7:00 p.m.

Agenda

- 1. Pledge of Allegiance
- 2. Public Meeting Agenda:
 - a. Approval of the Minutes from the Meeting of February 25, 2025
 - b. 140 Upper Church Road Prel/Final Minor Residential Subdivision and Planning Module
 - c. 256 Ferry Road Prel/Final Lot Line Change
 - d. Barry Road Prel/Final Residential Subdivision
 - e. DCED Greenway Trails Grant Pine Run Trail Replacement Support Letter Discussion
 - f. Public Comment
- 3. Other Business
- 4. Adjournment

The next meeting of the New Britain Township Planning Commission is scheduled to take place on Tuesday, April 22, 2025 at 7:00 p.m. at the New Britain Township Building, 207 Park Avenue, Chalfont, PA.

MEETING MINUTES February 25, 2025 7:00 PM

A meeting of the New Britain Township Planning Commission was held on February 25, 2025, at the Township Administration Building, 207 Park Avenue, New Britain Township, PA beginning at 7:00 p.m. In attendance were Chair Marco Tustanowsky, Vice Chair Jim Scanzillo, and members Deborah Rendon, Jeff Berman, and Theresa Rizzo-Grimes. Board Liaison Stephanie Shortall, Township Manager Dan Fox, and Township Engineer Craig Kennard, P.E., were also in attendance.

I. Reorganization

a. Pledge of Allegiance

b. Nomination and appointment for Temporary Chair

Marco Tustanowsky made a motion to nominate Stephanie Shortall for Temporary Chair. Seconded by Deborah Rendon.

c. Nomination and appointment for Chair

Jim Scanzillo made a motion to nominate Marco Tustanowsky for Chair. Seconded by Deborah Rendon.

d. Nomination and appointment for Vice-Chair

Deborah Rendon made a motion to nominate Jim Scanzillo for Vice-Chair. Seconded by Theresa Rizzo-Grimes.

e. Nomination and appointment for Secretary

Marco Tustanowsky made a motion to nominate Deborah Rendon for Secretary. Seconded by Jim Scanzillo.

II. Public Meeting Agenda

a. Approval of the Minutes from the Meeting of September 24, 2024.

Jim Scanzillo made a motion to approve the September 24, 2024, meeting minutes. Seconded by Deborah Rendon.

b. Draft SALDO and Zoning Amendments

A discussion ensued regarding making edits to the implemented SALDO and Zoning Ordinances. Craig Kennard mentioned that he will take comments and review them. It was discussed changing the traffic ordinances. Natural resources and tree ordinances will

be reflected in both SALDO and Zoning. Craig recalled that he presented to the Board of Supervisors, the natural resources, landscaping and buffers updates in December of 2023, parking and traffic in February of 2024, and then in April of 2024 he presented miscellaneous zoning updates. In September of 2024, the EAC submitted suggestions that they would like to see implemented.

A discussion ensued regarding what is permitted within the zoning districts and how that information is presented.

A discussion ensued regarding the submission of sketch plan, the details required and how that information is presented.

A discussion ensued regarding internal policies between the Planning Commission and the Board of Supervisors and how to notify both parties when new information becomes available.

A discussion ensued regarding Right-of-Way policies, rules, and regulations.

A discussion ensued regarding manufactured homes and mobile homes.

A discussion ensued regarding the zoning of the Township parks and the interaction with Food Trucks. They discussed what would be permitted and what would not be permitted. A discussion ensued regarding trees, branches, and the policies in place to remove them.

A discussion ensued regarding lighting in residential and nonresidential areas and what should be required in each.

A discussion ensued regarding parking regulations.

III. Public Comment

There was no public comment.

IV. Other Business

Deborah Rendon asked Dan Fox about the Open Space survey results and when they would become public. Dan Fox stated they would be available likely mid-March.

V. Adjournment

Upon motion of Deborah Rendon, seconded by Jim Scanzillo, and unanimously carried, the meeting was adjourned at 8:24 p.m.

Respectfully Submitted,	
Marco Tustanowsky, Chair	Daniel Fox, Township Manager

GILMORE & ASSOCIATES, INC.

ENGINEERING & CONSULTING SERVICES

March 19, 2025

File No. 2303044

Daniel Fox, Township Manager New Britain Township 207 Park Avenue Chalfont, PA 18914

Reference: Casadonti Subdivision, Preliminary Plan Review 3

140 Upper Church Road, T.M.P. #26-003-104

Dear Dan:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the revised Preliminary Plan submission for the above-referenced project and offers the following comments for consideration:

I. Submission

- A. Preliminary and Final Land Development and Minor Subdivision Plans for 140 Upper Church Road, as prepared by Holmes Cunningham, LLC, consisting of ten (10) sheets, dated June 16, 2023 last revised February 19, 2025.
- B. Post Construction Stormwater Management Plan Narrative for 140 Upper Church Road, as prepared by Holmes Cunningham, LLC, dated June 16, 2023, last revised August 19, 2024.
- C. Waiver Request Letter for 140 Church Road, as prepared by Holmes Cunningham, LLC, dated June 20, 2023, last revised March 14, 2024.
- D. Review Response Letter for 140 Church Road, as prepared by Holmes Cunningham, LLC, dated February 19, 2025.

II. Reference Documentation

A. Zoning Hearing Board Decision of Casadonti Homes, Inc. dated December 20, 2023.

III. General Information

The 13.35-acre subject tract is located at 140 Upper Church Road (T-350) within the Watershed (WS) Zoning District. The site currently consists of a single-family dwelling with two accessory structures amidst various natural resources including a watercourse, pond, woodlands and steep slopes. We note that the existing dwelling shares a driveway with a dwelling on the adjacent parcel to the northwest which is proposed to remain. The Applicant proposes to subdivide the property into two (2) single-family dwelling lots (Use B1) which is a Use permitted by right, with a new individual driveway access from Upper Church Road.

In addition, the existing dwelling and barn on Lot 1 are to remain as an accessory dwelling with conditions specified by the Zoning Hearing Board. The lots are proposed to have on-lot well and septic systems, with individual underground basins for each new dwelling lot. One barn and impervious areas are specified to be removed on proposed Lot 1. Both lots are proposed to be deed-restricted from further subdivision.

IV. Review Comments

A. Zoning Hearing Board Decision dated March 24, 2023

On December 20, 2023, the Zoning Hearing Board granted the Applicant relief to permit the existing dwelling on Lot 1 to be used as an accessory dwelling (H14) that is not a stand-alone, separate or second dwelling unit, limited to family members. Relief was also granted to permit two driveways 68.5 feet apart on Lot 1, where a 75-foot separation is required.

1. The Zoning Decision stated the septic system for the modified dwelling shall be an auxiliary type system for a single bathroom, not a bedroom-based system. The plans show that the system servicing the existing dwelling will be abandoned and the modified dwelling will connect to the septic system for the primary dwelling on Lot 1. Since the design varies from what was discussed at the Zoning Hearing, the revised plans shall be considered by the Zoning Hearing Board.

B. Zoning Ordinance

- 1. §27-502.b.3 The natural resource protection land shall be protected with a Conservation Easement and Agreement in accordance with §§27-505 and 27-2400. The septic easements are proposed within the conservation easement on Lot 2 and shall be excluded from the easement.
- 2. §27-502.b.5 As required, the stormwater facilities are designed for the 12% maximum impervious surface permitted for the site based on the ratio base site area. An impervious coverage easement is proposed to limit the allowable impervious surface area on Lot 2. An Impervious Area Easement Agreement shall be drafted by the Township Solicitor.

C. <u>Subdivision and Land Development Ordinance Waivers</u>

The following waivers from the Subdivision and Land Development Ordinance have been formally requested by the Applicant in a letter dated June 20, 2023:

- 1. §22-403 & 404 From providing separate preliminary and final submissions.
- 2. §22-502.1.H From providing a lighting plan, which we support.
- 3. §22-705.3.C Upper Church Road is considered a local road which requires a 50-foot ultimate right-of-way and 28-foot cartway. Based on discussions with the Public Works Superintendent, we recommend the following improvements in lieu of full road improvements:
 - a. There may be areas of erosion along the watercourse on Lot 2. We recommend any areas of erosion be stabilized and any associated permits obtained from PADEP, as required, including but not limited to, within the Upper Church Road ultimate right-of-way. It shall be clarified if there are any areas of streambank that need stabilization.
 - b. As shown on the plans, replace the CMP pipe for the existing driveway on Lot 1 with a minimum 15" RCP with concrete endwalls or flared end sections with a rip rap apron at the pipe discharge.
 - c. A consistent centerline slope shall be provided within the roadside swale from the new driveway on Lot 1 towards the existing stream at the southeastern corner of the property. We note that grading is proposed along the area of disturbance only.
 - d. Several areas of bare earth were observed along the roadside swale. These side slopes shall be permanently stabilized. The areas of stabilization should be quantified and noted on the plan.
 - e. The RCP driveway culvert at the new driveway on Lot 1 shall be mortared at the endwalls.
- 4. §22-705.3.G From providing a 1 ½" mill and overlay of King Road along the subdivision conditioned on the existing pavement being overlayed with leveling course to provide a 2% cross slope and 1½" wearing course, which we support. We note that the plan proposes leveling course and overlay along 220 liner feet of the Lot 2 frontage. The overlay should extend the full length of the property frontage to the eastern property corner for a total length of about 680 feet.

- 5. §22-706 From providing curb and sidewalk along the property frontage of Upper Church Road, which we support.
- 6. §22-713.4.B. For a partial waiver to utilize existing vegetation to meet the street tree requirement and to allow an informal arrangement of supplemental street trees. Based on 555 feet of frontage without vegetation, 19 street trees would be required. However, 16 street trees are proposed. An additional 3 street trees should be provided.
- 7. Resolution 2007-12 For any public improvement waivers granted, the Applicant is required to contribute a fee to the Township to cover 50% of the cost of future improvements to bring Township rights-of-way up to current standards. Based on the current waivers requested, this contribution would be required for widening, curb, sidewalk, etc., if granted. If waived, a cost estimate of the required improvements above with credit for any road improvements to be installed shall be submitted for review. We recommend this cost be estimated prior to the Board of Supervisors acting on the plans.

D. Subdivision and Land Development Ordinance

- §22-406.1 The Applicant is responsible for any other required approvals, permits, etc. (i.e., BCPC, BCCD, PADEP, Fire Marshal, Township Road Opening Permit, Well Construction Permits, existing non-conformity registration for Lot 1 side yard setback, BCDH, etc.) as applicable.
- 2. §22-502.B. The following comments related to the plans shall be addressed:
 - a. All requested/granted waivers should be noted on the Subdivision Plan.
 - b. The H14 Accessory Dwelling use should only be specified for Lot 1 on the Zoning Data Table.
 - c. The curve information along the northern property boundary of Lot 1 should be added to the Subdivision Plan.
 - d. A monument should be added at the change in direction of the Conservation Easement on Lot 2, adjacent to the stormwater facility, between lines with the bearings of S86°54'19"W and N86°07'39"W.
 - e. Site Plan Note 10 on the Subdivision Plan specifies the ultimate right-of-way to be offered as an easement. This note should be revised to offer the area between the title line and ultimate right-of-way for dedication to New Britain Township.
 - f. A note should be added to the Lot Area and Coverage Table requiring all future impervious to drain to the on-lot stormwater BMP unless otherwise approved by the Township.
 - g. Existing features to be removed should not be shown on the Subdivision Plan.
- 3. §22-502.B.11 Legal descriptions are required for the new lots, conservation easements, ultimate right-of-way for Upper Church Road, back up septic system easements and any other proposed easements.
- 4. §22-704.1. The Applicant has indicated that a driveway agreement exists with TMP 26-003-104-001. A copy of the driveway agreement should be provided for the Township's files. If an agreement does not exist, an easement should be provided over the shared driveway.
- 5. §22-705.13.C All access drives and driveways shall be provided with a stopping area of 20 feet, at a maximum grade of 3%, measured from the edge of cartway. Existing and proposed spot elevations should be provided at the cartway and 20 feet back along the driveway.
- 6. §22-711.3 The sequence of construction notes that underground basins shall be installed before the construction of any buildings or site improvements. This is not consistent with steps 5 and 6 of the sequence which specify the construction of building foundations before the installation of stormwater facilities. The sequence of construction should be revised to clarify when the stormwater basins should be installed.

- 7. §22-711.3 The following comments related to grading shall be addressed:
 - a. Based on the proposed 534 contour and the 533.00 top of wall elevation on Lot 2, there appears to be a slope of 1:1 along the retaining wall. The grading should be revised to provide a maximum slope of 3:1.
 - b. The proposed 529.58 spot elevation appears to represent the low spot of the driveway for Lot 2 which is a 1% slope across the yard to the proposed 528 contour at the rear of the dwelling. The grading should be revised to provide a minimum slope of 2% across all lawn.
 - c. The storm sewer structures labels shall be shown on the Grading Plan.
 - d. The dashed contours around the stormwater facility inlets on Lot 2 appear to be an elevation of 517 and should be labeled.
 - e. The plans shall specify which inlets will receive Flexstorm inlet filter.
- 8. §22-712.13.D The Township shall require payment of a fee in order to maintain the stormwater management facilities. The fee is \$2.50 per lineal foot of existing property frontage.
- 9. §22-715.2.C.(1) A fee-in-lieu of park and recreation is required at a rate of \$2,500.00 per dwelling unit or \$5,000.00 for the 2 new dwellings.
- 10. §22-719.4 No building permit shall be issued until the well has been constructed and tested in accordance with §22-719.
- 11. §22-721.7 An easement, deed restricting the sewage replacement areas from being built upon, shall be provided and shown on the site plan outside of the conservation easement area, with metes and bounds and monuments along the boundary. Easements should be provided for the secondary septic areas on Lots 1 and 2.

E. Stormwater Management Ordinance Comments

- 1. §26-123 & 22-712.2.N The proposed design utilizes the Managed Release Concept (MRC) developed by PADEP to meet the volume control requirement where infiltration is infeasible. Due to the shallow bedrock encountered throughout the site, MRC basins are proposed despite infiltration rates observed. We defer to BCCD to determine if the use of an MRC BMP is appropriate to meet the volume control requirement. We note that all proposed BMPs for stormwater shall be designed in accordance with the latest DEP BMP Manual. For example, the stormwater report should exclude the storage volume below the MRC orifice.
- 2. §26-125.1.B. For development and redevelopment sites, 50% of the impervious surface area shall be considered meadow. Based on approximately 0.31 acres of existing impervious onsite (not including Upper Church Road), 0.15 acres of this area should be modeled as meadow in the predevelopment condition.
- 3. §26-125.9 The following comments related to the underground basins shall be addressed:
 - a. The plan proposes a 15" pipe between the stormwater facilities on Lots 1 and 2 and the outlet structures. This is not consistent with the Underground Basin Outlet Structure Details which specifies a 30" HDPE connection. The size of the pipe should be clarified.
 - b. The plans propose the connection of 30" HDPE into the sides of standard inlet boxes which exceeds the inside width of these structures. A larger inlet box should be specified.
 - c. The underdrain and cleanouts added to plan view.
 - d. The discharge pipe lengths and slope modeled for both stormwater facilities is not consistent with the pipe length and slope noted on the plans and should be revised accordingly.
 - e. The Underground Basin Outlet Structure Details specify a 4-foot-wide weir wall and model a 4-foot weir wall in the stormwater report. The proposed outlet structure uses a standard inlet box which only has a width of 3.77 feet. The width of the weir wall should be revised to match the width of the inlet structure.

- 4. §26-132.2.B.(2)(a)5) The following comments related to the stormwater management and conveyance facilities should be addressed:
 - a. A detail should be provided for the observation wells in the stormwater facility. The size of the riser and structure should be specified.
 - b. The sanitary lateral for Lot 2 is within 3 feet of the stormwater facility. We recommend a minimum 10-foot separation should be provided between the sanitary sewer and stormwater facility.
 - c. We recommend the entire stone envelope of the level spreader be wrapped in geotextile fabric up to 6 inches below the grate elevation to prevent the stone from clogging with sediment and other yard debris.
 - d. The leaders for STRU 05 and STRU 06 appear to point to the same structure and should be revised as necessary.
- 5. §26-162 Inspection and maintenance responsibilities should be provided for the Flexstorm inlet filters
- 6. §26-164.1 The Applicant shall sign an Operation and Maintenance (O&M) agreement with the municipality covering all stormwater and storm sewer facilities and BMPs that are to be privately owned. The Stormwater BMP Maintenance Fee applies to all proposed BMPs installed in the Township to provide a financial guarantee for the timely installation, proper construction, and continued maintenance by the owner. The fee is based on \$2.50 linear feet of existing roadway (Resolution 2024-02)
- 7. Township Resolution #2024-02 The Applicant will be required to pay a fee for the proposed onsite BMP to provide a financial guarantee for the timely installation, proper construction, and continued maintenance by the owner of the subject property. The fee shall be 5% of the total construction cost of the proposed BMP. The Applicant's professional shall submit a cost estimate once the design is finalized.

We recommend that the plans be revised to address the above comments to the satisfaction of the Township. In order to help expedite the review process of the resubmission of the plans, the Applicant should submit a response letter which addresses each of the above comments. Changes that have been made to the application that are unrelated to the review comments should also be identified in the response letter. If you have any questions regarding the above, please contact this office

Sincerely,

Janene Marchand, P.E. Gilmore & Associates, Inc. Township Engineers

Janura Marchand

JM/tw

cc: Alexandria Mullin, Assistant to the Manager
Randy Teschner, Code Enforcement/Fire Marshal
Ryan Cressman, Public Works Superintendent
Scott Holbert, Flager & Associates
Joe Casadonti, Applicant
Robert T. Cunningham, P.E., Holmes Cunningham, LLC
Craig D. Kennard, P.E., E.V.P., Gilmore & Associates, Inc.



June 20, 2023 Rev. March 14, 2024

Via Email
New Britain Township
207 Park Avenue
Chalfont, PA 18914

RE: 140 Upper Church Road - Waiver Request Letter

TMP#: 26-003-104

New Britain Township, Bucks County, PA

Dear Supervisors:

In regard to the above referenced land development project, the applicant requests the following waivers from the Subdivision and Land Development Ordinance.

- 1. SALDO Section 22-403 & 404 The Applicant is requesting a waiver to allow a combined preliminary and final subdivision and land development submission for this project. All information required for final plans is included on the land development plan set.
- SALDO Section 22-502.1.H The applicant is requesting a waiver from providing a lighting plan, as no new lighting is proposed as part of this project. No pole lighting is proposed for this small-scale residential project with 1 new building lots.
- 3. SALDO Section 22-705.3.G The applicant is requesting a waiver from providing milling of the entire width of the roadway a depth of 1 ½ inches. The applicant is proposing to overlay the road with the required depth of 1 ½ inches as the road has limited existing pavement.
- 4. SALDO Section 22-706 The Applicant is requesting a waiver from providing curb and sidewalk along Upper Church Road. There is no existing curb or sidewalk on any surrounding properties, therefore, the applicant proposes to keep the site consistent with the surrounding neighborhood.
- SALDO Section 22-713.4.B The applicant is requesting a partial waiver to use the existing vegetation to meet the street tree requirement and to allow an informal arrangement of supplemental street trees.

Very truly yours,

Holmes Cunningham Engineering

Robert Cunningham,

Partner

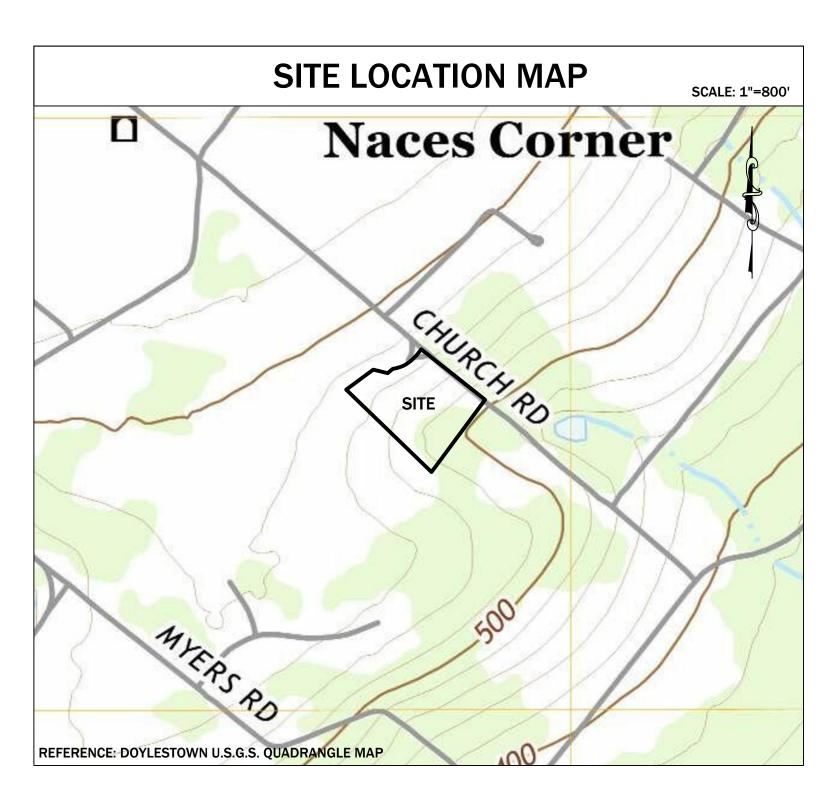
ECC: Joe Casadonti. Casadonti Custom Homes

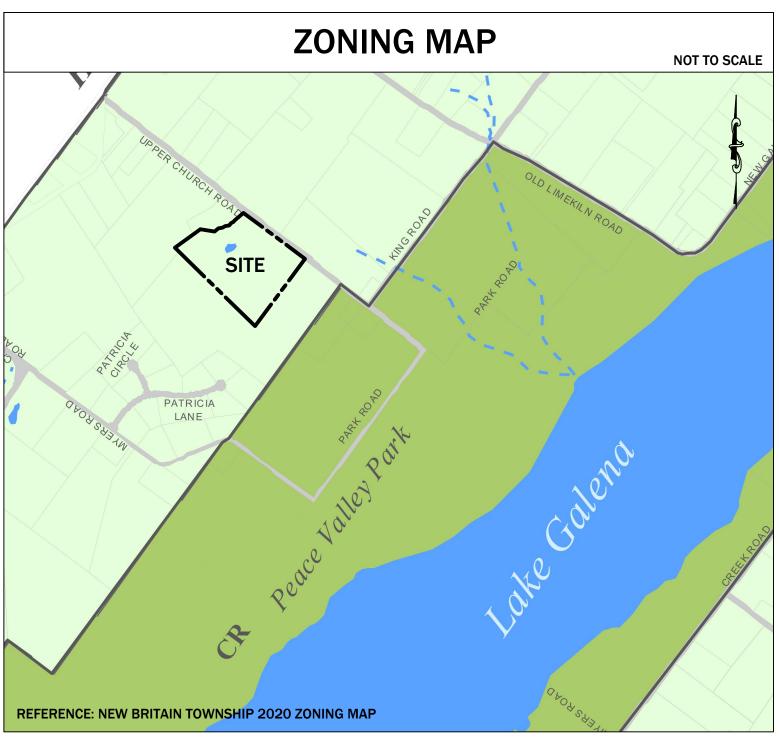
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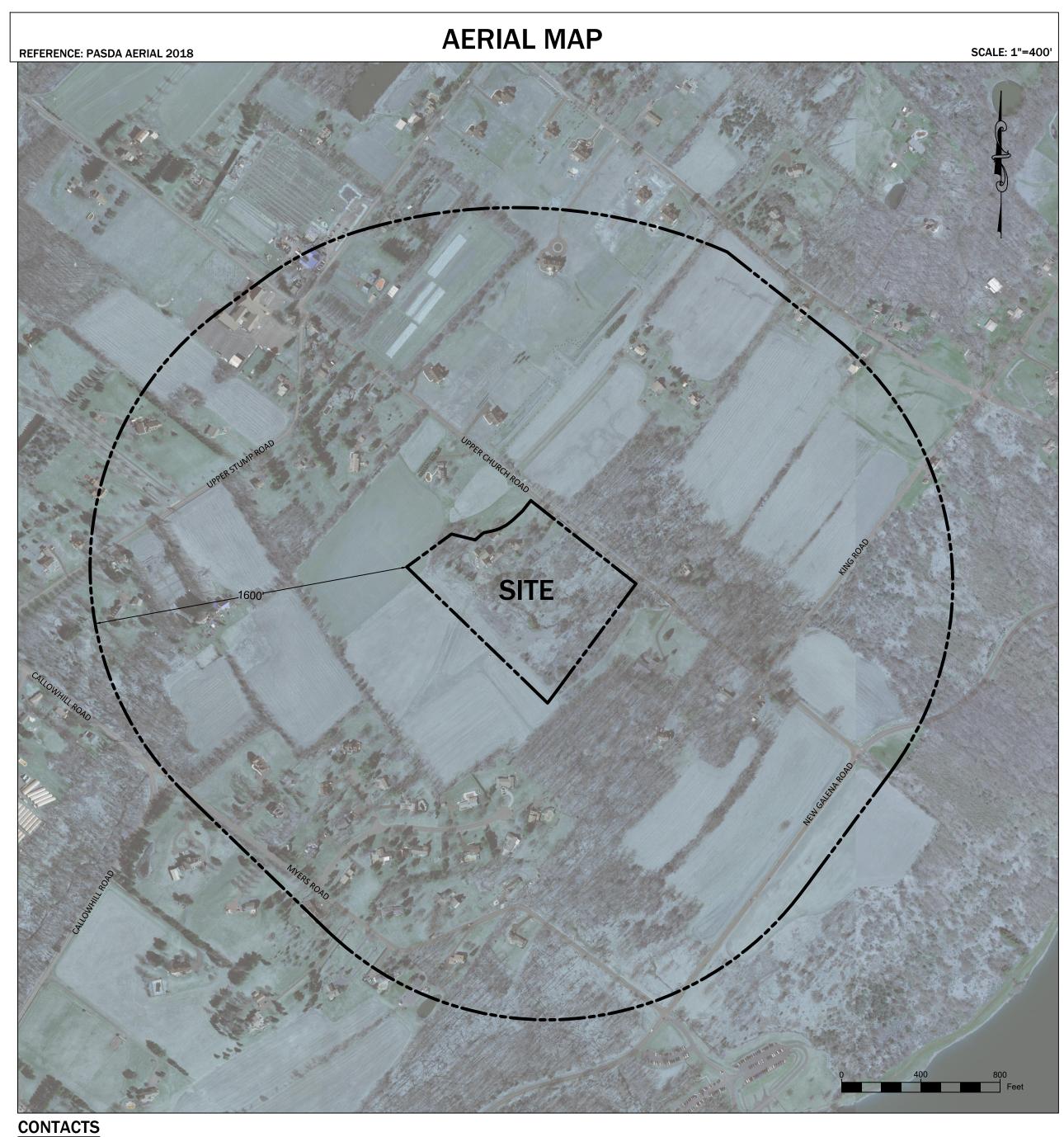
PRELIMINARY AND FINAL LAND DEVELOPMENT AND MINOR SUBDIVISION PLANS

140 UPPER CHURCH ROAD

TMP # 26-003-104 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA







TOWNSHIP
NEW BRITAIN TOWNSHIP 207 PARK AVENUE CHALFONT, Pa 18914 PHONE: (215)-822-1391

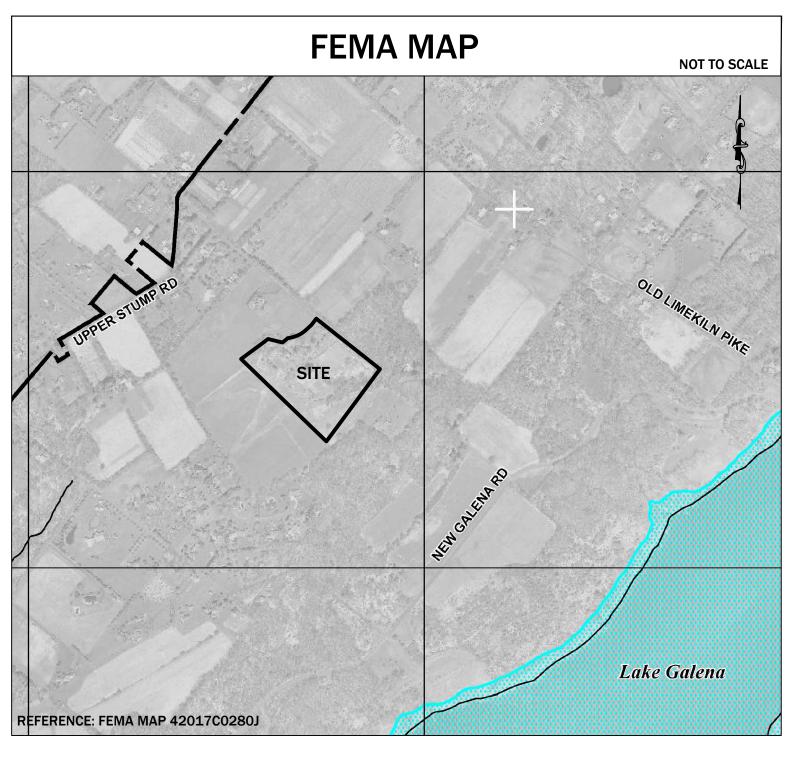
TOWNSHIP ENGINEER GILMORE & ASSOCIATES, INC. 65 EAST BUTLER AVENUE, SUITE 100 NEW BRITAIN, PA 18901 PHONE: 215 345 4330

TOWNSHIP PUBLIC WORKS DEPARTMENT 207 PARK AVENUE CHALFONT, PA 18914 PHONE: (215)-822-1391

COUNTY PLANNING COMMISSION BUCKS COUNTY PLANNING COMMISSION THE ALMSHOUSE NESHAMINY MANOR CENTER 1260 ALMSHOUSE ROAD DOYLESTOWN, PA 18901 PHONE: 215-345-3400

COUNTY CONSERVATION DISTRICT BUCKS COUNTY CONSERVATION 1456 FERRY ROAD, SUITE 704 DOYLESTOWN, PA 18901 PHONE: 215-345-7577

ELECTRIC AND GAS 400 PARK AVE., WARMINSTER, PA 18974 **ELECTRIC PHONE: (215) 956-3270 NEW ELECTRIC PHONE: (215) 956-3010 ELECTRIC EMERGENCY: (800) 841-4141** GAS PHONE: (800) 454-4100 NEW GAS PHONE: (800) 454-4100 GAS EMERGENCY: (800) 841-4141 GAS EMERGENCY(ALT): (844) 841-4151



	DRAWING LIST						
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE				
1	C0.0	COVER SHEET	2/19/2025				
2	C0.1	EXISTING CONDITIONS AND SITE ANALYSIS PLAN	2/19/2025				
3*	C0.2	SUBDIVISION PLAN	2/19/2025				
4	C0.3	GRADING & LANDSCAPING PLAN	2/19/2025				
5*	C1.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	2/19/2025				
6	C1.1	CONSTRUCTION DETAILS	2/19/2025				
7	C1.2	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	2/19/2025				
8	C2.0	EROSION AND SEDIMENT CONTROL PLAN	2/19/2025				
9	C2.1	EROSION AND SEDIMENT CONTROL DETAILS	2/19/2025				
10	C2.2	EROSION AND SEDIMENT CONTROL DETAILS	2/19/2025				

^{*} DENOTES PLAN TO BE RECORDED

PREPARED BY:

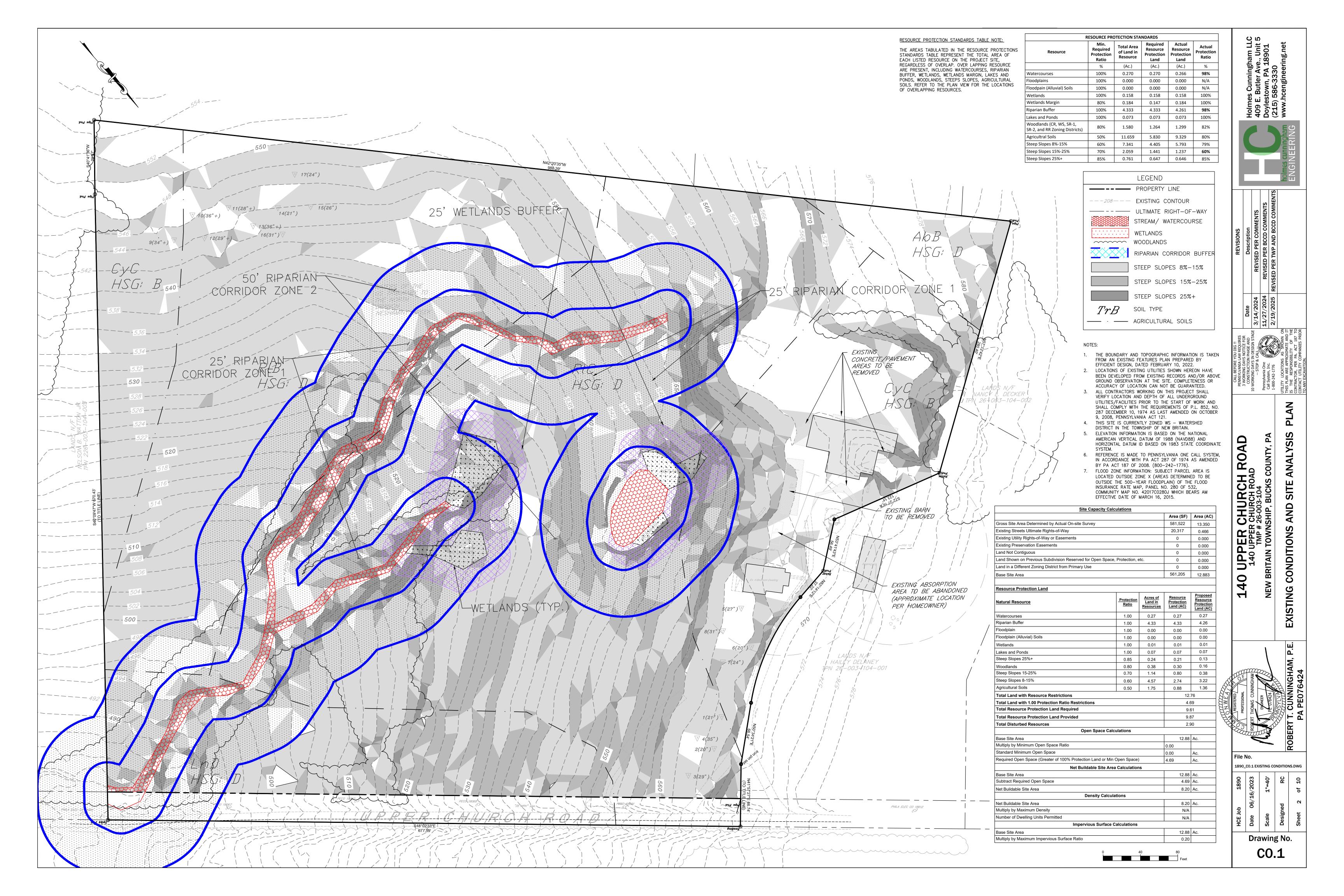
409 EAST BUTLER AVENUE DOYLESTOWN, PA 18901 (215) 586-3330

APPLICANT/ EQUITABLE OWNER

CASADONTI HOMES, INC. P.O. BOX 5, CHALFONT, PA 18914

olmes cunningham ENGINEERING
OLMES CUNNINGHAM LLC

REVISED: 2/19/2025 REVISED: 3/14/2024 06/16/2023 1890 PROJECT # CO.0 DRAWING # 1 OF 10 SHEET



	LOT AREA AND COVERAGE TABLE										
Lot	Gross Lot Area	Right-of-Way Area	100% Natural Resource Protection	Area Within Impervious Coverage Easement	Ratio Base Site Area	Building Area	Building Ratio	On-lot Impervious	Impervious Ratio	Future Impervious	Max Impervious Ratio Allowed
#	(SF)	(SF)	(SF)	(SF)	(SF)	(SF)	%	(SF)	%	(SF)	%
1	237,862	6,443	68,400	0	163,019	8,793	5.4%	16,140	9.90%	3,422	12%
2	343,660	13,874	142,181	109,499	78,106	2,710	3.5%	5,329	6.82%	4,044	12%

LOT WIDTH/DEPTH TABLE					
LOT	LOT WIDTH	LOT DEPTH			
#	(FEET)	(FEET)			
1	224.7	646.5			
2	466.5	701.2			

NEW BRITAIN TOWNSHIP ZONING DATA TABLE							
ZONING DISTRICT: WS - WATERSHED DISTRICT							
ITEM	REQUIRED/ PERMITTED	PROPOSED LOT 1	PROPOSED LOT 2	Ordinance Section			
Use: Zoning 27-501.a	_	e Family Detached 4 Accessory Dwelli	•				
Max. Building Height	35 FT	< 35 FT	< 35 FT	27-502.a			
Min. Lot Size	80,000 SF	5.313 AC	7.570 AC	27-502.b.1.(a)			
Min. Lot Width	175 FT	224.7 FT	466.5 FT	27-502.b.1.(b)			
Min. Front Yard Setback	100 FT	105.0 FT	105.0 FT	27-502.b.1.(c)			
Min. Side Yard Setback	30 FT	17.26 FT*	45.3 FT	27-502.b.1.(d)			
Min. Rear Yard Setback	60 FT	229.8 FT	518.1 FT	27-502.b.1.(e)			
Min. Building Envelope	10,000 SF	92,082 SF	15,905 SF	27-502.b.1.(f)			
Max. Building Coverage (Developer) (1)	6%	5.39%	3.47%	27-502.b.1.(g)			
Max. Impervious Surface Coverage (Developer) (2)	10%	9.90%	6.82%	27-502.b.1.(h)			
Max. Porch Pojection into Yard Areas	4 FT	0 FT	0 FT	27-2107			
Min. Off-Street Parking Spaces	3 spaces / DU (4+ bedrooms)	3 spaces	3 spaces	27-2901.B			

(1) Max. Building Coverage for the future resident shall not exceed 8% per Section 27-502.b.1.(g)

(2) Max. Impervious Coverage for the future resident shall not exceed 12% of the ratio base site area per Section 27-502.b.1.(h). Stormwater facilities have been designed to accommodate maximum impervious allowed on all lots as noted in

ZONING RELIEF GRANTED
ON DECEMEBR 20, 2023, THE NEW BRITAIN TOWNSHIP ZONING HEARING

SECOND DWELLING UNIT ON LOT 1; AND

BOARD GRANTED THE APPLICANTS' REQUEST FOR VARIANCES FROM THE ZONING ORDINANCE AS FOLLOWS: A. A VARIANCE IS GRANTED FROM \$27-305.H.H14 AND \$27-501 TO PERMIT THE EXISTING DWELLING ON LOT 1 TO BE USED AS AN ACCESSORY

DWELLING (USE H14) THAT IS NOT A STAND-ALONE, SEPARATE OR

B. A VARIANCE IS GRANTED FROM \$27-2904.D.5 TO PERMIT THE 2 DRIVEWAYS ON LOT 1 TO BE 68.5 FEET APART.

THE RELIEF GRANTED ABOVE IS SUBJECT TO THE FOLLOWING CONDITIONS: THE PROPOSED 2 LOT MINOR SUBDIVISION OF THE PROPERTY, AND THE RESULTING LAYOUT OF LOT 1 AND LOT 2, SHALL BE IN ACCORDANCE WITH DEFINITIVE PLAN MARKED AS EXHIBIT B-2, THE OTHER EVIDENCE,

REPRESENTATIONS AND CREDIBLE TESTIMONY MADE AT THE HEARING. THE LIVING SPACE PROPOSED FOR THE RENOVATED EXISTING RESIDENTIAL DWELLING SHALL NOTBE A STAND-ALONE, SEPARATE OR SECOND DWELLING UNIT ON LOT 1. OCCUPANCY OF THE LIVING SPACE SHALL BE LIMITED TO FAMILY MEMBERS OF THE OCCUPANTS OF THE NEW MAIN DWELLING ON LOT 1. THE ACCESSORY DWELLING SHALL NO BE LEASED OR RENTED TO THIRD PARTIES. THE SEPTIC SYSTEM FOR THE MODIFIED ACCESSORY DWELLING SHALL BE AN AUXILIARY TYPE

THIS DECISION DOES NOT WAIVE ANY REQUIREMENTS OF ANY OTHER APPLICABLE NEW BRITAIN TOWNSHIP ORDINANCE(S); AND THE PROPOSED USE(S) AND/OR IMPROVEMENTS(S) MUST MEET ALL OTHER APPLICABLE FEDÈRAL, STATE, COUNTY AND NÉW BRITAIN TOWNSHIP REGULATIONS AND CODES.

SYSTEM FOR A SINGLE BATHROOM, NOT A BEDROOM-BASED SYSTEM.

SITE PLAN NOTES: THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM EXISTING FEATURES PLAN PREPARED BY EFFICIENT

DESIGN DATED FEBRUARY 10, 2022. THE PROPOSED DEVELOPMENT IS TO BE SERVED BY ON-LOT

WELLS AND ON-LOT SEPTIC SYSTEMS FLOOD ZONE INFORMATION: SUBJECT PARCEL AREA IS LOCATED OUTSIDE ZONE X (AREAS DETERMINED TO BE OUTSIDE THE

500-YEAR FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP,

PANEL NO. 280 OF 532, COMMUNITY MAP NO. 42017C0280J WHICH

BEARS AM EFFECTIVE DATE OF MARCH 16, 2015. 4. THE STORMWATER MANAGEMENT FACILITIES (AS SHOWN ON THIS PLAN) ARE A BASIC AND PERPETUAL PART OF THE STORMWATÉR MANAGEMENT SYSTEM OF THE HOMEOWNERS AND AS SUCH ARE TO BE PROTECTED AND PRESERVED, IN ACCORDANCE WITH THE APPROVED FINAL PLAN BY THE OWNER ON WHOSE LANDS THE FACILITY IS LOCATED. THE TOWNSHIP OF NEW BRITAIN AND/OR ITS AGENTS RESERVE THE RIGHT AND PRIVILEGE TO EŃTER UPON SUCH LANDS FROM TIME TO TIME FOR THE PURPOSE OF INSPECTION OF THE STORMWATER MANAGEMENT FACILITIES IN ORDER TO DETERMINE THAT THE STRUCTURAL AND DESIGN INTEGRITY ARE BEING MAINTAINED BY

TOPSOIL SHALL NOT BE REMOVED FROM THE DEVELOPMENT SITE. TOPSOIL SHALL BE STRIPPED, STOCKPILED, AND

REDISTRIBUTED ON THE SITE. AT THE TIME OF INDIVIDUAL ZONING PERMIT APPLICATION FOR EACH LOT, THE NATURAL RESOURCES PROTECTION STANDARDS SHALL BE REVIEWED FOR COMPLIANCE AND SITES LAID OUT TO MINIMIZE NATURAL RESOURCE DISTURBANCE TO THE

GREATEST EXTENT PRACTICABLE.

7. IF THE DISTURBANCE ENCROACHES INTO A DESIGNATED TREE PROTECTION ZONE RESULTING IN THE DAMAGE OR DESTRUCTION OF THE EXISTING TREES AND/OR VEGETATION DESIGNATED TO REMAIN, THE APPLICANT SHALL BE RESPONSIBLE FOR REPLACING THE DAMAGED OR DESTROYED

VEGETATION ON AN EQUIVALENT CALIPER BASIS. OBSTRUCTIONS TO VISIBILITY SHALL NOT BE PERMITTED WITHIN 2 FEET AND 7 FEET ABOVE THE EDGE OF PAVING. ANY PLANT MATERIALS PLACED WITHIN CLEAR SIGHT TRIANGLES SHALL BE PROPERLY MAINTAINED TO CONTINUALLY COMPLY WITH THE HEIGHT RESTRICTIONS AND THE TOWNSHIP HAS THE RIGHT TO ENTER THE AREA AND PERFORM MAINTENANCE IF DEEMED CRITICAL TO PUBLIC WELFARE PURSUANT TO A DECLARATION OF COVENANTS, RESTRICTIONS AND CONDITIONS APPROVED BY

9. ALL MONUMENTATION SHALL BE SET BY A PROFESSIONAL LAND SURVEYOR AND ARE TO BE SET DURING CONSTRUCTION. 10. THE AREA LOCATED BETWEEN THE TITLE LINE AND ULTIMATE RIGHT-OF-WAY LINE OF UPPER CHURCH ROAD SHALL BE OFFERED TO NEW BRITAIN TOWNSHIP AS AN EASEMENT.

11. ALL PROPOSED LOTS ARE TO BE DEED RESTRICTED FROM FURTHER SUBDIVISION. 12. ALL DEAD TREES, LINE TREES AND BRANCHES INTERFERING WITH THE EXISTING OVERHEAD LINES SHALL BE REMOVED WITHIN THE PROPOSED ULTIMATE—RIGHT—OF—WAY.

13. A BLANKET EASEMENT IS PROVIDED TO THE TOWNSHIP TO CONDUCT INSPECTIONS AND MAINTENANCE OF STORMWATER FACILITIES AS REQUIRED.

14. AREAS NOT LOCATED IN THE LIMIT OF DISTURBANCE HAVE BEEN PROPOSED TO REMAIN IN EXISTING CONDITIONS. 15. NO BUILDING PERMIT SHALL BE ISSUED UNTIL THE PROPOSED LOT WELL HAS BEEN CONSTRUCTED AND TESTED IN ACCORDANCE WITH SECTION 22-719 OF THE TOWNSHIP ORDINANCE. A TOWNSHIP PERMIT IS REQUIRED FOR

16. THE WATERCOURSE ON LOT 2 SHALL BE STABILIZED TO THE SATISFACTORY OF NEW BRITAIN TOWNSHIP.

CONSTRUCTION OF ANY WELL.

OWNER SIGNATURE BLOCK & ACKNOWLEDGEMENT TO ALL WHOM THESE PRESENTS MAY COME, KNOW YE THAT I, _____

OF _____, HAS LAID OUT UPON MY/OUR LAND SITUATED IN THE TOWNSHIP OF NEW BRITAIN, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, CERTAIN LOTS ACCORDING TO THIS PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED. WITNESS OUR HAND AND SEAL THIS ______ DAY OF _____, 20____.

TITLE(S): ____ COMMONWEALTH OF _____ (OR IF NOT PENNSYLVANIA, STATE OF _ COUNTY OF _____

ON THIS _____ DAY OF ____ _____, A.D., 20____, BEFORE ME A NOTARY PUBLIC, PERSONALLY APPEARED ____, OWNER OF THE SUBJECT PROPERTY, AS SUCH, BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT ON ITS BEHALF FOR THE USES AND PURPOSES THEREIN SET FORTH.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC

COMMISSION EXPIRATION DATE

RECORDER OF DEEDS ACKNOWLEDGEMENT RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC. IN AND FOR THE COUNTY OF BUCKS, AT DOYLESTOWN, PENNSYLVANIA IN PLAN BOOK _____, PAGE _____

BUCKS COUNTY RECORDER OF

BOARD OF SUPERVISORS ACKNOWLEDGEMENT THIS PLAN APPROVED BY THE BOARD OF SUPERVISORS OF NEW BRITAIN TOWNSHIP THIS

OWNER CERTIFICATION FOR STORMWATER BMP'S THE STORMWATER BMP'S ARE FIXTURES THAT CAN BE ALTERED OR REMOVED ONLY

AFTER APPROVAL BY NEW BRITAIN TOWNSHIP.

PROPERTY OWNER

TOWNSHIP ENGINEER ACKNOWLEDGEMENT THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP ENGINEER ON THIS ______ DAY OF

PLANNING COMMISSION ACKNOWLEDGEMENT BUCKS COUNTY PLANNING COMMISSION NOTATION BCPC NO _____ PROCESSED AND REVIEWED. REPORT PREPARED BY THE BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH TH MUNICIPALITIES PLANNING CODE. CERTIFIED THIS DATE ____

WETLANDS CERTIFICATION

I HEREBY CERTIFY THAT THERE ARE NO WETLANDS LOCATED WITHIN THE PROPOSED REGULATED ACTIVITY ASSOCIATED WITH THIS LAND DEVELOPMENT, A INDICATED ON THE PLAN.

JOSEPH A. VALENTINE

ENGINEER'S CERTIFICATION

I_ROBERT CUNNINGHAM, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS PLAN IS ACCURATE AND CORRECT AS INDICATED.

ROBERT CUNNINGHAM, P.E. PA PE076424

CERTIFICATION OF ACCURACY I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT.

ERIC WILLIAMS, PLS SURVEYOR

> LEGEND PROPERTY LINE PROPOSED BUILDING - · - PROPOSED EASEMENT — — — BUILDING SETBACK LINE

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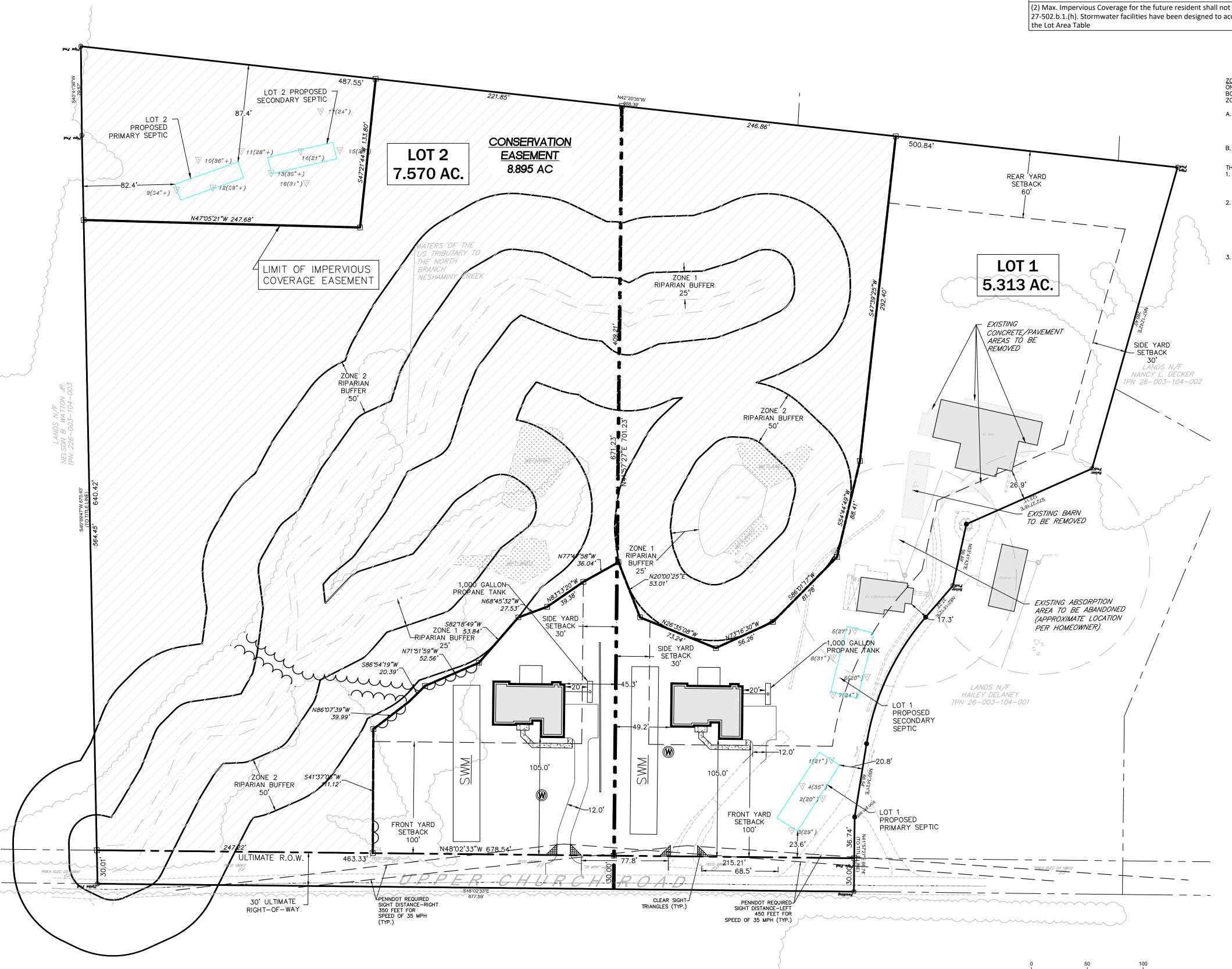
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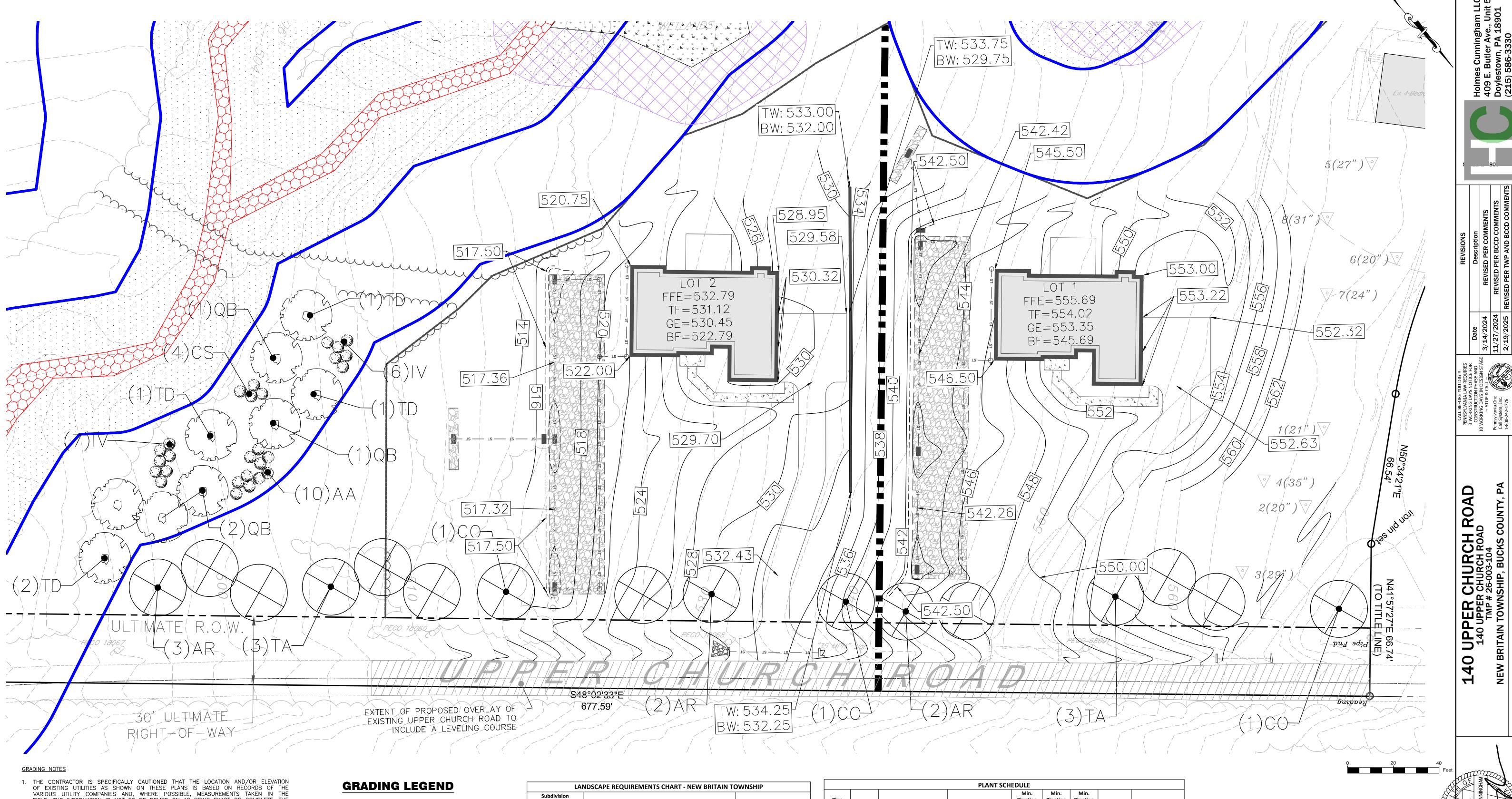
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Drawing No.

—— - - — LOT LINE PROPOSED WOODLANDS PROPOSED CONSERVATION EASEMENT PROPOSED MONUMENT PROPOSED IRON PIN





Plan Proposed

- VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER
- WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES. 2. COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE;

% OF MAX. DENSITY <u>FILL AREA</u> BUILDING FOOTPRINT

PAVEMENT AND ROADWAYS95% SIDEWALKS 95% LANDSCAPE AREAS

SAME AS SURROUNDING AREA TRENCH BACKFILL

- 3. PROTECTED SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION INCLUDING CONCRETE TRUCKS AN DUMP TRUCKS. 4. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH THE COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ONSITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE
- 5. ALL STRIPPED TOPSOIL SHOULD BE REUSED ON SITE TO THE GREATEST EXTENT POSSIBLE. HOWEVER, PRIOR TO REMOVAL OF TOPSOIL FROM THE SITE PERMISSION SHOULD BE OBTAINED FROM THE MUNICIPALITY.
- 6. THE MAXIMUM SLOPE IS THREE HORIZONTAL TO ONE VERTICAL (3H:1V). THE MINIMUM PERMITTED SLOPE IN LAWN AREAS IS 2% (50H:1V).
- 7. ALL GRADING SHALL BE A MINIMUM OF 5' FROM THE PROPERTY LINE OR WITHIN THE

ULTIMATE RIGHT-OF-WAY AS SHOWN/DEDICATED ON THE PENNDOT PLANS.

HARD, UNIFORM, SMOOTH, STABLE AND TRUE TO GRADE AND CROSS SECTION.

EXISTING CONTOUR	
EXISTING SPOT ELEVATION	185.2 ×
PROPOSED CONTOUR	185
PROPOSED SPOT ELEVATION	185.2 ×
PROPOSED OVERLAY WITH LEVELING COURSE	

CONTOUR	185			(175/20) * 1 = 9 Trees	9	Shade Trees
				(175/20) * 3 = 27 Shrubs	27	Shrubs
OVERLAY WITH OURSE	[185.2] ×	S.O. 22-713.4 Street Trees	Street trees shall be planted every 30' along all proposed streets and existing streets when they abut or lie within the proposed subdivision and/or land development. Trees shall be planted 3-5' outside the ultimate right-of-way.			
				Upper Church Rd.: 678' - 86'(driveway) - 124' (Ex. Veg.) = 468'		
				468/30 = 16 trees	16	Shade trees
						(+ existing vegetation)
					·	

Plants shall be provided at a rate of at least one overstory tree

Currently-Unvegetated Riparian Corridor: 175'

and three shrubs for every 20 linear feet of waterway.

Ordinance

ltem Z.O. 27-2400.4.(b)

Revegetation of

Riparian Area

			PLANT SCH	EDULE				
Plan Symbol	Quantity	Botanical Name	Common Name	Min. Planting Caliper	Min. Planting Spread	Min. Planting Height	Remarks	Comments
Shade Tre	es		•					•
AR	7	Acer rubrum 'October Glory'	'October Glory' Red Maple	3" cal.	-	14-16'	B&B	Full, straight leade
СО	3	Carya ovata	Shagbark Hickory	3" cal.	-	14-16'	B&B	Full, straight leade
TA	6	Tilia americana	American Linden	3" cal.	-	14-16'	B&B	Full, straight leade
TD	5	Taxodium distichum	Bald Cypress	3" cal.	-	14-16'	B&B	Full, straight leade
QB	4	Quercus bicolor	Swamp White Oak	3" cal.	-	14-16'	B&B	Full, straight leade
Shrubs**		•	•					•
AA	10	Aronia arbutifolia	Red Chokeberry	-	-	30"	CONT	Heavy, full specime
CS	4	Cornus sericea	Red Twig Dogwood	-	-	30"	CONT	Heavy, full specime
IV	13	Ilex verticillata 'Red Sprite'	'Red Sprite' Winterberry	-	-	30"	CONT	Heavy, full specime

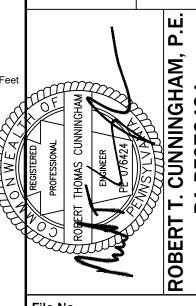
LANDSCAPE LEGEND



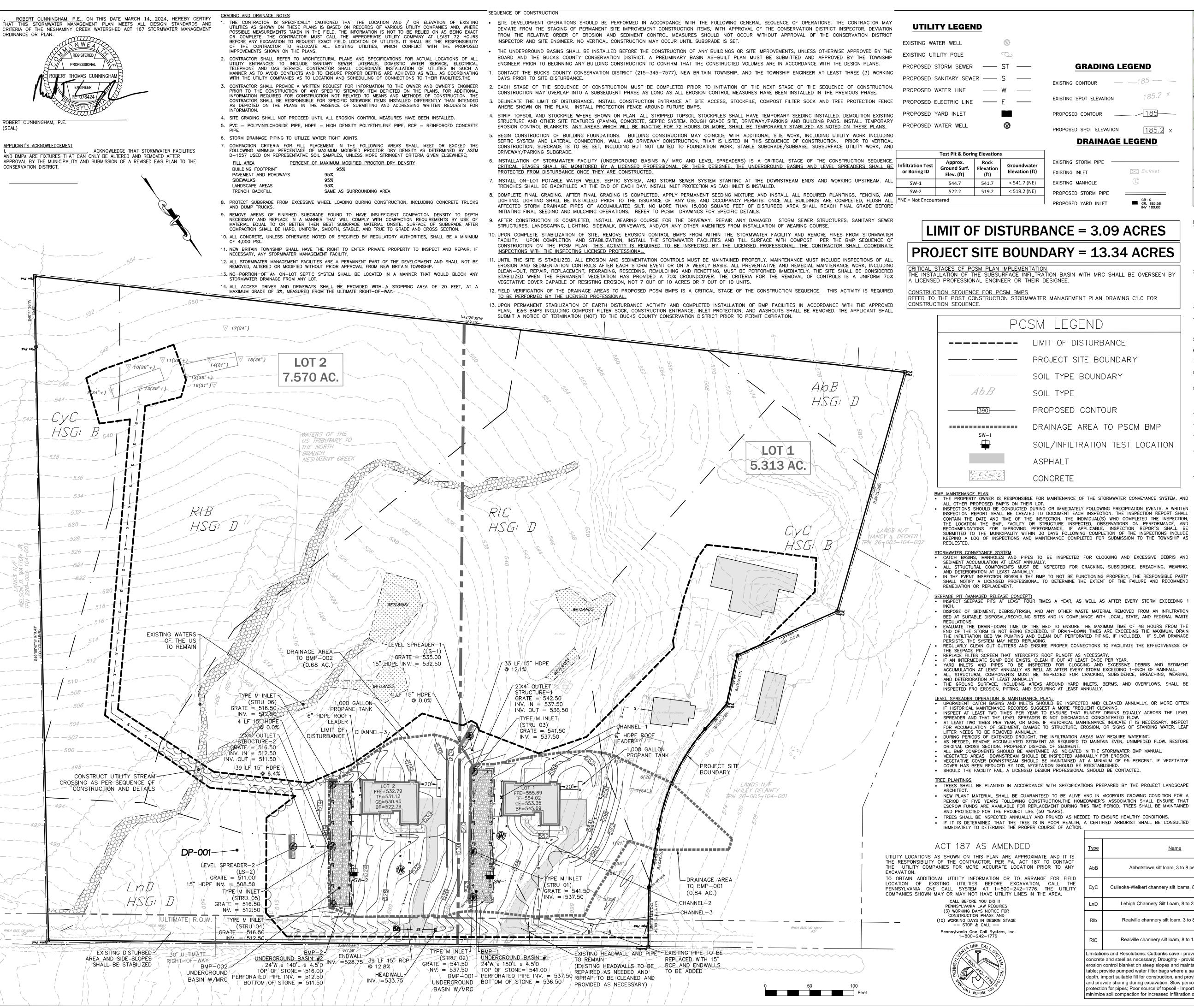
Street tree



Riparian Area Planting کلیکا



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PROPOSED STORM SEWER - ST **GRADING LEGEND** PROPOSED SANITARY SEWER ——— S **EXISTING CONTOUR** 185.2 EXISTING SPOT ELEVATION PROPOSED CONTOUR 185.2 PROPOSED SPOT ELEVATION

PCSM LEGEND

SOIL TYPE

ASPHALT

CONCRETE

PROJECT SITE BOUNDARY

SOIL TYPE BOUNDARY

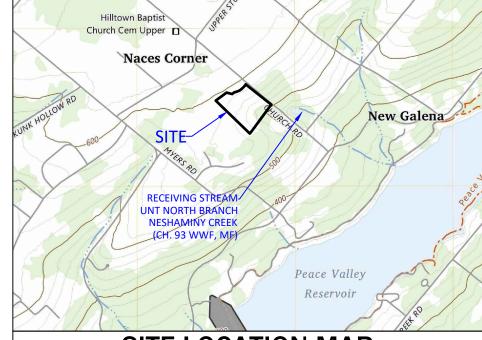
PROPOSED CONTOUR

DRAINAGE AREA TO PSCM BMP

SOIL/INFILTRATION TEST LOCATION

Test Pit & Boring Elevations						
tration Test	Approx.	Rock	Groundwater	EXISTIN		
Boring ID	Ground Surf. Elevation Elev. (ft) (ft)		Elevation (ft)	EXISTIN		
SW-1	544.7	541.7	< 541.7 (NE)	EXISTIN		
SW-2	522.2	519.2	< 519.2 (NE)	PROPO		
= Not Encountered						

DRAINAGE LEGEND ING STORM PIPE ∑ Ex.Inlet NG MANHOLE DSED STORM PIPE CB-X GR. 185.56 INV 180.00 PROPOSED YARD INLET



SITE LOCATION MAP

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR FLEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO

AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO LOCATION AND SCHEDULING OF CONNECTIONS THEIR FACILITIES. ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THI OWNER, AT NO COST TO THE TOWNSHIP,

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE EXISTING UTILITY SERVICE (WATER, SEWER, GAS AND ELECTRIC) TO THE PROPERTY AND ENSURE THAT THEY ARE PROPERLY DISCONNECTED FROM THE EXISTING UTILITIES AND RECONNECTED TO THE NEW SERVICES . THE LOCATION OF THE EXISTING GAS MAINS ARE APPROXIMATE. THE CONTRACTOR SHOULD

CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION.

SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.

6. THE LOCATION OF EXISTING ELECTRIC LINES ARE APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION. . ALL GAS WORK AND OTHER ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS. 8. ALL ELECTRICAL WORK, TRANSFORMER PADS, AND ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL GUIDELINES ANI REQUIREMENTS. MIN. DEPTH OF COVER OVER ELECTRIC, GAS, AND CABLE SHALL BE 2 FT.). THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS, UTILITY LOCATIONS. CATHODIC PROTECTION AND INVERTS PRIOR TO CONSTRUCTION. THI CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DISRUPTIONS TO EXISTING UTILITIES SERVICES. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN BY THE DRAWINGS

10. EIGHTEEN (18) INCHES VERTICAL CLEARANCE SHOULD BE PROVIDED AT ALL UTILITY 11. THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF LANDSCAPING SHOULD DISTURBANCE I REQUIRED FOR UTILITY REPAIRS. 12. 18 INCHES OF VERTICAL CLEARANCE OR 10 FEET OF HORIZONTAL CLEARANCE SH PROVIDED BETWEEN THE SANITARY SEWER AND ALL OTHER UTILITIES. OTHERWISE, CONCRETE ENCASEMENT OF THE SANITARY SEWER SHALL BE PROVIDED. 13. THERE SHALL NOT BE BUILT, INSTALLED, CONSTRUCTED, PLANTED OR LOCATED ANY TEMPORARY OR PERMANENT BUILDINGS OR STRUCTURES INCLUDING INFILTRATION BASINS,

OR ANY TREES, SHRUBS, OR OTHER LANDSCAPING WITHIN 10 FEET OF SANITARY SEWER FACILITIES, EXCEPT TREES, SHRUBS, AND OTHER LANDSCAPING WHICH WILL NOT GROW TO MORE THAN 6 FEET IN HEIGHT. 14. PROPOSED ON-LOT WELLS ARE SUBJECT TO THE PROVISIONS OF THE WELL CONSTRUCTION

STANDARDS, WHICH INCLUDES REQUIREMENTS FOR WELL PERMITTING, WATER QUALITY TESTING, AND WELL PRODUCTION CERTIFICATION.

THE PROJECT HAS LIMITED IMPERVIOUS AREAS PROPOSED TO THE MAXIMUM EXTENT POSSIBLE. THE SITE PLAN HAS CLUSTERED THE DEVELOPMENT TO REDUCE THE EXTENT CONTAIN THE DATE AND TIME OF THE INSPECTION, THE INDIVIDUAL(S) WHO COMPLETED THE INSPECTION, OF PROPOSED ROADWAYS AND THE DRIVEWAYS ARE THE MINIMUM ACCEPTABLE LENGTH. 0

> H F THE LIMIT OF DISTURBANCE IS MINIMIZED TO REDUCE THE DISTURBANCE TO EXISTING FEATURES. THE EXISTING VEGETATION AROUND THE PERIMETER OF THE SITE I TO REMAIN TO THE MAXIMUM EXTENT POSSIBLE. THERE IS NO PROPOSED DISTURBANCE

MINIMIZE IMPERVIOUS AREAS

THE PROJECT HAS LIMITED THE SOIL DISTURBANCE AREA TO THE MAXIMUM EXTEN POSSIBLE AND LAND CLEARING IS LIMITED TO THE AREAS SHOWN ON THE PLAN.

STRUCTURAL AND NON-STRUCTURAL BMPS TO DECREASE STORMWATER RUNOFF RE-VEGETATE DISTURBED AREAS: ALL DISTURBED AREAS WILL BE PERMANENTLY SEEDEL SEEPAGE PIT (MANAGED RELEASE CONCEPT)

RE-VEGEIALE DISTURBED AREAS WILL BE PERMANEINED SEEPAGE PITS AT LEAST FOUR TIMES A YEAR, AS WELL AS AFTER EVERY STORM EXCEEDING 1 OR LANDSCAPED. ADDITIONALLY, NEW TREES WILL BE PLANTED THROUGH THE SITE 1 REDUCE THE THERMAL IMPACTS OF IMPERVIOUS SURFACES AND REDUCE RUNOFF

> RECYCLING/ DISPOSAL OF MATERIALS
> THE CONSTRUCTION WASTES ANTICIPATED INCLUDE DEMOLITION MATERIALS FROM THE BUILDING AND SITE DEMOLITION AND EXCESS BUILDING MATERIAL SUCH AS CONCRETE, WOOD, ETC.

ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE ANI RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OF DISCHARGED AT THE SITE.

I. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM AN EXISTING

FEATURES PLAN PREPARED BY EFFICIENT DESIGN, DATED FEBRUARY 10, 2022. UNDER PENNSYLVANIA LAW , THE CONTRACTOR IS REQUIRED TO NOTIFY TH PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.

THERE ARE NO HQ OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA. THERE ARE NO INFILTRATION BMPS LOCATED OUTSIDE PROPOSED GRADING AREAS. THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL. THE TOWNSHIP ENGINEER SHALL INSPECT AND APPROVE THE TREE PROTECTION

FENCE INSTALLATION PRIOR TO ANY CLEARING OR EARTHMOVING ACTIVITIES. IN THE OPINION OF THE TOWNSHIP ENGINEERS REPRESENTATIVE OR CERTIFIED ARBORIST, ANY TREES DISTURBED, DAMAGED OR KILLED DURING OR AS A RESULT OF CONSTRUCTION SHALL BE REPLACED AT ONE CALIPER INCH FOR ONE CALIPE

Soils Legend HSG Hydric So Seasonal High Farmland o Abbotstown silt loam, 3 to 8 percent slopes 40"-60" 6"-18" mportance Farmland o Culleoka-Weikert channery silt loams, 8 to 15 percent slopes 20"-40" >80" Statewide Importance 12"-24" C/D Lehigh Channery Silt Loam, 8 to 25 percent slopes 40"-60" No Farmland Farmland o 20"-40" 6"-36" Realville channery silt loam, 3 to 8 percent slopes Statewide Importance Farmland of 20"-40" 6"-36" Realville channery silt loam, 8 to 15 percent slopes Statewide

imitations and Resolutions: Cutbanks cave - provide shoring during excavation; Corrosive to steel/concrete - provide cathodic protection for concrete and steel as necessary; Droughty - provide water truck during periods of drought and dry soil conditions; Easily erodible - provide an erosion control blanket on steep slopes and maintain existing vegetative cover in non-disturbed areas; Depth to saturated zone/seasonal high water table; provide pumped water filter bags where a saturated zone or shwt is encountered; Hydric/Hydric inclusions - strip existing topsoil to indicating depth, import suitable fill for construction, and provide adequate site grading; Low strength/landslide prone; Import suitable fill for topsoil stockpile and provide shoring during excavation: Slow percolation - replace soil with suitable fill for better percolation results: Piping - Provide cathodic protection for pipes; Poor source of topsoil - Import suitable fill for topsoil; Frost action - provide capillary flow path breaks in soils; Wetness ninimize soil compaction for increased infiltration of water into the soil and provide adequate site grading

SCALE: 1"=2,000

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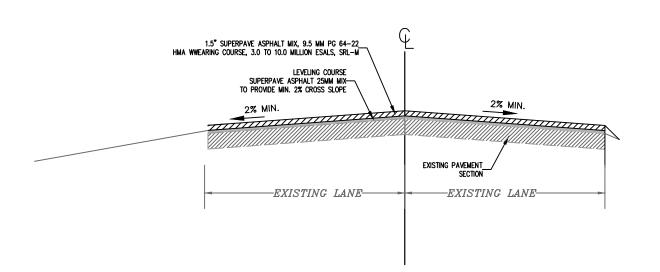
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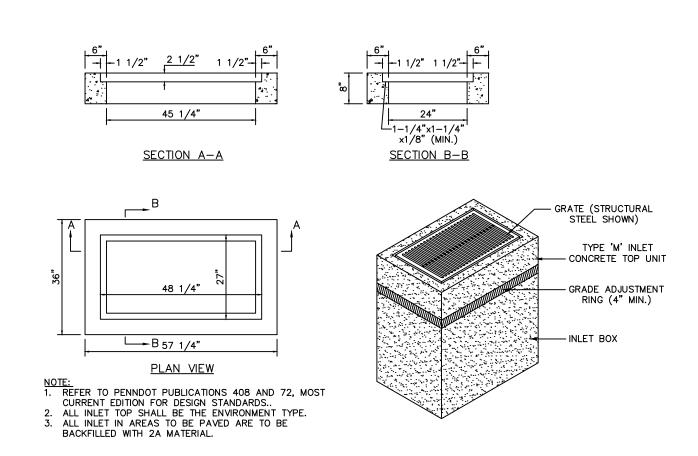
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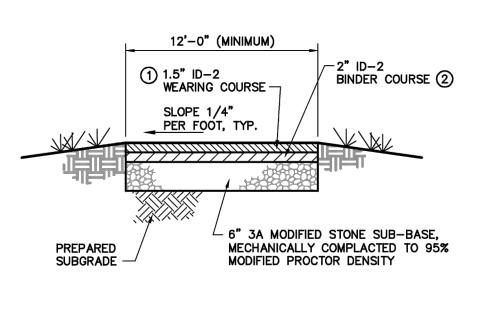
UPPER CHRUCH ROAD PAVING DETAIL

<u>NOTES</u>

- 1. THE FULL WIDTH OF UPPER CHURCH ROAD ALONG THE PROJECT FRONTAGE IS PROPOSED TO BE OVERLAID.
- 2. MATCH EXISTING SLOPE DIRECTION. PROVIDE MIN. 2% CROSS SLOPE
- 3. NO CURBING OR PAVEMENT BASE DRAIN IS PROPOSED.



TYPE M INLET DETAIL

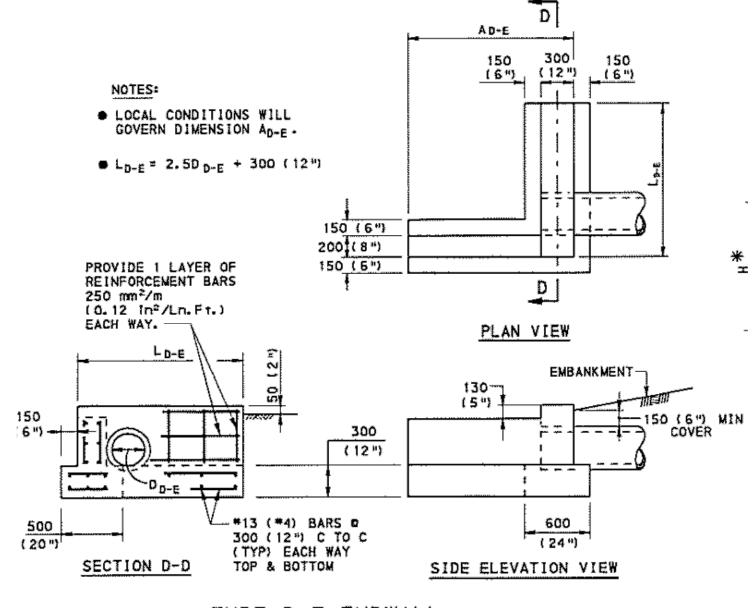


ALTERNATE SPECIFICATION

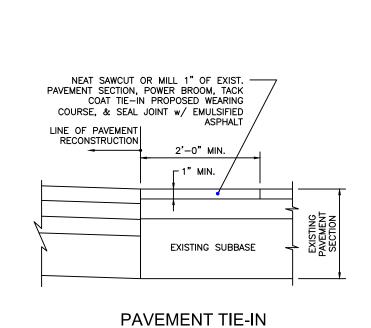
1.5" SUPERPAVE ASPHALT MIXTURE DESIGN, 9.5 mm MIX, PG 64-22, HMA WEARING COURSE, 0.3 TO 3 MILLION ESALS, SRL-M 2.0" SUPERPAVE ASPHALT MIXTURE DESIGN, 19mm MIX, PG 64-22, HMA BINDER COURSE, 0.3 TO 3 MILLION ESALS

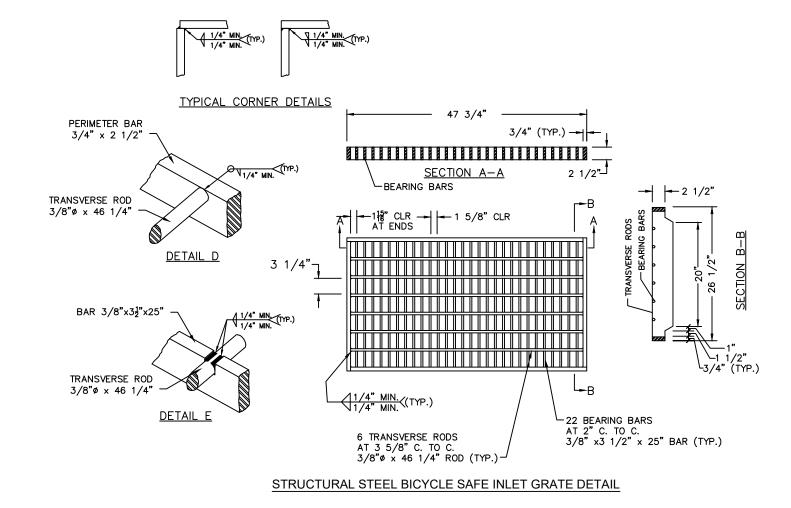
RESIDENTIAL DRIVEWAY PAVING SECTION DETAIL

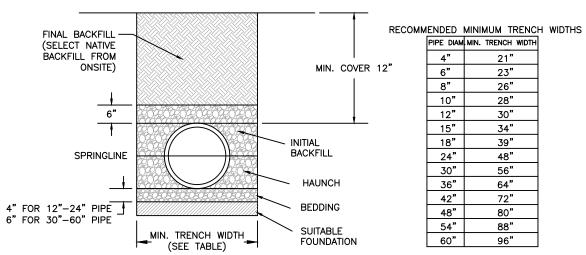
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA



TYPE D-E ENDWALL

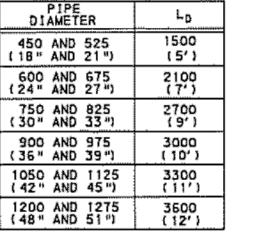


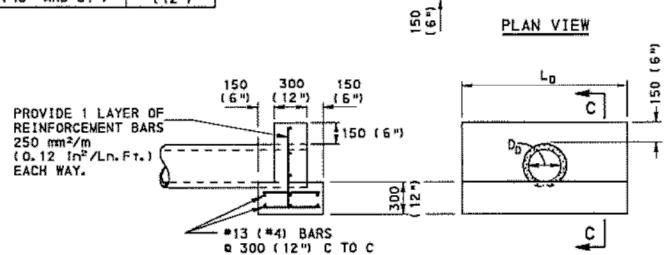




- 1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS",
- 2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A
- 4. <u>BEDDING:</u> SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
- 5. <u>INITIAL BACKFILL:</u> SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN " ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- 6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT

HDPF	PIP	F D	FT	ΑII	





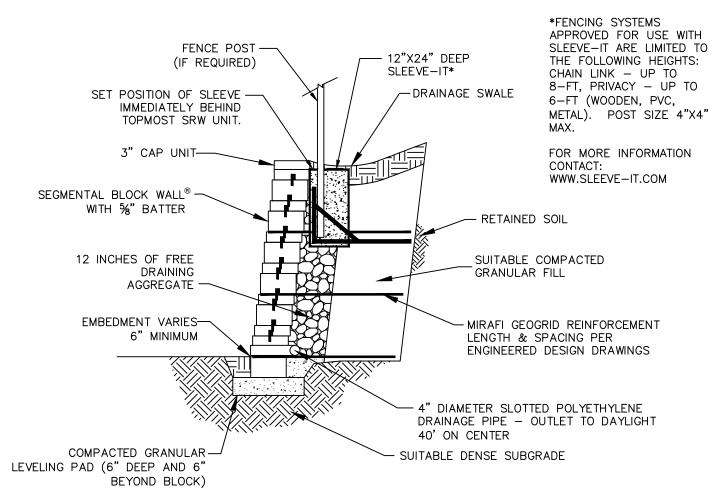
(TYP) EACH WAY

TOP & BOTTOM

SECTION C-C

FRONT ELEVATION VIEW

TYPE D ENDWALL



SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN PENNSYLVANIA SHALL BE SUBMITTED AND APPROVED BY THE TOWNSHIP PRIOR TO WALL CONSTRUCTION.

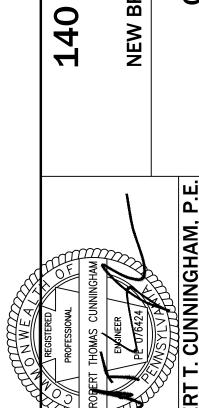
SCOUR PROTECTION SHALL BE PROVIDED AS REQUIRED FOR THE WALL ADJACENT TO

PRIOR TO START OF CONSTRUCTION, THE APPLICANT SHALL SUBMIT TO THE TOWNSHIP ENGINEER, FOR REVIEW AND APPROVAL, WALL DESIGNS AND CALCULATIONS FOR THE RETAINING WALL, WHICH DESIGNS AND CALCULATIONS SHALL SIGNED BY A CERTIFIED PROFESSIONAL LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.

A WALL WITH A HEIGHT OF 3 FEET OR MORE REQUIRES A FENCE TO BE INSTALLED PER NEW BRITAIN TOWNSHIPS ORDINANCE. ANY FENCING INSTALLED SHALL MEET ALL NEW

BRITAIN TOWNSHIP REQUIREMENTS. REINFORCED SEGMENTAL BLOCK

RETAINING WALL



PER CHURCH ROAD
TIMP # 26-003-104
TOWNSHIP, BUCKS COUNTY, P

UPPI 140 U

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SEEDING NOTES:

TEMPORARY SEEDING:

- 1. TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY. 2. DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED,
- AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIODS.
- 3. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
- 4. DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- A. APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE FEET)
- APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.
- WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL. . UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE
- TEMPORARY SEEDING
- MARCH 1 TO JUNE 15 1 LB./1000 SF ANNUAL RYEGRASS 1 LB. /1000 SF SUDAN GRASS MAY 15 TO SEPT 15
- SEPT 15 TO OCT 15 168 LB./AC WINTER RYE E. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

6. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2

PERMANENT SEEDING:

- 1. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- 2. SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1", DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
- 3. DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS:
- A. MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND. B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST
- RESULTS (ONE (1) TEST PER 25 ACRES)). THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE.
- INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED WHEREVER POSSIBLE. E. SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH '/2" OF
- F. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS:

MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE

AND RED TOP 12% OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1 2 LBS./1000 SF RED TOP*

SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS.

((*) USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.)

RATE MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80% AND RYEGRASS 20%

NOTE: SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED

- SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS". PENNSYLVANIA STATE UNIVERSITY. 4. FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZED AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0- 1 0- 10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER 1000 SF.
- 5. HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80. CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.
- 6. MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS: A. STRAW — SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COURSE MATERIAL, APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND. DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04

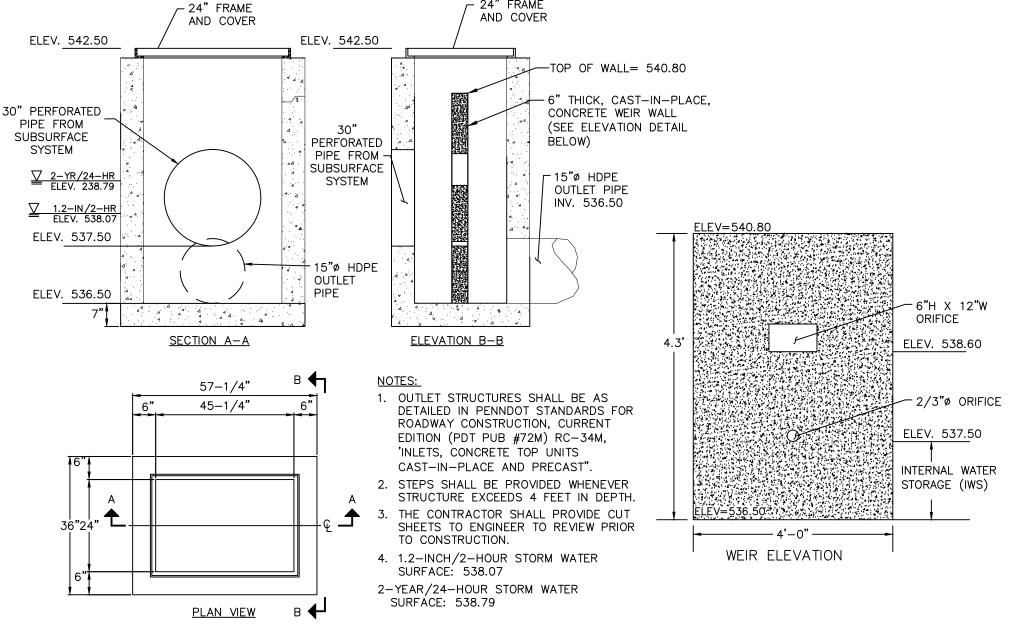
B. NETTING / EROSION CONTROL BLANKETS - THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND

CONSTRUCTION SEQUENCE FOR PCSM BMPS

SITE SPECIFIC CONSTRUCTION SEQUENCE

1. REFER TO THIS SHEET C1.0 FOR SITE—SPECIFIC CONSTRUCTION SEQUENCE. ONCE ALL UPSTREAM MEASURES FOR THE BMP HAVE BEEN STABILIZED, THE INDIVIDUAL BMP MAY BE CONSTRUCTED PER THE SEQUENCES IDENTIFIED BELOW.

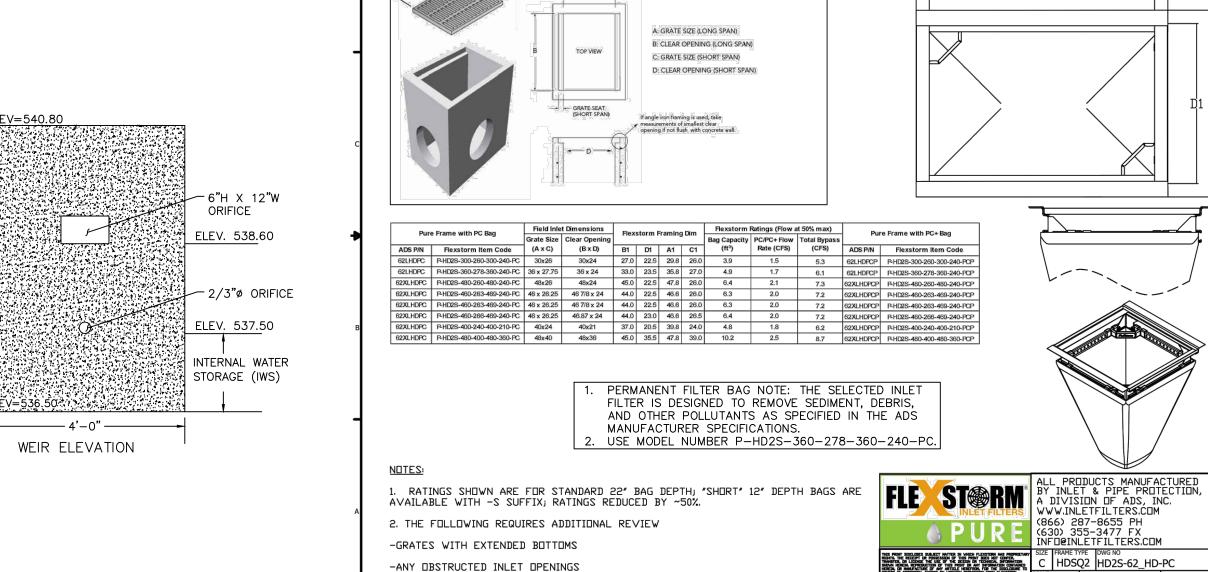
- IF ANY UNFAVORABLE CONDITIONS ARE ENCOUNTERED DURING THE INSTALLATION OF THE SEEPAGE PIT (I.E. GROUNDWATER AND/OR BEDROCK PINNACLES OF CARBONATE BEDROCK. ETC.). THE OWNER/ENGINEER SHOULD BE NOTIFIED IMMEDIATELY SINCE THE PROPOSED BASINS MAY NEED TO BE RELOCATED TO A MORE SUITABLE LOCATION ON THE PROPERTY.
- PROTECT THE AREA FROM COMPACTION PRIOR TO INSTALLATION USING ORANGE CONSTRUCTION FENCE AROUND THE PERIMETER OF THE AREA. 3. IF POSSIBLE, INSTALL DRY WELLS/OBSERVATION PORTS/CLEANOUTS DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM
- CONSTRUCTION ACTIVITY. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AS PER THE PENNSYLVANIA EROSION AND SEDIMENT POLLUTION CONTROL
- PROGRAM MANUAL (MARCH 2000, OR LATEST EDITION). EXCAVATE BOTTOM FOOTPRINT TO A UNIFORM, LEVEL UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE. TO THE GREATEST EXTENT POSSIBLE,
- EXCAVATION SHOULD BE PERFORMED WITH THE LIGHTEST PRACTICAL EQUIPMENT. EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE FACILITY BED. COMPLETELY WRAP BOTTOM AND SIDES WITH NONPERMEABLE LINER. (IF SEDIMENT AND/OR DEBRIS HAVE ACCUMULATED IN BED BOTTOM, REMOVE PRIOR TO GEOTEXTILE
- PLACEMENT.) LINER ROLLS SHOULD OVERLAP BY A MINIMUM OF 24 INCHES. FOLD BACK AND SECURE EXCESS GEOTEXTILE DURING STONE PLACEMENT. PLACE FIRST LIFT OF CLEAN STONE AGGREGATE AND LEVEL BEFORE PLACEMENT OF PERFORATED PIPE INSTALL CONTINUOUSLY PERFORATED PIPE, OBSERVATION WELLS, CLEANOUTS, OUTLETS, HEADERS, AND ALL OTHER STRUCTURES. CONNECT CULVERTS AND PIPES TO STRUCTURES AS
- INDICATED ON PLANS. PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 6-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
- FOLD AND SECURE NONWOVEN GEOTEXTILE OVER TRENCH, WITH MINIMUM OVERLAP OF 12-INCHES. PLACE LIFT OF SURFACE BASE OVER CLOSED GEOTEXTILE ENVEOLPE, AS INDICATED ON PLANS.
- SEED AND STABILIZE TOPSOIL IF VECETATED SURFACE IS PROPOSED. 13. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.
- LEVEL SPREADER CONSTRUCTION SEQUENCE
 1. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AS PER THE PENNSYLVANIA EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MARCH 2000, OR LATEST EDITION).
- INSTALL CONTINUOUSLY PERFORATED PIPE, OBSERVATION WELLS/INLETS, AND ALL OTHER LEVEL SPREADER STRUCTURES. CONNECT INCOMING PIPES TO STRUCTURES AS INDICATED
- PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 6-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS. INSTALL EROSION CONTROL BLANKET DOWNSTREAM OF LEVEL SPREADER AND SECURE AS PER MANUFACTURER'S RECOMMENDATIONS. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.
- 2. EXCAVATE LEVEL SPREADER BOTTOM TO A UNIFORM, LEVEL SUBGRADE FREE FROM ROCKS AND DEBRIS. EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE 3. COMPLETELY WRAP LEVEL SPREADER WITH NONWOVEN GEOTEXTILE. (IF SEDIMENT AND/OR DEBRIS HAVE ACCUMULATED IN LEVEL SPREADER BOTTOM, REMOVE PRIOR TO GEOTEXTILE PLACEMENT.) GEOTEXTILE ROLLS SHOULD OVERLAP BY A MINIMUM OF 24 INCHES WITHIN THE TRENCH. FOLD BACK AND/OR CUT EXCESS GEOTEXTILE DURING STONE PLACEMENT.



UNDERGROUND BASIN #1 (MRC)

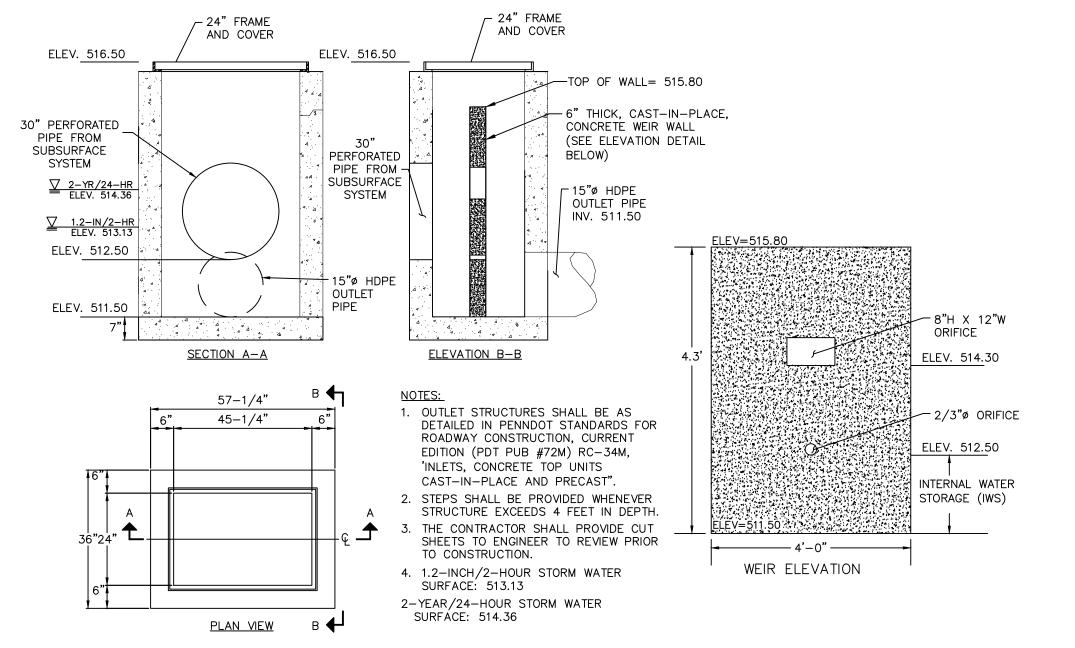
OUTLET STRUCTURE-1 DETAIL

- 24" FRAME

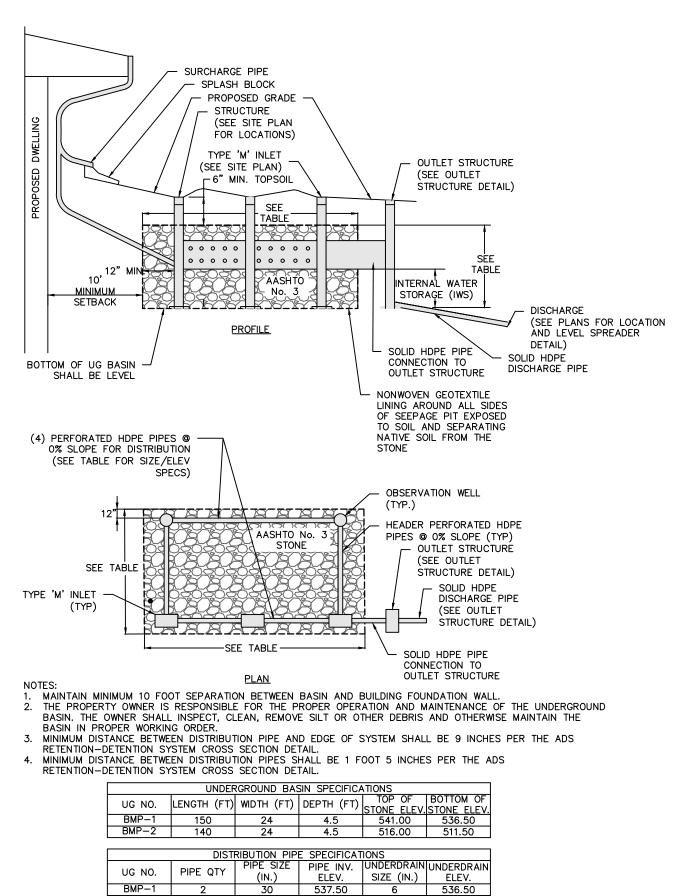


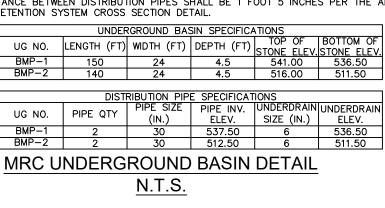


HD2S: INLET TYPE: RECTANGULAR PRECAST OPENING WITH 2 SEAT GRATE SUPPORTS ON LONG LEDGES (SHORT SPAN)



UNDERGROUND BASIN #2 (MRC) OUTLET STRUCTURE-2 DETAIL





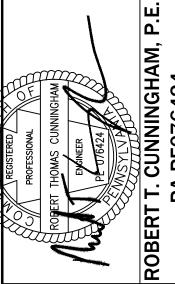


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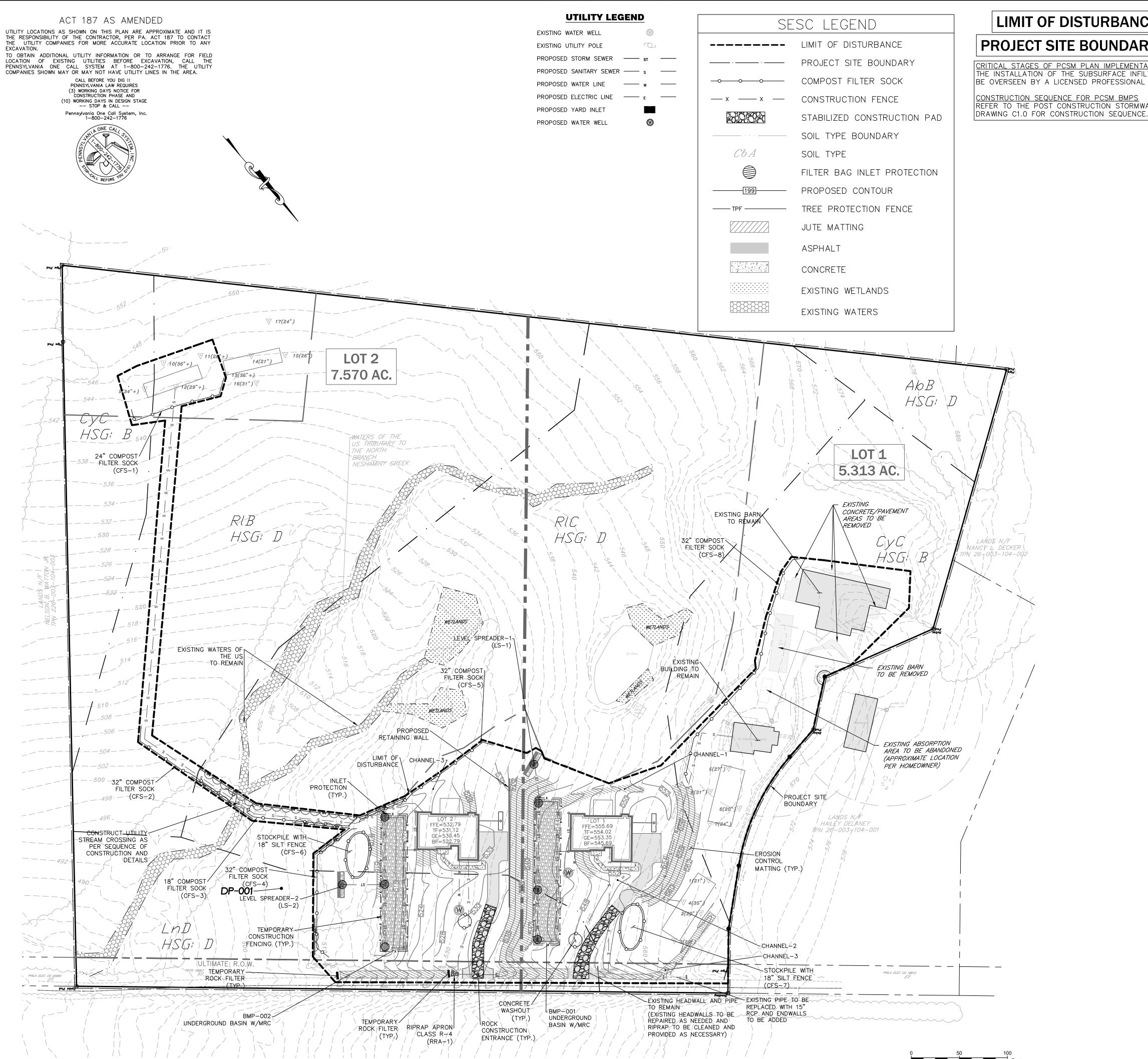
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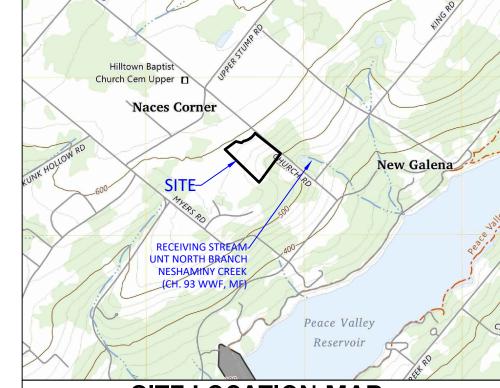
LIMIT OF DISTURBANCE = 3.09 ACRES

PROJECT SITE BOUNDARY = 13.34 ACRES

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
THE INSTALLATION OF THE SUBSURFACE INFILTRATION BASIN WITH MRC SHALL

BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR DESIGNEE.

CONSTRUCTION SEQUENCE FOR PCSM BMPS
REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN



SITE LOCATION MAP

SEQUENCE OF CONSTRUCTION

- SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIATE FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER. NO VERTICAL CONSTRUCTION MAY OCCUR UNTIL SUBGRADE IS SET.
- THE UNDERGROUND BASINS SHALL BE INSTALLED BEFORE THE CONSTRUCTION OF ANY BUILDINGS OR SITE IMPROVEMENTS, UNLESS OTHERWISE APPROVED BY THE BOARD AND THE BUCKS COUNTY CONSERVATION DISTRICT. A PRELIMINARY BASIN AS-BUILT PLAN MUST BE SUBMITTED AND APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO BEGINNING ANY BUILDING CONSTRUCTION TO CONFIRM THAT THE CONSTRUCTED VOLUMES ARE IN ACCORDANCE WITH THE DESIGN PLANS.
- 1. CONTACT THE BUCKS COUNTY CONSERVATION DISTRICT (215-345-7577), NEW BRITAIN TOWNSHIP, AND THE TOWNSHIP ENGINEER AT LEAST THREE (3) WORKING DAYS PRIOR TO SITE DISTURBANCE.
- 2. EACH STAGE OF THE SEQUENCE OF CONSTRUCTION MUST BE COMPLETED PRIOR TO INITIATION OF THE NEXT STAGE OF THE SEQUENCE OF CONSTRUCTION. CONSTRUCTION MAY OVERLAP INTO A SUBSEQUENT PHASE AS LONG AS ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED IN THE PREVIOUS PHASE.
- 3. DELINEATE THE LIMIT OF DISTURBANCE. INSTALL CONSTRUCTION ENTRANCE AT SITE ACCESS, STOCKPILE, COMPOST FILTER SOCK AND TREE PROTECTION FENCE WHERE SHOWN ON THE PLAN. INSTALL PROTECTION FENCE AROUND FUTURE BMPS.
- 4. STRIP TOPSOIL AND STOCKPILE WHERE SHOWN ON PLAN. ALL STRIPPED TOPSOIL STOCKPILES SHALL HAVE TEMPORARY SEEDING INSTALLED. DEMOLITION EXISTING STRUCTURE AND OTHER SITE FEATURES (PAVING, CONCRETE, SEPTIC SYSTEM. ROUGH GRADE SITE, DRIVEWAY/PARKING AND BUILDING PADS. INSTALL TEMPORARY EROSION CONTROL BLANKETS. ANY AREAS WHICH WILL BE INACTIVE FOR 72 HOURS OR MORE, SHALL BE TEMPORARILY STABILZED AS NOTED ON THESE PLANS.
- WORK, INCLUDING UTILITY WORK INCLUDING SEPTIC SYSTEM AND LATERAL CONNECTION, WALL AND DRIVEWAY CONSTRUCTION, THAT IS LISTED IN THIS SEQUENCE OF CONSTRUCTION. PRIOR TO VERTICAL CONSTRUCTION, SUBGRADE IS TO BE SET, INCLUDING BUT NOT LIMITED TO FOUNDATION WORK, STABLE SUBGRADE/SUBBASE, SUBSURFACE UTILITY WORK, AND DRIVEWAY/PARKING SUBGRADE.

5. BEGIN CONSTRUCTION OF BUILDING FOUNDATIONS. BUILDING CONSTRUCTION MAY COINCIDE WITH ADDITIONAL SITE

- 6. INSTALLATION OF STORMWATER FACILITY (UNDERGROUND BASINS W/ MRC AND LEVEL SPREADERS) IS A CRITICAL STAGE OF THE CONSTRUCTION SEQUENCE. CRITICAL STAGES SHALL BE MONITORED BY A LICENSED PROFESSIONAL OR THE UNDERGROUND BASINS AND LEVEL SPREADERS SHALL BE PROTECTED FROM DISTURBANCE ONCE
- 7. INSTALL ON-LOT POTABLE WATER WELLS, SEPTIC SYSTEM, AND STORM SEWER SYSTEM STARTING AT THE DOWNSTREAM ENDS AND WORKING UPSTREAM. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH DAY. INSTALL INLET PROTECTION AS EACH INLET IS INSTALLED.
- 8. COMPLETE FINAL GRADING. AFTER FINAL GRADING IS COMPLETED, APPLY PERMANENT SEEDING MIXTURE AND INSTALL ALL REQUIRED PLANTINGS, FENCING, AND LIGHTING. LIGHTING SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF ANY USE AND OCCUPANCY PERMITS. ONCE ALL BUILDINGS ARE COMPLETED, FLUSH ALL AFFECTED STORM DRAINAGE PIPES OF ACCUMULATED SILT. NO MORE THAN 15,000 SQUARE FEET OF DISTURBED AREA SHALL REACH FINAL GRADE BEFORE INITIATING FINAL SEEDING AND MULCHING OPERATIONS. REFER TO PCSM DRAWINGS FOR SPECIFIC DETAILS.
- 9. AFTER CONSTRUCTION IS COMPLETED, INSTALL WEARING COURSE FOR THE DRIVEWAY. REPAIR ANY DAMAGED STORM SEWER STRUCTURES, SANITARY SEWER STRUCTURES, LANDSCAPING, LIGHTING, SIDEWALK, DRIVEWAYS, AND/OR ANY OTHER AMENITIES FROM INSTALLATION OF WEARING COURSE.
- 10.UPON COMPLETE STABILIZATION OF SITE. REMOVE EROSION CONTROL BMPS FROM WITHIN THE STORMWATER FACILIT AND REMOVE FINES FROM STORMWATER FACILITY. UPON COMPLETION AND STABILIZATION, INSTALL THE STORMWATER FACILITIES AND TILL SURFACE WITH COMPOST PER THE BMP SEQUENCE OF CONSTRUCTION ON THE PCSM PLAN. THIS ACTIVITY IS REQUIRED TO BE INSPECTED BY THE LICENSED PROFESSIONAL. THE CONTRACTOR SHALL COORDINATE INSPECTIONS WITH THE INSPECTING LICENSED PROFESSIONAL.
- 11. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT OR ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY. THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUNDCOVER. THE CRITERIA FOR THE REMOVAL OF CONTROLS IS A UNIFORM 70% VEGETATIVE COVER CAPABLE OF RESISTING EROSION, NOT 7 OUT OF 10 ACRES OR 7 OUT OF 10 UNITS.
- 12. FIELD VERIFICATION OF THE DRAINAGE AREAS TO PROPOSED PCSM BMPS IS A CRITICAL STAGE OF THE CONSTRUCTION SEQUENCE. THIS ACTIVITY IS REQUIRED TO BE PERFORMED BY THE LICENSED PROFESSIONAL.
- 13. UPON PERMANENT STABILIZATION OF EARTH DISTURBANCE ACTIVITY AND COMPLETED INSTALLATION OF BMP FACILITIES IN ACCORDANCE WITH THE APPROVED PLAN, E&S BMPS INCLUDING COMPOST FILTER SOCK, CONSTRUCTION ENTRANCE, INLET PROTECTION, AND WASHOUTS SHALL BE REMOVED. THE APPLICANT SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO THE BUCKS COUNTY CONSERVATION DISTRICT PRIOR TO PERMIT EXPIRATION.

GENERAL NOTES

- 1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM AN EXISTING FEATURES PLAN PREPARED BY EFFICIENT DESIGN, DATED FEBRUARY 10, 2022. 2. UNDER PENNSYLVANIA LAW, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE—CALL SYSTEM AT 1—800—242—1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UNTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
- THERE ARE NO HQ OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA
- THERE ARE NO INFILTRATION BMPS LOCATED OUTSIDE PROPOSED GRADING AREAS.
 THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS
- WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL. 6. ALL CONSTRUCTION TRAFFIC SHALL UTILIZE A PROPOSED TIRE CLEANER. CONSTRUCTION TRAFFIC MAY NOT ENTER OR EXIT FROM THE EXISTING SHARED DRIVEWAY ON LOT #1.

RECYCLIING/ DISPOSAL OF MATERIALS
THE CONSTRUCTION WASTES ANTICIPATED INCLUDE DEMOLITION MATERIALS FROM THE BUILDING AND SITE

DEMOLITION AND EXCESS BUILDING MATERIAL SUCH AS CONCRETE, WOOD, ETC. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.

	Soils Le	egend				
<u>Type</u>	<u>Name</u>	Depth to Bedrock	Depth to Seasonal High Water Table	HSG	Hydric Soil	Agricultura Soil
AbB	Abbotstown silt loam, 3 to 8 percent slopes	40"-60"	6"-18"	D	No	Farmland o Statewide Importance
СуС	Culleoka-Weikert channery silt loams, 8 to 15 percent slopes	20"-40"	>80"	В	No	Farmland o Statewide Importance
LnD	Lehigh Channery Silt Loam, 8 to 25 percent slopes	40"-60"	12"-24"	C/D	No	Not Prime Farmland
Rlb	Realville channery silt loam, 3 to 8 percent slopes	20"-40"	6"-36"	D	No	Farmland o Statewide Importance
RIC	Realville channery silt loam, 8 to 15 percent slopes	20"-40"	6"-36"	D	No	Farmland o Statewide Importance

Limitations and Resolutions: Cutbanks cave - provide shoring during excavation; Corrosive to steel/concrete - provide cathodic protection for concrete and steel as necessary; Droughty - provide water truck during periods of drought and dry soil conditions; Easily erodible - provide an erosion control blanket on steep slopes and maintain existing vegetative cover in non-disturbed areas; Depth to saturated zone/seasonal high water table; provide pumped water filter bags where a saturated zone or shwt is encountered; Hydric/Hydric inclusions - strip existing topsoil to indicating depth, import suitable fill for construction, and provide adequate site grading; Low strength/landslide prone; Import suitable fill for topsoil stockpile and provide shoring during excavation; Slow percolation - replace soil with suitable fill for better percolation results; Piping - Provide cathodic protection for pipes; Poor source of topsoil - Import suitable fill for topsoil; Frost action - provide capillary flow path breaks in soils; Wetness ninimize soil compaction for increased infiltration of water into the soil and provide adequate site grading.

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THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF SITE LOCATION. THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL RESIDE WITH THE OPERATOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK. BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)

ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES INCLUDING BUT NOT LIMITED TO VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP. REVIEW OF PROPERTY USE HISTORY. SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS, ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OF RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

EROSION / SEDIMENT CONTROL PLAN STANDARD NOTES

STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2L:1V.

THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPÈRLY AND COMPLETELY IMPLEMENTED.

IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR 6. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2 ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED. APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR

PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED. STABILIZED AND FUNCTIONAL BEFORE SITE

DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE

AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL

OFFICIALS. THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNT CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WHICH WILL BI RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.

DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% (PERCENT) VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TÒ RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

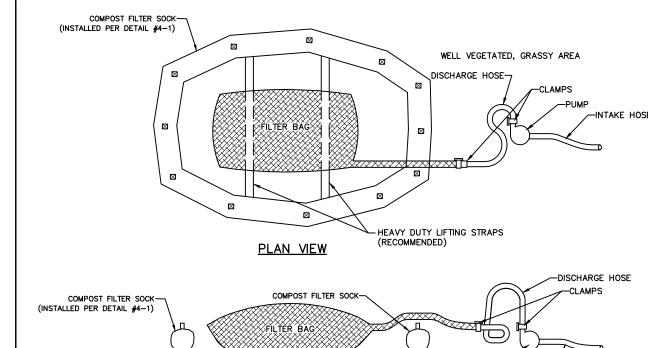
UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE BUCKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT). AT STREAM CROSSINGS, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS

STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE

SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES. UNTIL A SITE IS STABILIZED. ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF VENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE—GRADING, RE—SEEDING, RE—MULCHING AND RE—NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.

SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR

ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.



ELEVATION VIEW LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE

FOLLOWING STANDARDS:	WE TIETER BAGG GHALE	BE MADE TROM WOVEN O	LOILX
PROPERTY	TEST METHOD	MINIMUM STANDARD	
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN	
GRAB TENSILE	ASTM D-4632	205 LB	
PUNCTURE	ASTM D-4833	110 LB	
MULLEN BURST	ASTM D-3786	350 PSI	
UV RESISTANCE	ASTM D-4355	70%	
AOS % RETAINED	ASTM D-4751	80 SIEVE	

WELL VEGETATED, GRASSY AREA

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION

RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY

RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG WITH COMPOST FILTER SOCK

SEEDING NOTES:

TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.

. DURING NON—GERMINATING PERIODS. ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIODS.

DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.

4. DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.

TEMPORARY SEEDING STEPS: APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE

APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE. WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL. UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE

TEMPORARY SEEDING <u>SEASON</u> 1 LB./1000 SF ANNUAL RYEGRASS MARCH 1 TO JUNE 15 MAY 15 TO SEPT 15 1 LB./1000 SF

SEPT 15 TO OCT 15 168 LB./AC WINTER RYE APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

PERMANENT SEEDING:

1. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.

SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED IF SEEDING IS DONE AFTER OCTOBER 1", DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.

ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A 3. DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS:

MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE

AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)). THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING.

ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED WHEREVER POSSIBLE. SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED

UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH 1/2" OF SOIL WITH

SUITABLE EQUIPMENT. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS:

RATE MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE

AND RED TOP 12% OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1 2 LBS./1000 SF RED TOP*

((*) USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.)

PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC):

RATE MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80% AND RYEGRASS 20%

NOTE - SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION. VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY <u>DISTURBED AREAS"</u>, PENNSYLVANIA STATE UNIVERSITY.

FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZED AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0- 1 0- 10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER 1000 SF.

HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE. AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80, CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.

6. MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS:

A. STRAW — SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COURSE MATERIAL, APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND. DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OF POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. II LIEU OF MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE

NETTING / EROSION CONTROL BLANKETS - THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS.

UTILITY TRENCHING GUIDELINES: 1. CONSTRUCTION REQUIREMENTS -

A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.

. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.

C. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.

D. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING AS REQUIRED, TO A FACILITY FOR REMOVAL OF SEDIMENTS IN ACCORDANCE WITH PADEP GUIDELINES

E. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE AT THE END OF EACH WEEK.

2. EXCEPTIONS - IN CERTAIN CASES TRENCHES CANNOT BE BACKFILLED UNTIL THE PIPE IS HYDROSTATICALLY TESTED, OR ANCHORS AND OTHER PERMANENT FEATURES ARE INSTALLED IN THESE CASES, ALL OF THE REQUIREMENTS LISTED UNDER ITEM 1 WILL REMAIN IN EFFECT WITH THE FOLLOWING EXCEPTIONS:

A. DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR SIX DAYS. ALL PRESSURE TESTING AND THE COMPLETE BACKFILLING OF THE OPEN TRENCH MUST BE COMPLETED BY THE SEVENTH WORKING DAY.

B. IF DAILY BACKFILLING IS DELAYED, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS, APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES/FACILITIES WILL BE INSTALLED, AND THE AREAS SEEDED AND MULCHED WITHIN THE NEXT TWO CALENDAR DAYS.

BMP MAINTENANCE

INTAKE HOSE

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION STABILIZATION, AND MAINTENANCE OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE PROPER CONSTRUCTION AND STABILIZATION OF PERMANENT CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN DURING CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING INSPECTIONS OF THE BMPS AFTER

EACH RUNOFF EVENT AS WELL AS ON A WEEKLY BASIS. THE CONTRACTOR SHALL KEEP A LOG OF ALL INPECTIONS AND MAINTENANCE PERFORMED ON THE BMPS THE OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL PERMANENT CONTROL MEASURES.

SOIL SEDIMENT REMOVED FROM ANY TEMPORARY CONTROL MEASURE DURING REGULAR MAINTENANCE WILL BE INCORPORATED BACK INTO THE EARTHWORK AS FILL ON THE SITE. SOIL SEDIMENT MATERIAL SHALL BE

DISTRIBUTED ON-SITE WITHOUT CHANGING DRAINAGE PATTERNS DURING A SPECIFIC CONSTRUCTION STAGE. COMPOST FILTER SOCK WILL BE INSPECTED ONCE A WEEK OR AFTER EVERY STORM EVENT, WHICHEVER COMES FIRST. ANY NECESSARY REPAIRS WILL BE MADE IMMEDIATELY. ACCUMULATED SEDIMENTS WILL BE REMOVED AS REQUIRED TO KEEP THE SOCK FUNCTIONAL. DEPOSITS WILL BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK. UNDERCUTTING OR EROSION OF THE TOE ANCHOR OF THE COMPOST FILTER SOCK WILL BE REPLACED IMMEDIATELY WITH ROCK FILTER OUTLETS. ANY MANUFACTURER'S RECOMMENDATIONS WILL BE ADHERED TO FOR REPLACING COMPOST FILTER SOCK DUE TO WEATHERING.

THE CONSTRUCTION ENTRANCE WILL BE INSPECTED AT THE END OF EACH WORK DAY. THE THICKNESS WILL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE.

AT THE END OF EACH CONSTRUCTION DAY, ANY SEDIMENT DEPOSITED ON PUBLIC ROADWAYS, WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WITH WATER WILL NOT BE PERMITTED.

LIMITING EXPOSED EXTENT AND DURATION OF DISTURBED AREASTHE INITIAL PHASE OF THE PROPOSED PROJECT CONSISTS OF ESTABLISHING THE SOIL EROSION CONTROL MEASURES IN A SEQUENCE APPROPRIATE TOWARD LIMITING SOIL EROSION. THE EXTENT OF DISTURBED LAND HAS BEEN LIMITED TO INCLUDE ONLY THOSE AREAS REQUIRED FOR THE DEVELOPMENT OF THE SUBJECT SITE. ALL SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED. THE SEQUENCE OF CONSTRUCTION ACTIVITIES IS OUTLINED IN THE SEQUENCE OF CONSTRUCTION CONTAINED HEREIN AND ON THE

PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION

THE PROJECT PROPOSES TO MINIMIZE DISTURBANCE TO THE EXISTING VEGETATION AT THE SITE BY ONLY PROPOSING DISTURBANCE IN THE AREA WHERE NEEDED. THE SITE VEGETATION PROPOSED FOR DISTURBANCE IS MAINLY SCRUB VEGETATION AND VINES WHICH ARE CURRENTLY DETRIMENTAL TO THE

MINIMIZE SOIL COMPACTION THE PROJECT DESIGN LIMITS THE BULK/ MASS EARTHWORK TO BE PERFORMED AS MUCH AS POSSIBLE. ADDITIONALLY, SOIL COMPACTION WILL NOT BE REQUIRED OTHER THAN IN PROPOSED IMPERVIOUS AREAS.

FEATURES AND MEASURES TO MINIMIZE STORMWATER RUNOFFTEMPORARY STABILIZATION: UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED. THE DISTURBED AREAS WILL ALSO BE MULCHED WITH UNROTTED STRAW OR SALT HAY. TEMPORARY STABILIZATION MEASURES ARE SPECIFIED ON SOIL EROSION AND SEDIMENT POLLUTION CONTROL DETAIL PLANS.

PERMANENT STABILIZATION: ALL SLOPES AND DISTURBED AREAS SHALL BE STABILIZED WITH PERMANENT SEEDING AND LANDSCAPING AS SOON AS POSSIBLE AFTER THE FINAL EARTHMOVING AND CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. AREAS THAT ARE PROPOSED TO HAVE SPECIFIC LINING SHALL BE STABILIZED WITH THE SPECIFIED LINING AS SOON AS THE EARTHMOVING AND CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL A UNIFORM EROSION RESISTANT PERENNIAL VEGETATIVE COVER OF THE DISTURBED AREA IS ESTABLISHED. PERMANENT STABILIZATION MEASURES ARE SPECIFIED ON THE EROSION AND SEDIMENT

SOLIDS SEPARATION: PRIOR TO ANY SITE DISTURBANCE OR CONSTRUCTION ACTIVITIES. A GRAVEL BUFFER WILL BE INSTALLED AT THE EXISTING DRIVEWAYS TO SERVE AS A CONSTRUCTION ENTRANCE. IN ADDITION, FILTER FABRIC FENCING WILL BE INSTALLED AROUND THE PROJECT AREA, DOWNGRADIENT FROM ANY DISTURBANCE, TO PREVENT SEDIMENT FROM LEAVING THE SITE. FILTER FABRIC SILT FENCING WILL BE CONSTRUCTED AND WILL REMAIN OPERATIONAL UNTIL PERMANENT CONTROL MEASURES ARE IN

TREE PROTECTION NOTES

Protection from Grade Change

A. Prior to any site work, clearing, tree removal, grading, or construction, the tree protection area shall be delineated by the following methods:) The tree protection area that is delineated on the site prior to construction shall conform to he approved development plans. (2) Forty—eight inch high orange snow fence or other suitable fence, such as super silt fence,

mounted on steel posts located 8 feet on center, shall be placed along the boundary of the tree protection area. (3) Trees being removed shall not be felled, pushed or pulled into a tree protection area or into rees that are to be preserved. (4) Grade changes and excavations shall not encroach upon the Tree protection area.

(5) No toxic materials, including petroleum products shall be stored less than 100 feet from a tree protection area or a watercourse. If field conditions warrant, a greater distance may be (6) The area within the tree protection area shall not be built upon nor shall any materials be stored there either temporarily or permanently. Vehicles and equipment shall not be parked in the

tree protection area. (7) When tree stumps are located within 10 feet of the tree protection area, the stumps shall be removed by means of a stump grinder to minimize the effect on surrounding root systems. (8) Tree roots which must be severed shall be cut by a backhoe or similar equipment aligned adially to the tree. This method reduces the lateral movement of the roots during excavation, which if done by other methods could damage the intertwined roots of adjacent trees. (9) Within 4 hours of any severance of roots, all tree roots that have been exposed and/or damaged shall be trimmed cleanly and covered temporarily with moist peat moss, burlap, or other biodegradable material to keep them from drying out until permanent cover can be installed. (10) Sediment, retention, and detention basins shall not discharge into the tree protection area.

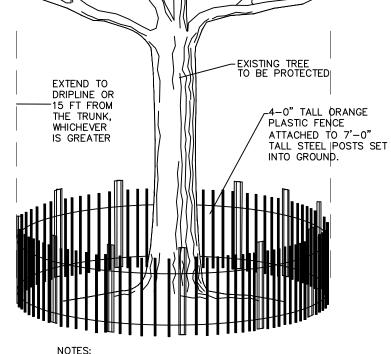
(11) Sediment, retention, and detention basins shall not be located within the tree protection (12) Trees shall not be used for roping, cables, signs, or fencing. Nails and spikes shall not be driven into trees.

1) When the original grade cannot be retained at the tree protection area line, a retaining wall shall be constructed outside the tree protection area. Appropriate details of the retaining wall design shall be provided. 3) To ensure the survival of trees, the following methods shall be used.

The top of the wall shall be four inches above the finished grade level. The wall shall be constructed of large stones, bricks, building tiles, concrete blocks, or treated wood beams not less than 6 inches by 6 inches. A means for drainage through the wall shall be provided so water will not accumulate on either side of the wall. Weep holes shall be

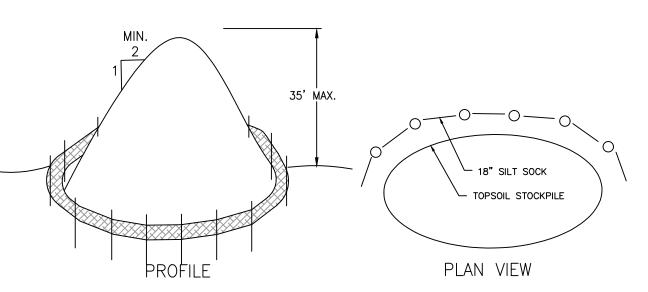
required within any wall. Any severed roots as a result of excavation shall be trimmed so that their edges are smooth and are cut back to a lateral root if exposed. Trees Damaged During Construction. Tree trunks and exposed roots damaged during construction shall be protected from further damage. Damaged branches shall be pruned according to National Arborist Association standards. All cuts shall be made sufficiently close to the trunk or parent limb without cutting into the branch collar or leaving a protruding stub. All necessary pruning cuts must be made to prevent bark from being torn from the tree and to facilitate rapid

Tree Replacement. In the event that trees that are to be protected are removed or damaged by accident or by violation of the tree protection requirements, trees shall be replaced on an inch for inch basis.

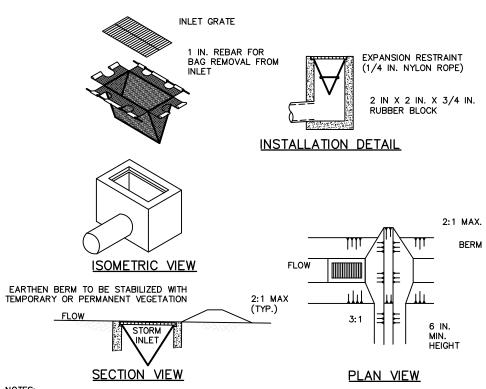


1) FENCE TO BE INSTALLED BEFORE WORK BEGINS. FENCE MUST REMAIN AND BE MAINTAINED THROUGH DURATION OF CONSTRUCTION. 2) ORANGE CONSTRUCTION FENCE MAY BE SUBSTITUTED FOR SNOW FENCE.

TREE PROTECTION FENCING DETAIL

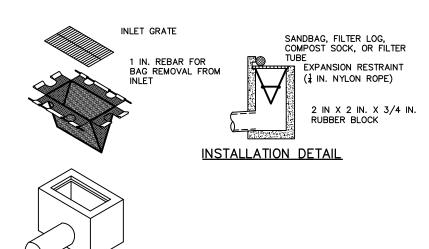


COMPOST FILTER SOCK MUST BE PLACED DOWNSLOPE OF ALI STOCKPILES WHICH WILL REMAIN IN PLACE 20 DAYS OR MORE STOCKPILE AREA DETAI



INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS. ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED

REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS. STANDARD CONSTRUCTION DETAIL #4-16 FILTER BAG INLET PROTECTION - TYPE M INLET



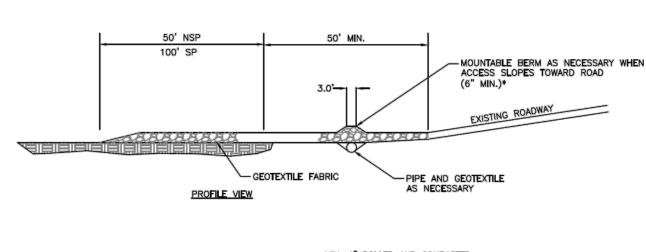
ISOMETRIC VIEW URB IF RUNOFF I BYPASSING INLET O SECTION VIEW

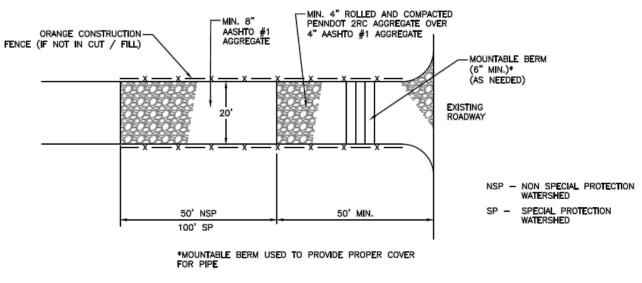
MAXIMUM DRAINAGE AREA = 1/2 ACRE. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 BS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER HE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS. STANDARD CONSTRUCTION DETAIL #4-15 FILTER BAG INLET PROTECTION - TYPE C INLET





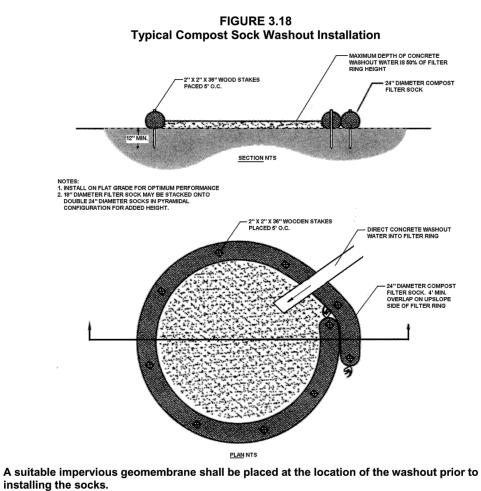
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED O THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SIT 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

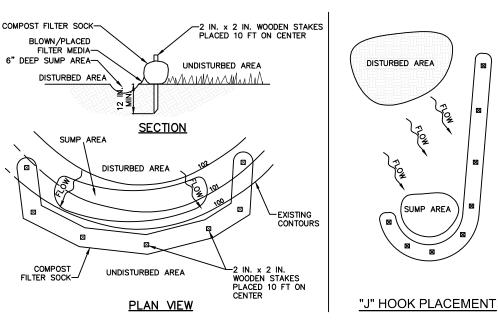
TO ENTERING ROCK CONSTRUCTION ENTRANCE.

Adapted from Filtrexx

OTHER DRAINAGE COURSES IS NOT ACCEPTABLE. ALTERNATIVE ROCK CONSTRUCTION ENTRANCE



CONCRETE WASHOUT DETAIL



SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF TH BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAI TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

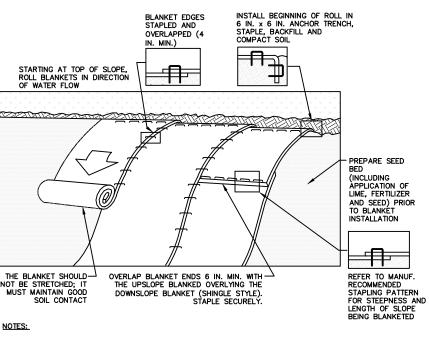
STANDARD CONSTRUCTION DETAIL #4-1

COMPOST FILTER SOCK

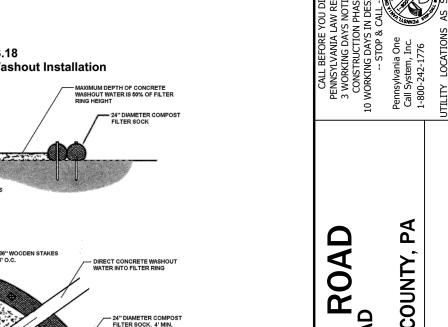
NOT TO SCALE

THE BLANKET SHOULD—I OVERLAP BLANKET ENDS 6 IN. MIN. WITH—INTERPRETATION OF BLANKED OVERLYING THE UPSLOPE BLANKED OVERLYING THE DOWNSLOPE BLANKET (SHINGLE STYLE).

STAPLE SECURELY. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.



SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS. STANDARD CONSTRUCTION DETAIL #11-1 **EROSION CONTROL BLANKET INSTALLATION**



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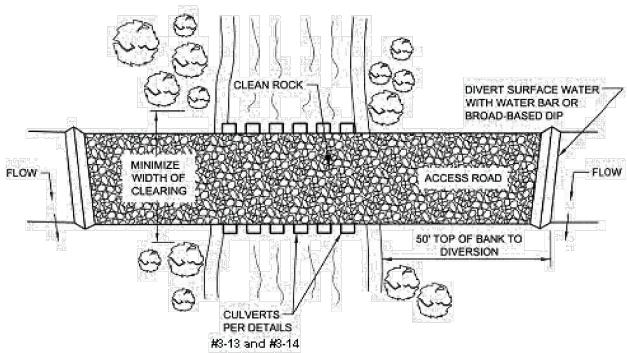
EROSION

1890_C2.0 E&S.DWG

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

STANDARD CONSTRUCTION DETAIL #4-14 **ROCK FILTER**

STANDARD CONSTRUCTION DETAIL # 3-12 **Temporary Stream Crossing - Plan View**



Adapted from Ohio EPA

NOTES:

Waterbars and broad-based dips shall discharge to sediment removal facility. Clean rock shall conform to Chapter 105 permitting requirements.

Follow permit conditions regarding removal of crossing.

STANDARD CONSTRUCTION DETAIL # 3-13 **Temporary Stream Crossing** 1 foot minimum depth of fill over culvert Clean rock fill (Streambed material is not to be used) Culvert installation on streambed

PA DEP Provide 50' stabilized access to crossing on both sides of stream channel (see Standard

Pipes shall extend beyond the toe of the roadway.

Runoff from the roadway shall be diverted off the roadway and into a sediment removal BMP before it reaches the rock approach to the crossing.

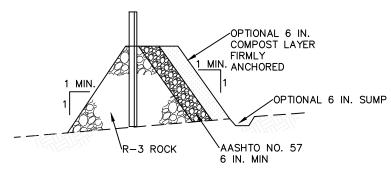
SECTION (

MAINTENANCE

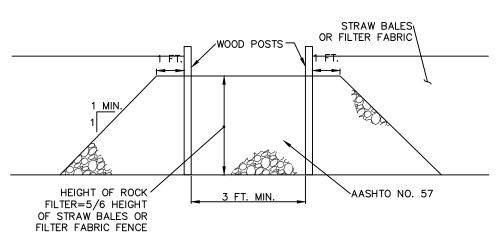
Construction Detail #3-12).

- 1. Temporary stream crossings shall be inspected on a daily basis.
- 2. Damaged crossings shall be repaired within 24 hours of the inspection and before any subsequent use.
- 3. Sediment deposits on the crossing or its approaches shall be removed within 24 hours of the inspection

As soon as the temporary crossing is no longer needed, it shall be removed. All materials shall be disposed of properly and disturbed areas stabilized.



OUTLET CROSS-SECTION

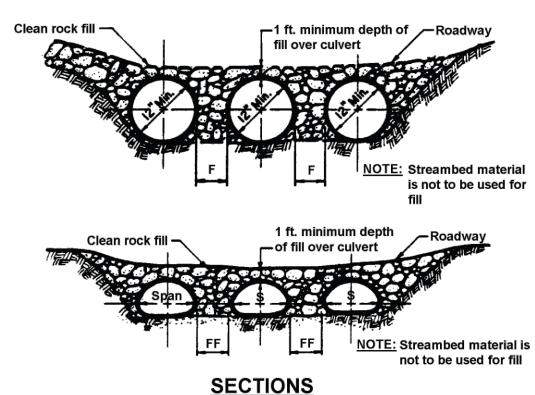


UP-SLOPE FACE

NOTES: A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET. STANDARD CONSTRUCTION DETAIL #4-6 ROCK FILTER OUTLET

STANDARD CONSTRUCTION DETAIL # 3-14 **Temporary Stream Crossing - Multiple Pipes**



PA DEP

Multiple pipes and multiple span bridges and culverts which may tend to collect debris, contribute to the formation of ice jams and increase head losses shall be avoided to the maximum extent practicable. Crossings of less than 15 feet shall be by one span, except where conditions make it impractical to affect the crossing without multiple spans (Section 105.162).

Provide 50' stabilized access to crossing on both sides of stream channel (Standard Construction Detail #3-12).

Pipes shall extend beyond the toe of the roadway.

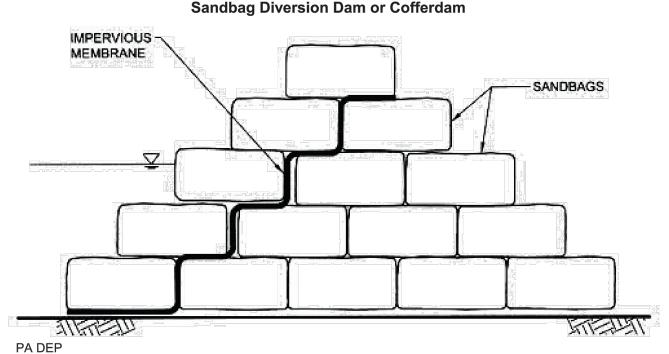
Runoff from the roadway shall be diverted off the roadway and into a sediment removal BMP before it reaches the rock approach to the crossing.

MAINTENANCE

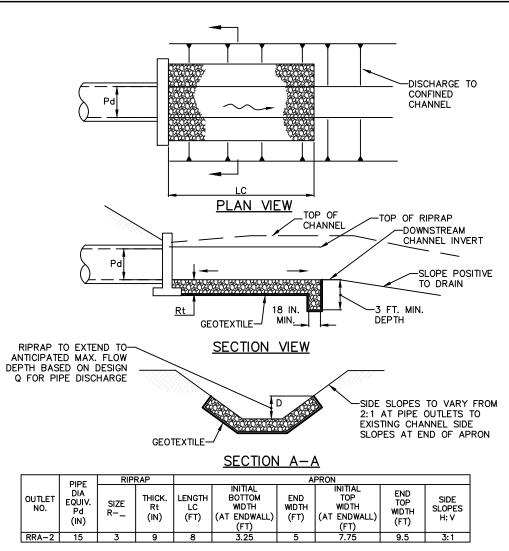
- 1. Temporary stream crossings shall be inspected on a daily basis.
- 2. Damaged crossings shall be repaired within 24 hours of the inspection and before any
- 3. Sediment deposits on the crossing or its approaches shall be removed within 24 hours of

As soon as the temporary crossing is no longer needed, it shall be removed. All materials shall be disposed of properly and disturbed areas stabilized.

STANDARD CONSTRUCTION DETAIL #3-15



2 BAG MINIMUM HEIGHT ABOVE NORMAL BASE FLOW



NOTES: ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-3 RIPRAP APRON AT PIPE OUTLET TO AN EXISTING CHANNEL

CULVERT->

WATER

FILTER

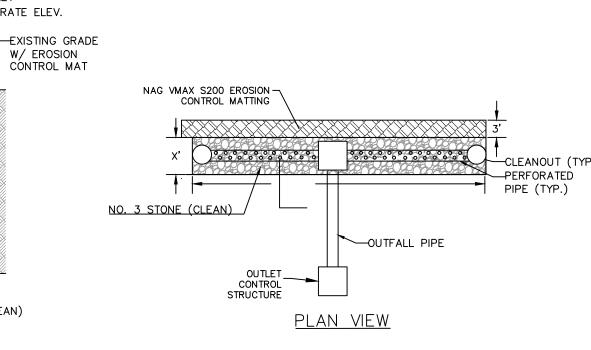
BAG

PA DEP

FIGURE 3.11

Temporary Cofferdam and Pump Bypass Around In-channel Work Areas

TOP OF GRATE ELEV. (SEE TABLE FOR DIAMETER) $^{\downarrow}$ NO. 3 STONE (CLEAN)



SWF OUTFALL	L	D	OUTFALL PIPE ELEV.	TOP OF GRATE ELEV.	PERF. PIPE DIAMETER	Н	Y	×
#	FT	IN			IN	FT	FT	FT
LS-1	27	15	532.50	535.00	12	0.50	3.00	4.00
LS-2	27	15	508.50	511.00	12	0.50	3.00	4.00

CONSTRUCTION SEQUENCE FOR LEVEL SPREADER:

1. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AS PER THE PENNSYLVANIA EROSION AND

NOTE: Pump intake

shall be maintained

a sufficient distance

from bottom to prevent sediment from entering the

system.

TEMPORARY

DISCHARGE

CULVERT

ENERGY

PUMP DISCHARGE

ANCHORED PLASTIC

OR SECURELY

* Sandbags (Standard Construction Detail #3-15), Jersey barriers (Figure 3.13) or other non-

** See Standard Construction Detail # 4-14. For low gradient channels, the rock filter may be

TEMPORARY COFERDAN AND BYPASS FOR STREAM CHANNEL WORK AREA

CONSTRUCTION

ENTRANCE

erosive material, no earth fill. Do not excavate a sump for the pump intake.

replaced by an impervious cofferdam to prevent backflow into the work area.

STREAM CHANNEL CULVERT REPLACEMENT SEQUENCE OF CONSTRUCTION:

1. INSTALL BYPASS PUMP AND ENERGY DISSIPATER AS SHOWN ON THE DETAIL

3. BEGIN EXCAVATION AND REMOVAL OF EXISTING STREAM CROSSING.

6. REMOVE PUMPED WATER FILTER BAG, ROCK FILTER, AND COFFERDAM.

APPROVED EROSION AND SEDIMENT CONTROL PLAN.

STREET OR ROADWAY

THE AREA DOWNSLOPE OF THE COMPOST FILTER SOCK MAY NOT BE UNDER

STANDARD CONSTRUCTION DETAIL #10-2

TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY

NOT TO SCALE

<u>PLAN VIEW</u>

. REMOVE BYPASS PUMP.

COMPOST FILTER SOCK

DEVELOPMENT OR OTHERWISE DISTURBED.

HOUSE

2. INSTALL COFFERDAM AND ROCK FILTER IN CHANNEL. INSTALL PUMPED WATER FILTER BAG IN A LEVEL, GRASSY, STABLE AREA ADJACENT TO THE CHANNEL.

4. INSTALL PROPOSED CULVERT AS SHOWN ON THE APPROVED GENERAL PERMIT 5. STABILIZE DISTURBED AREA AS PER THE DETAILS AND NOTES SHOWN ON THE

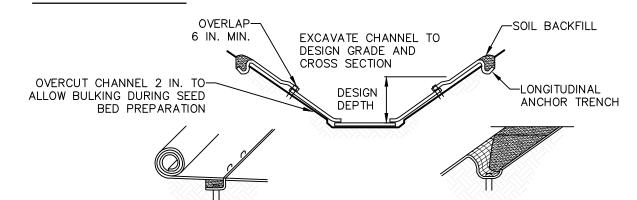
ENERGY DISSIPATER (R___)

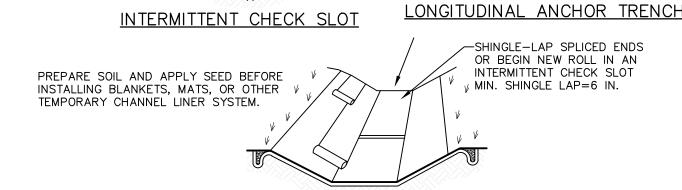
-DISSIPATER

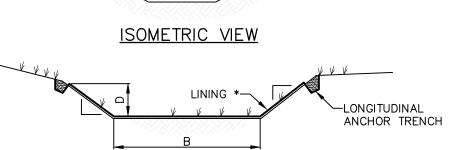
DAM*

- SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MARCH 2000, OR LATEST EDITION). 2. EXCAVATE LEVEL SPREADER BOTTOM TO A UNIFORM, LEVEL SUBGRADE FREE FROM ROCKS AND DEBRIS. EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE LEVEL SPREADER. 3. COMPLETELY WRAP LEVEL SPREADER WITH NONWOVEN GEOTEXTILE. (IF SEDIMENT AND/OR DEBRIS HAVE ACCUMULATED IN LEVEL SPREADER BOTTOM, REMOVE PRIOR TO GEOTEXTILE PLACEMENT.) GEOTEXTILE ROLLS SHOULD OVERLAP BY A MINIMUM OF 24 INCHES WITHIN THE TRENCH. FOLD BACK
- AND/OR CUT EXCESS GEOTEXTILE DURING STONE PLACEMENT. 4. INSTALL CONTINUOUSLY PERFORATED PIPE, OBSERVATION WELLS/INLETS, AND ALL OTHER LEVEL SPREADER STRUCTURES. CONNECT INCOMING PIPES TO
- 5. PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 6-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS. 6. INSTALL EROSION CONTROL BLANKET DOWNSTREAM OF LEVEL SPREADER AND SECURE AS PER MANUFACTURER'S RECOMMENDATIONS. 7. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

LEVEL SPEADER







CHANNEL CROSS-SECTION

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

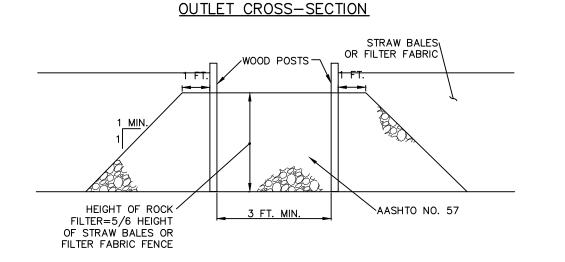
	CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
	CH-1	FULL CHANNEL	1.5	1.00	7.5	3	3	ERONET C125
	CH-2	FULL CHANNEL	1	1.00	7.0	3	3	ERONET C125
	CH-3	FULL CHANNEL	1.25	1.00	7.2	3	3	ERONET C125
<u>S:</u>	CH-4	FULL CHANNEL	1	1.00	7.0	3	3	ERONET C125

ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1 **VEGETATED CHANNEL**



R-3 ROCK

OPTIONAL 6 IN.

COMPOST LAYER

OPTIONAL 6 IN. SUMP

FIRMLY

MIN. ANCHORED

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

<u>UP-SLOPE FACE</u>

STANDARD CONSTRUCTION DETAIL #4-6

ROCK FILTER OUTLET

DIVERSION SWALE-HOUSE -DIRECT RUNOFF FROM DRIVEWAY TO SEDIMENT BARRIER FILTER FABRIC FENCE, COMPOST FILTER SOCK OR SEDIMENT FILTER LOG (TYP.) CONSTRUCTION STREET OR ROADWAY

NOTES: THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE L NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING

> STANDARD CONSTRUCTION DETAIL #10-1 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

- ~--OUTLET SWALE O ADEQUATE

PLAN VIEW



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File No. 1890_C2.0 E&S.DWG



COUNTY OF BUCKS

DEPARTMENT OF HEALTH

Neshaminy Manor Center, 1282 Almshouse Road, Doylestown, PA 18901 - 215-345-3318 FIELD OFFICES

Bucks County Government Services Center, 7321 New Falls Road, Levittown, PA 19055 – 267-580-3510 Bucks County Government Services Center, 261 California Road, Suite #2, Quakertown, PA 18951 – 215-529-7000

County Commissioners ROBERT J. HARVIE, JR., Chair DIANE M. ELLIS-MARSEGLIA, LCSW, Vice-Chair GENE DIGIROLAMO, Commissioner Director
DAVID C. DAMSKER, M.D., M.P.H.

January 9th, 2025

New Britain Township – Township Manager 207 Park Avenue Chalfont, PA 18914



RE: Proposed Subdivision Casadonti Homes, Inc T.M.# 26-003-104 DEP Code #

Dear Mr. Fox.

Component 1 (Minor Subdivision) of the Planning Module for Land Development for subject subdivision has been reviewed and signed by this Department in accordance with the requirements of Title 25, Pennsylvania Code, Section 71.44, subchapter C., 71.51, 71.53 and 71.55.

On June 10, 1989, Chapter 71 of the Pennsylvania Sewage Facilities Act (Act 537) was revised. Under the revision, it is now the municipality's responsibility to forward a complete planning module submission of this subdivision to PA DEP for their review.

This Department <u>cannot</u> issue any permits on this proposed subdivision until written approval from PA DEP has been received or proof that a complete application has been before PA DEP. This Department must also receive a copy of the signed subdivision plan.

Enclosed please find 2 copies of the following:

- 1) Component 1
- 2) Site Investigation and Percolation Test Report for On-Lot Disposal of Sewage
- 3) Subdivision Plan

If you have any questions, feel free to contact me at 215-345-3848.

Sincerely

Amanda Daniels

Sewage Enforcement Officer # 03938

CC:

Central

District

VW Consultants LLC -1590 Canary Rd, Quakertown, PA 18951

Casadonti Homes, Inc - Attention: Joe Casadonti - P.O. Box 5, Chalfont, PA 18914

3800-FM-BPNPSM0350 2/2015 Checklist



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

Completeness Checklist

The following items should be checked off by the applicant as each is completed. The municipality should confirm that the required items have been included within ten days of receipt and if complete, sign and date the checklist. Submissions not containing the following information will be considered incomplete.

K-7	0	
\boxtimes	Complete Component 1	
	Letter from public water supplier (if applicable)	
\boxtimes	Plot plan and 7.5' topo map showing subdivision	
\boxtimes	"Site Investigation and Percolation Test Report(s)" wit (suitable and unsuitable)	th results of ALL profile examinations and percolation tests
\boxtimes	Signature of soils description preparer	
\boxtimes	Signature of developer	
\boxtimes	SEO signature	
\boxtimes	PNDI "Project Planning & Environmental Review For Receipt" (self completed search) and all appropriate of	orm" (request DEP search) or "Project Environmental Review documentation for the form submitted.
\boxtimes	Planning Agency Signature	
	Zoning Officer Signature (if applicable)	
		Janene Marchand
		Signature of Municipal Official
		2/4/25
		Date submittal determined complete

COMPONENT 1 SEWAGE FACILITIES PLANNING MODULE

PROJECT NARRATIVE - Revised 11/26/2024

140 (146) Upper Church Road Chalfont, PA 18914 New Britain Township, Bucks County TM# 26-003-104

Casadonti Homes is proposing to subdivide the 140 Upper Church Road property into 2 residential
lots which is located in New Britain Township, Bucks County, PA. Please note, the tax parcels
records indicate this property as 146 Upper Church Road however it also lists the adjacent house
with the same address. Therefore 140 Upper Church Road will be utilized as directed by the
developer.

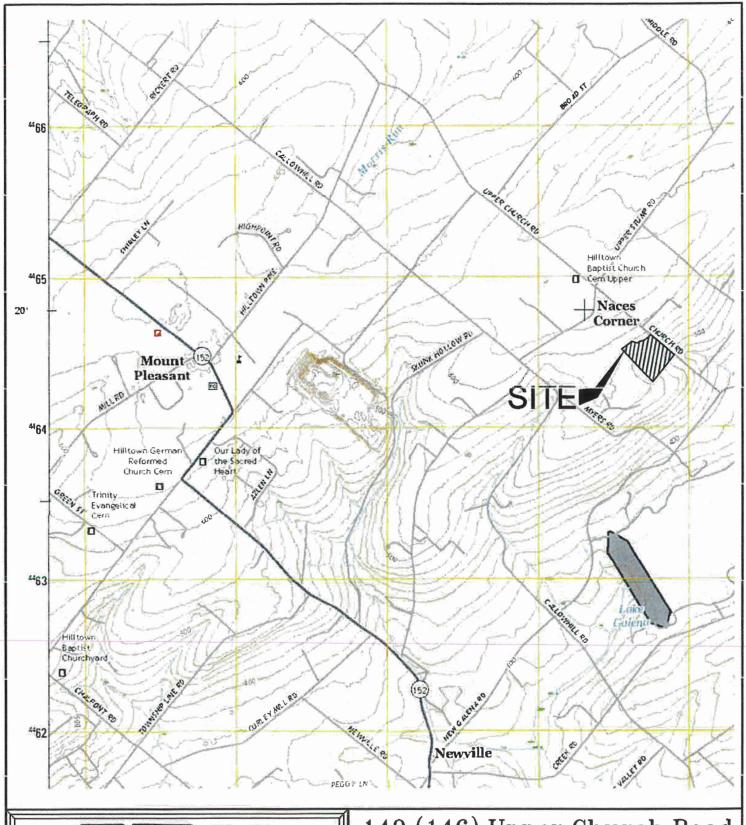
A proposed 4-bedroom home is proposed for Lot No. 1. The lot contains an existing 4-bedroom home that has been converted into an auxiliary building. The auxiliary building will be used for a home office/family space, no bedrooms, but will have an auxiliary bath and clean up sink area. The kitchen has been removed from the building and this building will only be used for personal use.

The existing well that serviced the existing building is going to be abandoned as the replacement area to service the proposed home is within 100' from the well. A new well is proposed for this lot. For Lot No. 2, a proposed 4-bedroom home to be serviced by its own sewage disposal system.

In support of the proposed 2-lot subdivision, VW performed deep-hole test pits and percolation testing to delineate primary and replacement on-lot sewage disposal areas for the two lots. The soils observed had seasonal high water table limiting zones (mottling/redox features) greater 20 inches below the existing ground surface. Therefore, the proposed primary and replacement areas are sutiable for conventional elevated sand mound systems.

Runoff from the site and adjacent areas flow to unnamed tributary (02833) of North Branch Neshaminy Creek which is classified as WWF in Chapter 93.

- 2. Per Title 25 of the PA Code, Chapter 73, the projected daily sewage flow for this 2-lot subdivision is 1,000 gallons per day. Lot No. 1 and 2 both proposed a 4-bedrooom at 500 gallons per day. Therefore, the calculated EDUs for the project is 2.5.
- 3. Total gross site acreage is 13.35 acres.
- 4. There is no acreage adjacent to this site under the same ownership. Residential properties border the project site and all utilize on-lot sewage disposal and individual wells. The surrounding properties do not have a known high rate of on-lot system malfunctions.





CONSUITANTS LLC 1590 Canary Rd, Quakertown, PA 18951 215-536-7006 | 215-538-6136 Fax

140 (146) Upper Church Road

New Britain Township, Bucks County, Pennsylvania

Quad Map: Doylestown

SHEET 1 of 1



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

Code	No.	

SEWAGE FACILITIES PLANNING MODULE

Component 1. Exception to the Requirement to Revise the Official Plan (Return completed module package to appropriate municipality)

	DEI	P USE ONLY		
DEP CODE # CL	IENT ID#	SITE ID#	APS ID#	AUTH ID#
This planning module component less (including residual lands) into sewage disposal systems. The notice help in completing this component in the land of the land	ended as building sites umber of lots includes o	for detached single family of	Iwelling units serve	ed by individual onlot
NOTE: All soil testing must be fice agency verbally or in writing agency may wish to observe	ting at least 10 days p	age Enforcement Officer (SE prior to testing. In some case		
the project (DE	les for land developme	es Act established fees to be ent. These fees may vary dagency). Please see Section	epending on the a	approving agency for
A. PROJECT INFORMATIO	N (See Section A of in	structions)	and the state of t	
Project Name 140 Upper Cl	hurch Road			
2. Brief Project Description Pro	oposed 2-lot residential	sudivision		
3. Total Number of Lots:				
Total Control of the	1 may 1			MALINE CONTRACTOR OF THE PARTY
			The state of the s	-
 Number of Previous Lot 	ts Developed from Pres	sent Tract As it Appeared on	May 15, 1972	, ,
Total				. = 2 *
 If total exceeds 10, do r 	not use this form. Conta	act DEP for correct forms.		
B. CLIENT (MUNICIPALITY) INFORMATION (S	ee Section B of instructions)		
Municipality Name	County	-	Boro	Twp
New Britian	Bucks			
Municipality Contact - Last Name Fox	First Name Dan	e MI	Suffix Title Tow	e rnship Manager
Additional Individual Last Name	First Name	MI	Suffix Title	
Municipality Mailing Address Line 207 Park Avenue	1	Mailing Address Line 2	A Standard Co.	
Address Last Line City Chalfont	the gray programs represent and any of the second	State PA	ZIP+4 18914	:
Phone + Ext. (215) 822-1391	FAX (option		l (optional) @nbtpa.us	,

C. SITE INFORMATION	(See Section C of instructions)				
Site (Land Development Project	t) Name 140 (146) Upper Church	n Road			
Site Location Line 1		Site Locati	on Line 2	New York	
140 Upper Church Road			R-8.		
Site Location Last Line City			ZIP+4	Latitude	Longitude
Chalfont	PA	Son exercises or	18914	40°19'56.9"N	75°12'16.7" W
Detailed Written Directions to S			470 N D		Marko Mari Adeloni, Alek Mel Sela
	PA, Head southwest toward E M (24.5 mi); Continue on Broad St				
(2.4 mi); site is located at 140 l		Drive to Opp	er Gridich	NO IT NEW DINAIT	Ownship 3 min
Description of Site (Project)			*4 7. 13 * 1.	TIES STORY IN THE STORY	JIPPE STORY
Auxillary Builling and lawn.	Her street with the second		100 100	A Miles Committee	ert er er til
Site Contact (Developer) – Las Casadonti	t Name First Name Joe	MI	Suffix	Phone (215) 768-2303	Ext.
Site Contact Title		Site (Contact Fi	irm (if none, leave b	lank)
Developer			donti Hon		
FAX		Emai			
		casa	dontihome	es@comcast.net	
Mailing Address Line 1		Maili	ng Addres	s Line 2	
P.O Box 5	ing in the stage of the stage o	\$ 17 med 11 med 198 27 for \$	and the second	THE STREET	
Mailing Address Last Line Ci	ty	State		ZIP+4	
Chalfont		PA	Market 1	18914	
D. PROJECT CONSULT	ANT INFORMATION (See See	ction D of instr	uctions)	A COME A PRODUCT POLYMETER	NAME OF STREET
Last Name	First Name	3/5	MI	X4	Suffix
Bernard	Tara			The state of the sale	
Title	Consulting Firm	-11	say of	en oranical approximation of the	883 884 883
Planning Specialist	VW Consultants, LLC.	al to a			
Mailing Address Line 1		Mailing A	ddress Li	ne 2	
1590 Canary Road Address Last Line - City		State		ZIP+4 Co	untry
Quakertown		PA			A U
Email	Phone	1.7	Ext.		AX
tbernard@vw-consultants.com	(215) 536-7006		L. ///.	era. I and project to the transfer of)
	RINKING WATER SUPPLY	Director Atticher.		terrescriptions and are	
			· · · · · · · · ·		
i nis project will be prov	ided with drinking water from the	tollowing sou	rce: (Che	eck appropriate box)	· William of the control of the cont
	cisterns.				
☐ A proposed public	water supply.	I I was	Han all	Comments of the second	
An existing public	water supply.				
	ater supply is to be used, provide in the water company stating that				The second secon
Name of water con	nnany.		Tapilo de ello	- 12 - 12 - 12 - 12 - 12 - 12 - 12 - 12	Thereby Seems
144110 01 114401 0011				- W	
The state of the s				Sugar - 1994 - Marie Carlo Carlo Carlo Caracalana and Carlo Caracalana (1988)	
F. PROJECT NARRATIV	E (See Section F of instructions)			
A narrative has been prepared as described in Section F of the instructions.					
The applicant ma instructions.	y choose to include additional	information	beyond ti	hat required by Se	ection F of the

G.		(See Section G of instructions)

1	PI	_O	T	PI	AI	V

Attach an original or copy of a 7½ minute USGS topographic map with the area of the proposed land development plotted and labeled. Attach a copy of the plot plan of the proposed subdivision showing the following information:

- a. Location of all soils profiles and percolation tests.
- b. Slope at each test area.
- c. Soil types and boundaries.
- d. Existing and proposed streets, roadways, access roads, etc.
- e. Lot lines and lot sizes.
- f. Existing and proposed rights-of-way.
- g. Existing and proposed drinking water supplies for proposed and contiguous lots.
- h. Existing buildings.
- i. Surface waters.

- Wetlands from National Wetland Inventory Mapping and USDA Hydric Soils Mapping.
- k. Floodplain and floodways (Federal Flood Insurance Mapping).
- Designated open space areas.
- Remaining acreage under the same ownership and adjoining lots.
- Existing onlot or sewerage systems; pipelines, transmission lines, etc.
- o. Prime agricultural land.
- p. Orientation to North.

2	RESIDUAL	TRACT	PLANNING	WAIV	ER	REQUEST	
---	----------	-------	-----------------	------	----	---------	--

A waiver from sewage facilities planning \square is, \boxtimes is not requested for the residual land tract associated with this project. (See Section H, I and J and instructions for additional information).

3. SOILS INFORMATION

- a. Attach copies of "Site Investigation and Percolation Test Report" (3800-FM-BPNPSM0290A) (formerly known as "Appendix A") form(s) for the proposed subdivision.
- b. Marginal conditions for long-term onlot sewage disposal ☐ are, ☒ are not present. See marginal conditions information in Sections H and J and in attached instructions.
- c. If one or more lots in this subdivision are planned to be served by Individual Residential Spray Irrigation Systems (IRSIS), please see the specific information on IRSIS in Section G of the instructions.

Both the soils description preparer and developer must sign below indicating acknowledgement of the false swearing statement.

I verify that the statements made in this component are true and correct to the best of my knowledge, information and belief. I understand that false statements are made subject to the penalties of 18 Pa. C.S.A. §4904 relating to unsworn falsification to authorities.

Max Russick Soils Description Preparer Name (Print)				Joe Casadonti Developer Name (Print)		
	That	Kerser	11/11/2024	A	11-11-24	
Signature			Date	Signature /	Date	
	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	10 R d q 20 8.			the second second	

H.	MUNICIPALITY'S CERTIFIED SEWAGE ENFORCEMENT OFFICER (See Section H of instructions)
1.	I have confirmed the information relating to the general suitability for onlot sewage disposal contained in this component. Confirmation of this information was based upon on-site verification of soil tests, general site conditions and other generally available soils information. The proposed development site:
	Is generally suitable for onlot disposal. This module does not constitute individual permit approval.
	Is marginal for long-term onlot disposal. (See instructions for information on marginal conditions).
	☐ Is not generally suitable for onlot disposal. (See my attached comments regarding this determination).
	☐ Cannot be evaluated for general site suitability because of insufficient soils testing.
2.	The proposed development site is considered "marginal for onlot disposal" or for long-term onlot system use because one or more of the following conditions exist. (Check all that apply).
	Soils profile examinations which document areas of suitable soil intermixed with areas of unsuitable soils.
	Site evaluation which documents soils generally suitable for elevated sand mounds with some potential lots with slopes over 12%.
	Site evaluation which documents soils generally suitable for in-ground systems with some potential lots with slopes in excess of 20%.
	Lot density of more than 1 residential dwelling/acre.
3.	Residual Tract Facilities (For use only when there is an existing septic system on the residual tract)
	I have inspected the lot on which the existing building and existing septic system is located and have concluded, based on soils mapping or soils evaluation, permit information or site inspection that the long-term sewage disposal needs of this site and the building currently served can be met.
	I further acknowledge that no violations of the Sewage Facilities Act are known to me or have become apparent as a result of my site inspection. No inferences regarding future performance of the existing septic system should be drawn from this acknowledgement.
	A brief description and sketch of the existing system and site is attached.
	a Domiels 3938 1.19/25
	nature of Certified Sewage Enforcement Officer with Certification Date
juri	sdiction in municipality where development is proposed
l.	PROTECTION OF RARE, ENDANGERED OR THREATENED SPECIES (See Section I of instructions)
Ch	eck one:
⊠ sea	The "Pennsylvania Natural Diversity Inventory (PNDI) Project Environmental Review Receipt" resulting from my arch of the PNDI database and all supporting documentation from jurisdictional agencies (when necessary) is/are ached.
cor my	A completed "Pennsylvania Natural Diversity Inventory (PNDI) Project Planning & Environmental Review Form," NDI Form) available at www.naturalheritage.state.pa.us , and all required supporting documentation is attached. I quest DEP staff to complete the required PNDI search for my project. I realize that my planning module will be asidered incomplete upon submission to the Department and that the DEP review will not begin, and that processing of planning module will be delayed, until a "PNDI Project Environmental Review Receipt" and all supporting cumentation from jurisdictional agencies (when necessary) is/are received by DEP.
	Applicant or Consultant Initials
J.	PLANNING AGENCY REVIEW (See Section J of instructions)
100000	is planning module has been reviewed by the existing municipal planning agency and zoning officer and has been
ord has	and to be a consistent, inconsistent with municipal zoning ordinances or subdivision and land development linances. A waiver of the sewage facilities planning requirements for the residual tract of this subdivision in has a solution not been requested. If requested, the proposed waiver is is not consistent with applicable ordinances ministered by this agency.
	Marchan d.
146	w Britain Township Municipal Planning Agency Name Janene Mar chand Zoning Officer Signature
•	Dianning Agency Cignoture (Authorized Official)
	Planning Agency Signature (Authorized Official)

K.	MUNICIPAL ACTION (See Section K of instructions)	ten datas di termina di manganti di termina da senti da Senti per senti da s	
The	e municipality must act within 60 days of receipt of a complete	sewage facilities planning module package.	40
\boxtimes	This planning module has been reviewed by the municipal grapproval of this planning module does not constitute individu		PTABLE.
	This planning module is NOT ACCEPTABLE because:		
	Check appropriate reason(s)		
	☐ The subdivision does not comply with municipal zoning of	ordinances.	
	☐ The subdivision does not comply with municipal subdivis	sion and land development ordinances.	
	☐ The subdivision is not suitable for the use of individual or	nlot subsurface absorption areas.	
	The subdivision does not meet the requirements for (Administration of Sewage Facilities Planning Program).		napter 71
	Other (Explain)		Section 1
	The proposed development has been identified in Section G concerns for the long-term use of onlot sewage systems. providing long-term sewage disposal to this subdivision: (Ch	The municipality has selected the following m	s or other nethod of
	Provision of a sewage management program meeting the	e minimum requirements of Chapter 71, Section	71.73
	Replacement area testing		
	☐ Scheduled replacement with sewerage facilities		
	Reduction of the density of onlot systems		
	The justification required in Section J of the instructions is at	tached.	
	A waiver of the planning requirements for the residual tract of	of this subdivision has been requested.	
The municipality acknowledges acceptance of this proposal and requests a waiver of the sewage facilities planted requirements for the residual tract designated on the subdivision plot plan. Our municipal officials acceptance responsibility now and in the future to identify any violation of this waiver and to submit to the approving agency required sewage facilities planning for the designated residual tract should a violation occur or construction of a sewage-generating structure on the residual tract of the subdivision be proposed. We understand that such plate information may require municipal officials to be responsible for soil testing and other environmental assessment the residual tract in the future.		ccept full lency any of a new planning	
	Cyrthia Jones.		2/14/25
***************************************	Chairperson/Secretary of Governing Body	Signature	Date
Ne	w Britain Township		
-	Municipality Name		
<u>207</u>	7 Park Avenue, Chalfont, PA 18914 Address	(Area Code) Telephone No. (215) 822-1391	

L. REVIEW FEE (See Section L of instructions)	
	nd send me an invoice for the correct amount. I understand DEP receives the correct review fee from me for the project.
instructions. I have attached a check or money orderensylvania DEP". Include DEP code number and/or review of my project unless it receives the fee and determine the control of the contr	ne formula found below and the review fee guidance in the er in the amount of \$35 payable to "Commonwealth of or project name on check. I understand DEP will not begin nines the fee is correct. If the fee is incorrect, DEP will return the correct amount. I understand the DEP review will NOT
lot and is the only lot subdivided from a parcel of land subdivision of a second lot from this parcel of land shall of the following deed reference information in support of my	
County Recorder of Deeds for	County, Pennsylvania
Deed Volume	Book Number
Page Number	Date Recorded
Formula:	A THE STATE OF THE
# 1 Lots X \$35.00 = <u>35</u>	Contrar and the same state of the
Note: (1) To calculate the review fee for any project, us	se the number of lots created in the above formula.
review fee. Do not include any "Residual La	
Joe Casadonti III Anno Anno Anno Anno Anno Anno Anno	್ ಕೆಲ್ಲ್ ಫ್ರಾನ್ ಆರ್ಥ್ ಕ್ರೀಡ್ ಪ್ರಾಪ್ತಿಗಳು ಅವರ ಭಾವತ್ತ ಮಾಡಿತಿಗಳು ಮತ್ತು ಪ್ರತಿಕ್ರಿಯ ಅವರ ಪ್ರತಿಕ್ರಿಯ ಮಾಡಿತಿಗಳು ಆರ್ಥ ಮತ್ತು ಮಾಡಿತಿಗಳು ಮತ್ತು ಮತ್ತು ಮಾಡಿತಿಗಳು ಮತ್ತು ಮಾಡಿತಿಗಳು
1-11-24	1M 3 31 1 1
Signature Date	

DATE OF DECISION: 12/20/2023

DATE OF MAILING: 12/20/2023

BEFORE THE NEW BRITAIN TOWNSHIP ZONING HEARING BOARD

RE: APPLICATION OF CASADONTI HOMES, INC. FOR THE PROPERTY LOCATED AT 140-146 UPPER CHURCH ROAD, NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA, FURTHER IDENTIFIED AS TAX MAP PARCEL NO. 26-3-104

FINDINGS OF FACT

- 1. On Thursday, November 16, 2023, at 7:00 p.m. at the New Britain Township Building, 207 Park Avenue, Chalfont, New Britain Township, the New Britain Township Zoning Hearing Board ("Board") held a duly noticed hearing on the application of Casadonti Homes, Inc. (the "Applicant").
- 2. The Applicant is the record owner of the property located at 140-146 Upper Church Road, New Britain Township, also known as Bucks County Tax Map Parcel No. 26-3-104 (the "Property"). The Property is the subject of the instant application.
- 3: Notice of the November 16, 2023, hearing was published in advance of the hearing in the Thursday, November 2, 2023, and Thursday, November 9, 2023, editions of The Intelligencer, a newspaper publication of general circulation in New Britain Township. *See* Exhibit B-5.
- 4. Notice of the November 16, 2023, hearing was sent by first class mail on November 9, 2023, by David Conroy ("Conroy"), the New Britain Township Director of Planning and Zoning, to (a) all record owners of properties in New Britain Township within 500 feet of the Property; and (b) to the adjoining municipality for any similarly situated properties that are located in that municipality. See Exhibit B-8.
- 5. Conroy posted notice of the November 16, 2023, hearing on the Property on November 9, 2023, at 12:23 p.m. See Exhibit B-9.
- 6. The Applicant is a Pennsylvania for-profit corporation. As the record owner of the Property, the Applicant has the requisite standing to prosecute this zoning hearing board application.
- 7. The Property is located in the WS, Watershed, zoning district under the New Britain Township Zoning Ordinance (the "Zoning Ordinance").
- 8. The Property is improved with a single-family detached dwelling (use B1) and 2 accessory barn structures. Such uses and structures are permitted in the WS zoning district. See Zoning Ordinance §27-501.

- 9. The Applicant proposes a minor subdivision of the Property to create 2 lots. Lot 1 will contain the existing B1 use dwelling and barn structures, and will also contain a new single-family detached dwelling (use B1). Lot 2 will be a new building lot to be improved with a single-family detached dwelling (use B1). See Exhibit B-2, Plan.
- 10. To permit the minor subdivision of the Property and the creation Lot 1 and Lot 2, the Applicant seeks variances from the following sections of the Zoning Ordinance:
 - a. From §27-305.H.H14 and §27-501 to permit the existing dwelling on Lot 1 to be used as an accessory dwelling (use H14) that is not a stand-alone or second dwelling unit; and
 - b. From §27-2904.d.5 to permit 2 driveways to be 68.5 feet apart on Lot 1, where the required minimum separation distance is 75 feet.
- 11. Introduced as exhibits at the zoning hearing are the documents identified on Schedule A attached to this decision. Schedule A is incorporated by reference as though fully set forth herein at length.
 - 12. The following individuals testified in support of the application at the hearing:
 - a. Joseph Casadonti ("<u>Casadonti</u>"), principal and officer of the Applicant. Casadonti is a builder of residential homes.
 - b. Robert Cunningham, P.E. ("Cunningham"), registered professional civil engineer. The Board received Cunningham as a civil engineering expert witness.
- 13. A few individuals appeared at the hearing to comment on the application and ask questions before the Board. No one requested party status. New Britain Township took no position on the application and did not participate in the hearing.
- 14. The Property is a very large lot. It is oddly shaped. It resembles a rectangle with the northwest corner removed and replaced with a inward-curved boundary line. See Exhibit B-2, Plan.
- 15. The Property's gross lot area is 13.49 acres. Excluding the areas of the Property within the ultimate right-of-way of Upper Church Road and other easements, the Property's base site area is 12.42 acres. See Exhibit A-3, Existing Conditions Plan.
- 16. The Property's front lot line is 677.59 feet long at the center line of Upper Church Road. At the Upper Church Road ultimate right-of-way line, the Property is 639 feet wide. See Exhibit B-2, Plan.
- 17. The Property's eastern side lot line is 719.99 feet long. The rear lot line is 988.39 feet long. Each of these lot lines is relatively straight. *See* Exhibit B-2, Plan.
- 18. The western side lot line is very jagged. It consists of 6 separate sections. The straightest 2 sections connect to the rear lot line and are 279.4 feet long. The remaining 4 sections generally form a concave curve that is 287.01 feet long. See Exhibit B-2, Plan.

- 19. Casadonti and Cunningham stated, and the Board finds, that the Property contains many natural resources. An unnamed tributary to the North Branch of the Neshaminy Creek essentially diagonally bisects the Property. See Exhibit A-3, Existing Conditions Plan.
- 20. Casadonti and Cunningham stated, and the Board finds, that the Property also contains woodlands and steep slopes. Collectively, all the natural resources occupy 11.65 acres of the Property. See Exhibit A-3, Existing Conditions Plan.
- 21. Casadonti stated, and the Board finds, that the existing B1 dwelling and barn structures are located along the jagged side lot line in the middle to rear portion of the Property. They are served by a long driveway that is partially on both the Property and the adjoining tract. See Exhibits A-2, Aerial Plan; and A-3, Existing Conditions Plan.
- 22. Casadonti stated, and the Board finds, that the existing long driveway is within a recorded easement. It accesses Upper Church Road near where the northern side lot line connects to the front lot line. See Exhibits A-2, Aerial Plan; and A-3, Existing Conditions Plan.
- 23. Casadonti and Cunningham stated, and the Board finds, that the new minor subdivision line will partition the Property roughly in half. Lot 2 will be 7.889 acres, and Lot 1 will 5.460 acres. The existing structures will be on Lot 1. See Exhibit B-2, Plan.
- 24. Cunningham stated, and the Board finds, that the proposed subdivision configuration was chosen to allow Lot 1 and Lot 2 to be comparable in size, shape and layout to the surrounding properties. *See* Exhibit B-2, Plan.
- 25. Casadonti and Cunningham stated, and the Board finds, that the vast natural resources significantly reduce the available building envelope on Lot 1 and Lot 2. The 2 new single-family detached B1 dwellings are close to Upper Church Road. See Exhibit B-2, Plan.
- 26. Each new dwelling will be served by its own on-lot septic system, well, and stormwater management system. Each new dwelling will also be served by its own driveway that connects to Upper Church Road. See Exhibit B-2, Plan.
- 27. Cunningham stated, and the Board finds, that the size and location of the building envelope on Lot 1 as well as the slope in Upper State Road limit where the driveway can access the street. See Exhibit B-2, Plan.
- 28. Cunningham stated, and the Board finds, these physical features prevent the new Lot 1 driveway's access point from being more than 75 feet away from the existing driveway. The 68.5 feet separation distance is the maximum gap that can be provided. See Exhibit B-2, Plan.
- 29. Regarding the existing 2 barn structures, Casadonti stated that the smaller barn will be removed. The lower wing sections of the larger barn will be removed, but the larger barn's original middle section will be preserved. See Exhibit A-5, Photos.
- 30. Casadonti stated, and the Board finds, that the larger barn's center section is in good condition. It will be secured during construction to ensure it does not become damaged or a hazard. See Exhibit A-5, Photos.

- 31. Casadonti stated, and the Board finds, that the existing dwelling was originally built in or around 1850. The dwelling will be renovated to be used as accessory living space solely in connection with the new house on Lot 1. See Exhibit B-2, Plan.
- 32. Casadonti stated, and the Board finds, that although the existing dwelling will be considered an accessory dwelling (use H14) under the Zoning Ordinance, it will not be a separate, stand-alone or second dwelling unit. See Exhibit B-2, Plan.
- 33. Casadonti stated, and the Board finds, that the renovated former house will not have an in-law suite, nor a kitchen. The sewage disposal system for the renovated structure will be an auxiliary system intended to serve only a single bathroom. It will not be a bedroom-based septic system. See Exhibit B-2, Plan.
- 34. Cunningham stated, and the Board finds, that a large conservation easement will run through the rear and eastern side yard of Lot 2. The protected riparian buffer on Lot I serves as a *de facto* conservation easement. *See* Exhibit B-2, Plan.
- 35. The surrounding properties consist of similar style residences and large lots. The surrounding property owners voiced concerns about the safety of the large barn and the on-lot septic systems for the 2 new dwellings.
- 36. Due to the Property being an oddly shaped large lot, along with the existence of a large amount of protected natural resources, the Property contains unique physical characteristics that support relief for the variances in connection with the proposed minor subdivision.
- 37. The Zoning Ordinance's limitations impose a hardship on the Property and the Applicant in that these provisions prevent a reasonable minor subdivision of the Property with 2 residentially used lots that are harmonious with the tracts in the surrounding area.
- 38. Subject to the conditions imposed herein, the proposed minor subdivision plan, the driveway separation, and the re-purposed use of the existing dwelling structure, are consistent with uses of other properties in the surrounding neighborhood.

CONCLUSIONS OF LAW

- 1. Required public notice of the date, time and location of the November 16, 2023, hearing was made by sufficient advanced publication, posting and mailing to affected property owners.
- 2. In order to show entitlement to a variance, use or dimensional, an applicant must demonstrate all the following elements:
 - a. an unnecessary hardship stemming from unique physical characteristics or conditions will result if the variance is denied;
 - b. because of such physical circumstances or conditions, there is no possibility that the property can be developed in strict conformity with the provisions of the zoning ordinance and a variance is necessary to enable the reasonable use of the property;

- c. the hardship has not been created by the applicant;
- d. granting the variance will not alter the essential character of the neighborhood nor be detrimental to the public welfare; and
- e. the variance sought is the minimum that will afford relief.
- 3. The Board finds that the request to use accessory dwelling (use H4) as a modified living space structure is a request for a use variance. The Board finds that the driveway separation variance is a dimensional variance.
- 4. Under Pennsylvania law, a use variance arises in situations where the proposal is to use the property in a manner that is wholly outside a Zoning Ordinance regulation. See Hertzberg v. Zoning Board of Adjustment of Pittsburgh, 721 A.2d 43 (Pa. 1998).
- 5. A dimensional variance involves a request to adjust or vary a zoning ordinance provision by degree to be able to otherwise use a property consistent with the regulations. See Dunn v. Middletown Township Zoning Hearing Board, 143 A.3d 494 (Pa Commw. 2015); see also Constantino v. ZHB of Forest Hills Borough, 636 A.2d 1266 (Pa. Commw. 1994).
- 6. The reasons for granting any variance must be substantial, serious and compelling. The party seeking the variance bears the burden of proving that (a) unnecessary hardship will result if the variance is denied; and (b) the proposed use will not be contrary to the public interest. See Wilson v. Plumstead Township Zoning Hearing Board, 936 A.2d 1061 (Pa. 2007).
- 7. An applicant can demonstrate "unnecessary hardship" for a use or dimensional variance by showing that: (a) a property's physical characteristics are such that the property cannot be used for any permitted use or purpose; (b) the property can only conform to a permitted use or purpose at prohibitive expense; or (c) that the property has either no value or only distress value for any permitted purpose. See Nowicki v. Zoning Hearing Board of Monaca Borough, 91 A.3d 287 (Pa. 2014).
- 8. Although mere economic hardship alone will not justify the grant of a use variance, an applicant need not demonstrate that the property is rendered completely valueless without the variance or as zoned in order to show that a use variance is needed to make reasonable use of the property. See Marshall v. City of Philadelphia, 97 A.3d 323 (Pa. 2014).
- 9. When evaluating an unnecessary hardship in a use variance case, use of adjacent and surrounding land is relevant but not dispositive. See Valley View Civic Association v. Zoning Hearing Board of Adjustment, 462 A.2d 637 (Pa. 1983).
- 10. A dimensional variance is subject to a lesser standard of proof to establish unnecessary hardship than a use variance. See Hertzberg v. Zoning Board of Adjustment of City of Pittsburgh, 721 A.2d 43 (Pa. 1998) (when seeking a dimensional variance within a permitted use, the owner is asking only for a reasonable adjustment of the zoning regulations. The grant of a dimensional variance is of lesser moment than the grant of a use variance, since the latter involves a proposal to use the property in a manner that is wholly outside the zoning regulation).

- 11. When deciding whether a hardship has been established in dimensional variance cases, the *Hertzberg* rationale authorizes the Board to consider multiple factors, including (a) the economic detriment to the applicant if relief is denied; (b) the financial hardship created by any work necessary to bring the proposed improvements into strict compliance with the zoning requirements; and (c) the characteristics of the surrounding neighborhood. *See Hertzberg, supra*, at 47, 50.
- 12. Nevertheless, the reasons for granting a variance must be substantial, serious and compelling. The party seeking the variance bears the burden of proving that (a) unnecessary hardship will result if the variance is denied; and (b) the proposed use will not be contrary to the public interest. See Wilson v. Plumstead Township Zoning Hearing Board, 936 A.2d 1061 (Pa. 2007).
- 13. The Board concludes that the Applicant has established, by substantial and credible evidence, that an unnecessary hardship will result if the variances are refused due to the unique physical circumstances and conditions of the Property.
- 14. The Board concludes that the Property's odd shape, location and age of the existing structures, and the Property's extensive natural resources establish a hardship under the *Hertzberg* standard sufficient to justify the variances requested.
- 15. The Board concludes that the nature of the renovated accessory dwelling is sufficient to justify the variance necessary from Zoning Ordinance §27-305.H.H14 and §27-501 to permit the structure to be used for living space purposes without rising to the level of being a full dwelling unit.
- 16. Critical to the Board's conclusion is that the accessory dwelling will be used only by the occupants of the new house on Lot 1. It will not be a rental unit, and will lack the overall physical features (i.e., kitchen) typical of a stand-alone dwelling unit.
- 17. Regarding the new driveway on Lot 1, the Board concludes that the 68.5 feet separation distance is necessary due to the Property's physical characteristics. Relocating the driveway to increase this distance is not possible and would create hazardous conditions.
- 18. The location of the building envelope, the slope of Upper Church Road, and the existing driveway within an easement benefiting the adjoining tract limit the places where the Lot 1 driveway can access the street. See Exhibit B-2, Plan.
- 19. Based on the credible testimony presented, the Board concludes that the requested variances propose reasonable adjustments to the Zoning Ordinance in connection with the minor subdivision.
- 20. The Board concludes that while the Applicant has established hardships to justify the variances, the Applicant can mitigate any adverse effects that use of the accessory dwelling structure on Lot 1 may have on surrounding tracts by preventing it from becoming a stand-alone dwelling unit.
- 21. Provided the Applicant complies with the reasonable conditions attached to the relief granted herein, the Applicant has met the Zoning Ordinance and Pennsylvania law

requirements for the variances, including hardship, to effect a minor subdivision of the Property, with the resulting dimensions and sizes of Lot 1 and Lot 2, as shown in with the definitive plan identified as Exhibit B-2.

- 22. The approved variances will not alter the essential character of the neighborhood in which the Property is located nor substantially impair the appropriate use or development of adjacent properties.
 - 23. The approved variances will not be detrimental to the public welfare.
- 24. The conditions and circumstances imposing a hardship upon the Property for the approved variances are not of the Applicant's own doing.
- 25. The approved variances represent the minimum variances that will afford relief and represent the least modification of the zoning regulations under the circumstances.

DECISION

AND NOW, this 20th day of December, 2023, upon consideration of the foregoing Findings of Fact and Conclusions of Law, the New Britain Township Zoning Hearing Board hereby GRANTS the Applicants' request for variances from the Zoning Ordinance as follows:

- a. A variance is granted from §27-305.H.H14 and §27-501 to permit the existing dwelling on Lot 1 to be used as an accessory dwelling (use H14) that is not a stand-alone, separate or second dwelling unit on Lot 1; and
- b. A variance is granted from §27-2904.d.5 to permit the 2 driveways on Lot 1 to be 68.5 feet apart.

The relief granted above is subject to the following conditions:

- 1. The proposed 2 lot minor subdivision of the Property, and the resulting layout of Lot 1 and Lot 2, shall be in accordance with definitive plan marked as Exhibit B-2, the other evidence, representations and credible testimony made at the hearing.
- 2. The living space proposed for the renovated existing residential dwelling shall not be a stand-alone, separate or second dwelling unit on Lot 1. Occupancy of the living space shall be limited to family members of the occupants of the new main dwelling on Lot 1. The accessory dwelling shall not be leased or rented to third parties. The septic system for the modified accessory dwelling shall be an auxiliary type system for a single bathroom, not a bedroom-based system.
- 3. This decision does not waive any requirements of any other applicable New Britain Township Ordinance(s); and the proposed use(s) and/or improvements(s) must meet all other applicable federal, state, county and New Britain Township regulations and codes.

The signatures of the New Britain Township Zoning Hearing Board members that appear on the following page attached hereto and incorporated herein, confirms the Board's decision and order.

DocuSigned by:	
By: Dave Conroy	12/20/2023 Date:
David Conroy	
New Britain Township	
Director of Planning and Zoning	

Thomas J. Walsh III, Esquire Solicitor, New Britain Township Zoning Hearing Board 3655 Route 202, Suite 105 Doylestown, PA 18902

Note to Applicant: This Decision is NOT an authorization to build. Zoning and building permits must be obtained from New Britain Township prior to the commencement of any construction.

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SCHEDULE A – TABLE OF EXHIBITS

Exhibit	Description
B-1	Zoning Hearing Board application dated 9/26/22 Included with the Application:
	Addendum outlining relief requested Deed dated 9/30/2022
	 Map and list of property owners within 500 feet
B-2	Subdivision Plan, 1 sheet, prepared by Holmes Cunningham, LLC, dated 6/16/23
B-3	Letter to The Intelligencer dated 10/27/23 forwarding public notice of 11/16/23 hearing for publication
B-4	Public Notice of the hearing on 11/16/23
B-5	Proof of publication of public notice in 11/2/23 and 11/9/23 editions of The Intelligencer
B-6	Letter to Applicant's attorney dated 10/30/23 providing notice of the 11/16/23 hearing
B-7	Township list of the record owners of all properties within 500 feet of the Property; map of properties
B-8	Affidavit of mailing to property owners – notice of hearing mailed on 11/9/23 to property owners on exhibit B-7
B-9	Affidavit of posting of public notice at property – notice posted on 11/9/23 at 12:23 p.m., together with photo of posting
B-10	Bucks County Floodplain Viewer and Map of Property
A-1	ZHB Application (same as Exhibit B-1)
A-2	Aerial Map, 1 sheet, prepared by Holmes Cunningham, LLC, dated 6/16/2023
A-3	Existing Conditions and Site Analysis Plan, 1 sheet, prepared by Holmes Cunningham, LLC, dated 6/16/2023
A-4	Subdivision Plan, 1 sheet, prepared by Holmes Cunningham, LLC, dated 6/16/23 (same as Exhibit B-2)
A-5	5 photos

New Britain Township Zoning Hearing Board

Signature Page

Re: Casadonti Homes, Inc. 140-146 Upper Church Road New Britain Township TMP No. 26-3-104

Date:	December 20, 2023
Chuck Coxhead, Chair	Charles a Cophead D2A2738415474F1
Cathy Basilii, Vice Chair	/ABSENT/
Scott Fischer, Member	Docusigned by: Scott Fischer DEFESSAFF378430
Ryan Wantz, Alternate Member	DocuSigned by:

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		ation No	Desirement of the last of the			Munici		New	Britain Tow	nship	_ County	Bud	cks
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] Suitable] Unsuital		☐ Mottl		De <u>Reaville</u> Geeps or Ponded						_Ave. Perc. se Fragments		23.74 Perc. Rate
			☐ Slo	ppe 🔲	Unstabilized Fill	☐ Floo	odplain [Other		The second secon		A. A. Typer Johnson Commission of St.	
		INSTR	UCTIO	NS FO	R COMPLE	TION OF	THIS FOR	M ARE LO	CATED	N THE F	REVERSE		- 10 3000 (10
		DESCI Descri			by:		VW Con	sultants LL	C/MHR		_ Date:	12/21/22	
	Inc	ches	Pit#	4			Descriptio	n of Horizo	n				
Ap		TO 16	11	10YR 3	/4, Silt Loam, N	loderate, M	ledium, Suba	ngular Block	y, Friable			<u> </u>	
Bt1	16	TO <u>35</u>	n	10YR 5	/4, Channery, S	Silt Loam, M	loderate, Me	dium, Suban	gular Blocky,	Friable .	V Charles		
Bt2	35	TO 42	н	10YR 5	/4, Very Chann	ery Silt Lo	am Weak M	edium Suba	ngular Block	v Friable			
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		Hole No.	Yes	No	Interval	of drop	of drop	of drop	of drop	of drop	of drop	of drop	of drop
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	1				10/30								
	1	***Water	remainin	g in the ho	ile at the end of t	he final 30 m	inute presoak	? Yes, use 30	minute inten	/al; No use	10 minute interv	ral.	<u></u>
					Percolation F					, C			
	Hole N		Drop d	uring	Perc. Rate Minutes/In	as	Depth of Hole	I				ř.	
				n				41	· .	The informa	ition provided is	the true and	
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	Annual States			h h	***************************************				A	\cap	Don	: In #	3938
		L OF M			***************************************	=		Min	9	(s) U	ANY	UW)	****
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		cation No	\$100 mile 1000 have placed as the			Munici			Britain Tow	nship	County	Buc	cks
_				140	(146) Upper (Church Ro	ad	Subd'n Nai	me	Segregary 2 - 1 % 3	Lot	#1	
4] Suitabl	le		Soil Ty	pe Readington	Slope	2-4%	Limiting 2	Zone	27"M	Ave. Perc.	Rate	16.80
] Unsulta	able	Mott	ling 🔲	Seeps or Ponded	Water	Bedro	ck 🔲 Fra	ictures	Coarse	e Fragments		Perc. Rate
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		ches	Pit#				Description						
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3C	_27	TO_33	11	10YR 5	5/4, Very Chann	nery, Silt Lo	am, Weak, M	edium, Suba	ingular Block	y, Firm			
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	Soil C	Hole No.	S: H20 Yes	No No No Average uring	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 20 / 30 20 / 30 20 / 30 20 / 30 20 / 30	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
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		cation No		-		Municip	-	New I	Britain Town	ship	County	Buci	(S
· (4)		ocation		140	(146) Upper C	hurch Roa	<u>d</u> 8	Subd'n Nan	ne _		Lot#	£ 1	
1	Suitabl	е		Soil Ty	pe Readington	Slope	2-4%	Limiting Z	one	20"M	Ave. Perc. R	late	16.80
	Unsuita	able	Mott		Seeps or Ponded		Bedroc			Coarse		_	erc. Rate
		-	Slo	120		Floor	dolain	Other	4 :				
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	Soil	s Descrip	otion C	omplete	e by:		VW Cons	ultants LLC	MHR	1.6.25	Date:	12/21/22	
	In	ches	Pit#	6	.,		Description	of Horizo	n			Additional P	its
Ap	0	TO_10	."	7.5YR	3/4, Silt Loam, N	Moderate, M	edium, Grant	ılar, Friable				Pit #5 27"M	
Bt1	10	TO 20	•	10YR	4/6, Silt Loam, N	loderate, Fir	ne, Subangul	ar Blocky, Fr	iable			Pit #7 24"M Pit #8 31"M	
Bt2	20	TO 25	н	10VR	4/6, Channery, S	Silt Loam Mo	ndarate Med	ium Subanc	ular Blocky	Friable to Fi	rm		
		10_20		Comm	on faint redox de	epletions and	d common di	stinct redox	concentration	IS	ior.		
Btx	25	TO 33	."		4/6, Channery, S		eak, Coarse,	Prismatic, F	irm				
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		her Cond				√ 40 F or Ab		Dry	Rain, Sle	et, Snow (last	t 24 hours)		
	Soil C	ondition	Andrews (Francisco)	The Park of the Land	Wet 🗹	Dry F					: : 7 1	· · · · · · · · · · · · · · · · · · ·	
			H20	Left		Reading No. 1:	Reading No. 2:	Reading No. 3:	Reading No. 4:	Reading No. 5:	Reading No. 6:	Reading No. 7:	Reading No. 8:
					Reading	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
		Hole No.	Yes	No	Interval	of drop	of drop	of drop	of drop	of drop	of drop	of drop	of drop
		1	X	in - 1 to	XX / 30	5.250	5.375	5.125	5.250				
		2	X		XX / 30	1.375	1,125	1.125	1.250				
		3	X		XX / 30	2.000	1.750	1.625	1.500	1.375	1.375	Sand Sand	pro to the second
		4	X		XX / 30	4.000	3.875	3.875	4.125		and the same of th	the distribution of the state o	
		5	X		XX / 30	4.500	3.750	3.125	3.125	2.625	2.625	2.500	2.500
		6	X	a in the b	XX / 30 ole at the end of the	1,250	1.000	1.000	1.000	di. Ma	minuto interve		
				Part of the second			nute presoak ?	res, use 30	minute interva	ii, No use 10	minute interva		
		Calcula			Percolation F		Dorth						
	Hole N	lo.	Drop d	eriod	Perc. Rate Minutes/In-		Depth of Hole	Ī	777	The National Control of the Na	1		The state of the s
	1		5.2		5.71		20 '	E-	-	The information	on provided is t	he true and	
	2		1.2		24.00	-	20 '				of tests condu		
	3		1.3		21.82	_	20 "				d under my per		
	4		4.1	The second second second	7.27	-	20 '		,	ision, or conf	irmed in a man	ner approved	
	5		2.50		12.00	_	20		ı	y the Departr	ment.	1 11-	1000
	6		1.00	00_"	30.00	-	20 "				Dan	1/1/15	3938
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		cation No				Municip		New	3ritain Towi	isnip	County	Buc	A3
				140 (146) Upper (Church Ros	ad	Subd'n Nan	ne _		Lot#	1.	
1] Suitable	е		Soil Typ	e Reaville	Slope	2-4%	Limiting Z	one	24"M	Ave. Perc. F	late	16.80
_] Unsuita	able [eeps or Ponded		Bedro		tures	Coars	e Fragments	☐ P	erc. Rate
			Slo	ре 🔲 и	Instabilized FIII	Floo	odplain [Other		-			
utuman		INSTRU	JCTIO	NS FOR	COMPLE	TION OF	THIS FOR	M ARE LO	CATED	N THE R	EVERSE		
	SOILS	SDESCE	RIPTIO	N:									
	Soil	s Descrip	otion Co	omplete i	by:		, and the second of the second	A 100 P.O.			Date:	12/21/22	
	In	ches	Pit#	7			Descriptio	n of Horizo	n				
	0	TO 14		7.5YR 3/	/4, Silt Loam,	Moderate, F	ine, Subangı	ılar Blocky, F	riable				
	14	TO 24	<u>u</u>	10YR 5/-	4, Channery,	Silt Loam, M	oderate, Med	fium, Suban	jular Blocky,	Friable			
	24	TO 32	u	10YR 5/4	4, Very Chann	ery, Silt Loa	ım, Weak, M	edium, Suba	ngular Block	y, Firm			
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	Perc	colation T	est Co	mpleted	by:						Date:	at - management to the second	
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		her Cond			low 40 F	40 For A	788	Dry	Rain, Si	eet, Snow (la	st 24 hours)		
		her Condition	s:	□w	low 40 F	Dry [Frozen			TENERAL TOTAL STREET		Reading	Reading
				☐ W	elow 40 F	Dry [] Reading No. 1:	Frozen Reading No. 2:	Reading No. 3:	Reading No. 4:	Reading No. 5:	Reading No. 6:	Reading No. 7;	Reading No. 8:
		Condition	s: H201	☐ W	low 40 F	Dry [] I	Frozen Reading	Reading	Reading	Reading	Reading		
			S: H201	□ W	elow 40 F et C	Reading No. 1: Inches	Frozen Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7; Inches	No. 8: Inches
		Condition	S: H201	□ W	elow 40 F et Reading Interval	Reading No. 1: Inches	Frozen Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7; Inches	No. 8: Inches
		Condition	S: H201	□ W	Reading Interval	Reading No. 1: Inches	Frozen Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7; Inches	No. 8: Inches
		Condition	S: H201	□ W	Reading Interval	Reading No. 1: Inches	Frozen Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7; Inches	No. 8: Inches
		Condition	S: H201	□ W	Reading Interval 10 / 30 10 / 30	Reading No. 1: Inches	Frozen Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7; Inches	No. 8: Inches
		Condition	S: H201	□ W	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30	Reading No. 1: Inches	Frozen Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7; Inches	No. 8: Inches
		Hole No.	S: H201	Left No	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30	Reading No. 1: Inches of drop	Frozen Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: inches of drop	Reading No. 6: Inches	No. 7: Inches of drop	No. 8: Inches
		Hole No.	S: H201 Yes	No No g in the hol	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30	Reading No. 1: Inches of drop	Frozen Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
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Α	pplication No	D <u>.</u>		<u></u>	Municip		New	Britain Tow	nship	County	Bı	ucks
	ite Location		14	10 (146) Upper (Church Roa	ad	Subd'n Nar	ne .		Lo	ot# 1	St. Server Serverine Andrew S. 19
√ St		Soil	Type Reaville	Slope	2-4%	Limiting Z	Zone	31"M	Ave. Perc.	Rate	16.80	
U	nsuitable	☐ Mott		Seeps or Ponded		Bedro		-	Coars	se Fragments		Perc. Rate
		Slo	оре [Unstabilized Fill	Floo	odplain	Other		-			
	INSTR	UCTIC	NS F	OR COMPLE	TION OF				N THE F	EVERSE		
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	Soils Descri	ption C	omple	ete by:	y =	ATTENDED TO THE RESIDENCE OF THE PARTY OF TH	The state of the s	marketines to ATT TIME I		_ Date:	12/21/22	***************************************
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t2	31 TO 40	**		R 4/4, Channery,		Veak, Mediun	n, Subangula	ır Blocky, Fri	able to Firm	1	*******	
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	1			Reading	No. 1: Inches	No. 2: Inches	No. 3: Inches	No. 4: Inches	No. 5: Inches	No. 6: Inches	No. 7: Inches	No. 8; Inches
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	1			10 / 30					100	1		
		6		10/30		a a						
				hole at the end of t		inute presoak	? Yes, use 30) minute interv	al; No use 1	0 minute inten	val.	
	Calcula			ge Percolation F								
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	lication No				Munici			Britain Tow	nship	County	Buc	ks
	Location	-	140	(146) Upper	Church Ro	ad	Subd'n Na	ne .		Lot	# 2	
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Unst	uitable			Seeps or Ponded		☐ Bedro			Coars	e Fragments		erc. Rate
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0 () TO 9		10YR 3	3/3, Gravelly, S	ilt Loam, Mo							
_	2	3.	The state of						267		-	
N	70_26	•	10114	1/6, Gravelly, S	olit Loam, ivid	derate, Fine	Subangular	Blocky, Friat	ole		_	
326	6_TO_34	-	10YR 4	1/6, Very Chan	nery, Silt Loa	am, Weak, F	ne, Subangu	lar Blocky, F	riable		-	
	то	n		and the same				and the second				
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	ercolation T ather Cond			elow 40 F	1 40 F or A	bove	Dry	Rain, St	eet, Snow (la	Date:		*
	Condition		□ v			Frozen						
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	Hole No.	1		Reading	Inches	Inches	Inches	No. 4: Inches	No. 5: Inches	No. 6: Inches	No. 7: Inches	No. 8: Inches
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		Yes	No	10 / 30			Inches	Inches	Inches	Inches	Inches	No. 8: Inches
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		ches	Pit#		A CONTRACTOR OF THE PROPERTY O		Description					Additional P	its
Ap	0	TO_10	81	10Y	R 3/3, Channery,	Silt Loam, M	oderate, Fine	, Granular, F	riable			Pit #9 34"+	
Bw	10	TO 28	и	10Y	R 4/4, Very Flagg	y, Silt Loam,	Weak, Fine,	Subangular	Blocky, Friab	le		Pit #10 36"+ Pit #12 29"+	
		то				*				2			
	4	то	•	***************************************					(1)	, //	7		
	-	то		***************************************	30 3 Sep 20 Sep				Thoy	the	ser		
	***************************************											Depth to Lir	niting
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	-	то				William Commission of the Comm						recommended to the same of	10.100
namen and the second													
	PER(COLATIC	N TES	T: mple	ted by:		VW Gor	sultants I I	C/GH		Date:	4/18/23	
*		her Cond			Below 40 F	✓ 40 F or A	bove 🖸	Dry	Rain, Sie	et, Snow (las	t 24 hours)		*
		ondition] Wet	Dry 🔲 I	Frozen		e no Mentel is lower (EMNel)		endyt og til til til til til en		
			H20 I		Interest of Contrast	Reading No. 1;	Reading No. 2:	Reading No. 3:	Reading No. 4:	Reading No. 5:	Reading No. 6;	Reading No. 7:	Reading No. 8:
				[]	Reading	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
		Hole No.	Yes	No	Interval XX / 30	of drop 5,125	of drop 5.000	of drop 5.875	of drop 4.250	of drop 4.375	of drop 5.250	of drop 4.375	of drop 4.125
		2		Х	10 / XX	3.375	4.625	3.250	3.750	3.000	a .750	2.875	2.500
		3	х		XX / 30	4.250	4.375	4.000	4.250	4.250	4.250		
		4		Х	10 / XX	2.500	The same of the sa	2.500	3.000	2.750	2,625	3.000	3.000
		5	Х		XX / 30	4.875	5.375	4.250	4.250	3.875	3.625	3.625	3.375
		6	Х	i i	XX / 30	5.125		4.375	4.500	4.000	4.000		4.500
			- 2		hole at the end of		inute presoak 1	Yes, use 30	minute interva	i; No use 10	minute interva		Control control and annual control con
		Calculat			ige Percolation I		Danish						
	Hole N	lo.	final pe		Perc. Rate Minutes/Ir		Depth of Hole	ſ					
	1		4.12		" 7.27		20	•	•	The information	on provided is t	ne true and	
	2		2.50		" 4.00		20				s of tests condu		
	<u>3</u> 4		3.00	-	" 7.06 " 3.33		20				d under my per firmed in a man	•	
	5		3.37		" 8.89		20	,		by the Depart		ilei appioved	10000
	6		4.50	-	" 6.67		20	1		\cap	DAIN	NIA IN	\$6/PC#
	TOTA	L OF MI	N/IN.		37.22	=	6.20	Min		(s) (A	10(X)	NUU	
					01.22		0.20			-	- V V		
		L No. O		ES	6		0.20	Inch			nforcement Offi	cer	

				NAME OF STREET,	Municip			Britain Tow	Homp	County	Bu	2710
	Site Locat	ion	140	(146) Upper (Church Roa	ad	Subd'n Nai	ne	1	Lo	t# 2	
	Suitable Unsuitable	☐ Mot	tling 🔲	pe <u>Culleoka</u> Seeps or Ponded Unstabilized Fill		☐ Bedro	Section 1	ctures		_Ave. Perc. se Fragments		G-20 Perc. Rate
aller yar				R COMPLE	TION OF	THIS FOR	M ARE LO	CATED (N THE F	EVERSE		
	SOILS DE Soils De	SCRIPTION (ON: Complete	by:		VW Con	sultants LL	C/MHR	47	Date:	12/21/22	
	Inches	Pit#	12			Descriptio	n of Horizo	on				
	0_TO_	12 "	10YR 3	3/3, Channey, S	Silt Loam, Mo	oderate, Fine	, Granular, \	ery Friable			-	
w		29_"	10YR 4	1/4, Very Chann	nery, Silt Loa	ım, Weak, Fi	ne, Subangu	lar Blocky, F	riable		- 2.	
	TO_					*		(1)	/	2	_	
	то_							Tho	+ K	ser		
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	ТО										Depth to L Zone:	miting
	то										29+	Inches
3					Tangan Salas							
¥.	Percolation		-		□ 40 E or A	hour [l Dov	□ Pain S	ook Coou (Is	Date:		
¥.	Weather C Soil Condi	onditions tions:	-	elow 40 F	40 F or A	Frozen	Dry Reading		· f	ast 24 hours)	I Reading	Reading
*	Weather C Soil Condi	conditions tions:	: DE	elow 40 F			Reading No. 3:	Reading No. 4: Inches	Reading No. 5:	-	Reading No. 7: Inches	Reading No. 8: Inches
¥.	Weather C	conditions tions:	:	Reading Interval	Dry [] Reading No. 1:	Reading No. 2:	Reading No. 3:	Reading No. 4;	Reading No. 5:	Reading No. 6:	No. 7:	No. 8:
· ·	Weather C Soil Condi	conditions tions:	: DE	Reading Interval	Reading No. 1: Inches	Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7: Inches	No. 8: Inches
¥.	Weather C Soil Condi	conditions tions:	: DE	Reading Interval	Reading No. 1: Inches	Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7: Inches	No. 8: Inches
1	Weather C Soil Condi	conditions tions:	: DE	Reading Interval	Reading No. 1: Inches	Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7: Inches	No. 8: Inches
The second secon	Weather C Soil Condi	conditions tions:	: DE	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30	Reading No. 1: Inches	Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6: Inches	No. 7: Inches	No. 8: Inches
The state of the s	Weather C Soll Condi	conditions tions:	Left No	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
Topic and the second se	Weather C Soll Condi	conditions tions: H20 No. Yes	Left No	Reading Interval 10 / 30 10 // 30	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
The second secon	Weather C Soll Condi	conditions tions: H20 No. Yes	Left No	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
The second second	Weather C Soll Condi	No. Yes	Left No No Average during eriod	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 Percolation Ferc. Rate	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
The second secon	Weather C Soll Condi	No. Yes	Left No No Average during eriod	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 Percolation Ferc. Rate	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop al; No use f	Reading No. 6: Inches of drop O minute interva	No. 7: Inches of drop	No. 8: Inches
The state of the s	Weather C Soll Condi	No. Yes	Left No No Average during eriod	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 Percolation Ferc. Rate	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop The informal correct resul me, performe	Reading No. 6: Inches of drop O minute interva	No. 7: Inches of drop	No. 8: Inches
and the second s	Weather C Soll Condi	No. Yes	Left No No Average during eriod	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 Percolation Ferc. Rate	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop The informal correct resul me, performe	Reading No. 6: Inches of drop O minute interva	No. 7: Inches of drop	No. 8: Inches
	Weather C Soll Condi	No. Yes	Left No No Average during eriod	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 Percolation Ferc. Rate	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop The informat correct resul me, performation, or control o	Reading No. 6: Inches of drop O minute interva	No. 7: Inches of drop	No. 8: Inches
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			- Control Control Control	140 ((146) Upper (Church Roa	ad	Subd'n Nar	ne .	-	Lo	t# 2	-
4	Suitable	е		Soil Tyr	e Culleoka	Slope	10-12%	Limiting 2	Cone	36"+	Ave. Perc.	Rate	18.02
	Unsulta	able			eeps or Ponded		Bedro	ck	ctures	Coars	e Fragments		Perc. Rate
			Slo		Jnstabilized Fill		odplain	Other	woman				
		INSTR	UCTIO	-	R COMPLE	TO BE BUILDING HOUSE THE REAL PROPERTY OF THE REAL							
	SOILS	SDESC	RIPTIO	N:									
	Soil	s Descri	ption Co	omplete	by:		VW Con	sultants LL	C/MHR	Elia III areas areas areas areas	Date:	12/21/22	
	In	ches	Pit#	13			Descriptio	n of Horizo	n				
q		TO 15		2.5Y 3/4	I, Channery, S	ilt Loam, Mo	oderate, Fine	, Granular, F	riable				
w	15	TO 24		2.5Y 4/6	6, Channery, S	ilt Loam, Mo	oderate, Fine	, Subangular	Blocky, Fria	ble			
2	_24	TO 36	11	2.5Y 4/6	3, Extremely, C	Gravelly, Loa	ım, Weak, Fi	ne, Subangu	lar Blocky, F	riable			
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	-	то											
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	Weat	her Condition	ditions : s:	☐ Be	elow 40 F /et Reading	Reading No. 1: Inches	Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5:	Reading No. 6: Inches	No. 7: Inches	No. 8: Inches
	Weat	her Cond	ditions : s: H20 I	☐ Be	elow 40 F /et	Dry Reading No. 1:	Frozen Reading No. 2:	Reading No. 3:	Reading No. 4:	Reading No. 5:	st 24 hours) Reading No. 6;	No. 7:	No. 8:
	Weat	her Condition	ditions : s:	☐ Be	Reading Interval	Reading No. 1: Inches	Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5:	Reading No. 6: Inches	No. 7: Inches	No. 8: Inches
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	Weat	her Condition	ditions : s:	☐ Be	Reading Interval 10 / 30 10 / 30	Reading No. 1: Inches	Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5:	Reading No. 6: Inches	No. 7: Inches	No. 8: Inches
	Weat	her Condition	ditions : s: H20 t	Be W	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30	Dry Reading No. 1: Inches of drop	Frozen Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
	Weat	her Condition Hole No.	ditions : s: H20 t Yes	Be W	Reading Interval 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30 10 / 30	Dry Reading No. 1: Inches of drop	Frozen Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches
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	oplication No	-			Municip		New	Britain Town	snip	County	Buck	
			140	(146) Upper (Church Roa	ad S	Subd'n Nam	ne _		Lot#	‡2	
☑ Suit		☐ Mo#1		De Readington Seeps or Ponded	. ,	10-12%			21"M /	Ave. Perc. R		18.02 erc. Rate
	isuitable	Sk		Unstabilized Fill	Floo		Other	.cui es	Coarse	rraginents		erc. Rate
	Metri							OATED O	O THE BE	VCDAE		
sc	OILS DESCR			R COMPLE	HON OF	THIS FOR	W ARE LO	CATEDO	NIHERE	VERSE		
	Soils Descrip			by:						Date:	12/21/22	
	Inches	Pit#	14			Description	of Horizo	n į			Additional P	its
р	0 TO 13	11	10YR 3	/4, Gravelly, Si	It Loam, Mo	derate, Fine,	Granular, Fri	iable			Pit #13 36"+	
it <u>1</u>	<u>13_</u> TO <u>_21</u>		10YR 5	/4, Silt Loam, N	Moderate, M	edium, Subar	igular Blocky	, Friable			Pit #15 26"N Pit #16 31"N	
Btx_2	21_TO_36	11 °	10YR 5	/4, Channery, S	Silt Loam, M	loderate, Med	ium, Subang	jular Blocky to	o Moderate,	Coarse, Pris	matic, Friable	
	TO	11	Commo	ni district rego,	x leatures			(1)	. /	7 In most manager, 2		
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P We	Percolation T	est Co litions :	mpleted Be	elow 40 F	Dry	bove 🖸 Frozen] Dry	Rain, Sle		24 hours)		Reading
P We	Percolation T leather Conditions	est Co ditions : s:	mpleted Be	elow 40 F /et Reading	Reading No. 1:	bove Frozen Reading No. 2: Inches	Reading No. 3: Inches	Reading No. 4: Inches	Reading No. 5: Inches	Reading No. 6:	Reading No. 7; Inches	Reading No. 8: Inches
P We	Percolation Treather Cond	est Co ditions : s:	mpleted Be	elow 40 F /et Reading Interval	Reading No. 1: Inches of drop	Frozen Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7: Inches of drop	No. 8: Inches of drop
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P We	Percolation T leather Conditions Oil Conditions Hole No.	est Co ditions : s: H20 (*** Yes X	mpleted Be	elow 40 F /et Reading Interval XX / 30	Reading No. 1: Inches of drop	bove Frozen Reading No. 2: Inches of drop 3.875	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7: Inches of drop	No. 8: Inches of drop
P We	Percolation T leather Conditions Oil Conditions Hole No.	est Co ditions : s: H20 I Yes X	mpleted Be	Reading Interval XX / 30 XX / 30	Reading No. 1: Inches of drop 4.250 4.125	Frozen Reading No. 2: Inches of drop 3.875 4.000	Reading No. 3: Inches of drop 3.250 3.500	Reading No. 4: Inches of drop 3.000	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop 2.500	Reading No. 7: Inches of drop	No. 8: Inches of drop
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P We	Percolation T leather Conditions Hole No. 1 2 3 4 5	rest Co ditions: s: H201 Yes X X	mpleted Be	Reading Interval XX / 30	Reading No. 1: Inches of drop 4.250 4.125 2.375 4.125 0.500 2.000	Reading No. 2: Inches of drop 3.875 4.000 2.250 4.125 0.500 3.125	Reading No. 3: Inches of drop 3.250 3.500 2.125 3.750 0.500 2.500	Reading No. 4: Inches of drop 3.000 3.500 2.125 4.125 0.500 2.750	Reading No. 5: Inches of drop 2.875 3.500 4.375	24 hours) Reading No. 6: Inches of drop 2.500 3.500 4.500	Reading No. 7: Inches of drop 2.250	No. 8: Inches of drop 2.250
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	Applic	cation No).	UMANGO PENGANGANGANG		Municip			Britain Tow	nship	County	Buc	ks
_		ocation			(146) Upper (•				Lot	#2	70.45
] Suitabi		☐ Mottl	ing 🔲 🤄	pe <u>Culleoka Ta</u> Seeps or Ponded Unstabilized Fill	Water	Bedro	ck 🗌 Fra	Zone ctures	Coars			erc. Rate
					R COMPLE	TION OF	THIS FOR	M ARE LO	CATED C	N THE R	EVERSE		NOONAL TOTAL OF CHICAGO SECURITY SECURI
	SOIL:	S DESCI Is Descri	RIPTIO ption C	N: omplete	by:		VW Con	sultants LLo	C/MHR		Date:	12/21/22	acorgic quadron managanistic quadra per a militari pedito.
	, In	iches	Pit#	15			Descriptio	n of Horizo	on				
Ap		TO 10	- "	10YR 3	3/4, Channery,	Silt Loam, M	oderate, Fine	e, Granular, I	Friable	San Transport		-	
Bw	10	TO_26		10YR 4	/6, Very Chann	ıery, Silt Loa	ım, Moderate	, Fine, Suba	ngular Block	y, Friable	THE COLOR SHEET STEET OF EACH SHEET	_	
С	26	TO 29	18	10YR 5	6/4, Very Chann	iery, Silt Loa	ım, Structure	less, Massiv	e, Firm				
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		_то	-	***************************************	***************************************			***************************************	Uh.	11	-		
		то	- "			***			pro	FU	ser	Depth to Li	mitina
		ТО	**		**************************************	7.35, W. C. and W. C. and C. a					***************************************	Zone:	
		то			50°							<u>26</u>	Inches
	oro/	201 4716	\.\.TE0					<u> </u>		September 1975			ordinale color dilibrial dile. Side consumer necessaria.
		COLATIC Colation 1			l by:						Date:		
		her Cond			_	40 F or Al		Dry	Rain, Sl	eet, Snow (la	st 24 hours)		
	Soil C	Condition	S: H20	eft I	Vet L	Dry F	rozen Reading	Reading	Reading	Reading	Reading	Reading	Reading
		Hole No.	Yes	1.	Reading Interval	No. 1: Inches of drop	No. 2: Inches of drop	No. 3: Inches of drop	No. 4: Inches of drop	No. 5: Inches of drop	No. 6: Inches of drop	No. 7: Inches of drop	No. 8: Inches of drop
				-23 ° A) · · ·	10/30								
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			-		10 / 30								
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		***Water	remainin	g in the ho	10 / 30	he final 30 mi	inute presoak	? Yes, use 30) minute interv	al; No use 1	O minute interv	al.	
			denos - toras.		10 / 30 10 / 30 10 / 30		inute presoak	? Yes, use 30) minute interv	al; No use 1	O minute interv	al.	
	Hole i	Calcula	denos - toras.	Average uring	10 / 30 10 / 30 10 / 30 ble at the end of the	Rate: e as	nute presoak Depth of Hole	? Yes, use 30) minute interv	al; No use 1	0 minute interv	al.	
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* :		Calcula	Drop d final pe	Average uring riod	10 / 30 10 / 30 10 / 30 ole at the end of the Percolation Ferc. Rate	Rate: e as	Depth of Hole	n n n ú		The informat correct result me, performe vision, or cor by the Depar	ion provided is s of tests cond ad under my pe ofirmed in a ma	the true and lucted by irsonal super- inner approved	13938
4 :	TOTA	Calcula	tion of A Drop d final pe	Average uring riod	10 / 30 10 / 30 10 / 30 ole at the end of the Percolation Ferc. Rate	Rate: e as	Depth of Hole	11		The informat correct result me, performe vision, or cor by the Depar	ion provided is s of tests cond ad under my pe ofirmed in a ma	the true and lucted by irsonal super-inner approved	13938

	Application N	-			wunich		***************************************	Britain Tow	nsnip	County	Buc	CKS
		***************************************	14	0 (146) Upper C	Church Roa	ad	Subd'n Na	me		Lo	# 2	
-] Suitable		Soil 7	Type Culleoka Ta	Slope	10-12%	Limiting 2	Zone	31"M	Ave. Perc.	Rate	18.02
Г	Unsuitable	Mott		Seeps or Ponded		Bedro				e Fragments		Perc. Rate
		□sl		Unstabilized Fill			Other			o (Tugillonia	٠.	Citi rate
	SOILS DESC			OR COMPLE	TION OF	THIS FOR	M ARE LO	DCATED (N THE R	EVERSE		
				te by:		VW Con	sultante I I	C / MHR		Date:	12/21/22	
	Inches	Pit#			The second second	Descriptio				Date.		
Am				04.05		ille see						
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Bw		-" :	10YR	8 4/6, Channery, S	Silt Loam, M	loderate, Fin	e, Subangula	ar Blocky, Fri	able		e de la companya de l	
С	31_TO_34			8 5/4, Very Chann								
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		_	-	The second secon				7)		1	-	
	то	-"	-					- Ch	11		Depth to Li	mitina
	TO	. n°		***				pro	FU	ser	Zone:	mung
	TO.	11			· · · · · · · · · · · · · · · · · · ·			(31	Inches
	то	-			***************************************						-	
	PERCOLATION	ON TES	eT.									
	Percolation			ed by:						Date:		
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	Soil Condition					Frozen						
	ľ	H20		And the second s	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
		**	•	Beeding	No. 1: Inches	No. 2: Inches	No. 3:	No. 4:	No. 5:	No. 6;	No. 7:	No. 8:
	Hole No.	Yes	No	Reading Interval	of drop	of drop	Inches of drop	Inches of drop	Inches of drop	Inches of drop	Inches of drop	Inches of drop
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	all and the second seco			10 / 30		1						,
				10 / 30				Terr angular ((196.37), 200.3560	
				10 / 30				- 20050 4000 70.70000				
	***Water	remainin	g in the	hole at the end of t	he final 30 m	inute presoak	Yes, use 3	0 minute interv	al; No use 10	minute interv	al,	
	Calcula	ition of	Averag	ge Percolation F	Rate:							
	Haf- Na	Drop d		Perc. Rate		Depth		P	5 - 5 - <u></u>	7.9 (
	Hole No.	final pe		Minutes/In	cn	of Hole						
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				***************************************	9					s of tests cond		
	MARCH 1997				d	***************************************	ũ			d under my pe		
		-	,	The second secon	17				vision, or con by the Depar	firmed in a ma	nner approved	
	Construction		l)	Page 1	1.0		ır	0.00	by the Depar	ineni.	- 1.H	3938
	TOTAL OF M	IN/IN			;; ;		Min		[1	DAM	INT	
	TOTAL No. O		ES		-	•	Min Inch	4	(S) () Sewage F	nforcement Of	(IV)	# 4000000000000000000000000000000000000
			_				111001	and the second second	- Johnson		(19 09)	

	Application	No.			Municip		INGM	Britain Tow	nsnip	County	Buc	KS
S	Site Locatio	n	140 (146) Upper (hurch Roa	ad	Subd'n Nan	ne _		Lot	# 2	
	Suitable Unsuitable	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ling S	eeps or Ponded	Water	☐ Bedro	ck 🗌 Fra		THE RESIDENCE AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF T	Ave. Perc. se Fragments	the state of the s	erc. Rate
	2 40 - 120 - 100 -	Sle		Instabilized Fill	Floo		Other					
				RCOMPLE	TION OF	THIS FOR	M ARE LO	CATED	N THE F	REVERSE		
5	SOILS DES Soils Des	CRIPTIC cription C	N: omplete	by:					***************************************	Date:	12/21/22	
	Inches	Pit#	17			Descriptio	n of Horizo	n				
p _	<u></u>	8_"	10YR 3/	4, Gravelly, Si	t Loam, Mo	derate, Fine,	Granular, Ve	ery Friable	d. 0.000		-	
w _	<u>8</u> TO_2	<u>4_</u> "	10YR 5	4, Channery,	Silt Loam, M	loderate, Fin	e, Subangula	r Blocky, Fri	able		-	
В	24 TO 3	<u>o</u> "		4, Very Chann		am, Weak, M	edium, Suba	ngular Block	y, Firm			
_	то	11	Commo	n distinct redo	x features			(1)	. /	1	7.4	
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_	то_		**************************************					100	PU	ber _	Depth to Li	miting
	то	or .								FI .	Zone:	maig
	TO	19					20 mm				24	Inches
	то		-								-	
F	PERCOLAT	ION TES	ST:									
	Percolation		mpleted							_ Date:	***************************************	
	Weather Co				40 For A	-	Dry	Rain, Sl	eet, Snow (la	ast 24 hours)		
,	Soil Conditi	ons: I H20	U N	/et L	Dry	Reading	Reading	Reading	Reading	Reading	Reading	Reading
		1120		D	No. 1:	No. 2:	No. 3:	No. 4:	No. 5:	No. 6:	No. 7: Inches	No. 8:
	Hole N	o. Yes	No	Reading Interval	Inches of drop	Inches of drop	Inches of drop	Inches of drop	Inches of drop	Inches of drop	of drop	Inches of drop
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				10 / 30			***************************************		The second	The Control of the Co		
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				10 / 30								
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		detion of	No. of Contract Section 1	Dercolation I	Pate.							
			Average	Percolation I		Depth						
ŀ		Drop o	Average	Percolation I Perc. Rate Minutes/Ir	as as	Depth of Hole					*	
	Calcu	Drop o	Average during	Perc. Rate	as as		n.			ation provided is		
-	Calcu	Drop o	Average Juring eriod	Perc. Rate	as as		n n		correct resu	ilts of tests cond	fucted by	
-	Calcu	Drop o	Average Juring eriod	Perc. Rate	as as		n n n	indicate a successive disease	correct resu	ilts of tests cond ned under my pe	fucted by ersonal super-	nistalan sazialka Planasa
-	Calcu	Drop o	Average Juring eriod	Perc. Rate	as as		n n n		correct resu	ilts of tests cond ned under my pe onfirmed in a ma	fucted by	7020-
	Calcu	Drop o	Average Juring eriod	Perc. Rate	as as		11 11 12 13 14		me, perform	ilts of tests cond ned under my pe onfirmed in a ma	fucted by ersonal super-	3938
	Calcu	Drop of final p	Average Juring eriod	Perc. Rate	as as		n n n n Min		me, perform	ilts of tests cond ned under my pe onfirmed in a ma	fucted by ersonal super-	3938
	Calcu	Drop of final p	Average during eriod	Perc. Rate	as as		0 0 0 10		me, perform vision, or co by the Depa	ilts of tests cond ned under my pe onfirmed in a ma	ducted by ersonal super- anner approved	3938

1. PROJECT INFORMATION

Project Name: 140 (146) Upper Church Road Date of Review: 11/28/2023 11:56:01 AM

Project Category: Development, Residential, subdivision which will contain 1-2 lots with 1-2 single family living

units

Project Area: 13.36 acres

County(s): Bucks

Township/Municipality(s): NEW BRITAIN TOWNSHIP

ZIP Code:

Quadrangle Name(s): DOYLESTOWN

Watersheds HUC 8: Crosswicks-Neshaminy

Watersheds HUC 12: North Branch Neshaminy Creek

Decimal Degrees: 40.330594, -75.203198

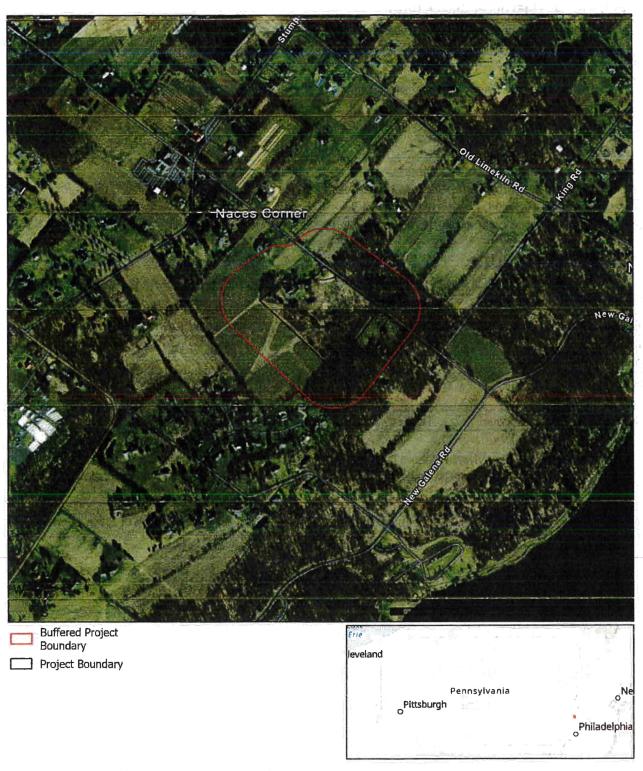
Degrees Minutes Seconds: 40° 19' 50.1378" N, 75° 12' 11.5112" W

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

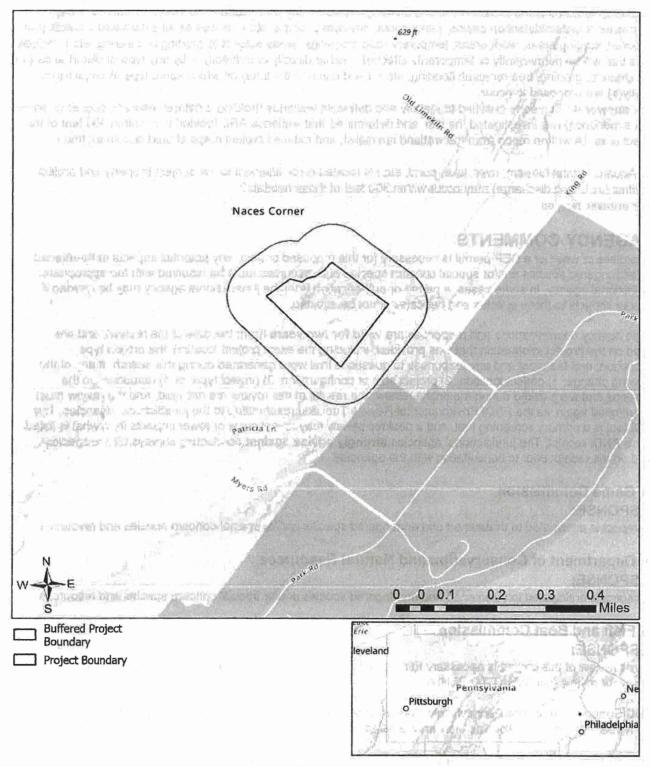
As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

140 (146) Upper Church Road



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson. NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

140 (146) Upper Church Road



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

RESPONSE TO QUESTION(S) ASKED

Q1: Accurately describe what is known about wetland presence in the project area or on the land parcel. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected — either directly or indirectly — by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: Someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience) has investigated the site, and determined that wetlands ARE located in or within 300 feet of the project area. (A written report from the wetland specialist, and detailed project maps should document this.)

Q2: Aquatic habitat (stream, river, lake, pond, etc.) is located on or adjacent to the subject property and project activities (including discharge) may occur within 300 feet of these habitats?

Your answer is: Yes

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status	
Sensitive Species**		Threatened	

Project Search ID: PNDI-775619

Martin Allahar

U.S. Fish and Wildlife Service RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

- * Special Concern Species or Resource Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.
- ** Sensitive Species Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).

*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

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Project narrative with a description of the overall project, the work to be performed, current physical characterist	tic
of the site and acreage to be impacted.	
A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the	ne
physical features such as wetlands, streams, ponds, rock outcrops, etc.)	
In addition to the materials listed above, USFWS REQUIRES the following	
SIGNED copy of a Final Project Environmental Review Receipt	
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The inclusion of the following information may expedite the review process.

Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section 400 Market Street, PO Box 8552 Harrisburg, PA 17105-8552 Email: RA-HeritageReview@pa.gov

PA Fish and Boat Commission

Name: Tara Bernard

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Game Commission

Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Company/Business Name: VW Consultants,	STALLCOLD FOR THE STATE OF THE
Address: 1590 Canary Road	A THE PERSON AND REPORT OF THE PERSON WITH THE PERSON AND THE PERS
City, State, Zip: Quakerktown, PA 18951	PARCE PRINTED IN YOUR MICH.
	Fax:(215) 538-6136
Email: tbernard@vw-consultants.com	MONTH AND THE PARTY OF THE PART
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I certify that ALL of the project information conta	tained in this receipt (including project location, project
size/configuration, project type, answers to que	estions) is true, accurate and complete. In addition, if the project type,
location, size or configuration changes, or if the	e answers to any questions that were asked during this online review
change, I agree to re-do the online environment	ntal review.
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lara Bernana	12/11/2023
applicant/project proponent signature	date

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September 5, 2024

IN REPLY REFER TO SIR# 58949

VW Consultants, LLC Richelle Daly 1590 Canary Road Quakertown, Pennsylvania 18951

RE:

Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species

PNDI Search No. 775619_1 140 (146) Upper Church Road

New Britain Township: BUCKS County

Dear Richelle Daly:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish and Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish and Boat Code (Chapter 75), or the Wildlife Code.

An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

SIR # 58949 September 5, 2024 Page 2

If you have any questions regarding this review, please contact Kathy Gipe at 814-359-5186 or c-kgipe@pa.gov and refer to the SIR # 58949. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

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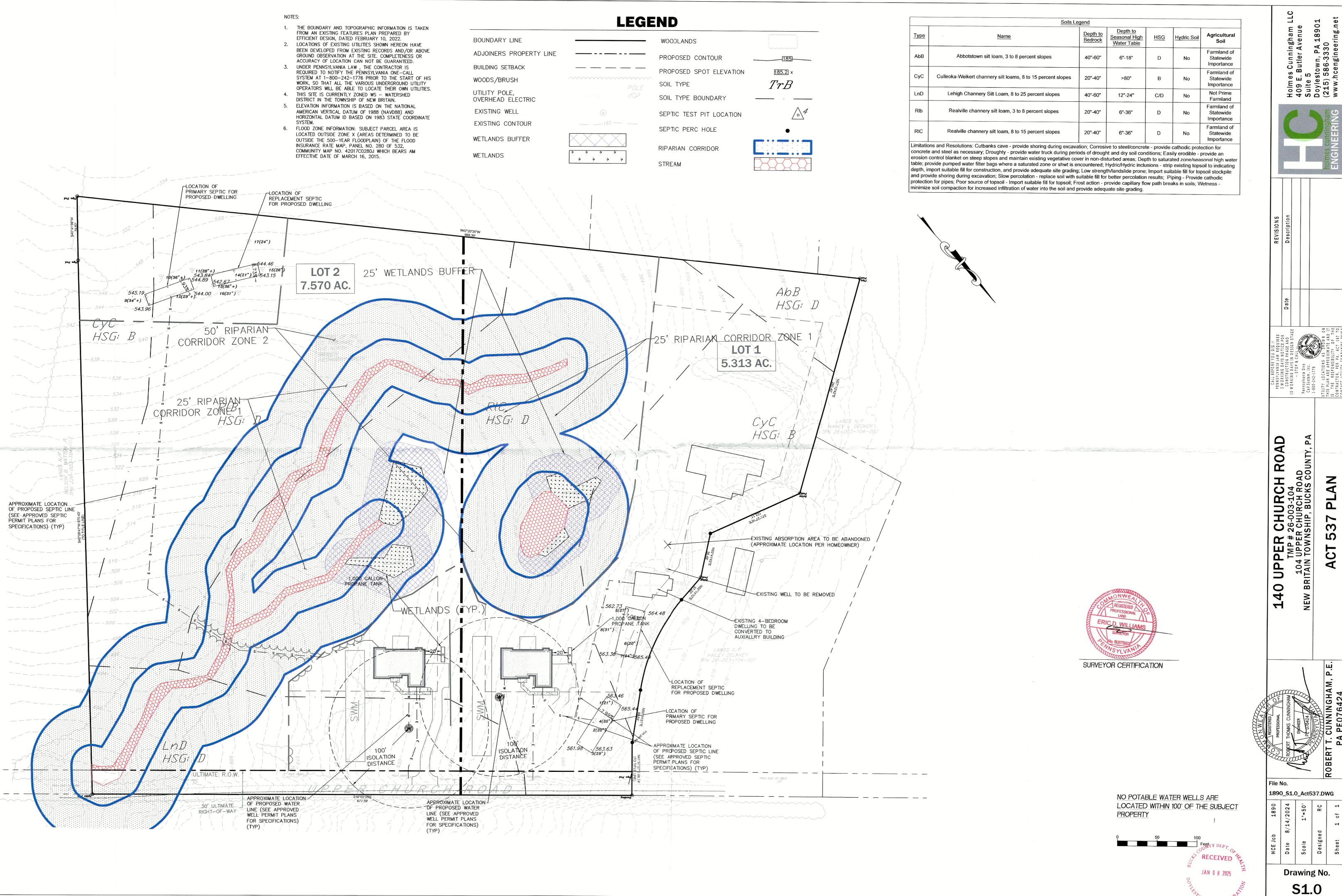
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Sincerely,

Christopher A. Urban, Chief
Natural Diversity Section

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CAU//KDG/dn





February 24, 2025

File No. 2400848

Daniel Fox, Township Manager New Britain Township 207 Park Avenue Chalfont, PA 18914

Reference: 256 Ferry Road-393 Old Iron Hill Road, Lot Line Change Review 2

TMP Nos. 26-011-051, 26-011-034-001

Dear Dan:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the revised Lot Line Change Plan for the above-referenced project. We offer the following comments for consideration by New Britain Township:

I. Submission

- A. Lot Line Change Plan prepared for Joseph I. & Aileen M. Solana, as prepared by R.L. Showalter & Associates, Inc., consisting of three sheets, dated July 15, 2024, last revised December 10, 2024.
- B. Waiver Request Letter for 256 Ferry Road & 393 Old Iron Hill Road Lot Line Change, as prepared by R.L. Showalter & Associates, Inc., dated December 10, 2024.

II. General Information

Robert Showalter (393 Old Iron Hill Road) proposes conveying 0.87 acres of land to Joseph Solana (256 Ferry Road S.R. 1006). This lot line change will result in a 4.1-acre (net) lot area for 393 Old Iron Hill Road (TMP #26-011-034-001) and a 11.9-acre (net) lot area for 256 Ferry Road (TMP #26-011-051). 256 Ferry Road contains a single-family dwelling, barn and apartment. 393 Old Iron Hill Road also contains a single-family dwelling with a barn. No site improvements are proposed.

III. Review Comments

A. Zoning Ordinance

§27-502.b.3., 505.1 & 2401.c – When a lot or tract of land undergoes subdivision/land development, all natural resource protection land shall be protected on each lot with a conservation easement in accordance with §27-505 and §27-2400 of this Chapter. The Applicant has requested that the conservation easement be recorded at the time a future subdivision plan is submitted for either parcel to create a new lot.

B. Subdivision and Land Development Ordinance Waivers

Waivers have been formally requested by the Applicant in a letter dated December 10, 2024:

§22-502.1.B(20) – From offering the legal right-of-way of Ferry Road to PennDOT and the ultimate right-of-way areas of Ferry Road and Old Iron Hill Road to New Britain Township. Based on a Tri-Municipal Master Trails Map, a future trail is conceptually proposed along Old Iron Hill Road to connect the Neshaminy Greenway Trail with the Peace Valley Park trail network. We recommend the Township formally accept the ultimate right-of-way along 393 Old Iron Hill Road and recommend the Applicant record a 20-foot permanent trail and temporary construction easement past the right-of-way to allow for the future trail.

65 East Butler Avenue | Suite 100 | New Britain, PA 18901 | Phone: 215-345-4330 | Fax: 215-345-8606

- 2. §22-705.3.C From the requirement to widen the cartway along Ferry Road and Old Iron Hill Road. We support this waiver request since the existing roadway width is consistent along the adjacent properties and mature trees exist along a portion of the Ferry Road right-of-way.
- 3. §22-706 From the requirement to provide curb and sidewalk along the property frontage. We support this waiver request since no sidewalk or curb exists along Ferry Road or Old Iron Hill Road near the subject properties.
- 4. §22-713.4 From the requirement to provide street trees along the property frontage. Existing vegetation along 256 Ferry Road appears to meet the Ordinance's street tree requirements. However, no street trees exist at 393 Old Iron Hill Road. We would support deferral of this requirement until such time a future subdivision plan is submitted for either lot.
- 5. §22-707.A.1 The Board, upon the recommendation of the Trail Committee and/or Planning Commission, may require pedestrian walkways or recreational trails at locations that...connect to schools, parks, recreation facilities, community buildings, commercial or employment centers or other facilities that are the destination of pedestrians or bicyclists. The Applicant shall discuss this waiver with the Board of Supervisors.

C. Subdivision and Land Development Ordinance

- 1. §22-406.1.I The Applicant shall prepare legal descriptions for the proposed lots, area to be conveyed, legal and ultimate rights-of-way, easements, etc. as required. Both the legal and ultimate right-of-way shall be completed described by metes and bounds.
- 2. §22-502.1.B.(21) The proposed gross and net lot areas (square feet) identified for both lots are not consistent with the gross and net areas to be conveyed.
- 3. §22-716 A written certification letter from a professional land surveyor shall be provided prior to the recording of the plan indicating that the monumentation has been installed per the plan.

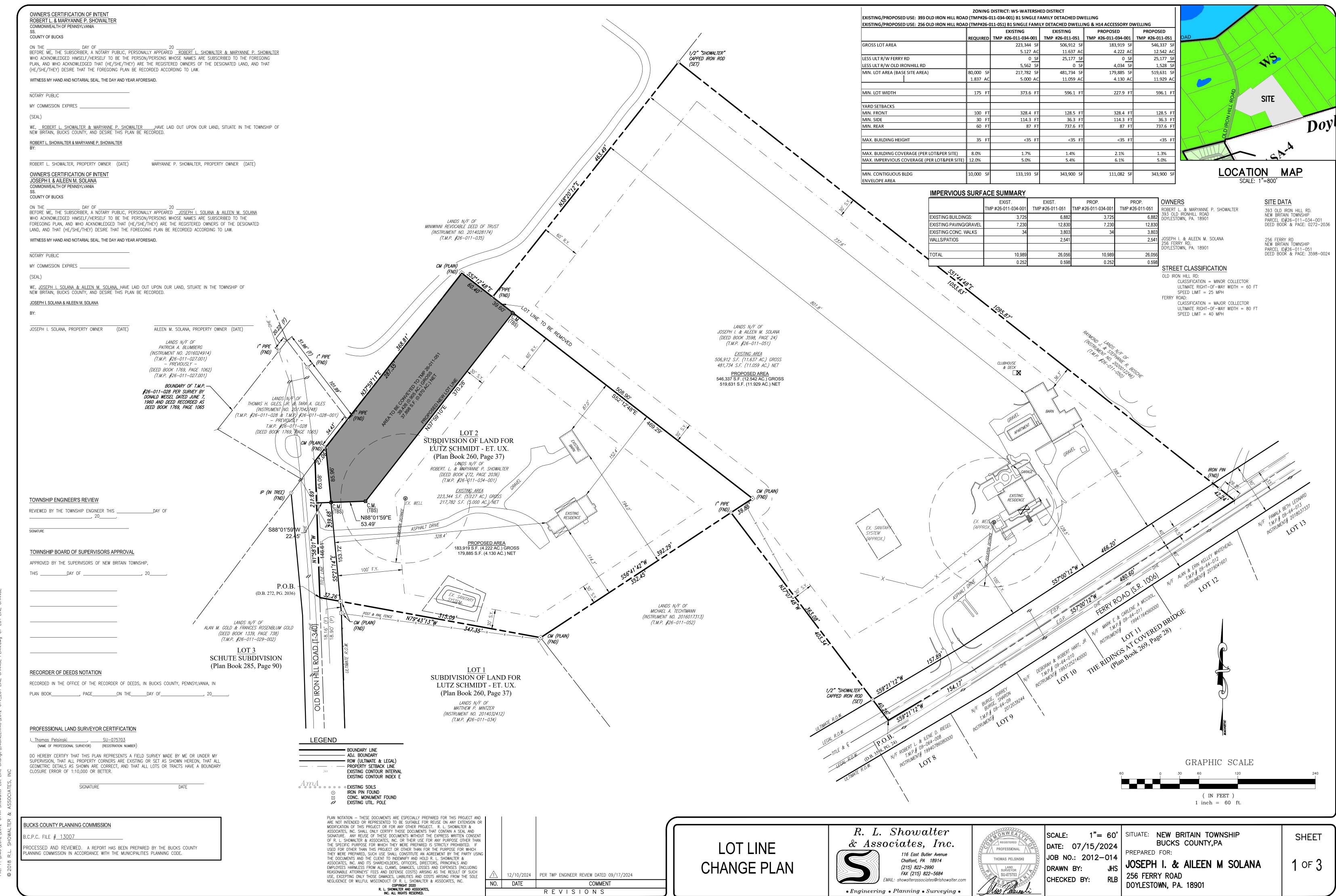
If you have any questions regarding the above, please contact this office.

Sincerely,

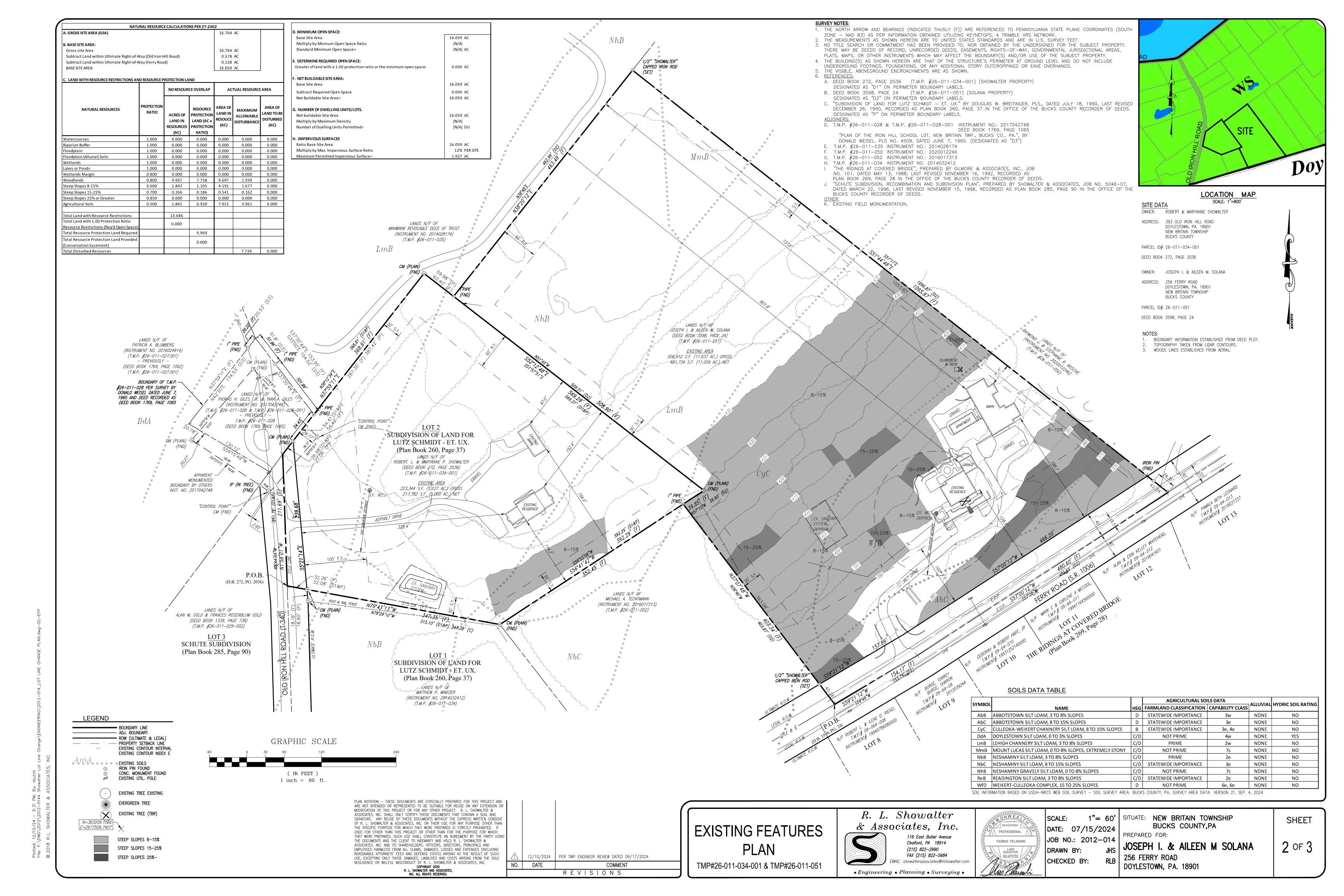
Craig D. Kennard, P.E. Executive Vice President Gilmore & Associates, Inc.

CDK/jm/tw

cc: Alexandra Mullin, Assistant to the Manager Randy Teschner, Fire Marshal/Code Enforcement Officer Scott Holbert, Esquire, Flager & Associates Rachel Butch, P.E., R.L. Showalter & Associates, Inc. Robert L. Showalter, Applicant, 393 Old Iron Hill Road Joseph Solana, Applicant, 256 Ferry Road Janene Marchand, P.E., Gilmore & Associates, Inc.



Plotted: 12/10/24 - 3:18 PM, By: rbutch File: F:\DWG\2012\2012-014A Showalter Lot Line Change\ENGINEERING\2012-014_LOT LINE CHANGE PLAN.dwg-I



1 | 12/10/2024 | PER TWP ENGINEER REVIEW DATED 09/17/2024

REVISIONS

COMMENT

NO. DATE

256 FERRY ROAD DOYLESTOWN, PA. 18901

CHECKED BY:

Gachel L Butch

FAX (215) 822-5684

ullet Engineering ullet Planning ullet Surveying ullet

March 19, 2025

File No. 2400815

Daniel Fox, Township Manager New Britain Township 207 Park Avenue Chalfont, PA 18914

Reference: Barry Road Subdivision, Preliminary Plan Review 1

W.B. Homes, Inc., TMP# 26-001-106-004

Dear Dan:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the Preliminary and Final Land Development and Major Subdivision Plans set for the above-referenced project. Upon review by our office, we offer the following comments for consideration:

Submission

- A. Preliminary and Final Land Development and Major Subdivision Plans for Barry Road Subdivision, TMP# 26-001-106-004, as prepared by Holmes Cunningham Engineering, consisting of seventeen (17) sheets, dated January 31, 2025.
- B. Post Construction Stormwater Management Plan Narrative for Barry Road Subdivision, as prepared by Holmes Cunningham Engineering, dated January 31, 2025.
- C. Waiver Request Letter for Barry Road Subdivision, as prepared by Holmes Cunningham Engineering, dated February 6, 2025.

II. General Information

The subject property is a 10-acre parcel located along the southwestern side of Barry Road (S.R. 1006), between New Galena Road and Railroad Avenue within the SR-2 Suburban Residential Zoning District. The property is bordered by detached single-family residential lots on all sides. The subject tract is vacant with woodlands and floodplain soils. The Applicant is proposing to subdivide the property into 4 residential lots ranging from 2.1 to 2.5 acres with a private road extending an existing street stub and ending in a hammerhead turnaround. Individual stormwater management facilities are proposed for each lot to manage the increase in stormwater. Public water and sewer are proposed from Barry Road.

III. Review Comments

A. Zoning Ordinance

- 1. §27-802.b The following dimensional comments should be addressed:
 - a. The individual lot areas shall be calculated based on the lot area definition of §27-201. An existing 75-foot-wide gas transmission easement crosses through Lots 1 and 2 which shall be subtracted from the lot areas. It appears Lot 3 has a total lot area of less than 2 acres and should be revised to provide the required 2-acre minimum.
 - b. The Zoning Table references a maximum 20% impervious surface coverage. The table should note that this is the maximum percentage for the site and note that 25% is the maximum for each individual lot.

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2. §27-2400 – It appears that several resources exist on site, including a watercourse and woodlands which are not included in the "Resource Protection Land Over Entire Tract" table on Sheet 4. There is also a possibility of wetlands per the National Wetlands Inventory. We note that some of these resources overlap and do not need to be included in site capacity calculations. However, the total area of these resources should be listed in the Resource Protection table for clarity and the wetlands, or lack thereof, certified. The conservation easement shall be extended over the natural resources required to be protected and a Conservation Easement recorded.

B. Subdivision and Land Development Ordinance Waivers

The following waivers have been requested by the Applicant from the Subdivision and Land Development Ordinance in a letter dated February 6, 2025:

- 1. §22-403 & 404 From the requirement to provide separate preliminary and final plan submissions.
- 2. §22-502.1.H From the requirement to provide a lighting plan, which we support.
- 3. §22-705.3.C From the requirement to widen Barry Road approximately 4 feet. We note that 100 feet of frontage along Barry Road was previously widened, and Barry Road is a PennDOT street. As a condition of a waiver, we recommend the drainage at the entrance to Barry Road be reviewed to address existing ponding. In December of 2024 runoff was observed from the existing street stub draining across Barry Road, creating an icing condition. We recommend the drainage be reviewed to determine if improvements could promote positive drainage.
- 4. §22-705.3.E From the requirement that private streets be designed to the specifications of a local street. The Applicant is proposing a 20-foot wide cartway (28 feet required) ending in a hammerhead turnaround configuration within a 50-foot-wide right-of-way and a 60-foot right-of-way bulb. We note that "No Parking" signs are proposed along the street. For reference, a waiver was granted from this requirement for a recent similar development, which also included a hammerhead turnaround configuration. We have no objection to the waiver request subject to an HOA being created to own and maintain the private street.
- 5. §22-705.3.G From the requirement to mill and overlay the entire width of the existing roadway abutting a subdivision a depth of 1 1/2 inches. We note that the plan proposes utility installation in the existing stub street and along the edge of Barry Road to the intersection with New Galena Road. We have no objection to a partial waiver request conditioned upon the Applicant milling and overlaying the existing stub street and also milling and overlay to the centerline of Barry Road along the frontage once the proposed utilities have been installed.
- 6. <u>§22-705.8.C</u> From the requirement that cul-de-sac streets be provided with a left side turnaround configuration with a minimum paving radius of 50 feet. For reference, a waiver was granted from this requirement for a similar recent development, which also included a hammerhead turnaround.
- 7. §22-705.8.F From the requirement to provide a 15-foot by 20-foot snow removal easement along the right-of-way of the cul-de-sac bulb, which we support.
- 8. §22-706 From the requirement to provide sidewalk along Barry Road and both sides of the proposed private street, which we support.
- 9. §22-710.4 From the requirement to provide at least one emergency access for subdivisions with a proposed single access loop street or cul-de-sac street, which we support.
- 10. §22-713.4.A & B The street tree waiver request shall be clarified. Street trees are currently proposed along the frontage of the new lots outside of the street "right-of-way", but not along the existing dwelling lots. We recommend the waiver request be discussed for clarification.

- 11. §22-714.3.A From the requirement to provide streetlights in residential subdivisions. No new street lighting is proposed at the intersection or at the turnaround, but typical residential lamp posts are proposed for each driveway, which we support.
- C. <u>Subdivision and Land Development Ordinance (SALDO) Comments (Chapter 22)</u>
 - 1. §22-406.1 The Applicant is responsible for any other required outside agency approvals, permits, etc. (i.e., BCPC, BCCD, PADEP, PENNDOT, CNBTJSA, NPWA, Fire Marshal, etc.) as applicable. The Applicant shall coordinate with DEP on the Planning Module, and the Water and Sewer Authorities about public water and sewer service requirements.
 - 2. §22-406.1.I Once the plans are approved, the legal descriptions for all proposed conservation easements, private street easement, etc., shall be submitted for review.
 - 3. §22-502.1 The following comments regarding plans and notes shall be addressed:
 - a. The Drawing List should be updated to note the Post Construction Stormwater Management Plan and details to be recorded.
 - b. The plans reference a "Plan or Boundary and Topography" prepared by Carroll Engineering Corporation, last revised September 7, 2024. A copy of this plan should be provided to verify the boundary and existing features.
 - c. The name, address and phone number of the applicant and owner of record should be provided on the Record Plan.
 - d. The zoning classification of the abutting parcels shall be noted on the Record Plan.
 - e. All adjacent owner names and tax parcel numbers shall be noted on the Record Plan.
 - f. The requested waivers shall be listed on the Record Plan.
 - g. Barry Road shall be listed as State Route 1006 on the plans.
 - h. The Utility Notes shall be revised to reference North Penn Water Authority.
 - 4. §22-502.1.D The Existing Conditions and Demolition Plan shows an existing sewer lateral at the same location as the proposed sewer main connection. This lateral may be for 59 Barry Road. The location of this lateral should be verified to determine if it conflicts with the proposed sewer main and water main.
 - 5. §22-502.1.I.(3) The following comments related to the profiles should be addressed:
 - a. All proposed utility crossings should be shown on the profiles, including laterals and roof drains.
 - b. The proposed finished grades and pipe material should be provided on all profiles.
 - 6. §22-502.1.J The following comments related to construction details shall be addressed:
 - a. A cross-section detail should be provided for the proposed private street and shall specify the roadway cross slope.
 - b. The HDPE headwall, detectable warning surface, and anti-seep collar details shall be clarified or removed.
 - 7. §22-704.1 The proposed private street extends an existing paved stub street with two existing residential driveways. Note 6 on the Record Site Plan notes that the private street will be privately owned and maintained.
 - a. The plan shows the existing and proposed private street as a separate parcel. We recommend an access easement be recorded over the proposed street for the perpetual access rights to benefit New Britain Township and Authorities, as needed.

- b. Any terms for any existing access easement for the existing street stub shall be reviewed. It should be determined if any existing access agreement needs to be amended or superseded by a new agreement. Any new shared maintenance agreement for the private access street should include the two existing properties.
- c. Note 6 on the Site Plan shall clarify the homeowners' association to be established for the development for ownership and maintenance of the proposed private street.
- 8. §22-704.1 Various easements are proposed as required and as previously discussed. We recommend a meeting with the Applicant to discuss the types of easements proposed and the proposed limits.
- 9. §22-704.2 Easements for single utilities shall be a minimum of 20 feet. A stormwater easement shall be provided for the storm pipe and level spreader from Lot 3 installed on Lot 2.
- 10. §22-704.6 Easements shall allow for the maintenance, repair and reconstruction of utilities, stormwater facilities or other facilities within easements. Site Plan Notes 5 states that a stormwater easement is proposed for inspection of the stormwater facilities. The note should clarify if this is a blanket easement. If individual easements are proposed over each system, they should be defined on the plan.
- 11. §22-705.1.H The Storm Sewer & Utility Trench Restoration Within Paved Areas Detail includes a pavement cross section for the paving of Township arterial and collector roads. A detail should also be provided for the paving specifications for the private street and the pavement specification for Barry Road as required by PennDOT.
- 12. §22-705.12.A All proposed street names shall be recommended by staff and reviewed by the Township Fire Marshal's office for duplication and are subject to approval by the Board. A name should be provided for consideration by the Township and a street name sign proposed.
- 13. §22-705.13.C Spot elevations shall be provided at each driveway entrance to specify the requirement for the stopping area of 20 feet at a maximum grade of 3%.
- 14. <u>§22-710</u> Fire lanes, need for emergency access, hydrant locations and circulation of emergency vehicles shall be reviewed and approved by the Fire Marshal.
- 15. §22-711.2 The following comments related to E&S control should be addressed:
 - a. Erosion controls should be provided along Barry Road as needed for the installation of the water main.
 - b. Erosion controls should be provided on either side of the construction entrance to prevent sediment runoff onto the adjacent properties.
 - c. The following comments regarding the Sequence of Construction should be addressed:
 - 1) The sequence notes state that the basin shall be installed before construction of any buildings. It shall be clarified that this refers to the individual stormwater facilities. It is anticipated that the stormwater facilities for each individual lot will be installed as each lot is developed. However, the stormwater facility on Lot 2 is designed to accommodate runoff from the proposed private street which will be constructed prior to the development of the individual lots. The sequence should be revised to specify the construction of the facility on Lot 2 prior to the installation of the road and associated stormwater structures unless an alternate sediment basin should be provided until the development of Lot 2.
 - 2) It shall be clarified if the stormwater facilities should be protected with orange construction fencing to prevent compaction during construction.

- 3) The sequence specifies the installation of the water and sewer mains after the installation of the construction entrance. It shall be clarified if these utilities should be installed prior to the construction entrance being installed.
- 16. §22-711.3 The following comments related to site grading shall be addressed:
 - a. The grading should be revised to clearly direct the runoff to the inlets to the underground stormwater facilities in accordance with the Post Development Drainage Area Plan.
 - b. Based on the proposed 329 contour on Lot 4, the flows along the common property line with Lot 3 will bypass the Lot 4 BMP as shown on the Post Development Drainage Area Map. The contours should be revised to clearly direct these flows to Inlet CB-1.
 - c. Spot elevations should be provided at the common lot line between Lots 3 and 4 to verify the grading is in accordance with the drainage area maps.
 - d. The proposed 322 contour on Lot 2 appears to direct runoff towards Inlet OS-3 on Lot 1. The contour should be revised to direct the runoff towards Inlet CB-7 in accordance with the Post Development Drainage Area Map.
 - e. A spot elevation should be provided behind the dwelling on Lot 3 and at the edge of the driveway on Lot 2 to clarify drainage away from the building and towards the swales.
 - f. The finished floor, garage and basement elevations for Lot 3 should be consistent with the proposed contours.
 - g. The grate elevation for OS-1 of 326.00 shall be verified or lowered if storage is anticipated below elevation 326.00 and the bottom elevation of the depression noted, if applicable.
 - h. The proposed 331 contour line on Lot 3 should be corrected at the proposed driveway.
- 17. §22-713.6 Due to the current threat to Oak trees from Red Oak Wilt and Bacterial Leaf Scorch, we recommend that the total quantity of oak tree species proposed not exceed 10% of the total proposed canopy tree species.
- 18. §22-715.2.C.(2). Park and recreation land is required at a ratio of 2,500 square feet per new dwelling unit or 10,000 square feet. A fee-in-lieu of park and recreation at a rate of \$2,500 per dwelling unit or \$10,000.00 for 4 units may be provided in lieu of land at the Board's discretion.
- 19. §22-716. Concrete monuments shall be provided at the following locations:
 - a. At all outbound existing property corners, including changes in direction of boundary where existing monumentation does not exist.
 - b. At all proposed property line lot corners.
 - c. Along both sides of a street easement or ultimate right-of-way line at all intersections, curves and changes in direction. The pins proposed along the private street should be replaced with monuments.
 - d. At the beginning and end of all easements, including changes in direction of easements.
- 20. §22-717 One Shumard Oak (QS) street tree is near the proposed underground water service on Lot 2. We recommend a minimum of 10 feet between plantings and underground utilities
- 21. §22-718 The plans shall clarify if the two existing dwellings adjoining the tract are proposed to be connected to public water as part of this project.
- 22. §22-720 A Sewage Facilities Planning Module shall be approved by the Township, Authority, and PADEP prior to final plan approval by the Township. The plans shall clarify if the two existing dwellings adjoining the tract are proposed to be connected to public sewer as part of this project.

D. Stormwater Management Comments (Chapters 22 and 26)

- §22-712.4.S.(5) An emergency overflow weir shall be provided for the outlet structure in order
 to convey basin inflow in excess of design flows or in the event the outlet structure becomes
 blocked and is unable to convey the design flow. The minimum capacity of the emergency
 overflow weir shall be equivalent to the one-hundred-year peak inflow rate for the postdevelopment design storm. Hydrographs for the 100-yr storm flow through the underground
 basins with only the overflow weir active should be provided to demonstrate it is sufficient to
 convey the total flows to the system.
- 2. §22-712.6.C & G Inlet reports should be provided to demonstrate the depth and ponding area needed at each inlet to capture the flows as shown on the Post Development Drainage Area Map and Proposed Inlet Drainage Area Map. The inlet grates should be lowered and additional spot elevations provided at the inlets to capture these flows.
- 3. §26-123 The proposed design utilizes the Managed Release Concept (MRC) developed by PADEP to meet the volume control requirement which is permitted where infiltration is infeasible. We note that the proposed managed release concept is subject to PADEP approval. We recommend the following be considered in the design:
 - a. The PADEP guidance for MRC basins states that up to 50% of the internal water storage (IWS) void volume can be included (only for vegetated MRC BMPs) as available storage during hydrologic routings to demonstrate compliance with the standards for the release rate. The proposed infiltration facilities are stone and the IWS area below the MRC orifice elevation should be excluded in the storage capacity for routing.
 - b. Non-vegetated MRC BMPs should include an underdrain at the bottom of the IWS to promote movement of water from previous storms. We recommend an underdrain be provided to the outlet structure to help turnover of water in the system.
- 4. §26-125.9 The following comments related to the modeling of the design in the stormwater management report shall be addressed:
 - a. Note 15 on the Record Site Plan states that the stormwater management facilities have been designed for the maximum permitted impervious for each lot. Individual lots in the SR-2 district are permitted to have a maximum impervious ratio of 25%. It shall be clarified on the Lot Area and Coverage Table if the stormwater management design considers 25% (lot) or 20% (site) impervious area.
 - b. The time of concentration paths should be shown on the drainage area maps to verify the calculations provided in the report.
 - c. The invert out of the outlet structures for stormwater facilities on Lots 1 and 2 are lower than the discharge elevation of the level spreaders and will result in a tailwater condition. The level spreaders should be revised to discharge at an elevation lower than the basin outlet pipe or the tailwater condition modeled in the pond report.
 - d. The outlet structure discharge pipes for all infiltration beds modeled in the pond reports are not consistent with the pipe length and slope listed on the plan and should be revised.
 - e. The weirs for the outlet structures on Lots 1 and 4 specify a width of 2.5 feet and are modeled with a width of 2.5 feet. This is not consistent with the configuration of the outlet structure inlet in relation to the pipe connection which will result in a 4-foot-wide weir at these structures. The size of the weir or the detail should be revised.

- f. The pond reports for the basin appear to model the entire area of the system with a 95% void ratio. The Stormtank details specify a 1-foot minimum stone perimeter around the Stormtank chambers which would reduce the overall capacity of the facility by several hundred cubic feet. Copies of the Stormtank volume calculator results or other sizing calculations should be provided to verify the volume used in the pond report.
- 5. §26-132 The following discrepancies with the stormwater management design and plans shall be addressed:
 - a. The size of the opening between the Stormtank chambers and the outlet structure should be specified on the plans and Outlet Structure Detail.
 - b. The Standard Cleanout Installation Detail should be revised to show the connection of the cleanout to the 15" perf. HDPE in the level spreader.
 - c. The plan shows two pipes connecting to the corners of Inlet CB-3. The pipe alignment should be revised to provide pipe connections into the sides or front of the inlet structure.
 - d. The invert in of CB-6 of 317.17 is lower than the invert out of 317.22 and should be revised.
 - e. The notes on the Subsurface Infiltration Bed BMP Maintenance Plan on Sheet 14 specify the replacement of the filter screen. The plans should clarify if filter screens are proposed and if so, a construction detail should be provided.
 - f. The discharge pipe from the outlet structures cross through portions of the Stormtank structures. It should be clarified if the outlet structures are intended to be installed along the perimeter of the system.
 - g. The Subsurface Stormwater Facility Outlet Structure Detail specifies inlets with internal dimensions of 3 feet by 2 feet. This is not consistent with the PennDOT Standard Inlet dimensions and does not provide sufficient width for the 4-foot-wide weir plate on Lots 2 and 3. The outlet structure inlet box and weir dimensions should be revised as necessary.
 - h. Inlets CB-5 and CB-6 are 7 feet or greater below existing grade. The test pits indicated that bedrock is approximately 3 to 4 feet deep on average throughout the site. The installation of these structures and connecting storm pipe may require excavation of bedrock. We recommend the pipe slopes be reduced to raise these structures and reduce conflicts with bedrock.
 - i. We recommend the entire stone envelope of the level spreader be wrapped in geotextile fabric up to 6 inches below the grate elevation to prevent the stone from clogging with sediment and other yard debris. We further recommend the top 6 inches be covered with the No. 3 stone or larger.
- 6. §26-164.1 The Applicant shall sign an Operation and Maintenance (O&M) and Easement agreement with the municipality covering all stormwater, storm sewer facilities and BMPs that are to be privately owned. The O&M agreement shall be transferred with transfer of ownership and shall be prepared by the Township Solicitor.
- 7. §22-712.13.C Note 7 of the Site Plan Notes on the Record Plan indicates that the stormwater facilities will be protected and preserved by the owner on whose lands the facility is located. However, Note 9 indicates the stormwater management facilities will be pursuant to a shared maintenance agreement between all lot owners. Furthermore, the facility on Lot 2 collects the flows from the shared access road and the discharge from the system on Lot 4. The ownership, inspection and maintenance responsibilities for each system should be clarified. The responsibility for each system should be clearly specified in the BMP Maintenance Plan notes on Sheet 14.

- 8. §22-712.13.D The Township shall require payment of a fee in order to maintain the stormwater management facilities. The fee shall apply to all storm sewers located in public rights-of-way or any easement owned by the Township.
- 9. <u>Township Resolution #2024-02</u> The Applicant will be required to pay a fee for the proposed onsite BMP to provide a financial guarantee for the timely installation, proper construction, and continued maintenance by the owner of the subject property. The fee shall be 5% of the total construction cost of the proposed BMP. The Applicant's professional shall submit a cost estimate once the design is finalized.

E. General Comments

- 1. It was previously discussed at a public meeting that a berm may be constructed to prevent runoff across the Fasti property line. We recommend a defined berm be identified on the plans.
- 2. We recommend coordination with USPS for the type of proposed mailboxes.

Considering the extent of the required plan revisions identified in this letter, we may have additional comments relating to compliance with the Township Ordinances upon resubmission by the Applicant and upon review of the final plan requirements. To help expedite the review process of the resubmission of the plan, the Applicant shall submit a response letter which addresses each of the above comments. Changes that have been made to the application that are unrelated to the review comments shall also be identified in the response letter.

Sincerely,

Janene Marchand, P.E. Gilmore & Associates, Inc. Township Engineers

Janurie Marchand

JM/tw

cc: Alexandria Mullin, Assistant to the Manager
Randy Teschner, Fire Marshall/Code Enforcement Officer
Scott Holbert, Esquire, Flager & Associates
Chris Canavan/Justin Strahorn, W.B. Homes, Inc./Cavandish Acquisitions, LP
Rob Cunningham, P.E., Holmes Cunningham Engineering
John Larson, Executive Director, CNBTJSA
Daniel Preston, P.E., Executive Director, NPWA
Craig D. Kennard, P.E., E.V.P., Gilmore & Associates, Inc.



February 6, 2025

New Britain Township 207 Park Avenue Chalfont, PA 18914

RE: Barry Road Subdivision - Waiver Request Letter

TMP#: 26-001-106-004

New Britain Township, Bucks County, PA

HCE Project No.: 2028

Dear Mr. Fox:

In regard to the above referenced land development project, the applicant requests the following waivers from the Subdivision and Land Development Ordinance.

- 1. SALDO Section 22-403 & 404 The Applicant is requesting a waiver to allow a combined preliminary and final subdivision and land development submission for this project. All information required for final plans is included on the land development plan set.
- 2. SALDO Section 22-502.1.H The Applicant is requesting a waiver from providing a lighting plan, as no new lighting is proposed as part of this project. No pole lighting is proposed for this small-scale residential project with 4 new building lots, only residential scale lighting will be used.
- SALDO Section 22-705.3.C The applicant is requesting a waiver from providing cartway widening along Schoolhouse Road. The existing cartway width is adequate for the existing traffic volume and the proposed development doesn't create a significant traffic impact. In addition, widening would disrupt the existing drainage swale along the roadway.
- 4. SALDO Section 22-705.3.E The applicant is requesting a waiver from providing a proposed private street that meets design specifications of a local street. The intent of this development is to provide the aesthetic of a rural neighborhood, which only contains 4 new building lots. The proposed road will be private and maintain by the homeowner's association. The proposed cartway width provides adequate access to the homes and for emergency vehicles. The required right-of-way width is proposed for the ability to widen the road in the future.
- 5. SALDO Section 22-705.3.G The applicant is requesting a waiver from providing mill and overlay of the entire width of the roadway a depth of 1 ½ inches. There are minimal improvements within the existing cartway, which include water and sewer connections on the western side of the Schoolhouse cartway. Additionally, no widening is proposed as part of this project and the existing cartway appears to be in good condition.
- 6. SALDO Section 22-705.8.C The applicant is requesting a waiver from providing culde-sac streets with a left-side turnaround configuration at the closed end and minimum

Phone: 215-586-3330 · 409 E. Butler Ave Unit 5 · Doylestown, PA 18901 · www.hcengineering.net

paving radius of 50 feet. The intent of this development is to provide the aesthetic of a rural neighborhood, which only contains 5 new building lots. A hammerhead turnaround is proposed with the required right-of-way width for the ability to install a cul-de-sac. Additionally, the hammerhead provides adequate turnaround space for emergency vehicles.

- 7. SALDO Section 22-705.8.F The applicant is requesting a waiver from providing a fifteen-foot by twenty-foot snow storage easement along the right-of-way of the cul-desac bulb. The current hammerhead design provides sufficient room for snow storage. Additionally, the roadway will be privately owned and maintained.
- 8. SALDO Section 22-706 The Applicant is requesting a waiver from providing curb and sidewalk along Barry Road and the proposed private road. There is currently curb along the property side of Barry Road.
- 9. SALDO Section 22-710.4 The Applicant is requesting a waiver from providing an emergency access for subdivisions with a single access. The feasibility of providing emergency access in the proposed subdivision is limited because the lot being subdivided is surrounded by an urbanized area. In addition, the emergency access will generate additional impervious areas.
- 10. SALDO Section 22-713.4.B The Applicant is requesting a waiver to allow street trees within the right-of-way. This layout was discussed during Sketch Plan phase of the project and is consistent with other similar projects.
- 11. SALDO Section 22-714.3.A The Applicant is requesting a waiver from providing streetlights at any location where improvements are shown. The intent of this development is to provide the aesthetic of a rural neighborhood, which only contains 4 new building lots. There are individual residential scale post lights at each home to illuminate the individual driveways. No internal pedestrian walkways are proposed that require illumination.

Very truly yours,

Holmes Cunningham Engineering

Robert Cunningham, P.E.

Partner

cc: Cavendish Acquisitions, LP

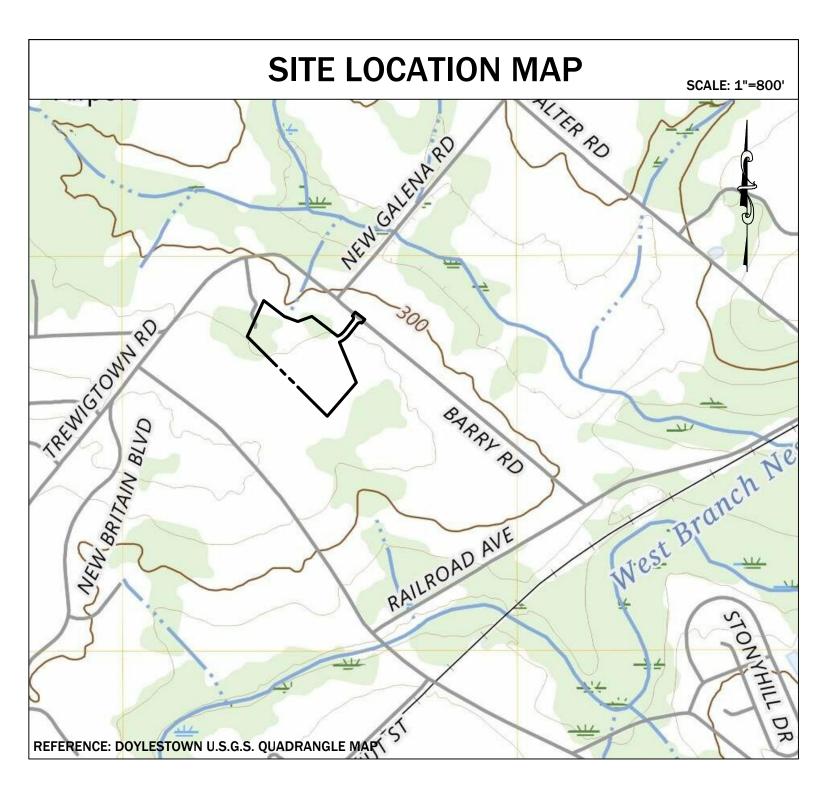
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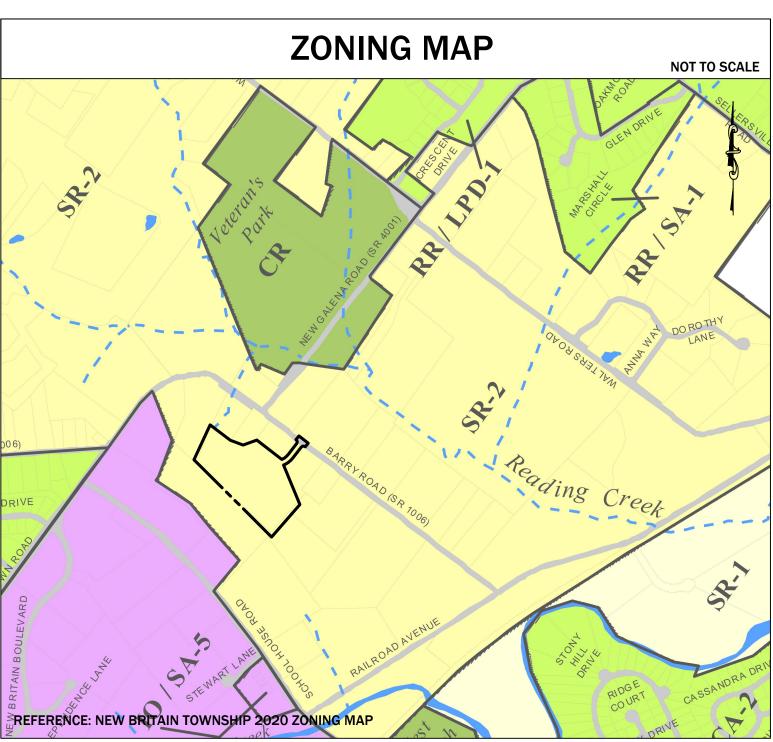


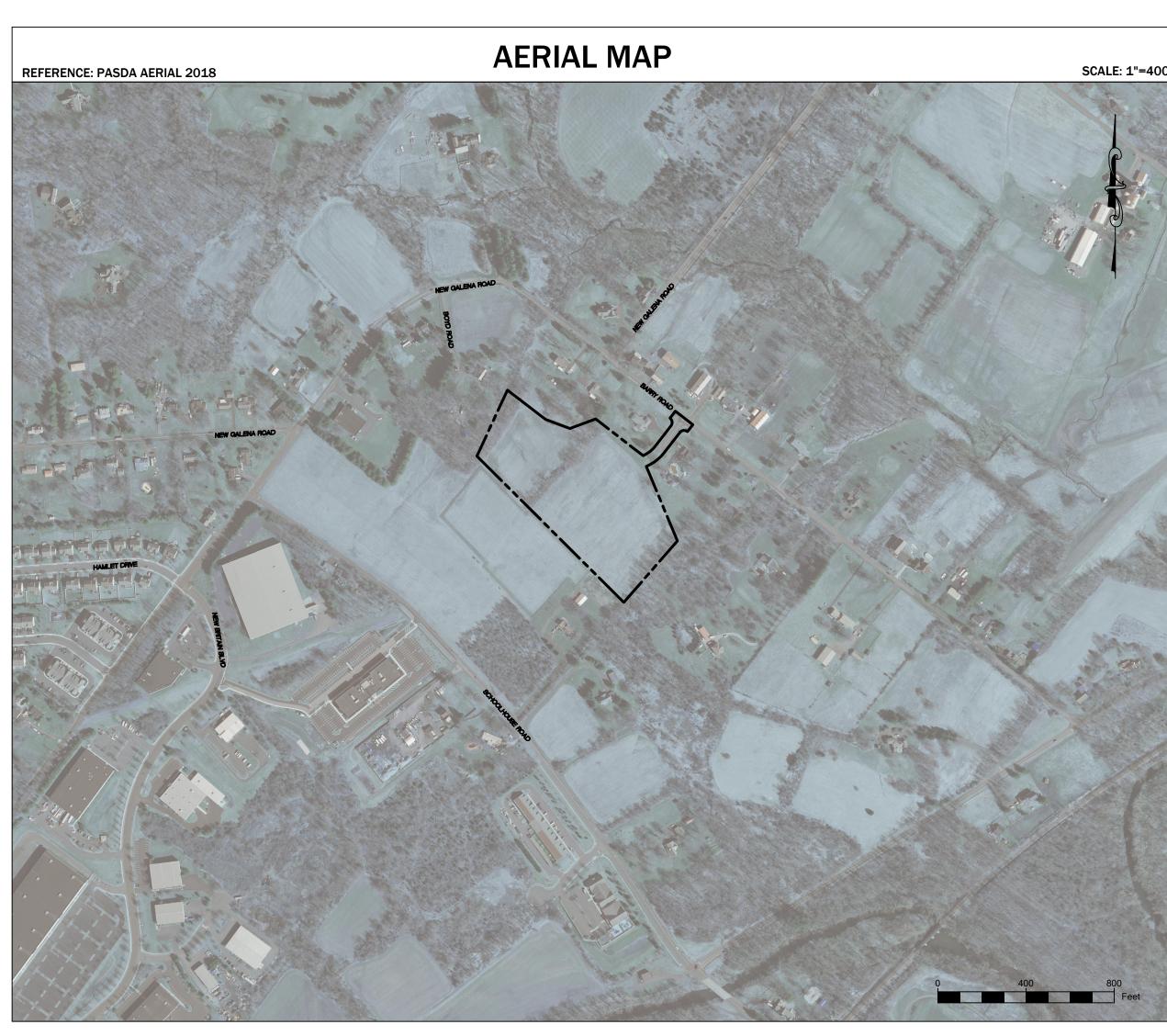
PRELIMINARY AND FINAL LAND DEVELOPMENT AND MAJOR SUBDIVISION PLANS

BARRY ROAD SUBDIVISION

TMP # 26-001-106-004 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA







CONTACTS

TOWNSHIP NEW BRITAIN TOWNSHIP 207 PARK AVENUE CHALFONT, Pa 18914 PHONE: (215)-822-1391

TOWNSHIP ENGINEER
GILMORE & ASSOCIATES, Inc
65 EAST BUTLER AVENUE, SUITE 100
NEW BRITAIN, PA 18901
PHONE: 215 345 4330

TOWNSHIP PUBLIC WORKS DEPARTMENT 207 PARK AVENUE CHALFONT, PA 18914 PHONE: (215)-822-1391

COUNTY PLANNING COMMISSION
BUCKS COUNTY PLANNING COMMISSION
THE ALMSHOUSE NESHAMINY MANOR CENTER
1260 ALMSHOUSE ROAD
DOYLESTOWN, PA 18901
PHONE: 215-345-3400

COUNTY CONSERVATION DISTRICT
BUCKS COUNTY CONSERVATION
DISTRICT
1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901
PHONE: 215-345-7577

WATER NORTH PENN WATER AUTHORITY 300 FORTY FOOT ROAD, LANDSDALE, PA 19446 PHONE: (215) 885-3617

ELECTRIC AND GAS
PHILDELPHIA ELECTRIC COMPANY
BUCKS/MONT REGION CONTRACTOR AND
BUILDER SERVICES
400 PARK AVENUE
WARMINSTER, PA 18974
PHONE: (215) 956-3270

FAX: (215) 956-3240

PHONE: (215) 345-1225

SEWER
CHALFONT-NEW BRITAIN TOWNSHIP JOINT
SEWAGE AUTHORITY
1645 UPPER STATE ROAD
DOYLESTOWN, PA 18901

PECO WARMINSTER SERVICE BUILDING

400 PARK AVE.,
WARMINSTER, PA 18974
ELECTRIC PHONE: (215) 956-3270
NEW ELECTRIC PHONE: (215) 956-3010
ELECTRIC EMERGENCY: (800) 841-4141
GAS PHONE: (800) 454-4100
NEW GAS PHONE: (800) 454-4100
GAS EMERGENCY: (800) 841-4141
GAS EMERGENCY(ALT): (844) 841-4151

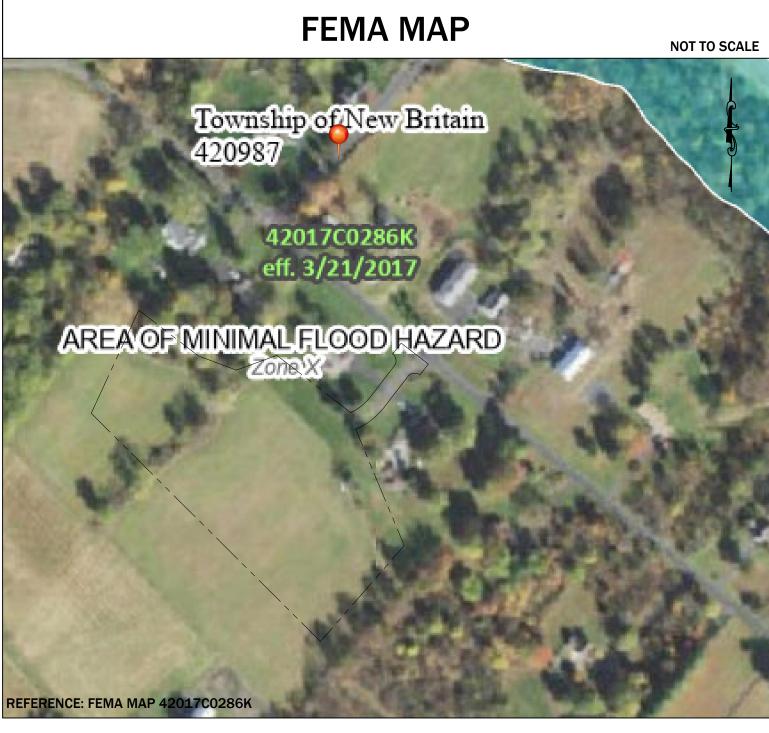
APPLICANT/EQUITABLE OWNER:

CAVENDISH ACQUISITIONS L.P. 404 N. SUMNEYTOWN PIKE NORTH WALES, PA 19454

PREPARED BY:



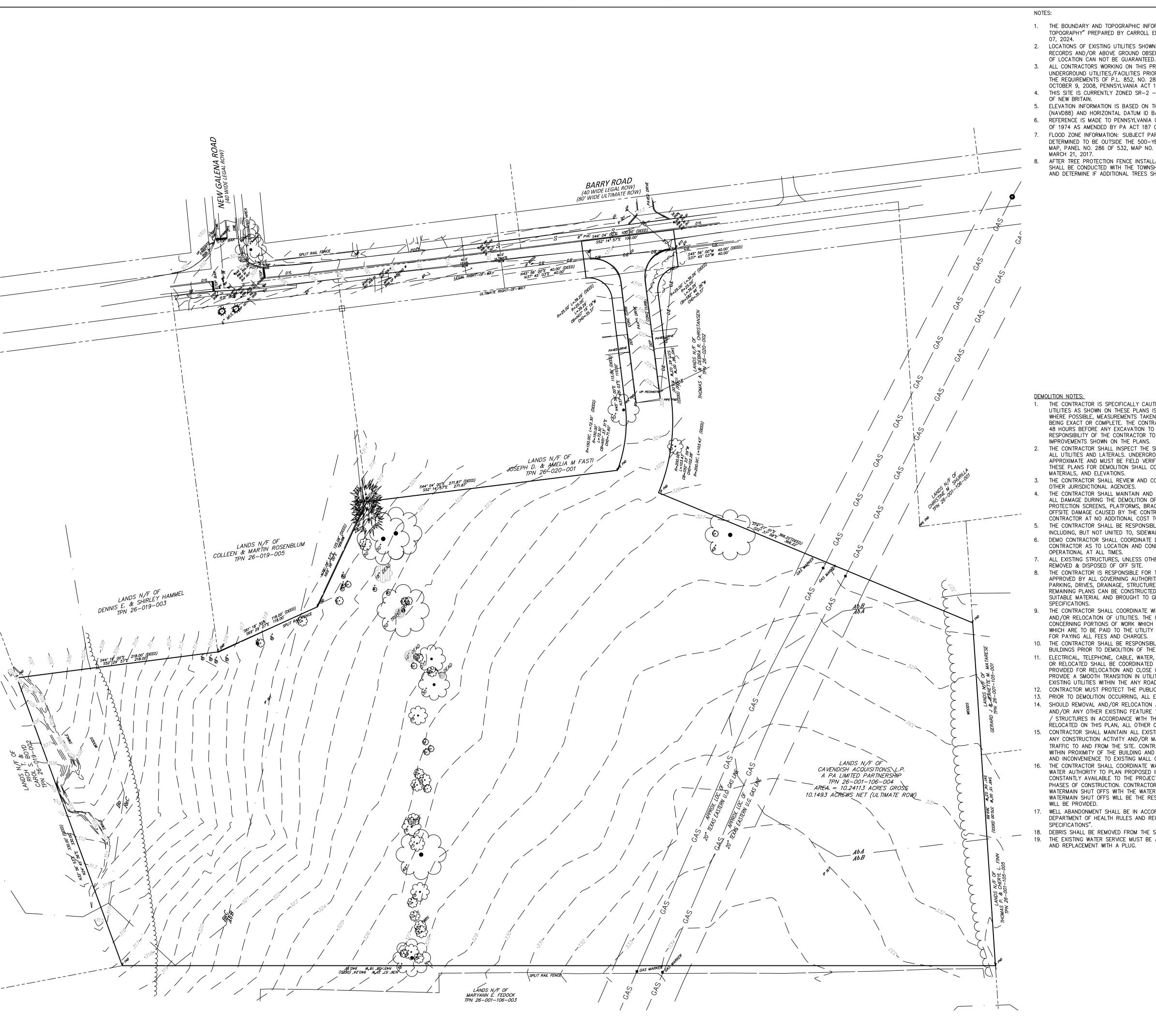
HOLMES CUNNINGHAM LLC 409 EAST BUTLER AVENUE UNIT 5 DOYLESTOWN, PA 18901 (215) 586-3330



DRAWING LIST						
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE			
1	C0.0	COVER SHEET				
2	C0.1	EXISTING CONDITIONS AND DEMOLITION PLAN	1/31/2025			
3	C0.2	AERIAL MAP	1/31/2025			
4	C0.3	EXISTING RESOURCE AND SITE ANALYSIS PLAN	1/31/2025			
5*	C1.1	RECORD SITE PLAN	1/31/2025			
6	C2.0	GRADING, DRAINAGE AND UTILITY PLAN	1/31/2025			
7	C2.1	CONSTRUCTION DETAILS	1/31/2025			
8	C2.2	CONSTRUCTION DETAILS	1/31/2025			
9	C2.3	CONSTRUCTION DETAILS	1/31/2025			
10	C3.0	UTILITY PROFILES	1/31/2025			
11	C4.0	EROSION AND SEDIMENT CONTROL PLAN	1/31/2025			
12	C4.1	EROSION AND SEDIMENT CONTROL DETAILS	1/31/2025			
13	C5.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	1/31/2025			
14	C5.1	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	1/31/2025			
15	C5.2	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	1/31/2025			
16	C6.0	LANDSCAPING PLAN	1/31/2025			
17	C6.1	LANDSCAPING DETAILS	1/31/2025			

* DENOTES PLAN TO BE RECORDED

DATE: (01/31/2025
PROJECT #	2028
DRAWING #	£ C0.0
SHEET	1 OF 17



1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM A "PLAN OF BOUNDARY AND

TOPOGRAPHY" PREPARED BY CARROLL ENGINEERING CORPORATION", LAST REVISED SEPTEMBER 2. LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM EXISTING RECORDS AND/OR ABOVE GROUND OBSERVATION AT THE SITE. COMPLETENESS OR ACCURACY

3. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON OCTOBER 9, 2008, PENNSYLVANIA ACT 121.

4. THIS SITE IS CURRENTLY ZONED SR-2 - SUBURBAN RESIDENTIAL DISTRICT IN THE TOWNSHIP OF NEW BRITAIN. 5. ELEVATION INFORMATION IS BASED ON THE NATIONAL AMERICAN VERTICAL DATUM OF 1988

(NAVD88) AND HORIZONTAL DATUM ID BASED ON 1983 STATE COORDINATE SYSTEM. 6. REFERENCE IS MADE TO PENNSYLVANIA ONE CALL SYSTEM, IN ACCORDANCE WITH PA ACT 287

OF 1974 AS AMENDED BY PA ACT 187 OF 2008. (800-242-1776). 7. FLOOD ZONE INFORMATION: SUBJECT PARCEL AREA IS LOCATED OUTSIDE ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 286 OF 532, MAP NO. 42017C0286K WHICH BEARS AN EFFECTIVE DATE OF

AFTER TREE PROTECTION FENCE INSTALLATION AND PRIOR TO CLEARING A SITE MEETING SHALL BE CONDUCTED WITH THE TOWNSHIP ENGINEER TO CONFIRM THE LIMIT OF CLEARING AND DETERMINE IF ADDITIONAL TREES SHALL BE REMOVED.

LEGEND

---- RIGHT OF WAY _____ CONTOUR —w—— WATER MAIN —s—— SANITARY MAIN ===== STORM SEWER -----OE------- OVERHEAD WIRES



______ FENCE WATER VALVE HYDRANT SIGN UTILITY POLE STORM INLET UTILITY ACCESS COVER

MONUMENT SPOT ELEVATIONS SOIL UNIT SYMBOL — · — · — SOIL UNIT LIMIT

-r---- TELECOMMUNICATION LINE

. TREE LINE EXISTING TREE EXISTING DEAD TREE

-0-

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(S) (TS)

TREE PROTECTION FENCE

- 1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- 2. THE CONTRACTOR SHALL INSPECT THE SITE THOROUGHLY AND FIELD VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND LATERALS. UNDERGROUND ELECTRIC, TELEPHONE, VAULTS, GAS, WATER MAINS, ETC. ARE APPROXIMATE AND MUST BE FIELD VERIFIED. OTHER UTILITIES MAY ALSO EXIST. ALL CONTRACTORS USING THESE PLANS FOR DEMOLITION SHALL CONFIRM ALL UTILITIES IN THE FIELD FOR EXACT LOCATIONS, SIZES, MATERIALS, AND ELEVATIONS.
- 3. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL PROVISIONS OF NEW BRITAIN TOWNSHIP, AND OTHER JURISDICTIONAL AGENCIES.
- 4. THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL OFFSITE PROPERTY AND STRUCTURES FROM ANY AND ALL DAMAGE DURING THE DEMOLITION OPERATION. THE CONTRACTOR SHALL USE ANY NECESSARY PROTECTION SCREENS, PLATFORMS, BRACING, UNDERPINNING, ETC. TO PROTECT OFFSITE PROPERTY. ANY OFFSITE DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS
- INCLUDING, BUT NOT UNITED TO, SIDEWALK/STREET CLOSING AND DEMOLITION. 6. DEMO CONTRACTOR SHALL COORDINATE DECOMMISSIONING AND REMOVAL OF UTILITY LINES WITH UTILITY CONTRACTOR AS TO LOCATION AND CONDITION OF CAPPING. THE ACCESS SHALL REMAIN OPEN AND
- OPERATIONAL AT ALL TIMES. 7. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN WITHIN CONSTRUCTION AREA SHALL BE
- REMOVED & DISPOSED OF OFF SITE. 8. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE
- THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO THE EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE BUILDINGS.
- 11. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ANY ROAD RIGHT OF WAY DURING CONSTRUCTION.
- 12. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
- 13. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED. 14. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, LIGHTING, STORM INLET STRUCTURES AND/OR ANY OTHER EXISTING FEATURE TO REMAIN THEN THE CONTRACTOR SHALL PROVIDE NEW MATERIALS / STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. EXCEPT FOR MATERIALS DESIGNED TO BE
- RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW. 15. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE. CONTRACTOR SHALL COORDINATE/PHASE ALL CONSTRUCTION ACTIVITY WITHIN PROXIMITY OF THE BUILDING AND UTILITY INTERRUPTIONS WITH THE OWNER TO MINIMIZE DISTURBANCE
- AND INCONVENIENCE TO EXISTING MALL OPERATION AND THE CUSTOMERS. THE CONTRACTOR SHALL COORDINATE WATERMAIN WORK WITH THE FIRE DEPT. AND THE NORTH WALES WATER AUTHORITY TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE PROJECT AND SITE THROUGH OUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATERMAIN SHUT OFFS WITH THE WATER COMPANY DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATERMAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION
- 17. WELL ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION ELEVEN OF THE "BUCKS COUNTY DEPARTMENT OF HEALTH RULES AND REGULATIONS GOVERNING ALL WELLS AND THEIR CONSTRUCTION
- 18. DEBRIS SHALL BE REMOVED FROM THE STREAM CHANNEL WITHIN THE PROPERTY LINES. THE EXISTING WATER SERVICE MUST BE ABANDONED BY REMOVAL OF THE CORPORATION STOP AT THE MAIN AND REPLACEMENT WITH A PLUG.

	_
S WORKING DAY'S NOTICE FOR CONSTRUCTION PHASE AND MORKING DAYS IN DESIGN STAGE STOP & CALL -	TRACTOR, PER PA. ACT 187 TO

10 Wv Penr Call 1-8C JTILI FHIS

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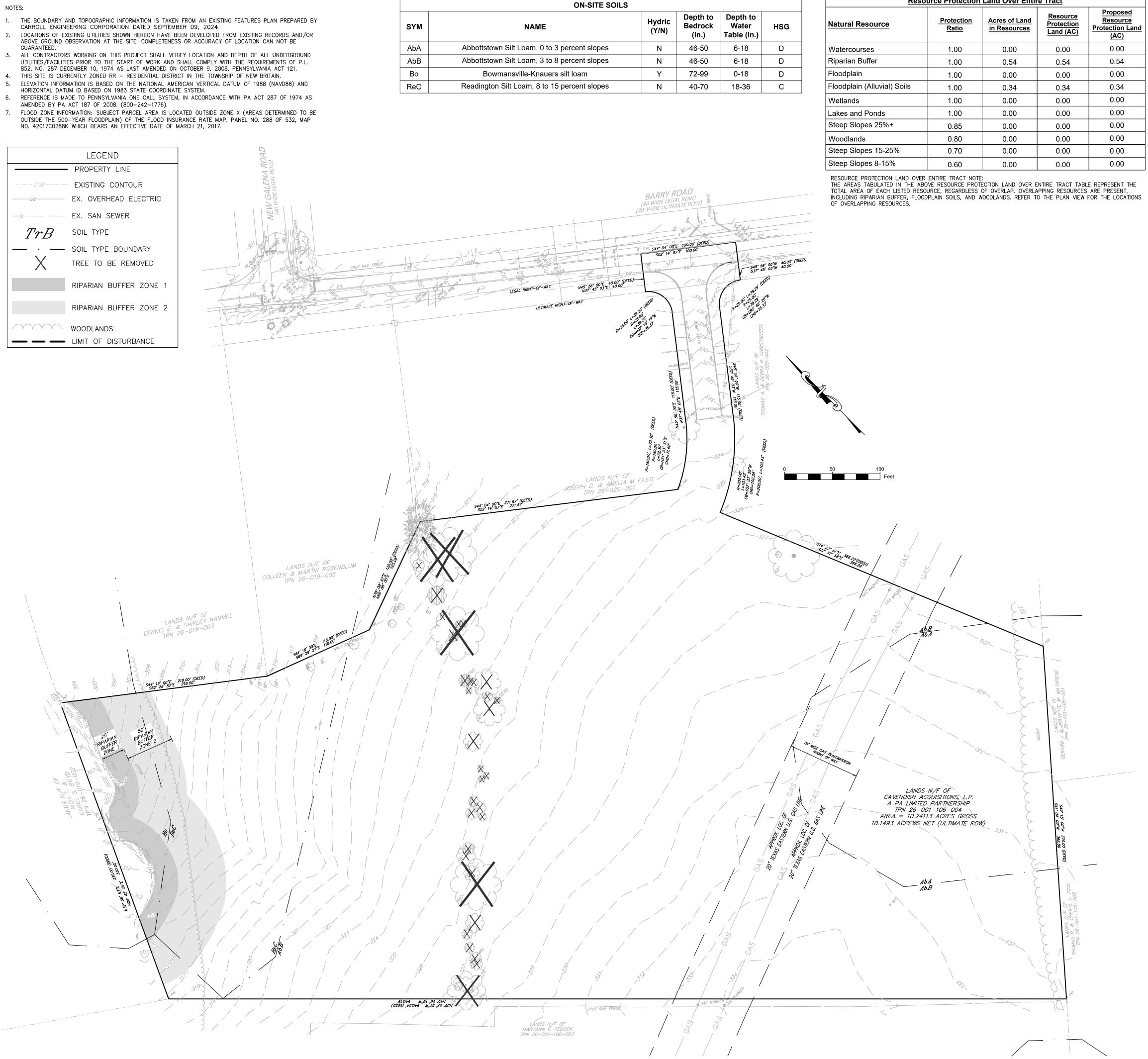
ARRY

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ROAD TWP # 26-002 BARRY FOWNSHIE BRITAIN NEW

File No. 2028 CO.1 EXISTING CONDITIONS.DWG





Resource Protection Land Over Entire Tract				
Natural Resource	Protection Ratio	Acres of Land in Resources	Resource Protection Land (AC)	Proposed Resource Protection Land (AC)
Watercourses	1.00	0.00	0.00	0.00
Riparian Buffer	1.00	0.54	0.54	0.54
Floodplain	1.00	0.00	0.00	0.00
Floodplain (Alluvial) Soils	1.00	0.34	0.34	0.34
Wetlands	1.00	0.00	0.00	0.00
_akes and Ponds	1.00	0.00	0.00	0.00
Steep Slopes 25%+	0.85	0.00	0.00	0.00
Woodlands	0.80	0.00	0.00	0.00
Steep Slopes 15-25%	0.70	0.00	0.00	0.00
Steep Slopes 8-15%	0.60	0.00	0.00	0.00

	Site Capacity Calculations		
		Area (SF)	Area (AC)
<u>d</u>	Gross Site Area Determined by Actual On-site Survey	446,104	10.241
	Existing Streets Ultimate Rights-of-Way	4,000	0.092
	Existing Utility Rights-of-Way or Easements	35,510	0.815
	Existing Preservation Easements	0	0.000
	Land Not Contiguous	0	0.000
	Land Shown on Previous Subdivision Reserved for Open Space, Protection, etc.	0	0.000
	Land in a Different Zoning District from Primary Use	0	0.000
	Base Site Area	406,594	9.334
	Net Buildable Site Area	402,238	9.234
	Resource Protection Land		

Resource Protection Land						
Natural Resource	Protection Ratio	Acres of Land in Resources	Resource Protection Land (AC)	Proposed Resource Protection Land (AC)		
Watercourses	1.00	0.00	0.00	0.00		
Riparian Buffer	1.00	0.54	0.54	0.54		
Floodplain	1.00	0.00	0.00	0.00		
Floodplain (Alluvial) Soils	1.00	0.10	0.10	0.10		
Wetlands	1.00	0.00	0.00	0.00		
Lakes and Ponds	1.00	0.00	0.00	0.00		
Steep Slopes 25%+	0.85	0.00	0.00	0.00		
Woodlands	0.80	0.00	0.00	0.00		
Steep Slopes 15-25%	0.70	0.00	0.00	0.00		
Steep Slopes 8-15%	0.60	0.00	0.00	0.00		
Total Land with Resource Restrictions	,		0.	.64		
Total Land with 1.00 Protection Ratio R	Restrictions		0.	.64		
Total Resource Protection Land Requi	red		0.64			
Total Resource Protection Land Provide	bet		0.64			
Total Disturbed Resources			0.00			
				1		
Base Site Area			9.33	Ac.		
Multiply Open Space Ratio			0.00			
Standard Minimum Open Space			0.00	Ac.		
Required Open Space (Greater of 100% I	Protection Land or M	in Open Space)	0.00	Ac.		
Base Site Area			9.33	Ac.		
Subtract required open space			0.64	Ac.		
Net Buildable Site Area			8.69	Ac.		
Net Buildable Site Area			8.69	Ac.		
Multiply by Maximum Density			N/A			
Number of Dwelling Units Permitted			N/A			
Base Site Area			9.33	Ac.		
Multiply by Maximum Impervious Surface		0.20				
Allowable Impervious Surface for Prop		1.87	Ac.			
Summary Table			<u></u>			
Proposed Open Space		0.00	Λ.			
Required Open Space			0.00	Ac.		
Proposed Number of Dwellings		חוו				
1 Toposed Number of Dwellings	4	DU				

Proposed Density



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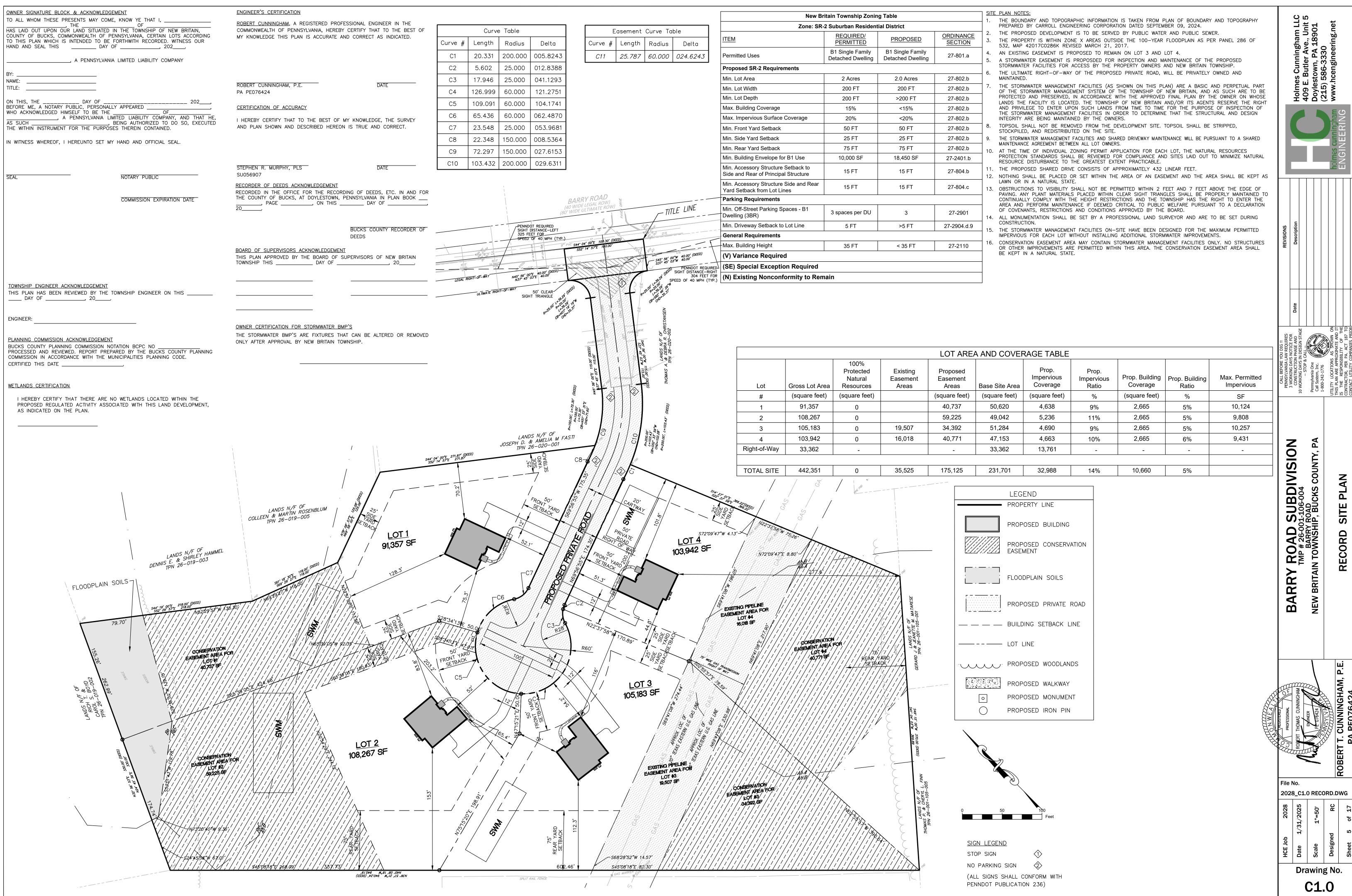
BARRY ROAD SUBDIV TMP # 26-001-106-004 BARRY ROAD NEW BRITAIN TOWNSHIP, BUCKS CO

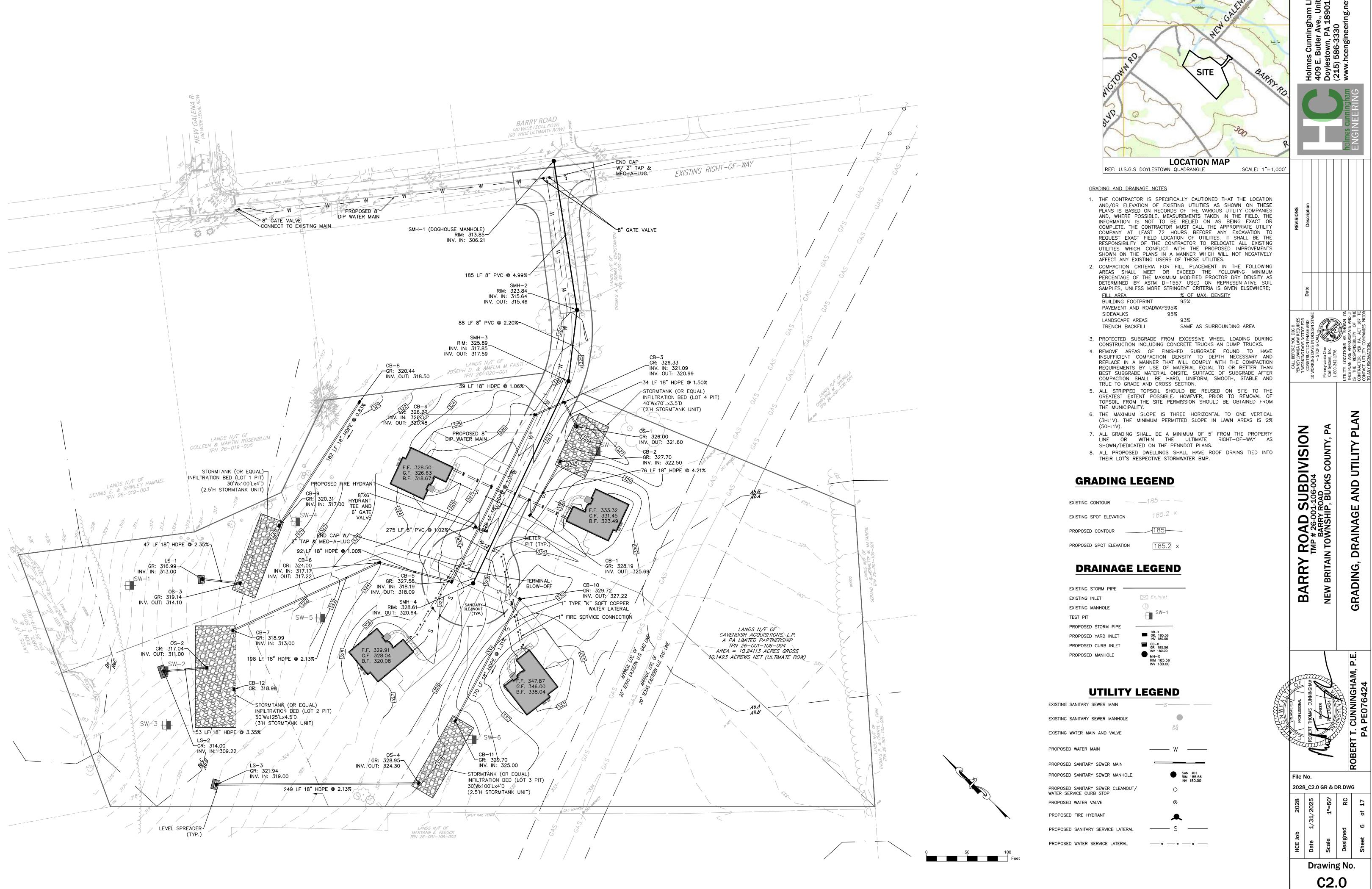
0.46 DU/Ac.

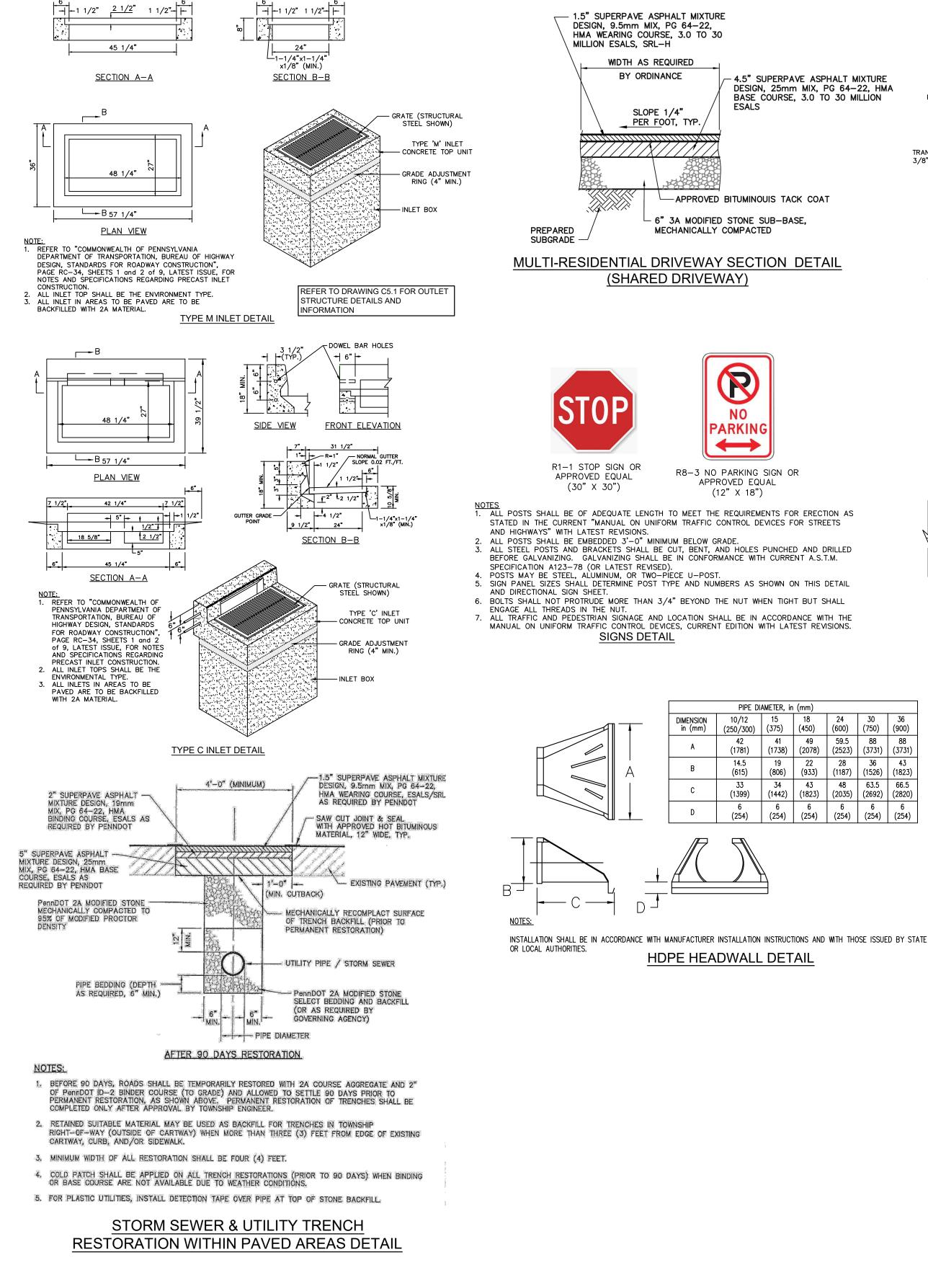
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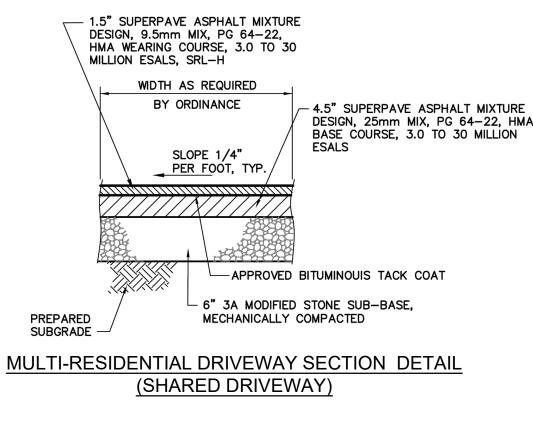
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NO

R1-1 STOP SIGN OR

APPROVED EQUAL

(30" X 30")

SIGNS DETAIL

DIMENSION in (mm)

HDPE HEADWALL DETAIL

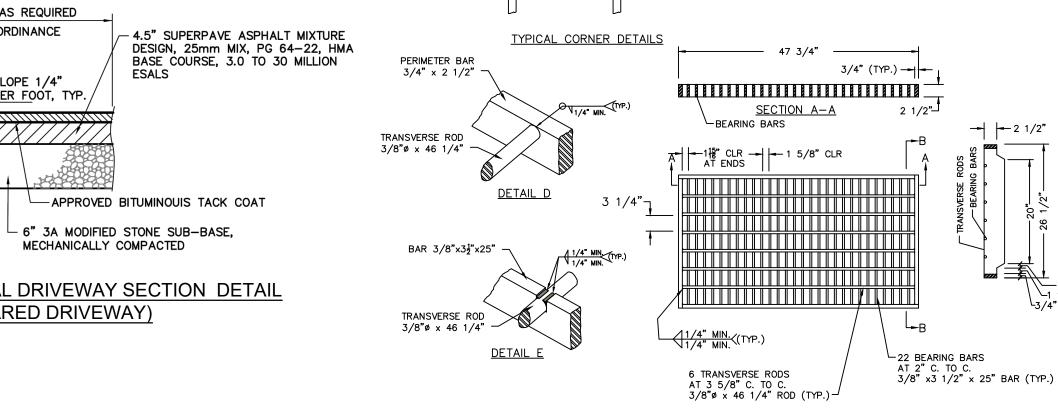
(250/300) | (375) | (450) | (600) | (750) | (900)

(1738) | (2078) | (2523) | (3731) | (3731)

(806) (933) (1187) (1526) (1823)

 (1442)
 (1823)
 (2035)
 (2692)
 (2820)

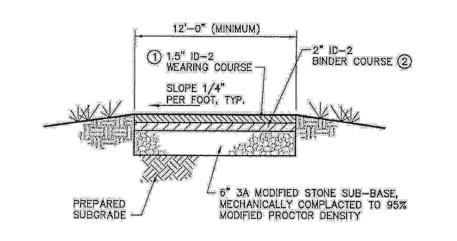
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1/4" MIN. (TYP.)



PAVEMENT TIE-IN



STRUCTURAL STEEL BICYCLE SAFE INLET GRATE DETAIL

--| |-- 2 1/2"

ALTERNATE SPECIFICATION 1.5" SUPERPAVE ASPHALT MIXTURE DESIGN, 9.5 mm MIX, PG 64-22, HMA WEARING COURSE, 0.3 TO 3 MILLION ESALS, SRL-M 2 2.0" SUPERPAVE ASPHALT MIXTURE DESIGN, 19mm MIX, PG 64-22, HMA BINDER COURSE, 0.3 TO 3 MILLION ESALS

RESIDENTIAL DRIVEWAY PAVING SECTION DETAIL

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE 19. PROPOSED 8" WATER MAIN SHALL BE CONNECTED TO EXISTING WATER MAIN IN RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF

THESE UTILITIES. 2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINAT INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND 23. ALL WATER FACILITIES SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE WITH NORTH WALES WATER AUTHORITY STANDARD SPECIFICATIONS. REGULATORY AGENCY AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO 24.18 INCHES OF VERTICAL CLEARANCE OR 10 FEET OF HORIZONTAL CLEARANCE

3. ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE OWNER, AT NO COST TO THE TOWNSHIP. 4. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE EXISTING UTILITY 25. THERE SHALL NOT BE BUILT, INSTALLED, CONSTRUCTED, PLANTED OR LOCATED SERVICE (WATER, SEWER, GAS AND ELECTRIC) TO THE PROPERTY AND ENSURE THAT THEY ARE PROPERLY DISCONNECTED FROM THE EXISTING UTILITIES AND

RECONNECTED TO THE NEW SERVICES PROVIDED. 5. THE LOCATION OF THE EXISTING GAS MAINS ARE APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL

CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL 7. ALL GAS WORK AND OTHER ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE AND FEDERAL 29. ALL CURB STOPS WITHIN PAVED AREAS MUST BE PROVIDED WITH A VALVE BOX

8. ALL ELECTRICAL WORK, TRANSFORMER PADS, AND ASSOCIATED 30. WATER MAINS MUST BE SURVEY STAKED AT FIFTY (50) FOOT INTERVALS ALONG APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS. MIN. DEPTH OF COVER OVER ELECTRIC, GAS, AND CABLE SHALL BE 2 FT.

9. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS, UTILITY LOCATIONS, CATHODIC PROTECTION AND INVERTS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DISRUPTIONS TO EXISTING UTILITIES SERVICES. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN BY THE DRAWINGS SHALL BE IMMEDIATELY 31. ALL WATER SERVICE CONNECTIONS, WATER MAIN CONNECTIONS AND SERVICE BROUGHT TO THE ATTENTION OF THE ENGINEER.

10. THE SANITARY SEWER MAINS ARE TO BE DEDICATED TO THE CHALFONT NEW BRITAIN SEWER AUTHORITY. 11. THE CONTRACTOR SHALL COORDINATE THE SANITARY SEWER WORK WITH THE CHALFONT NEW BRITAIN SEWER AUTHORITY. THE CHALFONT NEW BRITAIN SEWER AUTHORITY IS TO BE CONTACTED ONE WEEK PRIOR TO SANITARY SEWER CONSTRUCTION, AND 72 HOURS PRIOR TO EXCAVATING NEAR OR CONNECTING

INTO ANY EXISTING SEWER FACILITIES. 12. ALL SANITARY SEWER FACILITIES SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE CHALFONT NEW BRITAIN SEWER AUTHORITY SPECIFICATIONS. 13. EIGHTEEN (18) INCHES VERTICAL CLEARANCE SHOULD BE PROVIDED AT ALL UTILITY CROSSINGS

14. ALL WATER MAINS ARE TO HAVE A MINIMUM COVER OF 4 FEET FROM THE TOP OF THE PIPE TO THE PROPOSED SURFACE ELEVATION. 15. PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 10 FT BETWEEN SANITARY

SEWER MAINS AND WATER MAINS. PROVIDE A 5 FT MINIMUM HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER MAINS AND ALL OTHER UTILITIES. 16. ALL PROPOSED WATER MAINS SHALL BE DUCTILE IRON PIPE, CLASS 52, BITUMINOUS COATED DOUBLE CEMENT MORTAR LINED. 17. ALL WATER FACILITIES WITHIN THIS DEVELOPMENT, INCLUDING THE WATER MAIN

AND WATER SERVICE PIPING UP TO AND INCLUDING INDIVIDUAL CURB STOPS,

FIRE LINE ISOLATION VALVES AND FIRE HYDRANTS, SHALL BE OFFERED FOR

DEDICATION TO THE NORTH WALES WATER AUTHORITY. ALL WATER PIPING AND ASSOCIATED APPURTENANCES DOWNSTREAM OF THESE FACILITIES TO THE INDIVIDUAL BUILDINGS SHALL BE PRIVATELY OWNED. RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, 18. ALL WATER MAIN FITTINGS AND VALVES SHALL BE MECHANICAL JOINT (RESTRAINED) AND THE FITTINGS SHALL BE PROVIDED WITH THRUST BLOCKING. REFER TO DRAWING C2.3 FOR THRUST BLOCK DETAILS AND FITTING SCHEDULES.

NEW GALENA ROAD.

WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN 20. ALL FIRE HYDRANTS AND VALVES SHALL OPEN LEFT (COUNTERCLOCKWISE). 1. THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF LANDSCAPING SHOULD DISTURBANCE BE REQUIRED FOR UTILITY REPAIRS. 22. THE CONTRACTOR MUST CONTACT NWWA ONE WEEK PRIOR TO WATER MAN

CONSTRUCTION, AND 72 HOURS PRIOR TO EXCAVATION NEAR AND CONNECTION TO EXISTING WATER MAIN. SHALL BE PROVIDED BETWEEN THE SANITARY SEWER AND ALL OTHER UTILITIES. OTHERWISE, CONCRETE ENCASEMENT OF THE SANITARY SEWER SHALL BE

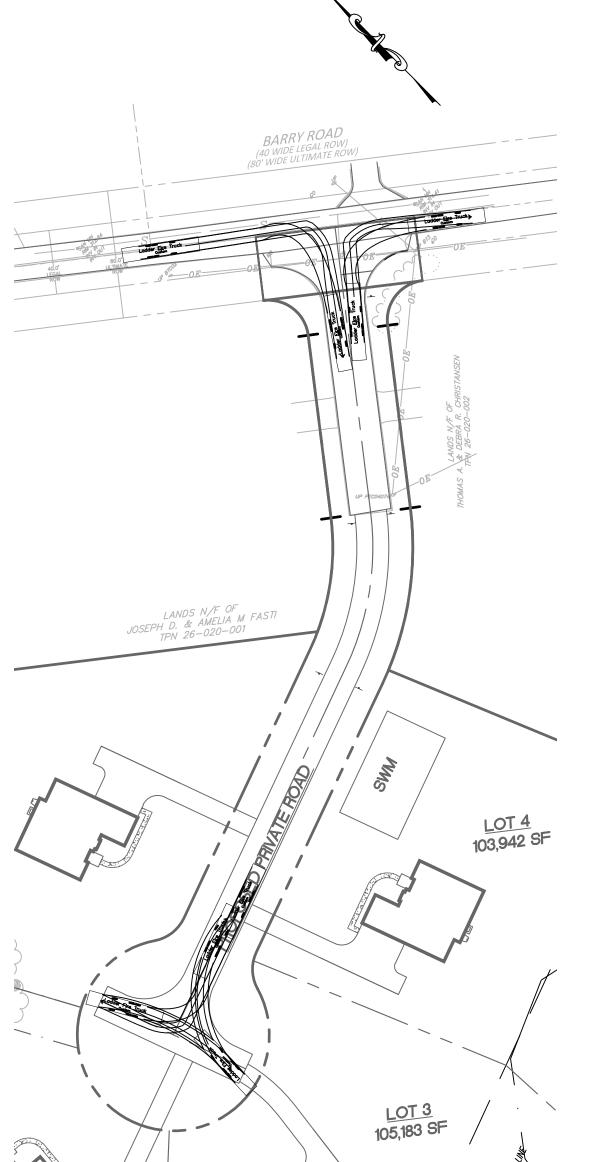
ANY TEMPORARY OR PERMANENT BUILDINGS OR STRUCTURES INCLUDING INFILTRATION BASINS, OR ANY TREES, SHRUBS, OR OTHER LANDSCAPING WITHIN O FEET OF SANITARY SEWER FACILITIES, EXCEPT TREES, SHRUBS, AND OTHER LANDSCAPING WHICH WILL NOT GROW TO MORE THAN 6 FEET IN HEIGHT. 26. SINCE THE PROJECT IS LOCATED IN THE MONTGOMERY HIGH PRESSURE ZONE, A PRESSURE REDUCING VALVE SHALL BE INSTALLED ON EACH WATER SERVICE.

6. THE LOCATION OF EXISTING ELECTRIC LINES ARE APPROXIMATE. THE 27. A MINIMUM OF 5 FEET OF HORIZONTAL CLEARANCE SHALL BE PROVIDED BETWEEN THE WATER MAIN AND ALL PARALLEL UTILITY LINES. 28. A MINIMUM CLEARANCE OF 18 INCHES SHALL BE PROVIDED WHERE A WATER MAIN CROSSES ANOTHER UTILITY. AND COVER FOR PROTECTION.

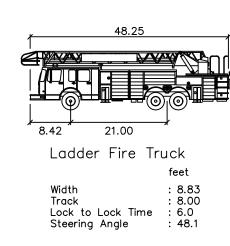
THE MAIN ALIGNMENT FOR STRAIGHT RUNS AND AT TWENTY-FIVE (25) FOOT INTERVALS ALONG CURVES. SURVEY STAKES MUST BE CLEARLY INSCRIBED WITH THE STATION POINTS, TOP OF FINAL GRADE, AND, WHEN APPLICABLE, FACE OF CURB. WHEN PIPELINE LOCATION IS USED FOR PLACEMENT OF SURVEY STAKES, THE STAKES SHALL BE OFFSET A MINIMUM OF TEN (10) FEET AND A MAXIMUM OF TWENTY (20) FEET FROM THE PIPELINE SO AS NOT TO INTERFERE WITH THE INSTALLATION OF THE PIPE.

DISRUPTIONS REQUIRED FOR CONSTRUCTION OF THE NEW WATER FACILITIES WITHIN THIS DEVELOPMENT MUST BE COORDINATED WITH NORTH WALES WATER AUTHORITY. THE AUTHORITY MAY REQUIRE SOME OR ALL OF THESE CONNECTIONS AND DISRUPTIONS TO OCCUR OUTSIDE OF REGULAR WORKING HOURS. THE SPECIFIC HOURS DURING WHICH THESE CONNECTIONS OR DISRUPTIONS ARE TO BE MADE WILL BE AS DIRECTED BY THE AUTHORITY AND THE WORK SHALL BE COMPLETED AT NO ADDITIONAL COST TO THE AUTHORITY. 32. A UTILITY AND ACCESS EASEMENT IS PROPOSED ON THE LAUREN LANE RIGHT-OF-WAY AND THE ULTIMATE RIGHT-OF-WAY OF SCHOOLHOUSE ROAD FOR INSPECTION AND MAINTENANCE OF THE PROPOSED WATER AND SANITARY SEWER SYSTEMS FOR ACCESS BY THE NORTH WALES WATER AUTHORITY AND CHALFONT NEW BRITAIN SEWER AUTHORITY RESPECTIVELY.

33. VALVE BOXES ARE TO BE INSTALLED FOR CURB STOPS LOCATED IN OR IMMEDIATELY ADJACENT TO PAVED AREAS.

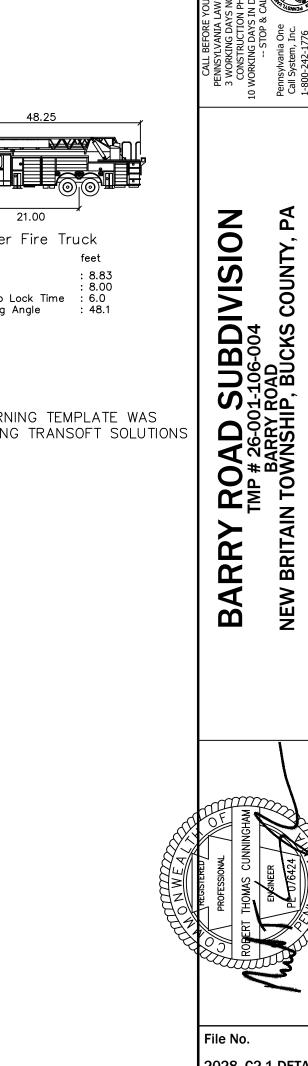


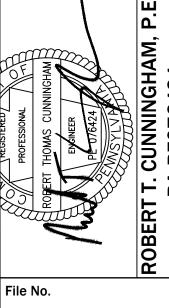
TRUCK TURN



NOTES:

1. THE TRUCK TURNING TEMPLATE WAS GENERATED USING TRANSOFT SOLUTIONS AUTOTURN 11.





BRITAIN

NEW

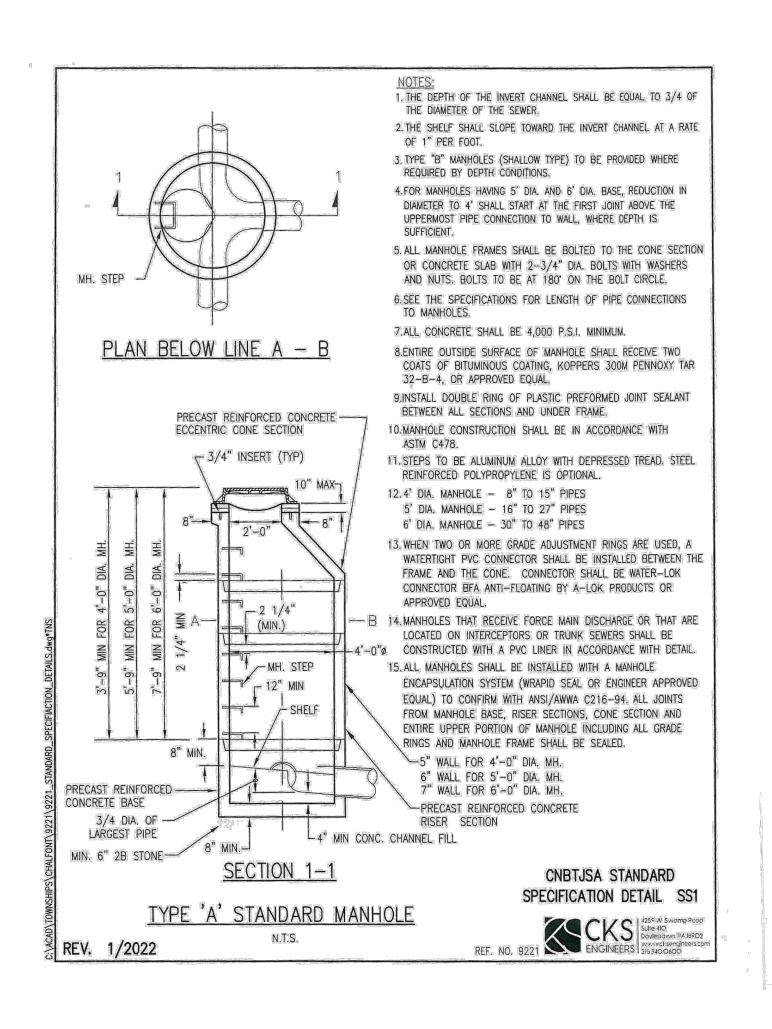
DETAIL

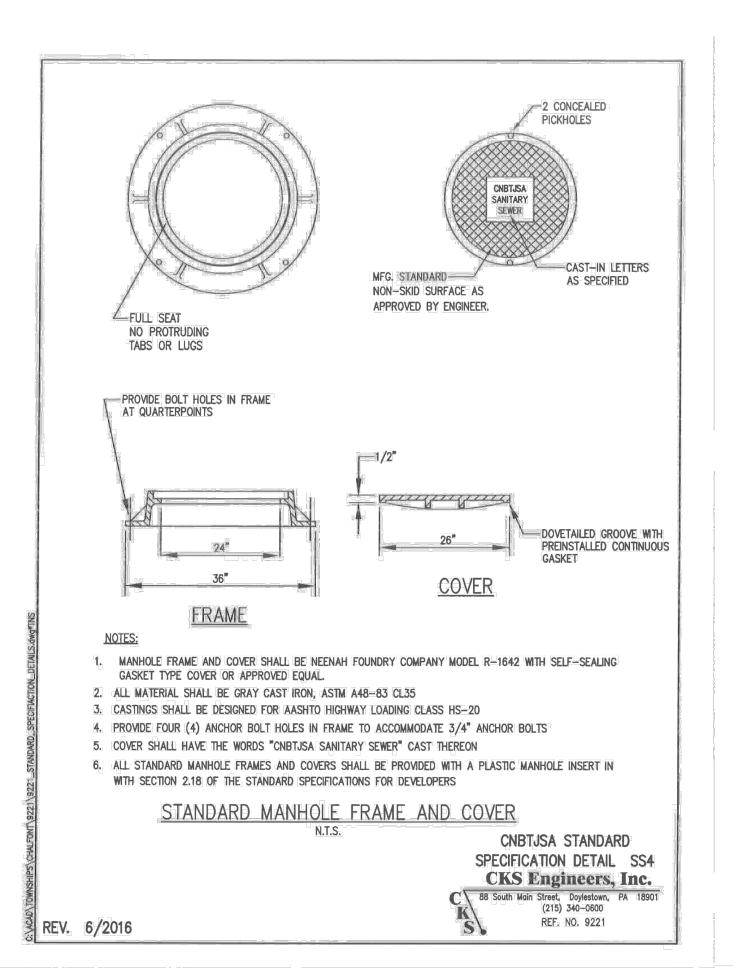
CONSTRUCTION

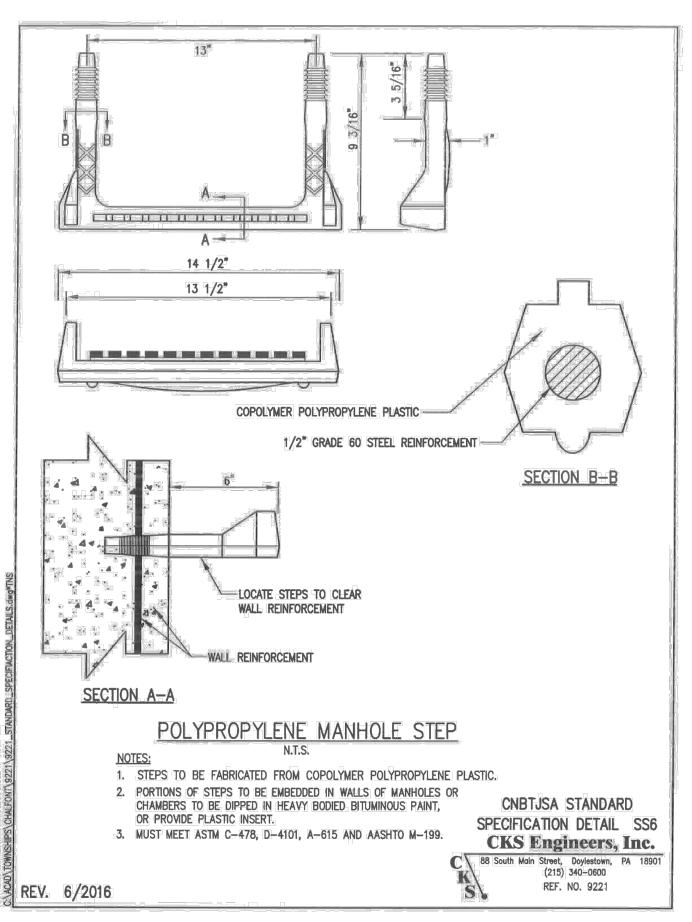
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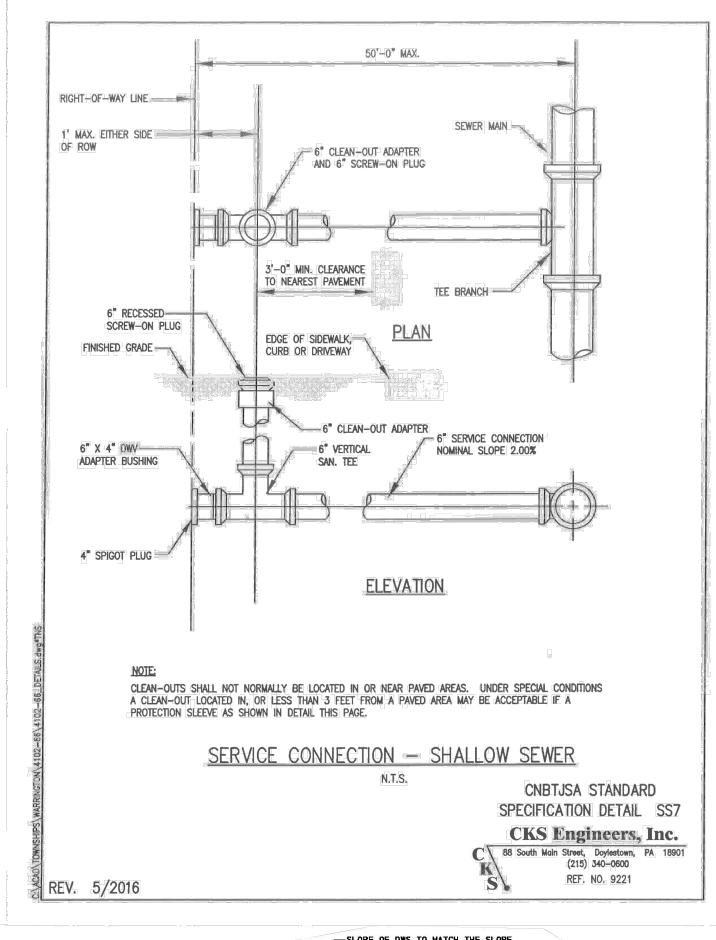
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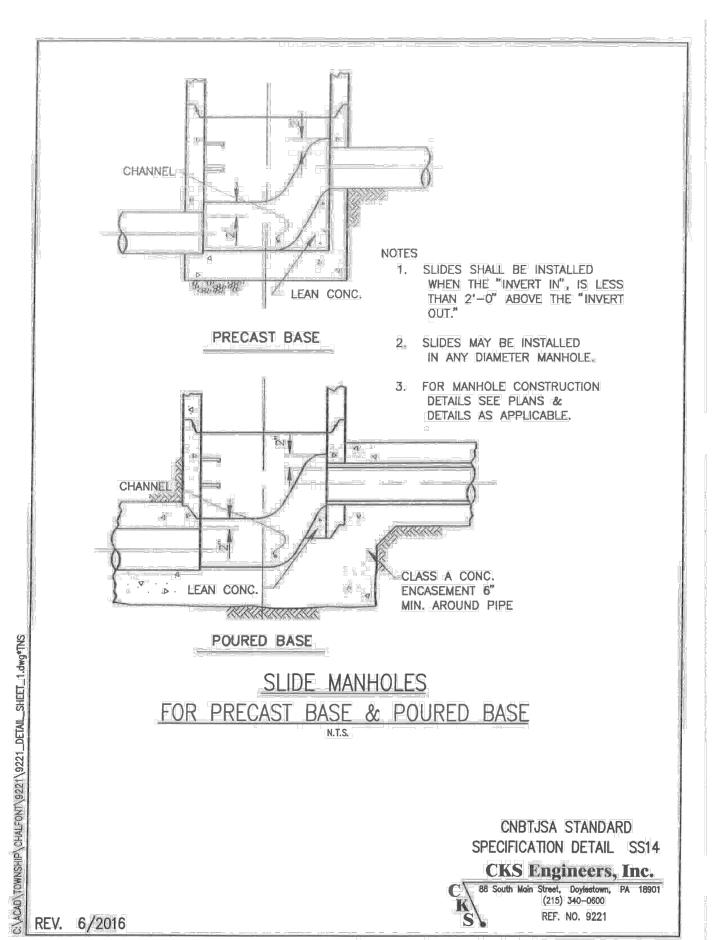
C2.1

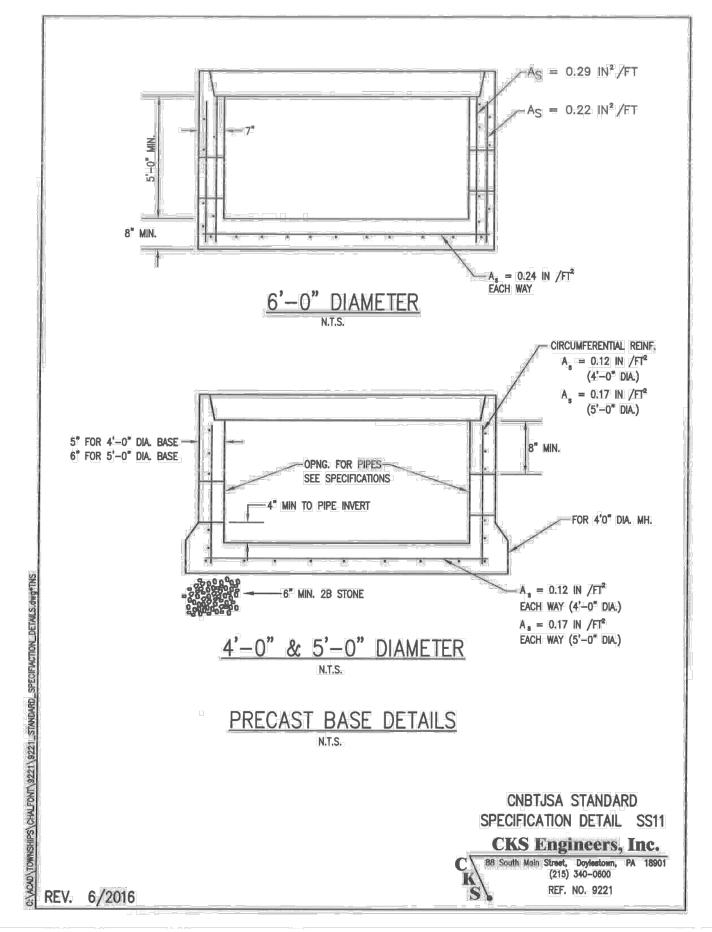


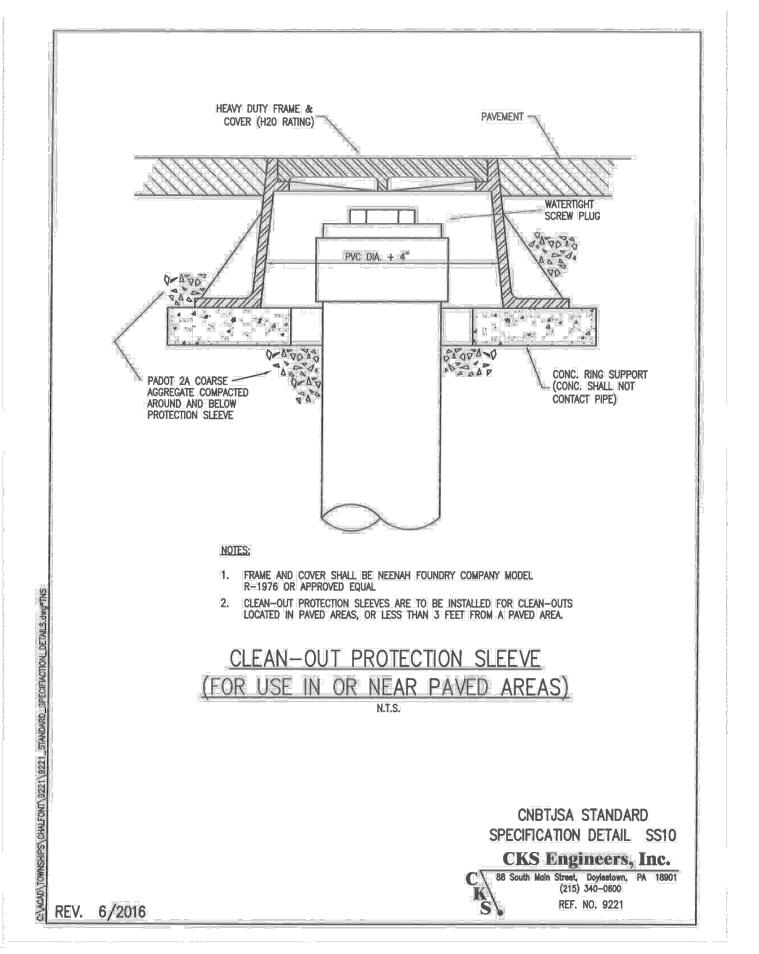


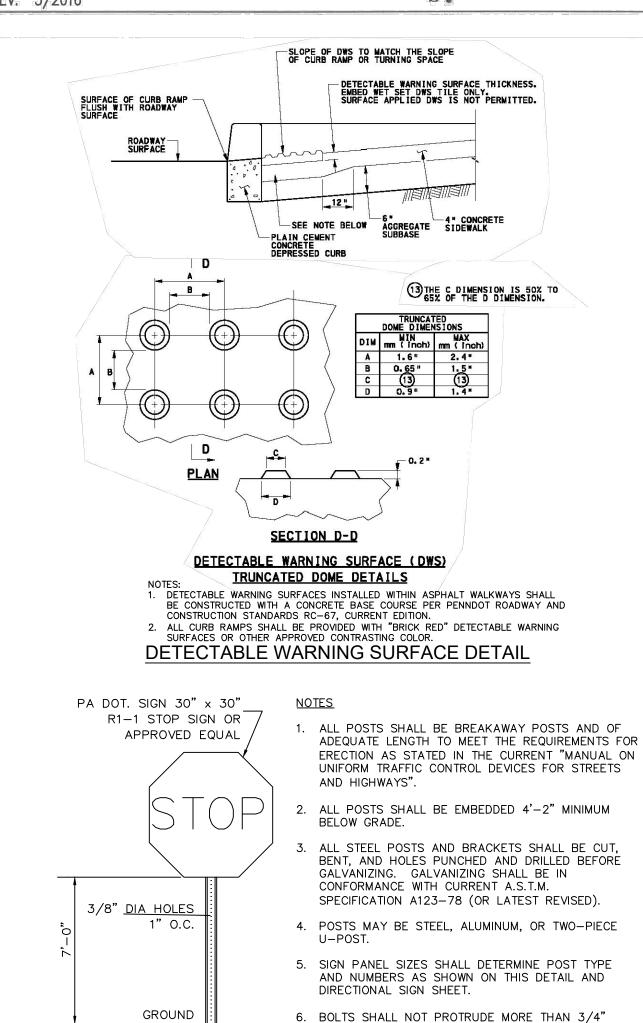












BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE

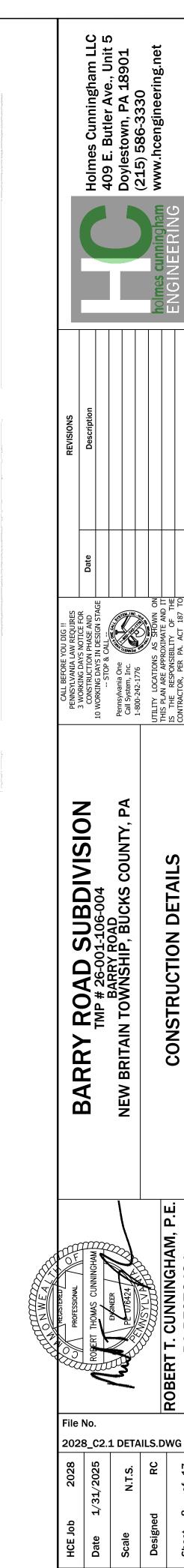
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

7. ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE

AND ALL CURRENT AMENDMENTS.

ALL THREADS IN THE NUT.

STOP SIGN

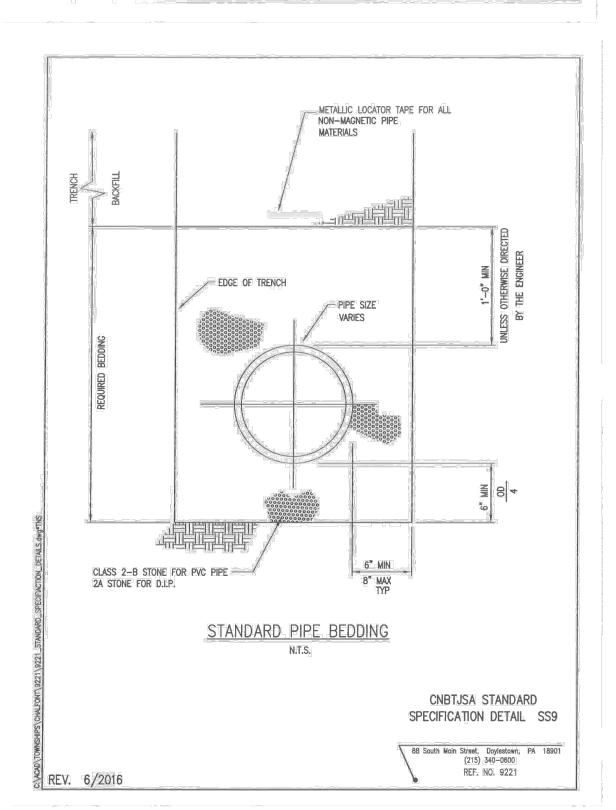


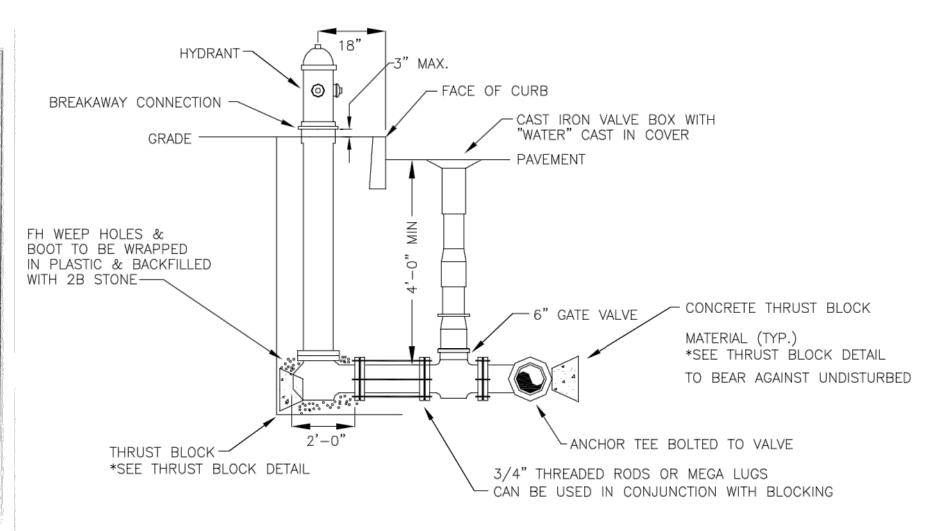
DETAIL

CONSTRUCTION

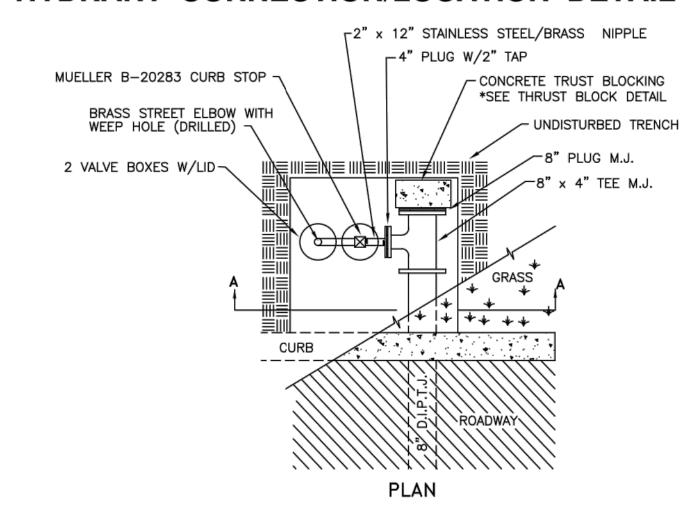
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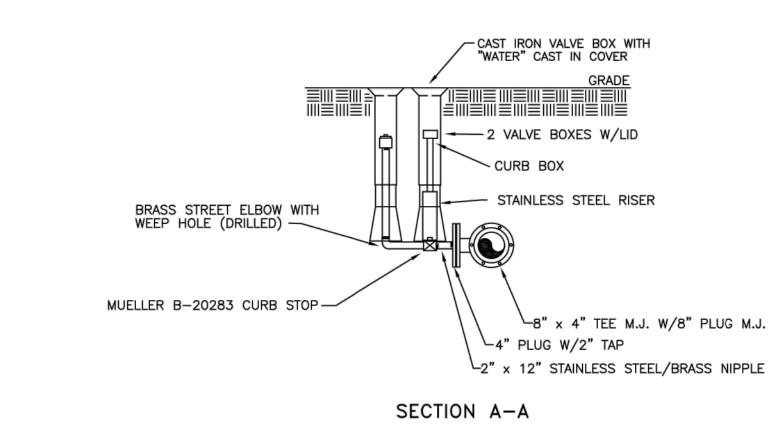
C2.2





FIRE HYDRANT CONNECTION/LOCATION DETAIL





NPWA STANDARD 2" BLOW-OFF VALVE INSTALLATION

- BITUMINOUS

(2-4" LIFTS)

4. COLD PATCH TEMPORARILY INSTALLED

30 DAYS AFTER BACKFILL COMPACTION

COMPACTED IN 6" LIFTS

2A MODIFIED

CONCRETE BASE 8" MIN OR TO MATCH

EXISTING BASE THICKNESS

CLEAN CUT & SEAL ALL

JOINTS WITH CL. BM-1

ASPHALT (12" WIDE MIN)

2" I.D. 2A WEARING COURSE

4 4

TYPICAL MUNICIPAL ROADWAY RESTORATION

CUT BACK ROADWAY 1' FOR

PERMANENT ASPHALT PATCH -

. ROADWAYS WILL BE PADDED TO PREVENT

DAMAGE FROM BUCKETS OR OUTRIGGERS

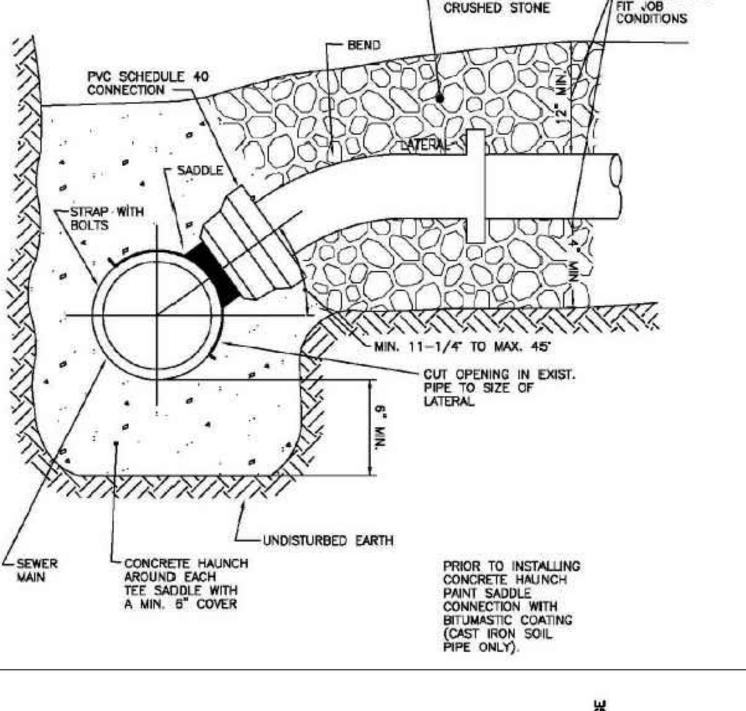
PENNDOT SPECIFICATIONS, FORM 408, CURRENT EDITION

3. FULL WIDTH OF ROAD SHOULDERS WILL BE COMPACTED WITH

WITH 2A MODIFIED WITHIN 3' OF ASPHALT ROAD SURFACE

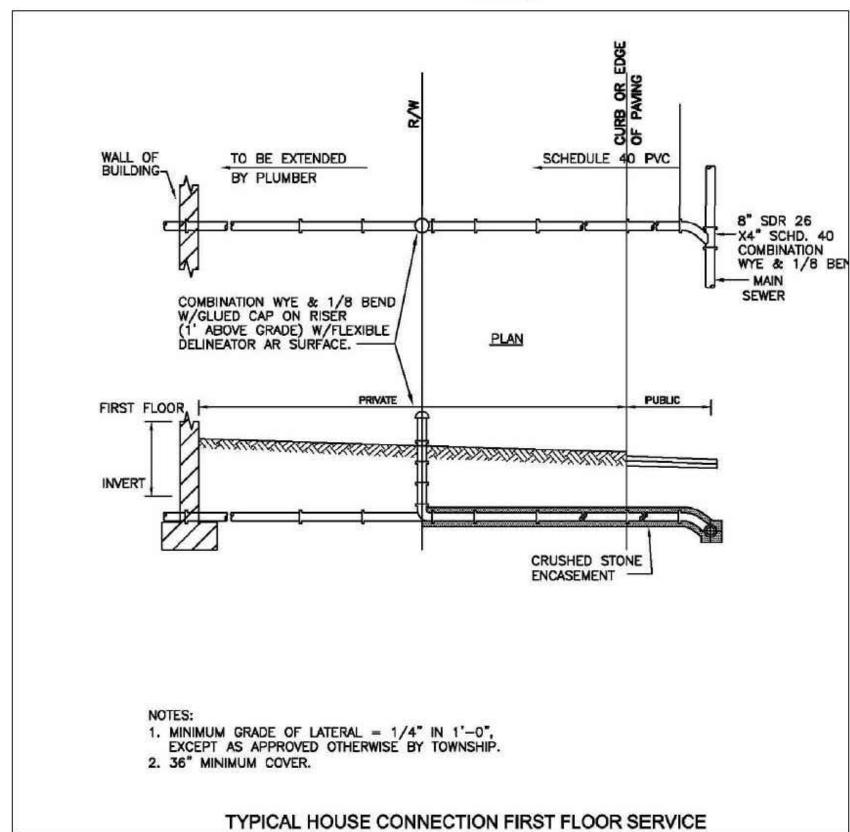
2. ALL MATERIALS AND CONSTRUCTION

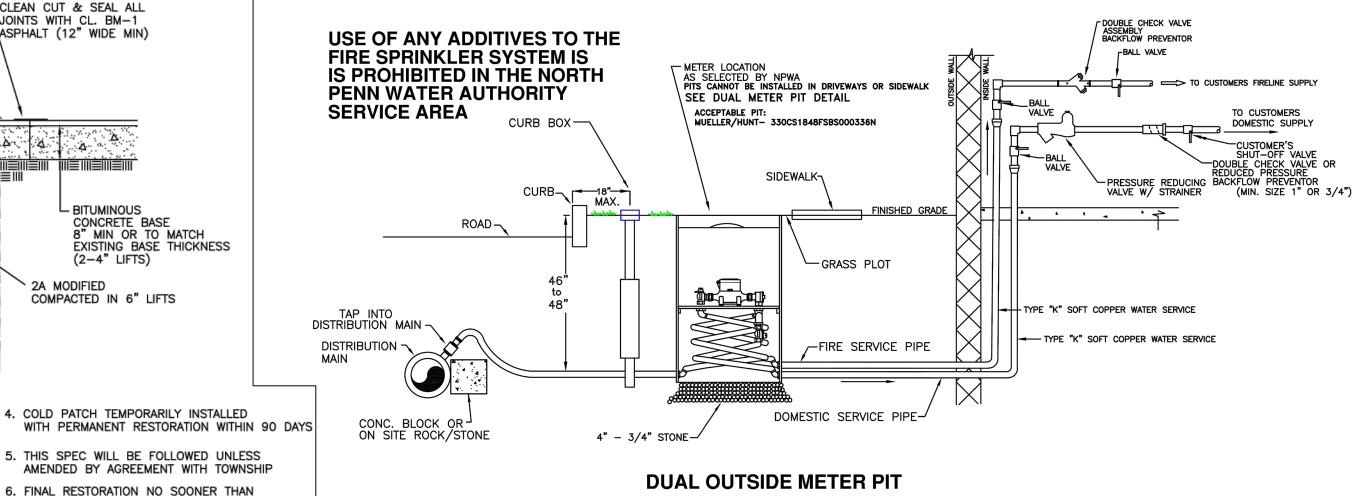
METHODS SHALL COMPLY WITH



- #2A MODIFIED

& BACKFILL TO





DOMESTIC & FIRE SERVICE CONNECTION DETAIL

GENERAL NOTES

WATER MAIN PREPARATION SURVEYORS ARE REQUIRED TO PLACE 5' OFFSET STAKES FROM FACE OF CURB OR EDGE OF ROADWAY AT 50' INTERVALS SHOWING THE FACE OF CURB AND TOP OF CURB

INSTALLATION MAY COMMENCE WHEN DEVELOPERS ESCROWS SIGNED AGREEMENTS AND BOARD APPROVALS ARE IN PLACE. 72 HOUR NOTICE MUST PROVIDED BEFORE PIPE MAY BE

WHEN WATER MAIN IS BEING INSTALLED IN AN AREA WHERE THE GRADE IS ABOVE THE ROAD SURFACE. THE WATER MAIN MUST BE INSTALLED WITH FOUR FEET OF COVER FROM THE TOP

OF THE ROAD SURFACE. WATER MAIN INSTALLED UNDER A CREEK BED, A GAS MAIN OR IN CORROSIVE SOIL WILL REQUIRE EACH SECTION OF WATER MAIN TO BE ENCASED WITH POLYETHYLENE FILM. THE POLYETHYLENE FILM SHOULD BE FITTED WITH MINUMUM SPACE BETWEEN THE FILM AND THE

PIPE. OVERLAPS AND ENDS SHOULD BE SECURED WITH ADHESIVE TAPE OR PLASTIC TIE STRAPS. STREAM CROSSINGS ARE REQUIRED TO BE IN COMPLIANCE WITH DEP AND CONSERVATION DISTRICT REGULATIONS. PIPE STOCKPILED FOR MORE THAN 24 HOURS ON THE JOB SITE WILL HAVE THE BELLS AND SPIGOTS WRAPPED WITH A POLYETHYLENE FILM AND/OR TARP TO PREVENT CONTAMINATION, UNLESS FIELD CONDITIONS DICTATE IMMEDIATE WRAPPING. (SEE PHOTO DOCUMENTATION OF

TYPICAL PIPE STOCKPILE) THE PIPELINE MUST BE ADJUSTED TO AVOID INSTALLATION OF THE PIPE BELL UNDER ANY UTILITY CROSSINGS

DUCTILE IRON PIPE AND FITTINGS

1. DUCTILE IRON PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI A21.51 (AWWA C151) AMERICAN STANDARD FOR DUCTILE IRON PIPE.

2. PIPE SHALL BE CLASS 52 THICKNESS IN ACCORDANCE WITH ANSI A21.51 (AWWA C151).

3. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE CEMENT LINED AND COATED OUTSIDE WITH A BITUMINOUS SEAL COAT IN ACCORDANCE WITH ANSI A21.4 (AWWA C104) OR EPOXY COATED. 4. THE FITTINGS SHALL BE SHORT BODY MECHANICAL JOINT FITTINGS AND SHALL CONFORM TO AWWA 153SSB EXCEPT WHERE DETAILED OTHERWISE ON THE DRAWINGS. ALL MECHANICAL

5. FIELD LOCKS GASKETS ARE TO BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS AND AS DIRECTED BY THE FIELD INSPECTOR.

VALVES AND VALVE BOXES

JOINT FITTINGS SHALL BE SECURED WITH MEGA LUGS.

VALVES CONNECTED TO LIVE WATER MAINS MAY ONLY BE OPERATED BY NPWA PERSONNEL. CONTRACTORS AND DEVELOPERS MAY NOT OPERATE ANY CHARGED WATER MAIN OPEN TO THE

1. ALL GATE VALVES REQUIRED FOR 4" THRU 16" DIAMETER MAIN SHALL BE EITHER OR - MUELLER #T-2360-16D GATE VALVE MANUFACTURED BY MUELLER CO., DECATUR, ILLINOIS.

- U.S. PIPE METRO SEAL 250 MANUFACTURED BY U.S. PIPE AND FOUNDRY CO., BIRMINGHAM,

- KENNEDY KENSEAL II RESILIENT WEDGE VALVE MANUFACTURED BY KENNEDY VALVE, ELMIRA,

- AMERICAN FLOW CONTROL SERIES 2500 RESILIENT WEDGE VALVE MANUFACTURED BY AFC, LATHAM, NY

2. VALVES SHALL BE MOUNTED VERTICALLY, EXCEPT IF OTHER WISE NOTED ON THE DRAWINGS AND SHALL HAVE MECHANICAL JOINT ENDS.

3. ALL VALVES SHALL OPEN BY TURNING COUNTERCLOCKWISE AND SHALL HAVE A STANDARD 2" OPERATING NUT.

4. ALL BURIED VALVES SHALL BE FURNISHED WITH A CAST IRON VALVE BOX. ALL VALVE BOXES SHALL BE EITHER:

- BUFFALO TYPE-TWO (2) PIECE SCREW TYPE 5-1/4" SHAFT.

- TYLER SERIES 6850, MANUFACTURED BY TYLER PIPE COMPANY.

5. VALVE BOXES SHALL BE TWO-PIECE, SCREW-TYPE INSTALLED OVER THE BONNET AND OPERATING NUT. VALVE BOXES SHALL BE OF SUFFICIENT LENGTH TO REACH THE SURFACE OF THE GROUND BUT NOT EXTEND ABOVE THE GROUND SURFACE, VALVE NUT EXTENSIONS SHALL BE INSTALLED AS NECESSARY TO INSURE THE VALVE CAN BE TURNED FROM GROUND LEVEL WITH A 6' LONG VALVE NUT KEY WRENCH.

6. DEVELOPERS AND THIER CONTRACTORS SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTAINCE OF VALVE BOXES. VALVE BOXES SHALL BE IN A VERTICAL OPERABLE CONDITION. ALL BROKEN, BURIED OR FILLED VALVE BOXES WILL BE DUG OUT AND REPAIRED AT THEIR EXPENSE.

FIRE HYDRANTS

1. ALL FIRE HYDRANTS SHALL BE EITHER:
- MUELLER CENTURION 5-1/4-INCH FIRE HYDRANT AWWA TYPE FIRE HYDRANT

MANUFACTURED BY MUELLER CO., DECATUR, ILLINOIS. - KENNEDY K-81D, 5 1/4-INCH FIRE HYDRANT

AWWA TYPE FIRE HYDRANT MANUFACTURED BY KENNEDY VALVE, ELMIRA, NEW YORK. - AMERICAN FLOW CONTROL, 5 1/4-INCH FIRE HYDRANT

AWWA B62B TRAFFIC MODEL FIRE HYDRANT

2. ALL FIRE HYDRANTS SHALL HAVE: - 6-INCH MECHANICAL JOINT INLET CONNECTION

- ONE (1) 4-1/2-INCH STEAMER NOZZLE

- TWO (2) 2-1/2 -INCH HOSE NOZZLE OPEN LEFT HYDRANT OPERATING & NOZZLE CAP NUTS; FIRE HYDRANT STEAMER & HOSE THREADS TO BE NATIONAL STANDARD OR NORTH PENN THREADS AS NOTED ON DRAWING.

- NON METERED WATER FROM FIRE HYDRANTS MAY NOT BE USED FOR ANY PURPOSE BY THE DEVELOPER OR CONTRACTOR. METERS MAY BE OBTAINED BY CONTACTING NPWA'S CUSTOMER SERVICE DEPARTMENT BETWEEN APRIL 1ST & NOVEMBER 1ST. UNAUTHORIZED USE OF WATER FROM FIRE HYDRANTS IS SUBJECT TO CRIMINAL CHARGES.

CHLORINE DOSAGES

DOMESTIC SUPPLY

65% TABLETS	<u> </u>								
Diameter of pipe in inches	2	3	4	6	8	10	12	16	24
No. of 65% Ca(Ocl)	1	1	1	1	2	3	4	6	14

SUPPLY DAILY FIELD NOTE SHEETS.

Tablets/pipe 1. TABLETS WILL BE ATTACHED WITH TYTON JOINT PIPE GREASE IN EACH PIECE OF PIPE INSTALLED

2. CALCIUM HYPO CHLORITE CONFORMING TO NSI/AWWA B300 IS AVAILABLE IN 5-g TABLETS, AND CONTAINS APPROX. 65 PERCENT AVAILABLE CHLORINE BY WEIGHT.

1. TRAFFIC CONTROL ON ALL STATE, TOWNSHIP AND BOROUGH ROADWAYS WILL BE IN ACCORDANCE WITH PENN DOT SPECIFICATIONS; PUBLICATION 213, FIG. 10A & 10B. **ROADWAY AND RIGHT OF WAY**

. ROADWAY RIGHT OF WAY RESTORATION WILL BE IN ACCORDANCE WITH PENN DOT SPECIFICATIONS ON STATE ROADWAYS, TOWNSHIP AND BOROUGH SPECIFICATION ON LOCAL MUNICIPALLY MAINTAINED ROADWAYS.

1. ALL SERVICE TRENCHS ARE REQUIRED TO HAVE 2A MODIFIED STONE BACKFILL.

2. ALL TAPS ARE INSTALLED BY EITHER NPWA OR CONTRACTOR

3. SERVICES WILL BE INSTALLED AT THE LOCATION DETERMINED BY DEVELOPER.

4. SERVICE TAPS WILL BE INSTALLED ONLY WHEN THE FOLLOWING REQUIREMENTS ARE MET: - NPWA WILL FILL THE WATER MAIN WAIT 48 HOURS THEN FLUSH THE MAINS. - A PRESSURE TEST WITH A MINIMUM PRESSURE OF 200 PSI FOR FOUR (4) HOURS WITHOUT LEAKS, CONDUCTED BY THE CONTRACTOR AND WITNESSED BY N.P.W.A.

- A BACTERIA TEST IS TAKEN AFTER THE LINES ARE FLUSHED WITH RESIDUAL CHLORINE OF 1.0 PPM OR LESS, CONDUCTED BY NPWA. 5. CURB BOXES WILL BE MAINTAINED IN A VERTICAL OPERABLE CONDITION. IT IS THE DEVELOPERS DEVELOPERS RESPONSIBILITY TO REPAIR, REPLACE AND RESTORE ALL DAMAGED, DESTROYED OR

6. ALL BRASS CORPORATIONS & CURB STOPS SHALL BE A COMPRESSION TYPE MEETING THE STANDARD MUELLER #B-25008 & MUELLER #B25209 WITH PRESSURE RATING OF 300 PSI. 7. CURB BOXES WILL BE TELESCOPING TYPE WITH PENTAGON PLUG IN CENTER OF LID. RISER PIPE WILL BE 1" DIAMETER TO ACCOMODATE THE STAINLESS STEEL CURB ROD. 8. SERVICE LINE WILL BE TYPE "K" COPPER.

ABANDONED MAIN 1. ANY OBSOLETE VALVE BOXES AND HYDRANTS WILL BE IDENTIFIED AND REMOVED UNDER THE DIRECTION OF A NPWA INSPECTOR.

2. ABANDONED VALVE BOXES ARE TO HAVE THE UPPER PORTION REMOVED 1' BELOW THE GRADE. THE VALVE BOX WILL BE FILLED USING 2-A MODIFIED STONE WHEN WORKING IN PAVING OR SUITABLE FILL WHEN WORKING OUTSIDE THE PAVED AREA. THE WORK AREA WILL BE RESTORED TO THE SURROUNDING CONDITIONS.

. ABANDONED NON-BREAKAWAY HYDRANTS ARE TO BE CUT 1' BELOW THE GROUND SURFACE, ABANDONED BREAKAWAY HYDRANTS ARE TO BE EXTRACTED FROM THE MECHANICAL JOINT OF THE CONNECTING PIPE. THE HYDRANT EXTENSION WILL BE FILLED USING 2-A MODIFIED STONE WHEN WORKING IN PAVING OR SUITABLE FILL WHEN WORKING OUTSIDE THE PAVED AREA. BREAKAWAY HYDRANTS WILL BE SAVED AND RETURNED TO INVENTORY.

1. NORTH PENN WATER AUTHORITY REQUIRES THEIR CONTRACTORS TO SUPPLY THE AUTHORITY WITH DAILY FIELD NOTES AND AN AS-BUILT DRAWING. NPWA'S CONSTRUCTION INSPECTOR WILL

4. ONCE REMOVAL IS COMPLETE THE WORK AREA WILL BE RESTORED TO THE PRE-EXISTING SURROUNDING CONDITIONS. FIELD NOTES & FIELD DIMENSIONS

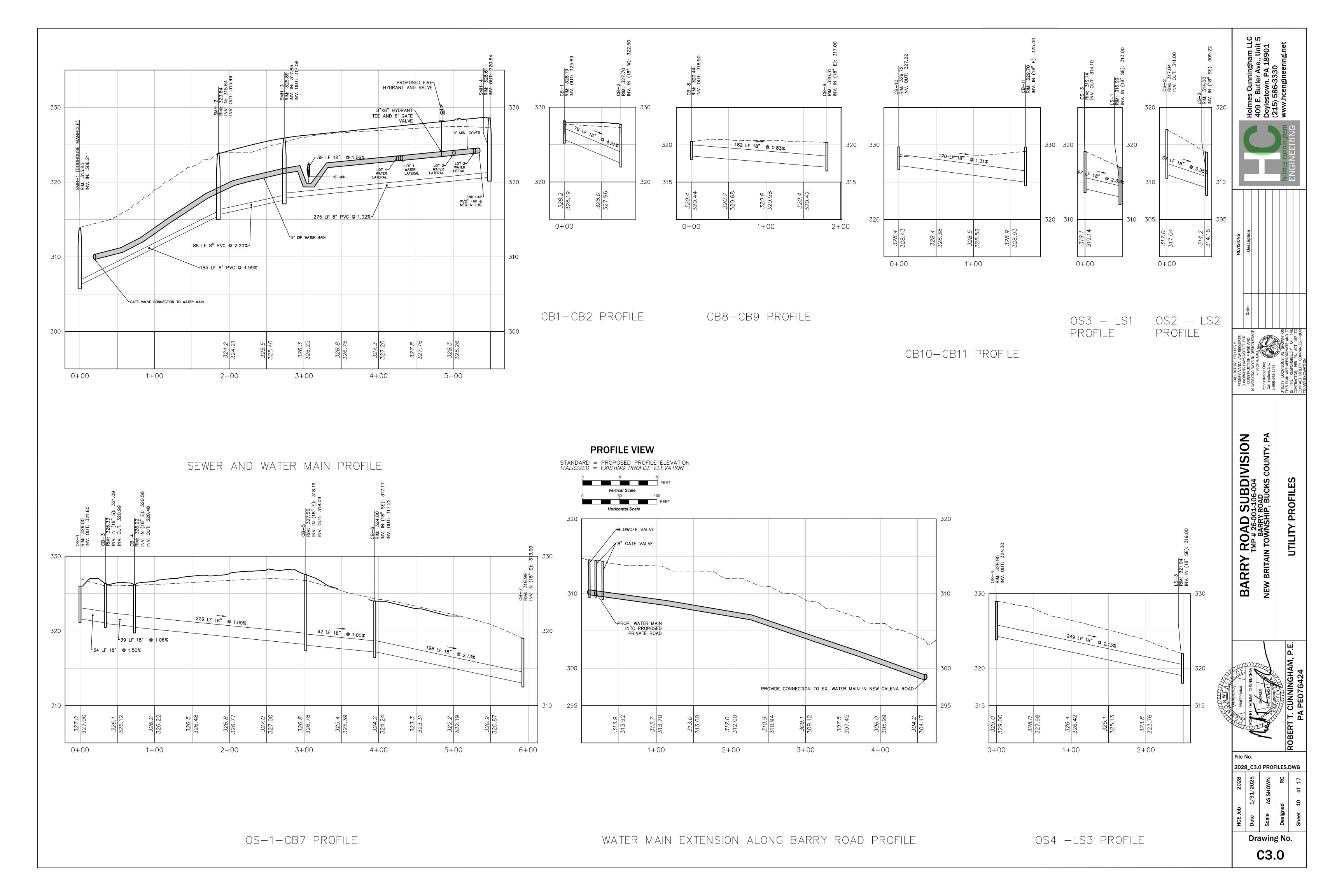
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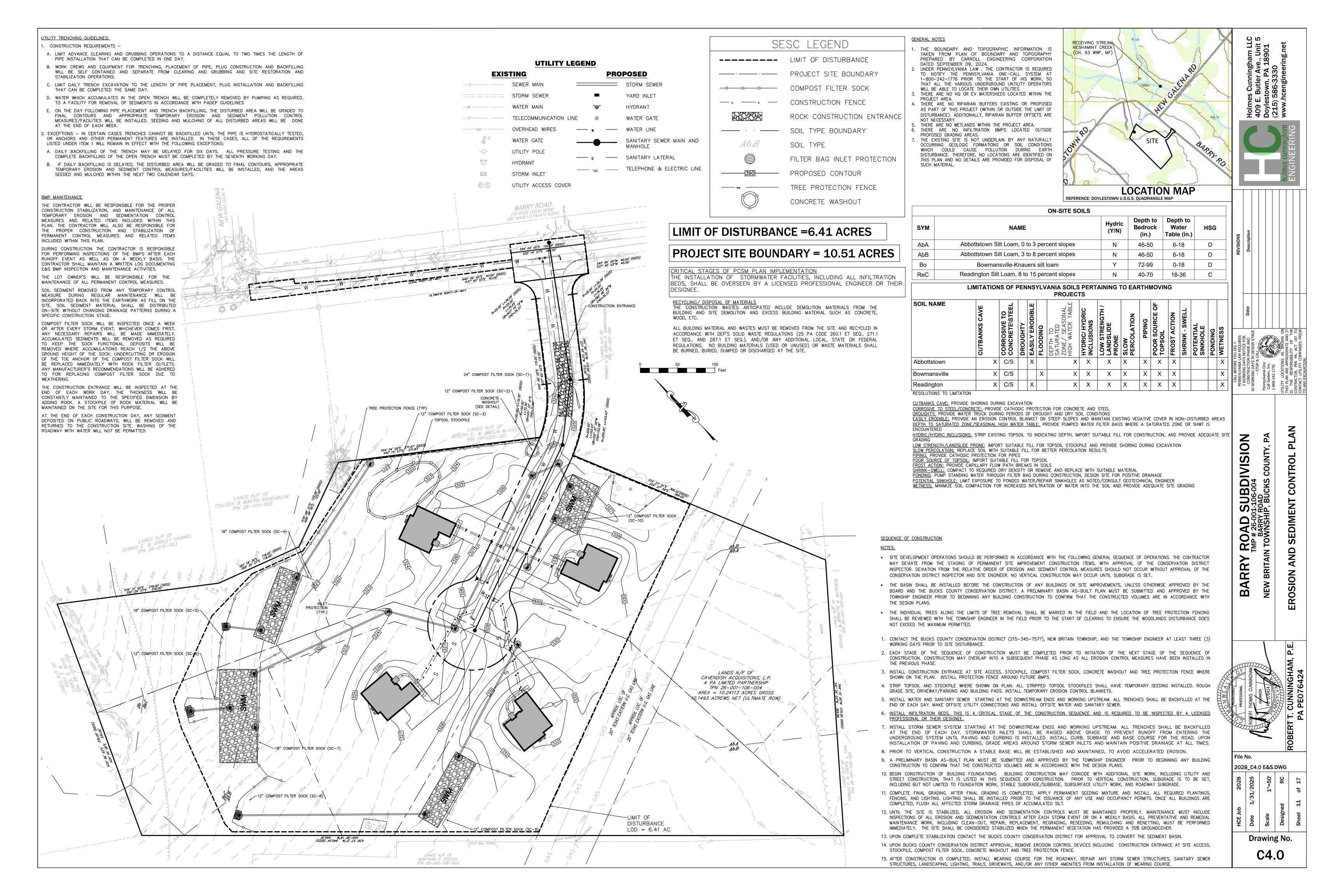
DETAIL

~ BRITAIN RRY < $\mathbf{\Omega}$



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F THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF SITE LOCATION, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL RESIDE WITH THE OPERATOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)

ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

EROSION / SEDIMENT CONTROL PLAN STANDARD NOTES

STABILIZED IMMEDIATELY.

STABILIZATION SPECIFICATIONS.

STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2L:1V.

THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION

THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR

ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE

PROJECT SITE AT ALL TIMES. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE

DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP

CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE

AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNTY CONSERVATION DISTRICT TO A PRE—CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL

UNDERGROUND UTILITIES LOCATIONS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE

NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY

DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% (PERCENT) VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

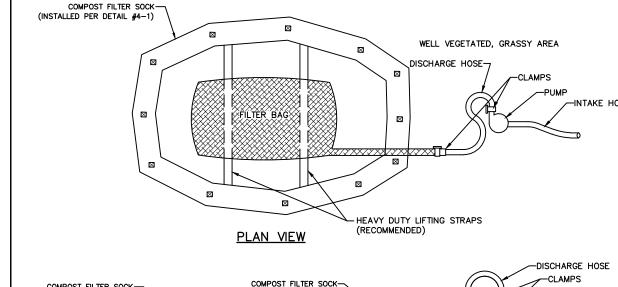
UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE BUCKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT).

AT STREAM CROSSINGS. A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.

INTIL A SITE IS STABILIZED ALL FROSION AND SEDIMENT BMPS MUST BE MAINTAINED MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING ELEANOUT, REPAIR, REPLACEMENT, RE—GRADING, RE—SEEDING, RE—MULCHING AND RE—NETTING MUST E PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.

SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.

ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.



COMPOST FILTER SOCK-(INSTALLED PER DETAIL #4-1 LL VEGETATED, GRASSY ARE **ELEVATION VIEW**

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGE HAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS: /G. WIDE WIDTH STRENGTH ASTM D-4884 ASTM D-4632

N SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%, FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

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

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED. STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG WITH COMPOST FILTER SOCK

SEEDING NOTES:

TEMPORARY SEEDING:

SEASON

- TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.
- DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIODS.
- DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
- 4. DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE
- APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.
- WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL. UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE

TEMPORARY SEEDING 1 LB./1000 SF ANNUAL RYEGRASS MAY 15 TO SEPT 15 1 LB./1000 SF SUDAN GRASS

SEPT 15 TO OCT 15 168 LB./AC WINTER RYE APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER

6. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2

DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.

SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1", DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE

3. DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS: MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL

AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND. B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES))

THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES

AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE, INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED WHEREVER POSSIBLE. SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH 1/2" OF SOIL WITH

APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS: RATE

MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1 2 LBS./1000 SF RED TOP*

MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80%

((*) USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.)

PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC): RATE

NOTE: SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY <u>DISTURBED AREAS"</u>, PENNSYLVANIA STATE UNIVERSITY.

FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZED AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0- 1 0- 10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF

5. HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80. CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.

MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS: STRAW — SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COURSE MATERIAL, APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND, DAMAGED OR MISSING MULCH SHALL B REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF

MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE YARD. NETTING / EROSION CONTROL BLANKETS - THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS.

LR-3 ROCK

HEIGHT OF ROCK -

FILTER=5/6 HEIGHT

OF STRAW BALES OR

FILTER FABRIC FENCE

OUTLET CROSS-SECTION

-WOOD POSTS-

UP-SLOPE FACE

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

STANDARD CONSTRUCTION DETAIL #4-6

ROCK FILTER OUTLET

SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

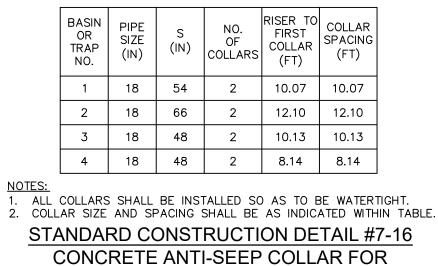
OPTIONAL 6 IN. COMPOST LAYER

STRAW BALES-

-AASHTO NO. 5

OR FILTER FABRIC

FIRMLY ANCHORED



PROVIDE

WATERTIGHT -

CONNECTION

12 IN. THICK (MIN

CAST-IN-PLACE OR

PRECAST CONCRETE

COLLAR (MIN. 2000 PSI)

TREE PROTECTION NOTES

A. Prior to any site work, clearing, tree removal, grading, or construction, the tree protection area DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS. shall be delineated by the following methods: 1) The tree protection area that is delineated on the site prior to construction shall conform to the approved development plans. (2) Forty—eight inch high orange snow fence or other suitable fence, such as super silt fence,

PERMANENT BASINS OR TRAPS

mounted on steel posts located 8 feet on center, shall be placed along the boundary of the tree (3) Trees being removed shall not be felled, pushed or pulled into a tree protection area or into

trees that are to be preserved. (4) Grade changes and excavations shall not encroach upon the Tree protection area. 5) No toxic materials, including petroleum products shall be stored less than 100 feet from a tree protection area or a watercourse. If field conditions warrant, a greater distance may be

(6) The area within the tree protection area shall not be built upon nor shall any materials be stored there either temporarily or permanently. Vehicles and equipment shall not be parked in the tree protection area. (7) When tree stumps are located within 10 feet of the tree protection area, the stumps shall be removed by means of a stump grinder to minimize the effect on surrounding root systems. (8) Tree roots which must be severed shall be cut by a backhoe or similar equipment aligned adially to the tree. This method reduces the lateral movement of the roots during excavation,

which if done by other methods could damage the intertwined roots of adjacent trees. (9) Within 4 hours of any severance of roots, all tree roots that have been exposed and/or damaged shall be trimmed cleanly and covered temporarily with moist peat moss, burlap, or other biodegradable material to keep them from drying out until permanent cover can be installed. (10) Sediment, retention, and detention basins shall not discharge into the tree protection area. (11) Sediment, retention, and detention basins shall not be located within the tree protection

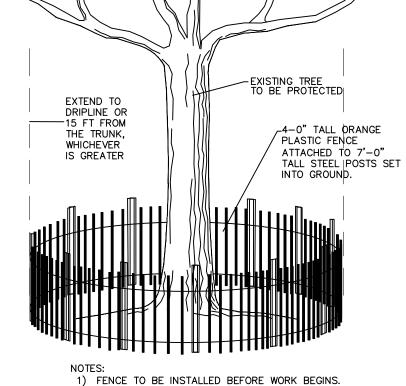
(12) Trees shall not be used for roping, cables, signs, or fencing. Nails and spikes shall not be driven into trees. 3. Protection from Grade Change.

When the original grade cannot be retained at the tree protection area line, a retaining wall shall be constructed outside the tree protection area. (2) Appropriate details of the retaining wall design shall be provided. To ensure the survival of trees, the following methods shall be used.

The top of the wall shall be four inches above the finished grade level. The wall shall be constructed of large stones, bricks, building tiles, concrete blocks, o treated wood beams not less than 6 inches by 6 inches. A means for drainage through the wall shall be provided so water will not accumulate on either side of the wall. Weep holes shall be required within any wall.

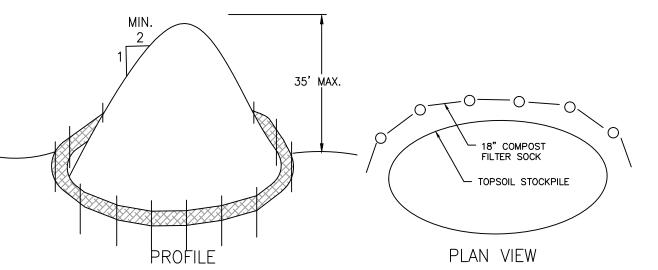
Anv severed roots as a result of excavation shall be trimmed so that their edges are smooth and are cut back to a lateral root if exposed. C. Trees Damaged During Construction. Tree trunks and exposed roots damaged during construction shall be protected from further damage. Damaged branches shall be pruned according to National Arborist Association standards. All cuts shall be made sufficiently close to the trunk or parent limb without cutting into the branch collar or leaving a protruding stub. All necessary pruning cuts must be made to prevent bark from being torn from the tree and to facilitate rapid

Tree Replacement. In the event that trees that are to be protected are removed or damaged by accident or by violation of the tree protection requirements, trees shall be replaced on an inch for inch basis.

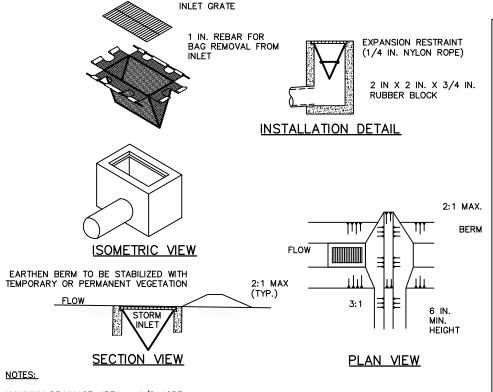


FENCE MUST REMAIN AND BE MAINTAINED THROUGH DURATION OF CONSTRUCTION. 2) ORANGE CONSTRUCTION FENCE MAY BE SUBSTITUTED FOR SNOW FENCE.

TREE PROTECTION FENCING DETAIL



COMPOST FILTER SOCK MUST BE PLACED DOWNSLOPE OF ALL STOCKPILES. IMMEDIATELY APPLY TEMPORARY SEEDING TO AL STOCKPILES WHICH WILL REMAIN IN PLACE 20 DAYS OR MORE. STOCKPILE AREA DETAIL

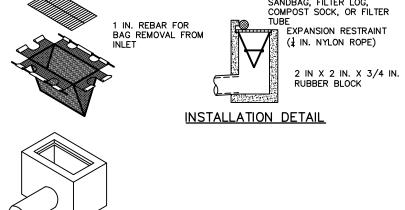


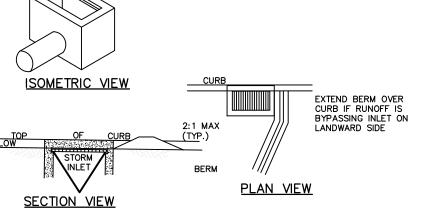
MAXIMUM DRAINAGE AREA = 1/2 ACRE

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS. ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE. NLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

> STANDARD CONSTRUCTION DETAIL #4-16 FILTER BAG INLET PROTECTION - TYPE M INLET

> > INLET GRATE





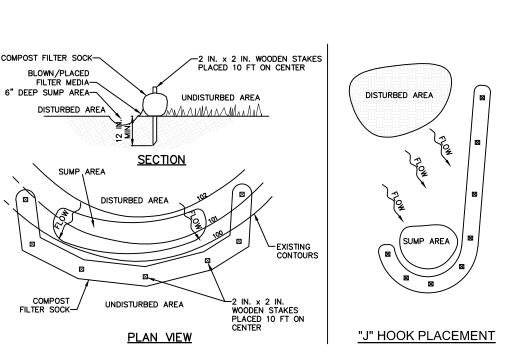
MAXIMUM DRAINAGE AREA = 1/2 ACRE.

NLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASI 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 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW

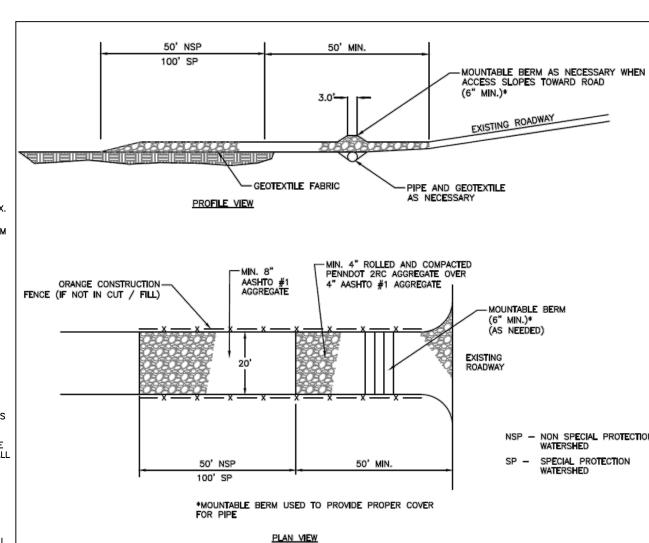
CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLE DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC STANDARD CONSTRUCTION DETAIL #4-15 FILTER BAG INLET PROTECTION - TYPE C INLET



SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THE SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

> STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK NOT TO SCALE



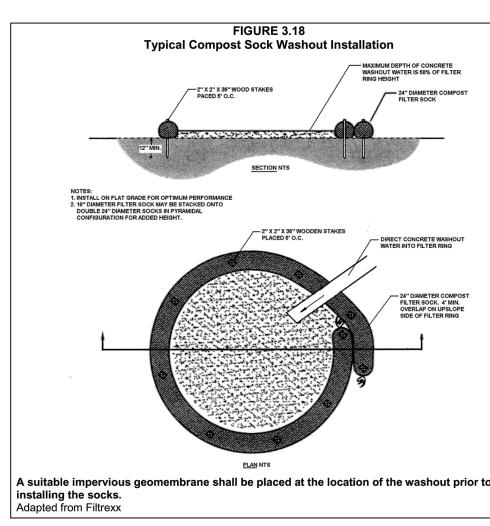
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE

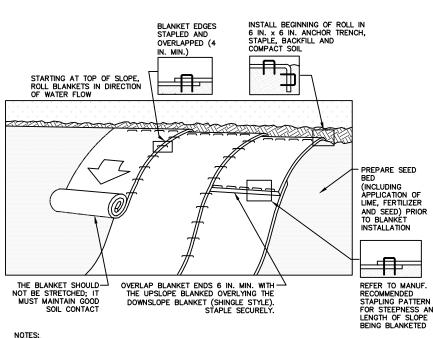
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITI 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.

ALTERNATIVE ROCK CONSTRUCTION ENTRANCE



CONCRETE WASHOUT DETAIL



SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS. STANDARD CONSTRUCTION DETAIL #11-1

EROSION CONTROL BLANKET INSTALLATION



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SEDIMENT AN **EROSION** < $\mathbf{\Omega}$

File No. 2028_C4.0 E&S.DWG

PCSM LEGEND					
	LIMIT OF DISTURBANCE				
·-	PROJECT SITE BOUNDARY				
	SOIL TYPE BOUNDARY				
AbB	SOIL TYPE				
390	PROPOSED CONTOUR				
SW-1	SOIL/INFILTRATION TEST LOCATION				
	SUBSURFACE BMP				

APPLICANT'S ACKNOWLEDGEMENT ACKNOWLEDGE THAT STORMWATER FACILITIES AND BMPs ARE FIXTURES THAT CAN ONLY BE ALTERED AND REMOVED AFTER APPROVAL BY THE MUNICIPALITY AND SUBMISSION OF A REVISED E&S PLAN TO THE CONSERVATION DISTRICT.

UTILITY LEGEND

WATER GATE

STORMTANK (OR EQUAL) INFILTRATION BED (LOT 1 PIT)

(2.5'H STORMTANK UNIT)

√53 LF/18" HDPE @ 3.35%

GR: 314,00 /INV, IN;5/309.22/

47 LF 18" HDPE @ 2.35%

30'Wx100'Lx4'D

∕–GR: 320.31

INV. IN: 317.17

\GR: 318.99

INV. IN: 313,00

198 LF 18" HDPE @ 2.13% J

STORMTANK (OR EQUAL) INFILTRATION BED (LOT 2 PIT)

249 LF 18" HDPE @ 2.13% /

50'Wx125'Lx4:5'D (3'H STORMTANK UNIT)

UTILITY ACCESS COVER

EXIS	TING	PROPOSED			
S	SEWER MAIN =		STORM SEWER		
=====	STORM SEWER	-	YARD INLET		
<i>y</i>	WATER MAIN	~	HYDRANT		
<i>T</i>	TELECOMMUNICATION LINE	8	WATER GATE		

WATER MAIN	HYDRANT
TELECOMMUNICATION LINE ⊗	WATER GATE
OVERHEAD WIRES w	WATER LINE
WATER GATE	SANITARY SEWER MAIN AND

0-	UTILITY POLE		WATTOLL
o o	LIVERANT	— s —	SANITARY LATERAL
	HYDRANT		TELEPHONE & ELECTRIC LINE
	STORM INLET	T&cE	

OFFSETS ARE NOT NECESSARY. SEWER MAIN AND MANHOLE

GENERAL NOTES

1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM PLAN OF BOUNDARY AND TOPOGRAPHY PREPARED BY CARROLL ENGINEERING

-76 LF 18" HDPE @ 4.21%

LANDS N/F OF CAVENDISH ACQUISITIONS, L.P.

A PA LIMITED PARTNERSHIP

TPN 26-001-106-004 AREA = 10.24113 ACRES GROSS Q.1493 ACREWS NET (ULTIMATE ROW)

INV. OUT: 325.69

DISTURBANCE

LOD = 6.41 AC

—GR: 329.72 INV. OUT; 327.22

- CORPORATION DATED SEPTEMBER 09, 2024. 2. UNDER PENNSYLVANIA LAW , THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UNTILITY OPERATORS WILL BE ABLE
- TO LOCATE THEIR OWN UTILITIES. 3. THERE ARE NO HQ OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA. 4. THERE ARE NO RIPARIAN BUFFERS EXISTING OR PROPOSED AS PART OF THIS PROJECT (WITHIN OR OUTSIDE THE LIMIT OF DISTURBANCE). ADDITIONALLY, RIPARIAN BUFFER
- THERE ARE NO WETLANDS WITHIN THE PROJECT AREA. THERE ARE NO INFILTRATION BMPS LOCATED OUTSIDE PROPOSED GRADING AREAS. THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.

CONSTRUCTION SEQUENCE FOR PCSM BMPS

- SITE SPECIFIC CONSTRUCTION SEQUENCE

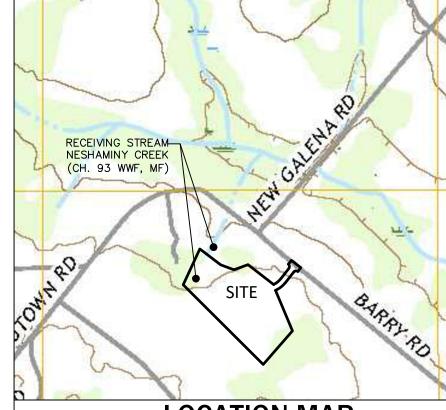
 1. REFER TO THIS SHEET FOR CONSTRUCTION SEQUENCE.

 2. ONCE ALL UPSTREAM MEASURES FOR THE BMP HAVE BEEN STABILIZED, THE INDIVIDUAL BMP MAY BE CONSTRUCTED PER THE SEQUENCES IDENTIFIED BELOW.

STORMTANK UNDERGROUND DETENTION AREA

1. REFER TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS TO ENSURE UPDATED INSTALLATION

- 2. EXCAVATE SUBGRADE TO A MINIMUM OF 6 INCHES BELOW INVERT OF DETENTION AREA.
- 3. IF ANY UNSTABLE, UNSUITABLE, AND/OR COMPROMISED AREAS OF SUBGRADE ARE PRESENT, THE OWNER/ENGINEER SHALL BE NOTIFIED IMMEDIATELY BEFORE INSTALLATION PROCEEDS. THIS MAY
 - NECESSITATE THE RELOCATION OF THE SYSTEM. INSTALL AND SECURE A LAYER OF GEOTEXTILE FABRIC AROUND ENTIRETY OF EXCAVATED AREA.
- INSTALL LEVELING BED PER DETAILS SHOWN ON THE DRAINAGE PLAN. INSTALL STORMTANK MODULES AND CONNECTIONS AS PER MANUFACTURER'S SPECIFICATIONS. INSTALL
- FULL LAYER OF BOTTOM MODULES AND PIN BEFORE PROCEEDING TO UPPER LAYER. LOCATE AND CUT OPENINGS WHERE INFLOW AND OUTFLOW PIPING ARE TO CONNECT TO DETENTION AREA.
- WRAP MODULE SYSTEM IN GEOTEXTILE WITH MINIMUM TWO FEET OF OVERLAP. SECURE AND PIN
- GEOTEXTILE TO PREVENT BACKFILL FROM ENTERING MODULES. BACKFILL PERIMETER OF AREA IN 12-INCH LIFTS, PLACING AGGREGATE AROUND MODULES EVENLY.
- 10. BACKFILL TOP OF MODULES IN 12-INCH MAXIMUM LIFTS, LIGHTLY COMPACTING AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.



LOCATION MAP REFERENCE: DOYLESTOWN U.S.G.S. QUADRANGLE MAP 1"=800'

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REVISIONS	Description			
	Date			

ISIO

BARRY ROAD SUBDIV TMP # 26-001-106-004 BARRY ROAD NEW BRITAIN TOWNSHIP, BUCKS CO CONSTRUCTION STORM\
MANAGEMENT PLAN

POST

				KOBEKI							
e No.											
28	3_C5.0	D PCSN	1.DW	9							
	1/31/2025	1"=50'	RC	of 17							
	1/3		peu	13							

Drawing No.

C5.0

Test Pit Elevations								
Infiltration Test #	Approx. Ground Surf. Elev. (ft)	Rock Elevation (ft)	Groundwater Elevation (ft)					
SW-1	311.8	309.47	NE					
SW-2	314.0	310.67	NE					
SW-3	317.1	314.93	NE					
SW-4	321.0	318.50	NE					
SW-5	323.3	318.80	NE					
SW-6	329.8	326.30	NE					
SW-7	327.5	325.50	NE					

LIMIT OF DISTURBANCE =6.41 ACRES

PROJECT SITE BOUNDARY = 10.51 ACRES

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION THE INSTALLATION OF STORMWATER FACILITIES, INCLUDING ALL INFILTRATION BEDS, SHALL BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR

	ON-SITE SOILS										
SYM	NAME	Hydric (Y/N)	Depth to Bedrock (in.)	Depth to Water Table (in.)	HSG						
AbA	Abbottstown Silt Loam, 0 to 3 percent slopes	N	46-50	6-18	D						
AbB	Abbottstown Silt Loam, 3 to 8 percent slopes	N	46-50	6-18	D						
Во	Bo Bowmansville-Knauers silt loam		72-99	0-18	D						
ReC	Readington Silt Loam, 8 to 15 percent slopes	N	40-70	18-36	С						

LIMITATIONS OF PENNSYLVANIA SOILS PERTAINING TO EARTHMOVING PROJECTS																
SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE/STEEL	HTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE	HYDRIC/ HYDRIC INCLUSIONS	LOW STRENGTH / LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK - SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
Abbottstown	Х	C/S		Х		Х	Х	X	X	Х	X	Х				Х
Bowmansville	Х	C/S			Х	Х	Х	Х	X	Х	Х	Х				Х
Readington	Х	C/S		Х		Х	Х	Х	X	Х	Х	Х				Х

RESOLUTIONS TO LIMITATION

CUTBANKS CAVE; PROVIDE SHORING DURING EXCAVATION CORROSIVE TO STEEL/CONCRETE; PROVIDE CATHODIC PROTECTION FOR CONCRETE AND STEEL DROUGHTY; PROVIDE WATER TRUCK DURING PERIODS OF DROUGHT AND DRY SOIL CONDITIONS

DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE; PROVIDE PUMPED WATER FILTER BAGS WHERE A SATURATED ZONE OR SHWT IS ENCOUNTERED EASILY ERODIBLE: PROVIDE AN EROSION CONTROL BLANKET ON STEEP SLOPES AND MAINTAIN EXISTING VEGATIVE COVER IN NON-DISTURBED AREAS

HYDRIC/HYDRIC INCLUSIONS: STRIP EXISTING TOPSOIL TO INDICATING DEPTH, IMPORT SUITABLE FILL FOR CONSTRUCTION, AND PROVIDE ADEQUATE SITE

LOW STRENGTH/LANDSLIDE PRONE; IMPORT SUITABLE FILL FOR TOPSOIL STOCKPILE AND PROVIDE SHORING DURING EXCAVATION SLOW PERCOLATION; REPLACE SOIL WITH SUITABLE FILL FOR BETTER PERCOLATION RESULTS

PIPING; PROVIDE CATHODIC PROTECTION FOR PIPES

POOR SOURCE OF TOPSOIL; IMPORT SUITABLE FILL FOR TOPSOIL

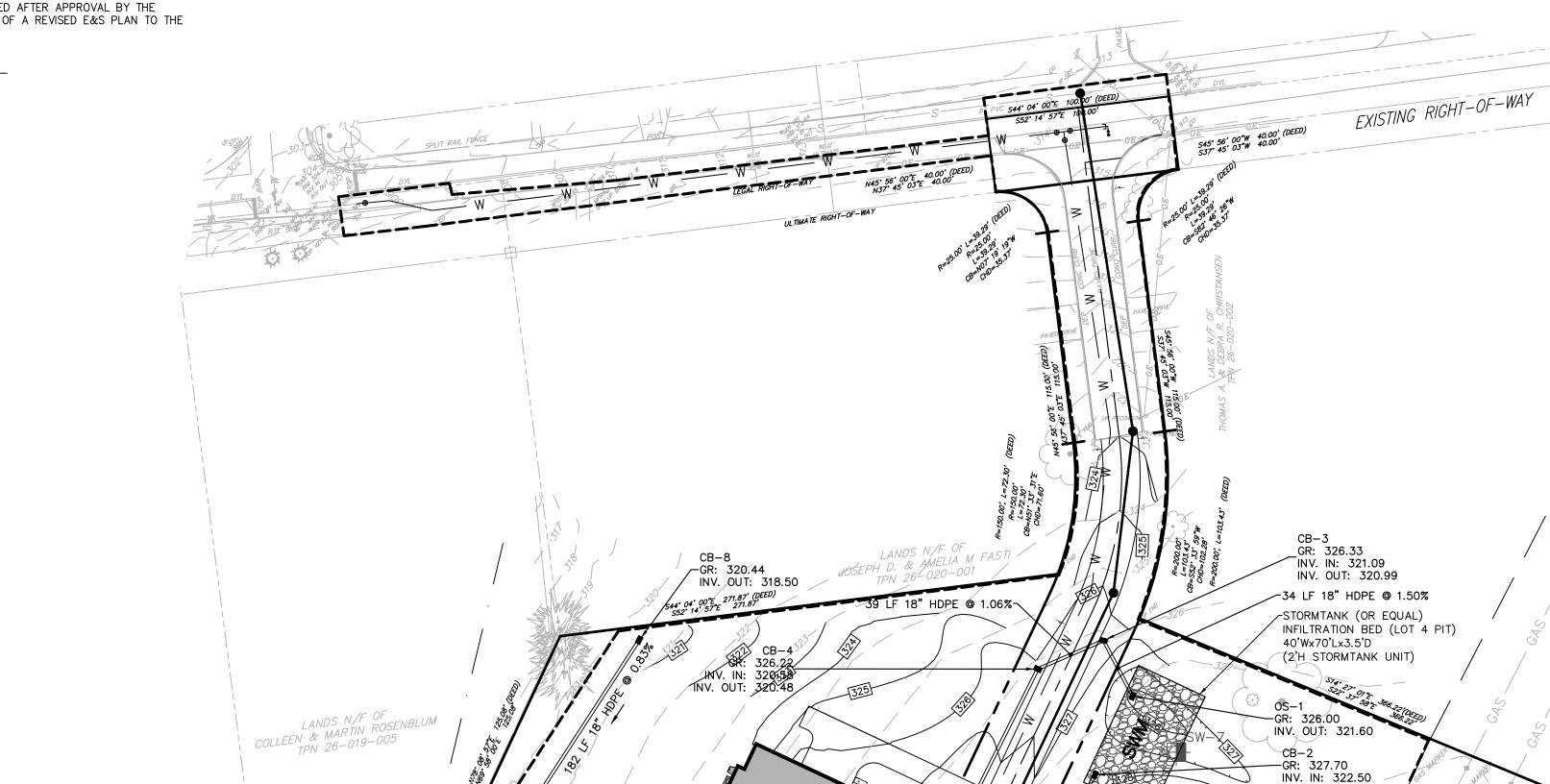
FROST ACTION; PROVIDE CAPILLARY FLOW PATH BREAKS IN SOILS

POTENTIAL SINKHOLE; LIMIT EXPOSURE TO PONDED WATER/REPAIR SINKHOLES AS NOTED/CONSULT GEOTECHNICAL ENGINEER

METNESS: MINIMIZE SOIL COMPACTION FOR INCREASED INFÍLTRATION OF WATER INTO THE SOIL AND PROVIDE ADEQUATE SITE GRADING

ONDING; PUMP STANDING WATER THROUGH FILTER BAG DURING CONSTRUCTION, DESIGN SITE FOR POSITIVE DRAINAGE

SHRINK-SWELL: COMPACT TO REQUIRED DRY DENSITY OR REMOVE AND REPLACE WITH SUITABLE MATERIAL



GR: 327.55 INV. IN: 318.19

X INV. OUT: 318.09

/ GR: 328.95-

LANDS N/F OF MARYANN E. FEDOCK TPN 26-001-106-003

TORMTANK (OR EQUAL) INFILTRATION BED (LOT 3 PIT)

(2.5'H STORMTANK UNIT)

30'Wx100'Lx4'D

TEMPORARY SEEDING:

- TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.
- DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE
- DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
- DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- . TEMPORARY SEEDING STEPS:

SEPT 15 TO OCT 15

- A. APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE FEET)
- B. APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.
- C. WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL. D. UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE

ANNUAL RYEGRASS MARCH 1 TO JUNE 15 1 LB./1000 SF MAY 15 TO SEPT 15 1 LB. /1000 SF SUDAN GRASS

. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

6. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2

168 LB./AC

PERMANENT SEEDING:

DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.

WINTER RYE

- SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1", DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
- . DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS: A. MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD
- OVER FROZEN GROUND. B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES
- RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)). THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE
- PLANTED AFTER HEAVY RAIN OR WATERING D. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED
- SEED SHALL BE SUPPLIED WHEREVER POSSIBLE. E. SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY
- BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH '/2" OF SOIL WITH SUITABLE EQUIPMENT.

F. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS:

MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1 2 LBS./1000 SF RED TOP*

((*) USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.)

PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC):

RATE TYPE MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80% AND RYEGRASS 20%

NOTE: SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS", PENNSYLVANIA STATE UNIVERSITY.

- FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZED AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0- 1 0- 10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER 1000 SF.
- HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80. CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER. APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.
- MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS: A. STRAW — SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COURSE MATERIAL, APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND. DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF

MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE YARD.

B. NETTING / EROSION CONTROL BLANKETS - THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS.

SEQUENCE OF CONSTRUCTION

NOTES:

- SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIATE FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER. NO VERTICAL CONSTRUCTION MAY OCCUR UNTIL SUBGRADE IS SET.
- THE BASIN SHALL BE INSTALLED BEFORE THE CONSTRUCTION OF ANY BUILDINGS OR SITE IMPROVEMENTS, UNLESS OTHERWISE APPROVED BY THE BOARD AND THE BUCKS COUNTY CONSERVATION DISTRICT. A PRELIMINARY BASIN AS-BUILT PLAN MUST BE SUBMITTED AND APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO BEGINNING ANY BUILDING CONSTRUCTION TO CONFIRM THAT THE CONSTRUCTED VOLUMES ARE IN ACCORDANCE WITH THE DESIGN PLANS.
- THE INDIVIDUAL TREES ALONG THE LIMITS OF TREE REMOVAL SHALL BE MARKED IN THE FIELD AND THE LOCATION OF TREE PROTECTION FENCING SHALL BE REVIEWED WITH THE TOWNSHIP ENGINEER IN THE FIELD PRIOR TO THE START OF CLEARING TO ENSURE THE WOODLANDS DISTURBANCE DOES NOT EXCEED THE MAXIMUM PERMITTED.
- CONTACT THE BUCKS COUNTY CONSERVATION DISTRICT (215-345-7577), NEW BRITAIN TOWNSHIP, AND THE TOWNSHIP ENGINEER AT LEAST
- EACH STAGE OF THE SEQUENCE OF CONSTRUCTION MUST BE COMPLETED PRIOR TO INITIATION OF THE NEXT STAGE OF THE SEQUENCE OF CONSTRUCTION. CONSTRUCTION MAY OVERLAP INTO A SUBSEQUENT PHASE AS LONG AS ALL EROSION CONTROL MEASURES HAVE BEEN
- INSTALLED IN THE PREVIOUS PHASE. INSTALL CONSTRUCTION ENTRANCE AT SITE ACCESS, STOCKPILE, COMPOST FILTER SOCK, CONCRETE WASHOUT AND TREE PROTECTION FENCE
- WHERE SHOWN ON THE PLAN. INSTALL PROTECTION FENCE AROUND FUTURE BMPS STRIP TOPSOIL AND STOCKPILE WHERE SHOWN ON PLAN. ALL STRIPPED TOPSOIL STOCKPILES SHALL HAVE TEMPORARY SEEDING INSTALLED.
- ROUGH GRADE SITE, DRIVEWAY/PARKING AND BUILDING PADS. INSTALL TEMPORARY EROSION CONTROL BLANKETS. INSTALL WATER AND SANITARY SEWER STARTING AT THE DOWNSTREAM ENDS AND WORKING UPSTREAM. ALL TRENCHES SHALL BE BACKFILLED
- AT THE END OF EACH DAY. MAKE OFFSITE UTILITY CONNECTIONS AND INSTALL OFFSITE WATER AND SANITARY SEWER.

INSTALL INFILTRATION BEDS. THIS IS A CRITICAL STAGE OF THE CONSTRUCTION SEQUENCE AND IS REQUIRED TO BE INSPECTED BY A LICENSED

- INSTALL STORM SEWER SYSTEM STARTING AT THE DOWNSTREAM ENDS AND WORKING UPSTREAM. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH DAY. STORMWATER INLETS SHALL BE RAISED ABOVE GRADE TO PREVENT RUNOFF FROM ENTERING THE UNDERGROUND SYSTEM UNTIL PAVING AND CURBING IS INSTALLED. INSTALL CURB, SUBBASE AND BASE COURSE FOR THE ROAD. UPON INSTALLATION OF PAVING AND CURBING, GRADE AREAS AROUND STORM SEWER INLETS AND MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.
- PRIOR TO VERTICAL CONSTRUCTION A STABLE BASE WILL BE ESTABLISHED AND MAINTAINED, TO AVOID ACCELERATED EROSION.
- . A PRELIMINARY BASIN AS-BUILT PLAN MUST BE SUBMITTED AND APPROVED BY THE TOWNSHIP ENGINEER. PRIOR TO BEGINNING ANY BUILDING CONSTRUCTION TO CONFIRM THAT THE CONSTRUCTED VOLUMES ARE IN ACCORDANCE WITH THE DESIGN PLANS.

D. BEGIN CONSTRUCTION OF BUILDING FOUNDATIONS. BUILDING CONSTRUCTION MAY COINCIDE WITH ADDITIONAL SITE WORK, INCLUDING UTILITY AND

- STREET CONSTRUCTION, THAT IS LISTED IN THIS SEQUENCE OF CONSTRUCTION. PRIOR TO VERTICAL CONSTRUCTION, SUBGRADE IS TO BE SET, INCLUDING BUT NOT LIMITED TO FOUNDATION WORK, STABLE SUBGRADE/SUBBASE, SUBSURFACE UTILITY WORK, AND ROADWAY SUBGRADE. COMPLETE FINAL GRADING. AFTER FINAL GRADING IS COMPLETED, APPLY PERMANENT SEEDING MIXTURE AND INSTALL ALL REQUIRED PLANTINGS,
- FENCING, AND LIGHTING. LIGHTING SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF ANY USE AND OCCUPANCY PERMITS. ONCE ALL BUILDINGS ARE COMPLETED, FLUSH ALL AFFECTED STORM DRAINAGE PIPES OF ACCUMULATED SILT.
- 2. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT OR ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY. THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUNDCOVER.
- 3. UPON COMPLETE STABILIZATION CONTACT THE BUCKS COUNTY CONSERVATION DISTRICT FOR APPROVAL TO CONVERT THE SEDIMENT BASIN. 14. UPON BUCKS COUNTY CONSERVATION DISTRICT APPROVAL, REMOVE EROSION CONTROL DEVICES INCLUCING CONSTRUCTION ENTRANCE AT SITE ACCESS, STOCKPILE, COMPOST FILTER SOCK, CONCRETE WASHOUT AND TREE PROTECTION FENCE.
- 15. AFTER CONSTRUCTION IS COMPLETED, INSTALL WEARING COURSE FOR THE ROADWAY. REPAIR ANY STORM SEWER STRUCTURES, SANITARY SEWER
- STRUCTURES, LANDSCAPING, LIGHTING, TRAILS, DRIVEWAYS, AND/OR ANY OTHER AMENITIES FROM INSTALLATION OF WEARING COURSE.

AND DETERIORATION AT LEAST ANNUALLY.

BMP MAINTENANCE PLAN NOTE: AN ANNUAL REPORT SHALL BE PREPARED AND RETAINED BY THE RESPONSIBLE PARTY STATING THE FOLLOWING MAINTENANCE HAS BEEN PERFORMED.

THE OWNER IS RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER CONVEYANCE SYSTEM, SUBSURFACE INFILTRATION AREA, LEVEL SPREADER, AND ALL OTHER PROPOSED BMPS.

STORMWATER CONVEYANCE SYSTEM • CATCH BASINS, MANHOLES, HEADWALLS, TRASH RACKS, AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER EVERY STORM

- EXCEEDING 1-INCH OF RAINFALL. DEBRIS SHALL BE REMOVED FROM THE TOP AND/OR INTERIOR OF THE STRUCTURE. ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING,
- SUMPS IN INLET AND MANHOLE STRUCTURES SHALL BE INSPECTED FOR DEBRIS FOLLOWING THE SCHEDULE ABOVE. IF PRESENT, ANY DEBRIS SHALL BE REMOVED FROM THE BOTTOM OF THE STRUCTURE. • TRASH RACKS AT HEADWALLS SHALL BE INSPECTED FOR CLOGGING AND/OR DEBRIS FOLLOWING THE

SUBSURFACE INFILTRATION BED • INSPECT SUBSURFACE BED AT LEAST FOUR TIMES A YEAR, AS WELL AS AFTER EVERY STORM EXCEEDING

0.8 INCH. • ENSURE THAT RUNOFF DRAINS DOWN TO THE LOWEST OUTFALL ELEVATION WITHIN AT LEAST 72 HOURS. IF DRAIN-DOWN TIMES ARE EXCEEDING THE MAXIMUM, DRAIN THE FACILITY VIA PUMPING AND CLEAN OUT

SCHEDULE ABOVE. IF PRESENT, ANY DEBRIS SHALL BE REMOVED FROM THE TRASH RACK.

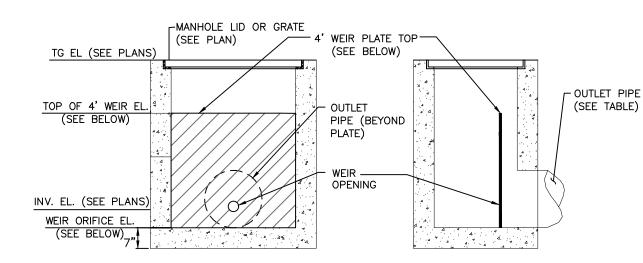
- PERFORATED PIPING AT LEAST TWO TIMES PER YEAR, INSPECT FOR ACCUMULATION OF SEDIMENT AND/OR DEBRIS. DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM A DRY WELL AT
- SUITABLE DISPOSAL/RECYCLING SITES AND IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL WASTE REGULATIONS. • AS NEEDED, REMOVE ACCUMULATED SEDIMENT BY FLUSHING AND/OR VACUUMING BED PIPE SYSTEM USING
- STRUCTURES AND/OR CLEANOUTS AT THE CORNERS OF THE SYSTEM, IN ORDER TO MAINTAIN FLOW THROUGH THE BED AND TO MAINTAIN WATER QUALITY FUNCTIONALITY.
- REGULARLY CLEAN OUT GUTTERS AND ENSURE PROPER CONNECTIONS TO FACILITATE THE EFFECTIVENESS OF THE FACILITY. • REPLACE FILTER SCREEN THAT INTERCEPTS ROOF RUNOFF AS NECESSARY.
- IF AN INTERMEDIATE SUMP BOX EXISTS, CLEAN IT OUT AT LEAST ONCE PER YEAR. • NO STRUCTURES OR LANDSCAPING SHALL BE INSTALLED OVER ANY SUBSURFACE MRC FACILITY AREA. • ALL BMP COMPONENTS SHOULD BE MAINTAINED AS INDICATED IN THE PADEP STORMWATER BMP MANUAL.
- TREES SHALL BE PLANTED IN ACCORDANCE WITH SPECIFICATIONS PREPARED BY THE PROJECT LANDSCAPE ARCHITECT. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF FIVE YEARS FOLLOWING CONSTRUCTION.THE HOMEOWNER'S ASSOCIATION SHALL ENSURE THAT ESCROW FUNDS ARE AVAILABLE FOR REPLACEMENT DURING THIS TIME PERIOD. TREES SHALL BE MAINTAINED AND PROTECTED FOR THE
- PROJECT LIFE (50 YEARS). • TREES SHALL BE INSPECTED ANNUALLY AND PRUNED AS NEEDED TO ENSURE HEALTHY CONDITIONS. • IF IT IS DETERMINED THAT THE TREE IS IN POOR HEALTH, A CERTIFIED ARBORIST SHALL BE CONSULTED IMMEDIATELY TO DETERMINE THE PROPER COURSE OF ACTION.

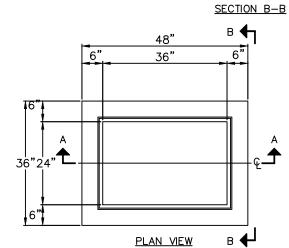
LEVEL SPREADER

- INSPECT AREA BELOW LEVEL SPREADER FOR CLOGGI NG, DENSITY OF VEGETATION, DAMAGE BY FOOT OR VEHICULAR TRAFFIC, EXCESSIVE ACCUMULATIONS, AND CHANNELIZATION ON A QUARTERLY BASIS FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION, AND THEN ON A BIANNUAL BASIS THEREAFTER, AS WELL AS AFTER EVERY STORM EXCEEDING 1 INCH.
- SEDIMENT AND DEBRIS SHOULD BE ROUTINELY REMOVED (BUT NEVER LESS THAN SEMIANNUALLY), OR UPON OBSERVATION, WHEN BUILDUP OCCU RS IN THE CLEAN OUTS. REGRADING AND RESEEDING MAY BE NECESSARY IN THE AREAS BELOW THE LEVEL SPREADER. REGRADING MAY ALSO BE REQUIRED WHEN POOLS OF STANDING WATER ARE OBSERVED ALONG THE SLOPE. (IN NO CASE SHOULD
- STANDING WATER BE ALLOWED FOR LONGER THAN 72 HOURS.) • DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM A LEVEL SPREADER AT SUITABLE DISPOSAL/RECYCLING SITES AND IN COMPLIANCE WITH LOCAL, STATE, AND
- FEDERAL WASTE REGULATIONS. • YARD INLETS AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER EVERY STORM EXCEEDING 1-INCH OF RAINFALL.
- ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING, AND DETERIORATION AT LEAST ANNUALLY. • IF EROSION IS OBSERVED, MEASURES SHOULD BE TAKEN TO IMPROVE THE LEVEL SPREADER OR OTHER DISPERSION METHOD TO ADDRESS THE SOURCE OF EROSION. RILLS AND GULLIES OBSERVED ALONG THE STRIP MAY BE FILLED WITH TOPSOIL, STABILIZED WITH EROSION CONTROL MATTING, AND EITHER SEEDED OR SODDED, AS DESIRED. FOR CHANNELS LESS THAN 12 INCHES WIDE, FILLING WITH CRUSHED GRAVEL, WHICH ALLOWS GRASS TO CREEP IN OVER TIME, IS ACCEPTABLE. FOR WIDER CHANNELS, I.E. GREATER THAN 12 INCHES, REGRADING AND RESEEDING MAY BE NECESSARY. (SMALL BARE AREAS MAY ONLY
- REQUIRE OVERSEEDING.) . IF VEGETATIVE COVER IS NOT FULLY ESTABLISHED WITHIN THE DESIGNATED TIME, IT MAY NEED TO BE REPLACED WITH AN ALTERNATIVE SPECIES.
- . UNWANTED OR INVASIVE GROWTH SHOULD BE REMOVED ON AN ANNUAL BASIS. BIWEEKLY INSPECTIONS ARE RECOMMENDED FOR AT LEAST THE FIRST GROWING SEASON, OR UNTIL THE VEGETATION IS PERMANENTLY . ONCE THE VEGETATION IS ESTABLISHED, INSPECTIONS OF HEALTH, DIVERSITY, AND DENSITY SHOULD BE PERFORMED AT LEAST TWICE PER YEAR, DURING BOTH THE GROWING AND NON-GROWING SEASON. VEGETATIVE COVER SHOULI

BE SUSTAINED AT 85% AND REPLACED IF DAMAGE GREATER THAN 50% IS OBSERVED.

STANDARD CLEANOUT INSTALLATION DETAIL

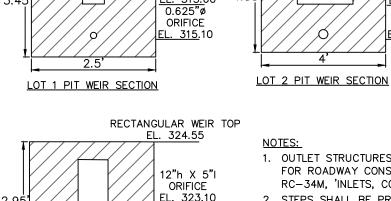


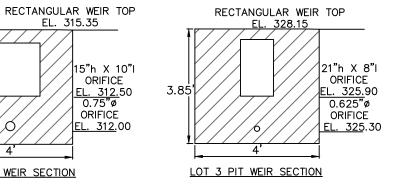


RECTANGULAR WEIR TOP

ВМР	OUTFALL STRUCTURE NAME	TOP OF GRATE ELEV.	OUTFALL PIPE DIA.	OUTFALL PIPE INV. ELEV.
#			INCHES	
LOT 1 PIT	0S-3	319.14	18	314.10
LOT 2 PIT	0S-2	317.04	18	311.00
LOT 3 PIT	OS-4	328.95	18	324.30
LOT 4 PIT	0S-1	326.00	18	321.60

ELEVATION A-A





ORIFICE LOT 4 PIT WEIR SECTION

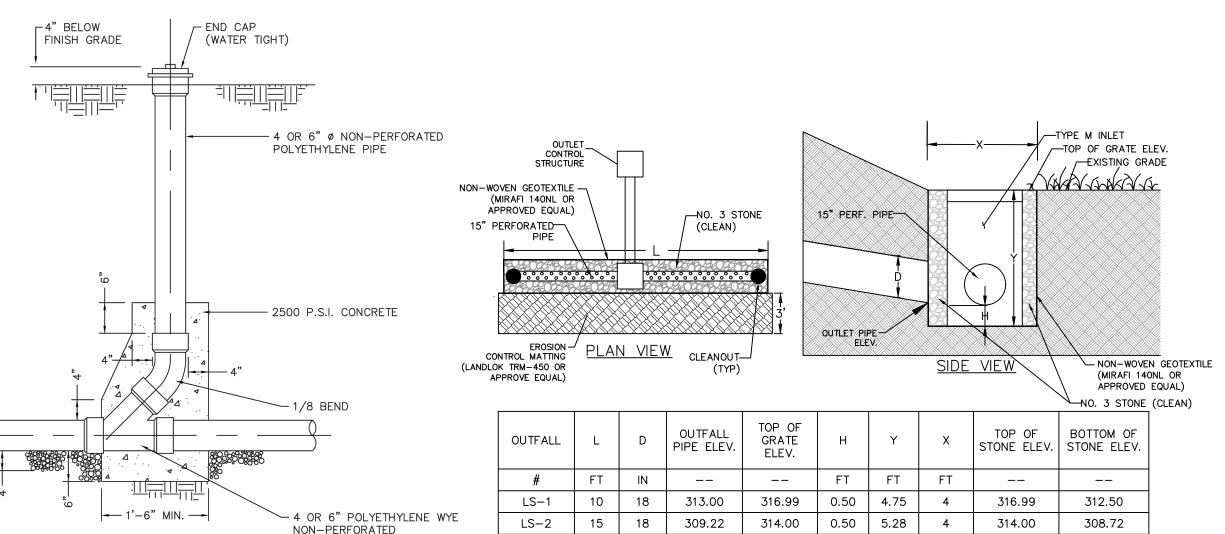
321.94 | 0.50 | 3.44 | 4 |

LEVEL SPREADER

321.94

- 1. OUTLET STRUCTURES SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-34M, 'INLETS, CONCRETE TOP UNITS CAST-IN-PLACE AND PRECAST".
- 2. STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN
- 3. THE CONTRACTOR SHALL PROVIDE CUT SHEETS TO ENGINEER TO REVIEW PRIOR TO CONSTRUCTION.
- 4. REFER TO THE SUBSURFACE BASIN DETAIL FOR ADDITIONAL CONNECTION INFORMATION.

SUBSURFACE STORMWATER FACILITY OUTLET STRUCTURE DETAIL



- SEQUENCE OF CONSTRUCTION FOR LEVEL SPREADER

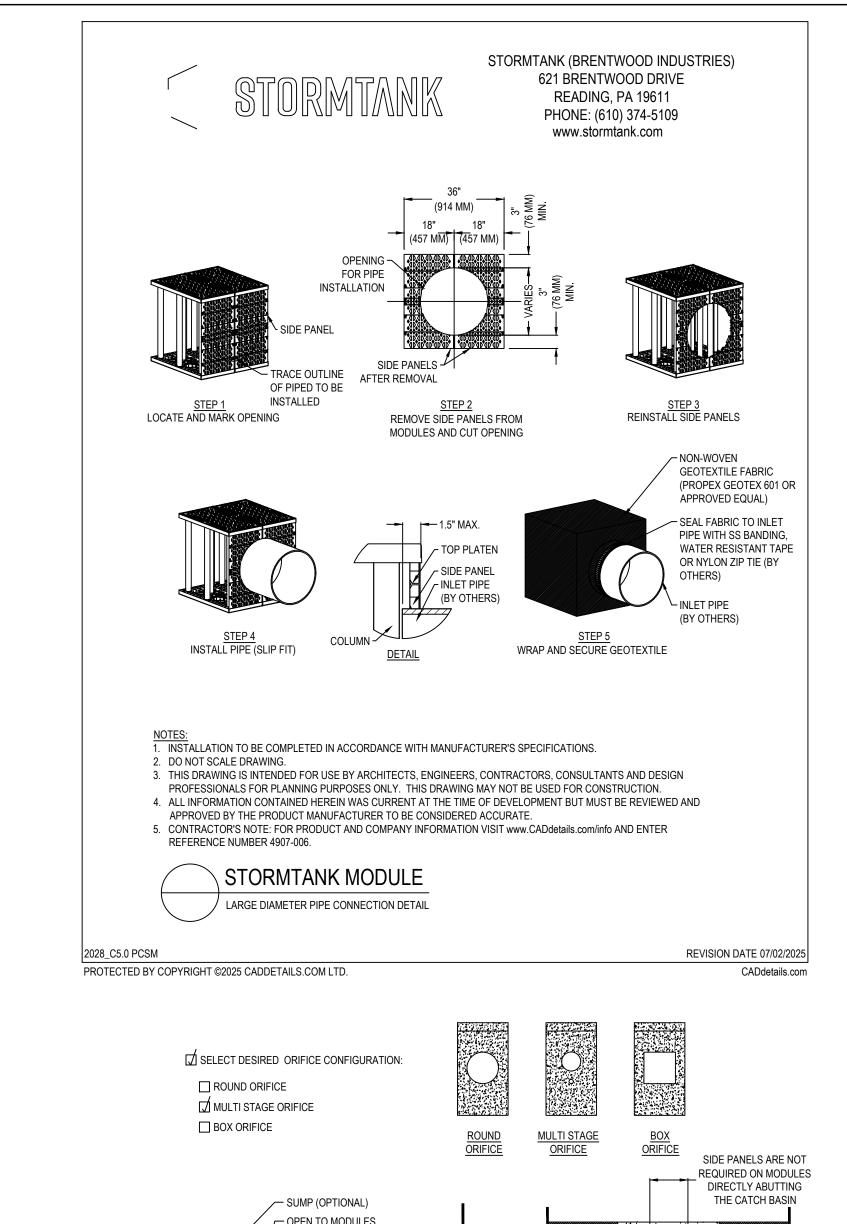
 1. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AS PER THE PENNSYLVANIA EROSION AND SEDIMENT
- POLLUTION CONTROL PROGRAM MANUAL (MARCH 2000, OR LATEST EDITION) EXCAVATE LEVEL SPREADER BOTTOM TO A UNIFORM, LEVEL SUBGRADE FREE FROM ROCKS AND DEBRIS. EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE LEVEL SPREADER. COMPLETELY WRAP LEVEL SPREADER WITH NONWOVEN GEOTEXTILE. (IF
- SEDIMENT AND/OR DEBRIS HAVE ACCUMULATED IN LEVEL SPREADER BOTTOM, REMOVE PRIOR TO GEOTEXTILE PLACEMENT.) GEOTEXTILE ROLLS SHOULD OVERLAP BY A MINIMUM OF 24 INCHES WITHIN THE TRENCH. FOLD BACK
- AND/OR CUT EXCESS GEOTEXTILE DURING STONE PLACEMENT. 4. INSTALL CONTINUOUSLY PERFORATED PIPE, OBSERVATION WELLS/INLETS, AND ALL OTHER LEVEL SPREADER STRUCTURES. CONNECT INCOMING PIPES TO STRUCTURES AS INDICATED ON PLANS.
- PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 6-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
- 6. INSTALL EROSION CONTROL BLANKET DOWNSTREAM OF LEVEL SPREADER AND SECURE AS PER MANUFACTURER'S RECOMMENDATIONS. 7. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS
- FULLY STABILIZED.

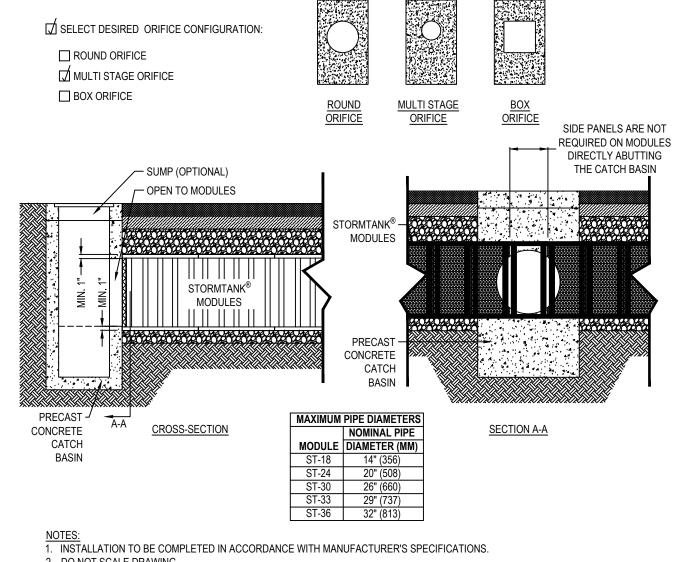


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4 O ~ BRITAIN RR NEW ⋖ $\mathbf{\Omega}$

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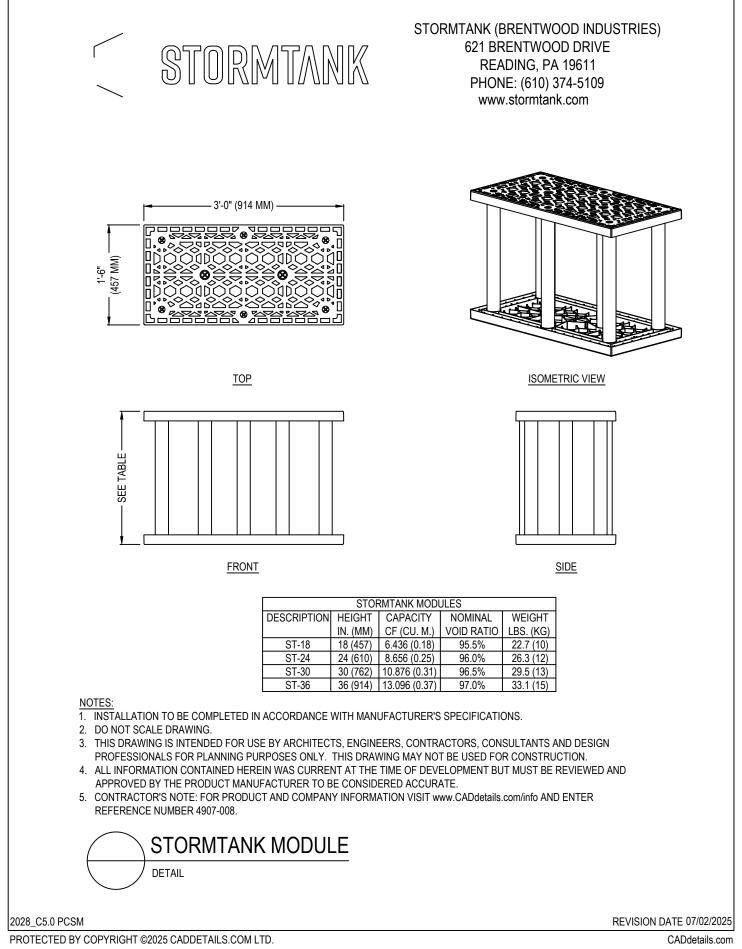


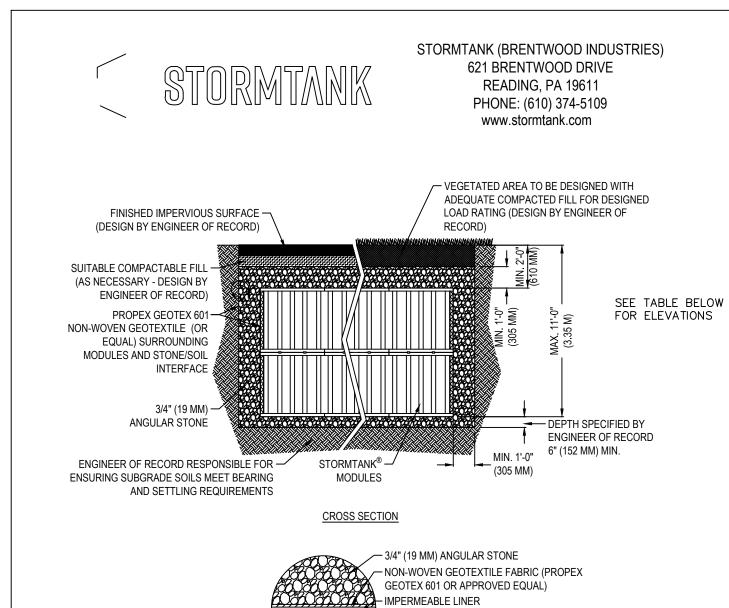


- 2. DO NOT SCALE DRAWING.
- 3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
- 4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
- 5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER

REFERENCE NUMBER 4907-001. STORMTANK MODULE

CATCH BASIN ABUTMENT DETAIL





- NON-WOVEN GEOTEXTILE FABRIC (PROPEX GEOTEX 601 OR APPROVED EQUAL) ─ NATIVE SOIL DETAIL "A"

NOTES: 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. 2. DO NOT SCALE DRAWING.

- 3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN
- PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION. 4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND
- APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 4907-021.



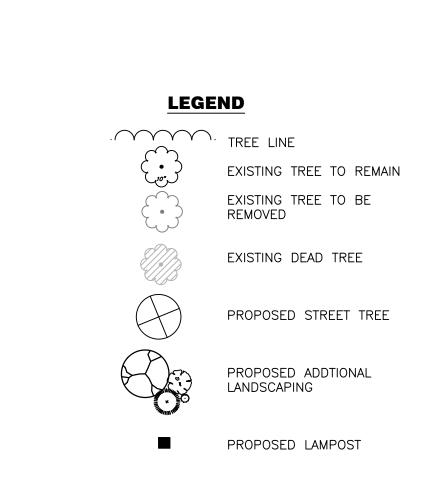
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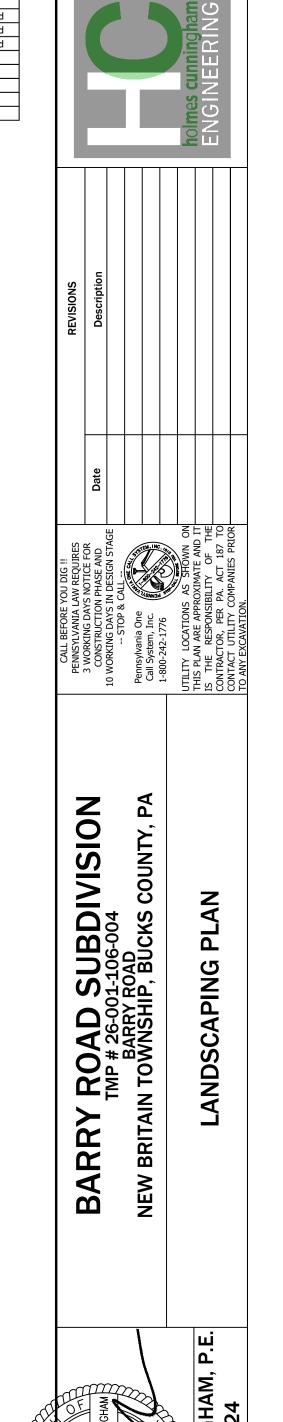
ВМР	TOP OF STONE ELEV.			BOTTOM OF STORMTANK ELEV.		
#						
LOT 1 PIT	318.10	314.10	317.60	315.10		
LOT 2 PIT	315.50	311.00	315.00	312.00		
LOT 3 PIT	328.30	324.30	327.80	325.30		
LOT 4 PIT	325.10	321.60	324.60	322.60		

/ISION WATER ARRY ROAD SUBDIVIS TMP # 26-001-106-004 BARRY ROAD W BRITAIN TOWNSHIP, BUCKS COU CONSTRUCTION STORMY MANAGEMENT DETAILS BARRY POST NEW File No. 2028_C5.0 PCSM.DWG



Subdivision Ordinance Item	Requirement	Plan Proposed
S.O. 22-713.4	Street trees shall be planted every 30' along all proposed streets and	
reet Trees	existing streets when they abut or lie within the proposed subdivision	
	and/or land development. Trees shall be planted 3-5' outside the	
	ultimate right-of-way.	
	Internal Rd.: 883' - 176' (along existing properties) =	
	707/30 = 24 street trees	24 Street trees [W]
Additional Landscape		
- not required		11 Shade trees
		15 Ornamental trees
		38 Evergreen trees
		54 Shrubs
		35 Street/ Shade Trees
		15 Ornamental trees
	Total Landscape Proposed	38 Evergreen trees
		54 Shrubs

			PLANT SCHEDU	ILE				
Plan	O a makitan	Patasias Nama	Common Name	Min. Planting	Min. Planting	Min. Planting	Domoniko	Comments
Symbol Shade Tre		Botanical Name	Common Name	Caliper	Spread	Height	Remarks	Comments
AR	6	Acer rubrum 'October Glory'	'October Glory' Red Maple	3.5" cal.	<u> </u>	14-16'	B&B	Full, straight leader
LT	4	Liriodendron tulipifera	Tulip Tree	2" cal.	-	12-14'	B&B	Full, straight leader
QA	7	Quercus alba	White Oak	2" cal.	-	12-14'	B&B	Full, straight leader
QB	4	Quercus bicolor	Swamp White Oak	3.5" cal.	-	14-16'	B&B	Full, straight leader
QS	6	Quercus shumardii	Shumard Oak	3.5" cal.	-	14-16'	B&B	Full, straight leader
TC	8	Tilia cordata	Littleleaf Linden	3.5" cal.	-	14-16'	B&B	Full, straight leader
Ornament	tal Trees		•		•			
AC	7	Amelanchier canadensis	Serviceberry	-	-	6'	B&B	Multi-stem, min. 5 stems
BN	3	Betula nigra	River Birch	-	-	6'	B&B	Multi-stem, min. 3 stems
CC	5	Cercis canadensis	Eastern Redbud	1.5" cal.	-	-	B&B	Full, straight leader
Evergreen	Trees							
AB	12	Abies concolor	White Fir	-	-	6'	B&B	Symmetrical, branched to grou
PA	10	Picea abies	Norway Spruce	-	-	6'	B&B	Symmetrical, branched to grou
PO	16	Picea omorika	Serbian Spruce	-	-	6'	B&B	Symmetrical, branched to grou
Shrubs **								
CS	19	Cornus sericea	Red Twig Dogwood	-	-	24"	CONT	Heavy, full specimen
HA	13	Hydrangea arborescens 'Annabelle'	'Annabelle' Hydrangea	-	-	24"	CONT	Heavy, full specimen
IV	17	Ilex verticillata	Winterberry	-	-	24"	CONT	Heavy, full specimen
VD	5	Viburnum dentatum	Arrowwood Viburnum	-	-	24"	CONT	Heavy, full specimen



File No.

Drawing No.

C6.0



GENERAL LANDSCAPE PLANTING NOTES:

PLANTING MATERIALS

- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
- STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK". PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
- 3. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
- 4. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
- 5. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.

PLANTING SOILS

- 1. REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOD, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS
- SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BOGS, MARSHES OR CONTAMINATED SITES.
- 3. IF DEPTH OF PLANTING SOILS AND TOPSOIL IS NOT INDICATED IN PLANS OR DETAILS, A MINIMUM 18" DEPTH SHALL BE PROVIDED FOR ALL TREES AND LARGE SHRUBS; MINIMUM 12" DEPTH SHALL BE PROVIDED FOR GROUNDCOVERS, HERBACEOUS AND MEADOW OR ORNAMENTAL GRASS AREAS AND A MINIMUM 6" LAYER SHALL BE INSTALLED IN ALL LAWN AREAS. TOPSOIL AND PLANTING SOIL DEPTH INDICATED ON PLANS AND PLANTING DETAILS AND NARRATIVE SPECIFICATIONS SHALL GOVERN DEPTH WHEN PROVIDED.
- 4. WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS
- 5. IF THE QUANTITY OF SOILS FROM THE SITE IS NOT ADEQUATE TO FILL PLANTING AREAS TO THE DEPTH INDICATED IN THE PLANS AND DETAILS. CONTRACTOR SHALL FURNISH PLANTING SOILS THAT ARE FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER AND COMPLY WITH THE FOLLOWING CRITERIA: -SOILS SHALL MEET ALL APPLICABLE SOIL REMEDIATION STANDARDS
 -ORGANIC CONTENT: 2-5% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS -SOLUBLE SALTS: LESS THAN 0.5 MM HOS/CM -SOIL PH: 4.5-7% TO BE AMENDED PER SOIL TEST RESULTS -PHYSICAL (SIEVE) ANALYSIS/ SOIL TEXTURE SAND: 40-60% SILT: 25-60% CLAY: 5-20%

-NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE.

- 6. ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED BY ADDING AMENDMENTS. THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.
- 7. IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATTER. ORGANIC AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8; MOISTURE CONTENT 35-55% BY WEIGHT 100% PASSING THROUGH 1" SIEVE; SOLUBLE SALT CONTENT LESS THAN 0.5 MM HOS/CM; MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL; FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER
- 8. SCARIFY AND/OR TILL ALL COMPACTED SUBSOILS PRIOR TO ADDING PLANTING SOIL OR TOPSOIL. PLANTING SOILS AND TOPSOIL SHALL BE PLACED IN 12-18" LIFTS THAT ARE LOOSELY COMPACTED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.

DELIVERY, STORAGE, AND HANDLING

- 1. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE
- TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSIT. DO NOT DROP OR BREAK BALLED STOCK DURING DELIVERY OR HANDLING.
- 3. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT BALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL AT THE TIME OF PLANTING, IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8" INTO THE PLANTING HOLE. WITH CONTAINER-GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO
- 4. THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY. THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

INSTALLATION

- 1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
- 2. THE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
- 3. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE FINISHED GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT
- 4. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
- 5. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
- 6. THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
- 7. AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMÓVED AFTER INSTALLATION
- 8. MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT
- 9. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24—HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
- 10. AFTER COMPLETION OF A PROJECT, ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A SHREDDED HARDWOOD BARK OR APPROVED EQUAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.

GUARANTEE

1. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF 18 MONTHS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

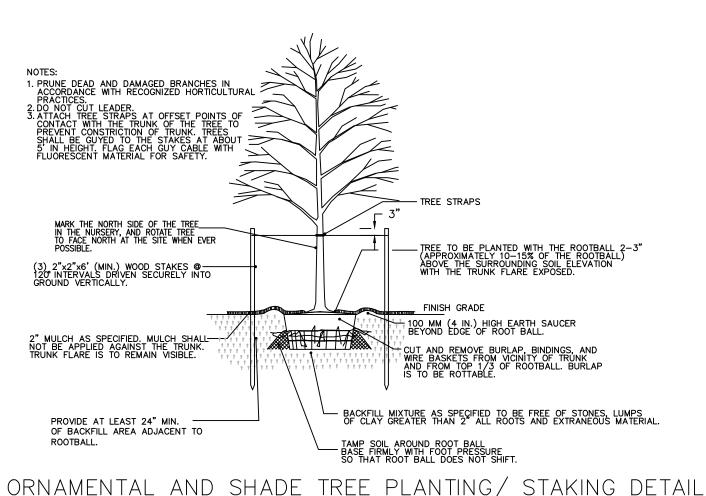
LAWN SEED NOTES:

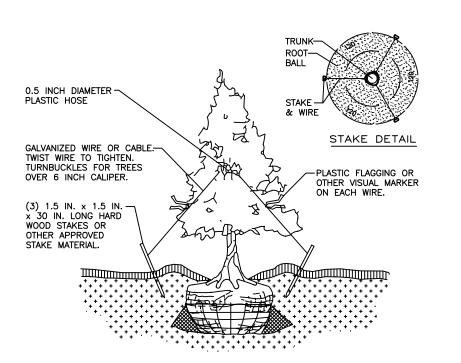
SPREADING FESCUE

- 1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
- 2. THE FOLLOWING SEED MIX SHALL BE SOWN AT THE RATES AS DEPICTED: RED FESCUE 1 1/2 LBS./1,000 SF PERENNIAL RYEGRASS 1 LBS./1,000 SF KENTUCKY BLUEGRASS 1 1/2 LBS./1,000 SF
- 3. SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS/AC OR 90 LBS/1,000 SF
- 4. SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS: SPRING: APRIL 1 - MAY 31
- FALL: AUGUST 16 OCTOBER 31 5. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

TREE PROTECTION NOTES:

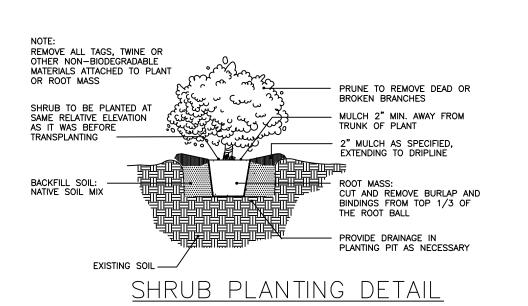
- 1. ALL EXISTING SHADE TREES WITHIN THE LIMITS OF TREE PROTECTION FENCING AND AS DIRECTED BY THE LANDSCAPE ARCHITECT SHALL BE PROTECTED THROUGHOUT THE DURATION
- 2. DEMOLITION AND GRADING WORK ADJACENT TO PROTECTED TREES SHALL BE PERFORMED BY A QUALIFIED PERSON WITH A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN WORKING WITH EXCAVATION EQUIPMENT. CONTRACTOR TO PRÒTECT ROOT MASS AGAINST DAMAGE DURING EXCAVATION. ANY TREE ROOTS THAT ARE DISTURBED, BROKEN OR CUT SHALL BE PRUNED BACK WITH CLEAN SHARP TOOLS.
- 3. TO MINIMIZE DISTURBANCE OF VEGETATION TO REMAIN, ALL TREE STUMPS TO BE REMOVED WITHIN 10' OF TREE PROTECTION FENCE SHALL BE REMILLED USING A STUMP GRINDER.
- 4. ALL EXPOSED TREE ROOTS SHALL BE THOROUGHLY IRRIGATED ON A DAILY BASIS UNTIL BACKFILLING CAN OCCUR AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.
- 5. ALL WORK TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF EITHER THE OWNER'S REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT. NOTIFY OWNER A MINIMUM OF 48 HOURS PRIOR TO ANY EARTHWORK / EXCAVATION WORK.





- 1. ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL. 2. ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM 0.5 INCH.
- WIRE OR CABLE SIZES SHALL BE AS FOLLOWS: TREES UP TO 2.5 INCH CALIPER 14 GAUGE TREES 2.5 INCH TO 3 INCH CALIPER 12 GAUGE
- TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 INCH CALIPER OF TRUNK MOVEMENT. TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.

EVERGREEN TREE STAKING DETAIL



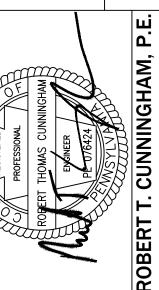


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DETAIL

LANDSCAPING

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File No.

2028_C6.0 LANDSCAPE.DWG

Greenways, Trails and Recreation Program (GTRP)

PROGRAM GUIDELINES February 2025



Department of Community & Economic Development





Commonwealth of Pennsylvania Josh Shapiro, Governor

PA Department of Community & Economic Development dced.pa.gov







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Section I - Statement of Purpose

Act 13 of 2012 (Act of February 14, 2012 (P.L. 87, No. 13) (58 Pa.C.S. §2315(a) and (a.1)(1)(iv)) establishes the Marcellus Legacy Fund and allocates funds to the Commonwealth Financing Authority (the "Authority") for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects.

Section II – Eligibility

A. Eligible Applicants

Any of the following entities may apply for a grant under Greenways, Trails and Recreation Program (GTRP):

- 1. Municipality Any county, city, borough, incorporated town, township or home rule municipality.
- 2. **Councils of Governments** An entity organized by units of local government under an intergovernmental agreement, which provides cooperative planning, coordination and technical assistance to its member governments on issues of mutual concern that cross jurisdictional lines, and which does not act under the direction and control of any single member government.
- 3. Authorized Organization An entity involved in research, restoration, rehabilitation, planning, acquisition, development, education or other activities, which furthers the protection, enhancement, conservation, preservation or enjoyment of this commonwealth's environmental, conservation, recreation or similar resources. The organization must be a tax-exempt institution under section 501(c) (3) of the Internal Revenue Code of 1986 (Public Law 99-514, 26 U.S.C. § 501(c) (3)) and registered with the Bureau of Charitable Organizations or an educational institution involved in these authorized activities or a municipal authority.
- 4. **Institution of Higher Education** An entity that is an accredited university, college, seminary college, community college or two-year college.
- 5. Watershed Organization An entity recognized by the PA Department of Conservation and Natural Resources (DCNR) or the PA Department of Environmental Protection (DEP) that was established to promote local watershed conservation efforts in an identified watershed.
- 6. For Profit Businesses other than "producers" of natural gas as defined in Act 13.

B. Eligible Projects

Eligible projects under the GTRP include:

Public Park and Recreation Areas – These projects involve the rehabilitation and development of
public indoor and/or outdoor park, recreation and conservation areas and facilities. Parks and recreation
areas are areas of land and/or water, for use as a neighborhood, community or regional public park and
recreation site. Property may be acquired for active and/or passive recreation use to create new park and
recreation areas and/or expand existing recreational sites.

- 2. Greenways and Trails These projects involve the renovation and development of linear public facilities, such as bicycle, walking, equestrian, snowmobile, and nature trails; passive recreation areas; riparian forest buffers; wetland boardwalks; observation decks. Related support facilities including: access roads, parking areas, walks, comfort station, lighting, landscaping, and signage are also eligible. Greenways are areas of land and/or water which provides a linear recreation, conservation, or open space corridor along a natural or man-made feature.
 - Trails are designated land and/or water corridor with public access that provides recreation and/or alternative transportation opportunities to motorized and/or non-motorized user of all ages.
- 3. **Rivers Conservation** These projects enhance rivers, streams, and watersheds for recreational purposes.

C. Eligible Use of Funds

Funds may be used by the applicant to pay for any of the following project costs:

- 1. **Development, Rehabilitation and Improvement** of public parks, indoor and outdoor recreation facilities, trails, greenways, and watershed implementation projects to include:
 - a. Construction activities. Construction contingencies are limited to 5% of actual construction costs.
 - b. Fixed equipment
 - c. The clearing and preparation of land.
 - d. Environmental site assessment.
 - e. Related engineering, design, and inspection costs not to exceed 10% of grant award.
 - f. Other professional services, excluding construction engineering. These services include archaeological surveys, geotechnical surveys, etc.
 - g. Settlement cost, acquisition projects only.
 - h. Administrative costs of the applicant necessary to administer the grant. Administrative costs will include advertising, legal, and audit costs as well as documented staff expenses. Administrative costs shall not exceed 2% of the grant.
- 2. **Planning Projects** that "lay the groundwork" for future land acquisition, development and/or management of parks, recreational facilities, critical habitat, open space, natural areas, greenways, motorized and non-motorized trails and river/watershed corridors. Planning projects also include the development of business plans for expansion or establishment of outdoor recreation businesses.
- 3. **Acquisition** of land, easements, or rights of way for park and recreation areas, natural areas, greenways, trails, river/watershed conservation, critical habitat conservation and/or open space.
- 4. Natural areas are areas of land and/or water, which are important in preserving flora, fauna, native ecological systems, and geological, natural, historical, open space, scenic or similar features of scientific or educational value.
- 5. Critical habitats are areas of land and/or water which provides habitat for rare, threatened or endangered plant and animal species or ecological or natural communities which are at risk of destruction or substantial degradation.

Ineligible costs include but are not limited to public relations, outreach, communications, lobbying, litigation, fees for securing other financing, interest on borrowed funds, application preparation fees and other costs incurred prior to the approval of grant funds.

Section III - Program Requirements

A. Applicant Cost Share Requirements

Projects require a 15% local cash match of the total project cost or cash equivalents for the appraised value of real estate.

Applicants considering the value of real estate as match are strongly encouraged to contact the Site Development Office. If using the value of real estate as match, an appraisal not older than 1 year will be required and the real estate being used as match must be developed as part of the proposed project. Match commitment documentation is required to be provided along with the application (see Appendix 1, Exhibit 3).

B. Planning and Permit Requirements

All recipients of funding under GTRP will be required to secure all necessary planning and permit approvals for the project from the federal, state, and local governments prior to disbursement of funds.

C. Other Requirements

1. Conflicts of Interest

An officer, director, or employee of an applicant who is a party to or who has a private interest in a project shall disclose the nature and extent of the interest to the governing body of the applicant and may not vote on any action of the applicant concerning the project, nor participate in the deliberations of the applicant concerning the project.

2. Nondiscrimination

No assistance shall be awarded to an applicant under this program unless the applicant certifies that the applicant shall not discriminate against any employee or against any person seeking employment by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the Pennsylvania Human Relations Act, which prohibits discrimination on the basis of race, color, religious creed, ancestry, age, sex, national origin, handicap or disability, or in violation of any applicable federal laws. All contracts for work to be paid with grant funds must contain the commonwealth's official nondiscrimination clause.

3. Project Records

The applicant must maintain full and accurate records, retained as Daily Activity Logs, with respect to the project and must ensure adequate control over related parties in the project. The Authority requires access to such records, as well as the ability to inspect all work, invoices, materials, and other relevant records at reasonable times and places to authorize daily activities and expenditures. Upon request of the Authority, the applicant must furnish all data, reports, contracts, documents, and other information relevant to the project.

4. Pennsylvania Prevailing Wage Act

All the construction work associated with the project may be subject to the Pennsylvania Prevailing Wage Act, as determined by the Pennsylvania Department of Labor and Industry.

5. Certification of Expenses

The applicant shall sign a payment request form certifying that the expenses were incurred and were in accordance with the scope of work approved by the CFA. In lieu of a formal project audit and prior to final closeout of the grant agreement, the applicant shall be required to submit copies of all canceled checks verifying the expenditure of the Greenways, Trails and Recreation Program proceeds. Bank statements may also be submitted if electronic payment of the expenditure occurred.

6. Bidding Requirements

Applicants must comply with all applicable federal, state, and local laws and regulations dealing with bidding and procurement.

7. Control of Property, Deed Restrictions and Public Access

The applicant must demonstrate control of the property that will be developed, rehabilitated or for which a Site Development Drawing will be completed. All facilities and property funded must be accessible to the public for uses consistent with the purposes for which it was acquired.

8. Guideline Provisions

The GTRP guideline provisions may be modified or waived by the Authority unless otherwise required by law.

D. Fees

The Commonwealth Financing Authority charges a \$100 non-refundable application fee for Greenways, Trails and Recreation Program applications. The application fee must be paid electronically by credit or debit card or electronic check through our secure, third-party vendor. Payment of the application fee must be completed prior to the certification and submission of the Electronic Single Application. Detailed payment instructions will be provided on the Certification Tab of the Electronic Single Application once all required fields have been completed.

Section IV - Grants

- 1. Grants shall not exceed a total of \$250,000 for any project.
- 2. Commencement of work prior to receiving authority approval will result in the project being ineligible for consideration.
- 3. To be eligible for reimbursement, project costs must be incurred within the time frame established by the grant agreement.

Section V – Application Procedures

- 1. To apply for funding, the applicant must submit the electronic online PA Department of Community and Economic Development Single Application for Assistance located at grants.pa.gov. Required supplemental information outlined in Appendix I of these guidelines must be attached electronically to the application as directed on the Addenda tab. For technical inquiries regarding the submission of the online application, contact the Customer Service Center at (800) 379-7448 or (717) 787-3405.
- 2. Applications will be accepted between February 1st and May 31st of each year. All applications and required supplemental information must be received by May 31st.

Section VI – Application Evaluation

The CFA will review and evaluate applications based on cost, strategic importance, and impact.

Section VII – Procedure for Accessing Funds

Upon approval of an application by the CFA, a grant agreement and commitment letter will be electronically issued to the applicant explaining the terms and conditions of the grant. The Grantee must provide the names, titles and e-mail addresses for two authorized individuals to receive and electronically sign the grant agreement. The grant agreement must be electronically signed and returned to the CFA within 45 days of the date of the commitment letter or the offer may be withdrawn by the CFA.

The applicant shall obtain the services of a professional engineer, architect, or landscape architect licensed in Pennsylvania who will certify to the Authority during construction that the expenses were incurred and were in accordance with plans approved by the Authority. The Authority will release funds to the applicant at not less than 30-day intervals.

Section VIII - Program Inquiries

Program inquiries should be directed to:

PA Department of Community and Economic Development
Office of Business Finance and Workforce Development – CFA Programs Division
Greenways, Trails and Recreation Program
Commonwealth Keystone Building
400 North Street, 4th Floor
Harrisburg, PA 17120-0225

Telephone: (717) 787-6245

Fax (717) 772-3581

E-mail: ra-dcedsitedvpt@pa.gov

These guidelines can also be accessed online at <u>dced.pa.gov</u>

Appendix I – Supplemental Information

In addition to completing the PA Department of Community and Economic Development Single Application for Assistance, please include the following items when applying for a grant under GTRP:

Exhibit 1: Project Description

Provide a narrative which discusses all the following:

- a. a description of the project;
- b. the specific location of the project area;
- c. current owner of the project site;
- d. whether the project is consistent with an existing county or local comprehensive plan;
- e. whether the project will result in a substantiated positive economic development impact;
- f. the historical and proposed use of land served by the project;
- g. the estimated start and end dates of construction;
- h. the names of the municipalities that will participate in and benefit from the project;
- i. a description of the existing greenways, recreational, or trail facilities in the area to be served by the project.

Exhibit 2: Cost Estimate

A thorough and detailed estimate for the total project cost. The estimate must be prepared by an engineer or other qualified professional and should be accompanied where appropriate by copies of the signed bid/quotations, contractor estimates, sales agreements or other documentation that verify project cost estimates.

Exhibit 3: Matching Funds Commitment

Provide funding commitment letters from all other project funding sources (including equity commitments).

- Funding commitments or term sheets provided by lending institutions must include the term, rate, and collateral conditions, and must be signed and dated.
- Funding commitments of equity from the applicant or private third party must be signed and dated (indicating the amount of funds being committed) and be accompanied by documentation (such as audited financial statements) showing the ability to commit such funds.
- If using the value of real estate as match, an appraisal not older than 1 year will be required.

Exhibit 4: Color-Coded Map

A color-coded map or plot plan detailing the location of the proposed project.

Exhibit 5: Permits

A list of all state, federal, and local planning and permit approvals required for the project.

Exhibit 6: Planning Letter

A letter from the appropriate planning agency certifying that the proposed project is in compliance with the comprehensive land use plans.

Exhibit 7: Resolution

Public sector applicants, provide a resolution duly adopted by the applicant's governing board formally requesting the grant, designating an official to execute all documents, describing briefly the project scope, and identifying the grant amount (see Appendix II for a Sample Resolution).

Exhibit 8: Land Acquisition Documents

For acquisition projects, please provide the following:

- · copy of the sales agreement or easement
- an appraisal prepared by either a Member, Appraisers Institute (MAI) formerly Institute of Real Estate Appraisers or a PA State Certified Appraiser.

Exhibit 9: Acquisition Consent Letter

For Authorized Organizations who are using grant funds for acquisition, provide copies of written consent from the county and municipality in which the land is situated.

Appendix II – Authorized Official Resolution

Be it RESOLVED, that the	(Name of Applicant) of
	request an Greenways, Trails and Recreation Program
(GTRP) grant of \$ from the Con	
Be it FURTHER RESOLVED, that the Applicant d	loes hereby designate (Name
	ne and Title) as the official(s) to execute all documents
and agreements between the	(Name of Applicant) and the Commonwealth
Financing Authority to facilitate and assist in obtain	ning the requested grant.
I duly qualified Secretary of the	e(Name of Applicant),
	by certify that the forgoing is a true and correct copy of a
	(Governing Body) at a
	said Resolution has been recorded in the Minutes of the
(Applicant) and remains in	
(-11	
IN WITNESS THEREOF, I affix my hand and atta	ch the seal of the (Applicant),
this day of, 20	
uns day or, 20	
Name of Applicant	
County	
<i>y</i>	
Secretary	_

