

Kellie A. McGowan, Esquire
Direct Dial: (215) 606-0181
E-mail: kellie.mcgowan@obermayer.com

Obermayer Rebmann Maxwell & Hippel LLP
10 S. Clinton Street, Suite 300
Doylestown, PA 18901-4640
P 215-606-0760
F 215-348-1804
www.obermayer.com

June 1, 2023

VIA HAND DELIVERY
AND EMAIL

New Britain Township
Ryan Gehman, Zoning Officer
207 Park Avenue
Chalfont, PA 18914
rgehman@nbtpa.us

RECEIVED
JUN - 8 2023

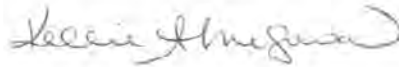
Re: Minor Subdivision Application of Anatoliy & Leonid Klimenko
TMP No.: 26-001-090
84 Curley Mill Road, New Britain Township, Bucks County

Dear Ryan:

Attached please find one (1) copies of Applicant, Anatoliy & Leonid Klimenko's, minor subdivision application with nine (9) full size and five (5) 11x17 copies of the plan sets in connection with the above-referenced property along with two checks for the required filing fee and escrow, in the amounts of \$500.00 and \$5,000.00 respectively.

Please let me know if you have any questions or require any further information. Thank you.

Very truly yours,



Kellie A. McGowan

Enclosures



NEW BRITAIN TOWNSHIP

207 Park Avenue • Chalfont, PA 18914 • Telephone: (215) 822-1391

SUBDIVISION & LAND DEVELOPMENT APPLICATION

1.	Date of Application:	<u>6/1/2023</u>	TOWNSHIP USE ONLY Date Received: <u>6/8/2023</u> Payment: <u>\$ 500.00</u> Check #: <u>1038</u> Receipt #: <u>14593</u> Escrow Acc. #: <u>2023-13148</u>		
2.	Date of Plan or Revision:	<u>5/30/2023</u>			
3.	Application for:	<u>Minor Subdivision</u>			
4.	Name of Subdivision or Land Development:	<u>N/A</u>			
5.	Location:	<u>84 Curley Mill Rd</u>			
6.	Tax Map Parcel #: <u>26-001-090</u>	Total Acreage: Gross <u>16.89</u>			Base Site Area <u>16.22</u>
7.	Net Buildable Site Area (from Section 2401):	<u>2.28 (Lot 1); 13.94 (Lot 2)</u>			
8.	Zoning Requirements:				
	Zoning District <u>SR-2</u>	Minimum Lot Size <u>2 ac</u>	Maximum Density _____		
	Front Yard <u>50</u>	Side Yard <u>25</u>	Rear Yard <u>75</u>		
9.	Number of Lots or Dwelling Units:	<u>2</u>			
10.	Equitable Owner of Record of Land:	<u>Anatoliy & Leonid Klimenko</u>			
	Address:	<u>1023 E. Territory Street</u>			
		<u>Meridian, ID 83646-7632</u>			
	Phone: <u>215-606-0181 (Attorney)</u>	E-mail: <u>kellie.mcgowan@obermayer.com (Attorney)</u>			
11.	Applicant:	<u>Same</u>			
	Address:	_____			
	Phone: _____	E-mail: _____			
12.	Registered Engineer or Surveyor:	<u>R.L. Showalter & Associates, Inc.</u>			
	Address:	<u>116 East Butler Avenue</u>			
		<u>Chalfont, PA 18914</u>			
	Phone: <u>215-822-2990</u>	E-mail: _____			
13.	Type of Water & Sewer:	<input checked="" type="checkbox"/> Public Water <input type="checkbox"/> Private Water <input checked="" type="checkbox"/> Public Sewer <input type="checkbox"/> Private Sewer			
14.	Proposed Use:	<u>Residential</u>			

This is to certify that I have read Article V of the New Britain Township Subdivision and Land Development Ordinance and that the accompanying plan meets the requirements of that Article to the best of my knowledge.

Kellie McGowan
Signature of Applicant

Gachel L. Dutch
Signature of Registered Engineer or Surveyor

SUBDIVISION & LAND DEVELOPMENT PLAN SUBMISSION CHECKLIST

Date of Application: June 1, 2023

Subdivision/Land Development Name: N/A

Address of Property: 84 Curley Mill Road

Owner(s) Name: Anatoliy & Leonid Klimenko

Applicant(s) Name: Four Brothers Construction Company

Tax Map Parcel Number: 26-001-090

Plan Sets for New Britain Township - Folded to 8 1/2 x 11: (9 Full Size, 5 11x17)

- | | |
|--|---|
| <input type="checkbox"/> NBT Board of Supervisors (Full Size) - 5 Copies | <input type="checkbox"/> NBT Planning Commission (11x17) - 2 Copies |
| <input type="checkbox"/> Township Engineer (Full Size) - 1 Copy | <input type="checkbox"/> NBT File (Full Size) - 2 Copies |
| <input type="checkbox"/> Fire Marshal (Full Size) - 1 Copy | <input type="checkbox"/> Digital Submission - Email or File Sharing Service |

Application Forms & Fees to be Submitted to the Township: *All applicants include these items or the application will be considered administratively incomplete and returned to the applicant. **Please also submit digital copies of all applicable forms/reports.***

- New Britain Township Subdivision and Land Development Application (1 Signed Original)
- Filing Fee according to the most current Fee Schedule adopted by Resolution
- Escrow Fee according to the most current Fee Schedule adopted by Resolution
- Contract for Professional Services Agreement (3 Signed Originals)
- Proof of Submission to Bucks County Planning Commission
- Proof of Submission to Bucks County Conservation District
- Proof of Submission to Water Authority (North Penn/North Wales/Aqua), if applicable
- Proof of Submission to Chalfont New Britain Joint Sewer Authority **OR** Buck County Department of Health
- Stomwater Management Report (2 Copies) (Digital Acceptable)
- PADEP Sewage Facilities Planning Module Application/Mailer approved by Sewer Authority or SEO (Original & 2 Copies)
- Traffic Impact Study, if applicable (2 Copies) (Digital Acceptable)
- PADOT Highway Occupancy Permit Plan/Application, if applicable (2 Copies)
- Community Impact Assessment Report, if applicable (4 Copies)
- Affidavit of Mailing Notification, Mailing Content & Post Property of SLD Application (§ 22-401.8 General Procedures)
- Township Road Opening Permit, if applicable
- Water Resource Impact Study, if applicable (2 Copies) (Digital Acceptable)
- Waiver Request Letter with Justification

Reviewed By: _____
Township Representative

Date: _____

**All fees or contributions in lieu of shall be payable to New Britain Township. All plan sets, applications and forms shall be submitted directly to New Britain Township.*

****The attached checklist is provided for the applicant as a guideline to assist in the submission process. All applicants must include these items or the application will be considered administratively incomplete and returned to the applicant.****



NEW BRITAIN TOWNSHIP SUBDIVISION & LAND DEVELOPMENT PROCEDURES INFORMATION FOR APPLICANTS

Applications:

All formal applications must be submitted to the Township Zoning Officer during regular office hours.

All required plans, fees and accompanying documentation must be submitted to the Township in accordance with the New Britain Township Plan Submission Checklist (attached). No application shall be considered complete without this information.

If the application is found to be incomplete, the Zoning Officer will advise the applicant, in writing, of the deficiencies within five (5) business days.

If the application is found to be complete, the application will be date-stamped and a letter will be forwarded to the applicant with the anticipated application processing dates and scheduled Planning Commission and Board of Supervisor's meeting dates. The application will then be distributed for review to the Township professional staff, boards, commissions and professional consultants.

If for any reason the Planning Commission does not meet within 30 days of the initial application filing approval date of the Township Zoning Officer, the Municipalities Planning Code (MPC) timetable for plan review processing will then automatically begin, unless waived by the applicant.

Review Process:

Upon receipt of the Township Engineer's review letter, it is recommended that the applicant conference with Township staff and/or the Township Engineer prior to the scheduled Planning Commission meeting when the Planning Commission would consider the application for a recommendation. During the conference, if it is determined that the application will require substantial revisions for compliance with Township ordinances, the Township staff and/or engineer will advise the applicant of an appropriate course of action for revising the application. An extension/waiver to the 90-day limit (attached to SALDO Application), as set forth by the MPC, may be necessary to allow sufficient time for the applicant to make necessary plan revisions and for Township staff and its engineer to review the revised application.

All revised applications must be resubmitted directly to the Township Zoning Officer. It shall be the responsibility of the applicant to submit the same number of revised plans to the Township as with the original application.

Recommendations and Plan Decisions:

The applicant is responsible for posting the property, notifying property owners within 1000ft (or adjoining owners for minor plans), and submitting an affidavit of mailing & the mailings content to the Township five days prior to the plans appearing before the Township Planning Commission (§ 22-401.8 General Procedures).

The Planning Commission in its review shall consider the comments, if submitted, of the Bucks County Planning Commission, Fire Marshal, Bucks County Conservation District and Township professional staff and consultants. At their anticipated monthly meeting, the Planning Commission may do any of the following:

- Recommend that the applicant address plan deficiencies or unresolved planning issues with Township staff.
- Recommend to the Board of Supervisors that the plan be approved with conditions and specifically list such conditions.
- Recommend to the Board of Supervisors that the plan be denied and specifically list the reasons for such a recommendation.

The Board of Supervisors shall take official action on all applications, after receiving the Township engineer's report and the recommendation by the Planning Commission and within the 90-day time limit, unless the applicant grants a time extension/waiver. The action of the Board of Supervisors shall be in writing and communicated to the applicant by mail within five (5) days following the date of the official action.



Record Plans:

Final record plans to be recorded must be submitted **directly to the Township Engineer** for review and execution prior to approval by the Board of Supervisors. The plans must include four (4) paper copies of the record plan(s). **All record plans must bear the original seal and signature and title of the professional engineer or land surveyor responsible for preparation of the plans and bear the notarized signature of the land owner(s).** At the time of record plan submission, five (5) complete paper sets of construction drawings should be submitted to the Township Engineer to be stamped approved for construction.

No final record plans shall be recorded for any project unless all of the following have been satisfied:

- All conditions of final approval have been met (including water and sewer approvals/agreement) and approved by Township Solicitor and Engineer.
- All required outside agency approvals/permits have been obtained.
- All Township legal, engineering, planning and administrative costs relative to the plan submission have been paid in full.
- The required financial security and developer's agreements have been executed and the construction escrow has been posted with the Township.

The Township Solicitor will record all final record plans at the Bucks County Courthouse. The Township will notify the applicant when the copies of the recorded plans are available to be picked up at the Township Zoning Office.

Contract for Professional Services Agreement and Professional Escrows:

The applicant shall be responsible for maintaining the original escrow balance relative to the escrow account established with the Township for the payment of Township incurred costs and fees on behalf of the applicant per the Contract for Professional Services Agreement. The Township shall forward an invoice to the applicant setting forth the amount deducted from said escrow account for payment of costs and fees. Within fourteen (14) days of the date of the invoice, the applicant shall remit the amount of the invoice to the Township, thereby bringing the balance of the escrow back to the original amount. In the event the applicant's escrow account balance falls below the original amount, the Township may direct its professionals and consultants to cease work on the applicant's submission until such time as the escrow account balance is restored to its original amount.

Any applicant who desires to meet with the Township's professionals or consultants prior to submitting a plan application shall execute a Contract for Professional Services Agreement with the Township and post an escrow amount to be determined therein to cover any costs incurred by the Township associated with the aforementioned consultations.

The applicant should also be advised that the Township has enacted a "Disclosure Ordinance No. 2001-09-01" which mandates that the seller of any lot divulge certain information to the purchaser of the lot prior to settlement.

****These guidelines may be amended from time to time, as needed.***





LOCATION MAP
SCALE 1" = 800'

SITE OWNER/APPLICANT
ANATOLIY & LEONID KLIMENKO
1023 TERRITORY ST.
MERIDIAN, PA 15545-7632

SITE DATA
84 CURLEY MILL RD, CHALFON, PA 18813
NEW BRITAIN TOWNSHIP
TWP# 26-001-090
INSTRUMENT #20220106
CURLEY MILL RD (MINOR COLLECTOR, 60' W/4, ADJAC)

ZONING DATA
ZONING DISTRICT: SR-2 SUBURBAN RESIDENTIAL
EXISTING & PROPOSED USE: BY SINGLE FAMILY DETACHED DWELLING (PERMITTED BY RIGHT)

ZONING TABLE	REQUIRED		LOT 1	LOT 2
	735.885 SF	106.620 SF		
GROSS	16.89	2.35	14.44	14.44
-LESS UTIL ROW CURLEY MILL RD			17,795 SF	17,795 SF
-LESS EX-SAN SEWER ESMT			3,654 SF	3,654 SF
*MIN. LOT SIZE (BASE SITE AREA)	2.00 AC	16.22 AC	2.28 AC	13.94 AC
-LESS PROP. CONSERVATION ESMT			0 SF	25,636 SF
*NET BUILDABLE SITE AREA			99,301 SF	591,781 SF
-LESS PROPOSED ESMTS			0 SF	0 SF
*RATIO BASE SITE AREA			99,301 SF	591,781 SF
			2.28 AC	13.26 AC
MIN LOT WIDTH (AT BSL)	200 FT	792 FT	300 FT	502 FT
MIN LOT DEPTH	200 FT	1,025 FT	526 FT	1,225 FT
MIN FRONT YARD	30 FT	140 FT	140 FT	N/A FT
MIN SIDE YARD	25 FT	25 FT	52 FT	N/A FT
MIN REAR YARD	75 FT	75 FT	371 FT	N/A FT
MAX BLDG HEIGHT	35 FT	<35 FT	<35 FT	N/A FT
MAX BLDG COV *	15 %			
MAX IMPERV COV * (PER LOT)	25 %	SEE IMPERVIOUS SURFACE SUMMARY		
MAX IMPERV COV * (TOTAL SITE)	20 %			

*PER RATIO BASE SITE AREA

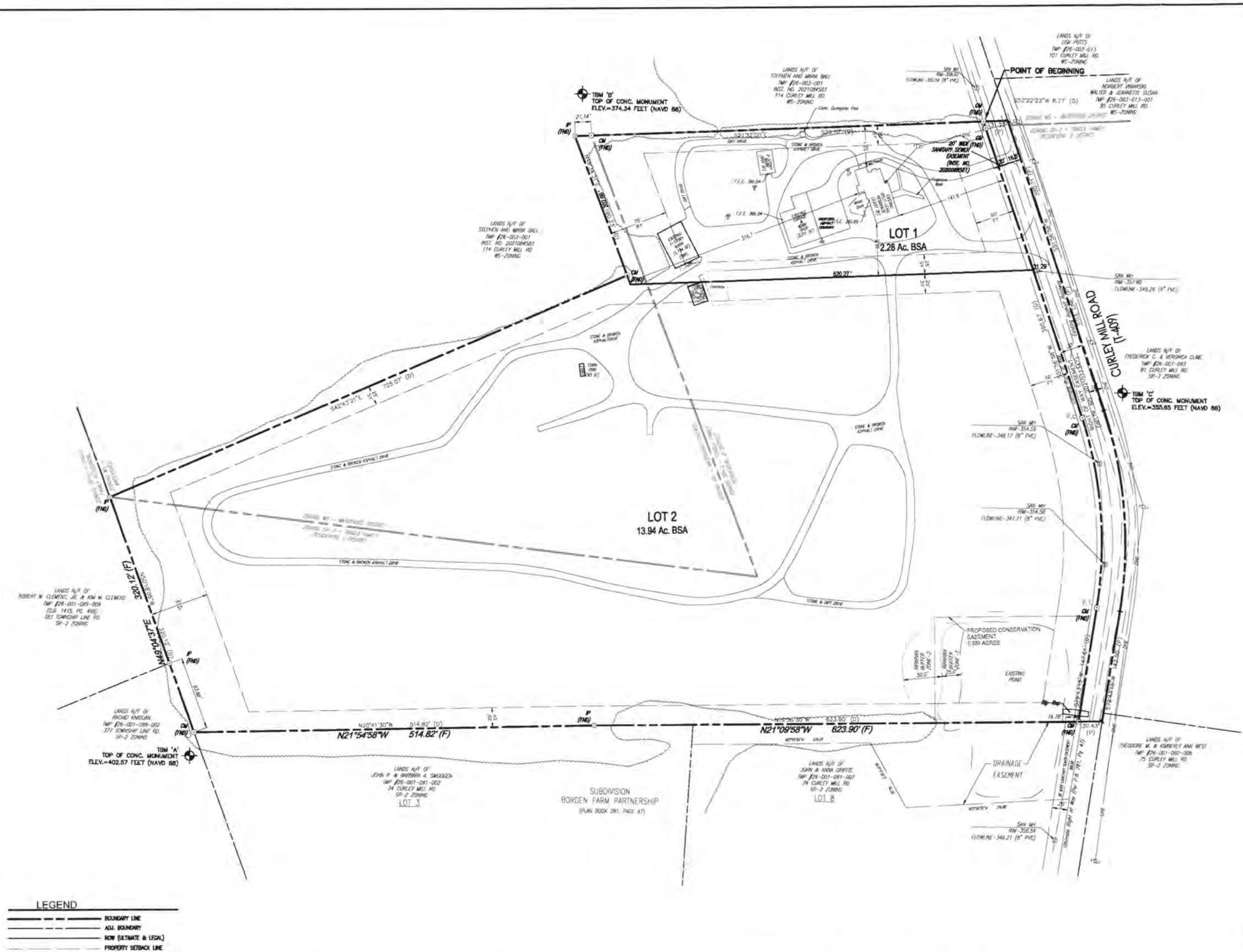
NECESSARY STRUCTURES (PER 27-804)
MIN. FRONT YARD: NOT PERMITTED
MIN. TO REAR/SIDE OF PRINCIPAL BUILDING: 15 FT
MIN. SIDE SWALE: 15 FT
MIN. REAR YARD: 15 FT
NOTE: EXISTING 1-STORY BARN, WOOD SHED, CORN CRIB PROPOSED TO BE REMOVED

IMPERVIOUS SURFACE SUMMARY - MINOR SUBDIVISION				
	EXISTING	LOT 1	LOT 2	TOTAL PROP.
EXISTING HOUSE	2,237	2,237	0	2,237 SF
EXISTING BARN, SHEDS, GARAGE	5,116	2,815	0	7,931 SF
EXISTING ASPHALT	57,303	14,754	42,506	57,303 SF
EXISTING CONCRETE & WALKS	1,895	667	728	1,595 SF
EXISTING WOOD PORCH AND DECK	534	534	0	534 SF
TOTAL EXISTING IMPERVIOUS	66,785	21,247	43,237	64,484 SF
NEW PROPOSED IMPERVIOUS	0	0	0	0 SF
TOTAL PROPOSED IMPERVIOUS	66,785	21,247	43,237	64,484 SF
MAX BLDG COV. * (PER LOT)	1.0%	5.1%	0.0%	0.7%
MAX IMPERV COV. * (PER LOT)		21.4%	7.4%	
MAX IMPERV COV. * (TOTAL SITE)		5.5%		9.5%

GENERAL NOTES:
1. AREA BETWEEN CENTERLINE OF CURLEY MILL RD AND ULTIMATE RIGHT-OF-WAY HAS PREVIOUSLY BEEN DEDICATED TO NEW BRITAIN TOWNSHIP. REFERENCE INSTRUMENT #202107247, "UNILATERAL DECLARATION OF EASEMENT FOR CURLEY MILL ROAD, RIGHT-OF-WAY"

LEGEND

- BOUNDARY LINE
- ADJ. BOUNDARY
- ROW (ULTIMATE & LEGAL)
- PROPERTY SETBACK LINE
- CONC MONUMENT FOUND
- IRON PIN FOUND
- CONC. MONUMENT TO BE SET
- IRON PIN TO BE SET
- RE-ZONED AREA



TMP:26-001-090

MINOR SUBDIVISION & RE-ZONING PLAN	<p>R. L. Showalter & Associates, Inc. 176 East State Avenue Chalfon, PA 18814 (717) 622-2900 FAX (717) 622-6084 rshowalter@rlshowalter.com</p>	SCALE: 1"=80' DATE: 05/30/2023 JOB NO.: 2021-002B DRAWN BY: JHS CHECKED BY: RLB	SITUATE: NEW BRITAIN TOWNSHIP BUCKS COUNTY, PA PREPARED FOR: ANATOLIY & LEONID KLIMENKO 1023 TERRITORY ST. MERIDIAN, ID 83646-7632	SHEET 1 OF 2
		<p>NO. DATE COMMENT</p> <p>REVISIONS</p>		

10/25/2023 8:15 AM by: JHS
 File: F:\WORK\2021-002B\2021-002B_MinorSubdivision\2021-002B_MinorSubdivision.dwg - 01 - SUBDIV
 © 2018 R.L. SHOWALTER & ASSOCIATES, INC.

PLAN NOTATION - THESE DOCUMENTS ARE ESPECIALLY PREPARED FOR THIS PROJECT AND ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR USE ON ANY OTHER PROJECT OR MODIFICATION OF THIS PROJECT OR FOR ANY OTHER PROJECT. R. L. SHOWALTER & ASSOCIATES, INC. SHALL ONLY CERTIFY THOSE DOCUMENTS THAT CARRY A SEAL AND SIGNATURE. ANY REUSE OF THESE DOCUMENTS WITHOUT THE EXPRESS WRITTEN CONSENT OF R. L. SHOWALTER & ASSOCIATES, INC. OR THEIR USE FOR ANY PURPOSE OTHER THAN THE SPECIFIC PURPOSE FOR WHICH THEY WERE PREPARED IS STRICTLY PROHIBITED. IF USED FOR OTHER THAN THIS PROJECT OR OTHER THAN THE PURPOSE FOR WHICH THEY WERE PREPARED, SUCH USE SHALL CONSTITUTE AN AGREEMENT BY THE PARTY USING THE DOCUMENTS AND THE CLIENT TO HOLD R. L. SHOWALTER & ASSOCIATES, INC. AND ITS SHAREHOLDERS, OFFICERS, DIRECTORS, PARTNERS AND EMPLOYEES HARMLESS FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES (INCLUDING REASONABLE ATTORNEY'S FEES AND DEFENSE COSTS) ARISING AS THE RESULT OF SUCH USE, EXCEPT ONLY THOSE DAMAGES, LOSSES AND COSTS ARISING FROM THE SOLE NEGLIGENCE OR WILLFUL MISCONDUCT OF R. L. SHOWALTER & ASSOCIATES, INC.



TOWNSHIP OF NEW BRITAIN

Bucks County, Pennsylvania

BOARD OF SUPERVISORS

William B. Jones, III, Chair
Stephanie Shortall, Vice-Chair
Gregory T. Hood
Cynthia M. Jones
MaryBeth McCabe

TOWNSHIP MANAGER

Matt West

July 17, 2023

Anatoliy & Leonid Klimenko
1023 East Territory Street
Meridian, ID 83646-7632

Re: Minor Subdivision Preliminary Plan
84 Curley Mill Road, T.M.P. #26-001-090
Prepared by R.L. Showalter & Associates, Inc., dated May 30, 2023

Dear Anatoliy & Leonid,

Township staff has reviewed the referenced plan and has the following comments:

1. Please clarify if a rezoning of the subject properties is associated with this project.
2. Please show if there are any proposed natural resource easements, as per ZO Section 27-2402.c.

If you have any questions, please feel free to contact me.

Sincerely,

David Conroy
Director of Planning & Zoning
New Britain Township
dconroy@nbtpa.us

Cc: Michael Walsh, Interim Township Manager
Ryan Gehman, Assistant Planning & Zoning Officer
Randy Teschner, Building Code Official
Ryan Cressman, Public Works Superintendent
Sean Gresh/Jeffrey P. Garton, Township Solicitors
Kellie A. McGowan, Esquire
Rachel L. Butch, P.E., R.L. Showalter & Associates, Inc.
Craig D. Kennard, P.E., E.V.P., Gilmore & Associates, Inc.
Janene Marchand, P.E., Gilmore & Associates, Inc.



July 18, 2023

File No. 21-12016

Michael Walsh, Assistant Township Manager
New Britain Township
207 Park Avenue
Chalfont, PA 18914

Reference: Klimenko Minor Subdivision Plan – Preliminary Plan Review 1
84 Curley Mill Road, TMP #26-001-090

Dear Mike:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the Preliminary Plan for the above-referenced project. Upon review by our office, we offer the following comments for consideration:

I. Submission

- A. Minor Subdivision & Re-Zoning Plan for Anatoly & Leonid Klimenko, as prepared by R.L. Showalter & Associates, Inc., consisting of two (2) Sheets, dated May 30, 2023.

II. General Information

The subject tract is located at 84 Curley Mill Road (T-342) and encompasses an area of approximately 16.9 gross acres within the SR-2 Single Family Residential 2 District and a portion within the WS Watershed District. The tract contains an existing single-family home with a detached garage and other out buildings, which was previously operated as King's Landscaping Nursery. Existing natural resources include an existing pond, riparian buffer, and is listed as under Act 319 on the County records. The Applicant proposes to subdivide the property into two lots of 2.45 acres for Lot 1 and 14.44 acres for Lot 2. Lot 1 will contain the existing single-family home, 2-story barn, and the detached garage. The remaining structures are proposed to be demolished. The subject tract underwent a Lot Line Change in 2021 where 3.68 acres of land in the Watershed Zoning District was conveyed from TMP 26-003-001 to the subject tract, TMP 26-001-090.

III. Review Comments

A. Zoning Ordinance

We offer the following comments related to the Township's Zoning Ordinance:

1. §27-107 – Sheet 1 is entitled Minor Subdivision and Re-Zoning Plan, however, no areas of the subject tract are proposed to be re-zoned. Any references to Re-Zoning should be removed and any proposed zoning changes shall be reviewed under separate application. Changes of any nature to the Official Zoning Map are required to be in conformity with the amendment procedures set forth in the Zoning Ordinance. We recommend a staff meeting to discuss any changes in zoning prior to presenting the plans to the Board of Supervisors.

2. §27-501 & §27-801 – The proposed use for Lot 2 shall be clarified, as the plans currently note an existing and proposed use as B1 – Single Family Detached Dwelling, yet no improvements are shown for Lot 2.
3. §§27-502.b.1(d) – The side yard setback of Lot 2 within the WS Watershed District shall be increased to the required 30 feet, unless the area is approved to be re-zoned under separate application. Similarly, the rear yard setback for Lot 1 can be revised to 60 feet.
4. §27-502.b.1(h) & §27-802.b – We offer the following comments in regard to the impervious surface coverage shown on the plans:
 - a. The existing asphalt noted in the Impervious Surface Summary Table for the Existing Lot, Lot 1, and Lot 2 do not correspond with the areas shown in plan view and shall be confirmed. Per §27-201, impervious surfaces shall include all areas that do not absorb water. Due to the nature of the site, all areas of compacted dirt driveways shall be included in the impervious calculations.
 - b. The Impervious Surface Summary Table notes that no new impervious surface is proposed on Lot 1, however, the plan view shows a proposed driveway. The areas shall be verified.
 - c. Once the impervious surface areas are verified, the maximum impervious coverage for the Lots and Site shall be confirmed. We also note that the Total Proposed percentages in the Impervious Surface Summary table for the Maximum Building Coverage and the Maximum impervious Coverage for the site do not correspond with our measurements from the plan view or in the table and should also be verified.
 - d. All impervious areas to be removed shall be hidden from the proposed plan view on Sheet 1.
5. §27-2400.g – The Natural Resource Calculation chart shall be revised to include all areas of naturally occurring steep slopes as shown on the plans.
6. §27-2401.c – The plan proposes a conservation easement over the existing pond and portion of riparian buffer. The easement shall be revised to protect 100% of the riparian buffer in accordance with this section. The Declaration of Easements shall be prepared by the Township Solicitor.

B. Subdivision and Land Development Ordinance

1. §22-401.6 – Subdivision applications creating a single new building lot are not considered minor subdivisions and such applications are required to submit a completed plan submission for Preliminary and Final Plans. Subdivision proposals creating a single new building lot must establish a plan for all required improvements under this chapter in those cases where there is additional vacant land for future subdivision of additional lots. It shall be confirmed that Lot 2 has an adequate supply of potable water and the sewer authority has the capacity to serve the new lot.
2. §22-401.8 – The applicant shall notify all adjacent property owners of the project and the anticipated Planning Commission date per this section.
3. §22-500.3 – Any requests for modifications and/or waivers of any provisions of this chapter shall be in accordance with § 512.1 of the MPC, 53 P.S. § 10512.1, as amended, and included in the plan submission. A waiver request letter shall be submitted to the Township.
4. §22-502.1.A.(4) – Legal descriptions shall be submitted for the proposed lots and conservation easement. An easement was previously recorded for the required ultimate right-of-way.
5. §22-502.1.B – The following comments related to the Site Plan should be addressed:

- a. A copy of the property deed should be provided upon resubmission.
 - b. The plans should specify whether the intent of the submission is for preliminary approval or preliminary and final approval.
 - c. Metes and bounds shall be provided for all boundary lines, including the arcs along the title line and ultimate right-of-way line, as well as existing and proposed easements.
 - d. It shall be verified if any floodplain soil is located onsite and required to be protected.
 - e. The proposed subdivision line shall be extended to the title line.
6. §22-502.1.E – Proposed contour lines shall be provided within the limit of disturbance including the proposed driveway and where existing pavement or buildings are proposed to be demolished.
 7. §22-705.3.A – Curley Mill Road, being designated as a minor collector road, is required to have a minimum paved width of 36 feet, as well as concrete curb and sidewalk separated by a grass strip. No frontage improvements are currently shown. Curb and sidewalks shall conform with the requirements specified under §22-706. We recommend a site meeting with Public Works and our office to discuss potential road improvements.
 8. §22-705.3.G – Where a subdivision abuts an existing street, the applicant shall be required to mill and overlay the entire width of the roadway along the frontage. Milling and overlay are not shown.
 9. §22-705.5 & 6 – The clear sight triangles and minimum sight distances for the proposed driveway shall be shown on the plan. Any obstructions shall be removed, or the driveway relocated.
 10. §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. The proposed driveway grading shall be added to the plans. A permit must be acquired from New Britain Township for any work within a Township right-of-way where such work involves construction or alteration of a driveway, utility or other structure. (§21-203)
 11. §22-705.14.A – A detail for the proposed residential driveway shall be added to the plans in accordance with the attached standard detail.
 12. §22-711 – E&S controls shall be provided downslope of any onlot improvements or demolition which may cause sediment laden runoff. The plans shall be revised accordingly.
 13. §22-713.4 – Street trees shall be planted every 30 feet along all existing streets when abutted by a subdivision. We note that existing trees exist along the property frontage, however, it appears that additional trees are required to be installed 10 feet outside of the ultimate right-of-way to meet the minimum required density. The sizes of existing trees in healthy condition shall be documented on the plans and supplemental trees shall be proposed at a rate of one for every 30 feet of frontage.
 14. §22-716 – Monuments shall be proposed at all new lot corners in accordance with this section.
 15. §22-717 – All utilities to the existing dwelling and any accessory structures shall be shown on the plans to verify that the utilities are not intersected by the proposed lot boundary, including the existing well, sewer lateral, etc. If so, easements will be required, or the utilities will need to be relocated. We may have additional comments regarding utilities once the information is provided.
 16. §22-720.3 – A completed PADEP Sewage Facilities Planning Module shall accompany all preliminary plan applications submitted for subdivision and/or land development that propose connection to a public sewer system.

17. The Applicant is responsible for any other required approvals, permits, etc. (i.e., BCPC, BCCD, PADEP NPDES & Planning Module, CNBJSA, Fire Marshal, Township Road Opening Permit, etc.) as applicable. Copies of these permits and approvals shall be submitted to the Township.

C. Stormwater Management Ordinance

1. The provided subdivision plans do not currently propose any stormwater management improvements. The plans shall clarify the net increase in impervious surface area. If required, a stormwater facility and associated calculations shall be submitted for review in accordance with the Stormwater Ordinance. Areas where existing impervious surface is removed should be restored with a minimum of 12 inches of topsoil and stabilized ground cover. A related detail should be added to the plans.

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

Sincerely,



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

JM/mz

Attachment: Residential Driveway Detail

cc: Dave Conroy, Director of Planning and Zoning
Ryan Gehman, Assistant Planning and Zoning Officer
Randy Teschner, Fire Marshal
Ryan Cressman, Superintendent of Public Works
Begley, Carlin & Mandio, Township Solicitor
John Schmidt, Chalfont New Britain Joint Sewage Authority
Kellie A. McGowan, Obermayer Rebmann Maxwell & Hippel LLP
Rachel L. Butch, P.E., R.L. Showalter & Associates, Inc.
Anatoliy & Leonid Klimenko, Owner/ Applicant
Craig D. Kennard, P.E., E.V.P., Gilmore & Associates, Inc.



Kristin Holmes, P.E., LEED AP
Robert Cunningham, P.E., LEED AP

June 20, 2023

Matthew West, Township Manager
New Britain Township
207 Park Avenue
Chalfont, PA 18914

**RE: 140 Upper Church Road
Preliminary/ Final Subdivision
TMP#: 26-003-104
New Britain Township, Bucks County, PA**

Dear Mr. West:

On behalf of the applicant, Casadonti Homes, Inc. enclosed please find the following materials for a subdivision and land development sketch plan for the above referenced project:

- 1 - Township Application for Subdivision and Land Development;
- 3 - full sized copies of Preliminary/Final LD Plan Set dated 6/16/23;
- 7 - 11x17 copies Preliminary/Final LD Plan Set dated 6/16/23;
- Waiver Request Letter dated 6/16/23.
- Check in the amount of \$600 made out to New Britain Township for Preliminary Plan Application Fee;
- Check in the amount of \$10,000 made out to New Britain Township for the Escrow Fee;
- Proof of Submission to Bucks County Planning Commission;
- Proof of Submission to Bucks County Health Department;
- 1 Flash Drive with PDF of plans and supplemental documents;

The following items shall be provided in a separate submission succeeding township review of the plans:

- Proof of Submission to Bucks County Conservation District
- Affidavit of Mailing Notification of SALDO Application
- Township Road Opening Permit

If you have any questions or require additional information, please do not hesitate to contact us at 215-586-3330 or rob@hcengineering.net

Very truly yours,

Holmes Cunningham Engineering

A handwritten signature in black ink, appearing to read 'Rob Cunningham'. Below the signature, the text 'Robert Cunningham, P.E.' and 'Partner' is printed.

Robert Cunningham, P.E.
Partner

cc: Casadonti Homes, Inc.

O:\1890 - 140 Upper Church Road\Outbound\2023-06-16 NBT Submission\Twp LD Submission Cover Letter 2023-06-20.docx




NEW BRITAIN TOWNSHIP

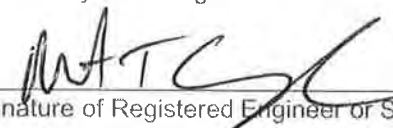
207 Park Avenue • Chalfont, PA 18914 • Telephone: (215) 822-1391

SUBDIVISION & LAND DEVELOPMENT APPLICATION

1.	Date of Application:	<u>06/16/2023</u>	TOWNSHIP USE ONLY	
2.	Date of Plan or Revision:	<u>06/16/2023</u>	Date Recieved:	_____
3.	Application for:	<u>Prelim./Final Plan</u>	Payment:	_____
4.	Name of Subdivision or Land Development:	<u>140 Upper Church Road</u>	Check #:	_____
5.	Location:	<u>140 Upper Church Road, Chalfont PA 18914</u>	Receipt #:	_____
6.	Tax Map Parcel #: 26- <u>003-104</u>	Total Acreage: Gross <u>13.34</u>	Escrow Acc. #:	_____
7.	Net Buildable Site Area (from Section 2401):	_____	Base Site Area	_____
8.	Zoning Requirements:			
	Zoning District <u>WS</u>	Minimum Lot Size <u>80,000 SF</u>	Maximum Density	<u>N/A</u>
	Front Yard <u>100</u>	Side Yard <u>30</u>	Rear Yard	<u>60</u>
9.	Number of Lots or Dwelling Units:	<u>2</u>		
10.	Equitable Owner of Record of Land:	<u>Casadonti Homes, Inc</u>		
	Address:	<u>P.O. Box 5</u>		
		<u>Chalfont, PA 18914</u>		
	Phone: <u>215-768-2303</u>	E-mail: <u>casadontihomes@comcast.net</u>		
11.	Applicant:	<u>Same as Owner</u>		
	Address:	_____		
	Phone: _____	E-mail: _____		
12.	Registered Engineer or Surveyor:	<u>Robert Cunningham, P.E.</u>		
	Address:	<u>409 East Butler Ave, Unit 5</u>		
		<u>Doylestown, PA 18901</u>		
	Phone: <u>215-586-3330</u>	E-mail: <u>rob@hcengineering.net</u>		
13.	Type of Water & Sewer:	<input type="checkbox"/> Public Water	<input checked="" type="checkbox"/> Private Water	
		<input type="checkbox"/> Public Sewer	<input checked="" type="checkbox"/> Private Sewer	
14.	Proposed Use:	<u>B-1 Single-Family Detached Dwelling</u>		

This is to certify that I have read Article V of the New Britain Township Subdivision and Land Development Ordinance and that the accompanying plan meets the requirements of that Article to the best of my knowledge.


Signature of Applicant


Signature of Registered Engineer or Surveyor

SUBDIVISION & LAND DEVELOPMENT PLAN SUBMISSION CHECKLIST

Date of Application: 06/16/2023

Subdivision/Land Development Name: 140 Upper Church Road

Address of Property: 140 Upper Church Road, Chalfont, PA

Owner(s) Name: Casadonti Homes, Inc.

Applicant(s) Name: Tax Map Casadonti Homes, Inc.

Parcel Number: 26-003-104

Plan Sets for New Britain Township - Folded to 8 1/2 x 11: (9 Full Size, 5 11x17)

- | | |
|---|--|
| <input checked="" type="checkbox"/> NBT Board of Supervisors (Full Size) - 5 Copies | <input checked="" type="checkbox"/> NBT Planning Commission (11x17) - 5 Copies NBT |
| <input checked="" type="checkbox"/> Township Engineer (Full Size) - 1 Copy | <input checked="" type="checkbox"/> File (Full Size) - 2 Copies |
| <input checked="" type="checkbox"/> Fire Marshal (Full Size) - 1 Copy | <input checked="" type="checkbox"/> Digital Submission - Flash Drive |

Plan Sets for Outside Agencies - Folded to 8 1/2 x 11: The applicant must show proof of submission to the outside agencies listed below (stamped copy or cover letter and copy of application form). The following plan sets are subject to the requirements of the outside agency and must be submitted to the outside agency by the applicant.

- Bucks County Planning Commission - 1 Copy
- Bucks County Conservation District - 1 Copy
- Water Authority (North Penn/North Wales/Aqua) - 1 Copy
- Chalfont New Britain Joint Sewer Authority - 3 Copies

OR

- Bucks County Department of Health - 1 Copy

Application Forms & Fees to be Submitted to the Township: *All applicants include these items or the application will be considered administratively incomplete and returned to the applicant.*

- New Britain Township Subdivision and Land Development Application (1 Signed Original)
- Filing Fee according to the most current Fee Schedule adopted by Resolution
- Escrow Fee according to the most current Fee Schedule adopted by Resolution
- Contract for Professional Services Agreement (3 Signed Originals)
- Application to Bucks County Planning Commission (Provide Proof of Submission)
- Application to Bucks County Conservation District (Provide Proof of Submission)
- Applicant Plan Submission Checklist (Should be completed by the applicant's professional engineer or land surveyor)
- Stormwater Management Report (2 Copies) (Digital Acceptable)
- PADEP Sewage Facilities Planning Module Application/Mailer approved by Sewer Authority or SEO (Original & 2 Copies)
- Traffic Impact Study, if applicable (2 Copies)
- PADOT Highway Occupancy Permit Plan/Application, if applicable (2 Copies)
- Community Impact Assessment Report, if applicable (4 Copies)
- Letter of Requested Waivers with Justification
- Affidavit of Mailing Notification, Mailing Content & Post Property of SLD Application (§ 22-401.8 General Procedures)
- Township Road Opening Permit, if applicable
- Water Resource Impact Study, if applicable (2 Copies)
- Waiver Request Letter with Justification

Reviewed By: _____
Township Representative

Date: _____

**All fees or contributions in lieu of shall be payable to New Britain Township. All plan sets, applications and forms shall be submitted directly to New Britain Township.*

****The attached checklist is provided for the applicant as a guideline to assist in the submission process. All applicants must include these items or the application will be considered administratively incomplete and returned to the applicant.****



**NEW BRITAIN TOWNSHIP
SUBDIVISION & LAND DEVELOPMENT PROCEDURES
INFORMATION FOR APPLICANTS**

Applications:

All formal applications must be submitted to the Township Zoning Officer during regular office hours.

All required plans, fees and accompanying documentation must be submitted to the Township in accordance with the New Britain Township Plan Submission Checklist (attached). No application shall be considered complete without this information.

If the application is found to be incomplete, the Zoning Officer will advise the applicant, in writing, of the deficiencies within five (5) business days.

If the application is found to be complete, the application will be date-stamped and a letter will be forwarded to the applicant with the anticipated application processing dates and scheduled Planning Commission and Board of Supervisor's meeting dates. The application will then be distributed for review to the Township professional staff, boards, commissions and professional consultants.

If for any reason the Planning Commission does not meet within 30 days of the initial application filing approval date of the Township Zoning Officer, the Municipalities Planning Code (MPC) timetable for plan review processing will then automatically begin, unless waived by the applicant.

Review Process:

Upon receipt of the Township Engineer's review letter, it is recommended that the applicant conference with Township staff and/or the Township Engineer prior to the scheduled Planning Commission meeting when the Planning Commission would consider the application for a recommendation. During the conference, if it is determined that the application will require substantial revisions for compliance with Township ordinances, the Township staff and/or engineer will advise the applicant of an appropriate course of action for revising the application. An extension/waiver to the 90-day limit (attached to SALDO Application), as set forth by the MPC, may be necessary to allow sufficient time for the applicant to make necessary plan revisions and for Township staff and its engineer to review the revised application.

All revised applications must be resubmitted directly to the Township Zoning Officer. It shall be the responsibility of the applicant to submit the same number of revised plans to the Township as with the original application.

Recommendations and Plan Decisions:

The applicant is responsible for posting the property, notifying property owners within 1000ft (or adjoining owners for minor plans), and submitting an affidavit of mailing & the mailings content to the Township five days prior to the plans appearing before the Township Planning Commission (§ 22-401.8 General Procedures).

The Planning Commission in its review shall consider the comments, if submitted, of the Bucks County Planning Commission, Fire Marshal, Bucks County Conservation District and Township professional staff and consultants. At their anticipated monthly meeting, the Planning Commission may do any of the following:

- Recommend that the applicant address plan deficiencies or unresolved planning issues with Township staff.
- Recommend to the Board of Supervisors that the plan be approved with conditions and specifically list such conditions.
- Recommend to the Board of Supervisors that the plan be denied and specifically list the reasons for such a recommendation.

The Board of Supervisors shall take official action on all applications, after receiving the Township engineer's report and the recommendation by the Planning Commission and within the 90-day time limit, unless the applicant grants a time extension/waiver. The action of the Board of Supervisors shall be in writing and communicated to the applicant by mail within five (5) days following the date of the official action.



Record Plans:

Final record plans to be recorded must be submitted **directly to the Township Engineer** for review and execution prior to approval by the Board of Supervisors. The plans must include four (4) paper copies of the record plan(s). **All record plans must bear the original seal and signature and title of the professional engineer or land surveyor responsible for preparation of the plans and bear the notarized signature of the land owner(s).** At the time of record plan submission, five (5) complete paper sets of construction drawings should be submitted to the Township Engineer to be stamped approved for construction.

No final record plans shall be recorded for any project unless all of the following have been satisfied:

- All conditions of final approval have been met (including water and sewer approvals/agreement) and approved by Township Solicitor and Engineer.
- All required outside agency approvals/permits have been obtained.
- All Township legal, engineering, planning and administrative costs relative to the plan submission have been paid in full.
- The required financial security and developer's agreements have been executed and the construction escrow has been posted with the Township.

The Township Solicitor will record all final record plans at the Bucks County Courthouse. The Township will notify the applicant when the copies of the recorded plans are available to be picked up at the Township Zoning Office.

Contract for Professional Services Agreement and Professional Escrows:

The applicant shall be responsible for maintaining the original escrow balance relative to the escrow account established with the Township for the payment of Township incurred costs and fees on behalf of the applicant per the Contract for Professional Services Agreement. The Township shall forward an invoice to the applicant setting forth the amount deducted from said escrow account for payment of costs and fees. Within fourteen (14) days of the date of the invoice, the applicant shall remit the amount of the invoice to the Township, thereby bringing the balance of the escrow back to the original amount. In the event the applicant's escrow account balance falls below the original amount, the Township may direct its professionals and consultants to cease work on the applicant's submission until such time as the escrow account balance is restored to its original amount.

Any applicant who desires to meet with the Township's professionals or consultants prior to submitting a plan application shall execute a Contract for Professional Services Agreement with the Township and post an escrow amount to be determined therein to cover any costs incurred by the Township associated with the aforementioned consultations.

The applicant should also be advised that the Township has enacted a "Disclosure Ordinance No. 2001-09-01" which mandates that the seller of any lot divulge certain information to the purchaser of the lot prior to settlement.

****These guidelines may be amended from time to time, as needed.***




**NEW BRITAIN TOWNSHIP
90-DAY REVIEW PERIOD WAIVER**

I/We, the applicant, understand that the time necessary for adequate review of this application and plans for compliance with current Zoning and Subdivision & Land Development Ordinances, including reviews of any revised plans, may exceed the 90-day review period stipulated under the Municipalities Planning Code.

In recognition of the above, I/we hereby waive the 90-day review period, with the understanding that I/we may revoke this waiver at any time in the future, upon 30-day written notice to the New Britain Township Zoning Officer.

Name of Subdivision/Land Development: 140 Upper Church Road

Tax Map Parcel Number(s): 26-003-104

Signature of Applicant: 

Date: 6-10-23

Signature of Applicant: _____

Date: _____





Bucks County Planning Commission

1260 Almshouse Road, Doylestown, PA 18901

Phone: 215.345.3400

email: planningcommission@buckscounty.org

INVOICE

Invoice Number: 23-0032
Invoice Date: June 21, 2023
Account Number: 286518424

Eric Claycomb
409 E. Butler Ave
Unit 5

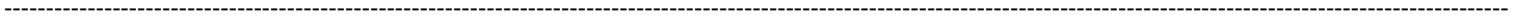
Invoice Questions?
Phone: 215.345.3400

Record Number: Project A23-0189
Parcel Number: 26-003-104
Location: 146 UPPER CHURCH RD
Building / Suite Name:
Building/Suite ID

Date	Description	Paid Date	Amount	Paid	Balance
June 21, 2023	Residential - (0 - 2 Lots or Units) (47027)		\$200.00		
	TOTAL: Project Fees		\$200.00		\$200.00

To pay your invoice online, visit [Online Portal](#) or visit https://www.civicgov4.com/pa_buckscounty/portal/index.php

The review process will not begin until *full* payment is received.





Kristin Holmes, P.E., LEED AP
Robert Cunningham, P.E., LEED AP

June 20, 2023

Via Email

New Britain Township
207 Park Avenue
Chalfont, PA 18914

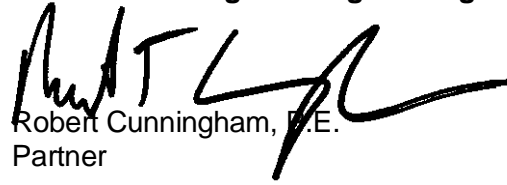
**RE: Waiver Request Letter
140 Upper Church Road
TMP#: 26-003-104
New Britain Township, Bucks County, PA**

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.
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 1 new building lots.
3. SALDO Section 22-703.4.C – The applicant is requesting a waiver from requiring lot lines to be drawn parallel, concentric, at right angles or radial to the street right-of-way. The proposed lot lines have been design to meet these requirements to the best of our ability due to the site constraints.
4. 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.
5. 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.
6. 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.
7. 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 one new building lot. No internal pedestrian walkways are proposed that require illumination.

Very truly yours,
Holmes Cunningham Engineering



Robert Cunningham, P.E.
Partner

ECC: Joe Casadonti, Casadonti Custom Homes

O:\1890 - 140 Upper Church Road\Outbound\2023-06-16 NBT Submission\Twp 2023-06-20 Waiver Letter.docx

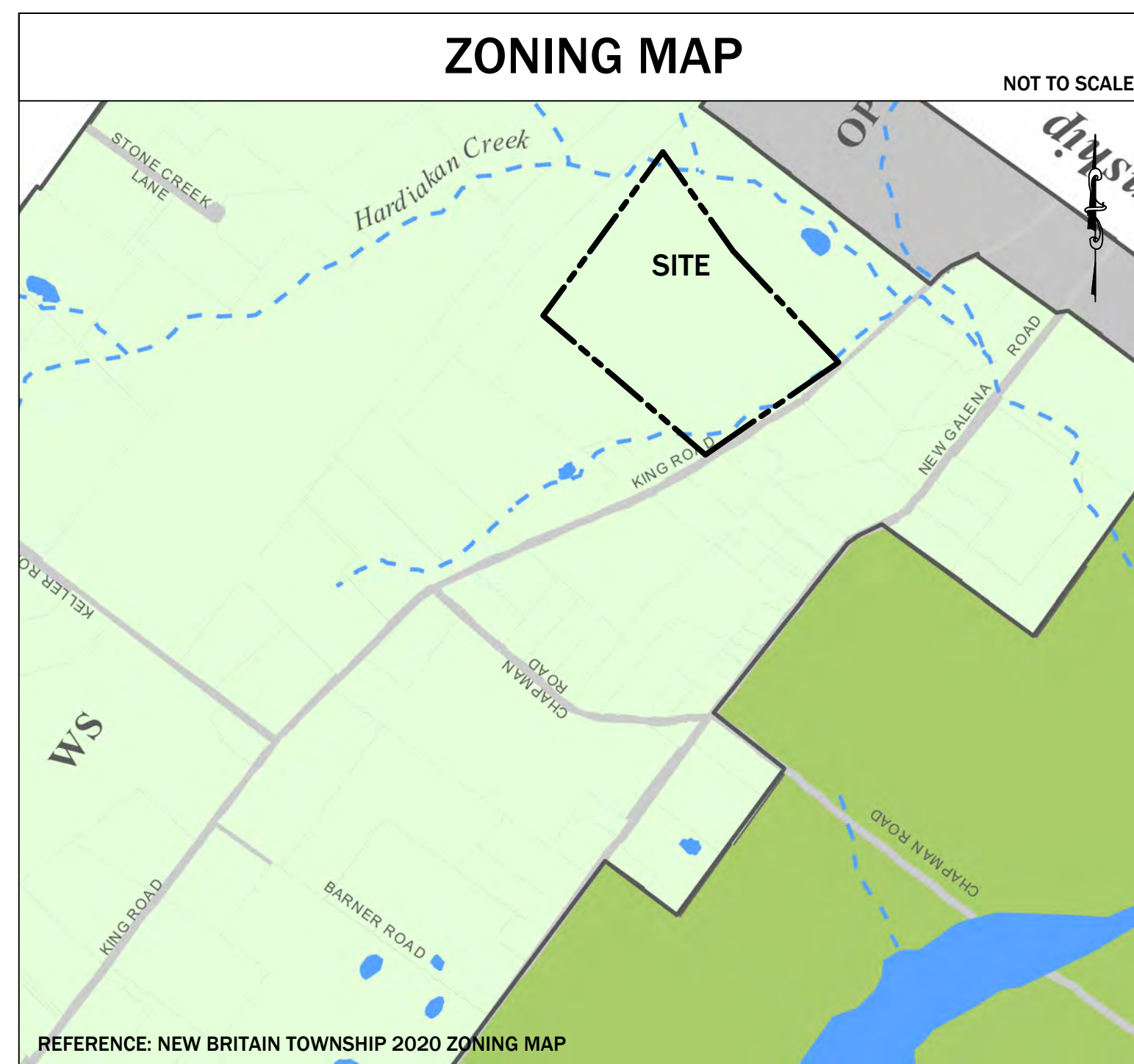
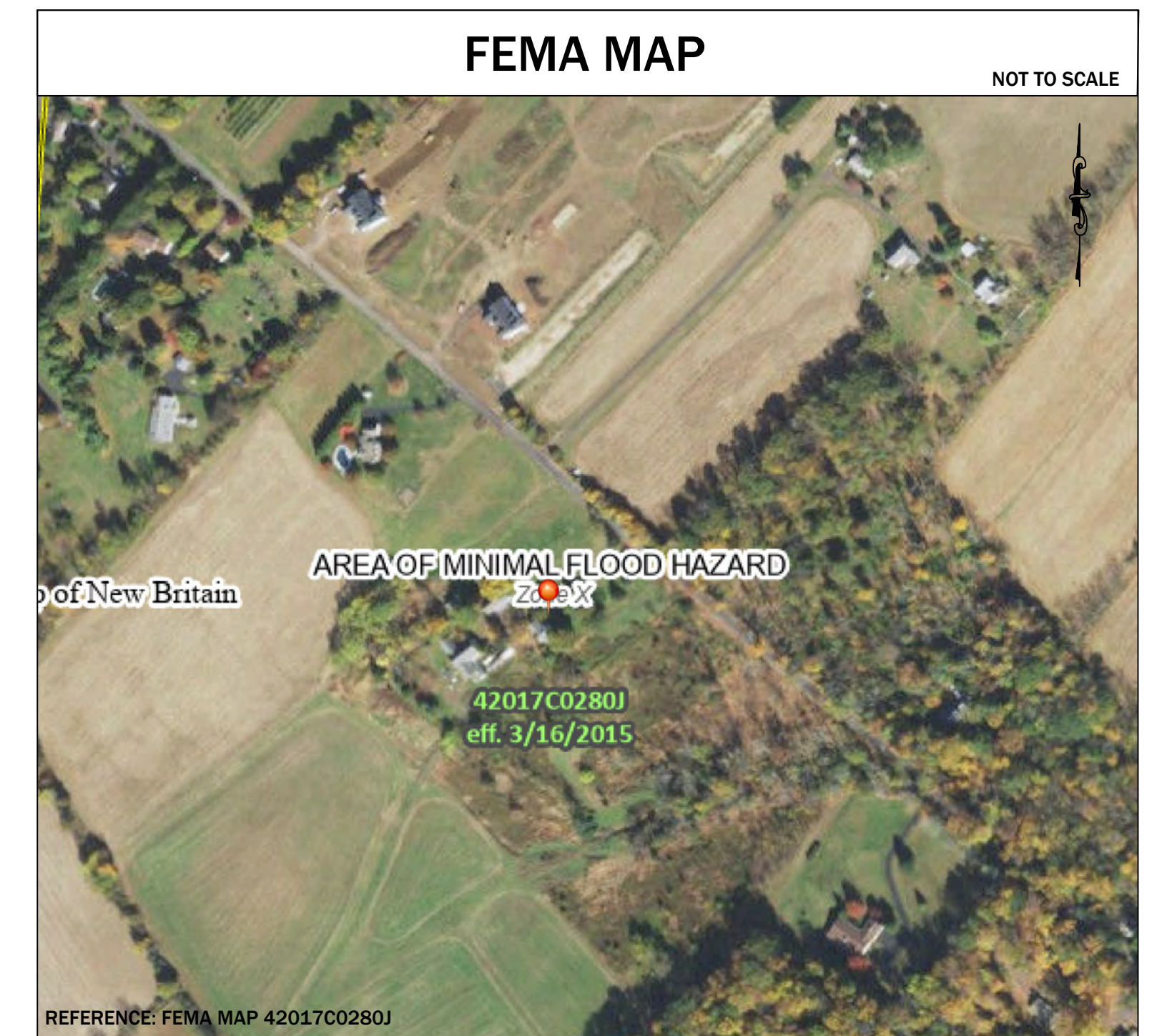
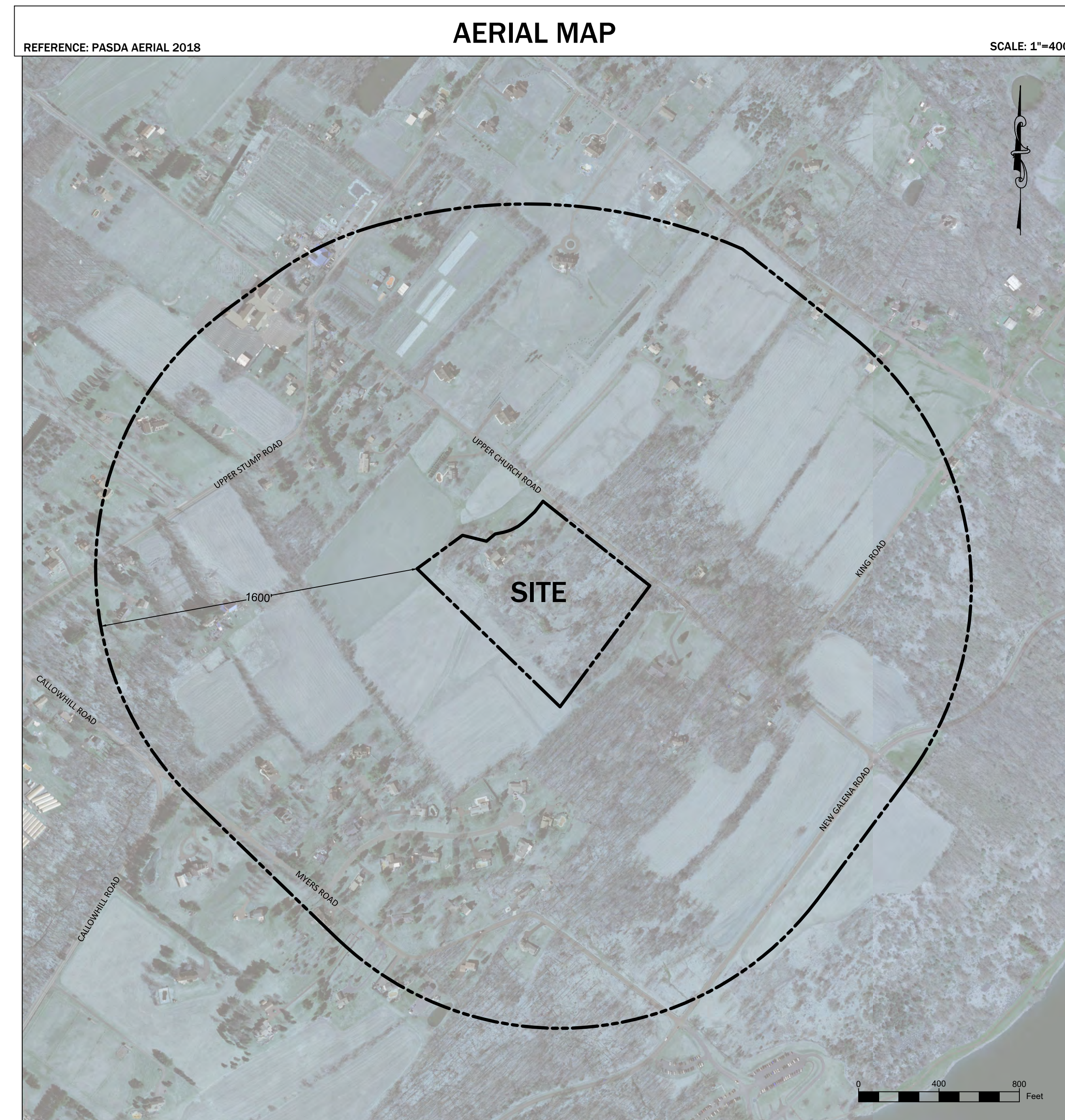
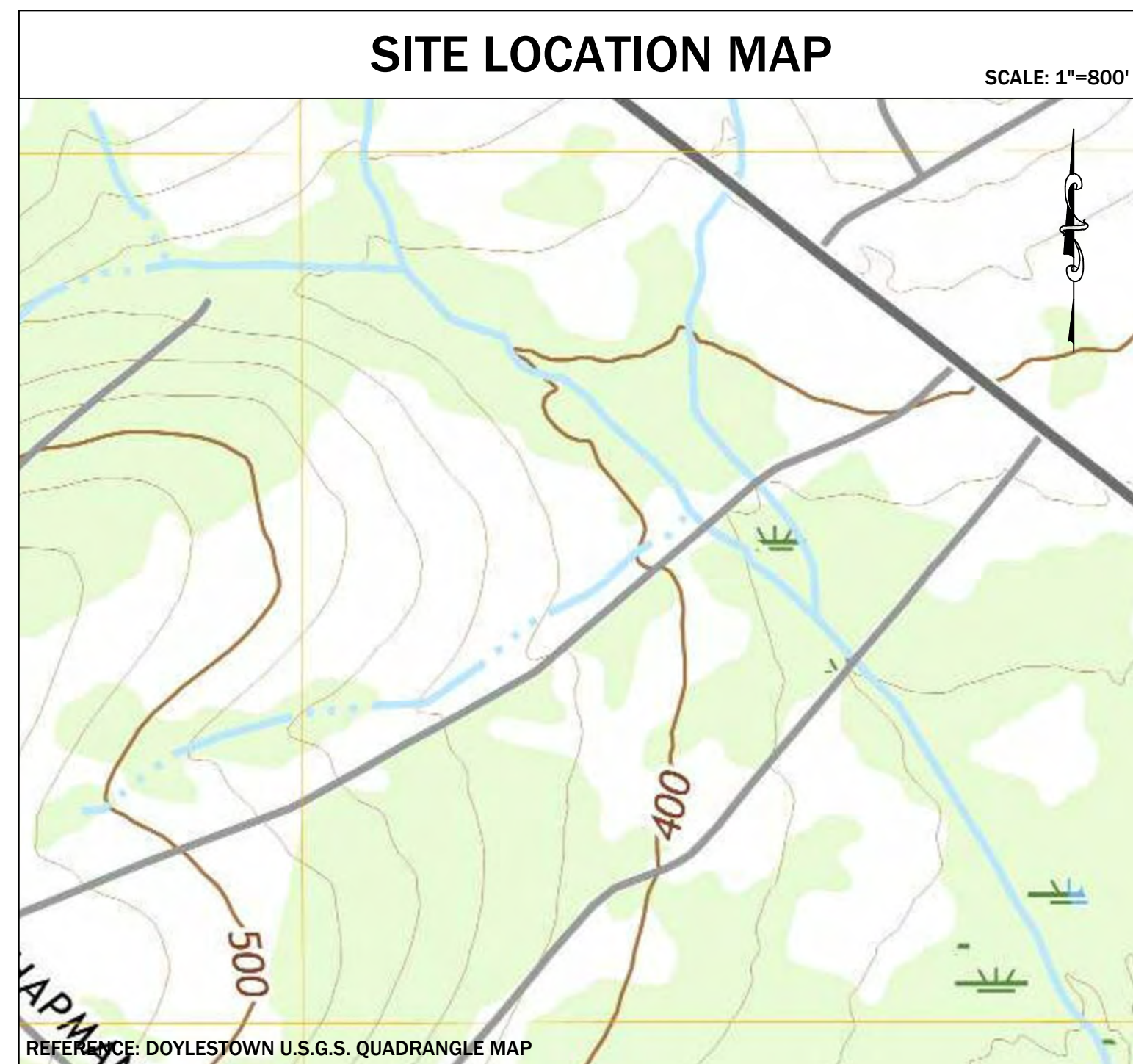
PRELIMINARY AND FINAL LAND DEVELOPMENT AND MINOR SUBDIVISION PLANS

FOR

140 UPPER CHURCH ROAD

TMP # 26-003-104

NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA



DRAWING LIST			
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
1	C0.0	COVER SHEET	6/16/2023
2	C0.1	EXISTING CONDITIONS AND SITE ANALYSIS PLAN	6/16/2023
3*	C0.2	SUBDIVISION PLAN	6/16/2023
4	C1.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	6/16/2023
5	C1.1	CONSTRUCTION DETAILS	6/16/2023
6	C1.2	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	6/16/2023
7	C2.0	EROSION AND SEDIMENT CONTROL PLAN	6/16/2023
8	C2.1	EROSION AND SEDIMENT CONTROL DETAILS	6/16/2023
9	C2.2	EROSION AND SEDIMENT CONTROL DETAILS	6/16/2023

* DENOTES PLAN TO BE RECORDED

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

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

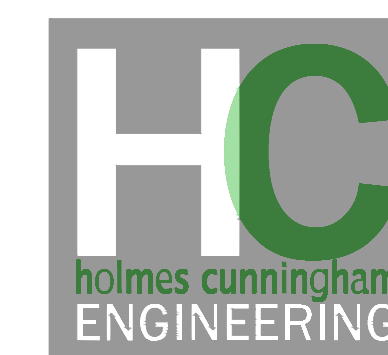
PECO
WARMINSTER SERVICE BUILDING
 400 PARK AVE.,
 WARMINSTER, PA 18974
 ELECTRIC PHONE: (215) 956-3270
 NEW ELECTRIC PHONE: (215) 956-3010
 ELECTRIC EMERGENCY: (800) 841-4141
 GAS PHONE: (800) 454-4100
 NEW GAS PHONE: (800) 454-4100
 GAS EMERGENCY: (800) 841-4141
 GAS EMERGENCY(ALT): (844) 841-4151

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

APPLICANT/ EQUITABLE OWNER

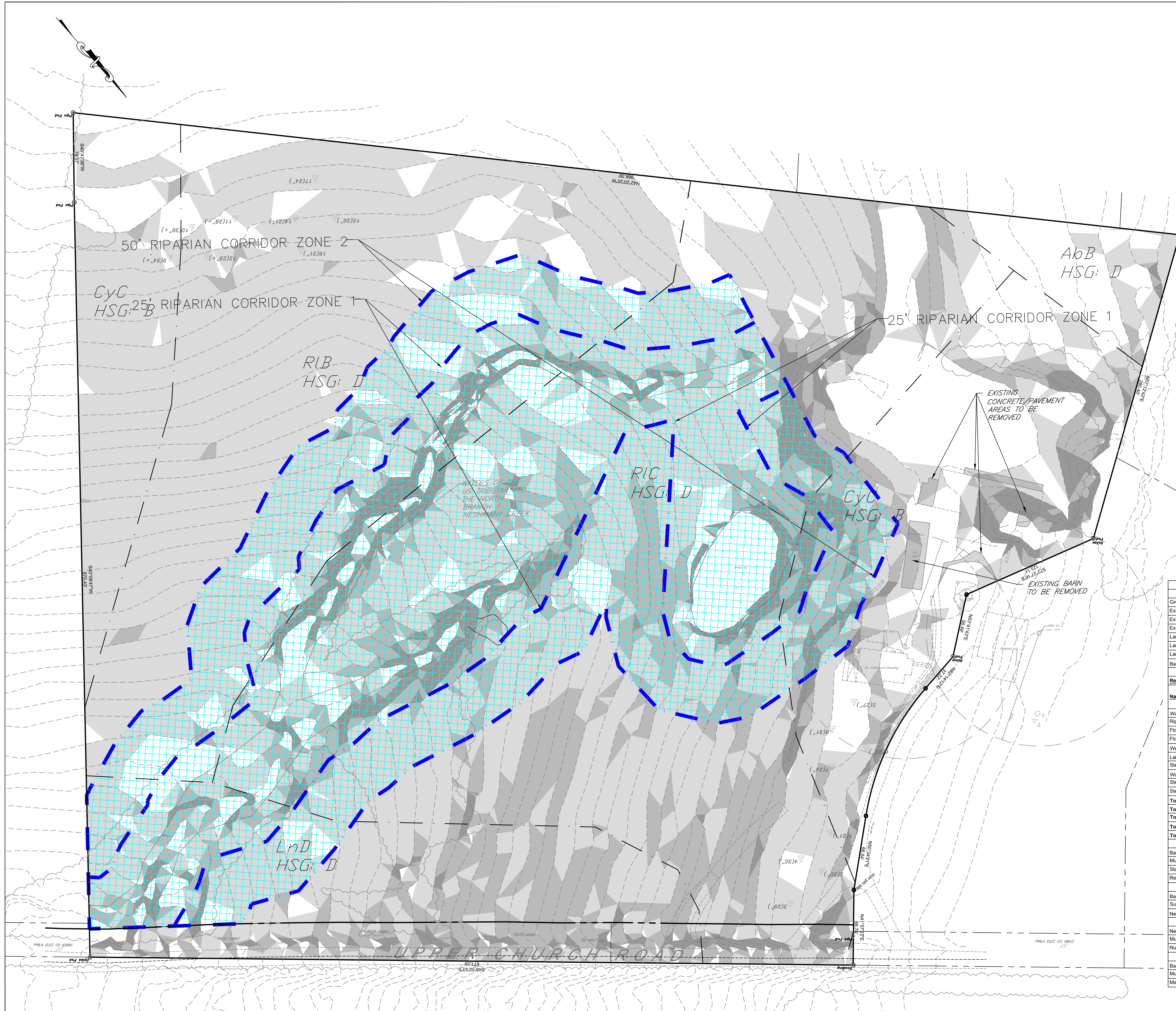
CASADONTI HOMES, INC.
 P.O. BOX 5,
 CHALFONT, PA 18914

PREPARED BY:



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

DATE:	06/16/2023
PROJECT #	1890
DRAWING #	C0.0
SHEET	1 OF 9



RESOURCE PROTECTION STANDARDS					
Resource	Min. Required Protection Ratio	Total Area of Land in Resource	Required Resource Protection Land	Actual Resource Protection Land	Actual Protection Ratio
	%	(Ac.)	(Ac.)	(Ac.)	%
Watercourses	100%	1.052	1.052	1.052	N/A
Floodplains	100%	0.569	0.569	0.569	100%
Floodplain (Alluvial) Soils	100%	0.933	0.933	0.933	100%
Wetlands	100%	0.000	0.000	0.000	N/A
Wetlands Margin	80%	0.000	0.000	0.000	N/A
Riparian Buffer	100%	5.431	5.431	5.431	100%
Lakes and Ponds	100%	0.000	0.000	0.000	N/A
Woodlands (CR, WS, SR-1, SR-2, and RR Zoning Districts)	80%	1.680	1.344	1.400	83%
Agricultural Soils	50%	13.350	6.675	10.180	76%
Steep Slopes 8%-15%	60%	7.479	4.488	5.879	79%
Steep Slopes 15%-25%	70%	2.254	1.578	1.854	82%
Steep Slopes 25%+	85%	0.836	0.710	0.746	89%

LEGEND	
	PROPERTY LINE
	EXISTING CONTOUR
	ULTIMATE RIGHT-OF-WAY
	STREAM/ WATERCOURSE
	WOODLANDS
	RIPARIAN CORRIDOR BUFFER
	STEEP SLOPES 8%-15%
	STEEP SLOPES 15%-25%
	STEEP SLOPES 25%+
	SOIL TYPE
	AGRICULTURAL SOILS

- NOTES:
- THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM AN EXISTING FEATURES PLAN PREPARED BY EFFICIENT DESIGN, DATED FEBRUARY 10, 2022.
 - LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM EXISTING RECORDS AND/OR ABOVE GROUND OBSERVATION AT THE SITE. COMPLETENESS OR ACCURACY OF LOCATION CAN NOT BE GUARANTEED. 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.
 - THIS SITE IS CURRENTLY ZONED WS - WATERSHED DISTRICT IN THE TOWNSHIP OF NEW BRITAIN.
 - ELEVATION INFORMATION IS BASED ON THE NATIONAL AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND HORIZONTAL DATUM ID BASED ON 1983 STATE COORDINATE SYSTEM.
 - 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).
 - FLOOD ZONE INFORMATION: A PORTION OF SUBJECT PARCEL AREA IS LOCATED INSIDE ZONE A OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 280 OF 532, MAP NO. 42017C0280J WHICH BEARS AN EFFECTIVE DATE OF MARCH 16, 2015.

Site Capacity Calculations		
	Area (SF)	Area (AC)
Gross Site Area Determined by Actual On-site Survey	581,269	13.344
Existing Streets Ultimate Rights-of-Way	22,518	0.517
Existing Utility Rights-of-Way or Easements	17,721	0.407
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	541,030	12.420

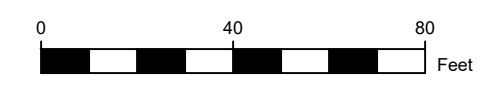
Resource Protection Land				
Natural Resource	Protection Ratio	Acres of Land in Resources	Resource Protection Land (Ac)	Proposed Resource Protection Land (Ac)
Watercourses	1.00	1.05	1.05	1.05
Riparian Buffer	1.00	3.81	3.81	3.81
Floodplain	1.00	0.57	0.57	0.57
Floodplain (Alluvial) Soils	1.00	0.03	0.03	0.03
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	0.31	0.26	0.75
Woodlands	0.80	0.16	0.13	0.13
Steep Slopes 15-25%	0.70	1.23	0.86	1.85
Steep Slopes 8-15%	0.60	4.50	2.70	5.88
Total Land with Resource Restrictions			11.65	
Total Land with 1.00 Protection Ratio Restrictions			5.46	
Total Resource Protection Land Required			9.41	
Total Resource Protection Land Provided			9.41	
Total Disturbed Resources			2.24	

Open Space Calculations	
Base Site Area	12.42 Ac.
Multiply by Minimum Open Space Ratio	0.00
Standard Minimum Open Space	0.00 Ac.
Required Open Space (Greater of 100% Protection Land or Min Open Space)	5.46 Ac.

Net Buildable Site Area Calculations	
Base Site Area	12.42 Ac.
Subtract Required Open Space	5.46 Ac.
Net Buildable Site Area	6.96 Ac.

Density Calculations	
Net Buildable Site Area	6.96 Ac.
Multiply by Maximum Density	N/A
Number of Dwelling Units Permitted	N/A

Impervious Surface Calculations	
Base Site Area	12.42 Ac.
Multiply by Maximum Impervious Surface Ratio	0.20
Maximum Permitted Site Impervious Surface	2.48 Ac.



Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date

140 UPPER CHURCH ROAD
 140 UPPER CHURCH ROAD
 TWP # 26-003-104
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
EXISTING CONDITIONS AND SITE ANALYSIS PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

File No.	
1890	1890.CO.1 EXISTING CONDITIONS.DWG

HCE Job	Date	Scale	Designed	RC	Sheet
1890	06/16/2023	1"=40'	RC	2	of 9

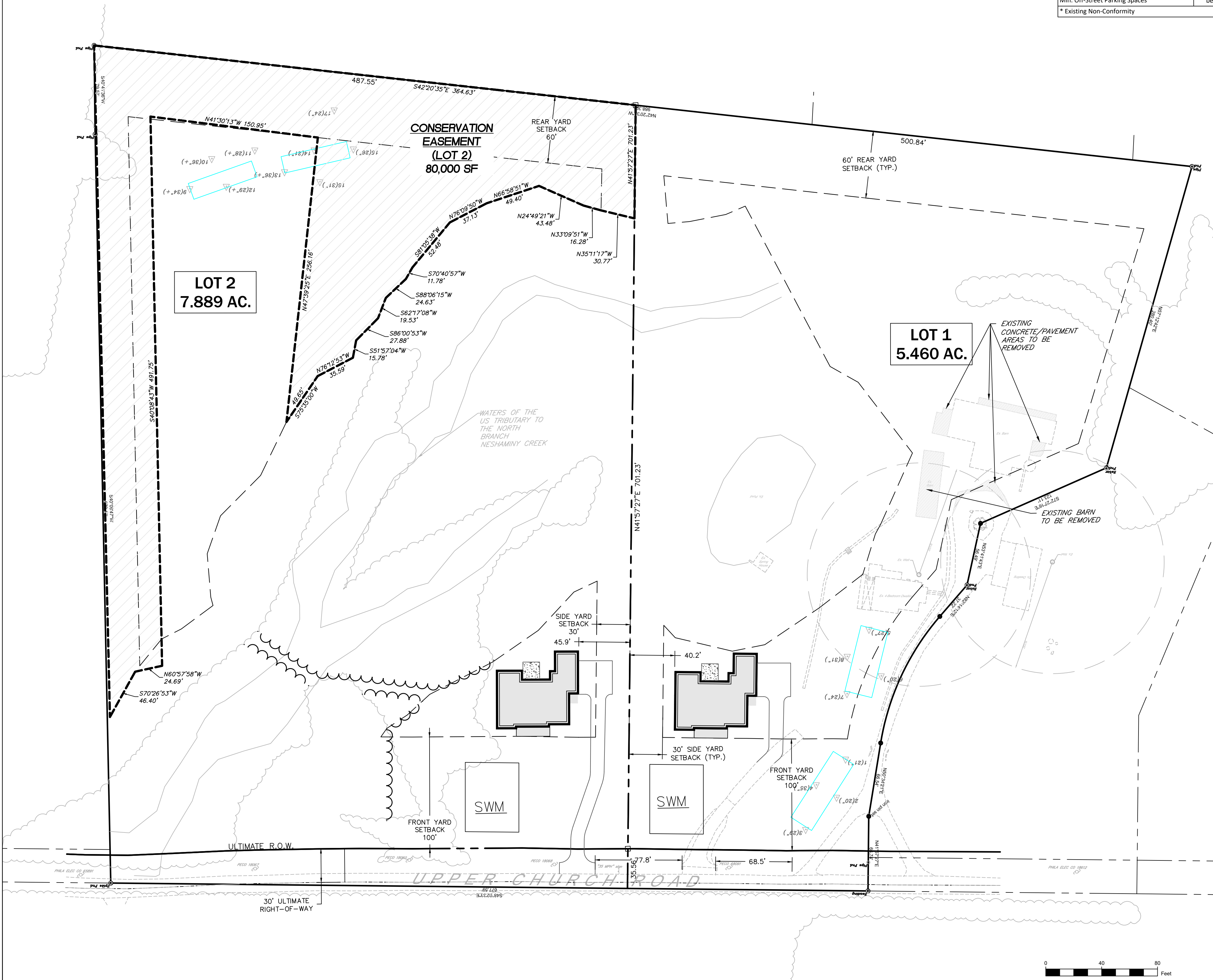
Drawing No.
C0.1

LOT AREA AND COVERAGE TABLE											
Lot	Gross Lot Area	Right-of-Way Area	Conservation Easement Area	100% Natural Resource Protection	Ratio Base Site Area	Building Area	Building Ratio	On-lot Impervious Excluding Building Area	Impervious Ratio	Future Impervious	Max Impervious Ratio
#	(SF)	(SF)	(SF)	(SF)	(SF)	(SF)	%	(SF)	%	(SF)	%
1	237,856	7,648	0	69,643	160,565	10,000	6.2%	6,058	10.00%	3,210	12%
2	343,413	14,870	80,000	166,934	81,809	4,046	5.0%	2,879	8.5%	2,868	12%

LOT WIDTH/DEPTH TABLE		
LOT #	LOT WIDTH (FEET)	LOT DEPTH (FEET)
1	441	566
2	198	599

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		B1: Single Family Detached Dwelling		
Max. Building Height	35 FT	< 35 FT	< 35 FT	27-502.a
Min. Lot Size	80,000 SF	5,460 AC	7,889 AC	27-502.b.1.(a)
Min. Lot Width	175 FT	225.7 FT	466.5 FT	27-502.b.1.(b)
Min. Front Yard Setback	100 FT	100 FT	100 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	493.5 FT	27-502.b.1.(e)
Min. Building Envelope	10,000 SF	13,390 SF	87,864 SF	27-502.b.1.(f)
Max. Building Coverage (Developer)	6%	6.23%	4.96%	27-502.b.1.(g)
Max. Impervious Surface Coverage (Developer)	10%	10.00%	8.49%	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	27-2901.8

* Existing Non-Conformity



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: A PORTION OF SUBJECT PARCEL AREA IS LOCATED INSIDE ZONE A OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 280 OF 532, MAP NO. 4201702020 WHICH BEARS AN EFFECTIVE DATE OF MARCH 16, 2015.
- THE STORMWATER MANAGEMENT FACILITIES (AS SHOWN ON THIS PLAN) ARE A BASIC AND PERPETUAL PART OF THE STORMWATER 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 ENTER 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 THE OWNERS.
- 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.
- IF THE DISTURBANCE ENCLOSES 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 THE BOARD.
- ALL MONUMENTATION SHALL BE SET BY A PROFESSIONAL LAND SURVEYOR AND ARE TO BE SET DURING CONSTRUCTION.
- THE AREA LOCATED BETWEEN THE TITLE LINE AND ULTIMATE RIGHT-OF-WAY LINE OF UPPER CHURCH ROAD SHALL BE OFFERED TO NEW BRITAIN TOWNSHIP.
- ALL PROPOSED LOTS ARE TO BE DEED RESTRICTED FROM FURTHER SUBDIVISION.
- ALL DEAD TREES, LINE TREES AND BRANCHES INTERFERING WITH THE EXISTING OVERHEAD LINES SHALL BE REMOVED WITHIN THE PROPOSED ULTIMATE-RIGHT-OF-WAY.
- A BLANKET EASEMENT IS PROVIDED TO THE TOWNSHIP TO CONDUCT INSPECTIONS AND MAINTENANCE OF STORMWATER FACILITIES AS REQUIRED.
- AREAS NOT LOCATED IN THE LIMIT OF DISTURBANCE HAVE BEEN PROPOSED TO REMAIN IN EXISTING CONDITIONS.

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

BY: _____ NAME _____ TITLE _____ DATE: _____

CORPORATION _____

OWNER(S): _____

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 _____

OF _____, 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 HERETO SET MY HAND AND OFFICIAL SEAL.

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 _____ ON THIS _____ DAY OF _____, 20____

BUCKS COUNTY RECORDER OF DEEDS

BOARD OF SUPERVISORS ACKNOWLEDGEMENT

THIS PLAN APPROVED BY THE BOARD OF SUPERVISORS OF NEW BRITAIN TOWNSHIP THIS _____ DAY OF _____, 20____

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 _____, 20____

ENGINEER: _____

PLANNING COMMISSION ACKNOWLEDGEMENT

BUCKS COUNTY PLANNING COMMISSION NOTATION BOPC NO _____ PROCESSED AND REVIEWED REPORT PREPARED BY THE BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE 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, AS INDICATED ON THE PLAN.

JOSEPH A. VALENTINE

ENGINEER'S CERTIFICATION

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.

WILLIAMS, PLS

SURVEYOR

DATE: _____ ERIC _____

LEGEND	
	PROPERTY LINE
	PROPOSED BUILDING
	PROPOSED EASEMENT
	BUILDING SETBACK LINE
	LOT LINE
	PROPOSED WOODLANDS
	PROPOSED CONSERVATION EASEMENT
	PROPOSED MONUMENT
	PROPOSED IRON PIN

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REVISIONS	Description	Date
10	WORKSHEET STORAGE	

140 UPPER CHURCH ROAD
 140 UPPER CHURCH ROAD
 TWP # 26-003-104
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

File No.	1890_00.2 SUB.DWG
HCE Job	1890
Date	06/16/2023
Scale	1"=40'
Designed	RC
Sheet	3 of 9
Drawing No.	C0.2

Type	Name	Depth to Bedrock	Depth to Seasonal High Water Table	HSG	Hydric Soil	Agricultural Soil
AbA	Abbotstown silt loam, 0 to 3 percent slopes	40'-60"	6'-18"	D	No	Farmland of Statewide Importance
AbB	Abbotstown silt loam, 3 to 8 percent slopes	40'-60"	6'-18"	D	No	Farmland of Statewide Importance
CyB	Culleoka-Weikert channery silt loams, 3 to 8 percent slopes	20'-40"	>80"	B	No	Farmland of Statewide Importance
CyC	Culleoka-Weikert channery silt loams, 8 to 15 percent slopes	20'-40"	>80"	B	No	Farmland of Statewide Importance
LnD	Lehigh Channery Silt Loam, 8 to 25 percent slopes	40'-60"	12'-24"	C/D	No	Not Prime Farmland
Rib	Reaville channery silt loam, 3 to 8 percent slopes	20'-40"	6'-36"	D	No	Farmland of Statewide Importance
RIC	Reaville channery silt loam, 8 to 15 percent slopes	20'-40"	6'-36"	D	No	Farmland of Statewide Importance

Limitations and Resolutions: The soils found within the project limits have varying limitations including possible shallow depth to groundwater and possible shallow depth to bedrock. In order to resolve the groundwater limitation, any standing water should be pumped through a sediment filter bag. To resolve the bedrock limitation, the contractor shall determine whether rock is ripplable. If rock is not ripplable, blasting will be required. All blasting shall meet all local, county, state and federal regulations.



LIMIT OF DISTURBANCE = 3.17 ACRES
PROJECT SITE BOUNDARY = 13.34 ACRES

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
 THE INSTALLATION AND/OR CONVERSION OF EROSION CONTROL FACILITIES TO STORMWATER FACILITIES, INCLUDING THE INFILTRATION BASIN WITH MRC, SHALL BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR DESIGNEE.

APPLICANT'S ACKNOWLEDGEMENT

I, the undersigned, 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.

GRADING AND DRAINAGE NOTES

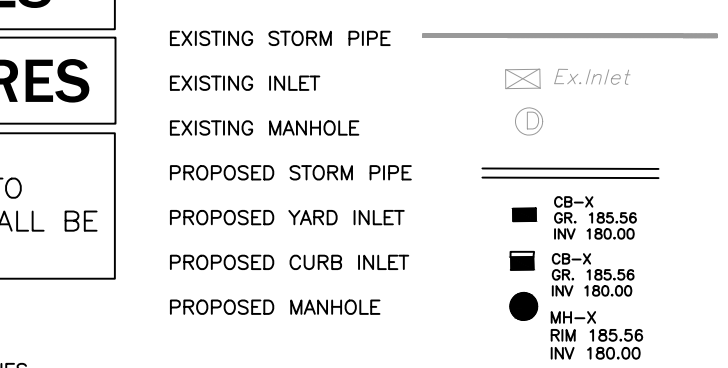
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 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.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
- CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC STAKEWORK OR ITEMS DEPICTED ON THE PLANS. FOR ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC STAKEWORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
- SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- PVC = POLYVINYLCHLORIDE PIPE, HDPE = HIGH DENSITY POLYETHYLENE PIPE, RCP = REINFORCED CONCRETE PIPE
- STORM DRAINAGE PIPING TO UTILIZE WATER TIGHT JOINTS.
- COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MOODED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA GIVEN ELSEWHERE:

FILL AREA	PERCENT OF MAXIMUM MOODED PROCTOR DRY DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	95%
SIDEWALKS	95%
LANDSCAPE AREAS	93%
TRENCH BACKFILL	SAME AS SURROUNDING AREA
- PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
- REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO BETTER THAN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS SECTION.
- ALL CONCRETE, UNLESS OTHERWISE NOTED OR SPECIFIED BY REGULATORY AUTHORITIES, SHALL BE A MINIMUM OF 4000 PSI.
- NO BRITAIN TOWNSHIP SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT FACILITY.
- ALL STORMWATER MANAGEMENT FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED OR MOVED WITHOUT PRIOR APPROVAL FROM NEW BRITAIN TOWNSHIP.
- NO PORTION OF AN ON-LOT SEPTIC SYSTEM SHALL BE LOCATED IN A MANNER THAT WOULD BLOCK ANY MINIMIZE IMPERVIOUS AREAS DRAINAGE FROM ANY LOT.
- ALL ACCESS DRIVES AND DRIVEWAYS SHALL BE PROVIDED WITH A STOPPING AREA OF 20 FEET, AT A MINIMUM GRADE OF 3%, MEASURED FROM THE PRIVATE ACCESS EASEMENT.

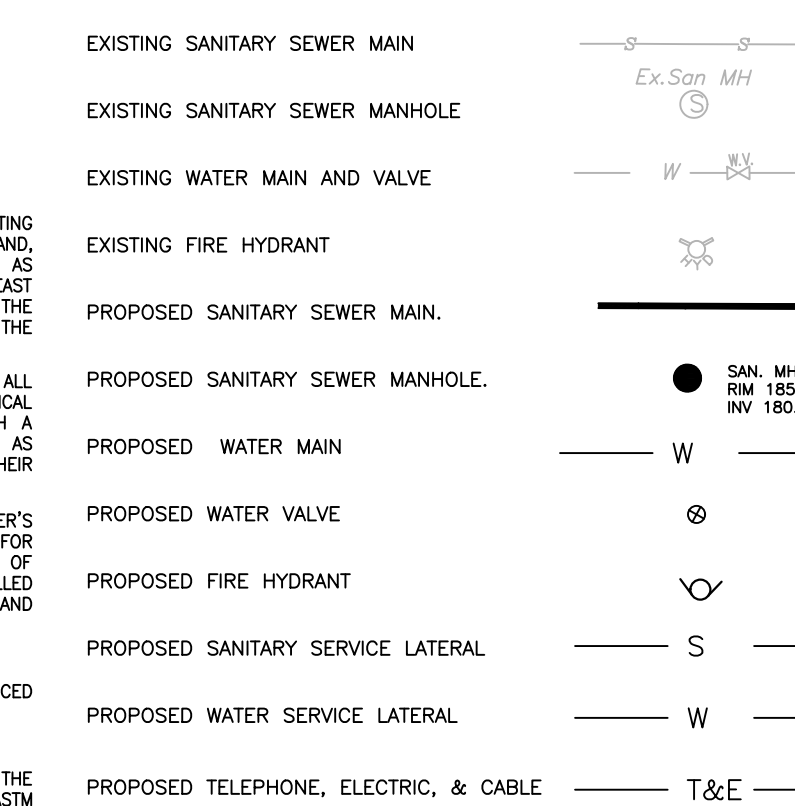
UTILITY NOTES

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 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 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 TO THEIR FACILITIES.
- ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE OWNER, AT HIS 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 PROVIDED.
- THE LOCATION OF THE EXISTING GAS MAINS ARE APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION.
- GAS WORK AND OTHER ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
- ALL ELECTRICAL WORK, TRANSFORMER PADS, AND ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS. MIN. DEPTH OF COVER OVER ELECTRICAL, GAS, AND CABLE SHALL BE 2 FT.
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS, UTILITY LOCATIONS, CATHODE 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 BROUGHT TO THE ATTENTION OF THE ENGINEER.
- EIGHTEEN (18) INCHES VERTICAL CLEARANCE SHOULD BE PROVIDED AT ALL UTILITY CROSSINGS.
- ALL FIRE HYDRANTS AND VALVES SHALL OPEN RIGHT (CLOCKWISE).
- THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF LANDSCAPING SHOULD DISTURBANCE BE REQUIRED FOR UTILITY REPAIRS.
- 18 INCHES OF VERTICAL CLEARANCE OR 10 FEET OF HORIZONTAL CLEARANCE SHALL BE PROVIDED BETWEEN THE SANITARY SEWER AND ALL OTHER UTILITY UTILITIES, OTHERWISE, CONCRETE ENCASUREMENT OF THE SANITARY SEWER SHALL BE PROVIDED.
- 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.
- 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.

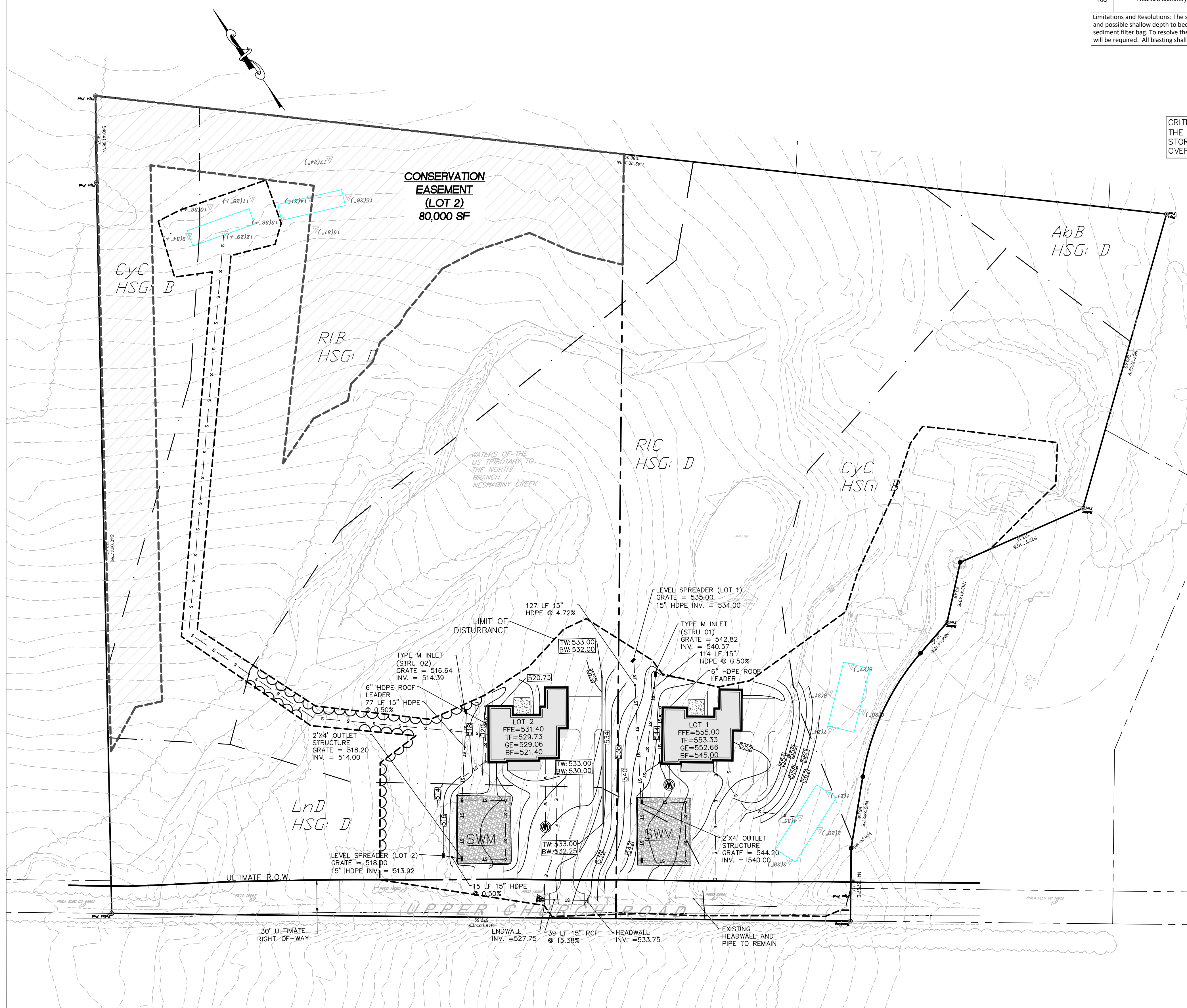
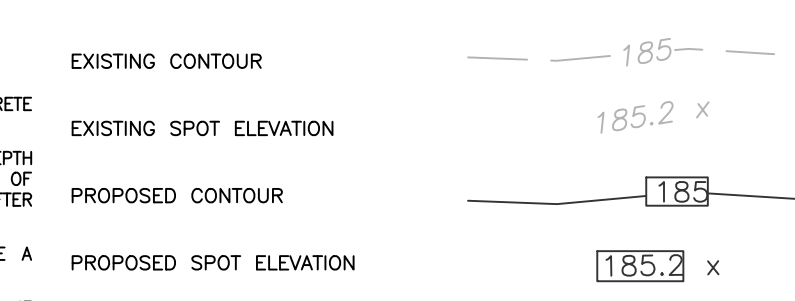
DRAINAGE LEGEND



UTILITY LEGEND



GRADING LEGEND



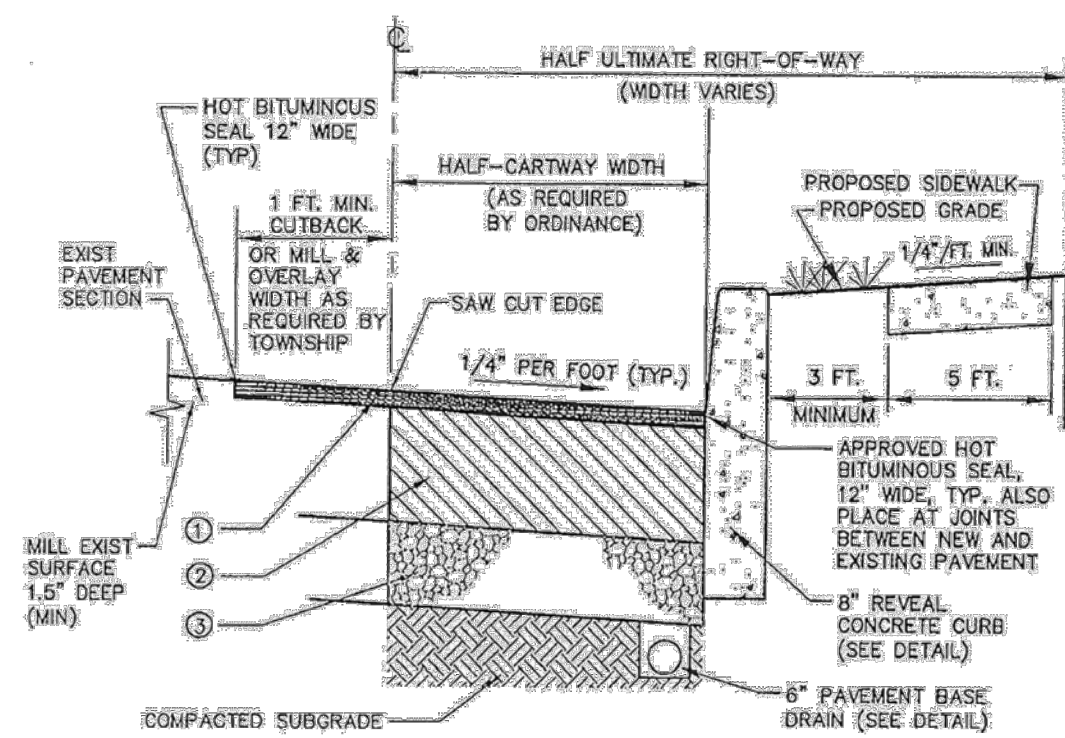
Holmes Cunningham LLC
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REVISIONS	Description	Date

140 UPPER CHURCH ROAD
140 UPPER CHURCH ROAD
TWP # 26-003-104
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

File No.	1890 C1.0 PCSM.DWG
HCE Job	1890
Date	06/16/2023
Scale	1"=60'
Designed	RC
Sheet	4 of 9
Drawing No.	C1.0



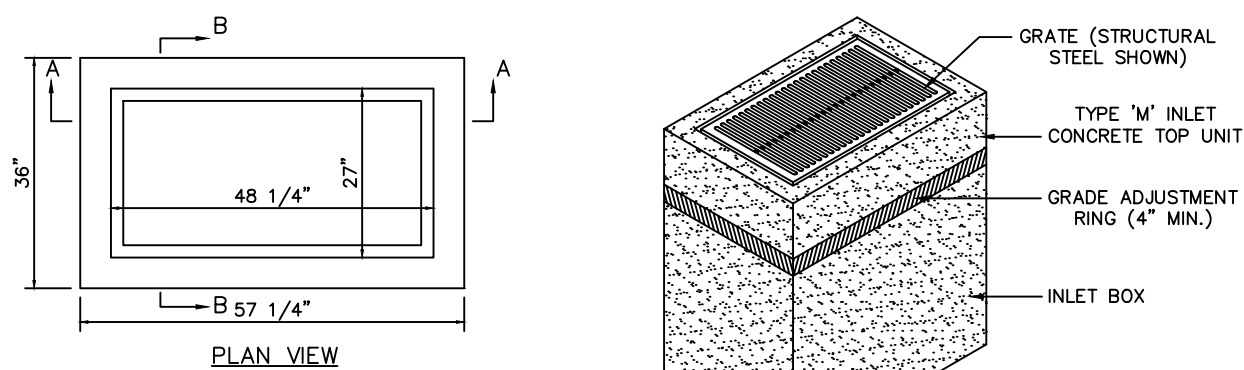
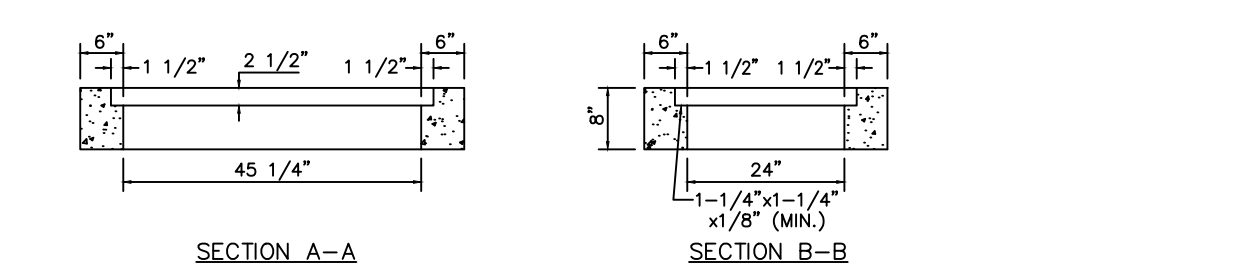
- ① 1.5\"/>
- ② 4.5\"/>
- ③ 6\"/>

NOTE: NEW ROADS SHALL COMPLY WITH THE ABOVE SPECIFICATION

TYPICAL ROADWAY WIDENING SECTION DETAIL FOR RESIDENTIAL AND LOCAL ROADS
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

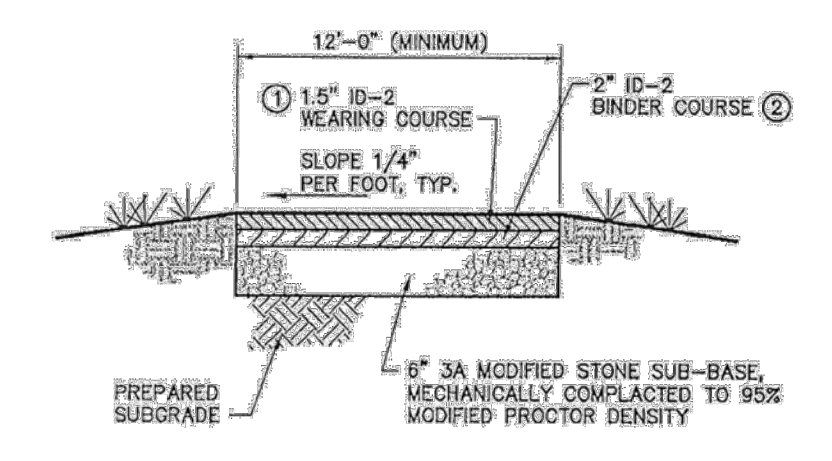
GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
85 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901-2106 • (610) 524-4300
www.gilmoreassoc.com

DATE:	LAST REVISED:	SCALE:	DRAWING No:
5/22/09		N.T.S.	3 of 17



- NOTE:
1. REFER TO PENNDOT PUBLICATIONS 408 AND 72, MOST CURRENT EDITION FOR DESIGN STANDARDS.
 2. ALL INLET TOPS SHALL BE THE ENVIRONMENT TYPE.
 3. ALL INLET IN AREAS TO BE PAVED ARE TO BE BACKFILLED WITH 2A MATERIAL.

TYPE M INLET DETAIL

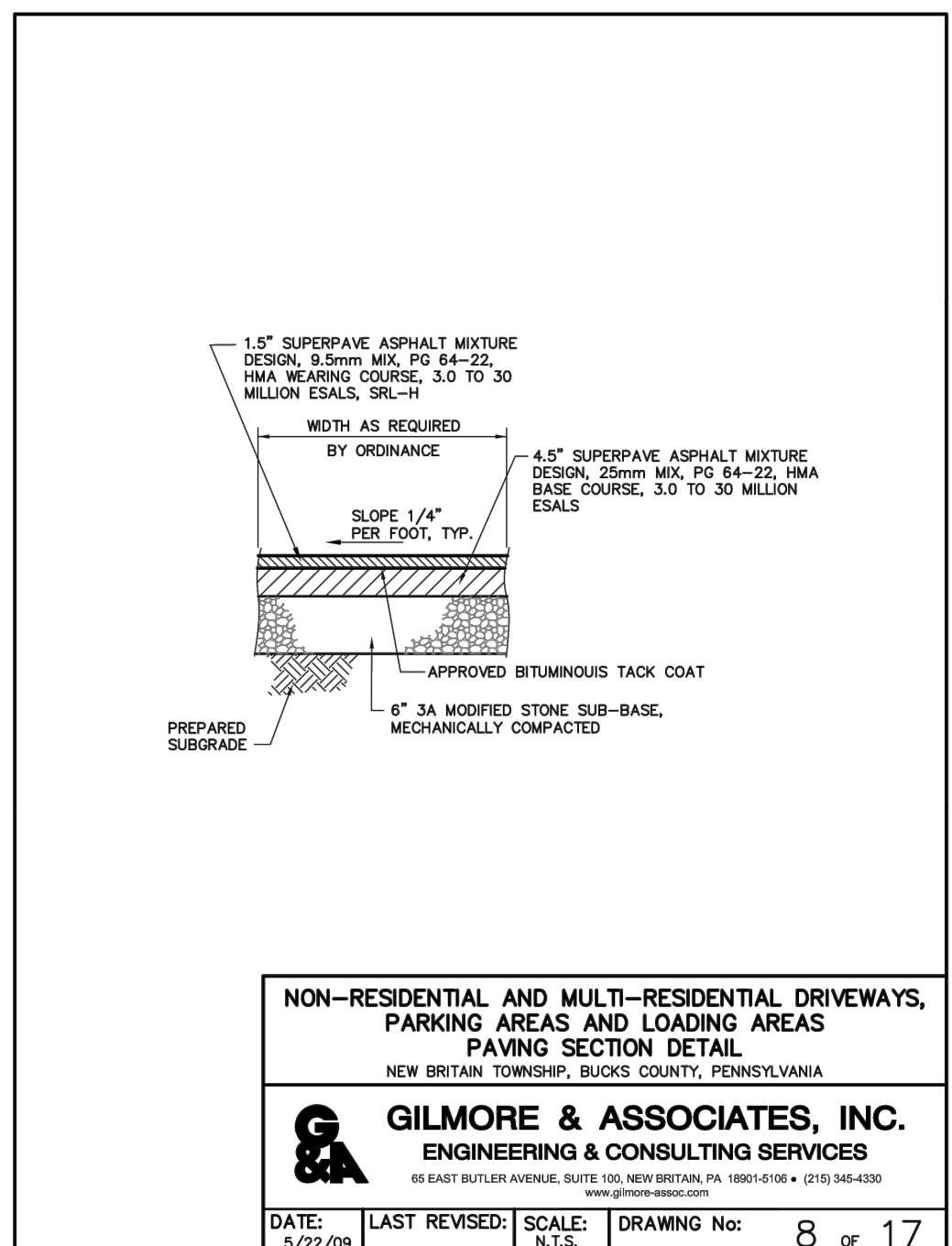


- ALTERNATE SPECIFICATION
- ① 1.5\"/>
 - ② 2.0\"/>

RESIDENTIAL DRIVEWAY PAVING SECTION DETAIL
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
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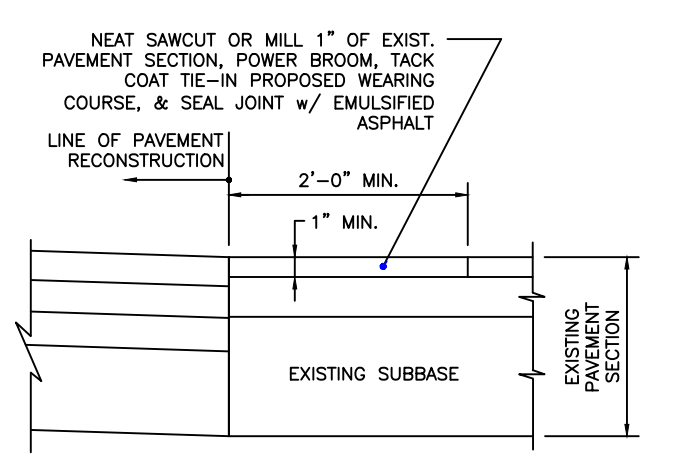
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5/22/09		N.T.S.	7 of 17



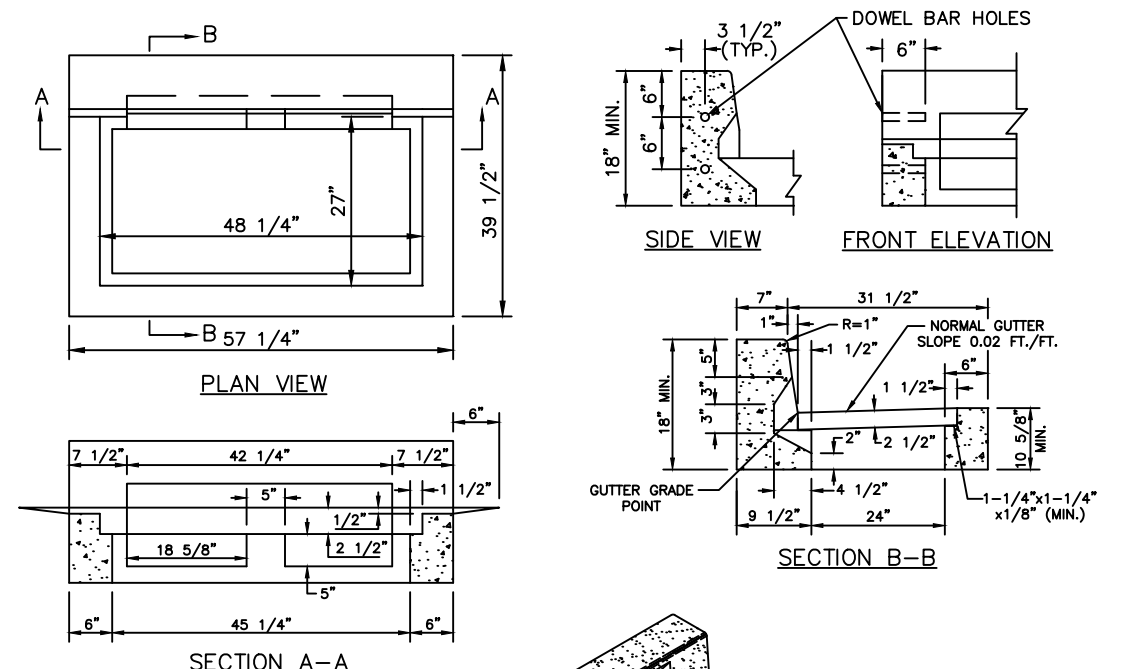
NON-RESIDENTIAL AND MULTI-RESIDENTIAL DRIVEWAYS, PARKING AREAS AND LOADING AREAS PAVING SECTION DETAIL
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
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5/22/09		N.T.S.	8 of 17

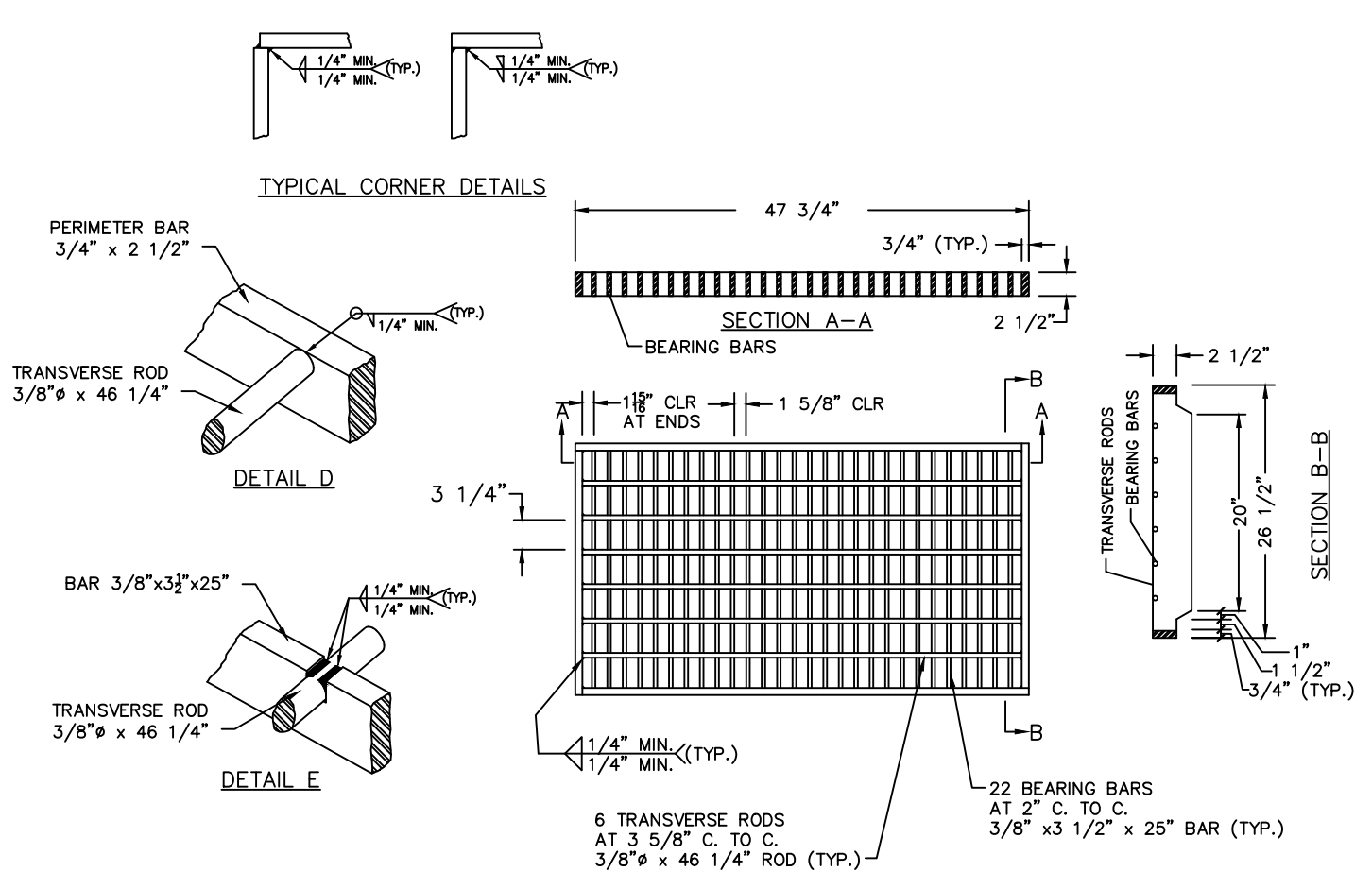


PAVEMENT TIE-IN

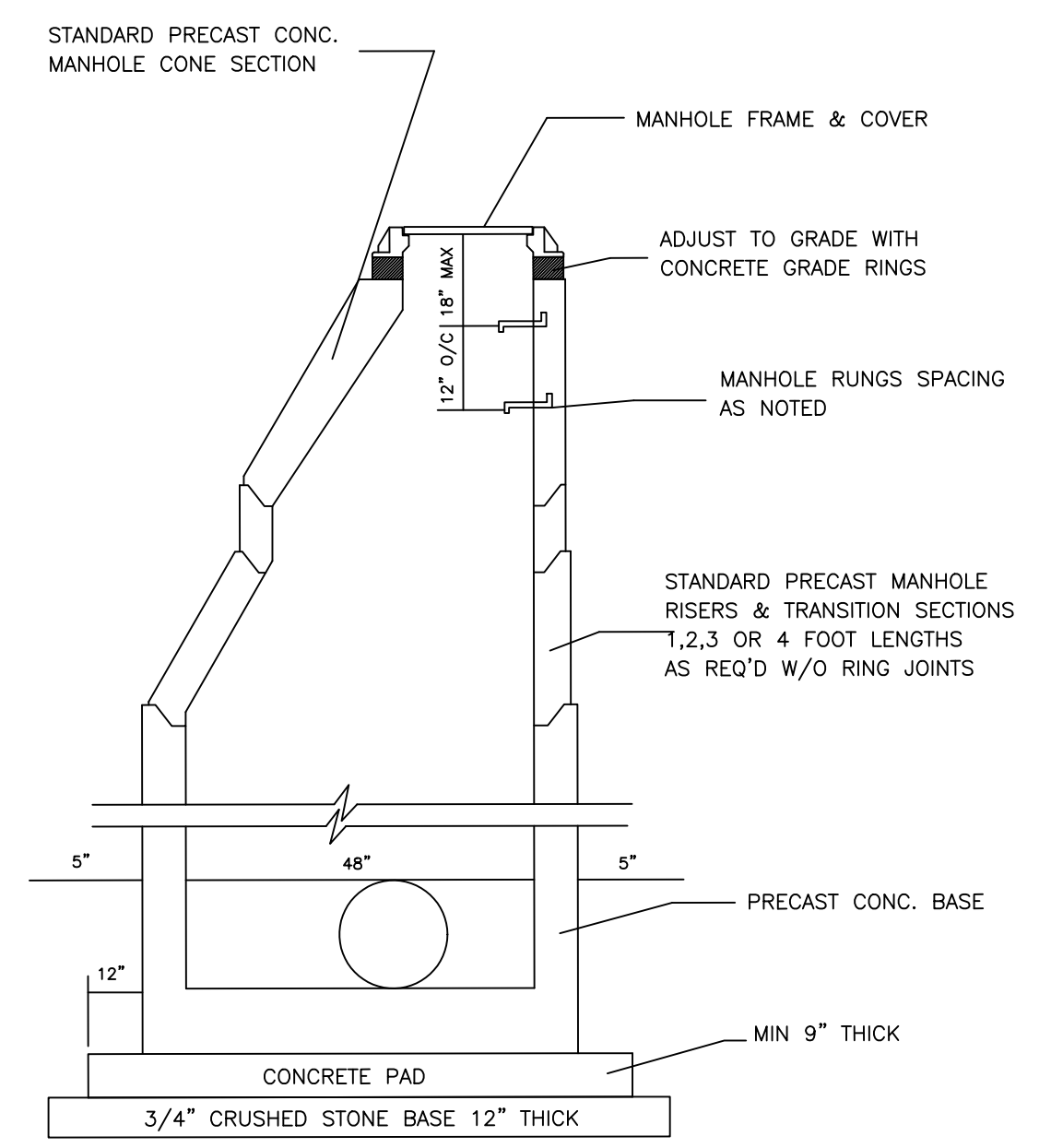


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1. REFER TO PENNDOT PUBLICATIONS 408 AND 72, MOST CURRENT EDITION FOR DESIGN STANDARDS.
 2. ALL INLET TOPS SHALL BE THE ENVIRONMENT TYPE.
 3. ALL INLETS IN AREAS TO BE PAVED ARE TO BE BACKFILLED WITH 2A MATERIAL.

TYPE C INLET DETAIL

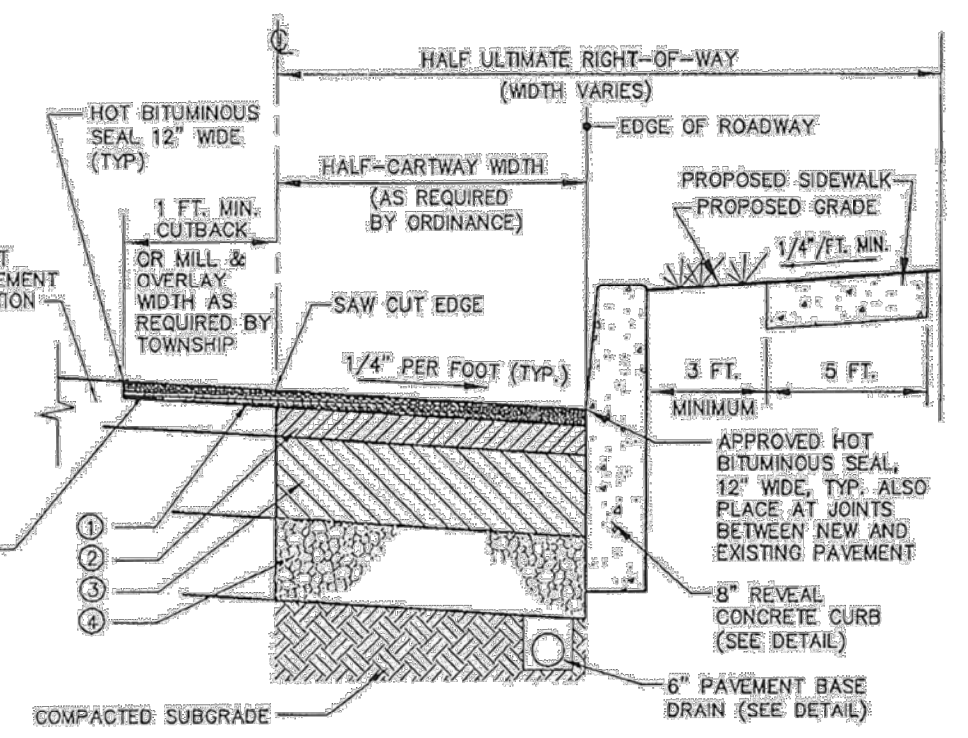


STRUCTURAL STEEL BICYCLE SAFE INLET GRATE DETAIL



PRECAST CONCRETE STORM MANHOLE

- NOTES:
1. PRECAST CONCRETE MANHOLES SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-39M, 'STANDARD MANHOLES, PRECAST MANHOLES AND MANHOLE STEPS'.
 2. STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN DEPTH.
 3. STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 172M), RC-39M.
 4. STEP AND STEP INSTALLATION SHALL MEET ALL REQUIREMENTS OF ASTM C 478 AND C 497 FOR DIMENSIONS, LOAD RATING AND PULLOUT RESISTANCE.
 5. PROVIDE FRAME AND GRATE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 1172M) RC-39M, 'STANDARD MANHOLES COVERS, FRAMES AND ADJUSTMENT RISERS'.
 6. THE CONTRACTOR SHALL PROVIDE CUT SHEETS TO ENGINEER TO REVIEW PRIOR TO CONSTRUCTION.
 7. STORM MANHOLE COVERS SHALL HAVE THE WORD 'STORM' ON THE COVER IN 2-INCH HIGH LETTERS.
 8. STORM MANHOLES SHALL BE THE ENVIRONMENT TYPE.



- ① 1.5\"/>
- ② 2.0\"/>
- ③ 4\"/>
- ④ 6\"/>

NOTE: NEW ROADS SHALL COMPLY WITH THE ABOVE SPECIFICATION

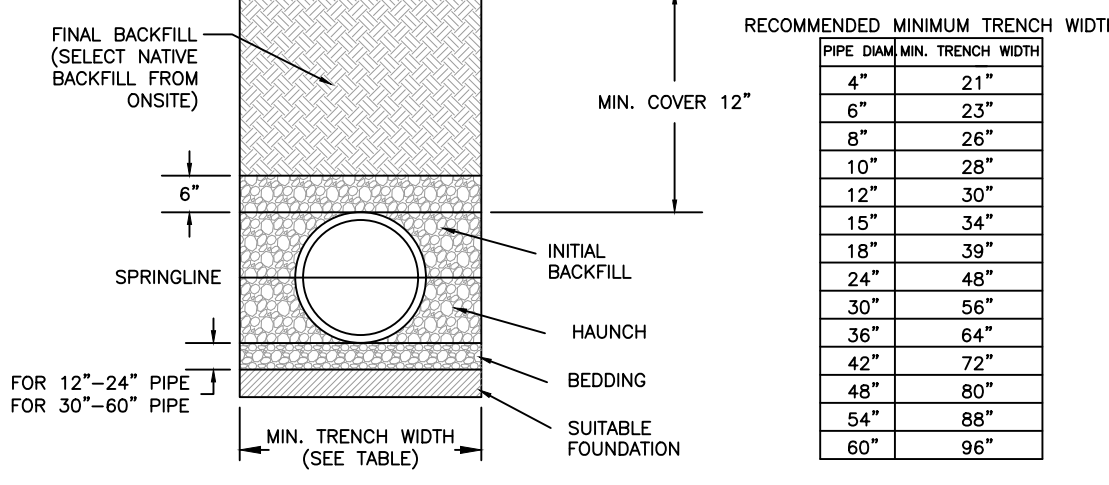
TYPICAL ROADWAY WIDENING SECTION DETAIL FOR ARTERIAL, COLLECTOR, AND NON-RESIDENTIAL ROADS
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
85 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901-2106 • (610) 524-4300
www.gilmoreassoc.com

DATE:	LAST REVISED:	SCALE:	DRAWING No:
5/22/09		N.T.S.	2 of 17

PIPE SIZE (IN)	MIN. TRENCH WIDTH (IN)	MIN. COVER (IN)	MIN. TRENCH WIDTH (IN)	MIN. COVER (IN)	MIN. TRENCH WIDTH (IN)	MIN. COVER (IN)	MIN. TRENCH WIDTH (IN)	MIN. COVER (IN)
4"	21"	12"	4"	12"	6"	12"	4"	12"
6"	23"	12"	6"	12"	6"	12"	6"	12"
8"	25"	12"	8"	12"	6"	12"	6"	12"
10"	28"	12"	10"	12"	6"	12"	6"	12"
12"	30"	12"	12"	12"	6"	12"	6"	12"
15"	34"	12"	15"	12"	6"	12"	6"	12"
18"	39"	12"	18"	12"	6"	12"	6"	12"
24"	49"	12"	24"	12"	6"	12"	6"	12"
30"	56"	12"	30"	12"	6"	12"	6"	12"
36"	64"	12"	36"	12"	6"	12"	6"	12"
42"	72"	12"	42"	12"	6"	12"	6"	12"
48"	80"	12"	48"	12"	6"	12"	6"	12"
54"	88"	12"	54"	12"	6"	12"	6"	12"
60"	96"	12"	60"	12"	6"	12"	6"	12"

CONCRETE END WALLS 2001 FT-29



- NOTES:
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', LATEST EDITION.
 2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 3. 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 GEOTEXTILE MATERIAL.
 4. BEDDING: 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. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" 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 FLOATATION, 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.

HDPE PIPE DETAIL

Holmes Cunningham LLC
409 E. Butler Ave. Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengr.com

REVISIONS	Description	Date

CALL BEFORE YOU DIG! 813
UTILITY LOCATIONS AS SHOWN ON THIS DRAWING ARE THE PROPERTY OF THE CONTRACTING UTILITY COMPANIES FROM WHOM THE INFORMATION WAS OBTAINED.
PENNSYLVANIA ONE STOP & CALL
Call System, Inc.
1-800-962-1976

140 UPPER CHURCH ROAD
140 UPPER CHURCH ROAD
TWP # 26-003-104
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

CONSTRUCTION DETAILS
ROBERT T. CUNNINGHAM, P.E.
PA PE07624

HCE Job	1890	Scale	N.T.S.	Designed	RC	Sheet	5 of 9
Date	06/16/2023						

Drawing No. **C1.1**

LIMIT OF DISTURBANCE = 3.17 ACRES

PROJECT SITE BOUNDARY = 13.34 ACRES

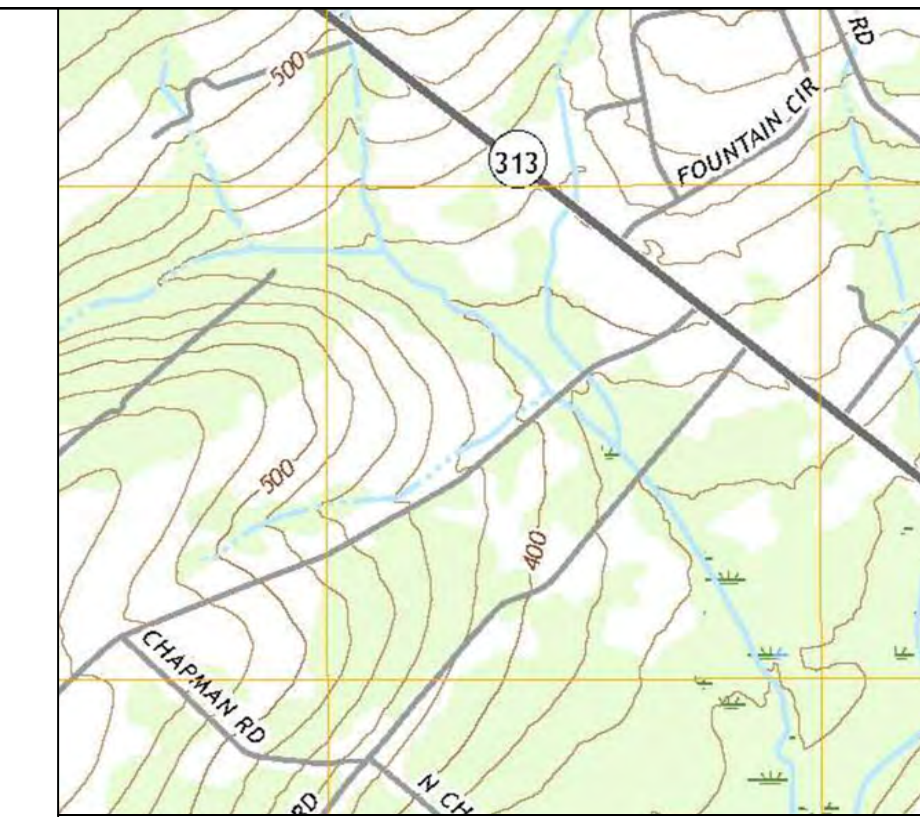
GENERAL NOTES

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 1-800-242-1779, PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
3. THERE ARE NO HO 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 OFFSETS ARE NOT NECESSARY.
5. THERE ARE NO WETLANDS WITHIN THE PROJECT AREA.
6. THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
7. 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.
8. IF ANY MUD OR STONE IS TRACKED ONTO KING ROAD, A FULL CONSTRUCTION ENTRANCE SHALL BE REQUIRED.

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
 THE INSTALLATION AND/OR CONVERSION OF EROSION CONTROL FACILITIES TO STORMWATER FACILITIES, INCLUDING THE INFILTRATION BASIN WITH MRC, SHALL BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR DESIGNEE.

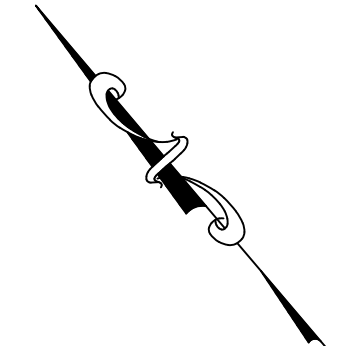
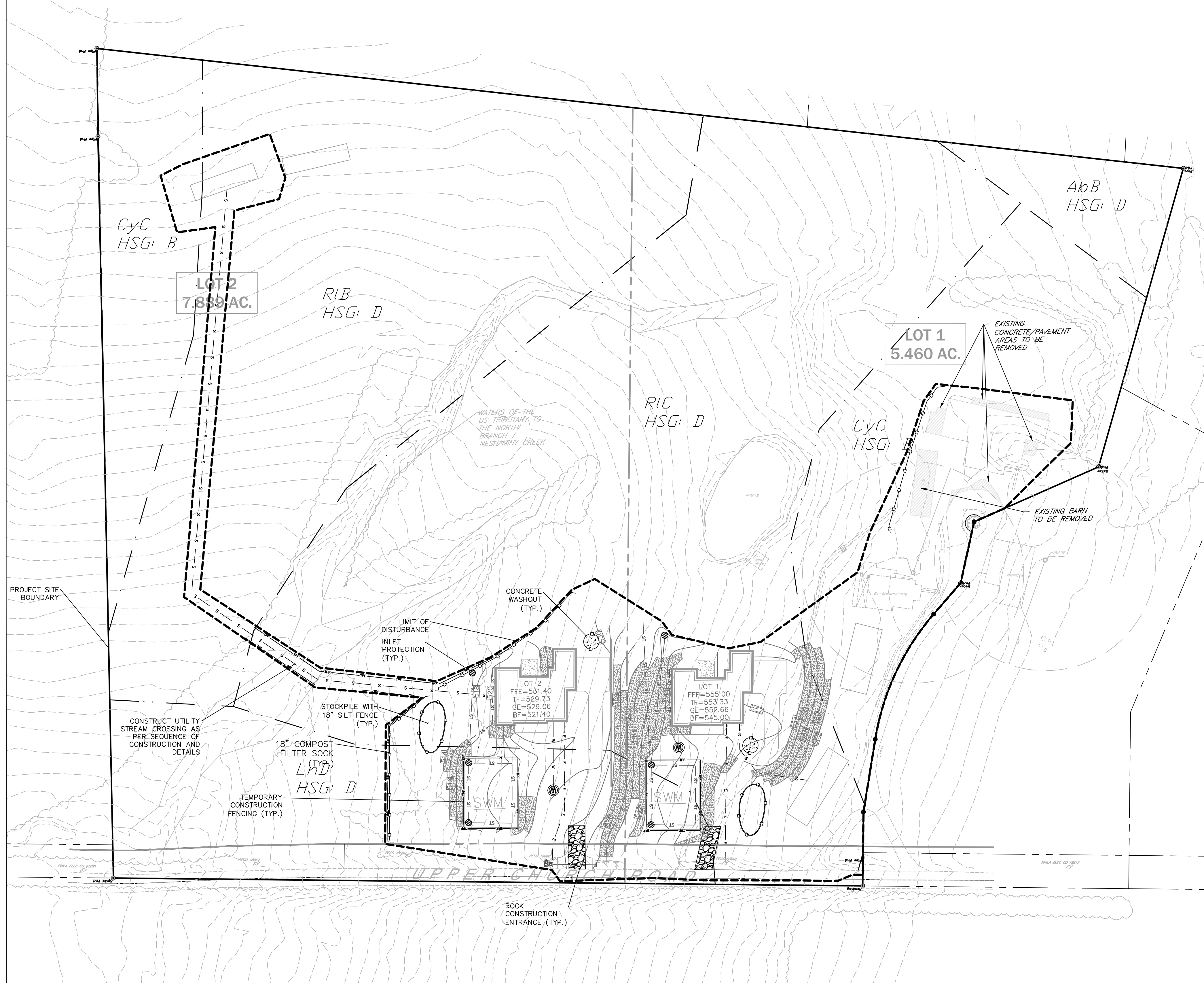
Soils Legend						
Type	Name	Depth to Bedrock	Depth to Seasonal High Water Table	HSG	Hydric Soil	Agricultural Soil
AbB	Abbotstown silt loam, 3 to 8 percent slopes	4'-6"	6'-18"	D	No	Farmland of Statewide Importance
Bc	Bowmansville-Knaeurs silt loams, 0 to 3 percent slopes	7'-9"	0'-18"	C/D	No	Not Prime Farmland
CyB	Culleoka-Weikert channery silt loams, 3 to 8 percent slopes	2'-4"	>8"	B	No	Farmland of Statewide Importance
CyC	Culleoka-Weikert channery silt loams, 8 to 15 percent slopes	2'-4"	>8"	B	No	Farmland of Statewide Importance
LHd	Lansdale loam, 8 to 25 percent slopes, extremely stony	4'-7"	>8"	B	No	Not Prime Farmland
ReB	Readington silt loam, 3 to 8 percent slopes	4'-6"	18'-36"	C	No	Farmland of Statewide Importance
RIc	Reaville channery silt loam, 8 to 15 percent slopes	2'-4"	6'-36"	D	No	Farmland of Statewide Importance

Limitations and Resolutions: The soils found within the project limits have varying limitations including possible shallow depth to groundwater and possible shallow depth to bedrock. In order to resolve the groundwater limitation, any standing water should be pumped through a sediment filter bag. To resolve the bedrock limitation, the contractor shall determine whether rock is riprapable. If rock is not riprapable, blasting will be required. All blasting shall meet all local, county, state and federal regulations.



LOCATION MAP
 REFERENCE: DOYLESTOWN U.S.G.S. QUADRANGLE MAP

Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net



SEQUENCE OF CONSTRUCTION
 NOTES:

1. 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.
2. THE RAIN GARDENS 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. PRIOR TO VERTICAL CONSTRUCTION A STABLE BASE WILL BE ESTABLISHED AND MAINTAINED, TO AVOID ACCELERATED EROSION.
8. A PRELIMINARY SEEPAGE PIT 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.
9. BEGIN CONSTRUCTION OF BUILDING FOUNDATIONS, BUILDING CONSTRUCTION MAY COINCIDE WITH ADDITIONAL SITE WORK, INCLUDING UTILITY 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.
10. INSTALL WATER, SANITARY SEWER, AND STORM SEWER SYSTEM 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 CURB, SUBBASE AND BASE COURSE FOR THE DRIVEWAY/PARKING.
11. 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.
12. 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.
13. UPON COMPLETE STABILIZATION OF SITE, REMOVE EROSION CONTROL DEVICES. THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUND COVER.
14. 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.

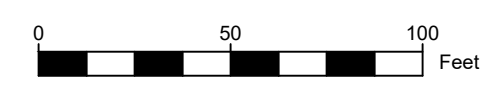
REVISIONS	Description	Date

140 UPPER CHURCH ROAD
 140 UPPER CHURCH ROAD
 TWP # 26-00-3-104
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
EROSION AND SEDIMENT CONTROL PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

LEGEND

	PROPERTY LINE
	PROPOSED BUILDING
	EXISTING CONTOUR
	PROPOSED CONTOUR
	DOWNSPOUT LOCATION
	COMPOST FILTER SOCK
	LIMIT OF DISTURBANCE
	PROJECT SITE BOUNDARY
	SOILS LINE
	SOILS TYPE
	CONSTRUCTION FENCE
	12" SILT SOCK
	EROSION CONTROL MATTING

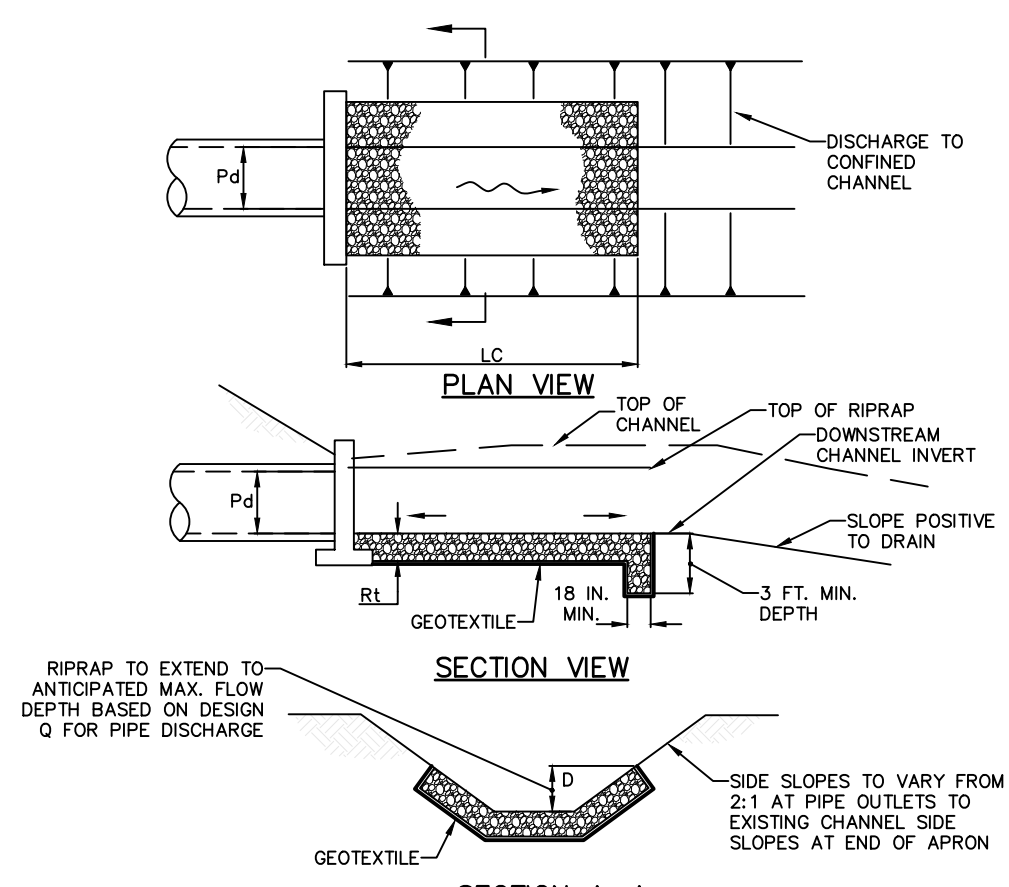


RECYCLING/ DISPOSAL OF MATERIALS
 THE CONSTRUCTION WASTES ANTICIPATED INCLUDE DEMOLITION MATERIALS FROM THE BUILDING AND SITE DEMOLITION AND EXCESS BUILDING MATERIAL SUCH AS CONCRETE, WOOD, ETC.
 ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 280.1 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.

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

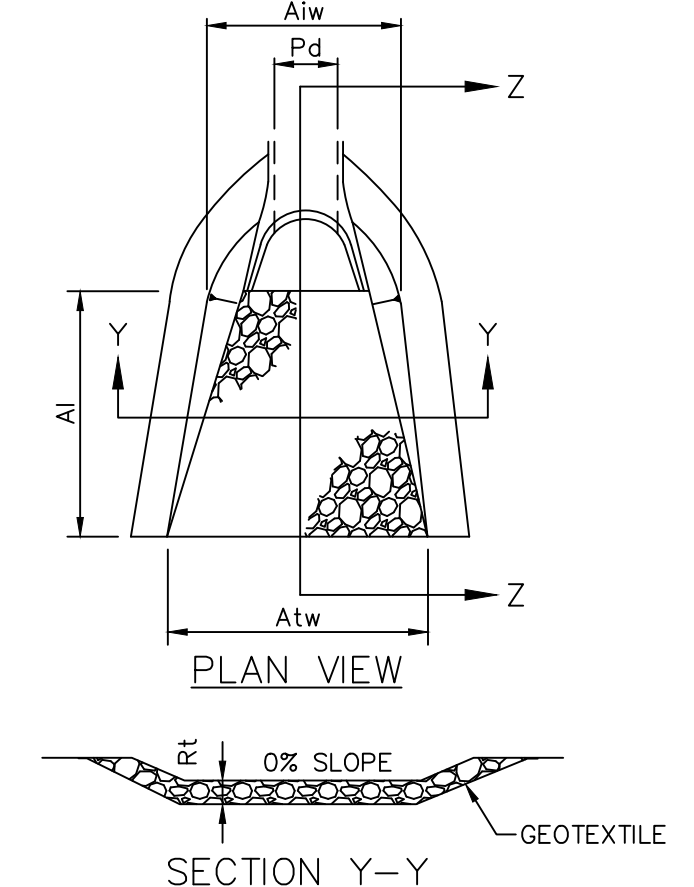
HCE Job	1890	Scale	1"=50'	Designed	RC	Sheet	7 of 9
Date	06/16/2023						

Drawing No.
C2.0



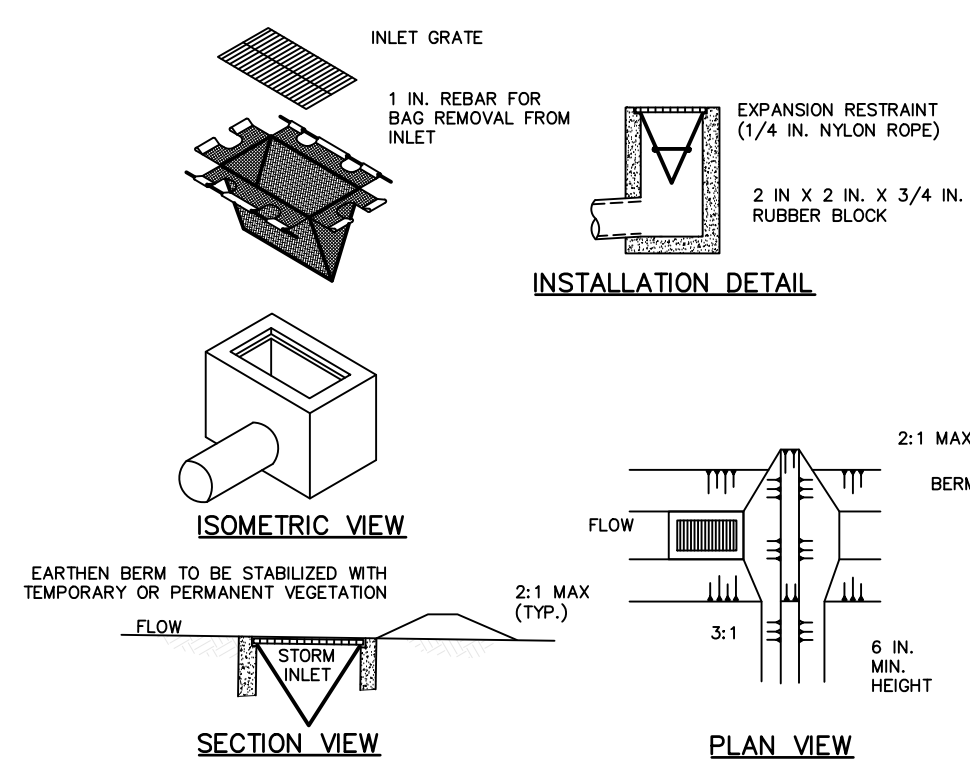
OUTLET NO.	PIPE DIA (IN)	RIPRAP SIZE (IN)	RIPRAP THICK. (IN)	RIPRAP LENGTH (FT)	APRON INITIAL WIDTH (AT ENDWALL) (FT)	APRON END WIDTH (AT ENDWALL) (FT)	APRON END TOP WIDTH (FT)	APRON SIDE SLOPES (H:V)
RRR-2	15	3	9	8	3.25	5	7.75	9.5 : 3.1

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**

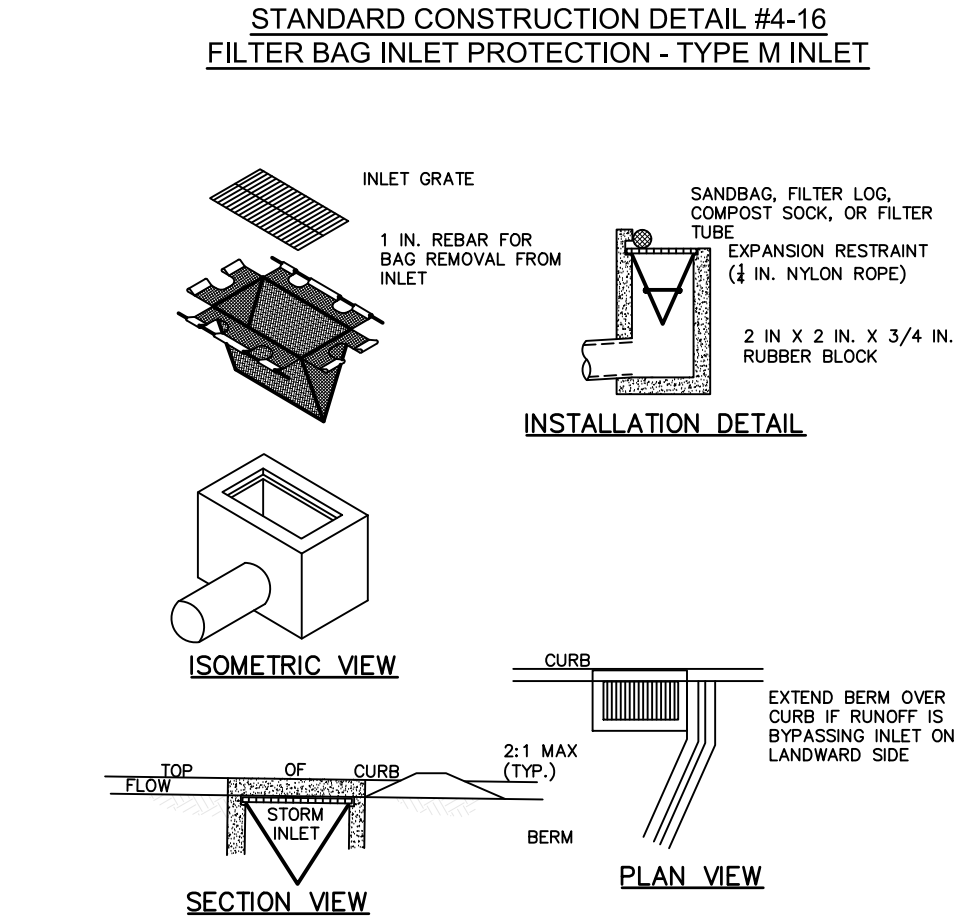


OUTLET NO.	PIPE DIA (IN)	RIPRAP SIZE (IN)	RIPRAP THICK. (IN)	RIPRAP LENGTH (FT)	APRON INITIAL WIDTH (AT ENDWALL) (FT)	APRON END WIDTH (AT ENDWALL) (FT)	APRON END TOP WIDTH (FT)	APRON SIDE SLOPES (H:V)
RRR-2	15	3	9	8	3.25	5	7.75	9.5 : 3.1

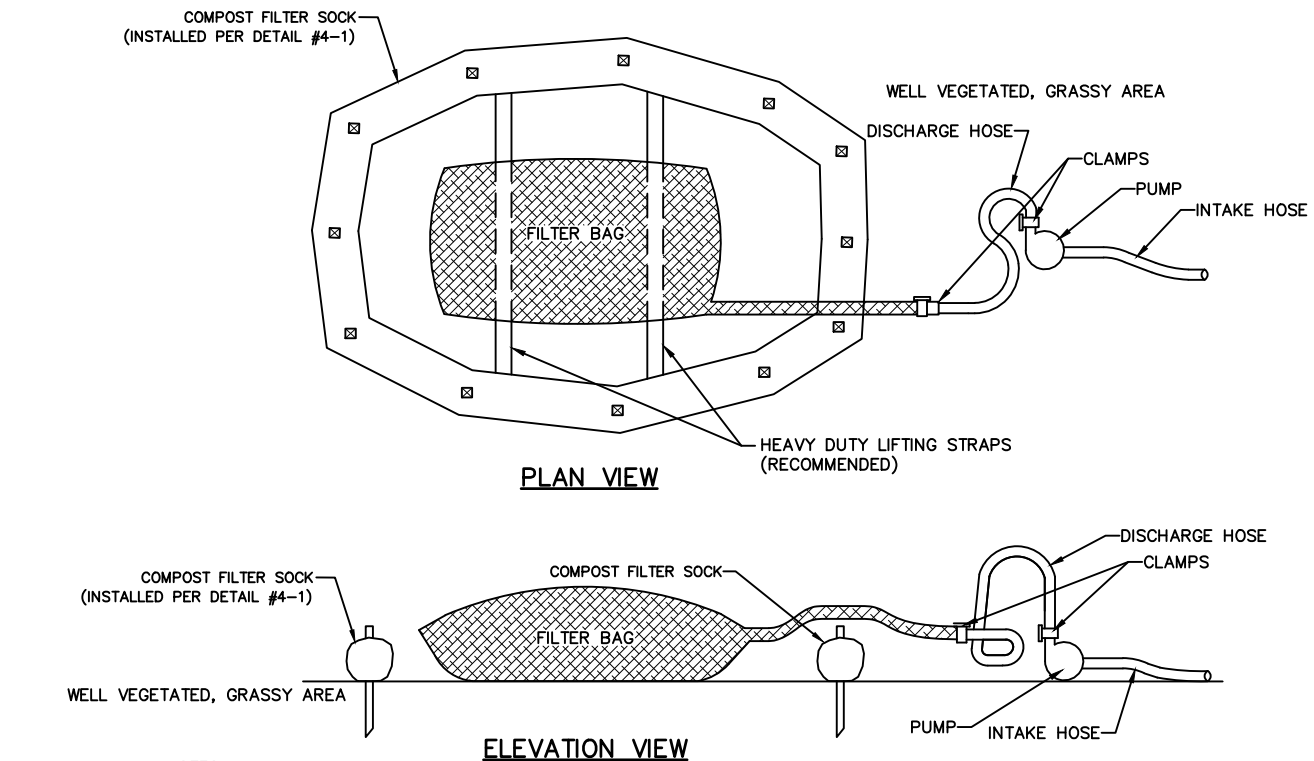
NOTES:
 REFER TO E&S STANDARD WORKSHEET 20 FOR RIP-RAP APRON SIZING INFORMATION.
 ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.
**STANDARD CONSTRUCTION DETAIL #9-1
 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL**



NOTES:
 MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
 AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE 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**



NOTES:
 MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
 AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
 DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.
**STANDARD CONSTRUCTION DETAIL #4-15
 FILTER BAG INLET PROTECTION - TYPE C INLET**

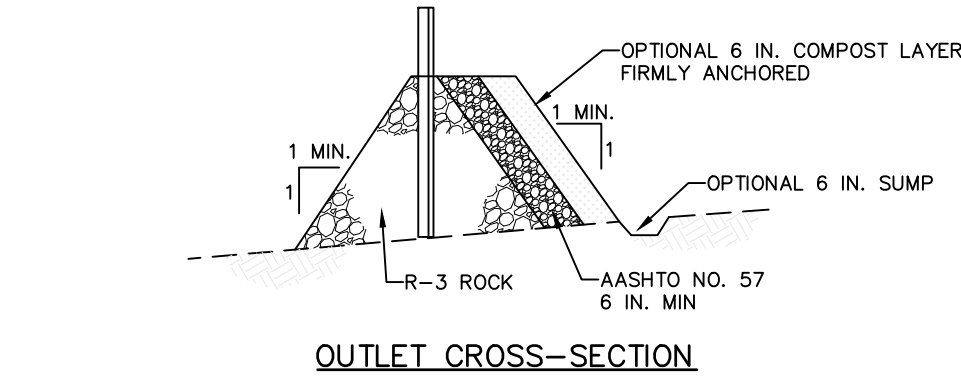


NOTES:
 LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

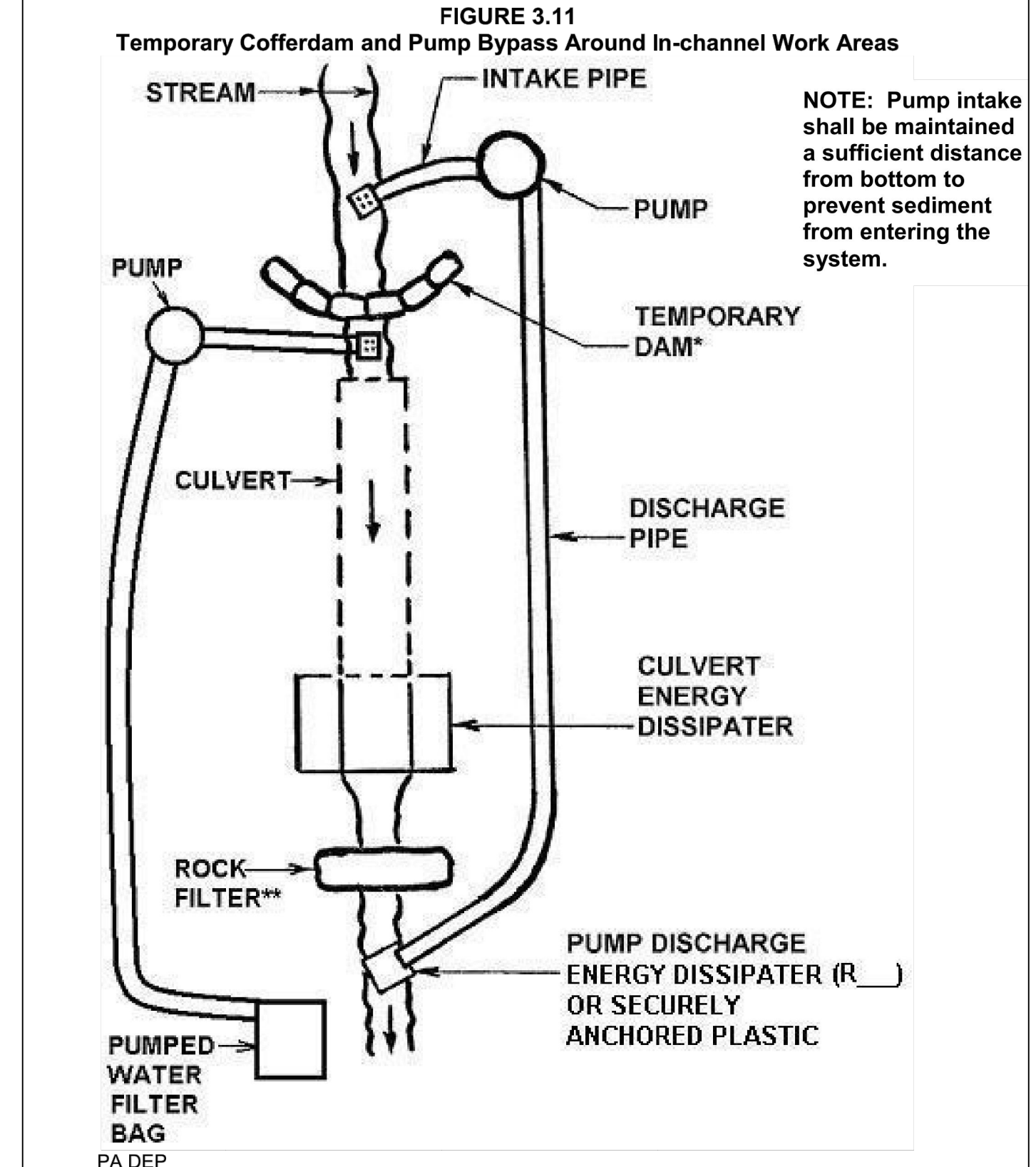
PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/FT
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3788	350 PSI
UV RESISTANCE	ASTM D-4350	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

 A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRIPS 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 UNDERLAMENT 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 HO 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 SCHEDULED.
 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**

CALL BEFORE YOU DIG. IT IS YOUR RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY EXCAVATION. PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND HIGHWAYS (DOT & CAL) - 3700 & CALL - 1-800-926-1776
 PENNSYLVANIA ONE CALL SYSTEM, INC. - 1-800-926-1776
 UTILITY LOCATIONS AS SHOWN ON THIS DRAWING ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTACT UTILITY COMPANIES PRIOR TO ANY EXCAVATION.



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 HO 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**



* Sandbags (Standard Construction Detail #3-15), Jersey barriers (Figure 3.13) or other non-erosive material, no earth fill. Do not excavate a sump for the pump intake.
 ** See Standard Construction Detail # 4-14. For low gradient channels, the rock filter may be replaced by an impervious cofferdam to prevent backflow into the work area.
TEMPORARY COFFERDAM AND BYPASS FOR STREAM CHANNEL WORK AREA

- STREAM CHANNEL CULVERT REPLACEMENT SEQUENCE OF CONSTRUCTION:
1. INSTALL BYPASS PUMP AND ENERGY DISSIPATER AS SHOWN ON THE DETAIL.
 2. INSTALL COFFERDAM AND ROCK FILTER IN CHANNEL. INSTALL PUMPED WATER FILTER BAG IN A LEVEL, GRASSY, STABLE AREA ADJACENT TO THE CHANNEL.
 3. BEGIN EXCAVATION AND REMOVAL OF EXISTING STREAM CROSSING.
 4. INSTALL PROPOSED CULVERT AS SHOWN ON THE APPROVED GENERAL PERMIT PLAN.
 5. STABILIZE DISTURBED AREA AS PER THE DETAILS AND NOTES SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
 6. REMOVE PUMPED WATER FILTER BAG, ROCK FILTER, AND COFFERDAM.
 7. REMOVE BYPASS PUMP.

Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date

140 UPPER CHURCH ROAD
 140 UPPER CHURCH ROAD
 TWP # 26-003-104
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

EROSION AND SEDIMENT CONTROL DETAILS

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

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

HCE Job	1890	Date	06/16/2023	Scale	N.T.S.	Designed	RC	Sheet	9 of 9
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Drawing No. C2.2



TOWNSHIP OF NEW BRITAIN

Bucks County, Pennsylvania

BOARD OF SUPERVISORS
William B. Jones, III, Chair
Stephanie Shortall, Vice-Chair
Gregory T. Hood
Cynthia M. Jones
MaryBeth McCabe

TOWNSHIP MANAGER
Matt West

July 17, 2023

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

Re: Casadonti Minor Subdivision Preliminary Plan
140 Upper Church Road, T.M.P. #26-003-104
Prepared by Holmes Cunningham, LLC, dated June 16, 2023

Dear Mr. Casadonti,

Township staff has reviewed the referenced plan and has the following comments:

1. The future use of the existing house needs to be clarified.
2. Please remove the existing driveway, or zoning relief will be required, as per ZO Section 27-2904.d.5.
3. Please show all proposed septic locations for Lot 2, as per ZO Section 27-2115.
4. It appears building coverage is exceeded for Lot 1; zoning relief would be required.

If you have any questions, please feel free to contact me.

Sincerely,

David Conroy
Director of Planning & Zoning
New Britain Township
dconroy@nbtpa.us

Cc: Michael Walsh, Interim Township Manager
Ryan Gehman, Assistant Planning & Zoning Officer
Randy Teschner, Building Code Official
Ryan Cressman, Public Works Superintendent
Sean Gresh/Jeffrey P. Garton, Township Solicitors
Robert T. Cunningham, P.E., Holmes Cunningham, LLC
Craig D. Kennard, P.E., E.V.P., Gilmore & Associates, Inc.
Janene Marchand, P.E., Gilmore & Associates, Inc.



GILMORE & ASSOCIATES, INC.

ENGINEERING & CONSULTING SERVICES

July 19, 2023

File No. 23-03044

Michael Walsh, Assistant Manager
New Britain Township
207 Park Avenue
Chalfont, PA 18914

Reference: Casadonti Subdivision Preliminary Plan Review 1
140 Upper Church Road, T.M.P. #26-003-104

Dear Mike:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the 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 nine (9) sheets, dated June 16, 2023.
- B. Post Construction Stormwater Management Plan Narrative for 140 Upper Church Road, as prepared by Holmes Cunningham, LLC, dated June 16, 2023.
- C. Sewage Facilities Planning Module Mailer for 140 (146) Upper Church Road.
- D. Waiver Request Letter for 140 Church Road, as prepared by Holmes Cunningham, LLC, dated June 20, 2023.

II. 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. 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.

III. Review Comments

A. Zoning Ordinance

- 1. §27-300.a. & 305 – The Zoning Data Table proposes Use B1: Single Family Detached Dwelling for both lots. In addition, the plan shows the existing single-family dwelling on Lot 1 to remain as well as one of the two barns. Only one principal use and one principal structure shall be permitted on any property. The Planning Module mailer indicates that Lot 1 will contain two dwellings, the existing and the proposed dwelling with a community on-lot sewage disposal system. The Township allows for one accessory dwelling, H14, in accordance with the Use Definitions and Regulations. We offer the following comments if the use is proposed to be an accessory dwelling:

BUILDING ON A FOUNDATION OF EXCELLENCE

- a. An accessory dwelling is a single-family detached dwelling used as a residence by relatives, tenant farmers or employees of a farm or estate.
 - b. All dimensional requirements of the zoning district applicable to principal buildings shall be observed, including, but not limited to, setback requirements and maximum building coverage. The proposed building coverage is 6.23% where 6% is the maximum permitted by the developer.
 - c. A separate permit shall be obtained from the Bucks County Department of Health for the sanitary waste disposal system if an on-site system is proposed for the accessory dwelling.
2. §§27-502.a & 27-2301 – The owner of [a] nonconforming use or structure shall register the nonconforming use or structure with the Zoning Officer on forms available for this purpose. Any existing nonconformities related to the existing structures or uses to remain shall be registered as such with the Zoning Officer.
 3. §27-502.b.1.(a) – Lot area shall exclude any area within an existing or designated future street right-of-way; any area required as open space; and the area of any existing easement. The northwestern property line of Lot 1 is through a shared driveway which services the existing dwelling on the adjacent parcel. It shall be determined if an existing easement needs to be excluded.
 4. §27-502.b.1.(i) – The Zoning Data Table should include a notation stating that the maximum building coverage by the owner is 8% and the maximum impervious surface ratio by the owner is 12%.
 5. §27-502.b.5 – When an applicant is proposing a land development, the stormwater management facilities shall be designed to manage the runoff from the maximum impervious surface permitted for the entire site or 12%. The proposed conservation easement area may be subtracted from the total site area when calculating the 12% requirement. We defer review of this requirement until the conservation easement areas are finalized.
 6. We offer the following comments regarding the natural resources:
 - a. §27-502.b.3 – When a lot of land undergoes subdivision and/or land development, all the natural resource protection land, such as watercourses, agricultural soils, woodlands, steep slopes, etc., shall be protected with a conservation easement in accordance with §§27-505 and 27-2400. The Existing Conditions and Site Analysis Plan notes 9.41 acres of resource protection land is required. However, the proposed conservation easement has an area of 80,000 s.f (1.83 ac) on Lot 2. The proposed conservation easement shall also exclude any improvements, i.e. septic areas/lines, future or proposed.
 - b. §27-505.1 – The Conservation Easement shall be executed by the Applicant. We also note the properties are proposed to be deed-restricted from further subdivision.
 - c. §27-505.2 – Agricultural soils, defined as Capability Class I, II, or III land, shall be added to the Resource Protection Land chart.
 - d. §27-2400.a – The entire extent of the watercourse shall not be altered, regraded, filled, piped, diverted or built upon, except roads and trails may cross watercourses where design approval is obtained from the Township and, if required, the DEP. The line to the septic system for lot 1 is proposed to cross the watercourse.
 - e. §27-2400.b – Sheet 2 notes 0.57 acres of floodplain area and Note 7 indicates Zone A is located on site. Sheet 3, Note 3, also references this. The FEMA floodplain map does not appear to show any floodplain onsite and shall be verified.
 - f. 27-2400.e – The resource protection standards shall include the existing pond on Lot 1. The plan should also denote if the table includes overlapping resources.

- g. §27-2400.i.1 – The Zone 1 and Zone 2 riparian buffers shall be dimensioned on the Subdivision Plan. The riparian buffer may include only the portion of land sloping towards the surface water bodies being protected.
 - h. §27-2400.i.1(c) – Regulated activities permitted by the Commonwealth and Township for stream crossing or septic lines within the riparian buffer Zones 1 and 2 may be permitted provided that any disturbance is offset by riparian corridor improvements approved by the Township.
 - i. Once confirmed and approved, the disturbance of the watercourse, floodplain and riparian buffer for the septic line should be noted in the Resource Protection tables on Sheet 2.
7. §27-2115 – No portion of an on-lot septic system or any of its components, including the toe of slope of the berm, shall be installed closer than 10 feet to a property line or ultimate right-of-way, or located within an existing easement, or located in a manner that would block any stormwater drainage or swales, or flow of stormwater from any lot. The location of the septic primary and back up septic systems for Lot 1 and the backup septic system for Lot 2 shall be identified on the plans to demonstrate compliance with this requirement.
 8. §27-2301 – The owner of any nonconforming use or structure shall register such with the Zoning Officer. The side yard setback for the existing dwelling on Lot 1 shall be registered.
 9. §27-2904.d.5 – At least 75 feet shall be provided between any two access drives along one street along one lot. The distance between the existing driveway and the newly constructed driveway on Lot 1 is 68.5 feet and shall be resolved.
 10. The plans shall comply with the New Britain Township Zoning review letter dated July 17, 2023.

B. Subdivision and Land Development Ordinance Waivers

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 plan submissions. We recommend no action be taken on this waiver until all zoning issues are resolved, and once our office reviews the Water Resource Impact Study.
2. §22-502.1.H – From providing a lighting plan, which we support.
3. §22-703.4.C. – From the requirement that lot lines shall be drawn at right angles to the street right-of-way line. The proposed lot line between Lots 1 and 2 is generally at a right angle to the right-of-way line. This waiver does not appear to be necessary and should be removed.
4. §22-705.3.C – Where a subdivision and/or land development abuts or contains an existing street, the applicant shall be required to improve the street to the Township standards for ultimate right-of-way and cartway widths. 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 Township and Applicant consider the following improvements in lieu of the full road improvements required:
 - 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 ultimate right-of-way.
 - b. 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.
 - d. Several areas of bare earth were observed along the roadside swale. These side slopes shall be permanently stabilized.
 - e. The RCP driveway culvert at the new driveway on Lot 1 shall be mortared at the endwalls.

5. §22-705.3.G – From providing a 1 ½-inch mill and overlay of King Road along the subdivision. The Applicant is proposing to overlay the existing pavement 1-½ inches. Based on the limited pavement depth, we recommend a leveling course be installed along the entire full-width frontage of the Upper Church Road prior to the installation of the 1-½ inch wearing course overlay.
 6. §22-706 – From providing curb and sidewalk along the property frontage of Upper Church Road, which we support.
 7. §22-713.4.B. – The Applicant is requesting a partial waiver to utilize the existing vegetation to meet the street tree requirement and to allow an informal arrangement of supplemental street trees. The size and location of the existing trees should be shown on the plan to determine the extent of the waiver. In addition, the number and location of the proposed supplemental trees from the Township's Required Plant List should be shown to document the number of required plantings at a rate of one street tree for every 30 feet of frontage.
 8. §22-714.3.A – From providing public streetlights. This waiver is not required, as there are no intersections within the subject tract.
 9. 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 taking action on the plans.
 10. An updated waiver request letter shall be provided to the Township.
- C. Subdivision and Land Development Ordinance
1. §22-401.8 – The applicant for a subdivision shall, with the submission of a preliminary plan, notify all surrounding property owners within 1,000 feet of the proposed development perimeter of the Planning Commission date at which the project is anticipated to be discussed and other project information per this section. Affidavits of the notifications shall be provided to the Township and the property posted.
 2. §22-406.1 – The Applicant is responsible for any other required reviews, approvals, permits, etc. (i.e., BCPC, BCCD, PADEP, Fire Marshal, Township Road Opening Permit, Well Construction Permits, etc.) as applicable.
 3. §22-502.B. – The following comments related to plan notes and presentation shall be addressed:
 - a. Metes and bounds shall be provided for the Upper Church Road Ultimate right-of-way.
 - b. The side property boundaries for Lots 1 and 2 both are measured to the title line. These property lines should be dimensioned to the ultimate right-of-way as well.
 - c. Yard setbacks from the existing features on Lot 1 shall be dimensioned on the Subdivision plan. In addition, the building setback lines shall be removed from any easement area.
 - d. The driveway width should be dimensioned on the Subdivision Plan.
 - e. The scale on Sheets 3 and 4 appear to be incorrect and should be listed as 50 scale.
 - f. General Note 4 on Sheets 4 and 7 states that there are no riparian buffers as part of this project. This note should be revised or removed.
 - g. Inlet information (grate, invert, structure type) shall be provided for all inlets in both basins.
 - h. The existing contours shall be labeled on the plans.
 - i. The utility providers' information on Sheet 1 shall be verified and revised accordingly.

4. §22-502.B.7 – A copy of the deed for the property shall be submitted so the boundary information can be verified and any restrictions noted.
5. §22-502.B.11 – Legal descriptions are required for the new lots, conservation easements, ultimate right-of-way easement for Upper Church Road, back up septic system easements and any other easements which may be proposed. All easements shall be labeled with metes and bounds.
6. §22-502.B.20 – Site Plan Note 10 on the Subdivision Plan should be revised to offer the ultimate right-of-way line of Upper Church Road to New Britain Township as an easement.
7. §22-502.J. – The following issues related to details should be addressed:
 - a. The Township widening details should be removed and, unless otherwise approved, a leveling course and overlay detail provided for Upper Church Road. The limits of work shall be clearly identified in plan view.
 - b. The Non-Residential and Multi Residential Driveway paving detail should be removed.
 - c. Roof drain details with an emergency overflow should be provided on the plans.
8. §22-704.1. – As previously noted, the existing driveway along the northwestern property line provides access to the dwelling on the adjacent property, TMP 26-003-104-001. If an access easement does not currently exist, a shared driveway easement shall be provided.
9. §22-705.6. – Minimum sight distances shall be shown on the preliminary plans for each driveway and shall comply with PennDOT standards.
10. §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 ultimate right-of-way. Spot elevations shall be provided at each proposed driveway to verify the slope. In addition, Grading and Drainage Note 14 on Sheet 4 should be revised to note the ultimate right-of-way.
11. §22-705.13.H. – The clear sight triangles for the existing and proposed driveways shall be shown on the plan with the landscaping.
12. §22-710 – We defer to the Township Fire Marshal for review of the plans with respect to water supply, emergency access, etc.
13. §22-711.3 – The following issues related to erosion control shall be addressed:
 - a. A rock filter outlet or some other form of erosion control should be provided in the roadside channel downslope of the disturbance on Lot 2.
 - b. Erosion controls should be provided downslope of the disturbance for the sanitary lateral through the stream and to the on-lot system.
 - c. The rock construction entrance for Lot 1 should be aligned with the existing driveway.
 - d. The model number of the Flexstorm inlet filters proposed onsite shall be noted in the detail.
 - e. The limit of disturbance shall be verified to align with the proposed grading, disturbance, with sufficient area to accommodate construction vehicles around the proposed features.
14. §22-711.3 – The following comments related to grading shall be addressed:
 - a. Spot elevations should be provided at the corners of the dwelling. In addition, spot elevations should be provided at the edge of the driveway to demonstrate positive drainage away from the garage.
 - b. The proposed contours on Lot 2 should be labeled. It appears two proposed contours overlap at the dwelling.
 - c. The proposed 520 contour on Lot 2 ties into the existing 520 contour and then is crossed by a proposed contour. The proposed 520 contour should be corrected.

- d. The slope between the proposed 540 and 542 contours around STRU 01 appears to exceed 2:1. The grading should be revised to provide a maximum slope of 3:1.
 - e. Proposed contours should be provided for the driveway culvert pipe on Lot 2 to clarify the extent of the grading.
 - f. The proposed 554 contour is shown crossing a portion of the existing driveway to remain on Lot 1. It appears that the grading should be revised to end before the driveway.
15. §22-711.4 – A retaining wall is proposed on Lot 2 with an exposed wall height of up to 3 feet. It is our understanding that a building permit is required for retaining walls with surcharges from adjacent slopes. Retaining wall specifications and design details shall be approved by the Township Engineer prior to final plan approval. Any associated fencing shall be detailed.
 16. §22-713.2.B.(4)&(5) – Tree protection notes from these sections shall be added to Sheet 4.
 17. §22-715.2.C.(1) – Park and recreation land is required at a ratio of 2,500 square feet per new dwelling unit. The land shall be dedicated to the Township or other entity as may be approved by the Board. A fee-in-lieu of park and recreation at a rate of \$3,000.00 per dwelling unit or **\$6,000.00** for the 2 new dwellings may be provided at the Board's discretion.
 18. §22-716 – Concrete monuments shall be placed at all outbound existing property corners, at all proposed lot corners, including changes in direction of boundary, along the ultimate right-of-way, and along all easements.
 19. §22-719.4 – The locations of the proposed wells for Lots 1 and 2 shall be shown on the Subdivision Plan. No building permit shall be issued until the well has been constructed and tested in accordance with §22-719. A Township permit is required for construction of any well.
 20. §22-719.7 – For all residential subdivisions containing three or more lots/units, including the existing lot/unit, the applicant shall submit a Water Resource Impact Study in accordance with this section. The Applicant proposes 2 new units in addition to the 1 existing unit to remain.
 21. §22-719.11 – For subdivisions and/or land developments involving water supply wells, the applicant shall be required to enter into a Well Depletion Agreement including a well monitoring program with the Township as a condition of final plan approval in accordance with sections §22-719.11.A-C.
 22. §§22-406.1.C & 22-721.3 – Planning module approval is required to be obtained from the PADEP. The planning module shall be approved/executed by the applicant, responsible professional soil scientist, Bucks County Department of Health and Bucks County Planning Commission prior to Township approval.
 23. §22-721.4 – The applicant shall provide the type of sanitary sewer disposal facility consistent with the existing physical, geographical and geological conditions, and the Township's Act 537 Sewage Facilities Plan and Comprehensive Plan. The type, capacity, location and layout of an on-lot sewage disposal system shall comply with all rules, regulations and ordinances of the Township, the Bucks County Department of Health, PADEP and all applicable statutes of the commonwealth. The following comments pertain to the Township's Act 537 Plan:
 - a. Section 5.7.C requires that any Applicant seeking approval for a Single-Family Residential On-Lot Disposal System must provide the system that is highest on the Township's Priority List, Table 9A. An alternatives analysis should be provided if the Applicant proposes to deviate from the list in any way.
 - b. For single-family residential developments, Community On-Lot Sewage Disposal systems will not be considered as an approved alternative disposal method, unless otherwise specifically approved by the Supervisors after review of thorough alternatives analyses and Sewage Facilities Planning Modules.

24. §22-721.5 – Final plans shall not be recorded until a permit from the Bucks County Department of Health is issued for each proposed on-lot sewage disposal system, indicating the lot proposed for subdivision is suitable for the type of on-lot sewage disposal proposed.
25. §22-721.6 – If the property being subdivided contains an existing on-site sewage disposal system to remain, the applicant shall submit to the Township acknowledgment from the Bucks County Department of Health (or reputable inspection company) indicating that the existing system has been inspected and is functioning properly. The location of the system for the existing dwelling to remain on Lot 1 shall be shown on the plan and tested, unless the system is noted to be abandoned in accordance with applicable regulations.
26. §22-721.7 – All lots shall also be tested to identify a suitable septic system replacement area in the event the primary sewage system fails. The on-lot sewage replacement area shall be identified for each lot on the plans and the soil testing shall be approved by the Township and Bucks County Department of Health. An easement deed restricting the sewage replacement area from being built upon shall be provided and shown on the site plan. The sewage replacement area shall be located a minimum of 25 feet from the primary system and shall not be located directly down slope of the primary system, or within any well isolation area.
27. §22-721.9 – The property owner shall execute an operation and maintenance agreement with the Township and post the required financial security for any community sewage system, if approved. The design, plans, and specifications shall be approved by the County Health Department prior to final plan approval for Lot 1.

D. Stormwater Management Ordinance Comments

1. §22-712.5.A – All storm sewer systems shall provide the required capacity for the 100-year design storm based on the Rational Method. Pipe capacity calculations shall demonstrate that the runoff from the 100-year storm will be directed to the on-lot stormwater facilities.
2. §26-123 – The managed release concept is proposed to meet the volume control and water quality requirements which is permitted for situations where infiltration is infeasible and is subject to PADEP approval. The plan proposes MRC basins for Lots 1 and 2, however, no infiltration tests have been provided. A soils evaluation and infiltration testing shall be provided.
3. §26-123.2.C.(5)(b) – A minimum infiltration rate of 1/4 inches/hour shall be utilized and a safety factor of 50% applied for design purposes.
4. §26-124.1.C – When calculating the allowable peak runoff rates, developers do not have to account for runoff draining into the subject development site from an off-site area. However, on-site drainage facilities shall be designed to safely convey off-site flows through the development site. The drainage area to the basin on Lot 1 shall be revised to include the offsite drainage from the property to the east which ultimately drains to the basin to demonstrate it can safely handle these additional flows.
5. §26-125.3 – The time of concentration flow paths shall be shown on the drainage area plans to verify the times used in the report. All segments should be labeled.
6. §26-125.9 – The basins on Lot 1 and 2 are modeled with a storage capacity of 5,739 cf. This is inconsistent with the dimensions of the bed and the pipes listed in the MRC Underground Basin Detail noting 4,297 cf. It appears that the pond report models the distribution pipes at a length of 62 feet but then includes header pipes which would expand the size of the basin. The pond report should be revised to model the basin based on the dimensions specified.
7. §26-132 – The following discrepancies shall be addressed:
 - a. The pipe connection from STRU 01 at the Lot 1 basin outlet structure is on the same side of the structure as the discharge pipe and will allow these flows to bypass the basin and discharge directly to the level spreader. In addition, these pipes are at similar elevations and will be in conflict. The storm layout should be revised to provide a separate connection.

- b. The Basin Outlet Structure Detail shows a 20" wide x 4" high orifice opening in the outlet structure and would not function within a stone bed. The outlet structure should be revised to provide the orifice opening within the structure.
 - c. The MRC Underground Basin Detail on Sheet 6 shows six (6) pipes but the Distribution Pipe Specifications table notes four (4) pipes. This is also not consistent with the plan which only shows two (2) pipes. The number of pipes in the MRC Basin should be clarified and the correct number of pipes should be shown on the plan and in the detail.
 - d. The level spreader for Lot 2 notes a grate elevation of 518.00. This is higher than the proposed 516 contour and should be revised.
 - e. The underdrain envelope dimensions specified in the Underdrain Bedding detail on Sheet 6 is inconsistent with the envelope listed in the Standard Underdrain/ MRC Stormwater Facility Detail. In addition, one detail specifies filter fabric around the stone envelope while the other specifies it around the pipe. These discrepancies should be resolved.
 - f. The Basin Outlet Structure Detail on Sheet 6 notes a 6-inch underdrain and is not consistent with the Underdrain Specifications table which notes a 4-inch underdrain. The size of the underdrain should be clarified. In addition, the location of the underdrain pipe in the basin should be shown on the plans.
 - g. The profile view of the MRC Underground Basin Detail notes BMP Soil Mix within the stone area. If a soil mix is proposed, the depth below the stone should be specified. Otherwise, this text should be removed.
 - h. The type of erosion control matting downslope of the level spreader should be specified on the level spreader detail.
 - i. The plans include a detail for a concrete endwall with wing walls. This is not consistent with the plan which shows a D-E endwall. In addition, the plans include details for riprap aprons at both D-E and D-W endwalls. The type of endwall should be clarified and the details revised as necessary.
8. §26-132.2.B.(2)(a)5 – The following issues related to the drainage areas should be addressed:
- a. Based on the drainage area plan and storm design, runoff from the two new houses and driveways are proposed to be directed to the on-lot stormwater facilities. Though future improvements may be limited by the riparian buffer, it shall be documented on the plans if any future impervious areas within the rear yards and bypass area is accounted for.
 - b. Based on the proposed contours, it appears a majority of the overland flow from Lot 1 will bypass the inlets and discharge onto Lot 2. The proposed grading should be revised to direct runoff to the inlets.
 - c. Based on the proposed contours, it appears the runoff from the front of Lot 2 will be directed away from the inlets over the basin. The grading should be revised to direct the runoff to the inlets.
 - d. All inlets should be sumped a minimum of 6 inches to ensure the overland flow shown on the drainage area map is captured by the inlet.
 - e. A portion of the Lot 1 stormwater facility is current proposed under the new driveway. The location shall be clarified.
 - f. The limits of the stone for the level spreaders shall be added to the plan view.
9. §26-132.2.C.(9) – The signature line from this section should be added to the Post Construction Stormwater Management Plan. The PCSWM Plan should also be added to the plans to be recorded.
10. §26-162 – The following comments related to the O&M responsibilities should be addressed:
- a. O&M responsibilities should be provided for the level spreader.

- b. The O&M responsibilities should be updated to note that “Inspections should be conducted during or immediately following precipitation events. A written inspection report shall be created to document each inspection. The inspection report shall contain the date and time of the inspection, the individual(s) who completed the inspection, the location of the BMP, facility or structure inspected, observations on performance, and recommendations for improving performance, if applicable. Inspection reports shall be submitted to the Municipality within 30 days following completion of the inspections include keeping a log of inspections and maintenance completed for submission to the Township as requested.”
 - c. The Sequence of Construction on Sheet 6 specifies a rain garden and should be revised.
11. §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.
 12. 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 \$0.25 for every square foot of net increase in impervious area and will be calculated once the layout is finalized. (2023 Fee Resolution)

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

Sincerely,



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

JM/tw

cc: David Conroy, Director of Planning and Zoning
Ryan Gehman, Assistant Planning and Zoning Officer
Randy Teschner, Code Enforcement/Fire Marshal
Ryan Cressman, Public Works Superintendent
Sean Gresh/Jeffrey P. Garton, Township Solicitors
Joe Casadonti, Applicant
Robert T. Cunningham, P.E., Holmes Cunningham, LLC
Craig D. Kennard, P.E., E.V.P., Gilmore & Associates, Inc.



Kristin Holmes, P.E., LEED AP
Robert Cunningham, P.E., LEED AP

June 8, 2023

Matt West, Township Manager
New Britain Township
207 Park Avenue
Chalfont, PA 18914

RE: 396 King Road – Preliminary Plan Review 2
TMP#: 26-004-030
New Britain Township, Bucks County, PA
HCE Project No.: 1734

Dear Matt:

We are in receipt of a review letter for the above-referenced project. Enclosed are copies of the revised documents. Below please find responses to each of the comments contained in those letters.

Review Letter from Gilmore & Associates, Inc. dated March 14, 2023.

A. Zoning Ordinance

We have identified the following issues with the proposed plan regarding the requirements and provisions of the current New Britain Township Zoning Ordinance:

1. §27-502.b.3. & 505.1 – Natural resource protection land, such as watercourses, agricultural soils, woodlands, and steep slopes are proposed to be protected and preserved on each site through a conservation easement on each lot. We offer the following comments related to the proposed conservation easements.
 - a. The area of each conservation easement on each lot shall be noted on the Record Site Plan and metes and bounds provided.
Response: The areas of each conservation easement on each lot have been added to the Record Site Plan.
 - b. The plan notes that all areas located outside of the limits of disturbance are to remain as existing cover. These areas include agricultural soils which are required to be protected and not permitted to be disturbed. The applicant shall discuss if the farming use is proposed to be continued and if the Easement Agreement allows for change in ground cover.
Response: Acknowledged.
 - c. We recommend the Easement Agreement indicate that the purpose of the conservation easements is for the protection and maintenance of the natural resources and allows New Britain Township to access the easements for inspection and emergency repair/maintenance should the property owner fail to honor their maintenance responsibility. (§22-712.A.(3)&(4)).
Response: Acknowledged. Easement Agreements will be prepared and provided under a separate cover.

2. §27-502.b.5. – When an applicant is proposing a land development, the stormwater management facilities shall be designed to manage the runoff from the maximum impervious surface permitted for the entire site. The Runoff Coefficient calculations for PR-1 through 6 appear to account for 3.84 acres of impervious. Based on the Ratio Base Site Area of 30.04 acres for the 6 lots and approximately 0.62 acres of impervious for the Henry Court and the widening along King Road, the stormwater management systems shall be designed to manage a total of 4.22 acres of impervious. The total impervious considered in the stormwater design shall be tabulated on the plans and the stormwater report revised to manage the maximum impervious.

Response: The Stormwater design has been designed to handle all new and future impervious for the new lots. The outstanding additional impervious is future impervious for the existing house (lot 4). A location for a proposed future stormwater management facility has been added to the plan.

3. §27-2400.4.i – For major subdivisions, replanting of the riparian corridor is required where there is little or no existing streamside vegetation and in accordance with this section. An evaluation of the existing vegetation along the stream shall be provided to determine if any revegetation is required or else a site meeting scheduled with our office to review the vegetation. Based on Sheet 4 of 15, there is an area of riparian corridor on Lot 6 that does not have existing vegetation. Ground cover is required along with trees at a rate of one overstory tree and three shrubs for every 20 feet of waterway.

Response: The landscaping plan has been revised to show proposed landscaping on lot 6 in the area where there is no vegetation located in the riparian corridor.

B. Subdivision and Land Development Ordinance Waivers

The following waivers from the Subdivision and Land Development Ordinance have been formally requested by the Applicant in a letter dated September 22, 2022, last revised February 8, 2023:

1. §22-403 & 404 – From providing separate preliminary and final plan submissions.
Response: Acknowledged.
2. §22-502.D – From the requirement to show existing features within 100 feet of the tract boundary conditioned on providing an aerial map and any additional information requested by the Township Engineer, which we support.
Response: Acknowledged.
3. §22-502.1.H – From providing a lighting plan, which we support.
Response: Acknowledged.
4. §22-703.4.C – From the requirement that lot lines shall be drawn parallel, concentric, at right angles or radial to the street right-of-way line. Several lot lines are not perpendicular or radial to the Henry Court right-of-way line.
Response: The lot lines have been revised to remain straight until the front yard setback.

5. §22-705.3.C – From constructing full width road improvements along King Road, a minor collector road which requires a 60-foot ultimate right-of-way and 36-foot cartway. The waiver request letter shall be revised to include this waiver. We recommend a waiver to allow partial widening along King Road of 2 ft of widening where 10 ft is required, with the following conditions:
 - a. A 30-foot ultimate right-of-way along King Road offered as an easement to the Township.
Response: Acknowledged.
 - b. As noted on the Record Plan, Site Plan Note 16, all dead trees, live trees and branches interfering with the existing overhead lines removed within the proposed King Road U.R.O.W.
Response: Acknowledged.
 - c. As noted on the Existing Features plan, 2 utility poles relocated near the proposed entrance.
Response: Acknowledged.
 - d. As shown, the entrance culvert replaced with a minimum 15” diameter pipe.
Response: Acknowledged.
 - e. Based on a site visit, there are areas of erosion along the watercourse on both Lots 1 and 6. We recommend any areas of erosion be stabilized, down trees removed from the watercourse, and any associated permits obtained from PADEP, as required.
Response: Acknowledged.
6. §22-705.3.E – From the requirement to design private streets to the specifications of a local street related to cartway width. A 20-foot private street is proposed where a 28-foot-cartway is required. We support a waiver conditioned on approval of the truck-turning templates by the Fire Marshal.
Response: Acknowledged.
7. §22-705.3.G– From providing a 1 ½ - inch mill and overlay of King Road along the subdivision. The plan currently proposes 2 feet of widening along the King Road frontage. Based on a discussion with the Public Works Superintendent, the road was originally a dirt road tar and chipped over the years and, therefore, we do not recommend a waiver. We would support a partial waiver from milling King Road, with the condition that a leveling course be installed along with 1 ½ of wearing course. We recommend that the development document the existing road conditions prior to construction.
Response: Acknowledged.
8. §22-705.8.C. – From providing a left-side turnaround configuration for the cul-de-sac with a minimum right-of-way radius of 60 feet and a minimum paving radius of 50 feet. The plan proposes a 20-foot-wide loop road at the end of the access road, which we support.
Response: Acknowledged.

9. §22-705.8.F. – From providing a 15-foot by 20-foot snow storage easement along the right-of-way of the cul-de-sac bulb, which we support.
Response: Acknowledged.
 10. §22-706 – From providing curb and sidewalk along the property frontage of King Road and the proposed private street, which we support.
Response: Acknowledged.
 11. §22-707.A – From providing pedestrian walkways or recreational trails at locations deemed necessary by the Board, which we support. Due to existing utilities, topography, and natural resources, it appears that the opposite side of King Road may be better location for any future trail.
Response: Acknowledged.
 12. §22-713.4.B – From the requirement that street trees be planted between three and five feet outside the ultimate right-of-way line and in an informal arrangement when approved by the Board. In addition, the waiver request should be revised to include a partial waiver from §22-713.4.A. to allow existing trees to partially satisfy the street tree requirement. The Applicant proposes to supplement the existing vegetation with an additional 50 trees. We support this waiver.
Response: Acknowledged.
 13. §22-714.3.A – From providing streetlights at the intersection and turnaround. We support this waiver conditioned on the lamp posts being installed as shown on the plan.
Response: Acknowledged.
 14. 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 partial road widening, curb, sidewalk, streetlighting, etc., if granted. If waived, a cost estimate of the required improvements above with credit for the road improvements to be installed shall be submitted for review. We recommend this cost be estimated by the Applicant's Design Professional and submitted to our office for review prior to the Board of Supervisors taking action on the plans.
Response: A cost estimate has been provided for all waived improvements located inside the public right-of-way.
- C. Subdivision and Land Development Ordinance
We have identified the following issues with the proposed plan regarding the requirements and provisions of the current Subdivision and Land Development Ordinance (SALDO):
1. §22-406.1 – The Applicant is responsible for any other required reviews, approvals, permits, etc. (i.e., BCPC, BCCD, PADEP, Fire Marshal, Township Road Opening Permit, Well Construction Permits, etc.) as applicable.
Response: Acknowledged.
 2. §22-502.A.(4) – The following issues related to the property line and bearings and distances on the Record Site Plan shall be addressed:

- a. The bearings and distances for the line at the southern end of the King Road Ultimate Right-of-way is cut off from the plan and shall be revised.
Response: The Record Site Plan has been revised so the bearings and distances are legible.
- b. The distance between the roadway centerline and the ultimate right-of-way of King Road shall be dimensioned on the plan.
Response: The distance between the roadway centerline and the ultimate right-of-way of King Road has been dimensioned on the plans.
3. §22-502.B. – The following comments regarding plan notes/presentation shall be addressed:
 - a. A wetland report has been provided indicating that no wetlands are present on the site. A signed wetlands certification shall be added to the Record Site Plan indicating the absence of wetlands on the site.
Response: The Wetlands certification has been added to the Record Site Plan.
 - b. At several locations along the road, the ultimate right-of-way appears to be slightly less than the required 30 feet. The distance between the centerline of King Road and the ultimate right-of-way shall be dimensioned on the plan on either side of the proposed intersection with Henry Court.
Response: The distance between the roadway centerline and the ultimate right-of-way of King Road has been dimensioned on the plans.
 - c. Once the waivers and design are finalized, a plan view detail and cross-section detail shall clarify the proposed King Road improvements.
Response: Acknowledged.
 - d. Several unidentified dashed and solid lines are shown on the Record Site Plan at the intersection of Henry Court and King Road. The existing storm sewer and notes related to the removal of the existing wall are shown on this plan as well. All unnecessary lines and notes should be removed from the Record Site Plan.
Response: The Record site has been updated accordingly.
 - e. The erosion control matting shall be included in the legend on the E&S Plan.
Response: Erosion control matting has been added to the legend on the E&S Plan.
 - f. The legend on the PCSWM Plan shall be revised to match the information on the plan.
Response: The legend on the PCSWM Plan has been revised.
4. §22-502.B.(11) – Legal descriptions are required for the new lots, natural resource conservation easements, ultimate right-of-way easement for King Road, private

access easement, defined stormwater easements, proposed utility easements, back up septic system easements and any other easements which may be proposed. All easements shall be labeled with metes and bounds.

Response: Legal descriptions will be provided under a separate cover.

5. §22-502.E(5), (8), & (9) – The location, size and material of the sanitary sewer pipe, water supply lines and well locations shall be shown on the Grading, Drainage and Utility Plan to verify they do not conflict with any other proposed improvements.

Response: The location, size and material of the proposed utilities have been added to the Drainage and Utility Plan.

6. §22-705.12. – All proposed street names shall be reviewed by the Township Fire Marshal's office for duplication then approved by the Board of Supervisors. The Applicant shall formally request approval of the proposed street name from the Board of Supervisors.

Response: Acknowledged.

7. §22-705.12.G – We offer the following comments relative to signage:

- a. The location of all traffic signage shall be shown on the Record Plan and signage details provided.

Response: Traffic signage has been added to the Record Plan.

- b. "No Parking" signs shall be provided along the private street to ensure adequate access is provided for emergency vehicles, delivery trucks, buses, and trash trucks.

Response: No parking signs have been added to the plans.

8. §22-710 – We defer to the Township Fire Marshal for review of the plans with respect to water supply, emergency access, etc.

Response: Acknowledged.

9. §22-711.3– Erosion controls shall be provided for the following:

- a. The plans notes that the existing driveway is to be used as a construction entrance. A note should be added, stating that if any mud or stone is tracked onto King Road, a full construction entrance shall be required. It appears that a construction entrance is required at the existing driveway to provide egress from Lots 3 and 5, unless the road is constructed first, in which case a construction entrance shall be provided for the roadwork.

Response: General Note 8 has been added to the E&S plan. The existing driveway will serve as the construction entrance to the site.

- b. For the replacement of the 36" RCP culvert pipe.

Response: A detail has been provided on plan sheet C3.2 for the 36" RCP culvert pipe.

- c. For the installation of the culvert pipe and road widening along King Road.

Response: E&S features have been proposed for the installation of the culvert pipe and the road widening along King Road.

- d. For the installation of the storm pipes from Henry Court to Lots 1 and 5.
Response: Silt fence has been added to the plans for storm pipes from Henry Court to Lots 1 and 5.
- e. Along the northeastern side of Henry Court between Lot 1 and King Road to capture any sediment that bypasses the inlet during construction.
Response: Silt Sock has been added to capture any sediment that may bypass the inlet during construction.
10. §22-711.3 – The following comments related to grading shall be addressed:
- a. Existing and proposed spot elevations should be provided for the connection between Henry Court and King Road to demonstrate adequate drainage at the intersection.
Response: A spot elevation for the existing and proposed elevation at the centerline of Henry Court and the intersection with King Road has been added to the plans.
- b. The proposed contours appear to direct runoff towards the dwellings on Lots 1 and 2. Spot elevations shall be provided at the corners of the dwellings and the contours revised as necessary to demonstrate drainage away from the dwelling.
Response: The site grading has been revised to direct water around the proposed dwellings.
- c. The existing 438 contour is shown at the headwall for the culvert pipe along King Road with an invert elevation of 437.75. This will result in the pipe being exposed at this location. The grading should be revised to provide a minimum of 1 foot of cover over the pipe.
Response: The grading has been revised to show a minimum of 1 foot of cover over the pipe.
- d. The proposed contour for the rain garden bottom at Lot 3 is listed at 456 and appears that it should be 458. The rain garden elevation should be clarified.
Response: The grading in the Lot 3 Rain Garden has been revised to reflect the correct rain garden bottom elevation.
11. §22-713.2.A & B – The plan shows four existing trees and canopy to remain in the cul-de-sac area, however, grading is proposed which may impact the trees. If these trees die as a result of construction, they will be required to be replaced prior to the end of the maintenance period.
Response: General landscape note 4 has been added to plan sheet C6.0.
12. §22-713.5.B.(3) – Multiple trees and shrubs are proposed on the downward slope of the rain garden embankment berms. The plant material shall be relocated to toe of slope.
Response: The proposed trees have been relocated accordingly.

13. §22-713.6.A – The proposed trees for the rain gardens on Lots 1, 2, 5 and 6 shall be relocated to a minimum distance of 10 feet to all underground utilities, including storm sewer. In addition, plantings shall be relocated outside of the existing cable easement.

Response: The proposed trees have been relocated accordingly.

14. §22-715.2.C.(1) – Park and recreation land is required at a ratio of 2,500 square feet per new dwelling unit or 12,500 square feet. The land shall be dedicated to the Township or other entity as may be approved by the Board. A fee-in-lieu of park and recreation at a rate of \$2,500 per dwelling unit or \$12,500.00 for the 5 new dwellings may be provided at the Board's discretion.

Response: Acknowledged.

15. §22-716 – Concrete monuments shall be placed at all outbound existing property corners, at all proposed lot corners, including changes in direction of boundary, along the King Road ultimate right-of-way, along the private access easement, along all existing and proposed easements including conservation easements, defined stormwater or storm sewer easements, etc. Monumentation shall be provided in lieu of pins along the property lines, changes in horizontal direction, conservation easements, backup septic easements, existing easement, and along the King Road ultimate right-of-way.

Response: Concrete Monuments have been proposed at all necessary locations.

16. §22-719.7.& 8. – The Applicant has submitted a Water Resource Impact Study to the Township. The Applicant shall comply with our Review Memo 1 dated March 1, 2023. We note that it shall be demonstrated that the proposed Lot 2 well will be able to meet the long-term yield.

Response: Acknowledged. The Water Resource Impact Study has been revised to address the concerns of the township staff.

17. §22-719.11. – For subdivisions and/or land developments involving water supply wells, the applicant shall be required to enter into a Well Depletion Agreement including a well monitoring program with the Township as a condition of final plan approval in accordance with sections §22-719.11.A-C. The approved Well Monitoring Program shall be attached to the Well Depletion Agreement.

Response: Acknowledged.

18. §22-721. – Planning module approval is required to be obtained from the Pennsylvania Department of Environmental Protection (DEP). We recommend the Planning Commission and Board of Supervisors review the Planning Module submission and approve it at an upcoming meeting.

Response: Acknowledged.

19. §22-721.7 – The location of the well isolation area for Lot 4 shall be shown on the plans.

Response: The location of the well isolation area for lot 4 has been added to the plans.

20. §22-721.8 – The applicant shall provide to each lot owner a plan and specifications of the on-lot sewage disposal systems and all operational manuals required for the use and proper maintenance of the systems.

Response: Acknowledged.

D. Stormwater Management Ordinance Comments

We offer the following comments related to the Township's Stormwater Ordinance:

1. §22-712.4 – The Applicant proposes a new rain garden for each of the proposed lots. While the rain gardens aren't identified as detention basins, they are controlling the peak rates for stormwater runoff. We recommend a partial waiver from this section of the Ordinance related to detention basins, conditioned on the following:

- a. §27-502.b.5 – Per the above-noted Zoning comment, the rain gardens shall manage the maximum impervious permitted for the site in accordance with the Township's Stormwater Ordinance.

Response: Acknowledged.

- b. §22-712.4.A – Though the plans identify the proposed stormwater facilities as rain gardens and not detention basins, the facilities are still detaining stormwater runoff. The emergency spillways are design to the exact elevation of the 100 year storm. If the basins are not constructed to the design volume, this will result in discharge from the spillway and possibly an increase in the peak flows from the site. We recommend the spill elevations be raised to provide freeboard.

Response: The rain gardens have been re-graded to provide 6" of freeboard from the 100-year storm elevation to the emergency spillway elevation.

2. §22-712.5.A – All storm sewer systems shall provide the required capacity for the 100-year design storm based on the Rational Method. The following issues related to the pipe capacity calculations should be addressed:

- a. The Culvert Report for the 36-inch pipe crossing under Henry Court notes a high-water elevation of 436.36. This is higher than embankment and will result in overflow across Henry Court which could damage the road. The pipe size should be increased or the grading around the pipe revised to prevent the flows to this culvert from overtopping the roadway.

Response: The grading has been revised to raise Henry Court so it will not overflow during the 100-year storm event.

- b. The Storm Sewer Tabulation shall label the storm sewer structures to verify the data.

Response: An inventory matching the Line ID to the Plan View Structure name has been added to the Storm Sewer Analysis.

- c. The Storm Sewer Tabulation models the 15" RCP along King Road with a drainage area of 0.20 acres. An offsite drainage area map shall be provided to verify the drainage area to this headwall.

Response: An offsite drainage area map with an aerial background has been provided with this submission.

- d. The report models the pipe between Manhole Structure STR 13 and the endwall along King Road as a 15-inch pipe which shall be revised to an 18-inch pipe.

Response: The report has been revised to an 18-inch pipe.

3. §22-712.6.A. – All inlets to be utilized in a storm sewer system shall conform to the design standards of the most current PennDOT Publications 408 and 72. The inlet details reference PennDOT Pub 72M, RC-34. This should be revised to specify RC-46M.

Response: The inlet details have been revised accordingly.

4. §22-712.6.C. – Inlet spacing in paved areas shall be arranged so that a minimum of 80% of the gutter flow tributary to the inlet will be captured. Inlet capacity reports shall be provided for the inlets along Henry Court. Inlets STRU 07 and 15 along Henry Court shall be noted to be sumped to ensure they capture the design subdrainage area.

Response: The inlet grate elevations for inlets STRU 07 and 15 have been revised to have a 6" sump and the call outs have been revised to reference a sumped condition.

5. §22-712.8.D. – Rock apron shall be placed at all headwalls and endwalls. The rip rap apron details on Sheet 10 only reference PRA-1 and PRA-2 for Lots 1 and 2. The 24-inch pipe size listed in the detail for PRA-1 is not consistent with the proposed pipe. Rip Rap apron details shall be provided for the discharge pipes on Lots 1 and 5, for the 36" RCP culvert crossing Henry Court, and the 18" RCP along King Road.

Response: Rip-Rap aprons have been added to the plans.

6. §22-712.12.A. – All proposed driveways, where curbs and storm sewer are not required by the Board, shall have a culvert with flared end sections or endwalls. Runoff is proposed to be directed over the proposed driveways. Twenty-four (24) foot long 15" RCP culverts or concrete trench boxes with grates shall be provided.

Response: Pipes and flared end sections have been added to the plans where necessary to prevent runoff from washing over the proposed driveways where they intersect with Henry Court.

7. §26-125.3 – The time of concentration flow paths shall be shown on the drainage area plans and calculations provided in the report to verify the times used for the hydrographs.

Response: The time of concentration flow paths have been added to the drainage area figures.

8. §26-123 –The following discrepancies with the stormwater management design and plans shall be addressed:

- a. The BMP Invert elevations listed in the Rain Garden MRC BMP Elevations table on Sheet 12 are inconsistent with the proposed contours shown on

the Grading, Drainage and Utility Plan. The detail and proposed contours shall be revised to clarify this discrepancy.

Response: One foot contours have been added to the grading and drainage plan to depict the rain garden elevations more clearly.

- b. The level spreader on Lot 6 has a grate elevation of 446.00 which is 1 foot higher than the invert from the outlet structure and will result in a tailwater effect for this rain garden. The elevations and report shall be clarified.

Response: The grate elevation of the lot 6 level spreader has been revised to alleviate the tailwater condition.

- c. The Hydrograph for the proposed total undetained flows includes offsite flows (POS-5). Based on the drainage area map, a separate hydrograph shall be provided combining offsite flows with the flows from PR-5 Detained for the Lot 6 MRC Routing. The hydrographs shall be revised.

Response: The routing for the Lot 6 MRC facility has been revised accordingly.

9. §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.

Response: Acknowledged.

10. The Stormwater BMP Maintenance Fee applies to all proposed stormwater BMPs installed in the Township to provide a financial guarantee for the timely installation, proper construction and continued maintenance by the owner. The fee will be calculated once the engineer's estimate of probable cost is submitted and is based on 5% of the construction cost not to exceed \$10,000.00. (Township Resolution 2019-03)

Response: Acknowledged.

11. §22-712.13.D & 2022 Fee Resolution – The storm sewer fee for the development will be \$2.50 per linear foot of existing and proposed roads. Based on 948 feet of frontage on King Road and 743 feet along Henry Court, a fee of \$4,227.50 would be required.

Response: Acknowledged.

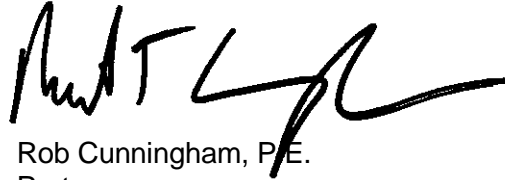
E. General Comments

1. The bridges in the area may not support anticipated construction vehicle traffic on King Road near Swamp Road or on Keller Road. Chapman Road should not be accessed by heavy trucks due to the existing road width and condition. As a side note there have also been discussions regarding construction at the County bridge on King Road near Swamp Road.

Response: Acknowledged.

If you have any questions or require additional information, please do not hesitate to contact us at 215-586-3330 or rob@hceengineering.net

Very truly yours,
Holmes Cunningham Engineering

A handwritten signature in black ink, appearing to read 'Rob Cunningham', with a long horizontal flourish extending to the right.

Rob Cunningham, P.E.
Partner

Cc:

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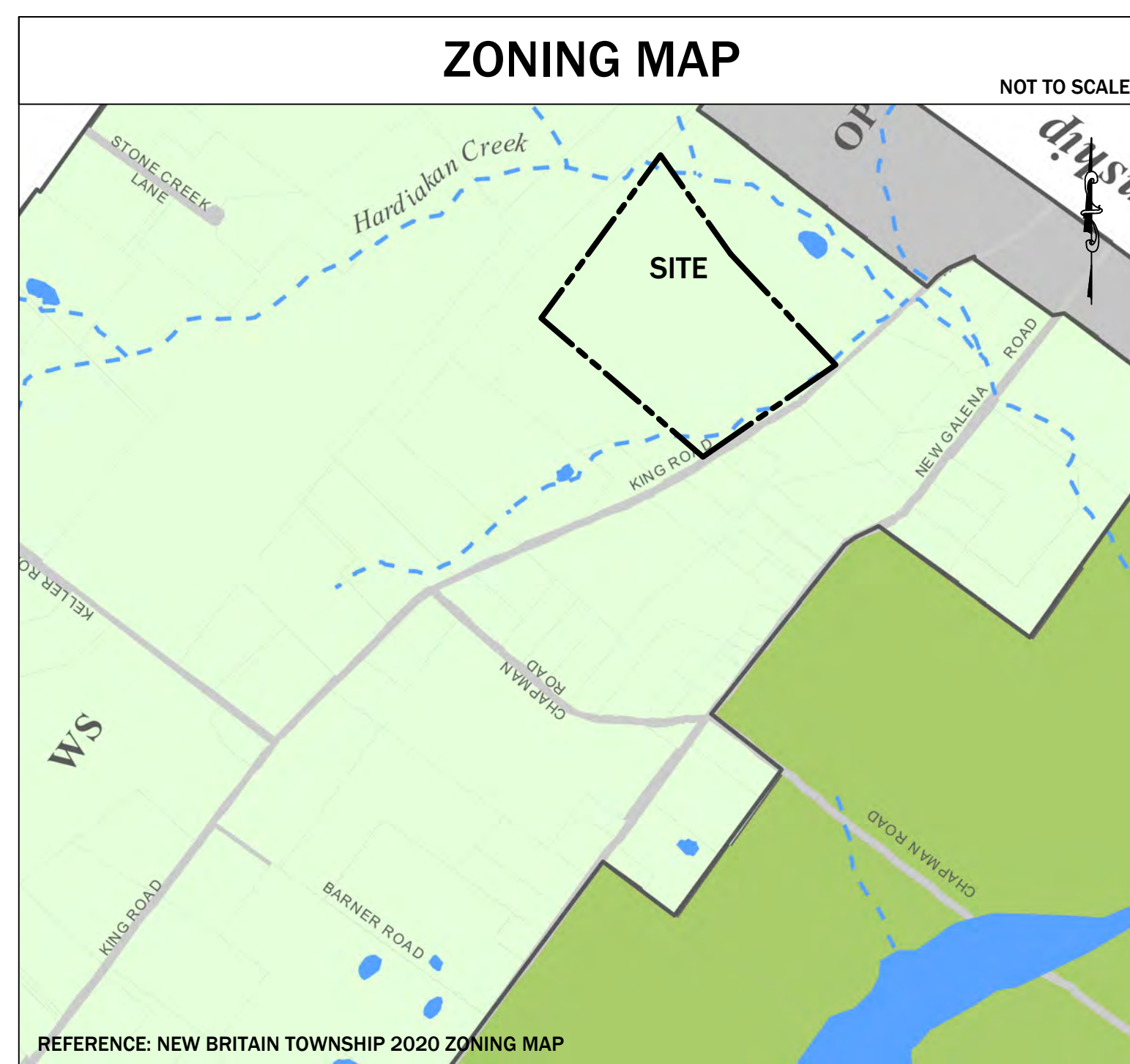
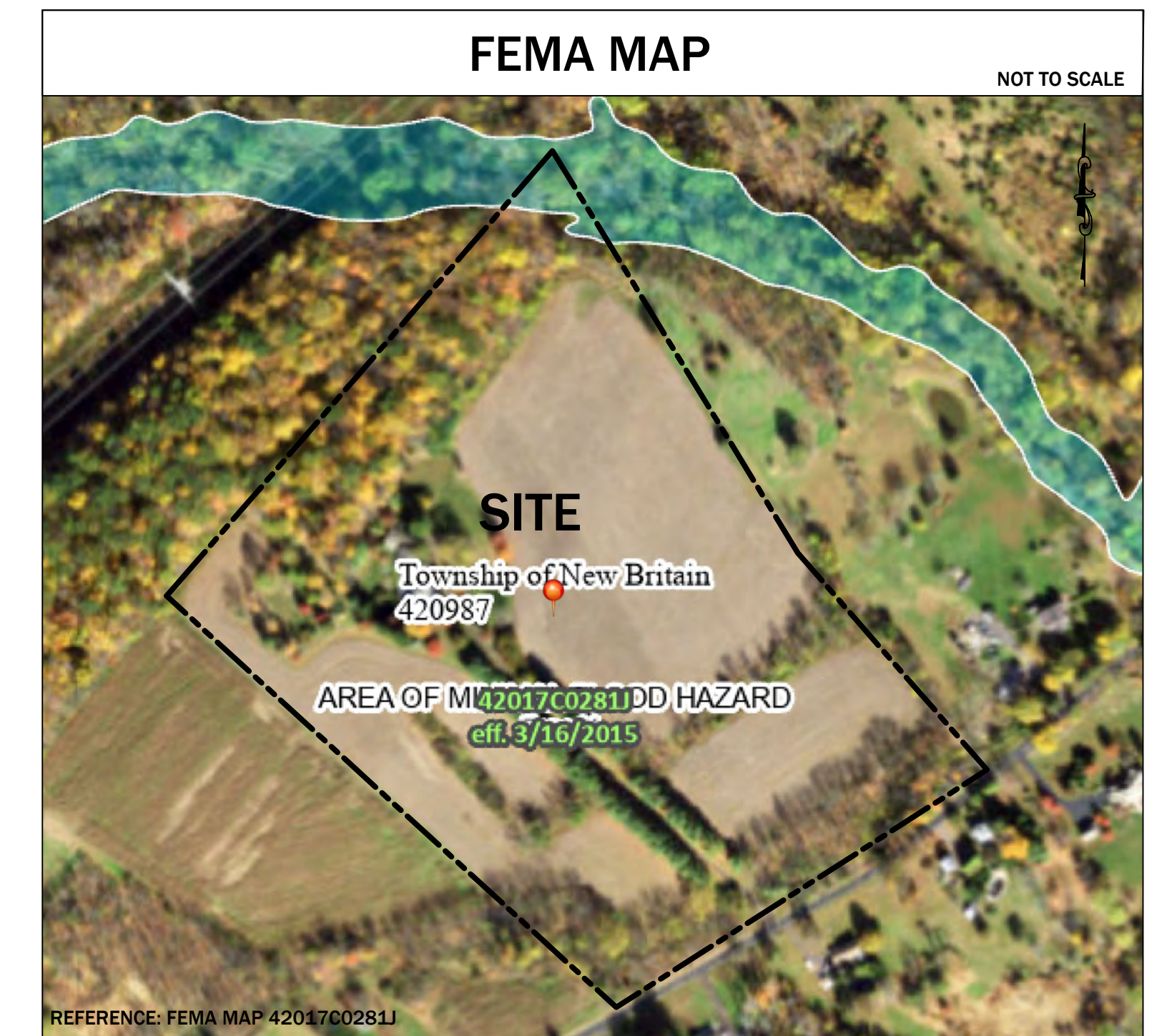
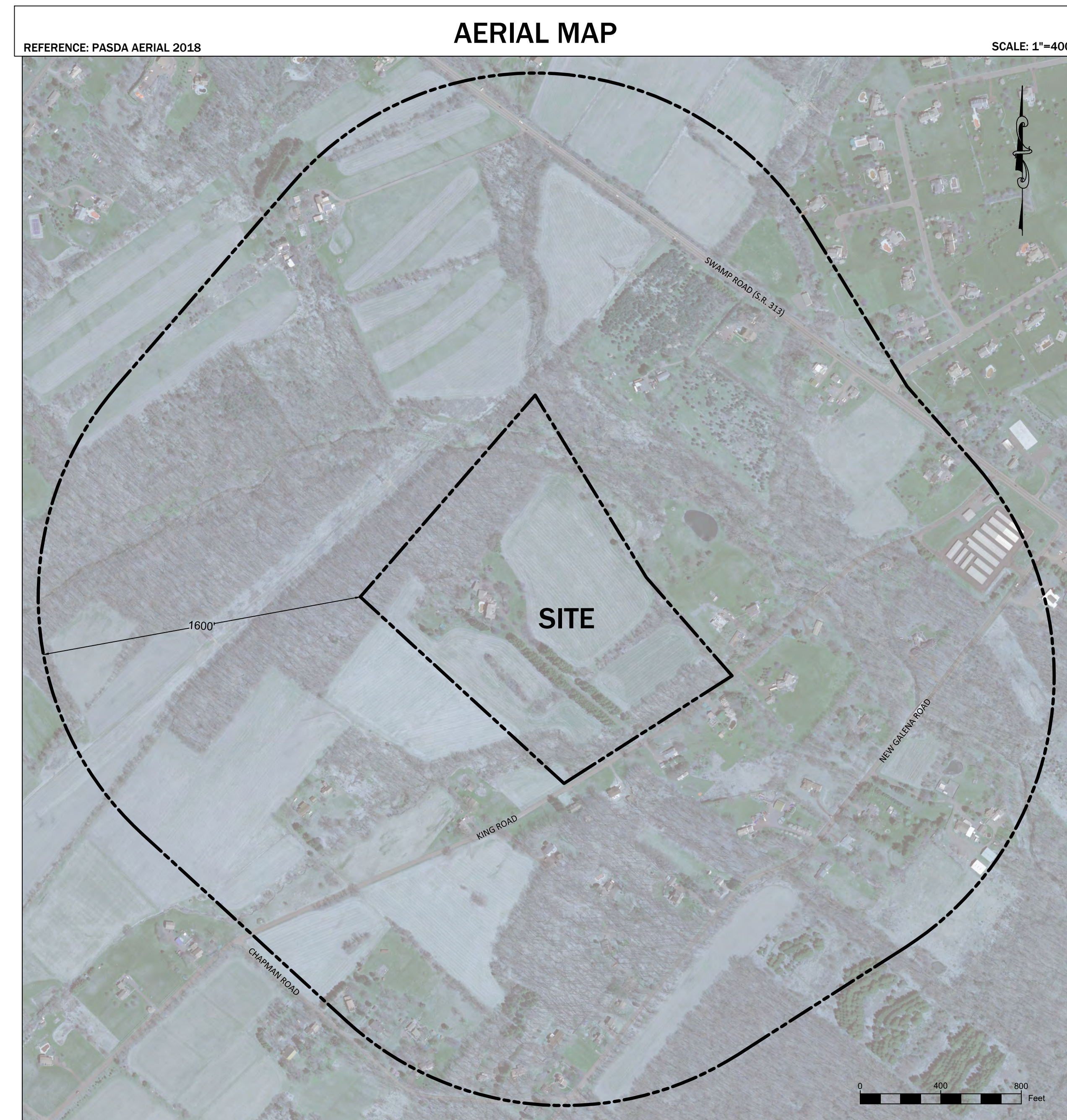
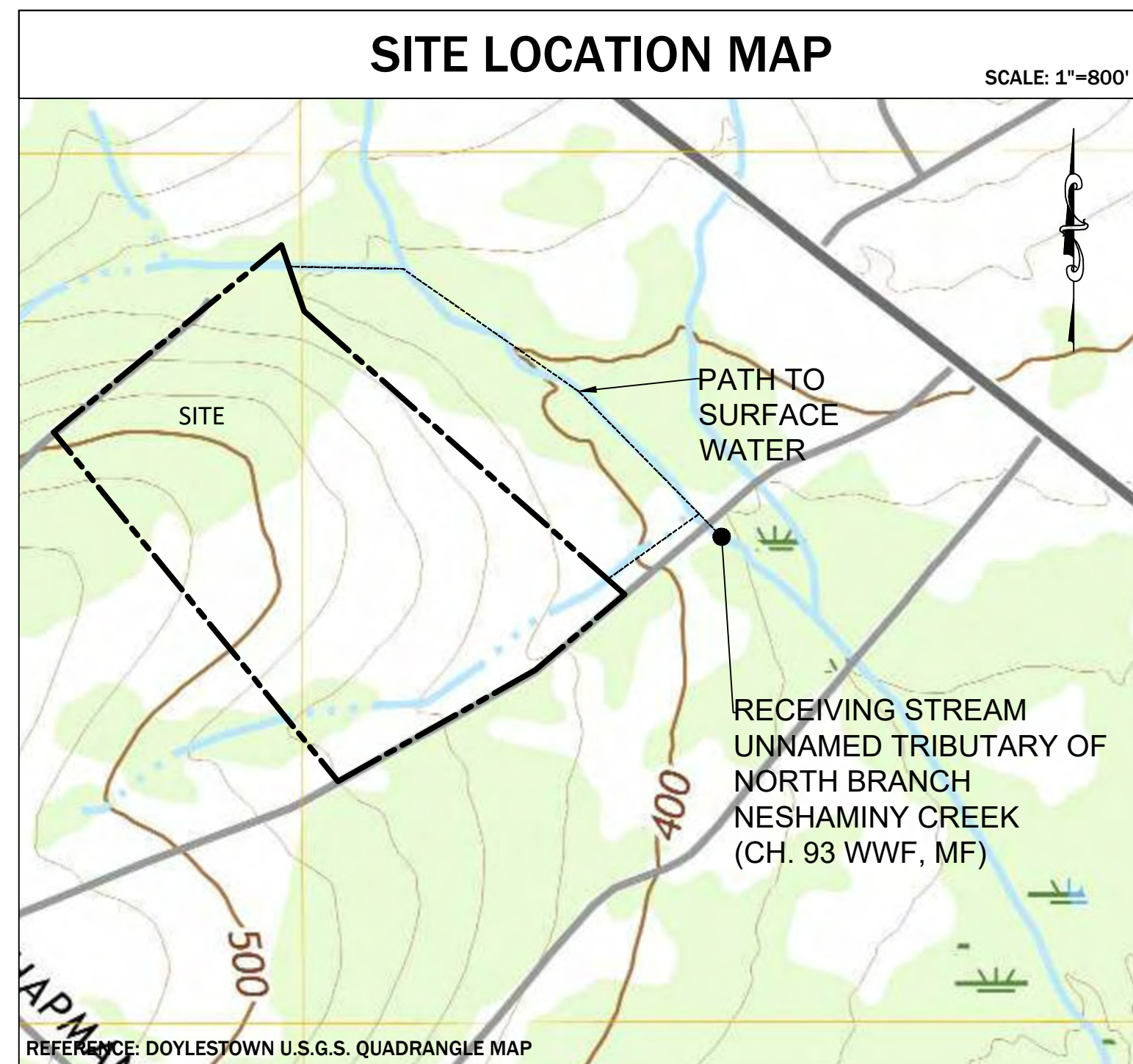
PRELIMINARY AND FINAL LAND DEVELOPMENT AND MAJOR SUBDIVISION PLANS

FOR

THE ESTATES AT HILL TOP

TMP # 26-004-030

NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA



DRAWING LIST			
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
1	C0.0	COVER SHEET	6/8/2023
2	C0.1	EXISTING CONDITIONS PLAN	6/8/2023
3	C0.2	AERIAL MAP	6/8/2023
4	C0.3	EXISTING RESOURCE AND SITE ANALYSIS PLAN	6/8/2023
5*	C1.0	RECORD SITE PLAN	6/8/2023
6	C2.0	GRADING, DRAINAGE AND UTILITY PLAN	6/8/2023
7	C2.1	CONSTRUCTION DETAILS	6/8/2023
8	C3.0	EROSION AND SEDIMENT CONTROL PLAN	6/8/2023
9	C3.1	EROSION AND SEDIMENT CONTROL DETAILS	6/8/2023
10	C3.2	EROSION AND SEDIMENT CONTROL DETAILS	6/8/2023
11*	C4.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	6/8/2023
12	C4.1	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	6/8/2023
13	C5.0	TRUCK TURN & PROFILE PLAN	6/8/2023
14	C6.0	LANDSCAPING PLAN	6/8/2023
15	C6.1	LANDSCAPING DETAILS	6/8/2023

* DENOTES PLAN TO BE RECORDED

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 ALMHOUSE NESHAMINY MANOR CENTER
1260 ALMHOUSE ROAD
DOYLESTOWN, PA 18901
PHONE: 215-345-3400

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

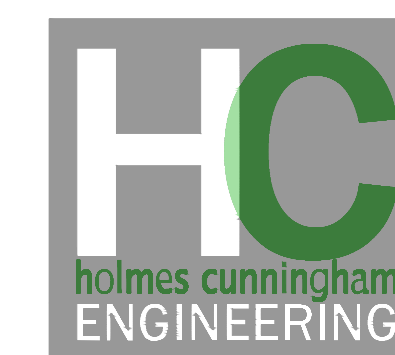
PECO
WARMINSTER SERVICE BUILDING
400 PARK AVE.,
WARMINSTER, PA 18974
ELECTRIC PHONE: (215) 956-3270
NEW ELECTRIC PHONE: (215) 956-3010
ELECTRIC EMERGENCY: (800) 841-4141
GAS PHONE: (800) 454-4100
NEW GAS PHONE: (800) 454-4100
GAS EMERGENCY: (800) 841-4141
GAS EMERGENCY(ALT): (844) 841-4151

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

APPLICANT/ EQUITABLE OWNER

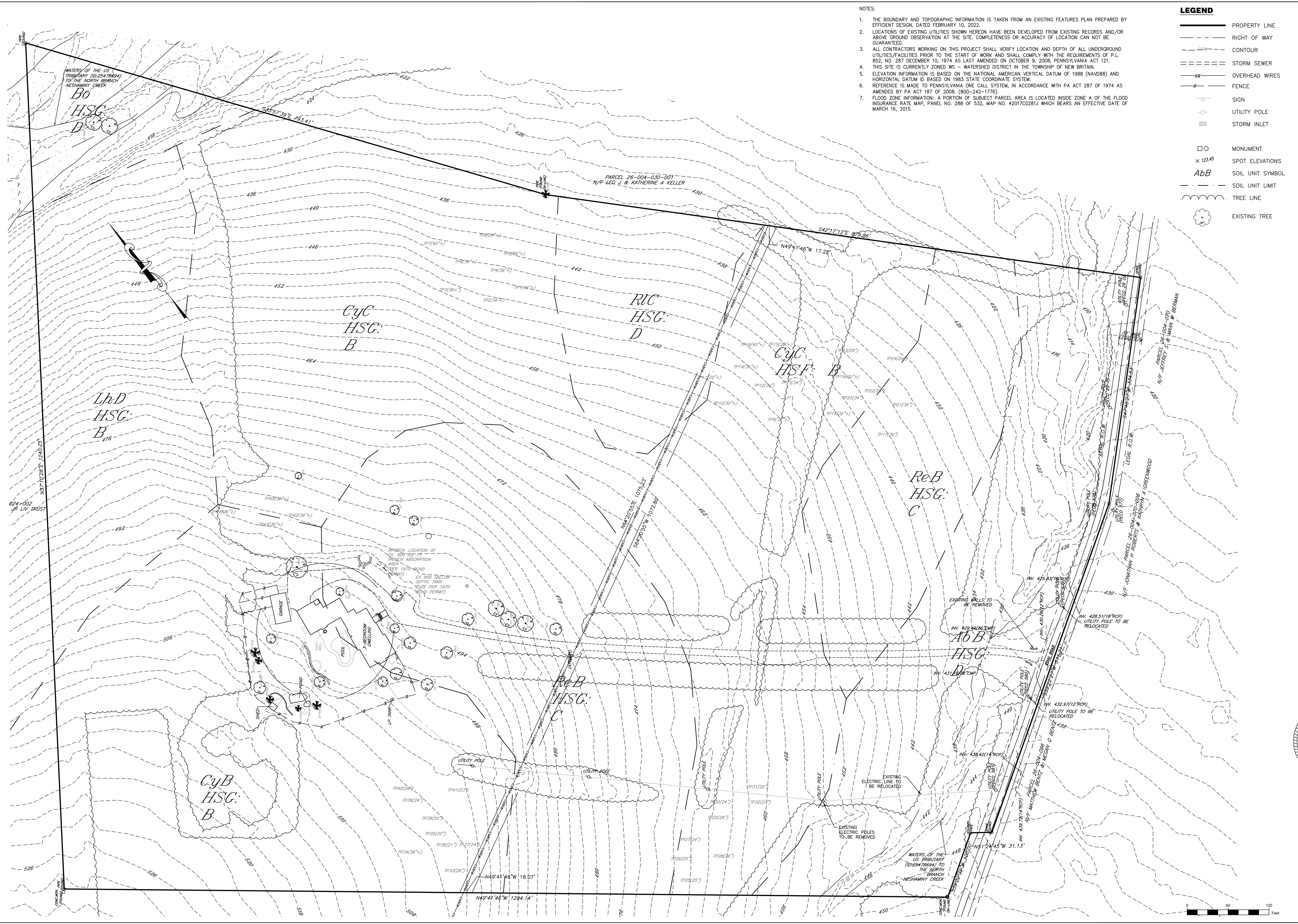
CASADONTI HOMES, INC.
P.O. BOX 5,
CHALFONT, PA 18914

PREPARED BY:



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

REVISED:	06/08/2023
REVISED:	02/08/2023
DATE:	09/14/2022
PROJECT #	1734
DRAWING #	C0.0
SHEET	1 OF 15



- NOTES:
1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM AN EXISTING FEATURES PLAN PREPARED BY EFFICIENT DESIGN, DATED FEBRUARY 10, 2022.
 2. LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM EXISTING RECORDS AND/OR ABOVE GROUND OBSERVATION AT THE SITE. COMPLETENESS OR ACCURACY OF LOCATION CAN NOT BE GUARANTEED.
 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 WS - WATERSHED DISTRICT IN THE TOWNSHIP OF NEW BRITAIN.
 5. ELEVATION INFORMATION IS BASED ON THE NATIONAL AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND HORIZONTAL DATUM IS 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: A PORTION OF SUBJECT PARCEL AREA IS LOCATED INSIDE ZONE A OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 288 OF 532, MAP NO. 42017C0281J WHICH BEARS AN EFFECTIVE DATE OF MARCH 16, 2015.

- LEGEND
- PROPERTY LINE
 - RIGHT OF WAY
 - - - CONTOUR
 - - - STORM SEWER
 - - - OVERHEAD WIRES
 - - - FENCE
 - SIGN
 - UTILITY POLE
 - STORM INLET
 - MONUMENT
 - x 123.45 SPOT ELEVATIONS
 - AbB SOIL UNIT SYMBOL
 - - - SOIL UNIT LIMIT
 - TREE LINE
 - EXISTING TREE

Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

THE ESTATES AT HILL TOP
 396 KING ROAD
 TWP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
 EXISTING CONDITIONS PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

REVISIONS	Date	Description
	02/08/2023	Revised Per Township Engineer Review
	06/08/2023	Revised Per Township Engineer Review

File No. 1734_CO-1 EXISTING CONDITIONS.DWG

HCE Job	1734
Date	09/14/2022
Scale	1"=60'
Designed	RC
Sheet	2 of 15

Drawing No. **C0.1**



THE ESTATES AT HILL TOP
396 KING ROAD
TMP # 26-004-030
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

AERIAL MAP

HO
holmes cunningham
ENGINEERING

Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date	Revised Per Township Engineer Review
		02/08/2023	Revised Per Township Engineer Review
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CALL BEFORE YOU DIG II
 3 DAYS BEFORE ANY EXCAVATION OR
 CONSTRUCTION PHASE AND
 10 WORKING DAYS BEFORE ANY
 "STOP & CALL"
 Pennsylvania One
 Call System, Inc.
 1-800-955-1776

UTILITY LOCATIONS AS SHOWN ON
 THIS MAP ARE THE RESPONSIBILITY OF THE
 CONTRACTOR. THE CONTRACTOR SHALL
 CONTACT UTILITY COMPANIES PRIOR
 TO ANY EXCAVATION.

File No.
1734_CO.2 AERIAL MAP.DWG

HCE Job # 1734
 Date 09/14/2022
 Scale 1"=80'
 Designed RC
 Sheet 3 of 15

REGISTERED PROFESSIONAL ENGINEER
ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

NOTES:
 1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM AN EXISTING FEATURES PLAN PREPARED BY EFFICIENT DESIGN, DATED FEBRUARY 10, 2022.
 2. AERIAL PHOTOGRAPHY TAKEN FROM PASDA AERIAL PHOTOGRAPHS 2018.

RESOURCE PROTECTION STANDARDS					
Resource	Min. Required Protection Ratio	Total Area of Land in Resource	Required Resource Protection Land	Actual Resource Protection Land	Actual Protection Ratio
	%	(Ac.)	(Ac.)	(Ac.)	%
Watercourses	100%	3.052	3.052	0.000	N/A
Floodplains	100%	0.569	0.569	0.569	100%
Floodplain (Alluvial) Soils	100%	0.933	0.933	0.933	100%
Wetlands	100%	0.000	0.000	0.000	N/A
Wetlands Margin	80%	0.000	0.000	0.000	N/A
Riparian Buffer	100%	3.154	3.154	3.154	100%
Lakes and Ponds	100%	0.000	0.000	0.000	N/A
Woodlands (CR, WS, SR-1, SR-2, and RR Zoning Districts)	80%	11.729	9.383	11.099	95%
Agricultural Soils	50%	31.614	15.807	20.794	66%
Steep Slopes 8%-15%	60%	18.272	10.963	13.419	73%
Steep Slopes 15%-25%	70%	2.132	1.492	1.996	94%
Steep Slopes 25%+	85%	0.460	0.391	0.443	96%

Soils Legend						
Type	Name	Depth to Bedrock	Depth to Seasonal High Water Table	HSC	Hydric Soil	
AbB	Abbotstown silt loam, 3 to 8 percent slopes	40"-60"	6"-18"	D	No	
Bo	Bowmansville-Krausers silt loams, 0 to 3 percent slopes	72"-99"	0"-18"	C/D	No	
CyB	Culleoka-Weikert clayey silt loams, 3 to 6 percent slopes	20"-40"	>80"	B	No	
CyC	Culleoka-Weikert clayey silt loams, 8 to 15 percent slopes	20"-40"	>80"	B	No	
LhD	Lansdale loam, 8 to 25 percent slopes, extremely stony	42"-72"	>80"	B	No	
ReB	Readington silt loam, 3 to 8 percent slopes	40"-60"	18"-36"	C	No	
RiC	Roadside clayey silt loam, 8 to 15 percent slopes	20"-40"	6"-36"	D	No	

Limitations and Resolutions: The soils found within the project limits have varying limitations including possible shallow depth to groundwater and possible shallow depth to bedrock. In order to resolve the groundwater limitation, any standing water should be pumped through a sediment filter bag. To resolve the bedrock limitation, the contractor shall determine whether rock is ripplable. If rock is not ripplable, blasting will be required. All blasting shall meet all local, county, state and federal regulations.

- NOTES:
- THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM BOUNDARY & TOPOGRAPHIC PLAN PREPARED BY EFFICIENT DESIGN, DATED FEBRUARY 10, 2022.
 - AERIAL PHOTOGRAPHY TAKEN FROM PASDA AERIAL PHOTOGRAPHS 2018.
 - THE PROPOSED DEVELOPMENT IS TO BE SERVED BY ON-LOT WELL AND SEPTIC SYSTEMS.
 - THE PROPERTY IS PARTIALLY WITHIN ZONE A FLOOD HAZARD AS PER FEMA PANEL 42017C0281J REVISED MARCH 15, 2015.
 - TOPOGRAPHICAL INFORMATION IS BASED UPON VERTICAL DATUM NAVD 88 AND HORIZONTAL DATUM PAB3-S.

Site Capacity Calculations		
	Area (SF)	Area (AC)
Gross Site Area Determined by Actual On-site Survey	1,495,537	34.333
Existing Streets Ultimate Rights-of-Way	22,837	0.524
Existing Utility Rights-of-Way or Easements	17,721	0.407
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	1,454,979	33.402

Resource Protection Land				
Natural Resource	Protection Ratio	Acres of Land in Resources	Resource Protection Land (AC)	Proposed Resource Protection Land (AC)
Watercourses	1.00	1.05	1.05	1.05
Riparian Buffer	1.00	1.53	1.53	1.53
Floodplain	1.00	0.57	0.57	0.57
Floodplain (Alluvial) Soils	1.00	0.03	0.03	0.03
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	0.42	0.36	0.44
Woodlands	0.80	8.15	6.52	6.52
Steep Slopes 15-25%	0.70	0.30	0.21	2.00
Steep Slopes 8-15%	0.60	12.18	7.31	13.42

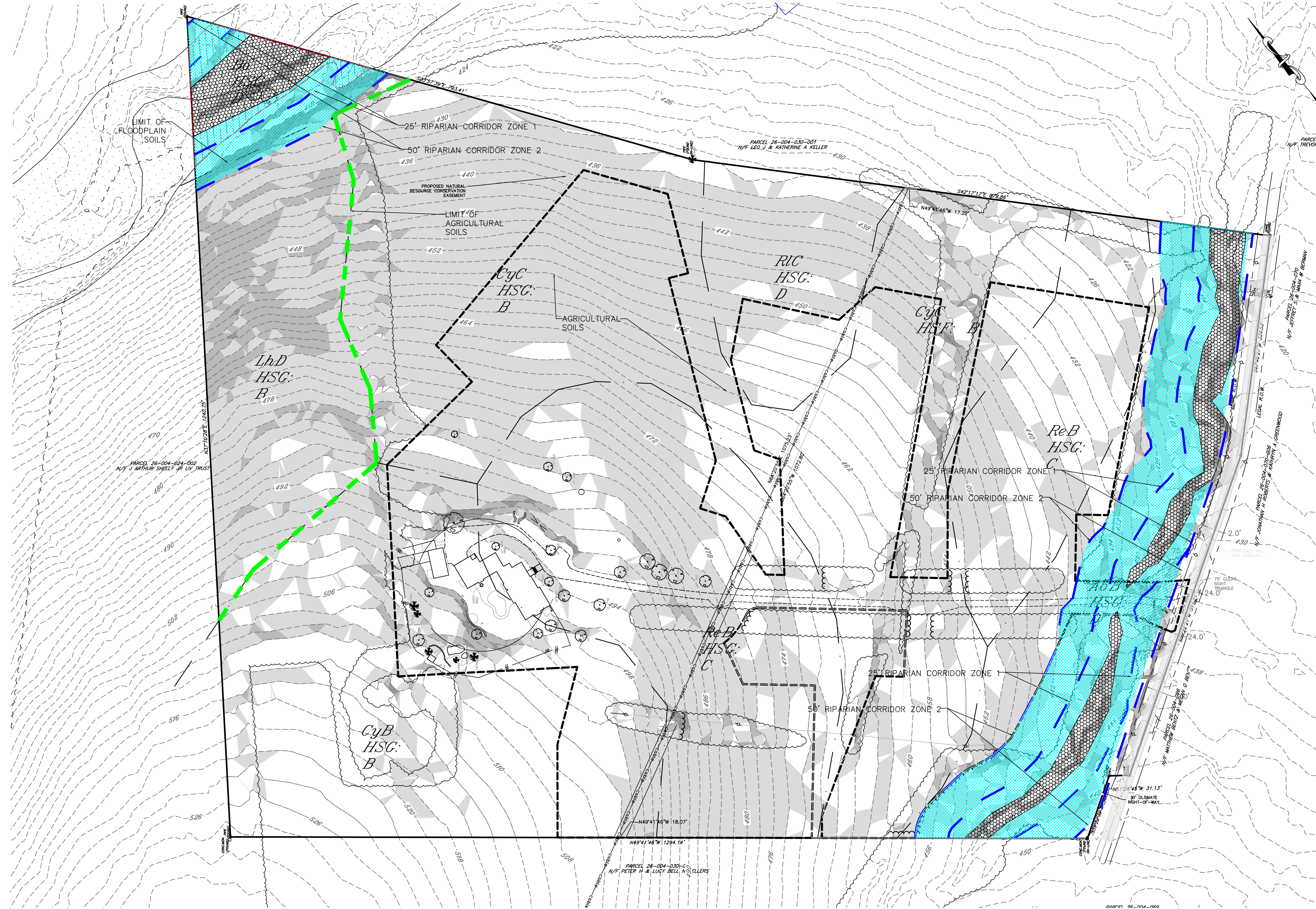
Total Land with Resource Restrictions	24.24
Total Land with 1.00 Protection Ratio Restrictions	3.18
Total Resource Protection Land Required	17.58
Total Resource Protection Land Provided	19.54
Total Disturbed Resources	4.70

Open Space Calculations	
Base Site Area	33.40 Ac.
Multiply by Minimum Open Space Ratio	0.00
Standard Minimum Open Space	0.00 Ac.
Required Open Space (Greater of 100% Protection Land or Min Open Space)	3.18 Ac.

Net Buildable Site Area Calculations	
Base Site Area	33.40 Ac.
Subtract Required Open Space	3.18 Ac.
Net Buildable Site Area	30.22 Ac.

Density Calculations	
Net Buildable Site Area	30.22 Ac.
Multiply by Maximum Density	N/A
Number of Dwelling Units Permitted	N/A

Impervious Surface Calculations	
Base Site Area	33.40 Ac.
Multiply by Maximum Impervious Surface Ratio	0.20
Maximum Permitted Site Impervious Surface	6.68 Ac.



LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- DISTURBANCE LINE
- ULTIMATE RIGHT-OF-WAY
- STREAM/ WATERCOURSE
- FLOODPLAIN
- WOODLANDS
- RIPARIAN CORRIDOR BUFFER
- STEEP SLOPES 8%-15%
- STEEP SLOPES 15%-25%
- STEEP SLOPES 25%+
- SOIL TYPE
- AGRICULTURAL SOILS

Holmes Cunningham LLC
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HC ENGINEERING

REVISIONS	Description	Date
02/08/2023	Revised Per Township Engineer Review	02/08/2023
06/08/2023	Revised Per Township Engineer Review	06/08/2023

THE ESTATES AT HILL TOP
 396 KING ROAD
 TMP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

EXISTING RESOURCE AND SITE ANALYSIS PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

File No.	1734_C0.2 ERSAP.DWG
HCE Job	1734
Date	09/14/2022
Scale	1"=80'
Designed	EC
Sheet	4 of 15

Drawing No.
C0.3

LOT AREA AND COVERAGE TABLE										
Lot #	Gross Lot Area (SF)	Right-of-Way Area (SF)	Utility Easement Area (SFO)	100% Natural Resource Protection (SF)	Ratio Base Site Area (SF)	Building Area (SF)	Building Ratio (%)	On-lot Impervious Excluding Building Area (SF)	Impervious Ratio (%)	Future Impervious (SF)
1	256,311	0	0	66,557	189,754	4,046	2.1%	4,196	4.3%	14,528
2	196,852	0	9,749	0	186,103	4,046	2.2%	3,542	4.1%	14,744
3	347,960	0	140	43,548	304,272	4,046	1.3%	4,278	2.7%	28,189
4	293,036	0	0	293,036	6,654	2.3%	10,857	6.0%	17,654	
5	235,543	0	5,034	0	230,509	4,046	1.8%	3,159	3.1%	20,456
6	166,835	0	0	61,934	104,901	4,046	3.9%	1,748	5.5%	6,794

NEW BRITAIN TOWNSHIP ZONING DATA TABLE										
ZONING DISTRICT: WS - WATERSHED DISTRICT										
ITEM	REQUIRED / PERMITTED	PROPOSED LOT 1	PROPOSED LOT 2	PROPOSED LOT 3	PROPOSED LOT 4	PROPOSED LOT 5	PROPOSED LOT 6	Ordinance Section		
Use: Zoning 27-501.a		B1: Single Family Detached Dwelling								
Max. Building Height	35 FT	< 35 FT	< 35 FT	< 35 FT	< 35 FT	< 35 FT	< 35 FT	< 35 FT	27-502.a	
Min. Lot Size	80,000 SF	5,884 AC	4,496 AC	7,988 AC	6,727 AC	5,407 AC	3,758 AC	27-502.b.1.(a)		
Min. Lot Width	175 FT	458.8 FT	233.1 FT	232.1 FT	270.3 FT	287.1 FT	504.1 FT	27-502.b.1.(b)		
Min. Front Yard Setback	100 FT	135.2 FT	131.4 FT	224.2 FT	104.4 FT	102.4 FT	118.3 FT	27-502.b.1.(c)		
Min. Side Yard Setback	30 FT	118.5 FT	50.3 FT	87.2 FT	75.1 FT	94.3 FT	177.5 FT	27-502.b.1.(d)		
Min. Rear Yard Setback	60 FT	335.2 FT	390.5 FT	316.0 FT	320.6 FT	101.4 FT	147.7 FT	27-502.b.1.(e)		
Min. Building Envelope	10,000 SF	132,934 SF	118,273 SF	226,413 SF	201,839 SF	118,187 SF	61,394 SF	27-502.b.1.(f)		
Max. Building Coverage (Developer)*	6%	2.13%	2.17%	1.33%	2.27%	1.76%	3.86%	27-502.b.1.(g)		
Max. Impervious Surface Coverage (Developer)**	10%	4.34%	4.08%	2.74%	5.98%	3.13%	5.52%	27-502.b.1.(h)		
Max. Porch Projection into Yard Areas	4 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	27-2107		
Min. Off-Street Parking Spaces	3 spaces / DU (4+ bedrooms)	3 spaces	3 spaces	3 spaces	3 spaces	3 spaces	3 spaces	27-2901.B		

LOT WIDTH/DEPTH TABLE		
LOT #	LOT WIDTH (FEET)	LOT DEPTH (FEET)
1	441	566
2	198	599
3	216	554
4	207	605
5	287	346
6	535	346

WETLANDS CERTIFICATION

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

JOSEPH A. VALENTINE

RECORD 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 _____ ON THIS _____ DAY OF _____, 20____.

BUCKS COUNTY RECORDER OF DEEDS

BOARD OF SUPERVISORS ACKNOWLEDGEMENT
 THIS PLAN APPROVED BY THE BOARD OF SUPERVISORS OF NEW BRITAIN TOWNSHIP THIS _____ DAY OF _____, 20____.

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.

TOWNSHIP ENGINEER ACKNOWLEDGEMENT
 THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP ENGINEER ON THIS _____ DAY OF _____, 20____.

ENGINEER: _____

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

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

BY: _____ NAME _____ TITLE _____ DATE: _____
 CORPORATION _____

OWNER(S): _____
 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 _____

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

SEAL _____ NOTARY PUBLIC _____

COMMISSION EXPIRATION DATE _____

ENGINEER'S CERTIFICATION

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. DATE: _____
 PA PE076424

CERTIFICATION OF ACCURACY

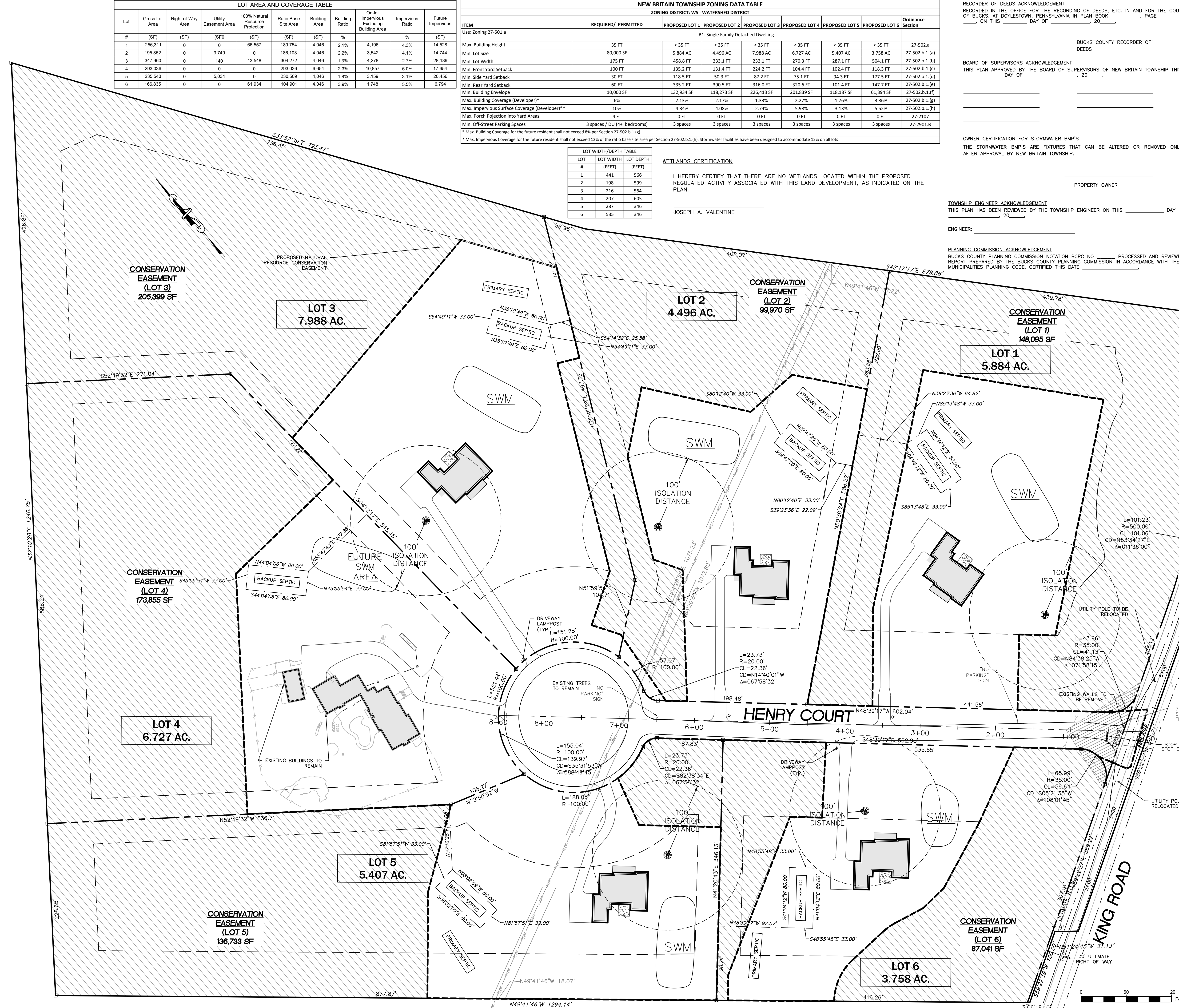
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT.

ERIC WILLIAMS, PLS DATE: _____
 SURVEYOR

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED EASEMENT
- BUILDING SETBACK LINE
- LOT LINE
- PROPOSED WOODLANDS
- PROPOSED CONSERVATION EASEMENT
- PROPOSED MONUMENT
- PROPOSED IRON PIN

- SITE PLAN NOTES:**
- THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM EXISTING FEATURES PLAN PREPARED BY EFFICIENT DESIGNATED FEBRUARY 10, 2022.
 - THE PROPOSED DEVELOPMENT IS TO BE SERVED BY ON-LOT WELLS AND ON-LOT SEPTIC SYSTEMS.
 - FLOOD ZONE INFORMATION: A PORTION OF SUBJECT PARCEL AREA IS LOCATED INSIDE ZONE A OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 288 OF 532, MAP NO. 420710281A WHICH BEARS AN EFFECTIVE DATE OF MARCH 16, 2015.
 - HENRY COURT WILL BE PRIVATELY OWNED AND MAINTAINED. A SHARED ACCESS EASEMENT AGREEMENT SHALL BE RECORDED ALONG WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
 - THE STORMWATER MANAGEMENT FACILITIES (AS SHOWN ON THIS PLAN) ARE A BASIC AND PERPETUAL PART OF THE STORMWATER MANAGEMENT SYSTEM OF THE HOMEOWNERS ASSOCIATION, 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 ENTER 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 THE OWNERS.
 - TOPSOIL SHALL NOT BE REMOVED FROM THE DEVELOPMENT SITE. TOPSOIL SHALL BE STRIPPED, STOCKPILED, AND REDISTRIBUTED ON THE SITE.
 - THE STORMWATER MANAGEMENT FACILITIES AND SHARED DRIVEWAY MAINTENANCE WILL BE PURSUANT TO A SHARED MAINTENANCE AGREEMENT BETWEEN ALL LOT OWNERS.
 - 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.
 - THE PROPOSED SHARED DRIVEWAY CONSISTS OF APPROXIMATELY 835 LINEAR FEET.
 - IF THE DISTURBANCE ENROACHES 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 EMERGENCY, RESTRICTIONS AND CONDITIONS APPROVED BY THE BOARD.
 - ALL MONUMENTATION SHALL BE SET BY A PROFESSIONAL LAND SURVEYOR AND ARE TO BE SET DURING CONSTRUCTION.
 - ALL PROPOSED LOTS MUST ACCESS HENRY COURT, NO LOTS SHALL HAVE DIRECT ACCESS TO KING ROAD.
 - THE AREA LOCATED BETWEEN THE TITLE LINE AND ULTIMATE RIGHT-OF-WAY LINE OF KING ROAD SHALL BE OFFERED TO NEW BRITAIN TOWNSHIP.
 - ALL PROPOSED LOTS ARE TO BE DEED RESTRICTED FROM FURTHER SUBDIVISION.
 - ALL DEAD TREES, LINE TREES AND BRANCHES INTERFERING WITH THE EXISTING ULTIMATE-RIGHT-OF-WAY.
 - A BLANKET EASEMENT IS PROVIDED TO THE TOWNSHIP TO CONDUCT INSPECTIONS AND MAINTENANCE OF STORMWATER FACILITIES AS REQUIRED.
 - AREAS NOT LOCATED IN THE LIMIT OF DISTURBANCE HAVE BEEN PROPOSED TO REMAIN IN EXISTING CONDITIONS.
 - ALL ROADWAY SIGNS REGULATORY (WARNING AND STREET NAME SIGNS) SHALL BE OF HIGH INTENSITY PRISMATIC MATERIAL MEETING MINIMUM ASTM TYPE III RETRO-REFLECTIVE STANDARDS.



Holmes Cunningham LLC
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REVISIONS

Date	Description
02/08/2023	Revised Per Township Engineer Review
06/08/2023	Revised Per Township Engineer Review

THE ESTATES AT HILL TOP
 396 KING ROAD
 TWP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

File No. 1734-C1.0 RECORD.DWG
 HCE Job 1734
 Date 09/14/2022
 Scale 1"=60'
 Designed RC
 Sheet 5 of 15
 Drawing No. C1.0

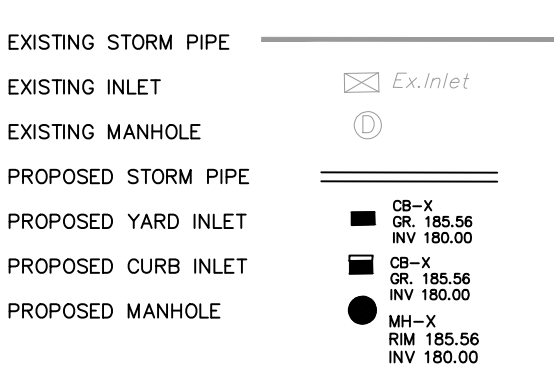


- GRADING AND DRAINAGE NOTES**
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 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.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
 - CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC NETWORK ITEM DEPICTED ON THE PLANS, FOR ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC NETWORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
 - SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
 - PVC = POLYVINYLCHLORIDE PIPE, HDPE = HIGH DENSITY POLYETHYLENE PIPE, RCP = REINFORCED CONCRETE PIPE
 - STORM DRAINAGE PIPING TO UTILIZE WATER TIGHT JOINTS.
 - COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MOFFITT PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA OVEN ELEMENS:

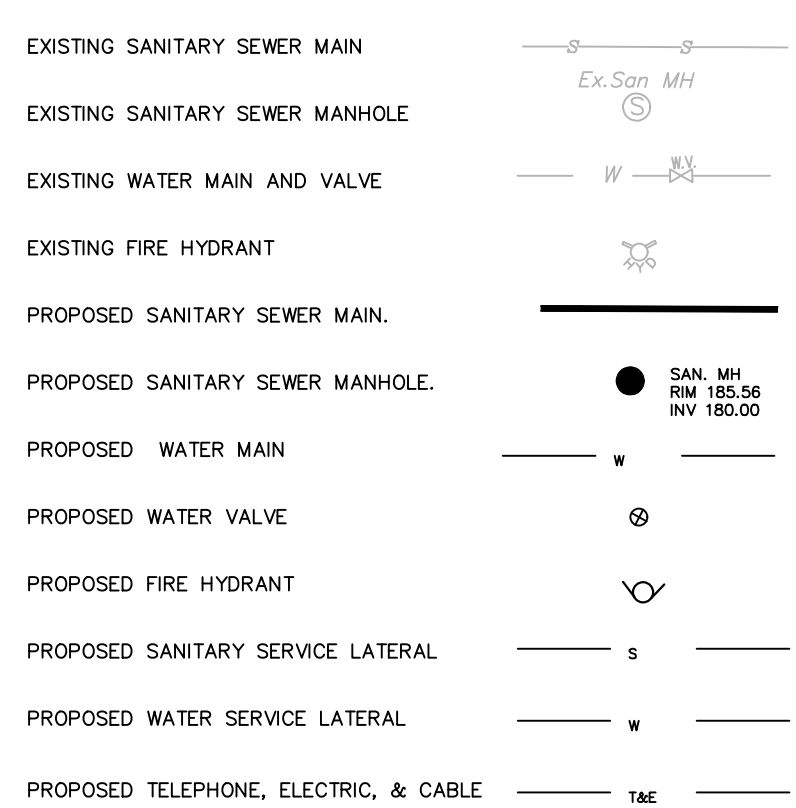
FILL AREA	PERCENT OF MAXIMUM MOFFITT PROCTOR DRY DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	95%
SIDEWALKS	95%
LANDSCAPE AREAS	93%
TRENCH BACKFILL	SAME AS SURROUNDING AREA
 - PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
 - REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THEN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS SECTION.
 - ALL CONCRETE, UNLESS OTHERWISE NOTED OR SPECIFIED BY REGULATORY AUTHORITIES, SHALL BE A MINIMUM OF 4,000 PSI.
 - NEW BRITAIN TOWNSHIP SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT FACILITY.
 - ALL STORMWATER MANAGEMENT FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED OR MODIFIED WITHOUT PRIOR APPROVAL FROM NEW BRITAIN TOWNSHIP.
 - NO PORTION OF AN ON-LOT SEPTIC SYSTEM SHALL BE LOCATED IN A MANNER THAT WOULD BLOCK ANY STORMWATER DRAINAGE FROM ANY LOT.
 - ALL ACCESS DRIVES AND DRIVEWAYS SHALL BE PROVIDED WITH A STOPPING AREA OF 20 FEET, AT A MAXIMUM GRADE OF 3%, MEASURED FROM THE PRIVATE ACCESS EASEMENT.

- UTILITY NOTES**
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
 - ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE 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 PROVIDED.
 - THE LOCATION OF THE EXISTING GAS MAINS ARE APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION.
 - 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.
 - ALL ELECTRICAL WORK, TRANSFORMER PADS, AND ASSOCIATED 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.
 - 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 UTILITY SERVICES. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN BY THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
 - EIGHTEEN (18) INCHES VERTICAL CLEARANCE SHOULD BE PROVIDED AT ALL UTILITY CROSSINGS.
 - ALL FIRE HYDRANTS AND VALVES SHALL OPEN RIGHT (CLOCKWISE).
 - THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF LANDSCAPING SHOULD DISTURBANCE BE REQUIRED FOR UTILITY REPAIRS.
 - 18 INCHES OF VERTICAL CLEARANCE OR 10 FEET OF HORIZONTAL CLEARANCE SHALL BE PROVIDED BETWEEN THE SANITARY SEWER AND ALL OTHER UTILITIES. OTHERWISE, CONCRETE ENCASEMENT OF THE SANITARY SEWER SHALL BE PROVIDED.
 - 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.
 - 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.

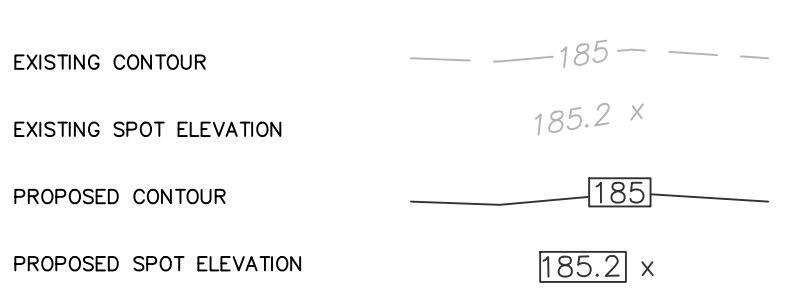
DRAINAGE LEGEND



UTILITY LEGEND



GRADING LEGEND



Holmes Cunningham LLC
409 E. Butler Ave. Unit 5
Doylesstown, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS	Description
Date	Revised Per Township Engineer Review
02/08/2023	Revised Per Township Engineer Review
06/08/2023	Revised Per Township Engineer Review

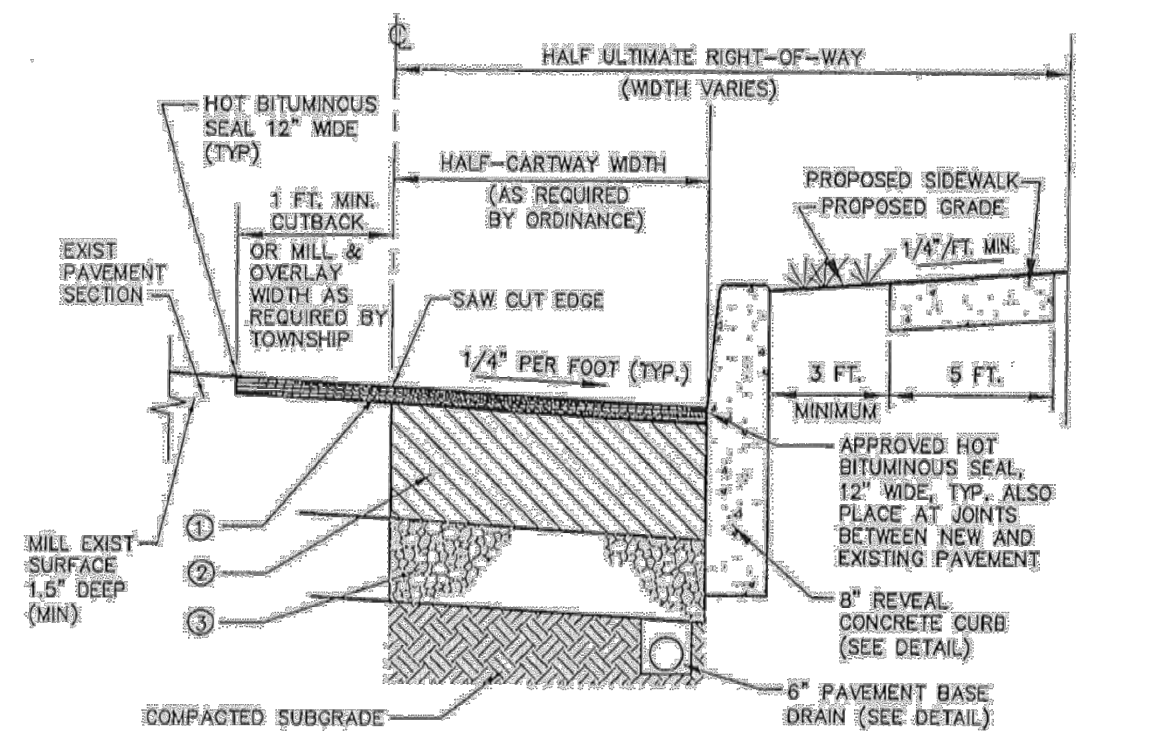
THE ESTATES AT HILL TOP
396 KING ROAD
TWP # 26-004-030
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

GRADING, DRAINAGE AND UTILITY PLAN

ROBERT T. CUNNINGHAM, P.E.
PA PE076424

File No.	1734_C2.0 GRADING.DWG		
HCE Job	1734	Scale	1"=60'
Date	09/14/2022	Designed	RC
		Sheet	6 of 15

Drawing No.
C2.0



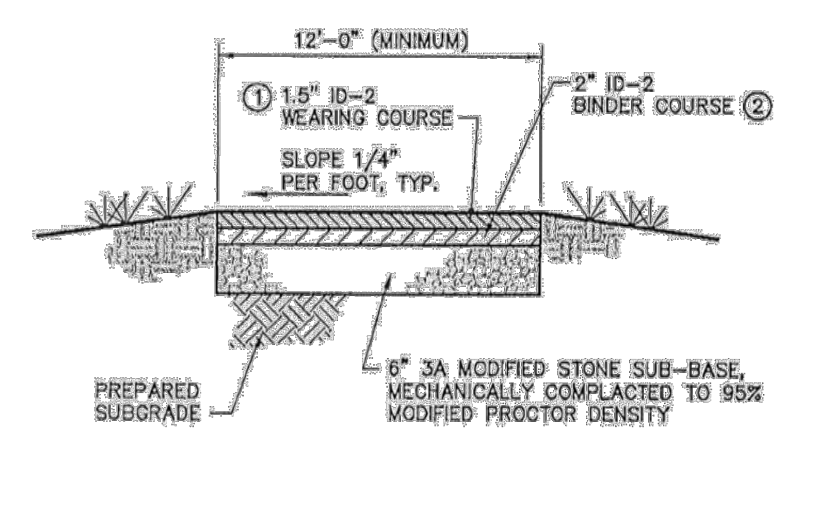
- ① 1.5" SUPERPAVE ASPHALT MIXTURE DESIGN, 9.5 mm MIX, PG 64-22, HMA WEARING COURSE, 3.0 TO 10.0 MILLION ESALS, SRL-M
- ② 4.0" SUPERPAVE ASPHALT MIXTURE DESIGN, 25 mm MIX, PG 64-22, HMA BASE COURSE, 3.0 TO 10.0 MILLION ESALS
- ③ 6" 3A MODIFIED STONE SUBBASE (MATCH EXISTING IF GREATER)

NOTE: NEW ROADS SHALL COMPLY WITH THE ABOVE SPECIFICATION

TYPICAL ROADWAY WIDENING SECTION DETAIL FOR RESIDENTIAL AND LOCAL ROADS
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
 ENGINEERING & CONSULTING SERVICES
 65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18051-5153 • (610) 545-4500
 www.gilmore-associates.com

DATE: 5/22/09 LAST REVISED: N.T.S. SCALE: N.T.S. DRAWING No: 3 of 17

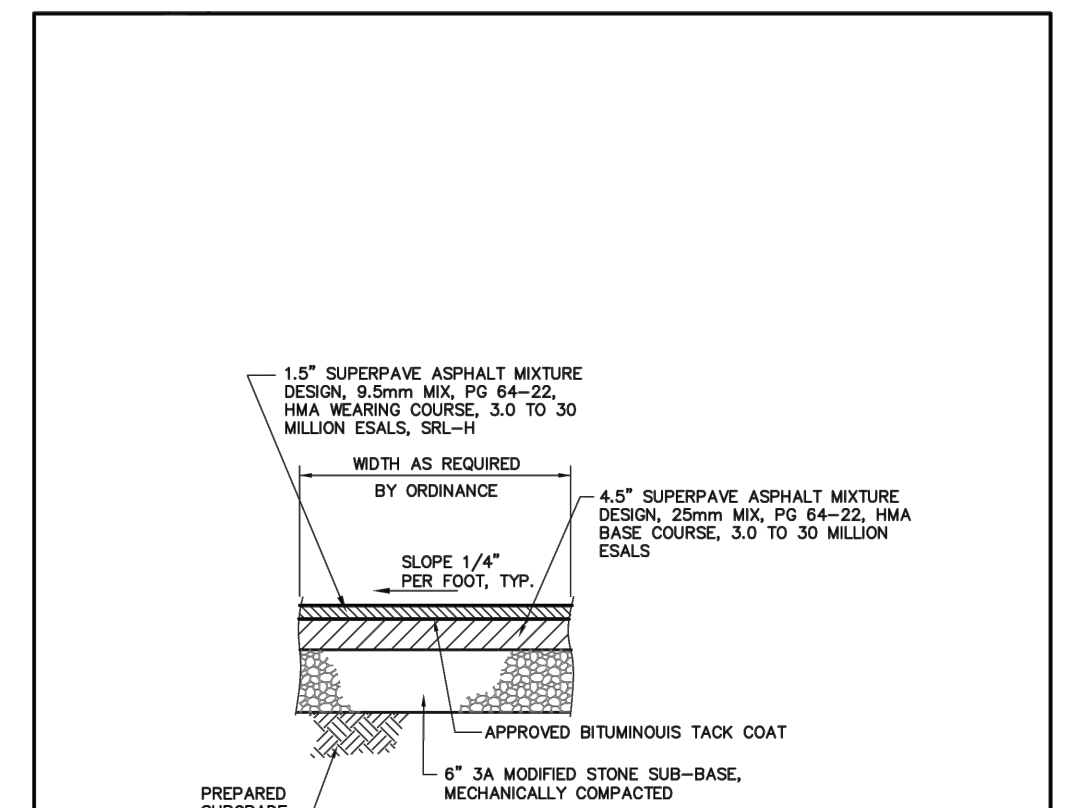


- ALTERNATE SPECIFICATION**
- ① 1.5" SUPERPAVE ASPHALT MIXTURE DESIGN, 9.5 mm MIX, PG 64-22, HMA WEARING COURSE, 0.5 TO 3 MILLION ESALS, SRL-M
 - ② 2.0" SUPERPAVE ASPHALT MIXTURE DESIGN, 19mm MIX, PG 64-22, HMA BINDER COURSE, 0.5 TO 3 MILLION ESALS

RESIDENTIAL DRIVEWAY PAVING SECTION DETAIL
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

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 ENGINEERING & CONSULTING SERVICES
 65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18051-5153 • (610) 545-4500
 www.gilmore-associates.com

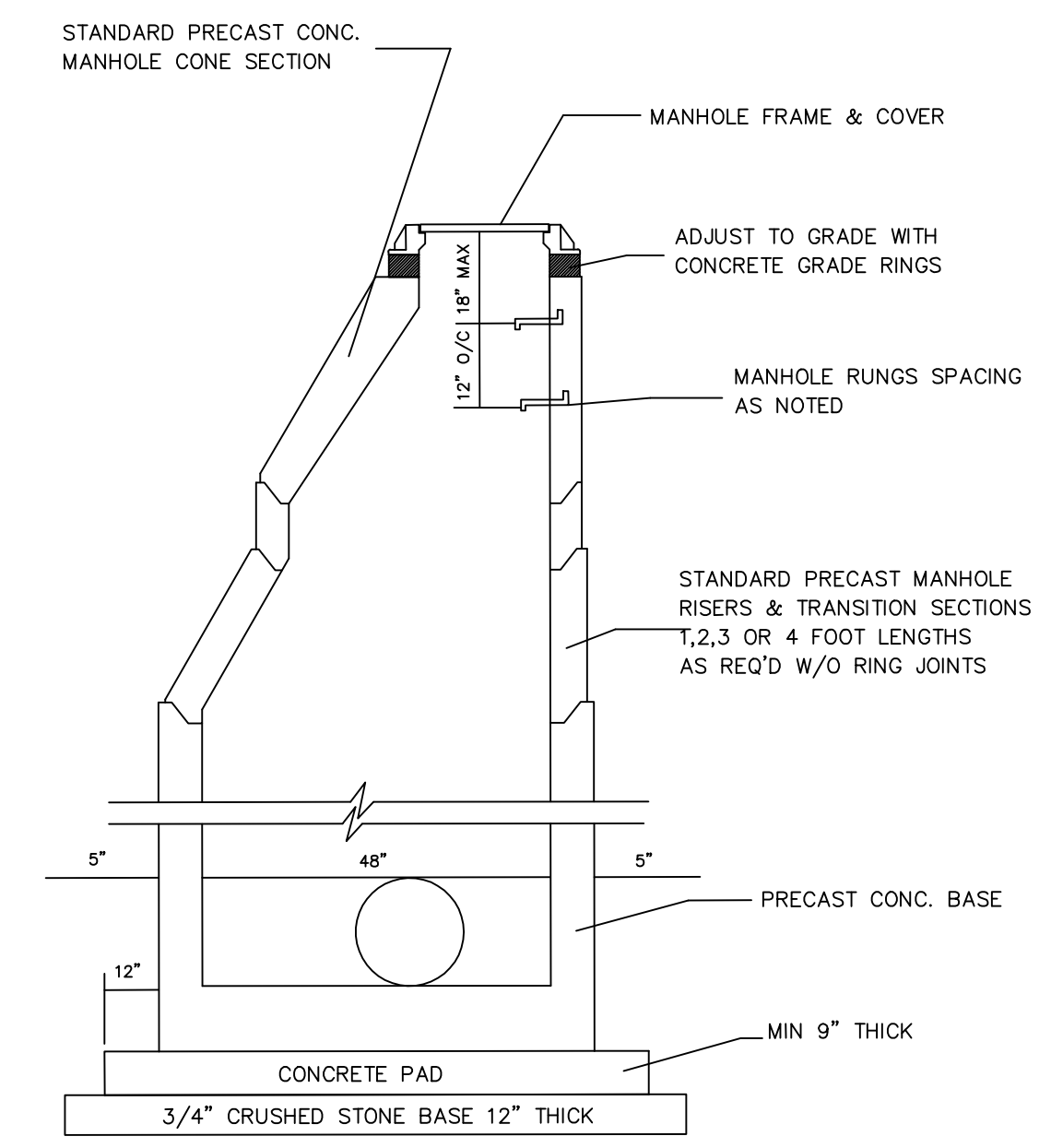
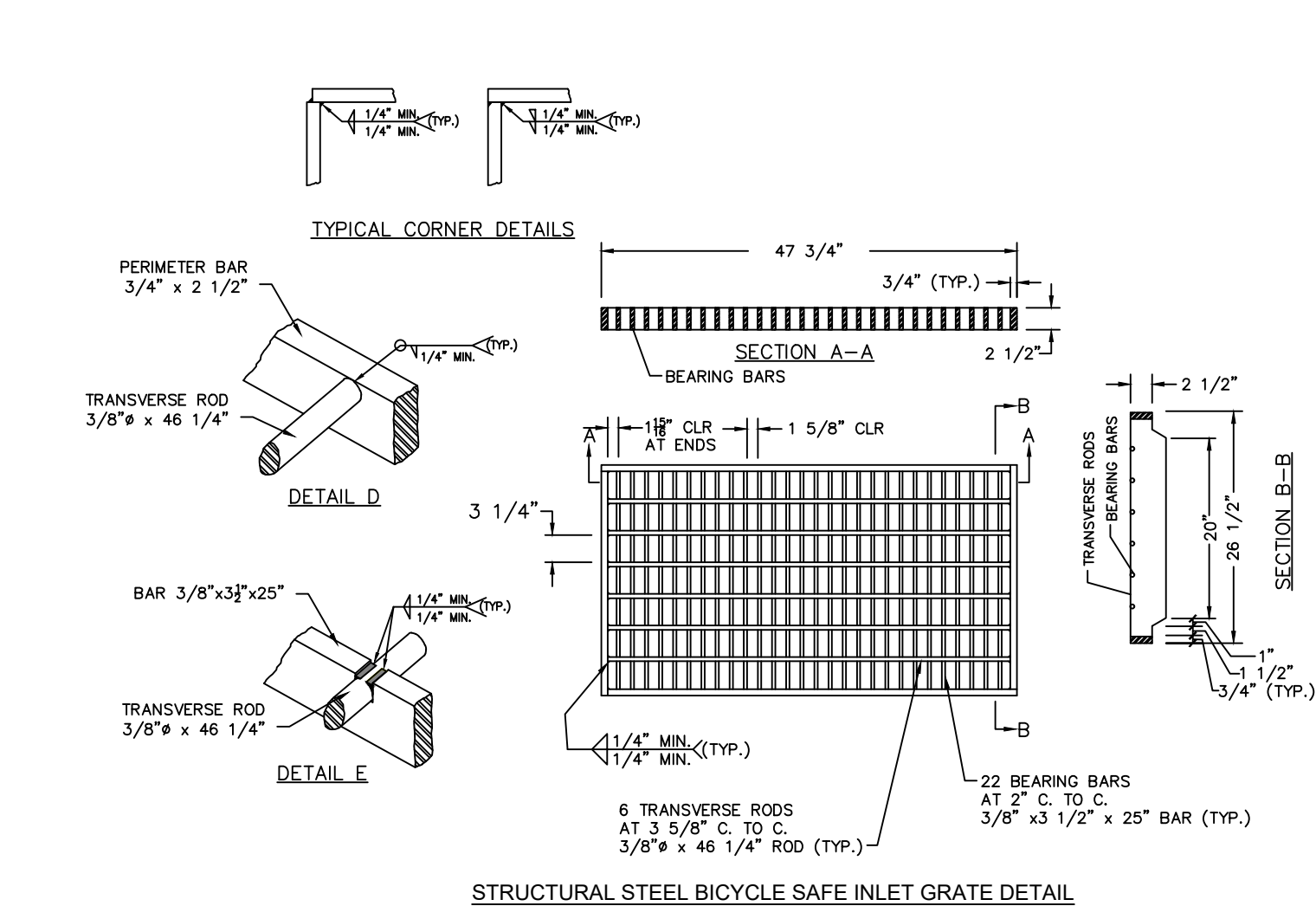
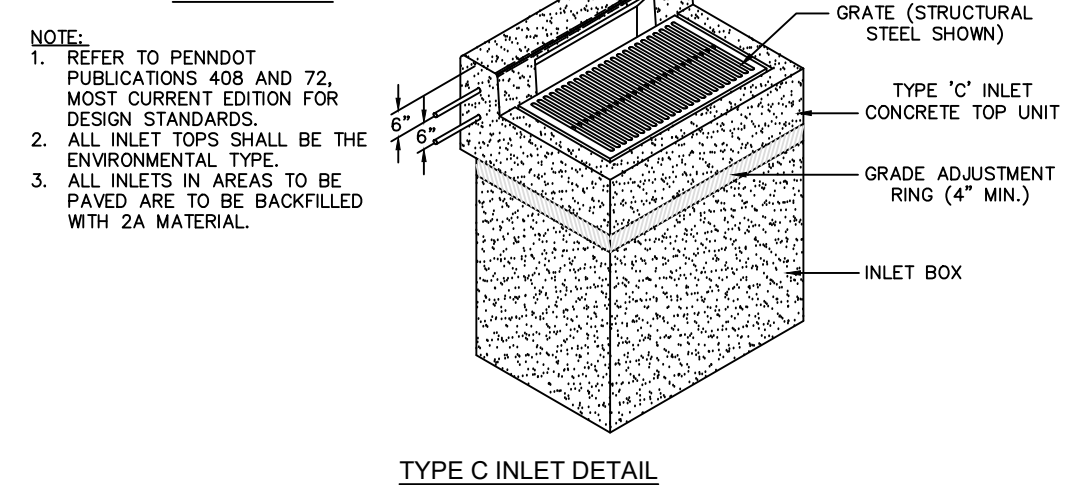
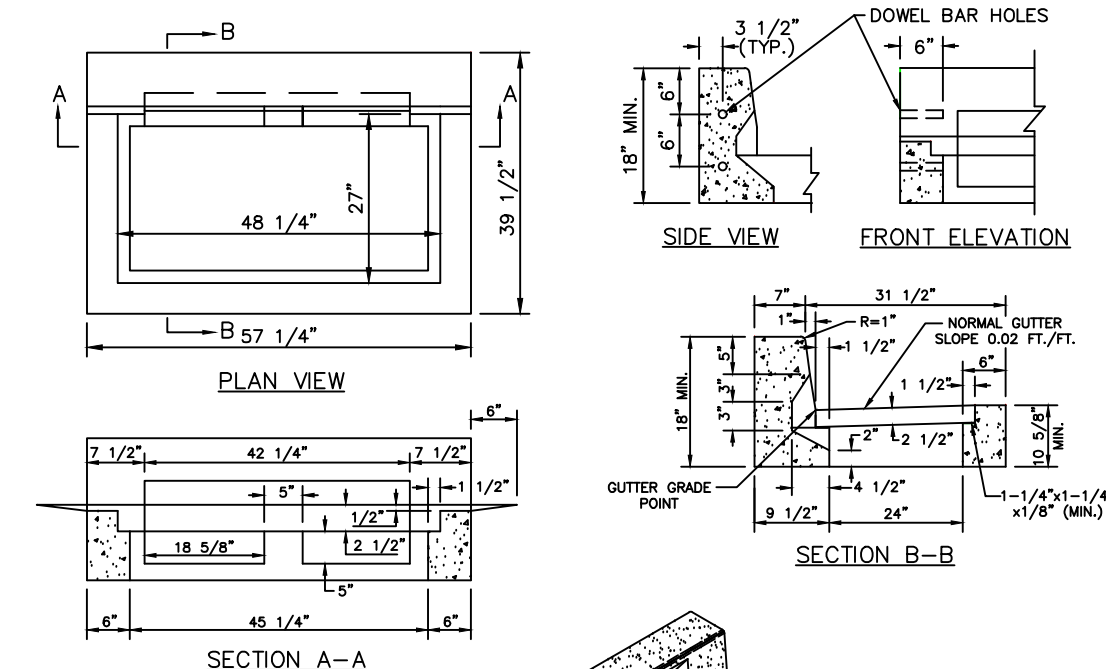
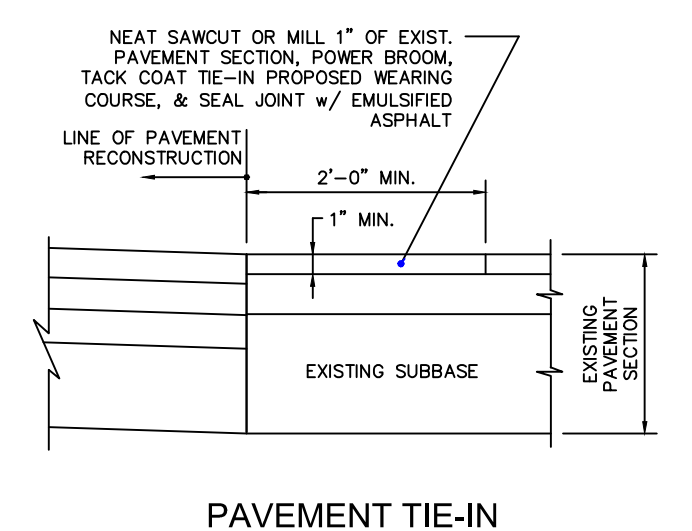
DATE: 5/22/09 LAST REVISED: N.T.S. SCALE: N.T.S. DRAWING No: 7 of 17



NON-RESIDENTIAL AND MULTI-RESIDENTIAL DRIVEWAYS, PARKING AREAS AND LOADING AREAS PAVING SECTION DETAIL
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

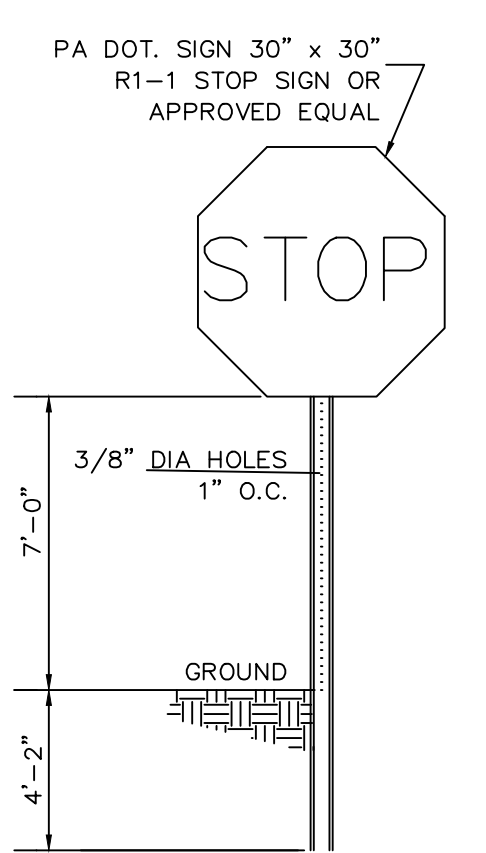
GILMORE & ASSOCIATES, INC.
 ENGINEERING & CONSULTING SERVICES
 65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18051-5153 • (610) 545-4500
 www.gilmore-associates.com

DATE: 5/22/09 LAST REVISED: N.T.S. SCALE: N.T.S. DRAWING No: 8 of 17



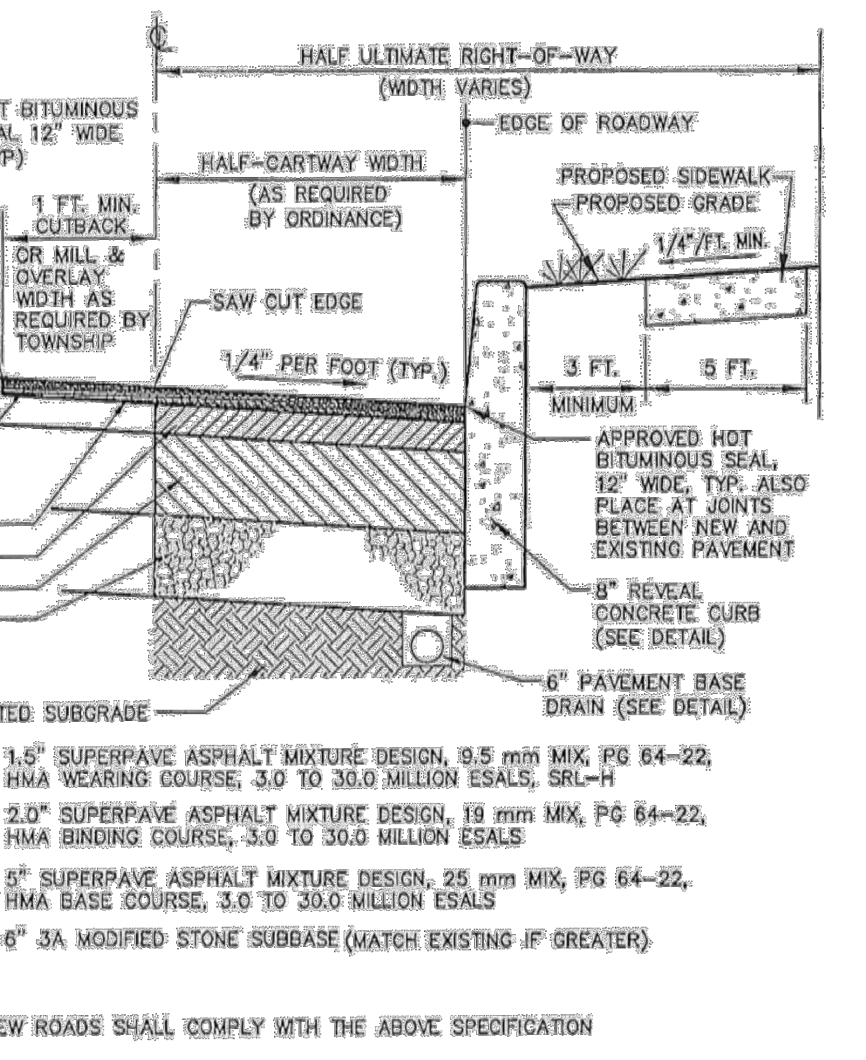
- NOTES:**
- PRECAST CONCRETE MANHOLES SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 972M) RC-30M, "STANDARD MANHOLES, PRECAST MANHOLES AND MANHOLE STEPS".
 - STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN DEPTH.
 - STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 172M), RC-39M.
 - STEP AND STEP INSTALLATION SHALL MEET ALL REQUIREMENTS OF ASTM C-478 AND C-497 FOR DIMENSIONS, LOAD RATING AND PULLOUT RESISTANCE.
 - PROVIDE FRAME AND GRATE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 1172M) RC-39M, "STANDARD MANHOLES COVERS, FRAMES AND ADJUSTMENT RISERS".
 - THE CONTRACTOR SHALL PROVIDE CUT SHEETS TO ENGINEER TO REVIEW PRIOR TO CONSTRUCTION.
 - STORM MANHOLE COVERS SHALL HAVE THE WORD "STORM" ON THE COVER IN 2-INCH HIGH LETTERS.
 - STORM MANHOLES SHALL BE THE ENVIRONMENT TYPE.

PRECAST CONCRETE STORM MANHOLE



- NOTES:**
- ALL POSTS SHALL BE BREAKAWAY POSTS AND OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
 - ALL POSTS SHALL BE EMBEDDED 4"-2" MINIMUM BELOW GRADE.
 - ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
 - POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.
 - SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
 - BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
 - ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL CURRENT AMENDMENTS.

STOP SIGN



TYPICAL ROADWAY WIDENING SECTION DETAIL FOR ARTERIAL, COLLECTOR, AND NON-RESIDENTIAL ROADS
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

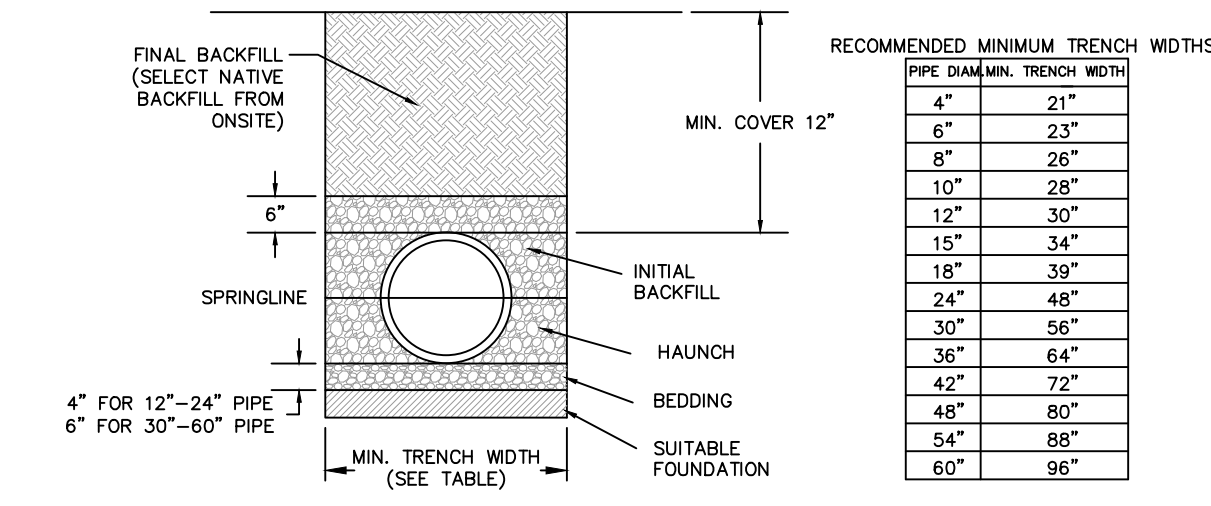
GILMORE & ASSOCIATES, INC.
 ENGINEERING & CONSULTING SERVICES
 65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18051-5153 • (610) 545-4500
 www.gilmore-associates.com

DATE: 5/22/09 LAST REVISED: N.T.S. SCALE: N.T.S. DRAWING No: 2 of 17

TYPE	MINIMUM PIPE DIA.	MINIMUM L.S./S.S.	A 1/2(D)	B 1/2(D)	C 1/2(D)	D 1/2(D)	E 1/2(D)	F 1/2(D)	G 1/2(D)
1	12-18 (120-180)	2400 (2100)	36 (142)	36 (142)	36 (142)	36 (142)	36 (142)	36 (142)	36 (142)
2	18-24 (180-240)	4800 (4200)	48 (183)	48 (183)	48 (183)	48 (183)	48 (183)	48 (183)	48 (183)
3	24-30 (240-300)	8000 (7000)	60 (229)	60 (229)	60 (229)	60 (229)	60 (229)	60 (229)	60 (229)
4	30-36 (300-360)	12000 (10500)	72 (267)	72 (267)	72 (267)	72 (267)	72 (267)	72 (267)	72 (267)
5	36-42 (360-420)	16000 (14000)	84 (303)	84 (303)	84 (303)	84 (303)	84 (303)	84 (303)	84 (303)
6	42-48 (420-480)	20000 (17500)	96 (346)	96 (346)	96 (346)	96 (346)	96 (346)	96 (346)	96 (346)
7	48-54 (480-540)	24000 (21000)	108 (391)	108 (391)	108 (391)	108 (391)	108 (391)	108 (391)	108 (391)
8	54-60 (540-600)	28000 (24500)	120 (436)	120 (436)	120 (436)	120 (436)	120 (436)	120 (436)	120 (436)
9	60-66 (600-660)	32000 (28000)	132 (481)	132 (481)	132 (481)	132 (481)	132 (481)	132 (481)	132 (481)
10	66-72 (660-720)	36000 (31500)	144 (526)	144 (526)	144 (526)	144 (526)	144 (526)	144 (526)	144 (526)

CONCRETE END WALLS 2001 FT-29

NOTE: 1. REFER TO "COMMON WEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAY DESIGN, STANDARDS FOR ROADWAY CONSTRUCTION" PUBLICATION 72M.



- NOTES:**
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLUID APPLICATIONS", LATEST EDITION.
 - 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 GEOTEXTILE MATERIAL.
 - BEDDING: 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-1500mm).
 - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" 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.
 - 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 FLOATING. 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.

HDPE PIPE DETAIL

Holmes Cunningham LLC
 409 E. Butler Ave. Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS

Date	Description	Revised Per
02/08/2023	Construction Phase and Construction Stage	Revised Per Township Engineer Review
06/08/2023		Revised Per Township Engineer Review

THE ESTATES AT HILL TOP
 396 KING ROAD
 TWP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

File No: 1734-C2.1 DETAILS.DWG

HCE Job: 1734 Date: 09/14/2022 Scale: N.T.S. Designed: RC Sheet: 7 of 15

Drawing No: **C2.1**

LIMIT OF DISTURBANCE = 11.01 ACRES

PROJECT SITE BOUNDARY = 36.17 ACRES

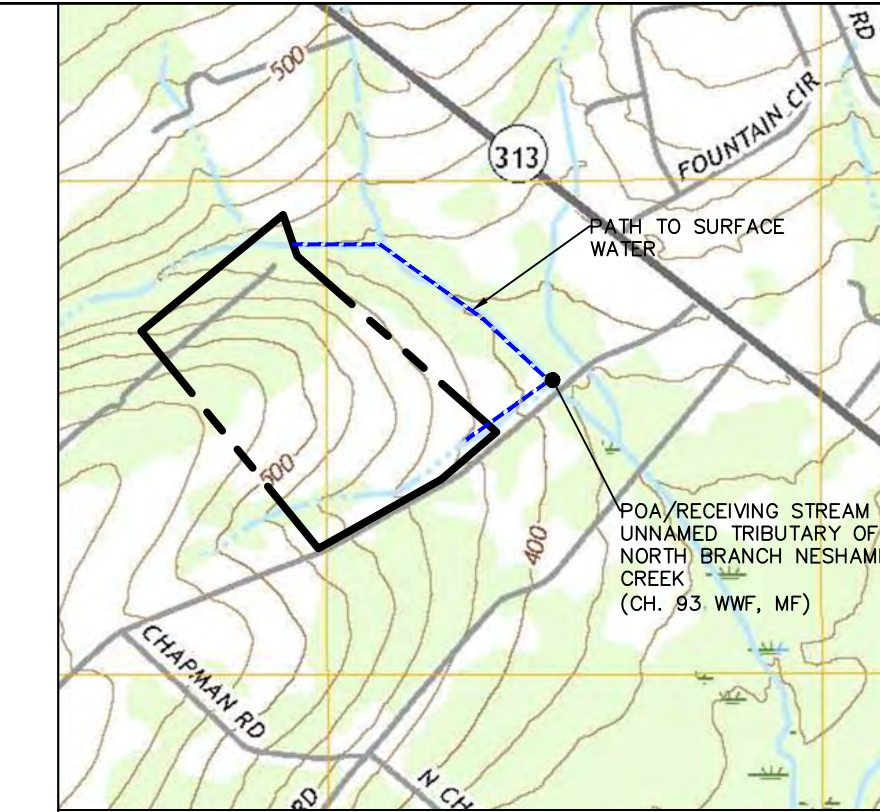
GENERAL NOTES

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 1-800-242-1779 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY 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 OFFSETS ARE NOT NECESSARY.
5. THERE ARE NO WETLANDS WITHIN THE PROJECT AREA.
6. THERE ARE NO INFILTRATION BMS LOCATED OUTSIDE PROPOSED GRADING AREAS. 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.
7. IF ANY MUD OR STONE IS TRACKED ONTO KING ROAD, A FULL CONSTRUCTION ENTRANCE SHALL BE REQUIRED.
8. IF ANY MUD OR STONE IS TRACKED ONTO KING ROAD, A FULL CONSTRUCTION ENTRANCE SHALL BE REQUIRED.

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
 THE INSTALLATION AND/OR CONVERSION OF EROSION CONTROL FACILITIES TO STORMWATER FACILITIES, INCLUDING THE INFILTRATION BASIN WITH MRC, SHALL BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR DESIGNEE.

Type	Name	Depth to Bedrock	Depth to Seasonal High Water Table	HSG	Hydric Soil	Agricultural Soil
AbB	Abbotstown silt loam, 3 to 8 percent slopes	40'-60"	6'-18"	D	No	Farmland of Statewide Importance
Bo	Bowmansville-Knaifers silt loams, 0 to 3 percent slopes	72'-99"	0'-18"	C/D	No	Not Prime Farmland
CyB	Culleoka-Welkert channery silt loams, 3 to 8 percent slopes	20'-40"	>80"	B	No	Farmland of Statewide Importance
CyC	Culleoka-Welkert channery silt loams, 8 to 15 percent slopes	20'-40"	>80"	B	No	Farmland of Statewide Importance
LhD	Lansdale loam, 8 to 25 percent slopes, extremely stony	42'-72"	>80"	B	No	Not Prime Farmland
ReB	Reading silt loam, 3 to 8 percent slopes	40'-60"	18'-36"	C	No	Farmland of Statewide Importance
Rc	Reaville channery silt loam, 8 to 15 percent slopes	20'-40"	6'-36"	D	No	Farmland of Statewide Importance

Limitations and Resolutions: The soils found within the project limits have varying limitations including possible shallow depth to groundwater and possible shallow depth to bedrock. In order to resolve the groundwater limitation, any standing water should be pumped through a sediment filter bag. To resolve the bedrock limitation, the contractor shall determine whether rock is ripable. If rock is not ripable, blasting will be required. All blasting shall meet all local, county, state and federal regulations.



LOCATION MAP
REFERENCE: DOYLESTOWN U.S.G.S. QUADRANGLE MAP

Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date
02/08/2023	Revised Per Township Engineer Review	02/08/2023
06/08/2023	Revised Per Township Engineer Review	06/08/2023

THE ESTATES AT HILL TOP
 396 KING ROAD
 TWP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

ROBERT T. CUNNINGHAM, P.E.
 PA PE07624

File No.	1734_C3.0 E&S.DWG
HCE Job	1734
Date	09/14/2022
Scale	1"=60'
Designed	RC
Sheet	8 of 15
Drawing No.	C3.0

SEQUENCE OF CONSTRUCTION

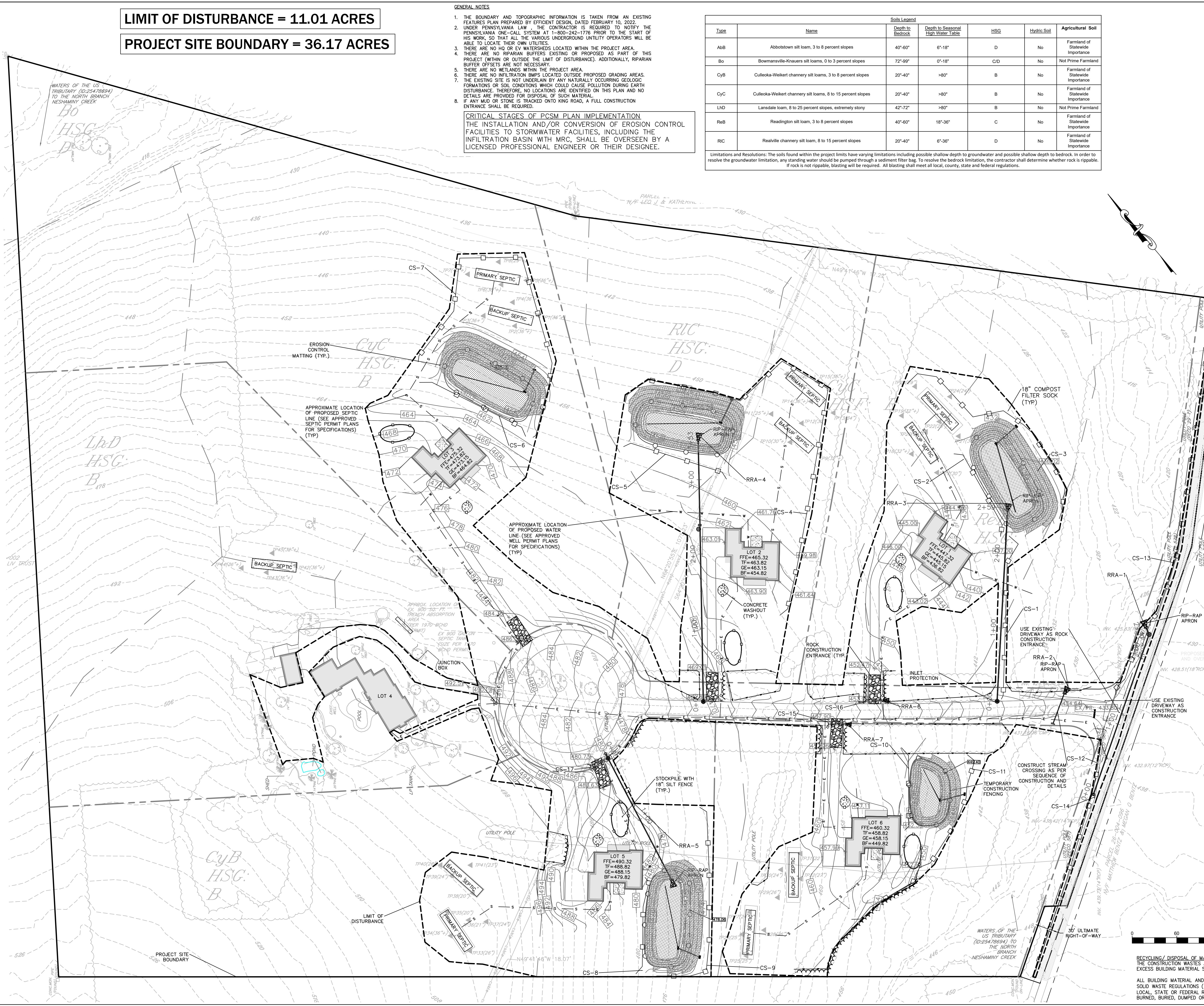
- NOTES:**
1. SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIATE FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE 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.
 2. THE RAIN GARDENS 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.
 3. 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.
 4. 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.
 5. INSTALL CONSTRUCTION ENTRANCE AT SITE ACCESS, STOCKPILE, COMPOST FILTER SOCK AND TREE PROTECTION FENCE WHERE SHOWN ON THE PLAN. INSTALL PROTECTION FENCE AROUND FUTURE BMS.
 6. 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.
 7. PRIOR TO VERTICAL CONSTRUCTION A STABLE BASE SHALL BE ESTABLISHED AND MAINTAINED, TO AVOID ACCELERATED EROSION.
 8. A PRELIMINARY RAIN GARDEN 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.
 9. 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 DRIVEWAY/PARKING SUBGRADE.
 10. INSTALL WATER, SEPTIC, AND STORM SEWER SYSTEM STARTING AT THE DOWNSTREAM END 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 CURB, SUBBASE AND BASE COURSE FOR THE DRIVEWAY/PARKING.
 11. COMPLETE FINAL GRADING. AFTER FINAL GRADING IS COMPLETED, APPLY PERMANENT SEEDING MIXTURE AND INSTALL ALL REQUIRED PLANTINGS, FENCING, AND LIGHTING. LIGHTING AND HENRY COURT BINDER COURSE 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.
 12. FINAL GRADE STORMWATER FACILITY UPON COMPLETING AND STABILIZING EACH TRIBUTARY AREA. INSTALLATION SHALL BE IN ACCORDANCE WITH THE PCSM PLANS, NOTES, AND DETAILS. INSTALLATION OF STORMWATER FACILITY IS A CRITICAL STAGE OF THE CONSTRUCTION SEQUENCE.
 13. 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 RETENING, MUST BE PERFORMED IMMEDIATELY.
 14. UPON COMPLETE STABILIZATION OF SITE, REMOVE EROSION CONTROL DEVICES, REMOVE TEMPORARY BRIDGE PLATES AND CONVERT SEDIMENT TRAP TO PERMANENT STORMWATER BASIN BMS PER THE CONSTRUCTION SEQUENCES AND DETAILS FOUND ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN. THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUND COVER.
 15. AFTER CONSTRUCTION IS COMPLETED, INSTALL WEARING COURSE FOR THE DRIVEWAY. REPAIR ANY DAMAGED CURBING, STORM SEWER STRUCTURES, SANITARY SEWER STRUCTURES, LANDSCAPING, LIGHTING, SIDEWALK, DRIVEWAYS, AND/OR ANY OTHER AMENITIES FROM INSTALLATION OF WEARING COURSE.

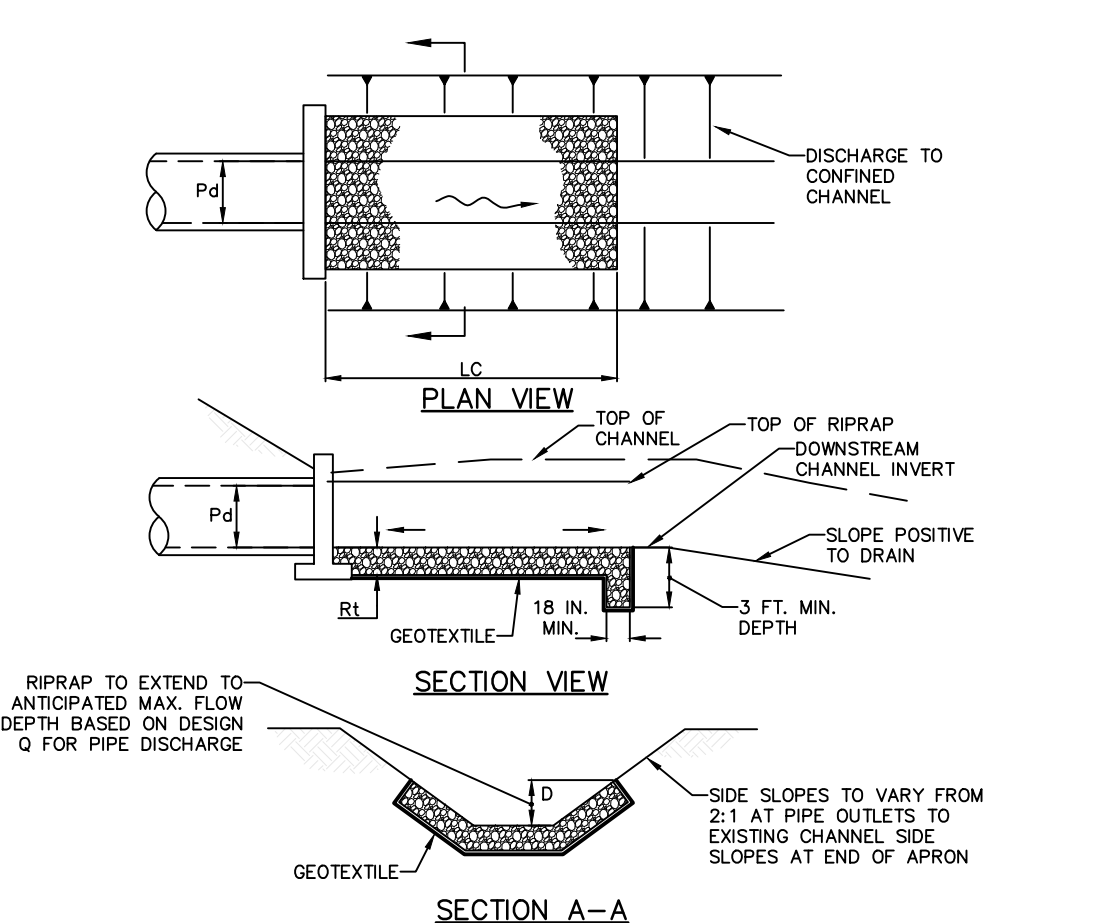
LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DOWNSPOUT LOCATION
- COMPOST FILTER SOCK
- LIMIT OF DISTURBANCE
- PROJECT SITE BOUNDARY
- SOILS LINE
- SOILS TYPE
- CONSTRUCTION FENCE
- 12" SILT SOCK
- EROSION CONTROL MATTING

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.

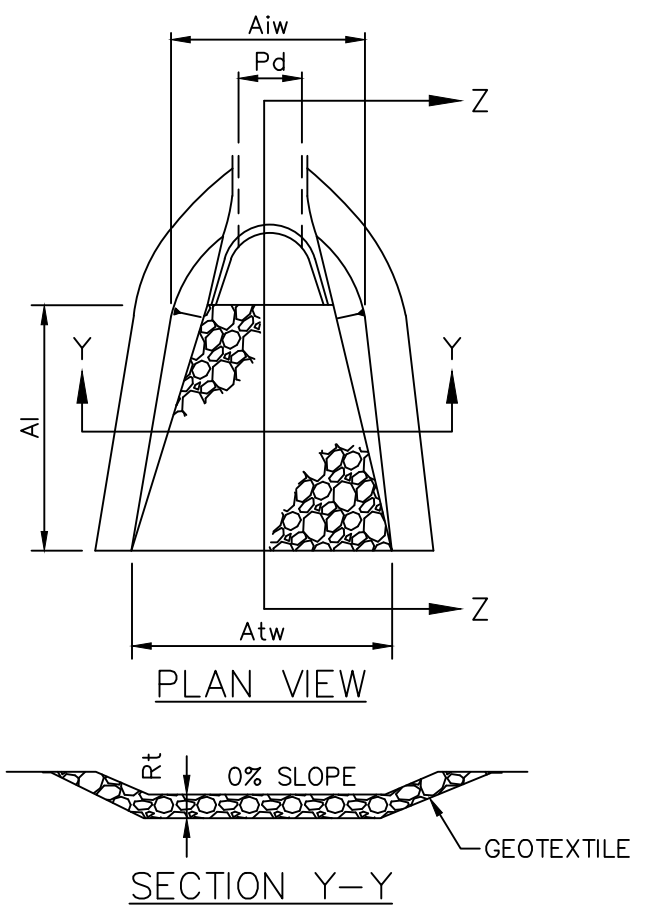
ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.) AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS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





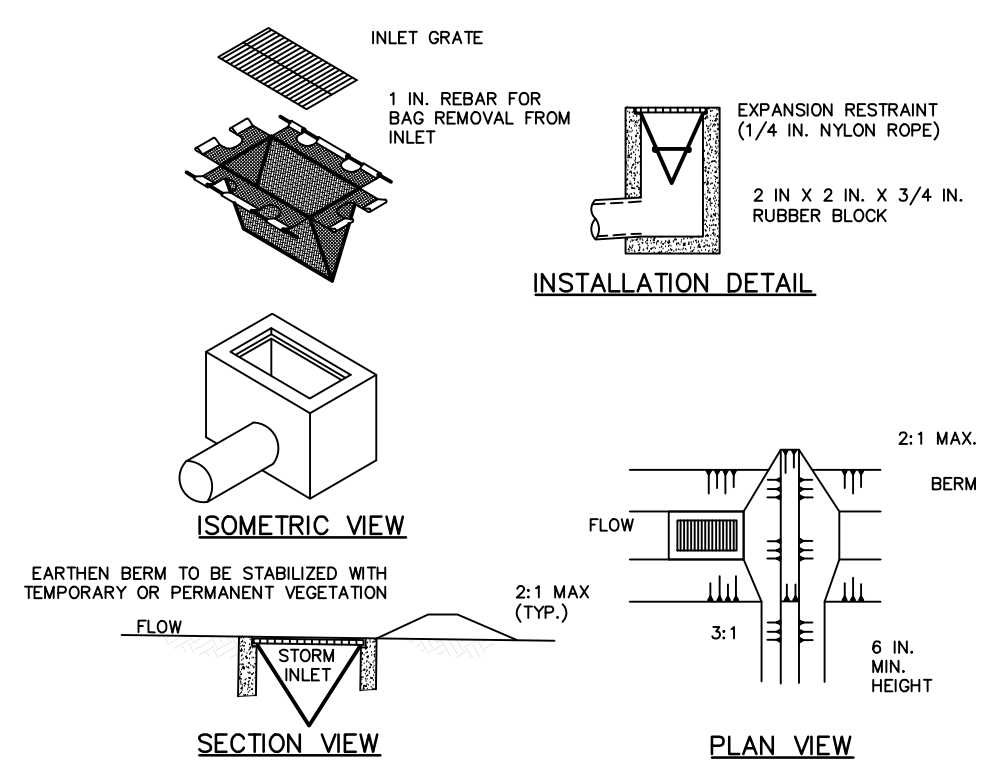
OUTLET NO.	PIPE DIA. (IN)	RIPRAP SIZE (IN)	RIPRAP THICK. (IN)	RIPRAP LENGTH (FT)	INITIAL BOTTOM WIDTH (AT ENDWALL) (FT)	END WIDTH (AT ENDWALL) (FT)	APRON TOP WIDTH (AT ENDWALL) (FT)	END TOP WIDTH (AT ENDWALL) (FT)	SIDE SLOPES H:V
RRA-2	15	3	9	8	3.25	5	7.75	9.5	3:1

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**

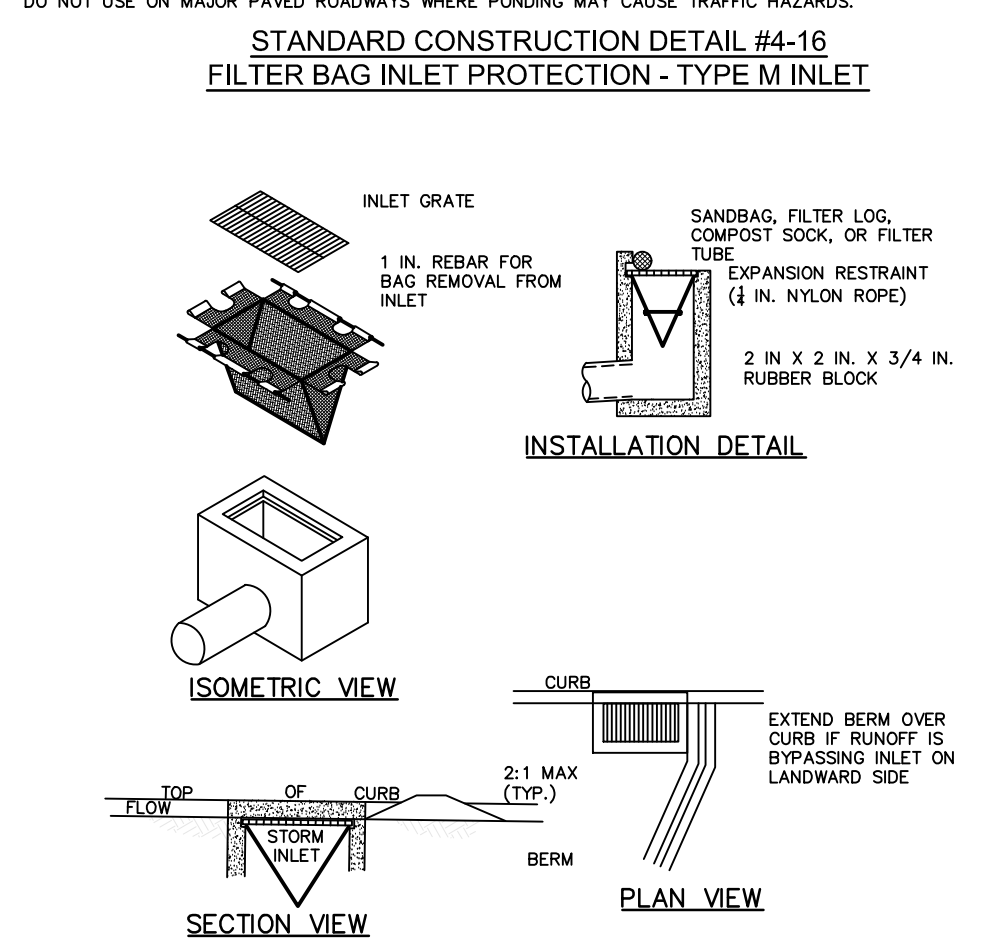


OUTLET NO.	PIPE DIA. (IN)	RIPRAP SIZE (IN)	RIPRAP THICK. (IN)	RIPRAP LENGTH (FT)	APRON INITIAL WIDTH (AT ENDWALL) (FT)	APRON TERMINAL WIDTH (AT ENDWALL) (FT)

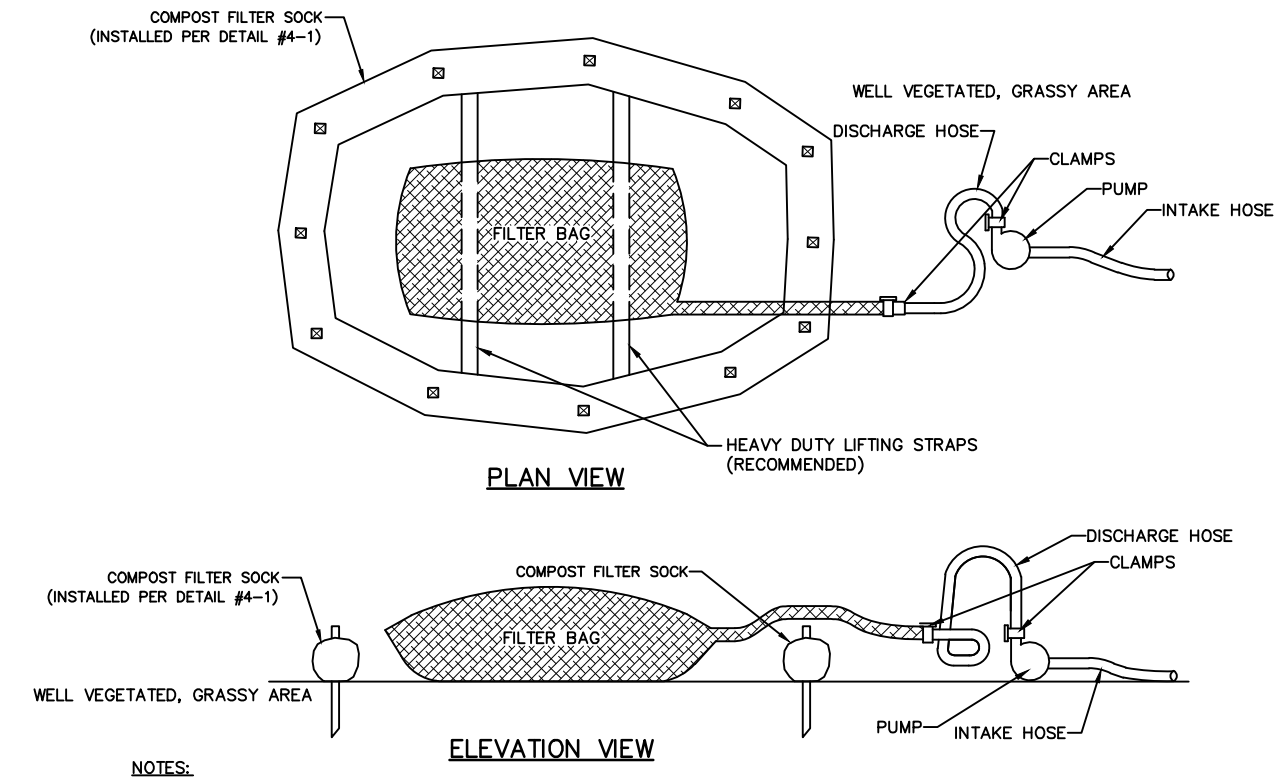
NOTES:
 REFER TO E&S STANDARD WORKSHEET 20 FOR RIP-RAP APRON SIZING INFORMATION.
 ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.
**STANDARD CONSTRUCTION DETAIL #9-1
 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL**



NOTES:
 MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
 AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINGED 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**



NOTES:
 MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
 AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINGED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
 DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.
**STANDARD CONSTRUCTION DETAIL #4-15
 FILTER BAG INLET PROTECTION - TYPE C INLET**

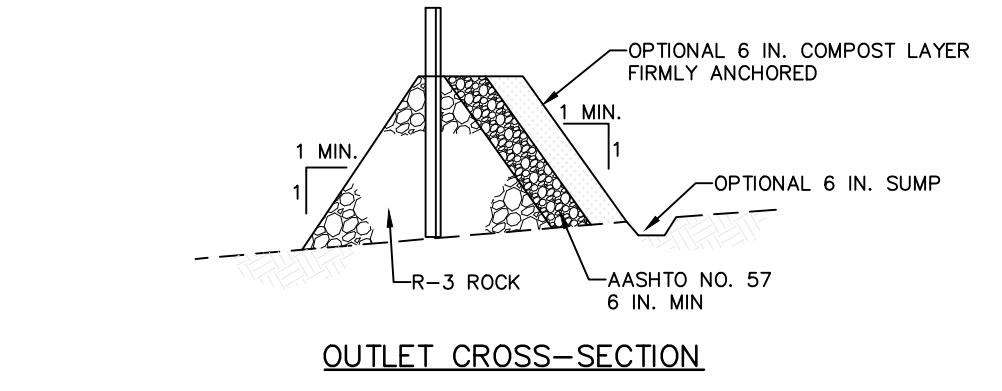


NOTES:
 LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

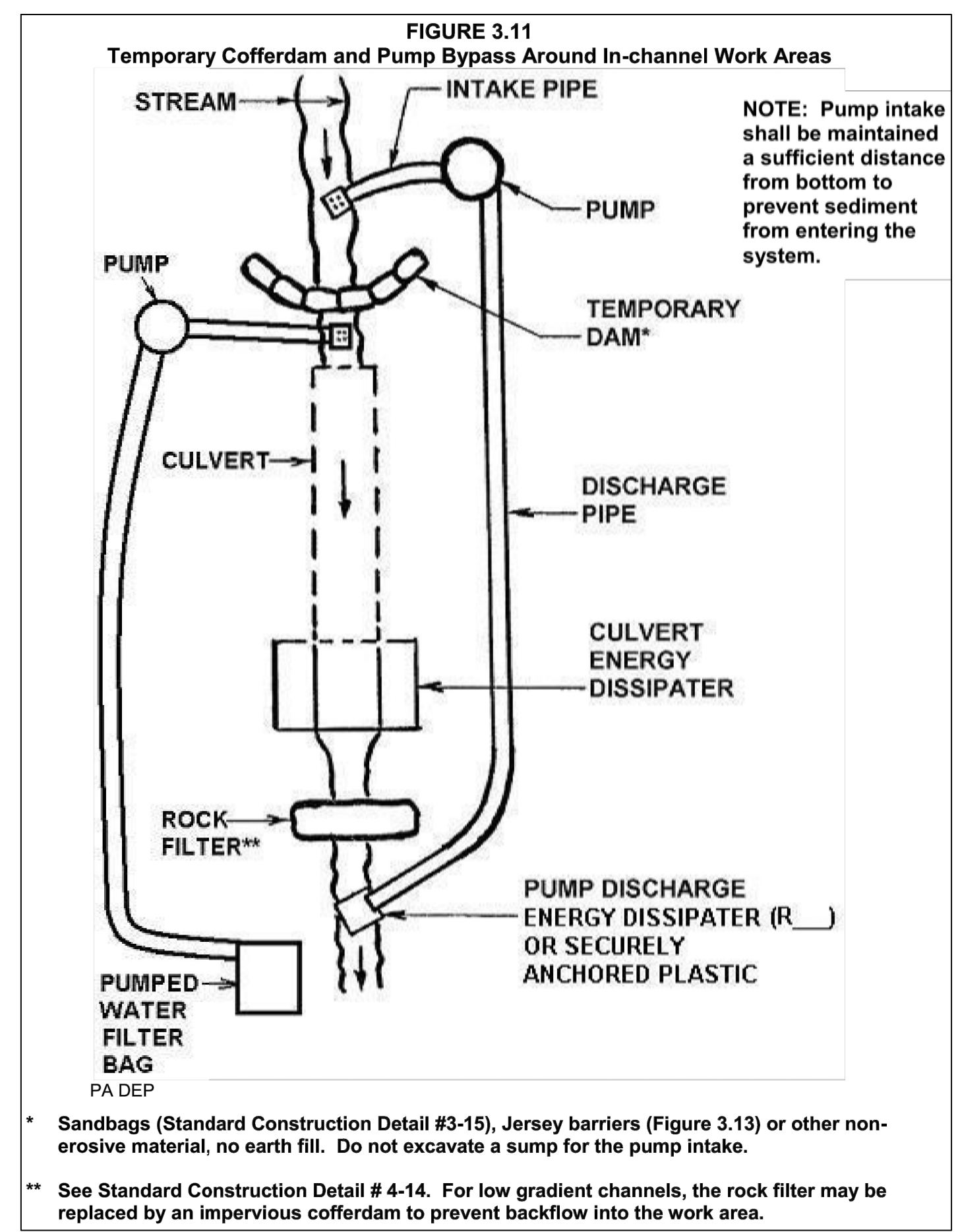
PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/FT
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3788	350 PSI
UV RESISTANCE	ASTM D-4355	70%
LOS % RETAINED	ASTM D-4751	80 SIEVE

 A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRIPS 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 UNDERLAMENT 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 HO 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 SCHEDULED.
 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**

CALL BEFORE YOU DIG. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY EXCAVATION. PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-950-1176
 UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTACT UTILITY COMPANIES PRIOR TO ANY EXCAVATION.



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 HO 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**



NOTE: Pump intake shall be maintained a sufficient distance from bottom to prevent sediment from entering the system.
TEMPORARY COFFERDAM AND BYPASS FOR STREAM CHANNEL WORK AREA
 STREAM CHANNEL CULVERT REPLACEMENT SEQUENCE OF CONSTRUCTION:
 1. INSTALL BYPASS PUMP AND ENERGY DISSIPATER AS SHOWN ON THE DETAIL.
 2. INSTALL COFFERDAM AND ROCK FILTER IN CHANNEL. INSTALL PUMPED WATER FILTER BAG IN A LEVEL, GRASSY, STABLE AREA ADJACENT TO THE CHANNEL.
 3. BEGIN EXCAVATION AND REMOVAL OF EXISTING STREAM CROSSING.
 4. INSTALL PROPOSED CULVERT AS SHOWN ON THE APPROVED GENERAL PERMIT PLAN.
 5. STABILIZE DISTURBED AREA AS PER THE DETAILS AND NOTES SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
 6. REMOVE PUMPED WATER FILTER BAG, ROCK FILTER, AND COFFERDAM.
 7. REMOVE BYPASS PUMP.

REVISIONS	Description	Date	Revised Per	Reviewed Per
02/08/2023	Revised Per Township Engineer Review	06/08/2023	Revised Per Township Engineer Review	

THE ESTATES AT HILL TOP
 396 KING ROAD
 TWP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

EROSION AND SEDIMENT CONTROL DETAILS
 ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

HCE Job	1734
Date	09/14/2022
Scale	N.T.S.
Designed	RC
Sheet	10 of 15

Drawing No.
C3.2

APPLICANT'S ACKNOWLEDGEMENT
 I, **APPLICANT'S NAME**, 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.

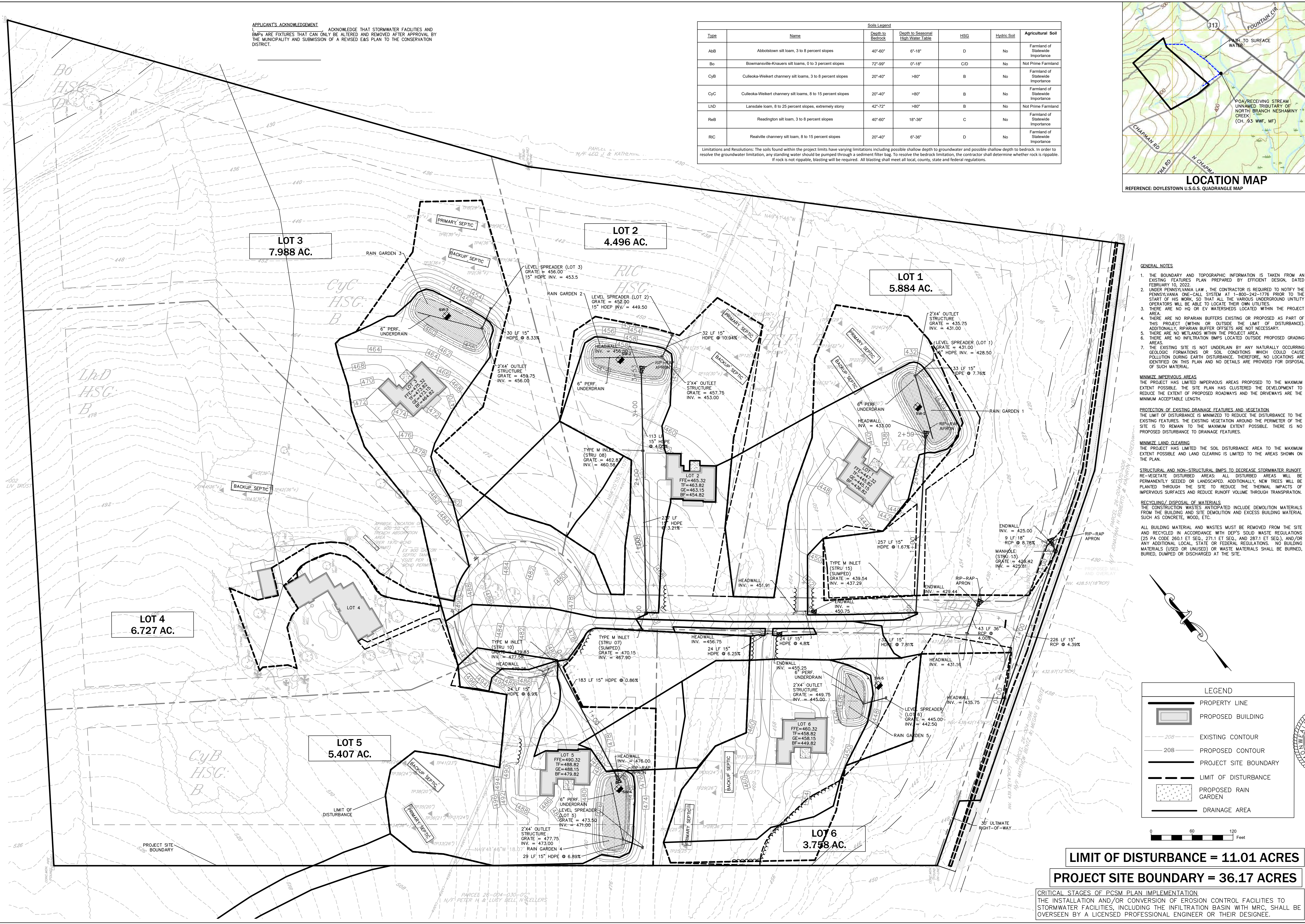
Soils Legend						
Type	Name	Depth to Bedrock	Depth to Seasonal High Water Table	HSG	Hydric Soil	Agricultural Soil
AaB	Abbotstown silt loam, 3 to 8 percent slopes	40'-60"	0'-18"	D	No	Farmland of Statewide Importance
Ba	Bowmansville-Krauers silt loams, 0 to 3 percent slopes	72'-99"	0'-18"	C/D	No	Not Prime Farmland
CyB	Culleoka-Weikert channery silt loams, 3 to 8 percent slopes	20'-40"	>80"	B	No	Farmland of Statewide Importance
CyC	Culleoka-Weikert channery silt loams, 8 to 15 percent slopes	20'-40"	>80"	B	No	Farmland of Statewide Importance
LHD	Lansdale loam, 8 to 25 percent slopes, extremely stony	42'-72"	>80"	B	No	Not Prime Farmland
ReB	Readington silt loam, 3 to 8 percent slopes	40'-60"	18'-36"	C	No	Farmland of Statewide Importance
RIC	Reaville channery silt loam, 8 to 15 percent slopes	20'-40"	6'-36"	D	No	Farmland of Statewide Importance

Limitations and Resolutions: The soils found within the project limits have varying limitations including possible shallow depth to groundwater and possible shallow depth to bedrock. In order to resolve the groundwater limitation, any standing water should be pumped through a sediment filter bag. To resolve the bedrock limitation, the contractor shall determine whether rock is ripable. If rock is not ripable, blasting will be required. All blasting shall meet all local, county, state and federal regulations.



Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Date	Description
02/08/2023	Revised Per Township Engineer Review	
06/08/2023	Revised Per Township Engineer Review	



- 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 UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
 3. THERE ARE NO HO 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 OFFSETS ARE NOT NECESSARY. THERE ARE NO WETLANDS WITHIN THE PROJECT AREA.
 5. THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
 6. 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.

MINIMIZE IMPERVIOUS AREAS
 THE PROJECT HAS LIMITED IMPERVIOUS AREAS PROPOSED TO THE MAXIMUM EXTENT POSSIBLE. THE SITE PLAN HAS CLUSTERED THE DEVELOPMENT TO REDUCE THE EXTENT OF PROPOSED ROADWAYS AND THE DRIVEWAYS ARE THE MINIMUM ACCEPTABLE LENGTH.

PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION
 THE LIMIT OF DISTURBANCE IS MINIMIZED TO REDUCE THE DISTURBANCE TO THE EXISTING FEATURES. THE EXISTING VEGETATION AROUND THE PERIMETER OF THE SITE IS TO REMAIN TO THE MAXIMUM EXTENT POSSIBLE. THERE IS NO PROPOSED DISTURBANCE TO DRAINAGE FEATURES.

MINIMIZE LAND CLEARING
 THE PROJECT HAS LIMITED THE SOIL DISTURBANCE AREA TO THE MAXIMUM EXTENT 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 SEEDED OR LANDSCAPED. ADDITIONALLY, NEW TREES WILL BE PLANTED THROUGHOUT THE SITE TO REDUCE THE THERMAL IMPACTS OF IMPERVIOUS SURFACES AND REDUCE RUNOFF VOLUME THROUGH TRANSPARATION.

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 AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 2601 ET SEQ., 2711 ET SEQ., AND 2871 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.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROJECT SITE BOUNDARY
- LIMIT OF DISTURBANCE
- PROPOSED RAIN GARDEN
- DRAINAGE AREA

LIMIT OF DISTURBANCE = 11.01 ACRES
PROJECT SITE BOUNDARY = 36.17 ACRES

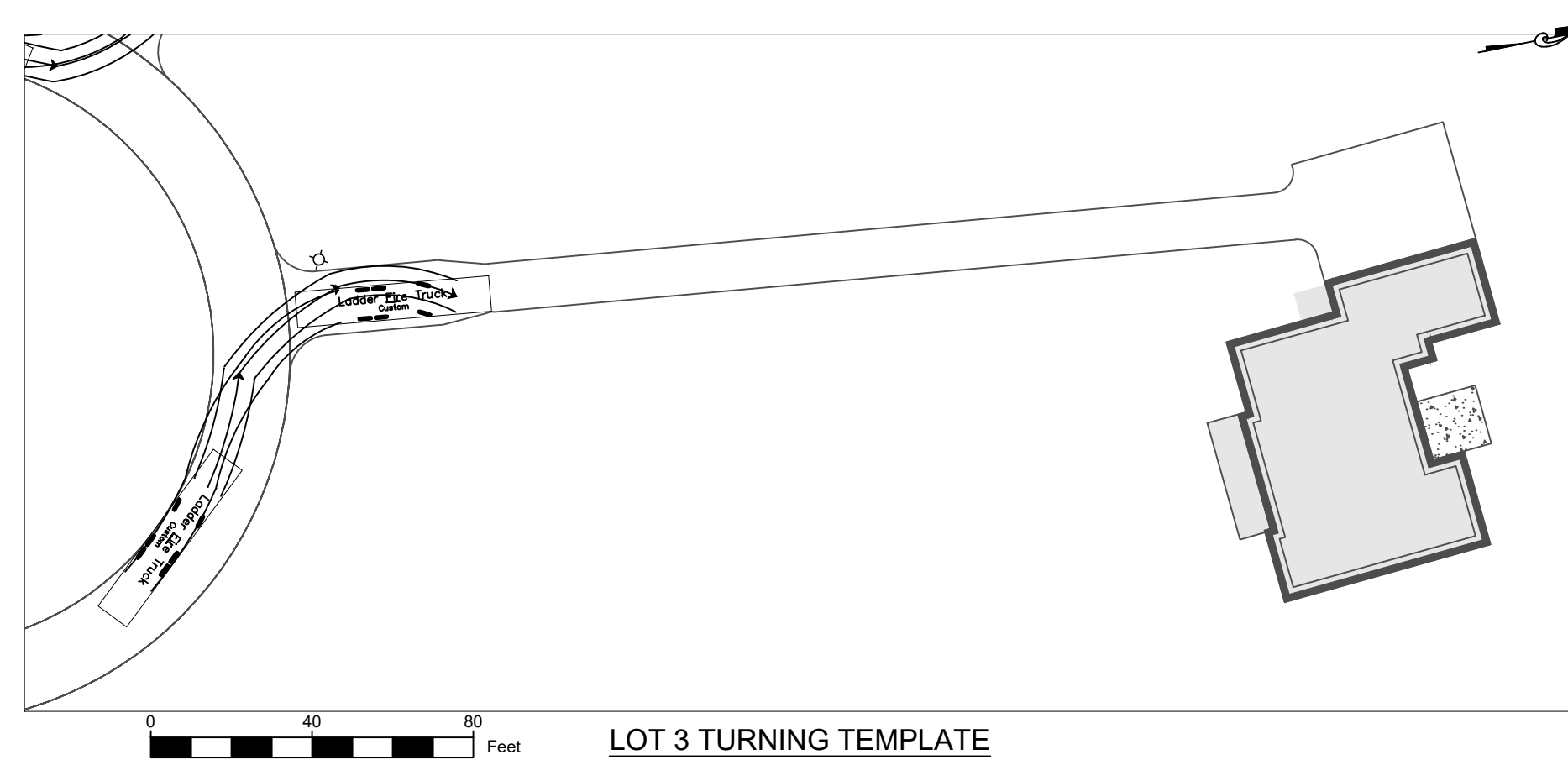
CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
 THE INSTALLATION AND/OR CONVERSION OF EROSION CONTROL FACILITIES TO STORMWATER FACILITIES, INCLUDING THE INFILTRATION BASIN WITH MRC, SHALL BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR DESIGNEE.

THE ESTATES AT HILL TOP
 396 KING ROAD
 TWP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

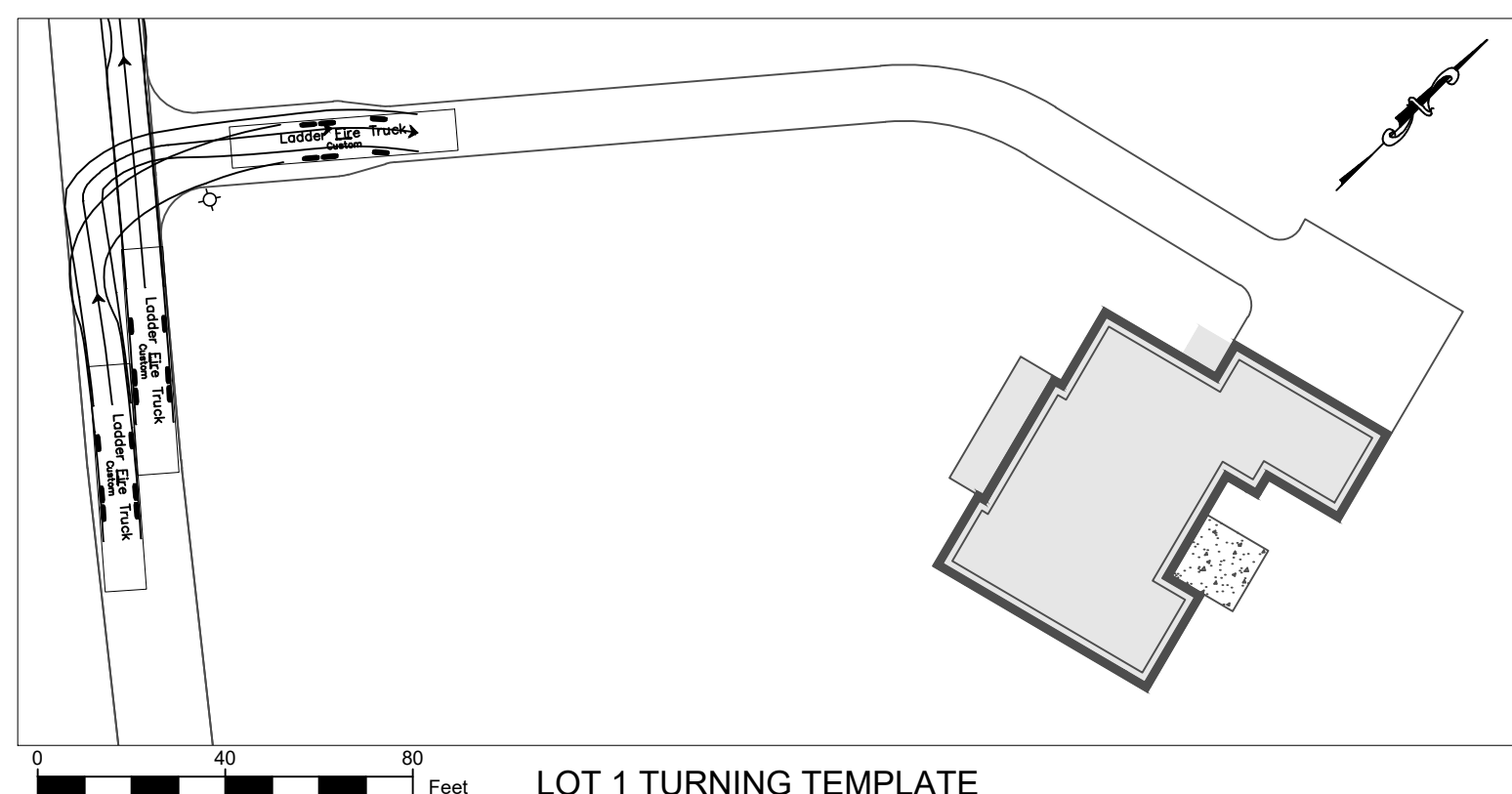
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

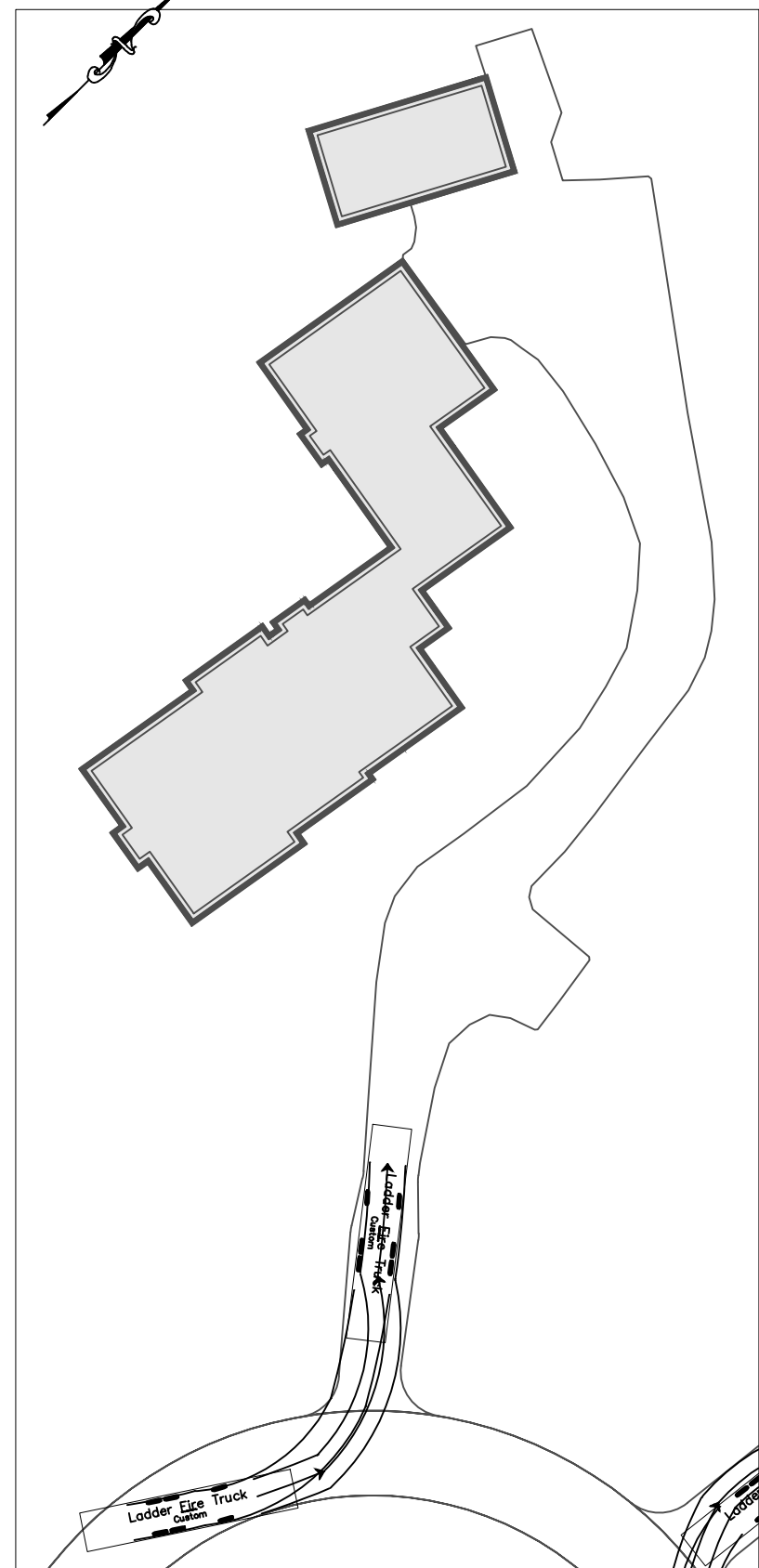
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HCE Job	1734	Scale	1"=60'
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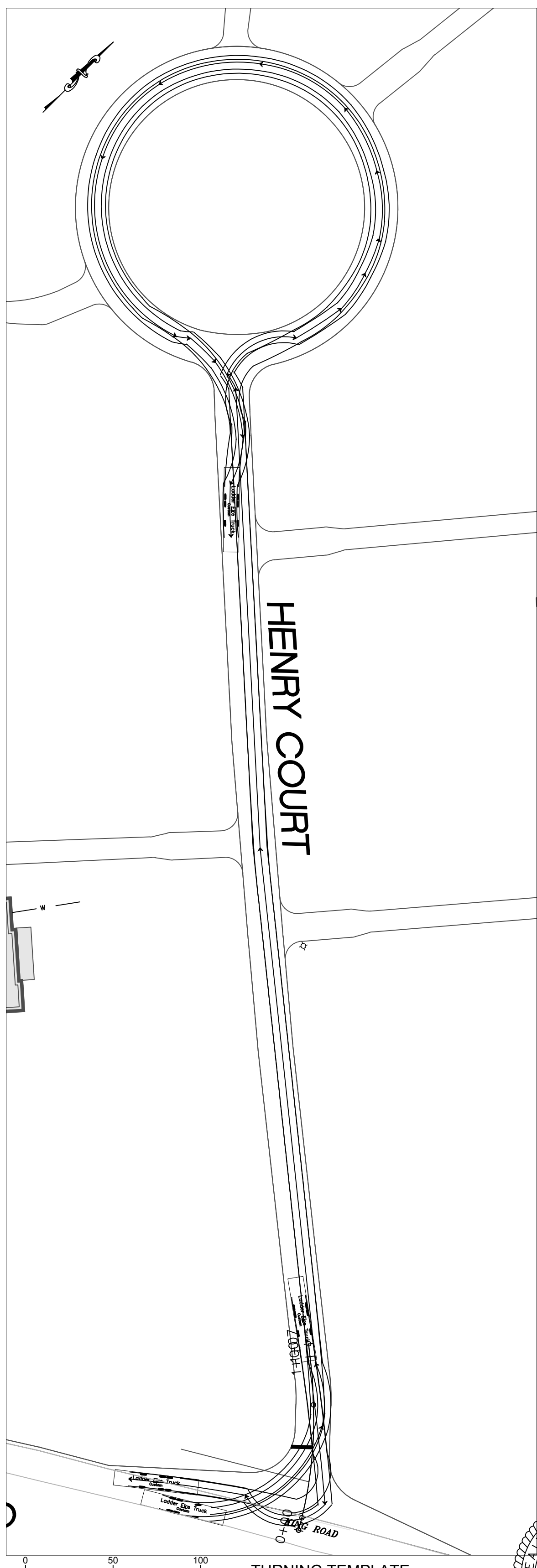
LOT 3 TURNING TEMPLATE



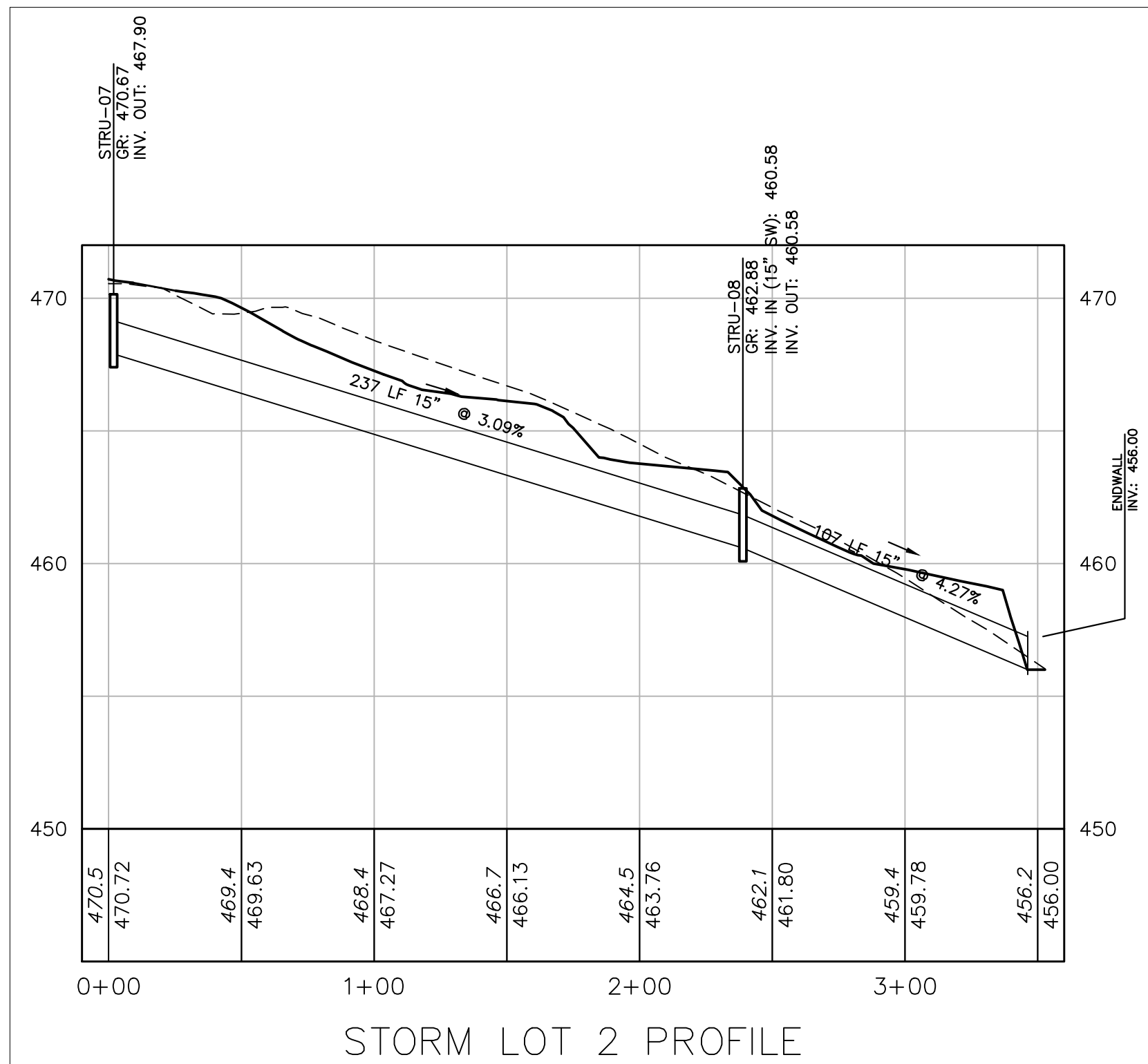
LOT 1 TURNING TEMPLATE



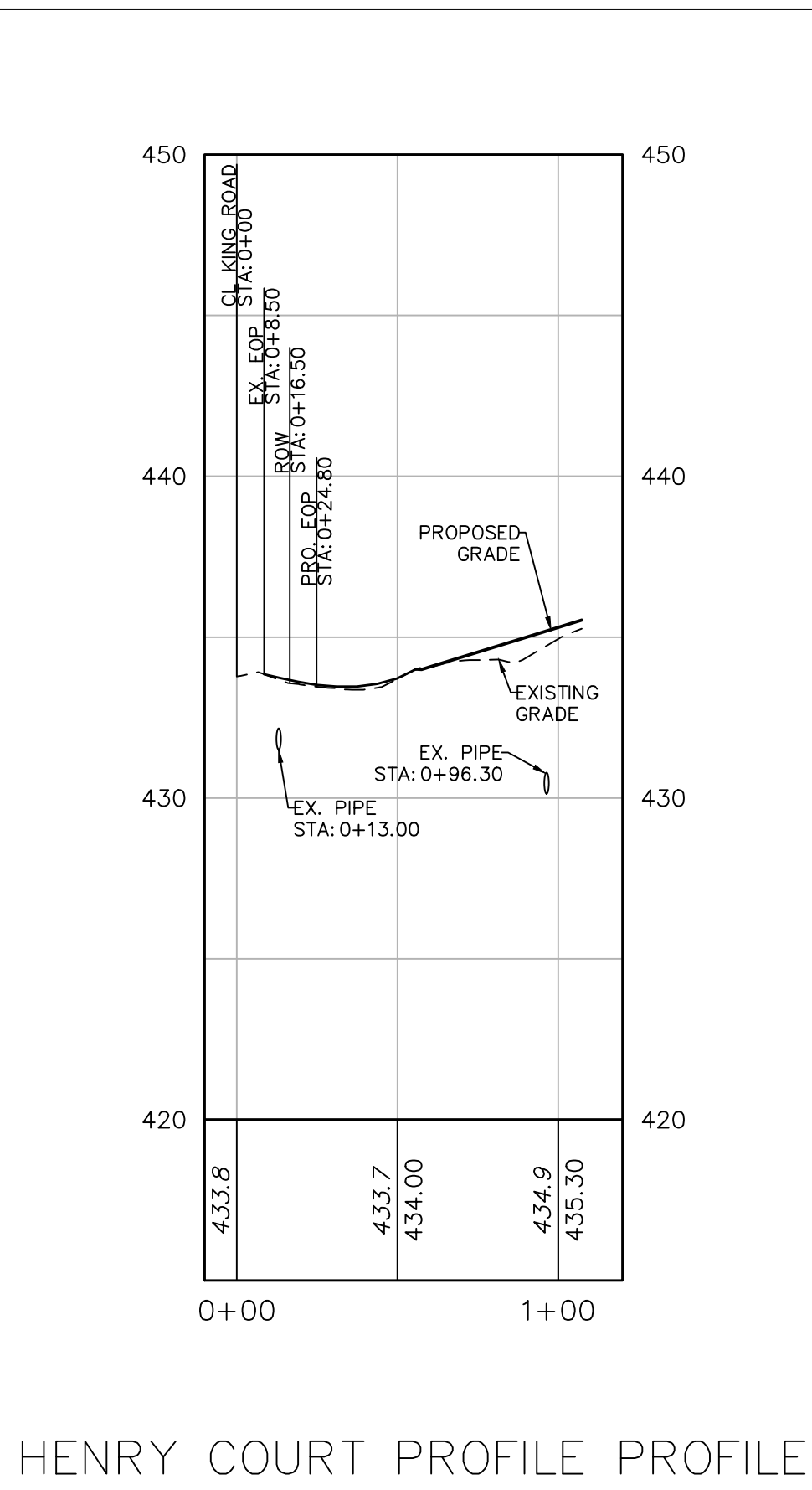
LOT 4 TURNING TEMPLATE



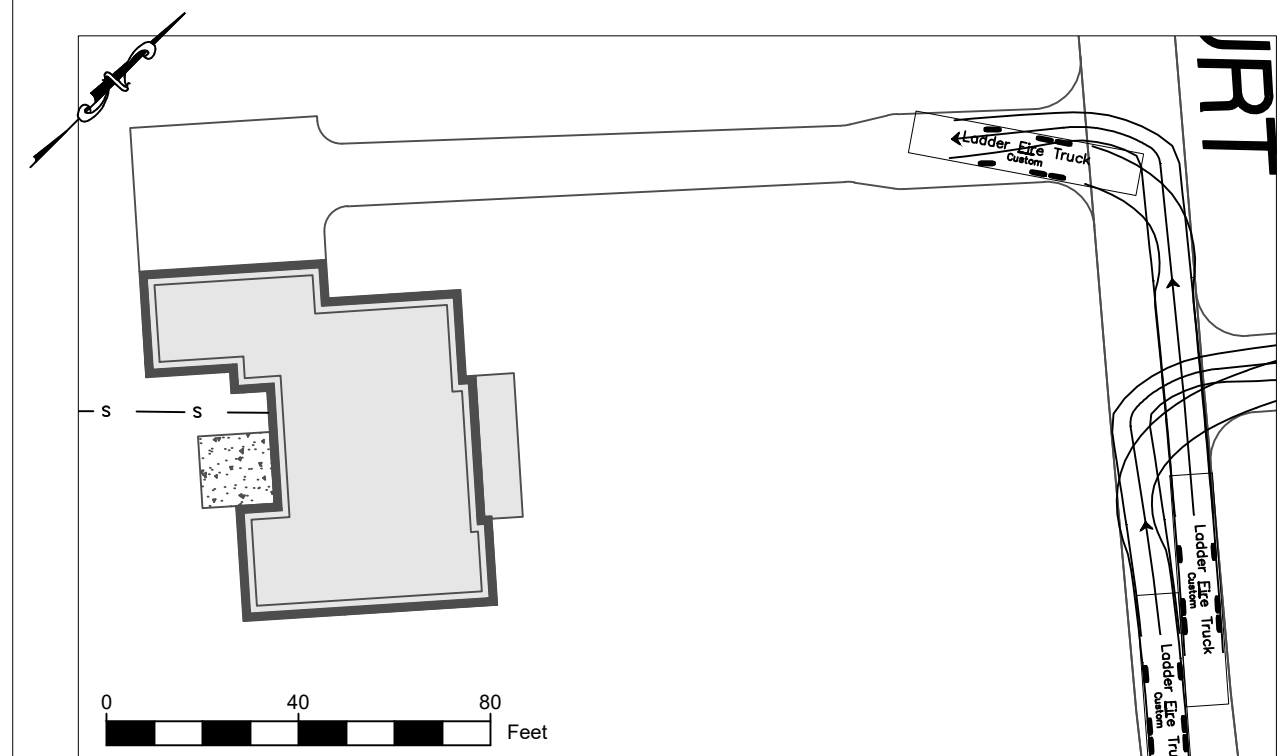
HENRY COURT



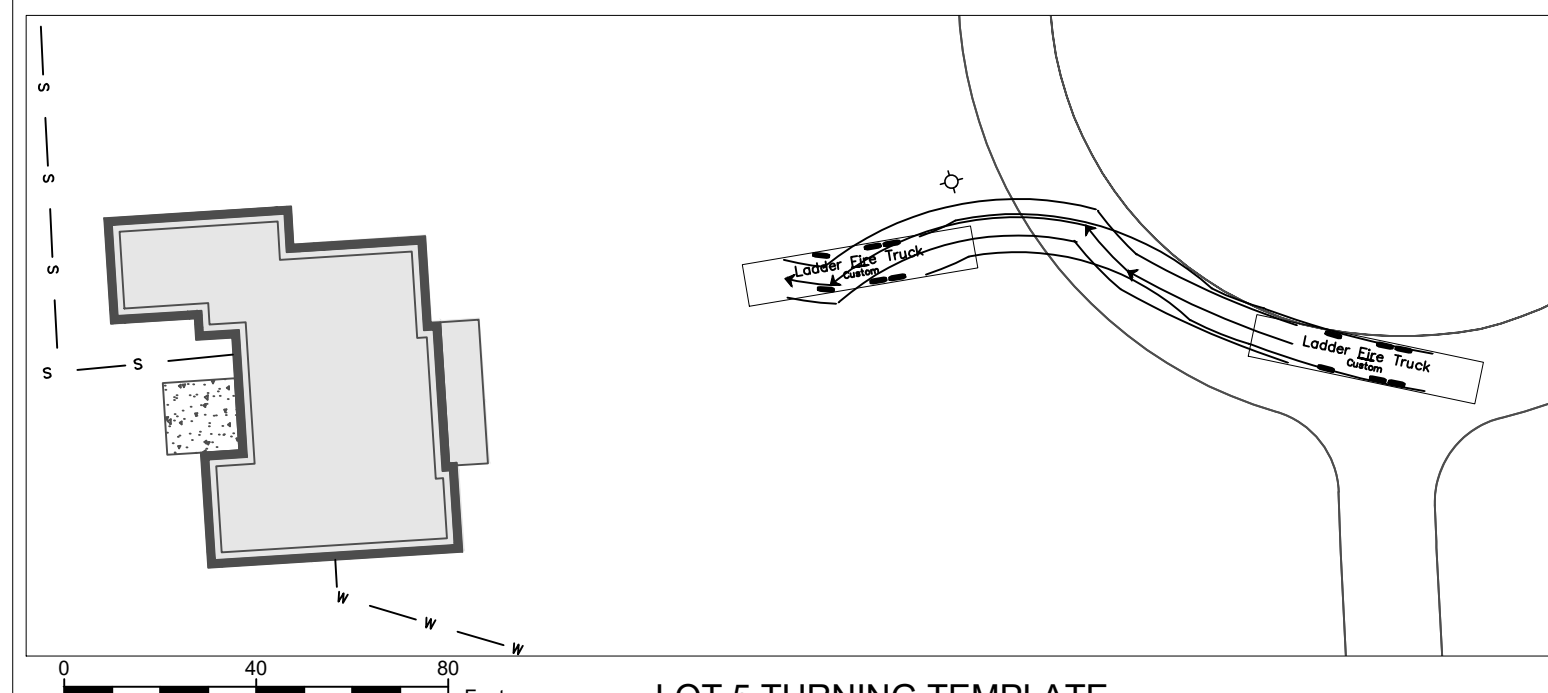
STORM LOT 2 PROFILE



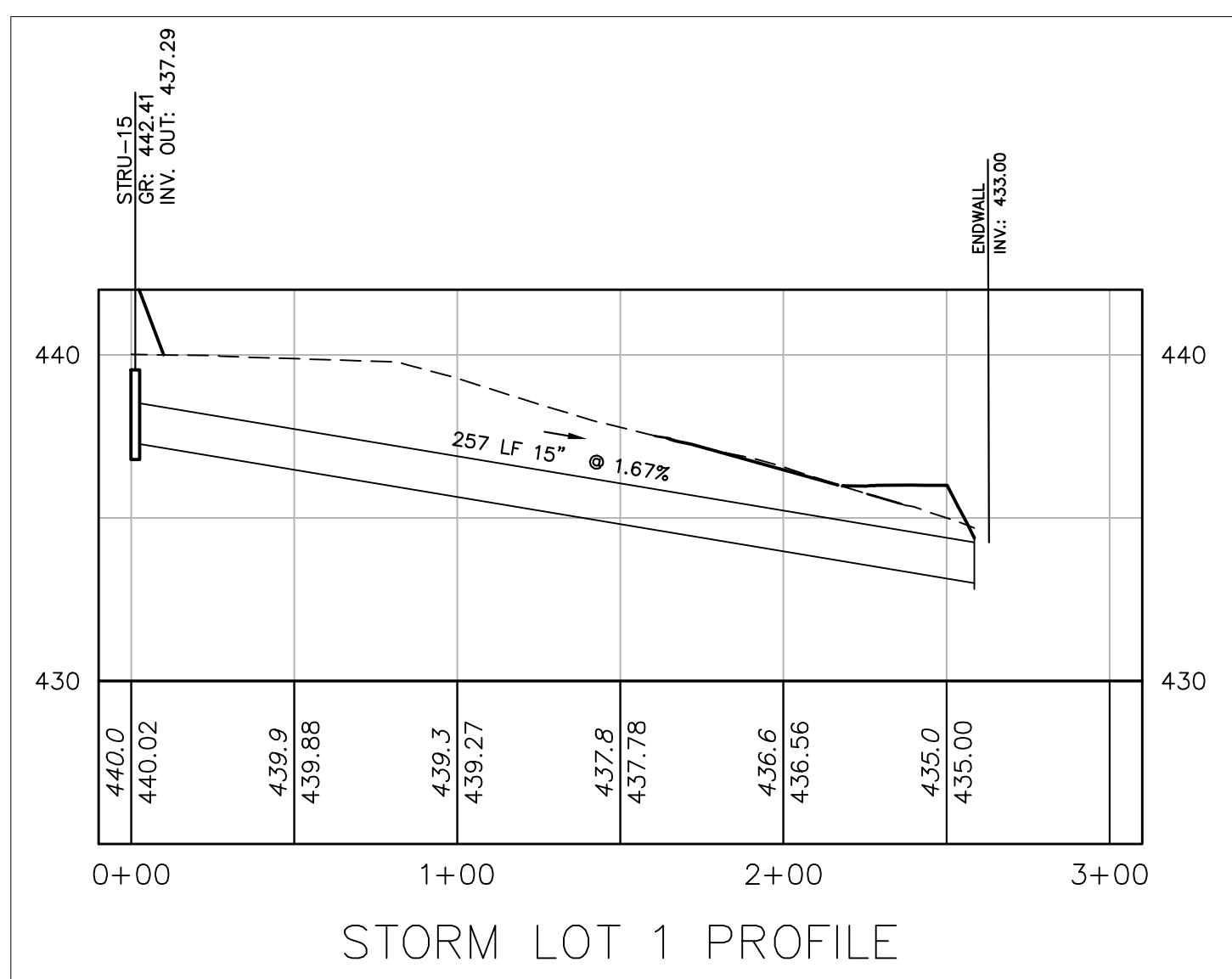
HENRY COURT PROFILE PROFILE



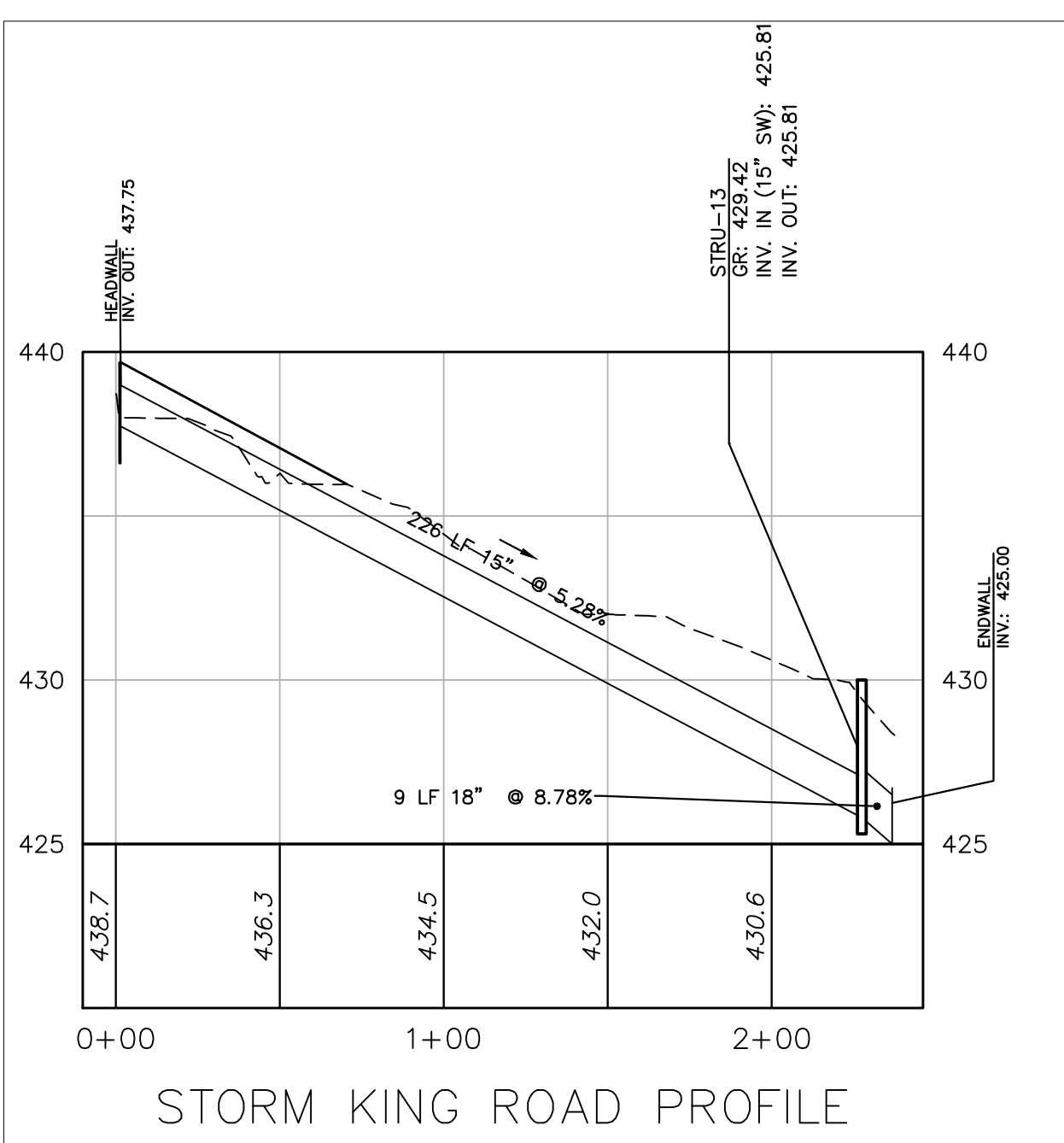
LOT 6 TURNING TEMPLATE



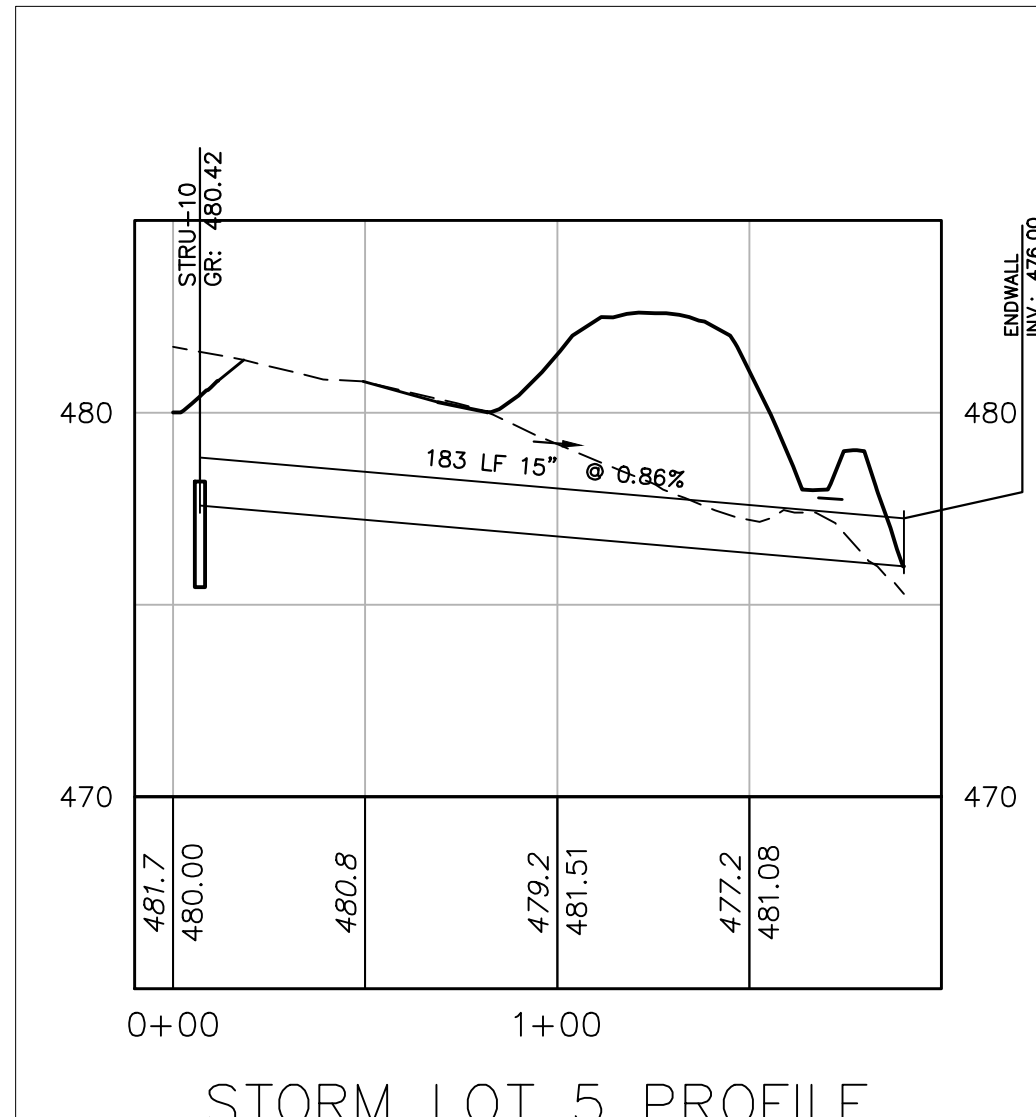
LOT 5 TURNING TEMPLATE



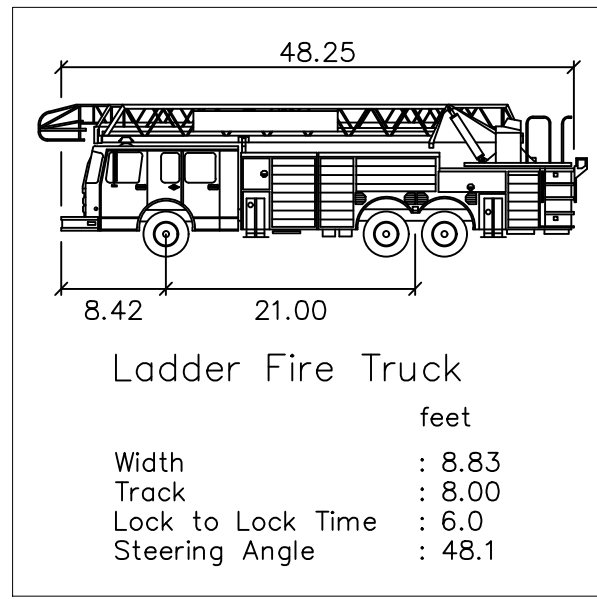
STORM LOT 1 PROFILE



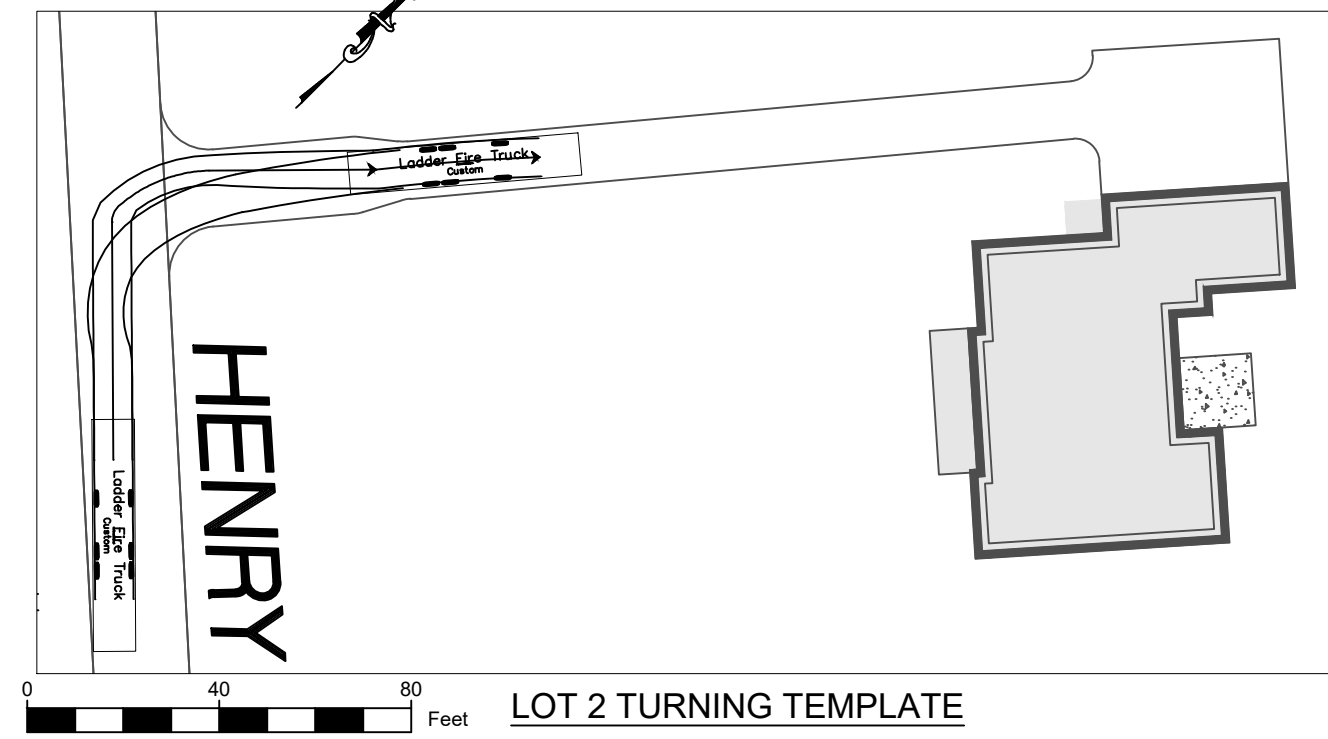
STORM KING ROAD PROFILE



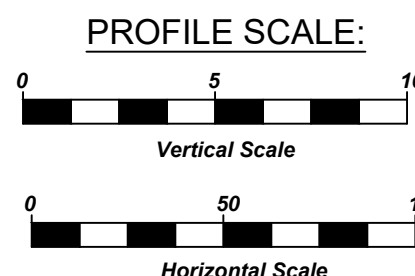
STORM LOT 5 PROFILE



VEHICLE PROFILE



LOT 2 TURNING TEMPLATE



REVISIONS	Date	Description
	02/08/2023	Revised Per Township Engineer Review
	06/08/2023	Revised Per Township Engineer Review

THE ESTATES AT HILL TOP
 396 KING ROAD
 TMP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

TRUCK TURN & PROFILE PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

HCE Job	1734
Date	09/14/2022
Scale	AS SHOWN
Designed	RC
Sheet	13 of 15

Drawing No.
C5.0

Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

CALL BEFORE YOU DIG
 3 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE AND
 30 DAYS NOTICE FOR
 STOP & CALL

Professional Engineer
 Call System, Inc.
 1-800-451-1776

THIS PLAN IS AN APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY EXCAVATION.

GENERAL LANDSCAPE NOTES:

1. THE TOWNSHIP ENGINEER SHALL INSPECT AND APPROVE THE TREE PROTECTION FENCE INSTALLATION PRIOR TO ANY CLEARING OR EARTHMOVING ACTIVITIES.
2. IN THE OPINION OF THE TOWNSHIP ENGINEER'S REPRESENTATIVE OR CERTIFIED ARBORIST, ANY TREES DISTURBED, DAMAGED OR KILLED DURING A RESULT OF CONSTRUCTION SHALL BE REPLACED AT A ONE CALIPER INCH FOR ONE CALIPER INCH.
3. ALL PROPOSED STREET TREES ALONG HENRY COURT TO BE STAKED IN THE FIELD AND REVIEWED BY THE TOWNSHIP ENGINEER PRIOR TO INSTALLATION.
4. IF THE EXISTING TREES LOCATED IN THE AREA OF THE PROPOSED TRAFFIC CIRCLE DIE AS A RESULT OF CONSTRUCTION, THEY WILL BE REQUIRED TO BE REPLACED PRIOR TO THE END OF THE MAINTENANCE PERIOD.

LANDSCAPE LEGEND



PLANT SCHEDULE									
Plan Symbol	Quantity	Botanical Name	Common Name	Min. Planting Spacing	Min. Planting Height	Min. Planting Depth	Remarks	Comments	
Shade Trees									
AT	11	Acer rubrum 'October Glory'	October Glory Red Maple	3" cal.	14-16'	8-10"	Full, upright leader		
CO	8	Coryx coccinea	Shagbark Hickory	3" cal.	14-16'	8-10"	Full, upright leader		
FR	4	Fraxinus pennsylvanica	American Beech	3" cal.	14-16'	8-10"	Full, upright leader		
LT	6	Liriodendron tulipifera	Tulip Tree	3" cal.	14-16'	8-10"	Full, upright leader		
QA	7	Quercus alba	White Oak	3" cal.	14-16'	8-10"	Full, upright leader		
QP	7	Quercus prinus	Pin Oak	3" cal.	14-16'	8-10"	Full, upright leader		
TA	7	Tilia americana	American Linden	3" cal.	14-16'	8-10"	Full, upright leader		
TD	18	Taxodium distichum	Swamp Cypress	3" cal.	14-16'	8-10"	Full, upright leader		
WB	14	Wormy White Oak	Wormy White Oak	3" cal.	14-16'	8-10"	Full, upright leader		
Ornamental Trees									
AC	18	Amelanchier canadensis	Shadbush	1.5" cal.	8-10'	8-10"	Multi-stem, 3 stems		
CC	13	Cornus canadensis 'Kross Pansy'	Spicebush	1.5" cal.	8-10'	8-10"	Multi-stem, 3 stems		
MV	11	Magnolia virginiana	Sweetbay Magnolia	1.5" cal.	8-10'	8-10"	Multi-stem, 3 stems		
Shrubs									
AA	42	Arnoea arbutifolia	Red Chokeberry	-	30"	COOT	Heavy, full specimen		
CS	18	Cornus amomum	Red Twig Dogwood	-	30"	COOT	Heavy, full specimen		
IG	16	Ilex glabra	Holly	-	30"	COOT	Heavy, full specimen		
IV	60	Ilex verticillata 'Red Spire'	Red Spire Winterberry	-	30"	COOT	Heavy, full specimen		

LANDSCAPE REQUIREMENTS CHART - NEW BRITAIN TOWNSHIP		
Subdivision Ordinance Item	Requirement	Plan Proposed
Z.O. 27-2400 Natural Resources	No more than 20% woodland disturbance is permitted in the WS district. 20% of woodland disturbance is proposed. No replacement trees are required.	N/A
Z.O. 27-2800 Buffer Yards	Buffer yards shall be required where a nonresidential zoning district adjoins a residential zoning district.	N/A
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. King Rd.: 948' - 50'(driveway) - 898' 898/30 = 30 trees Internal Rd.: 743' (1190x2)/30 = 79 trees	existing vegetation 50 Shade trees* (+ existing vegetation)
S.O. 22-713.5.B.(3) Landscape Buffers & Screens - Detention/Retention Basins	One deciduous or evergreen tree planted every 20 feet, plus one deciduous or evergreen shrub every 10 feet along the basin perimeter, planted in an informal arrangement. Rain Garden Lot 1: 307' 307/20 = 15 Deciduous or Evergreen trees 307/10 = 31 Deciduous or Evergreen shrubs Rain Garden Lot 2: 207' 207/20 = 10 Deciduous or Evergreen trees 207/10 = 21 Deciduous or Evergreen shrubs Rain Garden Lot 3: 307' 307/20 = 15 Deciduous or Evergreen trees 307/10 = 31 Deciduous or Evergreen shrubs Rain Garden Lot 4: 307' 307/20 = 15 Deciduous or Evergreen trees 307/10 = 31 Deciduous or Evergreen shrubs Rain Garden Lot 5: 207' 207/20 = 10 Deciduous or Evergreen trees 207/10 = 21 Deciduous or Evergreen shrubs 220/20 = 11 Deciduous or Evergreen trees 220/10 = 22 Deciduous or Evergreen shrubs Total Landscape Proposed	35 Shade trees (13 existing trees around perimeter) 36 Ornamental trees 146 Shrubs 267 Shade Trees

* Street trees placed behind existing evergreen vegetation along proposed road and elsewhere on lots.



Holmes Cunningham LLC
 409 E. Butler Ave. Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date	Revised Per Township Engineer Review	Revised Per Township Engineer Review
02/08/2023		06/08/2023		

THE ESTATES AT HILL TOP
 396 KING ROAD
 TMP # 26-004-030
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

LANDSCAPING PLAN

ROBERT T. CUNNINGHAM, P.E.
 PA PE076424

File No.	1734_C6.0 LANDSCAPE.DWG		
HCE Job #	1734	Scale	1"=60'
Date	09/14/2022	Designed	RC
Sheet	14	of	15
Drawing No.	C6.0		



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

July 17, 2023

File No. 22-05077

Michael Walsh, Assistant Manager
New Britain Township
207 Park Avenue
Chalfont, PA 18914

Reference: 396 King Road, "The Estates at Hill Top" Preliminary Plan Review 3
Joe Casadonti, T.M.P. #26-004-030

Dear Mike:

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

I. Submission

- A. Preliminary and Final Land Development and Major Subdivision Plans for The Estates at Hill Top, as prepared by Holmes Cunningham, LLC, consisting of fifteen (15) sheets, dated September 14, 2022, last revised June 8, 2023.
- B. Post Construction Stormwater Management Plan Narrative for The Estates at Hill Top, as prepared by Holmes Cunningham, LLC, dated September 14, 2022, last revised June 8, 2023.
- C. Preliminary Plan Review response letter for 396 King Road, as prepared by Holmes Cunningham, LLC, dated June 8, 2023.
- D. Street Improvement Waiver Cost Estimate for the Estates at Hilltop dated June 8, 2023.

II. General Information

The 36.1-acre subject tract is located at 396 King Road (T-407) within the Watershed Zoning District. The site currently consists of a single-family dwelling amidst various natural resources and agricultural land. The Applicant proposes to subdivide the property into six (6) single-family dwelling lots (Use B1) which is permitted by right with a +/-740'-long private street, Henry Court. The existing single-family dwelling is proposed to remain on Lot 4. The lots are proposed to have on-lot well and septic systems, with individual rain gardens for each new dwelling lot. Widening and storm sewer improvements are proposed along King Road.

III. Review Comments

A. Zoning Ordinance

We have identified the following comments with the proposed plan regarding the requirements and provisions of the current New Britain Township Zoning Ordinance:

1. §27-502.b.3. & 505.1 – Natural resource protection land, such as watercourses, agricultural soils, woodlands, and steep slopes are proposed to be protected and preserved on each site through a conservation easement on each lot. We offer the following comments related to the proposed conservation easements.
 - a. Metes and bounds shall be provided for the conservation easement on each lot.

- b. The plan notes that all areas located outside of the limits of disturbance are to remain as existing cover. These areas include agricultural soils which are required to be protected and not permitted to be disturbed. The applicant shall discuss if the farming use is proposed to be continued and if the Easement Agreement allows for change in ground cover.
 - c. As Easement Agreement shall be executed by the Applicant. (§22-712.A.(3)&(4))
2. §27-502.b.5. – The Lot Area and Coverage Table indicates that Lot 4 has 17,654 square feet of future impervious and shows a conceptual location for a future stormwater facility. The table shall be revised to indicate 0 square feet of future impervious with a note added to the table requiring stormwater management facilities for any future impervious areas on Lot 4.
3. §27-2400.4.i. – For major subdivisions, replanting of the riparian corridor is required where there is little or no existing streamside vegetation and in accordance with this section. An evaluation of the existing vegetation along the stream shall be provided to determine if any revegetation is required or else a site meeting scheduled with our office to review the vegetation. Based on Sheet 4 of 15, there is an area of riparian corridor on Lot 6 that does not have existing vegetation. The engineer's response letter indicates additional landscaping is proposed, however, is not shown on the plan. Ground cover is required along with trees at a rate of one overstory tree and three shrubs for every 20 feet of waterway.

B. Subdivision and Land Development Ordinance Waivers

The following waivers from the Subdivision and Land Development Ordinance have been formally requested by the Applicant in a letter dated September 22, 2022, last revised February 8, 2023:

1. §22-403 & 404 – From providing separate preliminary and final plan submissions.
2. §22-502.D – From the requirement to show existing features within 100 feet of the tract boundary conditioned on providing an aerial map and any additional information requested by the Township Engineer, which we support.
3. §22-502.1.H – From providing a lighting plan, which we support.
4. §22-703.4.C – From the requirement that lot lines shall be drawn parallel, concentric, at right angles or radial to the street right-of-way line, which we support.
5. §22-705.3.C – From constructing full width road improvements along King Road, a minor collector road which requires a 60-foot ultimate right-of-way and 36-foot cartway. We recommend a waiver to allow partial widening along King Road of 2' of widening where 10' is required, with the following conditions:
 - a. A 30-foot ultimate right-of-way along King Road offered as an easement to the Township.
 - b. As noted on the Record Plan, Site Plan Note 16, all dead trees, live trees and branches interfering with the existing overhead lines removed within the proposed King Road U.R.O.W.
 - c. As noted on the Existing Features plan, 2 utility poles relocated near the proposed entrance.
 - d. As shown, the entrance culvert replaced with a minimum 15" diameter pipe.
 - e. Based on a site visit, there are areas of erosion along the watercourse on both Lots 1 and 6. We recommend any areas of erosion be stabilized, down trees removed from the watercourse, and any associated permits obtained from PADEP, as required. Notes stating this requirement should be added to the Existing Conditions Plan.
6. §22-705.3.E – From the requirement to design private streets to the specifications of a local street related to cartway width. A 20' private street is proposed where a 28' cartway is required. We support a waiver conditioned on approval of the truck-turning templates by the Fire Marshal.
7. §22-705.3.G – From providing a 1½" mill and overlay of King Road along the subdivision. Based on a discussion with the Public Works Superintendent, the road was originally a dirt road tar and chipped over the years and, therefore, we do not recommend a waiver. We support a partial waiver from milling King Road, with the condition that a leveling course be installed along with 1½" of wearing course. We recommend that the developer document the existing road conditions prior to construction.

8. §22-705.8.C. – From providing a left-side turnaround configuration for the cul-de-sac with a minimum right-of-way radius of 60 feet and a minimum paving radius of 50 feet. The plan proposes a 20-foot-wide loop road at the end of the access road, which we support.
9. §22-705.8.F. – From providing a 15-foot by 20-foot snow storage easement along the right-of-way of the cul-de-sac bulb, which we support.
10. §22-706 – From providing curb and sidewalk along the property frontage of King Road and the proposed private street, which we support.
11. §22-707.A – From providing pedestrian walkways or recreational trails at locations deemed necessary by the Board, which we support.
12. §22-712.4 – From the detention basin facility regulations with the condition that the Rain Garden spillway for Lot 6 be raised a minimum of 6 inches above the 100-year high water elevation.
13. §22-713.4.B – From the requirement that street trees be planted between three and five feet outside the ultimate right-of-way line and in an informal arrangement when approved by the Board. In addition, the waiver request should be revised to include a partial waiver from §22-713.4.A. to allow existing trees to partially satisfy the street tree requirement, which we support.
14. §22-714.3.A – From providing streetlights at the intersection and turnaround. We support this waiver conditioned on the lamp posts being installed as shown on the plan.
15. 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 partial road widening, curb, sidewalk, and storm sewer, if granted. The estimated fee based on 50% of the cost of full road improvements beyond what's proposed and recommended within this letter, would be **\$44,106.50**. The fee shall be finalized prior to final approval.
16. We recommend an updated waiver letter be prepared and plans revised to include any waivers.

C. Subdivision and Land Development Ordinance

We offer the following comments with the proposed plan regarding the requirements and provisions of the current Subdivision and Land Development Ordinance (SALDO):

1. §22-406.1 – The Applicant is responsible for any other required reviews, approvals, permits, etc. (i.e., BCPC, BCCD, PADEP, Fire Marshal, Township Road Opening Permit, Well Permits, etc.).
2. §22-502.B. – The following comments regarding plan notes/presentation shall be addressed:
 - a. The common lot lines for Lots 2/3 and 4/5 have been revised. The lot areas listed in the Lot Area and Coverage Table on the Record Plan shall be updated, as well as the Zoning Data.
 - b. Once the waivers and design are finalized, a plan view detail and cross-section detail shall clarify the proposed King Road improvements.
 - c. The bearing and distance for the ultimate right-of-way is overwritten by the Ultimate R.O.W. text and should be revised for clarity.
 - d. A line is shown between the Ultimate right-of-way and the legal right-of-way that crosses through the bearing and distance for the Ultimate right-of-way. This line should be identified or removed from the plan.
 - e. Several unidentified dashed and solid lines are shown on the Record Site Plan at the intersection of Henry Court and King Road. The existing storm sewer and notes related to the removal of the existing wall are shown on this plan as well. All unnecessary lines and notes should be removed from the Record Site Plan.
 - f. The drainage area boundary on the PCSWM Plan should be differentiated from other solid line types.

- g. The rain garden hatching for Lot 5 should be aligned with the bottom of the rain garden.
 - h. Site Plan Note 14 should be revised to note the Ultimate right-of-way of King Road to be offered to the Township as an easement.
 - i. A portion of the existing fence on Lot 4 extends onto Lot 5. This fence should be relocated.
3. §22-502.B.(11) – Legal descriptions are required for the new lots, natural resource easements, UROW easement for King Road, private street access easement, defined stormwater easements, proposed utility easements, back up septic system easements and any other easements which may be proposed. All easements shall be labeled with metes and bounds.
 4. §22-705.12. – The Applicant shall formally request approval of the proposed, private street name from the Fire Marshall and Board of Supervisors.
 5. §22-705.12.G – A detail for the No Parking sign shall be provided.
 6. §22-710 – We defer to the Township Fire Marshal for review of the plans with respect to water supply, emergency access, etc.
 7. §22-711.3 – Erosion controls shall be provided for 1.) the replacement of the 36” RCP culvert pipe, 2.) for the installation of the culvert pipe and road widening along King Road, 3.) along the northeastern side of Henry Court between Lot 1 and King Road to capture any sediment that bypasses the inlet during construction, and 4.) for the embankment at the 36-inch culvert.
 8. §22-711.3 – The following comments related to grading shall be addressed:
 - a. The proposed contours appear to direct runoff towards the dwellings on Lots 1 and 2. Defined swales shall be proposed to demonstrate drainage away from the dwelling.
 - b. The existing 432 contour shows an existing swale in the northern pavement transition from Henry Court to King Road. Proposed contours shall be provided. In addition, the existing contours 338 and 336 along the southern transition indicate a cross slope of 40%. Detailed grading of the transition area should be provided.
 - c. The upstream “headwall” along King Road has a proposed invert of 435.75 directly adjacent to the proposed road widening with an elevation of 438. The invert shall be verified and proposed contours shown. In addition, the type of end treatment shall be clarified as protective barrier and/ or warning signage may be necessary at this location.
 - d. Based on the proposed contours, the grading along the northern edge of the road at the 36” culvert appears to have a slope exceeding 2:1. The grading shall be revised to 3:1 maximum.
 - e. The driveway culvert pipe at Lot 6 appears to have less than 6 inches of cover over the top of the pipe at the proposed 458 contour. The grading should be revised to provide a minimum of 12 inches of cover over the pipe.
 9. §22-714 – Residents have expressed concern regarding lighting installed by future homeowners. We recommend provisions be added to the HOA documents requiring any lighting fixture to be dark sky compliant as certified by the International Dark-Sky Association.
 10. §22-715.2.C.(1) – A fee-in-lieu of park and recreation at a rate of \$2,500 per dwelling unit or **\$12,500.00** for the 5 new dwellings may be provided in lieu of land at the Board’s discretion.
 11. §22-716 – Monumentation shall be provided in lieu of pins along the property line between Lots 3 and 4, conservation easements, backup septic easements and at the existing easement’s intersection with existing and proposed property lines.

12. §22-719 – Upon review of the revised Water Resource Impact Study, we have no outstanding technical comments. Please see the attached Memo dated July 17, 2023 detailing the revisions. The applicant shall execute a Well Depletion Agreement with the Township and post the required financial security prior to recording the final plans and in accordance with sections §22-719.11.A-C. The approved Well Monitoring Program shall be attached to the Well Depletion Agreement.
13. §22-721 – Planning module approval is required to be obtained from the PADEP. While the Planning Commission recommended approval of the Planning Module, we recommend the Board of Supervisors consider approval of the Component 1 Planning Module at an upcoming meeting. If approved, the Planning Module shall be submitted to DEP.
14. §22-721.8 – The applicant shall provide to each lot owner a plan and specifications of the on-lot sewage disposal systems and all operational manuals required for the use and proper maintenance of the systems.

D. Stormwater Management Ordinance Comments

We offer the following comments related to the Township's Stormwater Ordinance

1. §22-712.5.A – The following comments related to the pipe capacity calculations shall be addressed:
 - a. The Storm Sewer Tabulation models a drainage area of 0.20 acres to the 15" RCP along King Road. The drainage area appears to be larger than what's shown on the Drainage Area Plan. The drainage area should be verified and revised accordingly.
 - b. The drainage area to the existing pipe on the opposite side of King Road, north of the entrance, shall be included in the flow to the 18-inch pipe to confirm the size is sufficient.
2. §22-712.6.C – Inlets STRU 07 and 15 along Henry Court are noted to be sumped as requested, however, the proposed grading implies some flow may bypass these inlets. The grading should be revised to ensure runoff is directed towards these inlets and inlet capacity reports shall be provided for the inlets along Henry Court.
3. §22-712.8.D – The riprap apron details on Sheet 10 only reference PRA-1 with a 15-inch pipe which is not consistent with the plan which specifies it at the end of the 36-inch culvert pipe. In addition, the 'Standard Riprap Apron At Pipe Outlet' detail does not provide any specific information. Rip Rap apron details shall be provided for the discharge pipes on Lots 1, 2 and 5, for the 36" RCP culvert crossing Henry Court, and the 18" RCP along King Road.
4. §26-125.3 – The time of concentration calculations should be provided in the report to verify the times used for the hydrographs and labeled on the drainage area maps.
5. §26-132 – The level spreader on Lot 5 has a grate elevation of 473.50 which is 6 inches higher than the invert from the underdrain and outlet structure and will result in a tailwater effect. The level spreader should be lowered.
6. §26-164.1 – The Applicant shall sign an Operation and Maintenance (O&M) agreement with the municipality covering all stormwater facilities and BMPs that are to be privately owned.
7. The Stormwater BMP Maintenance Fee applies to all proposed stormwater BMPs installed in the Township to provide a financial guarantee for the timely installation, proper construction and continued maintenance by the owner. The fee will be calculated once the engineer's estimate of probable cost is submitted and is based on 5% of the construction cost not to exceed \$10,000.00. (Township Resolution 2022-03)
8. §22-712.13.D & 2022 Fee Resolution – The storm sewer fee for the development will be \$2.50 per linear foot of existing and proposed roads. Based on 948 feet of frontage on King Road and 743 feet along Henry Court, a fee of **\$4,227.50** would be required.

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

Sincerely,



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

JM/tw

cc: Dave Conroy, Director of Planning & Zoning Officer
Ryan Gehman, Assistant Planning and Zoning Officer
Randy Teschner, Code Enforcement/Fire Marshal
Ryan Cressman, Public Works Superintendent
Sean Gresh/Jeffrey P. Garton, Esq., Township Solicitors
Joe Casadonti, Applicant
Robert T. Cunningham, P.E., Holmes Cunningham, LLC
Craig D. Kennard, P.E., E.V.P., Gilmore & Associates, Inc.



VALLEY
ENVIRONMENTAL SERVICES, INC.



Jason Mease 610.762.0990
Jeff Clark 484.661.6209



3282 Hope Drive
Emmaus, PA 18049



www.valenv.com

Via Email

July 7, 2023

Casadonti Homes
28 Theresa Lane
Chalfont, PA 18914

Attn: Joseph Casadonti, President

**Re: Revised Water Resources Impact Study Review Response
King Road Subdivision
New Britain Twp., Bucks Co., PA
VES Job #22-107**

Dear Joe:

VES Environmental Services, Inc. (VES) has prepared this response to the March 1, 2023 Gilmore & Associates (G&A) review of the Water Resources Impact Study for the above referenced site in New Britain Township, Bucks County, Pennsylvania.

The following outlines our response to the G&A comments:

1. The purpose of the WRIS regulations is to ensure that new wells constructed in the Township are able to provide a reliable, safe, and adequate supply of water (§719.8.A). None of the test wells reported in the study have been identified as having an adequate supply of water even after hydrofracturing. The WRIS report shall be revised to evaluate the likelihood of obtaining sufficient water on each lot per the Township's testing requirements.

Past use and testing at the site have shown that the Lot #4 well is adequate for the intended domestic water use. Whereas initial yields of the Lots #2, #3, and #5 wells were limited, the Lot #2 well has been re-hydrofractured and a 2-part pumping test has been conducted on the well. Based on the 2-part pumping test, the well could support a 4-bedroom, 2.5-bathroom dwelling. It is understood that prior to obtaining a building permit, an adequate water supply well should be developed on each new lot as per the Township Ordinance (§22-719.9.E). Several options exist to secure an adequate water supply well on each lot. These options include:

1. Acid washing any new, low-yielding well in conjunction with hydrofracturing to remove calcium blockage in fractures and joints in the vicinity of the well bore.
2. Installation of larger diameter wells on the lots, with a minimum 8-inch diameter borehole (alternative well locations on Lots #1, #3, #5, and #6 have been provided on the attached site plan).
3. Drilling of the wells to a much greater depth (>800 feet bgs).
4. A combination of options 1-3.

The developer agrees that under no circumstance should a well be approved that cannot meet the township requirement for a 2-part pumping test based on the proposed number of bedrooms and bathrooms on any particular lot.

2. The location of all existing wells and septic systems within ¼-mile of the proposed wells shall be provided in the WRIS report. (§719.8.D.3).

The locations of all properties with dwellings within ¼-mile of the proposed subdivision boundaries have been provided on Figure 8. It is assumed that each dwelling within the ¼-mile area (a total of 41 including the 6 subdivision lots) has an on-lot septic system and on-lot domestic water supply well.

3. Conclusions regarding the impacts of long-term pumping to surrounding wells shall be drawn from the analysis. (§719.8.E.7). The WRIS report states, "Based on the Lot #2 well long-term pumping test, no adverse impacts to the local groundwater system are anticipated as a result of the 6 proposed domestic water supply wells for the Casadonti-King Road subdivision." This conclusion is inconsistent with the results of that pumping test. Although the proposed water supply wells in Lots #1 and #6 have not been installed, based on the data presented in the report, it is likely that the pumping in the proposed wells in lots #1 and 6 will impact the water levels in nearby existing residential wells. The report shall be revised to adequately predict the change in water level outside the proposed subdivision due to pumping of the proposed wells.

The long-term (72-hour) pumping test was conducted under conditions required by the New Britain ordinance at a pumping rate that simulated groundwater usage of 1,368 gpd/dwelling for each of the 6 proposed lots. This rate far exceeds the typical average water usage rate for a 4-bedroom, single-family dwelling of 300-375 gpd. It also far exceeds the peak sewage design flow for on-lot septic systems for 4-bedroom single-family dwellings (500 gpm). During the pumping tests, none of the off-site monitoring wells (or the Lot #1 on-site well) experienced any drawdown as a result of the test. It is important to note that the high pumping rate required by the ordinance is specifically required to simulate the usage from ALL of the proposed wells without installing and testing every well.

At the request of the Gilmore & Associates, the initial Lot #2 pumping test was re-visited for the revised report, since the single-well test provided drawdown information for the observation wells that could be used to evaluate long-term drawdown. On August 22, 2022, a pumping test on the Lot #2 well was started at 11:00 am with a pumping rate of 6.3 gpm. After approximately 3 hours of pumping, a significant amount of drawdown was observed in the well and the pumping rate was lowered to approximately 5.2 gpm. After approximately 24 hours of pumping, it was determined that the well could not sustain the 5.2 gpm pumping rate for an extended length of time and the pumping test was stopped. Long-term drawdown plots for the Lots #3, #4, and #5 observation wells during the Lot #2 24-hour pumping test are provided in Appendix X of the revised report. Drawdown from the long-term drawdown plots were used to prepare a distance-drawdown plot (also in Appendix X). The distance-drawdown plot indicates that zero drawdown at 365 days with no recharge would occur at a distance of 550 feet from the test well.

During the long-term pumping test, the Lot #2 well was pumped at a rate of 5.2 gpm. This equates to 0.87 gpm per well in the 6-lot subdivision, or 16.7 percent of the pumping test rate for each well (1,250 gpd). In order to calculate the drawdown at distance for each individual well in the subdivision, 16.7 percent of the total drawdowns after 365-days with no recharge for the Lot #3 well (4.0 feet), the Lot #5 well (2.5 feet), and the Lot #4 well (0.5 feet) were plotted on the distance-drawdown plot per Driscoll (1986). The distance-drawdown graph for this scenario is included in Appendix X of the revised report. The graph shows 0.0 feet of drawdown at a distance of approximately 550 feet from each of the proposed 6 pumping wells. This analysis is conservative in that the pumping rate of the test was 5.2 gpm, or 1,250 gpd per dwelling, and considers no recharge over 365 days or through the on-lot septic systems. Please note that the steep drawdowns in the pumping wells during the tests in the low transmissivity aquifer were the result of head loss in the wells themselves, and was not indicative of drawdown in the bedrock aquifer at large. Therefore, the drawdown in the pumping wells could not be used in the analysis.

Based on the pumping test and this very conservative analysis, there is the potential for minimal drawdown to occur within 550 feet of the subdivision wells were no rainfall to occur for a year. Several immediately adjacent wells to the southeast along King Road fall within the extrapolated 365-day drawdown area of the proposed wells on Lots #1 and #6 in the subdivision as shown on the Extrapolated Drawdown figure in Appendix X of the revised report. Should it not rain for 365 days, no water is recharged through the septic systems of the proposed subdivision, and the wells pump more than 3 times the average use of a single-family home continuously, minimal drawdown in 5 off-site wells could occur. However unlikely, any changes in water level outside of the proposed subdivision would be indicated by the monitoring well network required for the well depletion agreement.

4. The report shall include a contour map of water levels in the test well and monitoring wells after one year of pumping under drought conditions (no recharge), based upon the pump test data (§719.8.E.7). The contours in Figure 7 of the report do not reflect the water levels from the pump test data.

The contours in Figure 7 of the report reflect the water levels from the pump test data after 1 year of pumping, as they were plotted directly from the projected ground water elevations shown on Table 4. The ground water elevation after 1 year of pumping the Lot #2 well could not be plotted because the projected drawdown at the excessively high rate of the pumping test without recharge exceeded the depth of the well. Since the Lot #2 well was re-hydrofracked, the constant rate portion of the 2-part pumping test on the well showed that the sustainable pumping rate from the well exceeded that of the long-term pumping test.

5. The water quality testing did not include a library search for Tentatively Identified Compounds in both the Lot #2 and Lot #4 water laboratory reports. The laboratory report for the Lot #2 well shall be revised to include the Pesticides Group 3 parameters, aldrin and dieldrin. (§719.9.C.2.d)

The results (non-detect) for aldrin and dieldrin for the Lots #2 and #3 pumping test have been included in the water quality appendix of the report. The Lot #2 well was re-sampled during the 4/27/23 2-part pumping test conducted on the well. The results, including a library search for TIC are attached.

6. If the existing well on Lot #1 Well is not intended for use, it shall be noted to be properly sealed in accordance with the PADEP Groundwater Monitoring Guidance Manual, February 1996. (§719.9.D.9)

As per Township requirements (see comment #9), the existing well on Lot #1 will be used as a monitoring well for the Well Depletion Agreement. When the agreement concludes, a decision should be made as to whether the existing Lot #1 well should be abandoned, or remain in place as a future monitoring well.

7. The adequacy of each residential water supply shall be determined based upon 200 gallons of water per bedroom per dwelling unit per day. The WRIS report shall be revised to evaluate the potential for the proposed water supply wells to meet the NBT ordinance requirements. (§719.9.E.2).

The WRIS has been revised to reflect 4 bedrooms in each dwelling of the proposed subdivision. The pumping rate during the long-term pumping test (5.7 gpm) exceeded the minimum required peak pumping rate of 5.0 gpm.

8. In order to be certified for use for a single-family dwelling, a well shall have a production of not less than 6 gallons per minute as certified by a licensed well driller. If less than 6 gallons per minute yield is established, such a well may still be certified for use if sufficient storage is provided to meet the calculated peak demand. In no case shall a well yielding less than 2 gallons per minute be certified for use by the Township. Well #2 was observed to pump 2.69 gpm over the 72-hr pump test. It does not appear that the Lot 2 well will be able to meet the required long-term yield. The WRIS shall be revised to provide a long-term yield of the Lot #2 well and any recommendations and/or limitations provided accordingly. (§719.9.E.3)

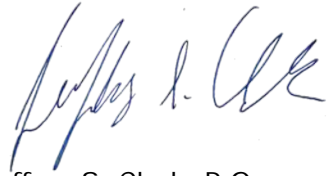
A 2-part pumping test was conducted on the Lot #2 well on April 27, 2023. Based on the 2-part pumping test, the well could support a 4-bedroom, 2.5-bathroom dwelling. The results of 2-part pumping test have been included in the revised WRIS.

9. The Well depletion agreement required by New Britain Township will need to include at a minimum, monthly monitoring of water levels in all monitoring and pumping wells, and the monitoring of precipitation, from the start of construction through from the date that the Township either accepts dedication of any public improvements or approves completion of improvements not to be publicly dedicated, whichever last occurs. The Applicant shall provide a proposed water level monitoring network in the WRIS to be used in the Well Depletion Agreement. (§719.11)

A monitoring plan for the Well Depletion Agreement has been included in the revised WRIS.

If you have any questions or require additional information, please do not hesitate to call.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeffrey S. Clark". The signature is fluid and cursive, with the first name "Jeffrey" being the most prominent.

Jeffrey S. Clark, P.G.
Professional Geologist/Principal
Valley Environmental Services, Inc.



- 5100 Tilghman Street, Suite 150 | Allentown, PA 18104 | P: 610.366.8064 | F: 610.366.0433
- 508 Corporate Drive West | Langhorne, PA 19047 | P: 215.369.3955 | F: 610.968.1829
- 65 E. Butler Avenue, Suite 100 | New Britain, PA 18901 | P: 215.345.4330 | F: 215.948.9943
- 184 W. Main Street, Suite 300 | Trappe, PA 19426 | P: 610.489.4949 | F: 610.489.8447
- One Penn Center at Suburban Station, 1617 JFK Blvd., Suite 425 | Philadelphia, PA 19103 | P: 215.687.4246 | F: 215.564.1780

IH MEMORANDUM

Date: July 17, 2023
To: Janene Marchand, P.E.
From: Toby Kessler, P.G.
cc: Michael Walsh, Dave Conroy, Randy Teschner, Ryan Gehman, Sean Gresh, Jeffrey Garton, Jeffrey Clark, Joe Casadonti, Craig Kennard, David Gerstenfeld
Reference: File 22-05077
396 King Road (Casadonti), Water Resource Impact Study Review 2
TMP 26-004-030

Please note the following review prepared by Gilmore & Associates, Inc. (G&A) on behalf of New Britain Township of the "Water Resources Impact Study Report," prepared by Valley Environmental Services, Inc. (VES), Revised July 7, 2023. In addition, we reviewed the letter titled, "Water Resources Impact Study Review Response," prepared by VES, dated July 7, 2023.

Summary:

The July 7, 2023 revised Water Resources Impact Study (WRIS) Report and comment-response letter present additional information in order to address deficiencies noted in G&A's March 1, 2023 review letter as well as discussions with the Applicant's hydrogeologist.

The two primary areas that the revised WRIS report addressed were the low yield of the test wells and potential impact to surrounding property wells. The report now includes discussion of methodology to construct 1,000-foot-deep wells with 8-inch diameters, and utilize additional methods for increasing yield, such as hydrofracturing and acid washing. Backup water supply well locations are provided on the site plan attached to the revised WRIS. If the first well that is constructed on the lot does not meet the New Britain Township requirements for minimum sustained yield of 2 gallons per minute (gpm) at the time of building permit, a second well will be constructed and tested as required in accordance with the New Britain Township well ordinance requirements. If the second well is found to have sufficient yield, then the first well would be properly sealed and abandoned. Additional hydrofracturing and a 2-part pumping test were reported for the Lot 2 test well in the revised WRIS report, demonstrating yield that meets New Britain Township requirements. In addition, the number of bedrooms per house has been reduced per the report, which lowers the required yield in each well. Based on our review, the revised WRIS sufficiently demonstrates the likelihood that the minimum yield will be met for each of the proposed lots in the subdivision.

With respect to potential impact to nearby wells, the revised WRIS report now utilizes standard methods to predict the effect of pumping a well on surrounding area wells. A very conservative prediction is required in the New Britain Township well ordinance. Based on the newly provided prediction, "minimal change" in water level was reported up to a distance of 550 feet. The prediction provided in the report is 5.2 feet at a distance of 200 feet, 3.2 feet at a distance of 300 feet, 1.9 feet at a distance of 400 feet, 1 foot at a distance of 500 feet and 0 feet at a distance of 550 feet with the assumption of no groundwater recharge for 1 year of pumping. The prediction is made with the very

conservative assumption of no precipitation or recharge of the aquifer through septic systems. In actual operation of the new on-lot supply wells, there will be some precipitation and return of water through the on-lot septic systems. The conservative nature of the prediction and the requirement to perform water level monitoring at accessible offsite wells, both during and following construction, will provide assurance to the Township and neighbors that the new homes will have minimal to no impact on nearby wells. There will also be an escrow established with the Well Depletion Agreement for the unlikely occurrence of a loss of water in an offsite, existing well.

Specifically, the revised WRIS report includes the following new information:

- There is a reduction in the proposed number of bedrooms from 5 to 4 in the proposed 5 new homes. This reduces the proposed water demand for the 6-lot subdivision and potential impacts.
- The test well in Lot 2 was subject to further construction and testing which included a second hydrofracturing and a 2-part pumping test.
- The Revised WRIS included additional sampling of the Lot 2 well for parameters that were not included in the previous 72-hour pumping test.
- The Revised WRIS included further analysis of long-term drawdown from pumping of the proposed wells.
- The Revised WRIS report provides a proposed groundwater monitoring network for the purpose of the Well Depletion Agreement.
- The Revised WRIS report discusses several options to secure sufficient yield in each of the proposed wells.
- The Revised WRIS report provides a map showing properties with wells and septic systems within ¼-mile of the property.
- The Revised WRIS report provides backup locations for proposed on-lot water supply wells on Lots 1, 3, 5, and 6. Lot 2 is not proposed to have a backup well based on the 2-part pumping test provided in the Revised WRIS report. Lot #4 contains the existing house and will continue to be served by the existing well on that lot.

Comments:

At this time, the WRIS report meets New Britain Township requirements.




The following items shall be performed as conditions once other land development approvals are met:

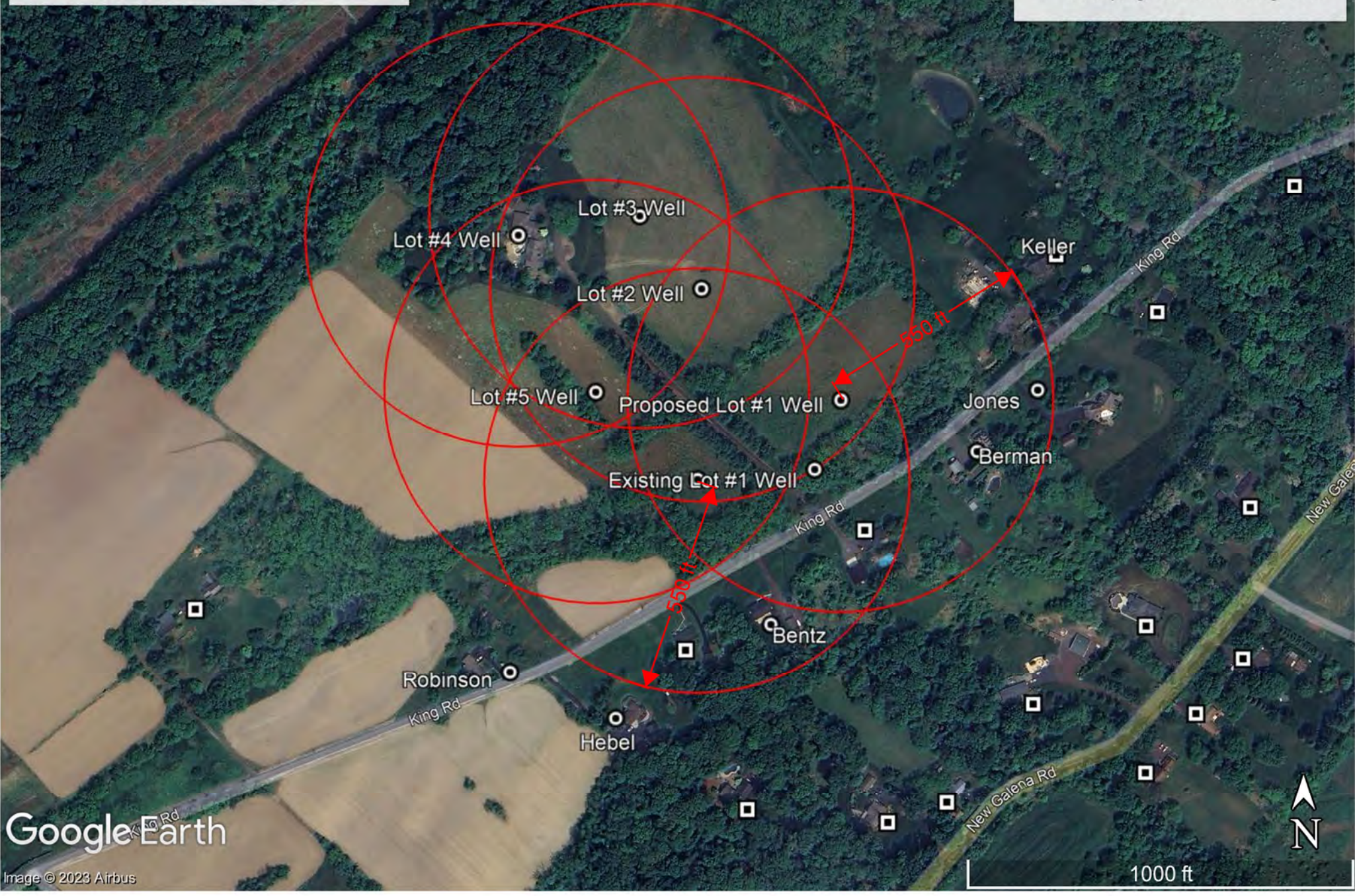
1. Based on the revised WRIS report, the Lot #1 Well is proposed to remain as a monitoring well for the duration of the Well Depletion Agreement. Following the duration of the Well Depletion, if the Lot #1 Well is no longer intended for use, it shall be noted to be properly sealed. In addition, any other test well if not proposed to be used shall be properly sealed. The sealing of abandoned wells shall be completed in accordance with the PADEP Groundwater Monitoring Guidance Manual, February 1996. (§719.9.D.9)
2. The Well Depletion Agreement shall be executed and associated escrow shall be secured prior to plan recordation (§719.11).

Extrapolated Drawdown

King Road Subdivision
New Britain Twp., Bucks Co., PA
VES Job #22-107

Legend

-  Extrapolated Drawdown Area
-  Off-Site Well
-  Pumping Test Monitoring Well



Google Earth

Image © 2023 Airbus

1000 ft