposed pipe upstream of Inlet T1 on North Trooper Rd (SR 3002) must be labeled on the plans.

T&M Response: *The proposed pipe upstream of Inlet T1 on North Trooper Rd (SR 3002) has been labeled on the plans.*

47. All proposed pipes should be RCP. The "Concrete Pipe" labels should be updated accordingly.

T&M Response: *All proposed pipes are labeled RCP.*

If you have any questions, clarification, or need additional information, please contact me.

Very truly yours,
T&M Associates

Barry G. Stingel, PLA
Group Manager

# MEMORANDUM

To: Worcester Township Planning Commission
From: Dan DeMeno, Township Manager
Date: March 20, 2026
Subject: Small Project Process Amendment

I'm bringing forward a proposed amendment to the Subdivision and Land Development Ordinance focused on minor plans.

The goal here is simple. We want to make small projects easier to process while keeping full review in place for anything with real impact.

Right now, our ordinance treats very small projects the same as large land developments. That creates unnecessary time, cost, and frustration for applicants, staff, and the Planning Commission.

This amendment fixes that.

As you may or may not be aware, the Township has historically handled smaller projects through what we've called "waivers of land development." While that approach was more common years ago, it has become less common and less defensible over time. Most municipalities have moved toward clearly codifying these processes instead of relying on case-by-case waivers.

Waivers can also create, fairly or not, the appearance of favoritism or that rules are being applied unevenly. This amendment replaces that approach with clear, objective standards that apply to everyone the same way. The Board is supportive of formalizing this and putting those rules in place.

There are three main components.

First, definitions.
I've cleaned up subdivision and land development definitions and explicitly added lot line adjustments and consolidations. Those are now clearly defined as subdivisions, which removes any ambiguity in how they're processed.

Second, minor plan submission.
Instead of maintaining a separate checklist, minor plans are required to meet preliminary plan requirements, but the Township can waive items that aren't necessary based on the scale and scope of the project.

Third, and most important, the minor plan framework.
I am creating clear, objective criteria for what qualifies as a minor plan. To be eligible, a plan must meet all of the following:

- It creates no more than three lots, or is a lot line adjustment or consolidation

- It does not include any new streets or extensions of utilities
- It adds no more than 10,000 square feet of impervious surface or building area
- It involves no more than 10,000 square feet of earth disturbance and does not require engineered stormwater management facilities beyond minor regulated activity
- It does not create adverse impacts to adjoining properties or infrastructure
- It complies with zoning, or zoning relief has already been obtained

If a plan meets all of those criteria, it can be handled administratively and may not need to come before the Planning Commission.

If it does not meet all of those criteria, it follows the standard process and comes to you for review. As always, all plans still require formal approval by the Board of Supervisors.

I am also standardizing submission timing. All plans and all revisions must now be submitted at least 30 days prior to the meeting where they are requested to be considered. That replaces the current 14-day revision window. We were already operating this way in practice, so this amendment simply brings the ordinance into alignment with how the Township is already functioning.
At a high level, this does two things:

- It speeds up small, low-impact projects
- It protects your time for projects that actually need Planning Commission review

From an administrative standpoint, this will make the process more predictable and easier to manage.

From a policy standpoint, nothing here lowers standards. It simply scales the level of review to the size and impact of the project.

I look forward to your feedback!

Respectfully,

Dan DeMeno
Township Manager

**Ordinance No. 2026-XX**

**WHEREAS, the Board of Supervisors of Worcester Township is authorized to enact and amend ordinances pursuant to the Pennsylvania Municipalities Planning Code, 53 P.S. §10101 et seq.; and**

**WHEREAS, the Board of Supervisors has determined that amendments to Chapter 130 are necessary to clarify terminology and establish a consistent and efficient process for the review of minor subdivision and land development applications; and**

**WHEREAS, the proposed ordinance has been submitted to the Montgomery County Planning Commission for review and recommendation; and**

**WHEREAS, the Worcester Township Planning Commission has reviewed the proposed ordinance at a public meeting and provided recommendations to the Board of Supervisors; and**

**WHEREAS, the Board of Supervisors has conducted a duly advertised public hearing pursuant to law.**

**NOW, THEREFORE, BE IT ORDAINED AND ENACTED by the Board of Supervisors of Worcester Township, Montgomery County, Pennsylvania, as follows:**

Section 1. Terminology Revised.

Chapter 130, §130-6 (Terminology), is hereby amended to revise and add the following terms:

SUBDIVISION
The division, redivision, consolidation, or lot line adjustment of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels, or other divisions of land, including changes in existing lot lines, for the purpose, whether immediate or future, of lease, partition by the court, distribution to heirs or devisees, transfer of ownership, or building or lot development; provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than 10 acres, not involving any new street, easement of access, or residential dwelling, shall be exempted.

LAND DEVELOPMENT
The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving:
A. A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot, regardless of the number of occupants or tenure; or

B. The division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of streets, common areas, leaseholds, condominiums, building groups, or other features.

The term shall not include those activities specifically excluded under the Pennsylvania Municipalities Planning Code.

LOT LINE ADJUSTMENT
The reconfiguration of lot lines between two or more contiguous lots, tracts, or parcels where no additional lots are created and no new building lot results. A lot line adjustment constitutes a subdivision and may be processed as a minor plan in accordance with this chapter.

CONSOLIDATION
The combination of two or more contiguous lots, tracts, or parcels into a single lot. A consolidation constitutes a subdivision and may be processed as a minor plan in accordance with this chapter.

Section 2. Amendment to §130-35.1 (Minor Plan Submission).

Chapter 130, §130-35.1 is hereby amended to read as follows:

§130-35.1 Minor Plan Submission

Minor plans, as defined in §130-6, shall comply with the requirements of this chapter.

Minor plans shall include the information required for a preliminary plan. The Township may waive requirements that are not necessary to evaluate the application based on the scale, scope, and impacts of the proposed development.

Section 3. Amendment to §130-35.2 (Plan Submission and Revisions).

Chapter 130, §130-35.2 is hereby amended to read as follows:

§130-35.2 Plan Submission and Revisions

All applications for subdivision or land development approval shall be submitted not less than 30 days prior to the Planning Commission meeting at which the application is requested to be considered. Applications shall include a digital submission in a format acceptable to the Township. Only complete applications shall be scheduled for Planning Commission review.

All plan revisions submitted for review shall be submitted not less than 30 days prior to the Planning Commission or Board of Supervisors meeting, as applicable, at which the plan is to be considered.

All plan revisions shall be accompanied by a report specifying the changes made to each plan element, including specific references to review comments made by the Township Engineer.

Section 4. Addition of §130-35.3 (Minor Plan Processing and Review).

Chapter 130 is hereby amended to add a new §130-35.3 to read as follows:

§130-35.3 Minor Plan Processing and Review

Minor plans may be processed in accordance with this section and may be eligible for administrative review and approval, including exemption from Planning Commission review, where the proposed subdivision or land development is limited in scope and impact.

A plan may be classified as a minor plan where it meets all of the following criteria:

A. The plan involves a lot line adjustment, consolidation, or subdivision creating no more than three lots.

B. The plan does not propose the construction of a new street or extension of public or private utilities.

C. The plan does not create more than 10,000 square feet of new impervious surface or building area.

D. The plan does not involve more than 10,000 square feet of earth disturbance and does not require the installation of engineered stormwater management facilities beyond those required for minor regulated activities under Chapter 129 (Stormwater Management).

E. The plan does not adversely impact adjoining properties, public infrastructure, or natural resources.

F. The plan complies with applicable zoning requirements or any required zoning relief has been obtained.

Minor plans meeting the above criteria may be reviewed and approved administratively and may be exempt from Planning Commission review.

All plans, including minor plans, shall require formal approval by the Board of Supervisors.

The Township reserves the right to require full subdivision or land development review where warranted by the nature, scale, or potential impacts of the proposed application.

Section 5. Repealer.

All ordinances or parts of ordinances inconsistent herewith are hereby repealed to the extent of such inconsistency.

Section 6. Severability.

If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions.

Section 7. Effective Date.

This ordinance shall take effect immediately upon enactment.

ENACTED AND ORDAINED this ___ day of _____, 2026, by the Board of Supervisors of Worcester Township, Montgomery County, Pennsylvania.

## § 130-35.1. Minor plan submission.

A. Applicability
Minor plan procedures apply only to Lot Line Adjustments, Simple Conveyances, Minor Subdivisions, and Minor Land Developments, as defined in §130-6.

B. Submission Requirements
Minor Plans shall comply with §130-33 (Preliminary Plan), including all applicable drafting and submission requirements, except as expressly modified by this section or §130-35.3.

C. Concurrent Approval.
The Board of Supervisors may grant concurrent preliminary and final plan approval where the plan complies with §130-34.

D. Planning Commission Review
The Board of Supervisors may require Planning Commission review of any Minor Plan. Minor Land Developments eligible under §130-35.3 may be considered for waiver of Planning Commission review in accordance with that section.

### §130-35.2 Plan Submission and Revisions

All applications for subdivision or land development approval shall be submitted not less than 30 days prior to the Planning Commission meeting at which the application is requested to be considered. Applications shall include a digital submission in a format acceptable to the Township. Only complete applications shall be scheduled for Planning Commission review.

All plan revisions submitted for review shall be submitted not less than 30 days prior to the Planning Commission or Board of Supervisors meeting, as applicable, at which the plan is to be considered.

All plan revisions shall be accompanied by a report specifying the changes made to each plan element, including specific references to review comments made by the Township Engineer.

### §130-35.3 Minor Plan Processing and Review

Minor plans may be processed in accordance with this section and may be eligible for administrative review and approval, including exemption from Planning Commission review, where the proposed subdivision or land development is limited in scope and impact.

A plan may be classified as a minor plan where it meets all of the following criteria:

A. The plan involves a lot line adjustment, consolidation, or subdivision creating no more than three lots.

B. The plan does not propose the construction of a new street or extension of public or private utilities.

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C. The plan does not create more than 10,000 square feet of new impervious surface or building area.

D. The plan does not involve more than 10,000 square feet of earth disturbance and does not require the installation of engineered stormwater management facilities beyond those required for minor regulated activities under Chapter 129 (Stormwater Management).

E. The plan does not adversely impact adjoining properties, public infrastructure, or natural resources.

F. The plan complies with applicable zoning requirements or any required zoning relief has been obtained.

Minor plans meeting the above criteria may be reviewed and approved administratively and may be exempt from Planning Commission review.

The Township reserves the right to require full subdivision or land development review where warranted by the nature, scale, or potential impacts of the proposed application.

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ARTICLE II
**Terminology**

## § 130-5. Word usage.

Words used in the singular include the plural, and words in the plural include the singular. The word "person" indicates a corporation, an incorporated association and a partnership as well as an individual. The word "building" indicates "structure" and shall be construed as if followed by the words "or part thereof." The word "street" indicates "road" and "land," and "watercourse" includes "drain," "ditch" and "stream." The word "may" is permissive; the words "shall" and "will" are mandatory subject to the provisions of § 130-6 of these regulations.

## § 130-6. Definitions.

Unless otherwise expressly stated, the following terms shall, for the purpose of these regulations, have the meanings indicated:

ALLEY — A strip of land over which there is a right-of-way, municipally or privately owned, on which no dwellings or stores front, serving as the secondary means of access to two or more properties.

APPLICANT — A landowner or developer, as hereinafter defined, who has filed an application for development, including his heirs, successors and assigns.

APPLICATION FOR DEVELOPMENT — Every application, whether preliminary, tentative or final, required to be filed and approved prior to the start of construction or development, including but not limited to an application for a building permit, for the approval of a subdivision plot or plan or for the approval of a development plan.**[Amended 8-21-1996 by Ord. No. 150]**

BIOTECHNICAL SLOPE PROTECTION — Stabilization of slopes by mechanical elements and structures in combination with plant material to arrest and prevent slope failures, movement of soil and erosion.**[Added 8-19-1998 by Ord. No. 166]**

BLOCK — An area usually bounded by streets or streets and natural or man-made features.

BUILDER — A person who is not necessarily the owner of the land or agent of the same, who by contract or other agreement is charged with the responsibility of construction of buildings or other structures or of making any construction improvements on any parcel of land.

BUILDING SETBACK LINE — A line within a lot, so designated on a subdivision plan, between which line and the ultimate right-of-way line of the street on which the lot abuts a building may not be erected.

CARTWAY — The portion of a street or alley intended for vehicular use.

COMPREHENSIVE PLAN — The official public document contemplated by the Pennsylvania Municipalities Planning Code and consisting of maps, charts and textual matter that constitutes a policy guide to decisions about the physical and social development of Worcester Township, adopted April 17, 1996, as amended from time to time.**[Amended 3-22-2006 by Ord. No. 208]**

CONDOMINIUM — Real estate, portions of which are designed for separate ownership and the remainder of which is designated for common ownership solely by the owners of those portions. Real estate is not a "condominium" unless the undivided interests in the common elements are

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vested in the unit owners. This form of ownership may be applied in residential, professional office, limited industrial and commercial land usage.**[Amended 8-21-1996 by Ord. No. 150]**

CONSERVATION AREA, PRIMARY — Lands within the one-hundred-year floodplain, wetlands, slopes in excess of 25%, and Riparian Buffer Zone 1.**[Added 3-22-2006 by Ord. No. 208]**

CONSERVATION AREA, SECONDARY — All landscape elements not included in the primary conservation area. These include:**[Added 3-22-2006 by Ord. No. 208]**

A. Hydric soils, swales, springs, lowland areas other than wetlands, and Riparian Buffer Zone 2.

B. Precautionary steep slopes where the grade is 15% to 25%, particularly those adjoining watercourses and ponds, where disturbance and resulting soil erosion and sedimentation could be detrimental to water quality.

C. Healthy woodlands, particularly those performing important ecological functions such as soil stabilization and protection of streams, wetlands and wildlife habitats.

D. Areas where precipitation is most likely to recharge local groundwater resources because of topographic and soil conditions affording high rates of infiltration and percolation.

E. Hedgerows, groups of trees, large individual trees of botanic significance, and other vegetative features.

F. Historic structures and sites.

G. Visually prominent topographic features such as knolls, hilltops and ridges, and scenic viewsheds as seen from public roads (particularly those with historic features).

H. Existing trails connecting the tract to other locations in the Township.

CONSOLIDATION
The combination of two or more contiguous lots, tracts, or parcels into a single lot. A consolidation constitutes a subdivision and may be processed as a minor plan in accordance with this chapter.

CROSSWALK — A right-of-way for pedestrian travel across a block connecting two of the bounding streets.

CUL-DE-SAC — A street with access at one end and terminated at the other by a paved vehicular turnaround.

CUT —

A. An excavation.

B. The difference between a point on the original ground and a designated point of lower elevation on the final grade.

C. Also, the material removed in excavation.

DEVELOPER — Any landowner, agent of such landowner or tenant with the permission of such landowner who makes or causes to be made a subdivision or land development.

DEVELOPMENT PLAN — The provisions for development of a residential development, including a plat of subdivision, all covenants relating to use, location and bulk of buildings and

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other structures, intensity of use or density of development, streets, ways and parking facilities, common open space and public facilities. The phrase "provisions of the development plan" when used in this chapter shall mean the written and graphic materials referred to in this definition.

DRIVEWAY — A private street providing for vehicular and pedestrian access between a public street and a parking area within a lot or property.

EASEMENT — A right-of-way or other right granted for the use of private land for certain public or quasi-public purposes.

ENDORSEMENT — Review stamp of the Montgomery County Planning Commission.

ENGINEER — A professional engineer licensed as such in the Commonwealth of Pennsylvania, duly appointed as the Engineer for a municipality, planning agency or joint planning commission.

EROSION — The removal of surface materials by the action of natural elements.

EXCAVATION — Any act by which earth, sand, gravel, rock or any other similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated or bulldozed, and shall include the conditions resulting therefrom.

FILL —

A. Any act by which earth, sand, gravel, rock or any other material is placed, pushed, dumped, pulled, transported or moved to a new location above the natural surface of the ground or on top of the stripped surface, and shall include the conditions resulting therefrom.

B. The difference in elevation between a point on the original ground and a designated point of higher elevation on the final grade.

C. The material used to make a fill.

FLOODPLAIN — As defined in Chapter 150, Zoning.**[Amended 8-21-1996 by Ord. No. 150]**

GRADE — A slope of a street or other public way specified in percent (%) and shown on plans as specified herein.

IMPROVEMENT — Grading, paving, curbing, streetlights and signs, fire hydrants, wells, water mains, sanitary sewers, storm drains, sidewalks, parking areas, crosswalks and street shade trees.

**LAND DEVELOPMENT**

A. The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving:

   1) A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot, regardless of the number of occupants or tenure; or

   2) The division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of streets, common areas, leaseholds, condominiums, building groups, or other features.

The term shall not include those activities specifically excluded under the Pennsylvania Municipalities Planning Code.

LANDOWNER — The legal or beneficial owner or owners of land, including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition),

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a lessee having a remaining term of not less than 40 years or other person having a proprietary interest in land.

LOT — A designated parcel, tract or area of land established by a plat or otherwise as permitted by law and to be used, developed or built upon as a unit.**[Amended 8-21-1996 by Ord. No. 150]**

LOT AREA — The definition of "lot area" shall be the same as the definition of "lot area" found in § 150-9 (Definitions) of Chapter 150, Zoning, as it may be amended from time to time.**[Amended 3-22-2006 by Ord. No. 208]**

LOT LINE ADJUSTMENT
The reconfiguration of lot lines between two or more contiguous lots, tracts, or parcels where no additional lots are created and no new building lot results. A lot line adjustment constitutes a subdivision and may be processed as a minor plan in accordance with this chapter.

MINOR LAND DEVELOPMENT
A land development that meets all of the following:

1. Proposes less than 10,000 square feet of additional impervious surface;
2. Proposes less than 10,000 square feet of additional building area;
3. Does not require the extension of public streets or public utilities;
4. Does not require conditional use or special exception approval;
5. Does not trigger traffic impact study requirements or off-site improvements;
6. Complies with Chapter 150 (Zoning), Chapter 137 (Stormwater), and all other applicable Township regulations.

MINOR PLAN
A subdivision or land development plan that qualifies as one of the following:

1. Lot Line Adjustment
2. Simple Conveyance
3. Minor Subdivision
4. Minor Land Development

MINOR SUBDIVISION
A subdivision that meets all of the following:

1. Creates no more than two lots from one existing, legally recorded lot;
2. Both lots comply with Chapter 150 (Zoning);
3. Both lots have frontage on an existing improved public street;

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4. No new street construction or extension of public utilities is required;

5. The parent tract has not been subdivided within the previous five (5) years.OFFICIAL MAP SUMMARY — The map of current adoption showing the location of the lines of existing and proposed public streets, including the ultimate width of the corridor for such streets, watercourses and public grounds for the whole of the municipality of Worcester Township, provided that proposed streets, watercourses or public grounds shall not, in and of themselves, constitute a taking or acceptance of any land by the municipality of Worcester Township.

OPEN SPACE PLAN — The Worcester Township Open Space Plan adopted April 16, 1995, as amended from time to time.**[Added 3-22-2006 by Ord. No. 208]**

PLAN —

A. PLAN, IMPROVEMENT CONSTRUCTION — A plan prepared by a registered engineer or surveyor showing the construction details of streets, drains, sewers, bridges, culverts and other improvements as required by these regulations, showing the horizontal details, profile and typical cross section to be constructed or installed.

B. PLAN, LAND DEVELOPMENT — A tentative, preliminary or final plan, including written and graphic material, showing the provision for development of a subject tract when plans of subdivision would not be applicable.

C. PLAN, PRELIMINARY — A plan in compliance with the requirements of § 130-33 of this chapter. A "preliminary plan" shall also meet all other applicable requirements of this chapter and shall propose development for only those uses permitted by Chapter 150, Zoning, and be in compliance therewith. **[Amended 10-10-1988 by Ord. No. 101]**

D. PLAN, RECORD — A plan prepared for recording by a registered engineer or surveyor, showing the ultimate width of streets, the lot lines, easements and any other relevant information pertaining to the subdivision.[1]

PLANNED RESIDENTIAL DEVELOPMENT — An area of land, controlled by a landowner, to be developed as a single entity for a number of dwelling units or combination of residential and nonresidential uses, the development plan for which does not correspond in lot size, bulk, type of dwelling or use, density or intensity, lot coverage and required open space to the regulations established in any one district created, from time to time, under the provisions of Chapter 150,

PLAT — The map or plan of a subdivision or land development, whether preliminary or final.

PUBLIC NOTICE — Notice published once each week for two successive weeks in a newspaper of general circulation in the Township. Such notice shall state the time and place of the hearing and the particular nature of the matter to be considered at the hearing. The first publication shall not be more than 30 days and the second publication shall not be less than seven days from the date of the hearing.**[Amended 8-21-1996 by Ord. No. 150]**

RESERVE STRIP — A parcel of land separating a street from adjacent properties.

RIGHT-OF-WAY LINE — Ultimate right-of-way line as defined below.

RUNOFF — The surface water discharge or rate of discharge of a given watershed after a fall of rain or snow that does not enter the soil but runs off the surface of the land.

RUNOFF FROM A FULLY DEVELOPED AREA UPSTREAM — The surface water runoff that can be reasonably anticipated upon maximum development of that area of the watershed

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located upstream from the subject tract, as permitted by prevailing zoning or the Township Comprehensive Plan.

SEDIMENTATION — The process by which mineral or organic matter is accumulated or deposited by moving wind, water or gravity. Once this matter is deposited (or remains suspended in water), it is usually referred to as "sediment."

SIGHT DISTANCE — The distance of unobstructed view along the center line of a street from the driver's sight height of five feet to the farthest visible point four inches above the street surface.

SIMPLE CONVEYANCE

A transfer of land from one existing, legally recorded lot to an abutting, existing, legally recorded lot that:

1. Does not create a new lot;
2. Results in both lots complying with Chapter 150 (Zoning);
3. Requires the conveyed land to be merged with the receiving lot by deed restriction and prohibits its separate conveyance or development.

SLOPE — The face of an embankment or cut section; any ground whose surface makes an angle with the plane of the horizon. "Slopes" are usually expressed in a percentage based upon vertical difference in feet per 100 feet of horizontal distance.

SOIL STABILIZATION — Chemical or structural treatment of a mass of soil to increase or maintain its stability or otherwise improve its engineering properties.

SOIL SURVEY — A report entitled "Soil Survey of Montgomery County Pennsylvania," published April 1967 by the Soil Conservation Service, United States Department of Agriculture, and which is available in the Township or through the Extension Service, Agricultural Agent, the Pennsylvania State University in Norristown.

STEEP SLOPE AREA — An area with slopes of 10% or greater.**[Added 8-19-1998 by Ord. No. 166]**

STREET — A strip of land, including the entire ultimate right-of-way, publicly or privately owned, serving primarily as means of vehicular and pedestrian travel, furnishing access to abutting properties which may also be used to provide space for sewers, public utilities, shade trees and sidewalks. (When designations conflict with those given in updated § 130-16C, the latter shall prevail.)

A. RESIDENTIAL — A street used primarily as the principal means of access to adjacent residential properties.
   (1) SECONDARY —A street connecting local residential streets to each other or community facilities and to the major streets, serving only neighborhood traffic.
   (2) Secondary feeder roads serve to connect residential streets to collector roads and community facilities with light traffic volumes.
   (3) Secondary collector roads serve to connect feeder roads and residential streets to other feeder roads, community facilities and major highways with medium traffic volumes.

B. MAJOR — A street connecting district centers or communities, serving large volumes

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of fast-moving through traffic, preferably located outside or bounding the residential neighborhood.

C. HALF-STREET — A street of less than required right-of-way and cartway width.

D. MARGINAL ACCESS STREET — A street parallel and adjacent to a major street providing access to abutting properties by a cartway separated from the major streets by a reserve strip.

STREET LINE — Ultimate right-of-way line as defined below.

STRUCTURE — Any man-made object having an ascertainable stationary location on or in land or water whether or not affixed to the land.

SUBDIVISION
The division, redivision, consolidation, or lot line adjustment of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels, or other divisions of land, including changes in existing lot lines, for the purpose, whether immediate or future, of lease, partition by the court, distribution to heirs or devisees, transfer of ownership, or building or lot development; provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than 10 acres, not involving any new street, easement of access, or residential dwelling, shall be exempted.

SWALE — A low-lying stretch of land which gathers or carries surface water runoff.

TOPSOIL — Surface soils and subsurface soils which presumably are fertile soils and soil material ordinarily rich in organic matter or humus debris. "Topsoil" is usually found in the uppermost soil layer called the "A horizon."

ULTIMATE RIGHT-OF-WAY — The expected future right-of-way width computed from the center line of an established right-of-way, as shown on the ultimate Right-of-Way Map of the Township adopted by the governing body as part of the Official Map Summary of Worcester Township.

ULTIMATE RIGHT-OF-WAY LINE — The line parallel to the center line of any public street which defines the boundary of the ultimate right-of-way as defined above.

WATERCOURSE — A permanent stream, intermittent stream, river, brook, creek or a channel or ditch for water, whether natural or man-made.

WETLANDS — Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas.**[Added 8-9-1998 by Ord. No. 166]**

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**MONTGOMERY COUNTY**
**BOARD OF COMMISSIONERS**

NEIL K. MAKHIJA, CHAIR
JAMILA H. WINDER, VICE CHAIR
THOMAS DIBELLO, COMMISSIONER

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**MONTGOMERY COUNTY**
**PLANNING COMMISSION**

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SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

October 23, 2025

Mr. Dan DeMeno, Township Manager
Worcester Township
1721 Valley Forge Road—Box 767
Worcester, PAennsylvania 19083

Re: MCPC #25-0205-001
Ordinance Amendments: Small Projects Process
Worcester Township

Dear Mr. DeMeno:

We have reviewed the above-referenced subdivision and land development ordinance text amendment in accordance with Section 609 of Act 247, "The Pennsylvania Municipalities Planning Code," as you requested on September 26, 2025. We forward this letter as a report of our review.

## BACKGROUND

The township is proposing to make amendments to the Subdivision and Land Development Ordinance (SALDO) to include definitions for Small Project Process and ither "minor land development" clarifications. The township's SALDO, Chapter 130 of the Township Code, currently provides a narrative description of minor plan processes (§ 130-35.1) but does not contain consistent, codified definitions. In addition, the Code defines "minor land development" under a 1,500-square foot/25% addition threshold, while the newly drafted Small Project Review process proposes a 10,000-square foot threshold. Without harmonization, these differences would create internal inconsistencies in the Code.

The proposed ordinance amendment creates a new §130-35.3 establishing a Small Project Review process for residential and nonresidential plans with less than 10,000 square feet of additional impervious surface and less than 10,000 square feet of additional building area. It provides exemptions from Planning Commission review where projects meet clear criteria and authorizes limited administrative review for qualifying projects in industrial zoning districts.

## RECOMMENDATION

The Montgomery County Planning Commission (MCPC) supports the applicant's proposal without comment as we have found it to be generally consistent with the Worcester's intent to clarify the process for small projects in the SALDO. MCPC generally aggrees with the statements in the Memorandum dated September 26th detailing

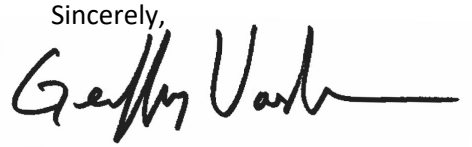
the reason behind the changes. These amendments will address administrative and potential issues in the current waiver of land development practice and will provide a clear legislative framework around the small projects process.

## CONCLUSION

Please note that the review comments and recommendations contained in this report are advisory to the municipality and final disposition for the approval of any proposal will be made by the municipality.

Should the governing body adopt this proposed subdivision and land development ordinance amendment, Section 609 of the Municipalities Planning Code requires that we be sent an official copy within 30 days.

Sincerely,



Geoffrey Vaughn, PLA, ASLA - Design Section Manager
geoffrey.vaughn@montgomerycountypa.gov - 610-278-3751

c: Christian Jones, Assistant Township Manager