

# 1500-1524 CEDAR HILL ROAD

## PRELIMINARY LAND DEVELOPMENT LOWER GWYNEDD TOWNSHIP – MONTGOMERY COUNTY – PENNSYLVANIA

No.	DATE	DESCRIPTION
1	07/06/22	REVISED TO REFLECT NEW RESOL. CONCEPT

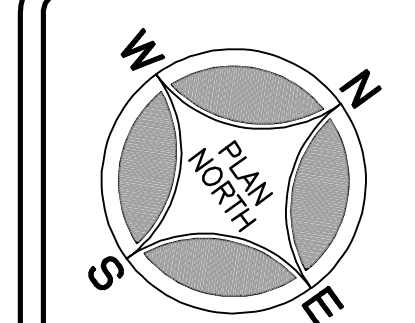
### REVISIONS



PROJECT LOCATION MAP

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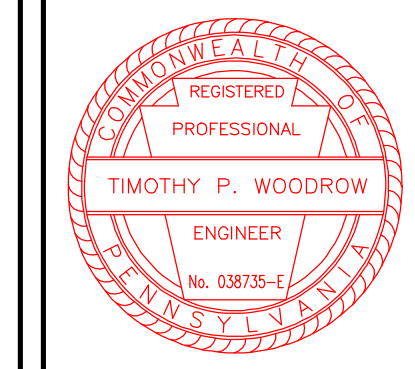
90' 0' 180'  
Scale in Feet (1" = 180')



PROJECT SERIAL NUMBER FOR DESIGN:  
2019 1291601 (Design)  
MAY 09, 2019

Parcel Information:  
39-00-00643-00-2 (B 18 U 70 – GAINES)  
1500 Cedar Hill Rd  
39-00-00646-00-8 (B 18 U 28 – STROHECKER)  
1512 Cedar Hill Rd  
39-00-00649-00-5 (B 18 U 29 – LYNCH)  
1524 Cedar Hill Rd  
Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

Applicant:  
CEDAR HILL DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer  
632 Germantown Pike  
Lafayette Hill, PA 19444



#### RECORDING NOTE:

COVER SHEET – RECORD PLAN (Sheet 1) & SUBDIVISION – RECORD PLAN (Sheet 2) to be recorded with the Montgomery County Recorder of Deeds.  
Plan Sheets 1 through 25 of 25 (Inclusive), on record with Lower Gwynedd Township, shall be considered a part of the approved Final Plan as if recorded with same.

#### PROJECT SCOPE:

This Application is for the construction of a total of Six (6) New Dwellings and One (1) Existing and the consolidation and re-subdivision of Block 18 Unit(s) 28, 28 & 70.

#### COMMONWEALTH OF PENNSYLVANIA COUNTY OF MONTGOMERY

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me the subscriber, a Notary Public in and for the said County and State, personally appeared \_\_\_\_\_ of the said \_\_\_\_\_, who being duly sworn according to law says that the said corporation is the owner of record of the property(s) shown on this plan, that the subdivision of land development plan hereat was made at the direction of the corporation, that he/she acknowledges the same to be the corporation's act and plan and desires the same to be recorded as such according to law and that all streets, open space contained in lot numbers and all other public improvements shown and not heretofore dedicated are hereby dedicated to the public use.

By: \_\_\_\_\_ Chairman  
Attest: \_\_\_\_\_ Secretary  
Sworn and subscribed to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
Notary Public  
My commission expires \_\_\_\_\_

**BOARD OF SUPERVISORS CERTIFICATE**  
At the meeting held on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the Board of Supervisors of Lower Gwynedd Township by Resolution duly enacted and approved the Subdivision/ Land Development Plan of the property of \_\_\_\_\_ as shown as shown herein.  
Chairman of the Board of Supervisors \_\_\_\_\_  
Township Secretary \_\_\_\_\_

**PLANNING COMMISSION CERTIFICATE**  
Reviewed by the Lower Gwynedd Township Planning Commission and recommended for approval on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
Planning Commission Chairman: \_\_\_\_\_

**TOWNSHIP ENGINEER CERTIFICATE**  
Reviewed by the Township Engineer on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
Township Engineer \_\_\_\_\_

**SURVEYOR'S CERTIFICATION**  
I hereby certify that the plan shown and described hereon, as well as all drawings bearing my seal, are true and correct to the accuracy required by the Lower Gwynedd Township Subdivision and Land Development Ordinance and were prepared by me under my direction and for which I accept full responsibility. The perimeter monuments shall be accurately placed as required by the Township.  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Lic. no.: \_\_\_\_\_

**ENGINEER'S CERTIFICATION**  
I, TIMOTHY P. WOODROW, P.E., do hereby certify that I am a Registered Professional Engineer, licensed in compliance with the laws of the Commonwealth of Pennsylvania; that this plan was prepared by myself or under my supervision and that said plan complies with all ordinances and regulations of the Township.  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Lic. no.: \_\_\_\_\_

**RECORDER OF DEEDS:**  
Recorded in the office of Recorder of Deeds for Montgomery County, at Norristown, Pennsylvania, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
By \_\_\_\_\_ Recorder of Deeds

**MCPC No.:**  
PROCESSED and REVIEWED: A report has been prepared by the Montgomery County Planning Commission in accordance with the Municipalities Planning Code.  
Certified this date: \_\_\_\_\_  
For the Director  
Montgomery County Planning Commission

PRELIMINARY PLAN (Not To Be Recorded)  
COVER SHEET – RECORD PLAN  
1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP – MONTGOMERY COUNTY – PENNSYLVANIA  
WOODROW & ASSOCIATES, INC.  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 Norristown Pike, Suite 400, Norristown, PA 19380  
Phone: (215) 242-4488 Web: www.woodrowinc.com

Layer List:  
Sht01\_Cover  
Job No: 18-0406 D  
Plan Date: APRIL 26, 2022  
Sheet No: 1 of 25

Print Date: Jul 27, 2022 (9:53) Plot Scale: 1" = 30.00'  
File Name: C:\Users\jwoodrow\OneDrive\Desktop\18-0406.dwg

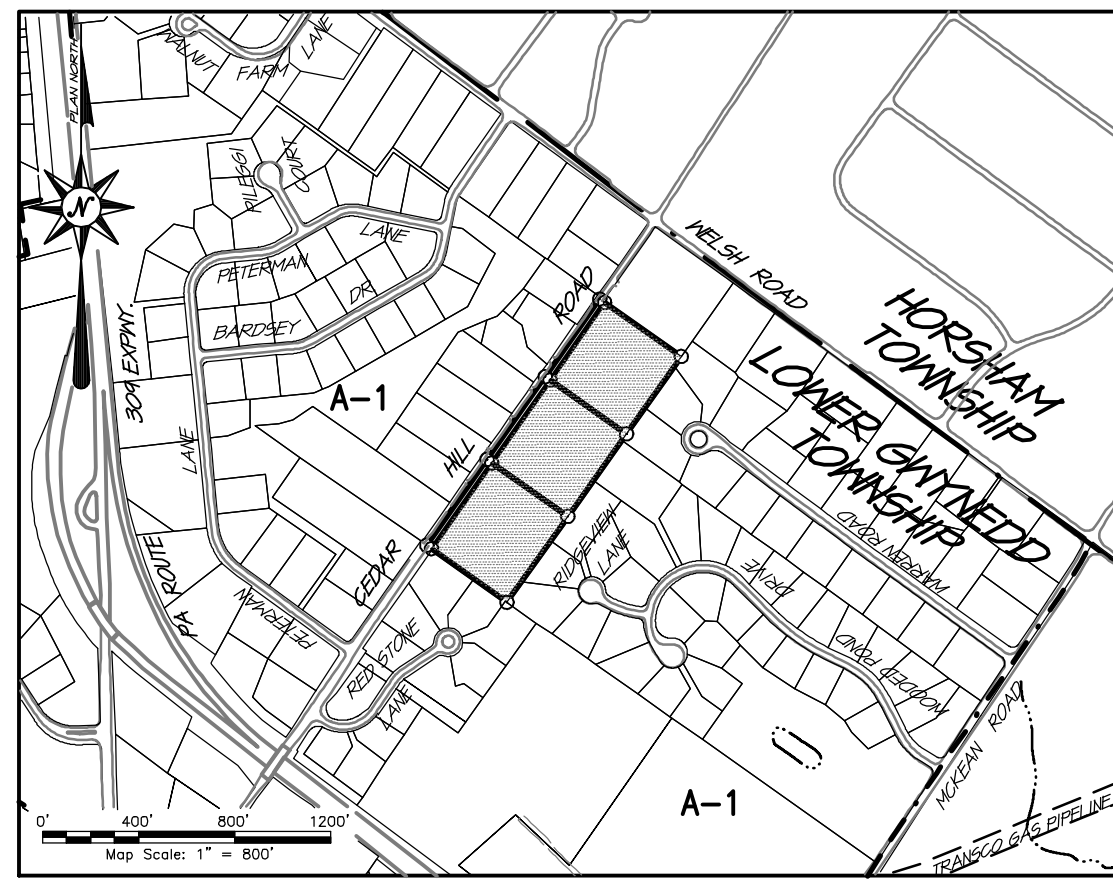
**GENERAL PLAN NOTES**

**BASE EXISTING FEATURES AND SURVEY NOTES:**

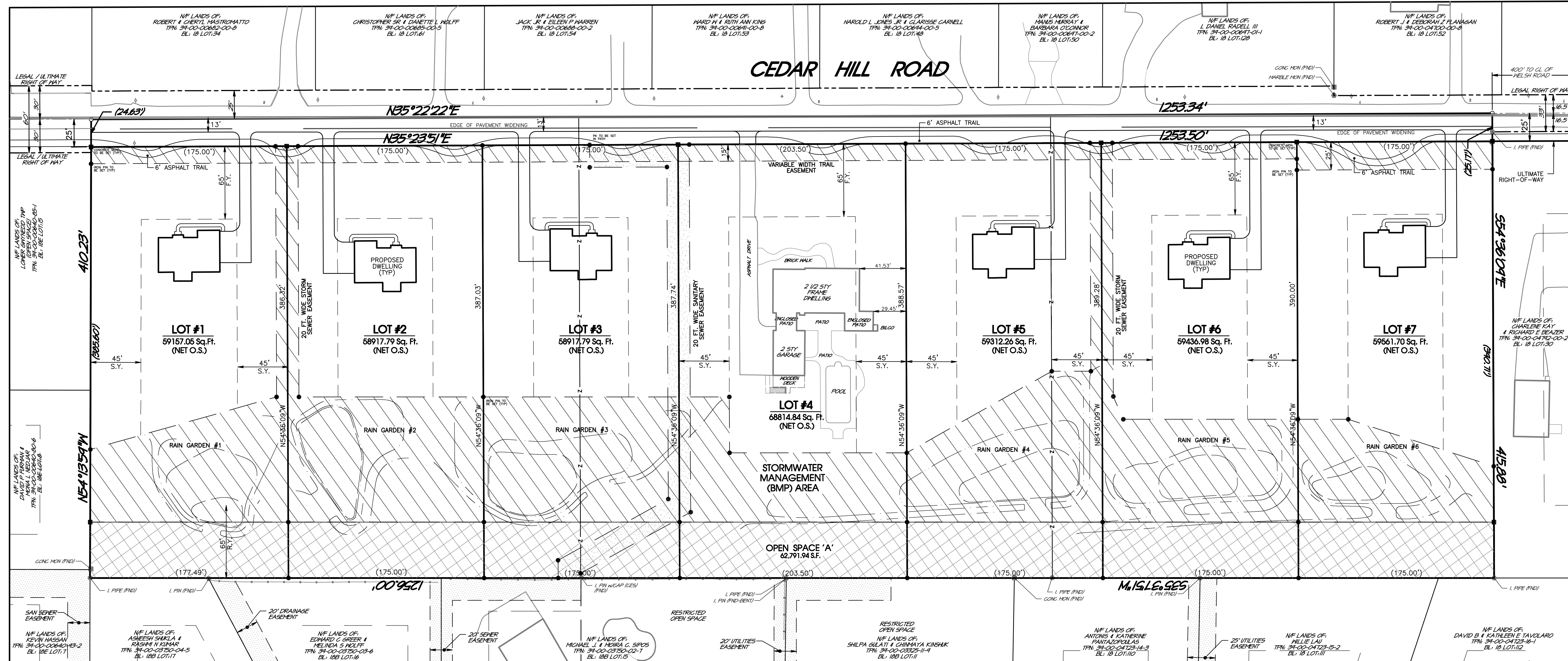
- The metes and bounds illustrated on this plan were prepared from documents of record and with benefit of Title Reports by Fidelity National Title Insurance Company, Commitment Numbers 245702LAFS, 245731LAFS & 245713LAFS with Effective Dates of October 22 & 23 of 2018. All Data shown verified from actual field survey in May, 2019. Site Benchmark is a sanitary manhole #7230 located within Cedar Hill Road having a rim elevation of 379.37. Site datum is referenced per note 3c below.
- All topographic and existing features illustrated on this plan were prepared by site field survey during the month of May, 2019. Site Benchmark is a sanitary manhole #7230 located within Cedar Hill Road having a rim elevation of 379.37. Site datum is referenced per note 3c below.
- This plan and survey were prepared utilizing the following references:
  - Tax maps and deeds of record as obtained from the Recorder of Deeds online resources.
  - Existing Soils classifications and mapping has been plotted from maps obtained from the USDA Web Soil Survey website (<http://websoilsurvey.sc.egov.usda.gov/>) unless otherwise noted.
  - Vertical datum references provided by the PA Special Data Access system (PASDA). PAMAP data is based on PA State Plane (South), NAD83 horizontal, NAVD83 vertical datum. Flight date was Spring 2008, updated by DMRPC flight 2010.
  - Aerial imagery used for base plan reference provided by NearMap, Inc. Imagery from flight dated March 19, 2018.
- There has been no field investigation performed to verify any existence of any wetlands, waters of the U.S. or Commonwealth or Alluvial Soils at the time of the site survey.
- This site is located within Flood Plain Zone "X" (areas determined to be outside the 0.2% annual chance floodplain) as illustrated on Community Panel Number 42091-C-02790, effective date March 2, 2016 as prepared by the Federal Emergency Management Agency. No computational floodplain study has been performed for this plan.
- All persons digging on this site shall comply with the requirements of Section 5 of PA Act 287 as amended by PA Act 181. State law requires a three (3) business day notice prior to any digging (does not include state holidays or weekends). Dial 81-1 or go to [www.paonecall.org](http://www.paonecall.org).
- Existing subsurface utility information illustrated on these plans is based upon visual field locations obtained as part of site survey. The information provided is representative of subsurface conditions only at locations and depths where such information was available. Utility information shown should not be relied upon for construction, it is incumbent upon the contractor to verify subsurface utilities prior to excavation.
- Subject property is Zoned "A-1" as noted on the official Zoning Map for this municipality.
- Cedar Hill Road is noted in Lower Gwynedd Subdivision Ordinance as having a 50-Ft Ultimate right-of-way width.

**BASE DEVELOPMENT NOTES:**

- The contractor shall ensure that all necessary permits and approvals have been obtained prior to commencement of any site construction activities.
- Erosion and sedimentation control measures shall be in place and functional prior to any earth disturbance or grading work.
- The area between the project Title Line and the Ultimate Right-of-Way is/are offered in perpetuity for dedication to the agency having jurisdiction over said right-of-way at time of dedication.
- This project shall be served by public sanitary sewer by Lower Gwynedd Township and water services by North Wales Water Authority.
- Nothing shall be permitted to be set on, placed or planted within, the area of any utility or storm water easement except lawns or suitable low ground cover.
- Construction materials and procedures shall follow Pennsylvania Department of Transportation Specifications and Standards Drawings (latest edition).
- Any/all storm water conveyance system(s) and rain garden facilities shown on these plans are a basic and perpetual part of the storm water management system for this Township, and as such, are to be protected, maintained and preserved in accordance with the approved final plans. The Township and/or its agents may reserve the right and privilege to enter upon such lands from time to time for the purpose of inspection of said storm water management system in order to determine that the structural design and integrity are being maintained.
- Common Open Space shall not be separately sold and shall not be further developed or subdivided.
- The Common Open Space illustrated on this plan shall be owned and maintained by an established Home Owners Association.



LOCATION MAP



**ZONING DATA SCHEDULE**

Item:	Section:	Requirement:	Provided:
Permitted Use	1258.02.(b)	Single-Family Detached Dwelling	
Min. Lot Area:	1258.03.(a)(3)	35,000 S.F.	[1] >20,700 S.F.
Max. Density:	1258.03.(b)	0.9 DU/Dev. Acre	1.1 DU/Dev. Acre (12 DU)
Min. Lot Width:	1258.03.(c)	175 Ft.	>126 Ft.
Min. Front Yard:	1258.04.(a)	65 Ft.	>45 Ft.
Min. Side Yard:	1258.04.(b)	45 Ft. Each	28.45 Ft. [3]
Min. Rear Yard:	1258.04.(c)	65 Ft.	>54 Ft.
Max. Building Coverage:	1258.05.(a)(3)	20 %	<25 %
Max. Impervious Coverage:	1258.05.(b)(1)	25 %	<35 %
Max. Building Height:	1258.06.(a)	45 Ft. & 2.5 Stories	<45 Ft. & 2.5 Stories
Min. Off-Street Parking:	1258.07.(a)	2 Spaces	>2 Spaces
Required Open Space:	1258.09.(c)	10% of Dev. Area+Nondev. Area (11.18*0.1+0.7185=1.8346 Ac.)	1,4415 Ac.

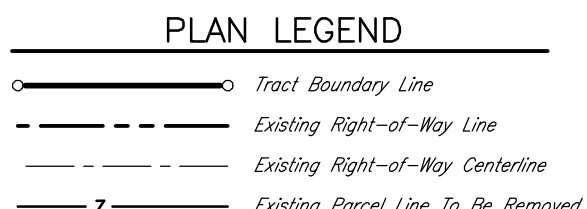
[1] Public water and sewer is available  
 [2] Lot width of the building line  
 [3] Zoning Relief Required

**WAIVERS REQUESTED**

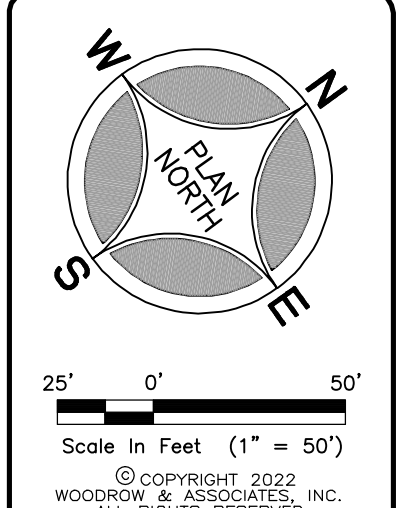
The applicant is seeking waivers from the following Lower Gwynedd Township Subdivision and Land Development Ordinance Sections:

- Section 1230.45.(a): Requires that sidewalk be provided along both sides of existing and new streets. Whereas, the applicant is proposing a paved trail across the frontage of the subject property and no sidewalk along the proposed private roads.
- Section 1230.60.(b): Requires that driveway aprons be constructed at all private driveways and within residential areas. Whereas, the applicant is not proposing any driveway aprons.
- Section 1230.61.(a): Requires that curbs shall be provided along both sides of all existing and proposed streets. Whereas, the applicant is not proposing any curbing.
- Section 1230.42.(i): To allow 105 replacement tree equivalents to be planted on site in lieu of the 310 replacement trees required.
- Section 1241.40.(n): Requires a minimum pipe diameter of 18", whereas 12" is proposed from the Rain Garden Outlet pipes and 15" within the right of way of Cedar Hill Road.

Print Date: Jul 27, 2022 (9:35) Plot Scale: 1" = 30.00'



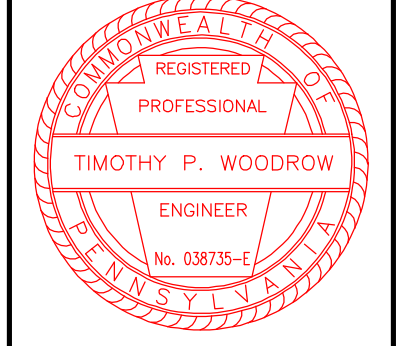
NO.	DATE	REVISION
1	07/26/22	REVISED TO REFLECT NEW DESIGN CONCEPT



PROJECT SERIAL NUMBER FOR DESIGN:  
 2019 1291601 (Design)  
 MAY 09, 2019

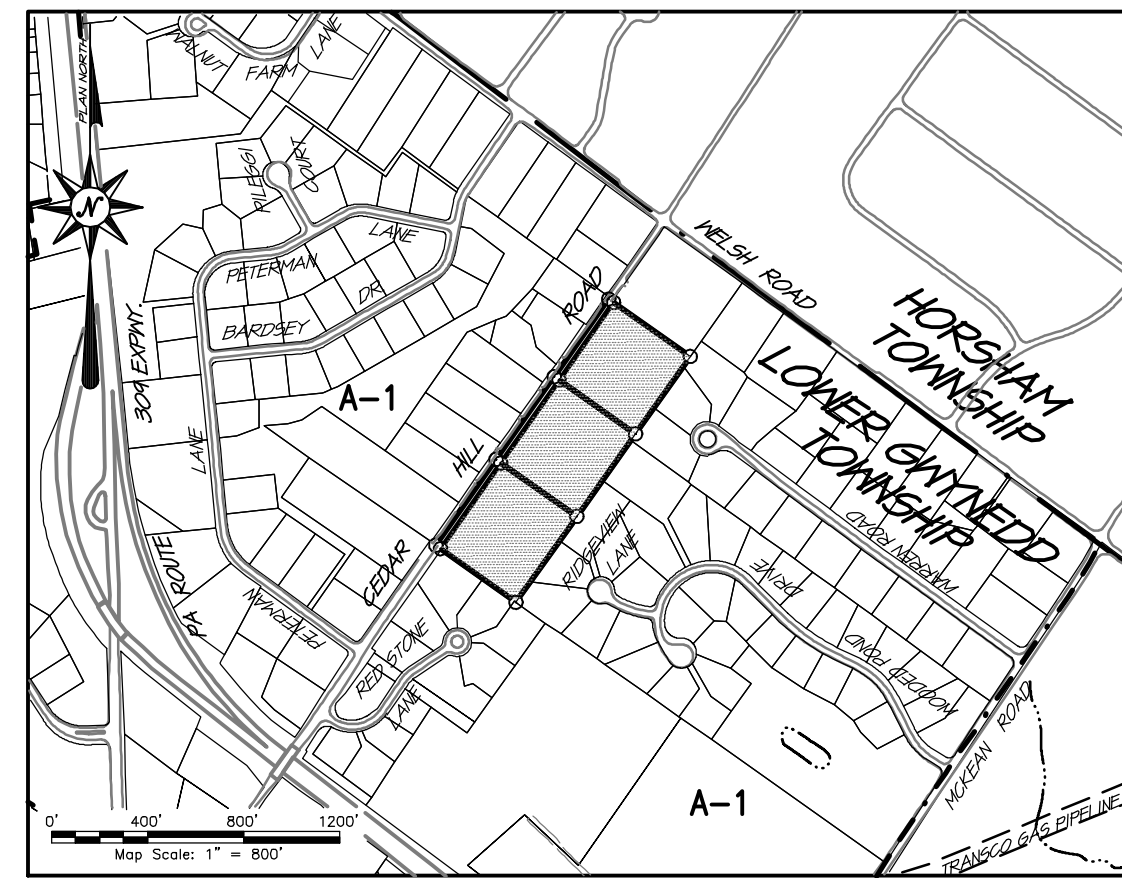
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 Lafayette Hill, PA 19444



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 LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
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Layer List:  
 Sht02\_Record  
 Job No:  
 18-0406 D  
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 APRIL 26, 2022  
 Sheet No:  
**2 of 25**



LOCATION MAP

**GENERAL PLAN NOTES**

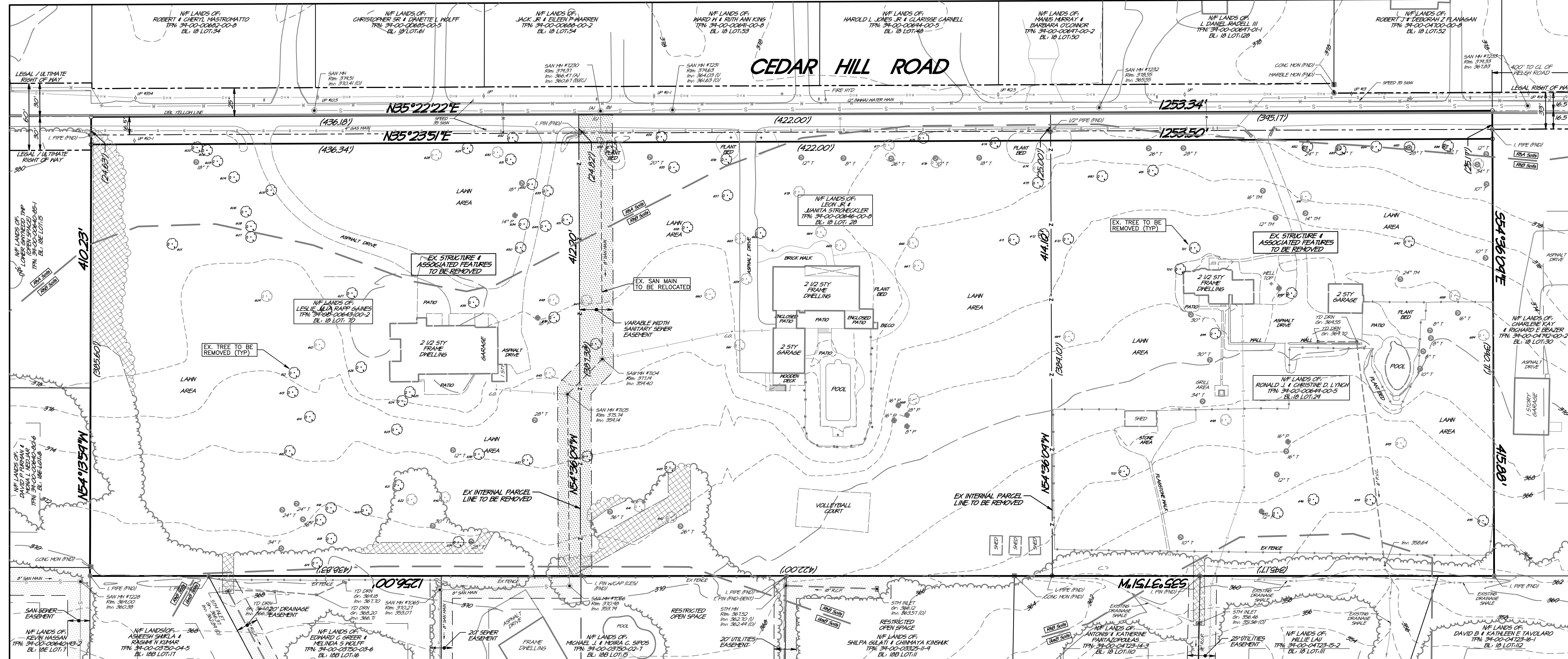
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- All topographic and existing features illustrated on this plan were prepared by site field survey during the month of May, 2019. Site benchmark #17230 located within Cedar Hill Road having a rim elevation of 379.37. Site datum is referenced per note 3c below.
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**PARCEL AREA SCHEDULE:**

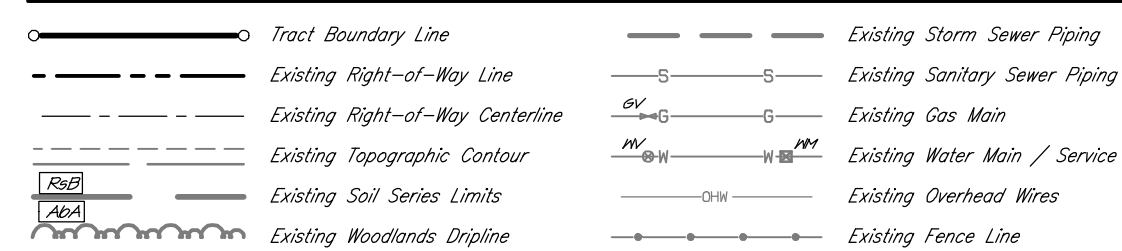
	Unit 70:	Unit 28:	Unit 29:	TOTAL:
Gross Parcel Area:	179,907.91 S.F.	+ 174,347.85 S.F.	+ 163,990.08 S.F.	= 518,245.84 S.F.
Legal Right of Way:	7,077.77 S.F.	+ 6,924.66 S.F.	+ 6,553.82 S.F.	= 20,556.25 S.F.
Ultimate Right of Way:	3,708.65 S.F.	+ 3,586.97 S.F.	+ 3,358.92 S.F.	= 10,654.54 S.F.
<b>NET Parcel Area:</b>	<b>169,121.49 S.F.</b>	<b>+ 163,836.22 S.F.</b>	<b>+ 154,077.34 S.F.</b>	<b>= 487,035.05 S.F.</b>
Existing Buildings:	4,390 S.F.	+ 5,455 S.F.	+ 2,718 S.F.	= 12,563 S.F.
Existing Paving:	7,340 S.F.	+ 3,788 S.F.	+ 5,176 S.F.	= 16,304 S.F.
Existing Hardscape:	1,718 S.F.	+ 4,372 S.F.	+ 4,910 S.F.	= 11,000 S.F.
<b>TOTAL Existing Impervious:</b>	<b>13,448 S.F.</b>	<b>+ 13,615 S.F.</b>	<b>+ 12,804 S.F.</b>	<b>= 39,867 S.F.</b>

TOTAL EXISTING IMPERVIOUS TO BE REMOVED: **39,867 S.F.**



REFER TO LANDSCAPE PLAN 'B' (SHEET 19) FOR TREE INVENTORY

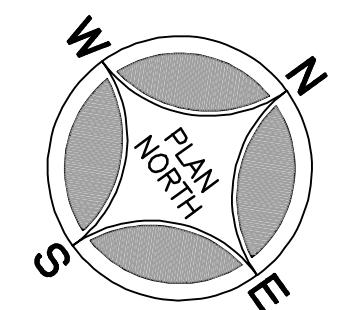
**PLAN LEGEND**



**PROJECT SOILS DATA**

Soils Type:	Slopes:	Depth to Restrictive Feature:	Depth to Water Table:	Hydrologic Soil Group:
RnA Reoville silt loam	0 to 3 percent	20-40' to Lithic Bedrock	6 to 36"	D
RnB Reoville silt loam	3 to 8 percent	20-40' to Lithic Bedrock	6 to 36"	D
Uu5B Urban land-Underlaths shale & sandstone	0 to 8 percent	20-99' to Lithic Bedrock	More than 80"	A

**REVISIONS**



Scale In Feet (1" = 50')  
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 WOODROW & ASSOCIATES, INC.  
 ALL RIGHTS RESERVED



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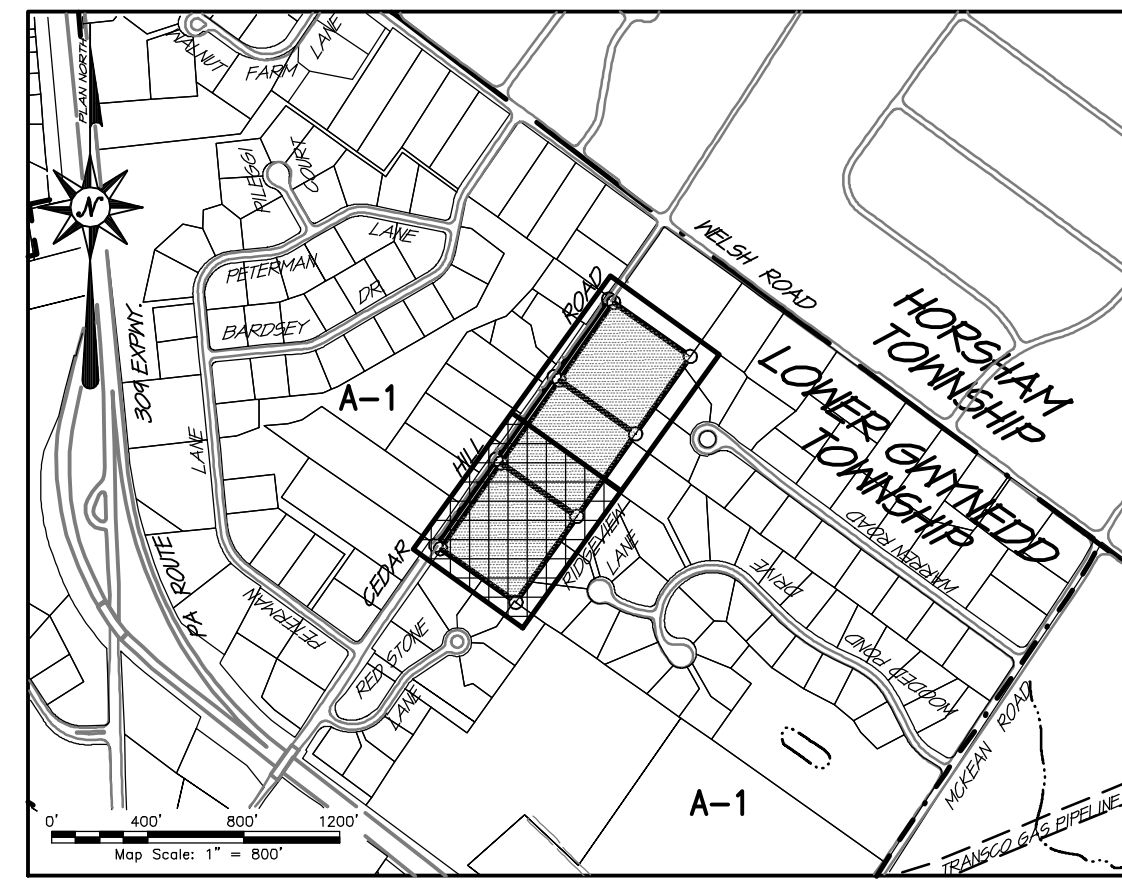
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PRELIMINARY PLAN (Not To Be Recorded)  
**EXISTING FEATURES PLAN**  
**1500-1524 CEDAR HILL ROAD**  
 LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
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Layer List:  
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 Sheet No:

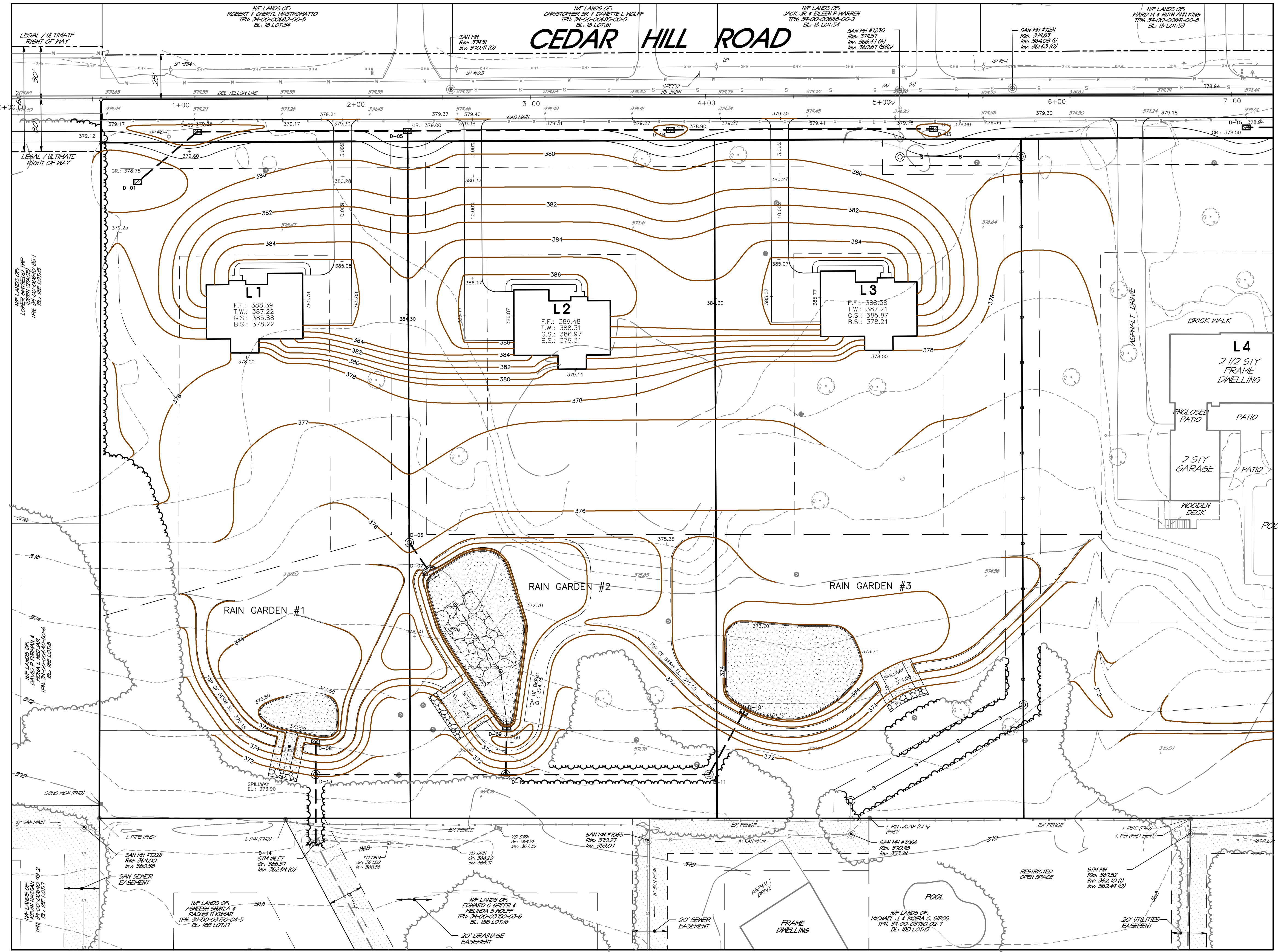


**LOCATION MAP**  
**GENERAL PLAN NOTES**

Refer to the plan Sheet 2 of 25 for 'BASE EXISTING FEATURES AND SURVEY NOTES' and 'BASE DEVELOPMENT NOTES'

**GRADING AND DRAINAGE NOTES:**

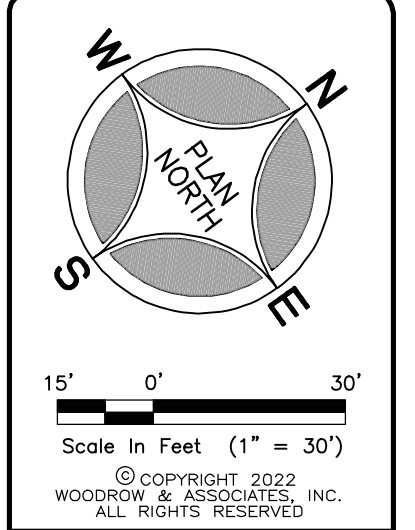
- All contractors working on this project shall comply with the requirements of P.L. 852, No. 287, December 10, 1974, as amended on December 17, 1986 P.L. 1574, No. 1732. Contractors must notify PA One Call System, Inc. three (3) days prior to the start of any construction. 1-(800)-242-1776.
- Contractors shall not encroach onto adjoining properties unless a temporary grading easement has been obtained from the adjoining owners. All property lines must be clearly and adequately marked and any area that proposed grading encroaches within five (5) feet of the property line the contractor shall install temporary Orange Construction Fence to prevent encroachment onto adjoining properties.
- All contractors working on this project shall ensure that all construction performed is in accordance with all applicable OSHA (Occupational Safety and Health Administration) standards and specifications.
- The contractor shall ensure that all necessary permits and approvals have been obtained prior to commencement of any site construction activities.
- Erosion and sedimentation control measures shall be in place and functional prior to any earth disturbance or grading work within the tributary area.
- Burying of trees, tree stumps and construction debris is prohibited. All debris shall be removed and disposed of in strict accordance with all Federal, State and Local Municipality standards and specifications. Tree stumps may be ground or chipped and spread on site.
- Nothing shall be permitted to be set on, placed or planted within, the area of any utility or storm water easement except lawns or suitable low ground cover.
- Proposed Lot Improvements: The proposed dwelling footprint, driveway, utility connections, etc. are shown to verify conformity with ordinances. Final design may vary and will require individual Building Permit Plans to be prepared and submitted to the Township(s) for approval.
- All construction requirements, methods, materials and specifications shall be in accordance with all Municipal Authority Standards, Municipality Standards and Penn-DOT Form 408 (Latest Edition). Where in the case of conflict the more stringent requirement shall apply.
- All storm sewer piping shall be HDPE pipe unless noted otherwise.
- All precast storm sewer structures such as inlets, storm manholes, endwalls, etc. shall conform to the Commonwealth of Pennsylvania Department of Transportation Publication 874 (latest edition). Shop Drawings shall be submitted to the Township Engineers Office for review and approval prior to fabrication.
- All utility installation must be in accordance with the requirements of the Pennsylvania Uniform Construction Code, as adopted by the Municipality.
- All slopes with grades three (3) foot horizontal to one (1) foot vertical (3:1) shall be stabilized with a North American Green or approved equal Erosion Control Blanket installed in strict accordance with manufacturers standards and specifications. See Erosion Control Plans for location and details.
- The minimum slope in grassed areas shall not be less than 2% and the minimum in paved areas shall not be less than 1%.
- Site grading shall be performed in accordance with these plans. The contractor shall be responsible for removing and replacing all soft, yielding or unsuitable materials and replacing with suitable materials. All excavated or filled areas shall be compacted to 95% of modified proctor maximum density per A.S.T.M. Test D-1557. moisture content at time of placement shall be no more than 2% above nor 3% below optimum. contractor shall submit a compaction report, prepared by a qualified soils engineer, registered within the state where the work is performed, verifying that all filled areas and subgrade areas within the building pad area and areas to be paved have been compacted in accordance with these plans.
- Any/all storm water conveyance system(s) and detention facilities shown on these plans are a basic and perpetual part of the storm water management system for this Township, and as such, are to be protected, maintained and preserved in accordance with the approved final plans. The township and/or its agents may reserve the right and privilege to enter upon such lands from time to time for the purpose of inspection of said storm water management system in order to determine that the structural design and integrity are being maintained.
- A minimum of six (6) inches of clean topsoil shall be provided on all lawn and planting areas.
- Subbase material for sidewalks, curb, or asphalt shall be free of organics and other unsuitable materials. Should subbase be deemed unsuitable, subbase is to be removed and filled with approved fill material compacted to 95% optimum density (as determined by modified proctor method).
- 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. (Markers may be bolted to the grate in off road locations. Markers shall have a minimum diameter of 3 1/2 inches and shall include "No Dumping - Drains to Waterway" and a fish symbol.
- All roof leader collection systems must be directed towards the drainage areas illustrated on the Post Development Drainage Area Boundary Plan. The rear of each dwelling unit shall be directed to the on lot rain garden for each individual lot.



**PLAN LEGEND**


NO.	DATE	DESCRIPTION
1	07/08/22	REVISED TO REFLECT NEW RESUB CONCEPT

**REVISIONS**

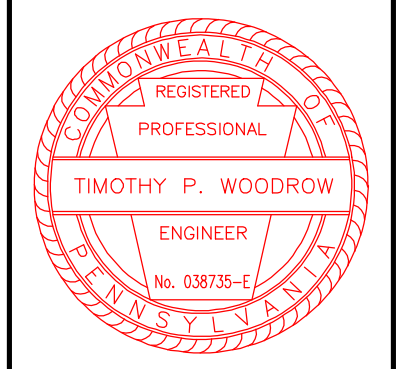


PROJECT SERIAL NUMBER FOR DESIGN:  
2019 1291601 (Design)  
MAY 09, 2019

Parcel Information:  
39-00-00643-00-2 (B 18 U 70 - GAINES)  
1500 Cedar Hill Rd  
39-00-00646-00-8 (B 18 U 28 - STROCKEY)  
1512 Cedar Hill Rd  
39-00-00649-00-5 (B 18 U 29 - LYNCH)  
1524 Cedar Hill Rd  
Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

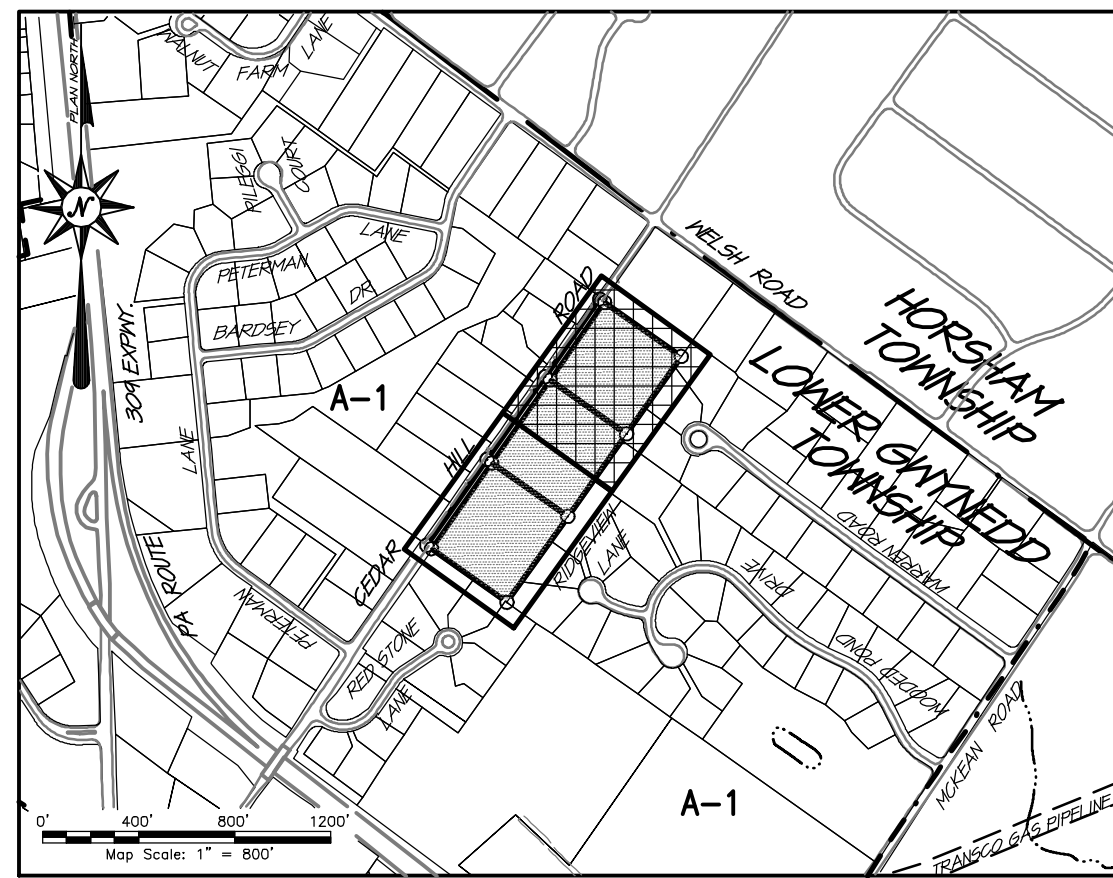
Applicant:  
**CEDAR HILL DEVELOPMENT GROUP, LLC.**  
c/o Mr. Jon Mayer

632 Germantown Pike  
Lafayette Hill, PA 19444



**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. 15th Street, Suite 100  
Pottsville, PA 17870  
Phone: (610) 542-4448  
Web: www.woodrowinc.com

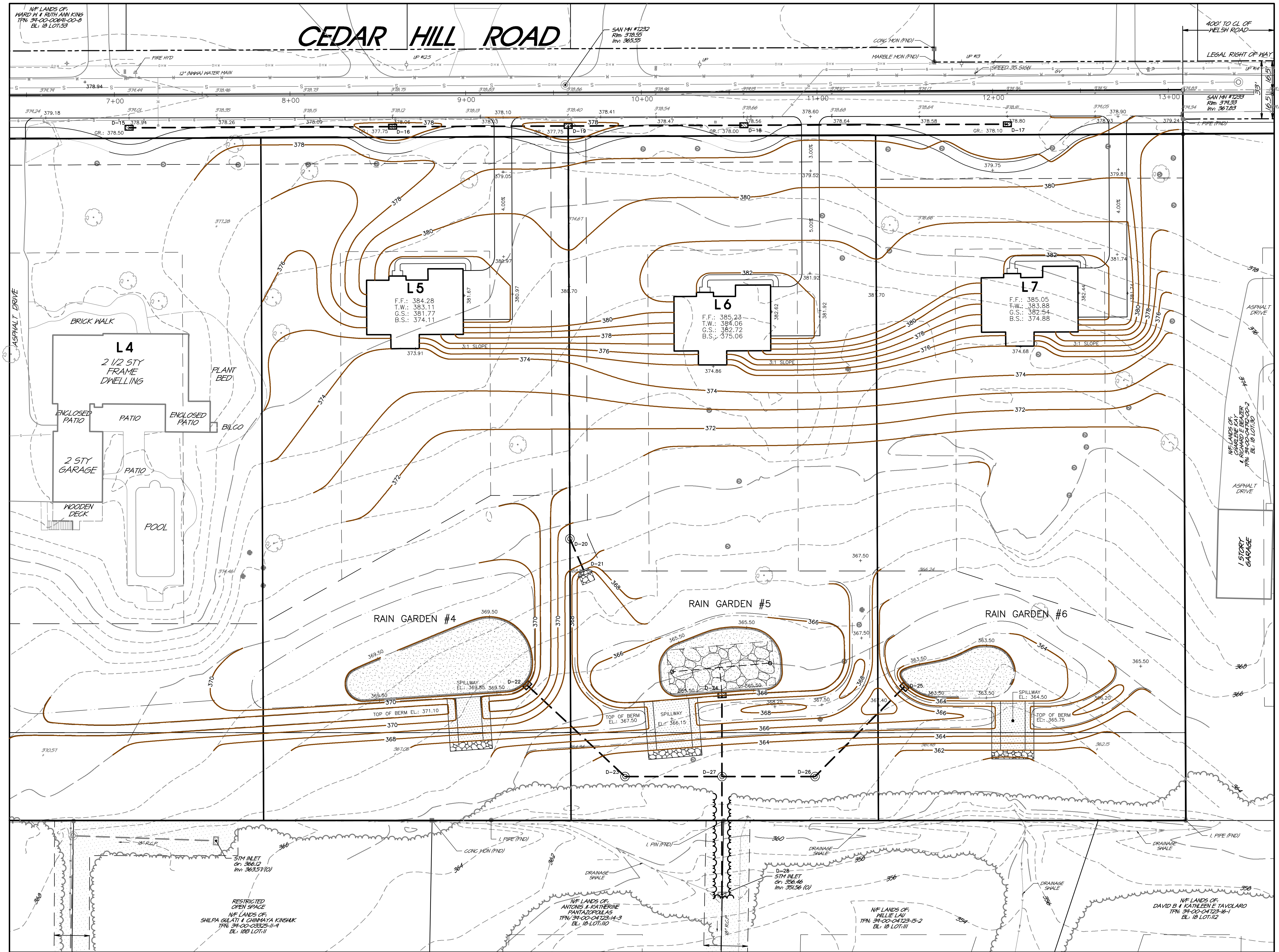
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Sht04\_A-Grade  
Job No: 18-0406 D  
Plan Date: APRIL 26, 2022  
Sheet No:



LOCATION MAP

GENERAL PLAN NOTES

Refer to the plan Sheet 2 of 25 for 'BASE EXISTING FEATURES AND SURVEY NOTES' and 'BASE DEVELOPMENT NOTES'  
 Refer to the plan Sheet 4 of 25 for 'BASE CONSTRUCTION DESIGN NOTES'.

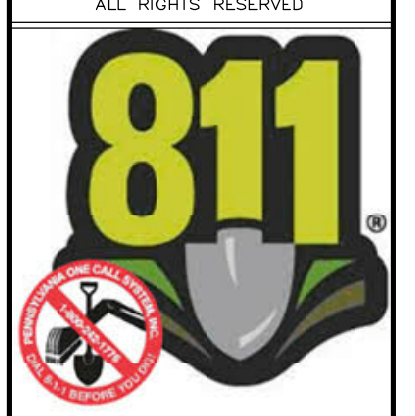
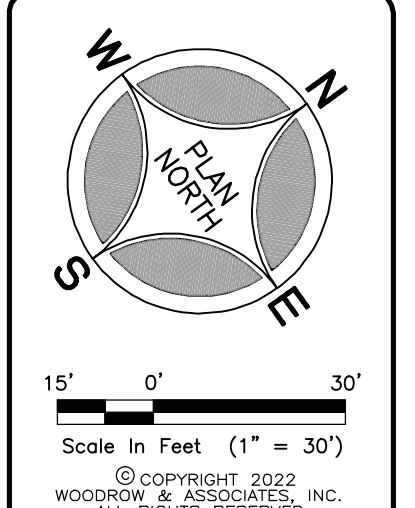


PLAN LEGEND


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NO.	DATE	DESCRIPTION
1	07/26/22	REVISED TO REFLECT NEW DESIGN CONCEPT

REVISIONS



PROJECT SERIAL NUMBER FOR DESIGN:  
 2019 1291601 (Design)  
 MAY 09, 2019

Parcel Information:  
 39-00-00643-00-2 (B 18 U 70 - GAINES)  
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 Gross Area: 11.8973 Acres  
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 CEDAR HILL DEVELOPMENT GROUP, LLC.  
 c/o Mr. Jon Mayer

632 Germantown Pike  
 Lafayette Hill, PA 19444

**TIMOTHY P. WOODROW**  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 03875-T

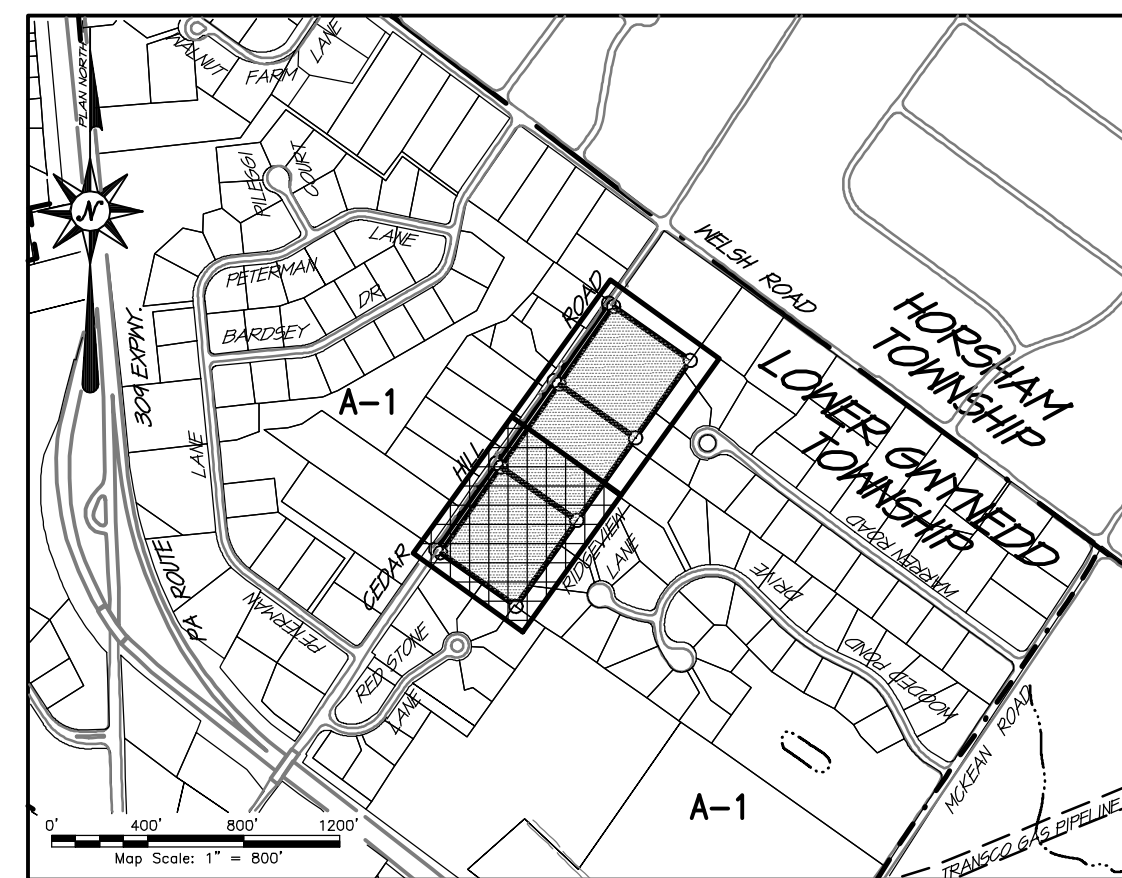
PRELIMINARY PLAN (Not To Be Recorded)  
**GRADING & DRAINAGE PLAN**  
**SECTION B -**  
**1500-1524 CEDAR HILL ROAD**  
 LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
**WOODROW & ASSOCIATES, INC.**  
 MUNICIPAL / CIVIL CONSULTING ENGINEERS  
 1108 N. 15th Street, Suite 400, P.O. Box 19002  
 Philadelphia, PA 19103  
 Phone: (215) 542-4448 Web: www.woodrowinc.com

Layer List:  
 Sht05\_Grade-B

Job No:  
 18-0406 D

Plan Date:  
 APRIL 26, 2022

Sheet No:  
**5 of 25**



LOCATION MAP

**STORMWATER STRUCTURE SCHEDULE**

Structure No: D-01 Type: Std. Inlet w/M Top Loc: Lot 1 Gr.: 378.75 Inv.: 376.25 (15" O)	Structure No: D-09 Type: Std. Box w/Rack Loc: Lot 2 Rain Garden T.O.B.: 373.50 Inv.: 373.10 (1' 40" R.W.) Inv.: 371.70 (0.4688' C.O.) Inv.: 370.51 (12" O)	Structure No: D-16 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 377.75 Inv.: 374.75 (15" I) Inv.: 374.58 (15" O)	Structure No: D-24 Type: Std. Inlet w/M Top Loc: Lot 5 Rain Garden T.O.B.: 366.15 Inv.: 365.05 (1.0' R.W.) Inv.: 364.50 (0.5' C.O.) Inv.: 362.05 (12" O)
Structure No: D-02 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 378.85 Inv.: 375.85 (15" I) Inv.: 375.68 (15" O)	Structure No: D-10 Type: Std. Box w/Rack Loc: Lot 3 Rain Garden T.O.B.: 374.00 Inv.: 373.80 (3.00' R.W.) Inv.: 371.70 (1" C.O.) Inv.: 371.05 (12" O)	Structure No: D-17 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 378.00 Inv.: 374.60 (15" I) Inv.: 374.43 (15" O)	Structure No: D-25 Type: Std. Inlet w/M Top Loc: Lot 6 Rain Garden T.O.B.: 364.25 Inv.: 363.85 (0.25' R.W.) Inv.: 361.50 (1" C.O.) Inv.: 361.25 (12" O)
Structure No: D-03 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 378.90 Inv.: 376.15 (15" O)	Structure No: D-11 Type: Std. Storm MH Loc: Lot 2 Rim: 371.75 Inv.: 369.00 (12" I) Inv.: 368.83 (12" O)	Structure No: D-18 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 377.75 Inv.: 374.60 (15" I) Inv.: 374.43 (15" O)	Structure No: D-26 Type: Std. Storm MH Loc: Lot 5 Rim: 362.75 Inv.: 359.75 (12" I) Inv.: 359.58 (12" O)
Structure No: D-04 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 378.90 Inv.: 375.40 (15" I) Inv.: 375.23 (15" O)	Structure No: D-12 Type: Std. Storm MH Loc: Lot 2 Rim: 371.50 Inv.: 369.16 (1/F 09) Inv.: 367.98 (12" I) Inv.: 367.79 (12" O)	Structure No: D-19 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 377.75 Inv.: 373.93 (15" I) Inv.: 373.68 (18" O)	Structure No: D-27 Type: Std. Storm MH Loc: Lot 5 Rim: 362.75 Inv.: 359.75 (12" I) Inv.: 359.05 (12" O)
Structure No: D-05 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 379.00 Inv.: 374.48 (15" I) Inv.: 374.31 (14"x23" O)	Structure No: D-13 Type: Std. Storm MH Loc: Lot 1 Rim: 372.50 Inv.: 369.50 (12" I/F 08) Inv.: 366.98 (12" I) Inv.: 364.62 (15" O)	Structure No: D-20 Type: Std. Storm MH Loc: Lots 5 & 6 Rim: 374.50 Inv.: 371.00 (18" I) Inv.: 367.40 (18" O)	Structure No: D-28 Type: Ex. Inlet Loc: Ex. Lot Gr.: 356.46 Inv.: 351.81 (15" I) Inv.: 351.56 (18" O)
Structure No: D-06 Type: Std. Storm MH Loc: Lots 1 & 2 Rim: 376.50 Inv.: 373.13 (14"x23" I) Inv.: 372.96 (14" X 23" O)	Structure No: D-14 Type: Ex. Inlet w/M Top Gr.: 366.37 Inv.: 363.06 (15" I) Inv.: 362.89 (15" O)	Structure No: D-21 Type: Std. D-W Endwall Loc: Lot 6 TW: 375.29 Inv.: 372.87 (18"	
Structure No: D-07 Type: Std. D-W Endwall Loc: Lot 2 TW: 375.29 Inv.: 372.87 (14" X 23" O)	Structure No: D-15 Type: Std. Inlet w/M Top Loc: Cedar Hill Road Gr.: 378.50 Inv.: 375.75 (15" O)	Structure No: D-22 Type: Std. Box w/Rack Loc: Lot 4 Rain Garden T.O.B.: 369.85 Inv.: 369.60 (0.50' R.W.) Inv.: 367.50 (1" C.O.) Inv.: 364.30 (12" O)	
Structure No: D-08 Type: Std. Box w/Rack Loc: Lot 1 Rain Garden T.O.B.: 373.90 Inv.: 373.50 (1' 30" R.W.) Inv.: 371.50 (1" C.O.) Inv.: 370.45 (12" O)		Structure No: D-23 Type: Std. Storm MH Loc: Lot 6 Rim: 363.50 Inv.: 360.50 (12" I) Inv.: 360.33 (12" O)	

**STORMWATER PIPING SCHEDULE**

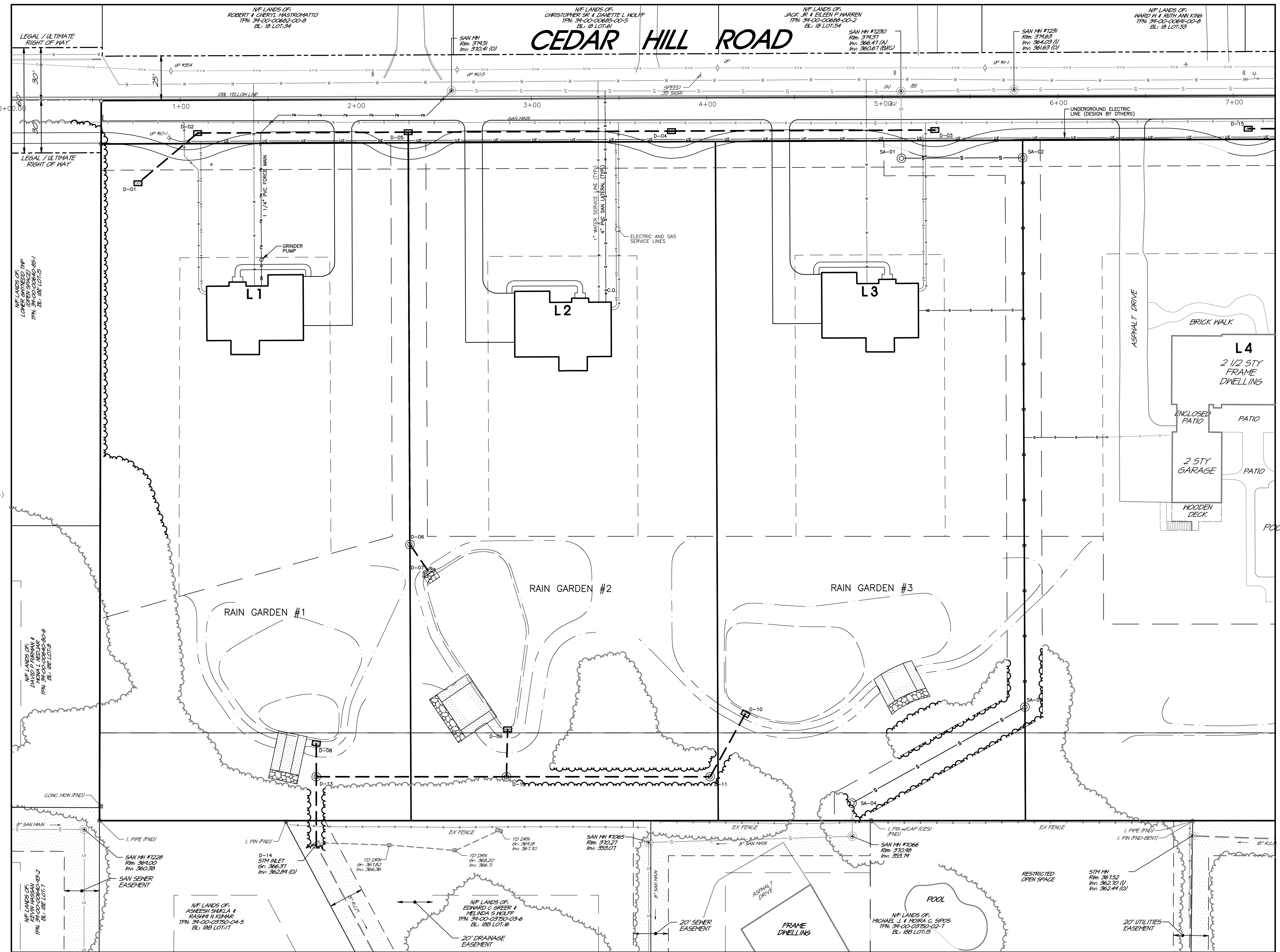
From:	To:	Length (L.F.):	Pipe Dia. (In.):	Pipe Material:	Slope (Percentage):
D-01	D-02	41	15"	ADS (N-12)	0.91%
D-02	D-05	120	15"	ADS (N-12)	1.00%
D-03	D-04	150	15"	ADS (N-12)	0.50%
D-04	D-05	150	15"	ADS (N-12)	0.50%
D-05	D-06	235	14"x23"	E.R.C.P.	0.50%
D-06	D-07	18	14"x23"	E.R.C.P.	0.50%
D-08	D-13	19	12"	O-RING	5.00%
D-09	D-12	27	12"	O-RING	5.00%
D-10	D-11	41	12"	O-RING	5.00%
D-11	D-12	116	12"	ADS (N-12)	0.75%
D-12	D-13	108	12"	ADS (N-12)	0.75%
D-13	D-14	39	15"	ADS (N-12)	4.00%
D-15	D-16	150	15"	ADS (N-12)	0.67%
D-16	D-19	100	15"	ADS (N-12)	0.65%
D-17	D-18	150	15"	ADS (N-12)	0.50%
D-18	D-19	100	15"	ADS (N-12)	0.50%
D-19	D-20	235	18"	ADS (N-12)	1.14%
D-20	D-21	20	18"	ADS (N-12)	2.00%
D-22	D-23	76	12"	O-RING	5.00%
D-23	D-27	55	15"	ADS (N-12)	2.33%
D-24	D-27	46	15"	ADS (N-12)	5.00%
D-25	D-26	72	12"	O-RING	2.08%
D-26	D-27	53	12"	O-RING	1.00%
D-27	D-28	67	15"	ADS (N-12)	5.00%

**SANITARY MANHOLE STRUCTURE SCHEDULE**

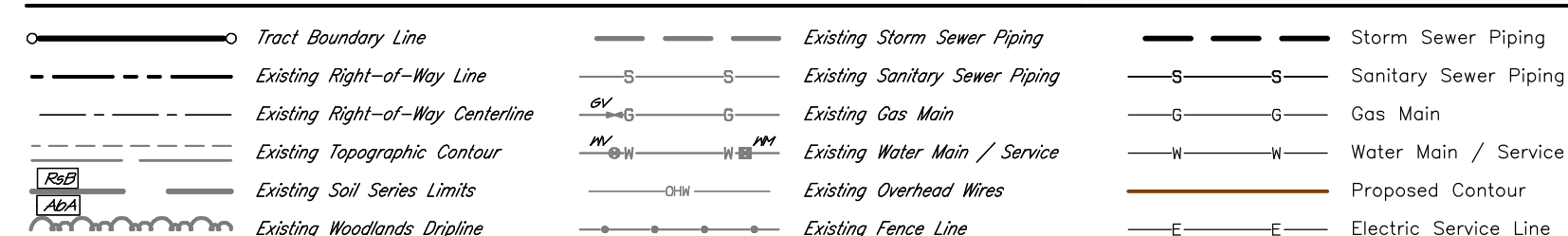
Structure No: SA-01 Type: Std. San. MH Loc: Private Lane (A) Rim: 377.76 Inv.: 370.76 (8" OUT)	Structure No: SA-02 Type: Std. San. MH Loc: Lots 3/4 Rim: 379.50 Inv.: 359.76 (8" IN) Inv.: 359.59 (8" OUT)	Structure No: SA-03 Type: Std. San. MH Loc: Lots 3/4 Rim: 372.50 Inv.: 356.01 (8" IN) Inv.: 355.84 (8" OUT)	Structure No: SA-04 Type: Doghouse MH Loc: Lots 3/4 Rim: 371.50 Inv.: 354.55 (8" IN) Inv.: 354.38 (8" OUT)
--	--	--	---

**SANITARY PIPING SCHEDULE**

From:	To:	Length (L.F.):	Pipe Dia. (In.):	Pipe Material:	Slope (FL/FT.):
SA-01	SA-02	69	8"	(SDR-35) PVC	0.0075
SA-02	SA-03	313	8"	(SDR-35) PVC	0.0114
SA-03	SA-04	113	8"	(SDR-35) PVC	0.0114

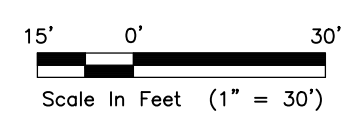


**PLAN LEGEND**



**REVISIONS**

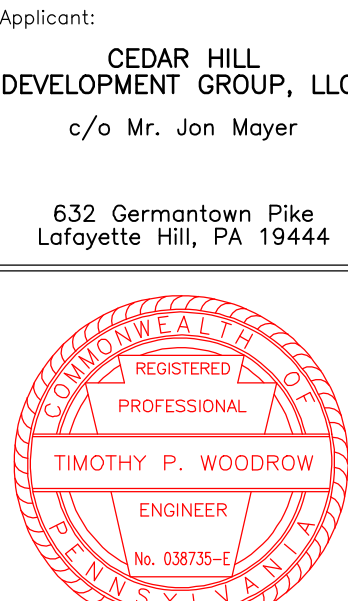
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PROJECT SERIAL NUMBER FOR DESIGN:  
2019 1291601 (Design)  
MAY 09, 2019

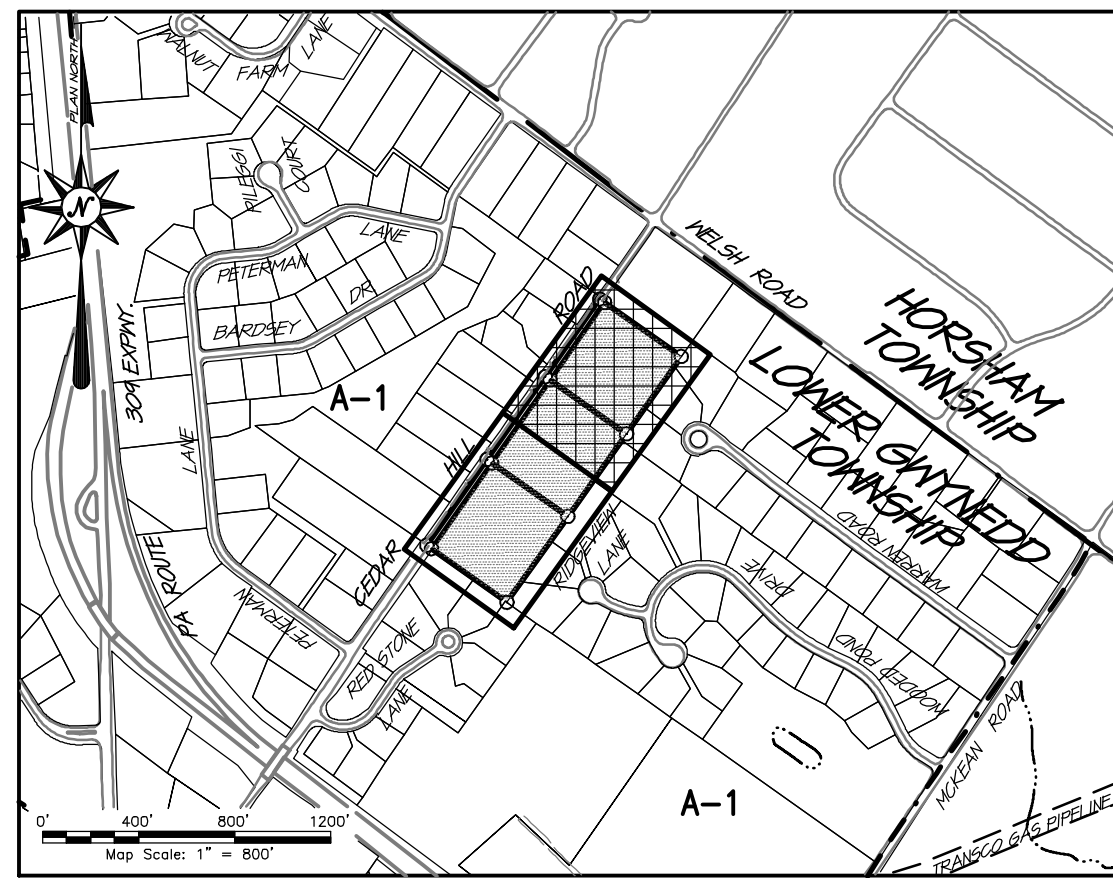
Parcel Information:  
39-00-00643-00-2 (B 18 U 70 - GAINES)  
1500 Cedar Hill Rd  
39-00-00646-00-8 (B 18 U 29 - STROHECKER)  
1512 Cedar Hill Rd  
39-00-00649-00-5 (B 18 U 29 - LYNCH)  
1524 Cedar Hill Rd  
Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

Applicant:  
CEDAR HILL DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer  
632 Germantown Pike  
Lafayette Hill, PA 19444

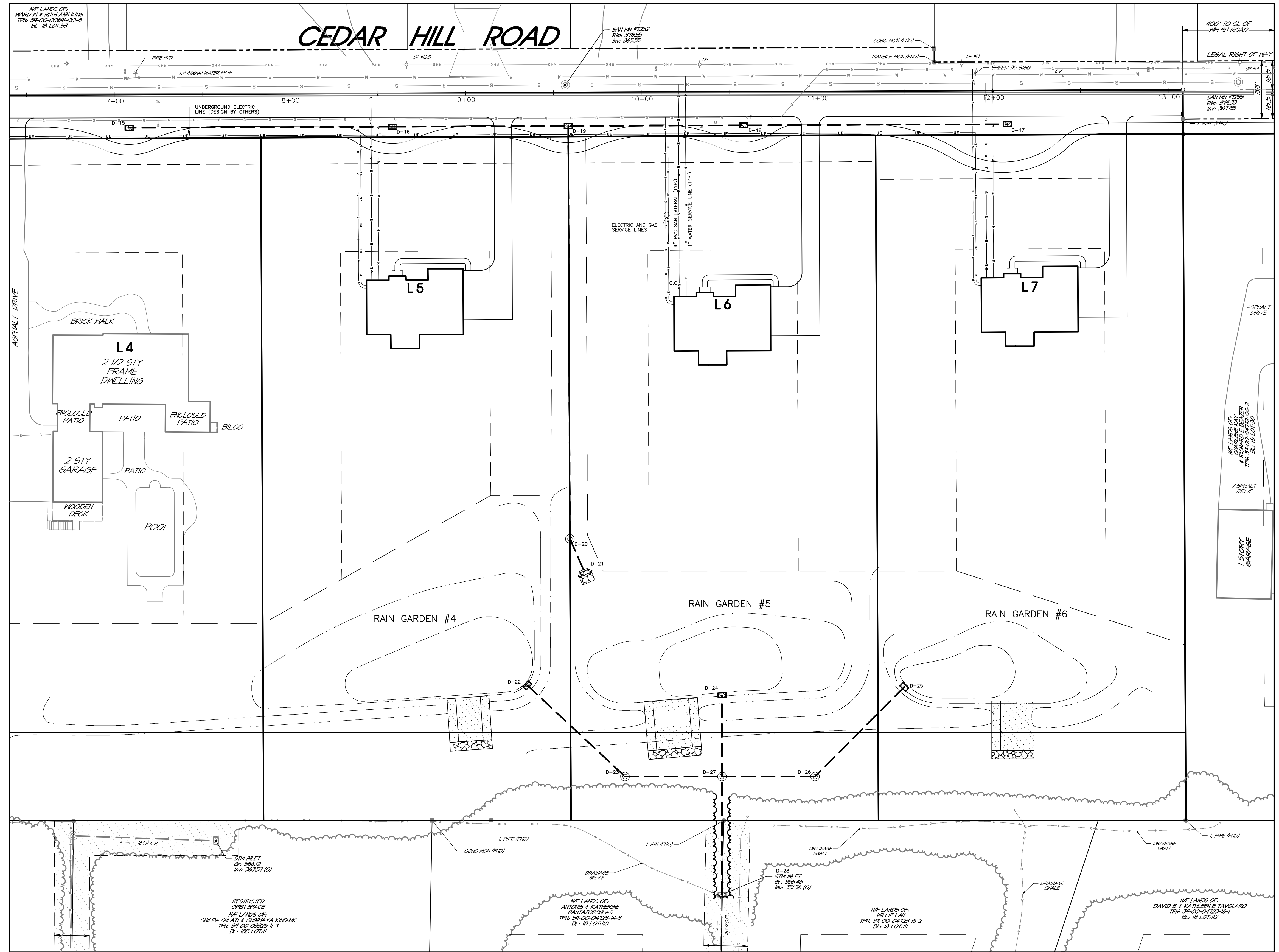


PRELIMINARY PLAN (Not To Be Recorded)  
UTILITIES LAYOUT PLAN  
SECTION A  
1500-1524 CEDAR HILL ROAD  
LOWER MERION TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. 15th Street, Suite 100  
Pittsburgh, PA 15203  
Phone: (412) 542-4488  
Web: www.woodrowinc.com

Layer List:  
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Job No: 18-0406 D  
Plan Date: APRIL 26, 2022  
Sheet No:

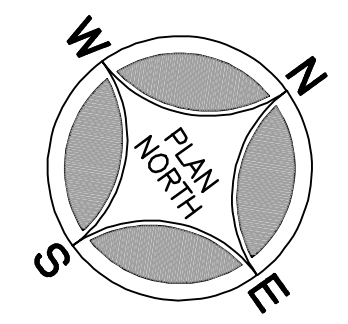


LOCATION MAP



PLAN LEGEND


REVISIONS



Scale in Feet (1" = 30')

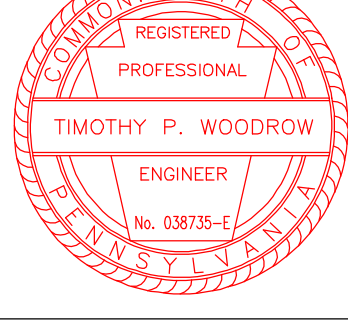


PROJECT SERIAL NUMBER FOR DESIGN:  
2019 1291601 (Design)  
MAY 09, 2019

Parcel Information:  
39-00-00643-00-2  
(B 18 U 70 - GAINES)  
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DEVELOPMENT GROUP, LLC.  
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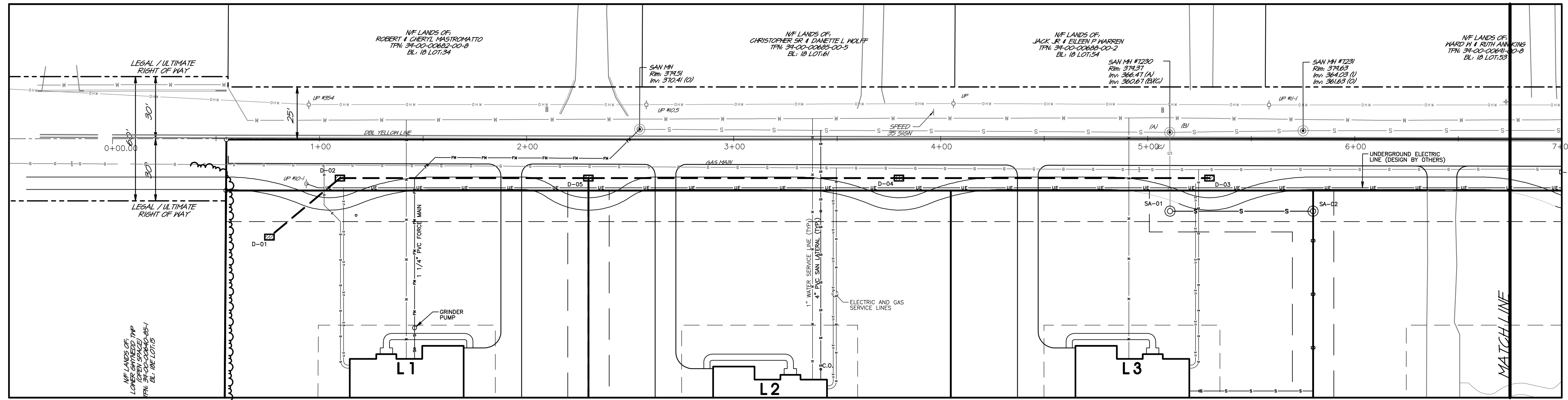
632 Germantown Pike  
Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)  
UTILITIES LAYOUT PLAN - SECTION B -  
1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1108 N. 15th Street, Suite 200, Pottsville, PA 19362  
Phone: (610) 542-4488 Web: www.woodrowinc.com

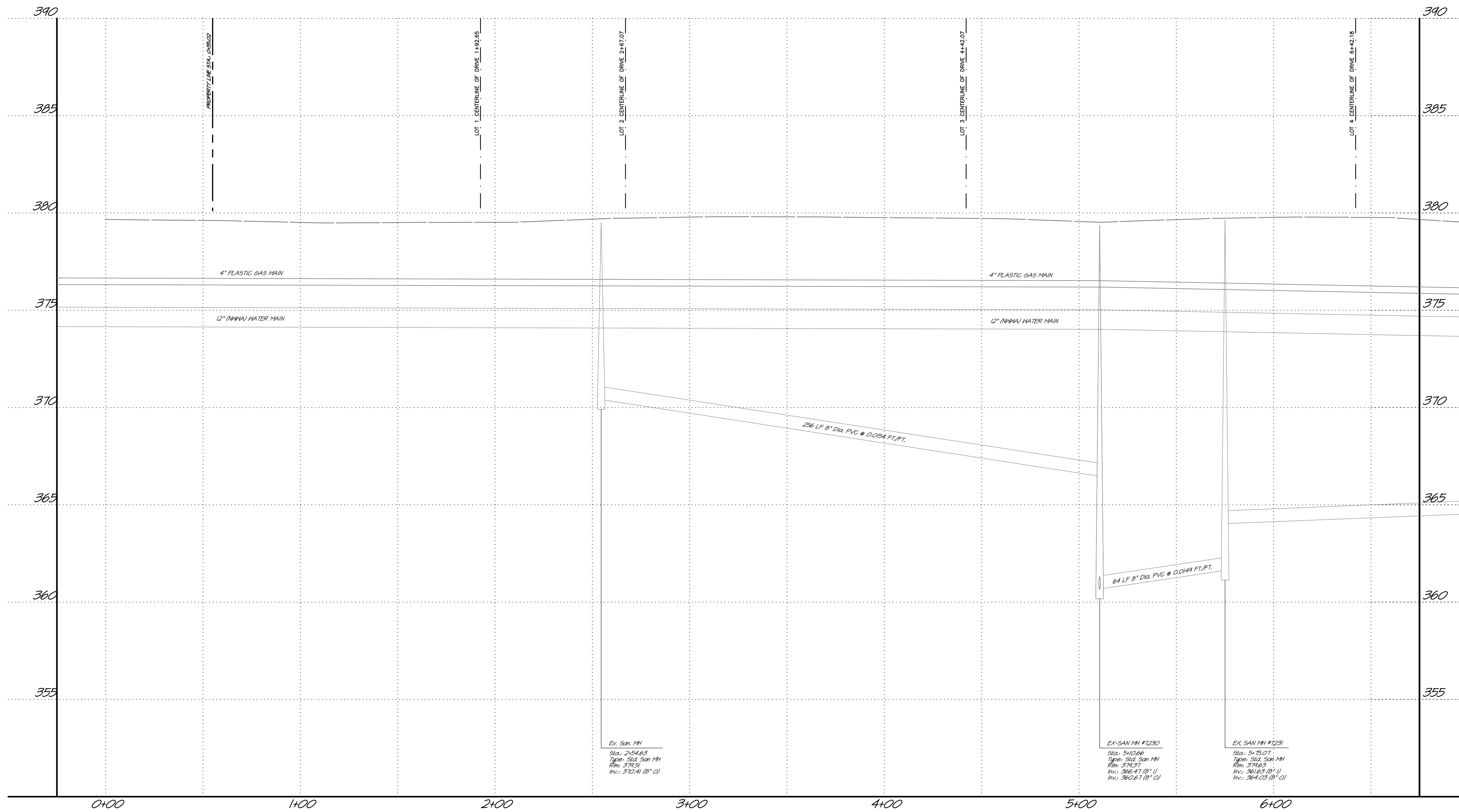
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18-0406 D  
Plan Date:  
APRIL 26, 2022  
Sheet No:

Print Date: Jul 27, 2022 (08:33) Plot Scale: 1" = 30.00'  
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PLAN VIEW: CEDAR HILL ROAD

SCALE: 1" = 30' HORIZONTAL



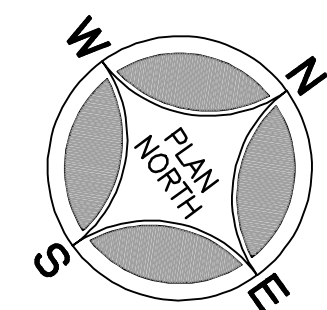
PROFILE VIEW: CEDAR HILL ROAD

SCALE: 1" = 30' HORIZ.  
1" = 3' VERT.

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No.	Date	Description
1	07/26/22	REVISED TO REFLECT NEW DESIGN CONCEPT

REVISIONS



Scale In Feet (1" = 30')

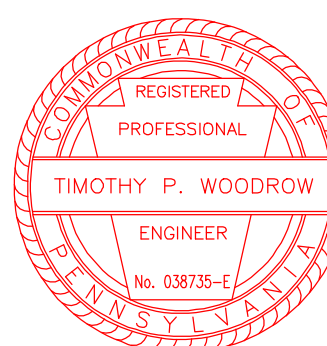
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ALL RIGHTS RESERVED



PROJECT SERIAL NUMBER FOR DESIGN:  
2019 1291601 (Design)  
MAY 09, 2019

Parcel Information:  
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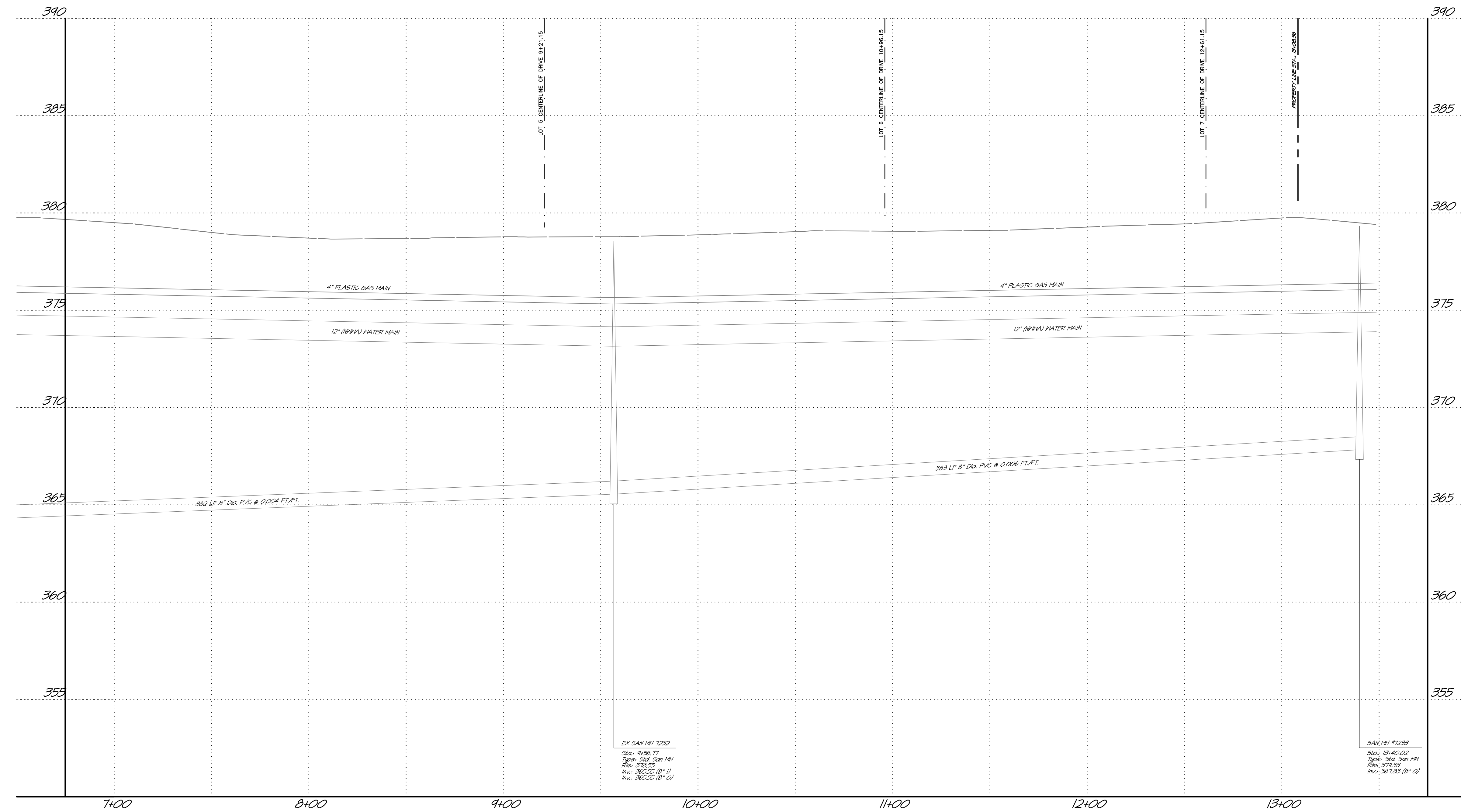
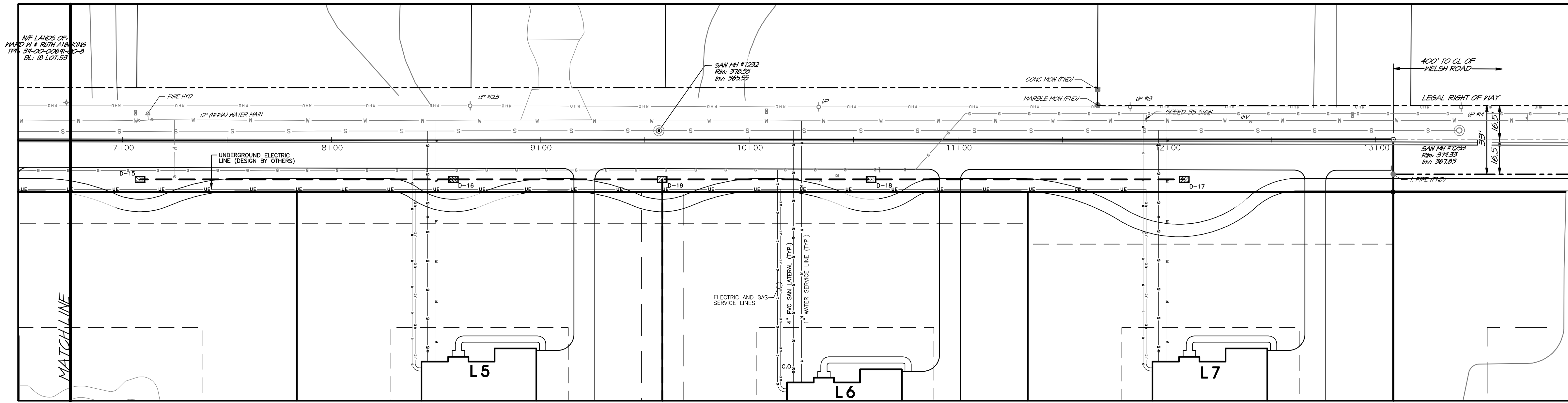
Applicant:  
CEDAR HILL  
DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer  
632 Germantown Pike  
Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)  
PLAN and PROFILE:  
CEDAR HILL ROAD  
1500-1524 CEDAR HILL ROAD  
LOWER OWNED TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1108 North Merkle Road, Suite 100, P.O. Box 19002  
Plymouth, PA 19002  
Phone: (215) 542-4488  
Web: www.woodrowinc.com

Layer List:  
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Job No: 18-0406 D  
Plan Date: APRIL 26, 2022  
Sheet No:





Print Date: Jul 27, 2022 (08:33) Plot Scale: 1" = 30.00'  
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No.	DATE	DESCRIPTION
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REVISIONS

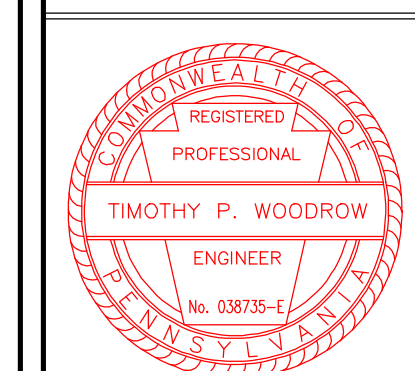
Scale in Feet (1" = 30')

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 CEDAR HILL  
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 Lafayette Hill, PA 19444



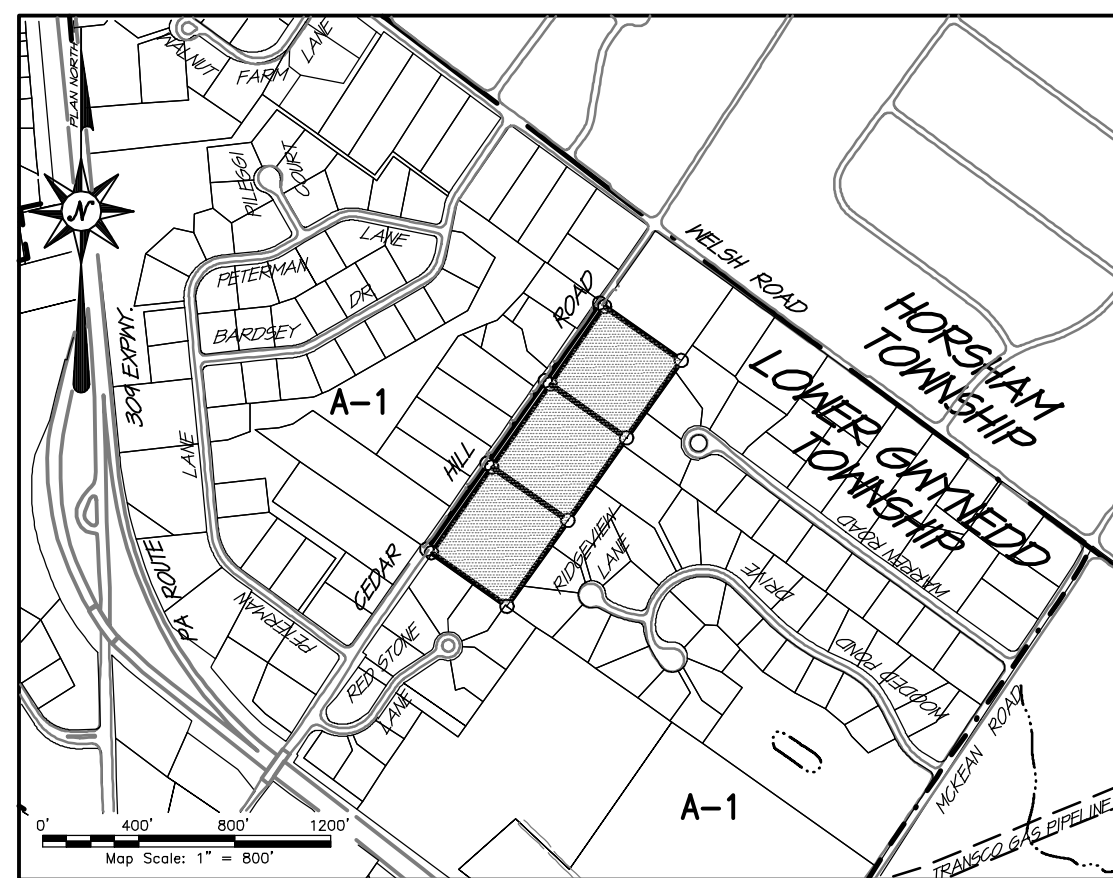
PRELIMINARY PLAN (Not To Be Recorded)  
 PLAN and PROFILE: CEDAR  
 HILL ROAD  
 1500-1524 CEDAR HILL ROAD  
 LOWER OWNED TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

**WOODROW & ASSOCIATES, INC.**  
 MUNICIPAL / CIVIL CONSULTING ENGINEERS  
 1108 N. State St., Suite 448  
 Philadelphia, PA 19102  
 Phone: (215) 542-6488  
 Web: www.woodrowinc.com

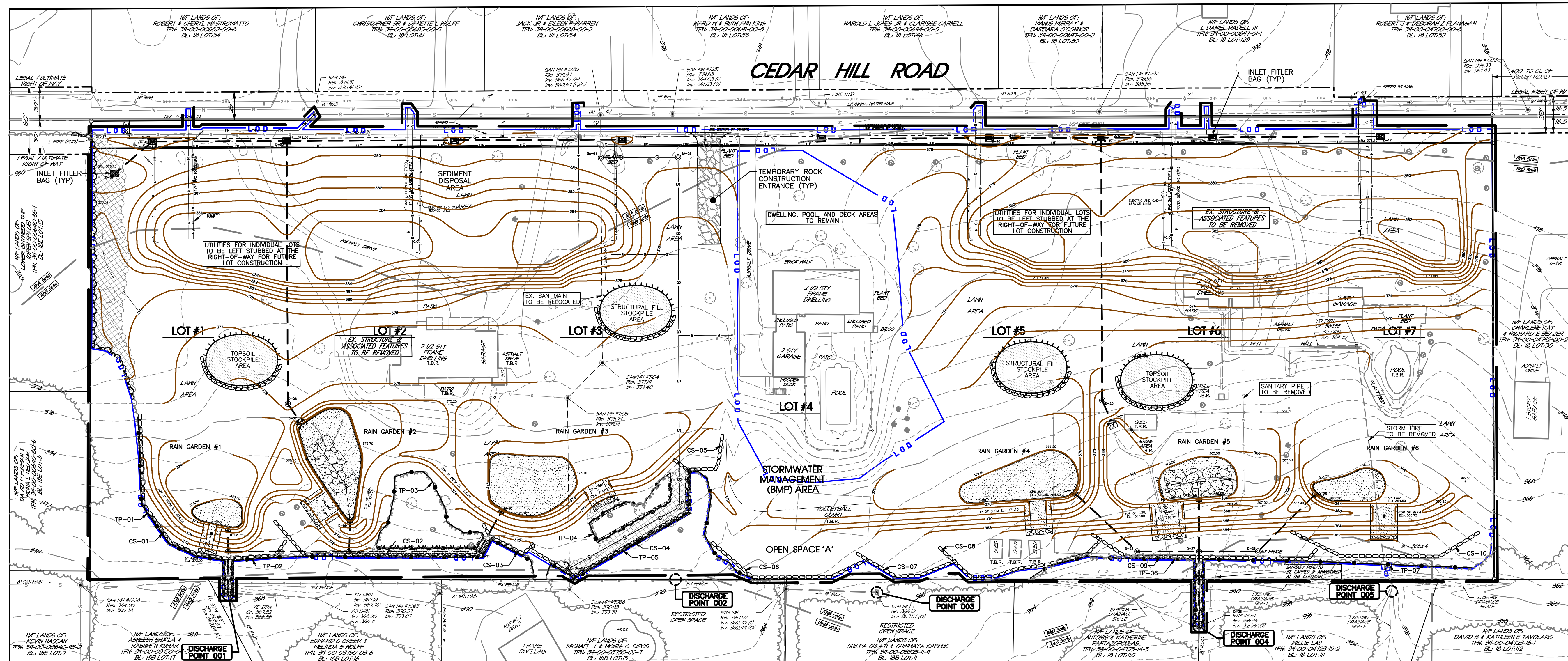
Layer List:

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Job No: 18-0406 D  
 Plan Date: APRIL 26, 2022  
 Sheet No: 9 of 25



LOCATION MAP



PROJECT SOILS DATA

Soils Type:	Slopes:	Depth to Restrictive Feature:	Depth to Water Table:	Hydrologic Soil Group:
RhA Reville silt loam	0 to 3 percent	20-40" to Lithic Bedrock	6 to 36"	D
RhB Reville silt loam	3 to 8 percent	20-40" to Lithic Bedrock	6 to 36"	D
UusB Urban land-Udorthents shale & sandstone	0 to 8 percent	20-99" to Lithic Bedrock	More than 80"	A

GENERAL PLAN NOTES

SEE RECORD PLAN FOR ALL EXISTING FEATURES AND GENERAL DEVELOPMENT NOTES.

EROSION CONTROL DESIGN:

- The Erosion & Sedimentation Control Plan shall minimize the extent and duration of earth disturbance to the greatest extent possible by outlining an efficient construction sequence to complete the proposed improvements as quickly as possible while utilizing the following Erosion and Sedimentation Controls, as shown and detailed on the plan, to minimize any sediment-laden runoff during construction; Sediment Basin, Compost Filter Socks, Inlet Filter Bags, and Rock Construction Entrances.
- The Erosion & Sedimentation Control Plan shall maximize protection of existing drainage features and vegetation to the greatest extent possible by outlining the Limit of Disturbance to avoid impact to any natural drainage features.
- The Erosion & Sedimentation Control Plan shall minimize soil compaction to the greatest extent possible by minimizing traffic within the area of any utilized Sediment Basin, Sediment Trap, or similar BMP once it is constructed and functioning in an effort to preserve natural infiltration rates for Post-Construction conversion. Soil compaction shall also be avoided by loosening the subsoil to a depth of 3 to 5 inches to permit the bonding of topsoil to the surface areas and scarification of 6 to 12 inches for compacted soils prior to seeding. Fencing off of infiltration areas may be implemented as noted on the plans or in the provided Construction Sequence.
- The Erosion & Sedimentation Control Plan outlines controls to prevent and/or minimize the generation of increased stormwater through the use of a Perforated Risar Pipe within the Sediment Basin (if applicable), to capture, slow, and cool runoff while allowing the natural infiltration properties in the soil in this location.
- Any proposed impervious areas, Rooftops, Pavement and Sidewalk areas, Etc., have the potential to increase thermal impacts to the watershed. Through the use of the proposed BMPs identified on the Plan and specifications for this Project, runoff is captured, slowed, and cooled to the greatest extent possible; thereby reducing the potential for thermal impacts to the watershed as much as possible.
- There are no naturally occurring geologic conditions on-site that could potentially cause pollution. All Erosion and Sedimentation Controls (Sedimentation Basin(s), Compost Socks, Etc.) are proposed around the project site in an effort to minimize any construction related pollution from leaving the site.
- If bedrock is encountered during the construction of the proposed BMPs, the project engineer shall be consulted to ensure that the proposed BMPs will still function as designed.
- Sediment-laden runoff is an anticipated construction waste. Through the use of the proposed Erosion Control Device outlined on this plan, sediment-laden runoff has been mitigated and prevented from leaving the project site to the greatest extent possible.
- The project site can be referenced on the AMBLER U.S.G.S. Quadrangle Map.

PHASE 1 CONSTRUCTION - COMPOST SOCK SCHEDULE

Sock No.	Location	Type	Sock Size	Slope Length Above Sock	Slope % Above Sock	Sock Length (L.F.)
CS-01	SE corner of project site	Filterrexx Sediment/Perimeter Control (Siltsoxx)	12"	360 Ft.	2.27%	236
CS-02	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	12"	384 Ft.	2.45%	215
CS-03	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	12"	400 Ft.	1.93%	60
CS-04	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	12"	400 Ft.	2.11%	205
CS-05	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	12"	302 Ft.	2.21%	74
CS-06	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	12"	416 Ft.	2.53%	156
CS-07	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	12"	412 Ft.	2.97%	98
CS-08	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	18"	440 Ft.	3.31%	166
CS-09	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	24"	410 Ft.	4.18%	212
CS-10	along SE property line	Filterrexx Sediment/Perimeter Control (Siltsoxx)	24"	394 Ft.	4.73%	182

Note: additional specifications for each proposed sock can be found at [www.filterrexx.com](http://www.filterrexx.com)

TREE PROTECTION FENCING SCHEDULE

Fence No.	Location	Fence Length (L.F.)	Fence No.	Location	Fence Length (L.F.)
TP-01	along SE property line	205	TP-05	along SE property line	322
TP-02	along SE property line	325	TP-06	along SE property line	215
TP-03	along SE property line	316	TP-07	along SE property line	302
TP-04	along SE property line	210			

TOTAL PROJECT DISTURBANCE:  
10.04 ACRES

PROJECT SITE BOUNDARY:  
11.80 ACRES

REVISIONS

NO.	DATE	DESCRIPTION
1	07/06/22	REVISED TO REFLECT NEW RESUB CONCEPT

Scale in Feet (1" = 50')

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PROJECT SERIAL NUMBER FOR DESIGN:  
2019 1291601 (Design)  
MAY 09, 2019

Parcel Information:  
39-00-0643-00-2 (B 18 U 70 - GAINES)  
1500 Cedar Hill Rd  
39-00-0646-00-8 (B 18 U 28 - STROHECKER)  
1512 Cedar Hill Rd  
39-00-0649-00-5 (B 18 U 29 - LYNCH)  
1524 Cedar Hill Rd  
Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

Applicant:  
CEDAR HILL DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer

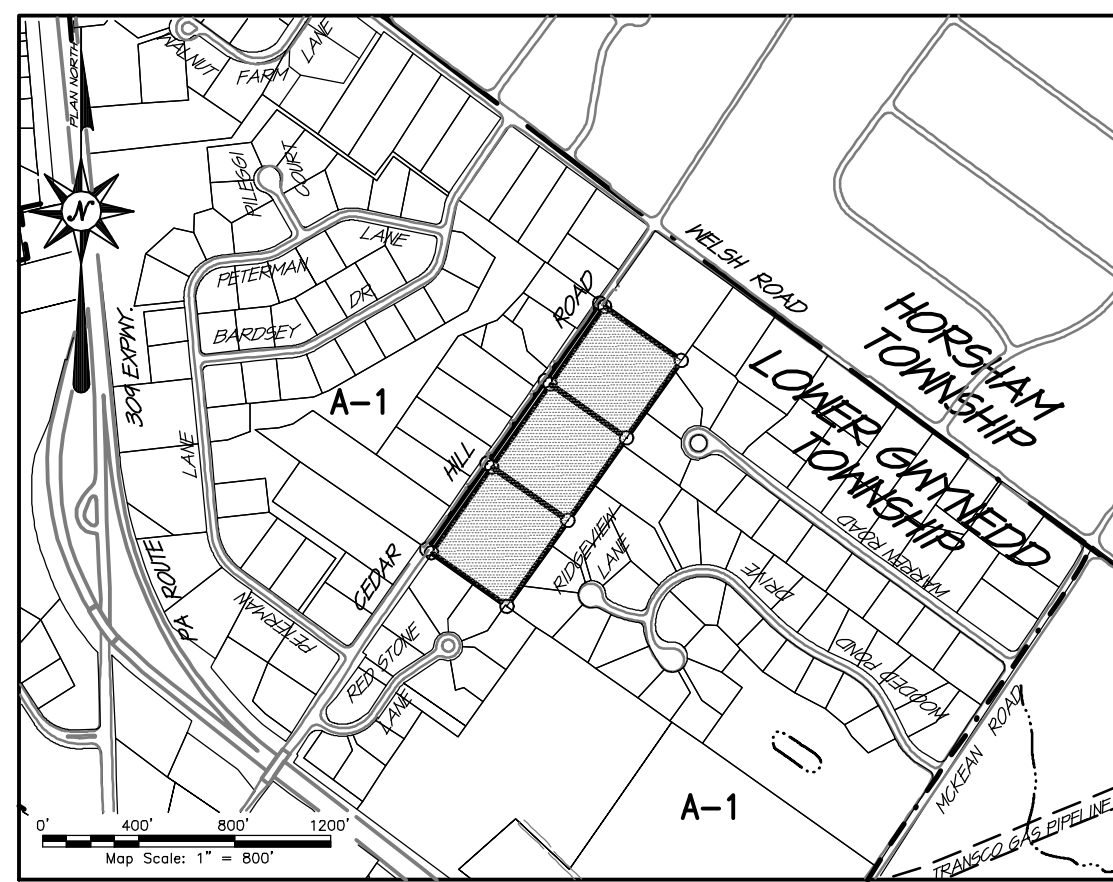
632 Germantown Pike  
Lafayette Hill, PA 19444



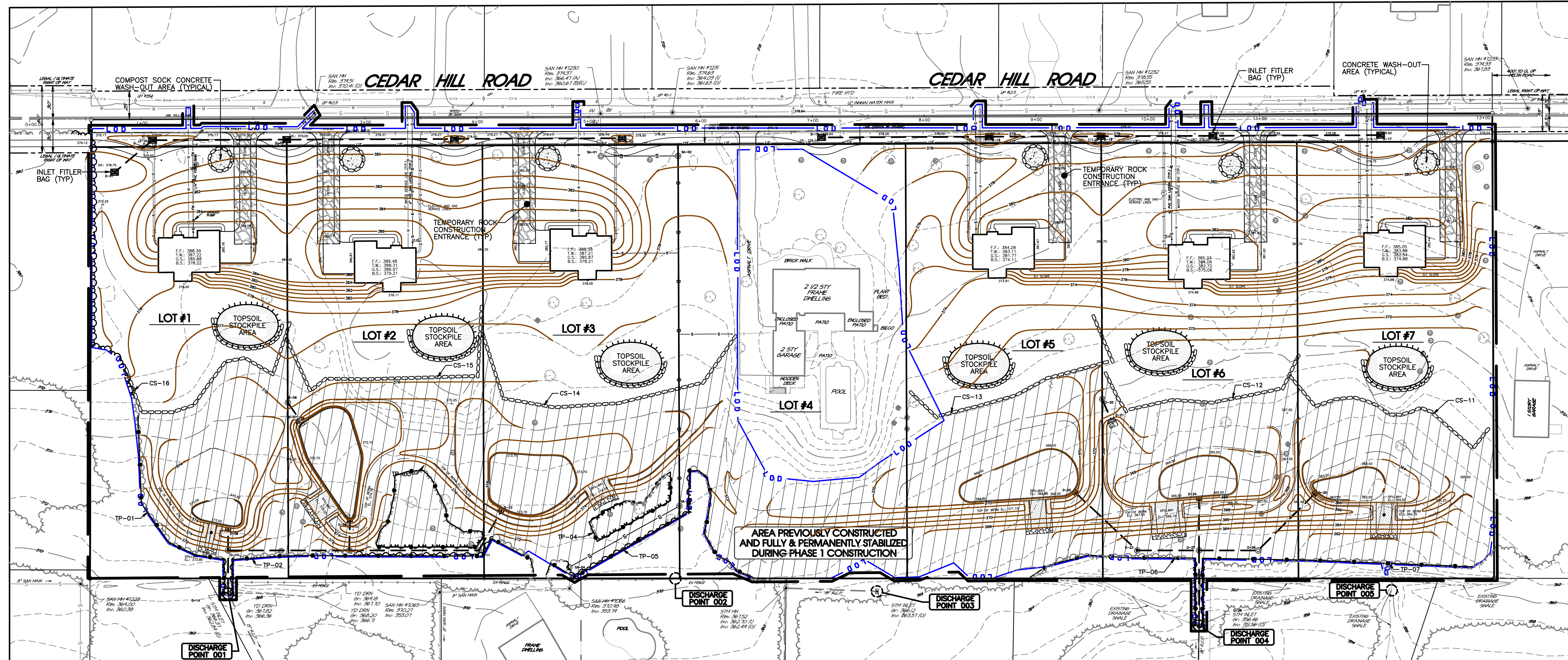
WOODROW & ASSOCIATES, INC.  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. ...  
Phone: (215) 542-6448  
www.woodrow.com

PRELIMINARY PLAN (Not To Be Recorded)  
EROSION AND SEDIMENTATION CONTROL - PHASE 1 PLAN  
1500-1524 CEDAR HILL ROAD  
LOWER MERION TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

Layer List:  
Sht10\_E&S Plan-A  
Job No:  
18-0406 D  
Plan Date:  
APRIL 26, 2022  
Sheet No:



LOCATION MAP



PHASE 2 CONSTRUCTION – COMPOST SOCK SCHEDULE

Sock No.	Location	Type	Sock Size	Slope Length Above Sock	Slope % Above Sock	Sock Length (L.F.)
CS-11	Lot #7	Filterxx Sediment/Perimeter Control (Siltsoxx)	18"	260 Ft.	4.66%	220
CS-12	Lot #6	Filterxx Sediment/Perimeter Control (Siltsoxx)	12"	252 Ft.	3.92%	220
CS-13	Lot #5	Filterxx Sediment/Perimeter Control (Siltsoxx)	12"	248 Ft.	2.85%	245
CS-14	Lot #3	Filterxx Sediment/Perimeter Control (Siltsoxx)	12"	252 Ft.	1.55%	300
CS-15	Lot #2	Filterxx Sediment/Perimeter Control (Siltsoxx)	12"	125 Ft.	6.64%	270
CS-16	Lot #1	Filterxx Sediment/Perimeter Control (Siltsoxx)	12"	110 Ft.	7.10%	235

Note: additional specifications for each proposed sock can be found at [www.filterxx.com](http://www.filterxx.com)

TREE PROTECTION FENCING SCHEDULE

Fence No.	Location	Fence Length (L.F.)	Fence No.	Location	Fence Length (L.F.)
TP-01	along SE property line	205	TP-05	along SE property line	322
TP-02	along SE property line	325	TP-06	along SE property line	215
TP-03	along SE property line	316	TP-07	along SE property line	302
TP-04	along SE property line	210			

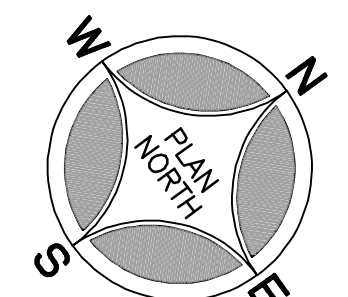
TOTAL PROJECT DISTURBANCE:  
10.04 ACRES

PROJECT SITE BOUNDARY:  
11.80 ACRES

Print Date: Jul 27, 2022 (9:32) | Plot Scale: 1" = 30.00'

No.	DATE	DESCRIPTION
1	07/26/22	REVISED TO REFLECT NEW RESOUR. CONCEPT

REVISIONS



Scale In Feet (1" = 50')  
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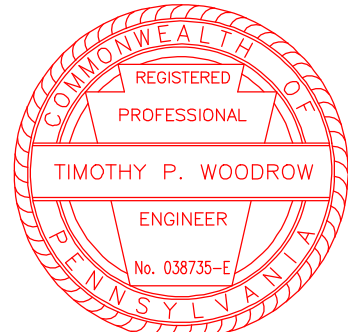


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MAY 09, 2019

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1524 Cedar Hill Rd  
Gross Area: 11.8973 Acres  
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Applicant:  
CEDAR HILL  
DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer

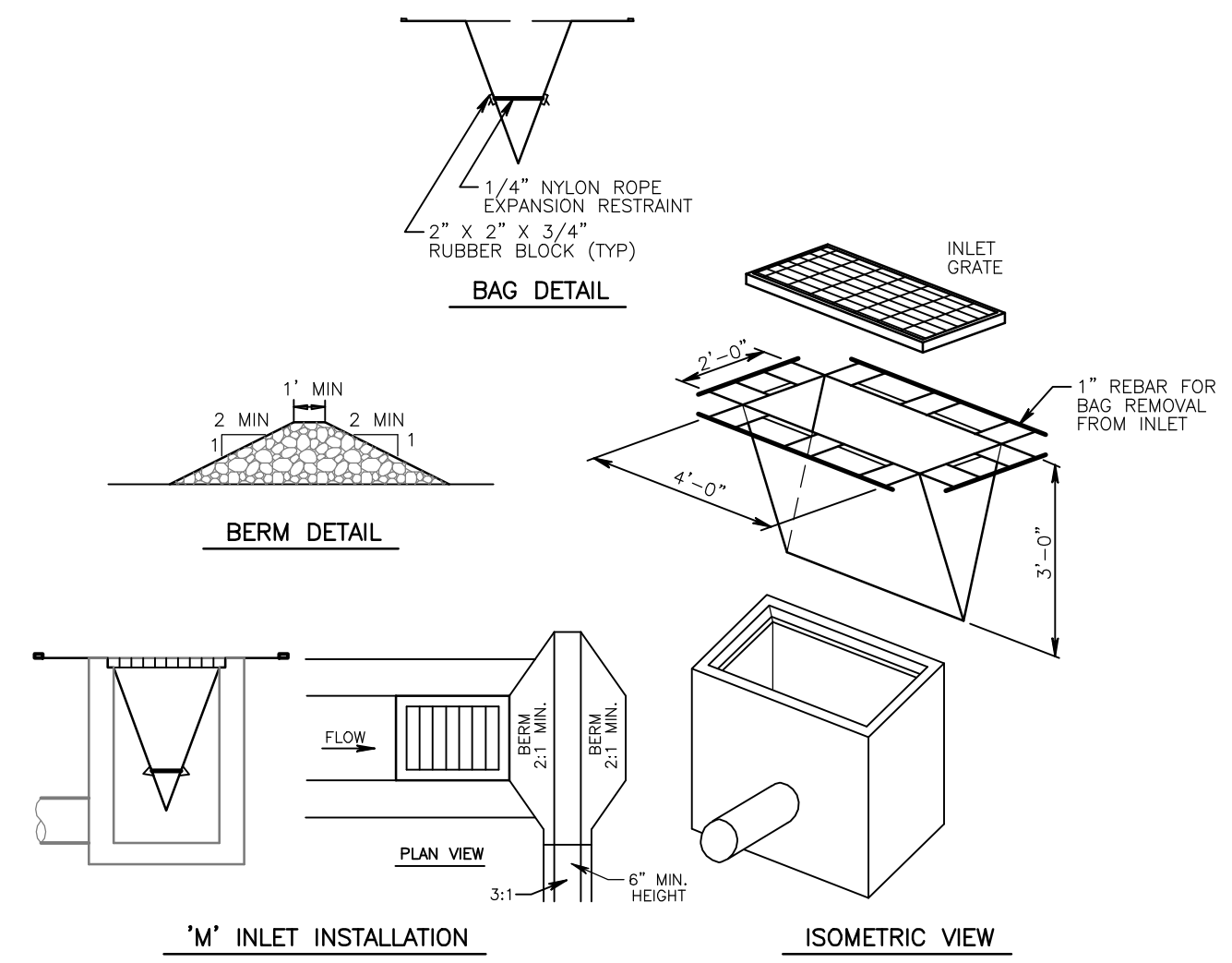
632 Germantown Pike  
Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)  
EROSION AND SEDIMENTATION  
CONTROL – PHASE 2 PLAN  
1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP – MONTGOMERY COUNTY – PENNSYLVANIA  
**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. 15th St., Suite 100, P.O. Box 19302  
Philadelphia, PA 19102  
Phone: (215) 426-4428  
Web: [www.woodrowinc.com](http://www.woodrowinc.com)

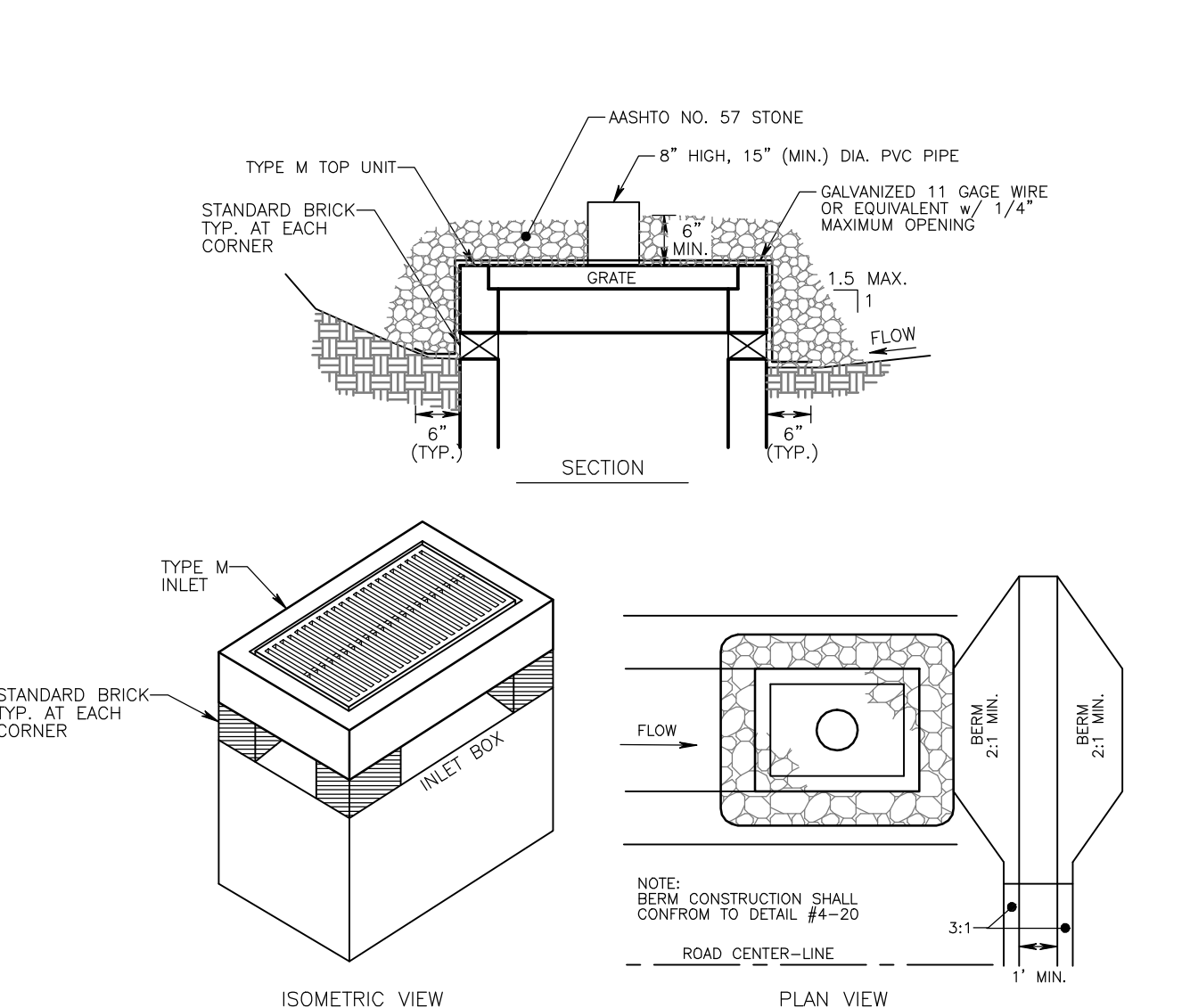
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Job No:  
18-0406 D  
Plan Date:  
APRIL 26, 2022





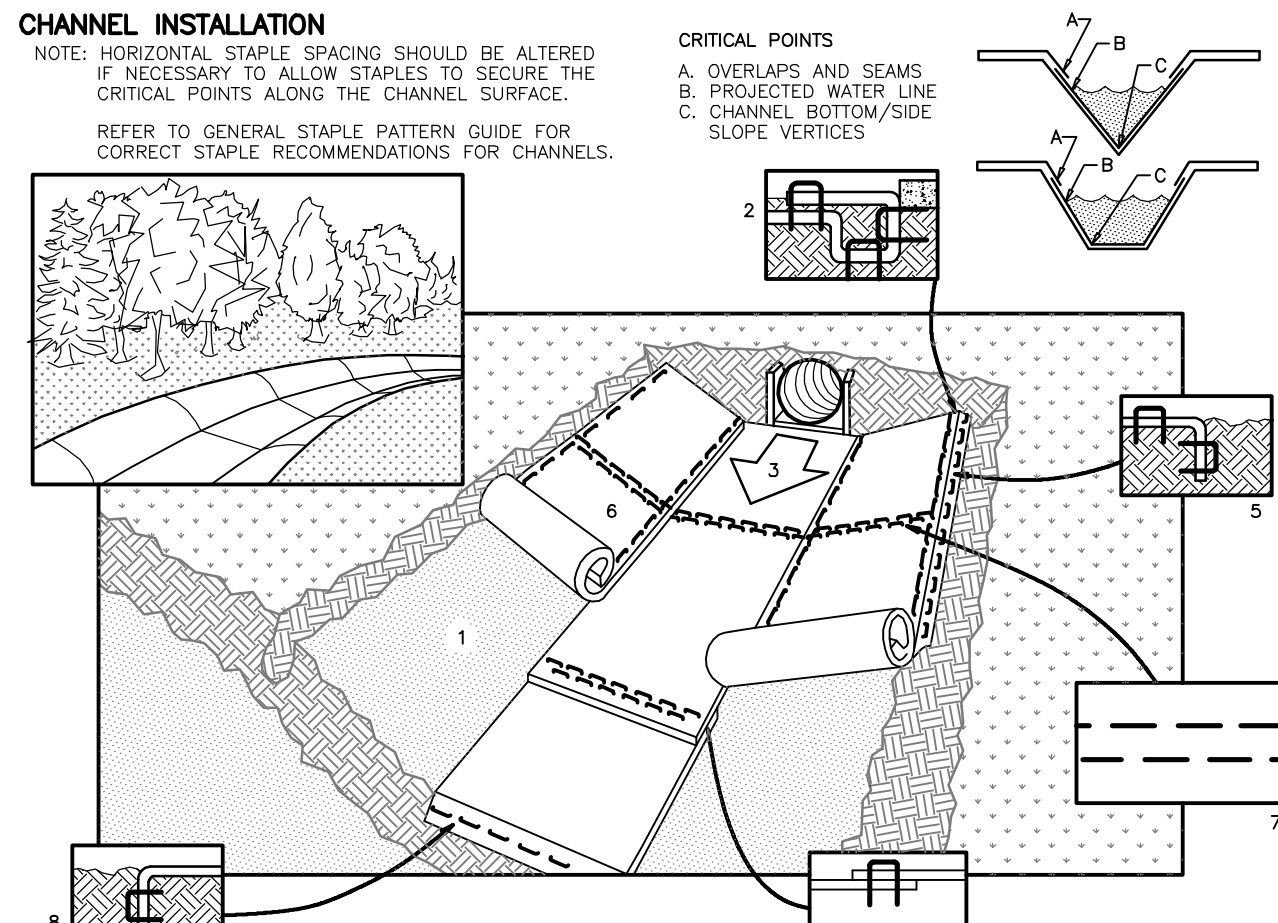
**ADAPTED FROM PENNDOT RC-70, 2008 EDITION**  
 \* EARTHEN BERM TO BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATION  
 MAXIMUM DRAINAGE AREA = 1/2 ACRE.  
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLETS TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.  
 ROLLED 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 OF 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 and #4-16  
 FILTER BAG INLET PROTECTION**  
 Not To Scale



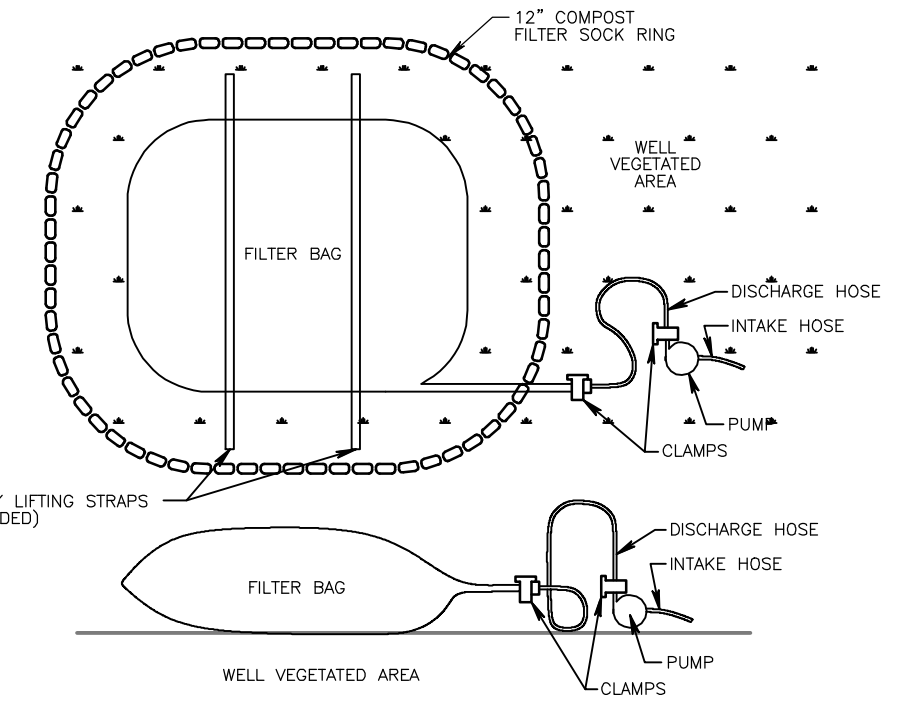
Inlet protection shall not be required for inlets tributary to sediment basins or sediment traps. Alternate Type M inlet protection can be used on one acre maximum drainage area with 15" overflow pipe and 4" head.  
 Berms shall be required for all installations not located at low points. Earthen berms shall be stabilized with vegetation and maintained until roadway is stoned or tributary area is permanently vegetated. Road subbase berms shall be maintained until roadway is paved.  
 Inlets shall be inspected weekly and after each runoff event. Accumulated sediment shall be removed when it reaches half the height of the stone. Damaged installations shall be repaired or replaced within 24 hours of inspection.  
 For systems discharging to HQ or EV surface water, a 6 inch thick compost layer shall be securely anchored on outside and over top of stone. Compost shall meet the standards of Table 4.2.

(PADEP EROSION and SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012)  
 (STANDARD CONSTRUCTION DETAIL #4-23)  
**ALTERNATE TYPE M INLET PROTECTION - NOT AT GRADE**  
 Not To Scale



- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
- BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
- PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
- FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED (2" FOR ESSO MATTING).
- IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
- THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

**STRAW EROSION CONTROL BLANKET**  
 Not To Scale



LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH DOUBLE STITCHED 1/2" PIPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 100 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	50 lb/2"
GRAB TENSILE	ASTM D-4832	205 lb
PUNCTURE	ASTM D-4832	110 lb
MULLEN BURST	ASTM D-3786	350 psi
UV RESISTANCE	ASTM D-4355	70%
LOSS 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 SLOPE 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 THE CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

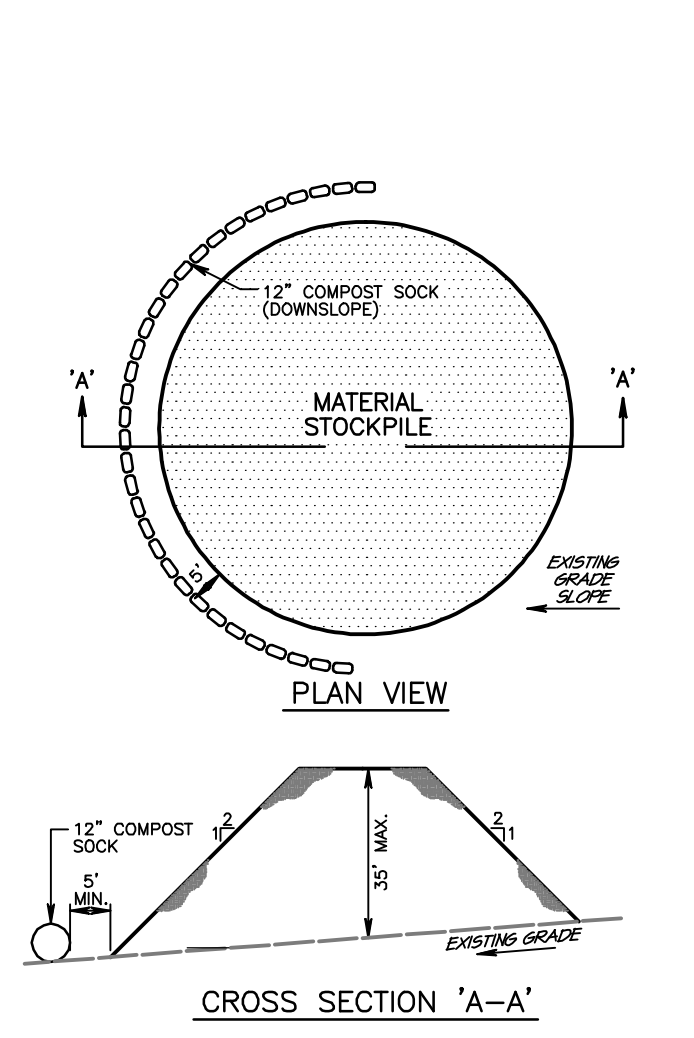
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE CROSSLAND AREA IS NOT AVAILABLE.

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 FLOWING 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.

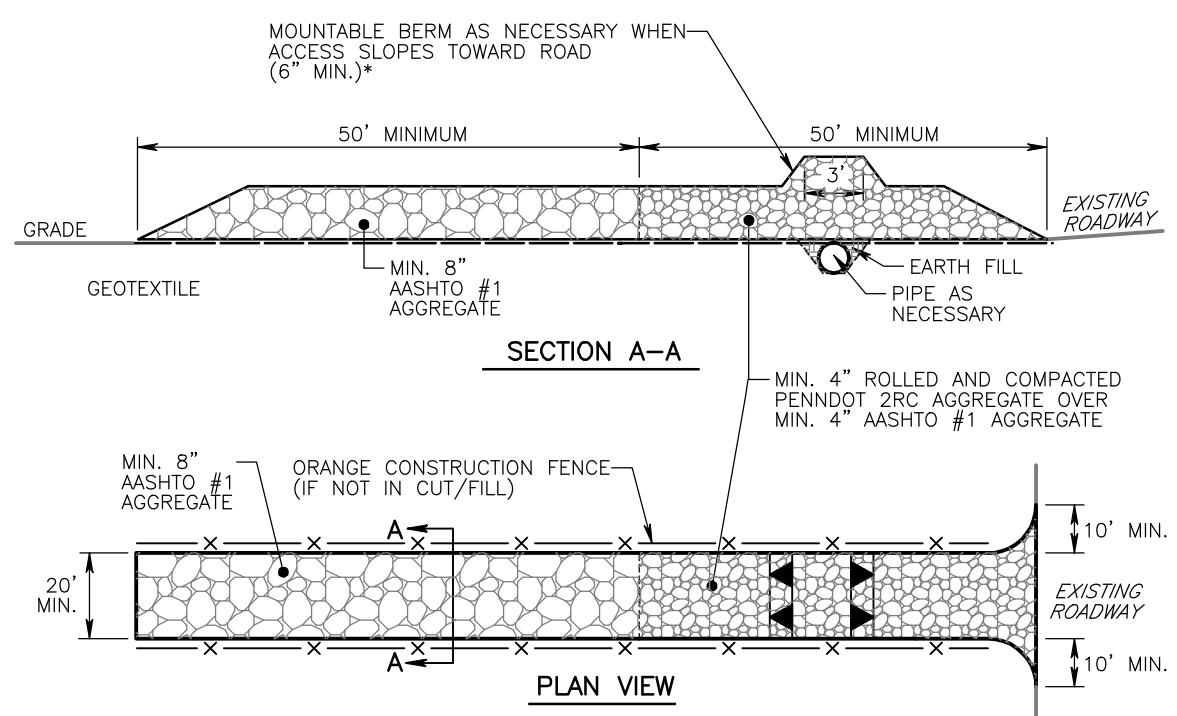
(PADEP EROSION and SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012)  
 (STANDARD CONSTRUCTION DETAIL #3-14)

**SEDIMENT FILTER BAG FOR PUMPED WATER**  
 Not To Scale



1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET.  
 2. SIDE SLOPES MUST BE NO GREATER THAN 2:1, 2 FEET HORIZONTALLY TO ONE FOOT VERTICALLY.  
 3. 12" COMPOST SOCK SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF THE STOCKPILE AT A MINIMUM OF 5 FEET FROM THE TOE OF SLOPE.  
 4. SHOULD THE NEED ARISE WHERE ADDITIONAL STOCKPILE AREAS ARE REQUIRED, COORDINATION MUST BE APPROVED BY THE LOCAL AUTHORITY OR COUNTY.  
 5. STOCKPILE AREA MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER THE PLACEMENT OF ANY STOCKPILE MATERIAL.

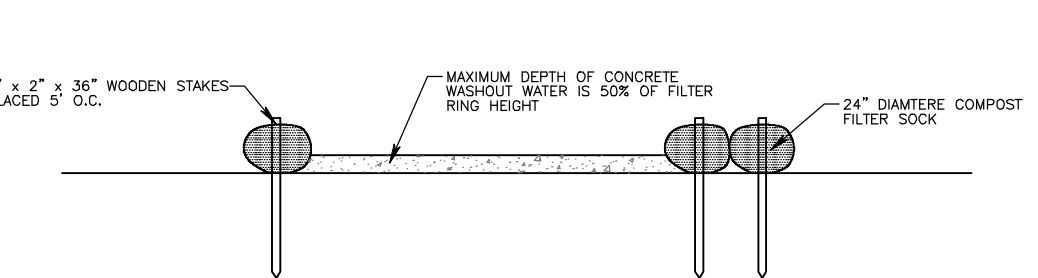
**TEMPORARY STOCKPILE AREA**  
 Not To Scale



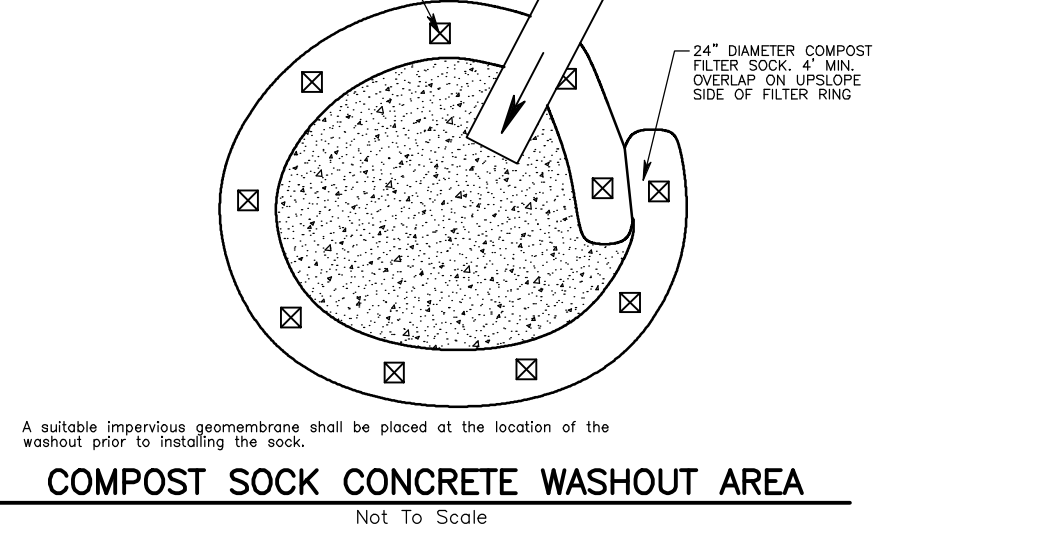
\* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE  
 REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.  
 RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.  
 MOUNTABLE 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.

**ROCK CONSTRUCTION ENTRANCE**  
 NOT TO SCALE

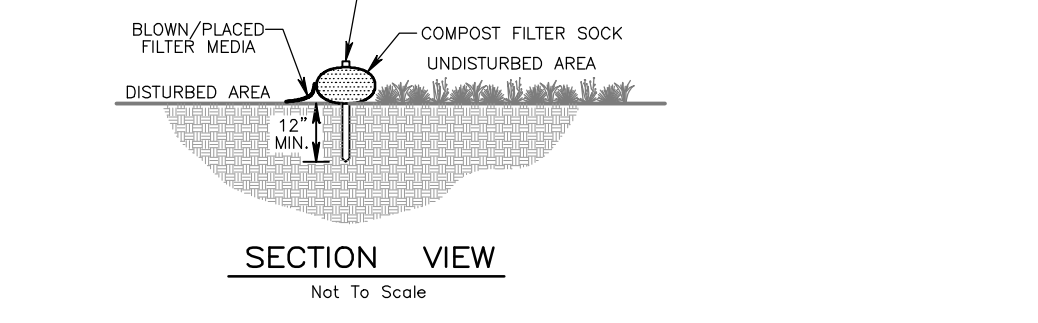
**MAINTENANCE:**  
 ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF 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.



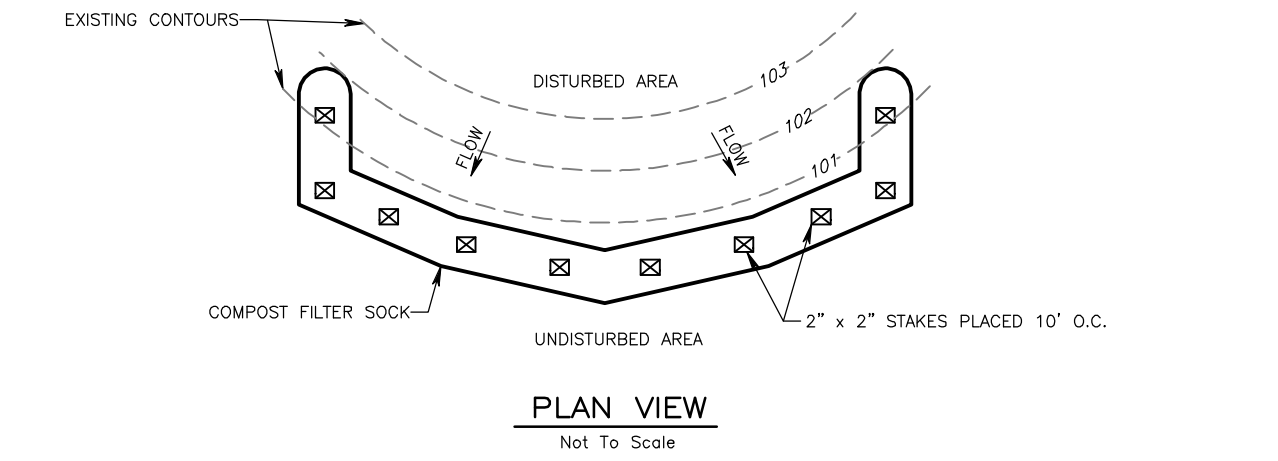
NOTES:  
 1. Install on flat grade for optimum performance  
 2. 18" diameter filter sock may be stacked onto 24" diameter stakes in pyramidal configuration for added height.



**COMPOST SOCK CONCRETE WASHOUT AREA**  
 Not To Scale

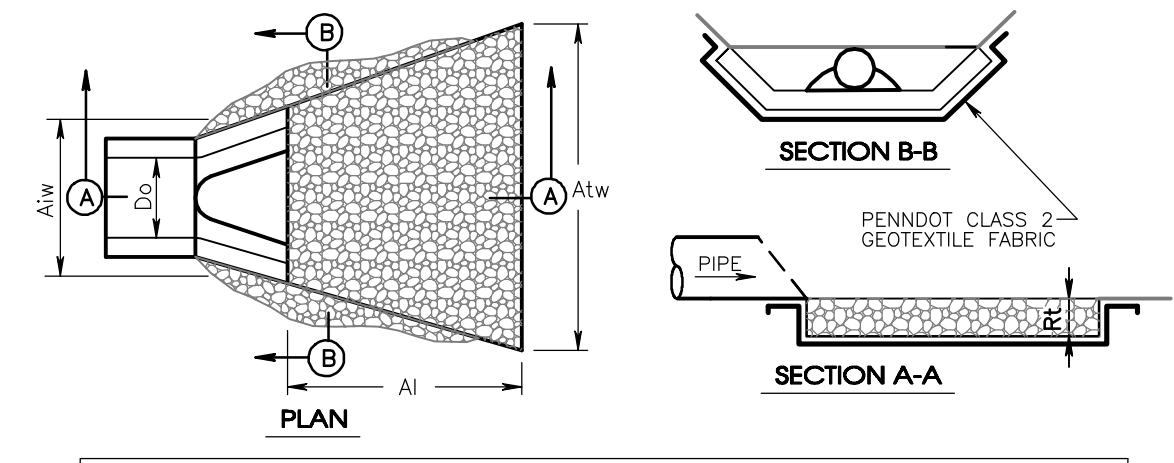


**COMPOST FILTER SOCK**  
 Not To Scale



Sock fabric shall meet standards of Table 4.1 of the Pennsylvania Department of Environmental Protection Erosion and Sediment Pollution Control Program Manual (Technical Guidance Number 363-2134-008). Compost shall meet standards of Table 4.2 of the Pennsylvania Department of Environmental Protection Erosion and Sediment Pollution Control Program Manual (Technical Guidance Number 363-2134-008). Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be extended at least 8 feet up slope at 45 degrees to the main sock alignment. Maximum slope length above any sock shall not exceed that shown on Figure 4.2 of the Pennsylvania Department of Environmental Protection Erosion and Sediment Pollution Control Program Manual (Technical Guidance Number 363-2134-008). Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.  
 Traffic shall not be permitted to cross filter sock.  
 Accumulated sediment shall be removed when it reaches half the aboveground height of the sock and disposed in the same manner described elsewhere in the plan.  
 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 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.

(PADEP EROSION and SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012)  
 (STANDARD CONSTRUCTION DETAIL #4-1)



**ENERGY DISSIPATOR SIZING DATA**

Outlet Structure No.	Pipe Dia. (in)	Tollwater Condition (Max or Min)	Q (CFS)	V <sup>2</sup> (FPS)	Riprap Size (inches)	Riprap Thickness (ft)	Length At (ft)	Initial Width At (ft)	Terminal Width At (ft)
D-07	14"x23"	MAX.	5.02	4.50	R 3	9	7.0	4.5	7.3
D-21	18"	MAX.	4.76	9.05	R 5	27	7.0	4.5	7.3

NOTE:  
 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.  
 EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.

(PADEP EROSION and SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012)  
 (STANDARD CONSTRUCTION DETAIL #3-14)  
**RIPRAP APRON OUTLET PROTECTION**  
 Not To Scale

**TABLE 4.1  
 Compost Sock Fabric Minimum Specifications**

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MPP)	Heavy Duty Multi-Filament Polypropylene (HDMPP)
Material Characteristics	Photo-degradable	Photo-degradable	Photo-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18"	12" 18"	12" 18"	12" 18"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength	26 psi	26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability & Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.	23% at 1000 hr.	100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years
Two-ply systems					
Inner Containment Netting	HDPE biaxial net				
	Continuously wound				
	Fusion-welded junctures				
Outer Filtration Mesh	3/4" x 3/4" Max. aperture size				
	Composite Polypropylene Fabric (Woven Taper and non-woven fleece mechanically fused via raddle punch)				
3/16" Max. aperture size					
Sock fabrics composed of burlap may be used on projects lasting 6 months or less					
Fitrex & JMD					

**TABLE 4.2  
 Compost Standards**

Organic Matter Content	80% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.0
Moisture Content	50% - 55%
Particle Size	98% pass through 1" screen
Soluble Salt Concentration	5.0 dg/m (mmhos/cm) Maximum
Fitrex	

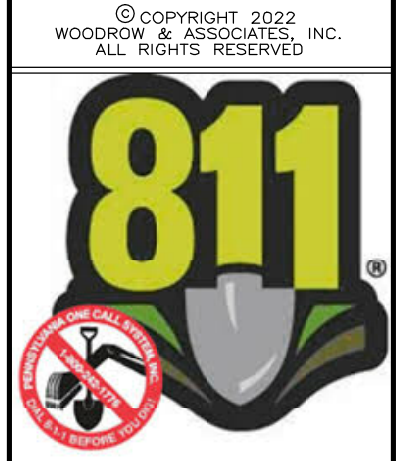
REVISIONS

NO.	DATE	DESCRIPTION
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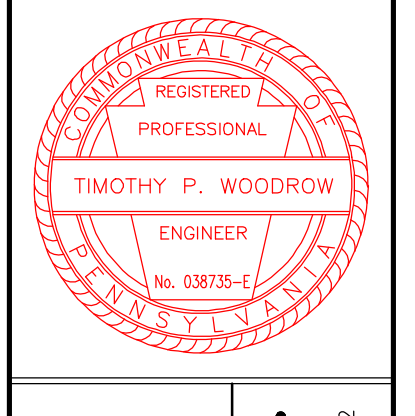
PROJECT SERIAL NUMBER FOR DESIGN:  
 2019 1291601 (Design)  
 MAY 09, 2019

Parcel Information:  
 39-00-0643-00-2 (B 18 U 70 - GAINES)  
 1500 Cedar Hill Rd  
 39-00-0646-00-8 (B 18 U 29 - STROHECKER)  
 1512 Cedar Hill Rd  
 39-00-0649-00-5 (B 18 U 29 - LYNCH)  
 1524 Cedar Hill Rd  
 Gross Area: 11.8973 Acres  
 NET Area: 11.1808 Acres

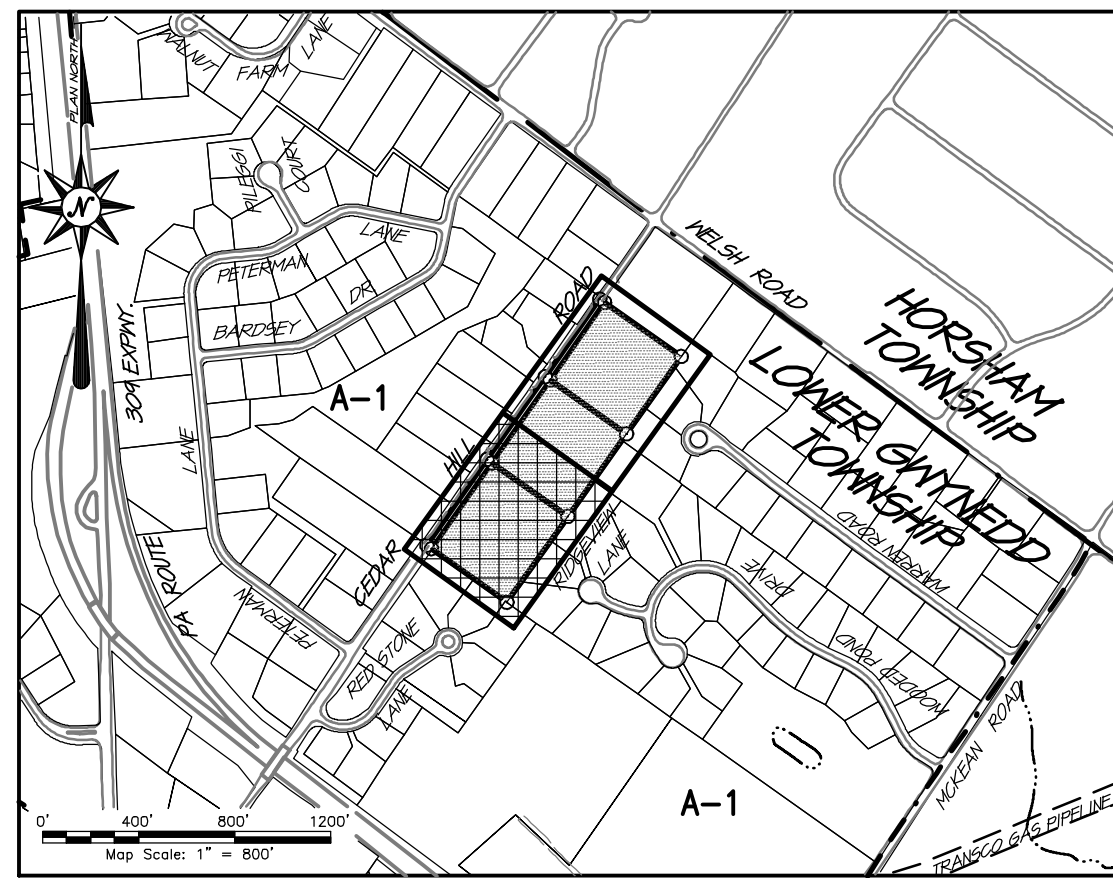
Applicant:  
 CEDAR HILL DEVELOPMENT GROUP, LLC.  
 c/o Mr. Jon Mayer  
 632 Germantown Pike  
 Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)  
**EROSION and SEDIMENTATION CONTROL DETAILS**  
 1500-1524 CEDAR HILL ROAD  
 LOWER MERION TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
**WOODROW & ASSOCIATES, INC.**  
 MUNICIPAL / CIVIL CONSULTING ENGINEERS  
 1105 N. Merion Rd., Suite 400  
 Philadelphia, PA 19102  
 Phone: (215) 546-4488  
 Web: www.woodrowinc.com



Layer List:  
 Sht13\_E&S-Det  
 Job No:  
 18-0406 D  
 Plan Date:  
 APRIL 26, 2022  
 Sheet No:  
 13 of 25



LOCATION MAP

GENERAL PLAN NOTES

SEE RECORD PLAN FOR ALL EXISTING FEATURES AND GENERAL DEVELOPMENT NOTES.

- Sediment laden runoff is an anticipated construction waste. Due to the implementation of numerous BMPs around the project site, there are no anticipated project wastes other than clean water runoff once the site is stabilized and complete.
- The receiving watershed for this development is an unnamed tributary to Park Creek. Park Creek is classified by Title 25 Environmental Resources Chapter 93 as WWF & M.
- The project site can be referenced on the Ambler U.S.G.S. Quadrangle Map.
- The shown BMPs are proposed to preserve the integrity of stream channels and maintain and protect the physical, biological, and chemical qualities of the receiving stream through the use of the proposed BMPs to capture, slow, and cool runoff before releasing it in a predevelopment direction but at a reduced flow rate and volume.
- The proposed BMPs shall prevent an increase in the rate and volume of stormwater runoff to the greatest extent possible by capturing, slowing, and cooling runoff to the greatest extent possible.
- Impervious cover has been minimized to the greatest extent possible by limiting proposed impervious coverage solely to the needs of the proposed development.
- Protection of existing drainage features and existing vegetation has been maximized to the greatest extent possible by placing tree protection fencing around existing vegetation to be preserved.
- Land clearing and grading has been minimized to the greatest extent possible by staking and flagging the limit of disturbance as the first step in the construction sequence to avoid any unnecessary disturbance and limiting disturbance solely to the areas of proposed improvement.
- Soil compaction has been minimized to the greatest extent possible by scarifying all areas of new topsoil placement, and deeper aeration required in areas that appear to be compacted.
- Through the use of the proposed BMPs, the flow rate and volume of runoff has been reduced when compared to predevelopment conditions; therefore, as designed, the project site will preserve the integrity of stream channels within the watershed and help to maintain and protect the physical, biological, and chemical qualities of the receiving stream.
- Any proposed impervious areas, Roofs, Pavement and Sidewalk areas, etc., have the potential to increase thermal impacts to the watershed. Through the use of the proposed BMPs identified on the Plan and Specifications for this project, runoff is captured, slowed, and cooled to the greatest extent possible; thereby reducing the potential for thermal impacts to the watershed as much as possible.

SEDIMENT DISPOSAL:

Silt removed from permanent BMPs shall be disposed of on-site in landscaped areas located outside the 100 year flood plains, wetlands, steep slopes and drainage swales. Areas of sediment disposal shall be considered a critical vegetation area requiring immediate stabilization.

All BMP shown above require inspection weekly and after each runoff event. All required repairs and or replacement of BMPs must be done immediately.

RECYCLING and DISPOSAL METHODS:

The operator shall remove from this site, recycle, or dispose of all building materials and wastes in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes at this site.

There are no naturally occurring geologic formations or soil conditions that could cause pollution after the earth disturbance activities are completed and the project site is fully stabilized.

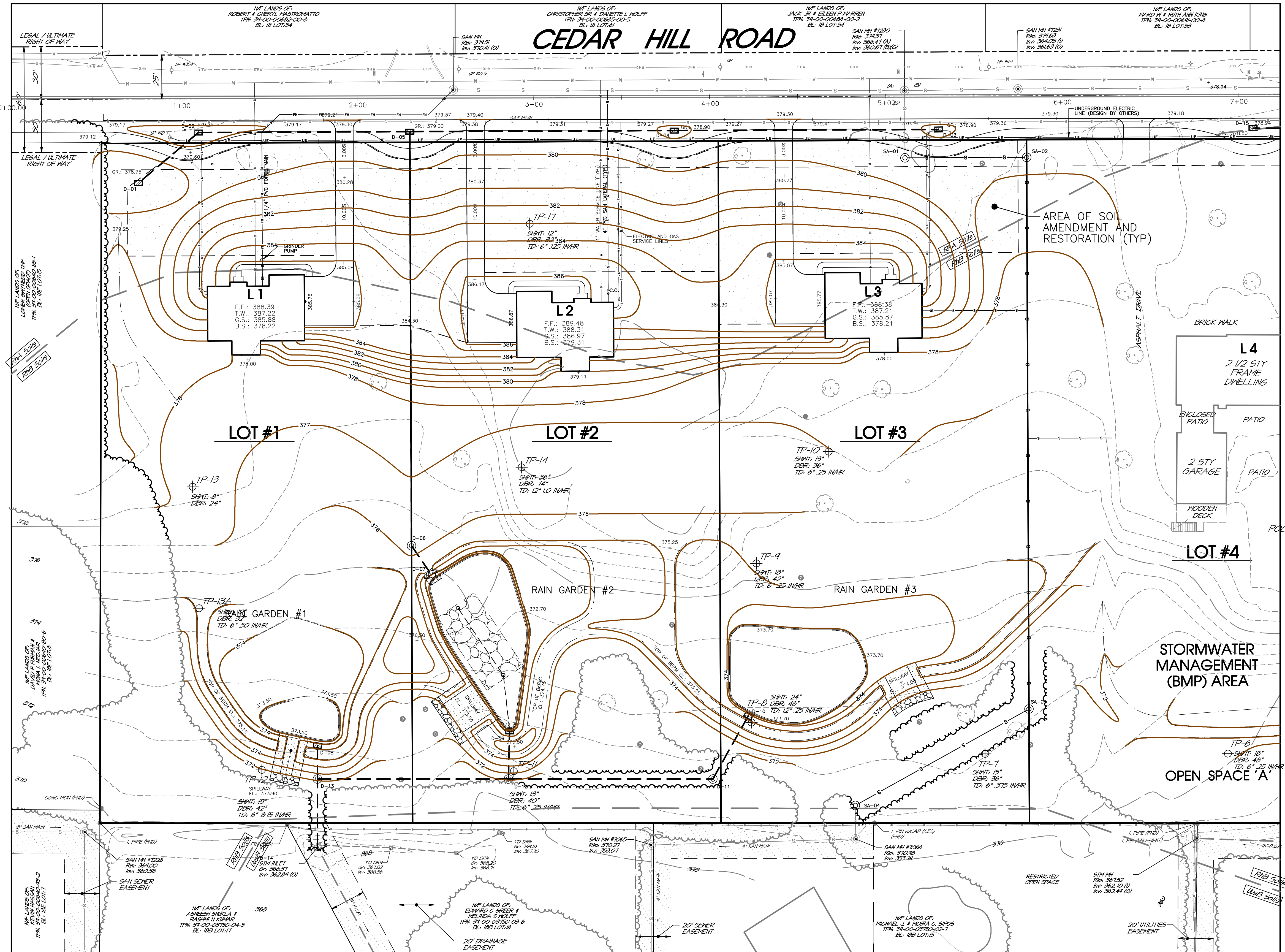
Upon completion and stabilization of proposed improvements, the homeowner, or other designated entity, responsible for perpetual operation and maintenance of the constructed BMPs shall remove any sediment, trash, debris or other such refuse collected within these BMPs and dispose of solid materials in accordance with all local, state, and governmental regulations.

ACKNOWLEDGEMENT:

I/WE, \_\_\_\_\_, ACKNOWLEDGE THAT THE STORMWATER MANAGEMENT FACILITIES SHOWN ON THESE PLANS CAN ONLY BE ALTERED OR REMOVED AFTER APPROVAL OF A REVISED PLAN BY THE APPLICABLE MUNICIPALITY AND COUNTY CONSERVATION DISTRICT. OWNER ALSO AGREES TO ALL ABOVE LISTED BMP MAINTENANCE PROGRAM REQUIREMENTS.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

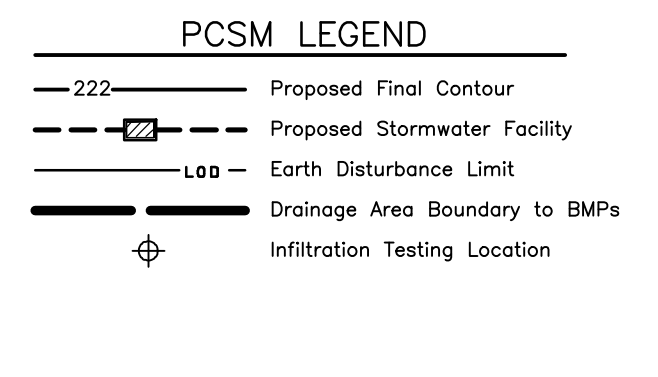
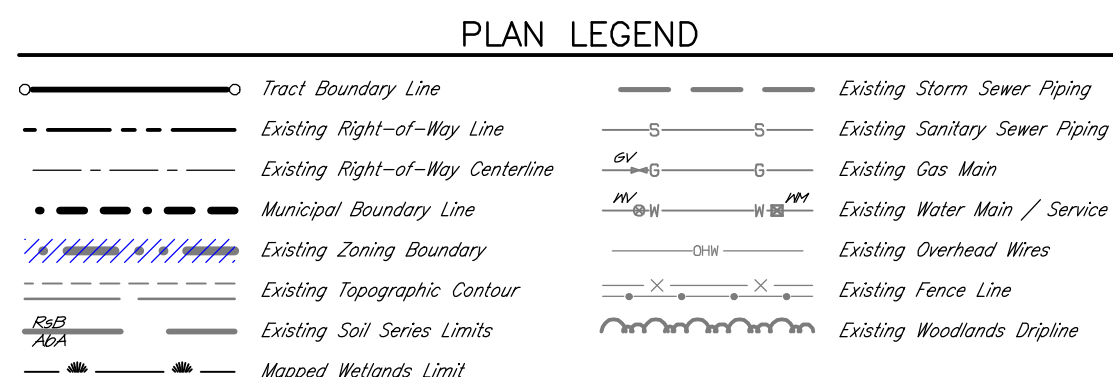
A licensed professional or the PCSM designee shall be present on-site during construction of the Rain Garden 'A', Rain Garden 'B', and all soil amended areas to ensure proper construction sequences are followed.



INFILTRATION TESTING RESULTS

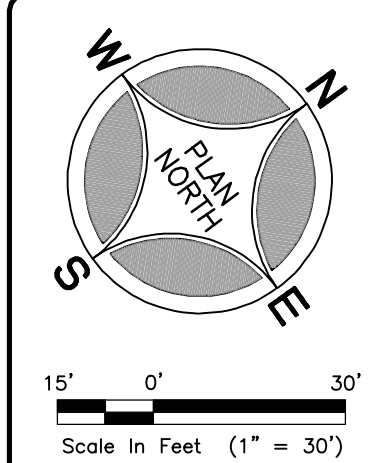
Test Pit No.:	Existing Ground Elevation at Test Pit:	Depth/Elevation of Infiltration Test:	Depth/Elevation of Water:	Depth/Elevation of Bedrock:	Bottom Elevation of BMP in this location:	Measured Infiltration Rate:
TP-1	361.60	6" / 361.10	13" / 360.52	60" / 356.60	R.G. #6: 362.50	0.375 in/hr
TP-2	366.00	6" / 365.50	8" / 365.33	58" / 361.17	N/A	0.75 in/hr
TP-3	371.10	6" / 370.60	12" / 370.10	32" / 368.43	N/A	0.375 in/hr
TP-4	373.90	6" / 373.40	18" / 372.40	48" / 369.90	N/A	0.25 in/hr
TP-5	367.75	6" / 367.25	15" / 366.50	43" / 364.17	R.G. #4: 368.50	0.625 in/hr
TP-6	370.10	6" / 369.60	18" / 368.60	48" / 366.10	N/A	0.25 in/hr
TP-7	372.05	6" / 371.55	15" / 370.80	36" / 369.05	N/A	0.375 in/hr
TP-8	372.70	12" / 371.70	24" / 370.70	48" / 368.70	R.G. #3: 372.70	0.25 in/hr
TP-9	375.20	6" / 374.70	18" / 373.70	42" / 371.70	N/A	0.25 in/hr
TP-10	376.90	6" / 376.40	13" / 375.82	36" / 373.90	N/A	0.25 in/hr
TP-11	370.35	6" / 369.85	13" / 369.27	40" / 367.02	R.G. #2: 370.70	0.25 in/hr
TP-12	371.70	6" / 371.20	15" / 370.45	42" / 368.20	R.G. #1: 372.50	0.875 in/hr
TP-13	378.20	N/A	8" / 377.53	24" / 376.20	N/A	N/A
TP-13A	374.70	6" / 377.70	12" / 373.70	32" / 372.03	R.G. #1: 372.50	0.50 in/hr
TP-14	380.05	12" / 379.05	36" / 377.05	74" / 373.88	N/A	1.0 in/hr
TP-15	374.85	6" / 374.35	15" / 373.60	40" / 371.52	N/A	0.375 in/hr
TP-16	377.25	6" / 376.75	12" / 376.25	52" / 372.92	N/A	0.0 in/hr
TP-17	379.65	6" / 379.15	12" / 378.65	32" / 376.98	N/A	0.125 in/hr

\* Testing conducted by Schetter Environmental between July 30 - August 6, 2019 for Test Pits TP-1 through TP-14 and additional testing on November 5, 2019 for Test Pit TP-15 through TP-17.



REVISIONS

NO.	DATE	DESCRIPTION
1	07/08/22	REVISED TO REFLECT NEW DESIGN CONCEPT



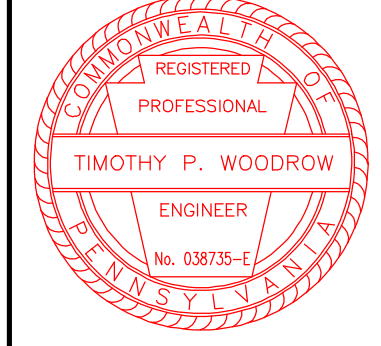
PROJECT SERIAL NUMBER FOR DESIGN: 2019 1291601 (Design) MAY 09, 2019

- Parcel Information:
- 39-00-00643-00-2 (B 18 U 70 - GAINES) 1500 Cedar Hill Rd
  - 39-00-00646-00-8 (B 18 U 28 - STROCKNER) 1512 Cedar Hill Rd
  - 39-00-00649-00-5 (B 18 U 29 - LYNCH) 1524 Cedar Hill Rd

Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

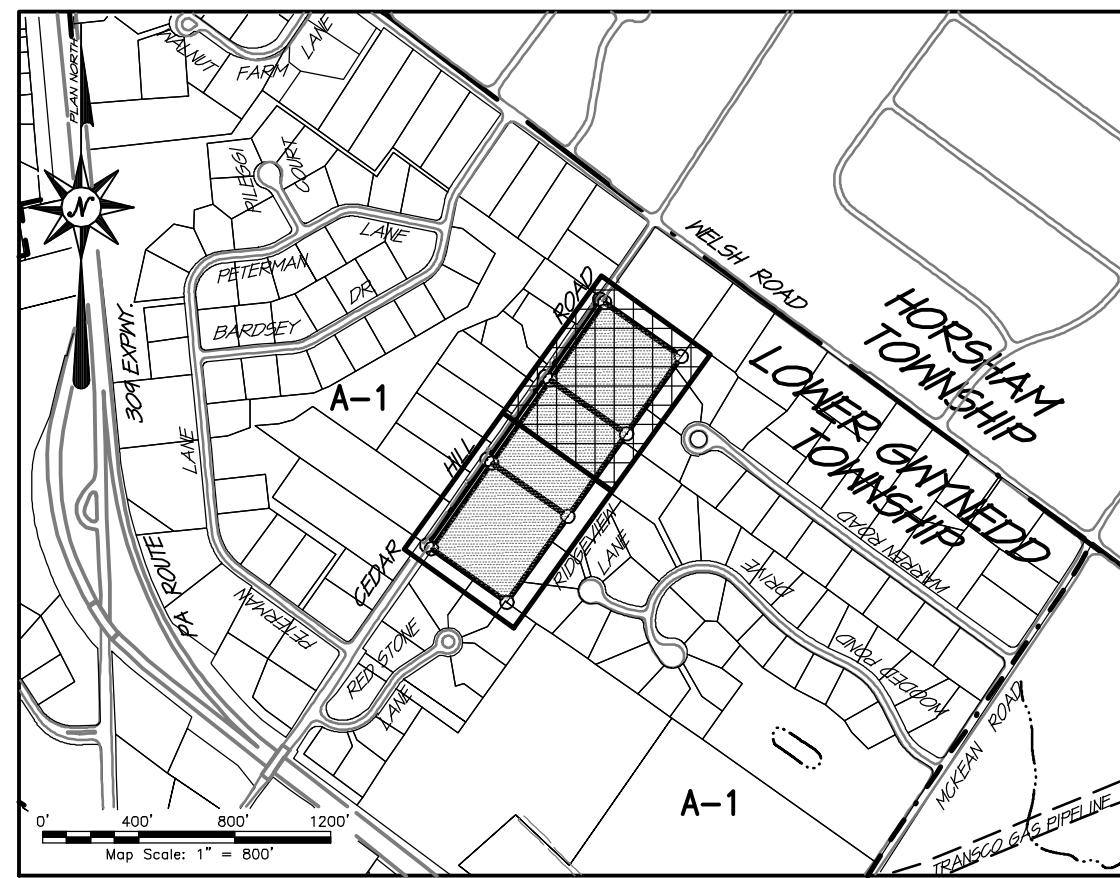
Applicant: CEDAR HILL DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer

632 Germantown Pike  
Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)  
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - A  
1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
WOODROW & ASSOCIATES, INC.  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. 2ND ST., SUITE 200, PHILADELPHIA, PA 19102  
Phone: (215) 542-6488  
Web: www.woodrowinc.com

Layer List: Sht14\_PostCon-A  
Job No: 18-0406 D  
Plan Date: APRIL 26, 2022  
Sheet No:



LOCATION MAP

B.M.P. MAINTENANCE PROGRAM

**GENERAL NOTES:**  
 The stormwater detention facility shown hereon is a permanent B.M.P. structure and is not to be removed, altered or reconfigured in any way without the approval of the applicable municipality and/or the local County Conservation District and D.E.P.

All B.M.P.'s such as this basin and conveyance system require yearly inspection and maintenance to ensure the B.M.P.'s are functioning as designed. Maintenance of the system will include the removal of any debris and floating material from the system. An inspection report should be provided by a credible Engineering firm under the direction of a Licensed Engineer. The owners, their successors, or its assigns, shall assume all responsibility for the cost associated with the inspection, cleaning of the system, engineering fees and ultimately any costs associated with recommended repairs, and/or replacement of said facilities. Copies of the inspection report shall be forwarded to the applicable municipality for review and record in keeping with State regulations.

During the construction phase of the project, the permittee shall be responsible for the proper construction, stabilization, and maintenance of all erosion and sedimentation control measures. The permittee shall also be responsible for the proper construction, operation and maintenance of all post construction stormwater management BMPs identified in the PCSM Plan. The applicant, its designs will assume responsibility for the operation and maintenance responsibilities of all post construction stormwater management BMPs.

If at any point the Basin fails to drain the storage volume within 72 hours, the remaining water shall be immediately pumped into the Basin Outlet Structure and a certified professional contacted to investigate the cause and recommend a solution to the infiltration failure.

Per PaCode §102.8(m)(2) - For any property containing a PCSM BMP, the permittee or co-permittee shall record an instrument with the recorder of deeds which will assure disclosure of the PCSM BMP and the related obligations in the ordinary course of a title search of the subject property. The recorded instrument must identify the PCSM BMP, provide for necessary access related to long-term operation and maintenance for PCSM BMPs and provide notice that the responsibility for long-term operation and maintenance of the PCSM BMP is a covenant that runs with the land that is binding upon and enforceable by subsequent grantors, and provide proof of filing with the notice of termination under §102.7(d)(5).

**MAINTENANCE NOTES & SCHEDULE:**

- Maintenance of the Rain Garden areas: (Semi-annually)

The owner, its assigns shall be responsible to ensure that the Rain Gardens are in operational condition, particularly the condition of the embankments, outlet structures, trough racks, risers, aprons, inlets, spillways, and other safety related items. While vegetation (seed mixes, plugs, and plantings) are being established, pruning and weeding may be required. Inspection shall be completed quarterly and after major rainfall events. Sediment removal shall be performed when the rain gardens are completely dry. Any removed sediment should be disposed of properly, and once removed, disturbed areas need to be immediately restabilized and revegetated. Debris may also need to be removed every year. Perennial plantings, if utilized, may be cut down at the end of the growing season. Mulch, if utilized, should be re-spread when erosion is evident and be replenished as needed. Once every two to three years the entire area may require mulch replacement. Maintain all Rain Garden berm and perimeter areas on a weekly basis. DO NOT apply pesticides or fertilizers where stormwater will be conveyed. The berm and outside embankment shall be mowed regularly to maintain a lawn condition. Mow interior embankment areas and floor areas twice a year. Once a year mowing is sufficient to keep a meadow from reverting to woodlands, but may not be sufficient to discourage woody seedlings, brambles, invasive vines and multiflora rose. Mowing more than twice a year will only encourage cool season grass species and create additional turf areas. Recommended dates for mowing are early July for the first cutting and a second cutting in March up to April 15th. This will maximize bird and animal habitat and promote desirable and attractive vegetation. Mow these areas when the ground is dry and at a height of 6"-8" during the dormant season. Monitor for intrusion by invasive plants such as thistle. Eliminate invasives by spot mowing, spot spraying, or wick application of appropriate herbicide, or manual or mechanical pulling. A combination of strategies may be the best approach. Trees and shrubs should be inspected twice a year to evaluate health. During periods of extended drought, Basin/Rain garden areas may require watering. Inflow and outflow structures shall be inspected at least two times per year for erosion. Rip-rap areas at these structures shall be replaced to design specifications if necessary.

**Maintenance of the Bio-Planting Areas:**

**1ST YEAR** - New plantings shall be closely monitored on a weekly basis during the 1st year of establishment in order to quickly identify any potential problems with the new growth. Any areas of discovered erosion shall be immediately fixed and re-seeded with a permanent seed mixture. Any plantings that die off within the first year shall be immediately replaced. All proposed plantings shall be routinely watered during the first year in order to promote vigorous growth and establishment of all bio-soils and stiling areas.

**SEMI-ANNUALLY AFTER 1ST YEAR GROWTH ESTABLISHMENT** - Monitor bio-planting areas for intrusion by invasive plants such as thistle. Eliminate invasives by spot mowing, spot spraying, or wick application of appropriate herbicide, or manual pulling. A combination of strategies may be the best approach. Re-stabilize any areas of discovered erosion immediately.

- Maintenance of the Seepage Bed within Rain Garden 'B': (annually)

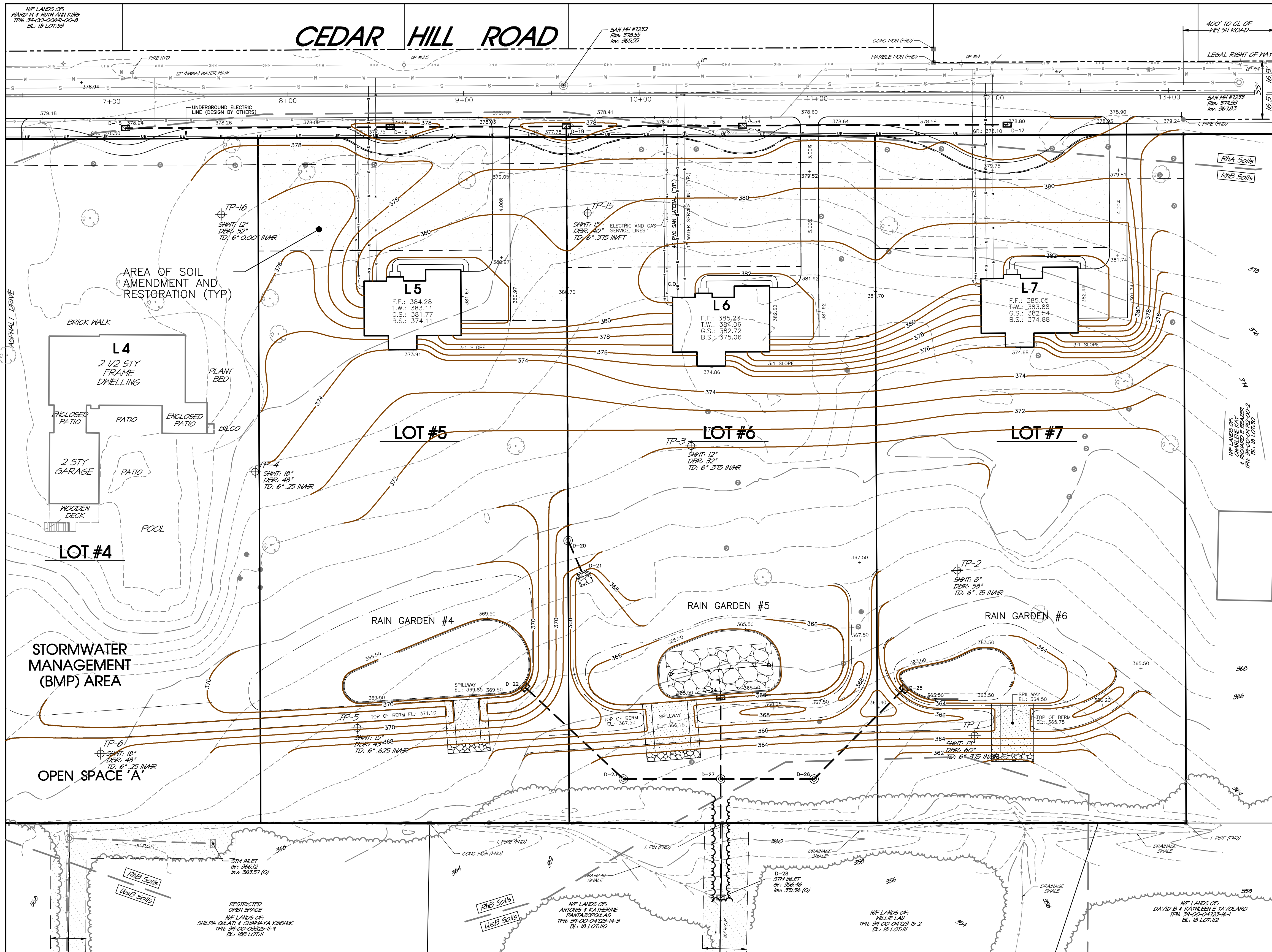
The owner, its assigns shall be responsible to flush the Seepage Bed Area annually through the proposed clean-outs and remove any discharged sediment or debris that is flushed into the Rain Garden Outlet Structure.

- Maintenance of the Storm Sewer Collection System: (After each runoff event)

The owner, its assigns shall be responsible to ensure that the storm sewer collection and lawn drain system is free and clear of any debris. The system shall be inspected after each runoff event and cleaned if required.

- Maintenance to be done on an "As Needed" basis for the entire project site:

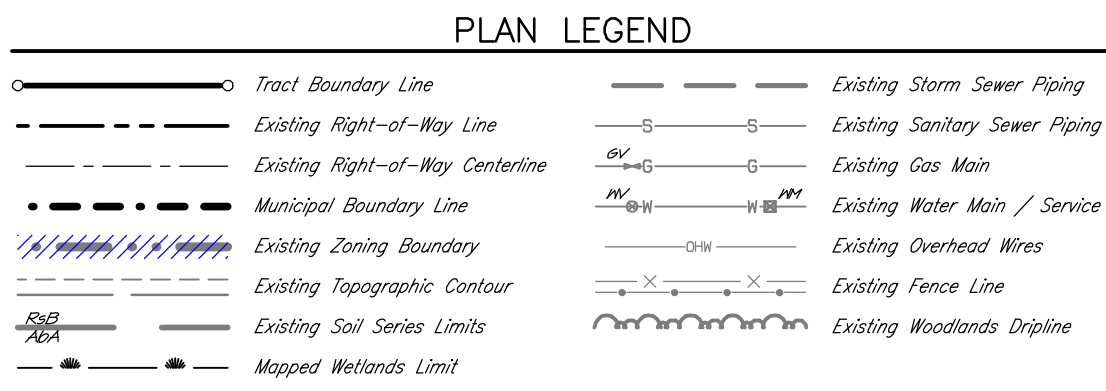
- Plant alternative grass species in the event of unsuccessful establishment of design grass.
- Re-seed bare areas and install appropriate erosion control measures when native soil is exposed or erosion channels are forming.
- Rototill and replant sods when draw down time is more than 48 hours.
- Water during dry periods, fertilize and apply pesticides only when absolutely necessary.



INFILTRATION TESTING RESULTS

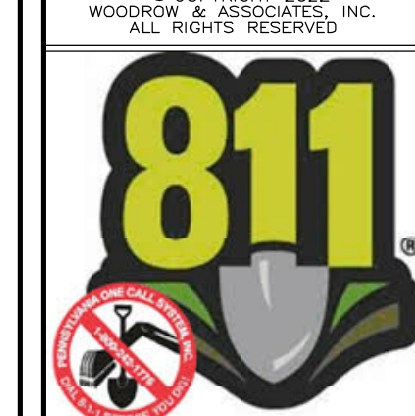
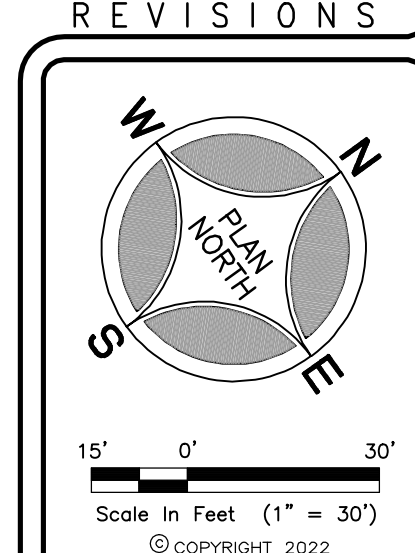
Test Pit No.:	Existing Ground Elevation at Test Pit:	Depth/Elevation of Infiltration Test:	Depth/Elevation of Water:	Depth/Elevation of Bedrock:	Bottom Elevation of BMP in this location:	Measured Infiltration Rate:
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TP-5	367.75	6" / 367.25	15" / 366.50	43" / 364.17	R.G. #4: 368.50	0.625 in/hr
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TP-8	372.70	12" / 371.70	24" / 370.70	48" / 368.70	R.G. #3: 372.70	0.25 in/hr
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TP-13A	374.70	6" / 377.70	12" / 373.70	32" / 372.03	R.G. #1: 372.50	0.50 in/hr
TP-14	380.05	12" / 379.05	36" / 377.05	74" / 373.88	N/A	1.0 in/hr
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TP-16	377.25	6" / 376.75	12" / 376.25	52" / 372.92	N/A	0.0 in/hr
TP-17	379.65	6" / 379.15	12" / 378.65	32" / 376.98	N/A	0.125 in/hr

\* Testing conducted by Schetter Environmental between July 30 - August 6, 2019 for Test Pits TP-1 through TP-14 and additional testing on November 5, 2019 for Test Pit TP-15 through TP-17.



REVISIONS

NO.	DATE	DESCRIPTION
1	07/26/22	REVISED TO REFLECT NEW DESIGN CONCEPT

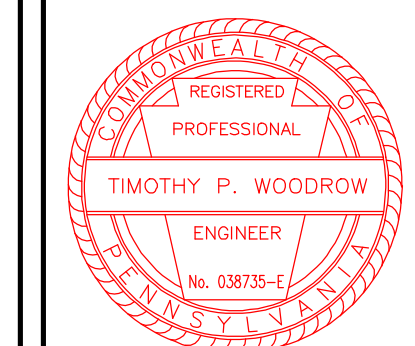


PROJECT SERIAL NUMBER FOR DESIGN:  
 2019 1291601 (Design)  
 MAY 09, 2019

- Parcel Information:
- 39-00-00643-00-2 (B 18 U 70 - GAINES) 1500 Cedar Hill Rd
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  - 39-00-00649-00-5 (B 18 U 29 - LYNCH) 1524 Cedar Hill Rd
- Gross Area: 11.8973 Acres  
 Net Area: 11.1808 Acres

Applicant:  
**CEDAR HILL DEVELOPMENT GROUP, LLC.**  
 c/o Mr. Jon Mayer

632 Germantown Pike  
 Lafayette Hill, PA 19444



**WOODROW & ASSOCIATES, INC.**  
 REGISTERED PROFESSIONAL ENGINEER  
 MUNICIPAL / CIVIL CONSULTING ENGINEERS  
 1105 North Merion Road, Suite 400  
 Philadelphia, PA 19104  
 Phone: (215) 542-6488  
 Web: www.woodrowinc.com

Layer List:  
 Sht15\_PostCon-B  
 Job No: 18-0406 D  
 Plan Date: APRIL 26, 2022  
 Sheet No:

### CONSTRUCTION SEQUENCE

At least 7 days before starting any earth disturbance activities, the operator shall invite all contractors involved in those activities, the landowner, all appropriate municipal officials, the erosion and sediment control plan preparer, the designated Licensed Professional, and the local Conservation District to an on-site meeting. Also, at least 3 days before starting any earth disturbance activities, all contractors involved in those activities shall notify the Pennsylvania One Call Incorporated System at 811 or 1-800-242-1776 for buried utilities locations.

All earth disturbance activities shall proceed in accordance with the outlined sequence on these plans. Each stage shall be completed before any following stage is initiated; clearing and grubbing shall be limited only to those areas described in each stage. 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 Construction Sequence for that stage or phase have been installed and are functioning as described in this document. Deviation from this sequence must be approved in writing from the local Conservation District or by DEP prior to implementation.

Upon temporary cessation of an earth disturbance or any stage or phase of an activity where a cessation of earth disturbance activities exceed 4 days, the site shall be immediately seeded, mulched or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities.

Per NPDES requirements "Upon the installation or stabilization of all perimeter sediment control BMPs and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the Department or authorized conservation district."

#### GENERAL SITE CONSTRUCTION:

1. Install Rock Construction Entrance along Cedar Hill Road as shown and detailed on the plans. Ensure construction entrances are of least 100-feet long to comply with ABCT (Anti-Deposition Best Available Combination of Technologies) requirements. Stakeout and flag the Limit of Disturbance as shown on the plans. Install Tree Protection Fencing as shown and detailed on the plans.
2. Install Compost Filter Socks CS-01 through CS-10 as shown and detailed on the plans and according to all manufacturer specifications.
3. Remove all existing features noted, strip and stockpile topsoil in the designated topsoil stockpile areas and structural fill in a separate stockpile area as shown and detailed on the plans. Install 12" Compost Filter Sock on the downslope side of all stockpile areas as shown and detailed on the plans. Stabilize stockpile areas immediately with a temporary seed and mulch mixture applied at the recommended rates. Stabilize all disturbance immediately with a temporary seed and mulch mixture applied at the recommended rates.
4. Begin rough grading of the project site as necessary for building pads and Rain Garden construction. All individual lot pads shall be set a minimum of 4-foot below proposed finished floor of the dwelling.
5. Begin installation of sanitary main relocation from SA-01 to SA-04, including the lateral connection for the existing home to remain, to ensure sewer service to this lot has the least length of disruption as possible. Stabilize all disturbance immediately with a permanent seed and mulch mixture applied at the recommended rates.
6. Begin installation of all individual lot sanitary laterals and water service connections to the existing mains within Cedar Hill Road as shown and detailed on the plans. Install 1" force-main piping as shown and detailed on the plans. All utilities shall be stubbed at the right-of-way line for future home connection. All disturbance to Cedar Hill Road shall immediately be stabilized and repaved as shown and detailed on the plans. All earth disturbance associated with the utility installation shall be immediately stabilized with a permanent seed and mulch mixture applied at the recommended rates.
7. **CRITICAL STAGE:** Upon completion of all utility installation, commence with construction of all proposed storm inlets, piping, and Rain Gardens as shown and detailed on the plans. An inlet filter bag shall be placed in each inlet as it is installed. Structural fill used to construct the Rain Garden berms shall be taken from the previously stockpiled structural fill areas. Berm construction (i.e., fill areas) shall conform to all referenced list situations. If Rain Garden berm construction requires more fill than obtained through initial stripping of the project site, additional fill may be obtained from the proposed foundation areas. Amend Sols within Rain Garden Areas as shown and detailed on the plans. Install the Stone Bed and perforated under-drain in the Rain Gardens on Lots 2 and 3 as shown and detailed on the plans. Install all Rain Garden Outlet Structures as shown and detailed on the plans. Complete Rain Garden Spillway Areas as shown and detailed on the plans. Complete storm pipe connection to existing off-site storm piping as shown, detailed, and profiled on the plans. Immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates. Upon completion and stabilization of all Rain Gardens, install Compost Filter Socks (CS-11 through CS-16) as shown on the Erosion Control - Phase 2 plans shall be installed to prohibit any sediment-laden runoff from entering the completed BMPs. Install all proposed plantings to the interior of the Rain Gardens as shown and detailed on the plans.
8. Complete general site grading and pad all areas for future individual home construction as shown on the plans. Immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates.
9. Install all remaining proposed plantings within the Rain Gardens as shown and detailed on the plans. Immediately stabilize any disturbance with a permanent seed and mulch mixture applied at the recommended rates.
10. Remove the Rock Construction Entrance and immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates.
11. Vegetated areas shall be considered permanently stabilized when a uniform 70% vegetative cover or erosion resistant perennial species have been achieved, or the disturbed area is covered with an acceptable BMP which permanently minimizes accelerated erosion and sedimentation. Until such time as this standard is achieved, interim stabilization measures and temporary erosion and sediment control BMPs that are used to treat project runoff may not be removed. If soil areas appear to be compacted, scarify 6 to 12 inches prior to seeding. New topsoil shall be placed with a minimum depth of 6 inches.
12. Upon completion of all Rain Gardens, all utility installations, and general site grading to create future pad sites for individual home construction, proceed to "Individual Lot Construction" sequence to complete the lots separately. Compost Socks CS-01 through CS-10 can be removed upon complete and permanent stabilization of all Rain Garden areas.

#### INDIVIDUAL LOT CONSTRUCTION:

14. Ensure Compost Socks (CS-11 through CS-16) installed upslope of the completed Rain Gardens are still installed and functioning per plan, and if necessary, replace or repair any damaged socks to prevent any sediment-laden runoff from individual lot construction from entering the completed Rain Garden areas.
15. Install Rock Construction Entrance at the proposed individual driveway connections to Cedar Hill Road.
16. Begin construction of lot driveway and proposed home.
17. Finalize all lot grading associated with the construction of the proposed home. Install all remaining lot landscaping as shown and detailed on the plans. Immediately stabilize all disturbance with a permanent seed and mulch mixture.
18. Complete all utility connections to the previously installed stubs at the right-of-way and finalize home construction. Install concrete sidewalk and finalize lot driveway. Immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates.
19. Upon completion of all site construction, including all individual lot construction, and complete site stabilization, contact the Montgomery County Conservation District representative to schedule a site-inspection for removal of all remaining erosion control devices.
20. Upon authorization from the Montgomery County Conservation District representative that all erosion control devices may be removed, dispose of any accumulated sediment in the areas designated for "Sediment Disposal". Remove all Compost Socks and Inlet Filter Bags from the project site. Remove any tree protection fencing. Immediately stabilize any disturbance with a permanent seed and mulch mixture applied at the recommended rates.
21. Within 30 days after the completion of earth disturbance activities authorized by the NPDES permit, including the permanent stabilization of the site and proper installation of PCSM BMPs in accordance with the approved PCSM Plan, or upon submission of the NOI if sooner, the permittee shall file with the department or authorized conservation district a statement signed by a licensed professional and by the permittee certifying that work has been performed in accordance with the terms and conditions of the NPDES permit and the approved E&S and PCSM Plans. Complete certificates are needed to ensure that all work has been performed in accordance with the terms and conditions of the NPDES permit and the approved E&S and PCSM Plans.

### STANDARD RAIN GARDEN INDIVIDUAL CONSTRUCTION SEQUENCE

\*per PA DEP BMP Manual - Chapter 6.4.5

1. Construct Rain Garden Outlet Structure, Anti-Seep Collar, berm, and spillway areas as shown and detailed on the plans. Immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates.
2. Complete and stabilize all upslope earth disturbance from the bottom Rain Garden area prior to excavation for the Basin Sols Mix area. If necessary, install upslope Compost Filter Sock as shown and detailed on the plans to prohibit any sediment-laden runoff from entering the area of excavation.
3. Excavate Rain Garden area for installation of the Basin Sols Mixture. The existing subgrade under the Basin Sols Mixture area should NOT be compacted or subject to excessive construction equipment traffic prior to soil placement. Where erosion of subgrade has caused accumulation of fine materials and/or surface ponding, this material should be removed with light equipment and the underlying soils scarified to a minimum depth of 6 inches with a York Rake (or equivalent) and light tractor. All fine grading should be done by hand.
4. Finish excavation of Basin Sols Mixture to proper depth as shown and detailed on the plans. If the subsoil appears to be compacted, the subsoil should be light equipment scarified to a minimum depth of 20 inches (8 inches for minor compaction).
5. Backfill Rain Garden with Basin Sols Mixture as shown on the plans and specifications. Overfilling is recommended to account for settlement. Light hand tamping is acceptable if necessary.
6. Upon completion of the placement of the Basin Sols Mixture, presack all soil prior to planting vegetation as shown and detailed on the plans. Immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates. Water all Rain Garden areas as necessary to establish vigorous and healthy vegetation growth.
7. If not already installed, place upslope Compost Filter Sock as shown and detailed on the plans above the completed Rain Garden to prohibit any sediment-laden runoff from entering this area.

### MANAGED-RELEASE RAIN GARDEN INDIVIDUAL CONSTRUCTION SEQUENCE

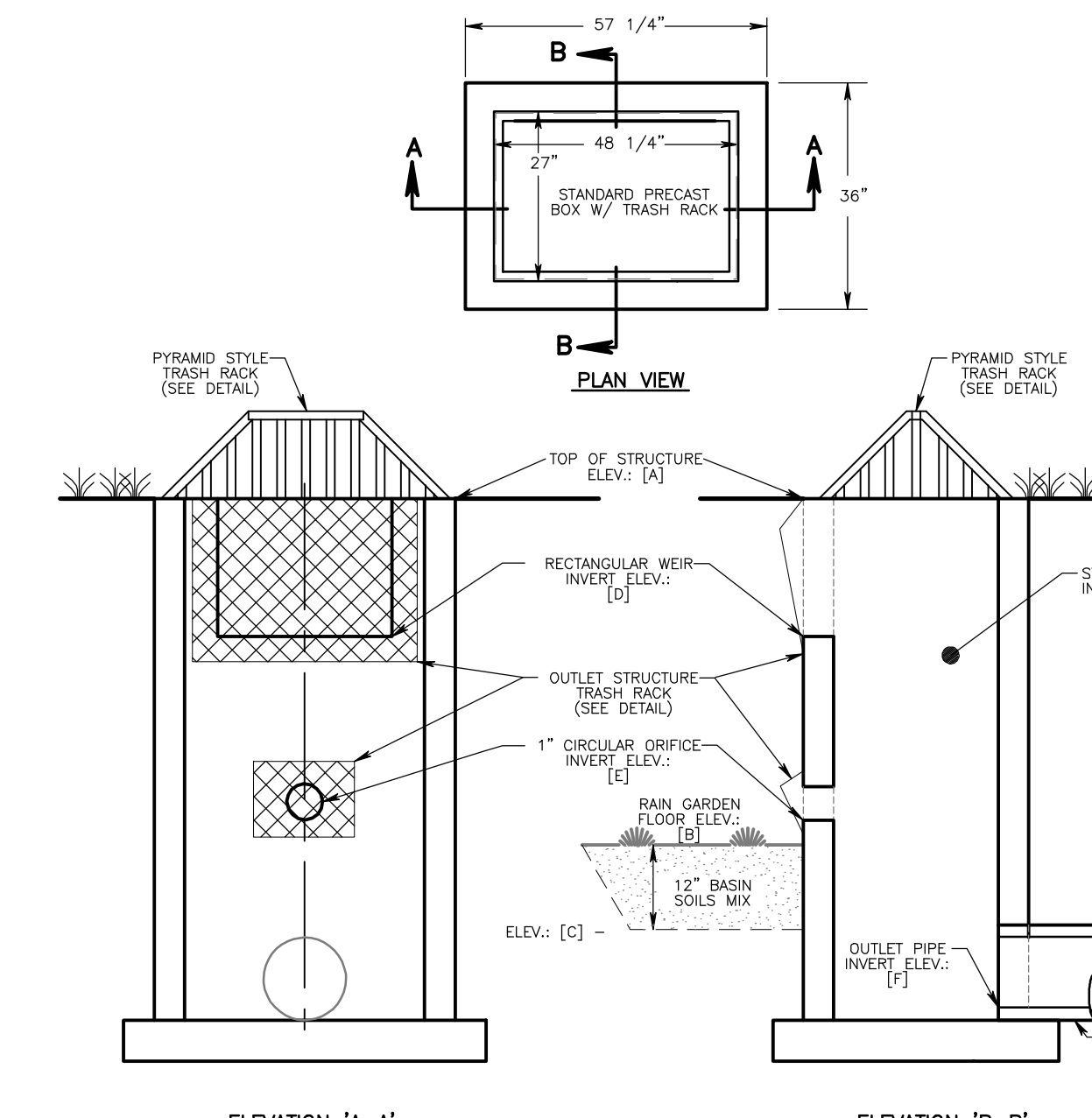
\*per PA DEP BMP Manual - Chapter 6.4.5

1. Construct Rain Garden Outlet Structure, Anti-Seep Collar, berm, and spillway areas as shown and detailed on the plans. Immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates.
2. Complete and stabilize all upslope earth disturbance from the bottom Rain Garden area prior to excavation for the Seepage Bed area. If necessary, install upslope Compost Filter Sock as shown and detailed on the plans to prohibit any sediment-laden runoff from entering the area of excavation.
3. Excavate Rain Garden area for installation of the subsurface Seepage Bed. The existing subgrade under the Seepage Bed area should NOT be compacted or subject to excessive construction equipment traffic prior to geotextile and stone bed placement.
4. Where erosion of subgrade has caused accumulation of fine materials and/or surface ponding, this material should be removed with light equipment and the underlying soils scarified to a minimum depth of 6 inches with a York Rake (or equivalent) and light tractor. All fine grading should be done by hand. All stone bed bottoms should be at level grade.
5. Excavate areas of Seepage Bed and Under-Drain placement as shown and detailed on the plans. Geotextile and bed aggregate should be placed immediately after approval of subgrade preparation and installation of perforated under-drain structures. Geotextile should be placed in accordance with manufacturer's standards and recommendations. Adjacent strips of geotextile should overlap a minimum of 16 inches. It should also be secured at least 4 feet outside of the bed area in order to prevent any sediment-laden runoff from entering the stone bed. This edge strip should remain in place until all bare soils contiguous to the stone beds are stabilized and vegetated.
6. Clean-washed, uniformly graded aggregate should be placed in the bed in maximum 8 inch lifts. Each layer should be lightly compacted, with construction equipment kept OFF of the bed bottom as much as possible. The perforated under-drain shall be surrounded by AASHTO No. 57 stone and completely encased with geotextile fabric as shown on the plans and details. The remainder of the Seepage Bed shall be filled with AASHTO No. 1 Ballast stone as shown and detailed on the plans. The entire Seepage Bed area shall be encased with geotextile fabric.
7. Ensure the under-drain discharge pipe connects to the Rain Garden Outlet Structure with a water-tight seal. Install water-tight cap within the Outlet Structure and ensure the appropriate sized Managed-Release hole is drilled into the cap at the invert elevation. Finalize installation of under-drain clean-out pipes and cap with a water-tight screw cap.
8. Fill remaining excavation of the Rain Garden with the Basin Sols Mixture as shown and detailed on the plans. The Basin Sols Mixture should be placed in maximum 8 inch lifts. Overfilling is recommended to account for settlement. Light hand tamping is acceptable if necessary.
9. Upon completion of the placement of the Basin Sols Mixture, presack all soil prior to planting vegetation as shown and detailed on the plans. Immediately stabilize all disturbance with a permanent seed and mulch mixture applied at the recommended rates. Water all Rain Garden areas as necessary to establish vigorous and healthy vegetation growth.
10. If not already installed, place upslope Compost Filter Sock as shown and detailed on the plans above the completed Rain Garden to prohibit any sediment-laden runoff from entering this area.

### LAWN SOIL AMENDMENT & RESTORATION INDIVIDUAL CONSTRUCTION SEQUENCE

\*per PA DEP BMP Manual - Chapter 6.7.3

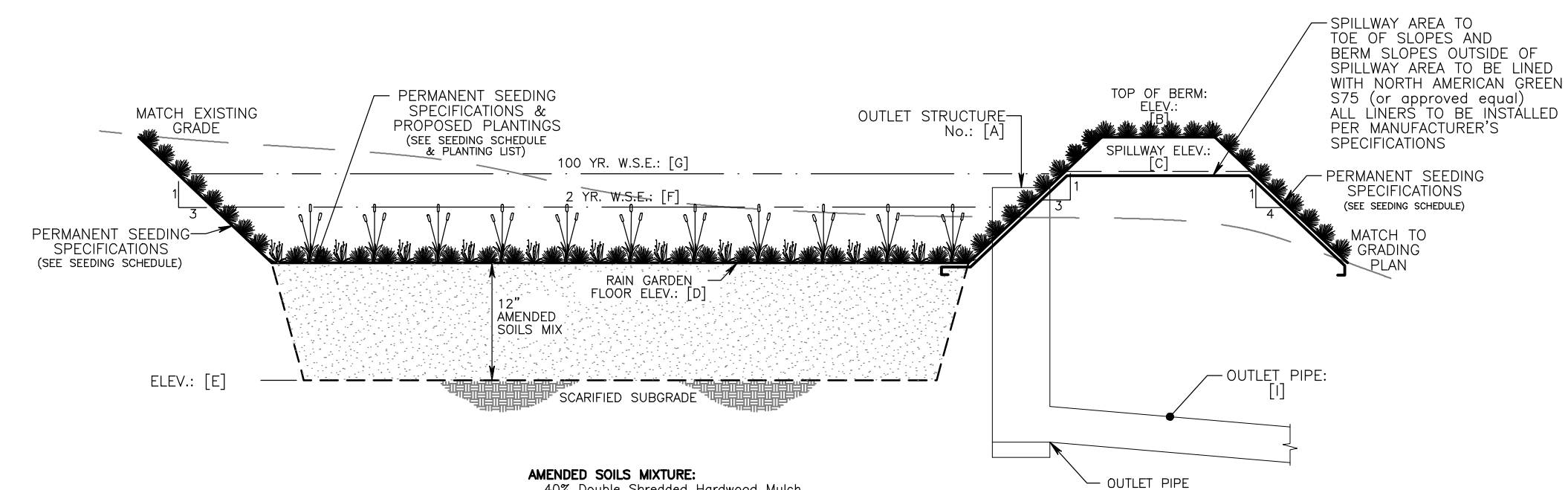
1. All individual lot construction shall be completed prior to soil restoration of the lawn areas.
2. Soil areas to be restored shall be dry prior to scarification.
3. Ripping (subsoiling) shall be completed on all lawn areas to a depth of 20 inches for areas of major compaction and 8 inches for areas of minor compaction.
4. Till and blend compost/topsoil layers according to specification.
5. Water lawn areas as necessary to establish vigorous and healthy seed growth.



Rain Garden Location:	BMP No.:	Top of Structure Elev. [A]	Rain Garden Floor Elev. [B]	Bottom Elev. of Basin Soil Mixture [C]	Rectangular Weir Invert Elev. [D]	1" Circular Orifice Invert Elev. [E]	Outlet Pipe Invert Elev. [F]	Outlet Pipe Dia. [G]
Lot #1	#1	373.90	373.50	372.50	1.30" WEIR @ ELEV. 373.60	371.50	370.45	19" of 12" WATER-TIGHT HDPE @ 5.00%
Lot #3	#3	374.00	373.70	372.70	3.00" WEIR @ ELEV. 373.80	371.70	371.05	41" of 12" WATER-TIGHT HDPE @ 5.00%
Lot #5	#4	366.15	369.50	368.50	0.50" WEIR @ ELEV. 369.60	367.50	364.30	76" of 12" WATER-TIGHT HDPE @ 5.00%
Lot #7	#6	364.25	363.50	362.50	0.25" WEIR @ ELEV. 363.65	361.50	361.25	72" of 12" WATER-TIGHT HDPE @ 2.08%

### STANDARD RAIN GARDEN OUTLET STRUCTURE DETAIL

Not to Scale



AMENDED SOLS MIXTURE:  
 40% Double Shredded Hardwood Mulch  
 50% Washed Sharp Sand - ASTM-C-33  
 5% Compost  
 5% Peatmoss

PERMANENT SEEDING SPECIFICATION - FORMULA B:  
 150 lbs./1,000 s.y.  
 10% Tall Fescue (Festuca Arvensis) var. Kentucky 31  
 6.0 lbs./1,000 s.y.  
 30% Creeping Red Fescue or Chewings Fescue

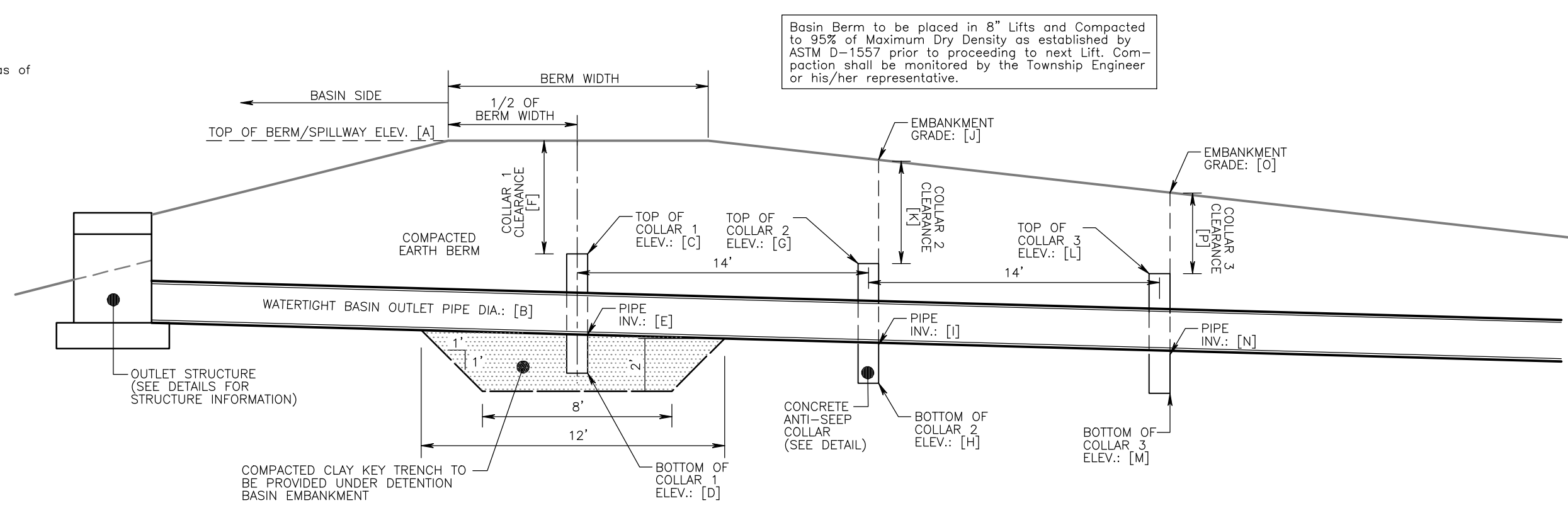
SEEDING RATES FOR THE ABOVE MIXTURES:  
 Spread seeds where indicated and at the rates specified above (and Table A, Table B, Section B-04). Spread seeds within the following dates, or otherwise indicated or directed:  
 \* Formula B  
 - March 15 to June 01  
 August 01 to October 15  
 - March 15 to October 15

Extend seeding dates where project conditions warrant. Apply full treatment or apply only 50% of the permanent seeding and soil supplements and apply the remaining 50% within the next seeding date.  
 Place mulch, hay or straw immediately after seeding or within 48 hours after seeding is completed. Place hay or straw uniformly in a continuous blanket at a rate of 1,000 lbs./1,000 s.y. If directed, increase the rate of application, depending upon the material used, season, soil conditions or method of application.

Rain Garden Location:	BMP No.:	Outlet Structure No. [A]	Top of Berm Elev. [B]	Spillway Elev. [C]	Rain Garden Floor Elev. [D]	Bottom Elev. of Basin Soil Mixture [E]	2-year Water Surface Elev. [F]	100-year Water Surface Elev. [G]	Outlet Pipe Invert Elev. [H]	Outlet Pipe Dia. [I]
Lot #1	#1	D-08	375.15	373.90	373.50	372.50	373.73	373.90	370.45	19" of 12" WATER-TIGHT HDPE @ 5.00%
Lot #3	#3	D-10	375.25	374.00	373.70	372.70	373.83	374.00	371.05	41" of 12" WATER-TIGHT HDPE @ 5.00%
Lot #5	#4	D-22	371.10	369.85	369.50	368.50	369.84	369.84	364.30	76" of 12" WATER-TIGHT HDPE @ 5.00%
Lot #7	#6	D-25	365.75	364.50	363.50	362.50	364.22	364.38	361.25	72" of 12" WATER-TIGHT HDPE @ 2.08%

### STANDARD RAIN GARDEN INTERIOR CROSS-SECTION

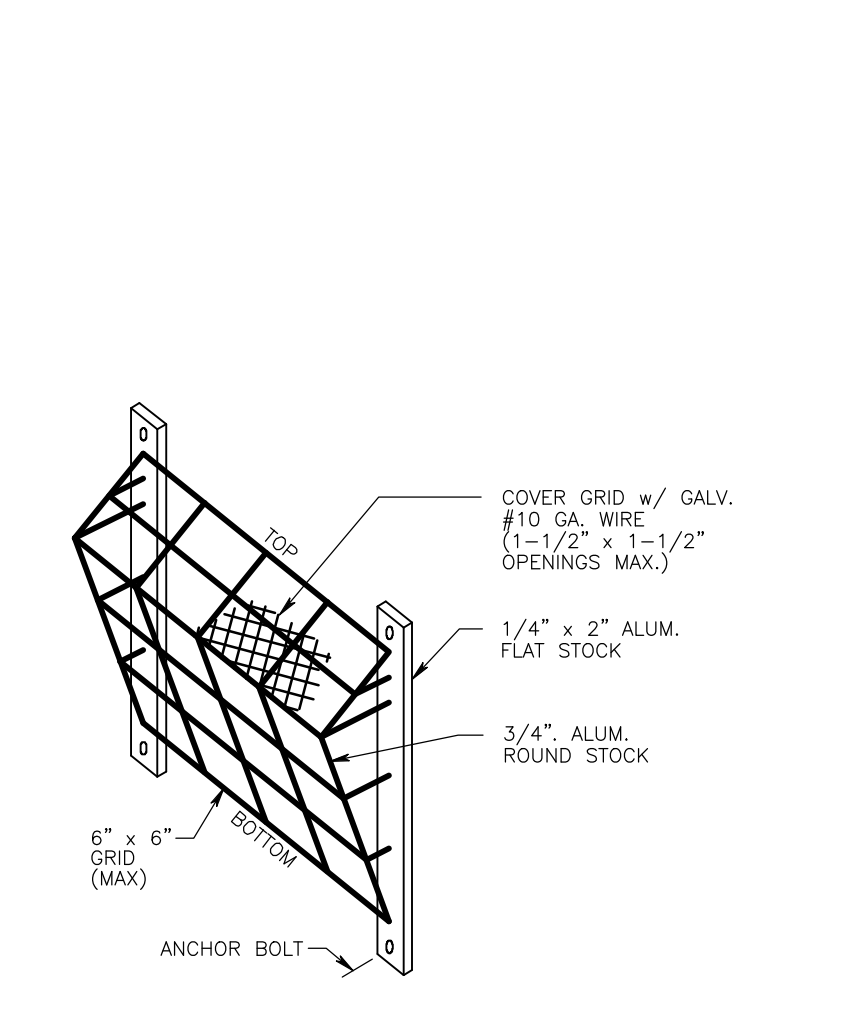
Not to Scale



Rain Garden No.	Collar Size:	Top of Berm or Spillway Elev. [A]	Top of Collar 1 Elev. [C]	Bottom of Collar 1 Elev. [D]	Top of Collar 2 Elev. [G]	Bottom of Collar 2 Elev. [H]	Top of Collar 3 Elev. [L]	Bottom of Collar 3 Elev. [M]	Collar 1 Comp. Rate [J]	Collar 2 Comp. Rate [K]	Collar 3 Comp. Rate [L]
#1											
#2											
#3											
#4											
#5											
#6											

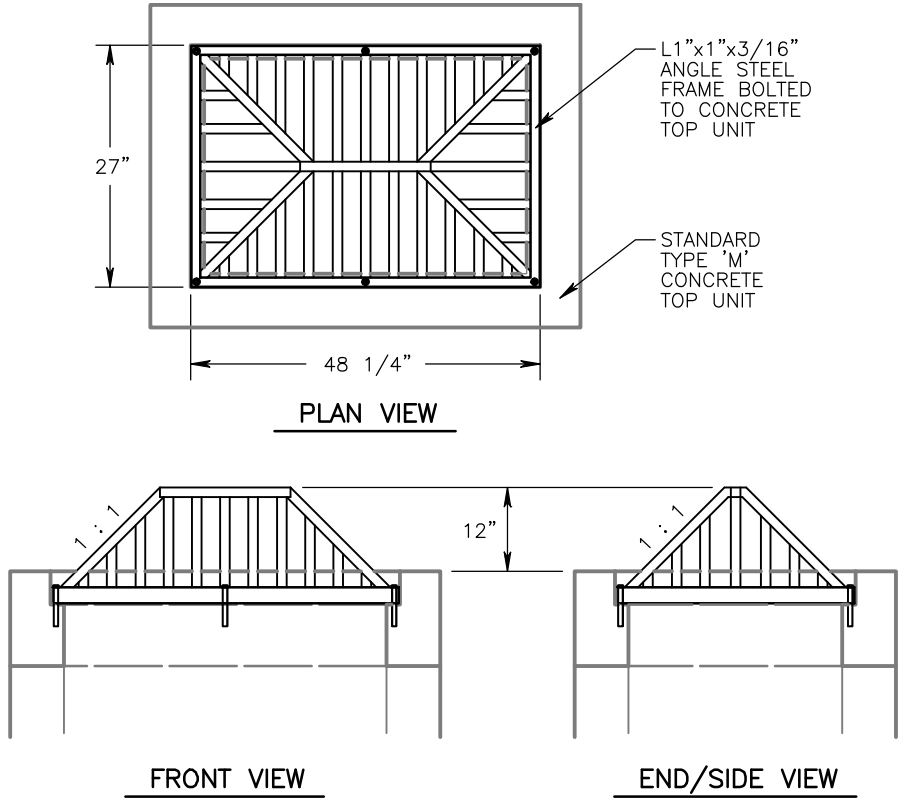
### ANTI-SEEP COLLAR PLACEMENT DETAIL

Not to Scale



### OUTLET STRUCTURE TRASH RACK DETAIL

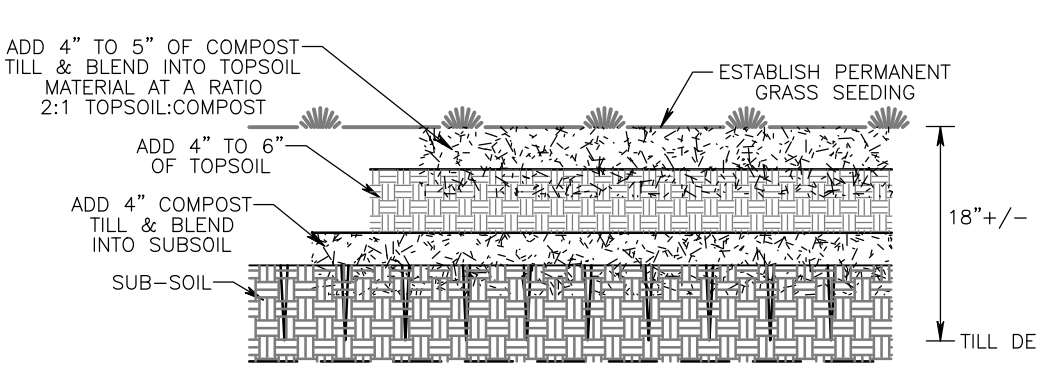
Not to Scale



### PYRAMID STYLE - TRASH RACK TOP

1. TRASH GRATE: L1"x1"x3/16" ANGLE STEEL FRAME w/5/8" DIA. STEEL GRATE BARS AT 4 1/2" O.C. (Max) PAINTED WITH ANTI-RUST COMPOUND.
2. ATTACH TO CONCRETE TOP WITH (6) 3/8" x 2" LAG BOLTS SET IN LEAD EXPANDERS.
3. WELD ALL GRATE BAR CONNECTIONS.
4. SIZE TRASH GRATE TO FIT IN PLACE OF STANDARD 'M' STEEL GRATE.

Not to Scale



### LAWN SOIL AMENDMENT & RESTORATION DETAIL

Not to Scale

Outlet Structure No.	Pipe Dia. (in)	Totwater (Max or Min)	Q (CFS)	V* (FPS)	Riprap Size	Riprap Thickness Rt (inches)	Length Atw (ft)	Initial Width Atw (ft)	Terminal Width Atw (ft)
D-07	14"x23"	MAX.	5.02	4.50	R 3	9	7.0	4.5	7.3
D-21	18"	MAX.	4.76	9.05	R 5	27	7.0	4.5	7.3

NOTE:  
 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.  
 EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.  
 (PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012)

### RIPRAP APRON OUTLET PROTECTION

Not to Scale

NO.	DATE	REVISION
1	07/08/22	REVISED TO REFLECT NEW RESOUR. CONCEPT

### REVISIONS

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PROJECT SERIAL NUMBER FOR DESIGN: 2019 1291601 (Design) MAY 09, 2019

Parcel Information:  
 39-00-00643-00-2 (B 18 U 70 - GAINES) 1500 Cedar Hill Rd  
 39-00-00646-00-8 (B 18 U 29 - STROHECKER) 1512 Cedar Hill Rd  
 39-00-00649-00-5 (B 18 U 29 - LYNCH) 1524 Cedar Hill Rd  
 Gross Area: 11.8973 Acres  
 NET Area: 11.1808 Acres

Applicant: CEDAR HILL DEVELOPMENT GROUP, LLC.  
 c/o Mr. Jon Mayer  
 632 Germantown Pike  
 Lafayette Hill, PA 19444

REGISTERED PROFESSIONAL ENGINEER  
 TIMOTHY P. WOODROW  
 No. 08875-1

PRELIMINARY PLAN (Not To Be Recorded)

POST CONSTRUCTION STORMWATER MANAGEMENT SPECIFICATIONS - 'A'

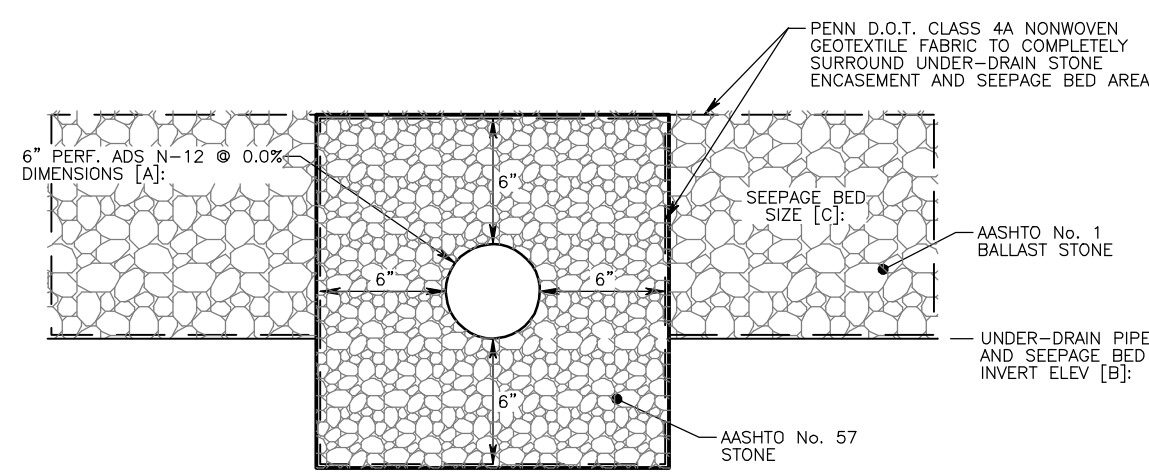
7500-1524 CEDAR HILL ROAD

LOWER GWYNDEN TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

WOODROW & ASSOCIATES, INC.  
 MUNICIPAL / CIVIL CONSULTING ENGINEERS  
 1108 N. York Road, Suite 400, York, PA 17402  
 Phone: (717) 542-4646  
 Web: www.woodrowinc.com

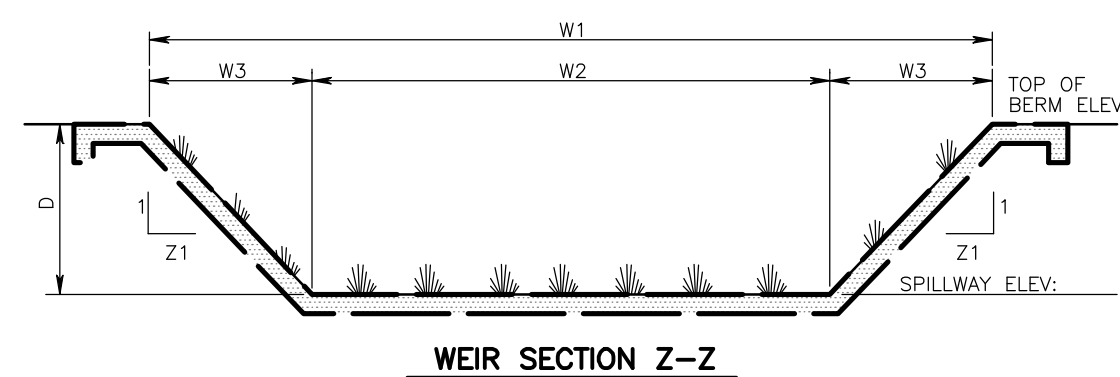
Layer List:  
 Sht16\_Post-Det  
 Job No: 18-0406 D  
 Plan Date: APRIL 26, 2022  
 Sheet No: 16 of 25



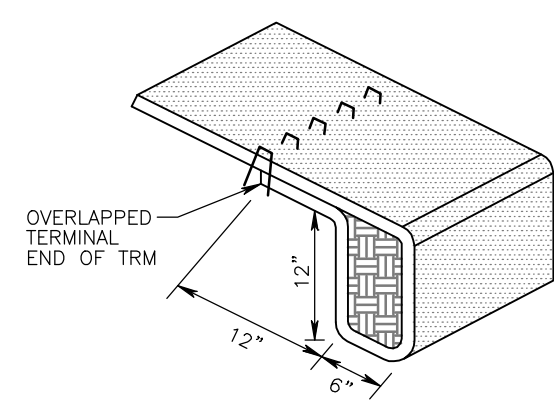


BASIN ID #	UNDER-DRAIN DIMENSIONS [A]	UNDER-DRAIN & SEEPAGE BED SIZE [B]	SEEPAGE BED SIZE [C]
R.G. #2	46 L.F. of 6" PERFORATED ADS N-12 @ 0.00%	370.70	50'L x 25'W x 1'D
R.G. #5	56 L.F. of 6" PERFORATED ADS N-12 @ 0.00%	363.50	60'L x 25'W x 1'D

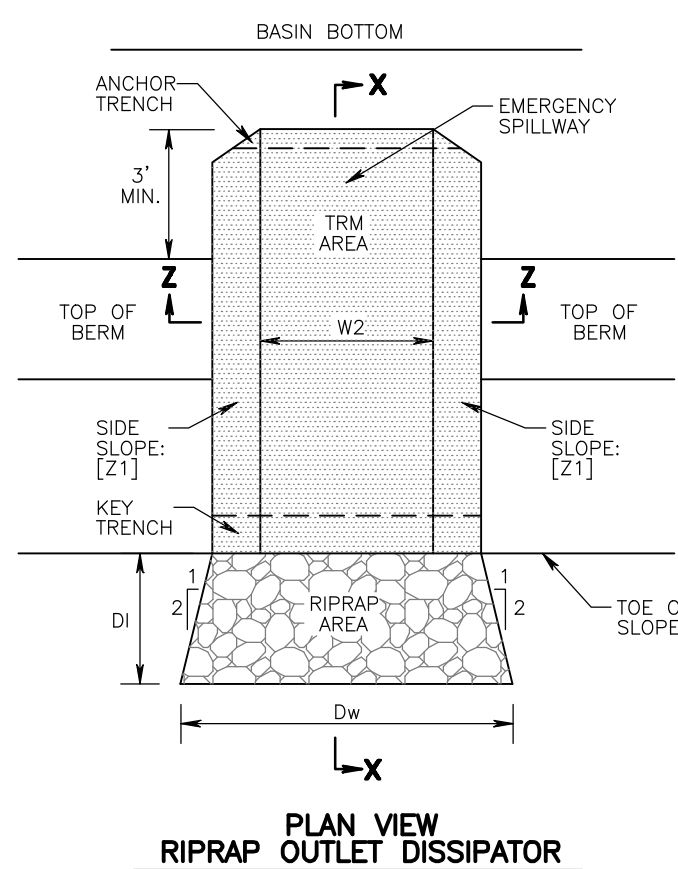
**BASIN PERFORATED UNDER-DRAIN DETAIL**  
Not To Scale



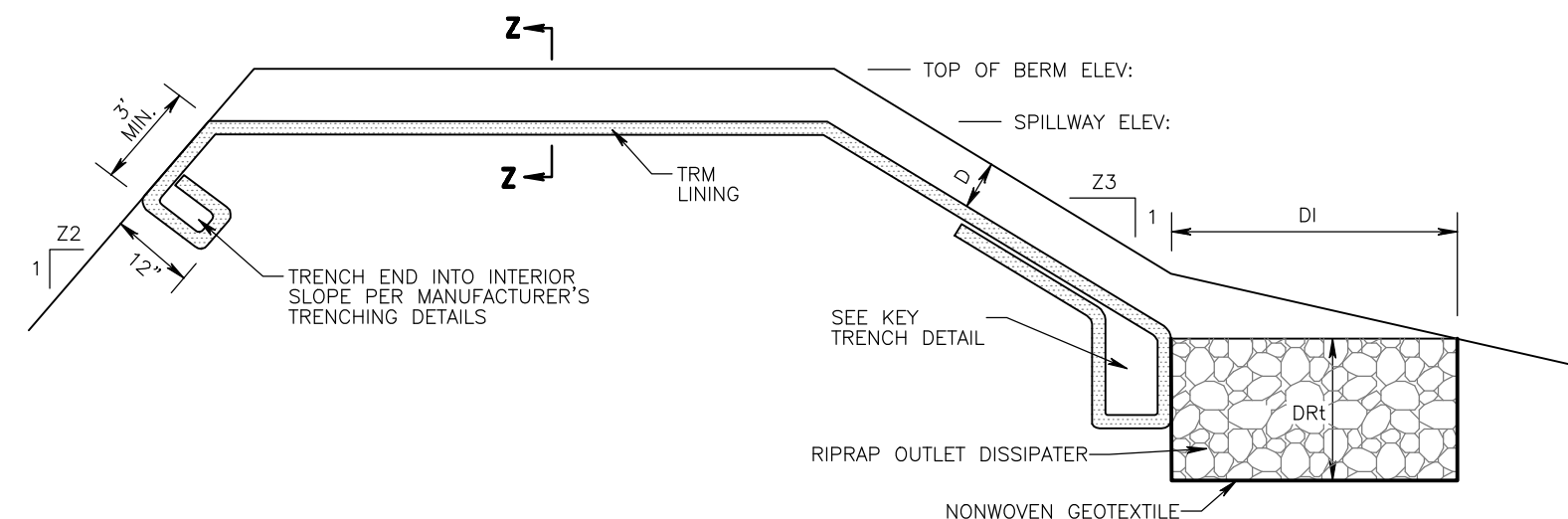
**WEIR SECTION Z-Z**



**KEY TRENCH AT TOE OF SLOPE OF SPILLWAY**



**PLAN VIEW RIPRAP OUTLET DISSIPATOR**



**EMBANKMENT SECTION ALONG EMERGENCY SPILLWAY (SECTION X-X)**

RAIN GARDEN No.	WEIR:				SPILLWAY ELEV.	TRM TYPE:	STAPLE PATTERN:		
	W1 (FT.)	W2 (FT.)	W3 (FT.)	D (FT.)					
#1	16.5	6.5	5.0	1.25	4	375.15	373.90	NAG SC250	1.15 STAPLES PER SQ. FT.
#2	29.5	19.5	5.0	1.25	4	374.75	373.50	NAG SC250	1.15 STAPLES PER SQ. FT.
#3	24.0	14.0	5.0	1.25	4	375.25	374.00	NAG SC250	1.15 STAPLES PER SQ. FT.
#4	24.5	14.5	5.0	1.25	4	371.10	369.85	NAG SC250	1.15 STAPLES PER SQ. FT.
#5	30.5	20.5	5.0	1.25	4	367.50	366.15	NAG SC250	1.15 STAPLES PER SQ. FT.
#6	24.0	14.0	5.0	1.25	4	365.75	364.50	NAG SC250	1.15 STAPLES PER SQ. FT.

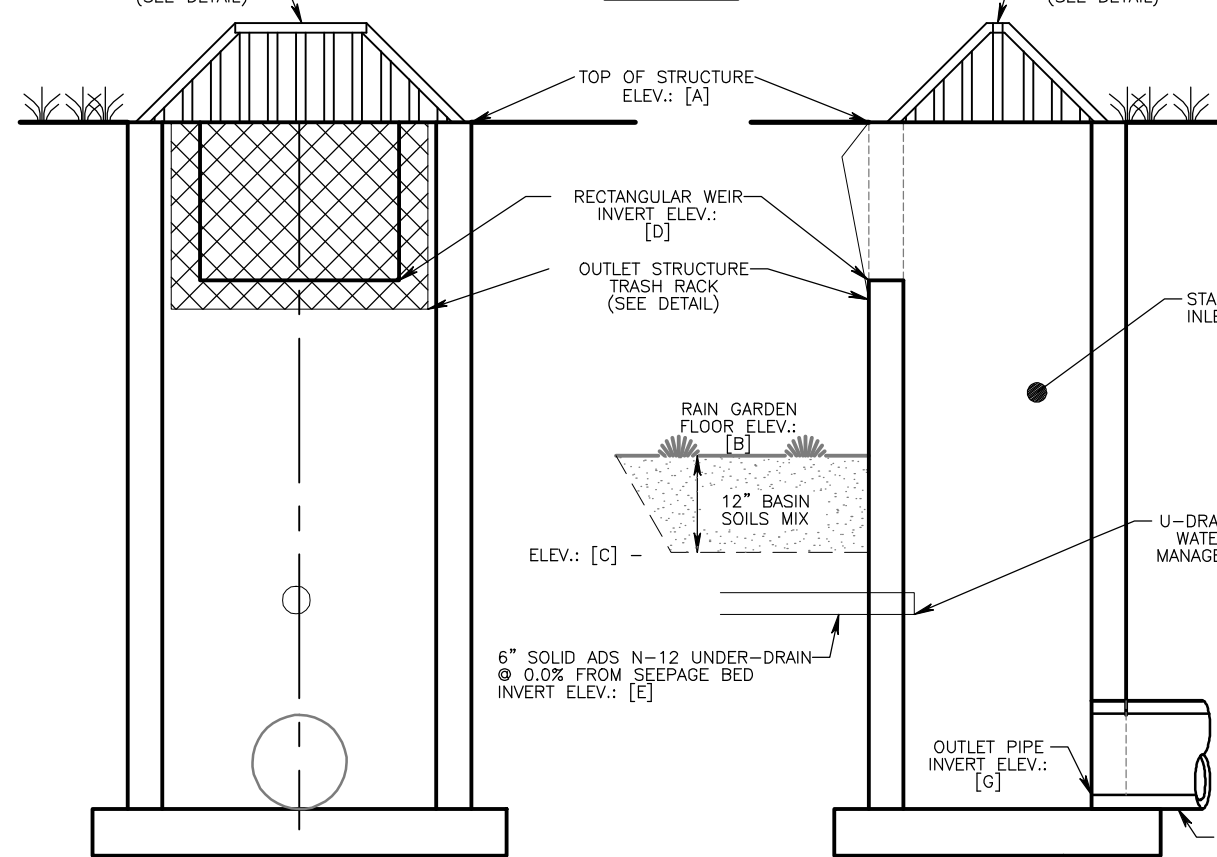
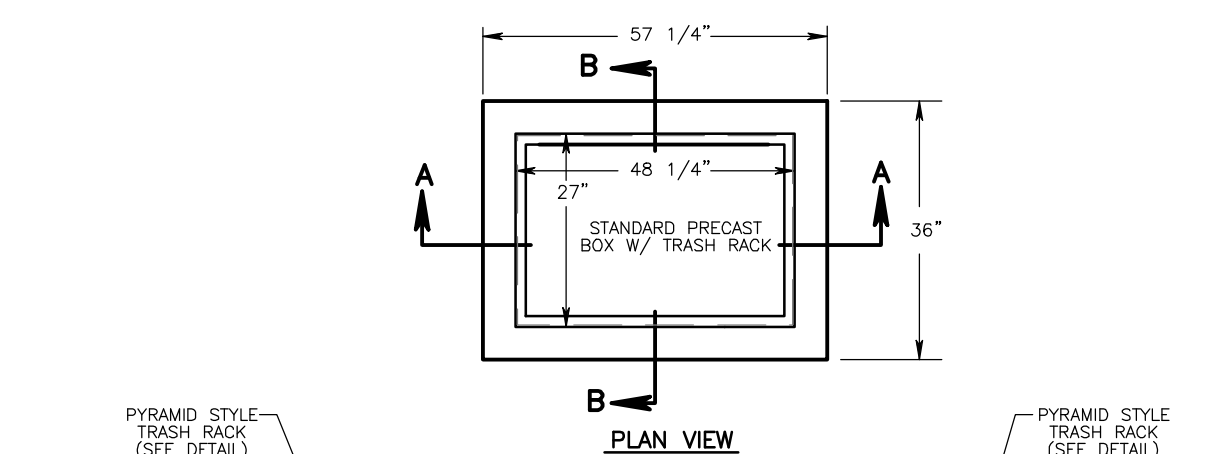
RAIN GARDEN No.	CHANNEL:		RIPRAP DISSIPATOR:		
	INTERIOR SLOPE [Z2]	EXTERIOR SLOPE [Z3]	LENGTH [L]	WIDTH [W]	THICKNESS [H]
#1	3	4	5 FT.	21.5 FT.	12"
#2	3	4	5 FT.	34.5 FT.	12"
#3	3	4	5 FT.	29.0 FT.	12"
#4	3	4	5 FT.	29.5 FT.	12"
#5	3	4	5 FT.	35.5 FT.	12"
#6	3	4	5 FT.	29.0 FT.	12"

**NOTES:**

- HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.
- DISPLACED LINER WITHIN 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.

(PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012)  
(STANDARD CONSTRUCTION DETAIL #7-13)

**BASIN EMERGENCY SPILLWAY with TRM LINING**  
Not To Scale

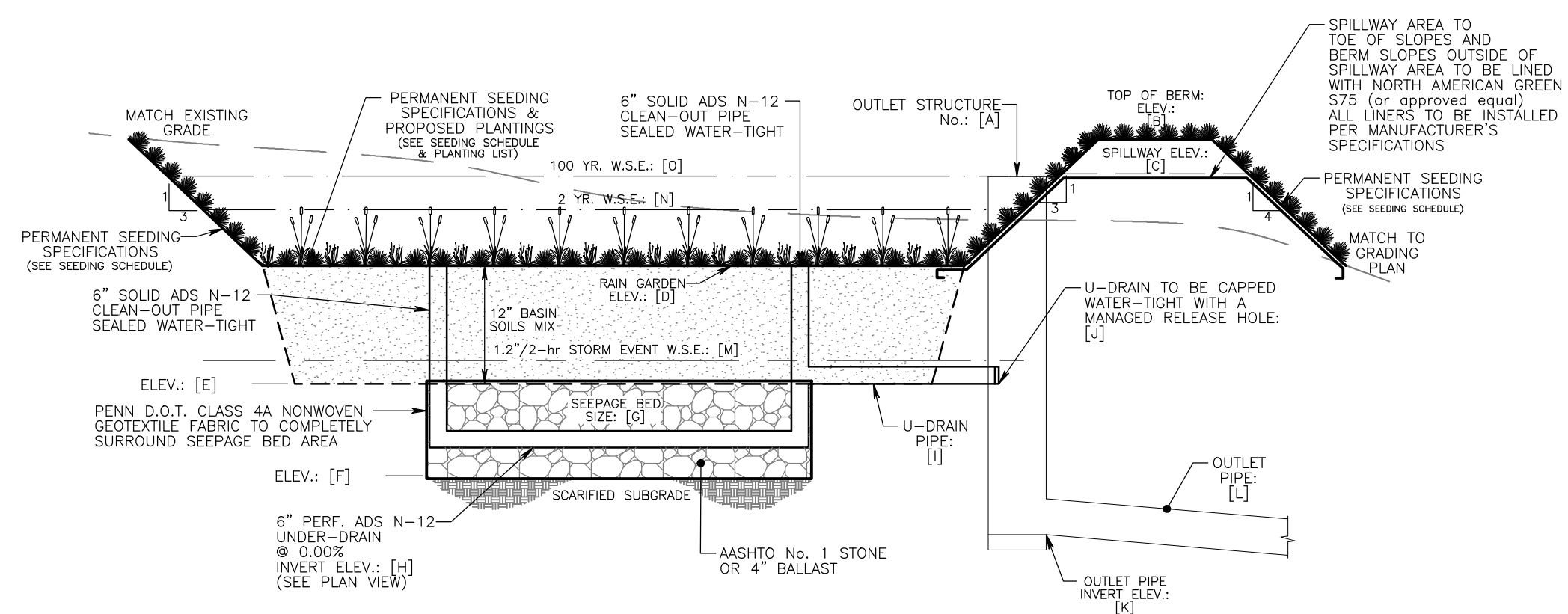


**ELEVATION "A-A"**

**ELEVATION "B-B"**

Rain Garden Location:	BMP No.:	Top of Structure Elev. [A]	Rain Garden Floor Elev. [B]	Bottom Elev. of Basin Soil Mixture [C]	Rectangular Weir Invert Elev. [D]	U-Drain Invert Elev. [E]	U-Drain Managed Release Hole Diameter [F]	Outlet Pipe Invert Elev. [G]	Outlet Pipe [H]
Lot #2	#2	373.50	372.70	371.70	1.40' WEIR @ ELEV.: 373.10	371.70	15/32"	370.51	27' of 12" WATER-TIGHT HDPE @ 5.00%
Lot #6	#5	366.15	365.50	364.50	1.00' WEIR @ ELEV.: 366.05	364.50	1/2"	362.05	46' of 12" WATER-TIGHT HDPE @ 5.00%

**MANAGED-RELEASE RAIN GARDEN OUTLET STRUCTURE DETAIL**  
Not To Scale



**AMENDED SOIL MIXTURE:**

- 40% Double Shredded Hardwood Mulch
- 20% Washed Sharp Sand - ASTM-C-33
- 5% Compost
- 5% Peatmoss

**PERMANENT SEEDING SPECIFICATION - FORMULA B:**

- 70% Tall Fescue (Pestuda Arundinacea var. Kentucky 31)
- 30% Creeping Red Fescue or Chewings Fescue

**SEEDING RATES FOR THE ABOVE MIXTURES:**

- Spread seeds where indicated and at the rates specified above (and Table A, Plan 400, Section 814). Spread seeds within the following dates, or as otherwise indicated or directed:

- \* Formula B: - March 15 to June 01
- August 01 to October 15

- \* Formula E: - March 15 to October 15

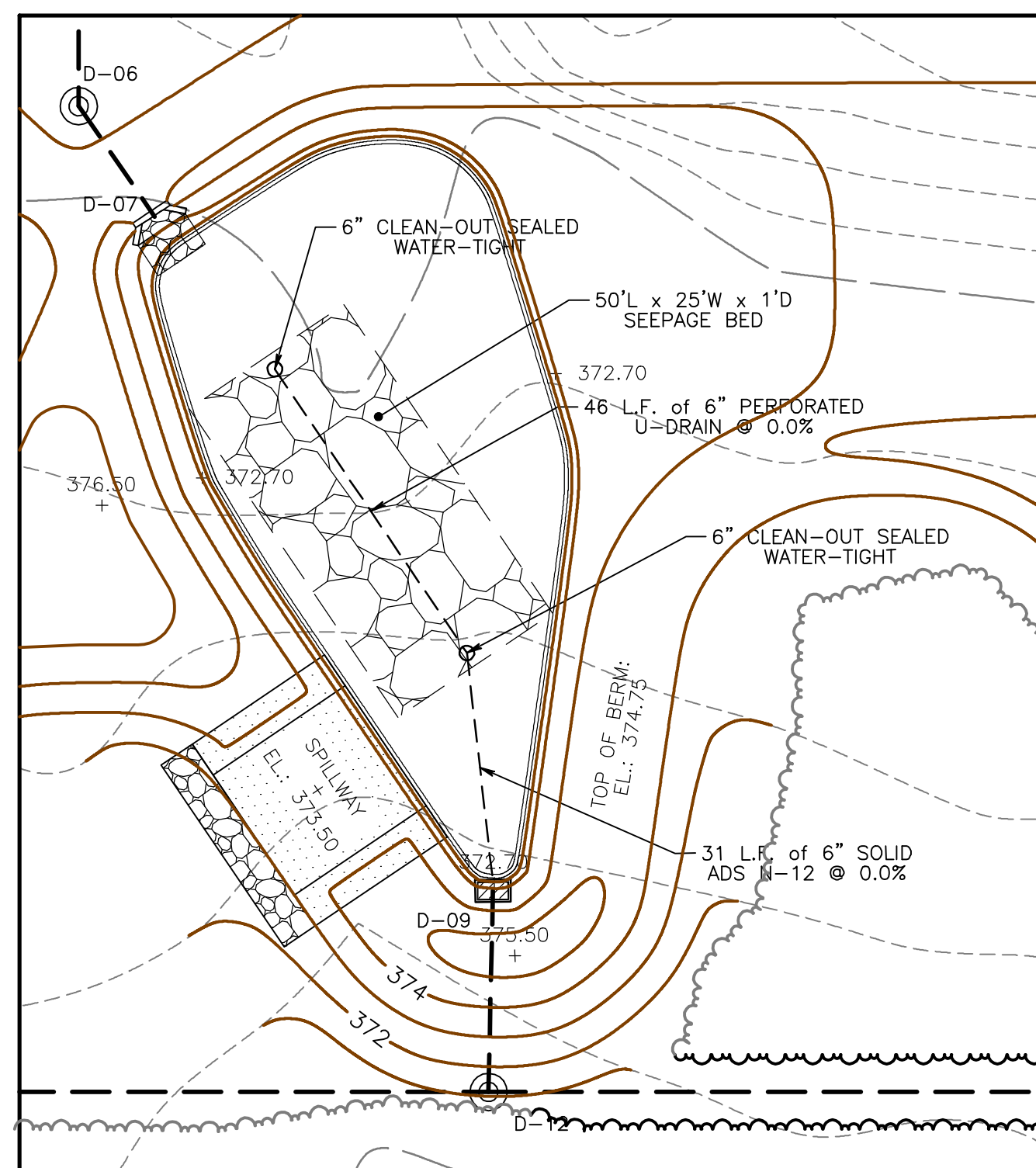
Extend seeding dates where project conditions warrant. Apply full treatment or apply only 50% of the germinant seeding and soil supplements and apply the remaining 50% within the next seeding dates.

Place mulch, hay or straw immediately after seeding or within 48 hours after seeding is completed. Place hay or straw uniformly, in a continuous blanket, at a rate of 1,000 lbs./1,000 s.y. If directed, increase the rate of application, depending upon the material used, season, soil conditions or method of application.

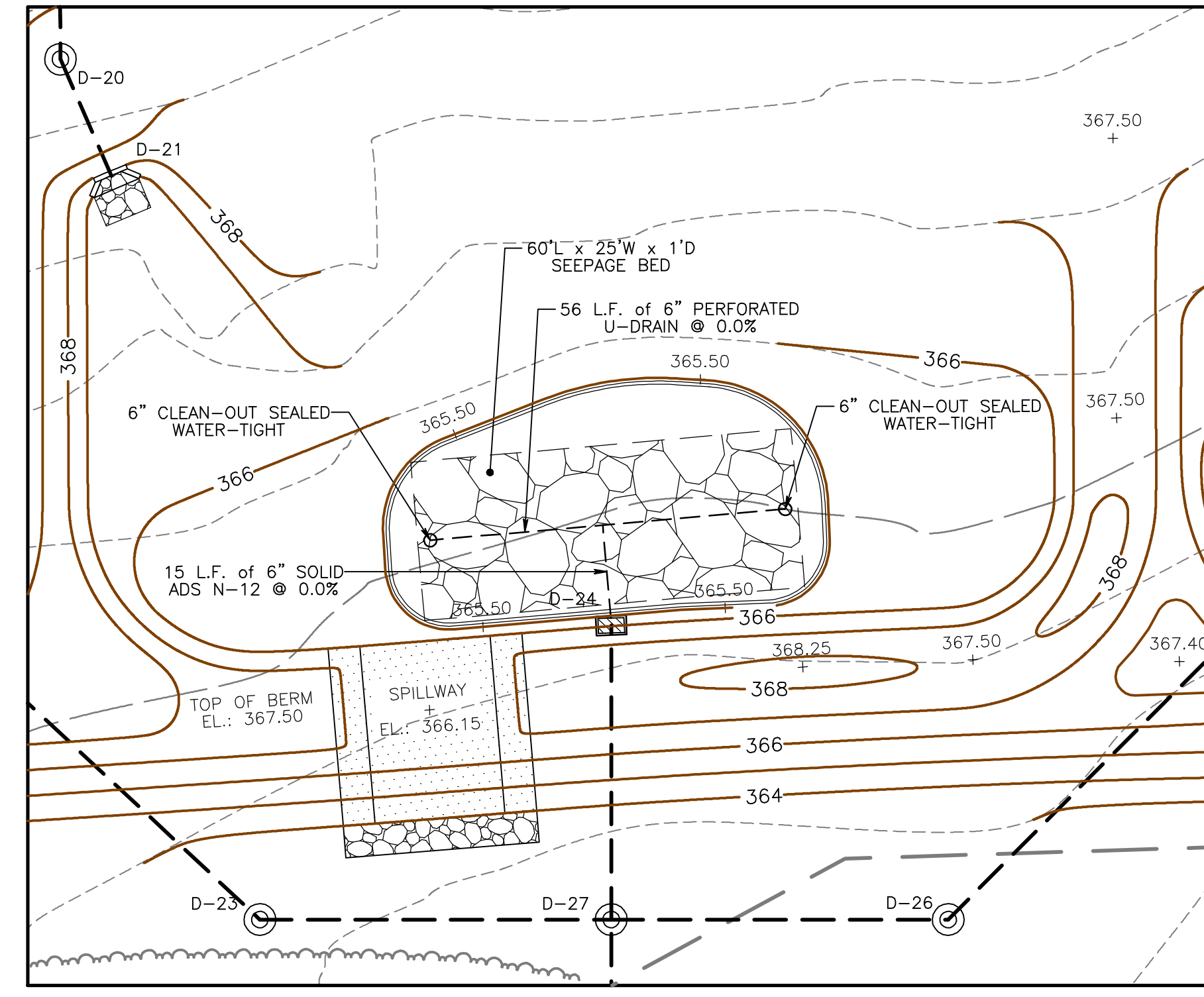
Rain Garden Location:	BMP No.:	Top of Structure Elev. [A]	Spillway Elev. [C]	Rain Garden Floor Elev. [D]	Bottom Elev. of Basin Soil Mixture [E]	Bottom Elev. of Seepage Bed [F]	Seepage Bed Size [G]	Perforated U-Drain Invert Elev. [H]
Lot #2	#2	D-09	374.75	373.50	372.70	371.70	50'L x 25'W x 1'D	371.20
Lot #6	#5	D-24	367.50	366.15	365.50	364.50	60'L x 25'W x 1'D	364.00

Solid U-Drain Discharge Pipe [I]	U-Drain Managed Release Hole Diameter [F]	Outlet Pipe Invert Elev. [G]	Outlet Pipe Invert Elev. [L]	1.2"/2-hour Storm Event Water Surface Elev. [M]	2-year Water Surface Elev. [N]	100-year Water Surface Elev. [O]
371.70	15/32"	370.51	27' of 12" WATER-TIGHT HDPE @ 5.00%	373.05	372.85	373.14
364.50	1/2"	362.05	46' of 12" WATER-TIGHT HDPE @ 5.00%	366.01	365.82	366.11

**MANAGED-RELEASE RAIN GARDEN INTERIOR CROSS-SECTION**  
Not To Scale



**LOT #2 (BMP #2) PLAN VIEW**  
Scale: 1" = 20'



**LOT #6 (BMP #5) PLAN VIEW**  
Scale: 1" = 20'

NO.	DATE	DESCRIPTION
1	07/08/22	REVISED TO REFLECT NEW RESIGN CONCEPT

**REVISIONS**

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PROJECT SERIAL NUMBER FOR DESIGN:

2019 1291601 (Design) MAY 09, 2019

Parcel Information:

39-00-00643-00-2 (B 18 U 70 - GAINES) 1500 Cedar Hill Rd

39-00-00646-00-8 (B 18 U 28 - STROHECKER) 1512 Cedar Hill Rd

39-00-00649-00-5 (B 18 U 29 - LYNCH) 1524 Cedar Hill Rd

Gross Area: 11.8973 Acres

NET Area: 11.1808 Acres

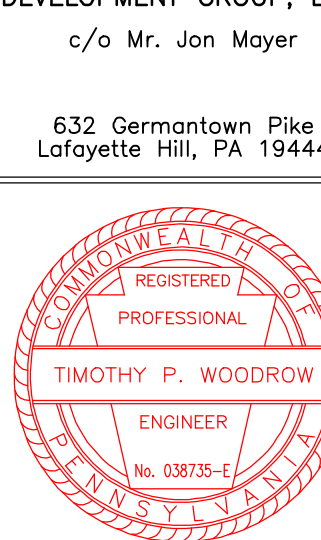
Applicant:

CEDAR HILL DEVELOPMENT GROUP, LLC.

c/o Mr. Jon Mayer

632 Germantown Pike

Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)

POST CONSTRUCTION STORMWATER MANAGEMENT SPECIFICATIONS - 'B'

7500-1524 CEDAR HILL ROAD

LOWER OWNEED TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

WOODROW & ASSOCIATES, INC.

MUNICIPAL / CIVIL CONSULTING ENGINEERS

1105 N. 15th Street, Suite 400, P.O. Box 19022

Philadelphia, PA 19102

Phone: (215) 542-4488

Web: www.woodrowinc.com



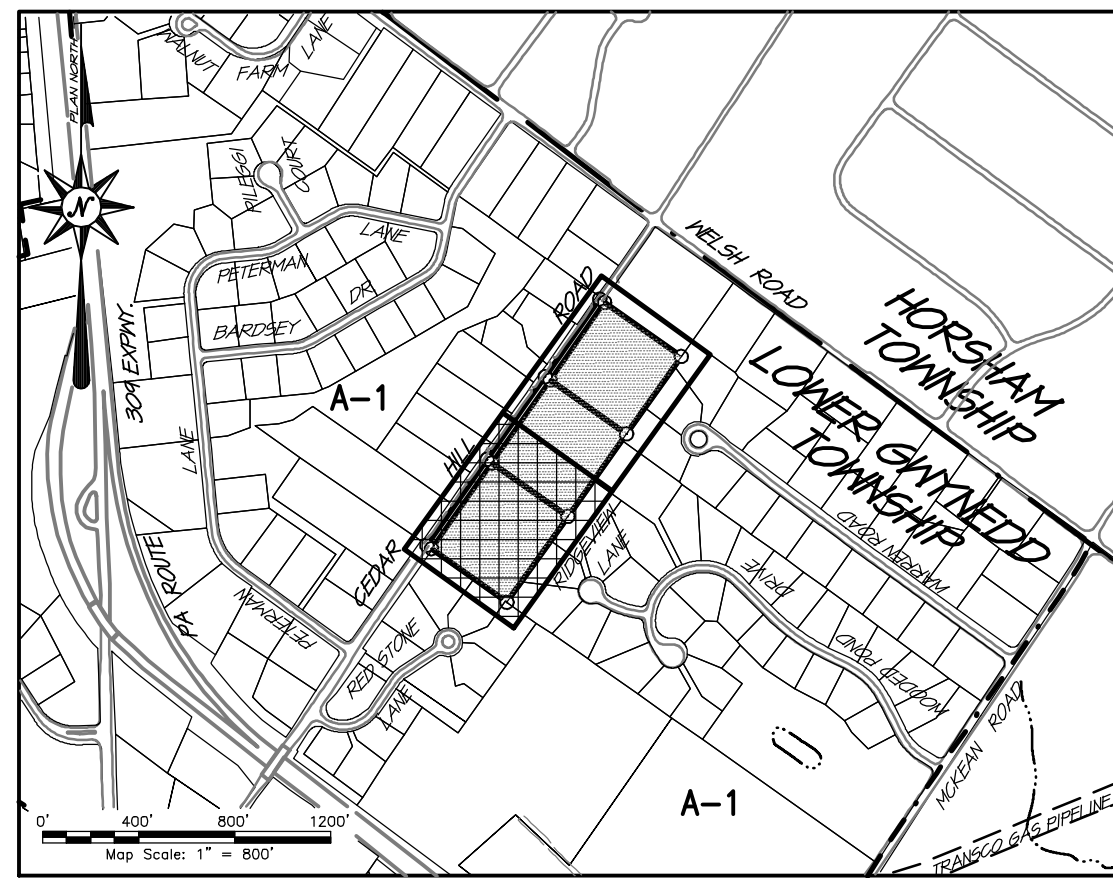
Layer List:

Sht17\_Post-Det

Job No: 18-0406 D

Plan Date: APRIL 26, 2022

Sheet No: 17 of 25



LOCATION MAP

GENERAL PLAN NOTES

Refer to the Record Plan (Sheet 1) for 'BASE EXISTING FEATURES AND SURVEY NOTES' and 'BASE DEVELOPMENT NOTES'

SITE LANDSCAPING NOTES:

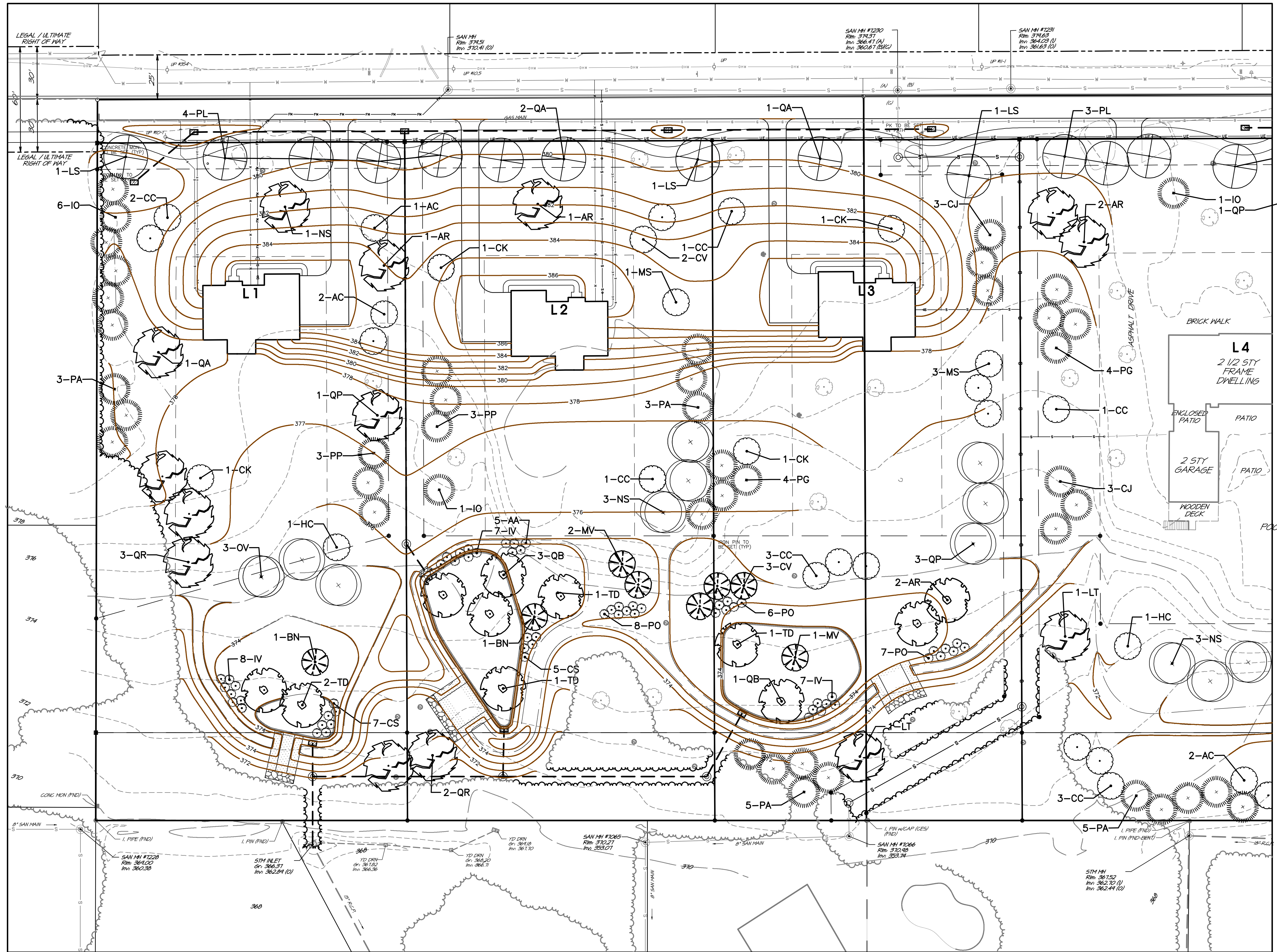
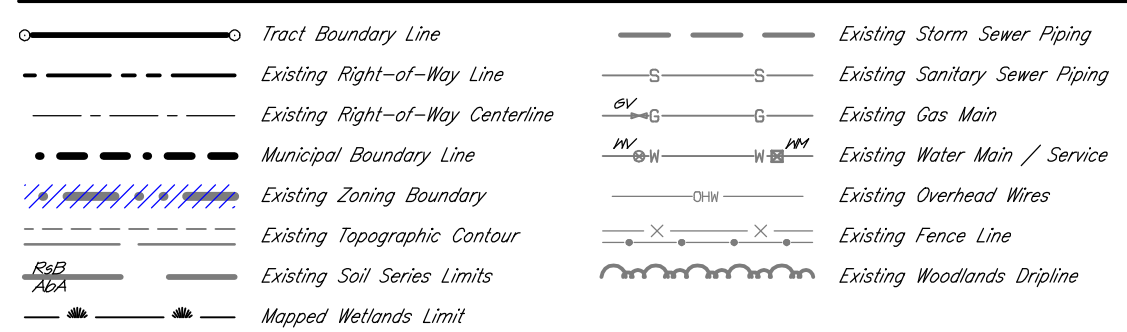
- All topsoil shall be a minimum of 6" in all seed/sod areas and 8" in all tree, shrub and ground-cover beds including parking lot island beds.
- Planting behind perpendicular parking shall be located 2' behind the curb line.
- All landscape and grass areas are to be hand raked and left clear of all stones, rock, construction debris and any unsuitable materials.
- Landscape contractor shall verify location of all utilities prior to any excavation and planting installation.
- All areas to be landscaped must be treated with a pre-emergent herbicide (surflan, dacthal or approved equal) in accordance with applicable federal, state regulations and per manufacturer's instructions.
- All proposed plant material is to be nursery grown, typical of their species or variety. Plant material shall have normal, vigorous root systems, free from defects and infections and in accordance with ANSI Z60.1.
- All proposed plant material shall be installed per standards of the "American Association of Nurserymen" and state nursery/landscape associations with regard to planting, pit size, backfill mixture, staking and guying.
- All planting containers and baskets shall be removed during plant material installation. All plants shall be set, plumbed and positioned so that the top of the root collar matches, or is no more than 2" above finished grade. Replace amended backfill in 6-inch layers and compact backfill to eliminate voids. Contractor shall water newly planted vegetation prior to mulching planting pit. All voids shall be filled and setting mitigated as necessary.
- After initial watering and prior to mulching, contractor shall apply herbicides and pre-emergent herbicides as required to eliminate any weed seeds or plants present on the root ball.
- All planting beds and individual tree pits shall be mulched with double-ground hardwood mulch at a depth of 2-3". If provided, any rain garden plug areas shall be mulched with 3" depth of shredded hardwood mulch. (no substitutions permitted).
- Landscape contractor to supply and install a pervious weed barrier (Dewitt, DuPont or approved equal) in accordance with manufacturer's installation within all defined landscape areas; including stone and mulch beds. All weed barrier will be overlapped a minimum of 6" at all seams. At plant locations, barrier should be cut in an "X" pattern so to accommodate root ball and replaced after plant has been installed.
- Seedbed Preparation:
  - Apply limestone and fertilizer according to soil tests of fertilizer may be applied at the rate of 260 pounds per acre or 6 pounds per 1,000 square feet using 10-20-20 ratio or equivalent. In addition, 300 pounds 4-8-2 ratio per acre (or equivalent) of slow release nitrogen may be using in lieu of top dressing.
  - Work lime and fertilizer into the soil as practical to a depth of 4 inches with a disc, spring tooth harrow or other suitable equipment. The final harrowing or disking operation should be parallel to the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared. All but clay or silty soils and coarse sands should be rolled to firm the seedbed wherever feasible.
  - Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retiled and firmed as outlined above.
  - For grass seeding mixture and application rate, refer to Erosion and Sediment Control Plan.
  - In areas designated as sod, rescue sod is to be installed on minimum 4" topsoil. Areas to be sodded are to be prepared as noted above for seeded areas.
- All landscape and lawn areas are to be irrigated by automatic sprinkler system.
- Plant material shall be guaranteed for eighteen (18) months from the date of substantial completeness. The contractor shall replace any dead, unthrifty, dying or damaged plants, through loss of branches and/or foliage. Plants that are not in good condition at the end of the guarantee period shall be replaced until a good lawn results.
- It is understood that the owner shall assume responsibility for watering all plant material and lawn area beginning with the date of substantial completeness.

LANDSCAPING REQUIREMENTS

ITEM	REQUIREMENT	PROVIDED
SALDO Sect. 1230-42(01) Street Trees	Two shade trees per 40' of street length (assuming 2-sided street) Tree min. dbh 2 1/4" 125/40 = 32 trees	29 Shade Trees (x3 existing trees)
SALDO Sect. 1230-42(02) Detention Basin Landscaping	One shade tree per 30' of basin perimeter May substitute up to 50% of shade trees with flowering trees at a rate of 2:1	2 Shade Trees 15 Shrubs
Rain Garden BMP Area D01: 118'	118/30 = 4 Shade trees	4 Shade Trees
Rain Garden BMP Area D02: 247'	247/30 = 8 Shade trees	8 Shade Trees
Rain Garden BMP Area D03: 228'	228/30 = 8 Shade trees	8 Shade Trees
Rain Garden BMP Area D04: 256'	256/30 = 9 Shade trees	9 Shade Trees
Rain Garden BMP Area D05: 184'	184/30 = 7 Shade trees	7 Shade Trees
Rain Garden BMP Area D06: 108'	108/30 = 6 Shade trees	6 Shade Trees
SALDO Sect. 1230-42(03) Interior Landscaping	3 Shade trees per dwelling in 'A' Residential District 7 evergreens 7 x 3' = 21 Shade trees	21 Shade Trees
SALDO Sect. 1230-42(04) Replacement Trees	Each tree 6" caliper or greater that is removed shall be replaced with a shade tree or shade trees from the same or similar species that have a total caliper equal to or greater than the tree removed. Site observation results in 774 outer inches requiring replacement due to dead or damaged trees 774/25 = 310 replacement trees required	44 Shade Trees 42 Evergreen Trees** 42 Planting Trees** (105 equivalents)
TOTAL PLANTINGS PROVIDED		116 Shade Trees 27 Flowering Trees 112 Shrubs

\*\* Evergreen and flowering trees proposed at a rate of 2:1 and shrubs proposed at a rate of 1:1 to provide greater diversity.  
\*\*\* Per Arbutal report dated 2/24/2021.

PLAN LEGEND



PLANTING SCHEDULE

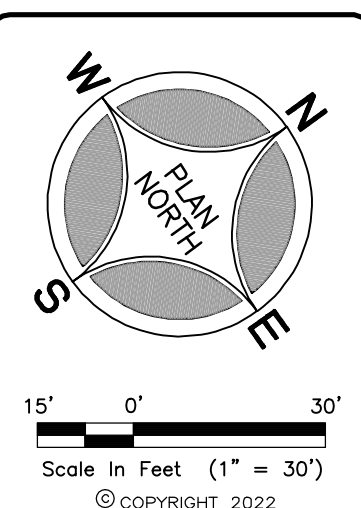
Plan Symbol	Quantity	Botanical Name	Common Name	Minimum Planting Caliper	Planting Spread	Minimum Planting Height	Remarks
AR	15	<i>Acer rubrum</i> "October Glory"	"October Glory" Red Maple	2.5"	5'-6"	14'-16'	B&B
LS	12	<i>Liquidambar styraciflua</i> "Rokundoiba"	Sweetgum	2.5"	5'-6"	14'-16'	B&B
LT	7	<i>Liliodendron tulipifera</i>	Tulip Tree	2.5"	5'-6"	14'-16'	B&B
NS	11	<i>Nyssa sylvatica</i>	Black Gum	2.5"	5'-6"	14'-16'	B&B
OV	6	<i>Ostrya virginiana</i>	Eastern Hop Hornbeam	2.5"	5'-6"	14'-16'	B&B
PL	13	<i>Platanus x acerifolia</i> "Bloodgood"	"Bloodgood" London Planetree	2.5"	5'-6"	14'-16'	B&B
QA	11	<i>Quercus alba</i>	White Oak	2.5"	5'-6"	14'-16'	B&B
QB	10	<i>Quercus bicolor</i>	Swamp White Oak	2.5"	5'-6"	14'-16'	B&B
QC	9	<i>Quercus phellos</i>	Willow Oak	2.5"	5'-6"	14'-16'	B&B
QR	12	<i>Quercus rubra</i>	Red Oak	2.5"	5'-6"	14'-16'	B&B
TD	10	<i>Taxodium distichum</i>	Bald Cypress	2.5"	5'-6"	14'-16'	B&B
116 TOTAL SHADE TREES							
AC	5	<i>Amelanchier canadensis</i>	Serviceberry	-	4'-5'	8'-10'	B&B, Multi-stem
BN	5	<i>Betula nigra</i>	River Birch	-	4'-5'	8'-10'	B&B, Multi-stem
CC	14	<i>Cercis canadensis</i>	Eastern Redbud	-	4'-5'	8'-10'	B&B, Single leader
CV	6	<i>Cornus kousa</i>	Chinese Dogwood	-	4'-5'	8'-10'	B&B, Single leader
CK	10	<i>Chionanthus virginicus</i>	Fringetree	-	4'-5'	8'-10'	B&B, Single leader
HC	4	<i>Halesia carolina</i>	Carolina Silverbell	-	4'-5'	8'-10'	B&B, Single leader
MS	7	<i>Magnolia x soulangeana</i>	Saucer Magnolia	-	4'-5'	8'-10'	B&B, Single leader
MV	6	<i>Magnolia virginiana</i>	Sweetbay Magnolia	-	4'-5'	8'-10'	B&B, Multi-stem
57 TOTAL FLOWERING TREES							

PLANTING SCHEDULE

Plan Symbol	Quantity	Botanical Name	Common Name	Minimum Planting Caliper	Planting Spread	Minimum Planting Height	Remarks
CJ	18	<i>Cryptomeria japonica</i> "Radicans"	Japanese Cedar	-	-	8'-10'	B&B
IO	9	<i>Ilex opaca</i>	American Holly	-	-	8'-10'	B&B
PA	25	<i>Picea abies</i>	Norway Spruce	-	-	8'-10'	B&B
PG	16	<i>Picea glauca</i>	White Spruce	-	-	8'-10'	B&B
PP	14	<i>Picea pungens</i>	Blue Spruce	-	-	8'-10'	B&B
82 TOTAL EVERGREEN TREES							
AA	33	<i>Arnica monticola</i>	Red Chokeberry	-	-	36"	B&B/ CONT.
CS	26	<i>Cornus sericea</i>	Red Twig Dogwood	-	-	36"	B&B/ CONT.
IV	22	<i>Ilex verticillata</i>	Winterberry	-	-	36"	B&B/ CONT.
PD	34	<i>Physocarpus opulifolius</i>	Ninebark	-	-	36"	B&B/ CONT.
115 TOTAL SHRUBS							

NO.	DATE	DESCRIPTION
1	07/08/22	REVISED TO REFLECT NEW RESURFACING

REVISIONS



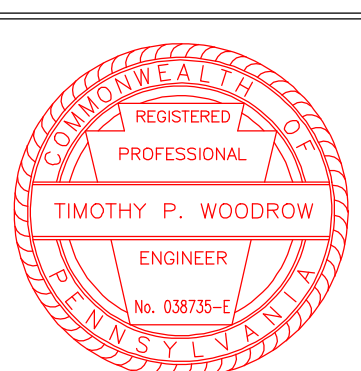
PROJECT SERIAL NUMBER FOR DESIGN: 2019 1291601 (Design) MAY 09, 2019

Parcel Information:  
39-00-00643-00-2 (B 18 U 70 - GAINES)  
1500 Cedar Hill Rd  
39-00-00646-00-8 (B 18 U 29 - STROHECKER)  
1512 Cedar Hill Rd  
39-00-00649-00-5 (B 18 U 29 - LYNCH)  
1524 Cedar Hill Rd

Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

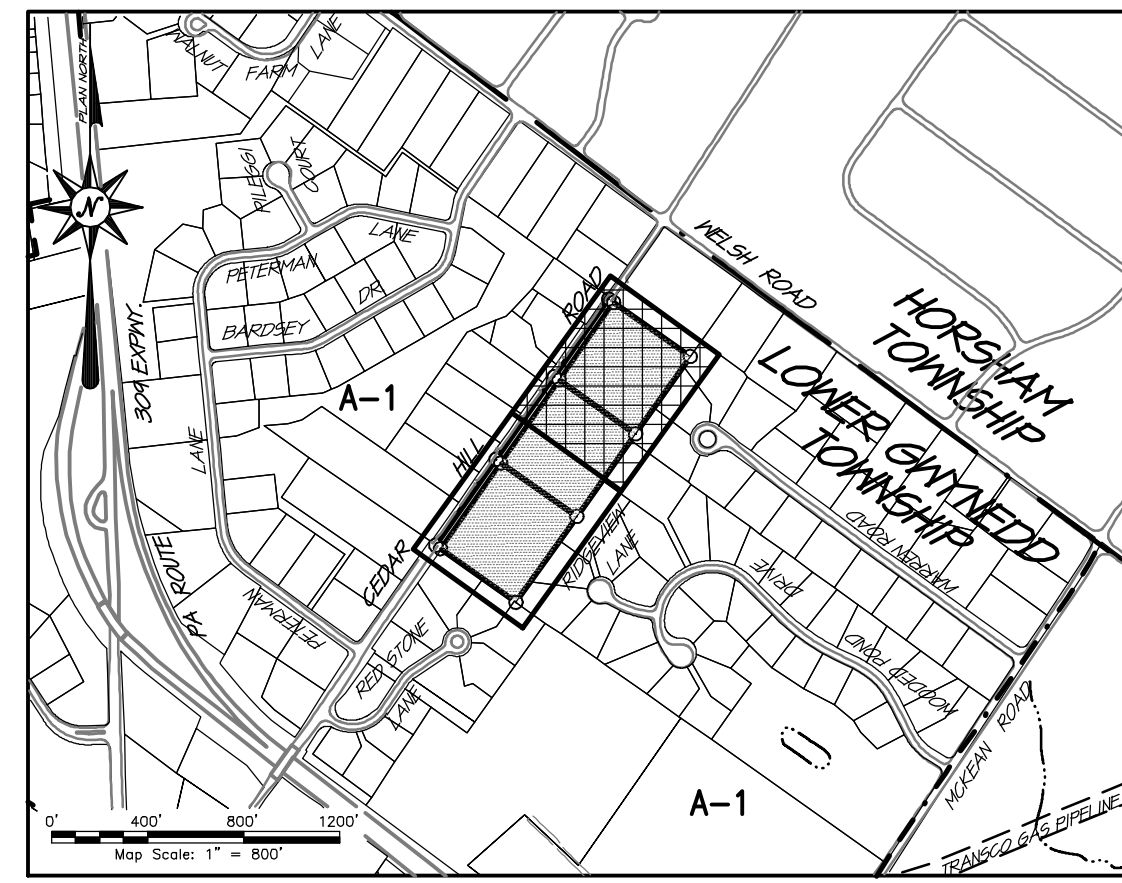
Applicant: CEDAR HILL DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer

632 Germantown Pike  
Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)  
SITE LANDSCAPING DESIGN PLAN - A  
1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
WOODROW & ASSOCIATES, INC.  
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Layer List:  
Sht18\_Land-A  
Job No: 18-0406 D  
Plan Date: APRIL 26, 2022  
Sheet No: 18 of 25



LOCATION MAP

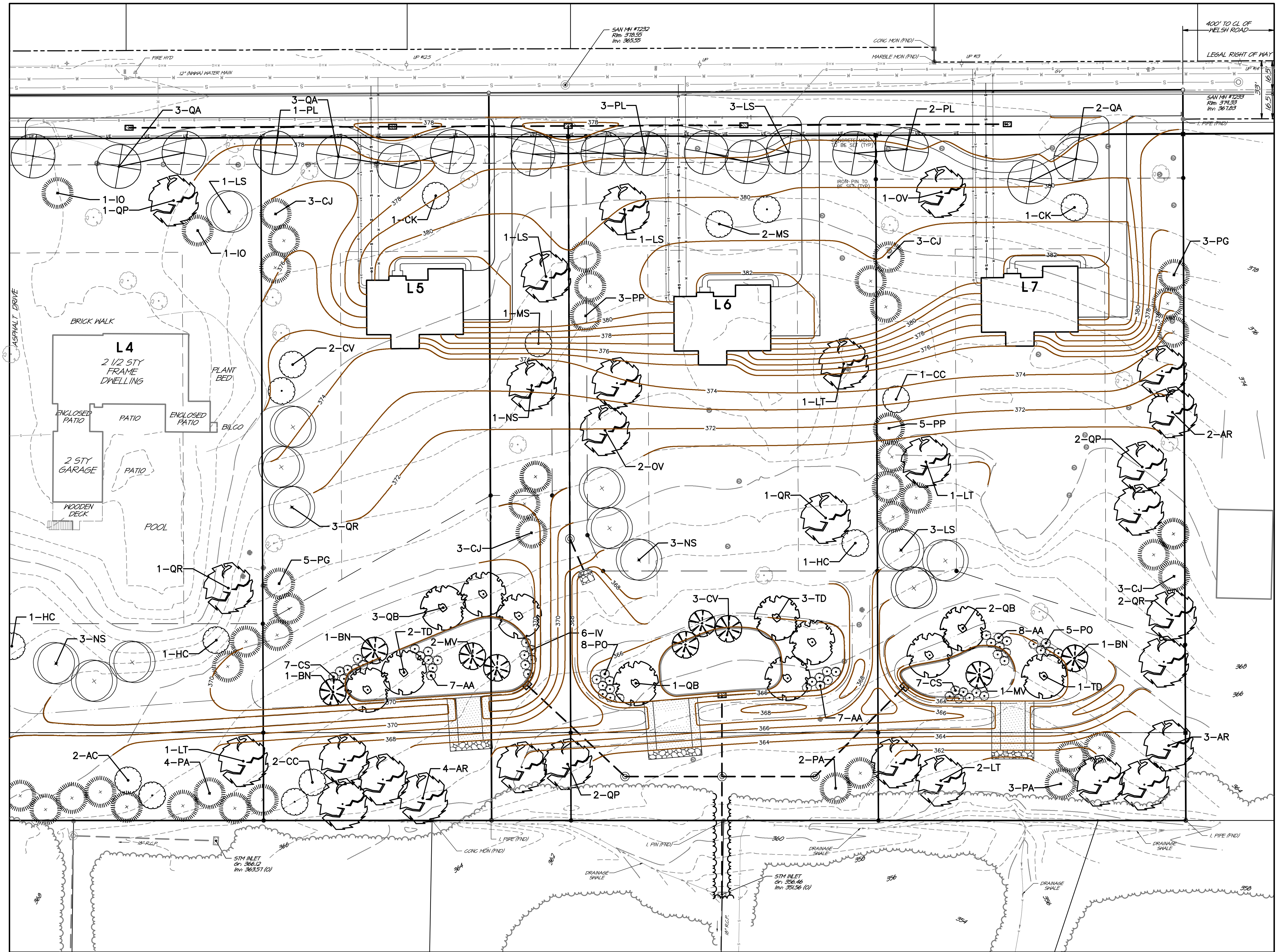
Tree Number	Species	Caliber (in)	To Be Removed	Replacement
600	Pin Oak	15	Yes	No
601	Red Maple	16.5	Yes	No
602	Red Maple	20	Yes	No
603	Red Maple	20.5	Yes	No
604	Pin Oak	13	Yes	Yes
605	Pin Oak	27	Yes	Yes
606	Pin Oak	25	Yes	No
607	Pin Oak	26	Yes	No
608	Pin Oak	32	Yes	No
609	Red Maple	35	Yes	No
610	Red Maple	22	Yes	No
611	Blue Spruce	33	Yes	No
612	Red Cedar	7	Yes	Yes
613	Pin Oak	7	Yes	Yes
614	Norway Spruce	24	Yes	Yes
615	Scotts Pine	26	Yes	No
616	Red Maple	21	Yes	No
617	Northern Red Oak	26	Yes	No
618	Red Maple	16	Yes	No
619	Pin Oak	32	Yes	No
620	Red Maple	20	Yes	Yes
621	Pin Oak	27	Yes	No
622	Norway Spruce	21	No	Yes
623	Pin Oak	38	Yes	Yes
624	American Holly	31	Yes	Yes
625	American Holly	30	Yes	Yes
626	American Elm	29	Yes	No
627	Norway Spruce	33	Yes	No
628	Red Cedar	37	No	Yes
629	Red Cedar	36	Yes	Yes
630	Red Cedar	30	No	Yes
631	Red Cedar	38	Yes	No
632	Red Cedar	11	Yes	No
633	Ornamental Pear	37	Yes	No
634	Scotts Pine	32	Yes	No
635	Ornamental Pear	9	Yes	Yes
636	Scotts Pine	26	Yes	Yes
637	Corkwood Willow	27	Yes	Yes
638	Pin Oak	23	Yes	Yes
639	Pin Oak	29	Yes	No
640	Pin Oak	28	No	Yes
641	Pin Oak	34	Yes	No
642	Pin Oak	31	Yes	No
643	Pin Oak	40	Yes	Yes
644	Red Cedar	37	No	Yes
645	Red Cedar	33	Yes	No
646	Red Cedar	37	No	Yes
647	Red Cedar	37	No	Yes
648	Red Cedar	37	No	Yes
649	Red Cedar	37	Yes	Yes
650	Ornamental Pear	37	Yes	No
651	Pin Oak	37	Yes	Yes
652	Red Cedar	38	Yes	Yes
653	Sweetgum	29	Yes	Yes
654	Sweetgum	26	Yes	Yes
655	Sweetgum	7	Yes	Yes
656	Crabapple	30	Yes	No
657	Flowering Plum	30	Yes	No
658	Hemlock	9	Yes	Yes
659	Supernova Tree	20	No	Yes
660	Littleleaf Linden	21	No	Yes
661	Cherry	32	Yes	No
662	Ornamental Pear	31	Yes	No
663	Crape Myrtle	6	No	No*
664	Pin Oak	29	Yes	No
665	Pin Oak	28	No	Yes
666	Cherry	20	Yes	No
667	Norway Spruce	9	No	Yes
668	Norway Spruce	31	No	Yes
669	Dawn Redwood	38	No	Yes
670	Dawn Redwood	38	No	Yes
671	Dawn Redwood	38	No	Yes
672	Dawn Redwood	6	No	Yes
673	Red Cedar	36	No	Yes
674	Red Cedar	34	No	Yes
675	Red Cedar	31	No	Yes
676	Red Cedar	31	No	Yes
677	Red Cedar	34	No	Yes
678	Red Cedar	34	No	Yes
679	Red Cedar	3	No	Yes
680	Red Cedar	32	No	Yes
681	Red Cedar	36	No	Yes
682	Red Cedar	27	Yes	No
683	Pin Oak	23	Yes	No
684	Cherry	32	Yes	No
685	Red Cedar	33	Yes	No
686	Sweetgum	27	Yes	Yes
687	Sweetgum	21	Yes	Yes
688	Sweetgum	9	No	Yes
689	Sweetgum	12	No	Yes
690	Japanese Maple	8	No	Yes
691	Pin Oak	33	Yes	Yes
692	Pin Oak	25	Yes	No
693	Pin Oak	27	Yes	Yes
694	Pin Oak	22	Yes	No
695	Pin Oak	30	Yes	Yes
696	Pin Oak	26	Yes	No
697	Pin Oak	27	Yes	No
698	Pin Oak	28	No	Yes
699	Crabapple	8	No	Yes
700	Crabapple	13	No	Yes
701	Crabapple	30	No	Yes
702	Dawn Redwood	31	Yes	Yes
703	Red Maple	24	No	Yes
704	Red Maple	34	No	Yes
705	Pin Oak	34	Yes	Yes
706	Pin Oak	34	Yes	Yes
707	Pin Oak	31	Yes	Yes
708	Pin Oak	33	Yes	Yes
709	Pin Oak	33	Yes	Yes
710	Pin Oak	35	Yes	Yes
711	Pin Oak	30	Yes	No
712	Pin Oak	32	Yes	No
713	Pin Oak	37	Yes	Yes
714	Pin Oak	30	Yes	Yes
715	Red Maple	20	Yes	Yes

Total caliber inches 2256

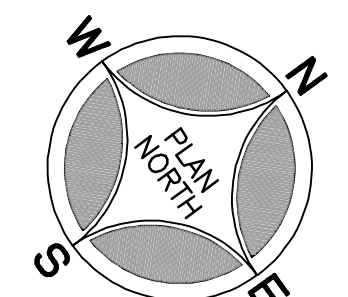
Total caliber inches to be removed 1547

Total caliber inches requiring replacement 709

\* Less than 6 inches



REVISIONS



Scale in Feet (1" = 30')



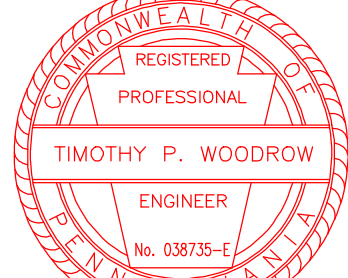
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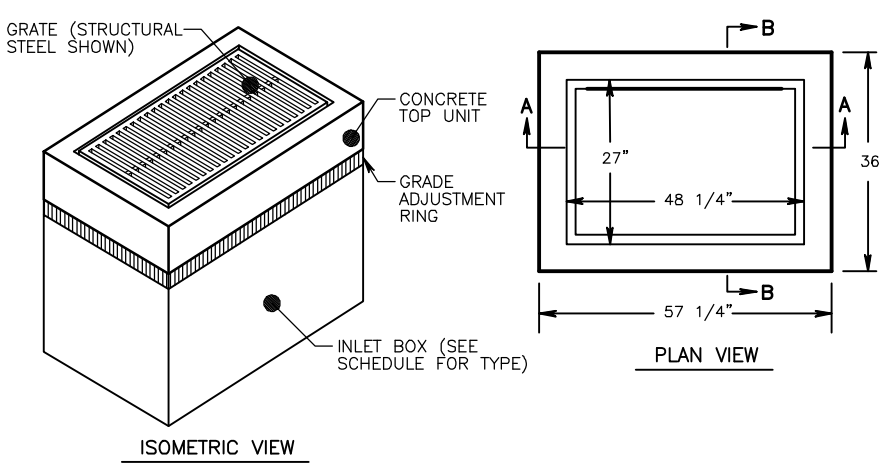
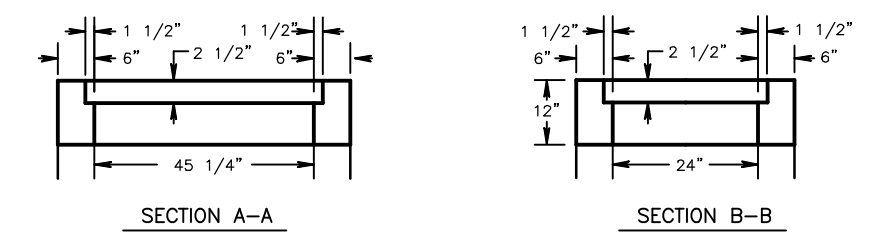
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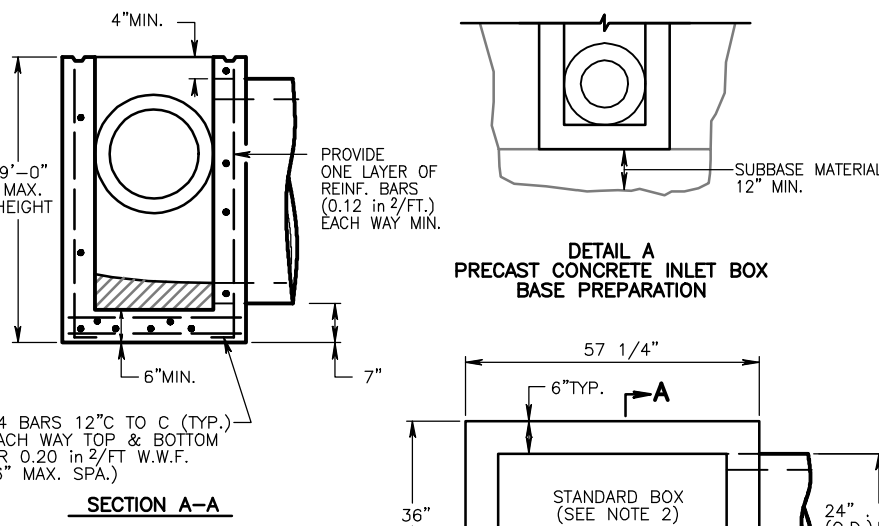


PRELIMINARY PLAN (Not To Be Recorded)  
**SITE LANDSCAPING DESIGN PLAN - B**  
 1500-1524 CEDAR HILL ROAD  
 LOWER MERION TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
**WOODROW & ASSOCIATES, INC.**  
 MUNICIPAL / CIVIL CONSULTING ENGINEERS  
 1108 N. 15th Street, Suite 400, Philadelphia, PA 19102  
 Phone: (215) 542-6488  
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Layer List:  
 Sht19\_Land-B  
 Job No: 18-0406 D  
 Plan Date: APRIL 26, 2022  
 Sheet No: 19 of 25

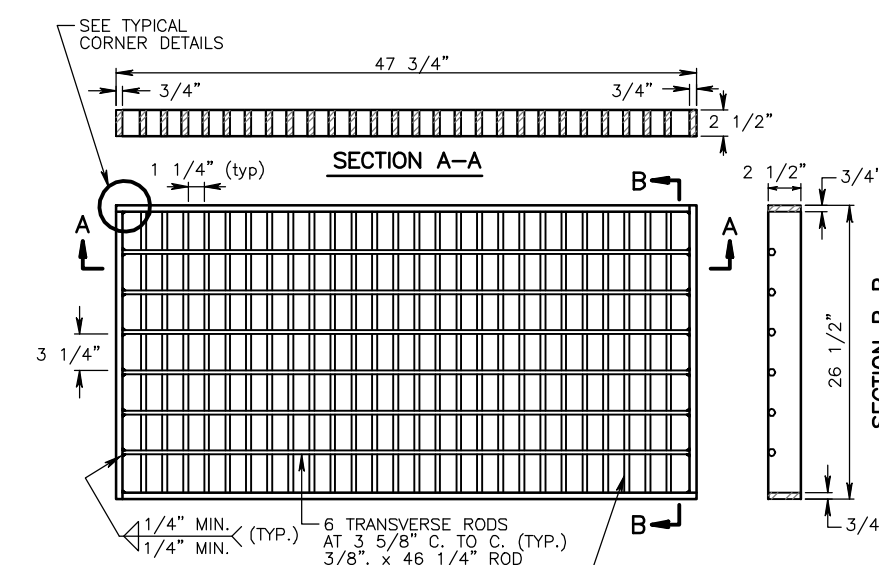


DETAIL FOR GENERAL REFERENCE ONLY, ACTUAL STRUCTURE TO BE IN COMPLIANCE WITH PENNDOT PUB 72, RC-45A, JUN. 1, 2010 OR LATEST EDITION.  
**PennDOT TYPE 'M' INLET TOP DETAIL**  
Not To Scale



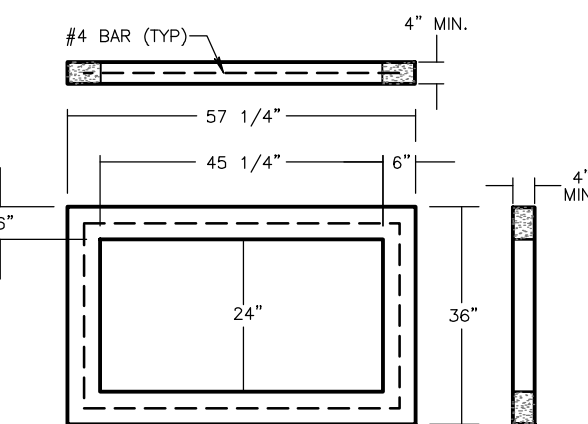
- NOTES:**
- CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 714 and PUBLICATION 72 (RC-34).
  - PROVIDE STANDARD INLET BOXES AND COVERS OPENING TO ACCOMMODATE STANDARD TOP COMPONENTS.

**STANDARD PRECAST INLET BOX**  
Not To Scale

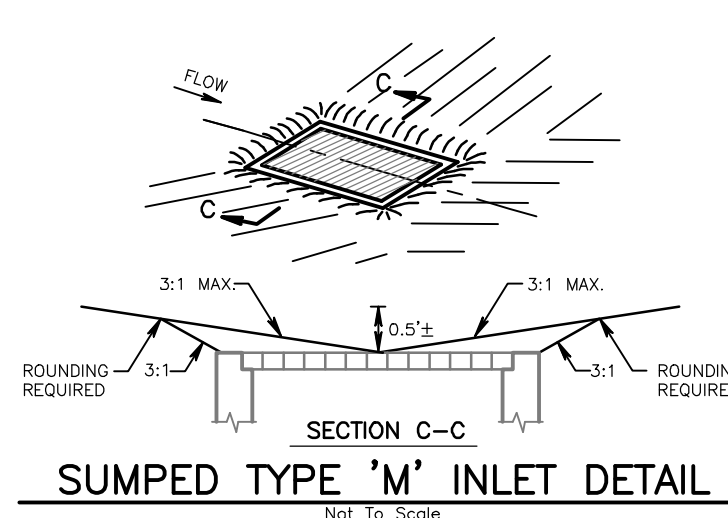


- NOTES:**
- CONSTRUCT STEEL GRATE IN ACCORDANCE WITH PA D.O.T. PUBLICATION 72 (RC-34).
  - WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03(B).

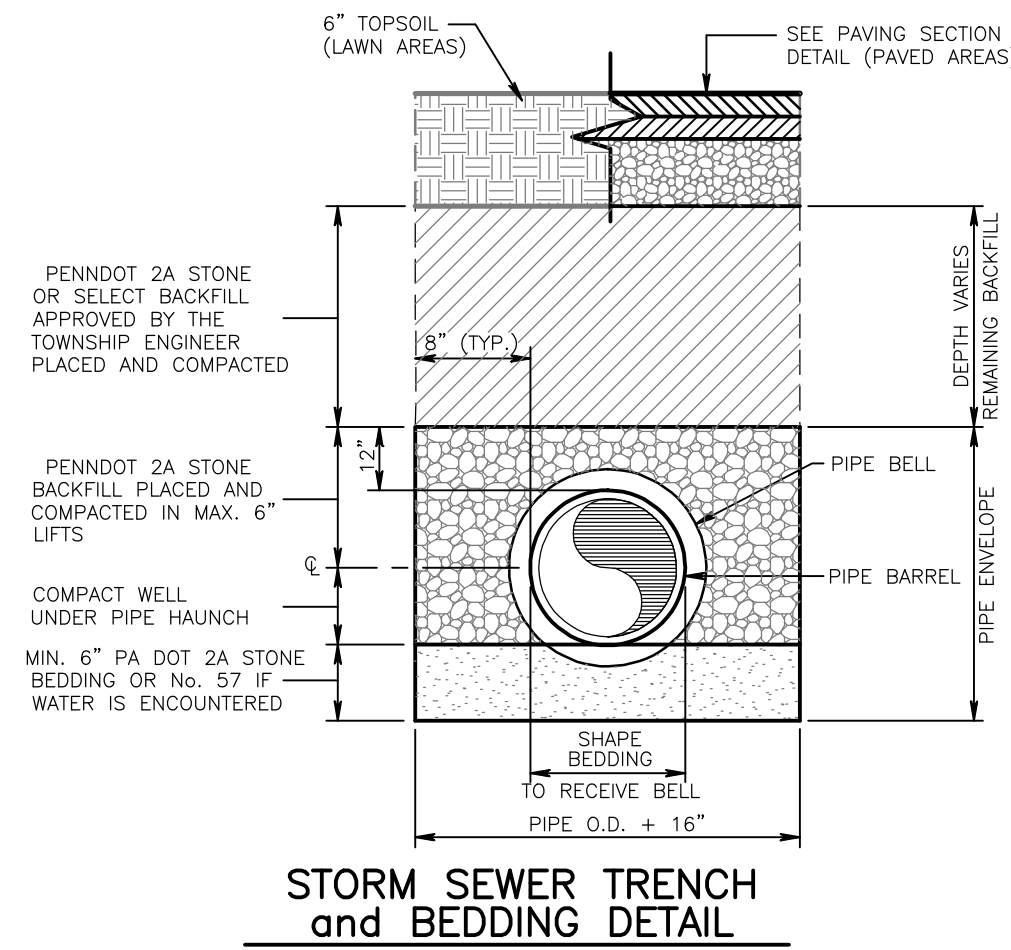
**BICYCLE SAFE STRUCTURAL STEEL GRATE**  
Not To Scale



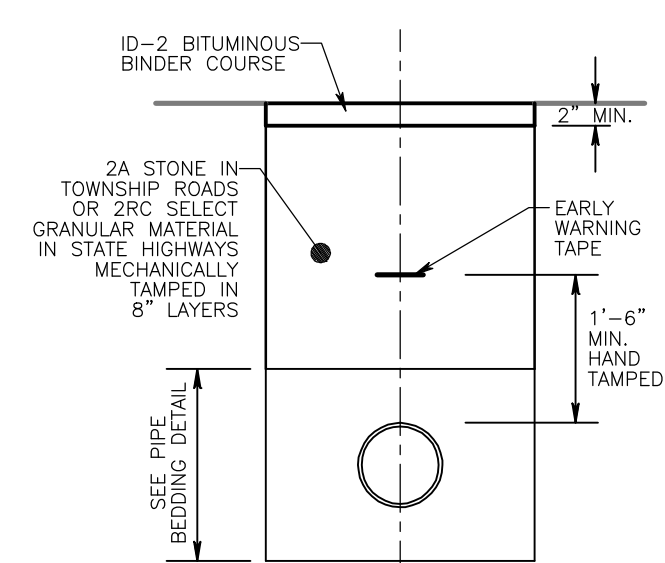
**(PRECAST) GRADE ADJUSTMENT RING**  
Not To Scale



**SUMPED TYPE 'M' INLET DETAIL**  
Not To Scale

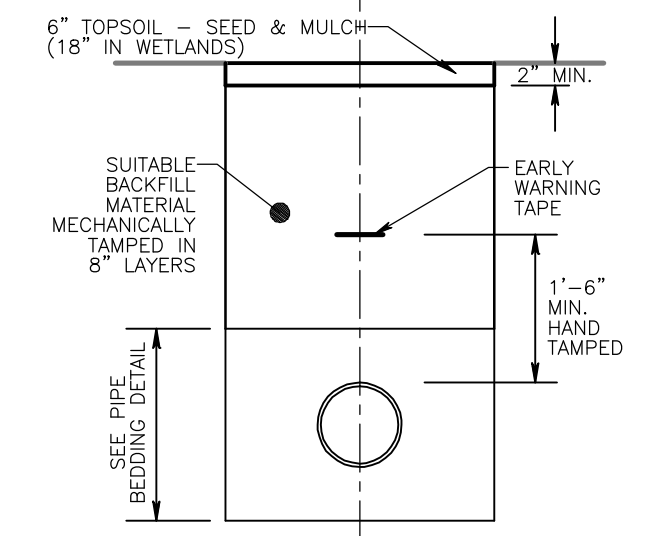


**STORM SEWER TRENCH and BEDDING DETAIL**  
Not To Scale



- NOTES:**
- SPECIAL CONDITIONS OF TOWNSHIP ROAD OPENING OR PENNDOT HIGHWAY OCCUPANCY PERMIT MAY SUPERSEDE THIS DETAIL.
  - CONTRACTOR TO MAINTAIN TEMPORARY PAVING, UNTIL PERMANENT PAVING IS INSTALLED.

**TEMPORARY PAVEMENT RESTORATION**  
Not To Scale



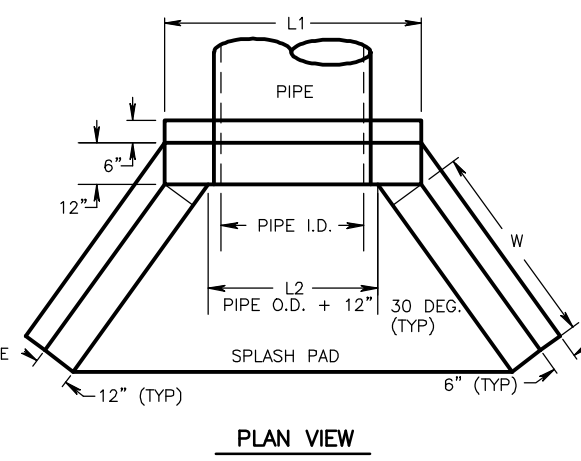
- NOTES:**
- THE TOP 6" OF ALL TRENCHES IN NON-WETLAND AREAS SHALL BE BACKFILLED WITH TOPSOIL AND RESTORED IN ACCORDANCE WITH SPECIFICATIONS NOTED ON PLANS.
  - THE TOP 18" OF ALL TRENCHES IN WETLANDS SHALL BE BACKFILLED WITH PREVIOUSLY STRIPPED TOPSOIL AND RESTORED IN ACCORDANCE WITH SPECIFICATIONS NOTED ON PLANS.

**RESTORATION IN UNPAVED AREAS**  
Not To Scale

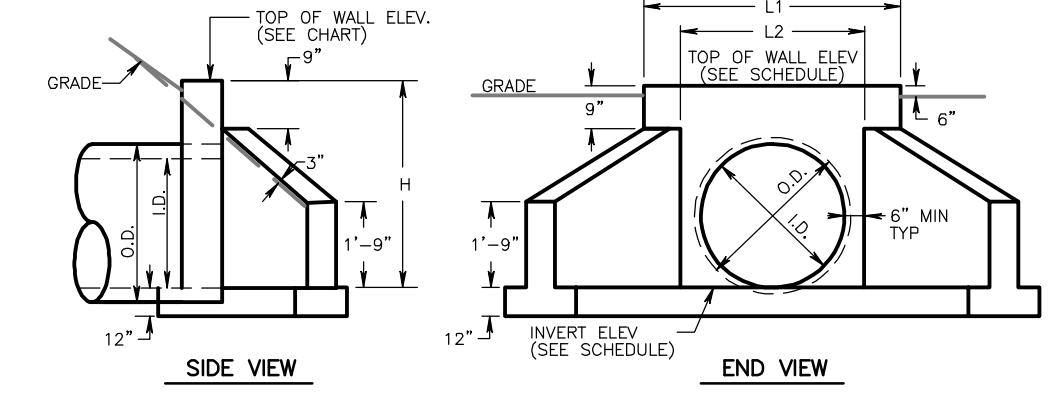
**TYPE D-W ENDWALL SCHEDULE OF DIMENSIONS**

PIPE I.D.	W	H
15" x 18"	3'-0"	3'-0"
21" x 24"	3'-0"	3'-0"
27" x 30"	3'-0"	3'-0"
34" x 36"	3'-0"	3'-0"
42" x 42"	3'-0"	3'-0"
48" x 48"	3'-0"	3'-0"
54" x 54"	3'-0"	3'-0"
60" x 60"	3'-0"	3'-0"
66" x 66"	3'-0"	3'-0"
72" x 72"	3'-0"	3'-0"

- GENERAL NOTES:**
- PROVIDE MATERIALS & WORKMANSHIP IN ACCORDANCE WITH PUB. 408, SECTION 605 AND PUB. 72, RC-31 LATEST EDITIONS.
  - USE CLASS A CONCRETE OR BETTER.
  - ENDWALL MAY BE STONE FACED AS REQUIRED.
  - FOR SPECIFIC STRUCTURE ELEVATION INFORMATION, REFER TO STRUCTURE SCHEDULE ON APPROPRIATE SHEET ATTACHED WITH THIS PLAN SET.

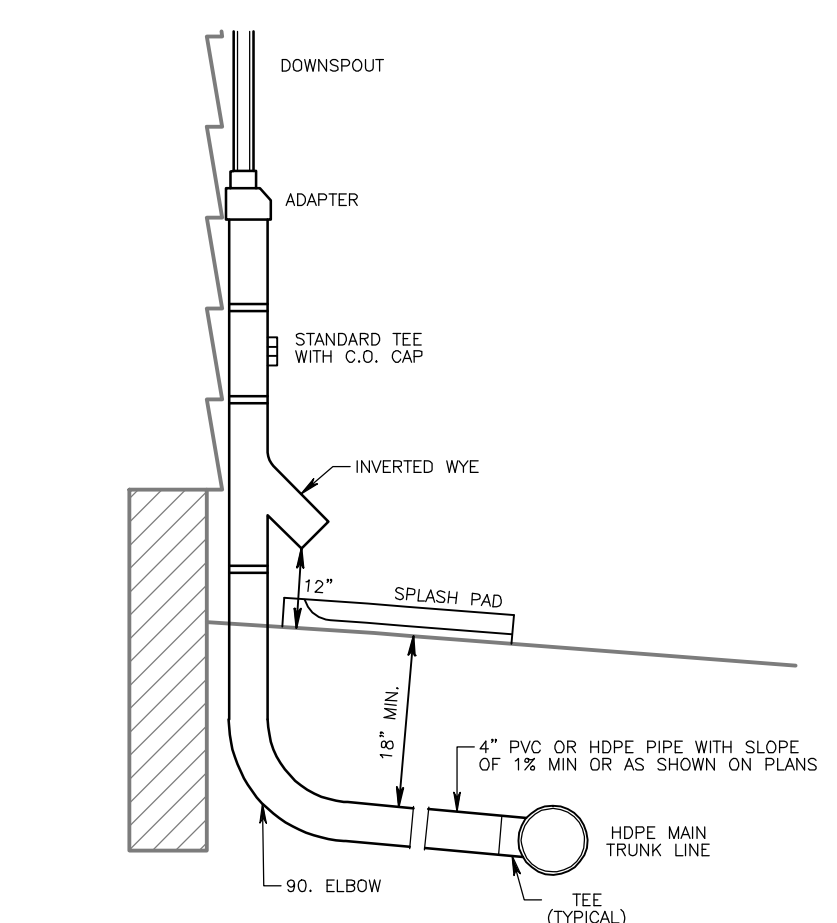


**PLAN VIEW**

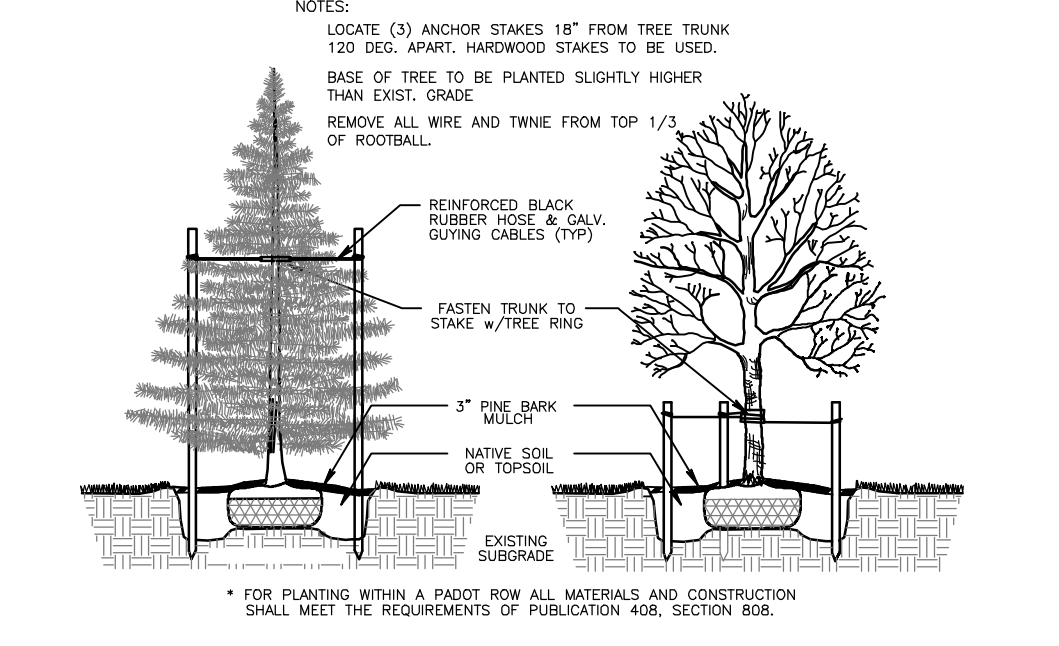


**SIDE VIEW** and **END VIEW**

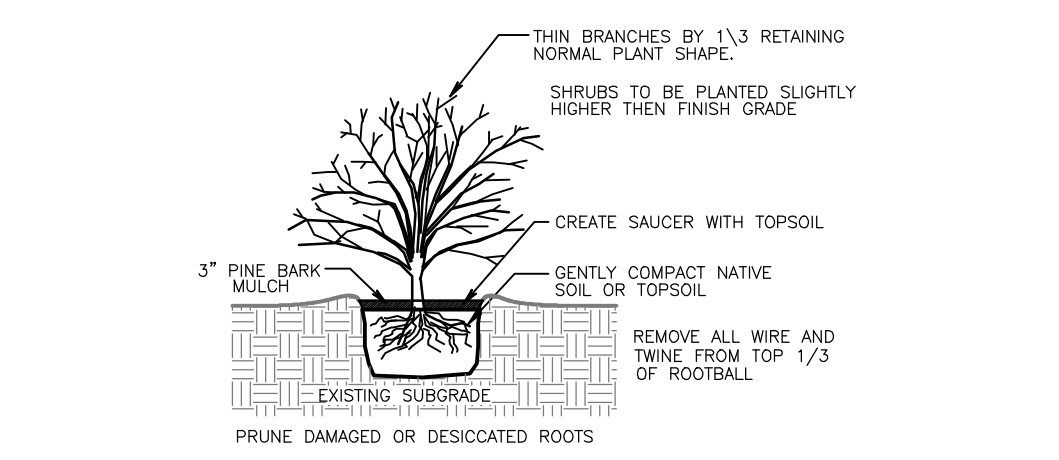
**TYPE D-W ENDWALL**  
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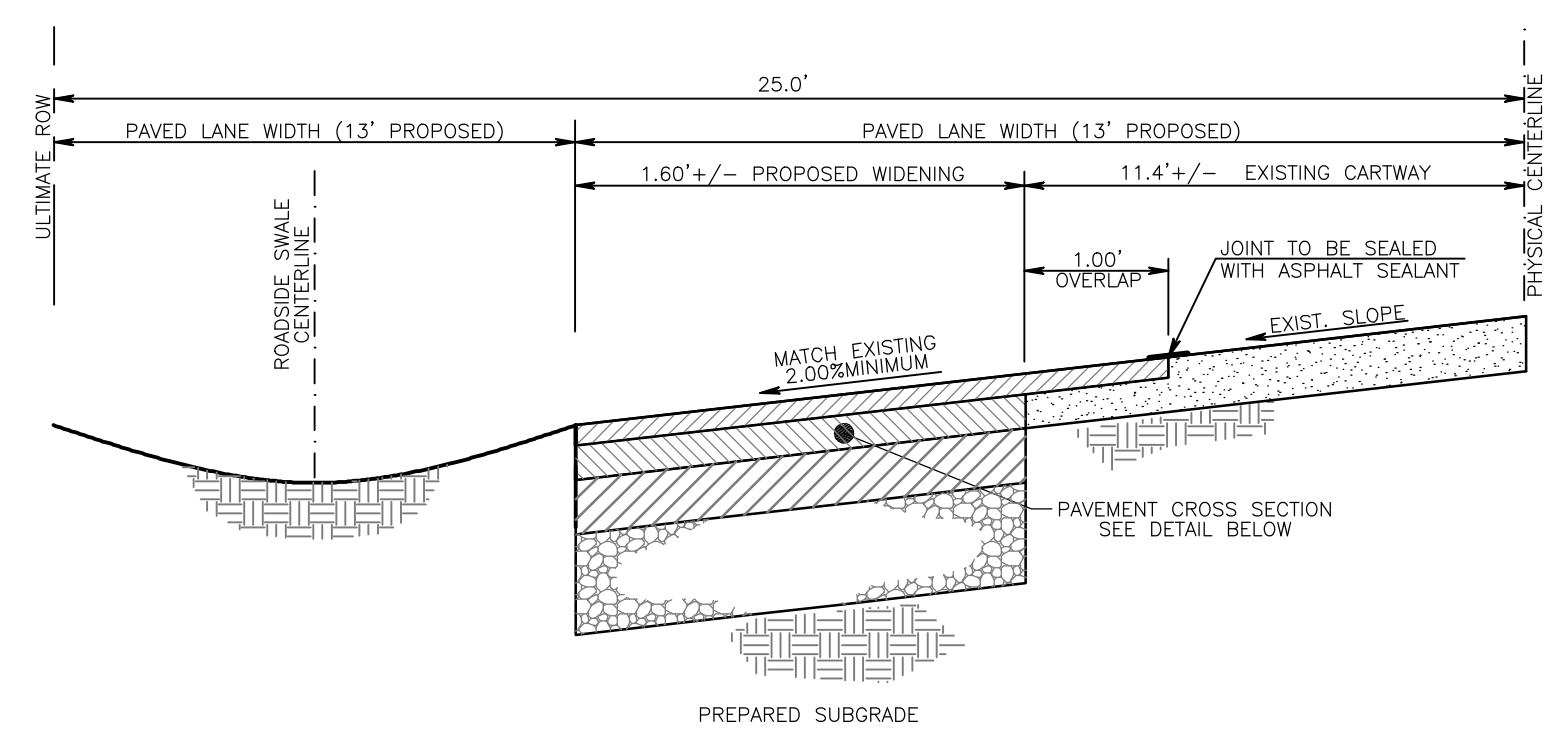
**DOWNSPOUT COLLECTION SYSTEM**  
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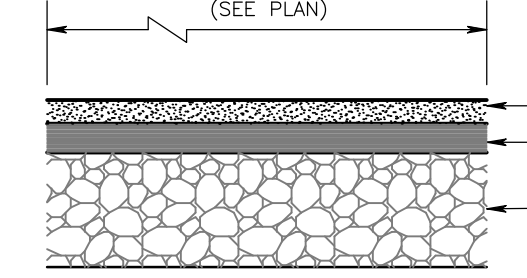
**TREE PLANTING DETAIL**  
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**SHRUB PLANTING DETAIL**  
Not To Scale



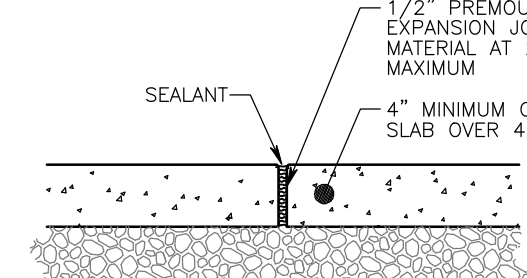
**PROPOSED ROAD WIDENING DETAIL**  
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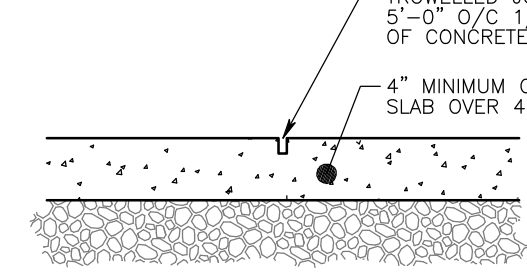
- PROOF ROLLED EARTH & SUBBASE**
- A) 1.5" SuperPave Volumetric Asphalt Mixture Design, 9.5mm, PG 64-22, HMA Wearing Course, 0-0.3M ESALS, SR-M or Greater
  - B) 2" SuperPave Volumetric Asphalt Mixture Design, 20mm, PG 64-22, HMA Base Course, 0-0.3M ESALS
  - C) 6" 2A Stone Subbase on prepared subgrade
- LOT DRIVEWAYS**
- A) 1.5" SuperPave Volumetric Asphalt Mixture Design, 9.5mm, PG 64-22, HMA Wearing Course, 0-0.3M ESALS, M or Greater
  - B) 4.5" SuperPave Volumetric Asphalt Mixture Design, 20mm, PG 64-22, HMA Base Course, 0-0.3M ESALS
  - C) 6" 2A Stone Subbase on prepared subgrade

- NOTES:**
- ALL SUBGRADE AREAS TO BE COMPACTED AND APPROVED PRIOR TO PLACEMENT OF MATERIALS.
  - ALL STREETS SHALL HAVE BASE UNDERDRAIN INSTALLED AS DIRECTED BY MUNICIPAL ENGINEER.

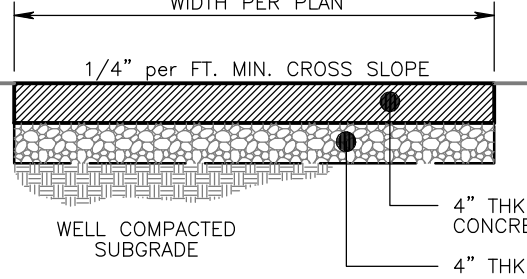
**PROJECT PAVING SECTION**  
Not To Scale



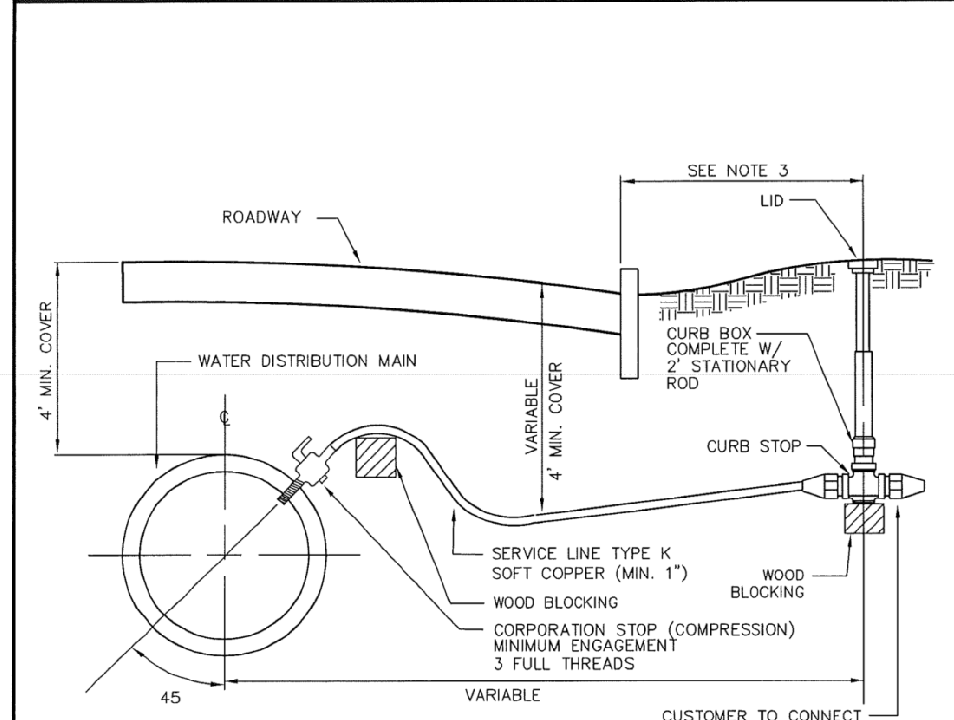
**TYPICAL EXPANSION JOINT DETAIL**



**TYPICAL CONTROL JOINT DETAIL**



**CONCRETE SIDEWALK**  
Not To Scale



- NOTES:**
- FOR TAPS > 1" CONNECTION, PROVIDE TAPPING SLEEVE IN ACCORDANCE WITH AUTHORITY SPECIFICATIONS.
  - DO NOT PLACE CURB BOX IN PAVED AREAS UNLESS OTHERWISE APPROVED BY AUTHORITY.
  - WHERE SIDEWALK PARALLELS ROADWAY, THE CURB BOX SHALL BE PLACED BETWEEN THE CURB AND SIDEWALK. ALL OTHER LOCATIONS, CURB BOX TO BE PLACED WHERE DIRECTED BY AUTHORITY.
  - CUSTOMER IS RESPONSIBLE FOR MAINTENANCE OF ALL SERVICE PIPING AND PLUMBING BEYOND THE CURB STOP, WITH EXCEPTION OF WATER METER.
  - PROVIDE COMPRESSION FITTINGS ON CURB AND CORPORATION STOP.

**NORTH WALES WATER AUTHORITY**

DES. BY: BEP	DATE: 5/11	SCALE: NONE	STANDARD WATER SERVICE CONNECTION
REVISION	DATE		

STANDARD DETAIL W3

**REVISIONS**

NO.	DATE	DESCRIPTION
1	07/06/22	REVISED TO REFLECT NEW RESOL. CONCEPT

Scale in Feet (1" = 50')

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**811**

PROJECT SERIAL NUMBER FOR DESIGN: 2019 1291601 (Design) MAY 09, 2019

Parcel Information:

- 39-00-00643-00-2 (B 18 U 70 - GAINES) 1500 Cedar Hill Rd
- 39-00-00646-00-8 (B 18 U 28 - STROHECKER) 1512 Cedar Hill Rd
- 39-00-00649-00-5 (B 18 U 29 - LYNCH) 1524 Cedar Hill Rd

Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

Applicant: CEDAR HILL DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer

632 Germantown Pike  
Lafayette Hill, PA 19444

**REGISTERED PROFESSIONAL ENGINEER**

TIMOTHY P. WOODROW  
No. 03875-1

**PROJECT CONSTRUCTION DETAILS SHEET - A**

1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. 15th St., Suite 400, P.O. Box 19022  
Philadelphia, PA 19102  
Phone: (215) 542-4622  
Web: www.woodrowinc.com

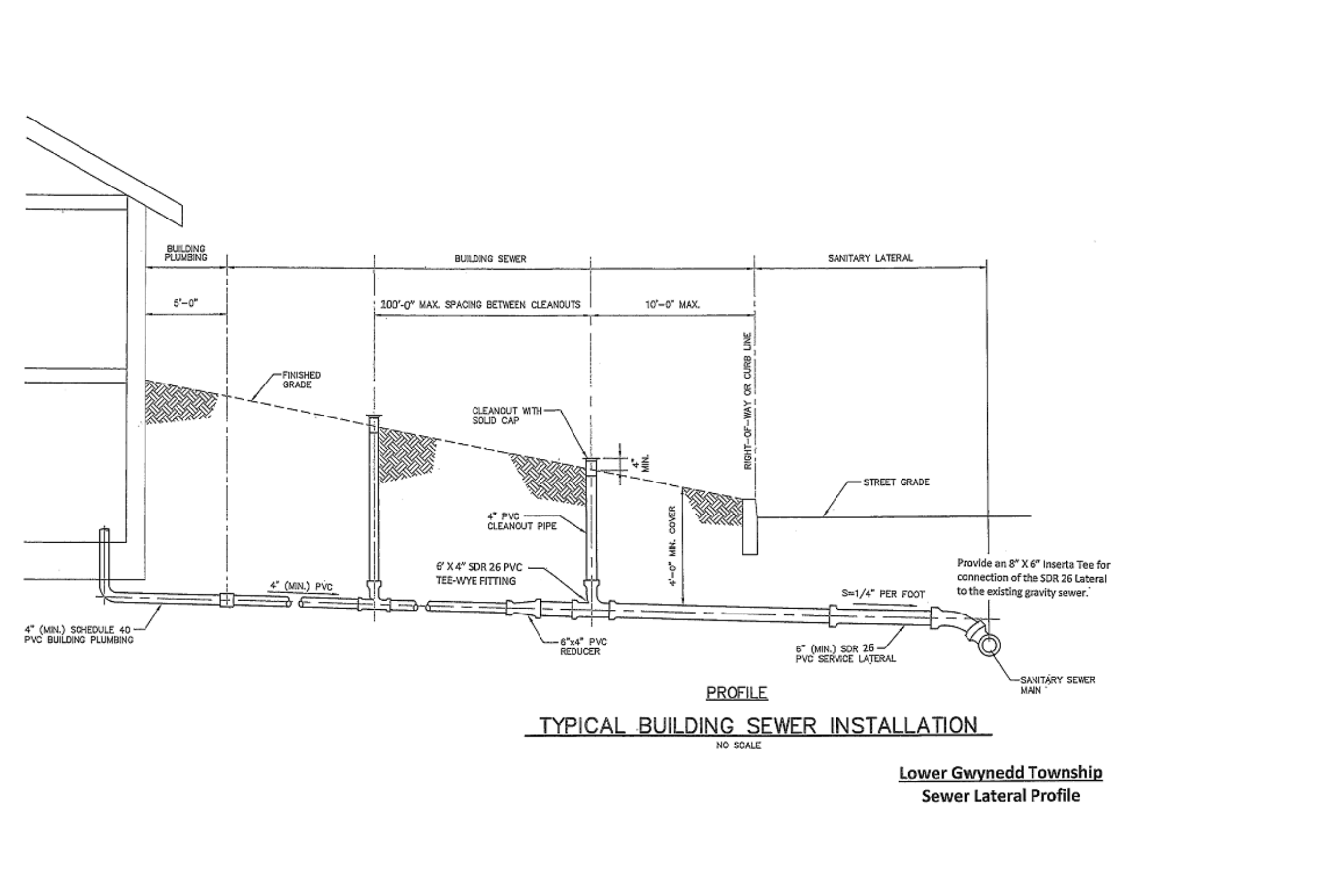
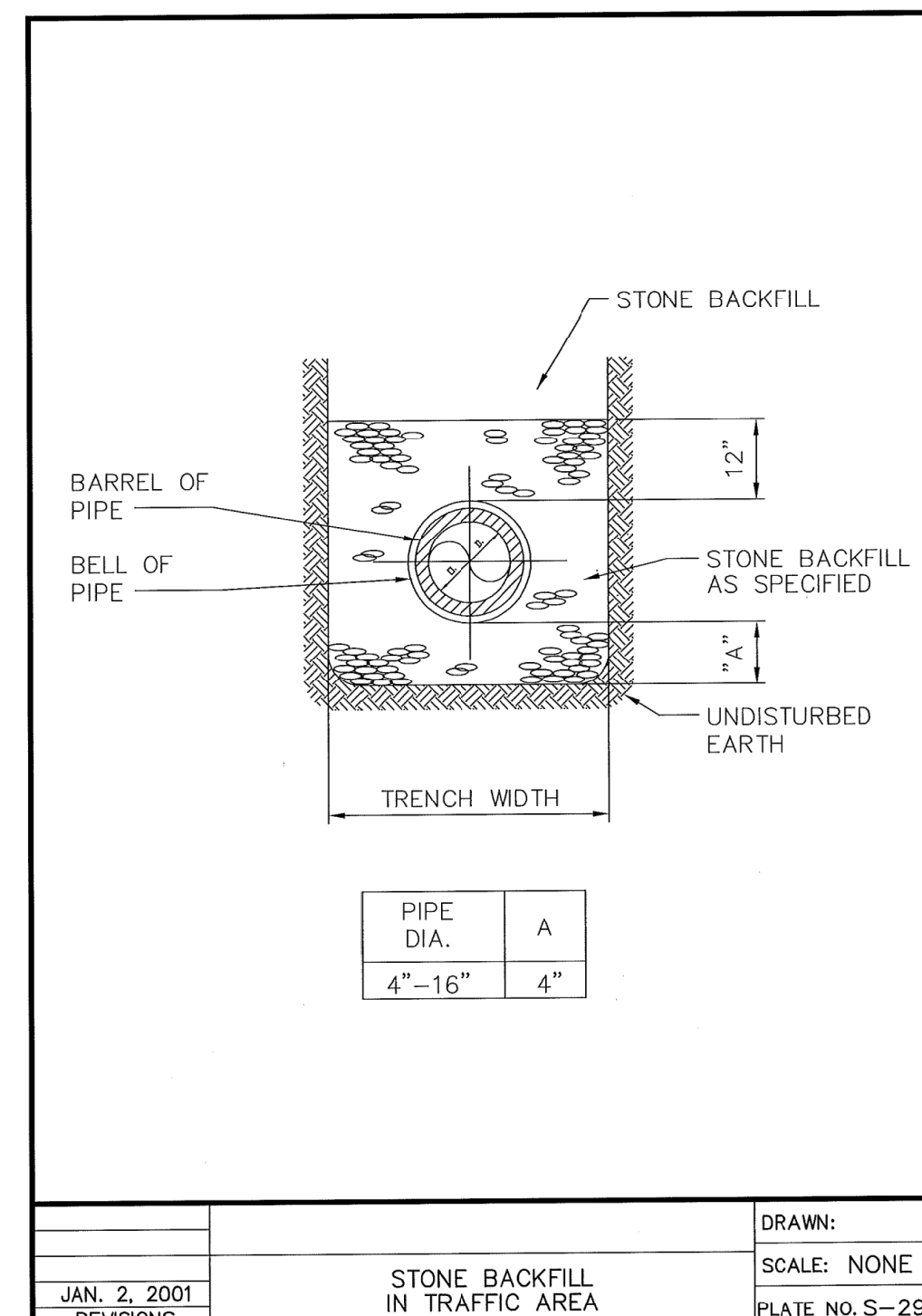
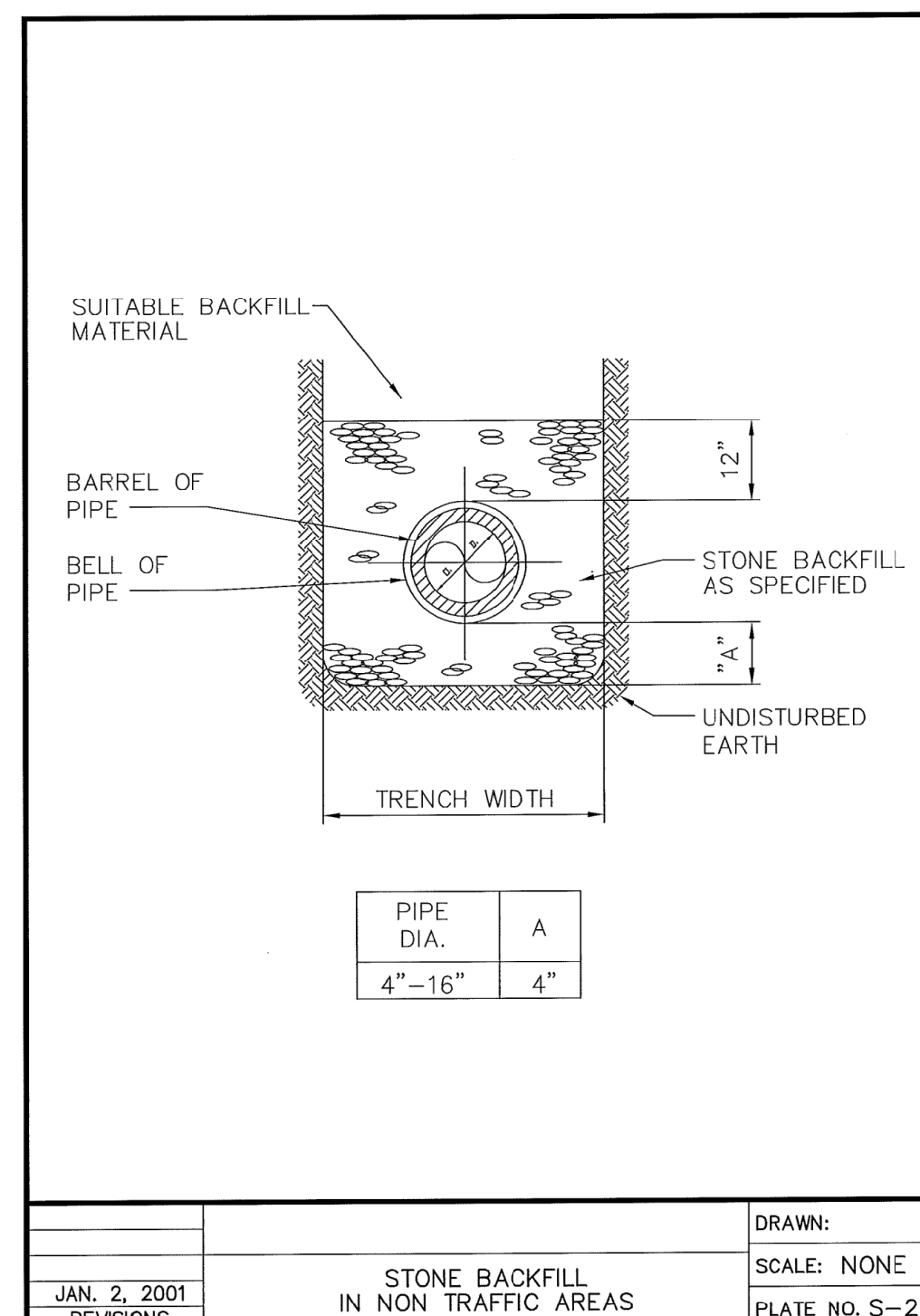
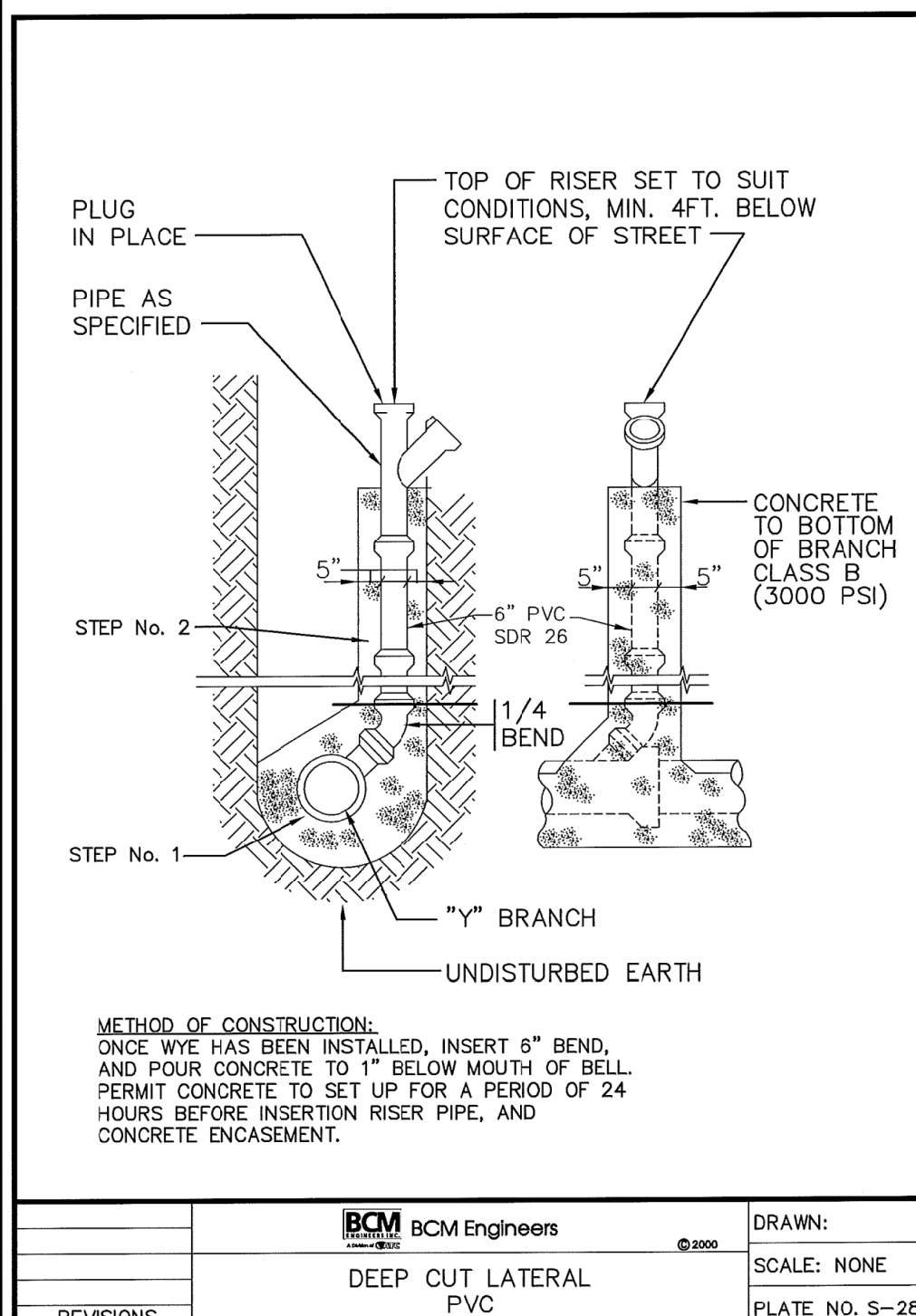
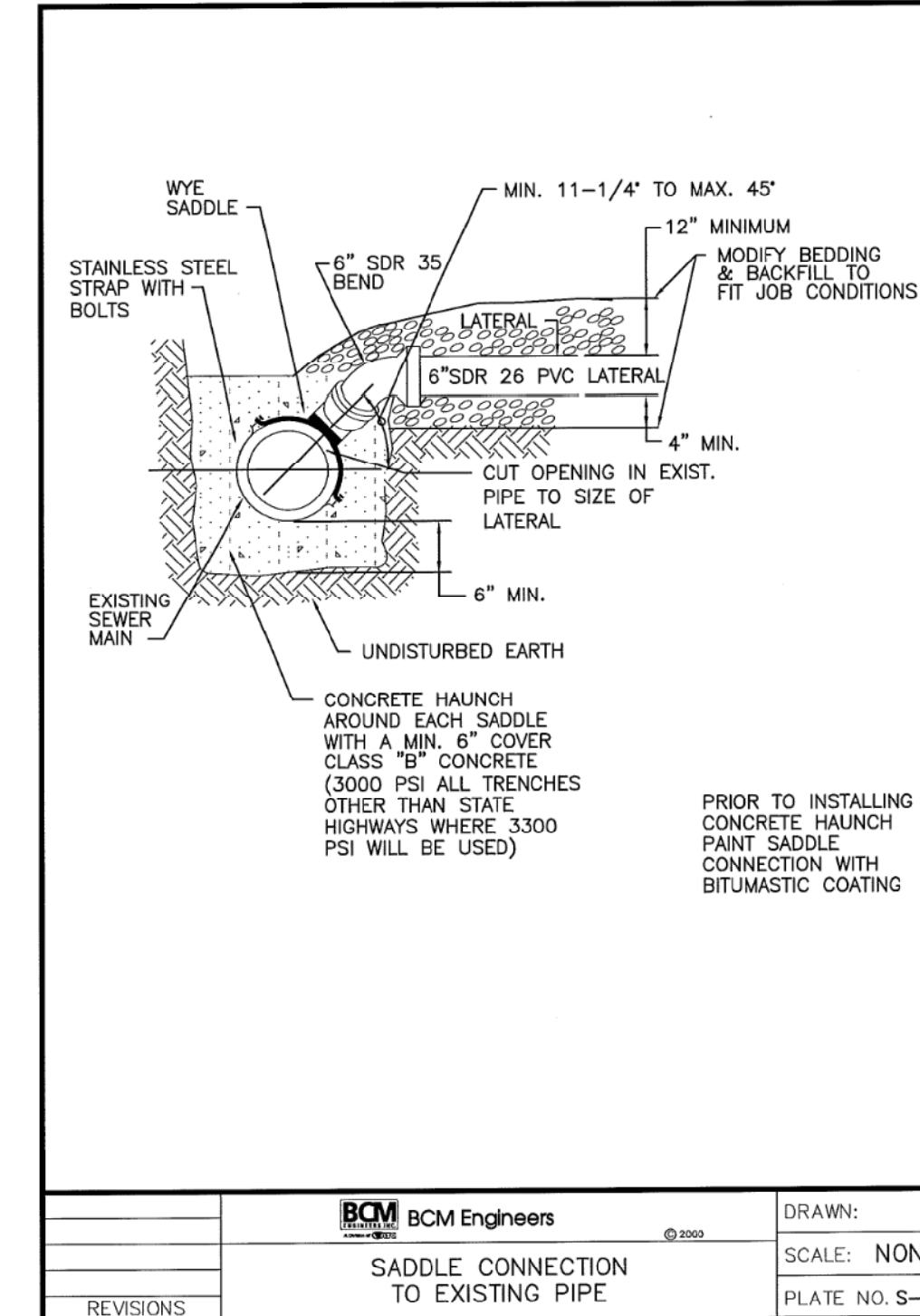
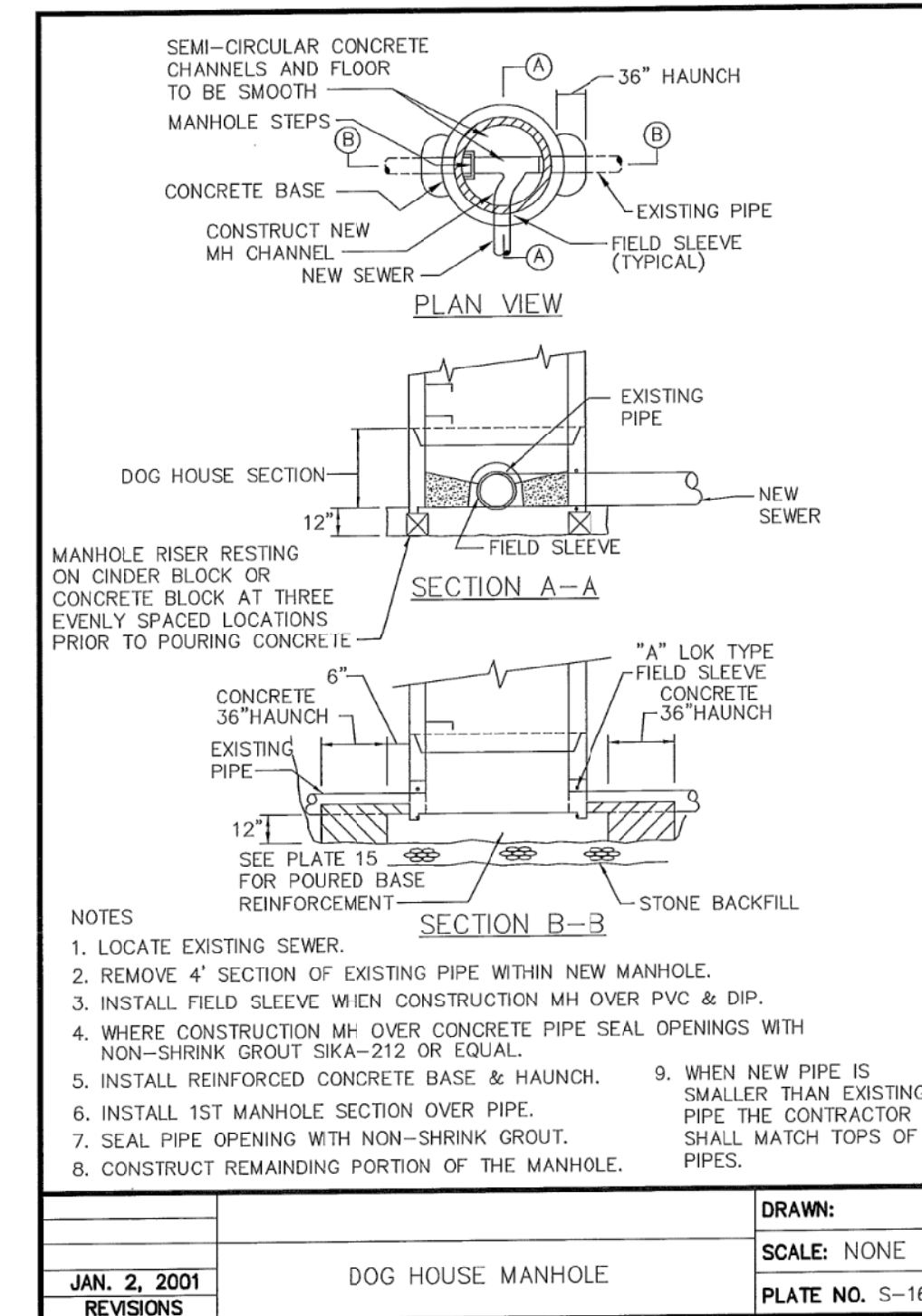
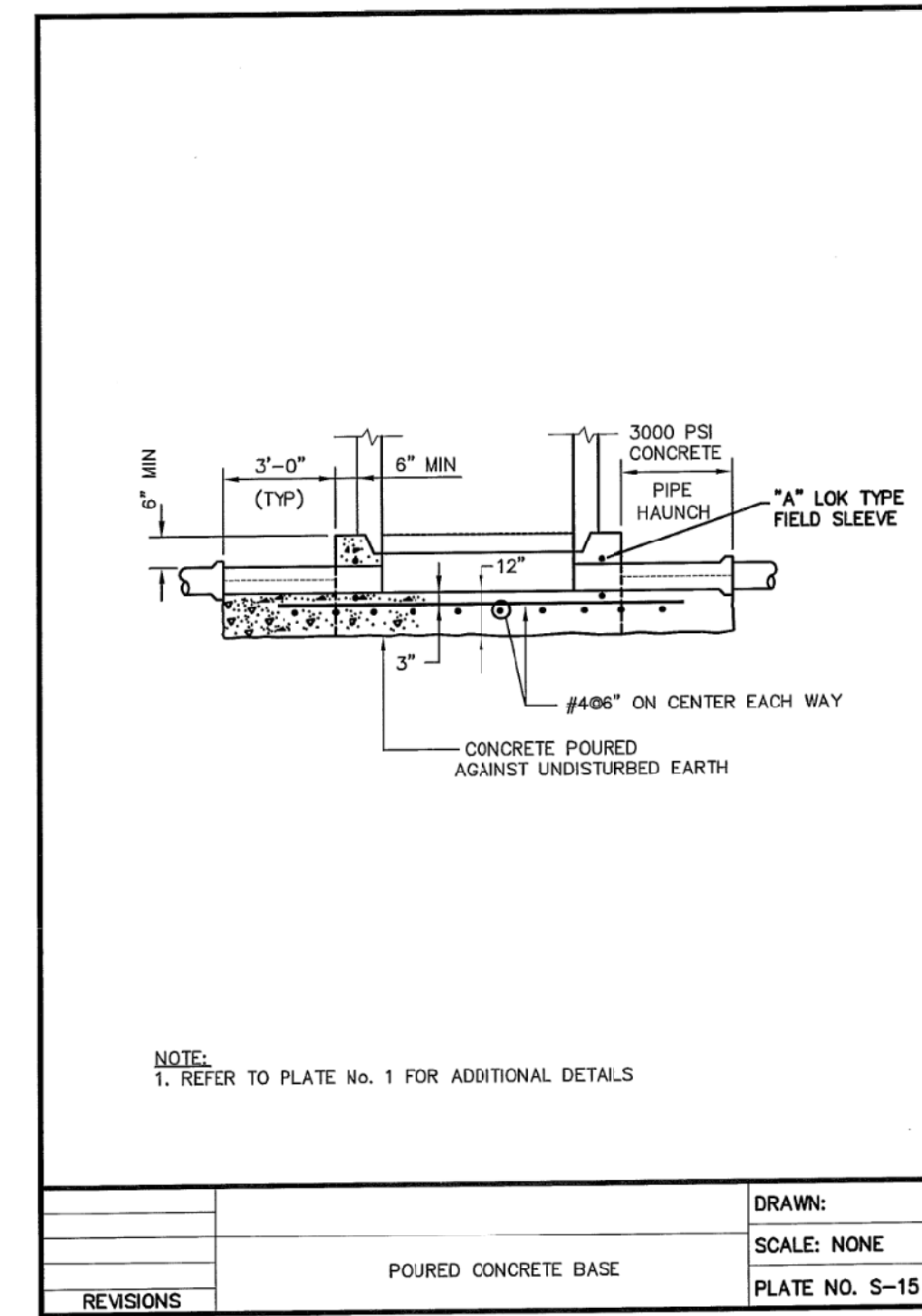
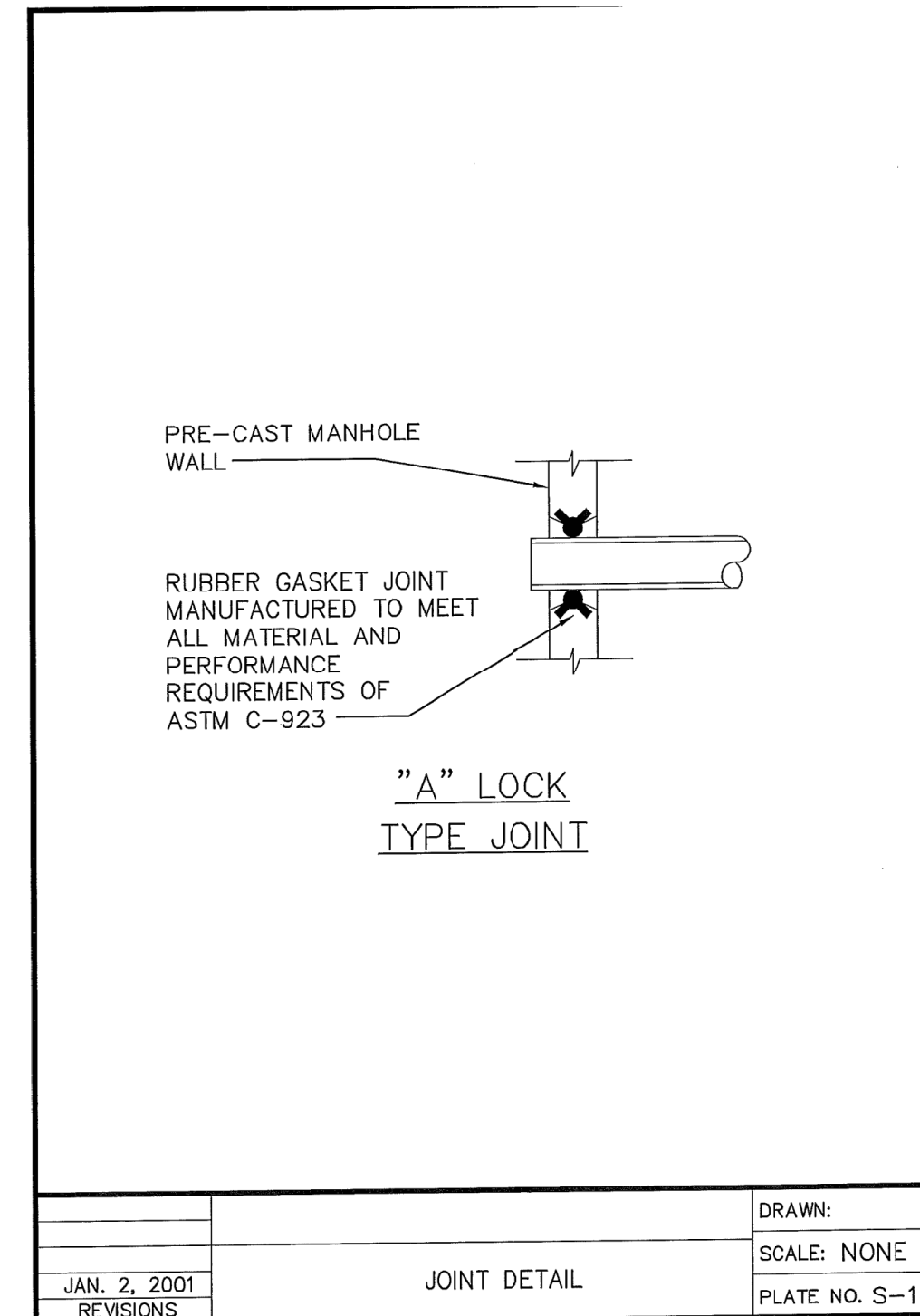
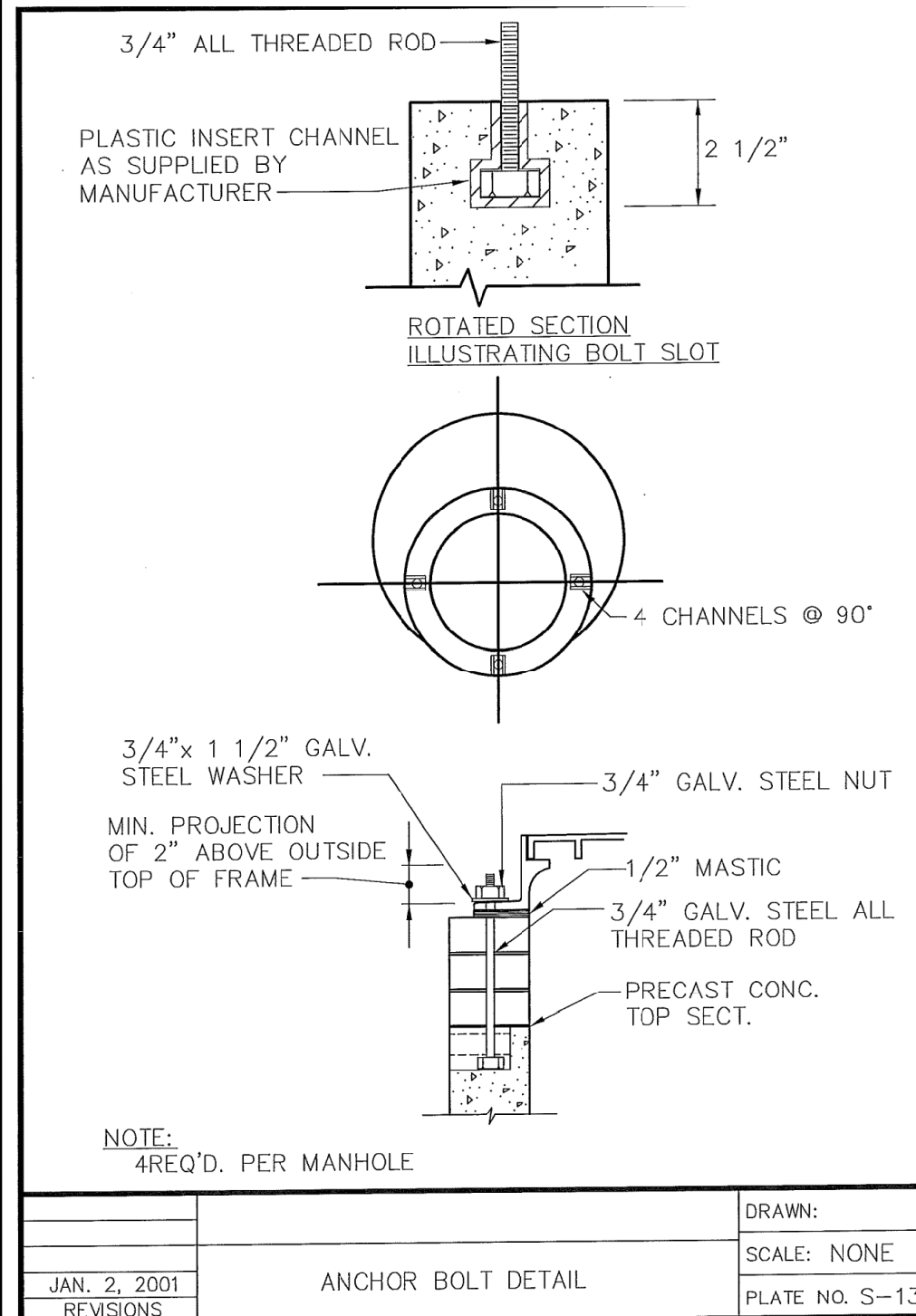
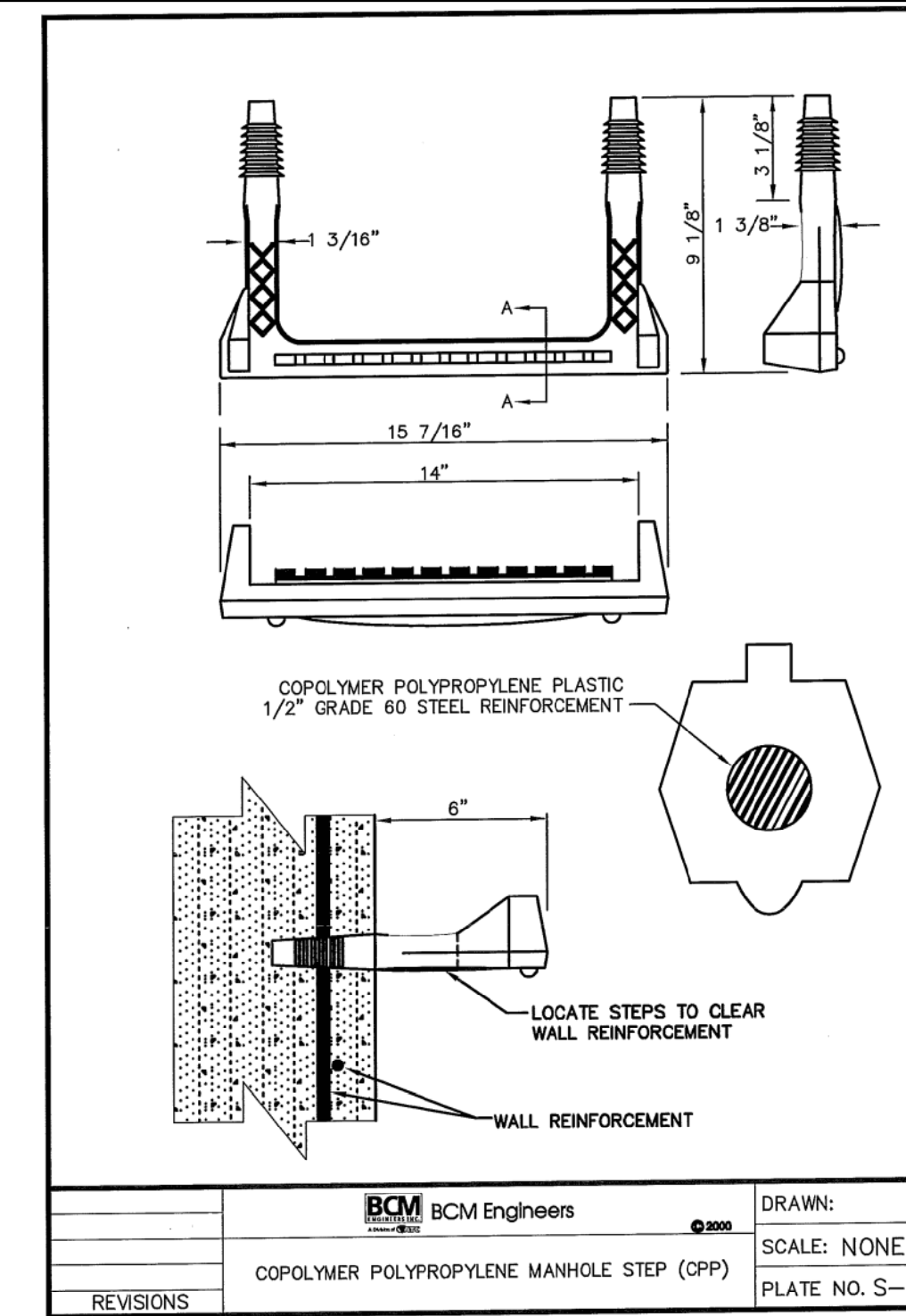
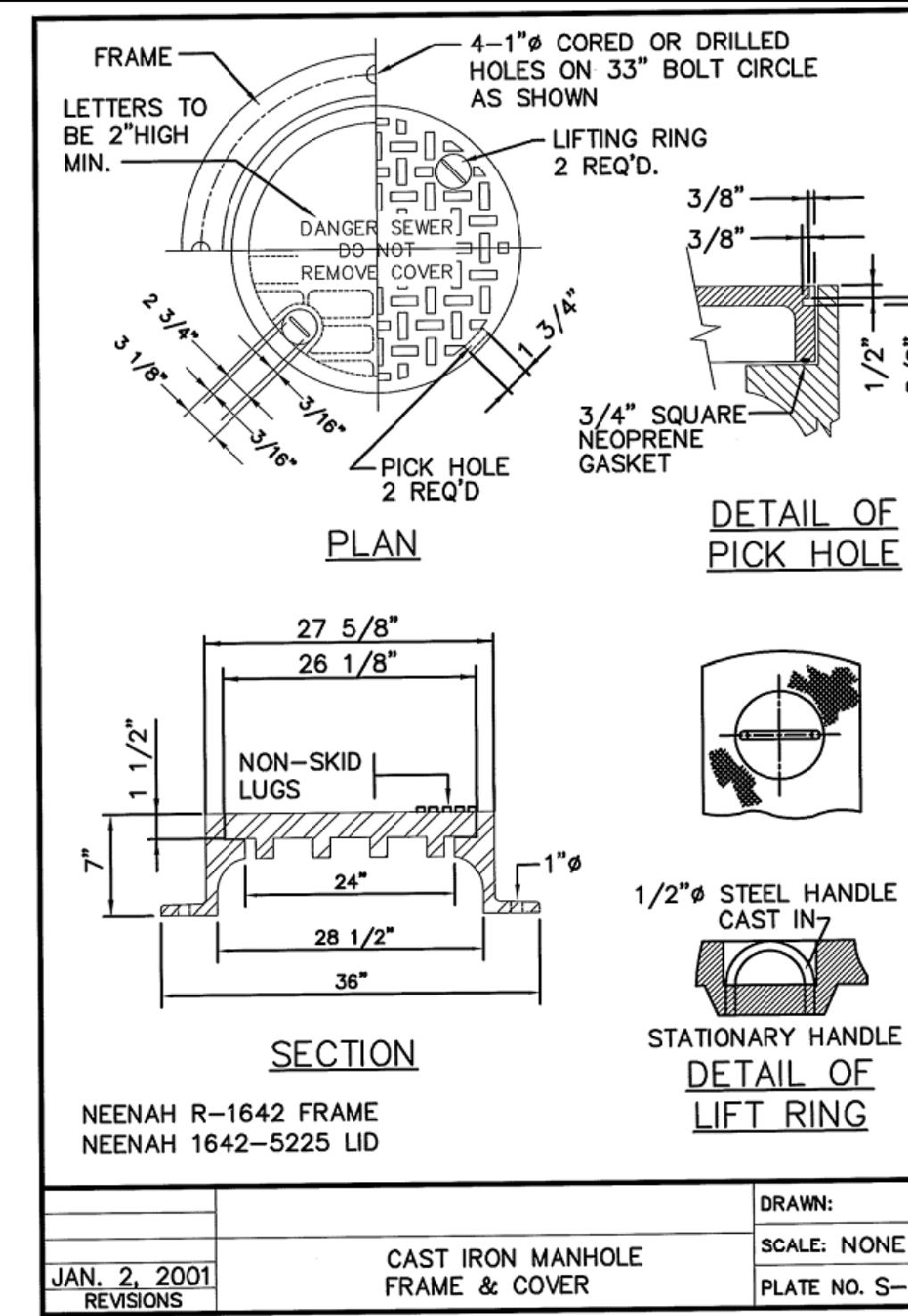
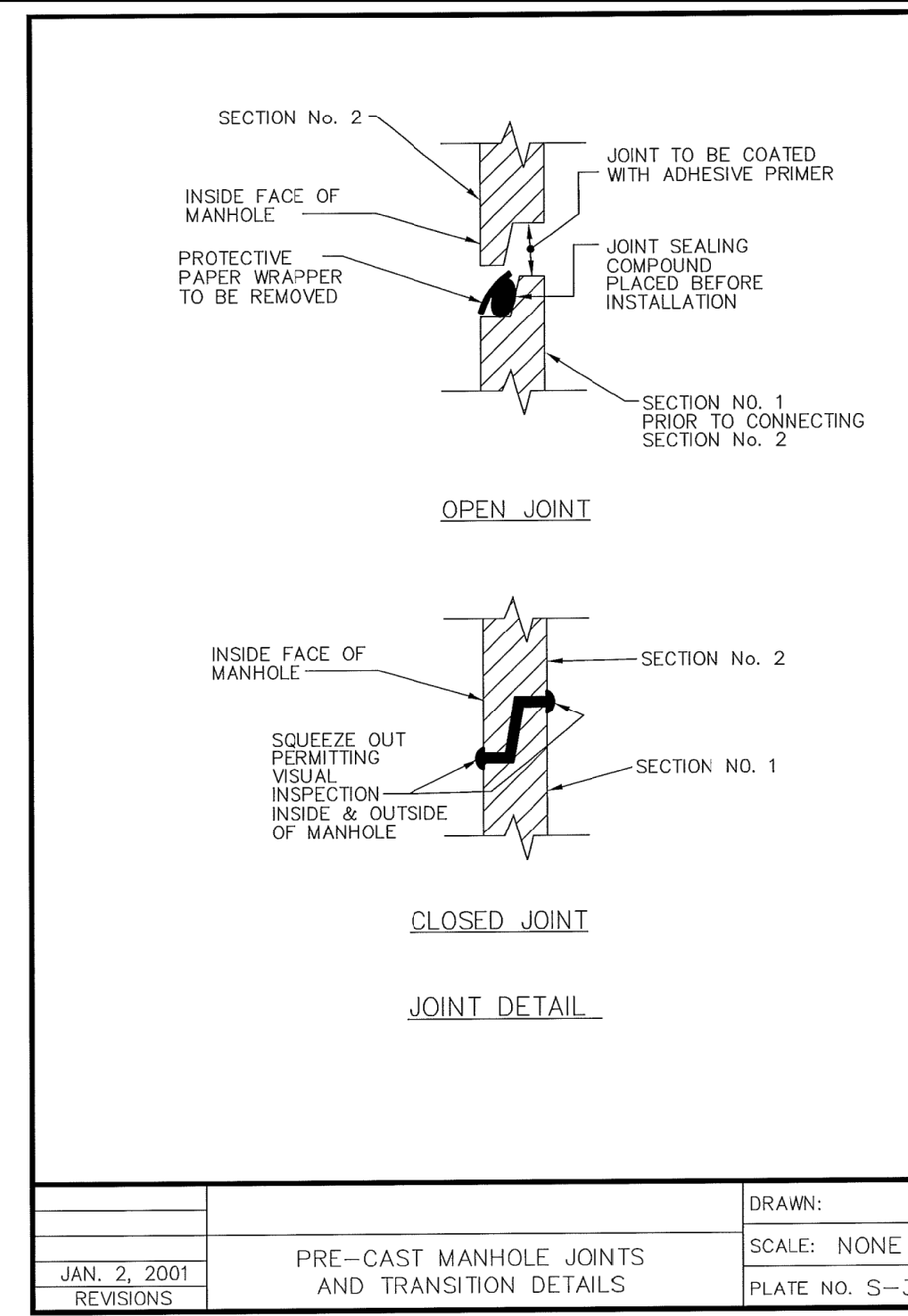
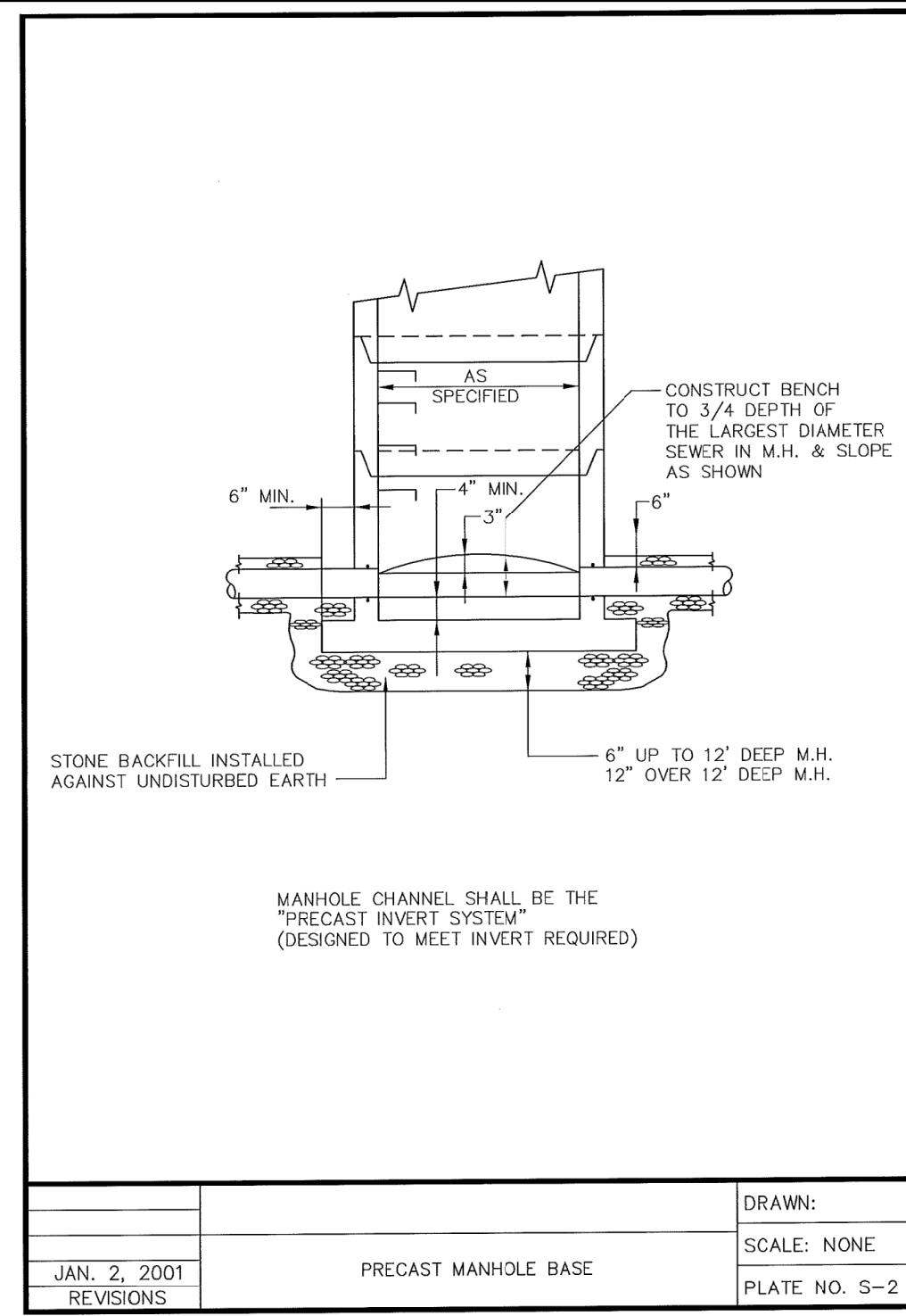
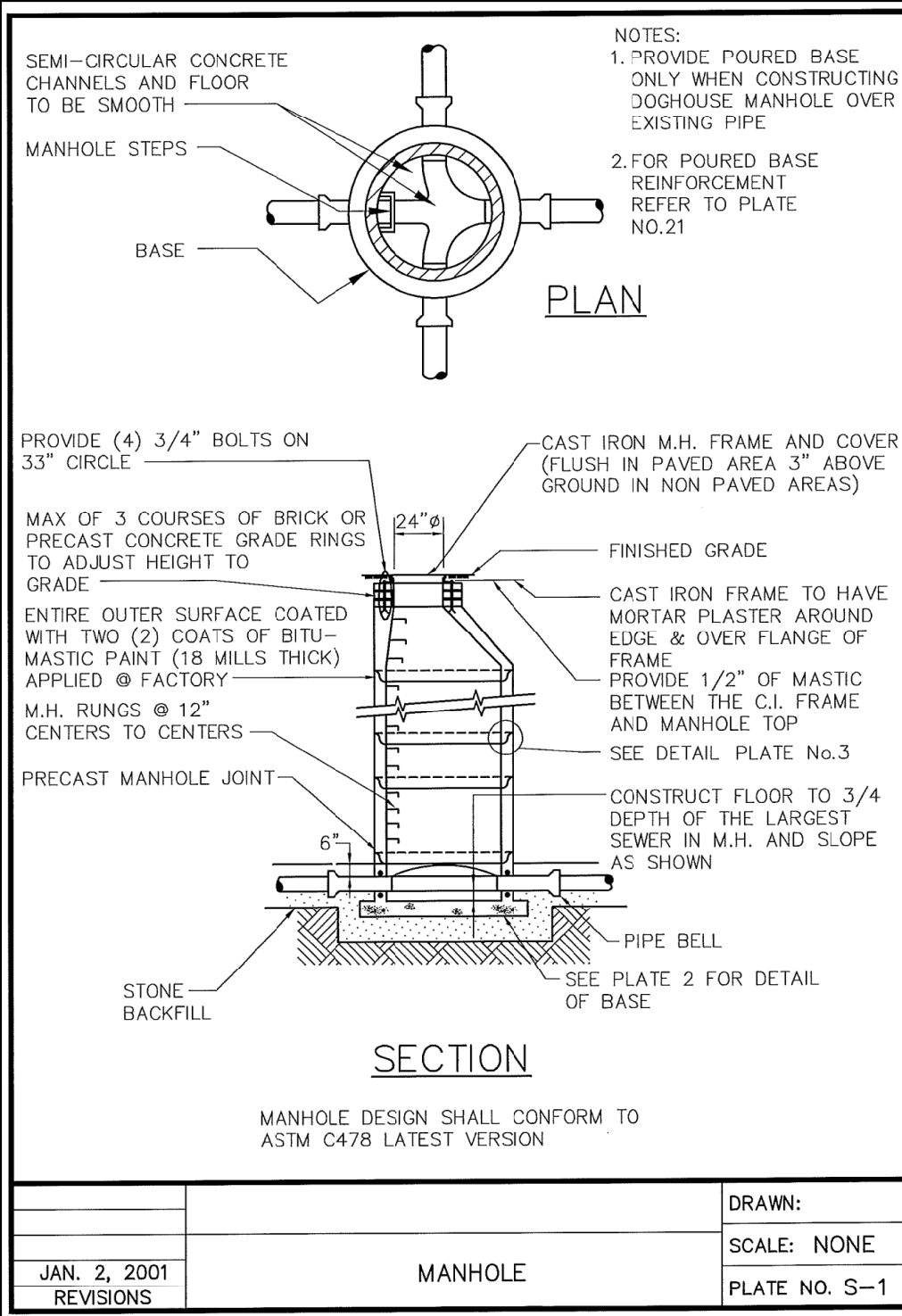
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Job No: 18-0406 D

Plan Date: APRIL 26, 2022

Sheet No: 20 of 25



REVISIONS

No.	DATE	DESCRIPTION
1	07/08/22	REVISED TO REFLECT NEW RESOL CONCEPT

Scale In Feet (1" = 50')

PROJECT SERIAL NUMBER FOR DESIGN: 2019 1291801 (Design) MAY 09, 2019

Parcel Information:  
39-00-00643-00-2 (B 18 U 70 - GAINES) 1500 Cedar Hill Rd  
39-00-00646-00-8 (B 18 U 28 - STROHECKER) 1512 Cedar Hill Rd  
39-00-00649-00-5 (B 18 U 29 - LYNCH) 1524 Cedar Hill Rd  
Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

Applicant: CEDAR HILL DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer  
632 Germantown Pike  
Lafayette Hill, PA 19444

REGISTERED PROFESSIONAL ENGINEER  
TIMOTHY P. WOODROW  
No. 03873-1  
Exp. 12/31/2022

PRELIMINARY PLAN (Not To Be Recorded)

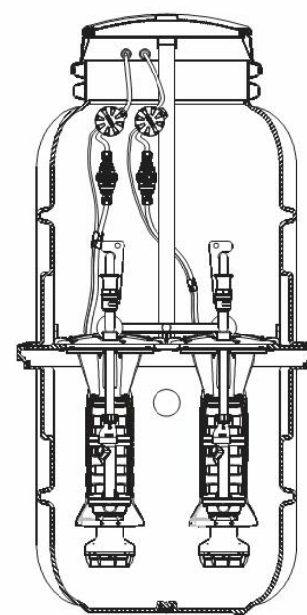
PROJECT CONSTRUCTION DETAILS  
SHEET - B -  
1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

WOODROW & ASSOCIATES, INC.  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1108 N. WOODROW BLVD. SUITE 200  
PHILADELPHIA, PA 19102  
Phone: (215) 542-6483  
Web: www.woodrowinc.com

Layer List: Sht21\_Details-B  
Job No: 18-0406 D  
Plan Date: APRIL 26, 2022  
Sheet No: 21 of 25

Print Date: Jul 27, 2022 (9:26)  
File Name: E:\DWG\18-0406D\18-0406D.prs  
Plot Scale: 1" = 30.00'

# DH152/DR152



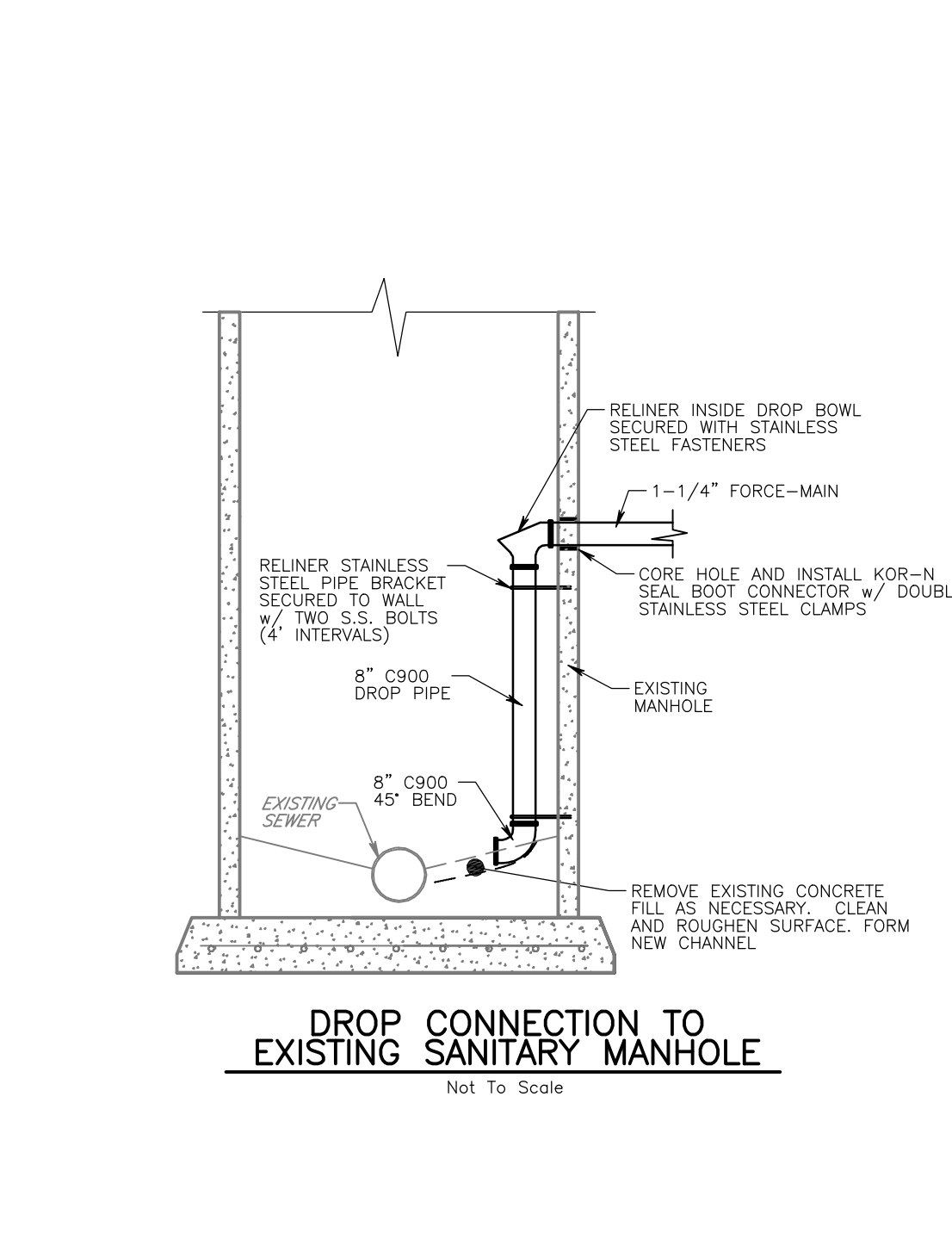
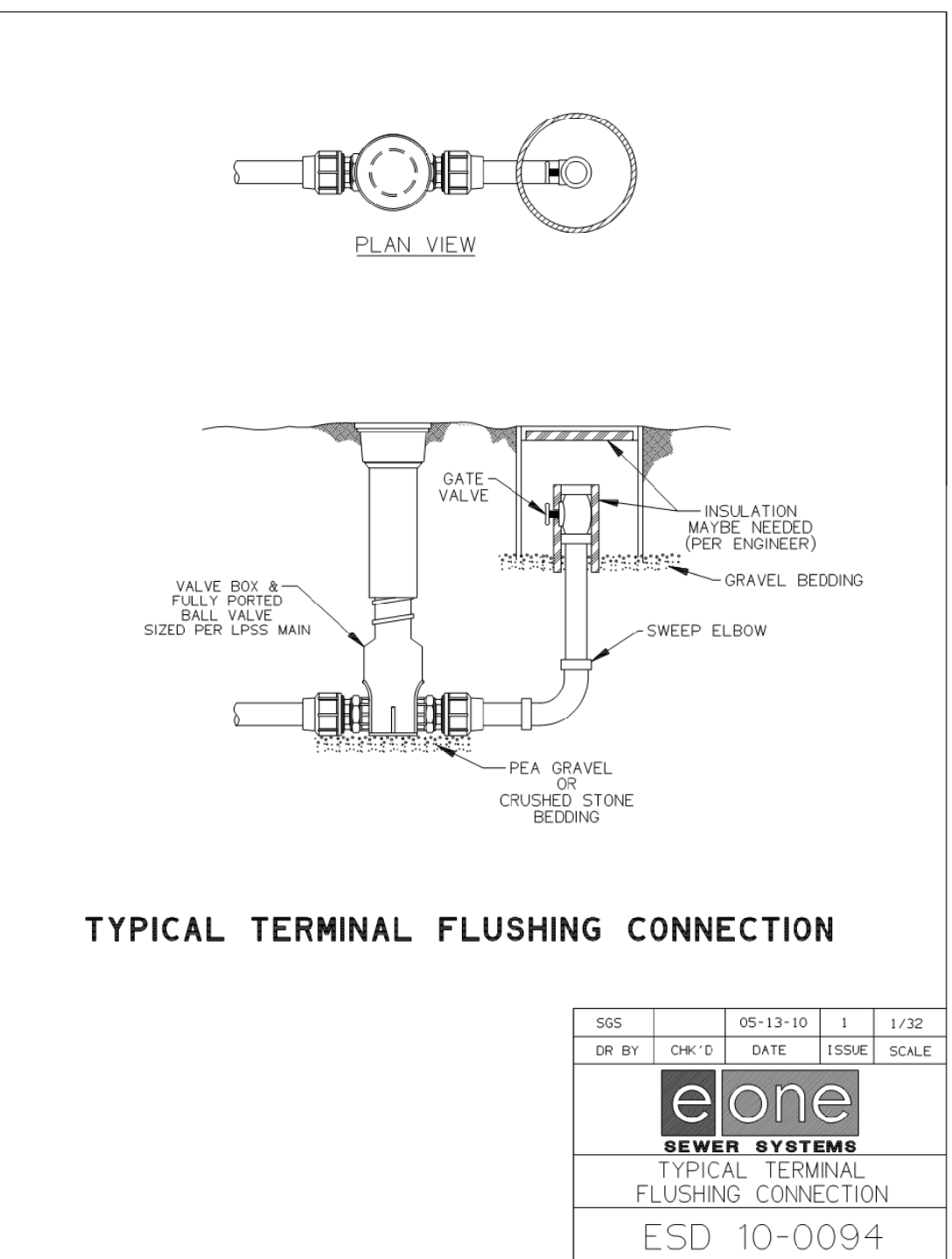
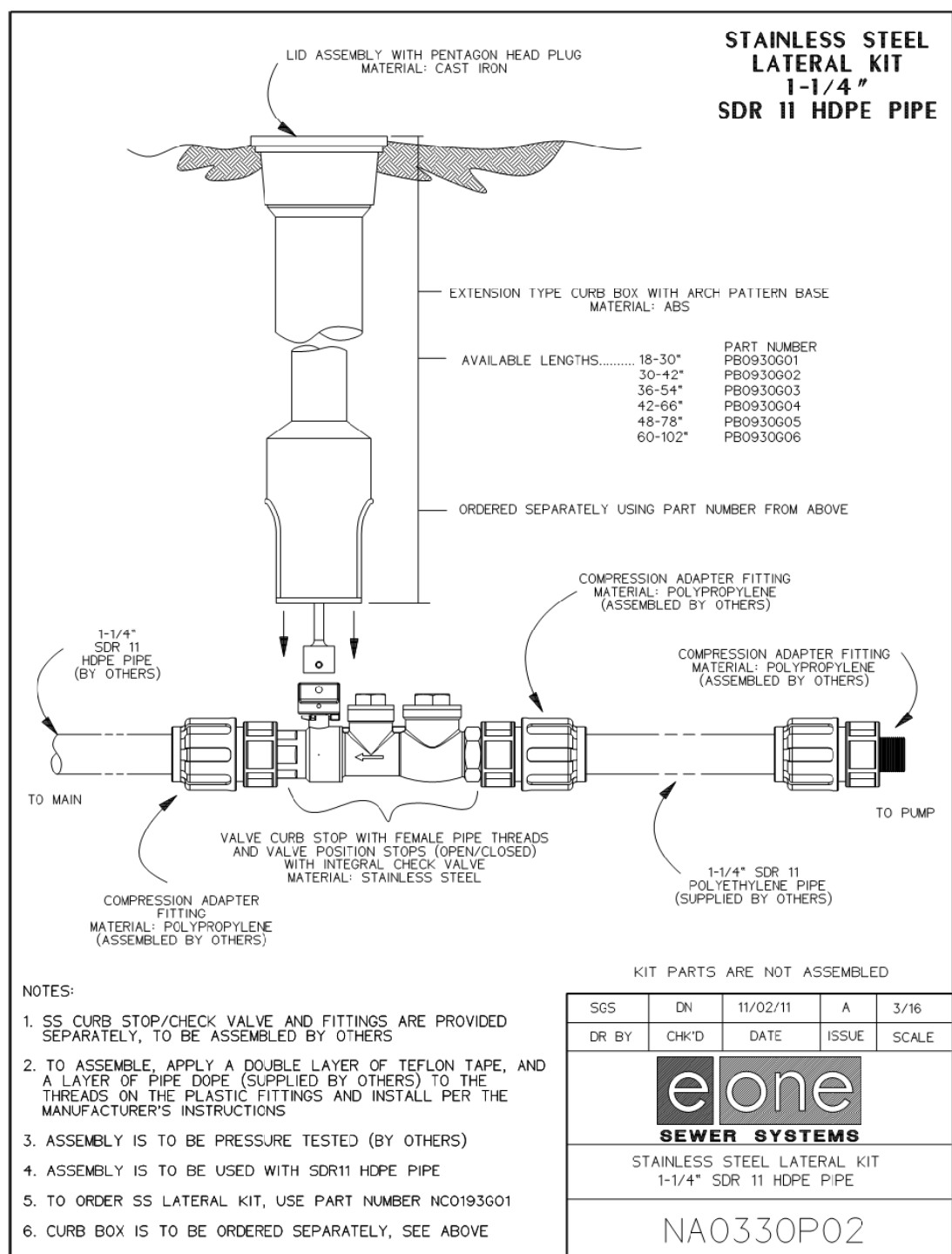
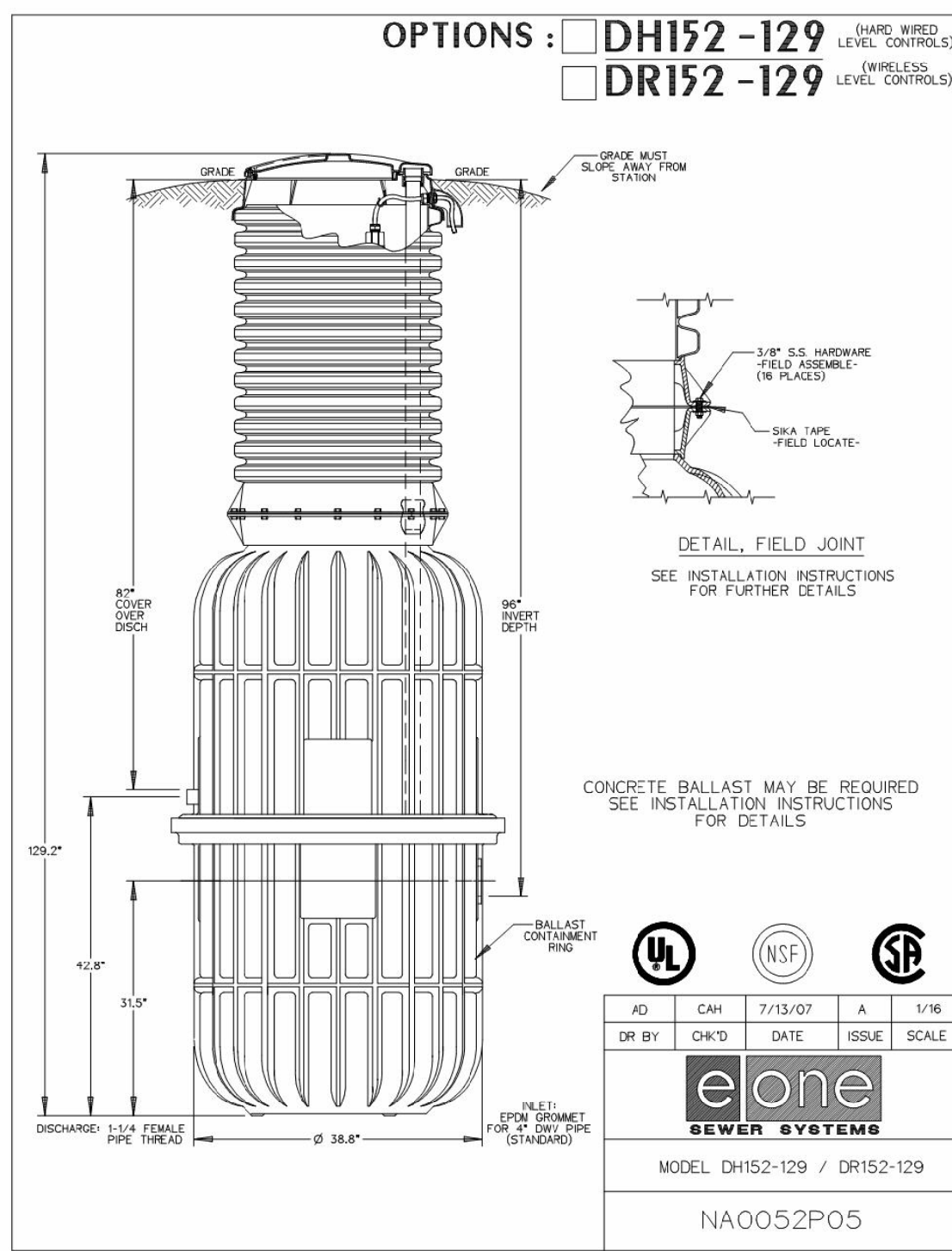
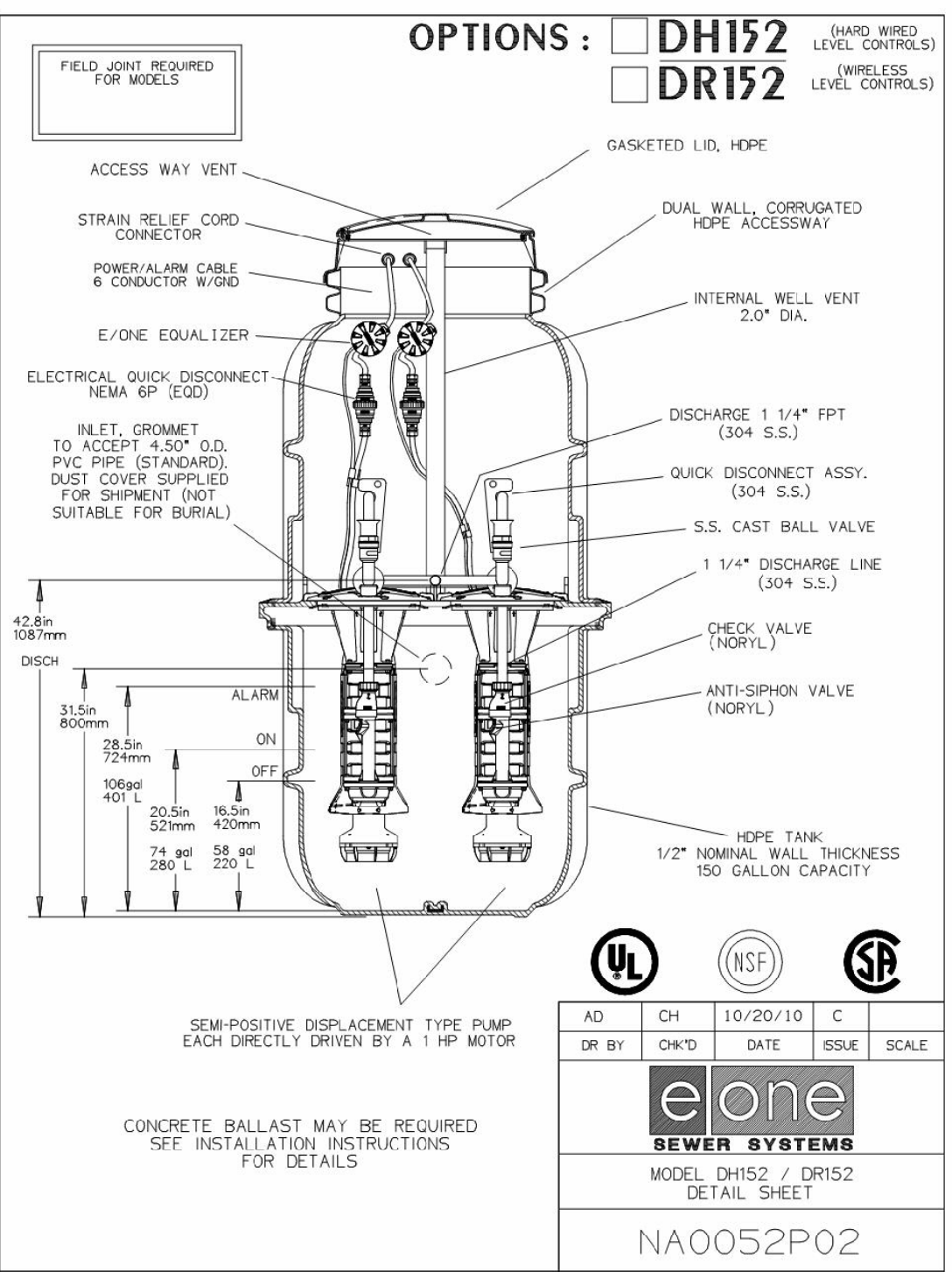
**General Features**

The DH152 or DR152 grinder pump station is a complete unit that includes two grinder pumps with check valves, HOPE (high density polyethylene) tank and controls. The DH152 or DR152 is packaged into a single complete unit, ready for installation. The DH152 is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations. The DR152 is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls. All solids are ground into fine particles, allowing them to pass easily through the pump, check valve and small-diameter pipelines. Even objects that are not normally found in sewage, such as plastic, rubber, fibers, wood, PVC pipe or any other material required by local codes, are ground into fine particles.

The 1 1/4-inch discharge connection is adaptable to any piping materials, thereby allowing it to meet local code requirements. The tank is made of tough corrosion-resistant HOPE. The optimum tank capacity of 150 gallons is based on computer studies of water usage patterns. A single DH152 or DR152 is ideal for up to four average, single-family homes, and can also be used for up to 12 average, single-family homes with the consent of the factory. This model can accommodate flows of 3000 GPD. The internal check valve assembly, located in each grinder pump, is custom-designed for non-dog, trouble-free operation.

The grinder pump is automatically activated and runs infrequently for very short periods. The annual energy consumption is typically that of a 40-watt light bulb. Units are available for indoor and outdoor installations. Outdoor units are designed to accommodate a wide range of burial depths. **Operational Information**  
**Motor**  
1 hp, 1.725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase  
**Field Connections**  
4-inch inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.  
**Discharge Connections**  
Pump discharge terminates in 1 1/4-inch NPT female thread. Can easily be adapted to 1 1/2-inch PVC pipe or any other material required by local codes.  
**Discharge\***  
15 gpm at 0 psig (per pump)  
11 gpm at 40 psig (per pump)  
7.8 gpm at 80 psig (per pump)  
**Control Panel**  
This station is designed to use the Alternating Control Panel, M00 T260.  
**Overhead Capacity**  
The maximum pressure that the pump can generate is limited by the motor characteristics. The motor generates a pressure well below the rating of the piping and appurtenances. The automatic reset feature does not require manual operation following overload.

Patent Numbers: 5,752,315  
5,562,254 / 5,430,189  
\*Discharge data includes loss through check valve, which is minimal.  
NA0052P01



**AGAVE WIRE, LTD**

Toll-Free (800) 690-3408    ISO 9001:2000 Certified    Fax: (469) 547-4242

**PRODUCT DATA SHEET**

**PRODUCT OVERVIEW:**    **APCS/APSS-1201 (Flexible CCS Tracer Wire)**

**CONSTRUCTION:**    One 12 AWG Copper Clad Steel PE Insulated Conductor

**APPROVALS:**    UL - Tracer Wire

**APPLICATION:**    Tracer Wire Suitable For Detecting Buried Facilities

**CONSTRUCTION PARAMETERS:**

CONDUCTOR:	12 AWG Copper Clad Steel
STRANDING:	Solid
NUMBER OF CONDUCTORS:	1
INSULATION MATERIAL:	PE
INSULATION THICKNESS:	0.030" Nominal
COPPER O.D.:	0.081" Nominal
FINISHED O.D.:	0.142" Nominal
WEIGHT PER 1000FT:	22.03 lbs/1000'

**ELECTRICAL & ENVIRONMENTAL PROPERTIES:**

TEMPERATURE RATING:	-20°c to 80°c
OPERATING VOLTAGE:	30v
INSULATION COLOR:	Various Colors Available
BREAK LOAD:	282-299 LBS    TENSILE STRENGTH: 55,000-58,111 PSI

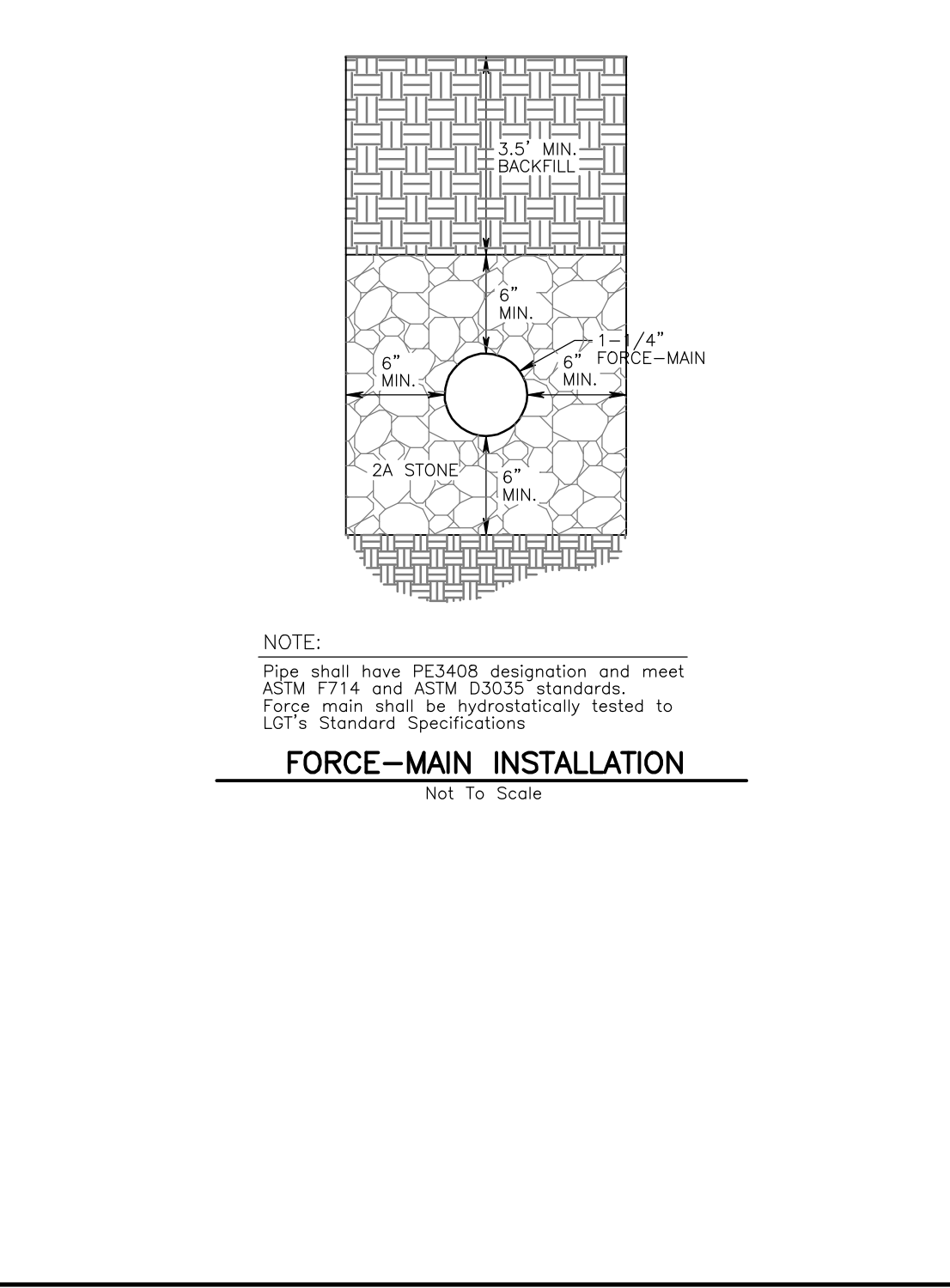
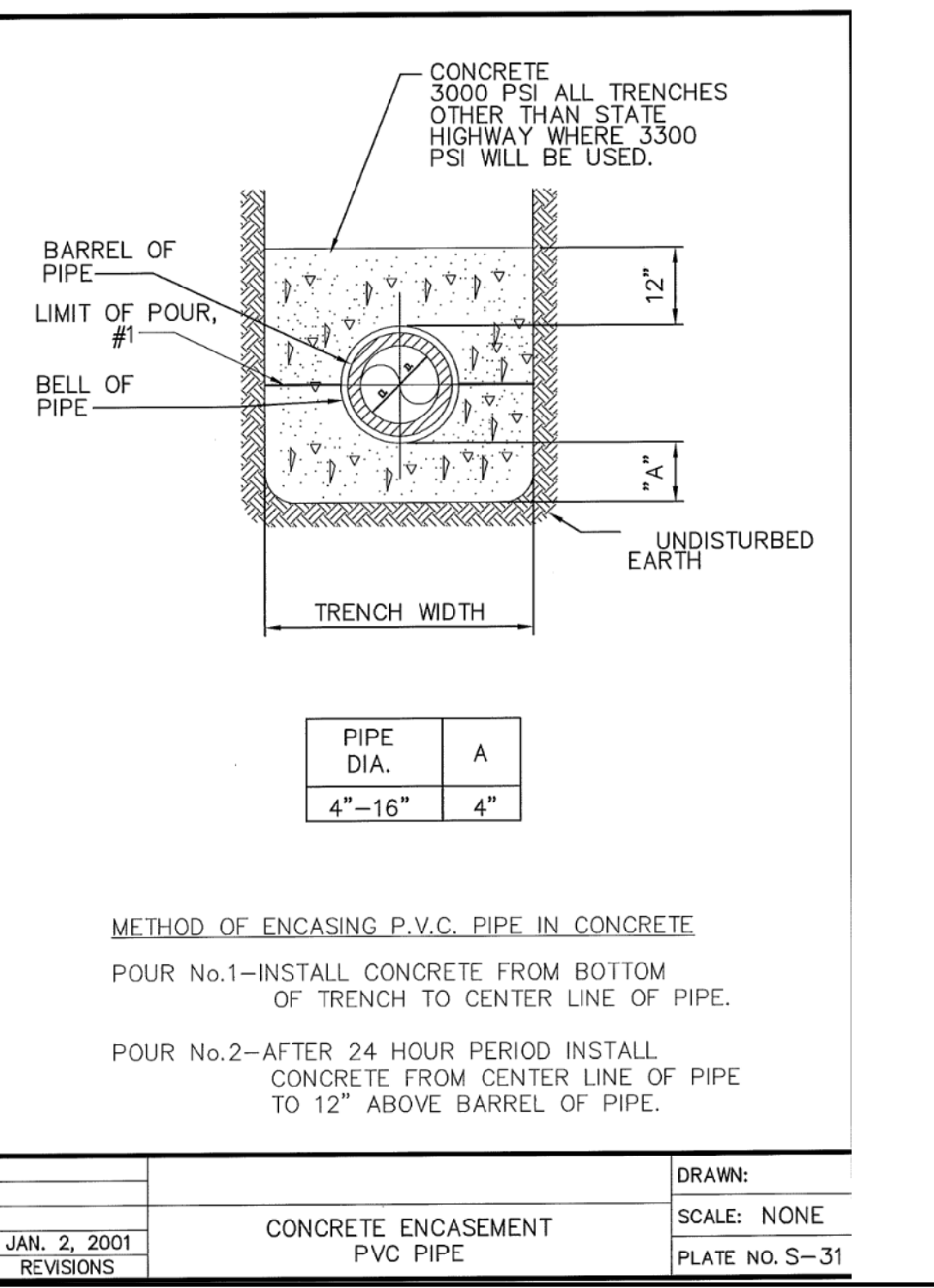
**PRINT LEGEND:**

**"AGAVE WIRE - 12AWG PE (30) COPPER CLAD STEEL TRACER WIRE (UL) 30V E246340"**

On special orders, the customer will accept all risks and liability of use beyond our control. All communications or representations are subject to change without notice or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise. This specification is proprietary intellectual property of Agave Wire. Any information contained herein shall not be disclosed to any party without written consent of Agave Wire.

Manufactured in the U.S.A.

P.O. Box 38409 - 10555 Sandton Drive - Dallas, TX 75238 - 714-903-2416 - Fax 469-547-4242 - www.agawewire.com



NO.	DATE	DESCRIPTION
1	07/08/22	REVISED TO REFLECT NEW DESIGN CONCEPT

**REVISIONS**

25' 0' 50'  
Scale In Feet (1" = 50')

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**811**

PROJECT SERIAL NUMBER FOR DESIGN:  
2019 1291601 (Design)  
MAY 09, 2019

Parcel Information:  
39-00-00643-00-2 (B 18 U 70 - GAINES)  
1500 Cedar Hill Rd  
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1512 Cedar Hill Rd  
39-00-00649-00-5 (B 18 U 29 - LYNCH)  
1524 Cedar Hill Rd  
Gross Area: 11.8973 Acres  
NET Area: 11.1808 Acres

Applicant:  
**CEDAR HILL DEVELOPMENT GROUP, LLC.**  
c/o Mr. Jon Mayer

632 Germantown Pike  
Lafayette Hill, PA 19444

**TIMOTHY P. WOODROW**  
REGISTERED PROFESSIONAL ENGINEER  
No. 03875-T

PRELIMINARY PLAN (Not To Be Recorded)

**PROJECT CONSTRUCTION DETAILS**

**SHEET - C**

**1500-1524 CEDAR HILL ROAD**

LOWER OWNED TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

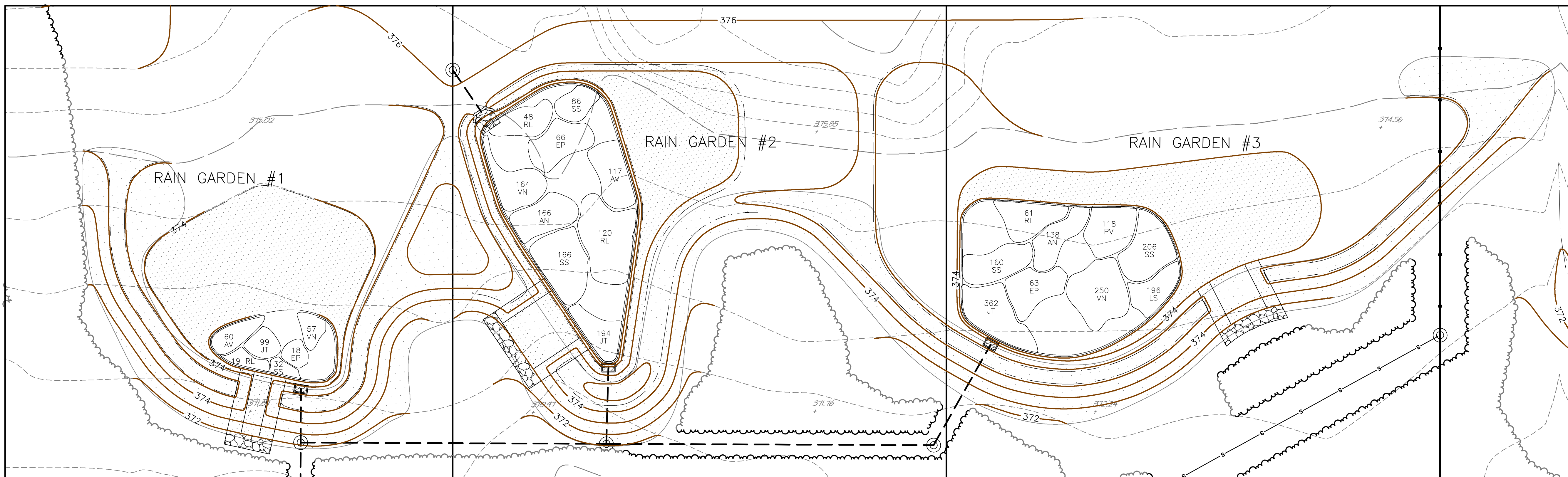
**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. State Street, Suite 400  
P.O. Box 1000  
Pittsburgh, PA 15222  
Phone: (412) 542-4488  
Web: www.woodrowinc.com

Layer List:  
Sht22\_Details-C

Job No:  
18-0406 D

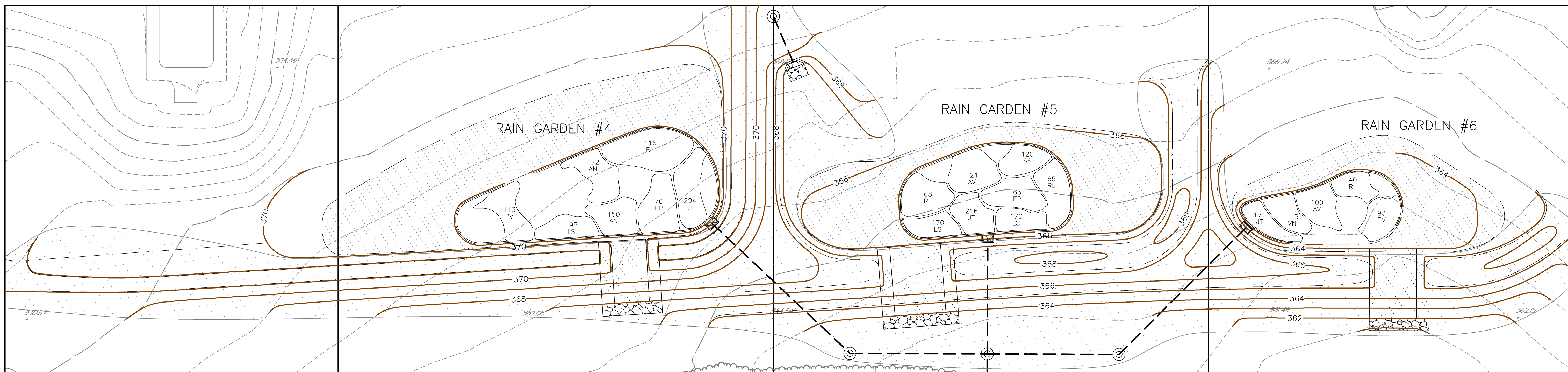
Plan Date:  
APRIL 26, 2022

Sheet No:  
22 of 25



RAIN GARDEN PLANTING DETAIL FOR RAIN GARDEN #1, RAIN GARDEN #2, AND RAIN GARDEN #3

SCALE: 1" = 20'



RAIN GARDEN PLANTING DETAIL FOR RAIN GARDEN #4, RAIN GARDEN #5, AND RAIN GARDEN #6

SCALE: 1" = 20'

RAIN GARDEN PLUG SCHEDULE

Plan Symbol	Quantity	Botanical Name	Common Name	Remarks	Comments
AN	726	Aster novae-angliae	New England Aster	PLUG	Space 15" on center
AV	298	Andropogon virginicus	Broomsedge	PLUG	Space 18" on center
EP	286	Eupatorium purpureum	Joe Pye-weed	PLUG	Space 24" on center
JT	1337	Juncus tenuis	Poverty Rush	PLUG	Space 12" on center
LS	731	Liatris spicata	Gayfeather	PLUG	Space 12" on center
PV	324	Panicum virgatum	Switchgrass	PLUG	Space 18" on center
RL	537	Rudbeckia laciniata	Cutleaf Coneflower	PLUG	Space 24" on center
SS	770	Schizachyrium scoparium	Little Bluestem	PLUG	Space 15" on center
VN	586	Vernonia noveboracensis	New York Ironweed	PLUG	Space 15" on center
5595		TOTAL PLUGS			

UPON COMPLETION OF PLUG INSTALLATION, THE BASIN FLOOR SHALL BE COVERED IN 3" SHREDDED, HARDWOOD BARK MULCH. NO MULCH SUBSTITUTIONS WILL BE ACCEPTED.

NO.	DATE	DESCRIPTION
1	07/06/22	REVISED TO REFLECT NEW DESIGN CONCEPT

REVISIONS

Scale in Feet (1" = 20')

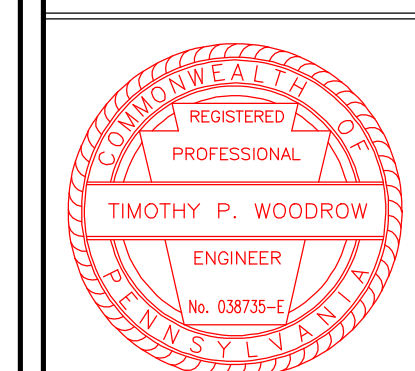
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MAY 09, 2019

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DEVELOPMENT GROUP, LLC.  
c/o Mr. Jon Mayer  
632 Germantown Pike  
Lafayette Hill, PA 19444



PRELIMINARY PLAN (Not To Be Recorded)  
PROJECT CONSTRUCTION DETAILS  
SHEET - D - D  
1500-1524 CEDAR HILL ROAD  
LOWER GWYNEDD TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA  
WOODROW & ASSOCIATES, INC.  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1105 N. 15th Street, Suite 400, P.O. Box 19002  
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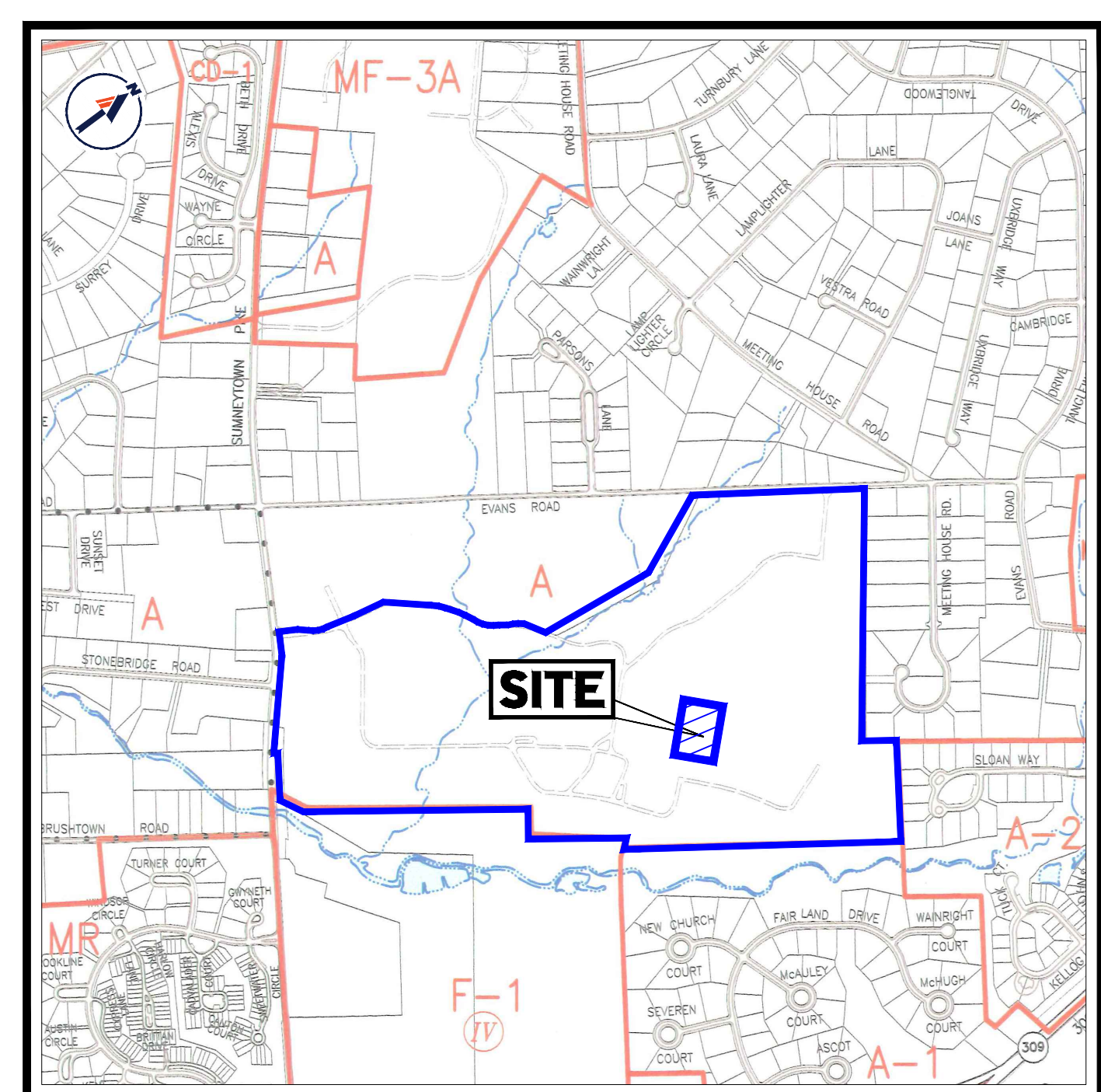
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Job No:  
18-0406 D  
Plan Date:  
APRIL 26, 2022  
Sheet No:  
23 of 25

Print Date: Jul 27, 2022 (9:23)  
Print Scale: 1" = 30.00'  
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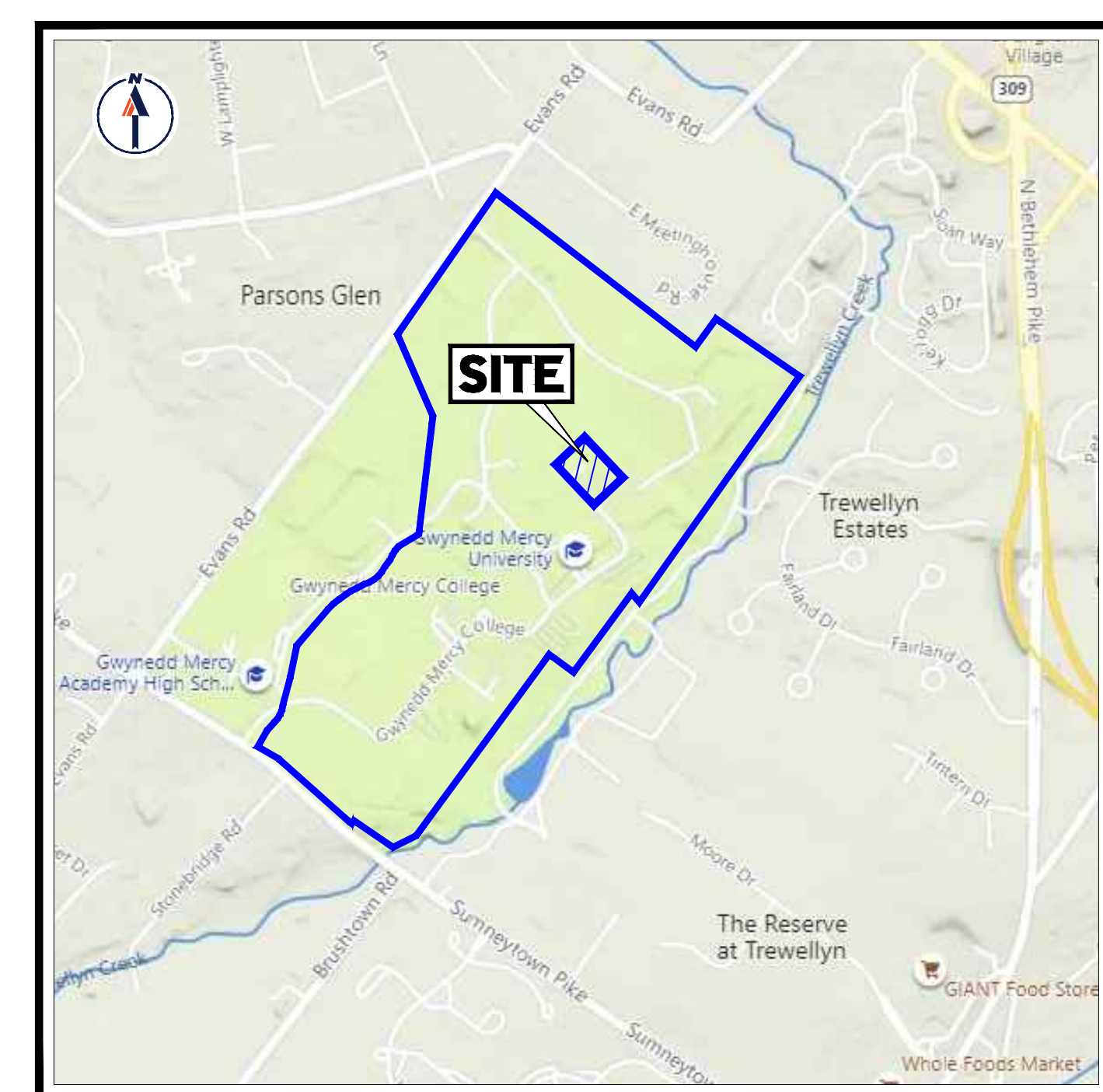
# WAIVER OF LAND DEVELOPMENT PLANS

## PROPOSED COURTYARD IMPROVEMENTS GWYNEDD MERCY UNIVERSITY

1325 SUMNEYTOWN PIKE  
LOWER GWYNEDD TOWNSHIP  
MONTGOMERY COUNTY  
COMMONWEALTH OF PENNSYLVANIA  
BLOCK 8, UNIT 24  
APN #39-00-03955-00-2



**ZONING MAP**  
SCALE: 1" = 1,000'  
SOURCE: LOWER GWYNEDD TWP.



**LOCATION MAP**  
SCALE: 1" = 1,000'  
SOURCE: BING MAPS

**DRAWING SHEET INDEX**

SHEET TITLE	SHEET NUMBER
COVER SHEET	C-101
GENERAL NOTES SHEET	C-102
EXISTING CONDITIONS/DEMOLITION PLAN	C-201
SITE PLAN	C-301
GRADING PLAN	C-401
UTILITY PLAN	C-501
SOIL EROSION AND SEDIMENT POLLUTION CONTROL PLAN	C-601
SOIL EROSION AND SEDIMENT POLLUTION CONTROL NOTES & DETAILS	C-602
LIGHTING PLAN	C-701
LANDSCAPE PLAN	C-702
DETAILS SHEET	C-901, C-902
FIRE TRUCK CIRCULATION PLAN	C-903

PREPARED BY



**BOHLER**  
SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM	GJH

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CONSTRUCTION**

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PROJECT No.: PAA220063.00  
DRAWN BY: MAM  
CHECKED BY: GJH  
DATE: 4/27/2023  
CAD ID: PAA220063.01-CNDS-1A

**PROJECT:**  
**WAIVER OF LAND  
DEVELOPMENT  
PLANS**  
FOR  
**GWYNEDD  
MERCY  
UNIVERSITY**  
PROPOSED COURTYARD  
IMPROVEMENTS  
RESIDENCE HALL TRIPLEX  
1325 SUMNEYTOWN PIKE  
LOWER GWYNEDD TOWNSHIP  
MONTGOMERY COUNTY, PA

**BOHLER**  
1600 MANOR DRIVE, SUITE 200  
CHALFONT, PA 18914  
Phone: (215) 996-9100  
Fax: (215) 996-9102  
www.BohlerEngineering.com

**G. J. HARTMAN**  
Professional Engineer  
PENNSYLVANIA LICENSE NO. 007816  
NEW JERSEY LICENSE NO. 26985-2000

SHEET TITLE:  
**COVER  
SHEET**

SHEET NUMBER:  
**C-101**

REVISION 1 - 06/02/2023

R:\2022\PA220063.01\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\PA220063.01-CNDS-1A.....LAYOUT\_C-101\_COVER



GENERAL NOTES

- 1. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER ENGINEERING, PENNSYLVANIA, LLC (HEREIN "BOHLER") PRIOR TO THE DATE ON WHICH THE PROFESSIONAL OF RECORD AND BOHLER PREPARED THESE PLANS. THE CONTRACTOR MUST ENTIRELY BE RESPONSIBLE FOR VERIFYING THE ACCURACY AND COMPLETENESS OF ALL INFORMATION PROVIDED TO BOHLER AND FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES. PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC.

DEMOLITION NOTES

- 1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY, THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE PROJECT SITE. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE PROJECT SITE.

GRADING NOTES

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SITE SPECIFIC

- 1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY, THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE PROJECT SITE.

ACCESSIBILITY DESIGN GUIDELINES

- 1. ALL ACCESSIBLE (A.K.A ADA) COMPONENTS AND ACCESSIBLE ROUTES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF: (A) THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 5041 ET SEQ. AND 42 U.S.C. § 4151 ET SEQ.) AND (B) ANY APPLICABLE LOCAL AND STATE REGULATIONS AND ALL AMENDMENTS TO BOTH. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE PROJECT SITE.

DRAINAGE AND UTILITY NOTES

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STORM SPECIFIC

- 1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY, THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE PROJECT SITE.

SITE LAYOUT NOTES

- 1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY, THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE PROJECT SITE.

SITE SPECIFIC NOTES

- 1. EXISTING PROPERTY INFORMATION: 1325 SUMNEYTOWN PIKE, LOWER GWYNEDD, PA 19437 ZONED A - RESIDENTIAL DISTRICT ELEVATION: 341.68

REVISIONS

Table with 4 columns: REV, DATE, COMMENT, DRAWN BY. Revision 1 on 06/02/2023 regarding PER FIRE MARSHAL COMMENTS.

BOHLER ENGINEERING logo and contact information. Includes phone number (610) 259-9100 and website www.BohlerEngineering.com.

NOT APPROVED FOR CONSTRUCTION

PROJECT INFORMATION table including PROJECT No., DRAWN BY, CHECKED BY, DATE, and CAD ID.

WAIVER OF LAND DEVELOPMENT PLANS

FOR GWYNEDD MERCY UNIVERSITY PROPOSED COURTYARD IMPROVEMENTS RESIDENCE HALL TRIPLEX

1325 SUMNEYTOWN PIKE LOWER GWYNEDD TOWNSHIP MONTGOMERY COUNTY, PA

BOHLER ENGINEERING logo

1600 MANOR DRIVE, SUITE 200 CHALFONTE, PA 19314 Phone: (215) 996-9100 Fax: (215) 996-9102 www.BohlerEngineering.com

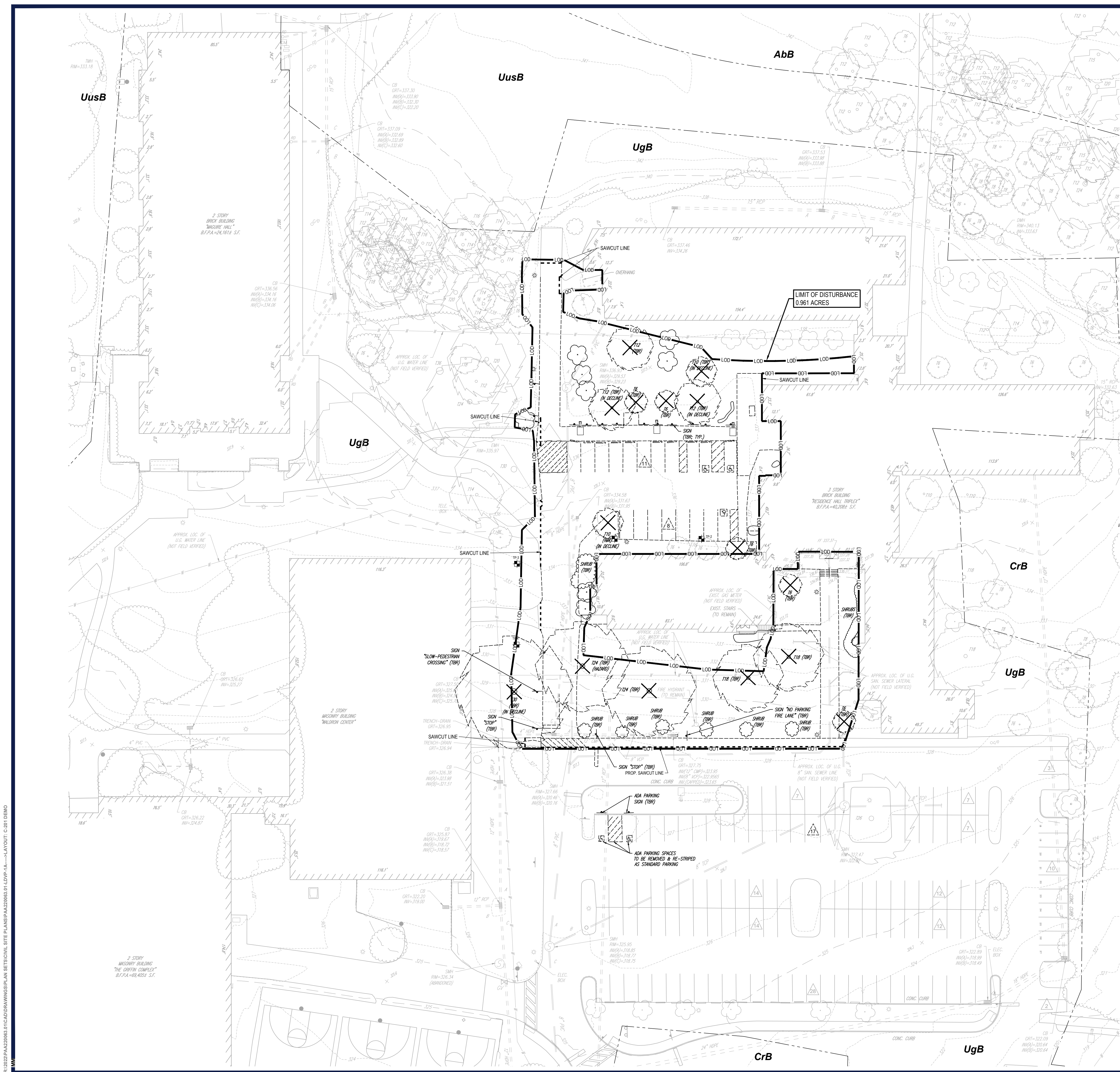
REFERENCES AND CONTACT INFORMATION

Table with 3 columns: SURVEY, ARCHITECTURAL DESIGN PLANS, and UTILITIES. Lists various engineering and surveying firms and their contact information.

G. HARTMAN logo and contact information. Includes phone number (610) 259-9100 and website www.BohlerEngineering.com.

GENERAL NOTES SHEET

C-102



**LEGEND**

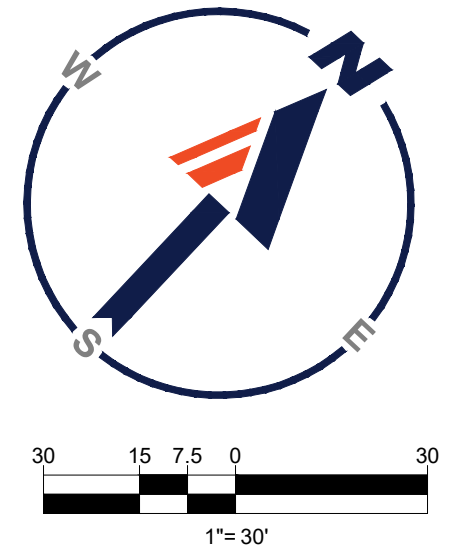
**EXISTING**

PROPERTY LINE	---
R.O.W. LINE	---
ADJACENT PROPERTY LINE	---
EASEMENT LINE	---
BUILDING	▨
RETAINING WALL	▨
CONCRETE CURB	---
FLUSH CURB	---
FENCE	---
GUIDE RAIL	---
TREELINE	---
ACCESSIBLE SYMBOL	---
CONCRETE MONUMENT/ IRON PIN	○
SIGN	---
PARKING COUNT	---
AREA LIGHT	---
TREE	○
DRAINAGE INLET	---
STORM/SANITARY MANHOLE	---
WATER/GAS VALVES	---
ROOF DRAIN/CLEANOUT	---
FIRE HYDRANT	---
UTILITY POLE W/ LIGHT	---
UTILITY POLE	---
OVERHEAD UTILITY WIRES	---
ELECTRIC LINE	---
TELEPHONE LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---
TEST PIT	---

**LEGEND**

**TO BE REMOVED**

EASEMENT LINE	---
BUILDING	▨
RETAINING WALL	▨
CONCRETE CURB	---
FLUSH CURB	---
FENCE	---
GUIDE RAIL	---
TREELINE	---
ACCESSIBLE SYMBOL	---
CONCRETE MONUMENT/ IRON PIN	○
SIGN	---
PARKING COUNT	---
AREA LIGHT	---
TREE	○
DRAINAGE INLET	---
STORM/SANITARY MANHOLE	---
WATER/GAS VALVES	---
ROOF DRAIN/CLEANOUT	---
FIRE HYDRANT	---
UTILITY POLE W/ LIGHT	---
UTILITY POLE	---
OVERHEAD UTILITY WIRES	---
ELECTRIC LINE	---
TELEPHONE LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---



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 TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM	G.J.H.

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PROJECT No.: PAA220063.00  
 DRAWN BY: MAM  
 CHECKED BY: G.J.H.  
 DATE: 4/27/2023  
 CAD ID: PAA220063.01-LDVP-1A

PROJECT:

**WAIVER OF LAND DEVELOPMENT PLANS**

FOR  
**GWYNEDD MERCY UNIVERSITY**  
 PROPOSED COURTYARD IMPROVEMENTS  
 RESIDENCE HALL TRIPLEX

1325 SUMNERTOWN PIKE  
 LOWER GWYNEDD TOWNSHIP  
 MONTGOMERY COUNTY, PA

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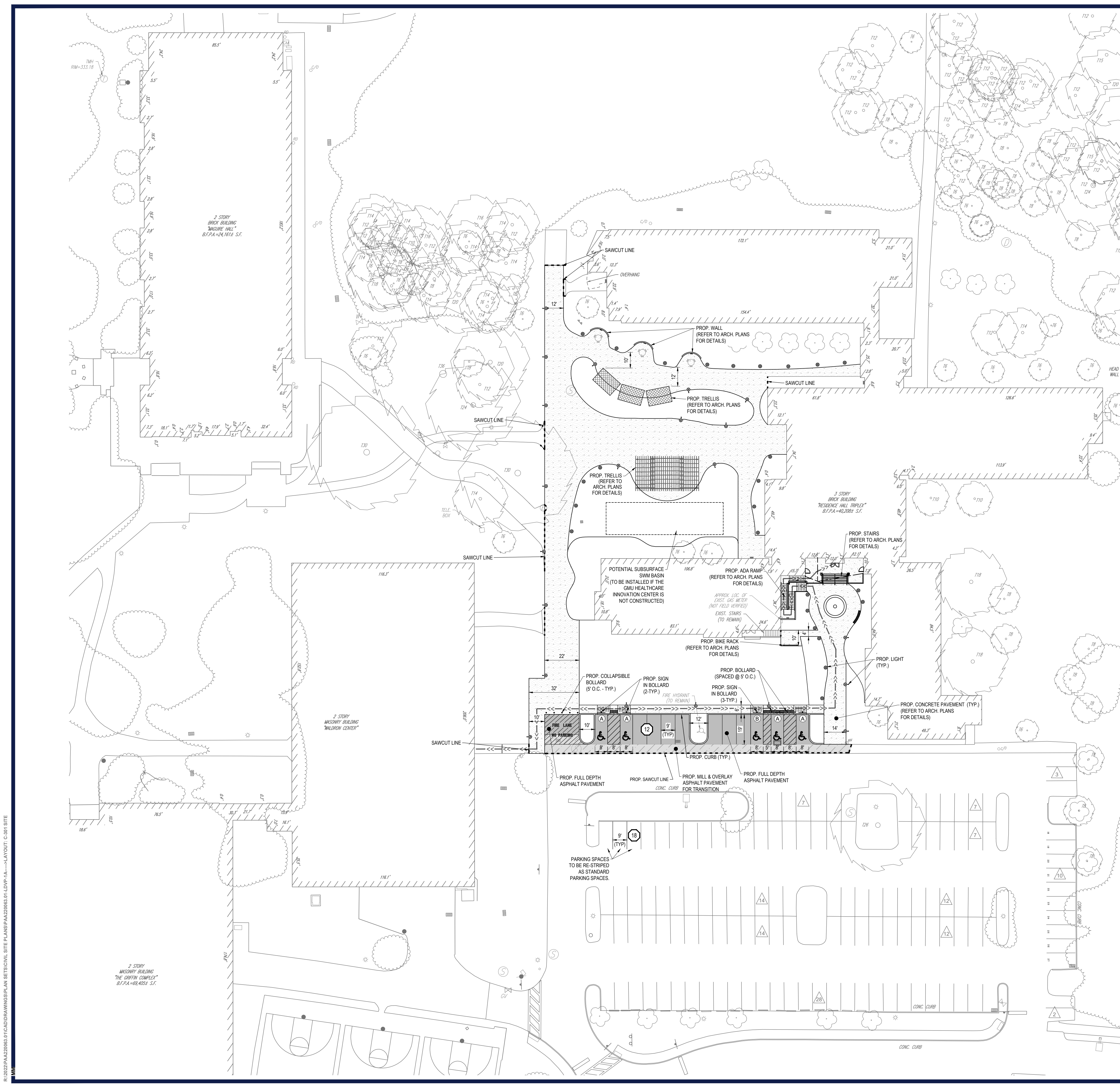
**G. J. HARTMAN**  
 G. J. Hartman, III  
 PROFESSIONAL ENGINEER  
 PENNSYLVANIA LICENSE NO. 007876  
 NEW JERSEY LICENSE NO. 36895-5200

SHEET TITLE:  
**EXISTING CONDITIONS/  
 DEMOLITION PLAN**

SHEET NUMBER:  
**C-201**

REVISION 1 - 06/02/2023

R:\2022\PA220063.01\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\PA220063.01-LDVP-1A\...LAYOUT.C-201.DWG



**IMPERVIOUS COVERAGE  
(WITHIN WORK AREA)**

EXISTING	PROPOSED	NET CHANGE
18,970 SF (0.435 AC.)	23,068 SF (0.530 AC.)	+4,098 SF +(0.095 AC)

**PARKING SPACES  
(WITHIN WORK AREA)**

EXISTING	PROPOSED	NET CHANGE
147 STANDARD 5 ADA	141 STANDARD 5 ADA	MINUS 6 STANDARD SAME ADA TOTAL

**LEGEND**

EXISTING	
PROPERTY LINE	---
R.O.W. LINE	---
ADJACENT PROPERTY LINE	---
EASEMENT LINE	---
BUILDING	[Hatched Box]
RETAINING WALL	[Hatched Line]
CONCRETE CURB	[Solid Line]
FLUSH CURB	[Dashed Line]
FENCE	[Crossed Line]
GUIDE RAIL	[Dashed Line]
TREELINE	[Wavy Line]
ACCESSIBLE SYMBOL	[Wheelchair Icon]
CONCRETE MONUMENT/ IRON PIN	[Square Icon]
SIGN	[Square Icon]
PARKING COUNT	[Triangle Icon]
AREA LIGHT	[Square Icon]
TREE	[Circle Icon]
DRAINAGE INLET	[Circle Icon]
STORM/SANITARY MANHOLE	[Circle Icon]
WATER/GAS VALVES	[Circle Icon]
ROOF DRAIN/CLEANOUT	[Circle Icon]
FIRE HYDRANT	[Circle Icon]
UTILITY POLE W/ LIGHT	[Circle Icon]
UTILITY POLE	[Circle Icon]
OVERHEAD UTILITY WIRES	[Wavy Line]

**LEGEND**

PROPOSED	
PROPERTY LINE	---
R.O.W. LINE	---
EASEMENT LINE	---
SETBACK LINE	---
RETAINING WALL	[Hatched Line]
CONCRETE CURB	[Solid Line]
FLUSH CURB	[Dashed Line]
FENCE	[Crossed Line]
GUIDE RAIL	[Dashed Line]
TREELINE	[Wavy Line]
ACCESSIBLE SYMBOL	[Wheelchair Icon]
CROSSWALK	[Dashed Line]
SIDEWALK	[Dashed Line]
RAMP	[Hatched Area]
SIGN	[Square Icon]
BOLLARD	[Circle Icon]
PARKING COUNT	[Triangle Icon]
AREA LIGHT	[Square Icon]
DRAINAGE INLET	[Circle Icon]
FULL DEPTH ASPHALT PAVEMENT	[Hatched Area]
MILL & OVERLAY ASPHALT PAVEMENT	[Hatched Area]
ADA ACCESSIBLE ROUTE	[Dashed Line]

**LEGEND**

PROPOSED SIGNAGE	
(A)	PROPOSED "RESERVED PARKING" SIGN (R7-8) & "RESERVED PARKING PENALTIES" SIGN (R7-8F) & VAN ACCESSIBLE SIGN (R7-8P)
(B)	PROPOSED "RESERVED PARKING" SIGN (R7-8) & "RESERVED PARKING PENALTIES" SIGN (R7-8F)



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 PERMITTING SERVICES  
 TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM	GJH

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 DATE: 4/27/2023  
 CAD ID: PAA220063.01-LDVP-1A

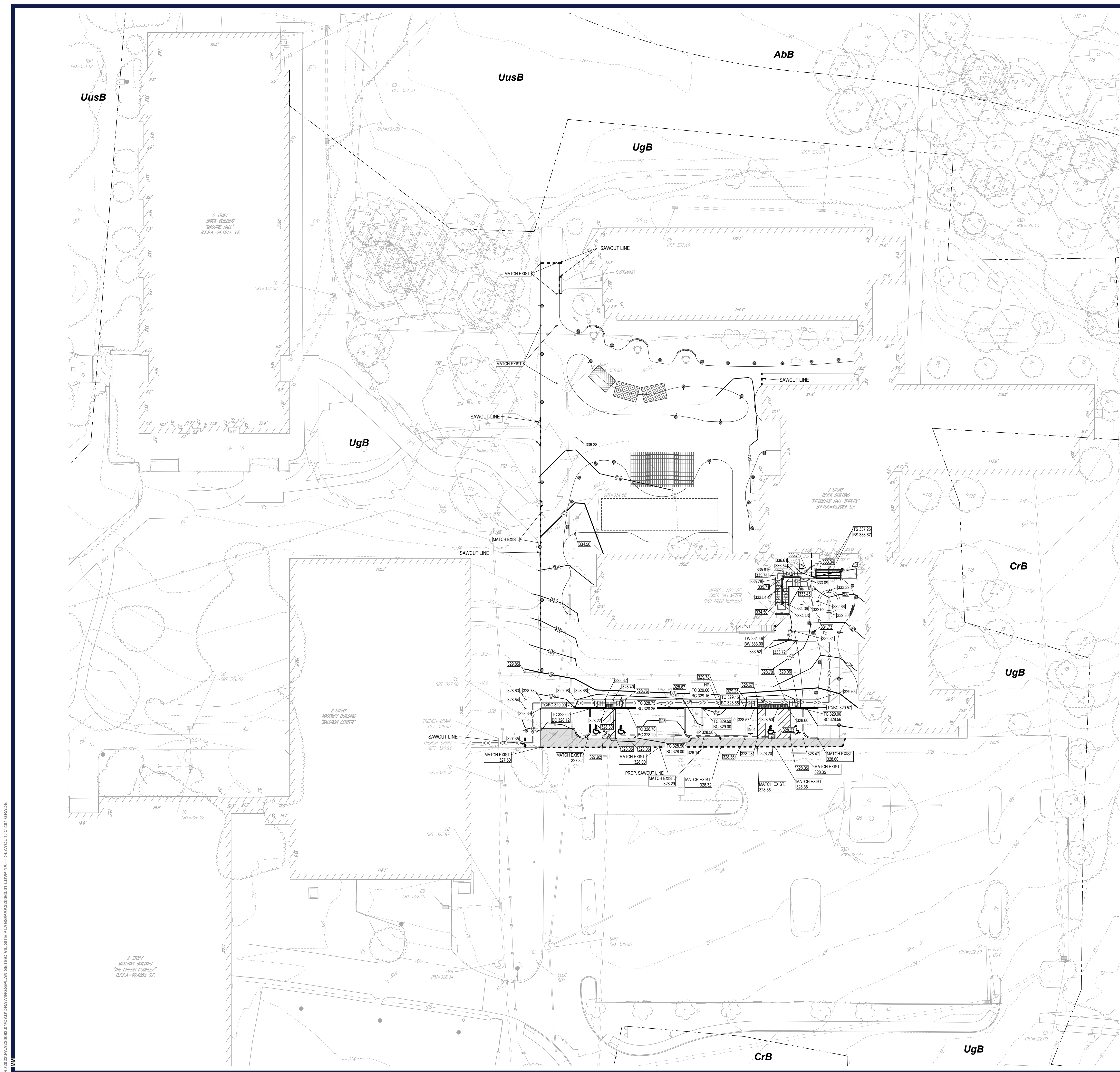
**PROJECT:**  
**WAIVER OF LAND DEVELOPMENT PLANS**  
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**G. J. HARTMAN**  
 G. J. Hartman, III  
 PROFESSIONAL ENGINEER  
 PENNSYLVANIA LICENSE NO. 007876  
 NEW JERSEY LICENSE NO. 26895-2200

SHEET TITLE:  
**SITE PLAN**  
 SHEET NUMBER:  
**C-301**  
 REVISION 1 - 06/02/2023

R:\2022\PA220063.01\CADD\DRAWINGS\PLAN\SET\DRG\DWG\PA220063.01-LDVP-1A.dwg; LAYOUT: C-301 SITE



**LEGEND**

**EXISTING**

PROPERTY LINE	---
R.O.W. LINE	---
ADJACENT PROPERTY LINE	---
EASEMENT LINE	---
BUILDING	[Hatched Box]
RETAINING WALL	[Hatched Line]
CONCRETE CURB	[Solid Line]
FLUSH CURB	[Dashed Line]
FENCE	[X-Mark]
GUIDE RAIL	[Star-Mark]
TREELINE	[Wavy Line]
ACCESSIBLE SYMBOL	[Wheelchair Icon]
CONCRETE MONUMENT/ IRON PIN	[Square with X]
SIGN	[Circle with X]
PARKING COUNT	[Square]
AREA LIGHT	[Circle]
TREE	[Circle with Dots]
DRAINAGE INLET	[Square with X]
STORM/SANITARY MANHOLE	[Circle with X]
WATER/GAS VALVES	[Circle with X]
ROOF DRAIN/CLEANOUT	[Circle with X]
FIRE HYDRANT	[Circle with X]
UTILITY POLE W/ LIGHT	[Circle with X]
UTILITY POLE	[Circle]
OVERHEAD UTILITY WIRES	[Wavy Line]
ELECTRIC LINE	[Dashed Line]
TELEPHONE LINE	[Dotted Line]
GAS LINE	[Long Dash]
WATER LINE	[Short Dash]
SANITARY SEWER	[Dash-Dash]
STORM PIPE	[Dash-Dash-Dash]

**LEGEND**

**PROPOSED**

PROPERTY LINE	---
R.O.W. LINE	---
EASEMENT LINE	---
RETAINING WALL	[Hatched Line]
CONCRETE CURB	[Solid Line]
FLUSH CURB	[Dashed Line]
GUIDE RAIL	[Star-Mark]
TREELINE	[Wavy Line]
ACCESSIBLE SYMBOL	[Wheelchair Icon]
CROSSWALK	[Dashed Line]
RAMP	[Staircase Icon]
SIGN	[Circle with X]
BOLLARD	[Circle]
AREA LIGHT	[Circle]
DRAINAGE INLET	[Square with X]
STORM PIPE	[Dash-Dash-Dash]
SPOT ELEVATION	[Circle with X]
ADA ACCESSIBLE ROUTE	[Dashed Line]

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 PERMITTING SERVICES  
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**REVISIONS**

REV	DATE	COMMENT	CHECKED BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM G.J.H.

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DRAWN BY:	MAM
CHECKED BY:	G.J.H.
DATE:	4/27/2023
CAD ID:	PAA220063.01-LDVP-1A

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FOR  
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**G. J. HARTMAN**  
 Gwynedd Mercy University  
 PROFESSIONAL ENGINEER  
 PENNSYLVANIA LICENSE NO. 007874  
 NEW JERSEY LICENSE NO. 36985-5200

SHEET TITLE:

**GRADING PLAN**

SHEET NUMBER:

**C-401**

REVISION 1 - 06/02/2023

R:\2022\PA220063.01\CADD\DRAWINGS\PLAN SET\TRICHTL SITE PLANS\PA220063.01-LDVP-1A\...LAYOUT\_C-401.GRD

R:\2022\PA22063.01\CADD\DRAWINGS\PLAN SET\TRICH\UTIL SITE PLANS\PA22063.01-LDVP-1A.dwg - LAYOUT, C-501 UTILITY



**LEGEND**

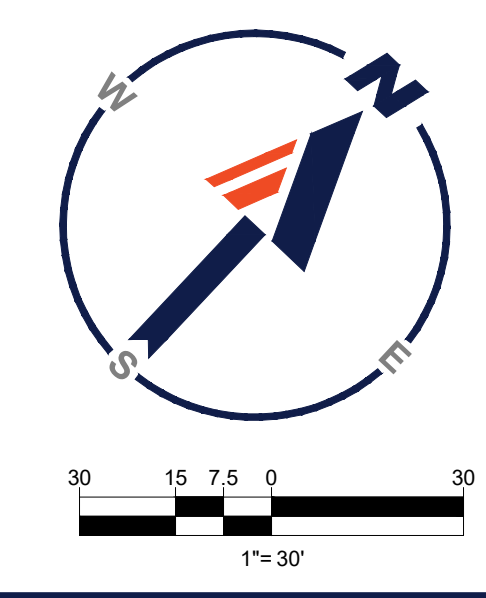
**EXISTING**

PROPERTY LINE	---
R.O.W. LINE	---
ADJACENT PROPERTY LINE	---
EASEMENT LINE	---
BUILDING	[Hatched Box]
RETAINING WALL	[Hatched Line]
CONCRETE CURB	[Solid Line]
FLUSH CURB	[Dashed Line]
FENCE	[Crossed Line]
GUIDE RAIL	[Crossed Line]
TREELINE	[Dashed Line]
CONCRETE MONUMENT/ IRON PIN	[Square]
SIGN	[Circle]
AREA LIGHT	[Square]
TREE	[Circle]
DRAINAGE INLET	[Circle]
STORM/SANITARY MANHOLE	[Circle]
WATER/GAS VALVES	[Circle]
ROOF DRAIN/CLEANOUT	[Circle]
FIRE HYDRANT	[Circle]
UTILITY POLE W/ LIGHT	[Circle]
UTILITY POLE	[Circle]
OVERHEAD UTILITY WIRES	[Line]
ELECTRIC LINE	[Line]
TELEPHONE LINE	[Line]
GAS LINE	[Line]
WATER LINE	[Line]
SANITARY SEWER	[Line]
STORM PIPE	[Line]
TEST PIT	[Square]

**LEGEND**

**PROPOSED**

PROPERTY LINE	---
R.O.W. LINE	---
EASEMENT LINE	---
RETAINING WALL	[Hatched Line]
CONCRETE CURB	[Solid Line]
FLUSH CURB	[Dashed Line]
GUIDE RAIL	[Crossed Line]
TREELINE	[Dashed Line]
RAMP	[Line]
SIGN	[Circle]
BOLLARD	[Circle]
AREA LIGHT	[Square]
DRAINAGE INLET	[Circle]
STORM PIPE	[Line]



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1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM G.J.H.

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PROJECT No.: PAA220063.00  
 DRAWN BY: MAM  
 CHECKED BY: G.J.H.  
 DATE: 4/27/2023  
 CAD ID: PAA220063.01-LDVP-1A

**PROJECT:**

**WAIVER OF LAND DEVELOPMENT PLANS**

FOR

**GWYNEDD MERCY UNIVERSITY**

PROPOSED COURTYARD IMPROVEMENTS  
 RESIDENCE HALL TRIPLEX

1325 SUMNERTOWN PIKE  
 LOWER GWYNEDD TOWNSHIP  
 MONTGOMERY COUNTY, PA

**BOHLER**

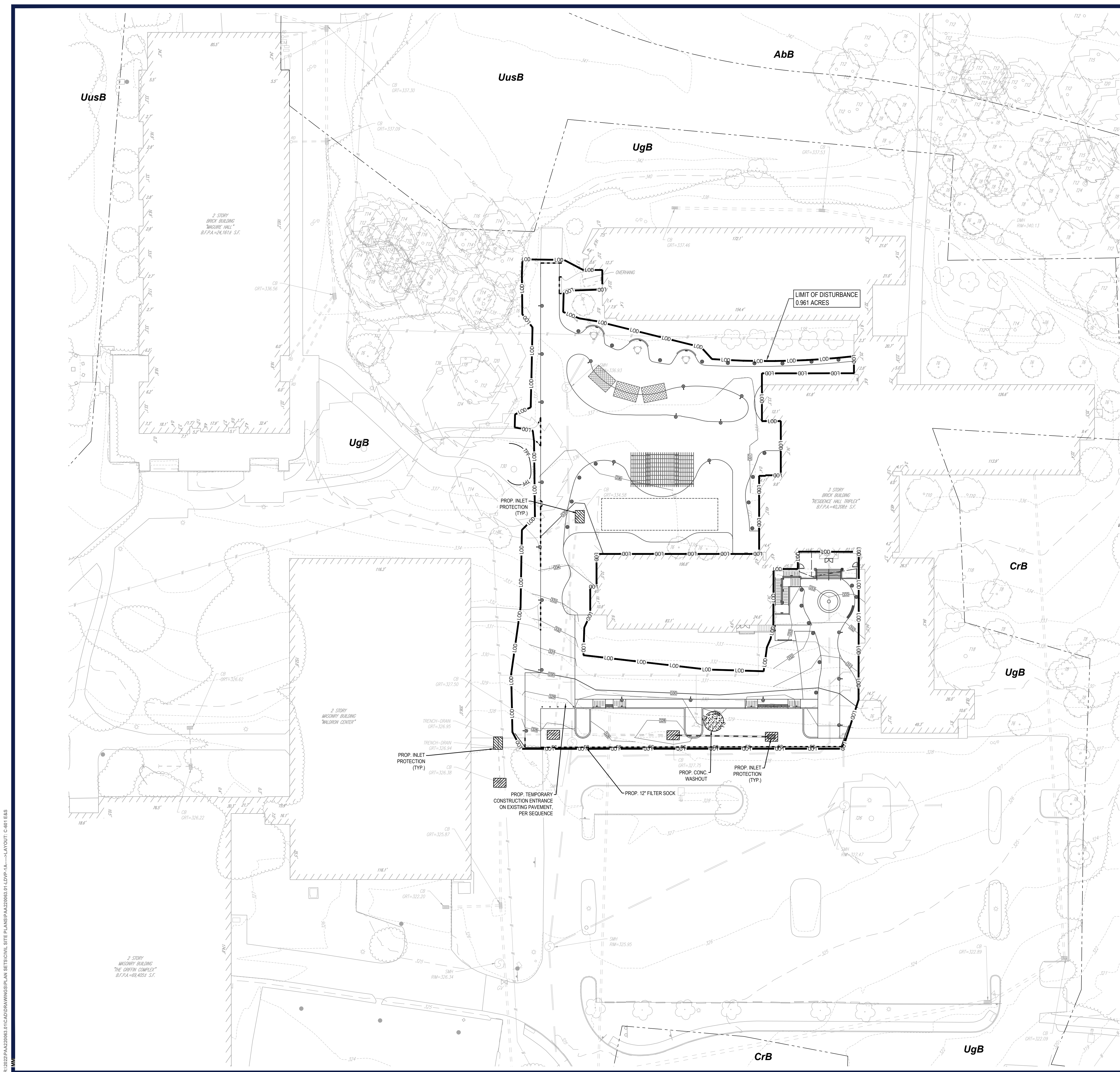
1600 MANOR DRIVE, SUITE 200  
 CHALFONT, PA 18914  
 Phone: (215) 996-9100  
 Fax: (215) 996-9102  
 www.BohlerEngineering.com

**G. J. HARTMAN**  
 Gwynedd Mercy University  
 PROFESSIONAL ENGINEER  
 PENNSYLVANIA LICENSE NO. 007874  
 NEW JERSEY LICENSE NO. 36985-2000

SHEET TITLE:  
**UTILITY PLAN**

SHEET NUMBER:  
**C-501**

REVISION 1 - 06/02/2023



**REVISIONS**

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM	G.J.H.

**LEGEND**  
**PROPOSED**

LIMIT OF DISTURBANCE	LOD
COMPOST FILTER SOCK	FS
TREE PROTECTION FENCE	TPF
CONCRETE WASHOUT	(Symbol)
INLET PROTECTION	(Symbol)



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**PROJECT:**  
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 FOR  
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**SHEET TITLE:**  
**SOIL EROSION & SEDIMENT POLLUTION CONTROL PLAN**

**SHEET NUMBER:**  
**C-601**

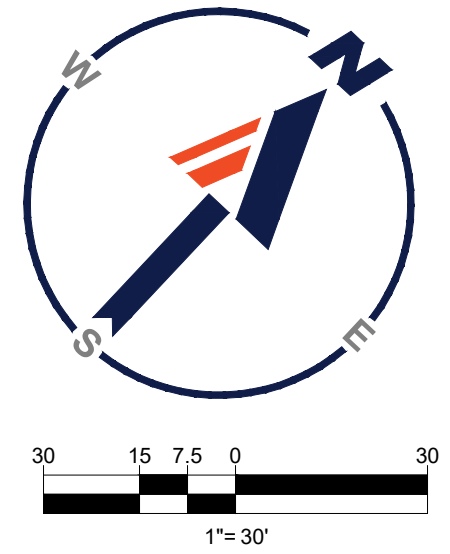
REVISION 1 - 06/02/2023

**LEGEND**  
**EXISTING**

PROPERTY LINE	(Symbol)
R.O.W. LINE	(Symbol)
ADJACENT PROPERTY LINE	(Symbol)
EASEMENT LINE	(Symbol)
BUILDING	(Symbol)
RETAINING WALL	(Symbol)
CONCRETE CURB	(Symbol)
FLUSH CURB	(Symbol)
FENCE	(Symbol)
GUIDE RAIL	(Symbol)
TREELINE	(Symbol)
CONCRETE MONUMENT/IRON PIN	(Symbol)
SIGN	(Symbol)
AREA LIGHT	(Symbol)
TREE	(Symbol)
DRAINAGE INLET	(Symbol)
STORM/SANITARY MANHOLE	(Symbol)
WATER/GAS VALVES	(Symbol)
ROOF DRAIN/CLEANOUT	(Symbol)
FIRE HYDRANT	(Symbol)
UTILITY POLE W/ LIGHT	(Symbol)
UTILITY POLE	(Symbol)
OVERHEAD UTILITY WIRES	(Symbol)
ELECTRIC LINE	(Symbol)
TELEPHONE LINE	(Symbol)
GAS LINE	(Symbol)
WATER LINE	(Symbol)
SANITARY SEWER	(Symbol)
STORM PIPE	(Symbol)

**LEGEND**  
**PROPOSED**

PROPERTY LINE	(Symbol)
R.O.W. LINE	(Symbol)
EASEMENT LINE	(Symbol)
RETAINING WALL	(Symbol)
CONCRETE CURB	(Symbol)
FLUSH CURB	(Symbol)
FENCE	(Symbol)
GUIDE RAIL	(Symbol)
TREELINE	(Symbol)
RAMP	(Symbol)
SIGN	(Symbol)
BOLLARD	(Symbol)
AREA LIGHT	(Symbol)
DRAINAGE INLET	(Symbol)
STORM PIPE	(Symbol)



R:\2022\PA220063.01\CADD\DRAWINGS\PLAN SET\TRIPLEX SITE PLANS\PA220063.01-LDVP-1A.dwg - LAYOUT, C-601.EGS



**LUMINAIRE SCHEDULE**

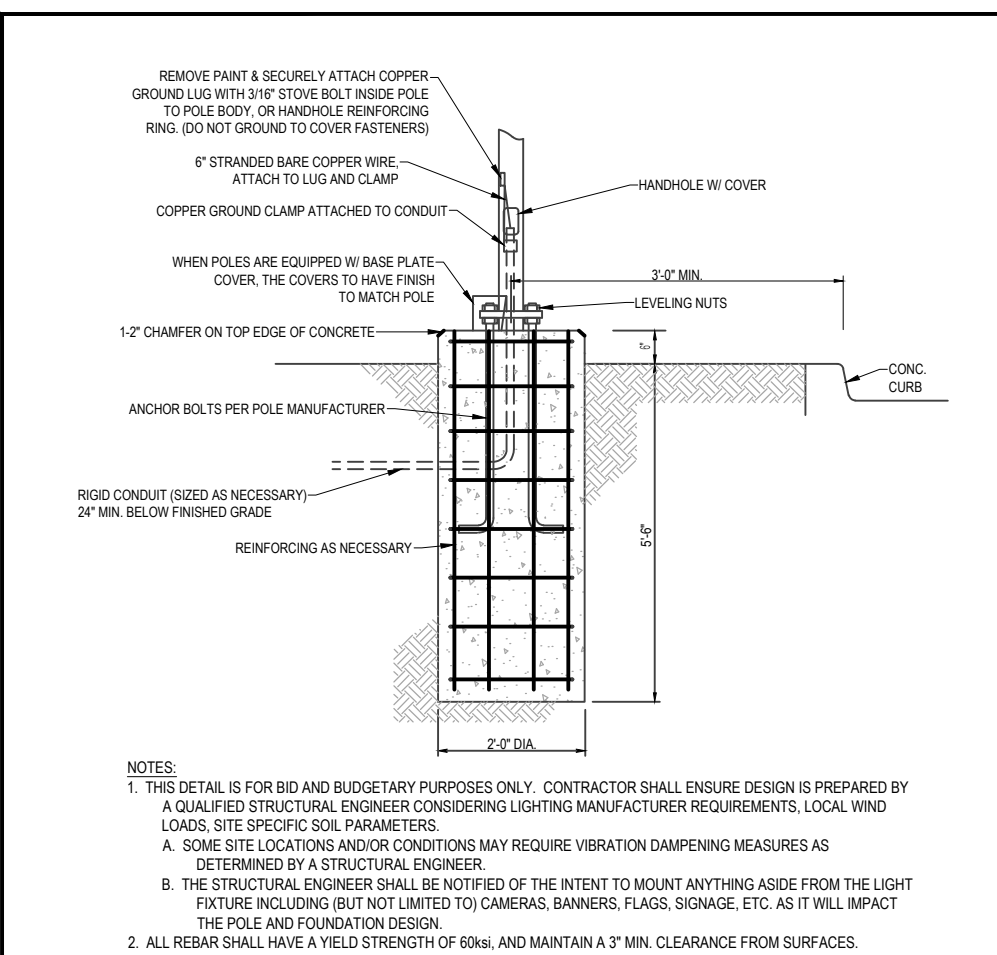
LABEL	QTY	MOUNTING HEIGHT	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION
L1	21	14'-0" AFF	SINGLE	7851	0.900	LOUIS POULSEN NYHAIN PARK POST. ZERO UP-LIGHT (LED 3000K-7851-120-27V/60HZ)
L2	26	3'-9" AFF	SINGLE	412	0.900	LOUIS POULSEN BYSTED BOLLARD, COOPER (LP-BYSTED)
L3	9	2'-6" AFF	SINGLE	266	0.900	KUZCO CASA WALL LIGHT, GRAY (EW7130S-GY)
ex	3	---	SINGLE	---	0.900	EXISTING LUMINAIRE MODELED FOR ILLUSTRATIVE PURPOSES

**CALCULATION SUMMARY**

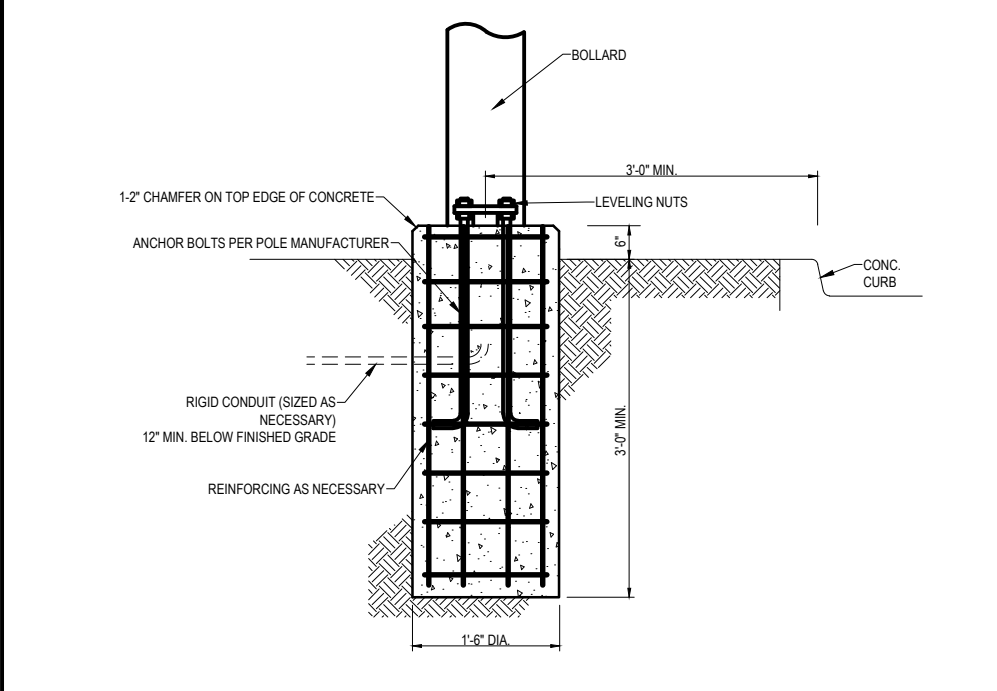
LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVGMIN	MAXMIN
ALL POINTS	ILLUMINANCE	Fc	0.77	31.1	0.0	N.A.	N.A.

**GENERAL LIGHTING NOTES**

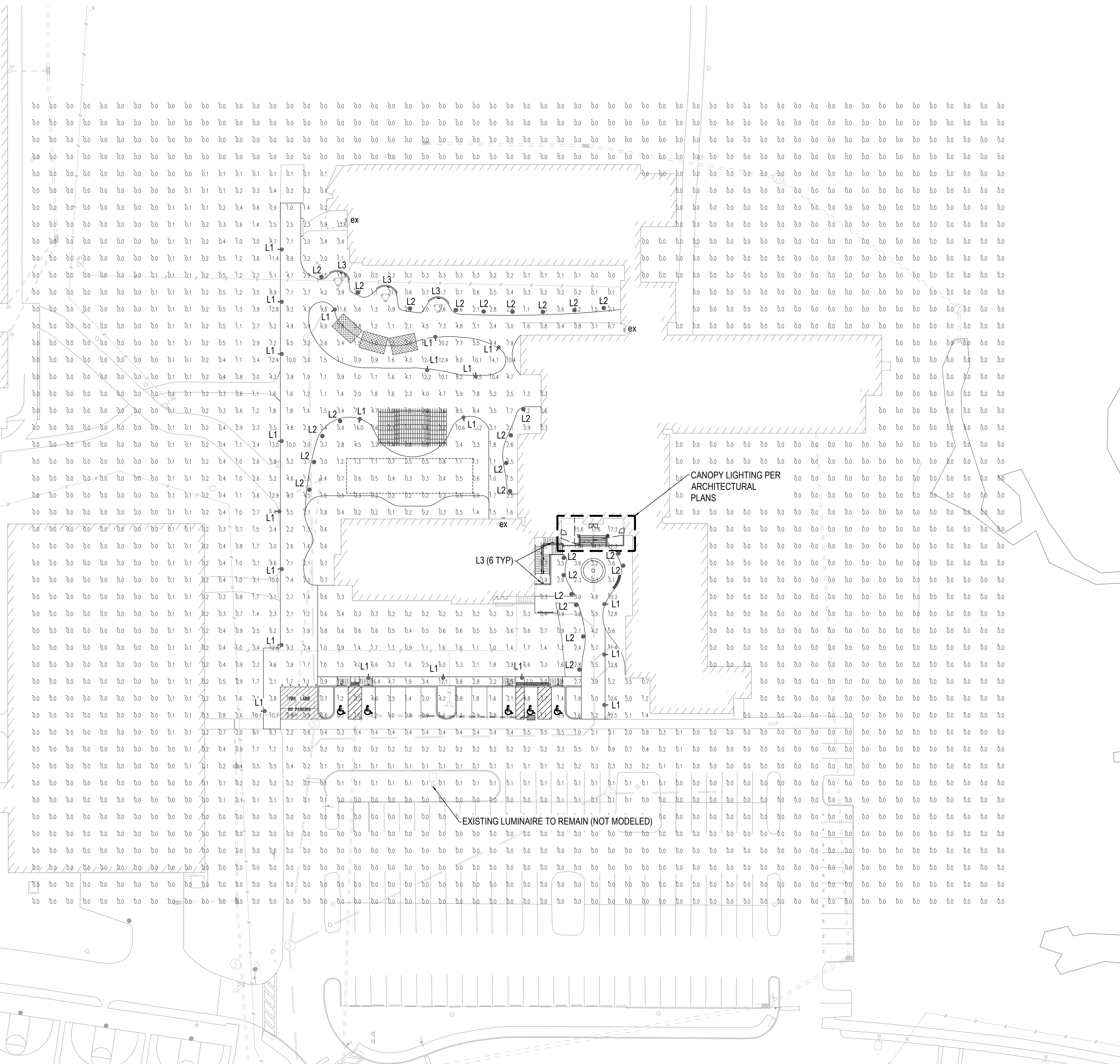
- THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE ELECTRICAL CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY, THE ELECTRICAL CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS SPECIFIC NOTES.
- THE ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE PLANS, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL AGENCY AND GOVERNMENTAL REGULATIONS.
- THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER. ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
- THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDELS (FC).
- THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND RE-LAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN. UPON COMPLETION AND OWNER'S ACCEPTANCE OF THE WORK, THE ABOVE RESPONSIBILITIES BECOMES SOLELY THE OWNERS.
- THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATION AND TYPE OF LUMINAIRES, POWER SYSTEM CONDUITS, WIRING AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECTS, MECHANICAL ENGINEERS AND/OR ELECTRICAL CONTRACTORS RESPONSIBILITY. AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS, THE CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TRUNKING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES.
- THE ELECTRICAL CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES (OR OTHER STRUCTURES) TO THE PROFESSIONAL OF RECORD'S ATTENTION, PRIOR TO THE START OF CONSTRUCTION.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND/OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.
- UPON OWNERS ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.
- THE LIGHT LOSS FACTORS (LLF) DEPICTED IN THE LUMINAIRE SCHEDULE ON THIS PLAN ARE BASED ON DATA PROVIDED BY THE MANUFACTURER FOLLOWING IES LM-80-08 TESTING. THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF LISTED IN THE LUMINAIRE SCHEDULE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO BOHLER FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE LUMINAIRE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.



**6" FOUNDATION DETAIL**  
NOT TO SCALE



**BOLLARD FOUNDATION DETAIL**  
NOT TO SCALE



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**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM	GJH

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PROJECT No.: PAA220063.00  
DRAWN BY: MAM  
CHECKED BY: GJH  
DATE: 4/27/2023  
CAD LID: PAA220063.01-LLGT-1A

**WAIVER OF LAND DEVELOPMENT PLANS**  
FOR  
**GWYNEDD MERCY UNIVERSITY**  
PROPOSED COURTYARD IMPROVEMENTS  
RESIDENCE HALL TRIPLEX  
1325 SUMNERTOWN PIKE  
LOWER GWYNEDD TOWNSHIP  
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**D. T. WORTH**  
REGISTERED LANDSCAPE ARCHITECT  
PENNSYLVANIA LICENSE # 11007229  
REGISTERED LANDSCAPE ARCHITECT

SHEET TITLE:  
**LIGHTING PLAN**  
SHEET NUMBER:  
**C-701**  
REVISION 1 - 06/02/2023

R:\0222\PA220063.01\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\PA220063.01-LLGT-1A.dwg - LAYOUT: C-701 LIGHT PLAN





REVISIONS				
REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM	GJH



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PROJECT No.: PAA220063.00  
 DRAWN BY: MAM  
 CHECKED BY: GJH  
 DATE: 4/27/2023  
 CAD ID: PAA220063.01-CNDS-1A

PROJECT:

**WAIVER OF LAND DEVELOPMENT PLANS**

FOR  
**GWYNEDD MERCY UNIVERSITY**  
 PROPOSED COURTYARD IMPROVEMENTS  
 RESIDENCE HALL TRIPLEX  
 1325 SUMNEYTOWN PIKE  
 LOWER GWYNEDD TOWNSHIP  
 MONTGOMERY COUNTY, PA

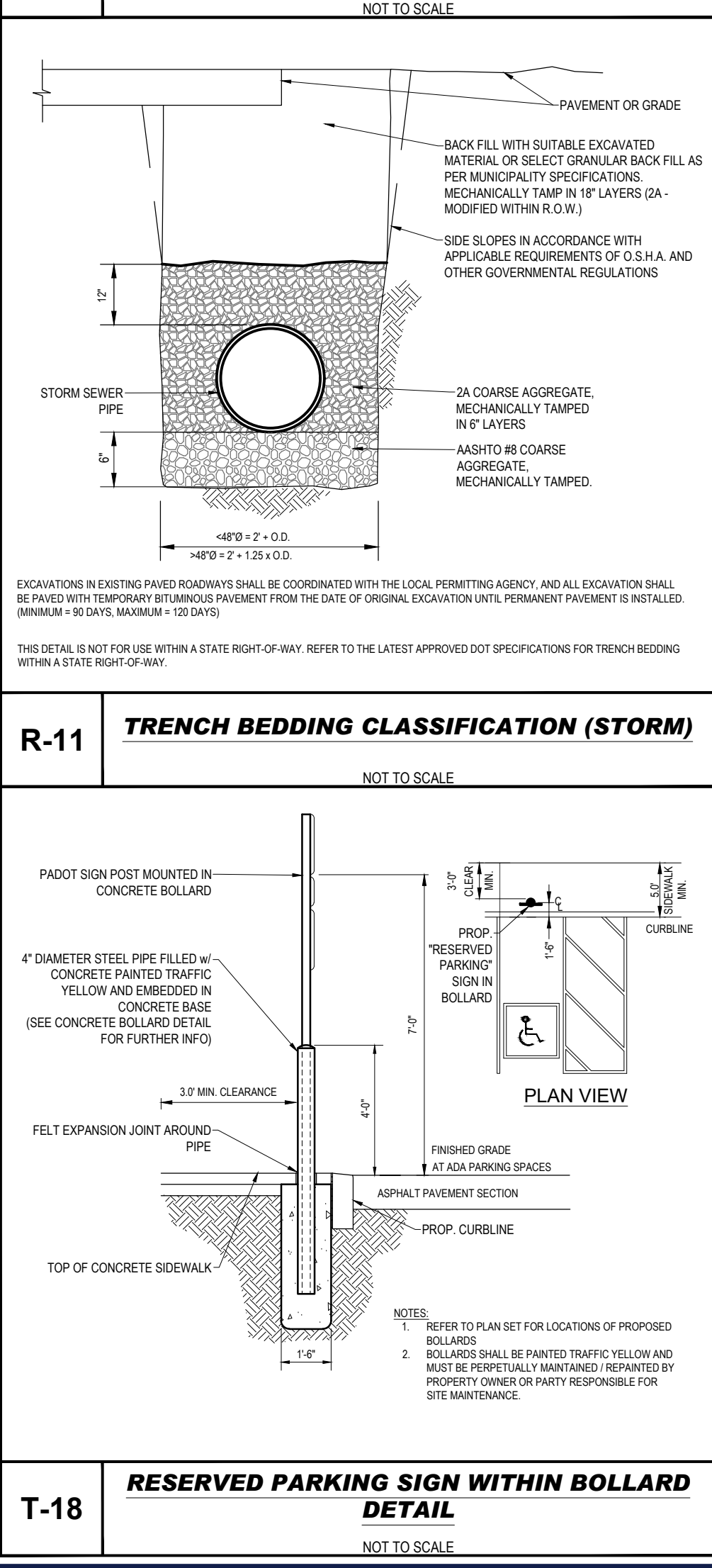
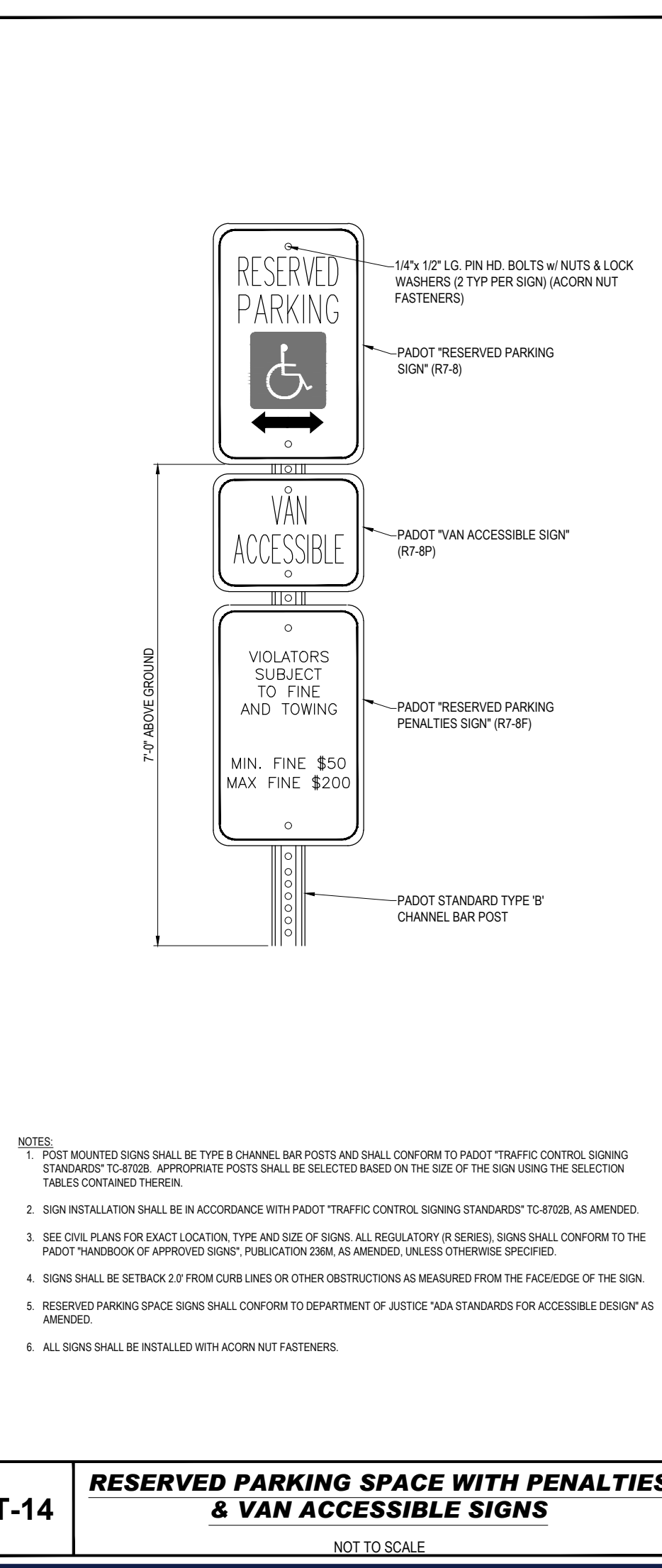
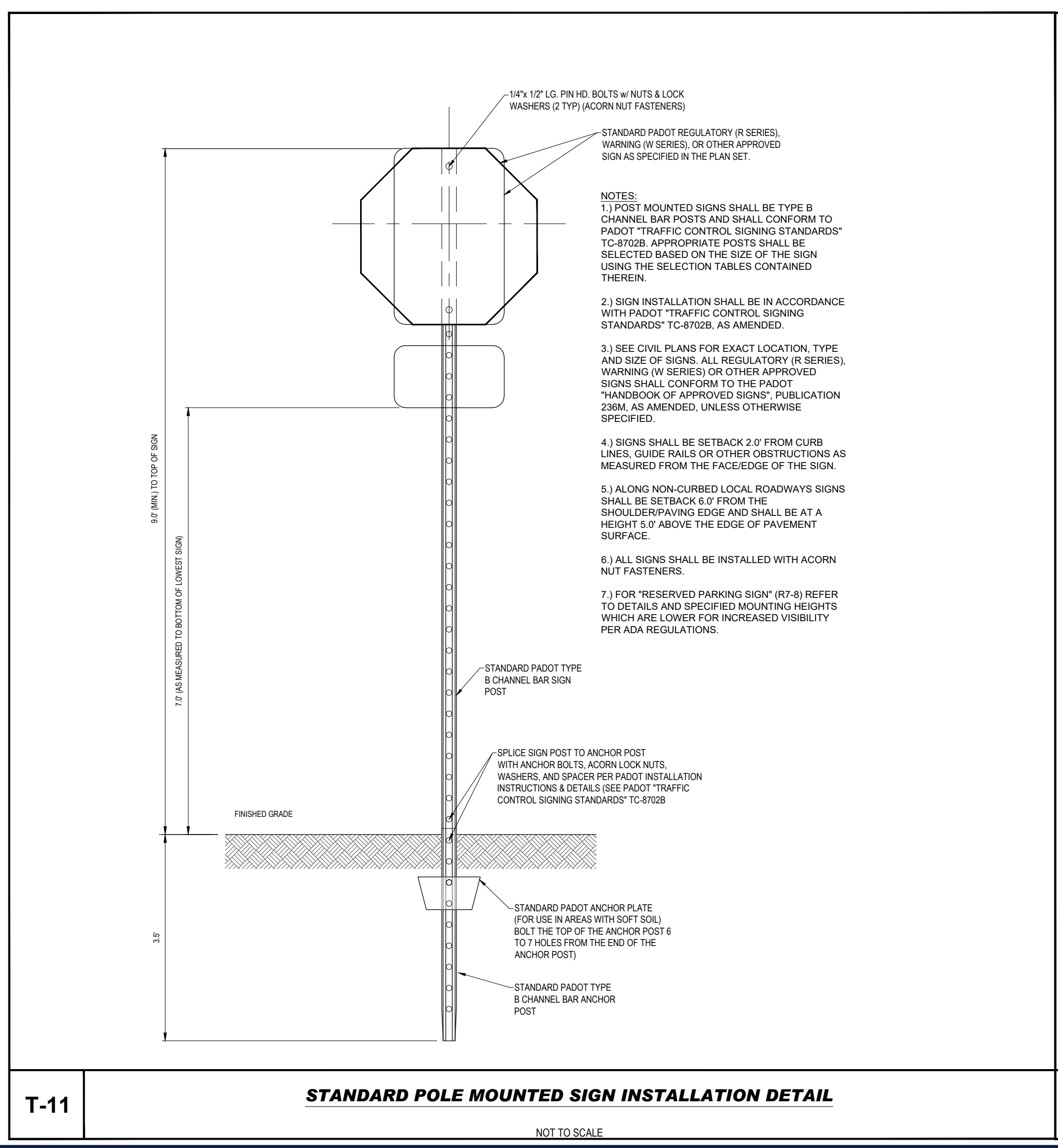
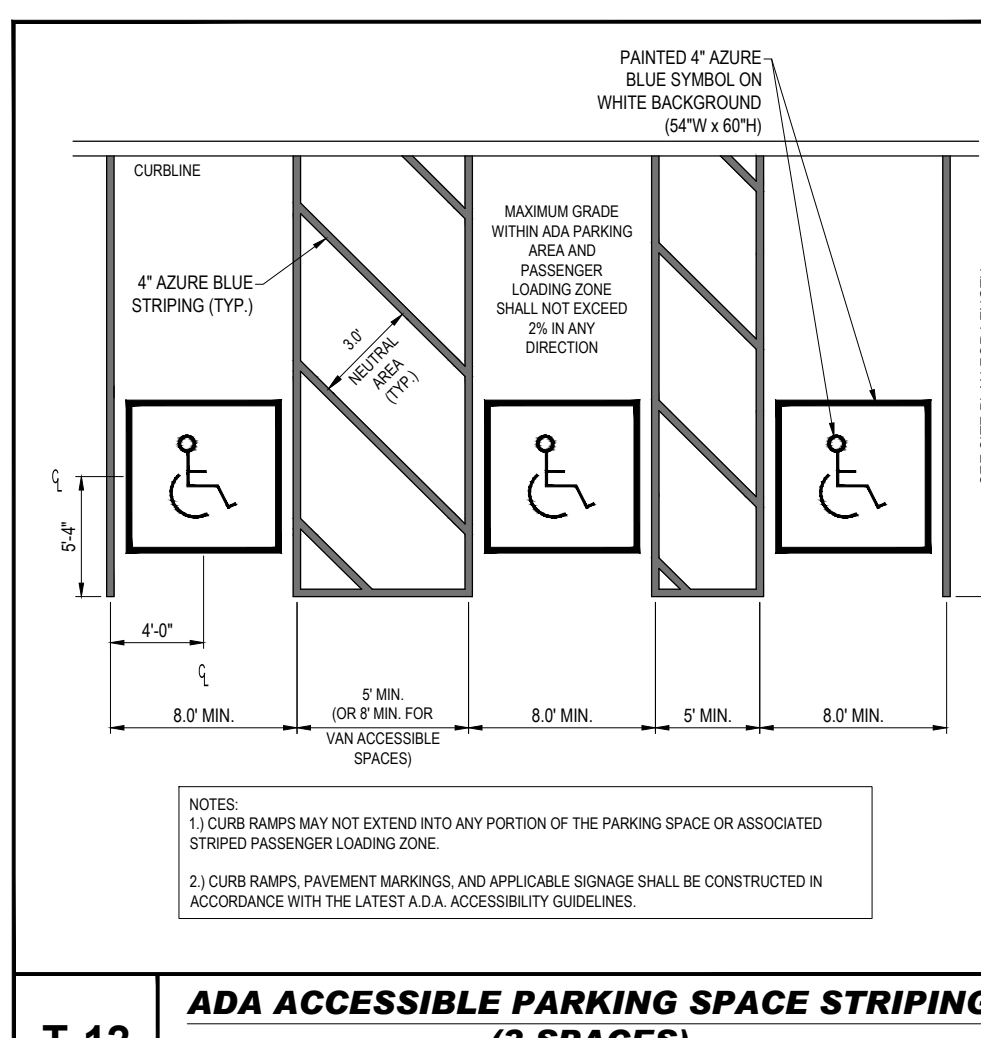
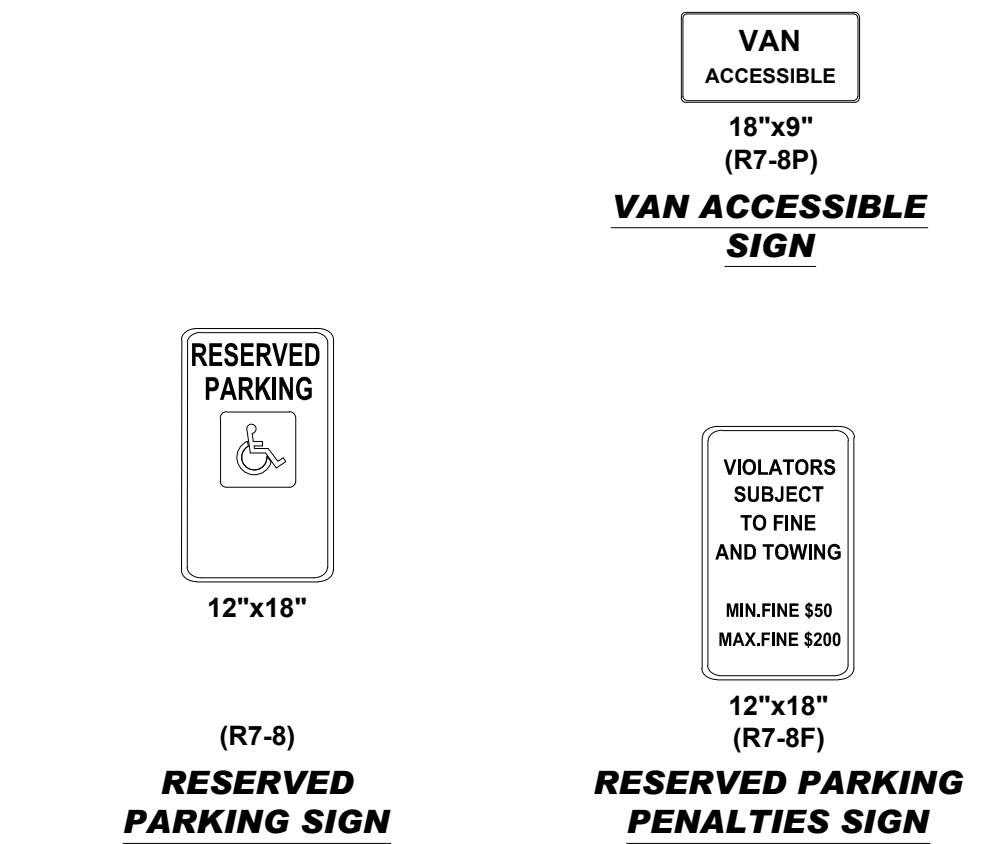
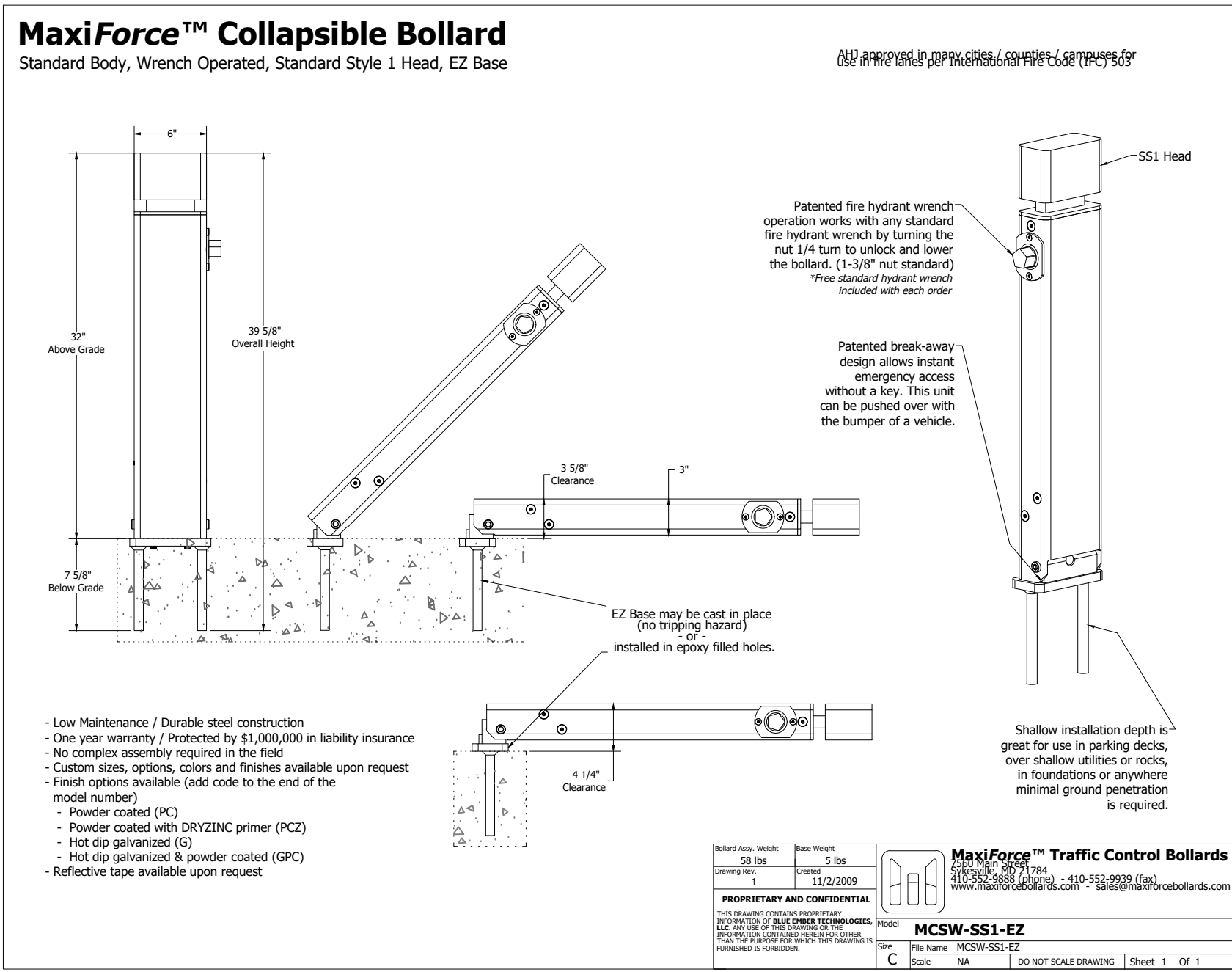
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SHEET TITLE:  
**DETAIL SHEET**  
 SHEET NUMBER:  
**C-901**  
 REVISION 1 - 06/02/2023

<p><b>P-13 PAVEMENT TIE-IN DETAIL</b> NOT TO SCALE</p>	<p><b>P-21 CONCRETE SIDEWALK DETAIL</b> NOT TO SCALE</p>	<p><b>T-20 BOLLARD DETAIL</b> NOT TO SCALE</p>
<p><b>P-3 TAPERED CURB DETAIL</b> NOT TO SCALE</p>	<p><b>P-17 STANDARD ASPHALT PAVEMENT DETAIL</b> NOT TO SCALE</p>	<p>CONCRETE TO BE RAISED FOR PROPER WATER RUN OFF        4" DIAMETER STEEL PIPE FILLED W/ CONCRETE PAINTED TRAFFIC YELLOW AND EMBEDDED IN CONCRETE BASE        BITUMINOUS JOINT AROUND PIPE        TOP OF SLAB OR ASPHALT        1'-0" MIN. (TYP) PAVEMENT SURFACE (SEE PLAN)        3'-0" MIN. (TYP) CONCRETE (SEE PLAN)        CLASS A CONCRETE MIN. COMPRESSIVE STRENGTH 4,000 PSI @ 28 DAYS</p> <p>NOTES:        1. BOLLARDS REQUIRED AT BLDG. CORNERS, FIRE HYDRANTS, WATER METERS, GAS METER, SPRINKLER RISER, SHOWN TRANSFORMER &amp; ALL UTILITIES AT LOCATIONS SHOWN ON THESE DRAWINGS INTERIOR &amp; EXTERIOR.        2. BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED/REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.</p>
<p><b>P-19 MILL &amp; OVERLAY DETAIL</b> NOT TO SCALE</p>	<p><b>P-1 TYPICAL CONCRETE CURB DETAIL</b> NOT TO SCALE</p>	<p><b>T-16 TRUNCATED DOME PATTERN FOR ADA DETECTABLE WARNING SURFACES (FOR USE IN DOT ROADWAYS)</b> NOT TO SCALE</p>
<p><b>P-19 MILL &amp; OVERLAY DETAIL</b> NOT TO SCALE</p>	<p><b>P-1 TYPICAL CONCRETE CURB DETAIL</b> NOT TO SCALE</p>	<p><b>T-16 TRUNCATED DOME PATTERN FOR ADA DETECTABLE WARNING SURFACES (FOR USE IN DOT ROADWAYS)</b> NOT TO SCALE</p>

R:\2022\PA220063\01\CADD\DRAWINGS\PLAN SET\TRICHIL SITE PLANS\PA220063-01-CNDS-1A.dwg - LAYOUT - C-902 DETAILS



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REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	06/02/2023	PER FIRE MARSHAL COMMENTS	MAM	GJH

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PROJECT No.: PAA220063.00  
DRAWN BY: MAM  
DATE: 4/27/2023  
CAD I.D.: PAA220063.01-CNDS-1A

PROJECT:

**WAIVER OF LAND DEVELOPMENT PLANS**

FOR

**GWYNEDD MERCY UNIVERSITY**

PROPOSED COURTYARD IMPROVEMENTS  
RESIDENCE HALL TRIPLEX

1325 SUMNEYTOWN PIKE  
LOWER GWYNEDD TOWNSHIP  
MONTGOMERY COUNTY, PA

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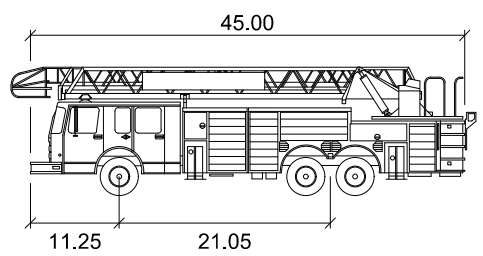
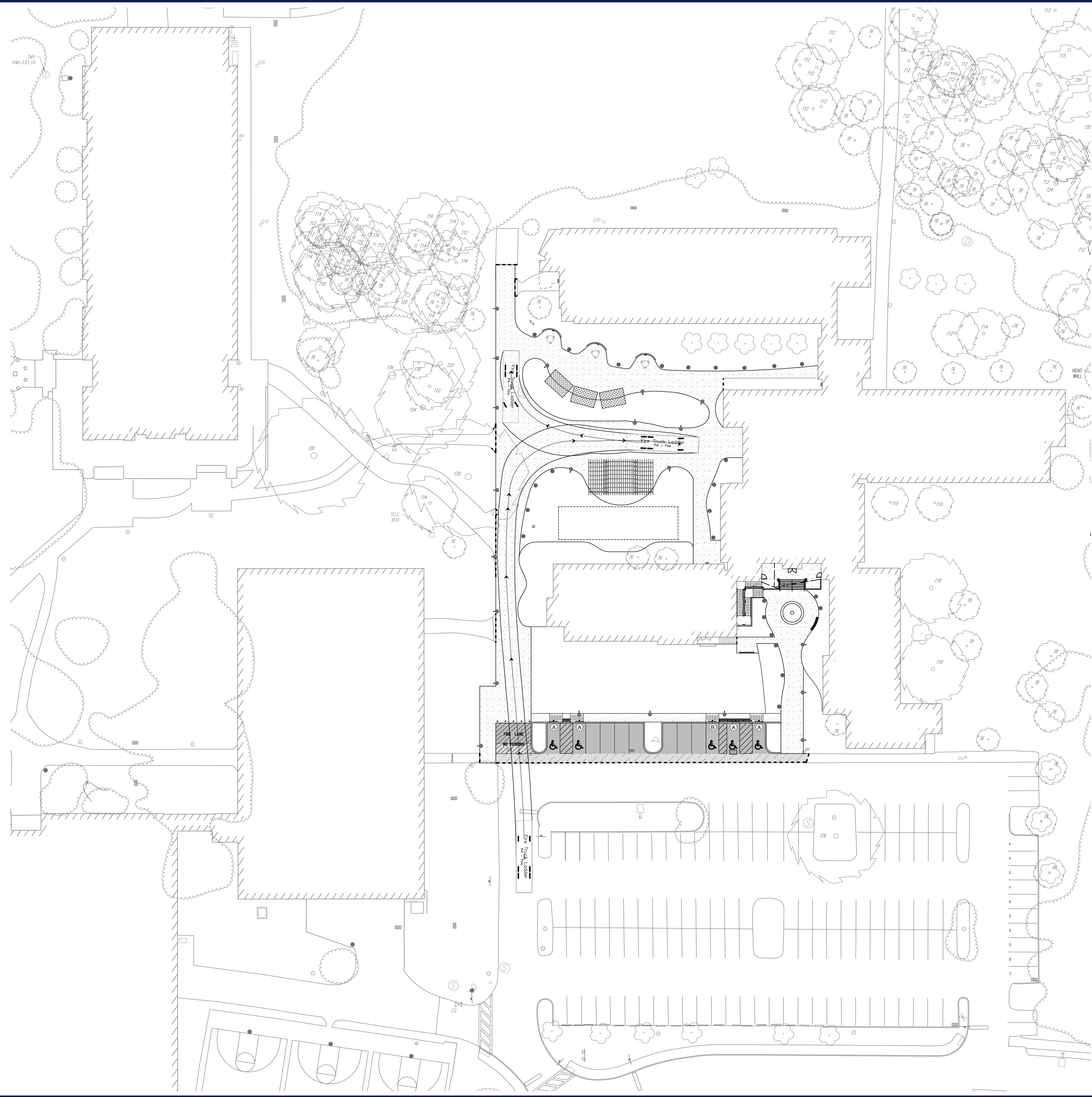
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**G. J. HARTMAN**  
PROFESSIONAL ENGINEER  
No. 100714  
PENNSYLVANIA LICENSE EXPIRES 12/31/2024  
NEW JERSEY LICENSE NO. 26895-2000

SHEET TITLE:  
**DETAIL SHEET**

SHEET NUMBER:  
**C-902**

REVISION 1 - 06/02/2023



Fire Truck Ladder

Width	: 9.80
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 30.0



30 15 7.5 0 30  
1" = 30'

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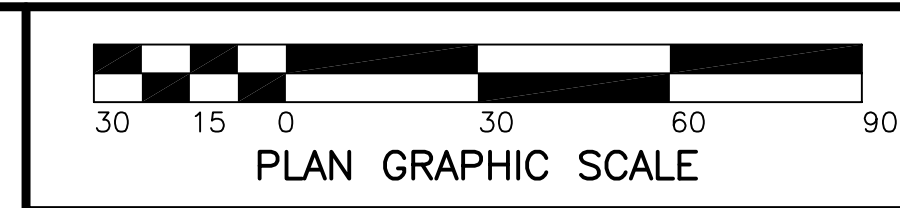
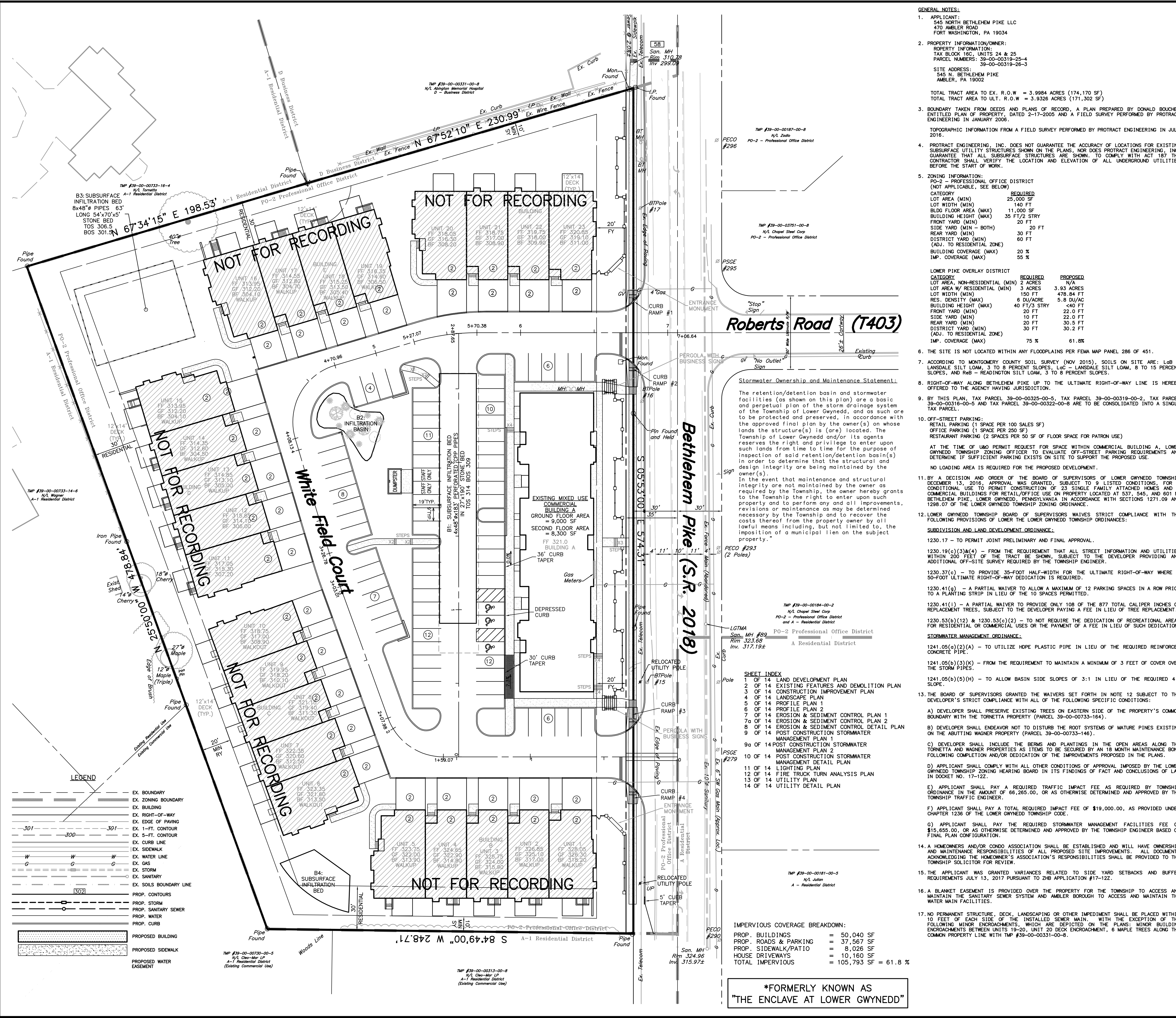
**G. J. HARTMAN**  
 G. J. Hartman, III  
 PROFESSIONAL ENGINEER  
 PENNSYLVANIA LICENSE # 007814  
 NEW JERSEY LICENSE # 109695-2000

SHEET TITLE:  
**FIRE TRUCK CIRCULATION PLAN**

SHEET NUMBER:  
**C-903**

REVISION 1 - 06/02/2023

R:\2023\PA220063.01\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\PA220063.01-LDVP-1A.dwg - LAYOUT, C:903 FIRE TRUCK



COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF MONTGOMERY

On the \_\_\_\_\_ day of \_\_\_\_\_, 2017, before me the subscriber, a notary public of the Commonwealth of Pennsylvania residing in \_\_\_\_\_ personally appeared Peter F. Penno, of 545 North Bethlehem Pike, LLC, who acknowledged this plan to be the official plan of the highways and property shown thereon situate in the Township of Lower Gwynedd, Montgomery County, Pennsylvania, and desired that this plan be recorded according to law.

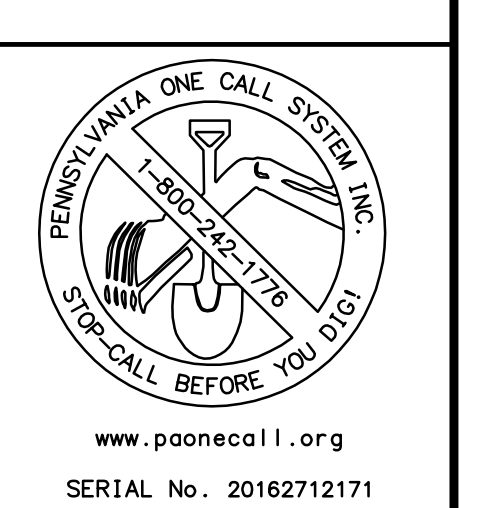
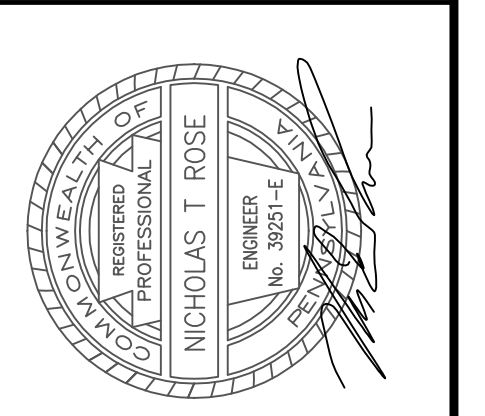
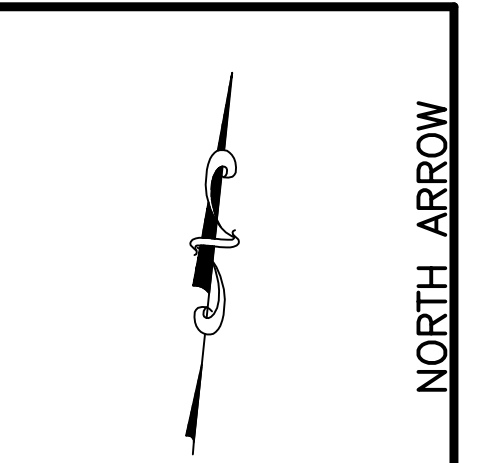
Witness my hand and notarial seal the day and year aforesaid.  
\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

I hereby certify that 545 North Bethlehem Pike, LLC is the registered owner of the land herein subdivided or developed and that we do hereby adopt this plan.

Approved by the Board of Supervisors of the Township of Lower Gwynedd this \_\_\_\_\_ day of \_\_\_\_\_, 2017.  
\_\_\_\_\_  
(Title)  
\_\_\_\_\_  
President  
\_\_\_\_\_  
Secretary

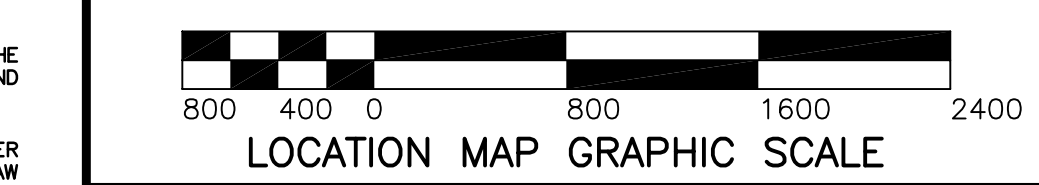
Approved by the Lower Gwynedd Township Engineer on the \_\_\_\_\_ day of \_\_\_\_\_, 2017.  
\_\_\_\_\_  
Engineer

Recorded this \_\_\_\_\_ day of \_\_\_\_\_, 2017, in the office for the recording of deeds, etc., in and for the County of Montgomery in Norristown, Pennsylvania in Plan Book No. \_\_\_\_\_, Page \_\_\_\_\_.  
\_\_\_\_\_  
Recorder

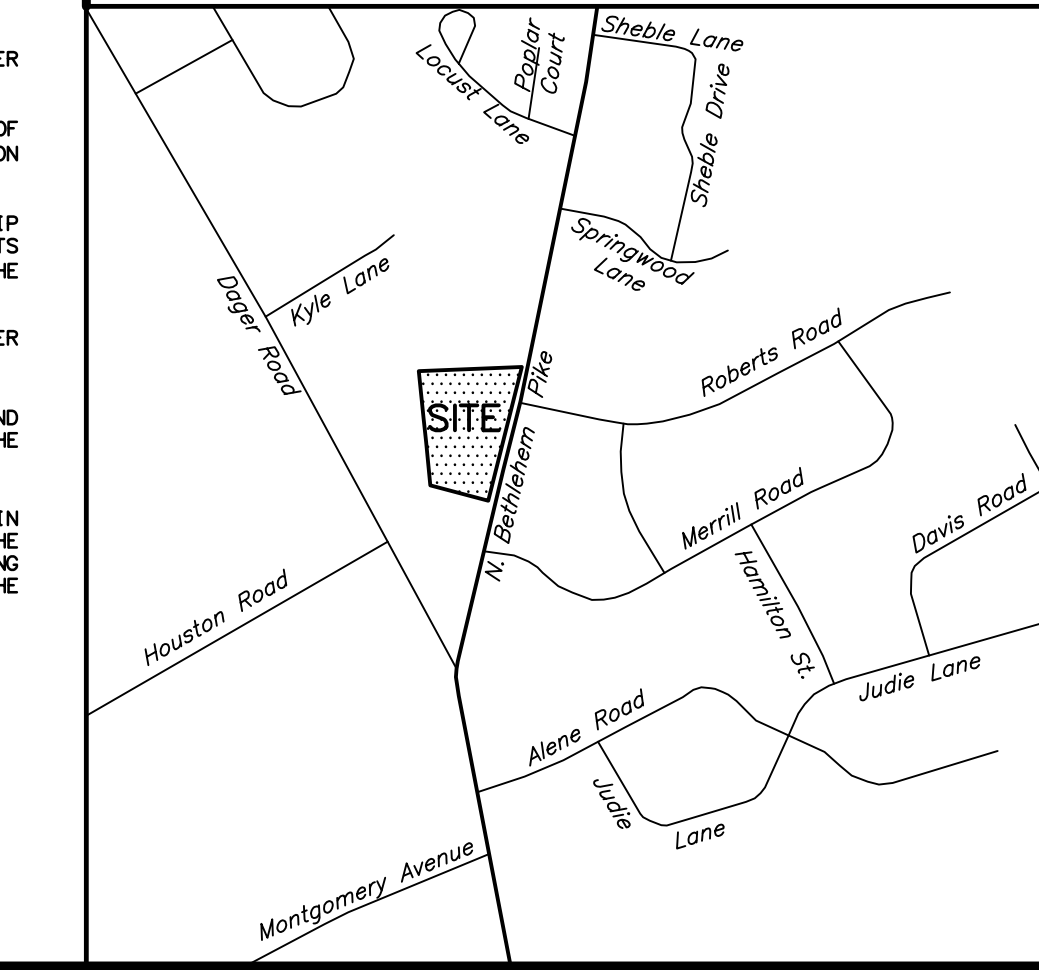


www.paonecall.org  
SERIAL No. 20162712171  
MCP No. 17-0089-001  
PROCESSED AND REVIEWED. A report has been prepared by the Montgomery County Planning Commission in accordance with the Municipalities Planning Code.  
Certified this date \_\_\_\_\_  
For the Director  
Montgomery County Planning Commission

EMS	BLH	BLH	BLH	BLH	BLH	EMS	By
7	04-28-23	AMENDED FINAL PLAN	7	04-28-23	AMENDED FINAL PLAN	7	DR/MS/NTR
6	02-13-18	PER REVIEW COMMENTS	6	02-13-18	PER REVIEW COMMENTS	6	
5	12-04-17	PER REVIEW COMMENTS	5	12-04-17	PER REVIEW COMMENTS	5	
4	11-06-17	MCD REVISION	4	11-06-17	MCD REVISION	4	
3	10-24-17	PER REVIEW COMMENTS & REVISED BASIN B3	3	10-24-17	PER REVIEW COMMENTS & REVISED BASIN B3	3	
2	09-08-17	MCD PER REVIEW COMMENTS	2	09-08-17	MCD PER REVIEW COMMENTS	2	
1	08-14-17	PER REVIEW COMMENTS	1	08-14-17	PER REVIEW COMMENTS	1	



LOCATION MAP/SCALE: 1"=800'



**LEGEND**

	EX. BOUNDARY
	EX. ZONING BOUNDARY
	EX. BUILDING
	EX. RIGHT-OF-WAY
	EX. EDGE OF PAVING
	EX. 1'-FT. CONTOUR
	EX. 5'-FT. CONTOUR
	EX. CURB LINE
	EX. SIDEWALK
	EX. WATER LINE
	EX. GAS
	EX. STORM
	EX. SANITARY
	EX. SOILS BOUNDARY LINE
	PROP. CONTOURS
	PROP. STORM
	PROP. SANITARY SEWER
	PROP. WATER
	PROP. CURB
	PROPOSED BUILDING
	PROPOSED SIDEWALK
	PROPOSED WATER EASEMENT

**GENERAL NOTES:**

- APPLICANT: 545 NORTH BETHLEHEM PIKE LLC, 470 AMBLER ROAD, FORT WASHINGTON, PA 19034
- PROPERTY INFORMATION/OWNER: TAX BLOCK 16C, UNITS 24 & 25, PARCEL NUMBERS: 39-00-00319-25-4, 39-00-00319-26-3. SITE ADDRESS: 545 N. BETHLEHEM PIKE, AMBLER, PA 19002
- BOUNDARY TAKEN FROM DEEDS AND PLANS OF RECORD, A PLAN PREPARED BY DONALD BOUCHER ENTITLED PLAN OF PROPERTY, DATED 2-17-2005 AND A FIELD SURVEY PERFORMED BY PROTRACT ENGINEERING IN JANUARY 2006. TOPOGRAPHIC INFORMATION FROM A FIELD SURVEY PERFORMED BY PROTRACT ENGINEERING IN JULY 2016.
- PROTRACT ENGINEERING, INC. DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS FOR EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS, NOR DOES PROTRACT ENGINEERING, INC. GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN. TO COMPLY WITH ACT 187 THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES BEFORE THE START OF WORK.
- ZONING INFORMATION: PO-2 - PROFESSIONAL OFFICE DISTRICT (NOT APPLICABLE, SEE BELOW). REQUIRED: LOT AREA (MIN) 25,000 SF, LOT WIDTH (MIN) 140 FT, BLDG FLOOR AREA (MAX) 11,000 SF, BUILDING HEIGHT (MAX) 35 FT/2 STRY, FRONT YARD (MIN) 20 FT, SIDE YARD (MIN - BOTH) 20 FT, REAR YARD (MIN) 30 FT, DISTRICT YARD (MIN) 60 FT (ADJ. TO RESIDENTIAL ZONE), BUILDING COVERAGE (MAX) 20 %, IMP. COVERAGE (MAX) 55 %.
- LOWER PIKE OVERLAY DISTRICT: REQUIRED: LOT AREA, NON-RESIDENTIAL (MIN) 2 ACRES, LOT AREA W/ RESIDENTIAL (MIN) 3 ACRES, LOT WIDTH (MIN) 150 FT, RES. DENSITY (MAX) 6 DU/ACRE, BUILDING HEIGHT (MAX) 40 FT/3 STRY, FRONT YARD (MIN) 20 FT, SIDE YARD (MIN) 10 FT, REAR YARD (MIN) 20 FT, DISTRICT YARD (MIN) 30 FT (ADJ. TO RESIDENTIAL ZONE), IMP. COVERAGE (MAX) 75 %, 61.8%.
- THE SITE IS NOT LOCATED WITHIN ANY FLOODPLAINS PER FEMA MAP PANEL 286 OF 451.
- ACCORDING TO MONTGOMERY COUNTY SOIL SURVEY (NOV. 2015), SOILS ON SITE ARE: LoB - LANSDALE SILT LOAM, 3 TO 8 PERCENT SLOPES, LoC - LANSDALE SILT LOAM, 8 TO 15 PERCENT SLOPES, AND ReB - READINGTON SILT LOAM, 3 TO 8 PERCENT SLOPES.
- RIGHT-OF-WAY ALONG BETHLEHEM PIKE UP TO THE ULTIMATE RIGHT-OF-WAY LINE IS HEREBY OFFERED TO THE AGENCY HAVING JURISDICTION.
- BY THIS PLAN, TAX PARCEL 39-00-00325-00-5, TAX PARCEL 39-00-00319-00-2, TAX PARCEL 39-00-00316-00-5 AND TAX PARCEL 39-00-00322-00-8 ARE TO BE CONSOLIDATED INTO A SINGLE TAX PARCEL.
- OFF-STREET PARKING: RETAIL PARKING (1 SPACE PER 100 SALES SF), OFFICE PARKING (1 SPACE PER 250 SF), RESTAURANT PARKING (2 SPACES PER 50 SF OF FLOOR SPACE FOR PATRON USE). AT THE TIME OF LMO PERMIT REQUEST FOR SPACE WITHIN COMMERCIAL BUILDING A, LOWER GWYNNED TOWNSHIP ZONING OFFICER TO EVALUATE OFF-STREET PARKING REQUIREMENTS AND DETERMINE IF SUFFICIENT PARKING EXISTS ON SITE TO SUPPORT THE PROPOSED USE. NO LOADING AREA IS REQUIRED FOR THE PROPOSED DEVELOPMENT.
- BY A DECISION AND ORDER OF THE BOARD OF SUPERVISORS OF LOWER GWYNNED TOWNSHIP DECEMBER 13, 2016 APPROVAL WAS GRANTED, SUBJECT TO 9 LISTED CONDITIONS, FOR A CONDITIONAL USE TO PERMIT CONSTRUCTION OF 23 SINGLE FAMILY ATTACHED HOMES AND 2 COMMERCIAL BUILDINGS FOR RETAIL/OFFICE USE, ON PROPERTY LOCATED AT 537, 545, AND 601 N. BETHLEHEM PIKE, LOWER GWYNNED, PENNSYLVANIA IN ACCORDANCE WITH SECTIONS 1271.09 AND 1298.07 OF THE LOWER GWYNNED TOWNSHIP ZONING ORDINANCE.
- LOWER GWYNNED TOWNSHIP BOARD OF SUPERVISORS WAIVES STRICT COMPLIANCE WITH THE FOLLOWING PROVISIONS OF LOWER THE LOWER GWYNNED TOWNSHIP ORDINANCES:
  - SUBDIVISION AND LAND DEVELOPMENT ORDINANCE: 1230.17 - TO PERMIT JOINT PRELIMINARY AND FINAL APPROVAL.
  - 1230.19(c)(3)&(4) - FROM THE REQUIREMENT THAT ALL STREET INFORMATION AND UTILITIES WITHIN 200 FEET OF THE TRACT BE SHOWN, SUBJECT TO THE DEVELOPER PROVIDING ANY ADDITIONAL OFF-SITE SURVEY REQUIRED BY THE TOWNSHIP ENGINEER.
  - 1230.37(c) - TO PROVIDE 35-FOOT HALF-WIDTH FOR THE ULTIMATE RIGHT-OF-WAY WHERE A 50-FOOT ULTIMATE RIGHT-OF-WAY DEDICATION IS REQUIRED.
  - 1230.41(g) - A PARTIAL WAIVER TO ALLOW A MAXIMUM OF 12 PARKING SPACES IN A ROW PRIOR TO A PLANTING STRIP IN LIEU OF THE 10 SPACES PERMITTED.
  - 1230.41(i) - A PARTIAL WAIVER TO PROVIDE ONLY 108 OF THE 877 TOTAL CALIPER INCHES OF REPLACEMENT TREES, SUBJECT TO THE DEVELOPER PAYING A FEE IN LIEU OF TREE REPLACEMENT.
  - 1230.53(b)(12) & 1230.53(c)(2) - TO NOT REQUIRE THE DEDICATION OF RECREATIONAL AREAS FOR RESIDENTIAL OR COMMERCIAL USES OR THE PAYMENT OF A FEE IN LIEU OF SUCH DEDICATION.
  - STORMWATER MANAGEMENT ORDINANCE: 1241.05(a)(2)(A) - TO UTILIZE HOPE PLASTIC PIPE IN LIEU OF THE REQUIRED REINFORCES CONCRETE PIPE. 1241.05(b)(3)(K) - FROM THE REQUIREMENT TO MAINTAIN A MINIMUM OF 3 FEET OF COVER OVER THE STORM PIPES. 1241.05(b)(5)(H) - TO ALLOW BASIN SIDE SLOPES OF 3:1 IN LIEU OF THE REQUIRED 4:1 SLOPE.
- THE BOARD OF SUPERVISORS GRANTED THE WAIVERS SET FORTH IN NOTE 12 SUBJECT TO THE DEVELOPER'S STRICT COMPLIANCE WITH ALL OF THE FOLLOWING SPECIFIC CONDITIONS:
  - A) DEVELOPER SHALL PRESERVE EXISTING TREES ON EASTERN SIDE OF THE PROPERTY'S COMMON BOUNDARY WITH THE TORNETTA PROPERTY (PARCEL 39-00-00733-164).
  - B) DEVELOPER SHALL ENDEAVOR NOT TO DISTURB THE ROOT SYSTEMS OF MATURE PINES EXISTING ON THE ABUTTING WAGNER PROPERTY (PARCEL 39-00-00733-146).
  - C) DEVELOPER SHALL INCLUDE THE BERMS AND PLANTINGS IN THE OPEN AREAS ALONG THE TORNETTA AND WAGNER PROPERTIES AS ITEMS TO BE SECURED BY AN 18 MONTH MAINTENANCE BOND FOLLOWING COMPLETION AND/OR DEDICATION OF THE IMPROVEMENTS PROPOSED IN THE PLANS.
  - D) APPLICANT SHALL COMPLY WITH ALL OTHER CONDITIONS OF APPROVAL IMPOSED BY THE LOWER GWYNNED TOWNSHIP ZONING HEARING BOARD IN ITS FINDINGS OF FACT AND CONCLUSIONS OF LAW IN DOCKET NO. 17-122.
  - E) APPLICANT SHALL PAY A REQUIRED TRAFFIC IMPACT FEE AS REQUIRED BY TOWNSHIP ORDINANCE IN THE AMOUNT OF 66,285.00, OR AS OTHERWISE DETERMINED AND APPROVED BY THE TOWNSHIP TRAFFIC ENGINEER.
  - F) APPLICANT SHALL PAY A REQUIRED TRAFFIC IMPACT FEE OF \$19,000.00, AS PROVIDED UNDER CHAPTER 1236 OF THE LOWER GWYNNED TOWNSHIP CODE.
  - G) APPLICANT SHALL PAY THE REQUIRED STORMWATER MANAGEMENT FACILITIES FEE OF \$15,655.00, OR AS OTHERWISE DETERMINED AND APPROVED BY THE TOWNSHIP ENGINEER BASED ON FINAL PLAN CONFIGURATION.
- A HOMEOWNERS AND/OR CONDO ASSOCIATION SHALL BE ESTABLISHED AND WILL HAVE OWNERSHIP AND MAINTENANCE RESPONSIBILITIES OF ALL PROPOSED SITE IMPROVEMENTS. ALL DOCUMENTS ACKNOWLEDGING THE HOMEOWNER'S ASSOCIATION'S RESPONSIBILITIES SHALL BE PROVIDED TO THE TOWNSHIP SOLICITOR FOR REVIEW.
- THE APPLICANT WAS GRANTED VARIANCES RELATED TO SIDE YARD SETBACKS AND BUFFER REQUIREMENTS JULY 13, 2017 PURSUANT TO ZHB APPLICATION #17-122.
- A BLANKET EASEMENT IS PROVIDED OVER THE PROPERTY FOR THE TOWNSHIP TO ACCESS AND MAINTAIN THE SANITARY SEWER SYSTEM AND AMBLER BOROUGH TO ACCESS AND MAINTAIN THE WATER MAIN FACILITIES.
- NO PERMANENT STRUCTURE, DECK, LANDSCAPING OR OTHER IMPEDIMENT SHALL BE PLACED WITHIN 10 FEET OF EACH SIDE OF THE INSTALLED SEWER MAIN. WITH THE EXCEPTION OF THE FOLLOWING MINOR ENCROACHMENTS, WHICH ARE DEPICTED ON THE PLANS: MINOR BUILDING ENCROACHMENTS BETWEEN UNITS 19-20, UNIT 20 DECK ENCROACHMENT, 6 MAPLE TREES ALONG THE COMMON PROPERTY LINE WITH TMP #39-00-00331-00-8.

**SHEET INDEX**

- 1 OF 14 LAND DEVELOPMENT PLAN
- 2 OF 14 EXISTING FEATURES AND DEMOLITION PLAN
- 3 OF 14 CONSTRUCTION IMPROVEMENT PLAN
- 4 OF 14 LANDSCAPE PLAN
- 5 OF 14 PROFILE PLAN 1
- 6 OF 14 PROFILE PLAN 2
- 7 OF 14 EROSION & SEDIMENT CONTROL PLAN 1
- 8 OF 14 EROSION & SEDIMENT CONTROL PLAN 2
- 9 OF 14 POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 1
- 9a OF 14 POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 2
- 10 OF 14 POST CONSTRUCTION STORMWATER MANAGEMENT DETAIL PLAN
- 11 OF 14 LIGHTING PLAN
- 12 OF 14 FIRE TRUCK TURN ANALYSIS PLAN
- 13 OF 14 UTILITY PLAN
- 14 OF 14 UTILITY DETAIL PLAN

**IMPERVIOUS COVERAGE BREAKDOWN:**

PROP. BUILDINGS	=	50,040 SF
PROP. ROADS & PARKING	=	37,567 SF
PROP. SIDEWALK/PATIO	=	8,026 SF
HOUSE DRIVENAYS	=	10,160 SF
TOTAL IMPERVIOUS	=	105,793 SF = 61.8 %

**\*FORMERLY KNOWN AS "THE ENCLAVE AT LOWER GWYNNED"**

AMENDED RECORD PLAN  
PREPARED FOR  
**545 NORTH BETHLEHEM PIKE**  
**ProTract Engineering, Inc.**  
64 East Moreland Avenue, P.O. Box 88  
Barbours, Pennsylvania 19040  
Phone (215)442-9280  
Fax (215)442-9288