

§ 164-62.18. Conditional use standards and criteria. [Amended 6-4-2014 by Ord. No. 2014-6]

- A. All conditional uses shall be served by public sewer and public water facilities.
- B. For Class One conditional uses, the proposed use must preserve, utilize and maintain any existing principal building, provided that this building was originally built for residential purposes.
- C. For Class One conditional uses, no new, freestanding, nonresidential building shall be constructed on any property which has an existing principal building situated on it as of the date of enactment of this article, and the existing building shall be expanded by no more than 50% of the residential building floor area that existed at the time of passage of this article.
- D. For Class One, Class Two and Class Three conditional uses, all new conditional use buildings with footprints less than or equal to 4,000 square feet and additions must have a residential character and must include the following features:
 - (1) A pitched roof, covering at least 80% of the building or addition, with a pitch of at least six vertical inches to every 12 horizontal inches.
 - (2) Residential building materials.
 - (3) Residentially scaled windows and doors, with a proportion of windows and doors to solid wall that is similar to proportions commonly found on residential structures in the Township.
- E. For Class Three conditional uses, all new conditional use buildings with footprints greater than 4,000 square feet must include the following features:
 - (1) A pitched roof, covering the main portion of the building, or at least 50% of the building, whichever is greater, with a pitch of at least five vertical inches to every 12 horizontal inches.
 - (2) The greatest overall dimension of any building shall not exceed 150 feet, measured horizontally, parallel to exterior walls.
 - (3) All visible façades, shall include a variety of architectural design elements to avoid monotonous or blank building facades.
- F. For Class Three conditional uses, the tract must abut either a MU-Mixed-Use District or an I-Industrial District.
- G. Driveway access controls.
 - (1) No more than one driveway access shall be permitted per street frontage.
 - (2) **Corner lots which front on two streets of different classification shall take access from the street of lesser classification and:**
 - (a) **For Class One and Class Two Uses, shall have no access from the street of higher classification, unless it is physically infeasible to provide access to the street of lesser classification. Any existing driveway to the street of higher classification shall be eliminated when a driveway is provided to the street of lesser classification.**
 - (b) **For Class Three Uses, shall have the principal access from the street of lower classifications, and be permitted one additional secondary access from the street of higher classification.**

(3) Along Sumneytown Pike, Route 113, and Oak Drive, all conditional uses shall be required to share access with an adjacent RO District property or other nonresidential property. When driveway access is available on an abutting property, the applicant shall use this access, as outlined in § 164-62.18G(3)(a) below. If shared access cannot be provided by an existing driveway on an abutting property, the applicant shall provide access in a way that maximizes the potential for shared access in the future, as outlined in § 164-62.18G(3)(b).

(a) Shared access via existing driveways.

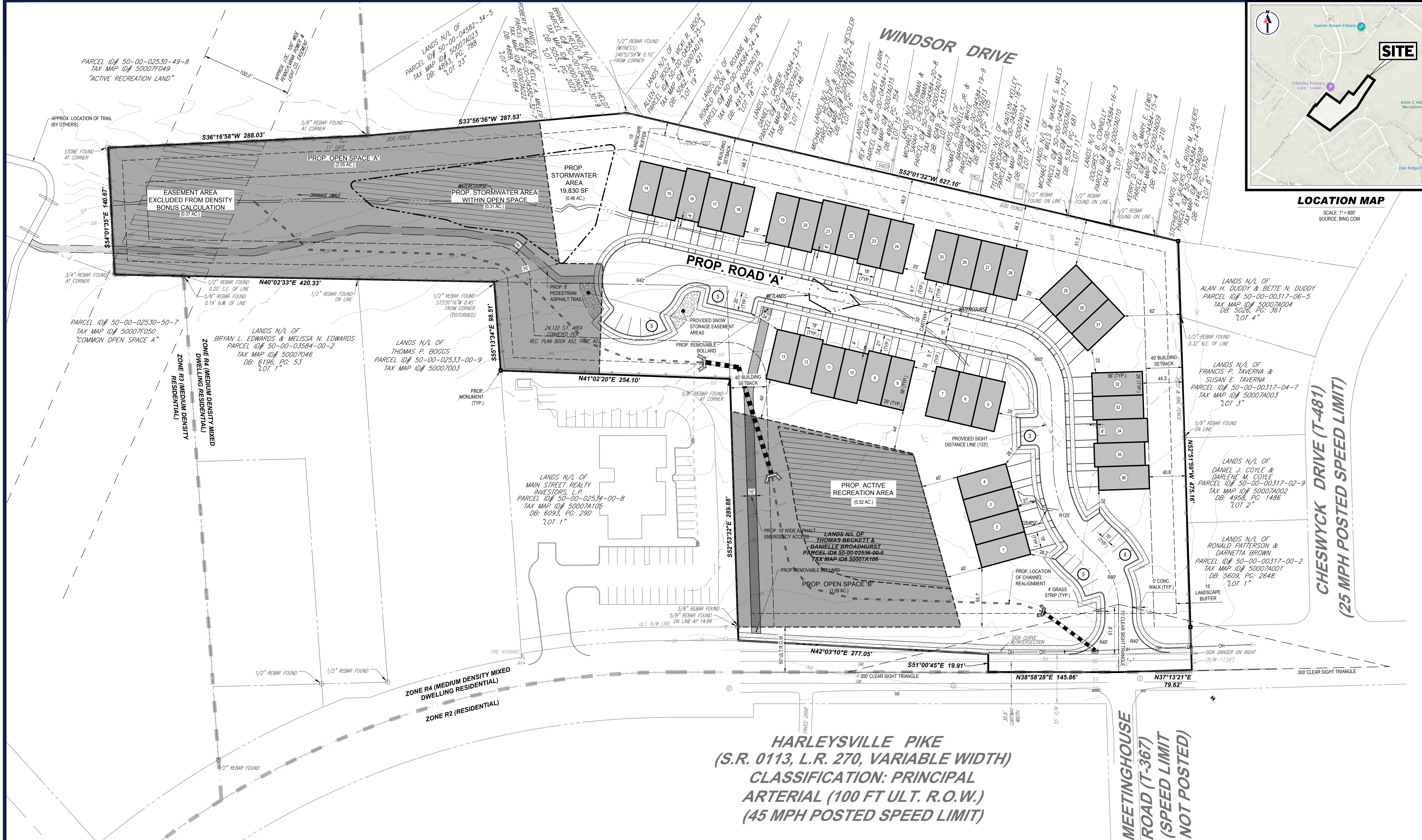
- [1] When the nearest edge of an existing driveway on an adjacent nonresidential property having frontage on the same street is within 30 feet of the applicant's tract, the applicant's tract shall utilize the driveway on the adjacent tract as a shared access, provided that an easement granting access to the applicant's tract has been recorded.
- [2] The shared access shall be the sole access to the site from Sumneytown Pike, Route 113, or Oak Drive. Any existing driveways on the site must be eliminated.
- [3] Shared access shall not be required when all possible interconnections between the two abutting lots would cross wetlands, floodplains, and/or slopes of 15% or more.
- [4] Shared access may be located entirely on one lot or may be divided along a common lot line.

(b) Shared access via new driveways.

- [1] When shared access cannot be provided via an existing driveway consistent with § 164-62.18G(3)(a) above, a maximum of one new driveway intersection shall be permitted per street.
- [2] This new driveway shall be located within 30 feet of a side lot line bordering a property zoned RO Residential Office, unless all possible interconnections between the applicant's tract and abutting lot(s) would cross wetlands, floodplains, or slopes of 15% or more.
- [3] The Board of Supervisors shall choose which side lot line the new driveway will border, based on the proposed driveway's ability to minimize the need for future driveways and/or maximize its distance from existing street and driveway intersections.
- [4] Existing driveways on the applicant's site not meeting the requirements in this section shall be eliminated.
- [5] Each nonresidential use shall provide an access easement for the shared driveway guaranteeing access to all abutting lots zoned RO Residential Office.
- [6] In addition, an access easement guaranteeing access from the closest adjacent nonresidential property to the shared driveway shall be recorded. This easement shall have a minimum width of 35 feet and shall be located between 50 and 100 feet from the street ultimate right-of-way line.
- [7] Parking lot entranceways taking access from existing or future shared driveways shall be set back from the street ultimate right-of-way line a minimum of 50 feet. Parking

shall not be permitted along shared driveways between the street ultimate right-of-way line and the rear edge of the easement granting access to the abutting lot.

- H. Each nonresidential use shall provide access easements for its parking aisles and driveways where required by the Board of Supervisors, guaranteeing access and use to all lots within the RO District, unless all possible interconnections between two abutting lots must cross wetlands, floodplains, or slopes of 15% or more. Parking areas on abutting lots shall be directly connected by a driveway. The applicant shall either construct these interconnections during the initial land development or provide an easement to the abutting lot allowing future construction of the interconnection.
- I. For Class One and Class Two conditional uses, parking is not permitted in front yards or between buildings and streets.
- J. No outdoor storage is permitted, and trash must be kept inside a principal building unless a suitable screened area is approved by the Board of Supervisors until collection.
- K. All signs must meet the requirements of Article XVII, Signs.
- L. Lighting shall not shine on abutting residential properties, and lighting poles shall not exceed 12 feet in height, except that for Class 3 conditional uses lighting poles shall not exceed 15 feet in height.
- M. Portions of dwellings which existed at the time of adoption of this article which are over 25 feet in height or above one story may be converted to offices, an apartment, or a bed-and-breakfast facility as a Class One conditional use, provided that no additions or exterior building improvements exceed one story or 25 feet in height.



LOCATION MAP
SCALE: 1" = 800'
SOURCE: BING.COM

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PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY
1	08/29/2023	GENERAL REVISIONS	MKS	JP
2	10/10/2023	GENERAL REVISIONS	LEB	JP
3	10/27/2023	GENERAL REVISIONS	BCG	JP

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PROJECT No.: PAA230105.00
DRAWN BY: BCG
CHECKED BY: JRP
DATE: 08/16/2023
CAD ID: PAA230105.00-SKTA-3A

SKETCH PLAN

FOR
JP ORLEANS

PROPOSED RESIDENTIAL DEVELOPMENT
488 HARLEYSVILLE PIKE
LOWER SALFORD TOWNSHIP
MONTGOMERY COUNTY
HARLEYSVILLE, PENNSYLVANIA
19438

BOHLER
1600 MANOR DRIVE, SUITE 200
CHALFONT, PA 18914
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J. BOHLER ENGINEERING
PROFESSIONAL ENGINEER
PENNSYLVANIA
No. 2002894

SHEET TITLE:
SKETCH PLAN-2
SHEET NUMBER:
1
OF 2
REVISION 3 - 10/27/2023

REFERENCES AND CONTACTS

- REFERENCES**
• BOUNDARY & TOPOGRAPHIC SURVEY:
ACAD-1447 PROGRESS.DWG
BY: HOWELL KLINE SURVEYING, LLC
FILE RECEIVED: 2022-06-08
• AERIAL IMAGERY:
AERIAL IMAGERY FROM GLOBAL MAPPER SOFTWARE,
ACCESSED 2022-06-29

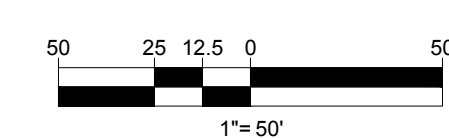
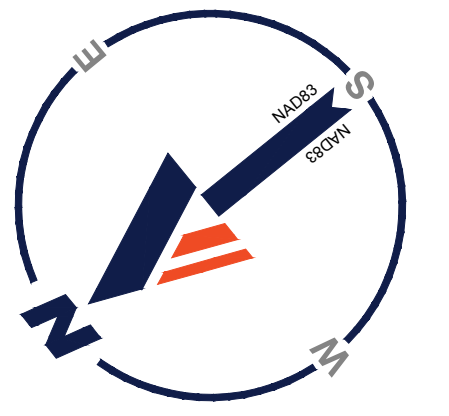
THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS. HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.

LEGEND
EXISTING

PROPERTY LINE	—
R.O.W. LINE	—
ADJACENT PROPERTY LINE	—
CONCRETE CURB	—
FENCE	-X-
CONCRETE MONUMENT/IRON PIN	□ ○
SIGN	•

LEGEND
PROPOSED

R.O.W. LINE	—
EASEMENT LINE	—
SETBACK LINE	—
CONCRETE CURB	—
FLUSH CURB	=====
FENCE	-X-
BOLLARD	•
PARKING COUNT	⑤



LOT CONSOLIDATION AND LAND DEVELOPMENT PLANS

PREPARED AS PART OF

Clemens' Mill

A VILLAGE COMMERCIAL LAND DEVELOPMENT IN

LOWER SALFORD TOWNSHIP

MONTGOMERY COUNTY, PENNSYLVANIA

PREPARED FOR

JEFFREY AND KELLY CLEMENS

531 MAIN STREET

HARLEYSVILLE, PENNSYLVANIA, 19438

PLAN SET REVISIONS

No.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	DECEMBER 15, 2022
15	REVISED PER MCOCD EMAIL. (08-21-2019)	AUGUST 30, 2019
14	REVISED PER MCOCD LTR. (02-19-2019)	JUNE 18, 2019
13	REVISED PER PREPARATION OF NPDES APPLICATION	SEPTEMBER 27, 2018
12	REVISED PER MCOCD LTR. (01-08-2018)	MAY 8, 2018
11	REVISED PER PREPARATION OF NPDES APPLICATION	NOVEMBER 22, 2017
10	REVISED PER CKS LTR. (12-08-2016), McMAHON LTR. (12-07-2016)	NOVEMBER 10, 2017
9	REVISED PER PADOT HOP CYCLE 1 REVIEW (11-29-2016)	MARCH 2, 2017
8	REVISED PER CKS LTR. (12-02-2015), McMAHON LTR. (10-22-2015)	OCTOBER 17, 2016
7	REVISED PER MCOCD LTR. (05-19-09)	JUNE 13, 2013
6	REVISED PER TWP. ENGINEER LTR. (04-21-09)	APRIL 15, 2011
5	REVISED PER MCOCD LTR. (03-16-09)	MARCH 31, 2009
4	TWP. LTR. (01-28-08), AUTH. LTR. (01-08-09), M08-031XB (12-30-08)	FEBRUARY 17, 2009
3	TWP. LTR. (01-22-07), AUTH. LTR. (04-14-08), M08-031XA (04-08-08)	NOVEMBER 5, 2008
2	REVISED PER TWP. ENGINEER LTR. (09-24-07)	DECEMBER 18, 2007
1	REVISED PER TWP. ENGINEER LTR. (03-22-07)	AUGUST 21, 2007
No.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

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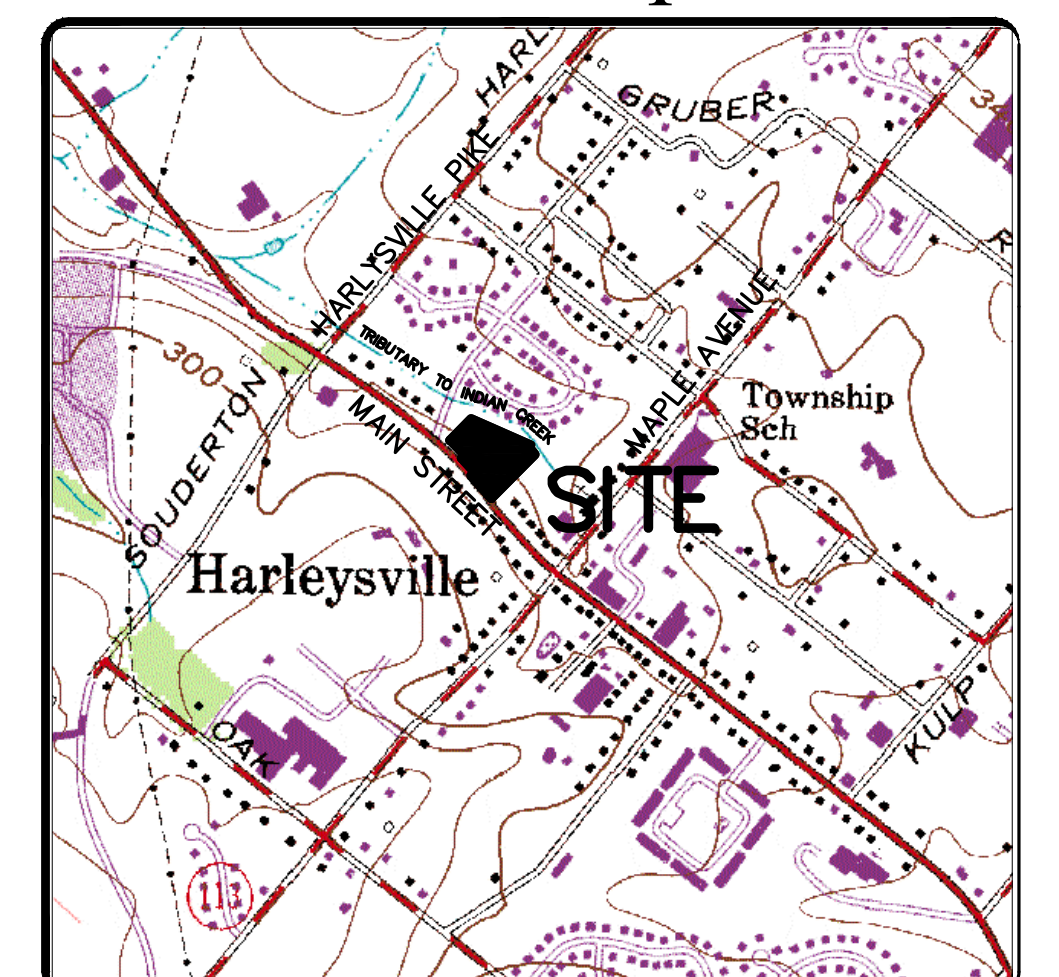
SHEET NO.	DESCRIPTION
0	COVER SHEET
1	LOT CONSOLIDATION AND LAND DEVELOPMENT PLAN
2	EXISTING FEATURES - DEMOLITION PLAN
3	CONSTRUCTION IMPROVEMENT PLAN (STORM SEWER AND GRADING)
4	CONSTRUCTION IMPROVEMENT PLAN (SANITARY SEWER AND WATER)
5	LANDSCAPING PLAN
6	LIGHTING PLAN
7	PLAN AND PROFILE MAIN STREET (S.R.0063)
8	SIGHT DISTANCE AND STRIPING PLAN
9	TRUCK TURNING TEMPLATE PLAN
10	MAIN STREET CROSS SECTIONS (S.R. 0063)
11	MAIN STREET CROSS SECTIONS (S.R. 0063)
12	MAIN STREET CROSS SECTIONS (S.R. 0063)
13	MAIN STREET CROSS SECTIONS (S.R. 0063)
14	DETAIL SHEET (ROADWAY DETAILS)
15	DETAIL SHEET (PATA FIGURES & RAMP DETAILS)
16	PLAN AND PROFILE CHELSEA LANE
17	PLAN AND PROFILE MISCELLANEOUS STORM SEWER
18	PLAN AND PROFILE LOT 4-5 SIGHT LINES
19	POST CONSTRUCTION STORM WATER MANAGEMENT PLAN
20	PCSM DETAILS
21	EROSION AND SEDIMENTATION CONTROL PLAN
22	EROSION CONTROL DETAILS
23	EROSION CONTROL DETAILS
24	SITE IMPROVEMENTS DETAILS
25	SITE IMPROVEMENTS DETAILS
26	SITE IMPROVEMENTS DETAILS
27	SANITARY SEWER AND WATER DETAILS
SHED PLANS	
1	PRE-DEVELOPMENT DRAINAGE SHED PLAN
2	POST-DEVELOPMENT DRAINAGE SHED PLAN
* INDICATES PLANS TO BE RECORDED	

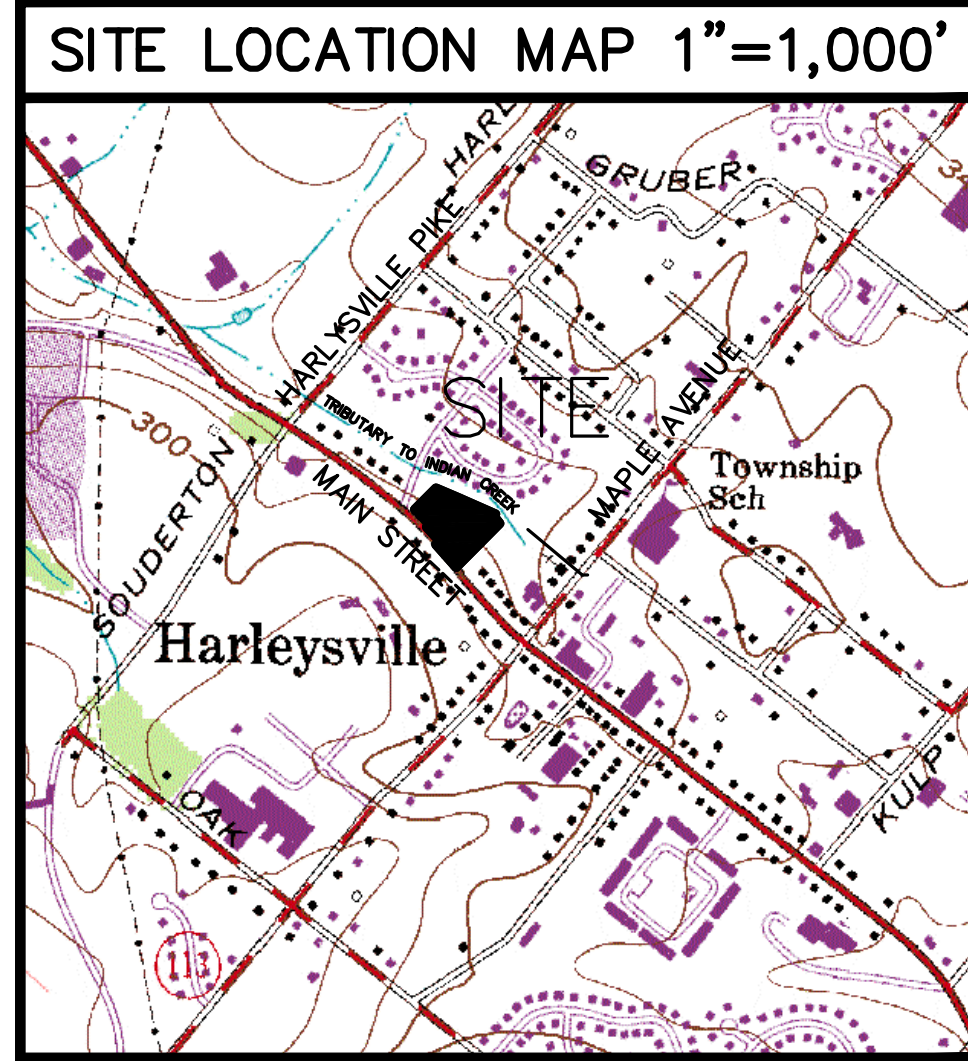


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Site Location Map 1"=1000'





GENERAL NOTES

- TITLE LINE INFORMATION IS BASED ON EXISTING DEEDS AND PLANS OF RECORD AND AN ON-SITE SURVEY BY RICHARD C. MAST ASSOCIATES, P.C., PERFORMED IN JAN. 2005.
- ELEVATION INFORMATION BASED ON APPROXIMATE U.S.G.S. VERTICAL DATUM.
- THE AREA BETWEEN THE ULTIMATE RIGHT-OF-WAY OF MAIN STREET (S.R. 0063) AND THE TITLE LINE IS HEREBY OFFERED FOR DEDICATION TO LOWER SALFORD TOWNSHIP OR THE GOVERNING BODY HAVING JURISDICTION AT THE TIME OF PLAN RECORDING.
- THE LEGAL RIGHT-OF-WAY ON S.R. 0063 IS BASED ON THE PLAN FOR L.R. 270 SEC. 4 RW, SIGNED BY THE GOVERNOR ON JULY 2, 1973 AND RECORDED ON JULY 17, 1973 IN THE MONTGOMERY COUNTY COURTHOUSE IN PLAN BOOK 41, PAGE 45.
- BLOCK 10 UNIT 50 (TMP 50-00-01879-519) IS RESTRICTED TO ALLOW ONLY RESIDENTIAL USE WITHIN THE PROPERTY. REFERENCE PLAN OF MINOR SUBDIVISION RECORDED IN PLOT PLAN BOOK 459 PAGE 40 ON NOVEMBER 24, 1999.
- LOWER SALFORD TOWNSHIP BLOCK 10 UNITS 7, 8, AND 50, WHICH COMPRISE ALL LOTS INVOLVED IN THIS LAND DEVELOPMENT PROJECT, SHALL BE COMBINED IN COMMON DEED CONCURRENTLY WITH FINAL PLAN RECORDING.
- AN ADDITIONAL DENSITY BONUS (ONE DWELLING UNIT) HAS BEEN APPLIED TO THE MAXIMUM RESIDENTIAL DWELLING UNITS CALCULATION, FOR SHARED FACILITIES WITH ADJOINING BLOCK 10 UNIT 51 (H&G PROPERTIES, L.P.), IN ACCORDANCE WITH ORDINANCE 164-70.6 (2)(2)(a).
- EXISTING STRUCTURE ON BLOCK 10 UNIT 8 (UNIT 14) SHALL REMAIN A RESIDENTIAL USE.
- THE EXISTING STRUCTURES ARE CURRENTLY CONNECTED TO PUBLIC SEWER SERVICE PROVIDED BY LOWER SALFORD TOWNSHIP AUTHORITY. PREVIOUS SEWER DISPOSAL SYSTEMS ARE ABANDONED. ALL USES SHALL BE CONNECTED TO AND SERVED WITH PUBLIC SEWER SERVICE.
- THE EXISTING 3.284 S.F. STRUCTURE IS CURRENTLY CONNECTED TO PUBLIC WATER SERVICE PROVIDED BY NORTH PENN WATER AUTHORITY. THE EXISTING 1,778 S.F. STRUCTURE IS CURRENTLY SERVED WITH AN ON-LOT PRIVATE WELL, WHICH IS TO BE LOCATED AND ABANDONED ACCORDING TO MONTGOMERY CO. HEALTH DEPT. REGULATIONS. ALL USES INCLUDING THE EXISTING STRUCTURE SHALL BE CONNECTED TO AND SERVED WITH PUBLIC WATER SERVICE.
- A BLANKET 40' WIDE SANITARY SEWER EASEMENT (CENTERED ON THE SITE ACCESS DRIVE) SHALL BE GRANTED TO THE LOWER SALFORD TOWNSHIP AUTHORITY FOR MAINTENANCE OF THE LOW PRESSURE SANITARY SEWER MAIN AND LATERALS TO THE FIRST CHECK VALVE.
- A BLANKET 40' WIDE WATER FACILITIES EASEMENT (CENTERED ON THE SITE ACCESS DRIVE) SHALL BE GRANTED TO NORTH PENN WATER AUTHORITY FOR MAINTENANCE OF THE WATER MAIN AND SERVICE LINES TO THE CURB VALVE.
- A PROPOSED 20 FEET WIDE STORM SEWER EASEMENT (DEPICTED HEREON) MUST BE OBTAINED FROM LOWER SALFORD TOWNSHIP AUTHORITY. THE EXISTING 1,778 S.F. STRUCTURE OF STORMWATER RUNOFF TO THE EXISTING WATER COURSE. THE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR THE PERPETUAL MAINTENANCE OF THE STORM SEWER FACILITIES WITHIN THE EASEMENT.
- ALL PROPOSED UTILITY SERVICES FOR THE PROJECT SHALL BE PROVIDED THROUGH UNDERGROUND SERVICES AND SHALL BE APPROVED FOR THEIR LOCATION PRIOR TO INSTALLATION. THE PROPOSED USE WILL NOT USE PROPANE FOR HEATING. NO PROPANE TANKS ARE PROPOSED.
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOWER SALFORD TOWNSHIP, LOWER SALFORD TOWNSHIP AUTHORITY, AND PADOT STANDARDS AND SPECIFICATIONS, WHICH EVER MAY BE GREATER. INTERPRETATION SHALL REST WITH THE TOWNSHIP ENGINEER OR HIS REPRESENTATIVE IN THE FIELD.
- CURBSIDE TRASH PICKUP IS PROPOSED FOR ALL USES WITHIN THE DEVELOPMENT.
- NO CENTRALIZED TRASH PICKUP IS PROPOSED.
- ALL STORMWATER BMPs IDENTIFIED ON THESE PLANS ARE PERMANENT FIXTURES AND MAY NOT BE REMOVED WITHOUT PRIOR TOWNSHIP APPROVAL. A BLANKET EASEMENT IS HEREBY GRANTED OVER THE PROPERTY FOR ACCESS AND MAINTENANCE OF ALL COMMON AMENITIES, SUCH AS STORMWATER MANAGEMENT FACILITIES AND BMPs (INCLUDING FRINGS AND BASINS), SITE ACCESS DRIVE, SIDEWALKS, LIGHTS, ETC. ALL FACILITIES SHALL BE MAINTAINED BY THE PROPERTY OWNER. UNITS, SUCH AS TIME AS RESPONSIBILITIES ARE TRANSFERRED TO THE INTENDING LONG-TERM MAINTENANCE ENTITY, A HOMEOWNERS ASSOCIATION, COMPLETED THROUGH COMPLETION OF THE NPDES (N.G.T. (REFER P.C.S.M. NOTES)). THE TOWNSHIP SHALL HAVE THE RIGHT TO ENTER THE SITE FOR THE PURPOSE OF MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES AND BMPs IF THE ASSOCIATION FAILS TO DO SO, WITH THE RIGHT TO LIEN THE PROPERTY FOR ALL ASSOCIATED COSTS. ALL STORMWATER BMPs SHALL BE MAINTAINED AND SHALL NOT BE REMOVED.
- TOPSOIL MAY NOT BE REMOVED FROM THE SITE WITHOUT TOWNSHIP APPROVAL.
- THE IMPROVEMENT CONSTRUCTION PLAN, A COPY OF WHICH MAY BE INSPECTED AT THE TOWNSHIP OFFICE, HAS BEEN MADE A PART OF THE APPROVED PLAN.
- ONLY SECURITY LIGHTING IS PERMITTED TO BE LIT BETWEEN THE HOURS OF 11:00 PM AND 6:00 AM.
- REFER TO S.A.L.D.O. SECTION 142-28 FOR CLEAR SIGHT TRIANGLE MAINTENANCE REQUIREMENTS. (SEE INFORMATION BLOCK HEREON).
- A VARIABLE WIDTH PUBLIC ACCESS EASEMENT WILL BE ESTABLISHED (AS SHOWN) FOR ACCESS AND USE OF THE PROPOSED PATH. HOMEOWNER ASSOCIATION DOCUMENTS WILL GRANT ACCESS AND USE OF THE CHELSEA LANE SIDEWALKS FOR PUBLIC EGRESS BETWEEN MAIN STREET AND THE PROPOSED PATH.
- A TOTAL OF 430 LF. OF MAIN STREET (S.R. 0063) IS TO BE IMPROVED WITH ASPHALT WIDENING, CONCRETE CURBS, AND CONCRETE SIDEWALK.
- THE PROPOSED PATH AND REMOVABLE BOLLARDS (COLUMBIA CASCADE COMPANY MODEL NO. 2581-0 OR APPROXIMATE EQUIVALENT) ARE TO BE CONSTRUCTED BY THE DEVELOPER. THE INSTALLED PATH AND BOLLARD SHALL BE DEDICATED TO AND MAINTAINED BY LOWER SALFORD TOWNSHIP.
- THE FINAL LOCATION OF THE OFF-SITE PATH CONNECTION THROUGH TOWNSHIP OPEN SPACE TO PIONEER CIRCLE, SHALL BE STAKED OUT AND VISUALLY APPROVED BY THE TOWNSHIP PRIOR TO INSTALLATION.
- PROPOSED UNITS 12 AND 4.5 MAY BE CONSTRUCTED PRIOR TO THE PROPOSED PATH. THE PROPOSED PATH STONE AND BINDER COURSE SHALL BE INSTALLED BEFORE THE FIRST CERTIFICATE OF OCCUPANCY PERMIT IS ISSUED FOR ANY OF UNITS 8 THROUGH 13. SHOULD WEATHER CONDITIONS PREVENT OFF-SITE PATH CONSTRUCTION IN AND ALONG THE FLOODPLAIN AREAS, LOWER SALFORD TOWNSHIP MAY CONSIDER GRANTING PERMISSION TO DELAY CONSTRUCTION TO A LATER TIME WHEN SOILS ARE DRY AND CONDUCIVE TO WORK. THE PATH WEARING COURSE SHALL BE INSTALLED TO THE TOWNSHIP ENGINEER'S SATISFACTION BEFORE THE PROJECT IS COMPLETED. THE DEVELOPER SHALL INSTALL ANY STORM CROSS-PIPES UNDER THE TRAIL AS DEEMED NECESSARY DURING CONSTRUCTION, UPON DIRECTION OF THE TOWNSHIP ENGINEER.
- CHELSEA DRIVE IS TO BE A PRIVATE STREET TO BE MAINTAINED BY A HOMEOWNERS ASSOCIATION. THE 40' SHARED ACCESS AND UTILITY EASEMENT, TO BE CREATED OVER CHELSEA DRIVE, SHALL PROVIDE FOR SHARED USE IN FAVOR OF BLOCK 10 UNIT 51.
- AT THE TIME OF BUILDING PERMIT APPLICATION, ARCHITECTURAL RENDERINGS FOR UNITS 12 & 4.5 WILL BE PROVIDED TO DEMONSTRATE COMPLIANCE WITH LOWER SALFORD TOWNSHIP S.A.L.D.O. SECTION 142-48.B.
- THE APPLICANT WILL BE REQUIRED TO PAY A RECREATION IMPACT FEE OF \$500 PER DWELLING UNIT ACCORDING TO S.A.L.D.O. SECTION 142-47.1.A.
- NO FURTHER SUBDIVISION OR DEVELOPMENT OF THE SITE IS PERMITTED THAT WOULD CREATE ANY ADDITIONAL RESIDENTIAL UNITS.

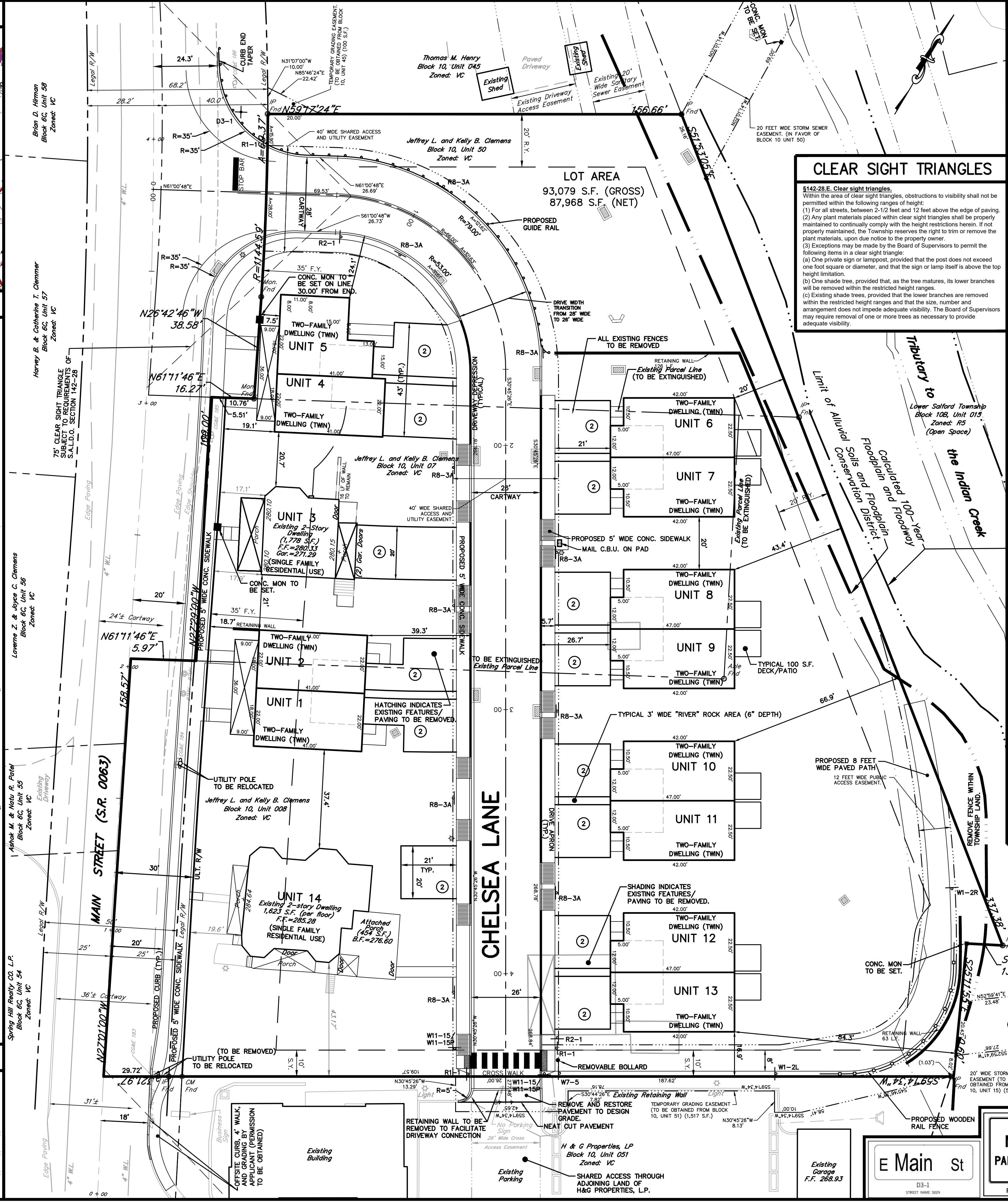
TAX PARCEL INFORMATION

SUBJECT TRACT MAY BE IDENTIFIED BY MONTGOMERY COUNTY TAX INFORMATION AS FOLLOWS:

LOWER SALFORD TOWNSHIP
RECORDED DEED DATA IS AS FOLLOWS:

PARCEL NO.	BLOCK/UNIT	DEED BOOK/PAGE	RECORD OWNER	TRACT AREA (TO TITLE LINE BY SURVEY)
50-00-01879-00-6 010/007	50-00-01879-00-6	5689/1252	JEFFREY L. AND KELLY B. CLEMENS HARLEYSVILLE, PA 19438	19,995 S.F.
50-00-01876-00-0 010/008	50-00-01876-00-0	5533/1328	JEFFREY L. AND KELLY B. CLEMENS HARLEYSVILLE, PA 19438	53,042 S.F.
50-00-01879-51-9 010/050	50-00-01879-51-9	5689/1252	JEFFREY L. AND KELLY B. CLEMENS HARLEYSVILLE, PA 19438	20,042 S.F.

MADE BY: RICHARD C. MAST ASSOCIATES, P.C. TRAVELERS REST, SC 29690-8004



CLEAR SIGHT TRIANGLES

§142-28.E Clear sight triangles.
Within the area of clear sight triangles, obstructions to visibility shall not be permitted within the following ranges of height:
(1) For all streets, between 2-1/2 feet and 12 feet above the edge of paving.
(2) Any plant materials placed within clear sight triangles shall be properly maintained to continually comply with the height restrictions herein. If not properly maintained, the Township reserves the right to trim or remove the plant materials, upon due notice to the property owner.
(3) Exceptions may be made by the Board of Supervisors to permit the following items in a clear sight triangle:
(a) One private sign or lamppost, provided that the post does not exceed one foot square or diameter, and that the sign or lamp itself is above the top height limitation.
(b) One shade tree, provided that, as the tree matures, its lower branches will be removed within the restricted height ranges.
(c) Existing shade trees, provided that the lower branches are removed within the restricted height ranges and that the size, number and arrangement does not impede adequate visibility. The Board of Supervisors may require removal of one or more trees as necessary to provide adequate visibility.

ZONING SUMMARY

REQUIRED INFORMATION OBTAINED FROM THE LOWER SALFORD TOWNSHIP ZONING ORDINANCE, CHAPTER 164, ARTICLE XIII A, 164-70.4

ZONING DISTRICT: "VC" VILLAGE COMMERCIAL
EXISTING USE: ONE-FAMILY DWELLING (SFD)
PROPOSED USE: ONE-FAMILY DWELLING (SFD) & TWO-FAMILY DWELLING (TWIN)

CRITERIA	REQUIRED	EXISTING	PROPOSED
MIN. NET LOT AREA	10,000 S.F.	87,968 S.F.	87,968 S.F.
MIN. LOT WIDTH AT BUILDING LINE	60 FT	366.7 FT	368.7 FT
MIN. FRONT YARD SETBACK	35 FT	0' 11" 1/2	0' 11" 1/2
MIN. SIDE YARD RESTRICTION	10 FT	43.2 FT	16.9 FT
MIN. REAR YARD RESTRICTION	20 FT	170.4 FT	20.0 FT
MAX. BUILDING HEIGHT	40 FT	<40 FT	<40 FT
MAX. IMPERVIOUS COVERAGE	80%	65.99%	48.7%
MIN. ACCESSORY USE SETBACK (4)	5 FT	8.7 FT	N/A

(1) EXISTING NON-COMFORMITY: NO PROPOSED UNIT IS CLOSER TO MAIN STREET THAN THE AVERAGE SETBACK OF ALL EXISTING BUILDINGS ALONG MAIN STREET, BETWEEN HARLEYSVILLE PIKE AND MAPLE AVENUE. THE AVERAGE SETBACK IS 17.7'.
MAXIMUM NUMBER OF DWELLING UNITS ALLOWED:
A=(1+C)/7500 * (E - 7500 (B/(1250+D)))
A=(1+1)/7500*(87968-7500*(0)/(1250+7500))
A= 23.5
A = THE PERMITTED NUMBER OF DWELLING UNITS
B = THE PROPOSED AMOUNT OF NONRESIDENTIAL NET FLOOR AREA IN SQUARE FEET. (THIS MAY EQUAL ZERO IF THE DEVELOPMENT WILL BE ALL RESIDENTIAL.)
C = THE NUMBER OF ADDITIONAL DWELLING UNITS PERMITTED PER 7,500 SQUARE FEET OF LOT AREA WHEN HISTORIC BUILDINGS ARE PRESERVED OR COMMON PARKING IS USED. (THIS WILL EQUAL ONE WHEN AN HISTORIC BUILDING IS PRESERVED, ONE WHEN COMMON PARKING IS PRESERVED AND TWO WHEN BOTH AN HISTORIC BUILDING IS PRESERVED AND COMMON PARKING/DRIVEWAY IS USED.)
D = THE AMOUNT OF ADDITIONAL NONRESIDENTIAL NET FLOOR AREA IN SQUARE FEET, PERMITTED PER 7,500 SQUARE FEET OF LOT AREA WHEN HISTORIC BUILDINGS ARE PRESERVED OR COMMON PARKING IS USED. (THIS WILL EQUAL 500 WHEN AN HISTORIC BUILDING IS PRESERVED, 300 WHEN COMMON PARKING/DRIVEWAY IS USED AND 750 WHEN BOTH AN HISTORIC BUILDING IS PRESERVED AND COMMON PARKING/DRIVEWAY IS USED.)
E = THE NET LOT AREA IN S.F.
MAX. NON-RESIDENTIAL AREA: (B) 0
RESIDENTIAL BONUS: (C) 0 (SHARED DRIVE)
NON-RESIDENTIAL BONUS: (D) 0
MAX. RESIDENTIAL UNITS: (A) 23
PROPOSED RESIDENTIAL DWELLING UNIT 14

RECORDING ACKNOWLEDGMENTS

WE, JEFFREY L. CLEMENS AND KELLY B. CLEMENS, UNDERSIGNED, HAVE LAID OUT UPON OUR LANDS SITUATE IN LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA CERTAIN IMPROVEMENTS ACCORDING TO THE ACCOMPANYING PLAN, WHICH IS INTENDED TO BE RECORDED.

JEFFREY L. CLEMENS KELLY B. CLEMENS

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF SS:

ON THIS _____ DAY OF _____ 20____ BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED JEFFREY L. CLEMENS AND KELLY B. CLEMENS, KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE WITHIN INSTRUMENT, AND ACKNOWLEDGED THAT HE/SHE EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.
IN WITNESS WHEREOF, I HEREBY SET MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC

COMMISSION EXPIRATION DATE _____

APPROVED BY THE BOARD OF SUPERVISORS OF LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, ON THE _____ DAY OF _____ 20____

SECRETARY CHAIRMAN

RECOMMENDED FOR APPROVAL BY THE PLANNING COMMISSION OF LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, ON THE _____ DAY OF _____ 20____

SECRETARY CHAIRMAN

REVIEWED BY THE TOWNSHIP ENGINEER OF LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, ON THE _____ DAY OF _____ 20____

TOWNSHIP ENGINEER

RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS IN AND FOR THE COUNTY OF MONTGOMERY, AT NORRISTOWN, PENNSYLVANIA IN PLAN BOOK NUMBER _____ PAGE NUMBER _____ ON THIS _____ DAY OF _____ 20____

(RECORDER)

REQUESTED WAIVERS

- A WAIVER OF SECTION 142-24.A IS REQUESTED TO PERMIT A SITE ACCESS DRIVE HORIZONTAL CURVE OF 60 FEET WHEREAS A MINIMUM OF 150 FEET IS REQUIRED.
- A WAIVER OF SECTION 142-24.B IS REQUESTED TO PERMIT THE SITE ACCESS DRIVEWAY AS DESIGNED WITH VERTICAL CURVES RECOMMENDED FOR A VEHICLE SPEED OF 20 MPH WHEREAS GREATER THAN 20 MPH SPEEDS IS REQUIRED.
- A WAIVER FROM SECTION 142-24.C(2) IS REQUESTED TO PERMIT UP TO AN 8% PROPOSED GRADE FOR THE SITE ACCESS DRIVEWAY WITHIN 50' FROM THE MAIN STREET CURBLINE (AT INTERSECTIONS), WHEREAS A MAXIMUM OF 4% GRADE IS REQUIRED.
- A PARTIAL WAIVER OF SECTIONS 142-18.B & 142-41 IS REQUESTED FROM SIDEWALK ALONG A PORTION OF ONE SIDE OF CHELSEA LANE AND MAIN STREET ADJACENT TO STEEP SLOPES AND THE STORMWATER MANAGEMENT FACILITY. ALL OTHER SIDEWALKS WILL BE PROVIDED.
- A PARTIAL WAIVER OF SECTION 142-39 IS REQUESTED TO PERMIT PROPOSED GRADING IN CERTAIN AREAS OF THE DEVELOPMENT TO EXCEED A MAXIMUM SLOPE OF 4:1. 4:1 SLOPES HAVE BEEN PROVIDED TO THE GREATEST EXTENT POSSIBLE.
- A WAIVER OF SECTION 142-39 IS REQUESTED TO PERMIT PROPOSED SIDEWALKS ALONG MAIN STREET TO SLOPE FROM THE CURB TOWARD THE RIGHT-OF-WAY (INTO THE SITE) WHEREAS SIDEWALKS SHOULD SLOPE TO THE CURB.
- A PARTIAL WAIVER OF SECTION 142-41.M IS REQUESTED TO PERMIT A VARIABLE WIDTH PROPOSED TRAIL RIGHT-OF-WAY WITHIN THE SITE, WHEREAS 20' WIDE IS REQUIRED. THE RIGHT-OF-WAY RANGES BETWEEN 12' AND 16' FEET WIDE. HOMEOWNER ASSOCIATION DOCUMENTS WILL GRANT ACCESS AND USE OF THE CHELSEA LANE SIDEWALKS FOR PUBLIC EGRESS BETWEEN MAIN STREET AND THE PROPOSED TRAIL.
- A WAIVER FROM SECTION 142-42.F(1)(a) IS REQUESTED TO PERMIT CERTAIN PROPOSED AND EXISTING TREES WITHIN 30 FEET OF THE IMPOUNDMENT AND EMERGENCY SPILLWAY AS SHOWN.
- A WAIVER OF SECTION 142-42.F(2)(b) IS REQUESTED TO PERMIT 3:1 BASIN SIDE SLOPES WHEREAS A MAXIMUM SLOPE OF 5:1 IS REQUIRED.
- A PARTIAL WAIVER OF SECTION 142-13.D IS REQUESTED FROM DEPICTING EXISTING FEATURES WITHIN 100 FEET OF THE TRACT EXCEPT WHERE REQUIRED BY THE TOWNSHIP ENGINEER.
- A PARTIAL WAIVER OF SECTION 142-13.D(6)(a) IS REQUESTED FROM TREE SPECIES IDENTIFICATION FOR ALL TREES TO BE REMOVED. THE APPLICANT WILL IDENTIFY ALL TREES TO REMAIN.
- A WAIVER OF SECTION 142-42.B(1)(g) IS REQUESTED TO DEFINE TREES NOT PRESERVED AS ONLY THOSE TREES THAT WILL BE PHYSICALLY REMOVED AS A RESULT OF CONSTRUCTION.
- A PARTIAL WAIVER OF SECTION 142-42.C IS REQUESTED FROM THE PROVISION OF REPLACEMENT TREES IN ADVANCE OF CONSTRUCTION TO PAVED PATH THROUGH TOWNSHIP OPEN SPACE AND 72 CALIPER INCHES OF REPLACEMENT TREES WILL BE PROVIDED IN LIEU OF THE REQUIRED REPLACEMENT TREES.

RECORDED DEED DATA IS AS FOLLOWS:

PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15 REVISED PER MCOO EMAIL (08-21-2019)	AUGUST 30, 2019
14 REVISED PER MCOO LTR. (02-19-2019)	JUNE 16, 2019
13 REVISED PER PREPARATION OF NPDES APPLICATION	SEPTEMBER 27, 2018
12 REVISED PER MCOO LTR. (01-08-2018)	MAY 8, 2018
11 REVISED PER PREPARATION OF NPDES APPLICATION	NOVEMBER 22, 2017
10 REVISED PER OCS LTR. (12-08-2016), MCOAMON LTR. (12-07-2016)	NOVEMBER 10, 2017

(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

No. _____ REVISION _____ DATE _____
PLAN ORIGINATOR DATE FEBRUARY 6, 2007

UNDERGROUND UTILITY NOTE

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION RECEIVED FROM FACILITY OWNERS FOLLOWING A CALL TO PA ONE CALL SYSTEM, INC. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH, OR HORIZONTAL LOCATION OF UTILITIES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES BEFORE THE START OF WORK BY NOTIFYING FACILITY OWNERS THROUGH THE PA ONE CALL SYSTEM (1-800-242-1776 OR 811), NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 10 BUSINESS DAYS IN ADVANCE OF BEGINNING EXCAVATION OR DEMOLITION WORK PER THE REQUIREMENTS OF PA ACTS 287 AND 121, AS AMENDED.
DESIGN SERIAL NO.: 5458593 (MAIN STREET)

PARKING REQUIREMENTS

1. RESIDENTIAL PARKING	28 SPACES
RESIDENTIAL DWELLING SPACES: (14 UNITS)	
(2 SPACES/UNIT NOT INCLUDING GARAGES)	
TOTAL REQUIRED:	28 SPACES
TOTAL PROVIDED:	28 SPACES

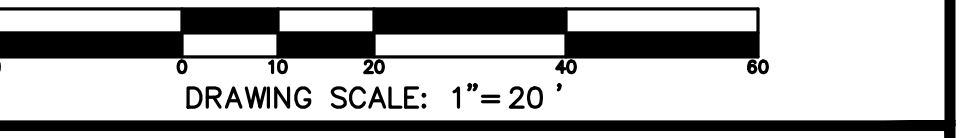
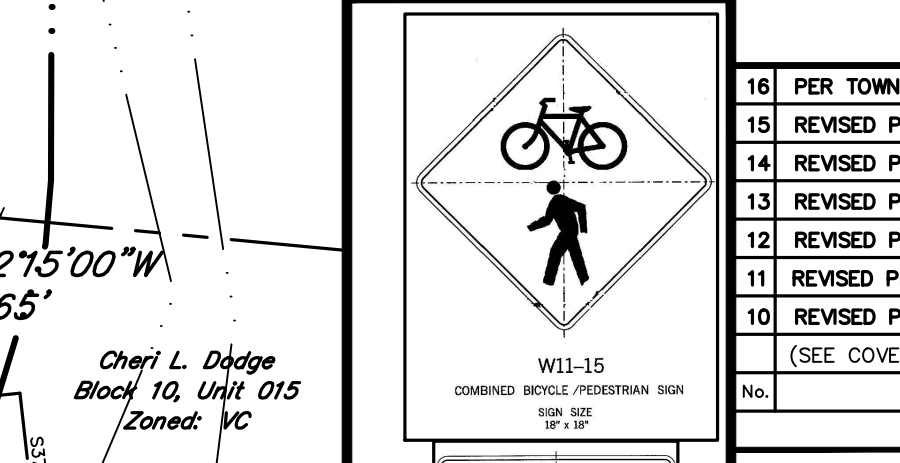
SURVEYOR'S CERTIFICATE

I, EDWARD M. HUBER, P.L.S., HEREBY CERTIFY THAT THIS PLAN REPRESENTS A SURVEY MADE BY ME AND THAT THE MONUMENTATION SHOWN HEREON EXISTS AS LOCATED, AND THAT ALL DIMENSIONAL AND GEODETIC DETAILS ARE CORRECT.

SU-040378-R
REGISTRATION NO. _____
EDWARD M. HUBER, P.L.S.

RECORD PLAN SHEET 1 OF 1

SIGN SCHEMATICS



No.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15	REVISED PER MCOO EMAIL (08-21-2019)	AUGUST 30, 2019
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(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

No. _____ REVISION _____ DATE _____
PLAN ORIGINATOR DATE FEBRUARY 6, 2007

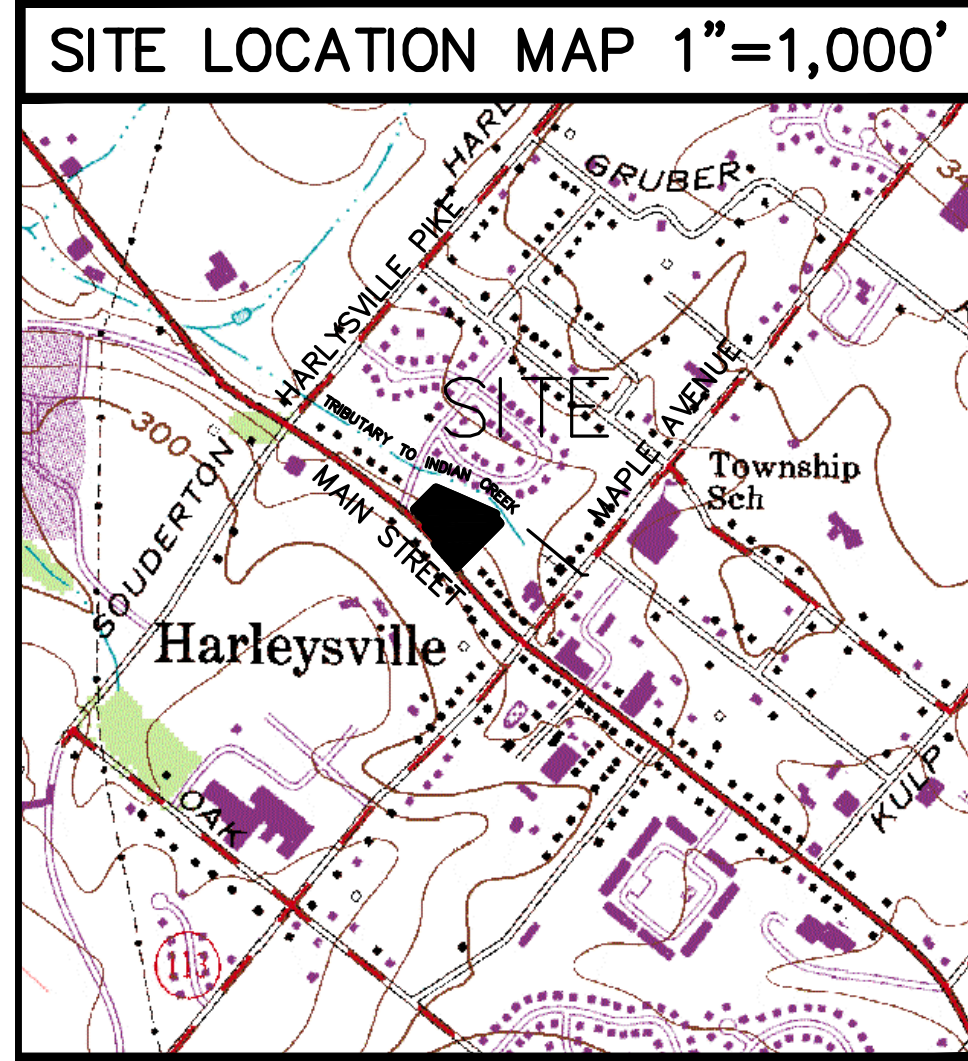
LOT CONSOLIDATION AND LAND DEVELOPMENT PLAN

AS PART OF
CLEMENS' MILL
PREPARED FOR
JEFFREY AND KELLY CLEMENS
SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
Consulting Engineers and Surveyors
www.rcmaonline.com

The Village at Lederach
656 Harleysville Pike, Suite 150
Harleysville, PA 19438
(215) 513-2100

DRAFTED BY: RCMA
PROJ. MGR.: D.B.C.
PROJECT NO.: 2283
DRAWING NO.: 1 OF 27



LEGEND

W	8"	W	EXIST. WATER LINE
W	W	W	EXIST. WATER LATERAL
BSW			EXIST. GAS LINE
L			EXIST. SANITARY LATERAL
X	X	X	SOILS LINE
X	X	X	EXIST. FENCE
---	---	---	FLOOD PLAIN
---	---	---	STREAM
---	---	---	EXIST. EASEMENT
---	---	---	TRACT BOUNDARY
---	---	---	EXIST. RIGHT-OF-WAY
---	---	---	ADJOINING PROPERTY LINE
---	---	---	EXIST. EDGE OF ROAD
---	---	---	EXIST. DRIVES
---	---	---	EXIST. CENTERLINE
---	---	---	EXIST. SANITARY SEWER LINE
---	---	---	EXIST. CONTOUR
---	---	---	EXIST. INDEX CONTOUR
---	---	---	EXIST. GUIDE RAIL
---	---	---	EXIST. CURB
ReB2			SOILS TYPE LABEL
○			EXIST. CLEAN OUT (C.O.)
○			EXIST. SANITARY MANHOLE
○			EXIST. FIRE HYDRANT
○			EXIST. WATER VALVE (W.V.)
○			EXIST. CONC. MONUMENT
○			EXIST. IRON PIN
○			EXIST. UTILITY POLE
○			EXIST. WELL
+			EXIST. SIGN
+			EXIST. STREET SIGN
+			EXIST. LIGHT POST

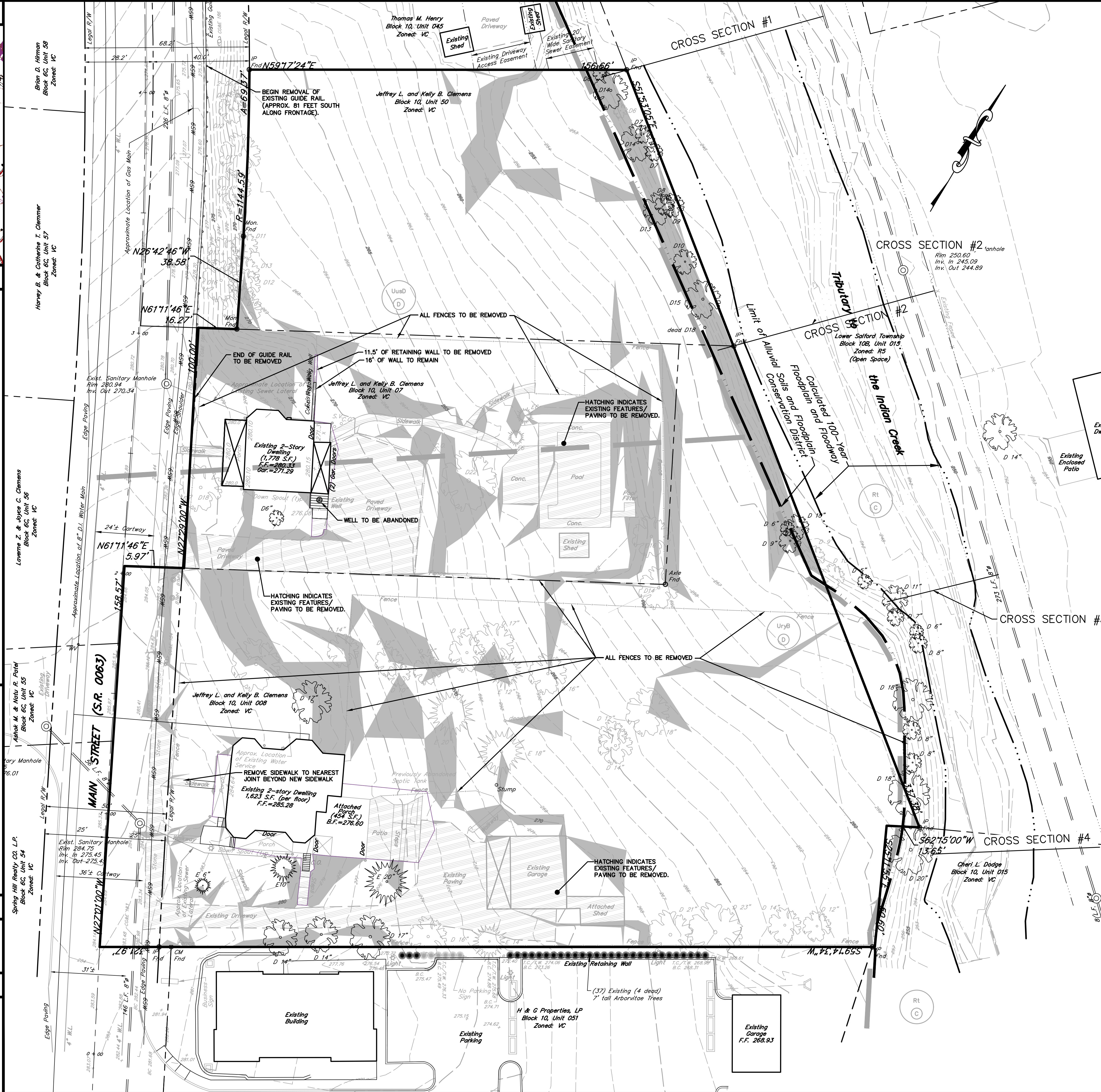
STEEP SLOPES LEGEND

█	STEEP SLOPES 15% AND GREATER
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UNDERGROUND UTILITY NOTE

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DESIGN SERIAL NO.: 5456593 (MAIN STREET)



TAX PARCEL INFORMATION

SUBJECT TRACT MAY BE IDENTIFIED BY MONTGOMERY COUNTY TAX INFORMATION AS FOLLOWS:

LOWER SALFORD TOWNSHIP

RECORDED DEED DATA IS AS FOLLOWS:

PARCEL NO.	BLOCK/UNIT	DEED BOOK/PAGE	RECORD OWNER	TRACT AREA
50-00-01879-00-6	010/007	5689/1252	JEFFREY L. AND KELLY B. CLEMENS SITESTY MAIN STREET HARLEYSVILLE, PA 19438	19,995 S.F. (TO TITLE LINE BY SURVEY)
50-00-01876-00-9	010/008	5533/1328	JEFFREY L. AND KELLY B. CLEMENS SITESTY MAIN STREET HARLEYSVILLE, PA 19438	53,042 S.F. (TO TITLE LINE BY SURVEY)
50-00-01879-51-9	010/050	5689/1252	JEFFREY L. AND KELLY B. CLEMENS SITESTY MAIN STREET HARLEYSVILLE, PA 19438	20,042 S.F. (TO TITLE LINE BY SURVEY)

SOILS DATA

SOIL BOUNDARY LINES AND DATA ARE TAKEN FROM THE US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY WEBSITE.

Rt ROWLAND SILT LOAM, TERRACE

UryB URBAN LAND-READINGTON COMPLEX, 0 TO 8 PERCENT SLOPES

UusD URBAN LAND-UDORTMENTS, SHALE AND SANDSTONE COMPLEX, 8 TO 25 PERCENT SLOPES

ROWLAND SERIES: THE ROWLAND SERIES CONSISTS OF VERY DEEP, MODERATELY WELL AND SOMEWHAT POORLY DRAINED SOILS FORMED IN ALLUVIAL SEDIMENTS WEATHERED FROM RED AND BROWN SHALE, SANDSTONE, AND CONGLOMERATE.

LIMITATIONS: SEASONAL FLOODING
RESOLUTIONS: WETNESS CAN BE REDUCED THROUGH THE USE OF DRAINAGE SYSTEMS.

URBAN LAND SERIES: URBAN LANDS GENERALLY CONSIST OF PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS AND/OR AREAS THAT HAVE BEEN PREVIOUSLY IMPROVED OR MODIFIED FROM ITS NATURAL STATE.

LIMITATIONS: SLOW PERMEABILITY, VARIABLE MATERIAL PROFILE
RESOLUTIONS: SOIL QUALITY MAY BE IMPROVED THROUGH THE USE OF SOIL MANAGEMENT BMPs.

- ### GENERAL NOTES
- TITLE LINE INFORMATION IS BASED ON EXISTING DEEDS AND PLANS OF RECORD AND AN ON SITE SURVEY BY RICHARD C. MAST ASSOCIATES, P.C., PERFORMED IN JANUAR 2008.
 - ELEVATION INFORMATION BASED ON APPROXIMATE U.S.G.S. VERTICAL DATUM.
 - BLOCK 10 UNIT 50 (TMP 50-00-01879-519) IS RESTRICTED TO ALLOW FOR ONLY RESIDENTIAL USE WITHIN THE PROPERTY. REFERENCE PLAN OF MINOR SUBDIVISION RECORDED IN PLOT PLAN BOOK A-58 PAGE 40 ON NOVEMBER 24, 1999.
 - THE EXISTING STRUCTURES ARE CURRENTLY CONNECTED TO PUBLIC SEWER SERVICE PROVIDED BY LOWER SALFORD TOWNSHIP AUTHORITY. PREVIOUS SEWER DISPOSAL SYSTEMS ARE ABANDONED. ALL USES SHALL BE CONNECTED TO AND SERVED WITH PUBLIC SEWER SERVICE.
 - THE EXISTING 3,254 S.F. STRUCTURE IS CURRENTLY CONNECTED TO PUBLIC WATER SERVICE PROVIDED BY NORTH PENN WATER AUTHORITY. THE EXISTING 1,178 S.F. STRUCTURE IS CURRENTLY SERVED WITH AN ON-LOT PRIVATE WELL TO BE ABANDONED. THE LOCATION OF THE WELL IS UNKNOWN. ALL USES (INCLUDING THE EXISTING STRUCTURE) SHALL BE CONNECTED TO AND SERVED WITH PUBLIC WATER SERVICE.
 - DEMOLITION NOTES:
A. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF ALL UTILITIES ON SITE TO BE REMOVED.
B. ALL DEMOLITION TO BE PERFORMED BY A QUALIFIED, LICENSED CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE TOWNSHIP, STATE, AND FEDERAL REGULATIONS.
C. ALL UTILITIES SHALL BE DISCONNECTED, ABANDONED AND/OR REMOVED IN ACCORDANCE WITH ALL APPLICABLE TOWNSHIP, STATE, AND FEDERAL REGULATIONS.
D. ANY UTILITIES DAMAGED DURING DEMOLITION AND CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED IN KIND BY THE CONTRACTOR AT HIS OWN EXPENSE.
 - REFER TO LANDSCAPING PLAN (SHEET 8) FOR TREES AND SHRUBS TO BE REMOVED.
 - 11.5' OF THE EXISTING CONCRETE RETAINING WALL LOCATED ON BLOCK 10 UNIT 07 IS TO BE REMOVED. 16' OF THE WALL (PORTION CONNECTED TO STRUCTURE) IS TO REMAIN.

DRAWING SCALE: 1"=20'

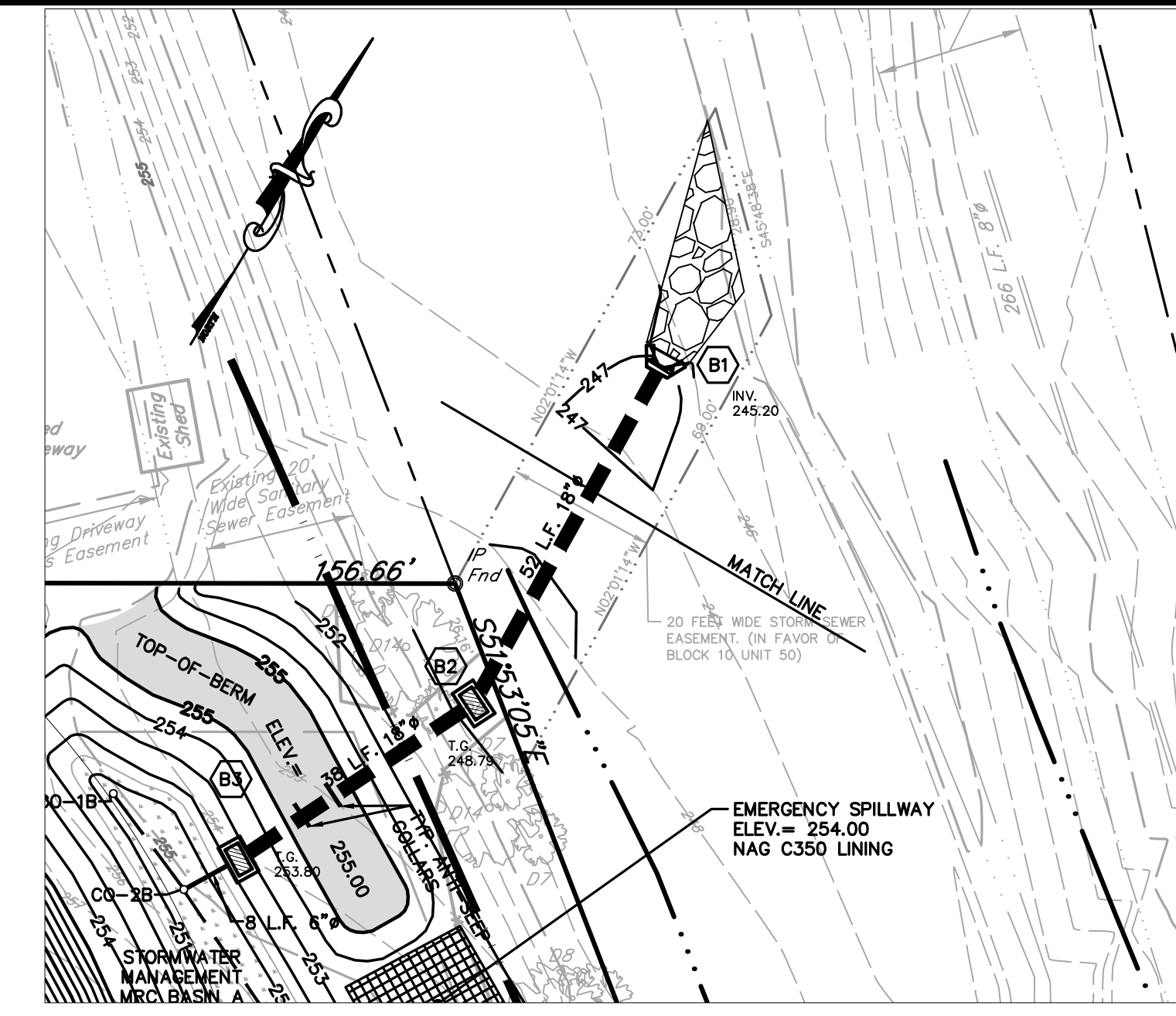
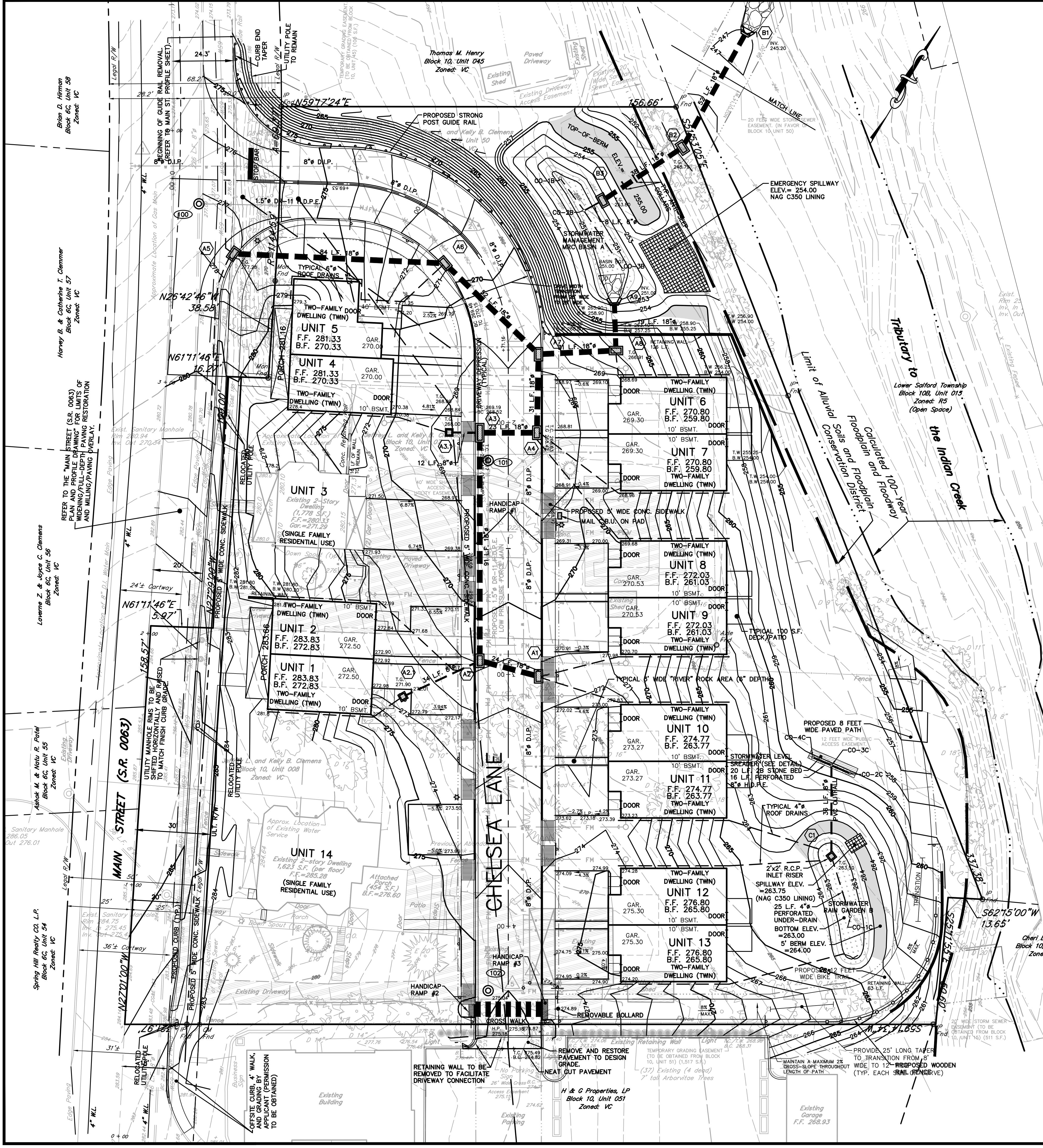
NO.	REVISION	DATE
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10	REVISED PER CKS LTR. (12-08-2016), MCMAHON LTR. (12-07-2016)	NOVEMBER 10, 2017
(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)		
No.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

EXISTING FEATURES - DEMOLITION PLAN

AS PART OF
CLEMENS' MILL
PREPARED FOR
JEFFREY AND KELLY CLEMENS
SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
Consulting Engineers and Surveyors
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DRAFTED	PROJ. MGR.	PROJECT NO.	DRAWING NO.
RCMA	D.B.C.	2283	2 OF 27



CONSTRUCTION NOTES

- ALL LAWN AREA SHALL BE PROPERLY GRADED TO ENSURE PROPER DRAINAGE FLOW AWAY FROM BUILDINGS TO NEAREST INLET OR WATERCOURSE WITHOUT FLOODING OR OBSTRUCTION. A MINIMUM OF 2% SLOPE SHALL BE PROVIDED ON ALL GRASSED AREAS.
- A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS WHERE 18 INCHES MINIMUM CLEARANCE CANNOT BE OBTAINED. THE UTILITY LINES SHALL BE CONCRETE ENCASED.
- ALL CONSTRUCTION SHALL CONFORM TO LOWER SALFORD TOWNSHIP PENN.D.O.T. AND/OR LOWER SALFORD TOWNSHIP AUTHORITY STANDARDS AND SPECIFICATIONS, WHICHEVER IS GREATER. INTERPRETATION SHALL REST WITH THE TOWNSHIP ENGINEER, OR HIS REPRESENTATIVE IN THE FIELD.
- ALL SANITARY SEWER AND SEWER LATERALS SHALL BE IN CONFORMANCE WITH THE LOWER SALFORD TOWNSHIP AUTHORITY (LSTA) STANDARDS. ALL LOW PRESSURE FORCE MAIN SEWER LINES SHALL BE DR-11 H.D.P.E. WITH ISOLATION VALVES. ALL LATERALS AND FITTINGS SHALL BE JOINED BY THE ELASTOMERIC GASKET SYSTEM CONFORMING TO ASTM D 3212 AIR RELEASE VALVE SHALL BE DEZURK MODEL 400 WITH 2" INLET, OR EQUAL, APPROVED BY SEWER AUTHORITY ENGINEER.
- THE EXISTING SEWER AND SEWER LATERALS FOR THE EXISTING HOMES SHALL BE TELEVIEWED TO DETERMINE EXISTING CONDITIONS, AND RESULTS SHALL BE PROVIDED TO THE LSTA. BUILDING SEWERS AND SEWER LATERALS SHALL BE REPLACED AND/OR REPAIRED BY OWNER IF NECESSARY AS DETERMINED BY LSTA.
- ALL WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
- GAS, ELECTRIC AND CABLE TELEVISION FACILITIES FOR ALL LOTS SHALL BE PROVIDED BY UNDERGROUND SERVICE.
- ALL GRAVITY PORTIONS OF SANITARY SEWER LATERALS SHALL BE LAID ON A SLOPE OF NOT LESS THAN 1/8" PER FOOT AND HAVE 10 FEET OF HORIZONTAL SEPARATION BETWEEN THE LATERAL AND PROPOSED LANDSCAPING.
- SANITARY SEWER SERVICE WILL BE PROVIDED TO THE BASEMENT ELEVATION FOR UNITS 1, 2, 4, 8, 9, AND TO THE FIRST FLOOR ELEVATION FOR UNITS 6-13. BASEMENT SERVICE FOR UNITS 6-13 MUST BE PROVIDED BY THE GRINDER PUMP (IN PLACE) LOCATED AT THE REAR OF THE UNIT.
- NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPILL. TOPSOIL MUST BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. UPON COMPLETION OF THE CONSTRUCTION, THE TOPSOIL MUST BE REDISTRIBUTED ON THE SITE UNIFORMLY, A MINIMUM 8" DEPTH, COMPACTED ON ALL DISTURBED AREAS (I.E. SWALES, LOTS, BASIN BERMS AND PLANTING BUFFERS).
- AT NO TIME SHALL PIPES BE LOCATED IN THE CORNERS OF THE INLET BOXES. ALL STORMSEWER PIPE REQUIRES 2 FEET MINIMUM COVER OVER THE TOP OF THE PIPE.
- ROOF DOWNSPOUT COLLECTION PIPES SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT WELDED JOINTS OR SDR-35 PVC INTEGRAL GASKET PIPE MEETING ASTM F477. TWO FOOT (2) MINIMUM COVER. REFER TO TYPICAL TRENCH DETAIL FOR ROOF DRAIN BACKFILL REQUIREMENTS.
- PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE STORM SEWER SYSTEM, STORM STRUCTURES, PIPE, ETC.: CONCRETE, I.E. CURB, SIDEWALK, ETC., ALL AGGREGATES, ALL ASPHALT DESIGN MIXES, ETC.
- PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE SANITARY SEWER SYSTEM, I.E. MANHOLES, PIPE, AGGREGATE, ETC.
- AT TIME OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE ELEVATION OF EXISTING 6" SANITARY LATERALS (2 TOTAL) WHERE THEY ENTER EXISTING MANHOLES IN MAIN STREET, AND PROVIDE TO SEWER AUTHORITY ENGINEER.
- PRIOR TO FABRICATION AND CONSTRUCTION, PROVIDE TO THE SEWER AUTHORITY ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE SANITARY SEWER SYSTEM, I.E. MANHOLES, PIPE, AGGREGATE, ETC.
- AT TIME OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE ELEVATION OF EXISTING 6" SANITARY LATERALS (2 TOTAL) WHERE THEY ENTER EXISTING MANHOLES IN MAIN STREET, AND PROVIDE TO SEWER AUTHORITY ENGINEER.
- CONTRACTOR SHOULD NOTE PROPOSED FLOOR, GARAGE, BASEMENT, FINISH GRADE, AND WALKOUT ELEVATIONS TO ENSURE STEPS AND TERRALS ARE ADEQUATELY PROVIDED TO ENSURE COMPLIANCE WITH BUILDING AND GRADING REQUIREMENTS.
- THERE ARE TWO EXISTING BELL TELEPHONE MANHOLES OVER A CONCRETE VAULT LOCATED ALONG MAIN STREET IMMEDIATELY ADJACENT TO PROPOSED CURB. BELL TELEPHONE SHALL BE NOTIFIED AND A REPRESENTATIVE MUST BE PRESENT FOR ANY WORK PERFORMED NEAR OR OVER THE VAULT. THE PROPOSED CURB SHALL BE INSTALLED OVER THE VAULT AND THE MANHOLES SHALL BE RAISED TO FINISH GRADE. THE MANHOLE RIMS SHALL ALSO BE SHIFTED HORIZONTALLY SO AS NOT TO CONFLICT WITH THE PROPOSED CURB.
- SHOULD A SPRING OR AREA OF POOR DRAINAGE BE ENCOUNTERED, THIS AREA MUST BE UNDER-DRAINED TO THE NEAREST STORM SEWER STRUCTURE OR AS DIRECTED BY THE TOWNSHIP ENGINEER OR THE TOWNSHIP ENGINEER'S REPRESENTATIVE IN THE FIELD.
- PROPOSED CURBING INSTALLED ADJACENT TO GUIDE RAIL SHALL BE 4" REVEAL. GUIDE RAIL POST LENGTH SHALL BE EXTENDED VERTICALLY A MINIMUM OF 1" WHERE A 2" FLAT AREA IS NOT PROVIDED BETWEEN THE GUIDE RAIL AND TOP OF CURB.
- A MINIMUM 4" LAYER OF RIVER STONE, OVER WEEP DRAINAGE FABRIC, IS TO BE APPLIED TO THE 3" WIDE STRIP SEPARATING ADJOINING DRIVEWAYS ALONG CHSELSE LANE.

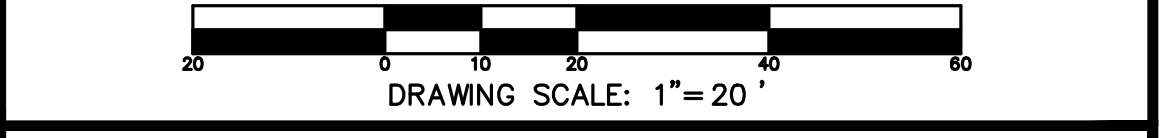
CONSTRUCTION LEGEND

- PROP. INDEX CONTOUR
- PROP. CONTOUR
- EXIST. CONTOUR
- EXIST. WATER LINE / LATERAL
- EXIST. SANITARY LATERAL
- EXIST. SANITARY SEWER MAIN
- PROP. CURBING
- PROP. STORM SEWER PIPE
- PROP. RIGHT-OF-WAY
- PROP. WATER SERVICE
- PROP. WATER MAIN
- PROP. SANITARY FORCE MAIN
- PROP. EDGE OF ROAD
- CENTERLINE
- TREE PROTECTION FENCING
- PROP. GUIDE RAIL
- EXIST. GUIDE RAIL
- EXIST. CLEAN OUT (C.O.)
- EXIST. SANITARY MANHOLE
- EXIST. WATER VALVE (W.V.)
- EXIST. WELL
- EXIST. CONC. MONUMENT
- EXIST. IRON PIN
- STREET SIGN
- SIGN
- LIGHT POST
- UTILITY POLE
- PROP. STORM SEWER LABEL
- PROP. HEADWALL
- PROP. INLET
- PROP. SANITARY M.H. LABEL
- PROP. WATER TAG
- PROP. FIRE HYDRANT

UNDERGROUND UTILITY NOTE

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DESIGN SERIAL NO.: 5456593 (MAIN STREET)



NO.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15	REVISED PER MCD EMAIL (08-21-2019)	AUGUST 30, 2019
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(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)		
PLAN ORIGINATION DATE		FEBRUARY 6, 2007

CONSTRUCTION IMPROVEMENT PLAN
(STORM SEWER AND GRADING)

AS PART OF
CLEMENS' MILL

PREPARED FOR
JEFFREY AND KELLY CLEMENS

SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
Consulting Engineers and Surveyors
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The Village at Lederach
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Hartysville, PA 19438
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RCMA D.B.C. 2283 3 OF 27

CONSTRUCTION LEGEND

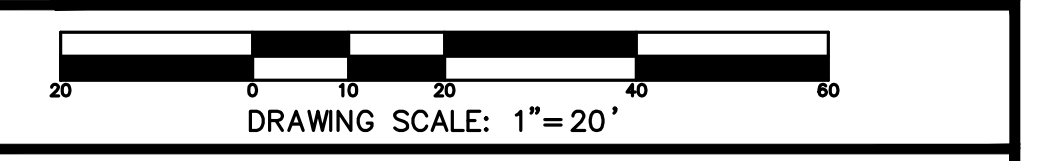
- 282— PROP. INDEX CONTOUR
- 254— PROP. CONTOUR
- 252— EXIST. INDEX CONTOUR
- 254— EXIST. CONTOUR
- W— EXIST. WATER LINE / LATERAL
- W— EXIST. SANITARY LATERAL
- W— EXIST. SANITARY SEWER MAIN
- W— PROP. CURBING
- W— PROP. STORM SEWER PIPE
- W— PROP. RIGHT-OF-WAY
- W— PROP. WATER SERVICE
- W— PROP. WATER MAIN
- FM— PROP. SANITARY FORCE MAIN
- FM— EASEMENT
- FM— PROP. EDGE OF ROAD
- FM— CENTERLINE
- X— TREE PROTECTION FENCING
- X— PROP. GUIDE RAIL
- X— EXIST. GUIDE RAIL
- EXIST. CLEAN OUT (C.O.)
- EXIST. SANITARY MANHOLE
- EXIST. WATER VALVE (W.V.)
- EXIST. WELL
- EXIST. CONC. MONUMENT
- EXIST. IRON PIN
- PROP./EXIST. HANDICAP SYMBOL
- +— STREET SIGN
- +— SIGN
- +— LIGHT POST
- +— UTILITY POLE
- A1— PROP. STORM SEWER LABEL
- A1— PROP. HEADWALL
- A1— PROP. INLET
- A1— PROP. MODIFIED INLET
- 100— PROP. SANITARY M.H. LABEL
- 1— PROP. WATER TAG
- 1— PROP. FIRE HYDRANT

CONSTRUCTION NOTES

1. ALL LAWN AREA SHALL BE PROPERLY GRADED TO ENSURE PROPER DRAINAGE FLOW, AWAY FROM BUILDINGS TO NEAREST INLET OR WATERCOURSE WITHOUT PONDING OR OBSTRUCTION. A MINIMUM OF 2% SLOPE SHALL BE PROVIDED ON ALL GRASSED AREAS.
2. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS, WHERE 18 INCHES MINIMUM CLEARANCE CANNOT BE OBTAINED, THE UTILITY LINES SHALL BE CONCRETE ENCASED.
3. ALL CONSTRUCTION SHALL CONFORM TO LOWER SALFORD TOWNSHIP PENN. D.O.T. AND/OR LOWER SALFORD TOWNSHIP AUTHORITY STANDARDS AND SPECIFICATIONS, WHICHEVER IS GREATER. INTERPRETATION SHALL REST WITH THE TOWNSHIP ENGINEER, OR HIS REPRESENTATIVE IN THE FIELD.
4. ALL SANITARY SEWER AND APPEARANCES SHALL BE IN CONFORMANCE WITH THE LOWER SALFORD TOWNSHIP AUTHORITY (LSTA) STANDARDS. ALL LOW PRESSURE FORCE MAIN SEWER LINES SHALL BE DR-11 HDPE WITH ISOLATION VALVES. ALL LATERALS AND FITTINGS SHALL BE JOINED BY THE ELASTOMERIC GASKET SYSTEM CONFORMING TO ASTM D 3212. AIR RELEASE VALVE SHALL BE DEZURK MODEL 400 WITH 2" INLET, OR EQUAL APPROVED BY SEWER AUTHORITY ENGINEER.
5. THE EXISTING SEWER AND SEWER LATERALS FOR THE EXISTING HOMES SHALL BE TELEVIEWED TO DETERMINE EXISTING CONDITIONS, AND RESULTS SHALL BE PROVIDED TO THE LSTA. BUILDING SEWERS AND SEWER LATERALS SHALL BE REPLACED AND/OR REPAIRED BY OWNER IF NECESSARY AS DETERMINED BY LSTA.
6. ALL WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
7. GAS, ELECTRIC AND CABLE TELEVISION FACILITIES FOR ALL LOTS SHALL BE PROVIDED BY UNDERGROUND SERVICE.
8. ALL GRAVITY PORTIONS OF SANITARY SEWER LATERALS SHALL BE LAID ON A SLOPE OF NOT LESS THAN 1/4 INCH PER FOOT AND HAVE 10 FEET OF HORIZONTAL SEPARATION BETWEEN THE LATERAL AND PROPOSED LANDSCAPING.
9. SANITARY SEWER SERVICE WILL BE PROVIDED TO THE BASEMENT ELEVATION FOR UNITS 1, 2, 4, 8, 9, AND TO THE FIRST FLOOR ELEVATION FOR UNITS 3, 5, 6, 7, 10, 11, 12, 13, 14. 6-13 MAY BE PROVIDED IF THE GRINDER PUMP TANK IS LOCATED AT THE REAR OF THE UNIT.
10. NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPILL. TOPSOIL MUST BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. UPON COMPLETION OF THE CONSTRUCTION, THE TOPSOIL MUST BE REDISTRIBUTED ON THE SITE UNIFORMLY. A MINIMUM 6" DEPTH, COMPACTED ON ALL DISTURBED AREAS (I.E. SWALES, LOTS, BASIN BERMS AND PLANTING BUFFERS).
11. AT NO TIME SHALL PILES BE LOCATED IN THE CORNERS OF THE INLET BOXES. ALL STORMSEWER PIPE REQUIRES 2 FEET MINIMUM COVER OVER THE TOP OF THE PIPE.
12. ROOF DOWNSPOUT COLLECTION PIPES SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT WELDED JOINTS OR SDR-35 PVC INTEGRAL GASKET PIPE MEETING ASTM F477. TWO FOOT (2) MINIMUM COVER REFER TO TYPICAL TRENCH DETAIL FOR ROOF DRAIN BACKFILL REQUIREMENTS.
13. PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE STORM SEWER SYSTEM, STORM STRUCTURES, PIPE, ETC., CONCRETE, I.E., CURB, SIDEWALK, ETC., ALL AGGREGATES, ALL ASPHALT DESIGN MIXES, ETC.
14. PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS AND DESIGN CALCULATIONS, SEALED BY A PROFESSIONAL REGISTERED ENGINEER IN THE STATE OF PENNSYLVANIA, FOR ALL ITEMS RELATED TO THE PROPOSED RETAINING WALL (ADJACENT TO UNIT 6), INCLUDING BACKFILL, REINFORCEMENT, TOP RAILING, ETC. THE SEGMENTAL BLOCK RETAINING WALL SHALL BE DESIGNED TO ACCOUNT FOR THE LOCATION OF INLET AS WITHIN THE REINFORCEMENT AND TO ACCOUNT FOR THE 18 INCH STORM SEWER PIPE FROM INLET AS TO DW ENDWALL AND THAT CROSSES BENEATH THE WALL.
15. PRIOR TO FABRICATION AND CONSTRUCTION, PROVIDE TO THE SEWER AUTHORITY ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE SANITARY SEWER SYSTEM, I.E. MANHOLES, PIPE, AGGREGATE, ETC.
16. AT TIME OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE ELEVATIONS OF EXISTING 6" SANITARY LATERALS (2 TOTAL) WHERE THEY ENTER EXISTING MANHOLES IN MAIN STREET, AND PROVIDE TO SEWER AUTHORITY ENGINEER.
17. CONTRACTOR SHOULD NOTE PROPOSED FLOOR, GARAGE, BASEMENT, FINISH GRADE, AND WALKOUT ELEVATIONS TO ENSURE STEPS AND MATERIALS ARE ADEQUATELY PROVIDED TO ENSURE COMPLIANCE WITH BUILDING AND GRADING REQUIREMENTS.
18. THERE ARE TWO EXISTING BELL TELEPHONE MANHOLES OVER A CONCRETE VAULT LOCATED ALONG MAIN STREET IMMEDIATELY ADJACENT TO PROPOSED CURB. BELL TELEPHONE SHALL BE NOTIFIED AND A REPRESENTATIVE MUST BE PRESENT FOR ANY WORK PERFORMED NEAR OR OVER THE VAULT. THE PROPOSED CURB SHALL BE INSTALLED OVER THE VAULT AND THE MANHOLES SHALL BE RAISED TO FINISH GRADE. THE MANHOLE RINGS SHALL ALSO BE SHIFTED HORIZONTALLY SO AS NOT TO CONFLICT WITH THE PROPOSED CURB.
19. SHOULD A SPRING OR AREA OF POOR DRAINAGE BE ENCOUNTERED, THIS AREA MUST BE UNDERDRAINED TO THE NEAREST STORM SEWER STRUCTURE OR AS DIRECTED BY THE TOWNSHIP ENGINEER OR THE TOWNSHIP ENGINEER'S REPRESENTATIVE IN THE FIELD.
20. PROPOSED CURBING INSTALLED ADJACENT TO GUIDE RAIL SHALL BE 4" REVEAL. GUIDE RAIL POST LENGTH SHALL BE EXTENDED VERTICALLY TO A MINIMUM OF 1" WHERE A 2" FLAT AREA IS NOT PROVIDED BETWEEN THE GUIDE RAIL AND TOP OF SLOPE.
21. A MINIMUM 6" LAYER OF "RIVER STONE" OVER WEED PREVENTION FABRIC, IS TO BE APPLIED TO THE 3' WIDE STRIP SEPARATING ADJOINING DRIVEWAYS ALONG CHELSEA LANE.

WATER SCHEDULE

- △ 1-12" TAPPING SLEEVE
 - △ 1-8" MET TAP
 - △ 1-8" G.V. & V.B.
 - △ 1-8" 45° D.I.P. BEND (M)
 - △ 1-8" 1-T.B.
 - △ 1-8" 22.5° D.I.P. BEND (M)
 - △ 1-8" 1-T.B.
 - △ 1-8"x6"x6" F.H. TEE
 - △ 1-8" G.V. & V.B.
 - △ 1-F.H. ASSEMBLY
 - △ 2-T.B.
 - △ 6" CONNECTION PIECE (LENGTH PER PLAN VIEW)
 - △ 1-8" G.V. & V.B.
 - △ 1-8" PLUG
 - △ 1-T.B.
- G.V. = GATE VALVE
V.B. = VALVE BOX ASSEMBLY
T.B. = THRUST BLOCK
F.H. = FIRE HYDRANT




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No.	REVISION	DATE
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CONSTRUCTION IMPROVEMENT PLAN
(SANITARY SEWER AND WATER)

AS PART OF
CLEMENS' MILL

PREPARED FOR
JEFFREY AND KELLY CLEMENS

SITE SITUATE IN
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA


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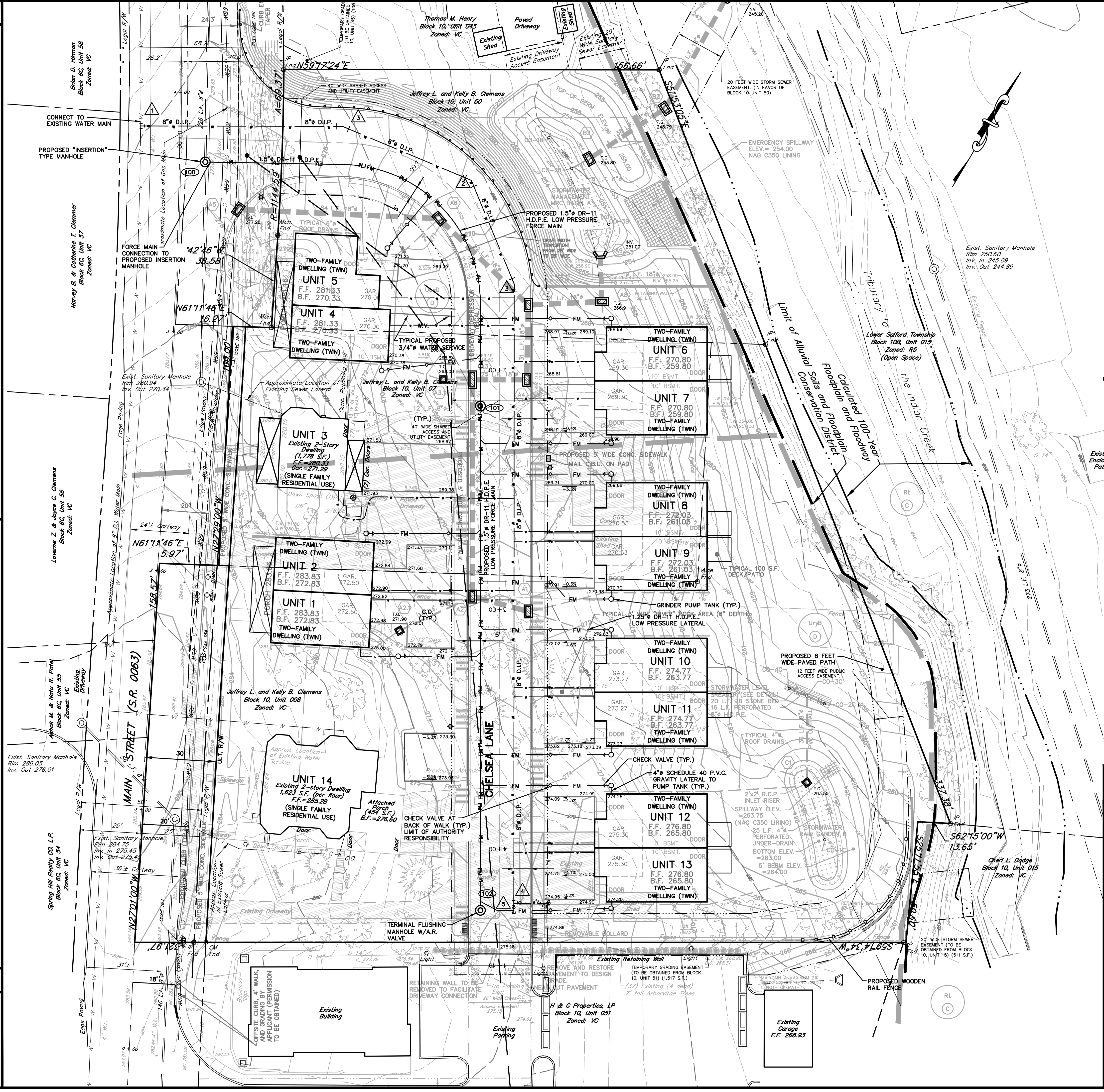
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DRAFTED BY: **RCMA**
 PROJ. MGR.: **D.B.C.**
 PROJECT NO.: **2283**
 DRAWING NO.: **4 OF 27**

UNDERGROUND UTILITY NOTE

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GENERAL LANDSCAPE NOTES

- THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS SHOWN ON THE DRAWINGS, AS SPECIFIED, AND IN QUANTITIES INDICATED ON THE PLANT LIST.
- ALL PLANTS SHALL BE NURSERY GROWN AND FRESHLY DUG.
- ALL PLANTS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION. ALL PLANTS SHALL MEET THE MINIMUM STANDARDS FOR HEALTH, FORM AND ROOT CONDITIONS AS OUTLINED IN THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS.
- ALL PLANTS SHALL BE HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. ALL PLANT MATERIAL SHALL BE HARDY WITHIN THE USDA HARDINESS ZONE 6 APPLICABLE TO MONTGOMERY COUNTY, PENNSYLVANIA.
- FALL DIGGING HAZARD: ANY SPECIES LISTED BELOW, IF INCLUDED ON THE PLANT LIST, MUST NOT BE DUG IN THE FALL. FROM OCTOBER THROUGH DECEMBER BECAUSE OF RISK TO THE TREE'S SURVIVAL. SPECIAL EXCEPTIONS MAY BE GRANTED IF THE OWNER IS NOTIFIED IN WRITING AND AN EXTENDED WARRANTY ON THESE PLANTS IS AGREED UPON PRIOR TO DIGGING. THE FOLLOWING VARIETIES SHOULD NOT BE DUG IN FALL: BETULA, US. CELTIS, CERODIPHYLLUM, CRATAEGUS, CRYPTOMERIA, FAGUS, HALEZIA, ILEX (TREE IN VARIETIES), LIQUIDAMBAR, LIRODENDRON, NYSSA, Ostrya, PRUNUS, PYRUS, QUERCUS (EXCEPT QUERCUS PALUSTRIS), SALIX WEEPING VARIETIES, AND TILIA TOMENTOSA. DIGGING FOR MALUS AND ZELKOVA VARIETIES SHOULD BE AVOIDED IN FALL ONLY WHEN IN LEAF.
- ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OR GROWTH. THEY SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE CERTIFIED BY APPROPRIATE STATE AND FEDERAL AUTHORITIES FREE OF DISEASE AND INSECT PESTS, EGGS OR LARVAE. THEY SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS.
- SUBSTITUTIONS: WHEN PLANTS OF A SPECIFIED KIND OR SIZE ARE NOT AVAILABLE WITHIN A REASONABLE DISTANCE, SUBSTITUTIONS MAY BE MADE UPON REQUEST BY THE CONTRACTOR, IF APPROVED BY THE TOWNSHIP.
- MEASUREMENT: DIMENSIONS OF TREES AND SHRUBS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION. ALL CANOPY TREES SHALL HAVE A MIN. CALIPER OF 3" AT PLANTING.
- SIZE: ALL PLANTS SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE PLANT LIST, UNLESS AUTHORIZED IN WRITING.
- BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH FIRM NATURAL BALLS OF EARTH, OF DIAMETER AND DEPTH TO INCLUDE MOST OF THE FIBROUS ROOTS. CONTAINER GROWN STOCK SHALL HAVE BEEN GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL TOGETHER FIRM AND WHOLE. NO PLANTS SHALL BE LOOSE IN THE CONTAINER.
- ROOT BALLS OF ALL PLANTS SHALL BE ADEQUATELY PROTECTED AT ALL TIMES FROM SUN AND DRYING WINDS OR FROST.
- OWNER OR THE OWNER'S REPRESENTATIVE AND THE TOWNSHIP SHALL BE NOTIFIED PRIOR TO BEGINNING PLANTING OPERATIONS.
- PLANTS WITH BROKEN ROOT BALLS OR EXCESSIVE DAMAGE TO THE CROWN SHALL BE REPLACED PRIOR TO PLANTING.
- ALL TREES SHALL BE STAKED AND GUYED ACCORDING TO ACCEPTED INDUSTRY PRACTICE.
- EVERY TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL DEAD WOOD OR SUCKERS AND ALL BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED.
- MULCH: IMMEDIATELY AFTER PLANTING OPERATIONS ARE COMPLETED, ALL TREES AND SHRUB PLANTING PITS SHALL BE COVERED WITH A 3" (THREE INCH) LAYER OF COARSE ROOT OR OTHER MATERIAL APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE. A GRANULAR PRE-EMERGENT WEED CONTROL SHALL BE SPREAD PRIOR TO MULCHING. THE LIMIT OF THIS MULCH FOR DECIDUOUS TREES AND SINGLE EVERGREEN TREES SHALL BE THE AREA OF THE PIT. FOR EVERGREEN TREE CLUSTERS, A MULCHED BED SHALL BE CREATED.
- WEED CONTROL: ALL PLANTING AREAS SHALL BE FREE FROM WEEDS PRIOR TO THE BEGINNING OF PLANTING OPERATION. CONTACT HERBICIDE SPRAYS SHOULD ONLY BE USED AS REQUIRED BY ALL MANUFACTURER'S SPECIFICATIONS FOLLOWED.
- TREES IN LEAF, INCLUDING EVERGREENS, WHEN PLANTED SHALL BE TREATED WITH ANTI-DESICCANT SUCH AS WLT-PROOF IF PLANTED DURING THE MONTHS OF JUNE THROUGH SEPTEMBER, NOVEMBER, AND DECEMBER.
- PLANTING SOIL OF 50% TOPSOIL AND 50% PEAT MOSS SHALL BE MIXED WITH EXISTING SOIL AT A RATE OF 1/3 PLANTING SOIL AND 2/3 EXISTING SOIL.
- GUARANTEE: REQUIRED SCREENING, SHADE TREES AND PERIMETER LANDSCAPING SHALL BE PERPETUALLY MAINTAINED. THE APPLICANT SHALL BE RESPONSIBLE FOR PLANTINGS FOR A PERIOD OF EIGHTEEN (18) MONTH MAINTENANCE PERIOD FOLLOWING COMPLETION OF THE IMPROVEMENTS. THE LANDOWNER SHALL BE RESPONSIBLE FOR MAINTENANCE AFTER THIS PERIOD HAS EXPIRED. ANY MATERIAL THAT IS 25% DEAD OR MORE SHALL BE CONSIDERED DEAD AND MUST BE REPLACED AT NO CHARGE. A TREE SHALL BE CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR THERE IS 25% OF THE CROWN DEAD.
- ALL PLANTING SHALL BE AT THE LOCATIONS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT THE CORRECT GRADES, ALIGNMENT, AND TO THE INDICATED LAYOUT OF THE PLANTING BEDS.
- LAYOUT OF PLANTING: THE CONTRACTOR SHALL LAY OUT WITH IDENTIFIABLE STAKES THE LOCATION OF ALL PLANTING BEDS AS INDICATED ON DRAWING. THE LAYOUT OF PLANTING SHALL BE APPROVED BY THE PROJECT REPRESENTATIVE PRIOR TO ANY EXCAVATION OF PLANT PITS OR PLANT BEDS.
- CONDITIONS DETRIMENTAL TO PLANTS: THE CONTRACTOR SHALL NOTIFY THE PROJECT REPRESENTATIVE IN WRITING OF ALL SOIL OR DRAINAGE CONDITIONS WHICH THE CONTRACTOR CONSIDERS DETRIMENTAL TO THE GROWTH OF PLANTS. THE CONTRACTOR SHALL STATE THE CONDITIONS AND SUBMIT A PROPOSAL FOR CORRECTING THE CONDITIONS, INCLUDING ANY CHANGE IN COST, FOR REVIEW AND ACCEPTANCE BY THE PROJECT REPRESENTATIVE.
- MINOR ADJUSTMENTS TO TREE LOCATIONS MAY BE NECESSARY DUE TO FIELD CONDITIONS AND FINAL GRADING. THE CONTRACTOR SHALL NOTIFY THE OWNER IF MAJOR ADJUSTMENTS ARE REQUIRED.
- ALL DEBRIS RESULTING FROM LANDSCAPE CONTRACTING OPERATIONS SHALL BE COLLECTED UP AND REMOVED FROM THE SITE ON A WEEKLY BASIS.
- WATERING: LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR WATERING SUFFICIENTLY AT THE TIME OF PLANTING AND UNTIL THE JOB IS COMPLETED, ACCEPTED AND TURNED OVER TO THE OWNER.

LANDSCAPING LEGEND

- EXISTING TREE (NOT CONSIDERED PRESERVED)
- EXISTING TREE (TO BE PRESERVED)
- EXIST. TREE LABEL
- WOOD LINE
- TREE/SHRUB ROW
- PROPOSED WOOD LINE
- TREE PROTECTION FENCING

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DESIGN SERIAL NO.: 5456593 (MAIN STREET)

RAIN GARDEN PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS
M.V.	MAGNOLIA VIRGINIANA	SWETBAY MAGNOLIA	6" HT.	2	B&B
I.G.	ILEX GLABRA	INKBERRY	18"-24" HT.	7	2GALLON
A.A.	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	18"-24" HT.	6	2GALLON

* RAIN GARDEN FLOOR AND BASIN FLOOR TO BE PLANTED WITH 75% ERNMX-180 RAIN GARDEN MIX AND 25% RYE GRASS.

PLANTING REQUIREMENTS

- STREET TREE REQUIREMENTS**
SECTION 142-42.2
(A) PLANTINGS SHOULD OCCUR AT A RATE OF AT LEAST ONE TREE PER 40 FEET, OR FRACTION THEREOF. THERE IS APPROXIMATELY 305 LINEAR FEET OF FRONTAGE ALONG MAIN STREET. THEREFORE TEN (10) TREES ARE REQUIRED. SEVEN (7) ARE PROPOSED ALONG MAIN STREET. THREE (3) ARE PROPOSED INTERMITTENTLY ALONG THE STREET.
(B) THERE IS APPROXIMATELY 810 LINEAR FEET (405 PAVING TE-IN TO LIT. R/W) OF FRONTAGE ALONG CHELSEA DRIVE. THEREFORE TWENTY (20) TREES ARE REQUIRED. (16) TREES ARE PROPOSED ALONG CHELSEA DRIVE. SEVEN (5) ARE PROPOSED INTERMITTENTLY ALONG THE BIKE TRAIL.
- DETENTION BASIN PLANTING REQUIREMENTS**
SECTION 142-42.2
(A) PLANTINGS SHOULD OCCUR AT A RATE OF AT LEAST TWO (2) TREES AND TEN (10) SHRUBS PER 100 LINEAR FEET OF BASIN PERIMETER, OR FRACTION THEREOF. THE BASIN PERIMETER IS APPROXIMATELY 233 LINEAR FEET. THEREFORE FIVE (5) TREES AND TWENTY-TWO (22) SHRUBS ARE REQUIRED AND PROPOSED. TWO (2) TREES ARE PROPOSED ALONG THE PATH PROPOSED THROUGH TOWNSHIP OPEN SPACE.
(B) THERE IS APPROXIMATELY 810 LINEAR FEET (405 PAVING TE-IN TO LIT. R/W) OF FRONTAGE ALONG CHELSEA DRIVE. THEREFORE TWENTY (20) TREES ARE REQUIRED. (16) TREES ARE PROPOSED ALONG CHELSEA DRIVE. SEVEN (5) ARE PROPOSED INTERMITTENTLY ALONG THE BIKE TRAIL.
- REPLACEMENT TREE REQUIREMENTS**
SECTION 142-42.2
A WAIVER OF SECTION 142-42.2(c) IS REQUESTED TO DEFINE TREES "NOT PRESERVED" AS ONLY THOSE TREES THAT WILL BE REMOVED AS A RESULT OF CONSTRUCTION.
(A) THE TOTAL CALIPER INCHES OF EXISTING SPECIMEN TREES ON-SITE IS 0.
(B) THE TOTAL CALIPER INCHES OF NON-SPECIMEN EXISTING TREES ON-SITE, 8" AND GREATER, IS 635 (80" ARE LOCATED WITHIN PADOT R/W ALONG MAIN STREET AND NOT COUNTED) (NO TREES BEYOND THE PROPERTY BOUNDARY IN THE AREA OF THE PATH ARE COUNTED). THE ORDINANCE ALLOWS A MAX. OF 25% REMOVAL OF NON-SPECIMEN TREES, 8" AND GREATER. ALLOWABLE CALIPER INCHES TO BE REMOVED WITHOUT REPLACEMENT IS 159 (635 X 0.25). THE TOTAL CALIPER INCHES OF TREES TO BE REMOVED DUE TO PROPOSED CONSTRUCTION IS 441 INCHES. THE TOTAL CALIPER INCHES OF REQUIRED TREE REPLACEMENT IS 282 (441 - 159) (94 TREES). 72 CALIPER INCHES OF REPLACEMENT TREES ARE PROPOSED (24-3" CAL. TREES).
A PARTIAL WAIVER OF SECTION 142-42.2(c) IS REQUESTED FROM THE PROVISION OF REPLACEMENT TREES. CONTRIBUTION/COORDINATION TOWARD A PAVED PATH OFFSITE THROUGH TOWNSHIP OPEN SPACE AND 72 CALIPER INCHES OF REPLACEMENT TREES WILL BE PROVIDED. 210 CALIPER INCHES OR SEVENTY (70) TREES IS ASSOCIATED WITH THIS WAIVER.
TWENTY (20) OF THE PROPOSED REPLACEMENT TREES WILL BE INSTALLED ALONG THE PATH PROPOSED THROUGH TOWNSHIP OPEN SPACE.
- DETENTION BASIN SITE ELEMENT SCREEN**
SECTION 142-42.4
(A) A TYPE NO. 1 SITE ELEMENT SCREEN SHALL BE INSTALLED AROUND THE DETENTION BASIN ADJACENT TO A RESIDENTIAL USE.
SCREEN TYPE NO. 1: EVERGREEN OR DECIDUOUS SHRUBS. SHRUBS SHALL BE PLACED 3 FEET ON CENTER IN A MINIMUM 5 FOOT WIDE BED SURROUNDING THE SITE ELEMENT AND ARRANGED TO PROVIDE A CONTINUOUS HEDGE-LIKE SCREEN UP TO A MINIMUM OF 3'-1/2 FEET AT MATURITY. SHRUBS MAY BE CLIPPED TO FORM A HEDGE OR LEFT IN THEIR NATURAL HABITAT PER SECTION 142-42.4(g)(1,11).
(B) THERE IS APPROXIMATELY 50 LINEAR FEET OF SITE ELEMENT LENGTH. THEREFORE SEVENTEEN (17) SHRUBS ARE REQUIRED AND PROPOSED.
- H&G PROPERTIES, L.P. PARKING AREA SITE ELEMENT SCREEN**
(34) AMERICAN ARBORVITAE TREES (10) WITH TEMPORARY GRADING EASEMENT SHALL BE REMOVED TO ACCOMMODATE PROPOSED IMPROVEMENTS. (34) TREES OF LIKE SIZE AND SPECIES SHALL BE INSTALLED BY THE APPLICANT FOLLOWING CONSTRUCTION.

PLANTING SCHEDULE

STREET TREES (1)						
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS	PCSM
AR	ACER RUBRUM	RED MAPLE	3" CAL	17	B&B	Y
PO	PLANTANUS OCCIDENTALIS	SYCAMORE	3" CAL	14	B&B	Y

DETENTION BASIN PLANTINGS (2,3)						
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS	PCSM
QA	QUERCUS ALBA	WHITE OAK	3" CAL	3	B&B	Y
IV	ILEX VERTICILLATA	WINTERBERRY	30" HT.	23	B&B	Y

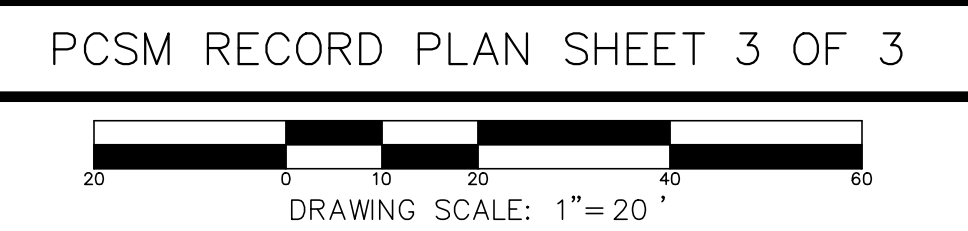
REPLACEMENT TREES (4)						
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS	PCSM
PH	PLATANUS X HISPANICA	LONDON PLANE	3" CAL	1	B&B	N
OR	QUERCUS RUBRA	RED OAK (NATIVE)	3" CAL	5	B&B	Y

SITE ELEMENT SCREEN (DETENTION BASIN)						
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS	PCSM
TO	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	4" HT.	17	B&B	N

SITE ELEMENT SCREEN (H&G PROPERTIES, L.P.)						
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS	PCSM
TO	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	4" HT.	34	B&B	N

PCSM RECORD PLAN SHEET 3 OF 3						
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS	PCSM
PS	PINUS STROBUS	WHITE PINE	6" HT.	8	B&B	Y

(1) EIGHT (8) OF THE REQUIRED STREET TREES ARE PROPOSED ALONG THE OFF-SITE PATH.
(2) TWO (2) OF THE REQUIRED DETENTION BASIN PLANTINGS ARE PROPOSED OFF-SITE ALONG THE PATH (BELOW THE DETENTION BASIN BERM).
(3) RAIN GARDEN FLOOR AND BASIN FLOOR TO BE PLANTED WITH 75% ERNMX-180 RAIN GARDEN MIX AND 25% RYE GRASS.
(4) TWENTY (20) OF THE REPLACEMENT TREES ARE PROPOSED ALONG THE OFF-SITE PATH. PLANTINGS WITH "Y" INDICATED IN PCSM COLUMN WERE USED TOWARD MEETING PCSM VOLUME CREDITS.



NO.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15	REVISED PER MCOE EMAIL (08-21-2019)	AUGUST 30, 2019
14	REVISED PER MCOE LTR. (02-19-2019)	JUNE 18, 2019
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10	REVISED PER OCS LTR. (12-08-2016), MCMANON LTR. (12-07-2016)	NOVEMBER 10, 2017

(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

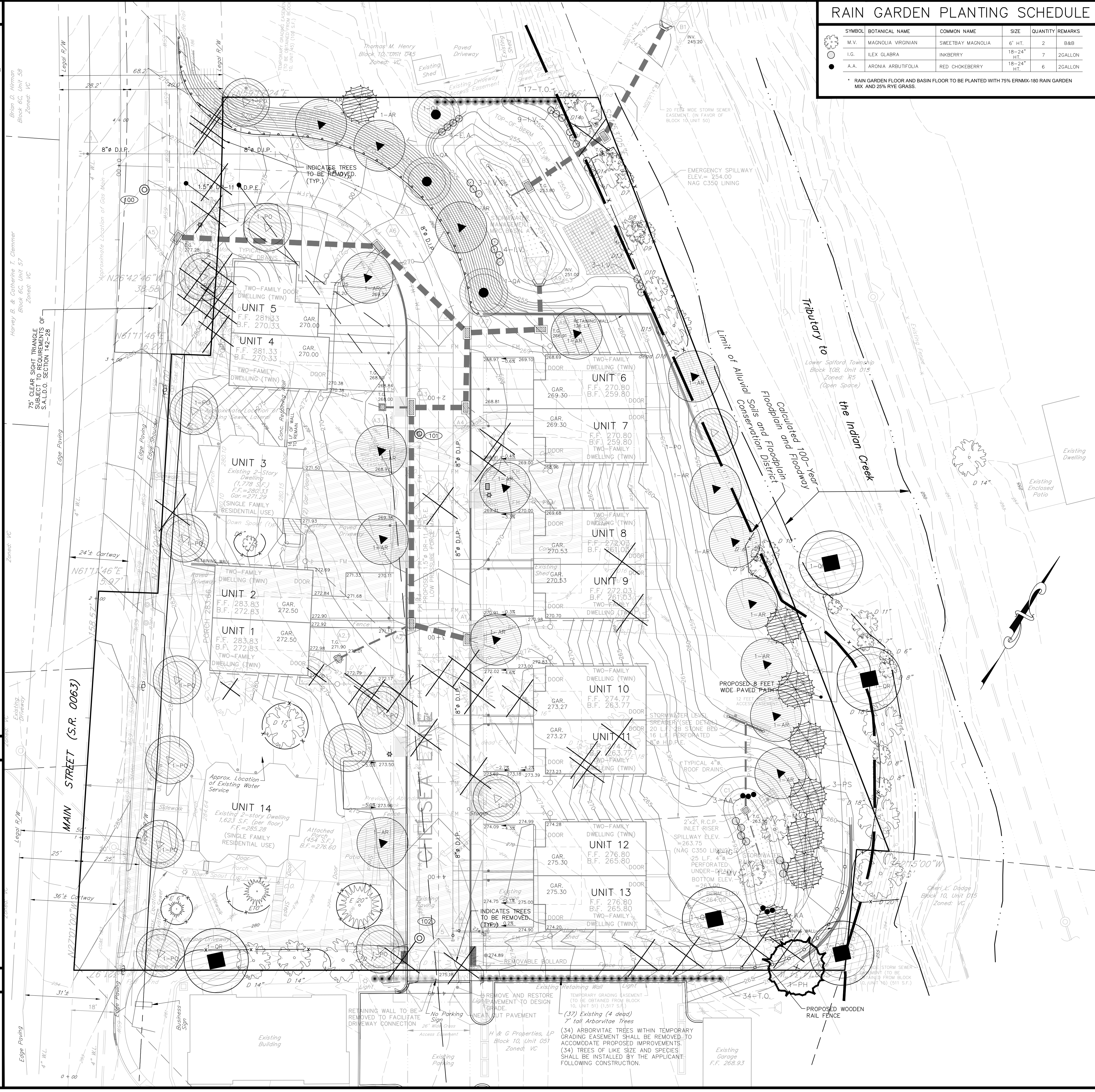
LANDSCAPING PLAN

AS PART OF
CLEMENS' MILL
PREPARED FOR
JEFFREY AND KELLY CLEMENS
SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
Consulting Engineers and Surveyors
www.rcmaonline.com

The Village at Lederach
658 Hartsville Pike, Suite 150
Hartsville, PA 19438
(215) 513-2100

DRAFTED BY: RCMA
PROJ. MGR.: D.B.C.
PROJECT NO.: 2283
DRAWING NO.: 5 OF 27



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LUMINAIRE SPECIFICATIONS
 STYLE: WILLIAM AND MARY MEDIUM
 HEIGHT: 7'-4" 3/8"
 WIDTH: 1'-4" 5/8" OCTAGONAL
 MATERIAL: CAST ALUMINUM ALLOY AND 306 PER A.S.T.M. 306-95
 FINISH: POWDER COAT - RIVER TEXTURE GLOSS BLACK
 LAMPING: 80 WATT LED SYSTEM
 VOLTAGE: ELECTRONIC WIRE AT 120-277 VOLTS
 COLOR TEMP: 4000K (MEDIUM WHITE)
 OPTICS: TYPE III REFRACTIVE OPTICS (ASYMMETRIC DISTRIBUTION)
 PANELS: PEBBLED ACRYLIC

CATALOG NO.: ALUMIN-LE080/VV/02-40-003-TYPF-F0V-DU

LAMP POST SPECIFICATIONS
 STYLE: NORHAMPTON
 HEIGHT: 9'-0"
 PHOTOMETRIC CENTER: 9'-11" 3/4"
 BASE: 17" DIAMETER
 MATERIAL: 5" DIA. 6061 ALLOY ALUMINUM TUBE (0.102" WALL)
 FINISH: CAST ALUMINUM ALLOY AND 306 PER A.S.T.M. 306-95
 ACCESS DOOR: LOCATED IN BASE SECURED WITH TAMPER PROOF HEX SOCKET SECURITY MACHINE SCREWS
 GROUND PROVISIONS: DRILL AND TAP INSIDE WALL OF BASE OPPOSITE ACCESS DOOR TO ACCOMMODATE A 1/4"-20 GROUND STUD (STUD SUPPLIED BY OTHERS)
 ANCHOR BOLTS: (4) 3/4" ANCHOR BOLTS BY OTHERS
 BOLT PROJECTION: 3" SECURED
 TENON: 1 1/2" DIA. X 3" HIGH

CATALOG NO.: #PSNR1-17-09-00-ES-7N35/3.00-DU

SECTION B-B
9" DIAMETER
12" FLAT FLUTE
ALUMINUM EXTRUSION
N.T.S.

SECTION A-A
17" DIAMETER
1/2" OF ACCESS DOOR
N.T.S.

Spring City Electrical Mfg. Co.
 1101 AND MAIN STREETS - P.O. BOX 18 - SPRING CITY, PA 19429
 PHONE (610) 548-4004 - FAX (610) 548-5017 - WWW.SPRINGCITYEMFG.COM

DESCRIPTION	THE NORHAMPTON 9'-0" ALUMINUM LAMP POST WITH THE WILLIAM AND MARY LED LUMINAIRE
CUSTOMER	CLEMENS MILL - LOWER SALFORD, PA
JOB	
SCALE	DRWN BY: DATE: DRAWING NO:
N.T.S.	T.E.B. 11-09-2017 5103660

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LUMINAIRE SPECIFICATIONS
 STYLE: WILLIAM AND MARY MEDIUM
 HEIGHT: 7'-4" 3/8"
 WIDTH: 1'-4" 5/8" OCTAGONAL
 MATERIAL: CAST ALUMINUM ALLOY AND 306 PER A.S.T.M. 306-95
 FINISH: POWDER COAT - RIVER TEXTURE GLOSS BLACK
 LAMPING: 80 WATT LED SYSTEM
 VOLTAGE: ELECTRONIC WIRE AT 120-277 VOLTS
 COLOR TEMP: 4000K (MEDIUM WHITE)
 OPTICS: TYPE III REFRACTIVE OPTICS (ASYMMETRIC DISTRIBUTION)
 PANELS: PEBBLED ACRYLIC

CATALOG NO.: ALUMIN-LE080/VV/02-40-003-TYPF-F0V-DU

LAMP POST SPECIFICATIONS
 STYLE: NORHAMPTON
 HEIGHT: 15'-0"
 PHOTOMETRIC CENTER: 15'-0"
 BASE: 17" DIAMETER
 MATERIAL: 5" DIA. 6061 ALLOY ALUMINUM TUBE (0.102" WALL)
 FINISH: CAST ALUMINUM ALLOY AND 306 PER A.S.T.M. 306-95
 ACCESS DOOR: LOCATED IN BASE SECURED WITH TAMPER PROOF HEX SOCKET SECURITY MACHINE SCREWS
 GROUND PROVISIONS: DRILL AND TAP INSIDE WALL OF BASE OPPOSITE ACCESS DOOR TO ACCOMMODATE A 1/4"-20 GROUND STUD (STUD SUPPLIED BY OTHERS)
 ANCHOR BOLTS: (4) 3/4" ANCHOR BOLTS BY OTHERS
 BOLT PROJECTION: 3" SECURED
 TENON: 1 1/2" DIA. X 3" HIGH

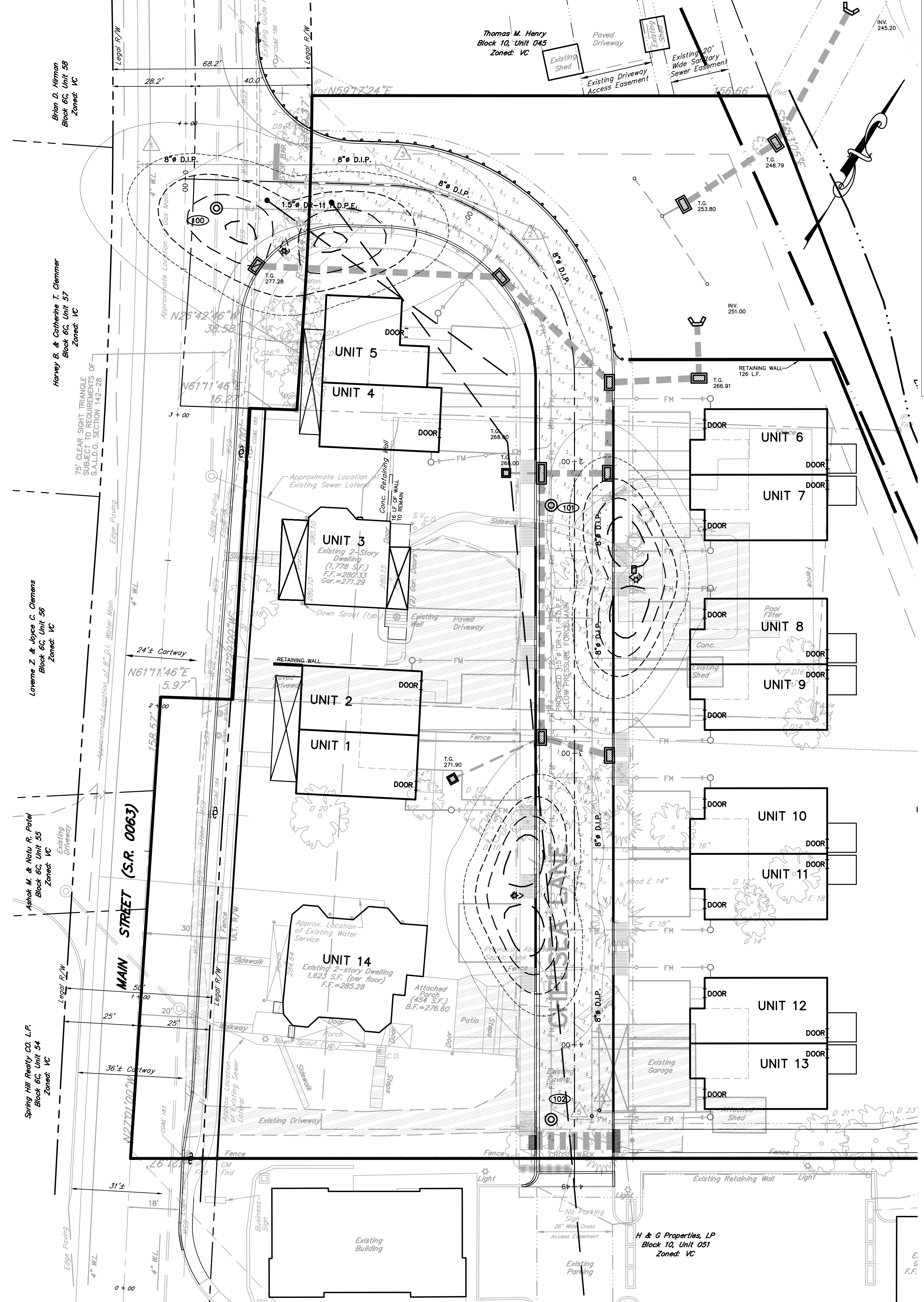
CATALOG NO.: #PSNR1-17-15-00-ES-7N35/3.00-DU

SECTION B-B
9" DIAMETER
12" FLAT FLUTE
ALUMINUM EXTRUSION
N.T.S.

SECTION A-A
17" DIAMETER
1/2" OF ACCESS DOOR
N.T.S.

Spring City Electrical Mfg. Co.
 1101 AND MAIN STREETS - P.O. BOX 18 - SPRING CITY, PA 19429
 PHONE (610) 548-4004 - FAX (610) 548-5017 - WWW.SPRINGCITYEMFG.COM

DESCRIPTION	THE NORHAMPTON 15'-0" ALUMINUM LAMP POST WITH THE WILLIAM AND MARY LED LUMINAIRE
CUSTOMER	CLEMENS MILL - LOWER SALFORD, PA
JOB	
SCALE	DRWN BY: DATE: DRAWING NO:
N.T.S.	T.E.B. 11-09-2017 5103661



Clemens Mill - Calculations

PHOTOMETRIC STUDY

THE CALCULATIONS ASSUME BOTH A 9' AND 15' HIGH POST WHICH ACCOMMODATES A SPRING CITY WILLIAM AND MARY LED LUMINAIRE

THE CALCULATION USES (2) WILLIAM AND MARY 80 WATT LED - 4000K - TYPE III AND (1) WILLIAM AND MARY 80 WATT LED - 4000K - TYPE III

THE WILLIAM AND MARY LUMINAIRE ON WILL UTILIZE (54) CREE XTE CHIPS AT 60 WATTS. THE WILLIAM AND MARY LUMINAIRE ON WILL UTILIZE (72) CREE XTE CHIPS AT 60 WATTS. THE COLOR TEMPERATURE WILL BE 4000K AND HAVE A TYPE III DISTRIBUTION.

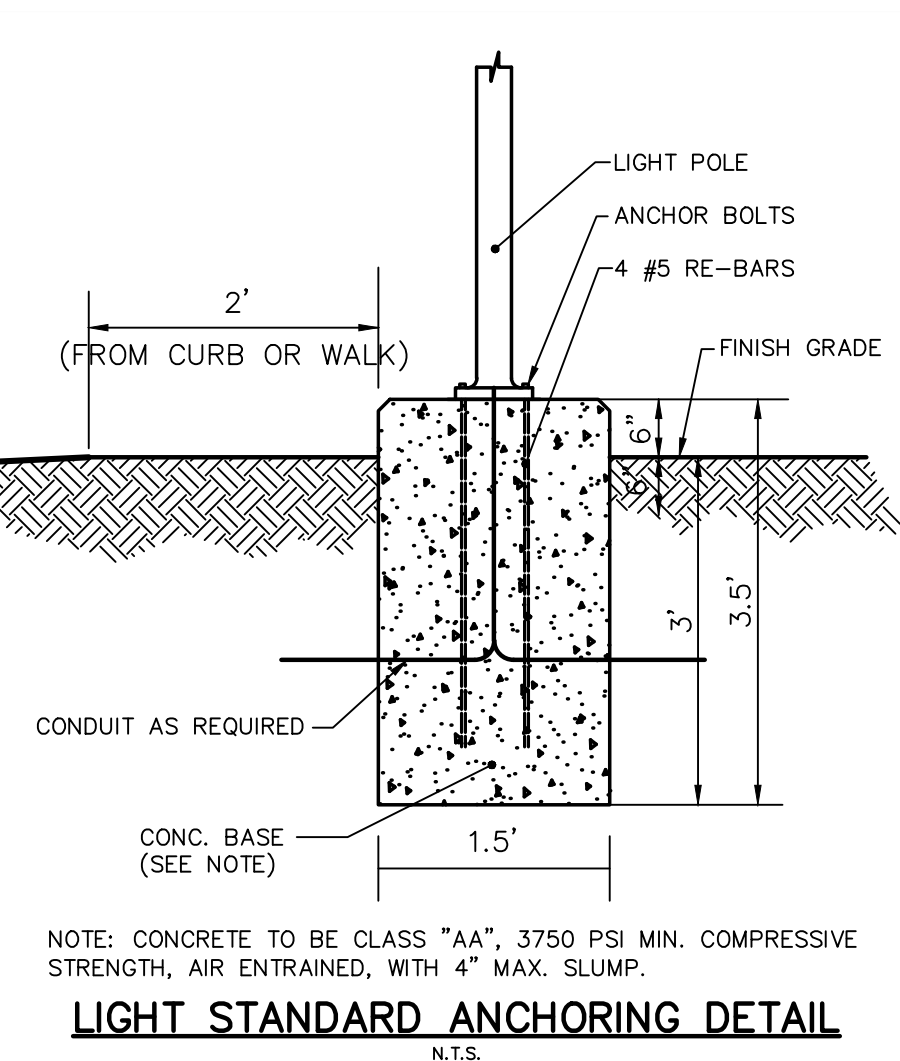
THE LIGHT LOSS FACTOR FOR THE WILLIAM AND MARY IS 0.81:
 LUMEN DEPRECIATION: 0.90
 DIRT DEPRECIATION: 0.90

IF YOU HAVE ANY QUESTIONS OR CONCERNS PLEASE CONTACT:
 TAD BARTON
 DESIGN ENGINEER
 SPRING CITY ELECTRICAL MFG. CO.
 610-948-4000 EXT. 252

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	SPF	Description
○	2	WM-LE080-VV-02-40-003-PPF	STRIP	8,814	8.814	WILLIAM AND MARY 80 WATT LED - 4000K - TYPE III
○	1	WM-LE080-VV-02-40-003-PPF	STRIP	8,814	8.814	WILLIAM AND MARY 80 WATT LED - 4000K - TYPE III

Calculation Summary	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Total Lamp Lumens	1111111111	FC	10.0	12.5	10.0	1.25	1.25

Spring City Electrical Mfg. Co. Prepared By: T. Barton Date: October 17, 2016
 1 South Main Street Spring City, PA 19475 Software: AGI 32 Project Name: Clemens Mill



ISOLUX CONTOUR LEGEND

LIGHT POLE ☆

2.0 FC —————

1.0 FC - - - - -

0.5 FC - - - - -

0.25 FC - - - - -

0.10 FC - - - - -

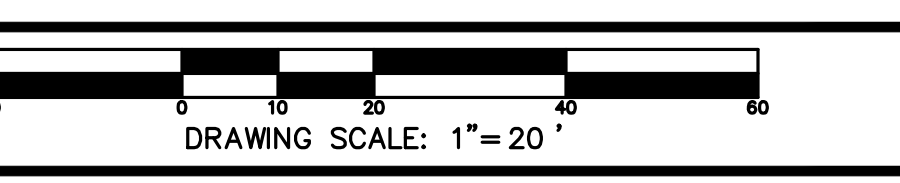
* FC=FOOT CANDLES

- GENERAL LIGHTING NOTES**
- SITE LIGHTING TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH 20. CHAPTER 164, ARTICLE V, SECTION 164-25.2.D.
 - NO EXTERNAL LIGHTING STANDARD SHALL EXCEED 10 FEET IN HEIGHT.
 - NO LIGHTING FIXTURE SHALL BE MOUNTED ON A BUILDING HIGHER THAN 15 FEET ABOVE THE ADJACENT GRADE LEVEL EXCEPT FOR SECURITY LIGHTING WHICH IS DIRECTED AWAY FROM PROPERTY LINES.
 - LIGHT CAST ONTO ADJUTING PROPERTIES AND STREET RIGHTS-OF-WAY SHALL NOT EXCEED 0.1 FOOTCANDLES.
 - THE ABOVE REQUIREMENT "LIGHT CAST...EXCEED 0.1 FOOTCANDLES" IS NOT APPLICABLE TO THE STREET LIGHT LOCATED AT THE ACCESS DRIVE/MAIN STREET INTERSECTION.

UNDERGROUND UTILITY NOTE

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION RECEIVED FROM FACILITY OWNERS FOLLOWING A CALL TO PA ONE CALL SYSTEM, INC. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UTILITIES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES BEFORE THE START OF WORK BY NOTIFYING FACILITY OWNERS THROUGH THE PA ONE CALL SYSTEM (1-800-242-7778 OR 811). NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 10 BUSINESS DAYS IN ADVANCE OF BEGINNING EXCAVATION OR DEMOLITION WORK PER THE REQUIREMENTS OF PA ACTS 287 AND 121, AS AMENDED.

DESIGN SERIAL NO.: 5456593 (MAIN STREET)



NO.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15	REVISED PER MCD EMAIL (08-21-2019)	AUGUST 30, 2019
14	REVISED PER MCD LTR. (02-19-2019)	JUNE 16, 2019
13	REVISED PER PREPARATION OF NPDES APPLICATION	SEPTEMBER 27, 2018
12	REVISED PER MCD LTR. (01-08-2018)	MAY 6, 2018
11	REVISED PER PREPARATION OF NPDES APPLICATION	NOVEMBER 22, 2017
10	REVISED PER OKS LTR. (12-08-2016), MCMANION LTR. (12-07-2016)	NOVEMBER 10, 2017

(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

PLAN ORIGINATION DATE	FEBRUARY 6, 2007
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LIGHTING PLAN

AS PART OF
CLEMENS' MILL

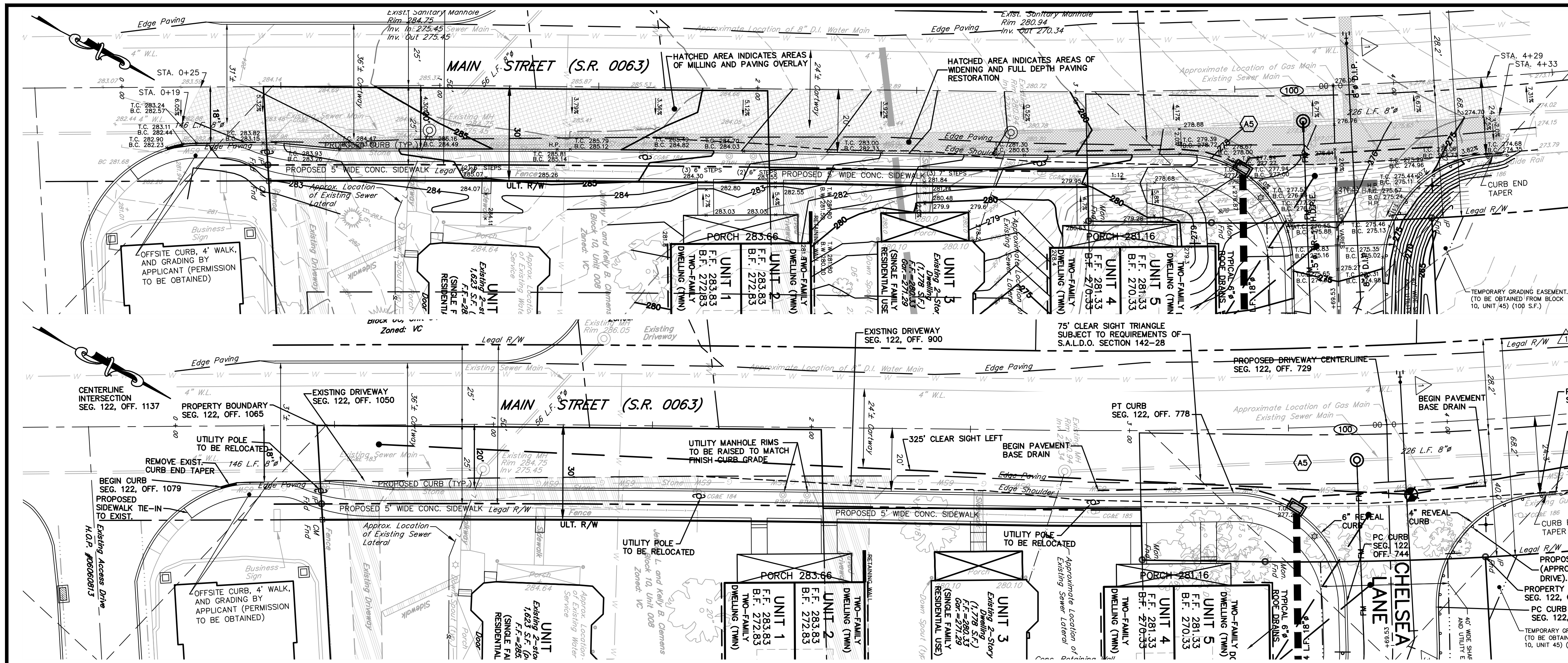
PREPARED FOR
JEFFREY AND KELLY CLEMENS

SITE SITUATE IN
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
 Consulting Engineers and Surveyors
 www.rcmaonline.com

The Village at Lederach
 656 Harleysville Pike, Suite 150
 Harleysville, PA 17043
 (215) 513-2100

DRAWN BY	PROJECT NO.	DRAWING NO.
RCMA	D.B.C. 2283	6 OF 27



- ### CONSTRUCTION SEQUENCE
- INSTALL WORK ZONE TRAFFIC CONTROL SIGNS AND DEVICES ACCORDING TO PUB 213 FIGURE PATA 102 OR PUB 213 FIGURE PATA 107, AS APPROPRIATE FOR WORK TO BE PERFORMED, PRIOR TO BEGINNING ANY ROADWAY WORK THAT WILL OCCUPY A LOCATION FOR UP TO 24 HOURS.
 - EXISTING GUIDE RAIL SHALL REMAIN IN PLACE UNTIL PROPOSED DRIVEWAY IS ROUGH GRADED TO DESIGN SUBGRADE AT LEAST 50 FEET INTO THE SITE FROM THE EDGE OF WIDENING. CONTRACTOR TO COORDINATE WITH UTILITY POLE OWNERS FOR POLE RELOCATIONS AS SHOWN.
 - NEAT-CUT ALONG PROPOSED ROADWAY WIDENING. REMOVE EXISTING DRIVEWAY PAVING, EXCAVATE SHOULDERS TO WIDENING WIDTH AND DESIGN SUBGRADE, AND ROUGH GRADE PROPOSED DRIVEWAY TO DESIGN SUBGRADE SIMULTANEOUSLY. CONTRACTOR MAY REMOVE GUIDE RAIL AFTER THE ABOVE IS COMPLETED.
 - INSTALL PROPOSED WATER MAIN CONNECTION. ADJUST ALL EXISTING UTILITIES AS NECESSARY FOR ROADWAY IMPROVEMENTS. INSTALL PROPOSED CURBS AND SIDEWALKS. INSTALL STONE AND PAVING BASE COURSES. MILL NORTHBOUND LANE WEARING COURSE (TO D.Y.L.) AS SHOWN. INSTALL PAVING WEARING COURSE.
 - INSTALL PROPOSED GUIDE RAIL ALONG NEW DRIVEWAY INTO SITE AND INSTALL TERMINAL SECTION. INSTALL SIGNAGE AS SHOWN.
 - MAINTAIN TRAFFIC CONTROL DEVICES AS NEEDED TO PERFORM ROADWAY STRIPING USING STATIONARY SHORT TERM TRAFFIC CONTROLS.

- ### PENNDOT NOTES
- THE LEGAL RIGHT-OF-WAY ON S.R. 0063 IS BASED ON THE PLAN FOR L.R. 270 SEC. 4 PATA 201 PRIOR TO PERFORMING ANY ROADWAY WORK THAT WILL OCCUPY A LOCATION FOR MORE THAN 24 HOURS.
 - MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE FIGURES PATA 102, 107, & 211 IN PENNDOT PUBLICATION 213 "TEMPORARY TRAFFIC CONTROL GUIDELINES", JUNE 6, 2014 AND TITLE 67 PA CODE, CHAPTER 212 "OFFICIAL TRAFFIC CONTROL DEVICES" DATED FEBRUARY 4, 2006 OR MOST CURRENT.
 - NO TRAFFIC RESTRICTIONS OR LANE CLOSURES ARE PERMITTED BETWEEN THE HOURS OF 6:00AM AND 9:00AM AND 3:00PM AND 6:00PM, MONDAY THROUGH FRIDAY AND ON LEGAL HOLIDAYS.
 - ALL WHITE PAVEMENT MARKINGS REMOVED DURING CONSTRUCTION SHALL BE TEMPORARILY PAINTED OR REPLACED GUARDRAIL DURING THE CONSTRUCTION OF THE ROAD WIDENING. ALL EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER APPROPRIATE SHALL BE ERASED BY THE DEVELOPER (PERMITTED). THE DEVELOPER (PERMITTED) SHALL PLACE ALL REQUIRED NEW PAVEMENT MARKINGS.
 - THE DEVELOPER (PERMITTED) MUST MAINTAIN GOOD CLEAR SIGHT DISTANCES FOR THE MOTORISTS BY REMOVING OR REDUCING ALL RELATED SIGHT DISTANCE OBSTRUCTIONS (TREES, SHRUBS, SIGNS, ETC.).
 - THE RESPONSIBILITY FOR ENSURING THAT ALL UTILITY POLES WITHIN THE PROPOSED PAVING ARE RELOCATED OUTSIDE OF PAVED AREAS AND SHOULDERS SHALL BE THAT OF THE DEVELOPER (PERMITTED), AND SHALL BE COMPLETED PRIOR TO WIDENING.
 - DRIVEWAY TO BE CLOSED WITH BARRELS AND TYPE III ROAD CLOSED SIGN ON BARRICADES UNTIL DEEMED READY TO OPEN BY A PENN. D.O.T. FIELD REPRESENTATIVE.
 - SANITARY LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DEEMED NECESSARY BY A PENNDOT REPRESENTATIVE. ALL SUBSTANDARD OR DAMAGED CURB WITHIN THE UNITS OF WORK MUST BE REPLACED, AS NECESSARY.
 - THE APPLICANT IS RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY FACILITY AND THE DEPARTMENT REGARDING ANY UTILITY RELOCATIONS. ALL UTILITY RELOCATION PERMITS TAKE PRECEDENCE OVER THE UTILITY RELOCATION POSITIONS SHOWN ON THE H2P PLANS.

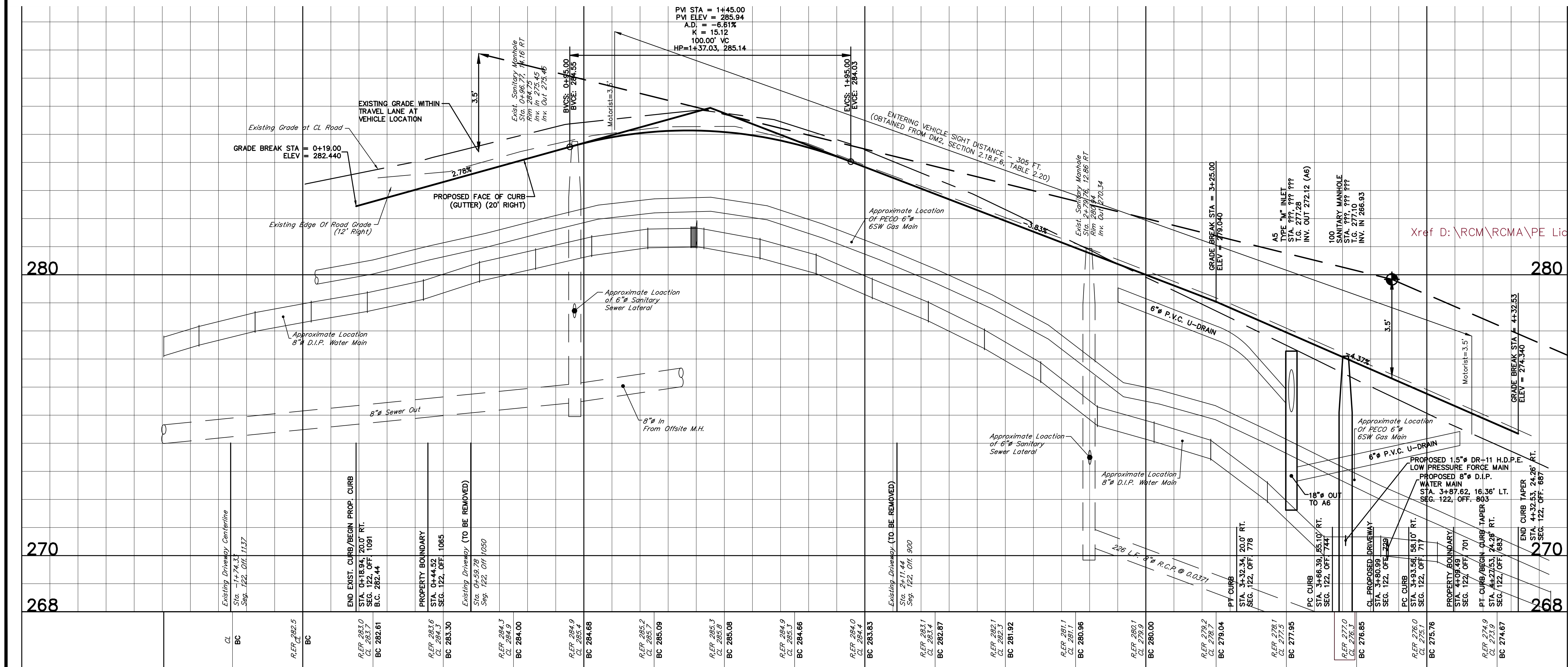
- ### WATER SCHEDULE
- 1-12" TAPPING SLEEVE
 - 1-8" MET TAP
 - 1-8" G.V. & V.B.
 - G.V. = GATE VALVE
 - V.B. = VALVE BOX ASSEMBLY
 - T.B. = THRUST BLOCK
 - F.H. = FIRE HYDRANT

- ### CONSTRUCTION NOTES
- REFER TO SHEET 5, AND/OR 13-18 FOR COMPLETE CONSTRUCTION NOTES.

- ### PAVEMENT LEGEND
- INDICATES AREAS OF WIDENING AND FULL-DEPTH PAVING RESTORATION
 - INDICATES AREAS OF MILLING AND PAVING OVERLAY

- ### SIGHT DISTANCE NOTE
- PROPOSED LOW VOLUME DRIVEWAY (CHELSEA LANE)
- ALL SIGHT DISTANCE OBSTRUCTIONS (INCLUDING BUT NOT LIMITED TO EMBANKMENTS AND VEGETATION) SHALL BE REMOVED BY THE PERMITTEE TO PROVIDE A MINIMUM OF 325 FEET OF CONTINUOUS SIGHT DISTANCE TO THE LEFT AND 304 FEET OF CONTINUOUS SIGHT DISTANCE TO THE RIGHT FOR A DRIVER EXITING THE PROPOSED DRIVEWAY ONTO THE STATE HIGHWAY. THE DRIVER MUST BE CONSIDERED TO BE POSITIONED TO FEET FROM THE NEAR EDGE OF THE CLOSEST HIGHWAY THROUGH TRAVEL LANE FROM THE CURBLINE IF CURBING IS PRESENT) AT AN EYE HEIGHT OF THREE FEET-SIX INCHES (3'-6") ABOVE THE PAVEMENT SURFACE. THE POINT SIGHTED BY THE EXITING DRIVER SHALL BE THREE FEET-SIX INCHES (3'-6") ABOVE THE PAVEMENT SURFACE LOCATED IN THE CENTER OF THE CLOSEST HIGHWAY TRAVEL LANE. THIS SIGHT DISTANCE SHALL BE MAINTAINED BY THE PERMITTEE.
 - THE MINIMUM ACCEPTABLE SAFE SIGHT DISTANCES LISTED BELOW ARE COMPUTED FROM THE SAFE STOPPING SIGHT DISTANCE (SSSD) IN TITLE 67, PA CODE, CHAPTER 441, AS FOLLOWS:

$$SSSD = 1.47(v)(t) + 30(t+g)$$
 WHERE: v = VELOCITY OF VEHICLE, MPH
 t = PERCEPTION TIME OF MOTORIST, 2.5 SECONDS
 f = WET FRICTION OF PAVEMENT, 0.30
 g = GRADE OF ROADWAY, FT/FT
 - SUMMARY OF SIGHT DISTANCE CALCULATIONS IS AS FOLLOWS:
 SIGHT DISTANCE FROM 10' OFF EDGE OF S.R. 0063 (MAIN STREET), THE POSTED SPEED LIMIT OF S.R. 0063 IS 35 MPH.
 THE APPLICANT IS NOT ABLE TO ACHIEVE THE SAFE SIGHT DISTANCE ACCORDING TO TABLE 1. INSTEAD, THE DRIVEWAY IS PROPOSED AT A POINT ALONG THE PROPERTY FRONTAGE THAT PROVIDES OPTIMUM SIGHT DISTANCE. MINIMUM ACCEPTABLE SIGHT DISTANCE CALCULATIONS PROVIDED HEREON ARE BASED UPON A VEHICLE OPERATING SPEED OF 40 MPH.



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DESIGN SERIAL NO.: 5456593 (MAIN STREET)

PROPOSED DRIVEWAY	RIGHT	MINIMUM ACCEPTABLE	AVAILABLE
	304 FT.	304 FT.	304 FT.
	LEFT	325 FT.	325 FT.

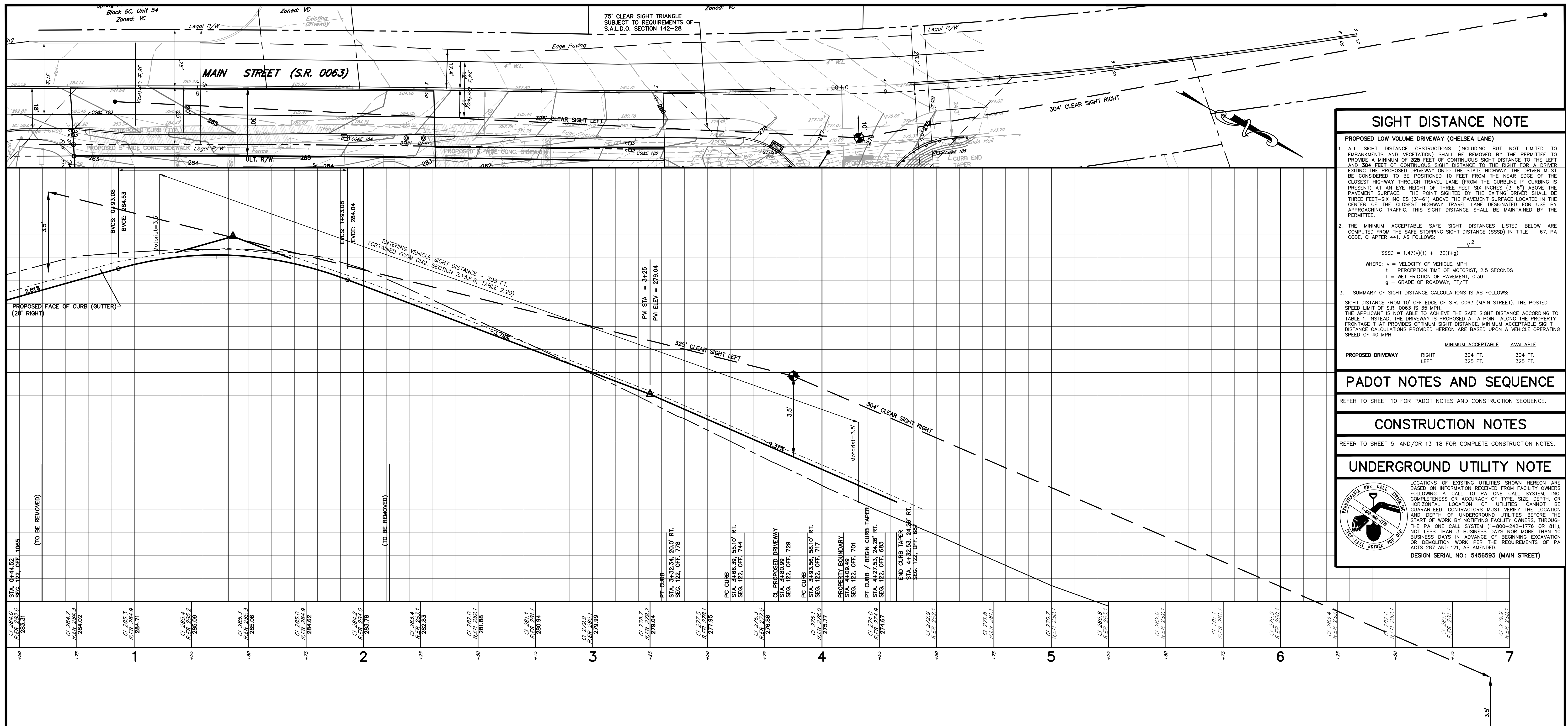
PLAN AND PROFILE MAIN STREET (S.R.0063)

AS PART OF CLEMENS' MILL PREPARED FOR JEFFREY AND KELLY CLEMENS SITE SITUATE IN LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

NO.	REVISION	DATE
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(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

PLAN ORIGINATION DATE	REVISION	DATE
		FEBRUARY 6, 2007



SIGHT DISTANCE NOTE

PROPOSED LOW VOLUME DRIVEWAY (CHELSEA LANE)

- ALL SIGHT DISTANCE OBSTRUCTIONS (INCLUDING BUT NOT LIMITED TO EMBANKMENTS AND VEGETATION) SHALL BE REMOVED BY THE PERMITTEE TO PROVIDE A MINIMUM OF 325 FEET OF CONTINUOUS SIGHT DISTANCE TO THE LEFT AND 304 FEET OF CONTINUOUS SIGHT DISTANCE TO THE RIGHT FOR A DRIVER EXITING THE PROPOSED DRIVEWAY ONTO THE STATE HIGHWAY. THE DRIVER MUST BE CONSIDERED TO BE POSITIONED 10 FEET FROM THE NEAR EDGE OF THE CLOSEST HIGHWAY THROUGH TRAVEL LANE (FROM THE CURBLINE IF CURBING IS PRESENT) AT AN EYE HEIGHT OF THREE FEET-SIX INCHES (3'-6") ABOVE THE PAVEMENT SURFACE. THE POINT SIGHTED BY THE EXITING DRIVER SHALL BE THREE FEET-SIX INCHES (3'-6") ABOVE THE PAVEMENT SURFACE LOCATED IN THE CENTER OF THE CLOSEST HIGHWAY TRAVEL LANE DESIGNATED FOR USE BY APPROACHING TRAFFIC. THIS SIGHT DISTANCE SHALL BE MAINTAINED BY THE PERMITTEE.
- THE MINIMUM ACCEPTABLE SAFE SIGHT DISTANCES LISTED BELOW ARE COMPUTED FROM THE SAFE STOPPING SIGHT DISTANCE (SSSD) IN TITLE 67, PA CODE, CHAPTER 441, AS FOLLOWS:

$$SSSD = 1.47(v)(t) + 30(+g)$$
 WHERE: v = VELOCITY OF VEHICLE, MPH
 t = PERCEPTION TIME OF MOTORIST, 2.5 SECONDS
 f = WET FRICTION OF PAVEMENT, 0.30
 g = GRADE OF ROADWAY, FT/FT
- SUMMARY OF SIGHT DISTANCE CALCULATIONS IS AS FOLLOWS:
 SIGHT DISTANCE FROM 10' OFF EDGE OF S.R. 0063 (MAIN STREET), THE POSTED SPEED LIMIT OF S.R. 0063 IS 35 MPH.
 THE APPLICANT IS NOT ABLE TO ACHIEVE THE SAFE SIGHT DISTANCE ACCORDING TO TABLE 1, INSTEAD, THE DRIVEWAY IS PROPOSED AT A POINT ALONG THE PROPERTY FRONTAGE THAT PROVIDES OPTIMUM SIGHT DISTANCE. MINIMUM ACCEPTABLE SIGHT DISTANCE CALCULATIONS PROVIDED HEREON ARE BASED UPON A VEHICLE OPERATING SPEED OF 40 MPH.

PROPOSED DRIVEWAY	MINIMUM ACCEPTABLE		AVAILABLE
	RIGHT	LEFT	
	304 FT.	304 FT.	304 FT.
		325 FT.	325 FT.

PADOT NOTES AND SEQUENCE

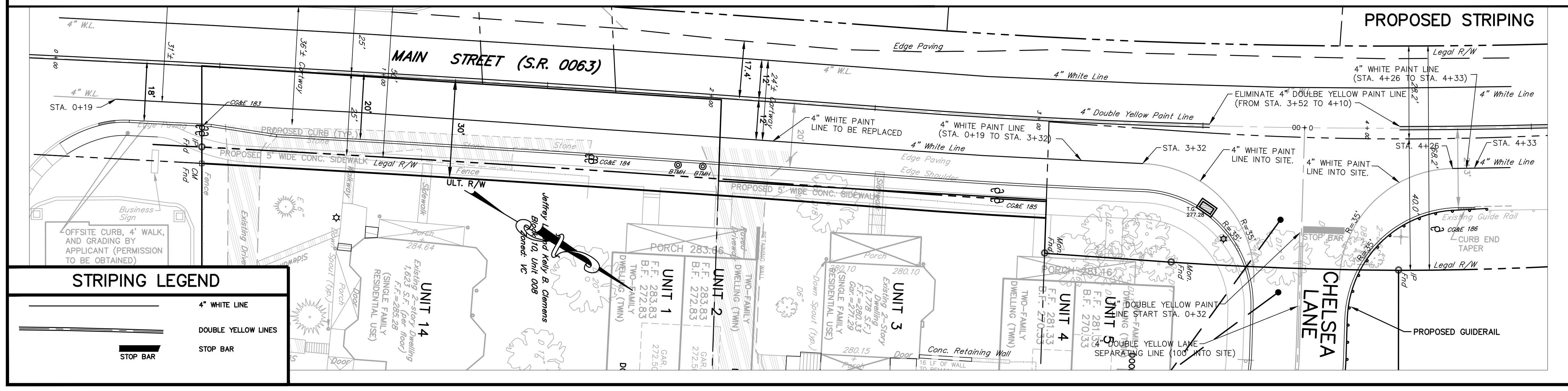
REFER TO SHEET 10 FOR PADOT NOTES AND CONSTRUCTION SEQUENCE.

CONSTRUCTION NOTES

REFER TO SHEET 5, AND/OR 13-18 FOR COMPLETE CONSTRUCTION NOTES.

UNDERGROUND UTILITY NOTE

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 DESIGN SERIAL NO.: 5456593 (MAIN STREET)



DRAWING SCALE: 1" = 20'

16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15	REVISED PER MCD EMAIL (08-21-2019)	AUGUST 30, 2019
14	REVISED PER MCD LTR. (02-19-2019)	JUNE 18, 2019
13	REVISED PER PREPARATION OF NPDES APPLICATION	SEPTEMBER 27, 2018
12	REVISED PER MCD LTR. (01-08-2018)	MAY 8, 2018
11	REVISED PER PREPARATION OF NPDES APPLICATION	NOVEMBER 22, 2017
10	REVISED PER CKS LTR. (12-08-2016), McMAHON LTR. (12-07-2016)	NOVEMBER 10, 2017

(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

NO.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

SIGHT DISTANCE AND STRIPING PLAN

AS PART OF
CLEMENS' MILL
 PREPARED FOR
JEFFREY AND KELLY CLEMENS
 SITE SITUATE IN
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

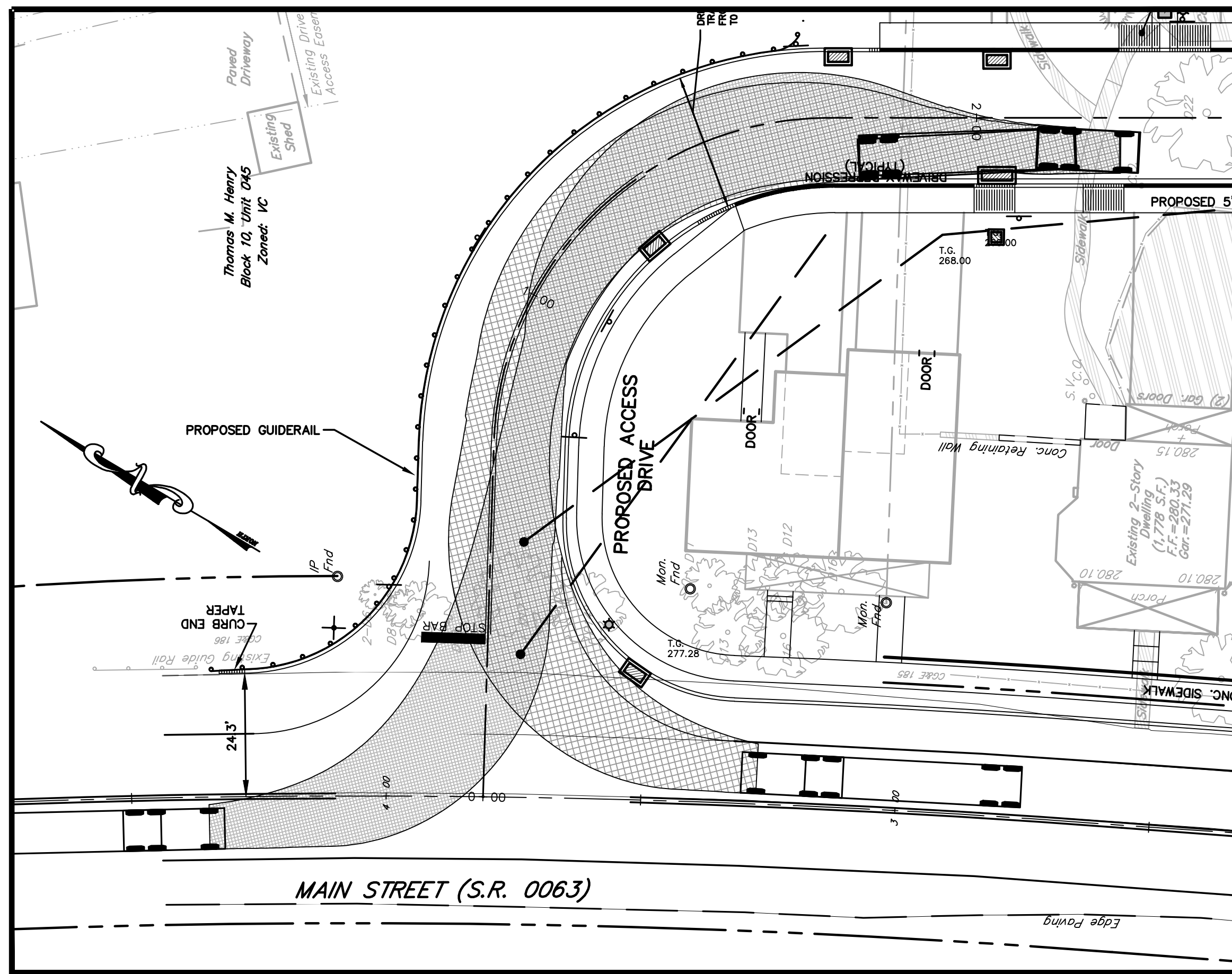
Richard C. Mast Associates, P.C.
 Consulting Engineers and Surveyors
 www.rcmaonline.com

The Village at Lederach
 658 Harleysville Pike, Suite 150
 Harleysville, PA 17048
 (215) 513-2100

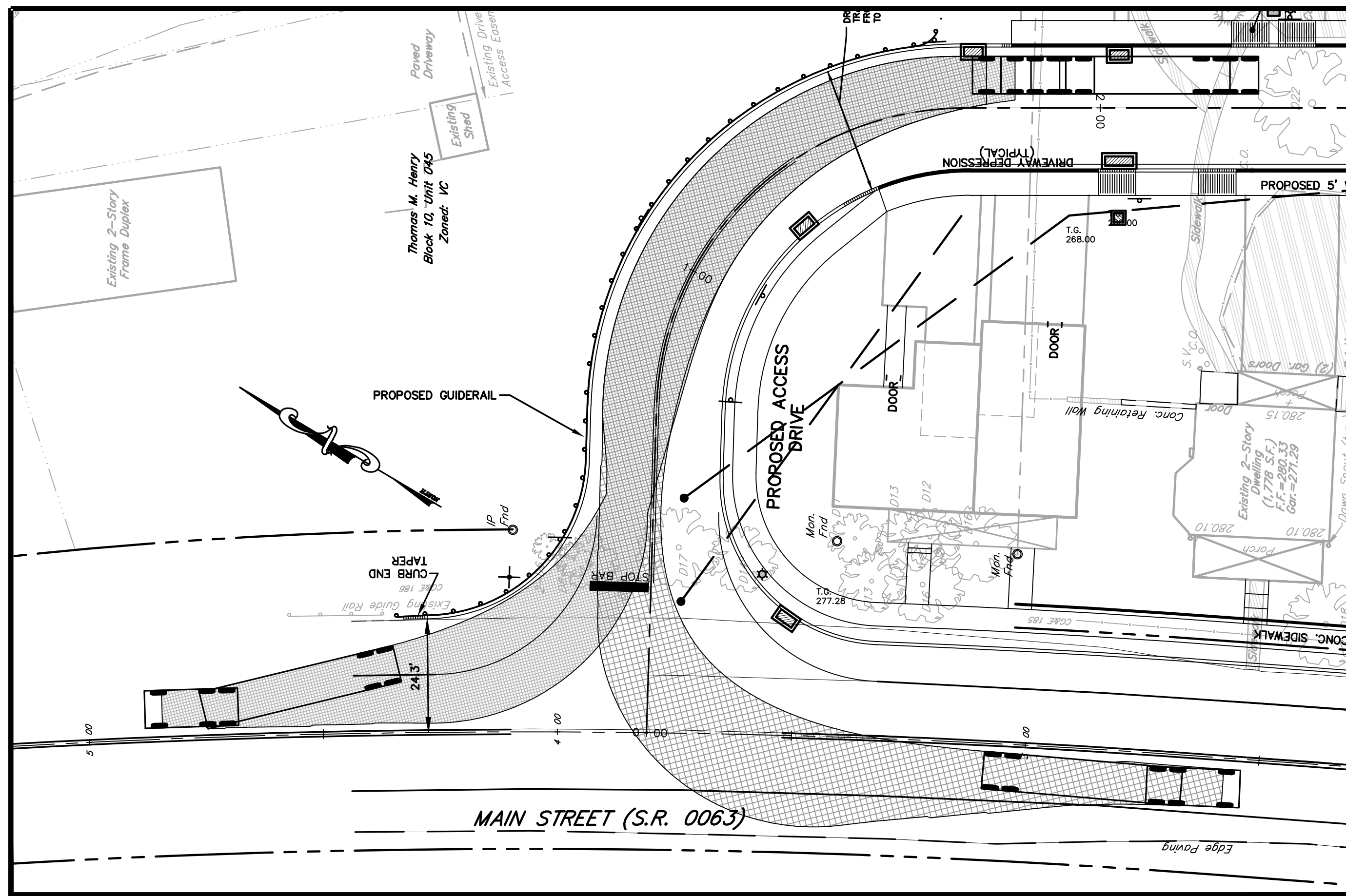
DRAWN BY	PROJ. MGR.	PROJECT NO.	DRAWING NO.
RCMA	D.B.C.	2283	8 OF 27

STRIPING LEGEND

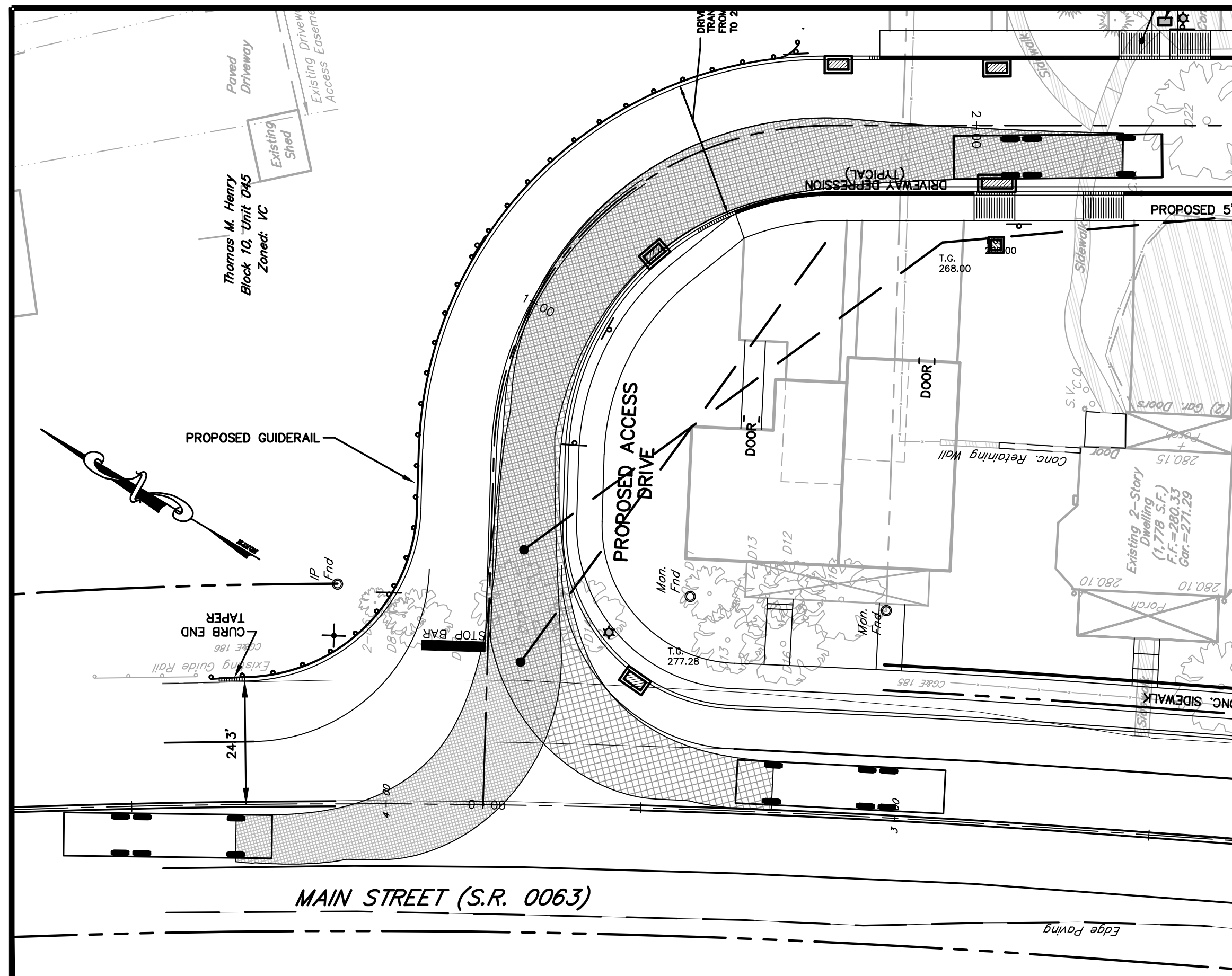
	4" WHITE LINE
	DOUBLE YELLOW LINES
	STOP BAR



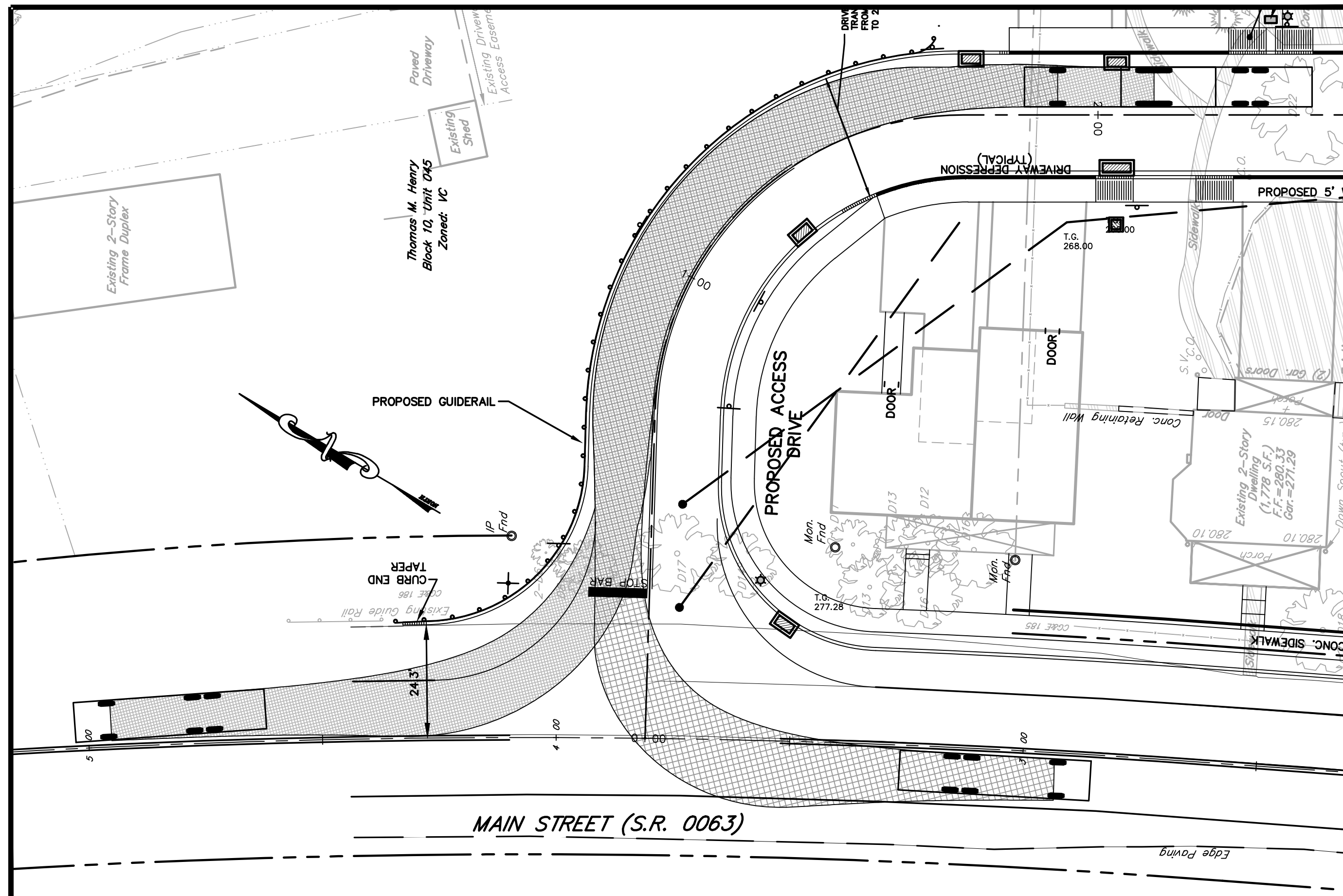
WB-50 TRUCK ENTERING SITE



WB-50 TRUCK EXITING SITE



F.D. TANKER TRUCK ENTERING SITE



F.D. TANKER TRUCK EXITING SITE

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 DESIGN SERIAL NO.: 5456593 (MAIN STREET)

TRUCK TURNING NOTES

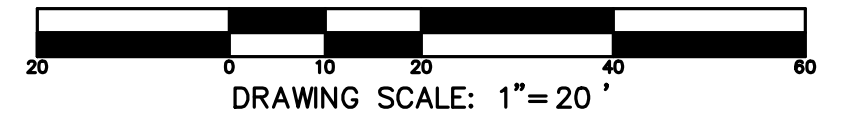
1. A WB50 COMBINATION TRUCK AND THE HARLEYSVILLE FIRE DEPARTMENT TANKER TRUCK, WERE USED TO PREPARE THE TURNING MOVEMENTS SHOWN HEREON.

PADOT NOTES AND SEQUENCE

REFER TO SHEET 10 FOR PADOT NOTES AND CONSTRUCTION SEQUENCE.

CONSTRUCTION NOTES

REFER TO SHEET 5, AND/OR 13-18 FOR COMPLETE CONSTRUCTION NOTES.



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(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)		
NO.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

TRUCK TURNING TEMPLATE PLAN

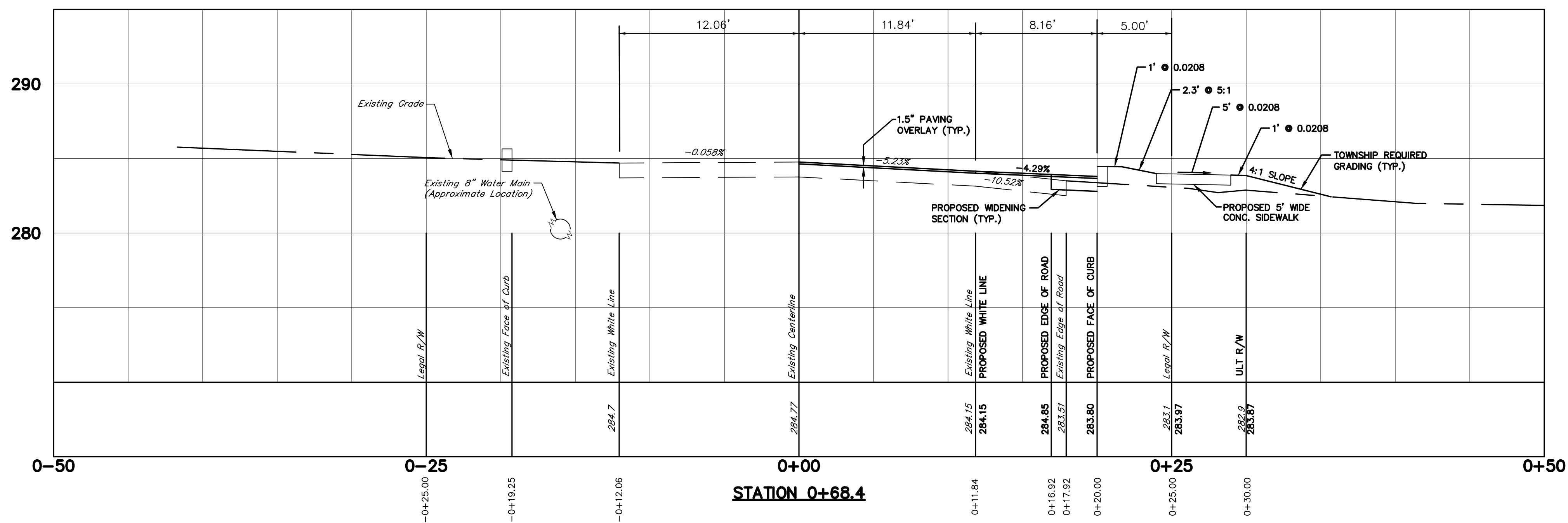
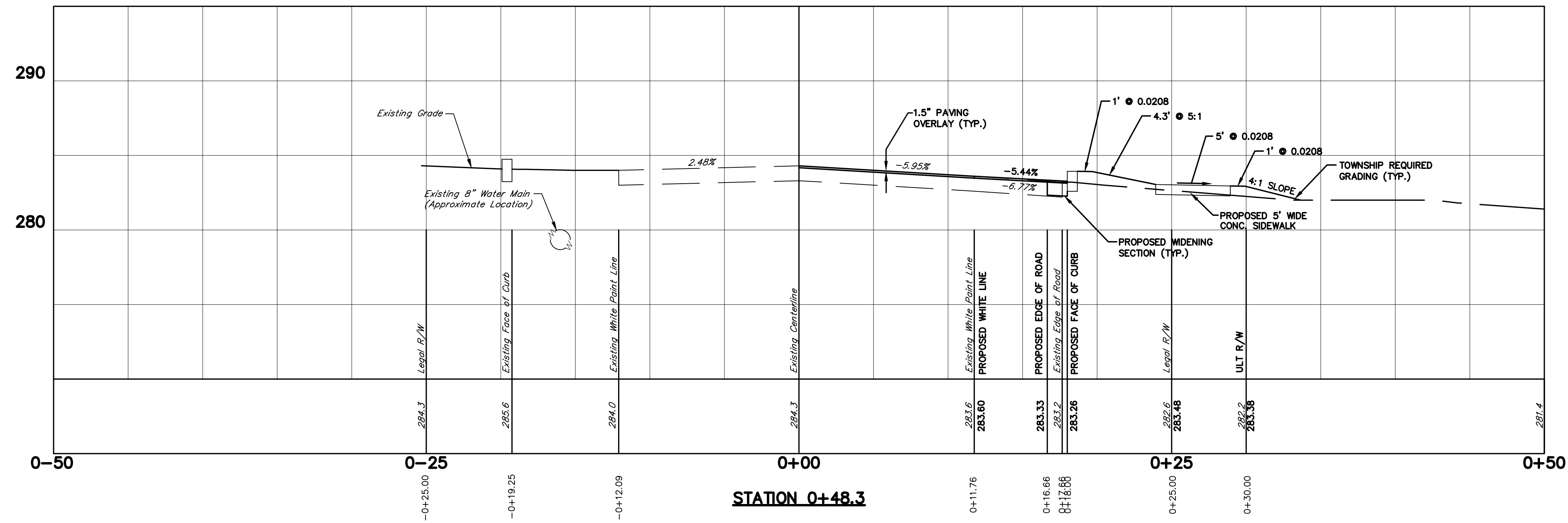
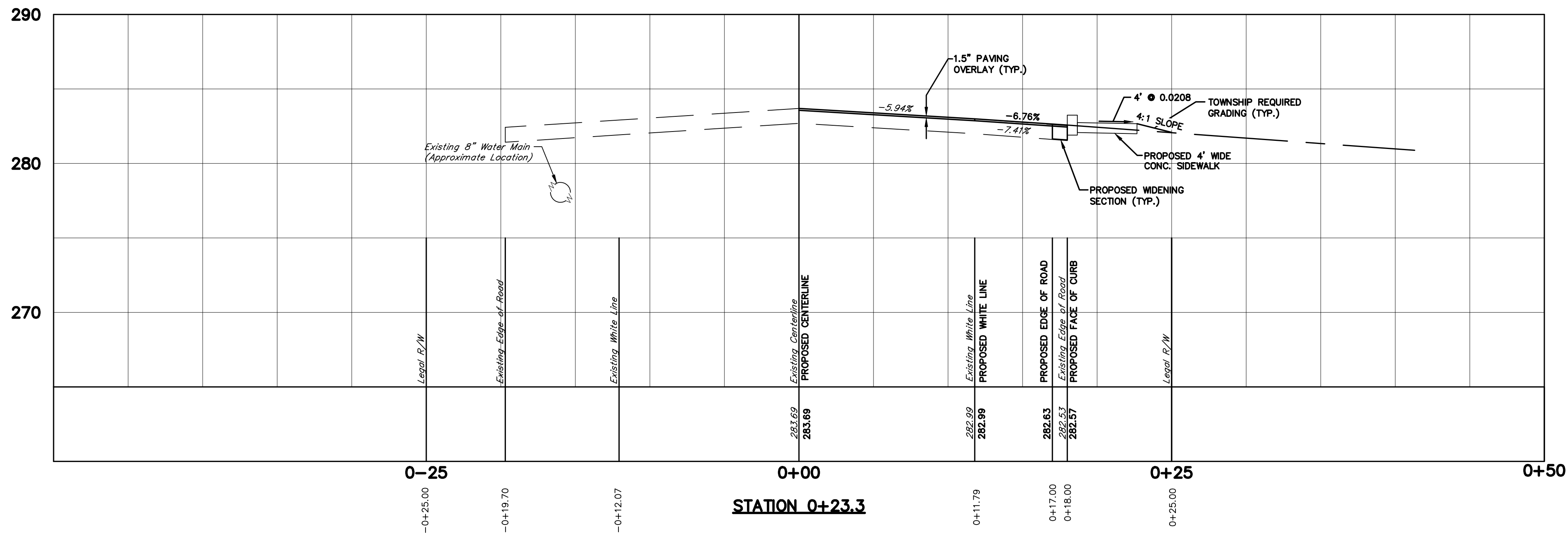
AS PART OF
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DRAFTED BY: RCMA
 PROJ. MGR.: D.B.C.
 PROJECT NO.: 2283
 DRAWING NO.: 9 OF 27



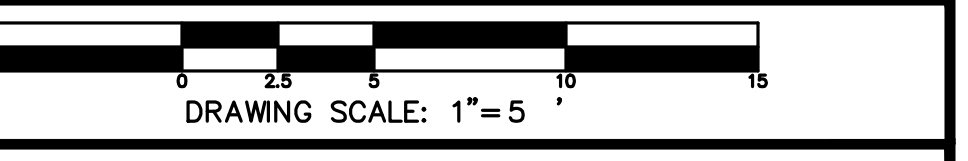
CONSTRUCTION NOTES

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- A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS WHERE 18 INCHES MINIMUM CLEARANCE CANNOT BE OBTAINED. THE UTILITY LINES SHALL BE CONCRETE ENCASED.
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DESIGN SERIAL NO.: 5456593 (MAIN STREET)



NO.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
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NO.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

MAIN STREET CROSS SECTIONS (S.R. 0063)

AS PART OF
CLEMENS' MILL
 PREPARED FOR
JEFFREY AND KELLY CLEMENS
 SITE SITUATE IN
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

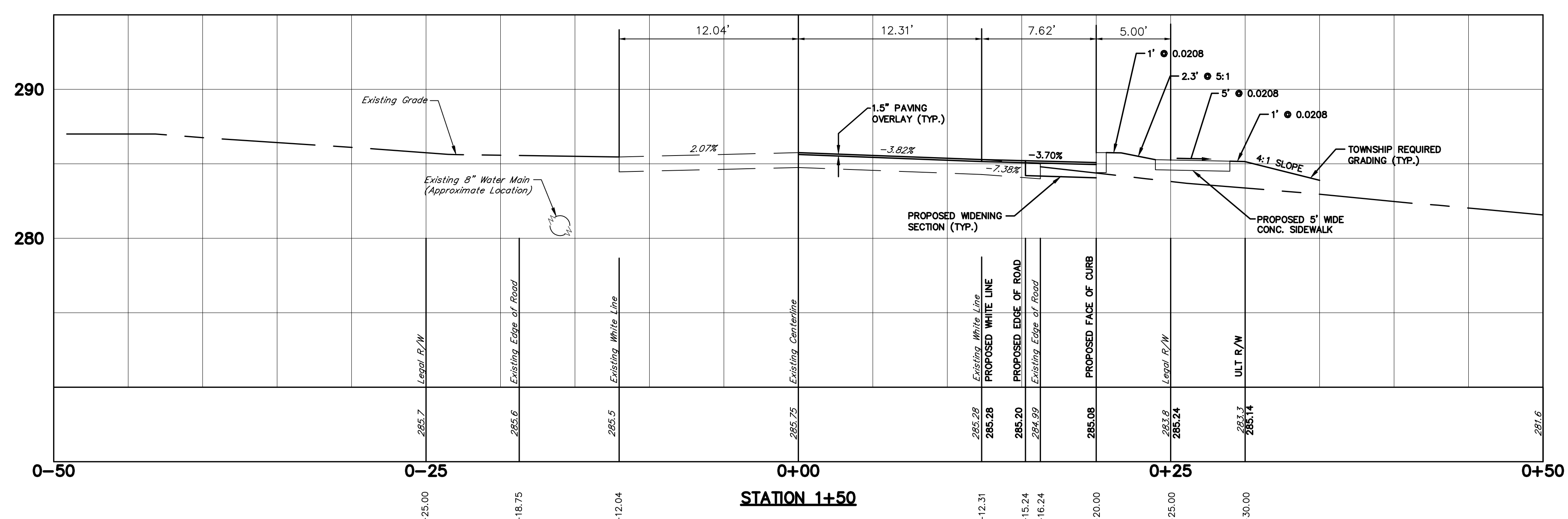
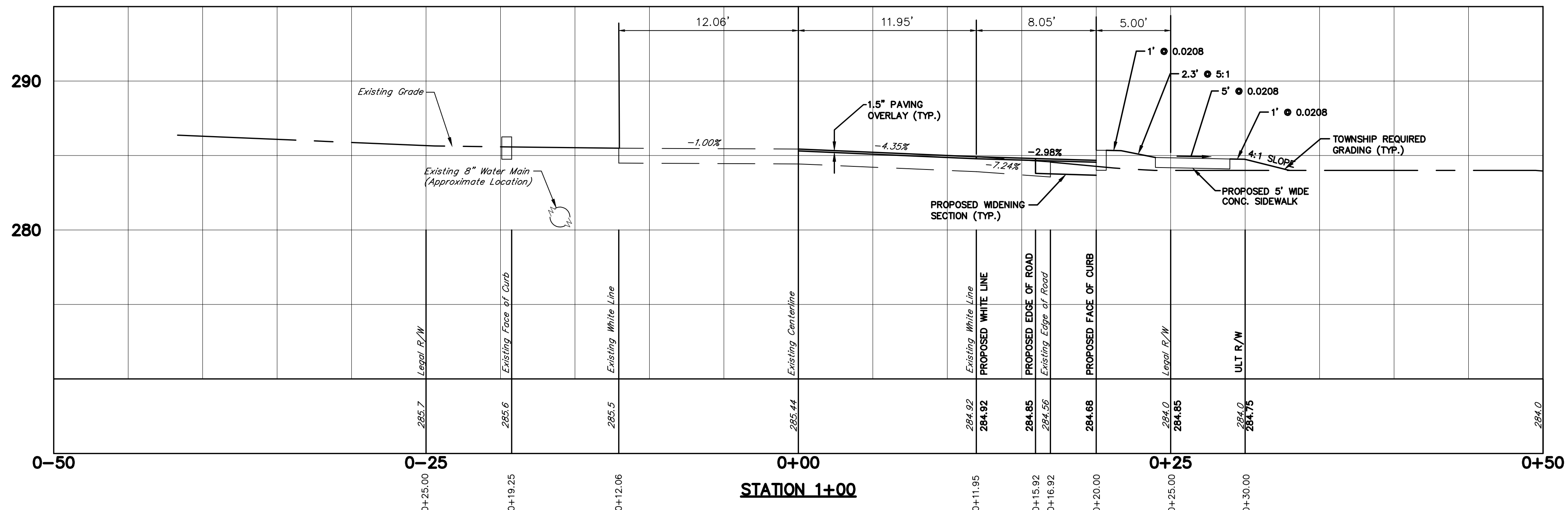
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 PROJ. MGR.: **D.B.C.**
 PROJECT NO.: **2283**
 DRAWING NO.: **10 OF 27**

CONSTRUCTION NOTES

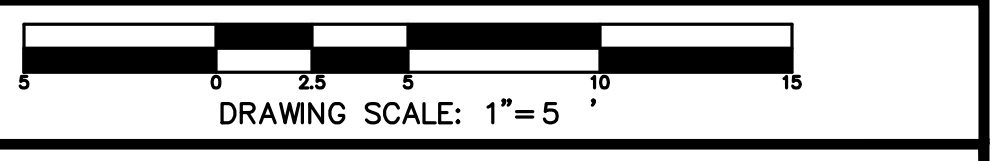
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(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

NO.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

MAIN STREET CROSS SECTIONS (S.R. 0063)

AS PART OF
CLEMENS' MILL
 PREPARED FOR
JEFFREY AND KELLY CLEMENS
 SITE SITUATE IN
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
 Consulting Engineers and Surveyors
 www.rcmaonline.com

The Village at Lederach
 658 Harleysville Pike, Suite 150
 Harleysville, PA 17038
 (215) 513-2100

DRAWN BY	PROJ. MGR.	PROJECT NO.	DRAWING NO.
RCMA	D.B.C.	2283	11 OF 27

CONSTRUCTION NOTES

- ALL LAWN AREA SHALL BE PROPERLY GRADED TO ENSURE PROPER DRAINAGE FLOW AWAY FROM BUILDINGS TO NEAREST INLET OR WATERCOURSE WITHOUT PONDING OR OBSTRUCTION. A MINIMUM OF 2% SLOPE SHALL BE PROVIDED ON ALL GRASSES AREAS.
- A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS WHERE 18 INCHES MINIMUM CLEARANCE CANNOT BE OBTAINED, THE UTILITY LINES SHALL BE CONCRETE ENCASED.
- ALL CONSTRUCTION SHALL CONFORM TO LOWER SALFORD TOWNSHIP, PENN. D.O.T. AND/OR LOWER SALFORD TOWNSHIP AUTHORITY STANDARDS AND SPECIFICATIONS, WHICHEVER IS GREATER. INTERPRETATION SHALL REST WITH THE TOWNSHIP ENGINEER, OR HIS REPRESENTATIVE IN THE FIELD.
- ALL SANITARY SEWER AND APPURTENANCES SHALL BE IN CONFORMANCE WITH THE LOWER SALFORD TOWNSHIP AUTHORITY (LSTA) STANDARDS. ALL LOW PRESSURE FORCE MAIN SEWER LINES SHALL BE DR-11 H.D.P.E. WITH ISOLATION VALVES. ALL LATERALS AND FITTINGS SHALL BE JOINED BY THE ELASTOMERIC GASKET SYSTEM CONFORMING TO ASTM D 3212. AIR RELEASE VALVE SHALL BE DEZURIK MODEL 400 WITH 2" INLET, OR EQUAL APPROVED BY SEWER AUTHORITY ENGINEER.
- THE EXISTING SEWER AND SEWER LATERALS FOR THE EXISTING HOMES SHALL BE TELEVIEWED TO DETERMINE EXISTING CONDITIONS, AND RESULTS SHALL BE PROVIDED TO THE LSTA. BUILDING SEWERS AND SEWER LATERALS SHALL BE REPLACED AND/OR REPAIRED BY OWNER IF NECESSARY AS DETERMINED BY LSTA.
- ALL WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
- GAS, ELECTRIC AND CABLE TELEVISION FACILITIES FOR ALL LOTS SHALL BE PROVIDED BY UNDERGROUND SERVICE.
- ALL GRAVITY PORTIONS OF SANITARY SEWER LATERALS SHALL BE LAID ON A SLOPE OF NOT LESS THAN 1/4 INCH PER FOOT AND HAVE 10 FEET OF HORIZONTAL SEPARATION BETWEEN THE LATERAL AND PROPOSED LANDSCAPING.
- SANITARY SEWER SERVICE WILL BE PROVIDED TO THE BASEMENT ELEVATION FOR UNITS 1, 2, 4 & 5 AND TO THE FIRST FLOOR ELEVATION FOR UNITS 6-13. BASEMENT SERVICE FOR UNITS 6-13 MAY BE PROVIDED IF THE GRINDER PUMP TANK IS LOCATED AT THE REAR OF THE UNIT.
- NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPOIL. TOPSOIL MUST BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. UPON COMPLETION OF THE CONSTRUCTION, THE TOPSOIL MUST BE REDISTRIBUTED ON THE SITE UNIFORMLY, A MINIMUM 8" DEPTH, COMPACTED ON ALL DISTURBED AREAS I.E. SWALES, LOTS, BASIN BERMS AND PLANTING BUFFERS.
- AT NO TIME SHALL PIPES BE LOCATED IN THE CORNERS OF THE INLET BOXES. ALL STORMSEWER PIPE REQUIRES 2 FEET MINIMUM COVER OVER THE TOP OF THE PIPE.
- ROOF DOWNSPOUT COLLECTION PIPES SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT WELDED JOINTS OR SDR-35 PVC INTEGRAL GASKET PIPE MEETING ASTM F477. TWO FOOT (2) MINIMUM COVER REFER TO TYPICAL TRENCH DETAIL FOR ROOF DRAIN BACKFILL REQUIREMENTS.
- PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE STORM SEWER SYSTEM, STORM STRUCTURES, PIPE, ETC., CONCRETE, I.E., CURB, SIDEWALK, ETC., ALL AGGREGATES, ALL ASPHALT DESIGN MIXES, ETC.
- PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS AND DESIGN CALCULATIONS, SEALED BY A PROFESSIONAL REGISTERED ENGINEER IN THE STATE OF PENNSYLVANIA, FOR ALL ITEMS RELATED TO THE PROPOSED RETAINING WALL (ADJACENT TO UNIT 6), INCLUDING BACKFILL, REINFORCEMENT, TOP RAILING, ETC. THE SEGMENTAL BLOCK RETAINING WALL SHALL BE DESIGNED TO ACCOUNT FOR THE LOCATION OF INLET AS WITHIN THE REINFORCEMENT AND TO ACCOUNT FOR THE 18 INCH Ø STORM SEWER PIPE FROM INLET AS TO DW ENDWALL AS THAT CROSSES BENEATH THE WALL.
- PRIOR TO FABRICATION AND CONSTRUCTION, PROVIDE TO THE SEWER AUTHORITY ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE SANITARY SEWER SYSTEM, I.E. MANHOLES, PIPE, AGGREGATE, ETC.
- AT TIME OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE ELEVATIONS OF EXISTING 6" Ø SANITARY LATERALS (2 TOTAL) WHERE THEY ENTER EXISTING MANHOLES IN MAIN STREET, AND PROVIDE TO SEWER AUTHORITY ENGINEER.
- CONTRACTOR SHOULD NOTE PROPOSED FLOOR, GARAGE, BASEMENT, FINISH GRADE AND WALKOUT ELEVATIONS TO ENSURE STEPS AND MATERIALS ARE ADEQUATELY PROVIDED TO ENSURE COMPLIANCE WITH BUILDING AND GRADING REQUIREMENTS.
- THERE ARE TWO EXISTING BELL TELEPHONE MANHOLES OVER A CONCRETE VAULT LOCATED ALONG MAIN STREET IMMEDIATELY ADJACENT TO PROPOSED CURB. BELL TELEPHONE SHALL BE NOTIFIED AND A REPRESENTATIVE MUST BE PRESENT FOR ANY WORK PERFORMED NEAR OR OVER THE VAULT. THE PROPOSED CURB SHALL BE INSTALLED OVER THE VAULT AND THE MANHOLES SHALL BE RAISED TO FINISH GRADE. THE MANHOLE RIMS SHALL ALSO BE SHIFTED HORIZONTALLY SO AS NOT TO CONFLICT WITH THE PROPOSED CURB.
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- PROPOSED CURBING INSTALLED ADJACENT TO GUIDE RAIL SHALL BE 4" REVEAL. GUIDE RAIL POST LENGTH SHALL BE EXTENDED (VERTICALLY) A MINIMUM OF 1" WHERE A 2' FLAT AREA IS NOT PROVIDED BETWEEN THE GUIDE RAIL AND TOP OF SLOPE.
- A MINIMUM 6" LAYER OF "RIVER STONE" OVER WEED PREVENTION FABRIC, IS TO BE APPLIED TO THE 3' WIDE STRIP SEPARATING ADJOINING DRIVEWAYS ALONG CHELSEA LANE.

UNDERGROUND UTILITY NOTE

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION RECEIVED FROM FACILITY OWNERS FOLLOWING A CALL TO PA ONE CALL SYSTEM, INC. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UTILITIES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES BEFORE THE START OF WORK BY NOTIFYING FACILITY OWNERS, THROUGH THE PA ONE CALL SYSTEM (1-800-242-1778 OR 811), NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 10 BUSINESS DAYS IN ADVANCE OF BEGINNING EXCAVATION OR DEMOLITION WORK PER THE REQUIREMENTS OF PA ACTS 897 AND 121, AS AMENDED.

DESIGN SERIAL NO.: 5456593 (MAIN STREET)



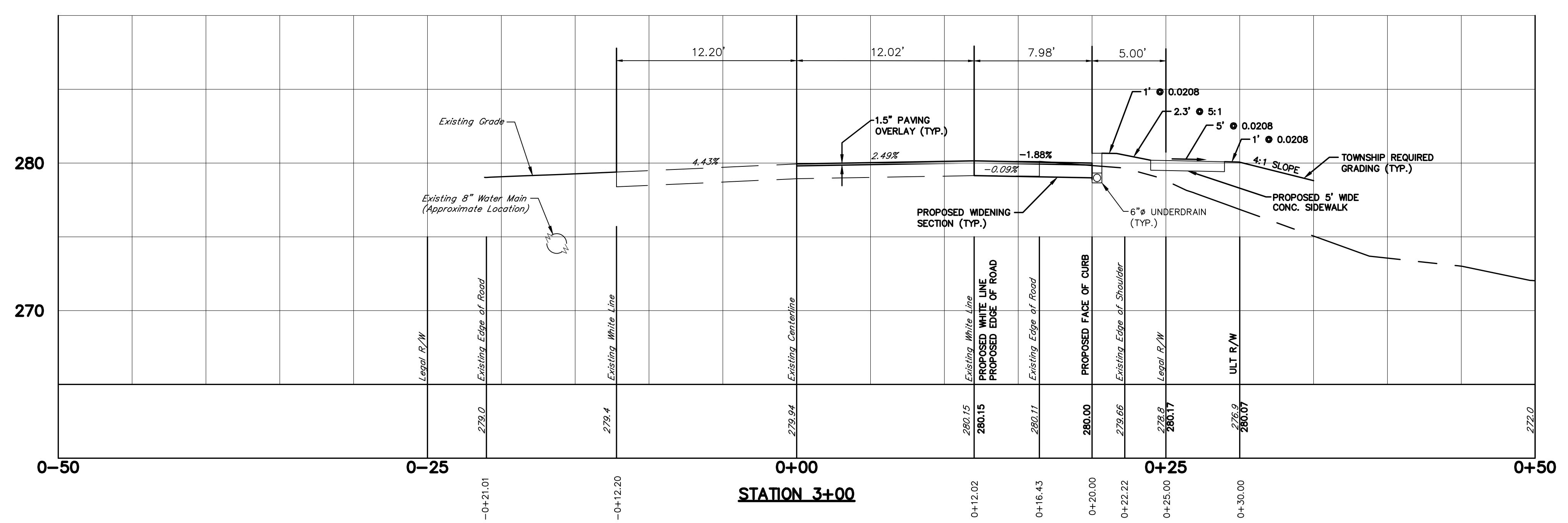
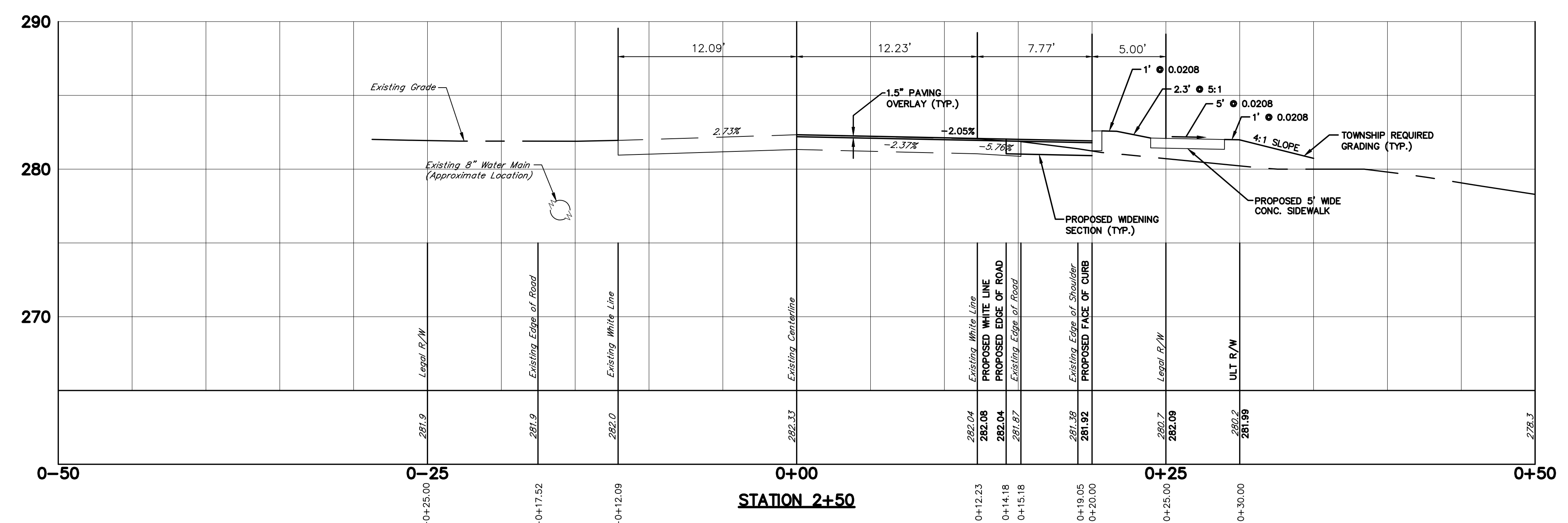
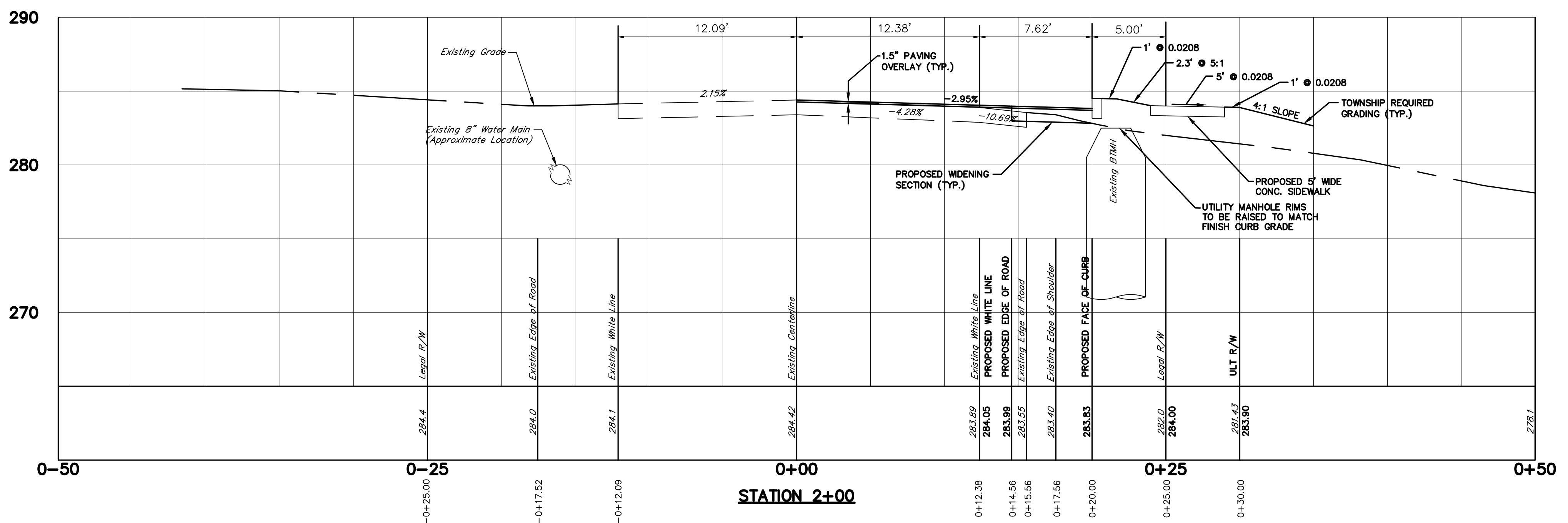
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MAIN STREET CROSS SECTIONS (S.R. 0063)

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RCMA	D.B.C.	2283	12 OF 27



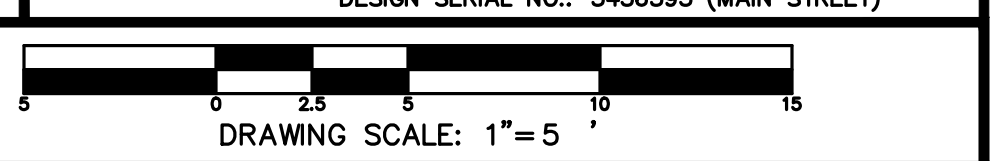
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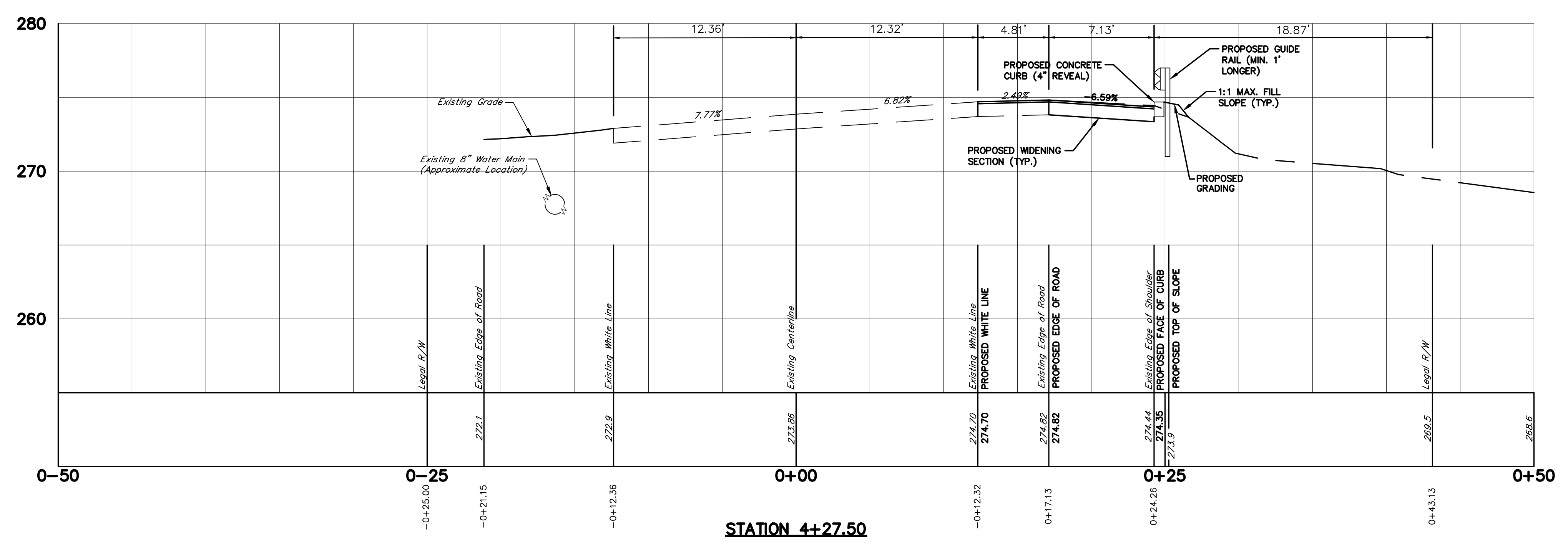
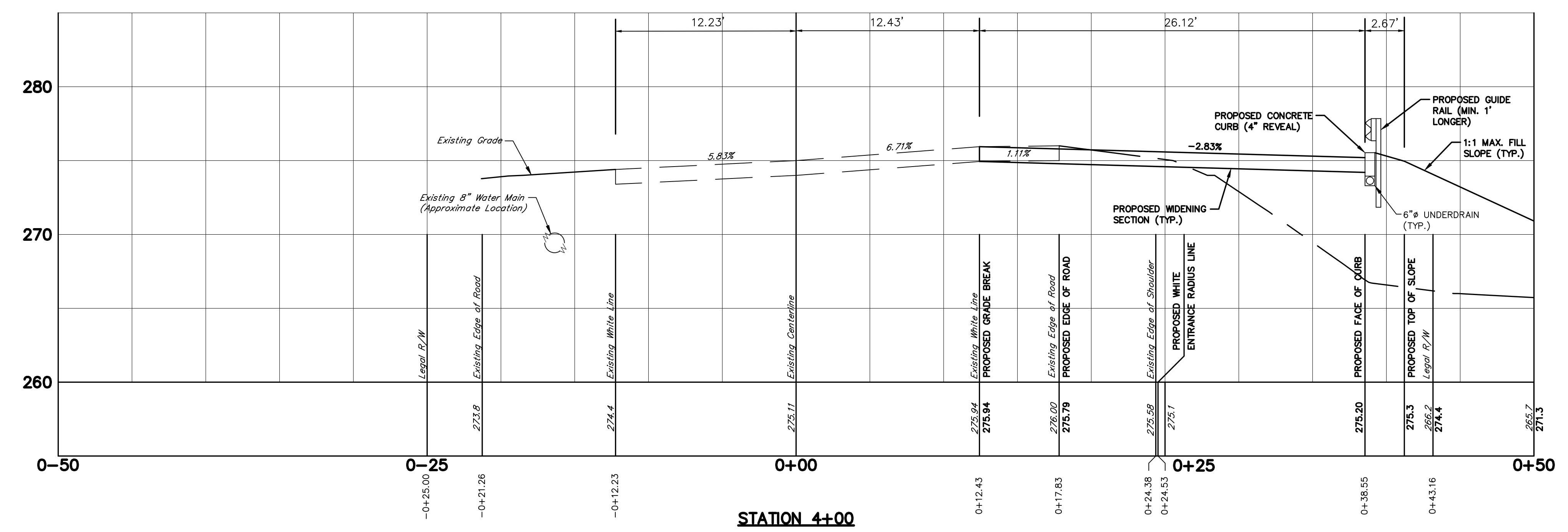
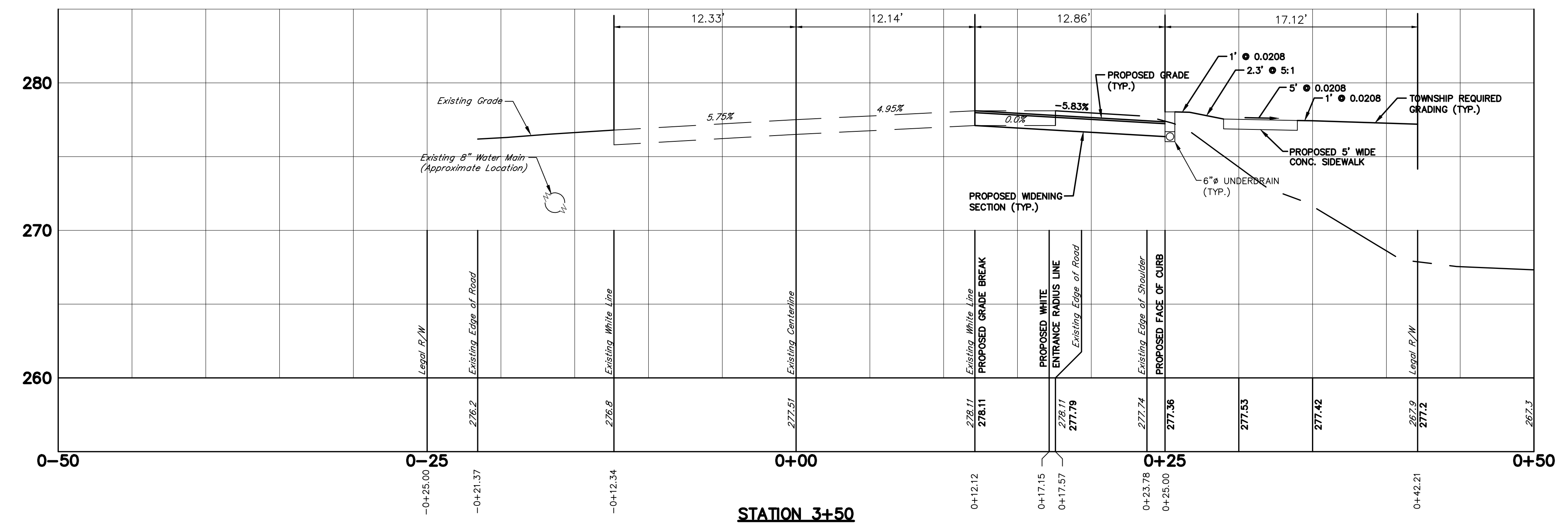
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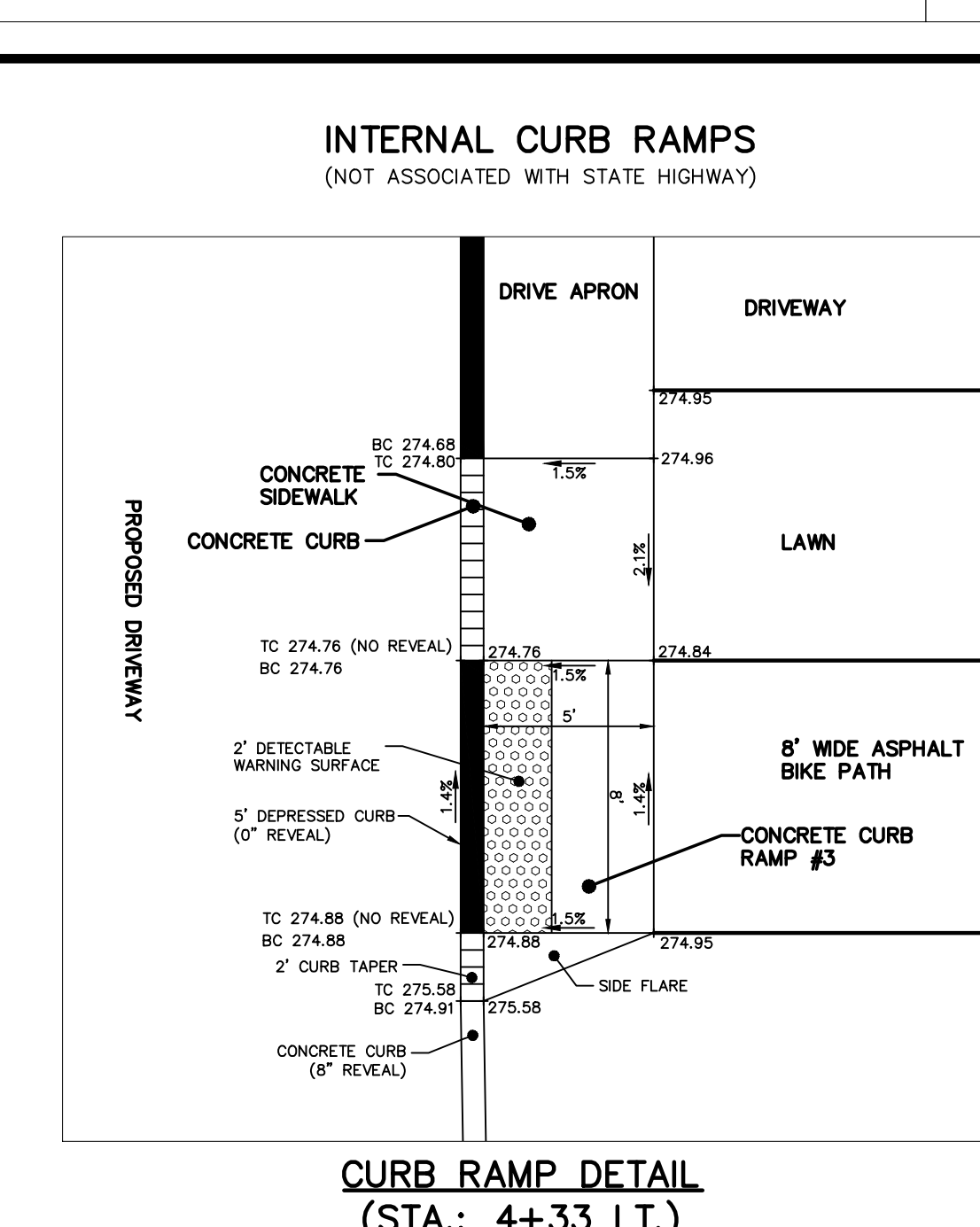
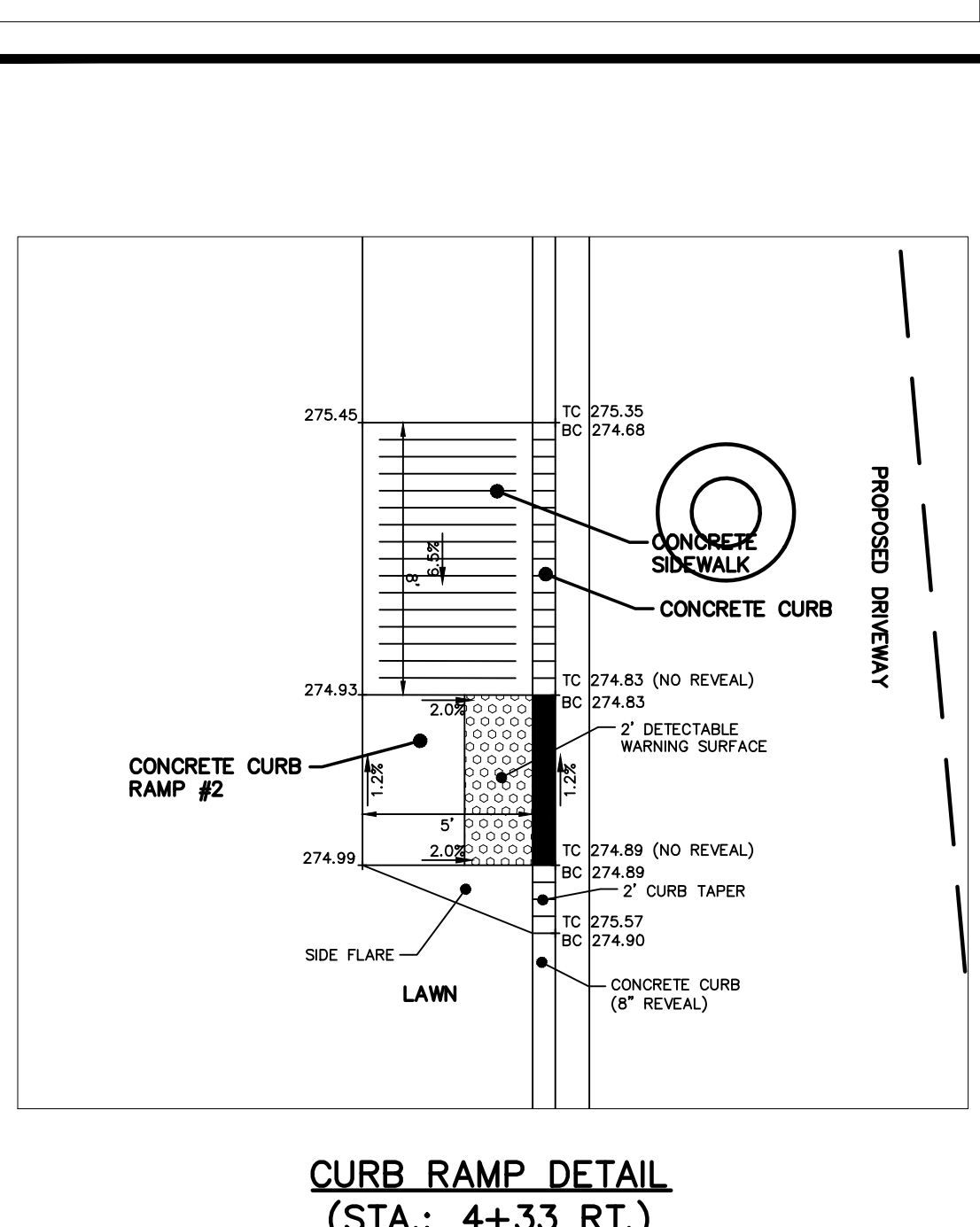
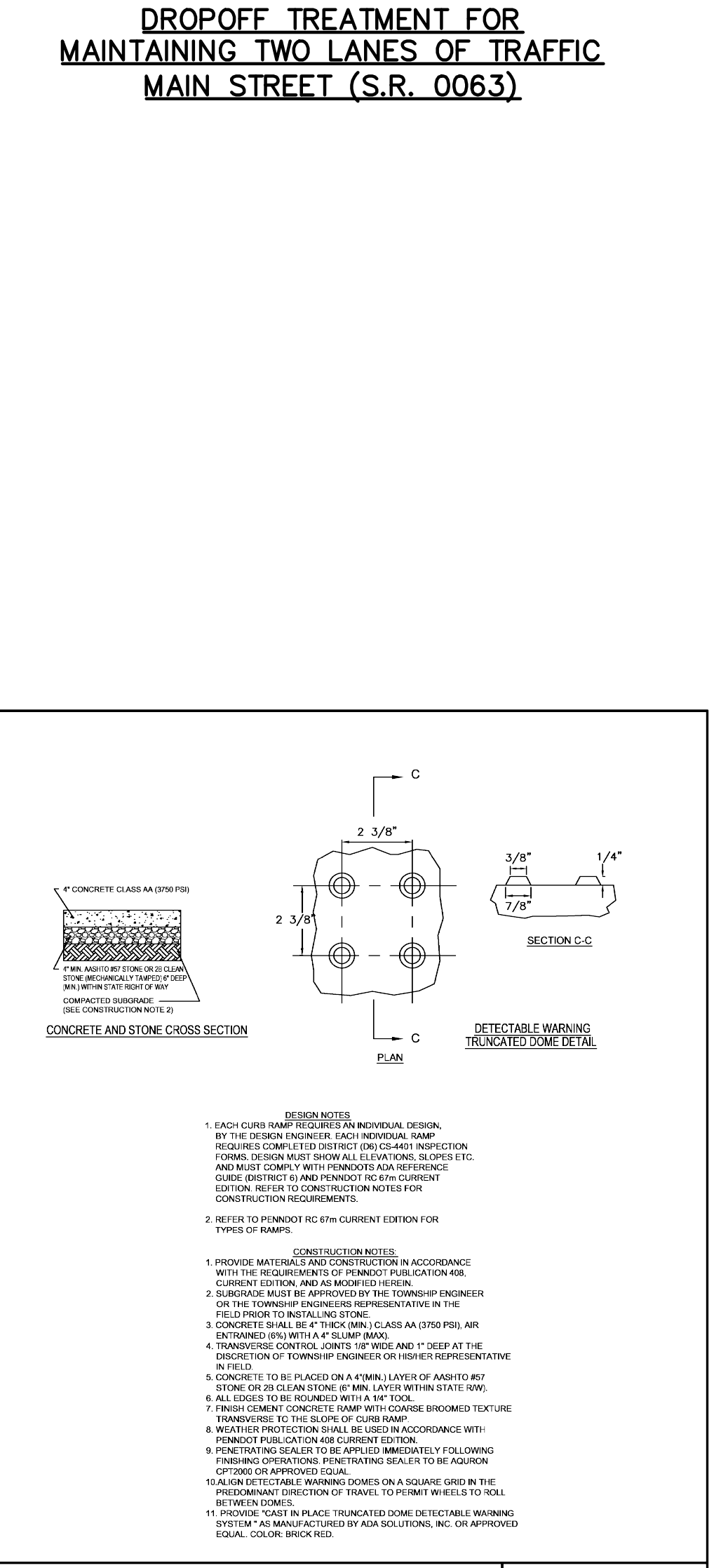
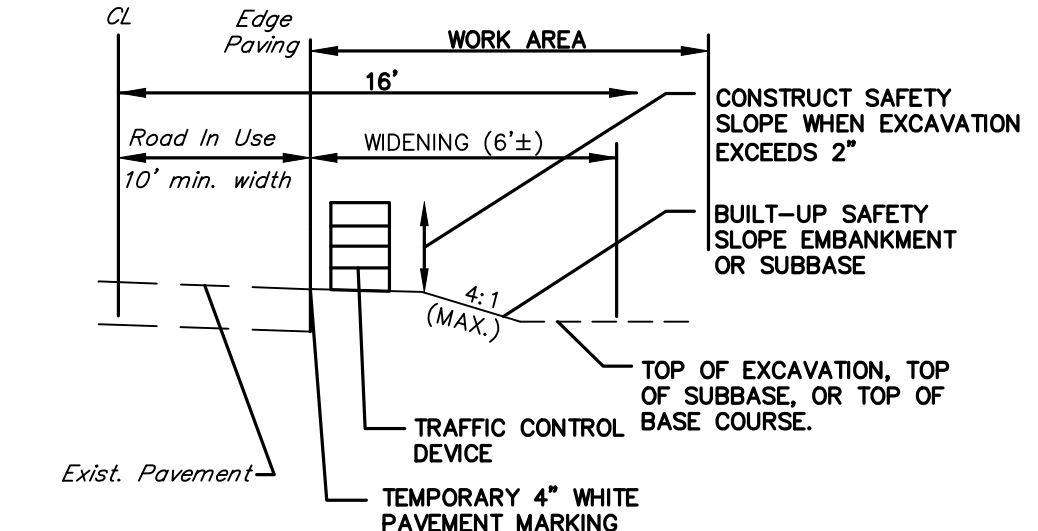
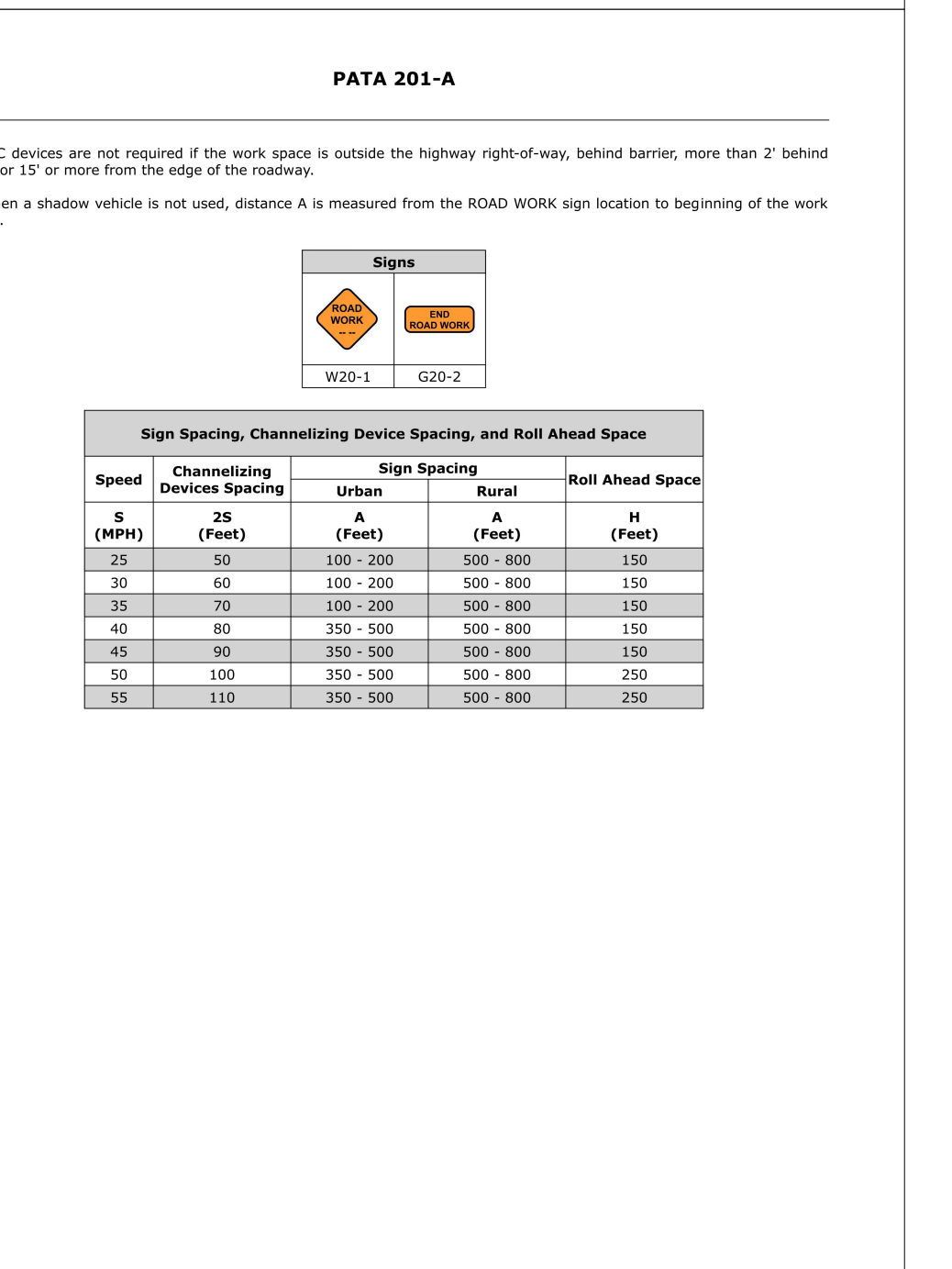
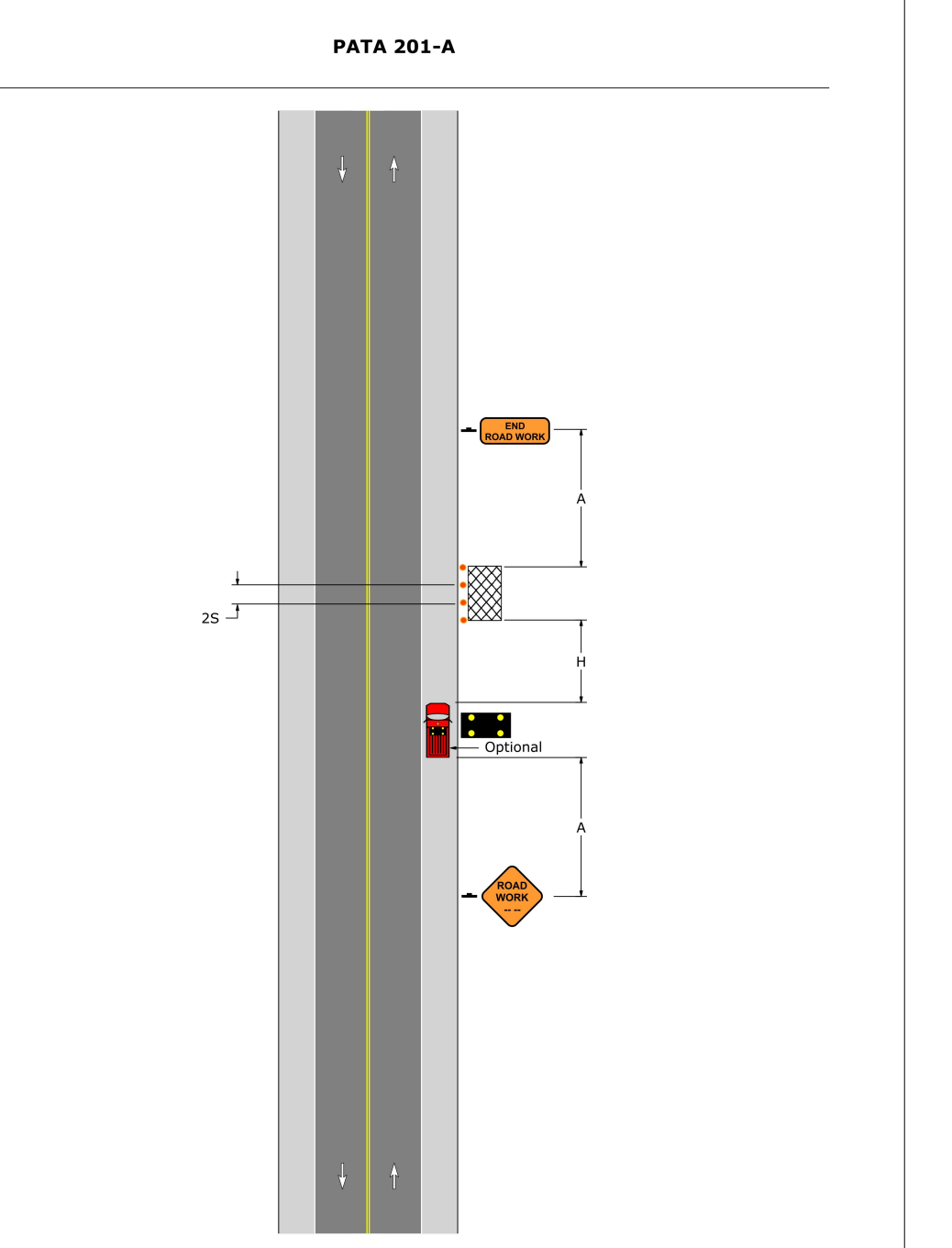
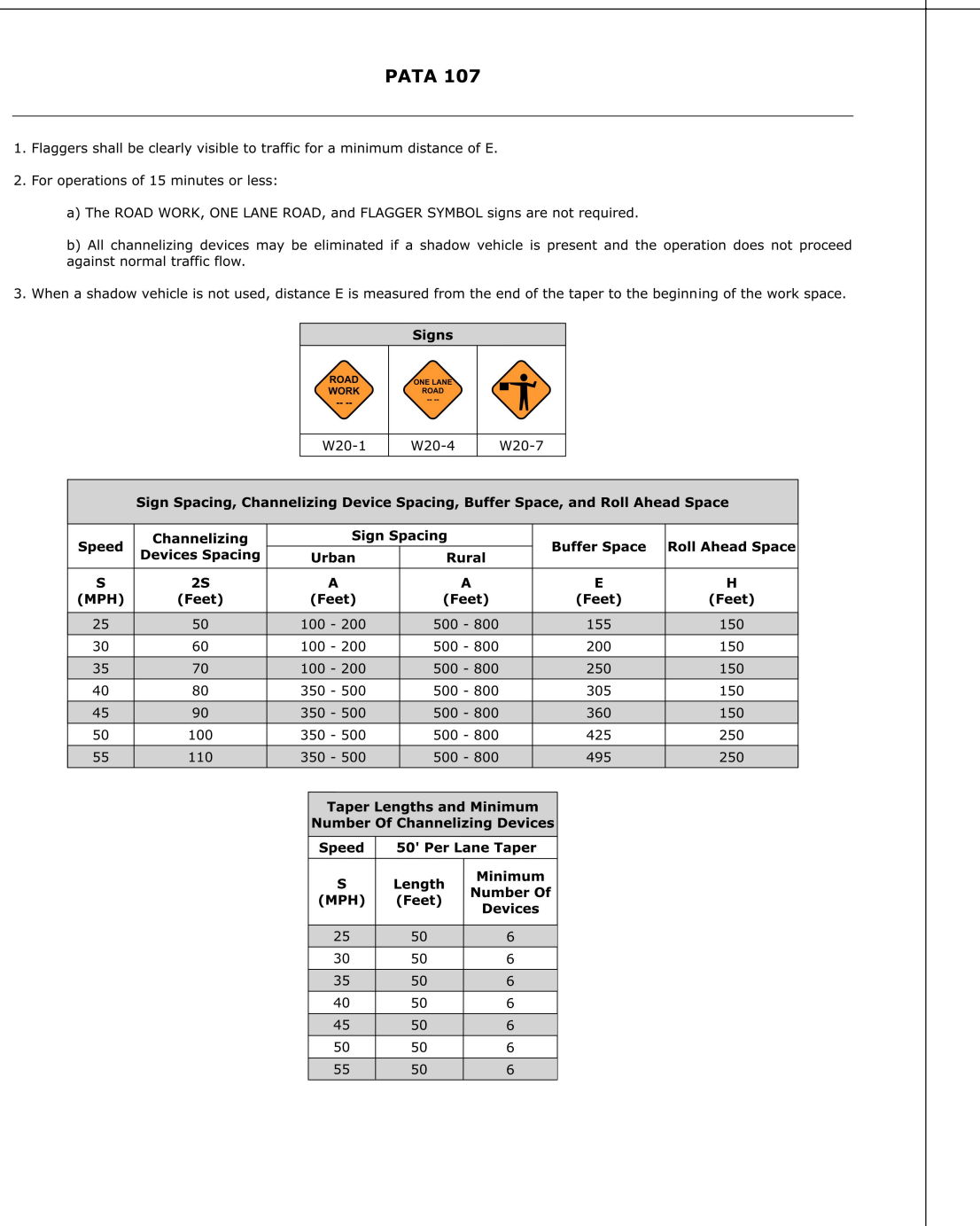
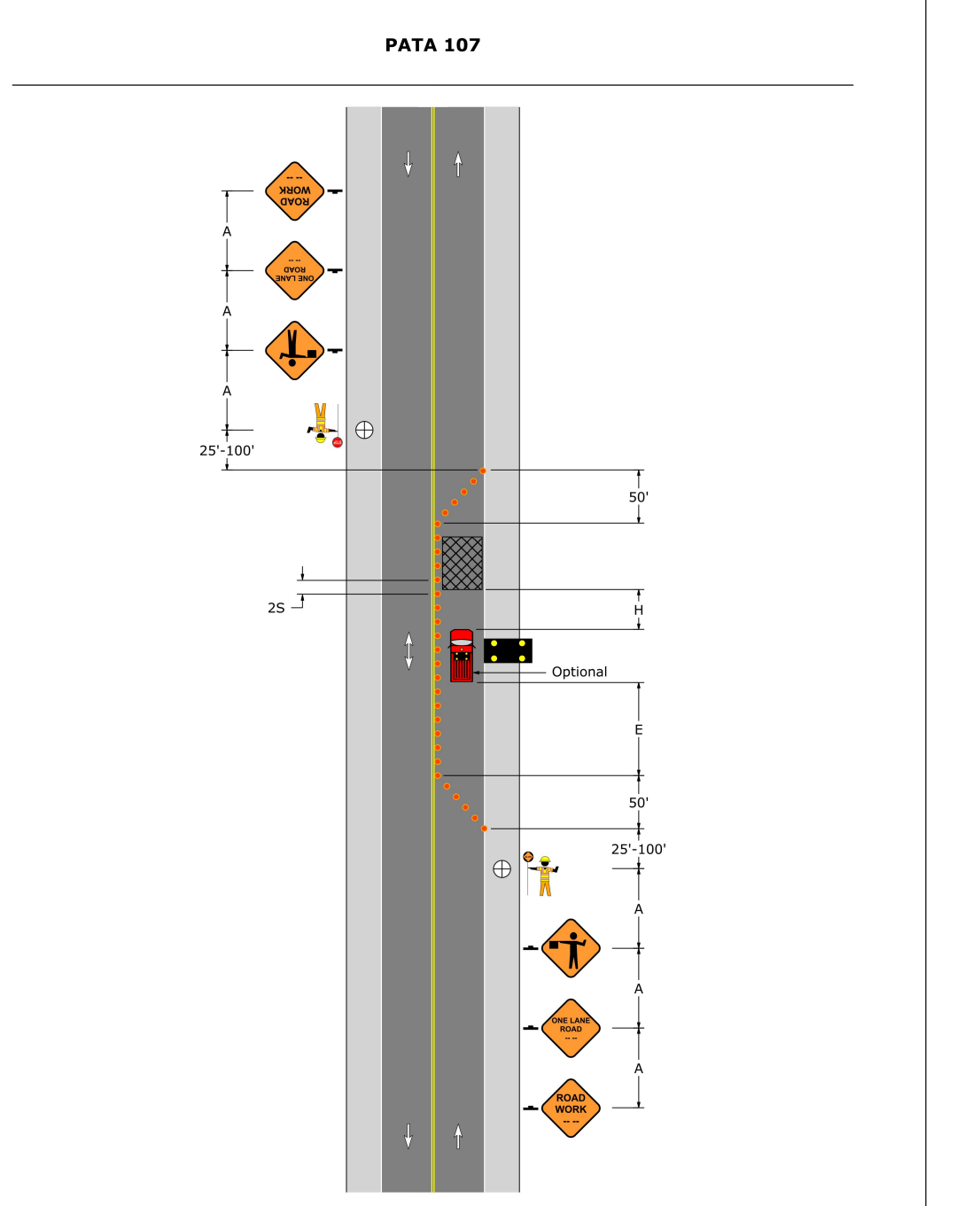
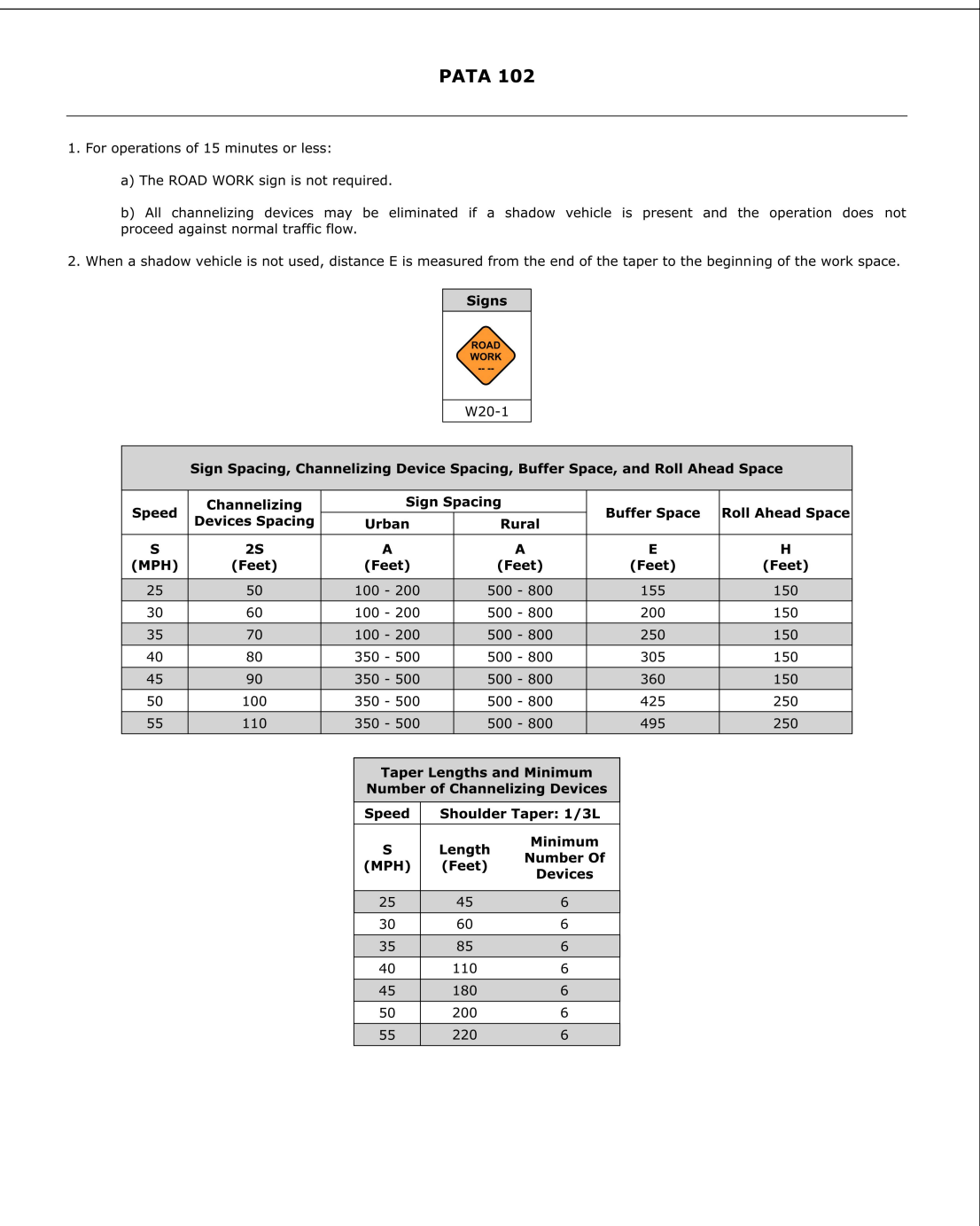
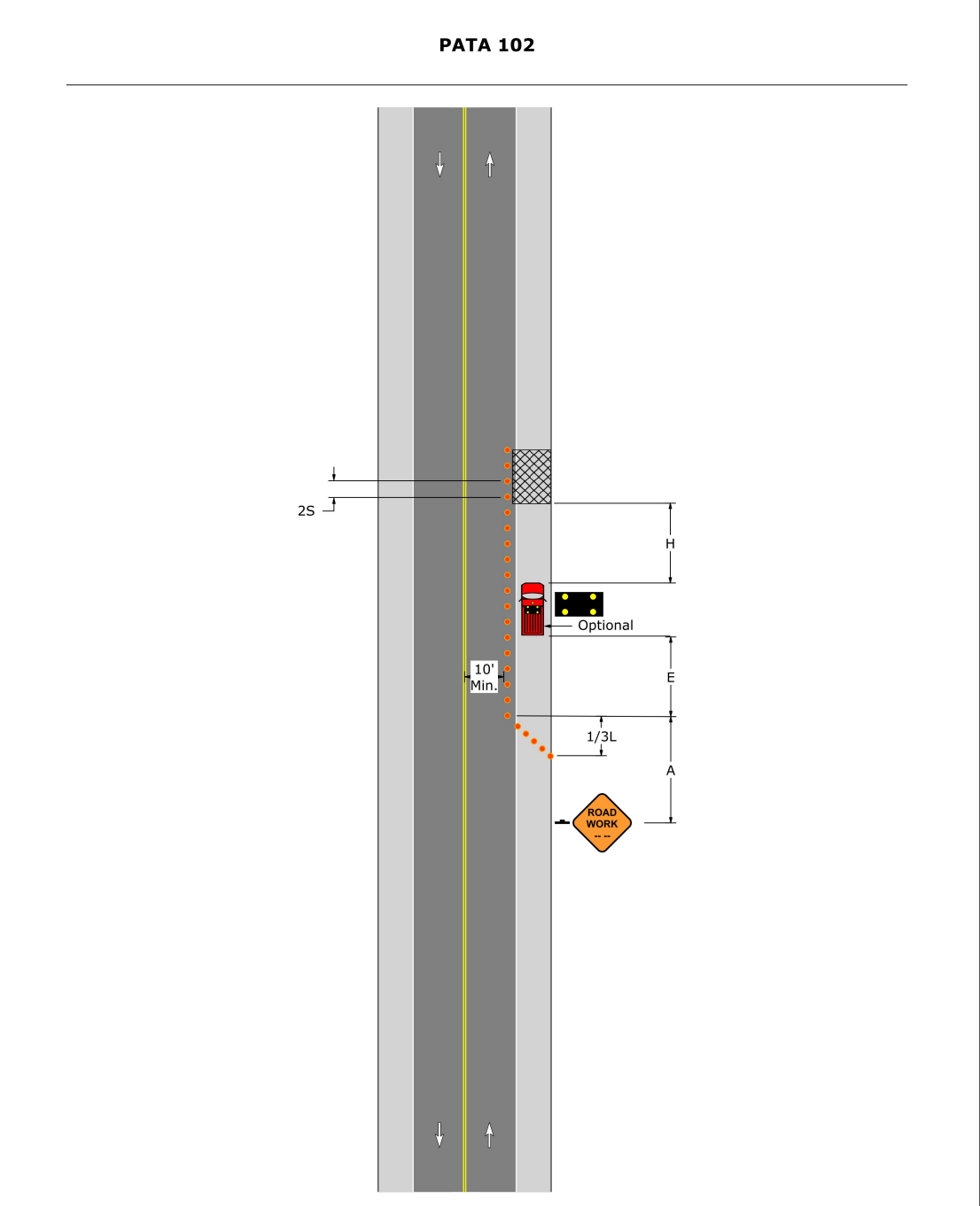
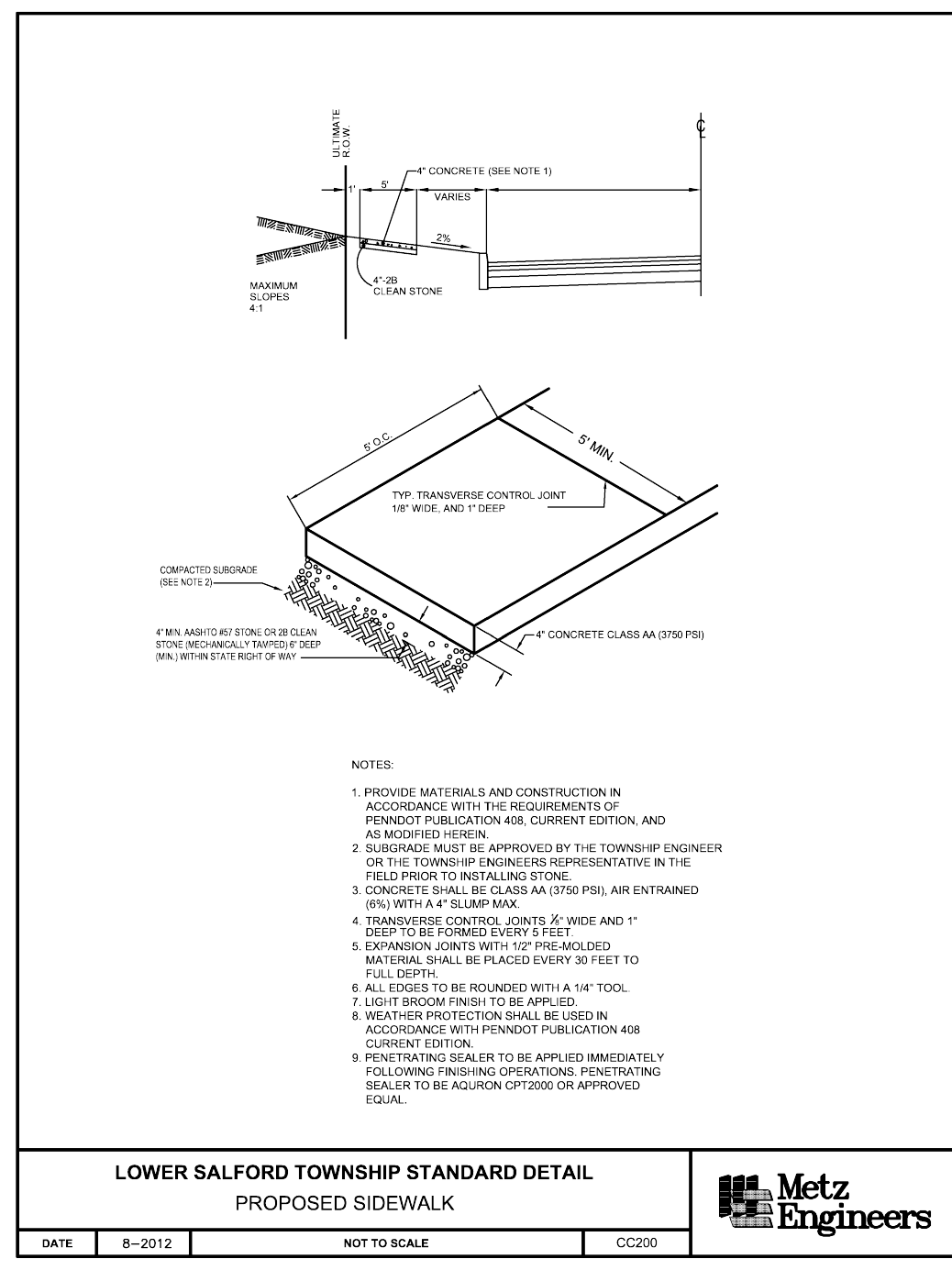
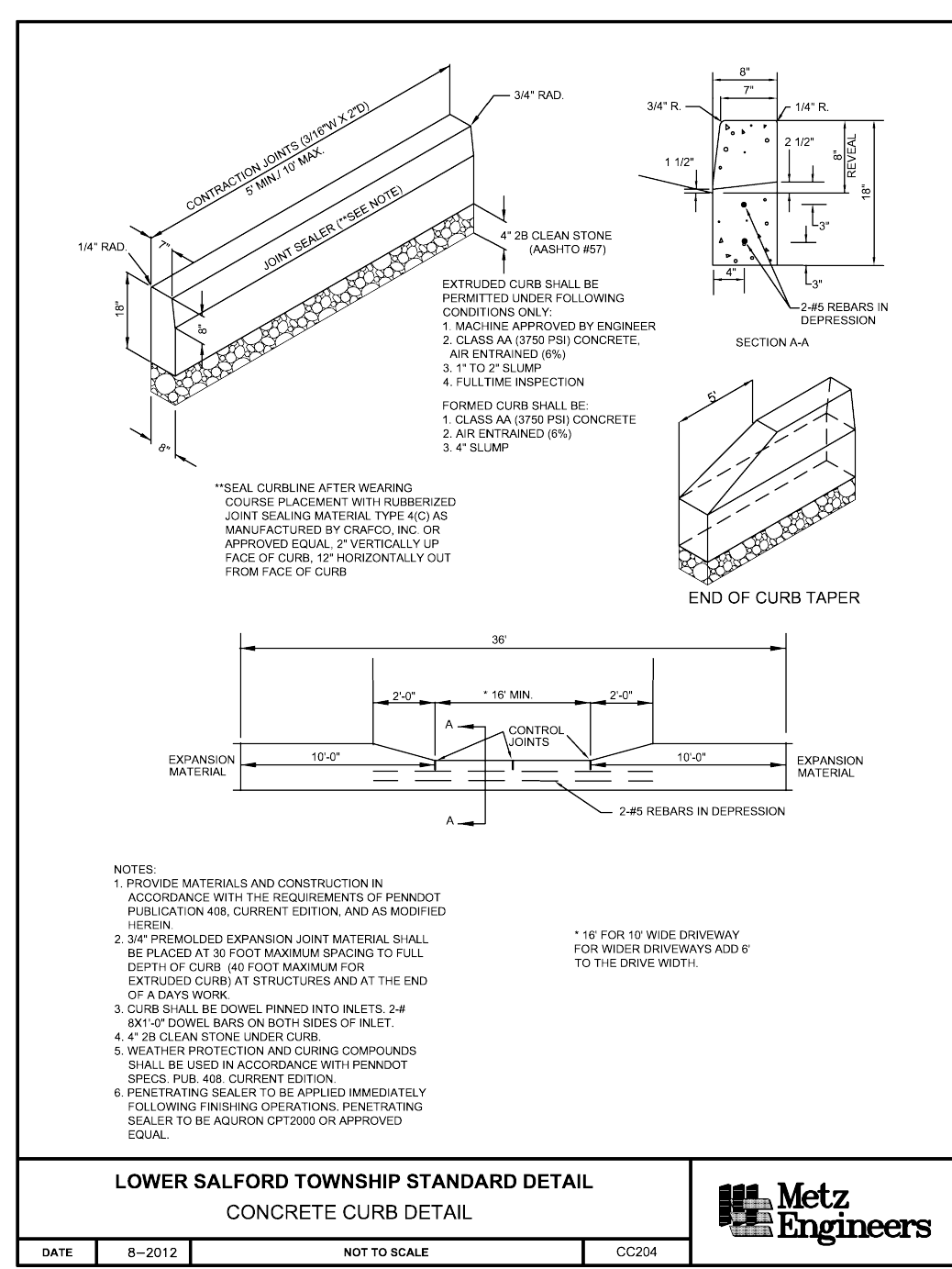
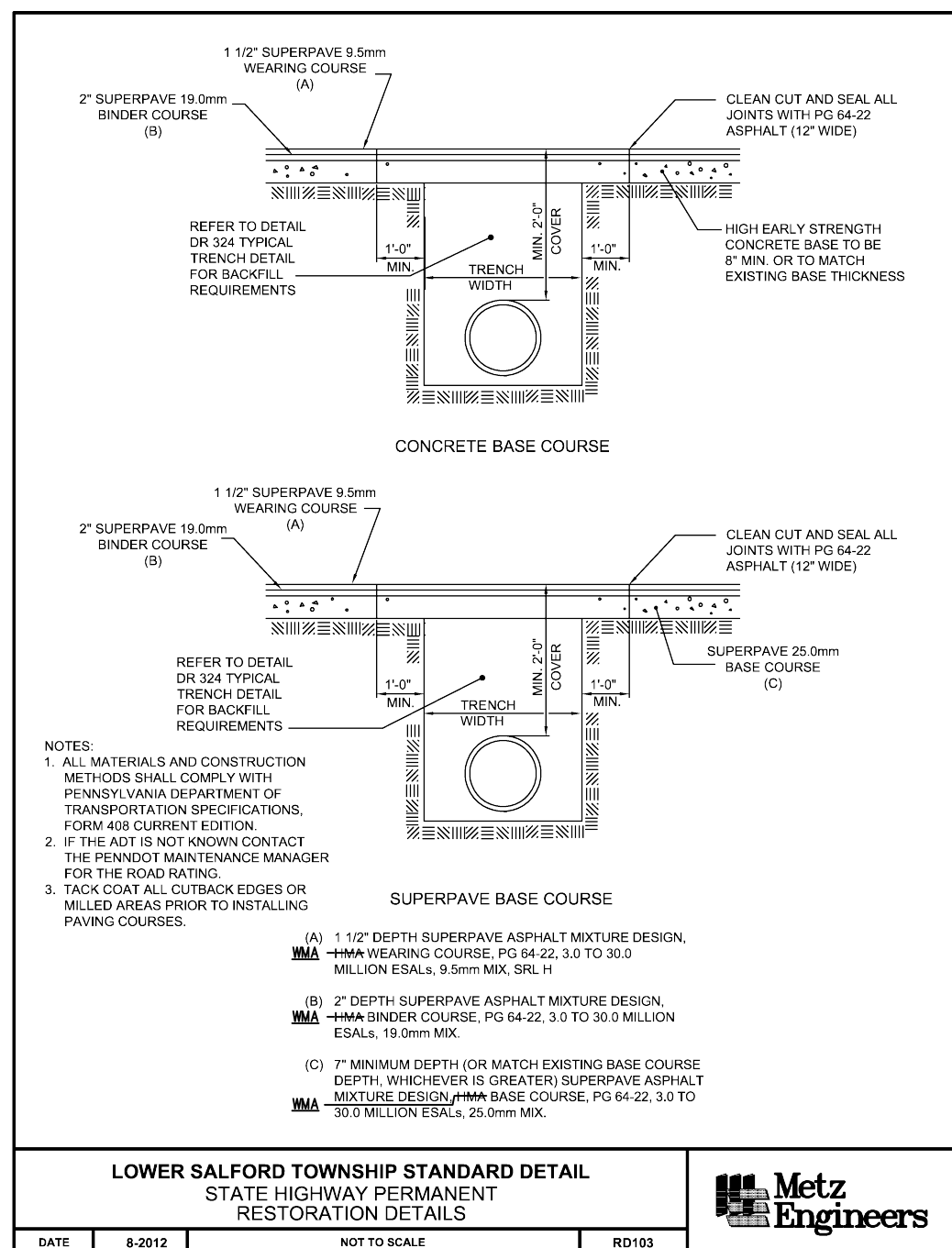
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 PREPARED FOR
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	The Village at Lederach 658 Harleysville Pike, Suite 150 Harleysville, PA 19438 (215) 513-2100	DRAFTED BY RCMA	PROJ. MGR. D.B.C.	PROJECT NO. 2283	DRAWING NO. 13 OF 27
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DETAIL SHEET (PATA FIGURES & RAMP DETAILS)

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DRAFTED BY: RCMA
PROJ. MNGR.: D.B.C.
PROJECT NO.: 2283
DRAWING NO.: 14 OF 27

R2-1 SPEED LIMIT SIGN

The Speed Limit Sign (R2-1) shall be authorized for use to display the maximum legal speed limit on a highway. When used as a variable speed limit sign, speed display modules may be attached to the sign or inserted through cut-outs in the sign substrate.

The R2-1 sign shall be placed at intervals as specified in Department regulations. The standard size sign shall be as follows:

- 24" x 30", All single lane conventional highways having any speed limit.
- 30" x 36", Multi-lane conventional highways regardless of speed limit.
- 48" x 60", Expressways and freeways.

SIGN SIZE A x B		DIMENSIONS - IN									
A	B	C	D	E	F	G	H	J	K	L	M
18" x 12"	2.8	2.50	2	4.4	4.5	0.4	0.4	0.6	0.6	0.8	0.8
24" x 18"	5.5	4.0	3	7.1	7.1	0.4	0.4	0.6	0.6	0.8	0.8
30" x 36"	11.1	12.9	2.1	0.4	18	4.5	9.6	0.6	0.8	0.8	0.8
48" x 60"	14.8	17.1	2.8	0.4	24	6	12.8	0.8	1.2	1.2	0.8

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

W11-15 COMBINED BICYCLE/PEDESTRIAN SIGN

The Combined Bicycle/Pedestrian (W11-15) sign may be used where both bicycles and pedestrians might cross the roadway, such as at an intersection with a paved side path. A Trail X-Ing (W11-15P) supplemental plaque may be mounted below the W11-15 sign. If used in advance of a pedestrian and bicycle crossing, a W11-15 sign should be supplemented with an Ahead Plaque (W11-15P) or the Distance Ahead Plaque (W11-15D) to inform road users that they are approaching a point where crossing activity might occur. If a post-mounted W11-15 sign is placed at the location of the crossing point, a Diagonal Downward Pointing Arrow Plaque (W11-15P) shall be mounted below the sign. If the W11-15 sign is mounted overhead, the W11-15P supplemental plaque shall not be used.

SIGN SIZE A x B		DIMENSIONS - IN									
A	B	C	D	E	F	G	H	J	K	L	M
18" x 12"	2.8	2.50	2	4.4	4.5	0.4	0.4	0.6	0.6	0.8	0.8
24" x 18"	5.5	4.0	3	7.1	7.1	0.4	0.4	0.6	0.6	0.8	0.8
30" x 36"	11.1	12.9	2.1	0.4	18	4.5	9.6	0.6	0.8	0.8	0.8
48" x 60"	14.8	17.1	2.8	0.4	24	6	12.8	0.8	1.2	1.2	0.8

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

W11-15P TRAIL X-ING PLAQUE

A Trail X-Ing Plaque (W11-15P) may be mounted below a Combined Bicycle/Pedestrian (W11-15) sign as an add-on plaque.

SIGN SIZE A x B		DIMENSIONS - IN									
A	B	C	D	E	F	G	H	J	K	L	M
18" x 12"	2.8	2.50	2	4.4	4.5	0.4	0.4	0.6	0.6	0.8	0.8
24" x 18"	5.5	4.0	3	7.1	7.1	0.4	0.4	0.6	0.6	0.8	0.8
30" x 36"	11.1	12.9	2.1	0.4	18	4.5	9.6	0.6	0.8	0.8	0.8
48" x 60"	14.8	17.1	2.8	0.4	24	6	12.8	0.8	1.2	1.2	0.8

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

D3-1 STREET NAME SIGN

The Street Name Sign (D3-1) shall be authorized for use as a post-mounted sign to identify names of streets for motorists and pedestrians. The D3-1 sign, or other official type of street name sign, should be placed at all street intersections regardless of other route marking that may be present.

When the D3-1 signs are used in business districts, they should be placed at least on the diagonally opposite corners so that they will be on the far right-hand side of the intersection for traffic on the more important street. Signs naming both streets should be erected at each location. They should be mounted with their faces parallel to the streets they name, as close to the corner as practical with the nearest part of each sign not less than 1', and preferably 2', back from both curb lines.

In residential districts, D3-1 signs should be mounted as in business districts, but a single location at each intersection shall ordinarily suffice on all but the most important thoroughfares.

Lettering on post-mounted D3-1 signs should be composed of 6" UCLC letters. On multi-lane streets with speed limits greater than 40 MPH the lettering on post-mounted D3-1 signs should be composed of initial upper-case letters at least 8 inches in height and lower-case letters at least 6 inches in height. The overall width of the sign is variable. Except when necessary to avoid confusion, suffixes such as "RD", "CR", and "TR", or sections of the city such as "NW" should not be used. When used, this supplemental lettering may be in smaller lettering composed of 3" UCLC letters. For roads functionally classified as local with speed limits of 25 MPH or less, the lettering may be 4" UCLC letters.

A pictograph may be used on a D3-1 sign. If a pictograph is used, the height and width of the pictograph shall not exceed the upper-case letter height of the principal legend of the sign.

The street name sign should be reflectorized or illuminated and should have a white legend on a green background, white legend on a lower background, white legend on a blue background, or black legend on a white background. Borders are not required. The same background color for D3-1 signs should be applied to all signs on roadways under the jurisdiction of a particular highway agency.

SIGN SIZE A x B		DIMENSIONS - IN									
A	B	C	D	E	F	G	H	J	K	L	M
18" x 12"	2.8	2.50	2	4.4	4.5	0.4	0.4	0.6	0.6	0.8	0.8
24" x 18"	5.5	4.0	3	7.1	7.1	0.4	0.4	0.6	0.6	0.8	0.8
30" x 36"	11.1	12.9	2.1	0.4	18	4.5	9.6	0.6	0.8	0.8	0.8
48" x 60"	14.8	17.1	2.8	0.4	24	6	12.8	0.8	1.2	1.2	0.8

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 11-07-13
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

W-BEAM RAIL ELEMENT

150 x 75 x 3.53 (6" x 3" x 10 GAGE) THICK COLD FORMED CHANNEL OR C150 x 12 (C6" x 8.2") RUBBING RAIL

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

R1-1 STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection as designated by the Department with reference to State-designated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-way, two-way, and three-way intersections where all approaches are controlled by an R1-1 sign, a supplemental ALL-WAY plaque (R1-1P) shall be mounted below each R1-1 sign.

(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designations shall first be obtained from the Department. Approval to install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in the Department's Temporary Traffic Control Guidelines are satisfied.

(c) Size. The standard size R1-1 sign shall be 30" x 30" for single lane conventional highways and 36" x 36" for multi-lane conventional highways. The 24" x 24" size shall only be used for sites with restrictive physical conditions and vehicle usage that prohibits the installation of the standard size R1-1. A sign that is mounted back-to-back with a R1-1 sign should sit within the edges of the D3-1 sign. If necessary, the size of the R1-1 sign should be increased so that any other sign installed back-to-back with it remains within the edges of the R1-1 sign.

SIGN SIZE A x B		DIMENSIONS - IN									
A	B	C	D	E	F	G	H	J	K	L	M
18" x 18"	6	6	6	6	6	0.4	0.4	0.6	0.6	0.8	0.8
24" x 24"	8	8	8	8	8	0.6	0.6	0.8	0.8	1.0	1.0
30" x 30"	10	10	10	10	10	0.8	0.8	1.0	1.0	1.2	1.2
36" x 36"	12	12	12	12	12	1.0	1.0	1.2	1.2	1.4	1.4
48" x 48"	18	18	18	18	18	1.2	1.2	1.4	1.4	1.6	1.6

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

MAIN STREET WIDENING (STA. 0+18 TO STA. 0+68)

MILL AND OVERLAY TO MATCH EXISTING CENTERLINE. LEVELING COURSE AS NECESSARY.

EXISTING SHOULDER SHALL BE REMOVED. EXISTING ROAD SHALL BE CUTBACK FULL DEPTH, ONE FOOT MINIMUM, OR UNTIL SATISFACTORY DEPTH OF PAVING IS FOUND. LIMITS OF CUTBACK SHALL BE AS APPROVED BY TWP. ENGINEER OR HIS/HER REPRESENTATIVE IN THE FIELD.

UNDERDRAIN TO BE INSTALLED: 2+90 TO INLET A5, 3+53 TO 4+14. SUBBASE INSTALLED TO DAYLIGHT: 0+18 TO 2+90, 4+14 TO 4+33

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

MAIN STREET WIDENING (STA. 0+68 TO STA. 2+37)

MILL AND OVERLAY TO MATCH EXISTING CENTERLINE. LEVELING COURSE AS NECESSARY.

EXISTING SHOULDER SHALL BE REMOVED. EXISTING ROAD SHALL BE CUTBACK FULL DEPTH, ONE FOOT MINIMUM, OR UNTIL SATISFACTORY DEPTH OF PAVING IS FOUND. LIMITS OF CUTBACK SHALL BE AS APPROVED BY TWP. ENGINEER OR HIS/HER REPRESENTATIVE IN THE FIELD.

UNDERDRAIN TO BE INSTALLED: 2+90 TO INLET A5, 3+53 TO 4+14. SUBBASE INSTALLED TO DAYLIGHT: 0+18 TO 2+90, 4+14 TO 4+33

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

MAIN STREET WIDENING (STA. 2+38 TO STA. 4+33) (SUPER-ELEVATION)

MILL AND OVERLAY TO MATCH EXISTING CENTERLINE. LEVELING COURSE AS NECESSARY.

EXISTING SHOULDER SHALL BE REMOVED. EXISTING ROAD SHALL BE CUTBACK FULL DEPTH, ONE FOOT MINIMUM, OR UNTIL SATISFACTORY DEPTH OF PAVING IS FOUND. LIMITS OF CUTBACK SHALL BE AS APPROVED BY TWP. ENGINEER OR HIS/HER REPRESENTATIVE IN THE FIELD.

UNDERDRAIN TO BE INSTALLED: 2+90 TO INLET A5, 3+53 TO 4+14. SUBBASE INSTALLED TO DAYLIGHT: 0+18 TO 2+90, 4+14 TO 4+33

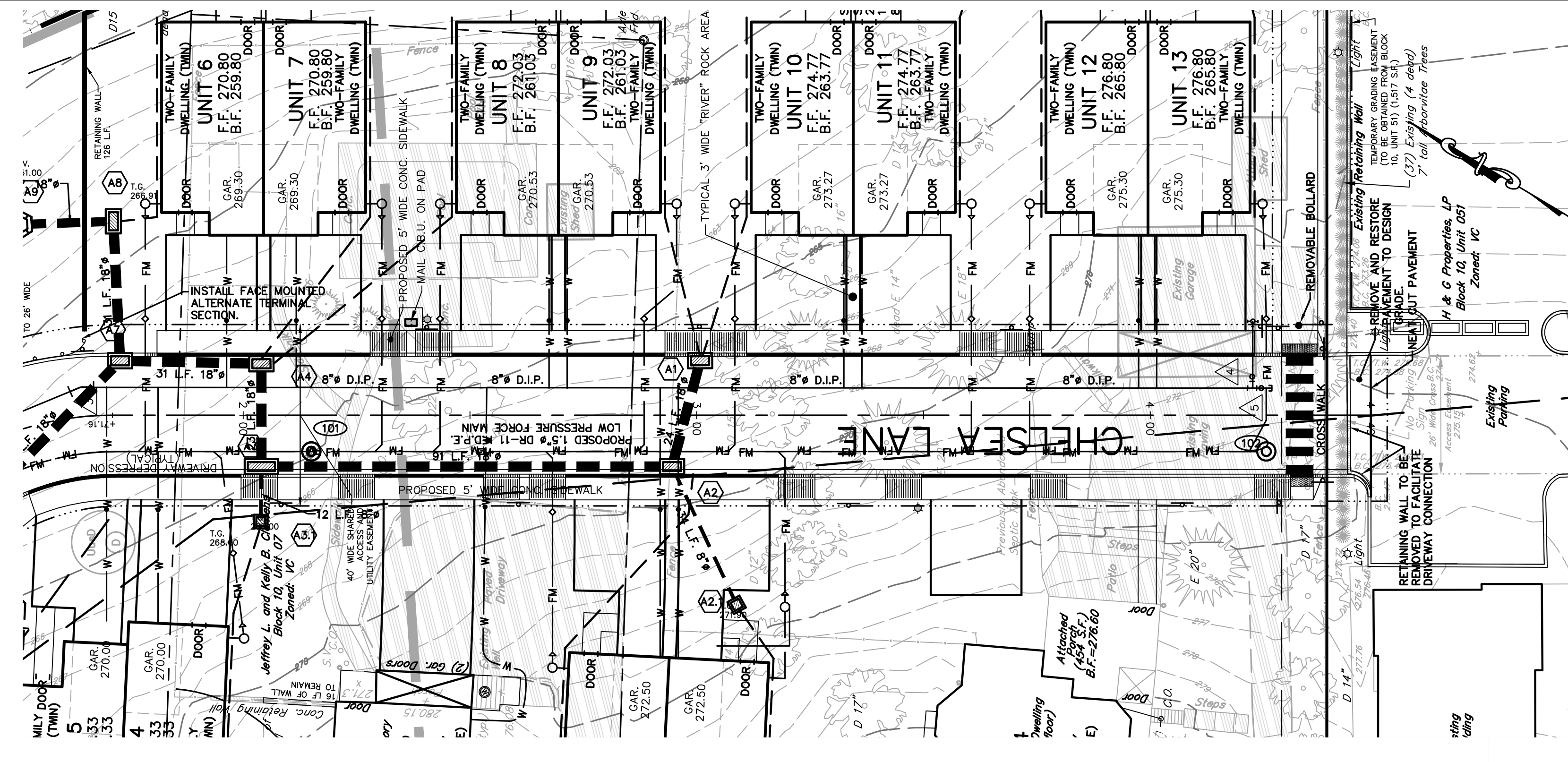
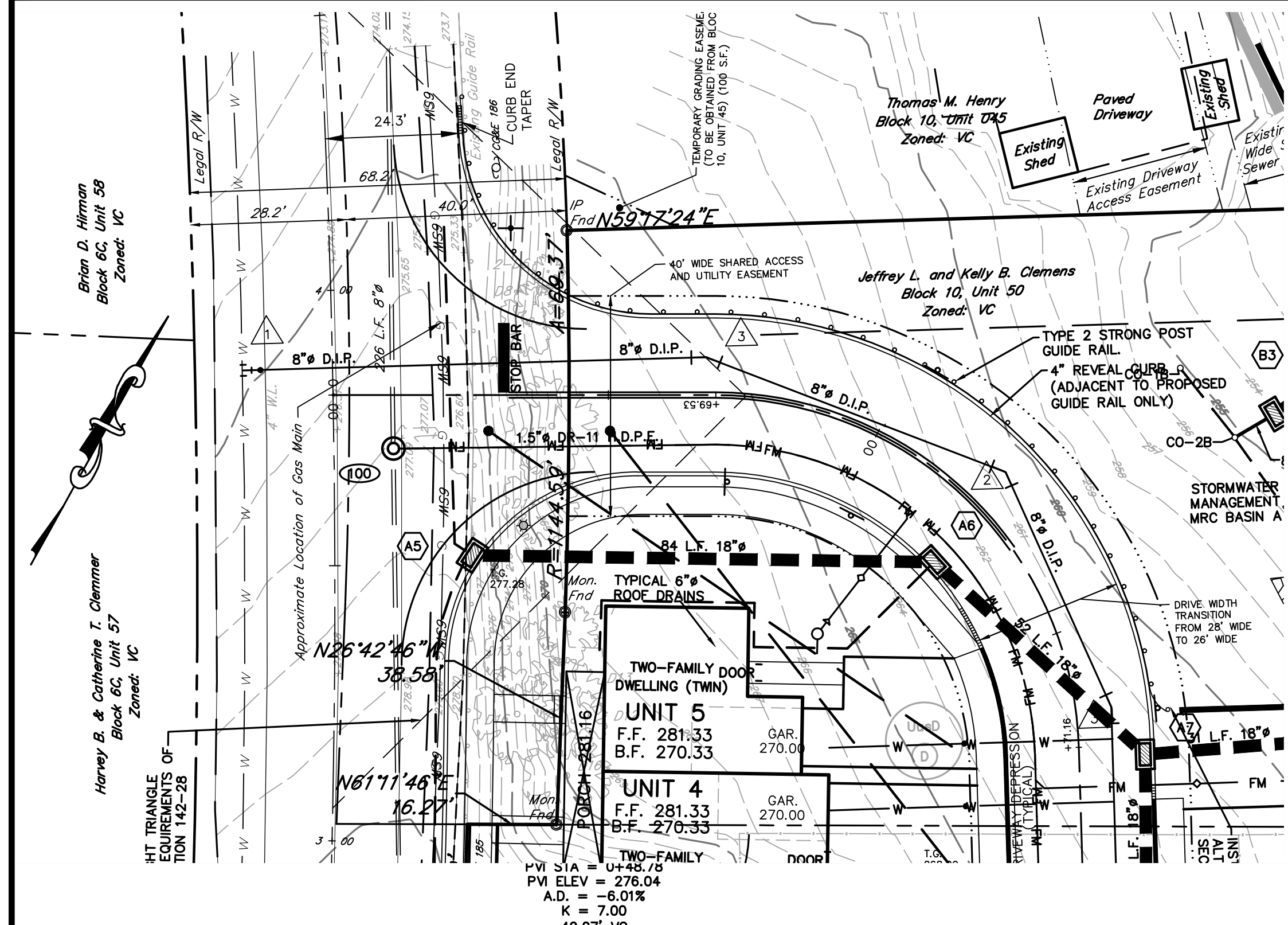
APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

STEEL POSTS OVER UNDERGROUND STRUCTURES

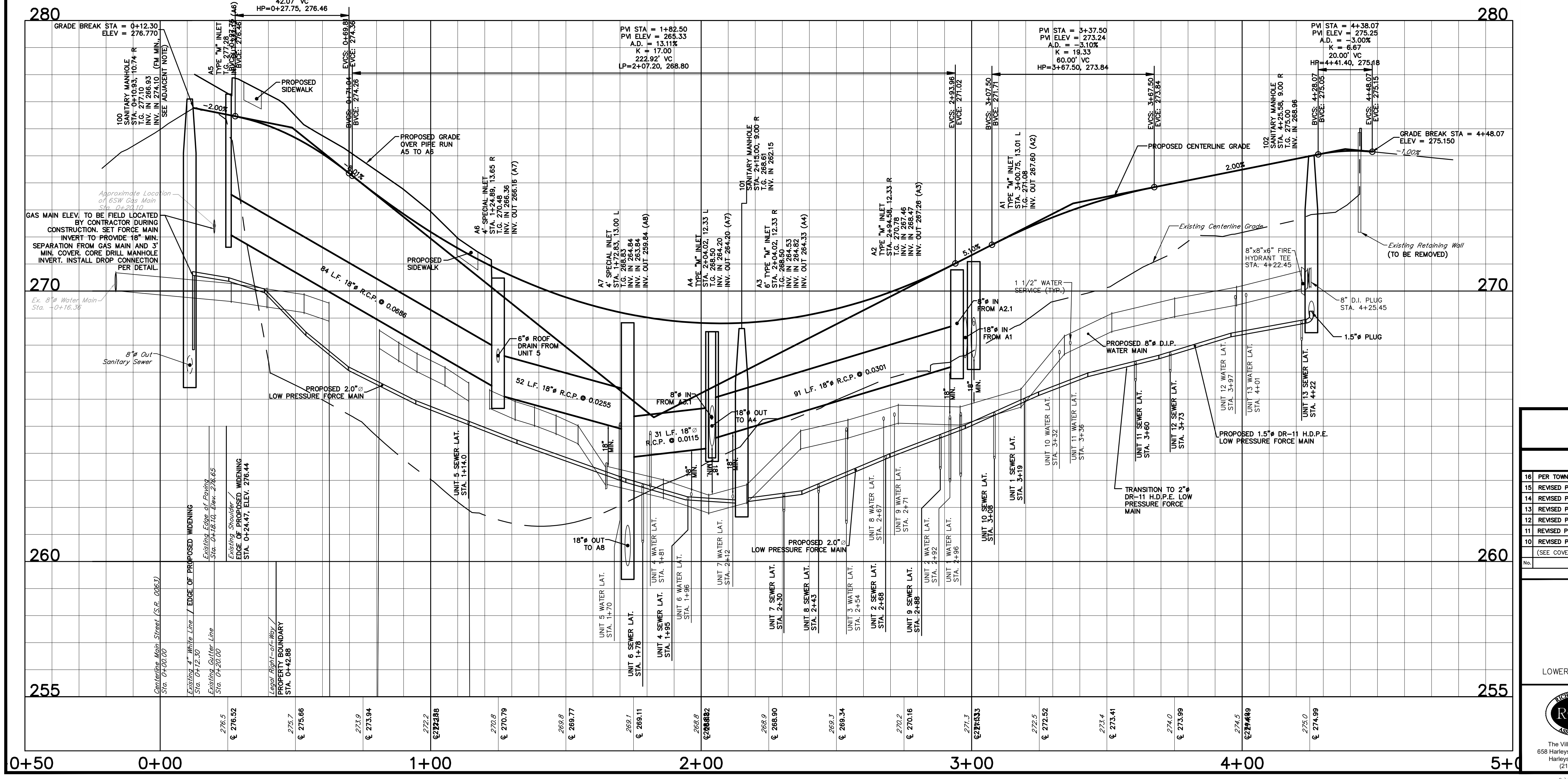
APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *C. Rowe* Date: 02-29-12
Chief, Traffic Engineering and Permit Section
Bureau of Maintenance and Operations

R8-3a NO PARKING SIGN

SIGN SIZE A x B		DIMENSIONS - IN									
A	B	C	D	E	F	G	H	J	K	L	M
18" x 24"	3.75	3.75	4	3	3	3	3	3	3	3	3
24" x 30"	4.75	4.75	5	4	4	4	4	4	4	4	4
30" x 36"	5.75	5.75	6	5	5	5	5	5	5	5	5
36" x 42"	6.75	6.75	7	6	6	6	6	6	6	6	6
42" x 48"	7.75	7.75	8	7	7	7	7	7	7	7	7
48" x 54"	8.75	8.75	9	8	8	8	8	8	8	8	8
54" x 60"	9.75	9.75	10	9	9	9	9	9	9	9	9
60" x 66"	10.75	10.75	11	10	10	10	10	10	10	10	10
66" x 72"	11.75	11.75	12	11	11	11	11	11	11	11	11
72" x 78"	12.75	12.75	13	12	12	12	12	12	12	12	12
78" x 84"	13.75	13.75	14	13	13	13	13	13	13	13	13
84" x 90"	14.75	14.75	15	14	14	14	14	14	14	14	14
90" x 96"	15.75	15.75	16	15	15	15	15	15	15	15	15
96" x 102"	16.75	16.75	17	16	16	16	16	16	16	16	16
102" x 108"	17.75	17.75	18	17	17	17	17	17	17	17	17
108" x 114"	18.75	18.75	19	18	18	18	18	18	18	18	18
114" x 120"	19.75	19.75	20	19	19	19	19	19	19	19	19
120" x 126"	20.75	20.75	21	20	20	20	20	20	20	20	20
126" x 132"	21.75	21.75	22	21	21	21	21	21	21	21	21
132" x 138"	22.75	22.75	23	22	22	22	22	22	22	22	22
138" x 144"	23.75	23.75	24	23	23	23	23	23	23	23	23
144" x 150"	24.75	24.75	25	24	24	24	24	24	24	24	24
150" x 156"	25.75	25.75	26	25	25	25	25	25	25	25	25
156" x 162"	26.75	26.75	27	26	26	26	26	26	26	26	26
162" x 168"	27.75	27.75	28	27	27	27	27	27	27	27	27
168" x 174"	28.75	28.75	29	28	28	28	28	28	28	28	28
174" x 180"	29.75	29.75	30	29	29	29	29	29	29	29	29
180" x 186"	30.75	30.75	31	30	30	30	30	30	30	30	30
186" x 192"	31.75	31.75	32	31	31	31	31	31	31	31	31
192" x 198"	32.75	32.75	33	32	32	32	32	32	32	32	32
198" x 204"	33.75	33.75	34	33	33	33	33	33	33	33	33
204" x 210"	34.75	34.75	35	34	34	34	34	34	34	34	34
210" x 216"	35.75	35.75	36	35	35	35	35	35	35	35	35
216" x 222"	36.75	36.75	37	36	36	36	36	36	36	36	36
222" x 228"	37.75	37.75	38	37	37	37	37	37	37	37	37
228" x 234"	38.75	38.75	39	38	38	38	38	38	38	38	38
234" x 240"	39.75	39.75	40	39	39	39	39	39	39	39	39
240" x 246"	40.75	40.75	41	40	40	40	40	40	40	40	40
246" x 252"	41.75	41.75	42	41	41	41	41	41	41	41	41
252" x 258"	42.75	42.75	43	42	42	42	42	42	42	42	42
258" x 264"	43.75	43.75	44	43	43	43	43	43	43	43	43
264" x 270"	44.75	44.75	45	44	44	44	44	44	44	44	44
270" x 276"	45.75	45.75	46	45	45	45	45	45	45	45	45
276" x 282"	46.75	46.75	47	46	46	46	46	46	46	46	46
282" x 288"	47.75	47.75	48	47	47	47	47	47	47	47	47
288" x 294"	48.75	48.75	49	48	48	48	48	48	48	48	48
294" x 300"	49.75	49.75	50	49	49	49	49	49	49	49	49
300" x 306"	50.75	50.75	51	50	50	50	50	50	50	50	50
306" x 312"	51.75	51.75	52	51	51	51	51	51	51	51	51
312" x 318"	52.75	52.75	53	52	52	52	52	52	52	52	52
318" x 324"	53.75	53.75	54	53	53	53					



- ### CONSTRUCTION NOTES
1. ALL LAWN AREA SHALL BE PROPERLY GRADED TO ENSURE PROPER DRAINAGE FLOW AWAY FROM BUILDINGS TO NEAREST INLET OR WATERCOURSE WITHOUT PONDING OR OBSTRUCTION. A MINIMUM OF 2% SLOPE SHALL BE PROVIDED ON ALL GRASSED AREAS.
 2. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS WHERE 18 INCHES MINIMUM CLEARANCE CANNOT BE OBTAINED. THE UTILITY LINES SHALL BE CONCRETE ENCASED.
 3. ALL CONSTRUCTION SHALL CONFORM TO LOWER SALFORD TOWNSHIP, PENN. D.O.T. AND/OR LOWER SALFORD TOWNSHIP AUTHORITY STANDARDS AND SPECIFICATIONS, WHICHEVER IS GREATER. INTERPRETATION SHALL REST WITH THE TOWNSHIP ENGINEER, OR HIS REPRESENTATIVE IN THE FIELD.
 4. ALL SANITARY SEWER AND APPURTENANCES SHALL BE IN CONFORMANCE WITH THE LOWER SALFORD TOWNSHIP AUTHORITY (LSTA) STANDARDS. ALL LOW PRESSURE FORCE MAIN SEWER LINES SHALL BE DR-11 H.D.P.E. WITH ISOLATION VALVES. ALL LATERALS AND FITTINGS SHALL BE INSTALLED BY THE ELASTOMERIC GASKET SYSTEM CONFORMING TO ASTM D 3012. AIR RELEASE VALVE SHALL BE DEZURK MODEL 400 WITH 2" INLET, OR EQUAL APPROVED BY SEWER AUTHORITY ENGINEER.
 5. THE EXISTING SEWER AND SEWER LATERALS FOR THE EXISTING HOMES SHALL BE TELEVIEWED TO DETERMINE EXISTING CONDITIONS, AND RESULTS SHALL BE PROVIDED TO THE LSTA. BUILDING SEWERS AND SEWER LATERALS SHALL BE REPLACED AND/OR REPAIRED BY OWNER IF NECESSARY AS DETERMINED BY LSTA.
 6. ALL WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
 7. GAS, ELECTRIC AND CABLE TELEVISION FACILITIES FOR ALL LOTS SHALL BE PROVIDED BY UNDERGROUND SERVICE.
 8. ALL GRAVITY PORTIONS OF SANITARY SEWER LATERALS SHALL BE LAID ON A SLOPE OF NOT LESS THAN 1/4 INCH PER FOOT AND HAVE 10 FEET OF HORIZONTAL SEPARATION BETWEEN THE LATERAL AND PROPOSED LANDSCAPING.
 9. SANITARY SEWER SERVICE WILL BE PROVIDED TO THE BASEMENT ELEVATION FOR UNITS 1, 2, 4 & 5. FIRST FLOOR ELEVATION FOR UNITS 6, 7, 8, 9, 10, 11, 12 & 13. UNITS 6-13 MAY BE PROVIDED IF THE GRINDER PUMP TANK IS LOCATED AT THE REAR OF THE UNIT.
 10. NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPILL. TOPSOIL MUST BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. UPON COMPLETION OF THE CONSTRUCTION, THE TOPSOIL MUST BE REDISTRIBUTED ON THE SITE UNIFORMLY. A MINIMUM 8" DEPTH, COMPACTED ON ALL DISTURBED AREAS I.E. SWALES, LOTS, BASH BERMS AND PLANTING BUFFERS.
 11. AT NO TIME SHALL PIPES BE LOCATED IN THE CORNERS OF THE INLET BOXES. ALL STORMSEWER PIPE REQUIRES 2 FEET MINIMUM COVER OVER THE TOP OF THE PIPE.
 12. ROOF DOWNSPOUT COLLECTION PIPES SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT WELDED JOINTS OR SDR-35 PVC INTEGRAL GASKET PIPE MEETING ASTM F477. TWO FOOT (2') MINIMUM COVER, REFER TO TYPICAL TRENCH DETAIL FOR ROOF DRAIN GASKET REQUIREMENTS.
 13. PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE SANITARY SEWER SYSTEM, I.E. MANHOLES, PIPE, AGGREGATE, ETC., I.E., CURB, SIDEWALK, ETC. ALL AGGREGATES, ALL ASPHALT DESIGN MIXES, ETC.
 14. PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS RELATED TO THE PROPOSED RETAINING WALL (ADJACENT TO UNIT 5), INCLUDING BACKFILL, REINFORCEMENT, TOP RAILING, ETC. THE SEGMENTAL BLOCK RETAINING WALL SHALL BE DESIGNED TO ACCOUNT FOR THE LOCATION OF INLET AB TO INLET AND TO DW ENDWALL AS THAT CROSSES BENEATH THE WALL.
 15. PRIOR TO FABRICATION AND CONSTRUCTION, PROVIDE TO THE SEWER AUTHORITY ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE SANITARY SEWER SYSTEM, I.E. MANHOLES, PIPE, AGGREGATE, ETC.
 16. AT TIME OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE ELEVATIONS OF EXISTING 6" Ø SANITARY LATERALS (2 TOTAL) WHERE THEY ENTER EXISTING MANHOLES IN MAIN STREET, AND PROVIDE TO SEWER AUTHORITY ENGINEER.
 17. CONTRACTOR SHOULD NOTE PROPOSED FLOOR, GARAGE, BASEMENT, FINISH GRADE AND WALKOUT ELEVATIONS TO ENSURE STEPS AND MATERIALS ARE ADEQUATELY PROVIDED TO ENSURE COMPLIANCE WITH BUILDING AND GRADING REQUIREMENTS.
 18. THERE ARE TWO EXISTING BELL TELEPHONE MANHOLES OVER A CONCRETE WALL LOCATED ALONG MAIN STREET IMMEDIATELY ADJACENT TO PROPOSED CURB. BELL TELEPHONE SHALL BE NOTIFIED AND A REPRESENTATIVE MUST BE PRESENT FOR ANY WORK PERFORMED NEAR OR OVER THE WALL. THE PROPOSED CURB SHALL BE INSTALLED OVER THE WALL AND THE MANHOLES SHALL BE RAISED TO FINISH GRADE. THE MANHOLES SHALL ALSO BE SHIFTED HORIZONTALLY SO AS NOT TO CONFLICT WITH THE PROPOSED CURB.
 19. SHOULD A SPRING OR AREA OF POOR DRAINAGE BE ENCOUNTERED, THIS AREA MUST BE UNDER-DRAINED TO THE NEAREST STORM SEWER STRUCTURE OR AS DIRECTED BY THE TOWNSHIP ENGINEER OR THE TOWNSHIP ENGINEER'S REPRESENTATIVE IN THE FIELD.
 20. PROPOSED CURBING INSTALLED ADJACENT TO GUIDE RAIL SHALL BE 4" REVEAL. GUIDE RAIL POST LENGTH SHALL BE EXTENDED VERTICALLY A MINIMUM OF 1" WHERE A 2' FLAT AREA IS NOT PROVIDED BETWEEN THE GUIDE RAIL AND TOP-OF-SLOPE.
 21. A MINIMUM 6" LAYER OF 'RIVER STONE' OVER WEED PREVENTION FABRIC IS TO BE APPLIED TO THE 2' WIDE STRIP SEPARATING ADJACENT DRIVEWAYS ALONG CHELSEA LANE.



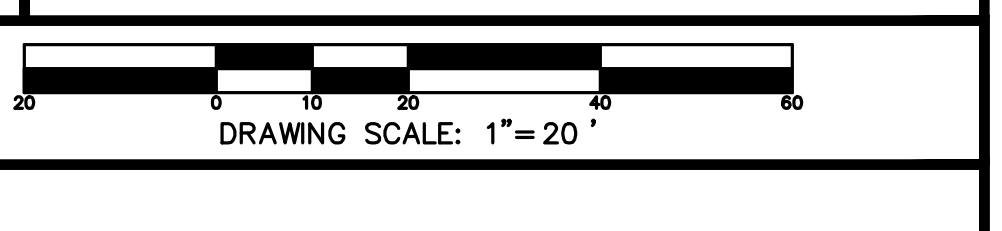
WATER SCHEDULE

1-12" TAPPING SLEEVE	1-8"x8"x6" F.H. TEE
1-8" WET TAP	1-8" G.V. & V.B.
1-8" G.V. & V.B.	1-F.H. ASSEMBLY
2-T.B.	6" CONNECTION PIECE (LENGTH PER PLAN VIEW)
1-8" 45° D.I.P. BEND (M/J)	6" CONNECTION PIECE (LENGTH PER PLAN VIEW)
1-8" 22.5° D.I.P. BEND (M/J)	1-8" G.V. & V.B.
1-T.B.	1-8" PLUG
G.V. = GATE VALVE	T.B. = THRUST BLOCK
V.B. = VALVE BOX ASSEMBLY	F.H. = FIRE HYDRANT

UNDERGROUND UTILITY NOTE

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION RECEIVED FROM FACILITY OWNERS FOLLOWING THE PA ONE CALL SYSTEM. THE LOCATION, COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH, OR HORIZONTAL LOCATION OF UTILITIES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES BEFORE THE START OF WORK BY NOTIFYING FACILITY OWNERS THROUGH THE PA ONE CALL SYSTEM (1-800-242-7776 OR 813), NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 10 BUSINESS DAYS IN ADVANCE OF BEGINNING EXCAVATION OR DEMOLITION WORK PER THE REQUIREMENTS OF PA ACTS 287 AND 121, AS AMENDED.

DESIGN SERIAL NO.: 5456593 (MAIN STREET)



16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15	REVISED PER MCOO EMAIL (08-21-2019)	AUGUST 30, 2019
14	REVISED PER MCOO LTR. (02-19-2019)	JUNE 18, 2019
13	REVISED PER PREPARATION OF NPDES APPLICATION	SEPTEMBER 27, 2018
12	REVISED PER MCOO LTR. (01-08-2018)	MAY 8, 2018
11	REVISED PER PREPARATION OF NPDES APPLICATION	NOVEMBER 22, 2017
10	REVISED PER CKS LTR. (12-08-2016), McMAHON LTR. (12-07-2016)	NOVEMBER 10, 2017
(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)		
No.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

PLAN AND PROFILE CHELSEA LANE

AS PART OF
CLEMENS' MILL

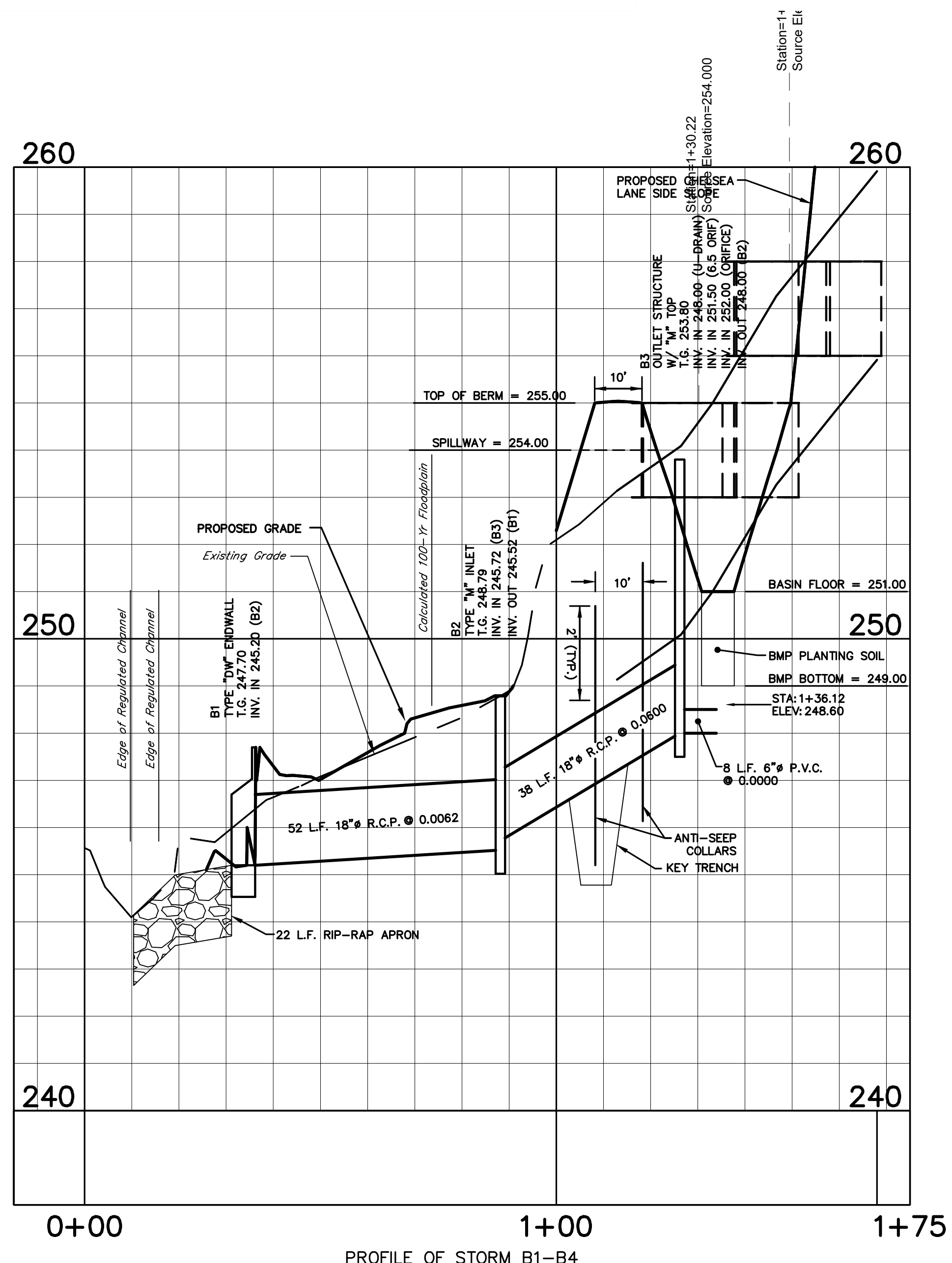
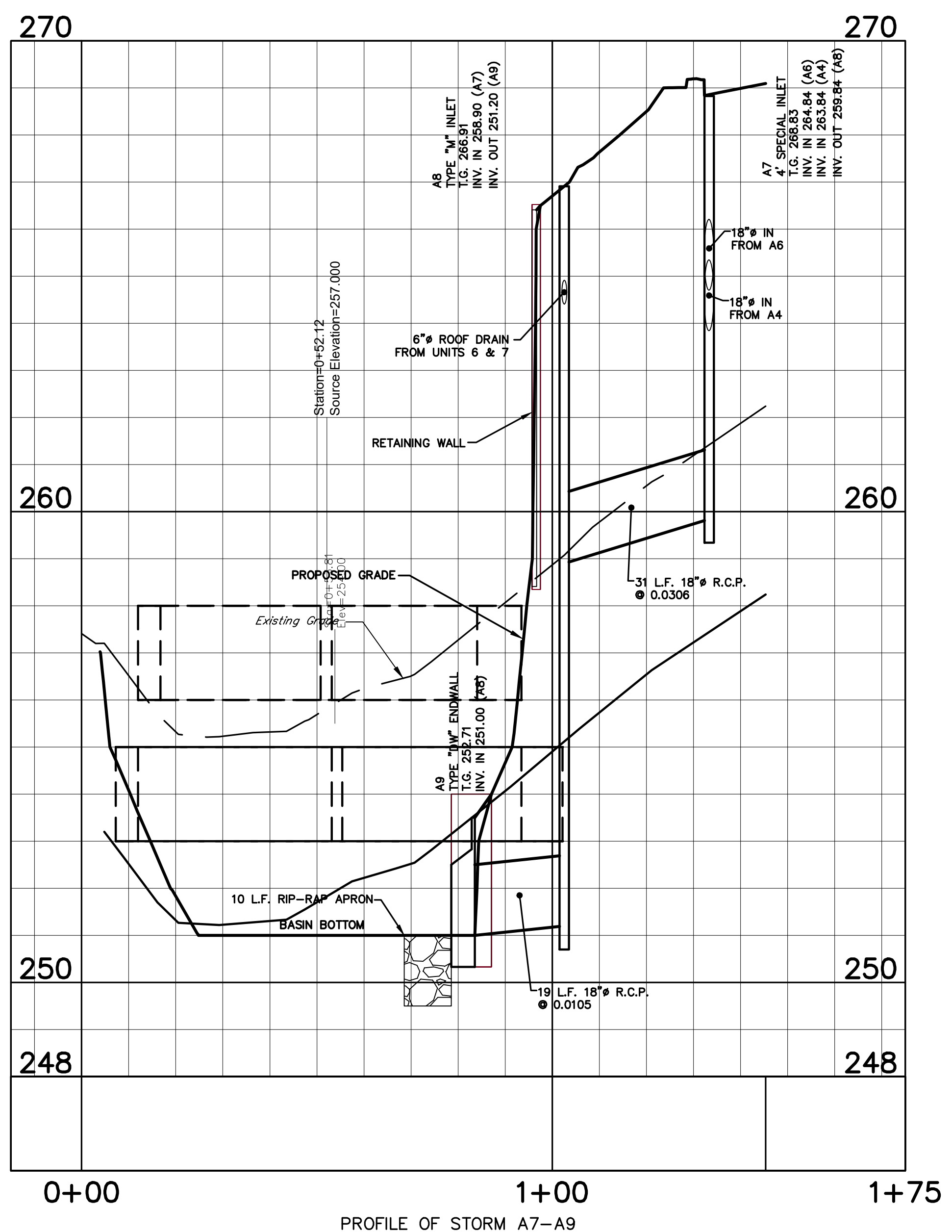
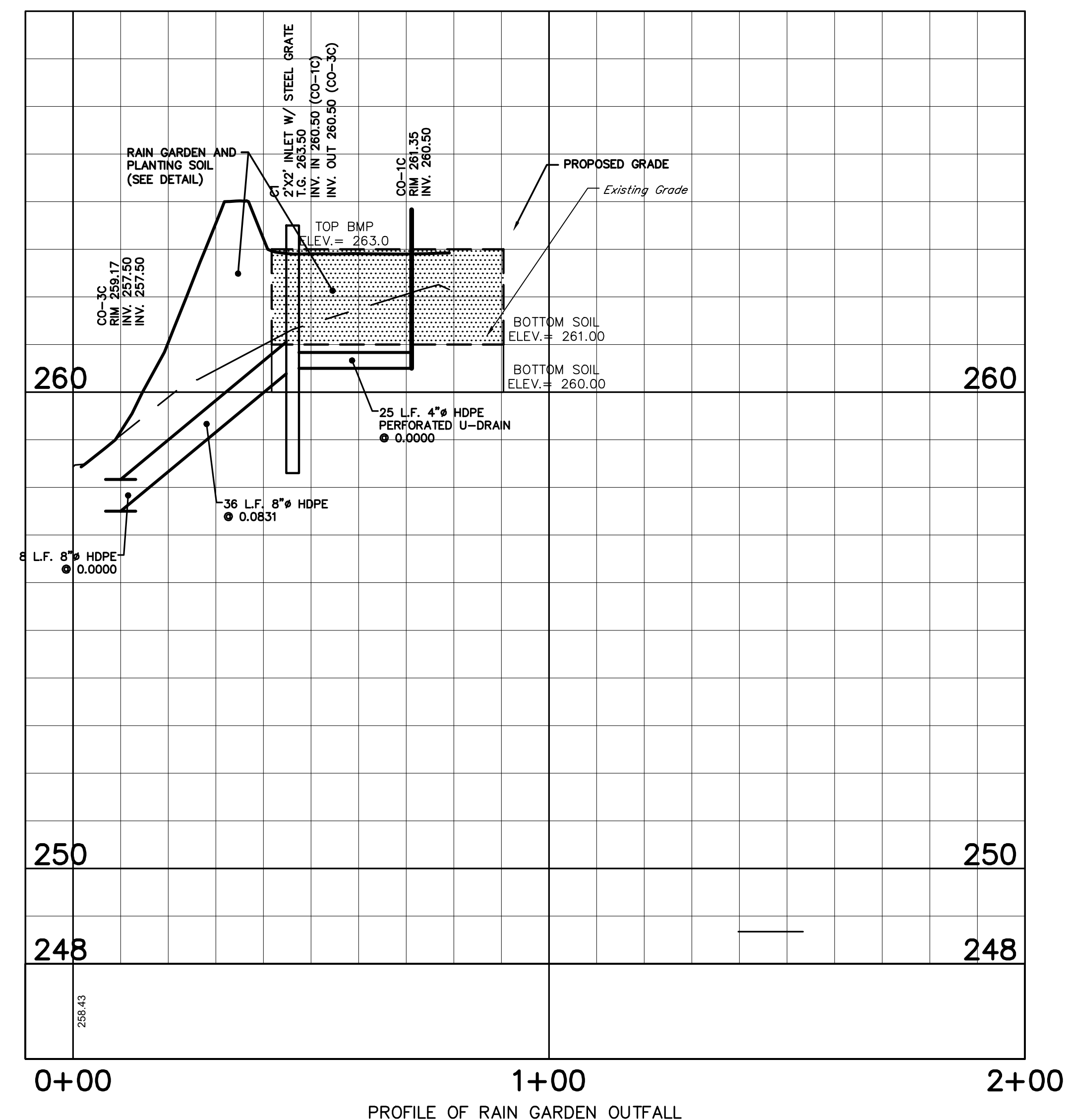
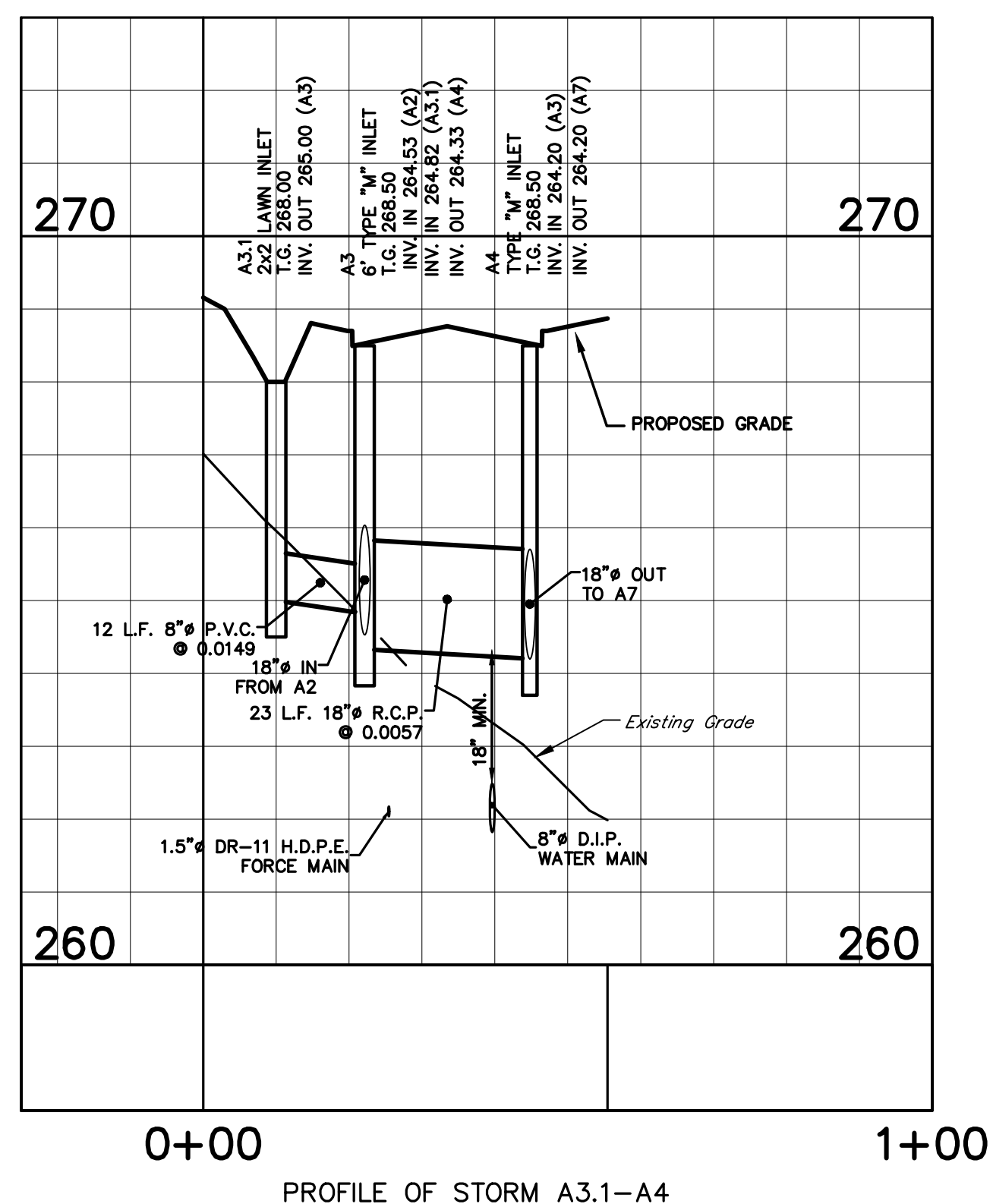
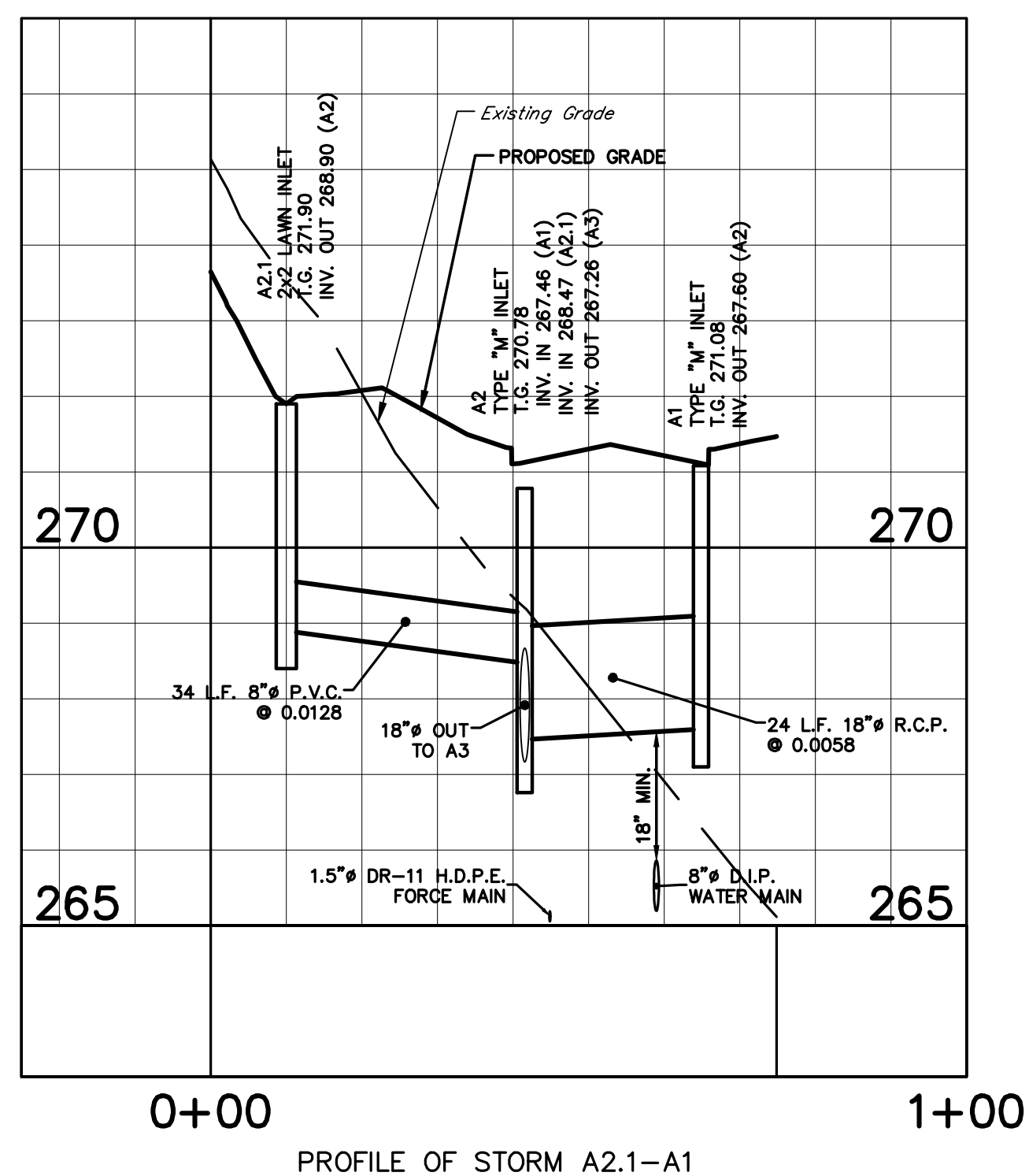
PREPARED FOR
JEFFREY AND KELLY CLEMENS

SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

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RCMA D.B.C. 2283 16 OF 27



- ### CONSTRUCTION NOTES
- ALL LAWN AREA SHALL BE PROPERLY GRADED TO ENSURE PROPER DRAINAGE FLOW. AWAY FROM BUILDINGS TO NEAREST INLET OR WATERCOURSE WITHOUT PONDING OR OBSTRUCTION. A MINIMUM OF 2% SLOPE SHALL BE PROVIDED ON ALL GRASSED AREAS.
 - A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS, WHERE 18 INCHES MINIMUM CLEARANCE CANNOT BE OBTAINED, THE UTILITY LINES SHALL BE CONCRETE ENCASED.
 - ALL CONSTRUCTION SHALL CONFORM TO LOWER SALFORD TOWNSHIP, PENN.D.O.T. AND/OR LOWER SALFORD TOWNSHIP AUTHORITY STANDARDS AND SPECIFICATIONS, WHICHEVER IS GREATER. INTERPRETATION SHALL REST WITH THE TOWNSHIP ENGINEER, OR HIS REPRESENTATIVE IN THE FIELD.
 - ALL SANITARY SEWER AND APPURTENANCES SHALL BE IN CONFORMANCE WITH THE LOWER SALFORD TOWNSHIP AUTHORITY (LSTA) STANDARDS. ALL LOW PRESSURE FORCE MAIN SEWER LINES SHALL BE DR-11 H.D.P.E. WITH ISOLATION VALVES. ALL LATERALS AND FITTINGS SHALL BE JOINED BY THE ELASTOMERIC GASKET SYSTEM CONFORMING TO ASTM D 3012. AIR RELEASE VALVE SHALL BE DEZURIK MODEL 400 WITH 2" INLET, OR EQUAL APPROVED BY SEWER AUTHORITY ENGINEER.
 - THE EXISTING SEWER AND SEWER LATERALS FOR THE EXISTING HOMES SHALL BE TELEVIEWED TO DETERMINE EXISTING CONDITIONS, AND RESULTS SHALL BE PROVIDED TO THE LSTA. BUILDING SEWERS AND SEWER LATERALS SHALL BE REPLACED AND/OR REPAIRED BY OWNER IF NECESSARY AS DETERMINED BY LSTA.
 - ALL WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
 - GAS, ELECTRIC AND CABLE TELEVISION FACILITIES FOR ALL LOTS SHALL BE PROVIDED BY UNDERGROUND SERVICE.
 - ALL GRAVITY PORTIONS OF SANITARY SEWER LATERALS SHALL BE LAID ON A SLOPE OF NOT LESS THAN 1/4 INCH PER FOOT AND HAVE 10 FEET OF HORIZONTAL SEPARATION BETWEEN THE LATERAL AND PROPOSED LANDSCAPING.
 - SANITARY SEWER SERVICE WILL BE PROVIDED TO THE BASEMENT ELEVATION FOR UNITS 1, 2, 4, 6, 8, AND TO THE FIRST FLOOR ELEVATION FOR UNITS 3, 5, 7, 9. SEWER SERVICE FOR UNITS 6-13 MAY BE PROVIDED IF THE GRINDER PUMP TANK IS LOCATED AT THE REAR OF THE UNIT.
 - NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPOIL. TOPSOIL MUST BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. UPON COMPLETION OF THE CONSTRUCTION, THE TOPSOIL MUST BE REDISTRIBUTED ON THE SITE UNIFORMLY, A MINIMUM 9" DEPTH, COMPACTED ON ALL DISTURBED AREAS I.E. SWALES, LOTS, BASIN BERMS AND PLANTING BUFFERS.
 - AT NO TIME SHALL PIPES BE LOCATED IN THE CORNERS OF THE INLET BOXES. ALL STORMSEWER PIPE REQUIRES 2 FEET MINIMUM COVER OVER THE TOP OF THE PIPE.
 - ROOF DOWNSPOUT COLLECTION PIPES SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT WELDED JOINTS OR SDR-35 PVC INTEGRAL GASKET PIPE MEETING ASTM F477. TWO FOOT (2') MINIMUM COVER, REFER TO TYPICAL TRENCH DETAIL FOR ROOF DRAIN BACKFILL REQUIREMENTS.
 - PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE STORM SEWER SYSTEM, STORM STRUCTURES, PIPE, ETC., CONCRETE, I.E., CURB, SIDEWALK, ETC., ALL AGGREGATES, ALL ASPHALT DESIGN MIXES, ETC.
 - PRIOR TO FABRICATION OR CONSTRUCTION, PROVIDE TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS RELATED TO THE PROPOSED RETAINING WALL ADJACENT TO UNIT 6, INCLUDING BACKFILL, REINFORCEMENT, TOP RAILING, ETC. THE SEGMENTAL BLOCK RETAINING WALL SHALL BE DESIGNED TO ACCOUNT FOR THE LOCATION OF INLET A8 WITHIN THE REINFORCEMENT AND TO ACCOUNT FOR THE 18 INCH Ø STORM SEWER PIPE FROM INLET A8 TO DW ENDWALL A9 THAT CROSSES BENEATH THE WALL.
 - PRIOR TO FABRICATION AND CONSTRUCTION, PROVIDE TO THE SEWER AUTHORITY ENGINEER FOR REVIEW AND APPROVAL, SHOP DRAWINGS/LITERATURE SUBMITTALS FOR ALL ITEMS PERTAINING TO THE SANITARY SEWER SYSTEM, I.E. MANHOLES, PIPE, AGGREGATE, ETC.
 - AT TIME OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE ELEVATIONS OF EXISTING 6" Ø SANITARY LATERALS (2 TOTAL) WHERE THEY ENTER EXISTING MANHOLES IN MAIN STREET, AND PROVIDE TO SEWER AUTHORITY ENGINEER.
 - CONTRACTOR SHOULD NOTE PROPOSED FLOOR, GARAGE, BASEMENT, FINISH GRADE, AND WALKOUT ELEVATIONS TO ENSURE STEPS AND MATERIALS ARE ADEQUATELY PROVIDED TO ENSURE COMPLIANCE WITH BUILDING AND GRADING REQUIREMENTS.
 - THERE ARE TWO EXISTING BELL TELEPHONE MANHOLES OVER A CONCRETE VAULT LOCATED ALONG MAIN STREET IMMEDIATELY ADJACENT TO PROPOSED CURB. BELL TELEPHONE SHALL BE NOTIFIED AND A REPRESENTATIVE MUST BE PRESENT FOR ANY WORK PERFORMED NEAR OR OVER THE VAULT. THE PROPOSED CURB SHALL BE INSTALLED OVER THE VAULT AND THE MANHOLES SHALL BE RAISED TO FINISH GRADE. THE MANHOLE RIMS SHALL ALSO BE SHIFTED HORIZONTALLY SO AS NOT TO CONFLICT WITH THE PROPOSED CURB.
 - SHOULD A SPRING OR AREA OF POOR DRAINAGE BE ENCOUNTERED, THIS AREA MUST BE UNDERDRAINED TO THE NEAREST STORM SEWER STRUCTURE OR AS DIRECTED BY THE TOWNSHIP ENGINEER OR THE TOWNSHIP ENGINEER'S REPRESENTATIVE IN THE FIELD.
 - PROPOSED CURBING INSTALLED ADJACENT TO GUIDE RAIL SHALL BE 4" REVEAL. GUIDE RAIL POST LENGTH SHALL BE EXTENDED VERTICALLY A MINIMUM OF 1" WHERE A 2" FLAT AREA IS NOT PROVIDED BETWEEN THE GUIDE RAIL AND TOP-OF-SLOPE.
 - A MINIMUM 6" LAYER OF "RIVER STONE", OVER WEED PREVENTION FABRIC, IS TO BE APPLIED TO THE 3" WIDE STRIP, SEE PREVIOUS DRAWING FOR FURTHER DETAILS.

UNDERGROUND UTILITY NOTE

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DESIGN SERIAL NO.: 5456593 (MAIN STREET)

DRAWING SCALE: 1" = 20'

No.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
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10	REVISED PER CKS LTR. (12-08-2016), MCMANON LTR. (12-07-2016)	NOVEMBER 10, 2017

(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

No.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

PLAN AND PROFILE MISCELLANEOUS STORM SEWER

AS PART OF
CLEMENS' MILL

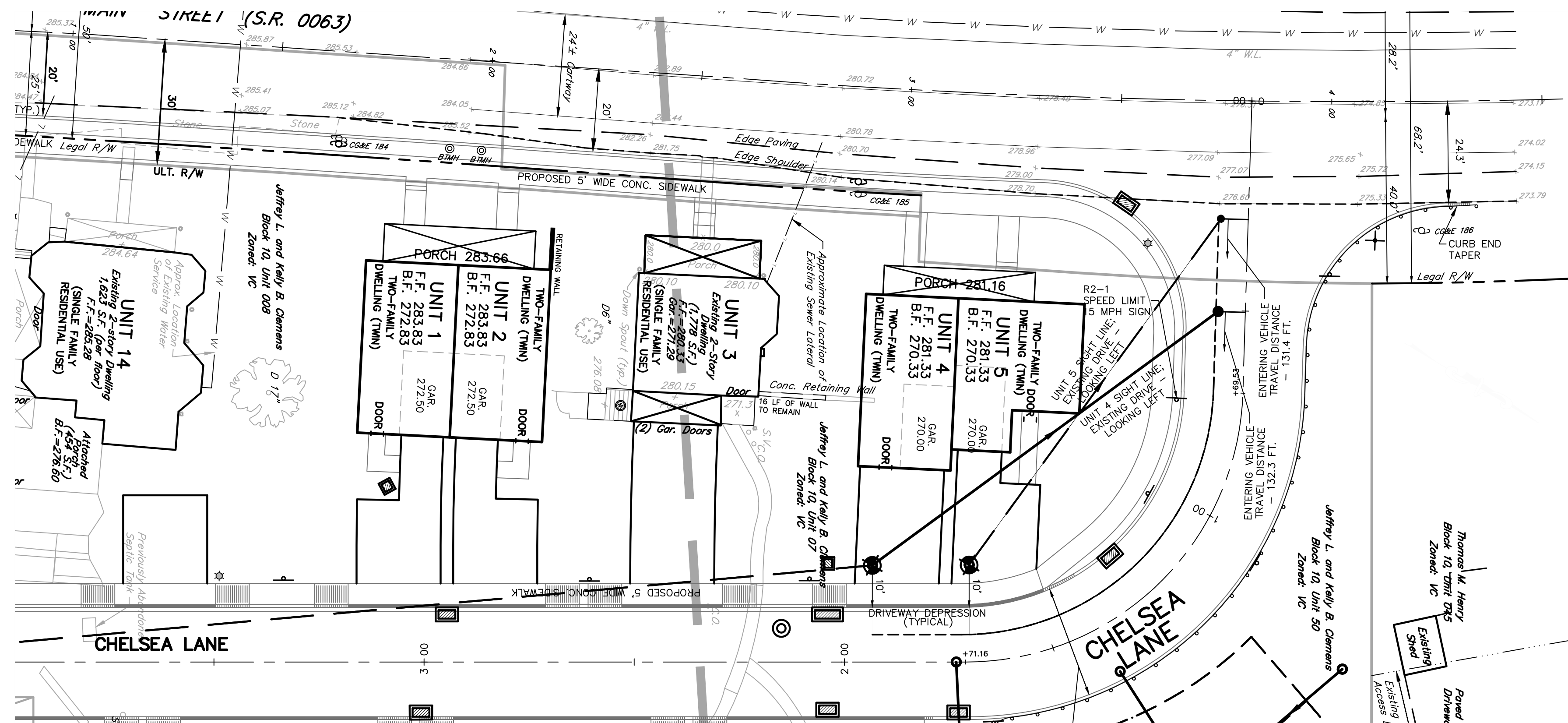
PREPARED FOR
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SITE SITUATE IN
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RCMA	D.B.C.	2283	17 OF 27

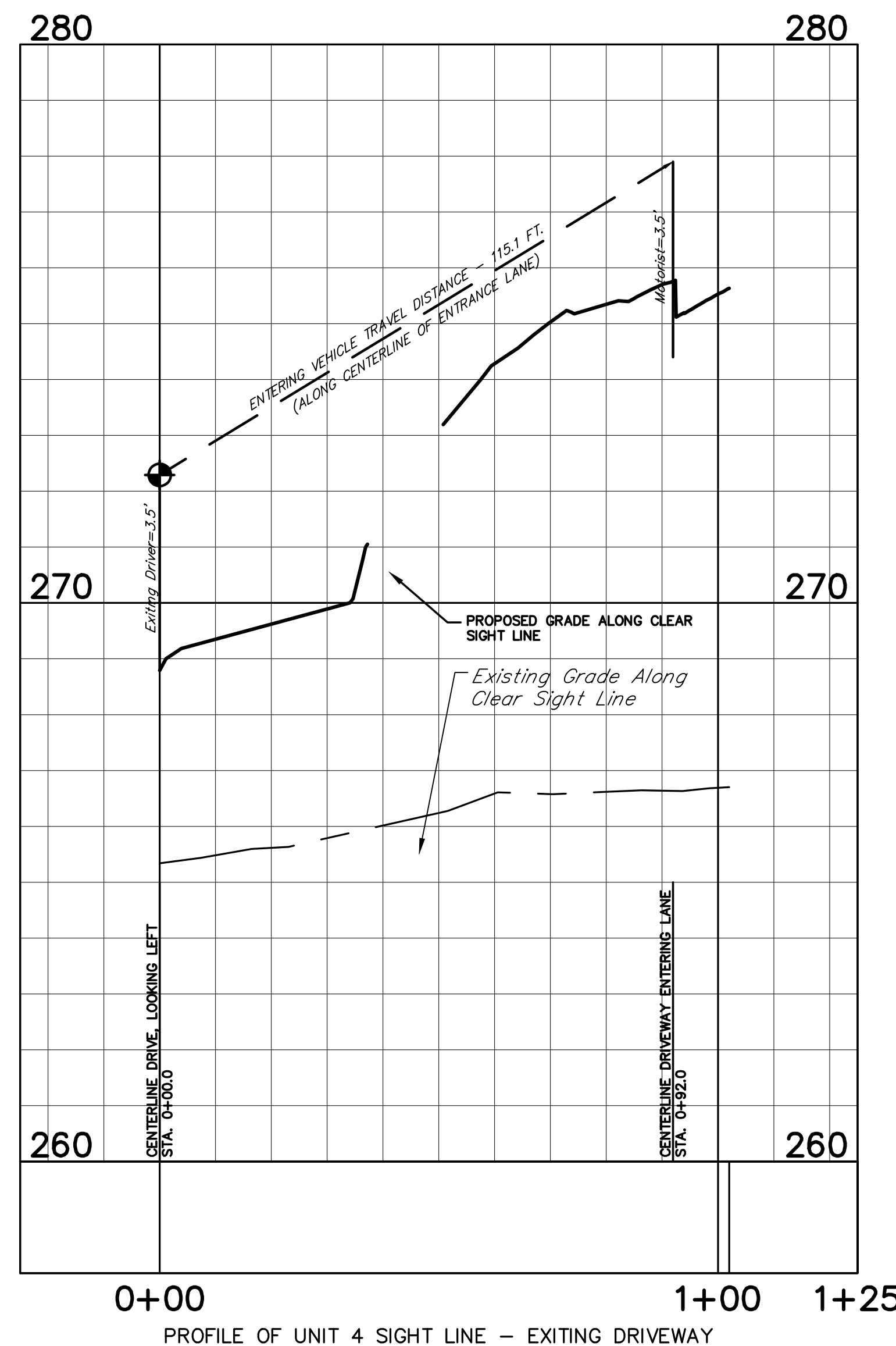


SIGHT DISTANCE SUMMARY

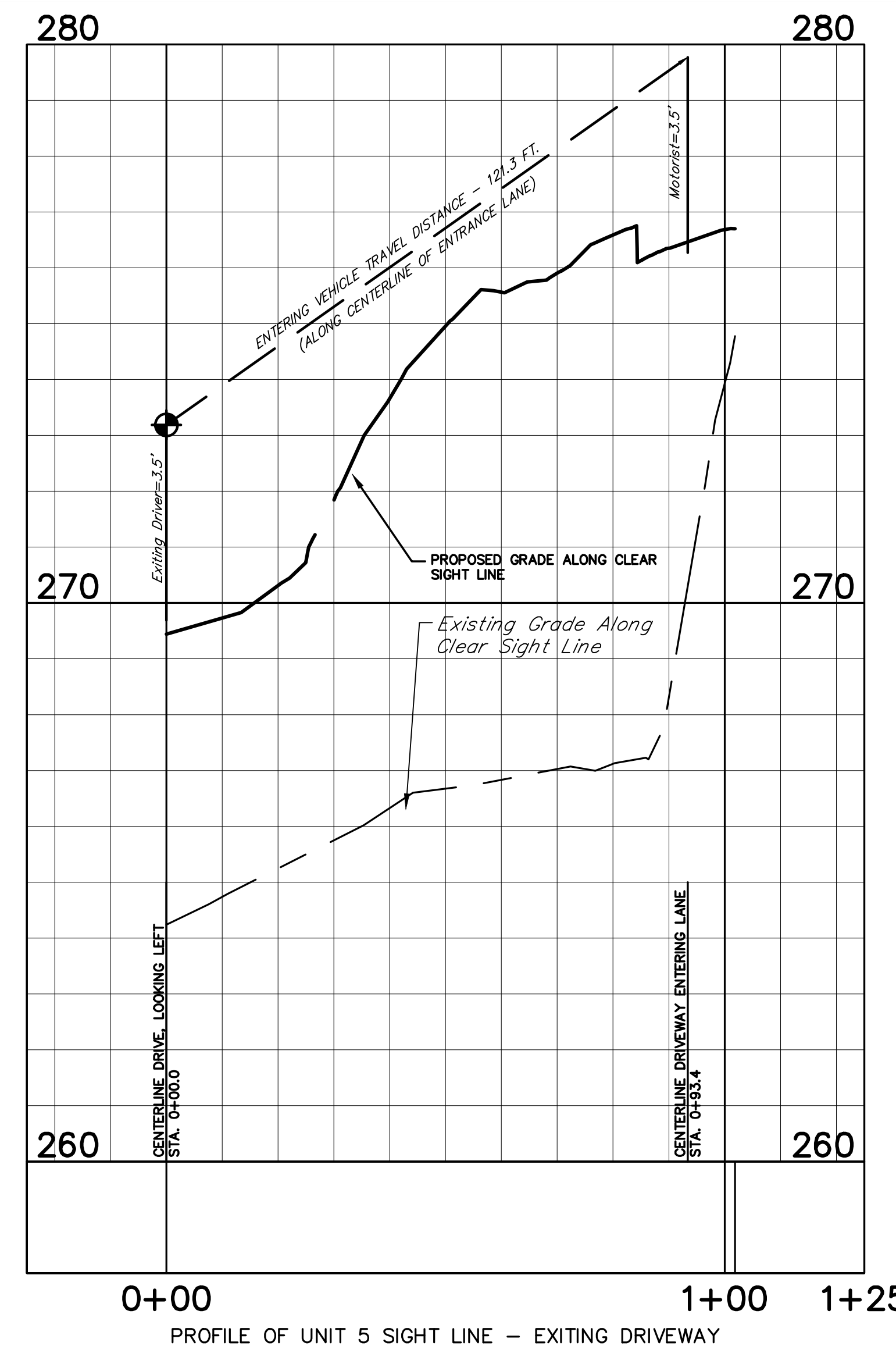
Sight Distance Summary					
Proposed Residential Driveways along Chelsea Lane					
Driveway No.	Direction	Vehicle Speed ¹	Approach Grade	Sight Distance (feet)	
				Min. Acceptable ²	Provided ³
4	To the Left	20 mph	-5.0%	127	132.3
	To the Right	20 mph	-5.2%	127	N/A
5	To the Left	20 mph	-5.0%	127	131.4
	To the Right	20 mph	-5.2%	127	N/A

1. Posted Speed Limit = 15MPH
2. Based on PENNDOT minimum acceptable sight distance values per PA Code, Title 67, Chapter 441.8.h.2.iv.
3. Existing (measured) sight distance

PENNDOT Minimum Acceptable Sight Distance $(1.47 \times V^2 + 5V^2) / 30(0.3 + g/100)$



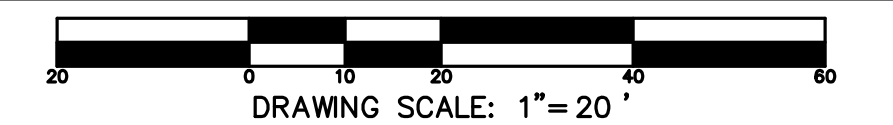
PROFILE OF UNIT 4 SIGHT LINE - EXITING DRIVEWAY



PROFILE OF UNIT 5 SIGHT LINE - EXITING DRIVEWAY

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No.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

PLAN AND PROFILE LOT 4-5 SIGHT LINES

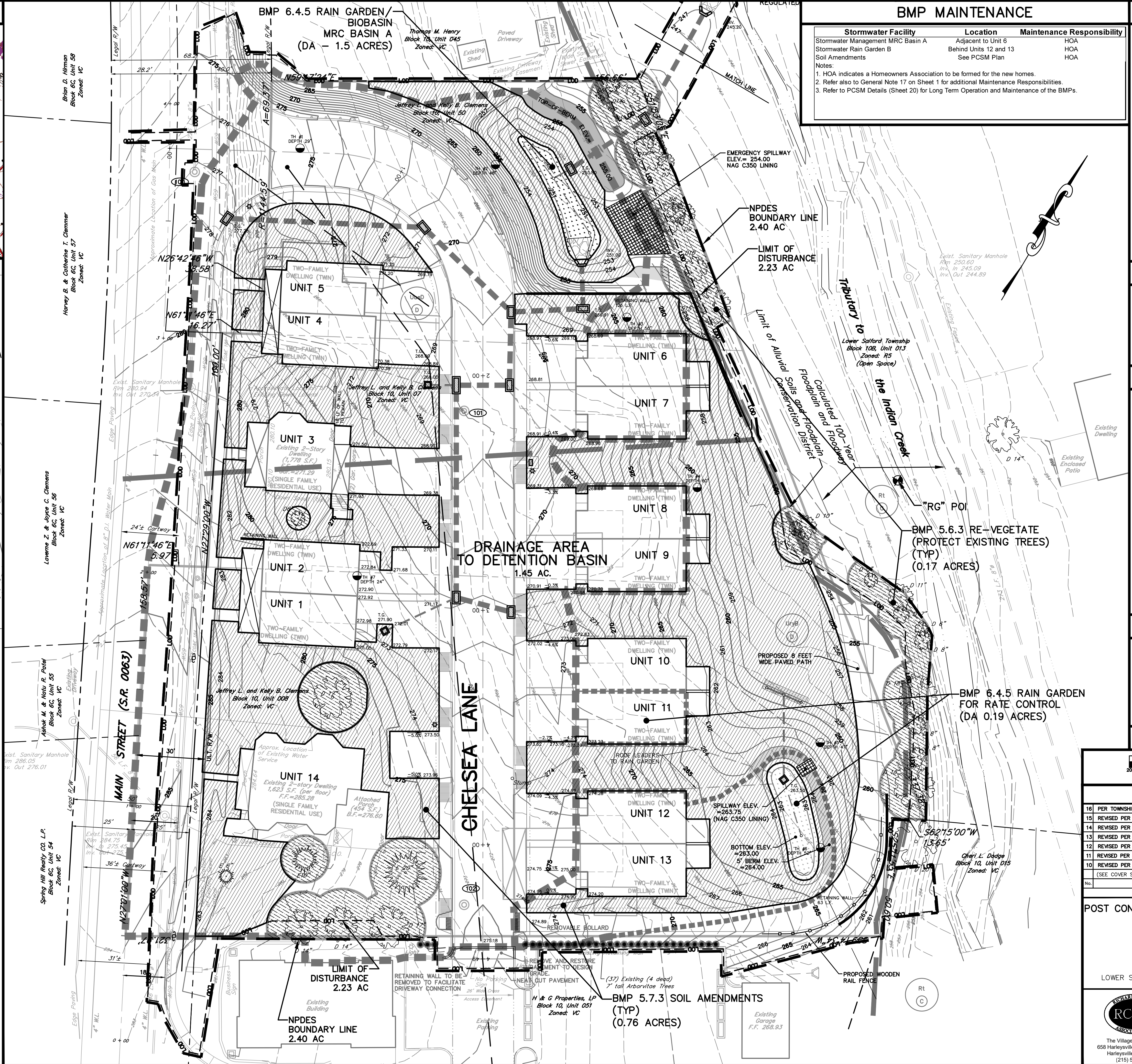
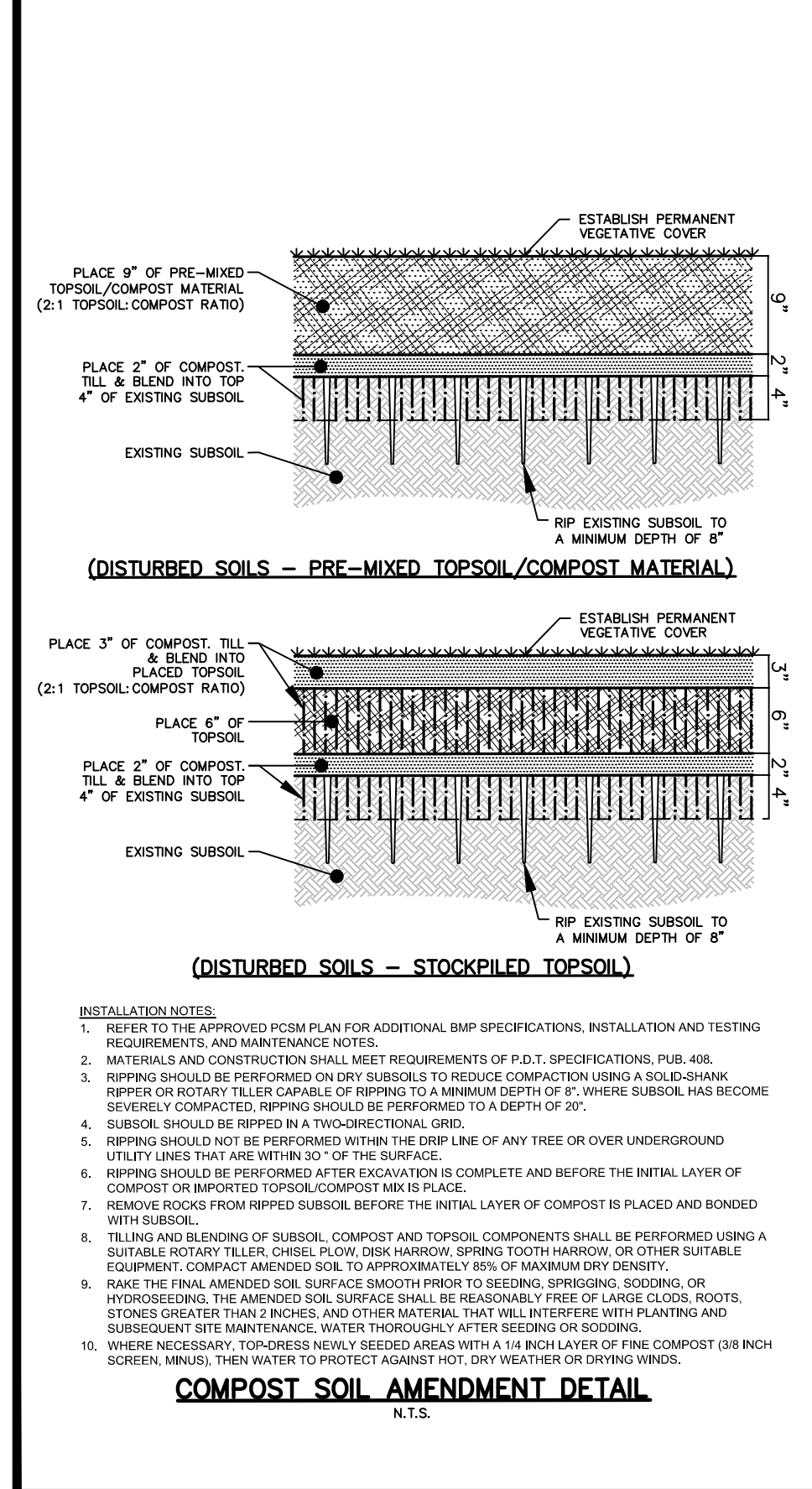
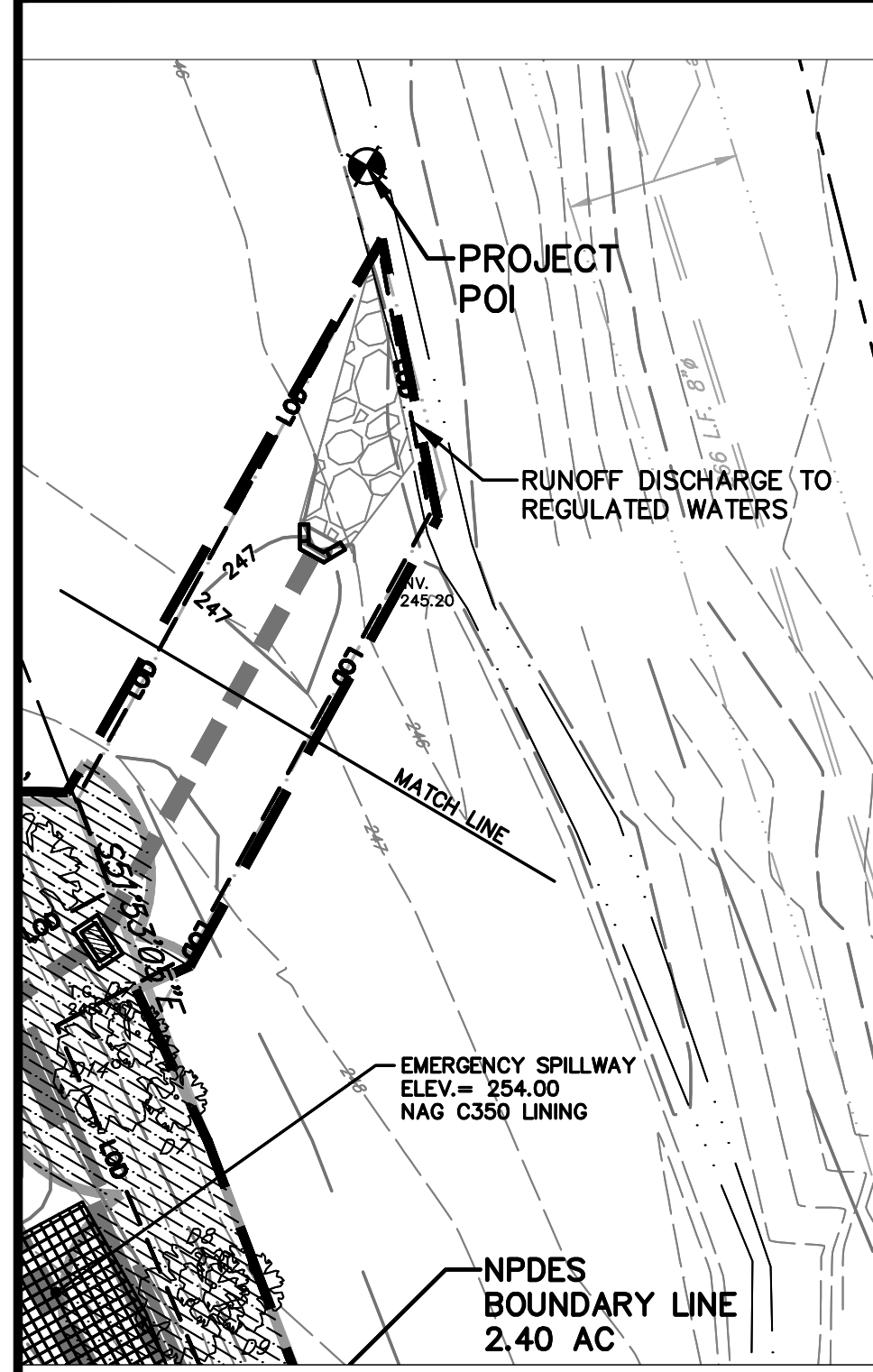
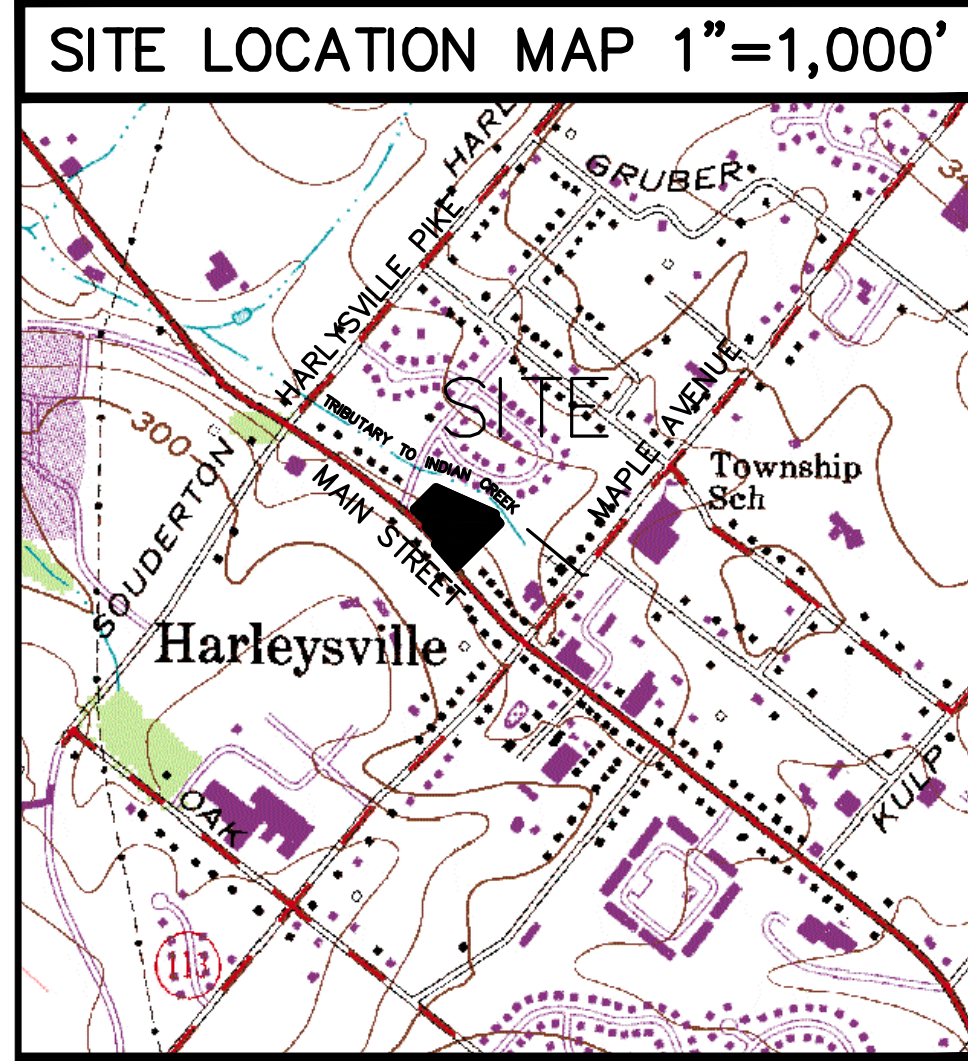
AS PART OF
CLEMENS' MILL
PREPARED FOR
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SITE SITUATE IN
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PROJECT NO.: 2283
DRAWING NO.: 18 OF 27



BMP MAINTENANCE

Stormwater Facility	Location	Maintenance Responsibility
Stormwater Management MRC Basin A	Adjacent to Unit 6	HOA
Stormwater Rain Garden B	Behind Units 12 and 13	HOA
Soil Amendments	See PCSM Plan	HOA

Notes:
 1. HOA indicates a Homeowners Association to be formed for the new homes.
 2. Refer also to General Note 17 on Sheet 1 for additional Maintenance Responsibilities.
 3. Refer to PCSM Details (Sheet 20) for Long Term Operation and Maintenance of the BMPs.

LEGEND

- BIORETENTION
- MINIMAL DISTURBANCE AREA
- TREE PROTECTION AREA (TREES WITHIN 100' OF IMP. SURFACES)
- SOIL RESTORATION / AMENDED SOILS
- LOD
- PROP. LIMIT OF DISTURBANCE LINE
- PROP. NPDES BOUNDARY LINE
- INDICATES SOILS BOUNDARY
- INDICATES SOILS TYPE LABEL
- INFILTRATION TEST SITE

SOIL INFILTRATION TESTING

Test Location	Depth of Test Pit (ft)	Depth to Water (ft)	Depth to Rock (ft)	Depth of Testing (ft)	Infiltration Rate (in/hr)	Ex. Grade El. at Test Location (ft)	Depth to Rock El. (ft)	Depth of Testing El. (ft)
1	22	11	29	N/A	0.0	265.17	263.75	N/A
2	48	15	48	N/A	0.0	257.62	253.62	N/A
3	50	---	50	42	10.0	257.60	253.43	254.10
4	60	15	60	N/A	0.0	256.29	251.29	N/A
5	47	---	47	47	0.5	259.54	255.62	255.62
6	52	---	52	52	1.0	261.78	257.45	257.45
7	24	---	24	7	4.7	273.56	271.56	272.98

Depth to Water - indicates the depth to water seepage

LANDSCAPE RESTORATION

COMMON NAME	SIZE	QUANTITY
RED MAPLE	3" CAL	17
SYCAMORE	3" CAL	14
WHITE OAK	3" CAL	3
RED OAK	3" CAL	5
EASTERN WHITE PINE	3" CAL	8

COMMON NAME	SIZE	QUANTITY
WINTERBERRY	30" HT.	23
INKBERRY	18-24" HT.	7
RED CHOKEBERRY	18-24" HT.	6

* RAIN GARDEN FLOOR AND BASIN FLOOR TO BE PLANTED WITH 75% ERMX-180 RAIN GARDEN MIX AND 25% RYE GRASS.

REFER TO SHEET 20 FOR BMP DETAILS, SOIL AMENDMENT SPECIFICATIONS, AND BMP SEEDING SPECIFICATIONS.
 BMP 6.7.2 LANDSCAPE RESTORATION - REFER TO LANDSCAPING PLAN (SHEET 5) FOR SPECIFIC TREE LOCATIONS.

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PCSM RECORD PLAN SHEET 1 OF 3

DRAWING SCALE: 1" = 20'

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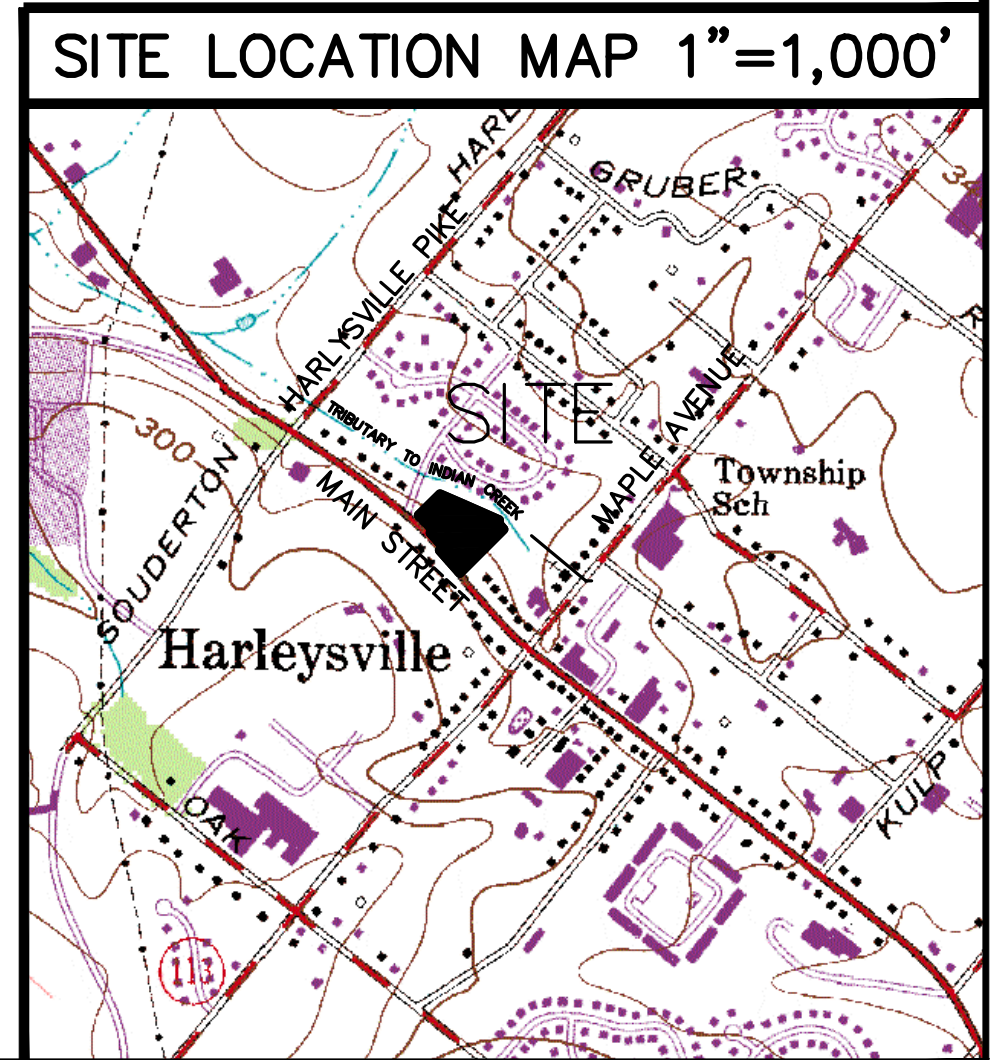
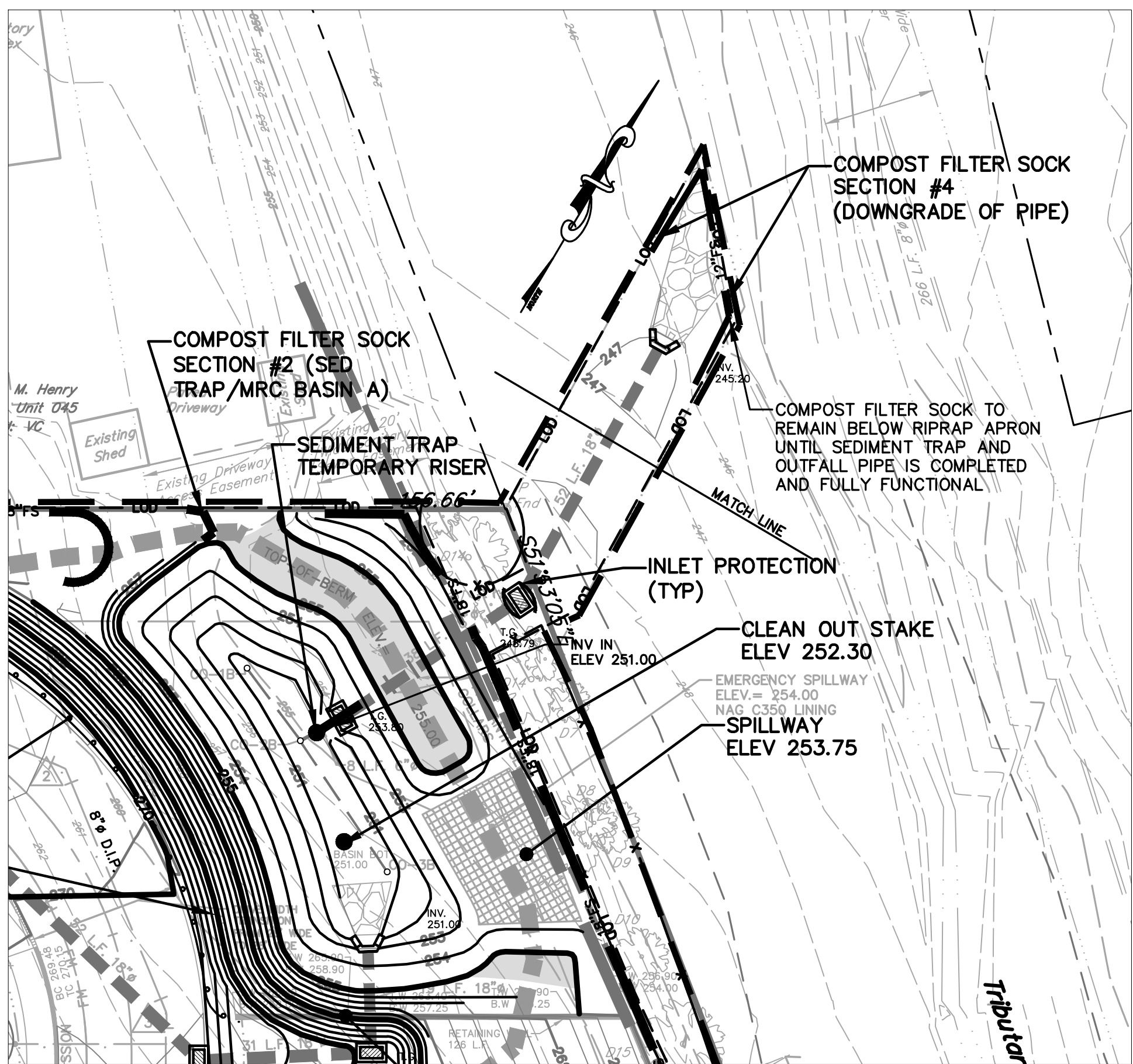
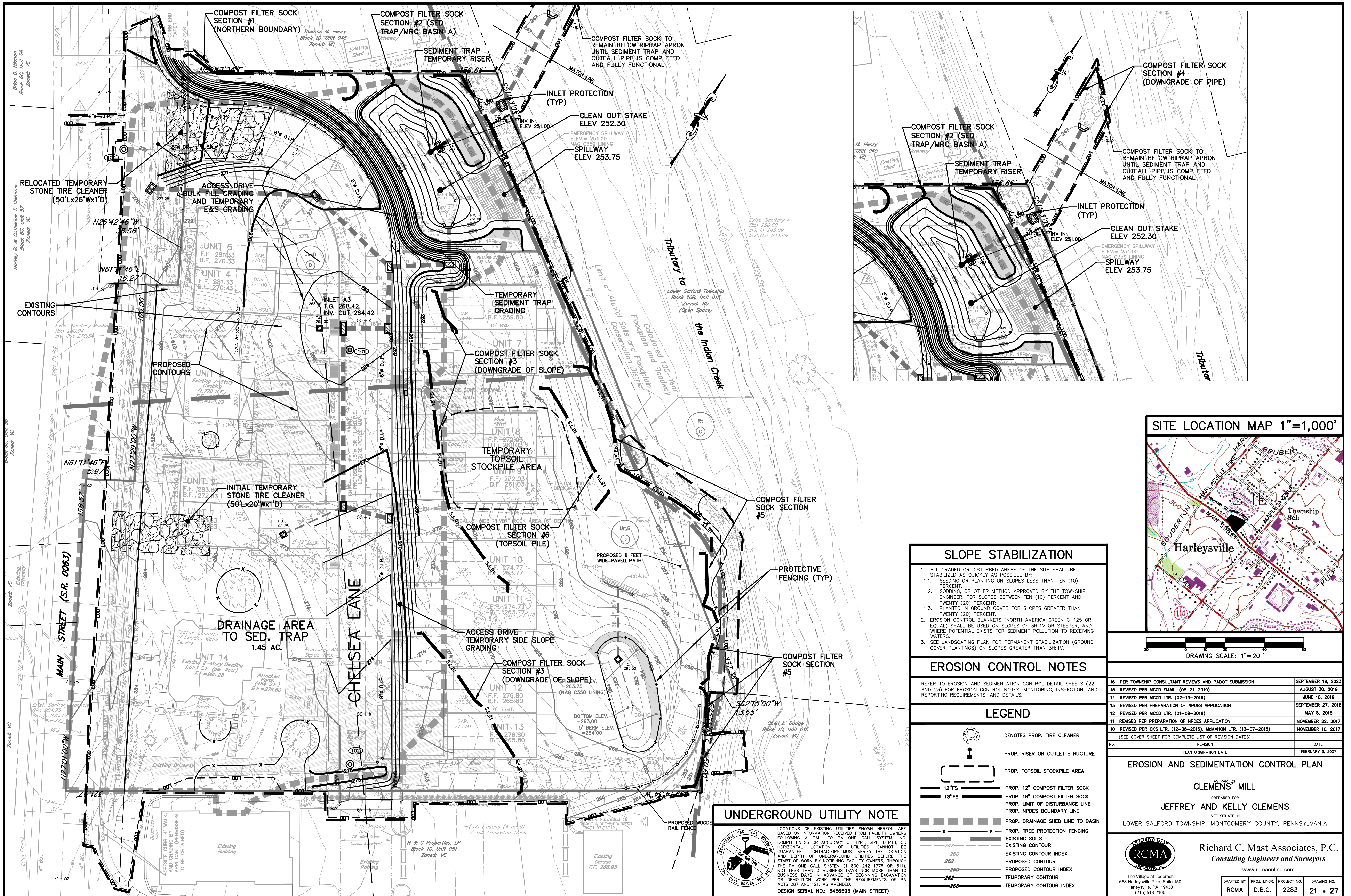
POST CONSTRUCTION STORM WATER MANAGEMENT PLAN

AS PART OF
CLEMENS' MILL
 PREPARED FOR
JEFFREY AND KELLY CLEMENS
 SITE SITUATE IN
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 PROJECT NO.: 2283
 DRAWING NO.: 19 OF 27



SLOPE STABILIZATION

- ALL GRADED OR DISTURBED AREAS OF THE SITE SHALL BE STABILIZED AS QUICKLY AS POSSIBLE BY:
 - SEEDING OR PLANTING ON SLOPES LESS THAN TEN (10) PERCENT.
 - SOODING, OR OTHER METHOD APPROVED BY THE TOWNSHIP ENGINEER, FOR SLOPES BETWEEN TEN (10) PERCENT AND TWENTY (20) PERCENT.
 - PLANTED IN GROUND COVER FOR SLOPES GREATER THAN TWENTY (20) PERCENT.
- EROSION CONTROL BLANKETS (NORTH AMERICA GREEN C-125 OR EQUAL) SHALL BE USED ON SLOPES OF 3H:1V OR STEEPER, AND WHERE POTENTIAL EXISTS FOR SEDIMENT POLLUTION TO RECEIVING WATERS.
- SEE LANDSCAPING PLAN FOR PERMANENT STABILIZATION (GROUND COVER PLANTINGS) ON SLOPES GREATER THAN 3H:1V.

EROSION CONTROL NOTES

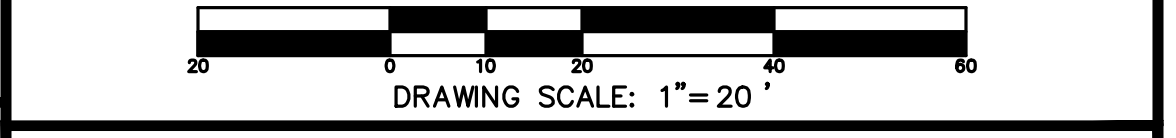
REFER TO EROSION AND SEDIMENTATION CONTROL DETAIL SHEETS (22 AND 23) FOR EROSION CONTROL NOTES, MONITORING, INSPECTION, AND REPORTING REQUIREMENTS, AND DETAILS.

LEGEND

- DENOTES PROP. TIRE CLEANER
- PROP. RISER ON OUTLET STRUCTURE
- PROP. TOPSOIL STOCKPILE AREA
- PROP. 12" COMPOST FILTER SOCK
- PROP. 18" COMPOST FILTER SOCK
- PROP. LIMIT OF DISTURBANCE LINE
- PROP. NPDES BOUNDARY LINE
- PROP. DRAINAGE SHED LINE TO BASIN
- PROP. TREE PROTECTION FENCING
- EXISTING SOILS
- EXISTING CONTOUR
- EXISTING CONTOUR INDEX
- PROPOSED CONTOUR
- PROPOSED CONTOUR INDEX
- TEMPORARY CONTOUR
- TEMPORARY CONTOUR INDEX

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PLAN ORIGINATION DATE		FEBRUARY 6, 2007

EROSION AND SEDIMENTATION CONTROL PLAN

AS PART OF
CLEMENS' MILL
PREPARED FOR
JEFFREY AND KELLY CLEMENS
SITE SITUATE IN
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RCMA	D.B.C.	2283	21 OF 27

EROSION CONTROL NOTES

- General
- 1. Earth disturbance activities for the project site has been planned and designed, to the extent practicable, in order to accomplish the following:
 - The E&S Plan will, to the extent practicable, minimize the extent and duration of the earth disturbance by minimizing the limit of disturbance to only those areas required for the planned development of the site and by sequencing construction activities, as specified in the E&S Plan, to minimize the duration of construction activities.
 - The E&S Plan will, to the extent practicable, maximize protection of existing drainage features and vegetation by minimizing the limit of disturbance to only those areas required for the planned development of the site and by minimizing disturbance of areas that may adversely affect existing site drainage features.
 - The E&S Plan will, to the extent practicable, minimize soil compaction by minimizing the limit of disturbance, and restricting construction activities and vehicles to within the limit of disturbance, to only those areas required for the planned development of the site.
 - The E&S Plan will, to the extent practicable, utilize measures or controls that prevent or minimize the generation of increased stormwater runoff by applying the guidelines presented in the PADEP Erosion and Sediment Pollution Control Program Manual for the design of the proposed BMPs described in the E&S Plan. All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S Plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
- 2. All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S Plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
- 3. At least 7 days prior to starting any earthmoving activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for the design of the proposed implementation of the PCSM Plan, and a representative from the local conservation district to an on-site preconstruction meeting. Upon installation or stabilization of all perimeter sediment control BMPs and at least three (3) days prior to proceeding with the bulk earth disturbance activities, the Permittee or Co-permittee shall provide notification to the PADEP or authorized County Conservation District.
- 4. At least 30 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System, Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
- 6. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from the sequence must be approved by the local conservation district or by the PADEP prior to implementation. Each step of the sequence shall be completed before proceeding to the next step, except where noted.
- 7. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until all E&S BMPs specified by the BMP sequence for that stage or phase have been installed and are functioning as described in this E&S plan. These areas must be clearly marked and fenced off before clearing and grubbing operation begin.
- 8. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan maps) in the amount necessary to complete the finish grading of all exposed areas that are to be stabilized by vegetation. Each stockpile shall be protected in the manner shown on the plan drawings. Stockpile height shall not exceed 35 feet. Stockpile slopes shall be 2H:1V or flatter.
- 9. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the local conservation district and/or regional office of the PADEP.
- 10. All off-site waste and borrow areas must have an E&S plan approved by the local conservation district or the PADEP fully implemented prior to being activated.
- 11. All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas. All water pumped from a disturbed area must be treated for sediment removal prior to discharging to a surface water. Pumped water may be discharged through a properly functioning sediment trap or sediment basin or through a sediment control BMP such as a pumped water filter bag.
- 12. A Rock Construction Entrance shall be installed wherever it is known that construction vehicles will be entering onto a roadway (public or private).
- 13. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site immediately and disposed of in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or other waterway.
- 14. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches, 6 to 12 inches on compacted soils, prior to placement of topsoil. Areas to be vegetated shall have a minimum 6 inches of topsoil in place prior to seeding and mulching. Fill outcrops shall have a minimum of 2 inches of topsoil.
- 15. Seeps or springs encountered during construction shall be handled in accordance with the standard and specifications for subsurface drain of other approved method.
- 16. E&S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the local conservation district or the PADEP.
- 17. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of primary E&S BMPs.
- 18. After final site stabilization has been achieved, temporary E&S BMPs must be removed or converted to PCSM BMPs. Areas disturbed during removal or conversion of the BMPs shall be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal/conversions are to be done only during the germinating season.
- 19. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
- 20. Failure to correctly install E&S BMPs, failure to prevent sediment/runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S BMPs may result in administrative, civil and criminal penalties being instituted by the PADEP as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to \$10,000 per civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation.

BMP Maintenance and Monitoring

- 21. Until the site is stabilized, all E&S BMPs shall be maintained properly. Maintenance shall include inspections of all E&S BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, upgrading, reseeding, removing and resetting must be performed immediately. If E&S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
- 22. A log showing dates that E&S BMPs were inspected as well as any deficiencies noted and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
- 23. Maintain all erosion control facilities through the working period of each area. Contractor shall remove accumulated sediment to maintain effectiveness of erosion control facilities when capacity is reduced by a maximum of 25%.
- 24. All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
- 25. Sediment removed from BMPs shall be disposed of in landscape areas outside of steep slopes, wetlands, floodplains or drainage swales and immediately stabilized, or placed in topsoil stockpiles.
- 26. Stormwater inlets must be protected until the tributary areas are stabilized. Sediment must be removed from stormwater inlet protection after each runoff event. The use of mastic or equivalent is recommended in all inlets located within grassed areas and PCSM BMP areas to prevent soil from migrating into the storm sewer or infiltration area through unsealed joints in the box and top.
- 27. Sediment must be removed from all fenced/sloped stockpiles whenever accumulated sediment reaches 1/3 above ground height of site fencing/silt sock. Any silt fencing/silt sock, which has been undammed or topped, shall be replaced with rock filter outlets immediately.
- 28. The project site is located within the East Branch Perkiomen Creek Watershed (Basin). Runoff from the project site drains into the Indian Creek (reach 02040203001208). The classification pursuant to Chapter 93 and the Statewide Designated Use Listing are: TSE, M. The Indian Creek is impaired according to Category 5 of the current Integrated Water Quality Monitoring and Assessment Report.
- 29. Construction Vehicles:
 - At no time shall construction vehicles be allowed to enter the areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
 - Construction vehicles must exit the site through an installed Rock Construction Entrance. Construction vehicles are prohibited from exiting the site through any other access way.
- 30. Recycling and Disposal of Materials:
 - All building materials and wastes must be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code Ch. 260a (relating to hazardous waste management system - general), Ch. 271 (relating to municipal waste management system - general provisions), and Ch. 287 (relating to residual waste management system - general provisions). No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
 - Anticipated construction/demolition waste materials from the project include the following: E&S BMP materials, wood, plaster, metals, asphaltic substances, bricks, block and unsegmented concrete.
 - Under no circumstances may E&S BMPs be used for temporary storage of demolition materials or construction wastes.
- 31. Concrete Washout: A suitable washout facility must be provided for the cleaning of chutes, mixers, and hoppers of the concrete delivery vehicle. Under no circumstances may wash water from these vehicles be allowed to enter any surface water.
- 32. The contractor is responsible for ensuring that any material brought on the site is clean fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.
- 33. Clean Fill is defined as: Uncontaminated, non-water soluble, non-decomposable, inert, solid material to include soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. The term "used asphalt" does not include milled asphalt or asphalt that has been processed for re-use.
- 34. Environmental due diligence. The applicant must perform environmental due diligence to determine if the fill materials associated with the project qualify as clean fill. Environmental due diligence is defined as: Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Stateform maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of the Department's policy "Management of Fill."
- 35. Fill material that does not qualify as clean fill is regulated fill. Regulated fill is waste and must be managed in accordance with the Department's municipal residual waste regulations based on 25 Pa. Code Chapters 287 Residual Waste Management or 271 Municipal Waste Management, whichever is applicable. These regulations are available on-line at www.pasdepa.com.
- 36. Areas to be filled are to be cleared, grubbed, and stripped of topsoil and to be free of trees, vegetation, roots and other objectionable material.
- 37. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and concrete, etc. shall be compacted in accordance with local requirements and codes.
- 38. All earthen fills shall be placed in compacted layers no thicker than 9 inches in thickness unless otherwise noted.
- 39. All fills shall be free of frozen particles, brush, roots, soil, or foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
- 40. Frozen materials of soft, mucky, or highly compressible materials shall not be incorporated into fills.

MONITORING, INSPECTION, AND REPORTING REQUIREMENTS

- 1. The permittee and co-permittee(s) must ensure that visual site inspections are conducted weekly, and within 24 hours after each measurable rainfall event throughout the duration of construction and until the receipt and acknowledgment of the NOT by the department or authorized conservation district. The visual site inspections and reports shall be completed in a format provided by the department, and conducted by qualified personnel, trained and experienced in erosion and sediment control, to ascertain that E&S BMPs and PCSM BMPs are properly constructed and maintained to effectively minimize pollution to the waters of this Commonwealth. A written report of each inspection shall be kept and include at a minimum:
 - A summary of site conditions, E&S BMP and PCSM BMP, implementation and maintenance and compliance actions; and
 - The date, time, name and signature of the person conducting the inspection.
- 2. Where E&S, PCSM or PFC BMPs are found to be ineffective or ineffective during an inspection, or any other time, the permittee and co-permittee(s) shall, within 24 hours, contact the department or authorized conservation district, by phone or personal contact, followed by the submission of a written report within 5 days of the initial contact. Noncompliance reports shall include the following information:
 - Any condition on the project site which may endanger public health, safety, or the environment, or involve incidents which cause or threaten pollution;
 - The period of noncompliance, including exact dates and times and/or anticipated time when the activity will return to compliance;
 - Steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance; and
 - The date or schedule of dates, and identifying remedies for correcting noncompliance conditions.
- 3. Upon reduction, loss, or failure of the BMPs, the permittee and co-permittee shall take immediate action to restore the BMPs or provide an alternative method of treatment. Such restored BMPs or alternative treatment shall be at least as effective as the original BMPs.
- 4. NOT: Upon permanent stabilization of earth disturbance activities associated with construction activity that are authorized by this permit and when BMPs identified in the PCSM Plan have been properly installed, the permittee or co-permittee of the facility must submit a NOT form that is signed in accordance with Part B, Section 1.c, Signatory Requirements, of this permit. All letters certifying compliance terminate with the date of the department or authorized conservation district. The NOT must contain the following information: facility name, address, and location, operator name and address, permit number, identification and proof of acknowledgment from the person(s) who will be responsible for operation and maintenance of the PCSM BMPs in accordance with the approved PCSM Plan, and the reason for permit termination. Until the permittee has received written acknowledgement of the NOT, the permittee will remain responsible for operating and maintaining all E&S BMPs and PCSM BMPs on the project site and will be responsible for violations occurring on the project site.
- 5. **COMPLETION CERTIFICATE AND FINAL PLANS**
 - Within 30 days after the completion of earth disturbance activities authorized by this permit, including the permanent stabilization of the site and proper installation of PCSM BMPs in accordance with the approved PCSM Plan, or upon submission of the NOT if sooner, the permittee shall file with the department or authorized conservation district a statement signed by a licensed professional and by the permittee certifying that work has been performed in accordance with the terms and conditions of this permit and the approved E&S and PCSM Plans.

EARTHMOVING/BMP CONSTRUCTION SEQUENCE

- In order to keep erosion and sediment pollution during construction to an absolute minimum, the following procedures and stages shall be followed:
 - Install initial E&S Controls:
 - Contractor to install, or cause to have installed, location markers for existing underground utilities along the Main Street frontage and within the project site, including, but not limited to, underground electric, water, sewer, and/or gas lines.
 - (CRITICAL STAGE Contact licensed Professional) Install location markers for limit of disturbance, tree protection fencing, and BMP isolation fencing (rain garden BMP).
 - From existing driveways, install Composite Fiber Sock (FS) #1, #2, #3, & #4 downgrade from proposed road and sediment trap at shown.
 - Construct INITIAL storm construction entrance from Main Street as shown and according to detail.
 - Install a Concrete Washout Station (see Figure 3.18).
 - INTERNAL IMPROVEMENTS:
 - Construct Storm Outfall #1-B3 and Sediment Trap:
 - Ensure FS #2 is installed below proposed trap construction. Clear and Grub for sediment trap only.
 - Strip topsoil over basin area and stockpile where shown. Install FS below stockpile.
 - Rough grade Sed. Trap to design subgrade. Rough grade embankment (berm) and emergency spillway to 1' below specified finish grade elevations. NOTE: Do not excavate to bottom of permanent basin BMP during fill.
 - Install FS #4 below Endwall B1 (where shown). Install outlet protection to B1 and construct storm B1-B3 including specified anti-seep collars. Install inlet filter at B2.
 - Install temporary sizer and skimmer over outlet structure office, stone skimmer landing, dewatering facility, spillway TRM liner, and clean-out stake.
 - Remove FS barrier below B1.
 - (CRITICAL STAGE Contact licensed Professional) Distribute 2" of compost over proposed embankment and side slopes. Scarify subgrade. Distribute 1" of Amended Topsoil Mixture to completed areas.
 - Finish grade completed areas. Stabilize basin side slopes with specified erosion, silt control blanket and permanent seed. Stabilize all other areas with permanent seed and mulch.
 - Permanent facility planting soil mixture and forestry to be installed later.
 - Perform all necessary demolition of pool, sheds, fences, and walks, and trebuchet clearing and grubbing. Features to be removed are detailed on the "Existing Features - Demolition Plan." Clean acceptable fill may be reused onsite as permitted by Lower Salford Township. Remove debris from the site in accordance with waste disposal regulations.
 - Construct Storm A9-A8-A7 and Amended Topsoil Mixture with Sediment Trap and construct temporary grading proposed along Main Street embankment and storm culvert as shown. This will convey runoff to the sediment trap during filling and grading activities for the access drive.
 - Perform bulk cut/fills and rough grading operations for construction of the access drive and temporary E&S grading (as shown):
 - Strip and stockpile topsoil over proposed access drive and temporary E&S grading. After topsoil is stripped and stockpiled, re-stabilize stockpile with temporary seed and mulch.
 - Perform bulk cuts & fills, including temporary E&S grading, and rough grade access drive to design subgrade.
 - Construct Storm A7-A4-A3 as soon possible (when sufficient structural cover over pipes is available) in order to convey captured upfill runoff to the sediment trap. Direct runoff into Inlet A3.
 - Stabilize steep slopes proposed along north side of access drive with slope stabilization matting.
 - After completion of access drive bulk earthmoving, the site TIE Cleaner shall be RELOCATED to the new drive entrance from Main Street (as shown). A portion of guide rail must be removed to permit access into the site from the location.
 - Construct Main Street proposed improvements:
 - Main Street improvements may begin only AFTER completion of Stages #1 through #6.
 - Complete Main Street improvements in accordance with issued PA001 Highway Occupancy Permit.
 - Complete Main Street improvements according to CONSTRUCTION SEQUENCE provided on the PLAN AND PROFILE - MAIN STREET (E.C.R. 0003) drawing sheet.
 - Frontage improvements may be completed concurrently with on-site construction, detailed in the following steps:
 - Main Street to be kept clean at all times and must be swept as required throughout the day and at the end of each workday.
 - Perform remaining site wide bulk cut/fills and rough grading operations:
 - Install remaining FS #5 & #6, then remove FS #5 (below access drive bulk grading).
 - Construction activities around and over the proposed rain garden BMP must be completed in accordance with specific staging and construction notes for the BMP. See Detail.
 - Strip topsoil to stockpile for remainder of construction site.
 - Perform bulk cuts & fills for building pads to design subgrade.
 - Disturbed areas not to be completed immediately shall be stabilized with temporary seed and mulch.
 - Construct proposed sanitary sewer force main and proposed potable water main, including lateral and service stubs. Trenches in roadways to be filled with soil, in required fills, and compacted per requirements. All installed stub locations to be marked with a visual demarcation.
 - Construct remaining storm sewers, except Rain Garden outfall pipe. Install inlet filters immediately over all inlets.
 - Begin construction of remaining improvements, including dwellings and path.
 - Install all remaining underground utilities.
 - Complete internal access to macadam base course:
 - Finish grade access drive for curb and sidewalk installation.
 - After passing the required Subgrade Stability Verification, install curbs, stone base and bituminous base course.
 - Construct access drive curbs including driveway depressions and sidewalk ramps.
 - Remove site TIE Cleaner and install stone base course and bituminous base course.
 - Final construction equipment and vehicles shall enter completed access drive over individual tire cleaners.
 - Replace earthen Water Bars with macadam Water Bars as necessary to ensure inlet capture.
 - Construct all on-site sidewalks. Stabilize disturbed areas.
 - Complete construction of each attached dwelling building:
 - Construct proposed trench building and improvements, including dewatering, electrocables utility connectors, sanitary sewer lateral clean-out chamber, grinder pump tank, gravelly sewer lateral, water service, roof drains, and driveway to macadam base course.
 - Roof drains are to be constructed to discharge locations as shown (i.e. inlet, basin, overground, etc.)
 - Complete lot to design subgrade (8' below finish grade).
 - (CRITICAL STAGE Contact licensed Professional) Distribute 2" of compost and scarify subgrade.
 - (CRITICAL STAGE Contact licensed Professional) Distribute 1" of specified Amended Topsoil Mixture over designated lawn areas. Additional initial seed is recommended to ensure minimum depth is provided the time of final inspection.
 - (CRITICAL STAGE Contact licensed Professional) If desired, install proposed landscaping surrounding completed units.
- Finish grade completed lawns and stabilize disturbed areas with specified permanent seed mixture and mulch.
- (CRITICAL STAGE Contact licensed Professional) Following construction of town units 12 & 13, Construct Rain Garden BMP as per detail and utilizing specific BMP construction staging provided on said detail.
- Protect stormwater BMPs against sedimentation during lot finish grading. Finish grade and stabilize disturbed areas with permanent seed and straw mulch.
- Complete construction of all proposed improvements and utilities (except placement of Amended Planting Soil in basin bottom and rain garden bottom).
- (CRITICAL STAGE Contact licensed Professional) Apply Amended Topsoil Mixture to all designated areas.
- Complete construction outlined in stages 15.1-15.4 above.
- An area shall be considered to have achieved final stabilization when it has a minimum uniform 70% (percent) vegetative or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.
- (CRITICAL STAGE Contact licensed Professional) Follows final stabilization of site, convert temporary sediment trap to permanent MRC Basin A condition.
 - Pump out sediment trap using dewatering facility and filter bag.
 - Remove temporary skimmer, riser, and other temporary structures.
 - Install straw bale over outfall orifice.
 - From outside basin bottom area, remove collected sediment. Distribute sediment over lawn area surrounding basin and stabilize immediately.
- (CRITICAL STAGE Contact licensed Professional) Construct basin bottom Rain Garden / Bioretention BMP as per detail and utilizing specific BMP construction staging provided on said detail.
- Stabilize ALL disturbed areas with permanent seed and straw mulch.
- Remove remaining temporary erosion control measures and distribute collected sediment to area adjacent to construction activities (i.e. signs, mailboxes, etc.). Complete all municipal inspection and punchlist items. Install all remaining bioretention weeping courses. Install all permanent signage and staking.
- Install permanent ground cover to steep slope embankment along north side of access drive. (CRITICAL STAGE Contact licensed Professional) Install all remaining landscaping.
- Upon permanent stabilization of earth disturbance activity under 25 PA. Code § 102.22(A)(2) (relating to permanent stabilization) and installation of BMPs in accordance with the approved plan prepared and implemented in accordance with 25 PA. Code § 102.22(A)(2), the permittee and/or co-permittee shall submit a N.O.T. Notice Of Termination) to the PADEP or authorized conservation district. The Permittee shall include with the N.O.T. the required record drawings with a final certification statement from a licensed professional.

NOTE: ADDITIONAL E&S DETAILS PROVIDED ON SHEET 10.

NO.	REVISION	DATE
16	PER TOWNSHIP CONSULTANT REVIEWS AND PADOT SUBMISSION	SEPTEMBER 19, 2023
15	REVISED PER MCD E-MAIL (08-21-2019)	AUGUST 30, 2019
14	REVISED PER MCD LTR. (02-19-2019)	JUNE 18, 2019
13	REVISED PER PREPARATION OF NPDES APPLICATION	SEPTEMBER 27, 2018
12	REVISED PER MCD LTR. (01-08-2018)	MAY 8, 2018
11	REVISED PER PREPARATION OF NPDES APPLICATION	NOVEMBER 22, 2017
10	REVISED PER C&S LTR. (12-08-2016), McMAHON LTR. (12-07-2016)	NOVEMBER 10, 2017
(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)		
No.	REVISION	DATE

EROSION CONTROL DETAILS

AS PART OF
CLEMENS' MILL

PREPARED FOR
JEFFREY AND KELLY CLEMENS

SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
Consulting Engineers and Surveyors
www.rcmaonline.com

The Village at Lederach
658 Harleysville Pike, Suite 150
Harleysville, PA 19438
(215) 513-2100

DRAFTED BY	PROJ. MNGR.	PROJECT NO.	DRAWING NO.
RCMA	D.B.C.	2283	22 OF 27

LOWER SALFORD TOWNSHIP STANDARD DETAIL
4 FOOT AND 6 FOOT SPECIAL INLETS

DATE: 8-2012 NOT TO SCALE DRS00

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
HOOD DETAIL

DATE: 8-2012 NOT TO SCALE DRS01

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
STRUCTURAL STEEL INLET FRAMES

DATE: 8-2012 NOT TO SCALE DRS03

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
STRUCTURAL STEEL GRATE BICYCLE SAFE

DATE: 8-2012 NOT TO SCALE DRS04

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
TYPE "M" INLET

DATE: 8-2012 NOT TO SCALE DRS06

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
TYPE "C" INLET STATE ROADS ONLY

DATE: 8-2012 NOT TO SCALE DRS07

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
STANDARD INLET BOXES (PRECAST)

DATE: 8-2012 NOT TO SCALE DRS08

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
TYPE D-W ENDWALL 4:1 SLOPE

DATE: 8-2012 NOT TO SCALE DRS15

Metz Engineers

PIPE DIAMETER (IN)	SKW ANGLE = 90° TO 60°	9:1	4:1	2:1
18	4.0	0	2.3	
24	4.2	0	4.9	
30	4.2	0	7.5	
36	4.8	0	10.1	
42	4.3	0	12.7	
48	4.9	0	15.3	
54	4.4	0	17.9	
60	4.1	0	20.5	
72	3.2	0	26.1	

LOWER SALFORD TOWNSHIP STANDARD DETAIL
PERFORATED UNDERDRAIN

DATE: 8-2012 NOT TO SCALE DRS20

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
PERFORATED UNDERDRAIN

DATE: 8-2012 NOT TO SCALE DRS20

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
PERFORATED UNDERDRAIN SWALES AND OUTSIDE OF ROADWAY

DATE: 8-2012 NOT TO SCALE DRS27

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
2'x2' STRUCTURAL STEEL GRATE BICYCLE SAFE

DATE: 8-2012 NOT TO SCALE DRS34

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
COPOLYMER POLYPROPYLENE MANHOLE STEP (ASTM C-478)

DATE: 8-2012 NOT TO SCALE DRS35

Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
4 FOOT AND 6 FOOT SPECIAL INLET GRADE ADJUSTMENT RINGS

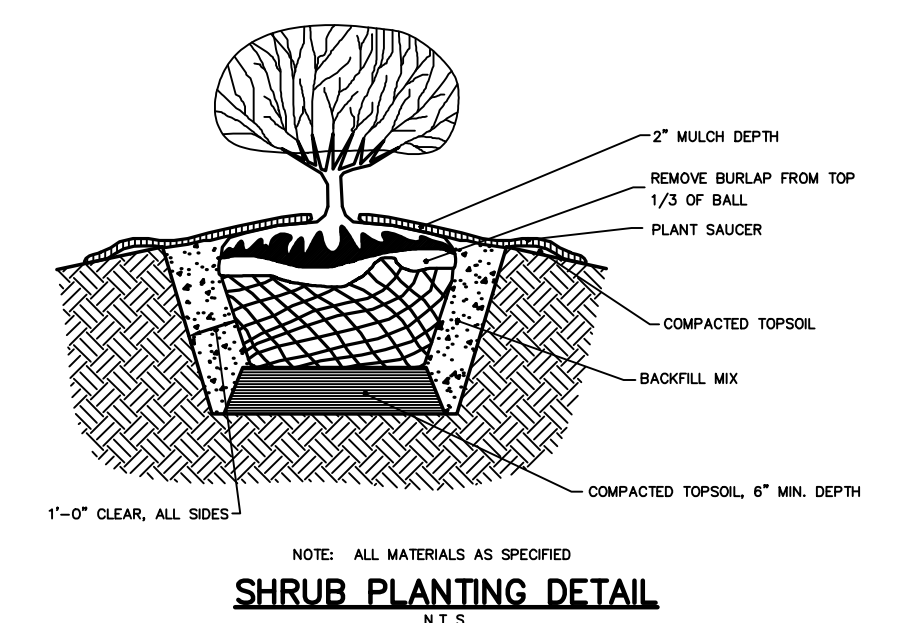
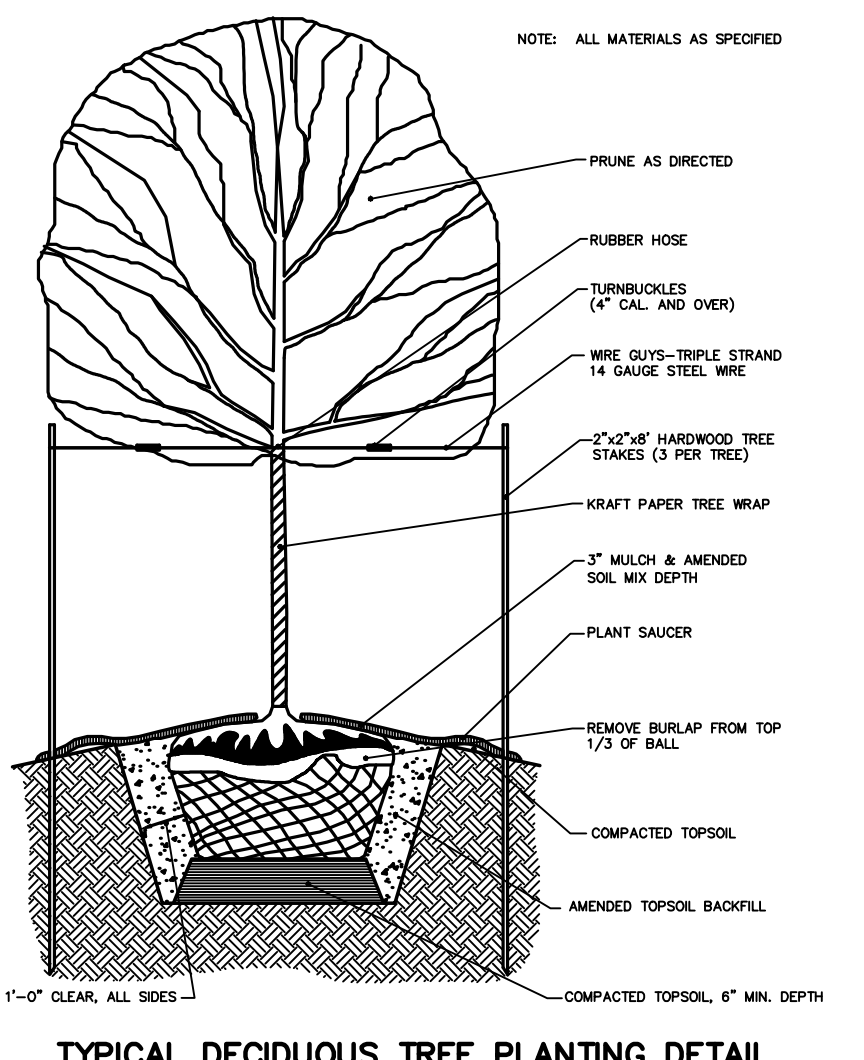
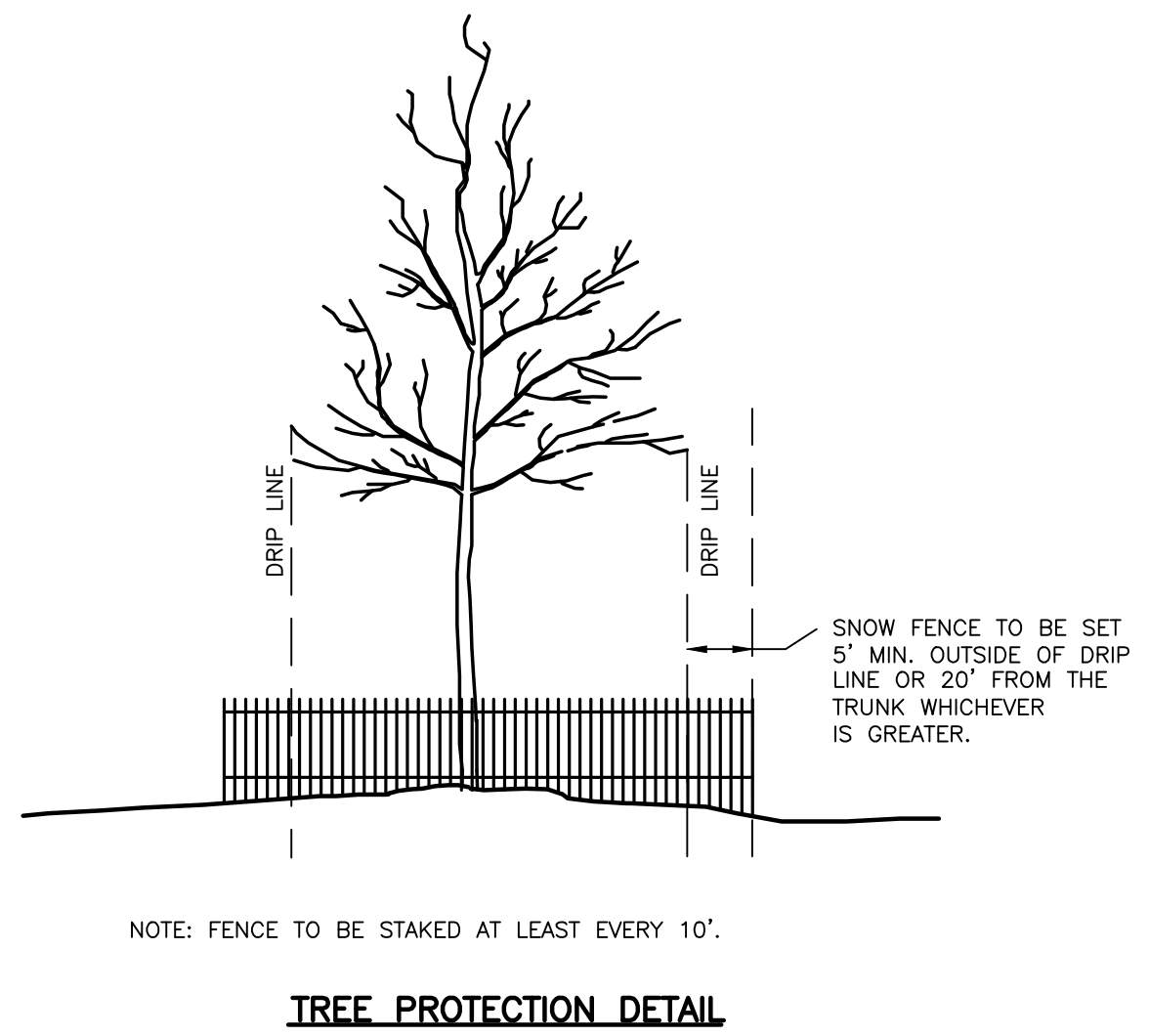
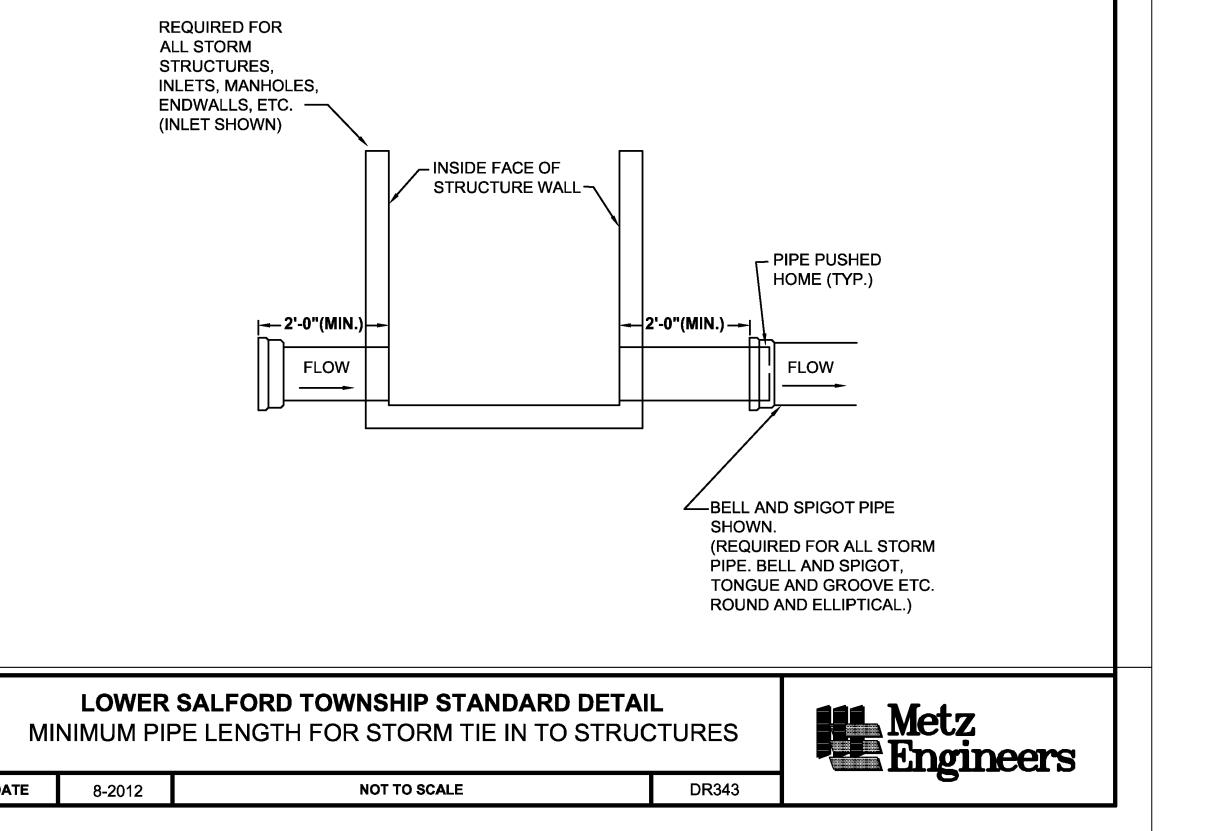
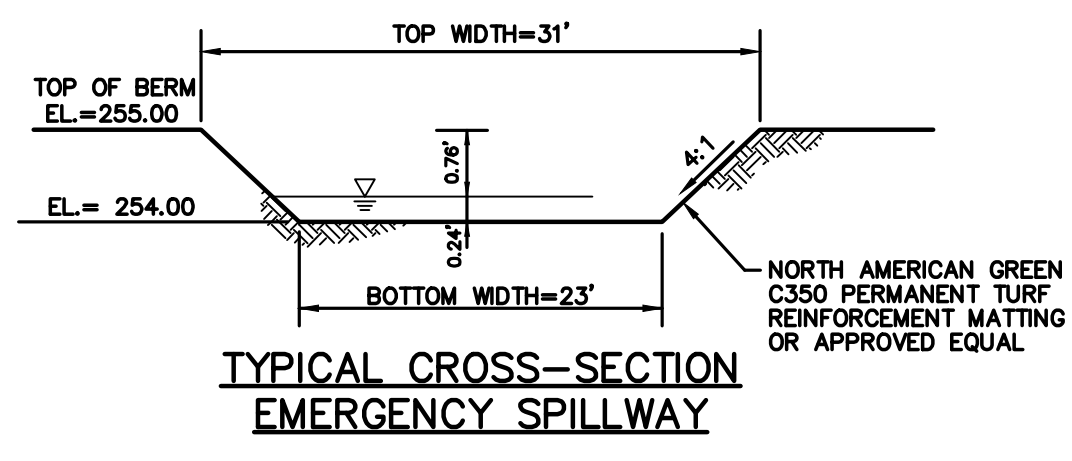
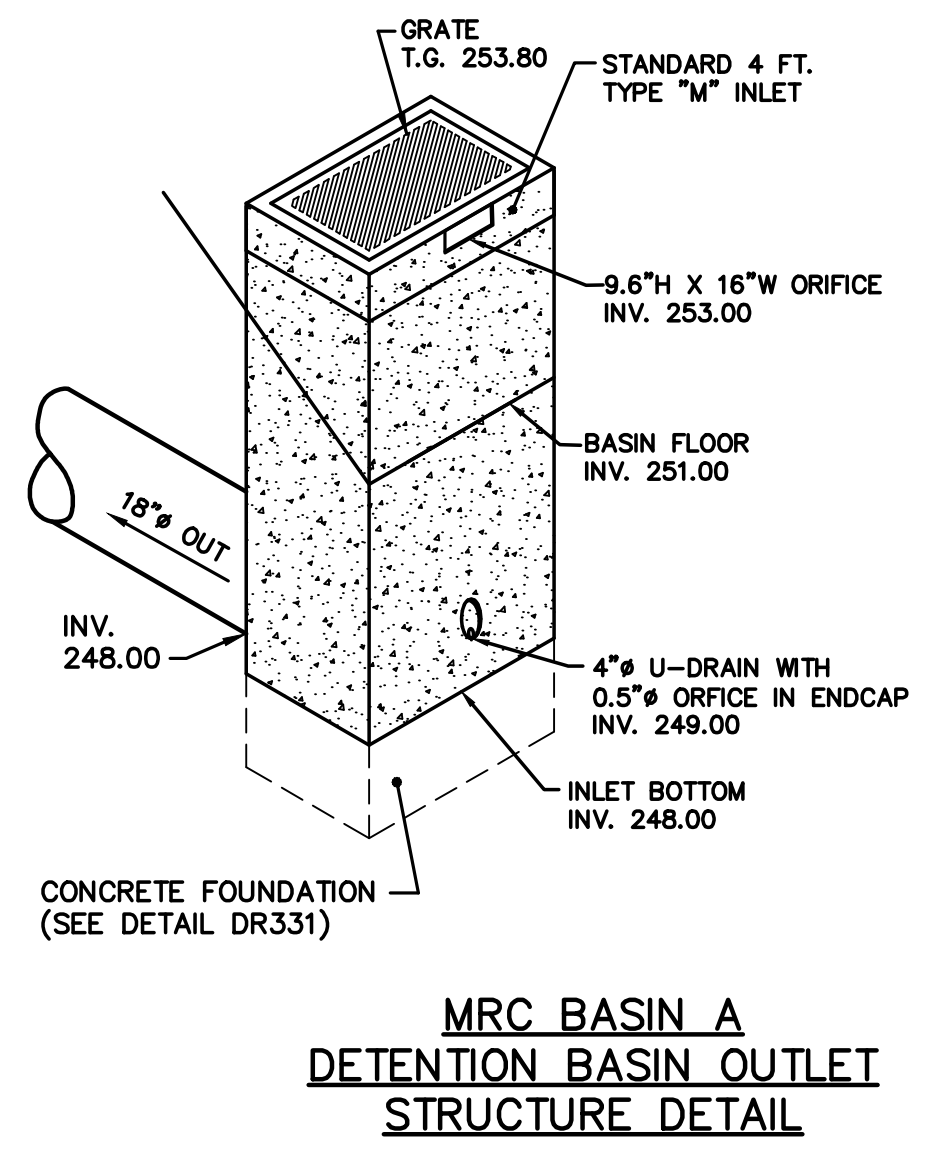
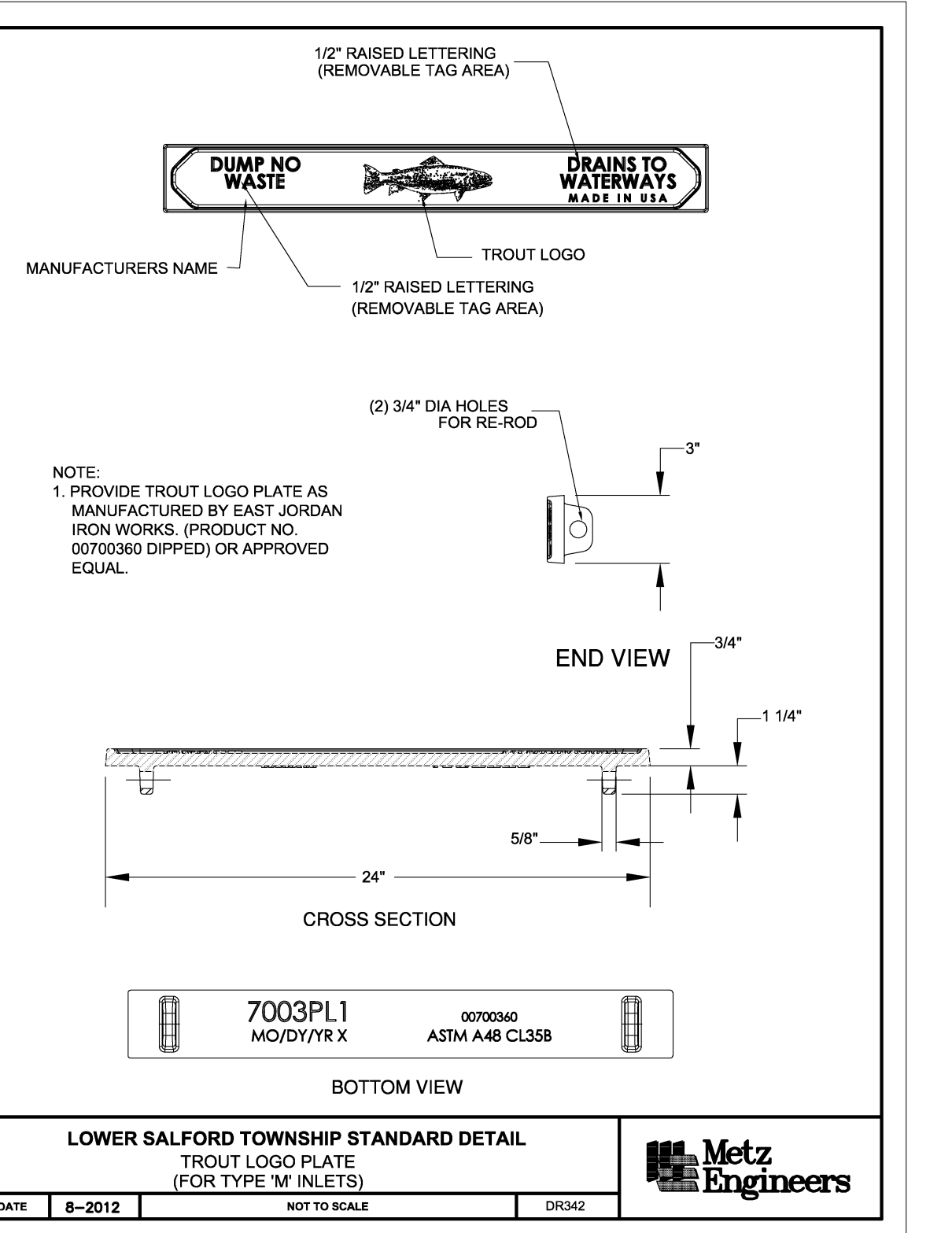
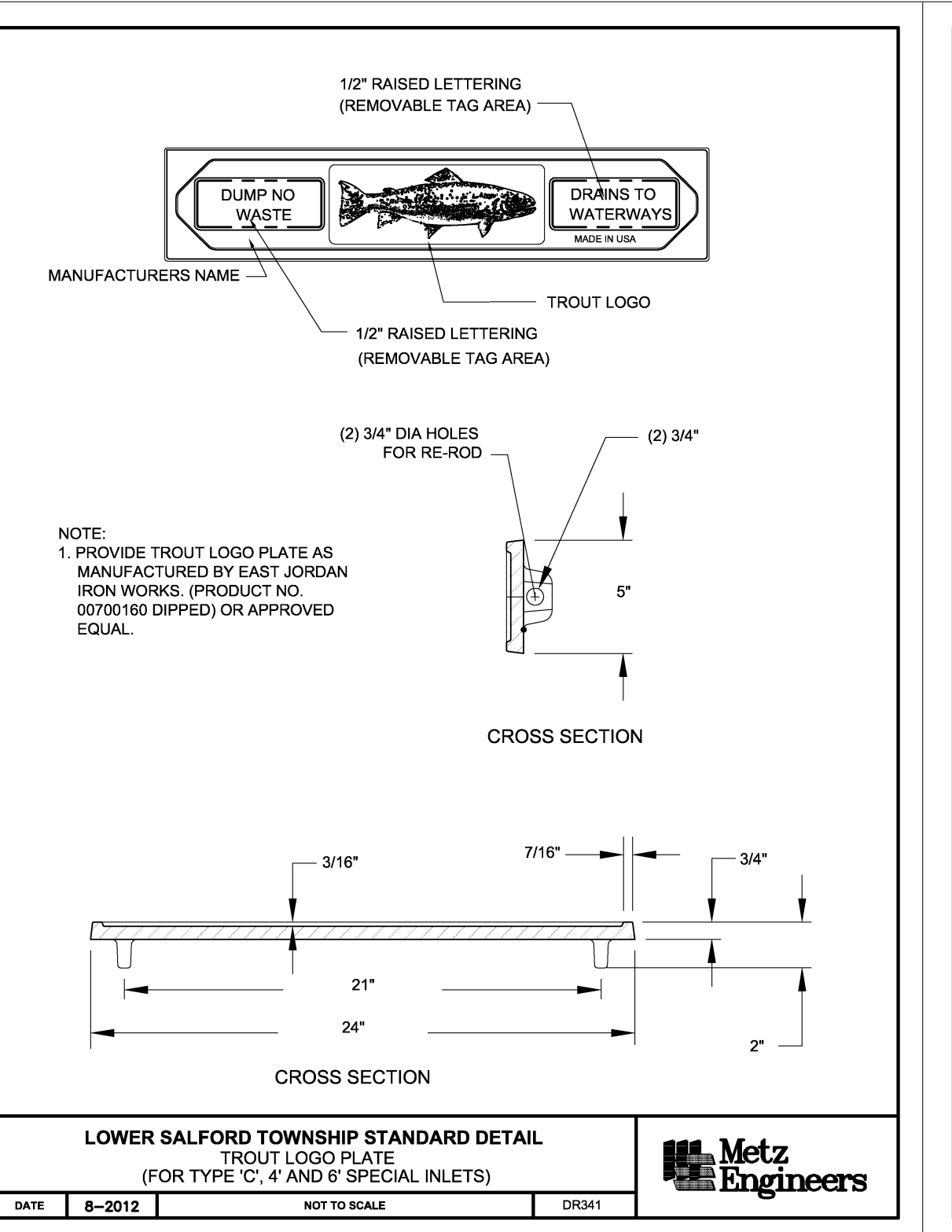
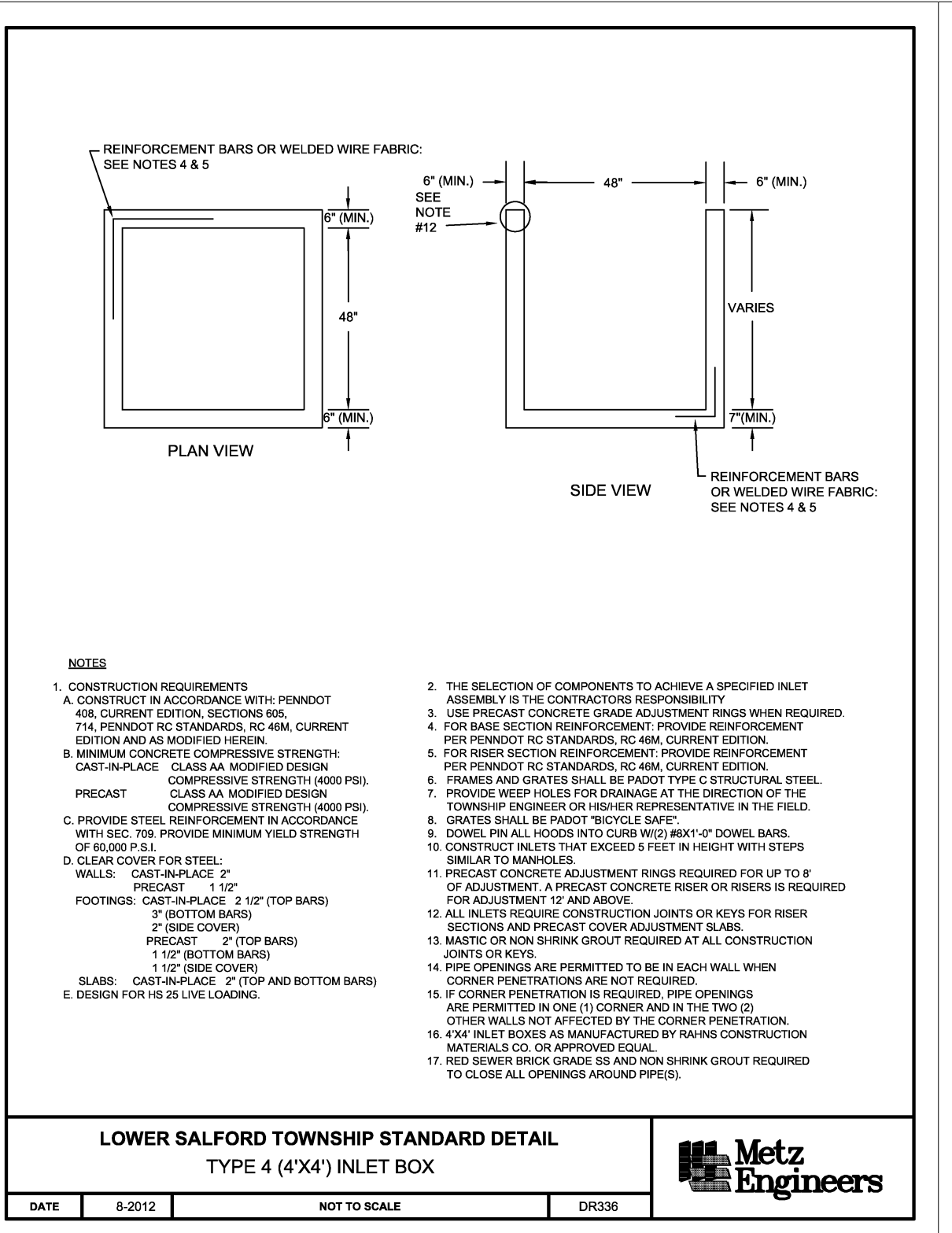
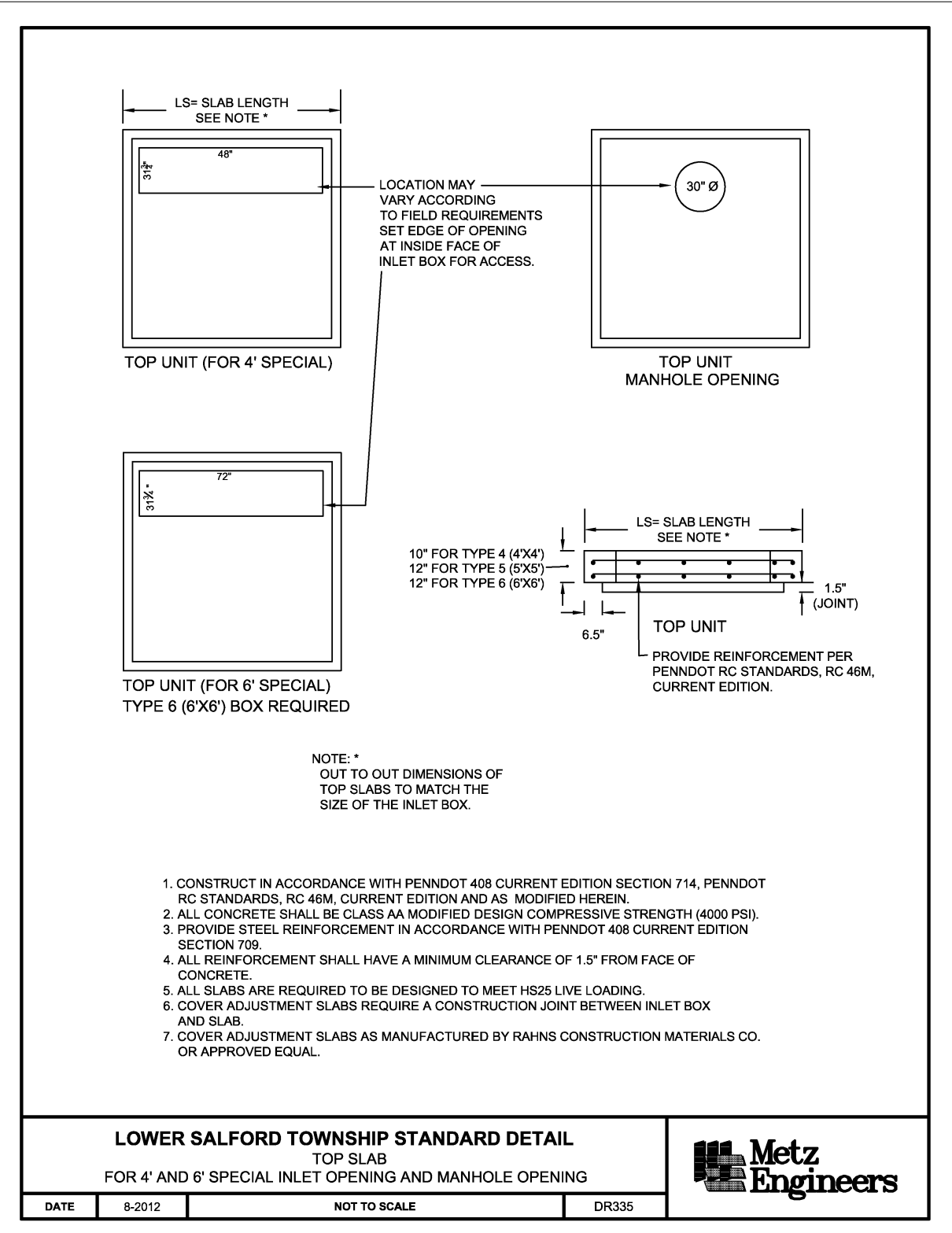
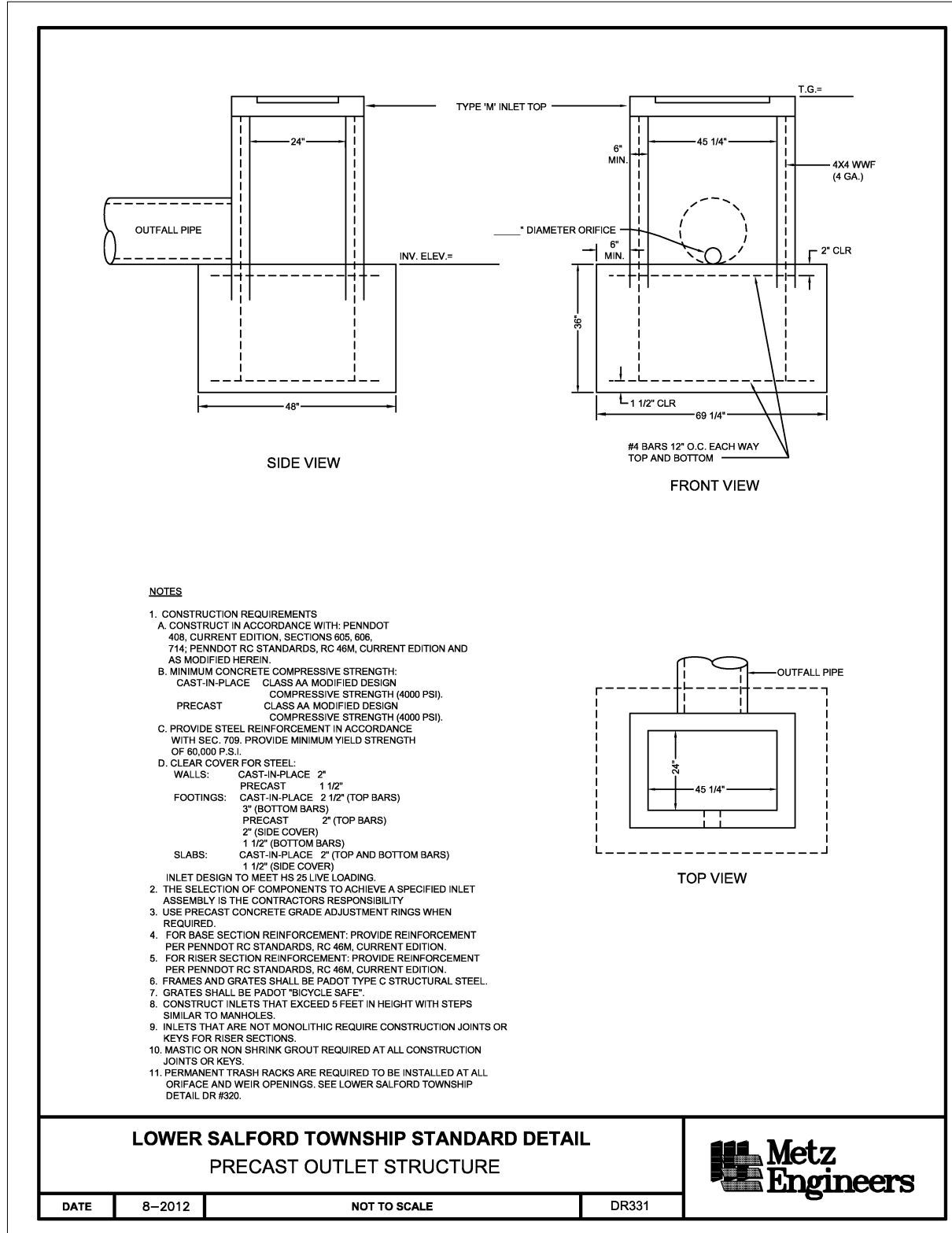
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Metz Engineers

LOWER SALFORD TOWNSHIP STANDARD DETAIL
TYPE "M" & TYPE "C" GRADE ADJUSTMENT RINGS

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Metz Engineers



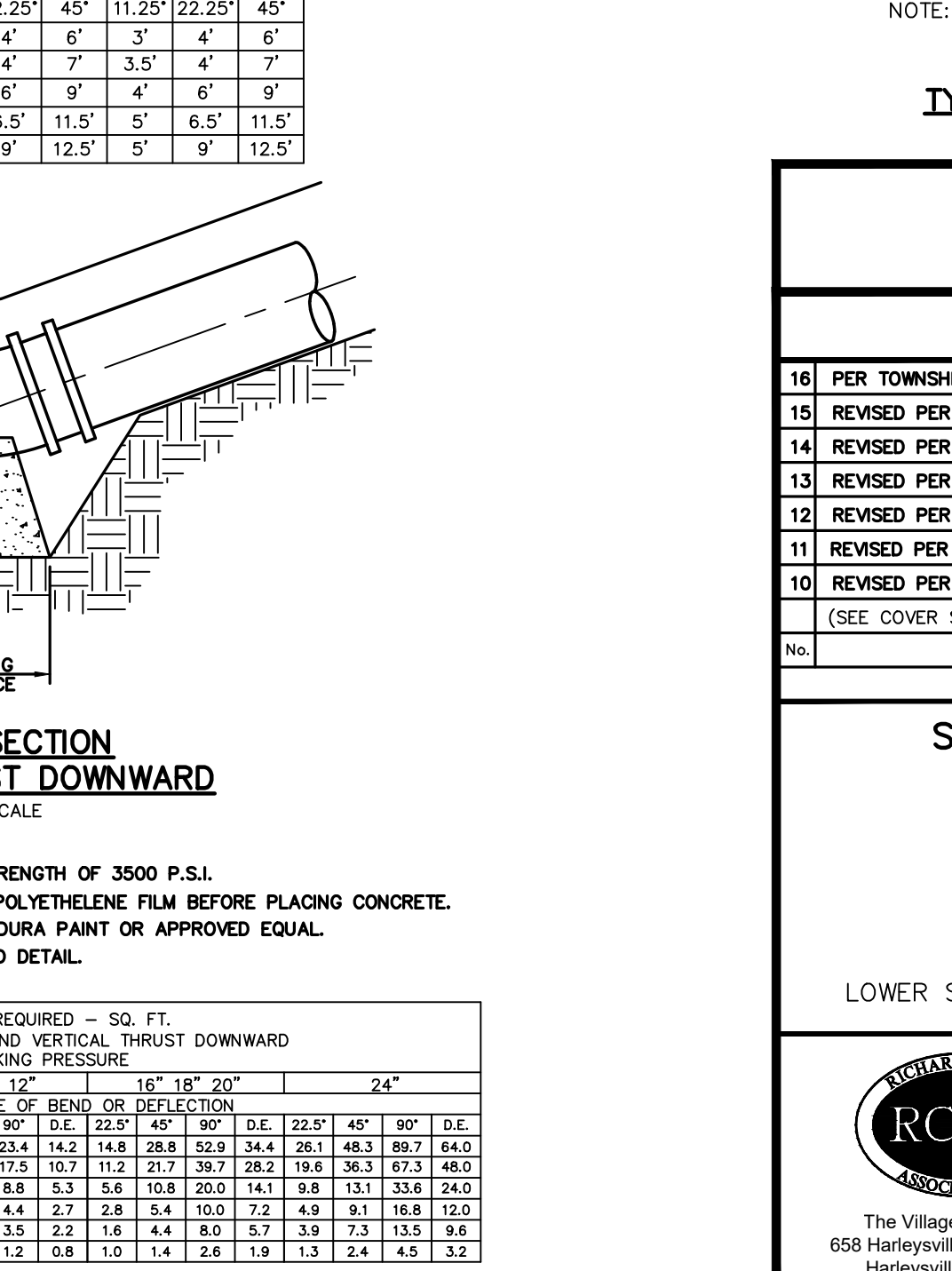
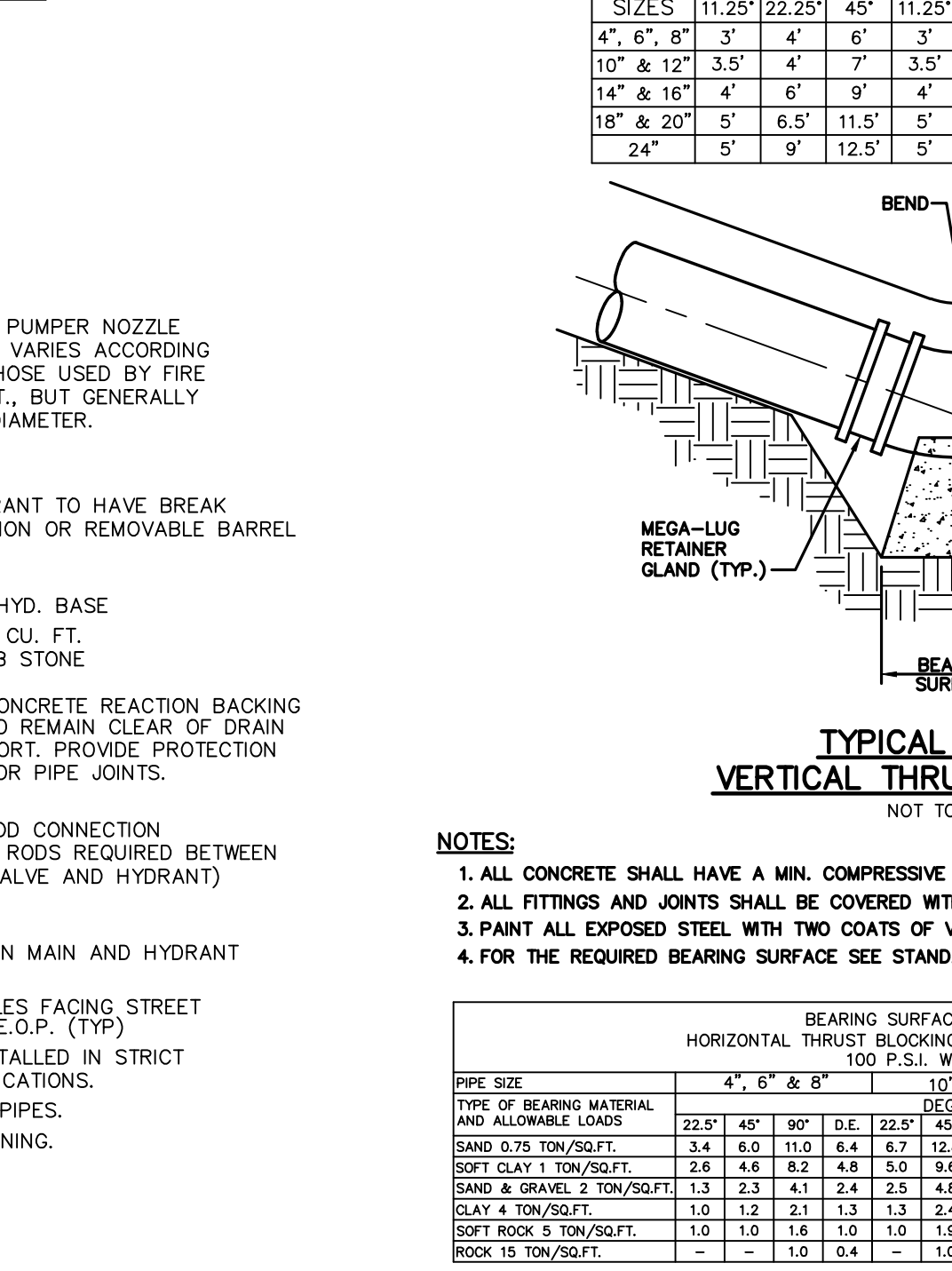
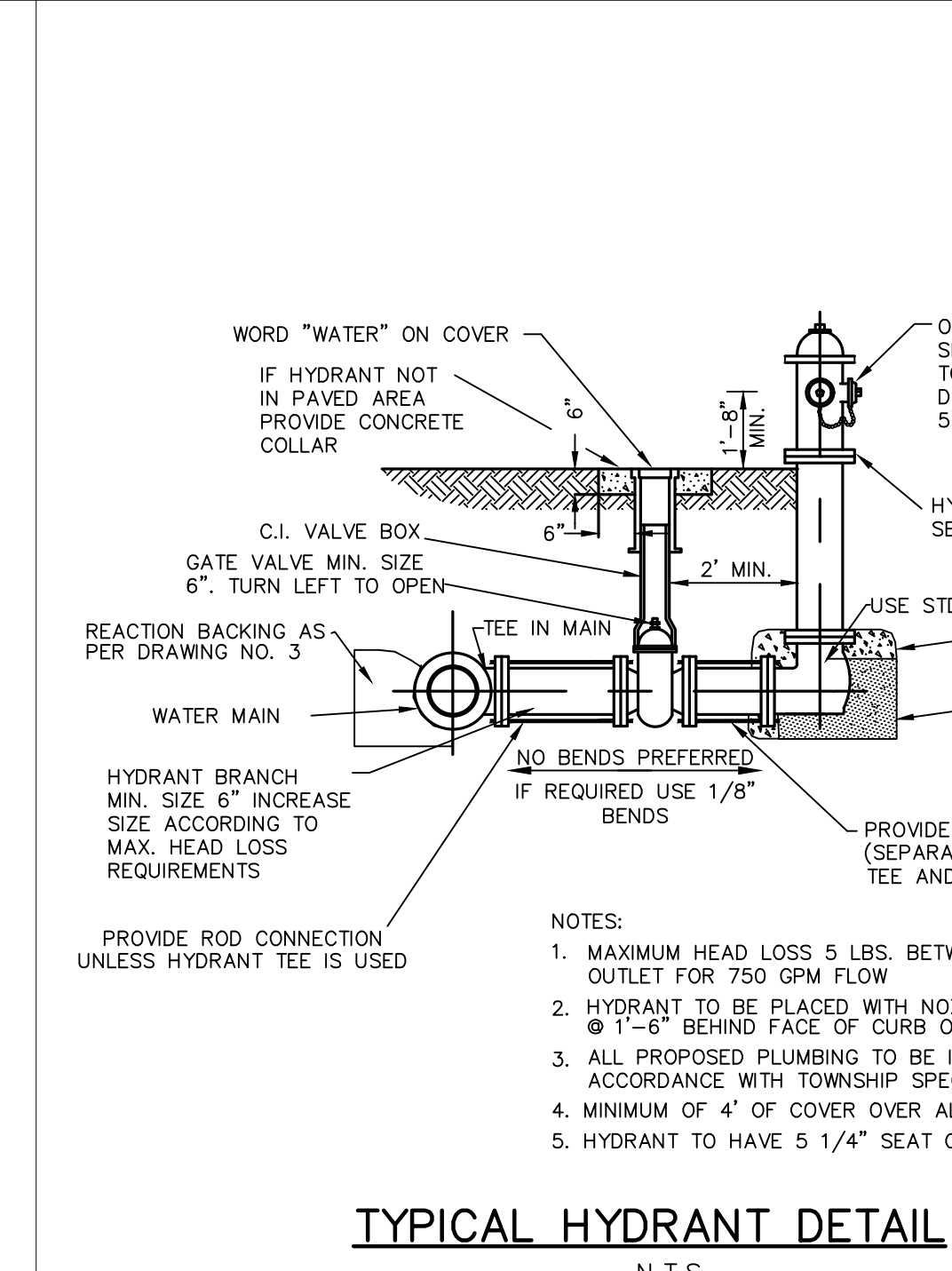
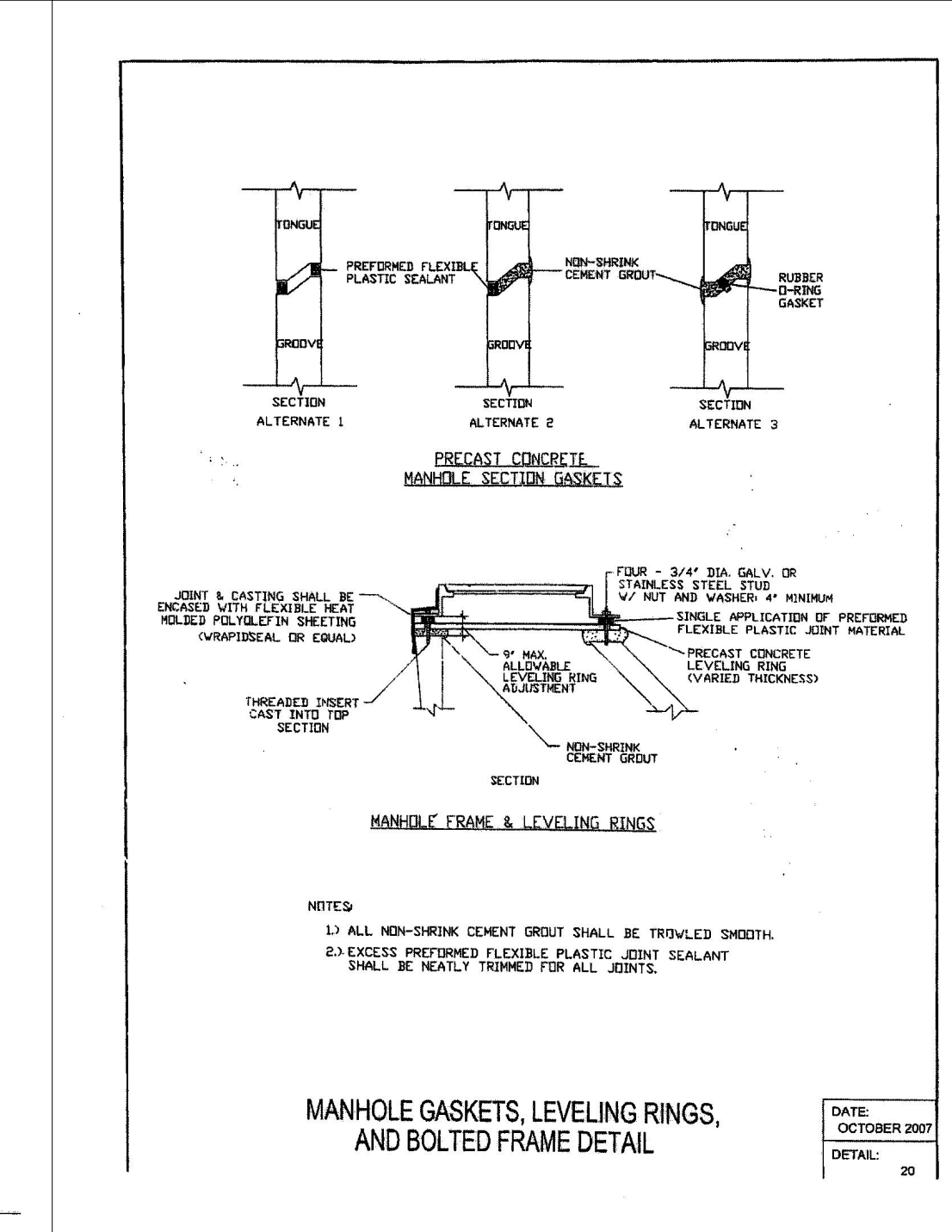
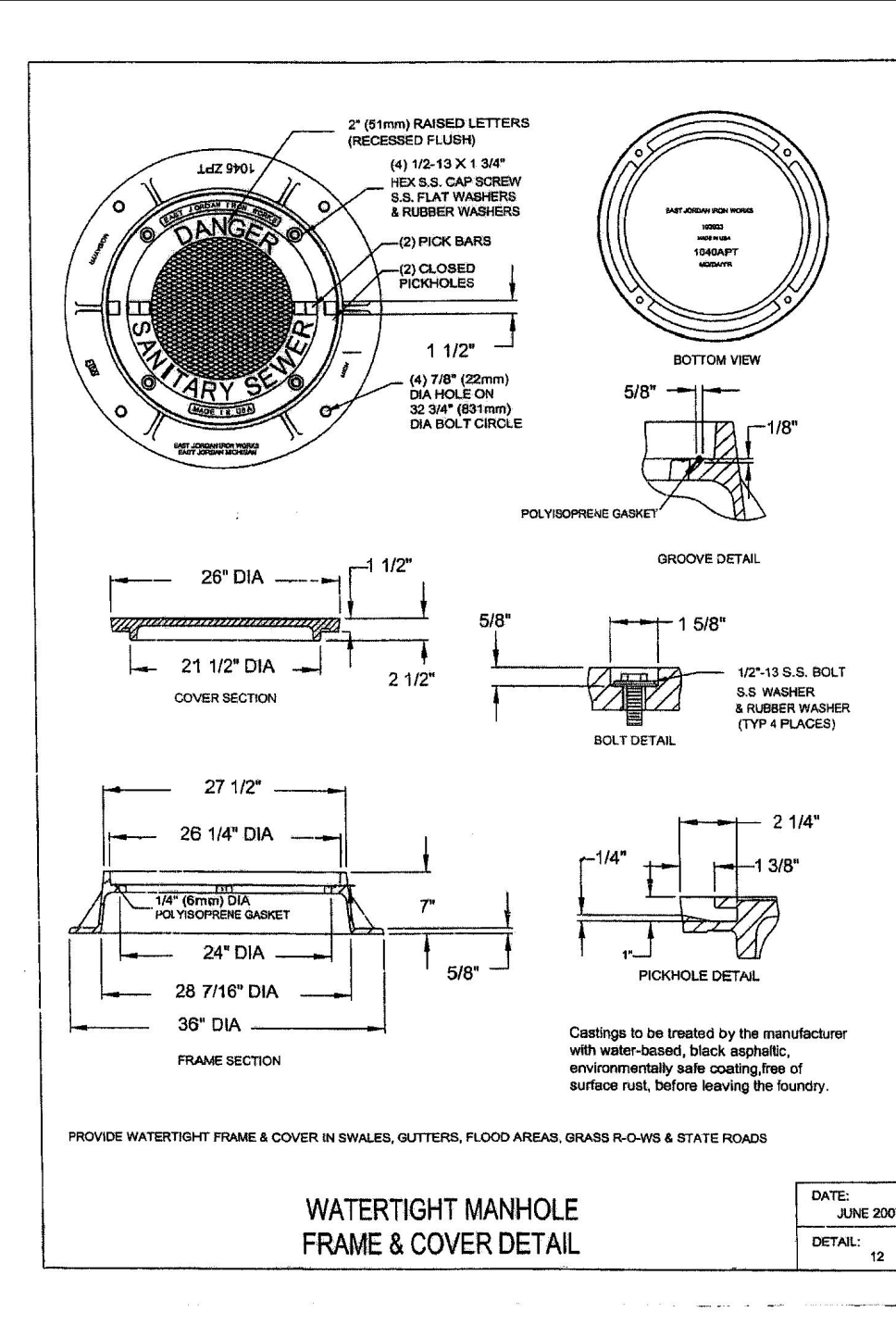
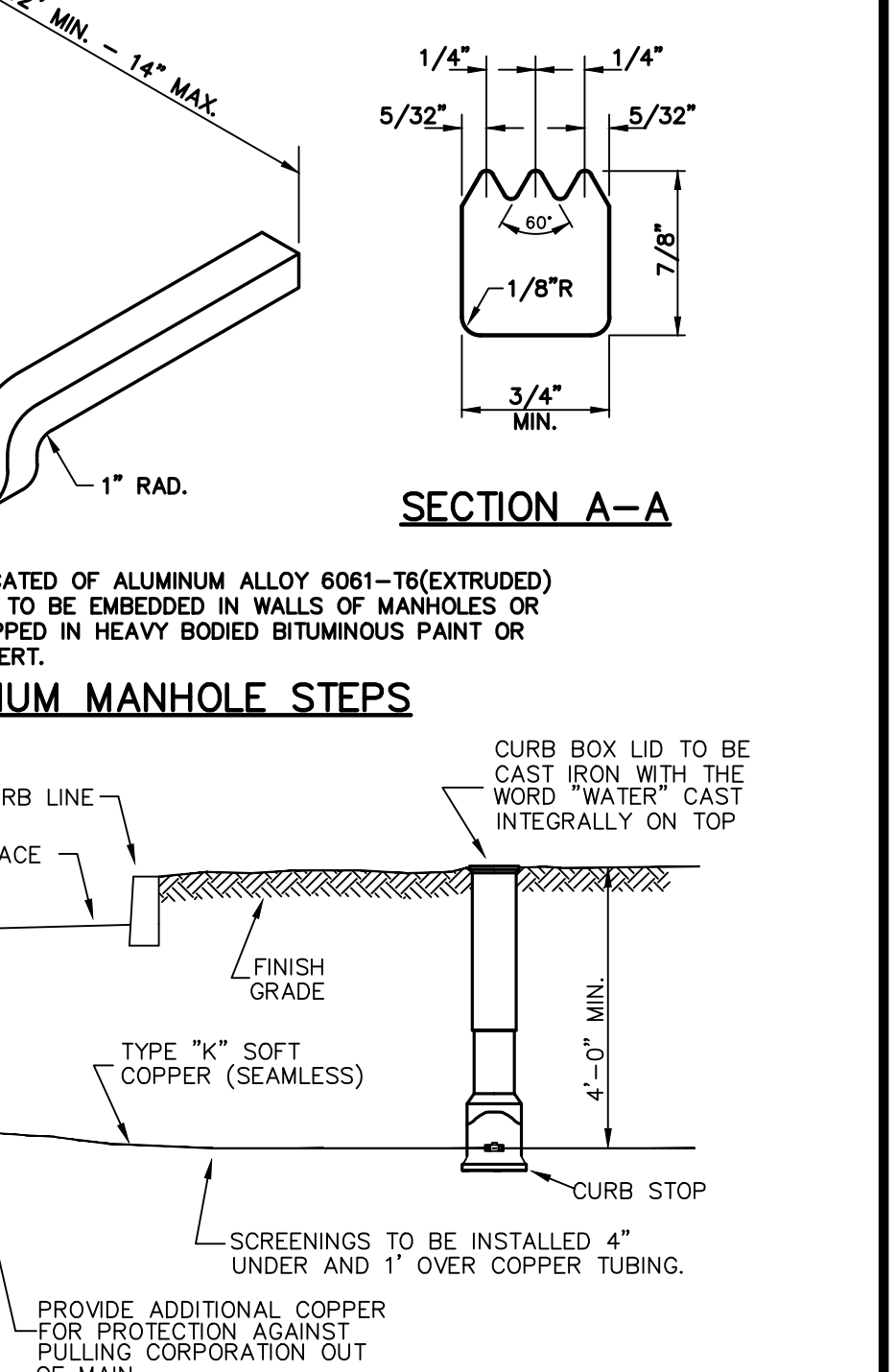
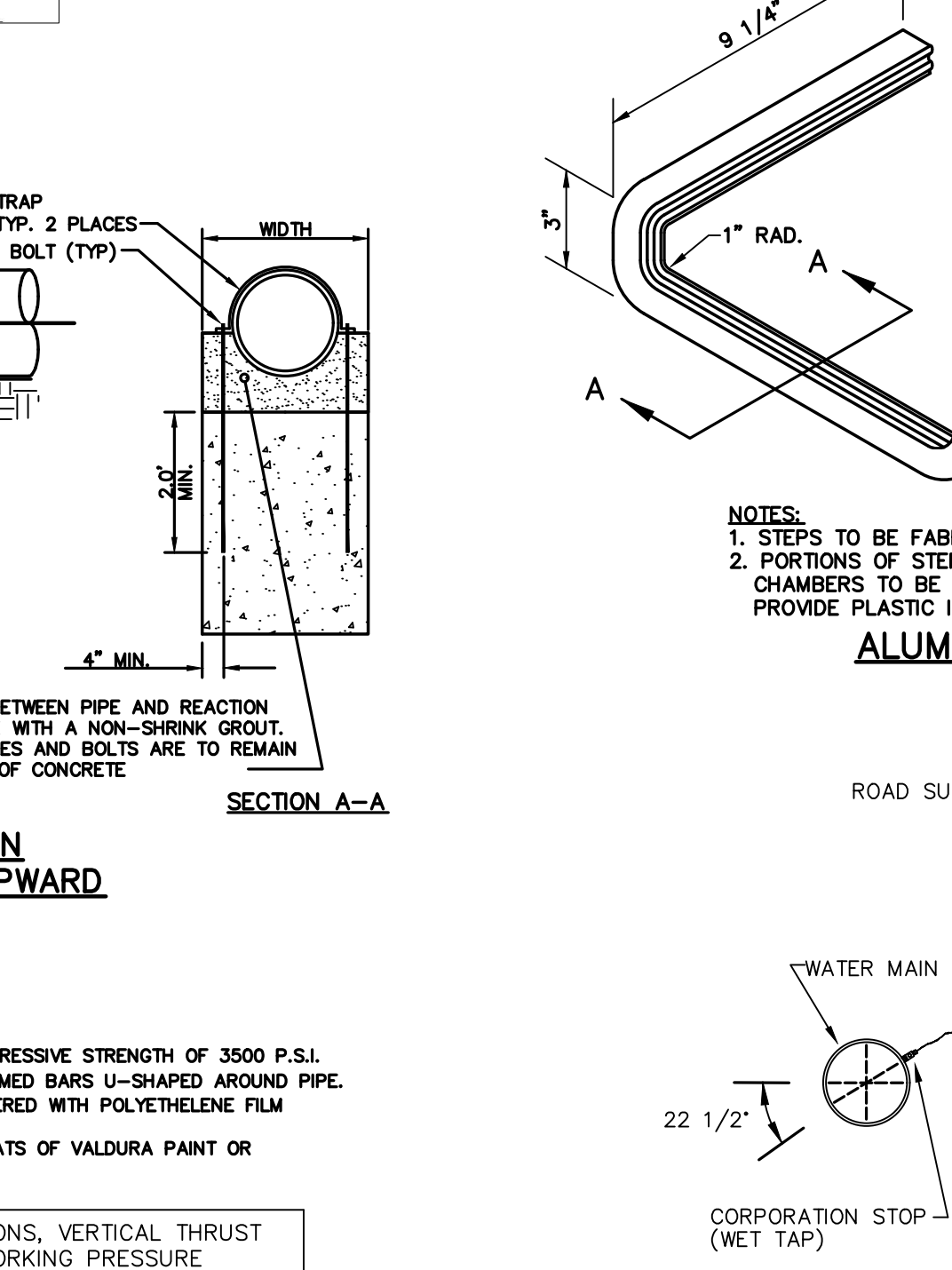
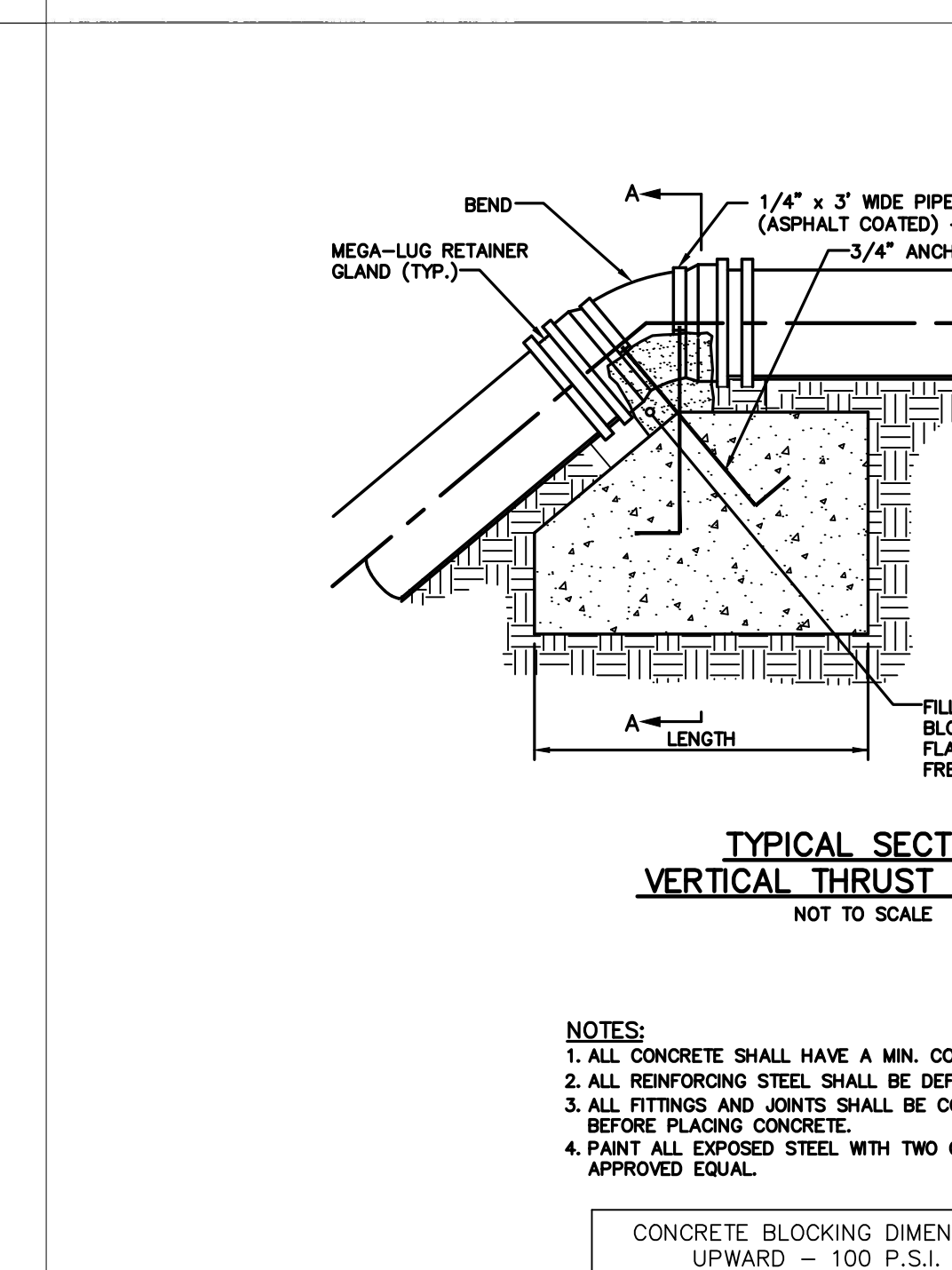
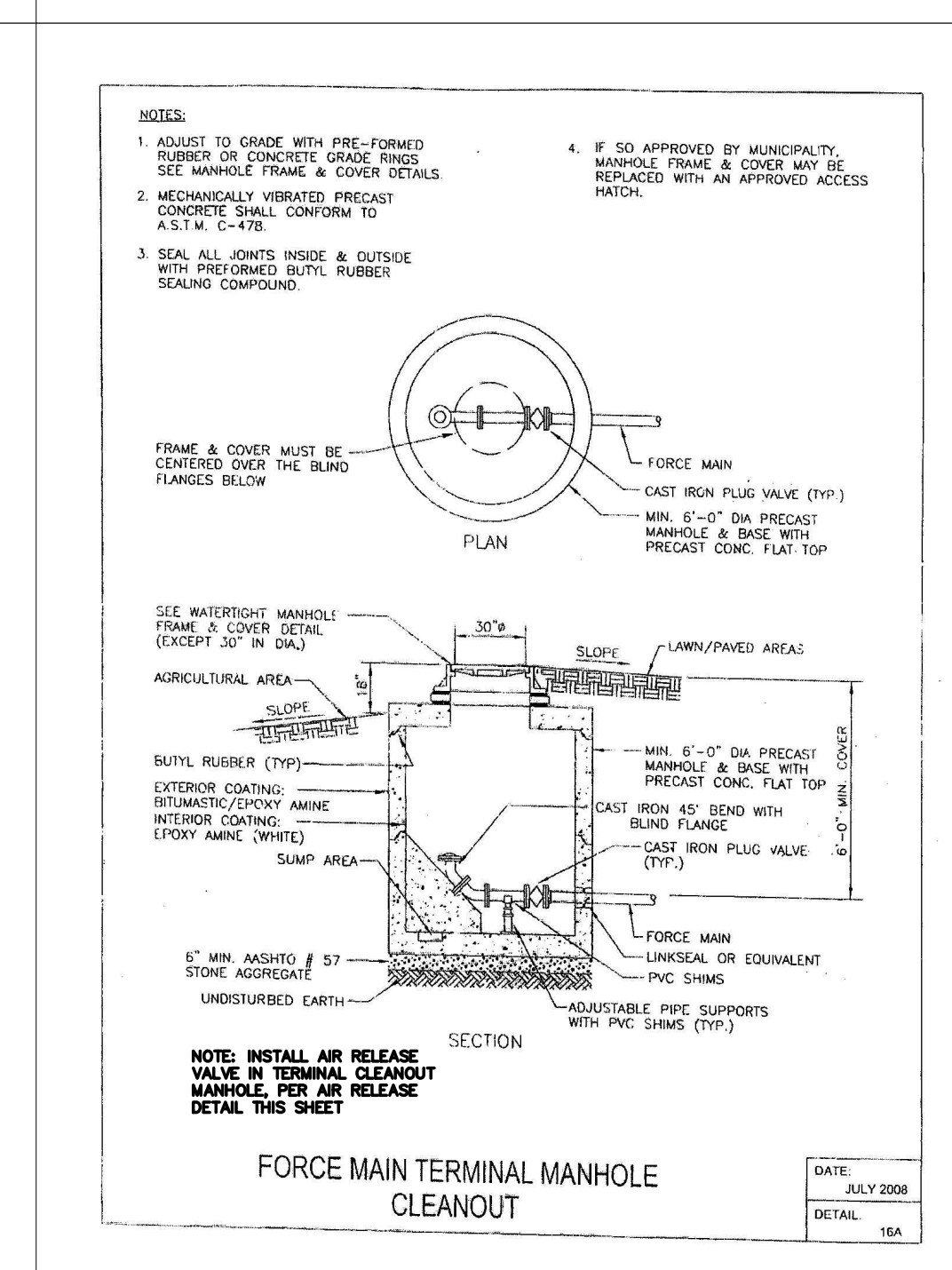
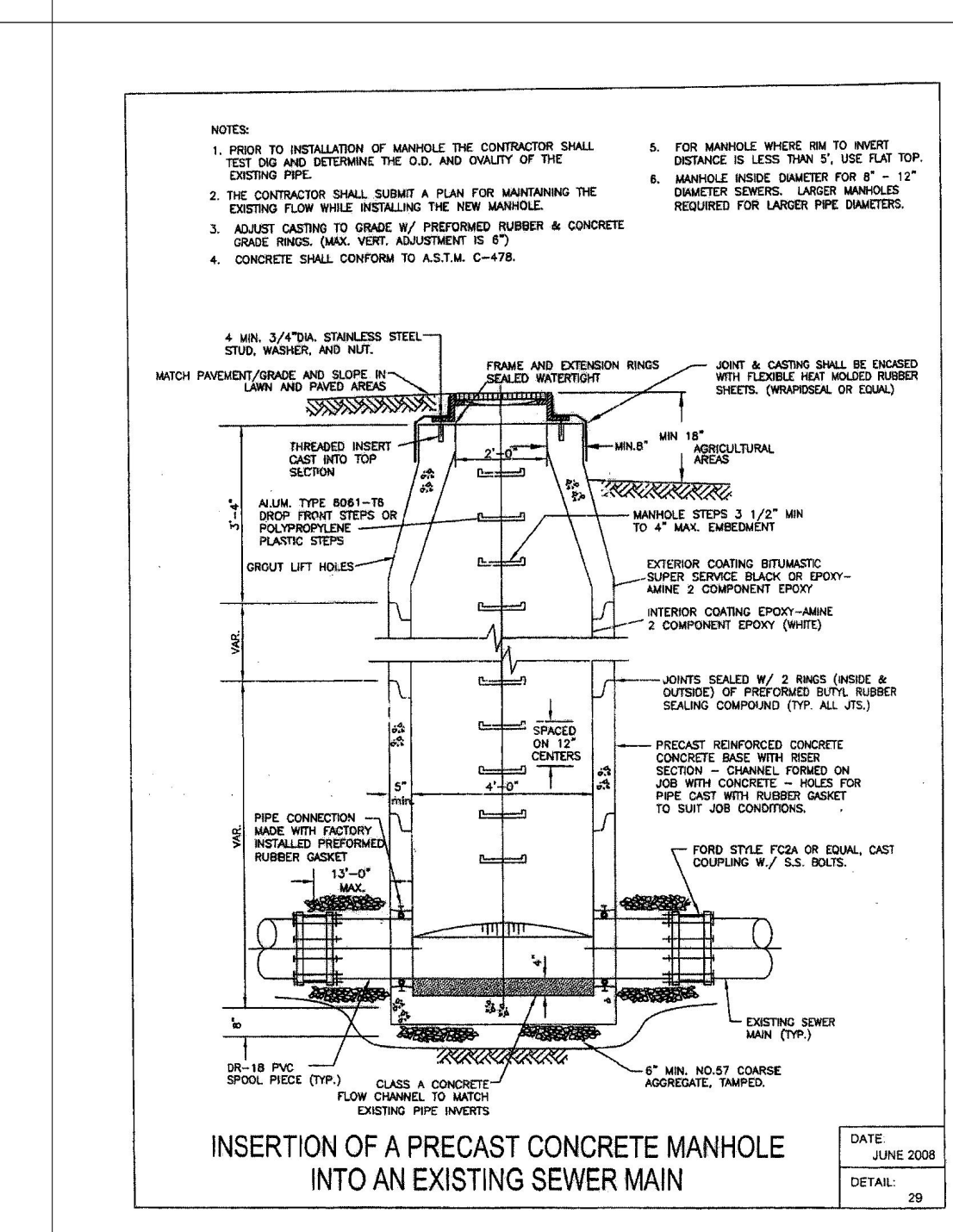
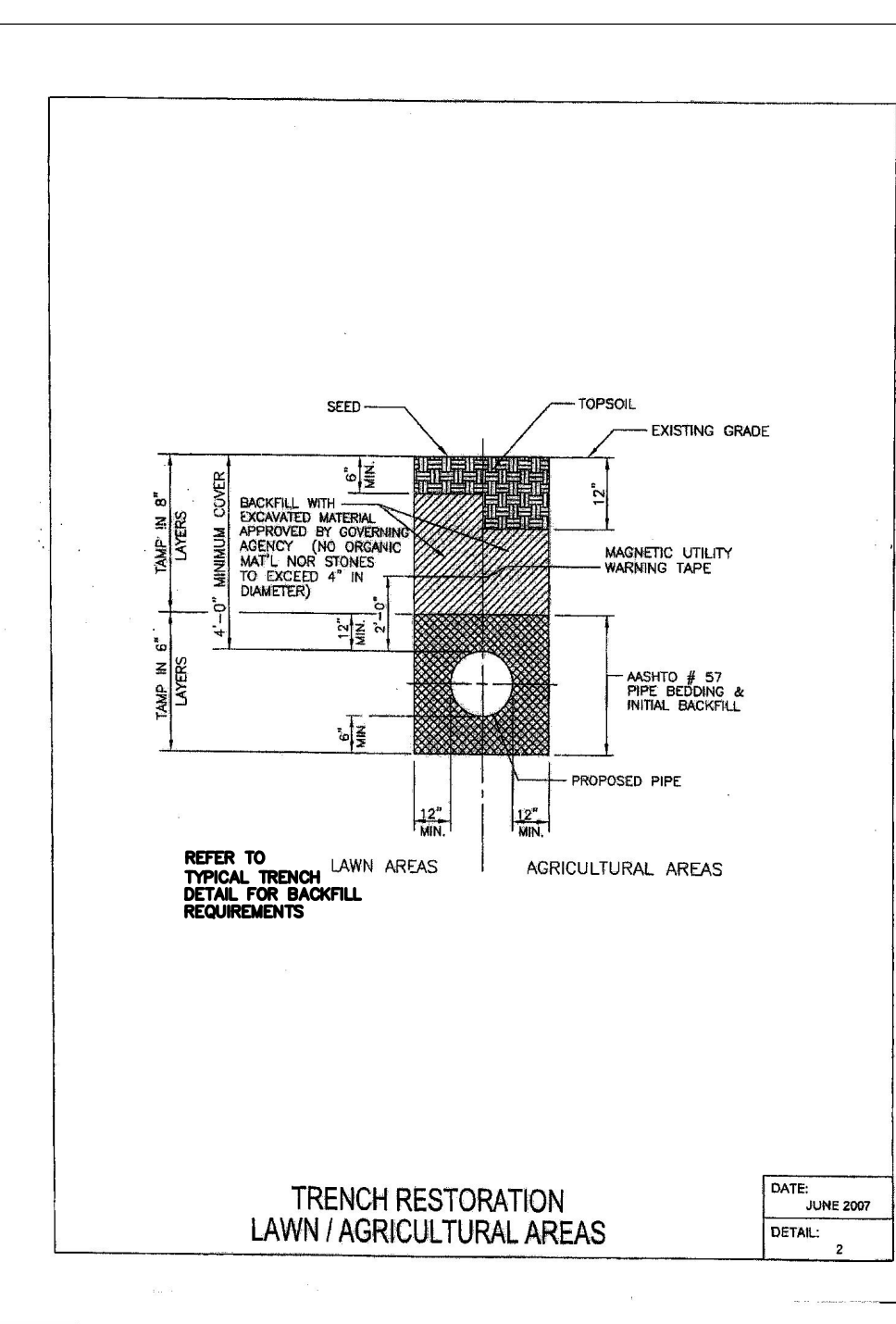
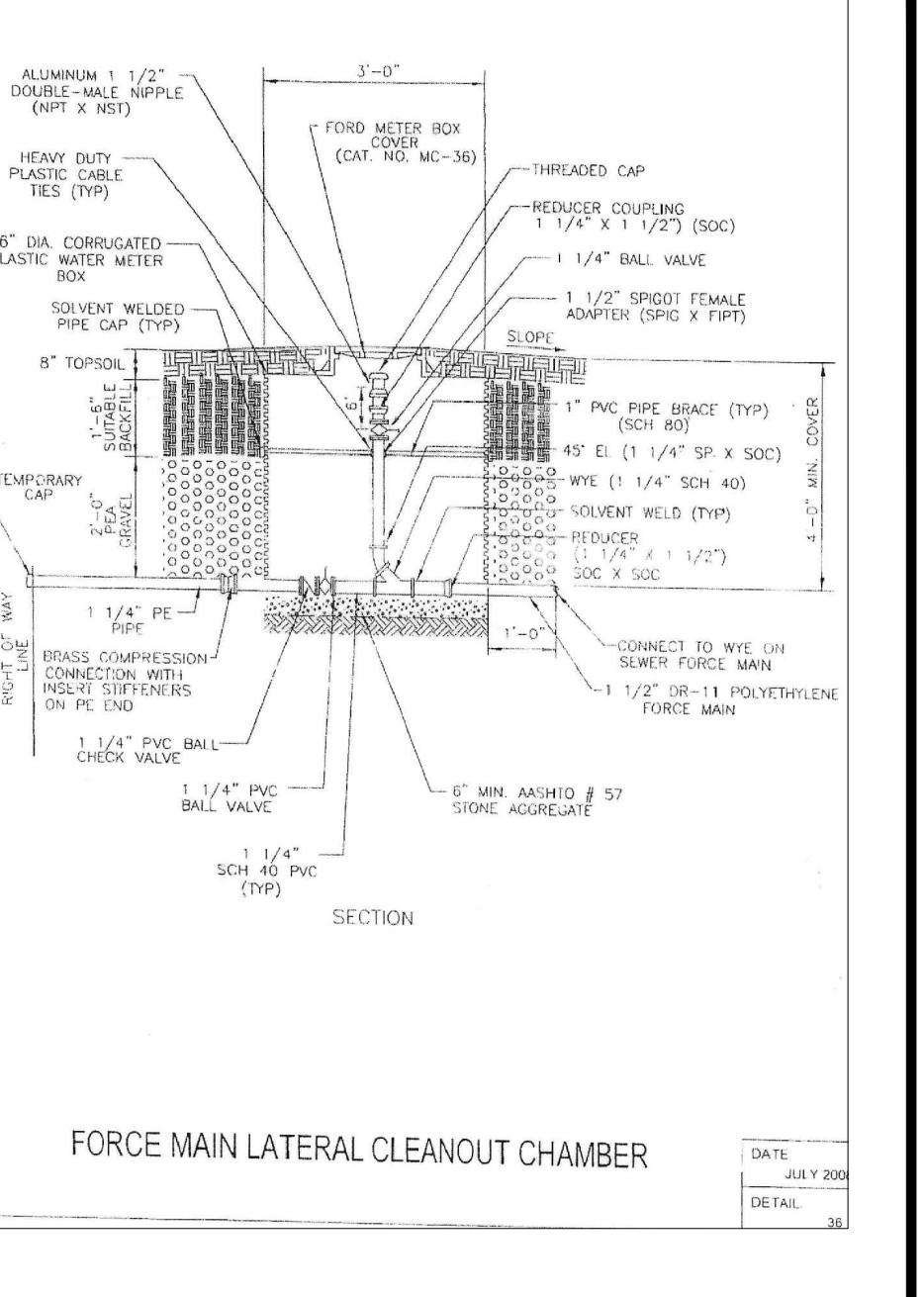
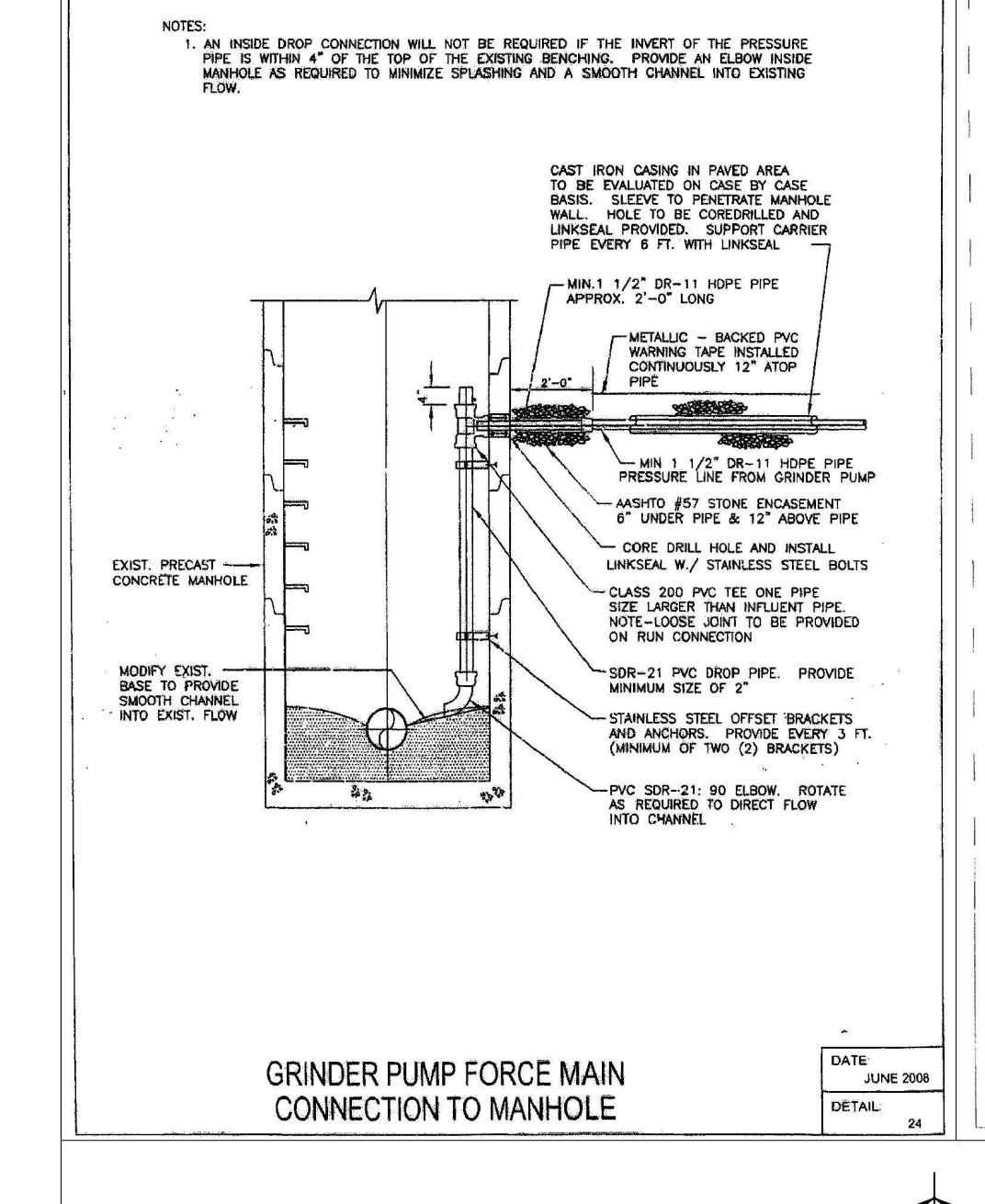
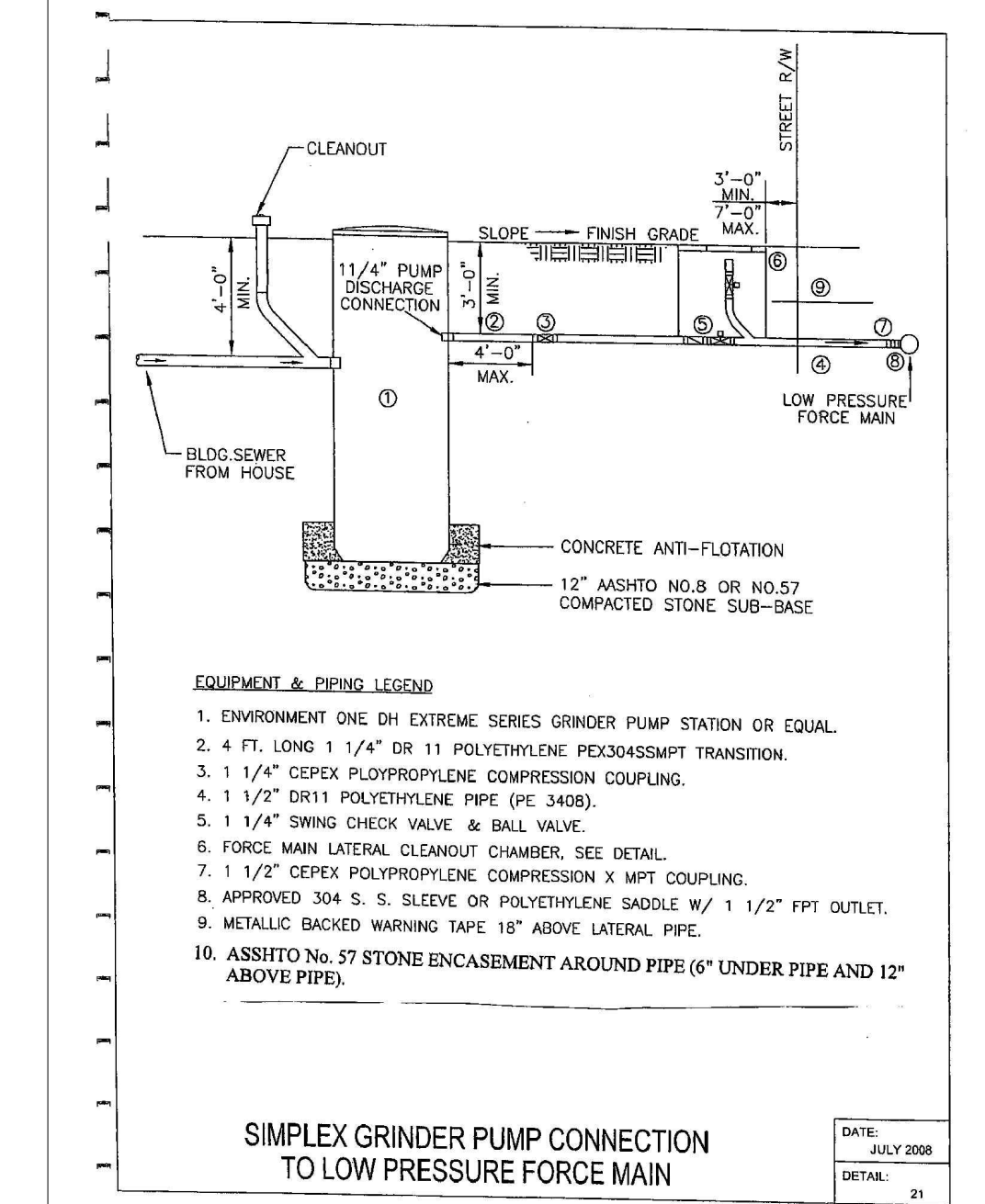
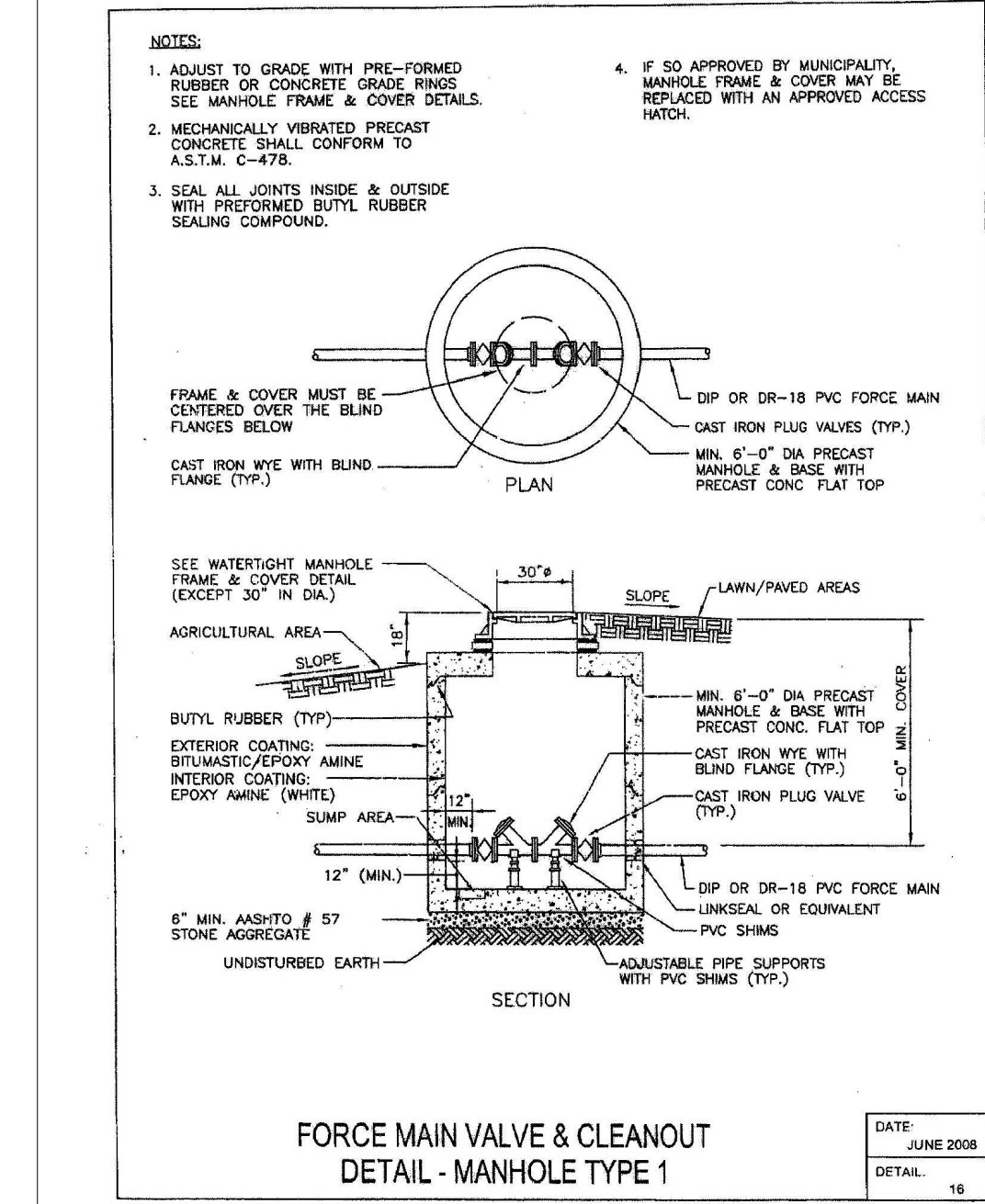
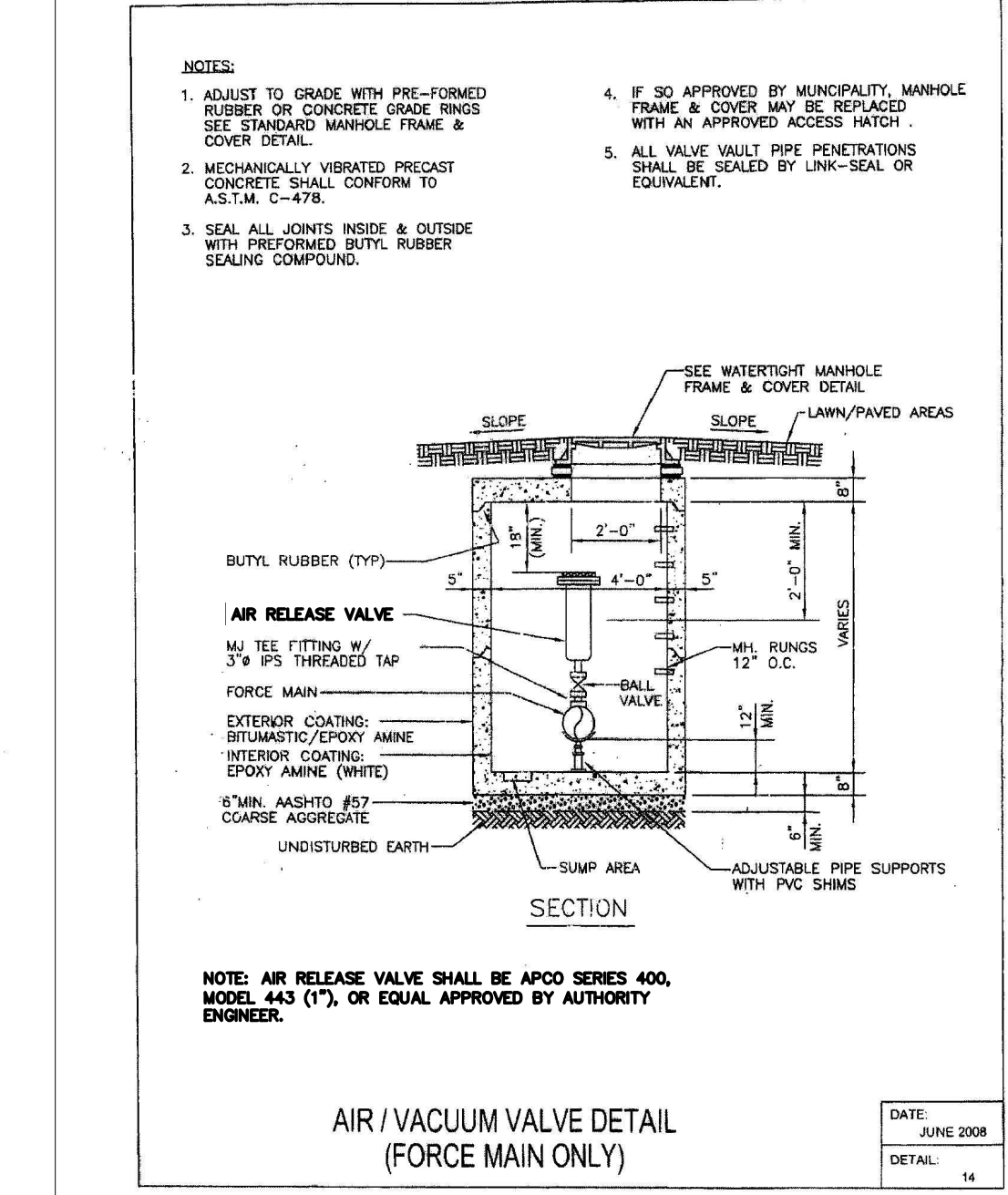
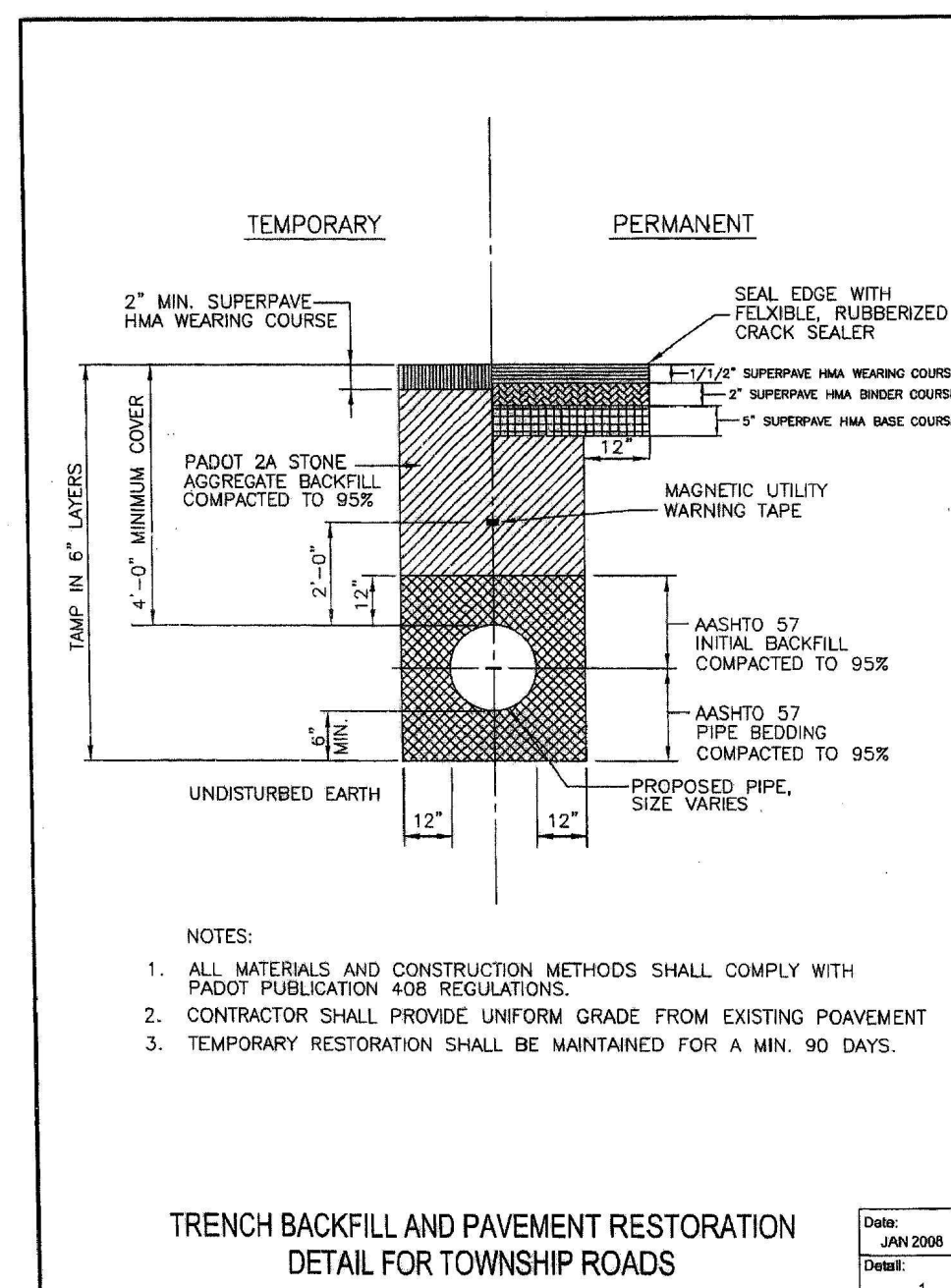
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14	REVISED PER MCOE LTR. (02-19-2019)	JUNE 18, 2019
13	REVISED PER PREPARATION OF NPDES APPLICATION	SEPTEMBER 27, 2018
12	REVISED PER MCOE LTR. (01-08-2018)	MAY 8, 2018
11	REVISED PER PREPARATION OF NPDES APPLICATION	NOVEMBER 22, 2017
10	REVISED PER CKS LTR. (12-08-2016), McMAHON LTR. (12-07-2016)	NOVEMBER 10, 2017
(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)		
No.	REVISION	DATE
	PLAN ORIGINATOR DATE	FEBRUARY 6, 2007

SITE IMPROVEMENTS DETAILS
AS PART OF
CLEMENS' MILL
PREPARED FOR
JEFFREY AND KELLY CLEMENS
SITE SITUATE IN
LOWER Salford TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

Richard C. Mast Associates, P.C.
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PROJ. MNGR: D.B.C.
PROJECT NO: 2283
DRAWING NO: 26 OF 27



NO.	REVISION	DATE
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10	REVISED PER CKS LTR. (12-08-2016), MCDMOM LTR. (12-07-2016)	NOVEMBER 10, 2017

(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)

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	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

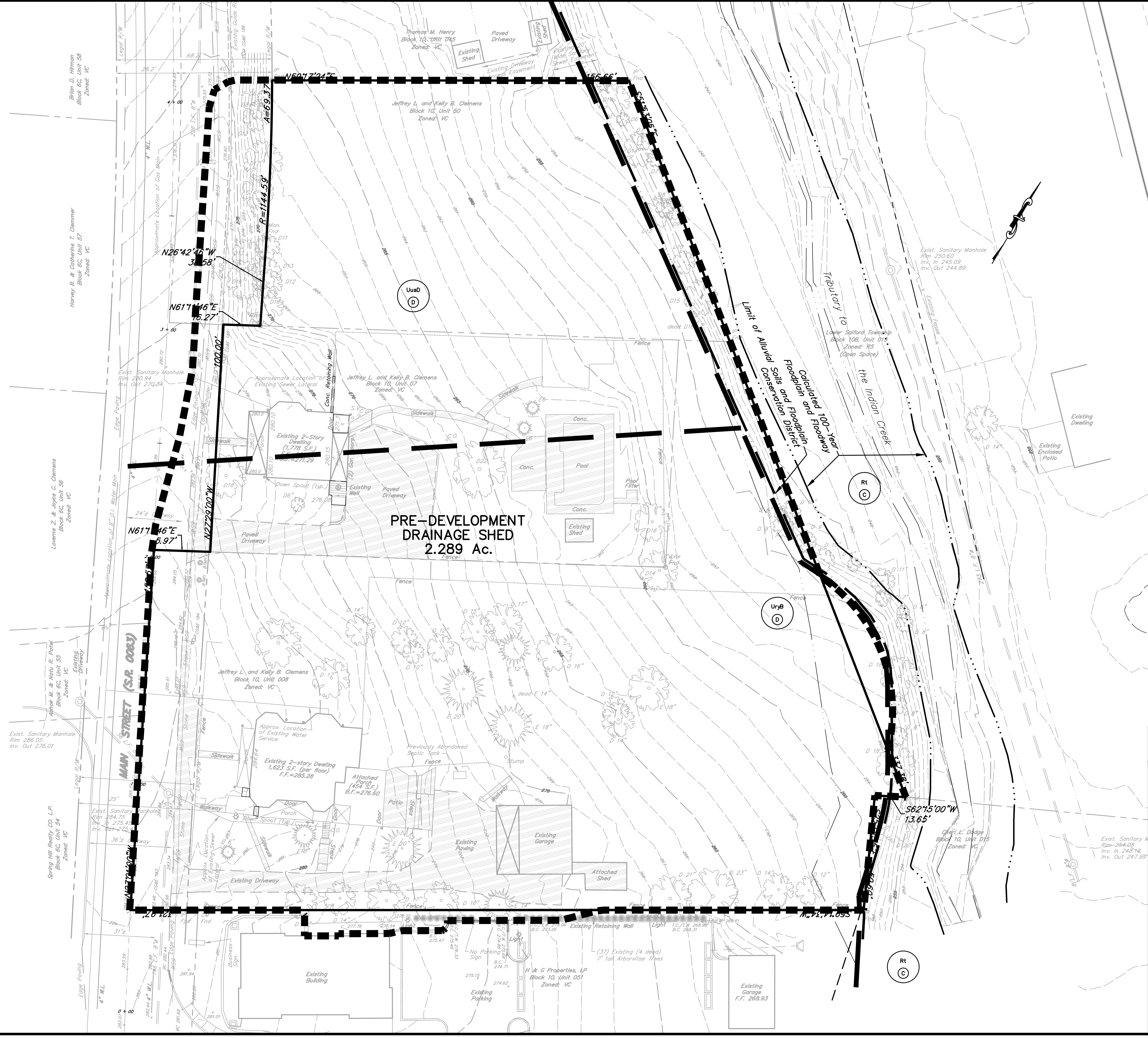
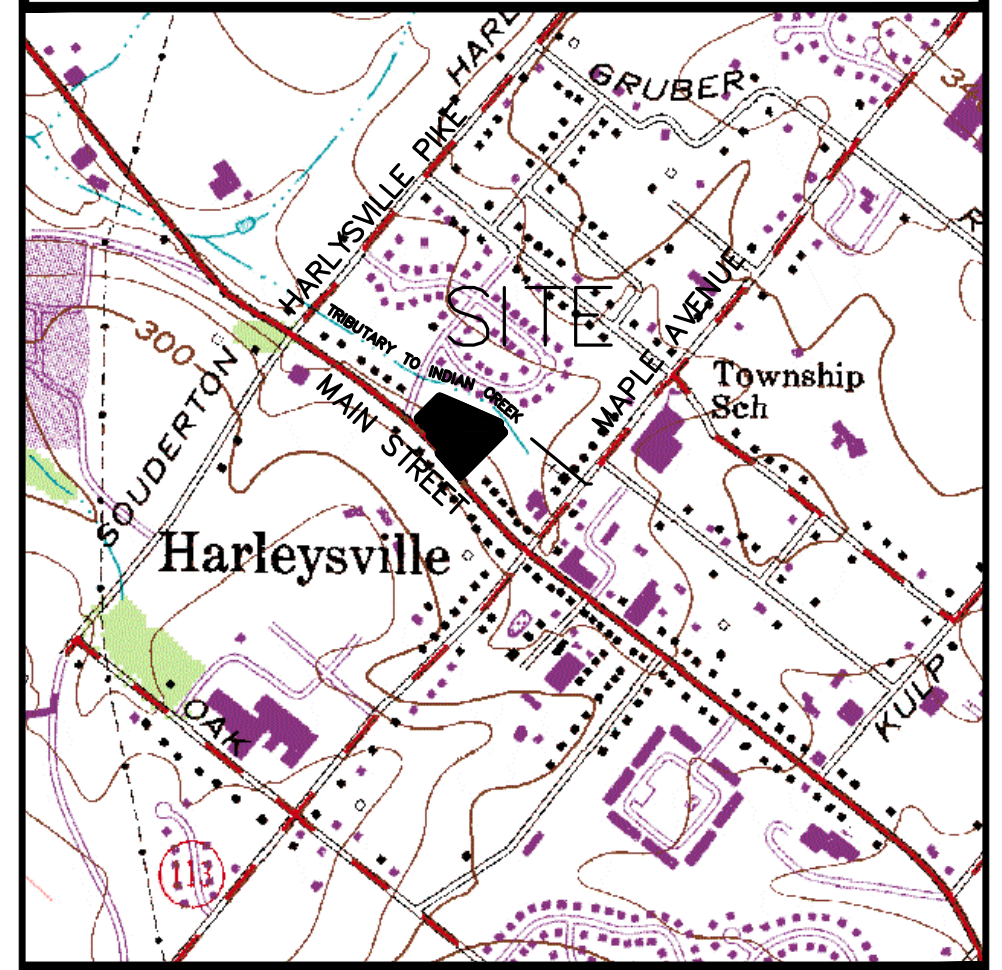
SANITARY SEWER AND WATER DETAILS

AS PART OF
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PREPARED FOR
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PROJ. MGR.: D.B.C.
PROJECT NO.: 2283
DRAWING NO.: 27 OF 27



**PRE-DEVELOPMENT
DRAINAGE SHED
2.289 Ac.**

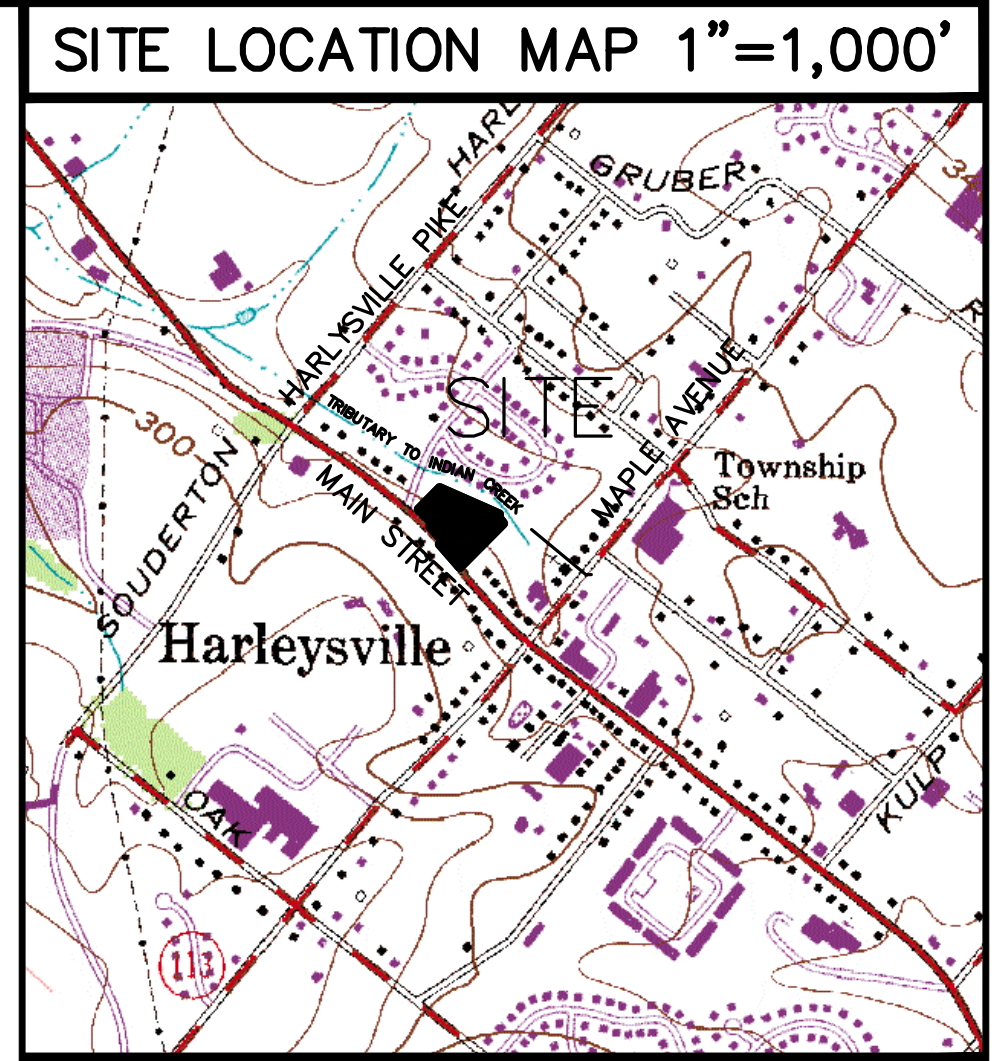
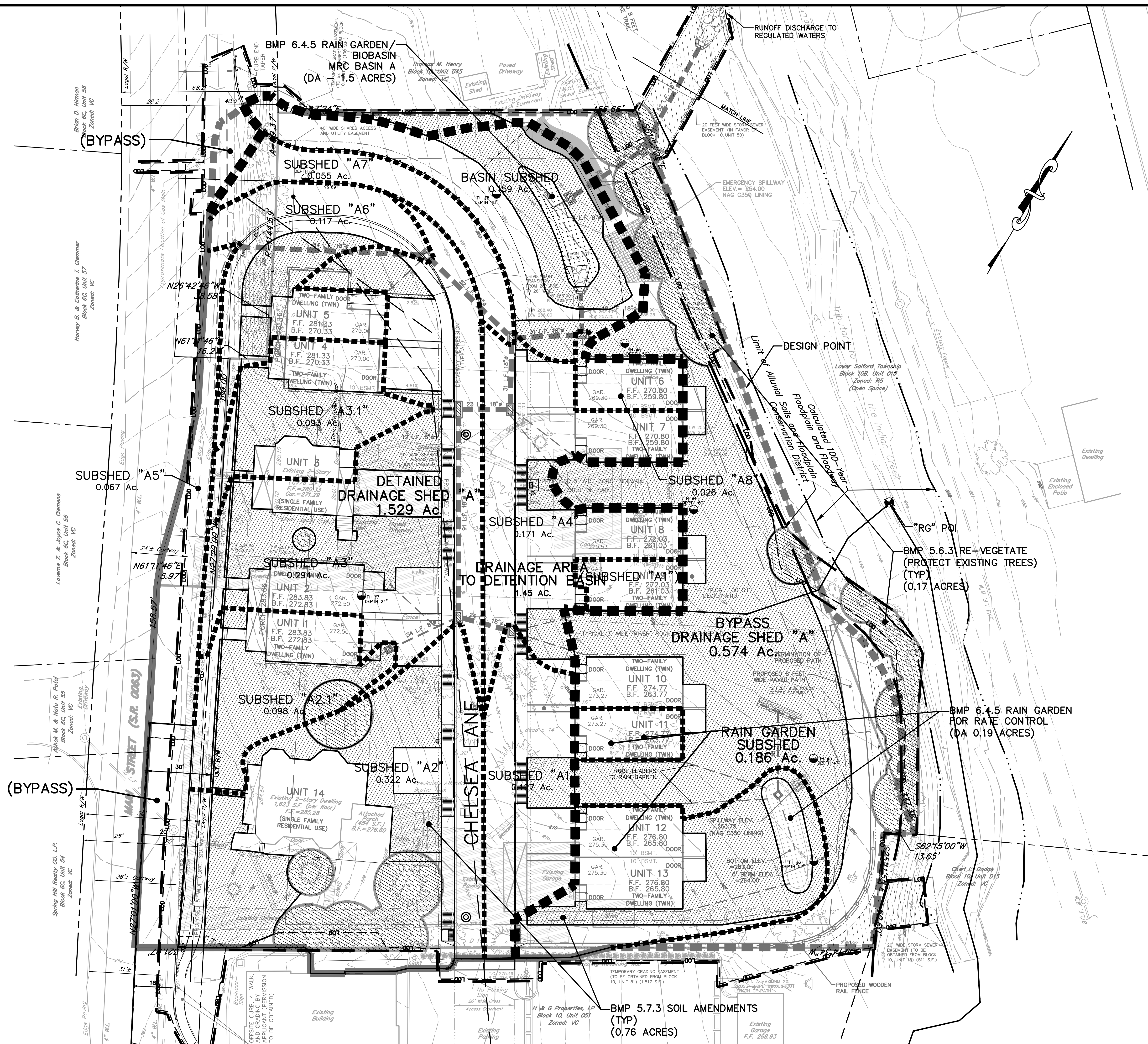
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(SEE COVER SHEET FOR COMPLETE LIST OF REVISION DATES)		
No.	REVISION	DATE
	PLAN ORIGINATION DATE	FEBRUARY 6, 2007

PRE-DEVELOPMENT DRAINAGE SHED PLAN
 AS PART OF
CLEMENS' MILL
 PREPARED FOR
JEFFREY AND KELLY CLEMENS
 SITE SITUATE IN
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

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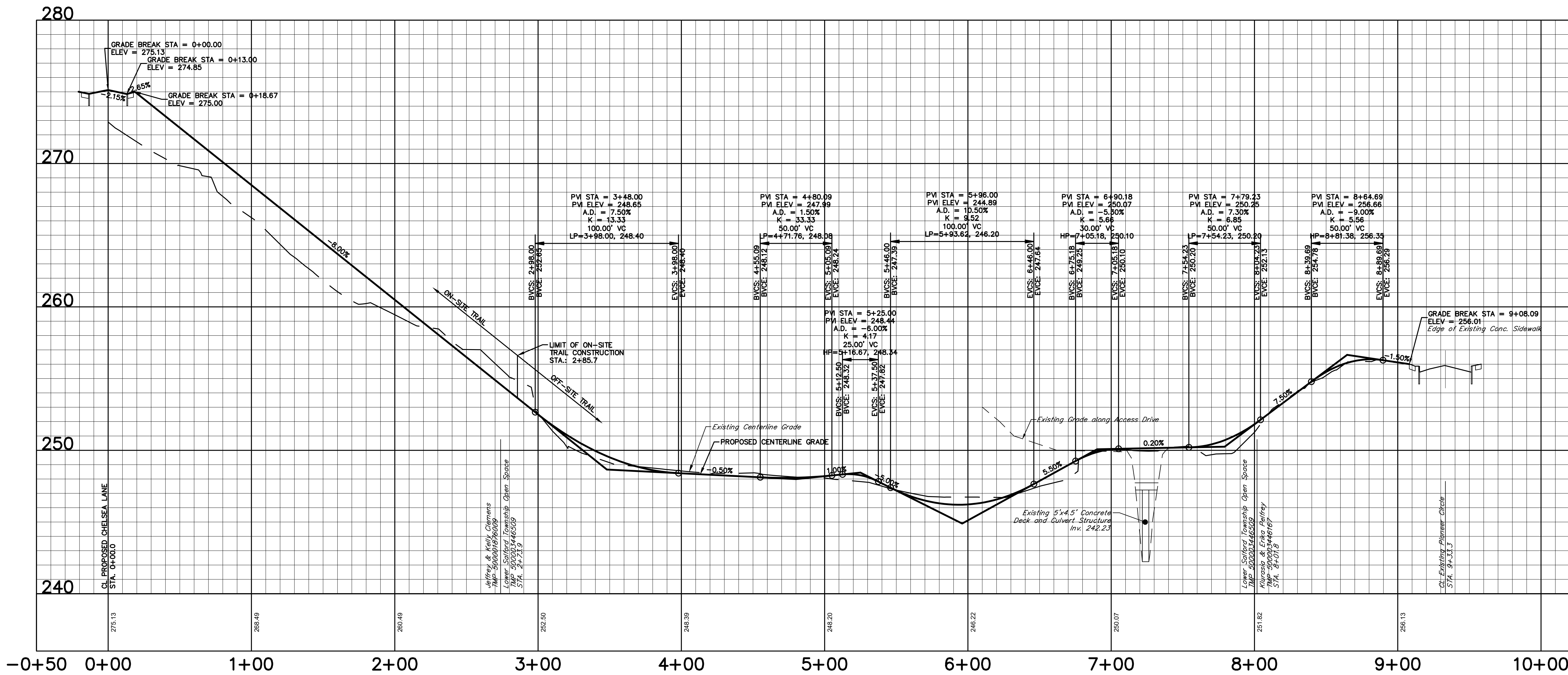
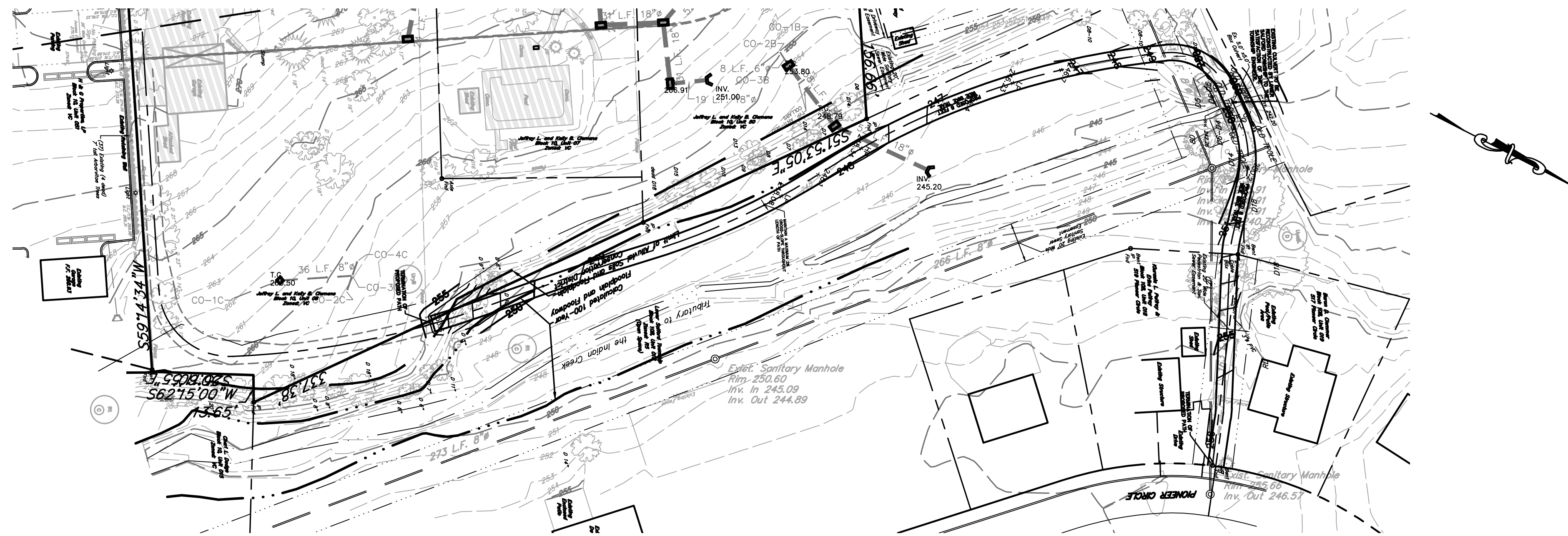
POST-DEVELOPMENT DRAINAGE SHED PLAN

AS PART OF
CLEMENS' MILL
PREPARED FOR
JEFFREY AND KELLY CLEMENS
SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

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RCMA	D.B.C.	2283	2 OF 2



DRAWING SCALE: H: 1" = 40' V: 1" = 4'

No.	REVISION	DATE

PLAN ORIGINATION DATE: NOVEMBER 10, 2017

OFFSITE PATH PLAN AND PROFILE

AS PART OF
CLEMENS' MILL
 PREPARED FOR
JEFFREY AND KELLY CLEMENS
 SITE SITUATE IN
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

RCMA
ASSOCIATES, INC.

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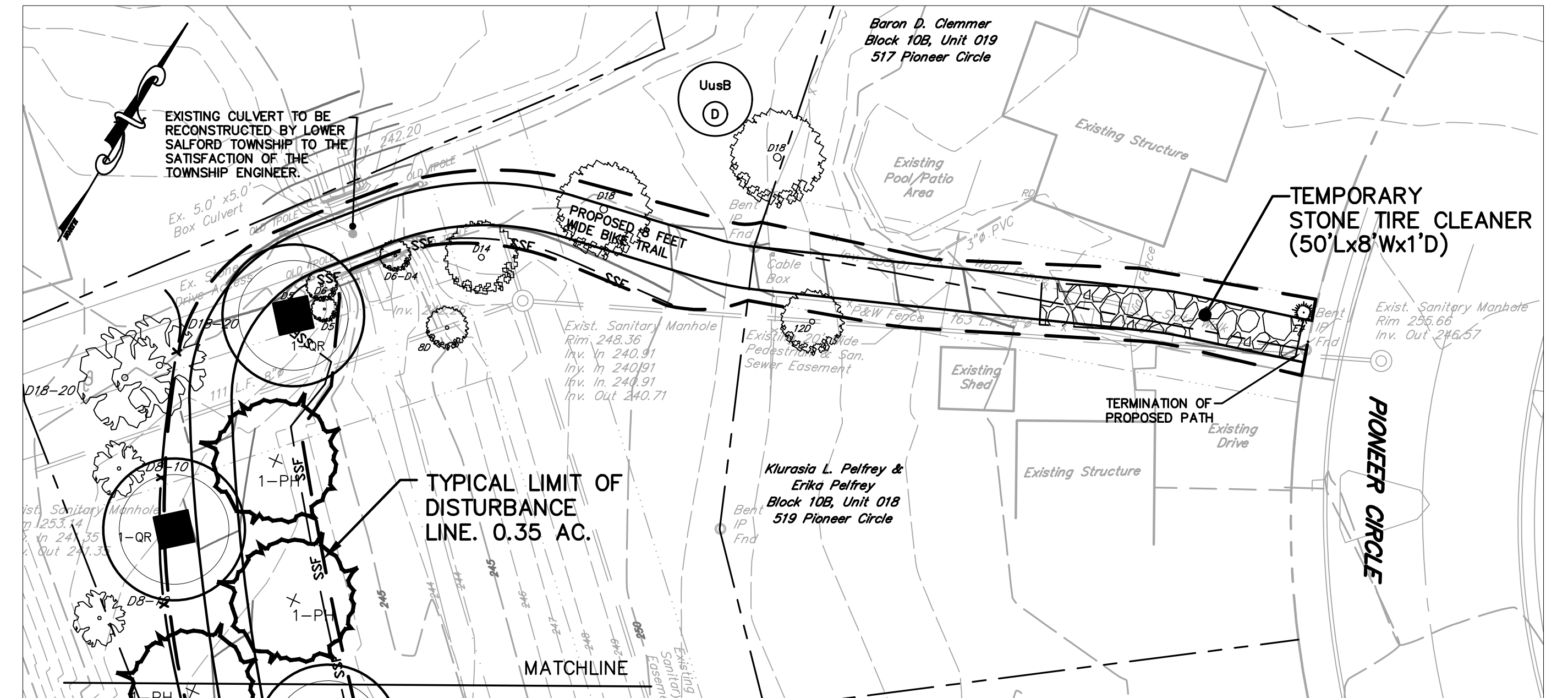
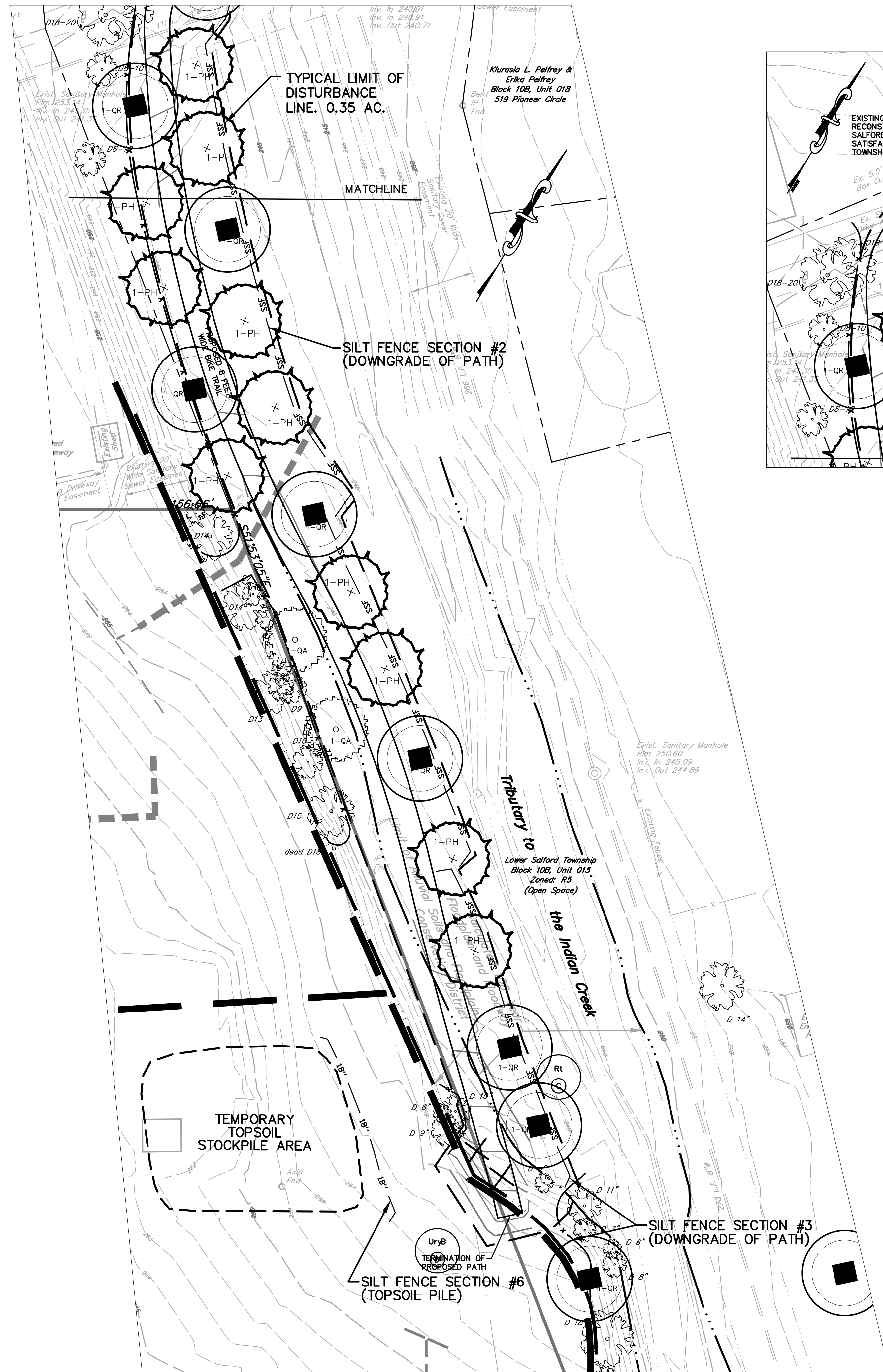
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DRAFTED BY RCMA	PROJ. MNGR D.B.C.	PROJECT NO. 2283	DRAWING NO. 1 OF 2
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PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	REMARKS	PCSM
PH	PLATANUS X HISPANICA	LONDON PLANE	3" CAL	11	B&B	N
QR	QUERCUS RUBRA	RED OAK (NATIVE)	3" CAL	9	B&B	N

- (1) EIGHT (8) OF THE REQUIRED STREET TREES ARE PROPOSED ALONG THE OFF-SITE PATH.
- (2) TWO (2) OF THE REQUIRED DETENTION BASIN PLANTINGS ARE PROPOSED OFF-SITE ALONG THE PATH (BELOW THE DETENTION BASIN BERM).
- (3) TWENTY (20) OF THE REPLACEMENT TREES ARE PROPOSED ALONG THE OFF-SITE PATH.
- (4) PLANTINGS WITH "*" INDICATED IN PCSM COLUMN WERE USED TOWARD MEETING PCSM VOLUME CREDITS.



UNDERGROUND UTILITY NOTE




LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION RECEIVED FROM FACILITY OWNERS FOLLOWING A CALL TO PA ONE CALL SYSTEM, INC. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UTILITIES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES BEFORE THE START OF WORK BY NOTIFYING FACILITY OWNERS, THROUGH THE PA ONE CALL SYSTEM (1-800-242-1778 OR 811), NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 10 BUSINESS DAYS IN ADVANCE OF BEGINNING EXCAVATION OR DEMOLITION WORK PER THE REQUIREMENTS OF PA ACTS 287 AND 121, AS AMENDED.
DESIGN SERIAL NO.: 5456593 (MAIN STREET)

EROSION CONTROL NOTES


REFER TO PROPOSED PATH EROSION AND SEDIMENTATION CONTROL DETAIL SHEET (3 OF 3) FOR EROSION CONTROL NOTES, MONITORING, INSPECTION, AND REPORTING REQUIREMENTS, AND DETAILS.

LEGEND

- DENOTES PROP. TIRE CLEANER
- PROP. TOPSOIL STOCKPILE AREA
- PROP. SUPER SILT FENCE
- PROP. 30" SILT FENCE
- PROP. LIMIT OF DISTURBANCE LINE
- PROP. TREE PROTECTION FENCING
- EXISTING CONTOUR
- EXISTING CONTOUR INDEX
- PROPOSED CONTOUR
- PROPOSED CONTOUR INDEX

 DRAWING SCALE: 1" = 20'		
No.	REVISION	DATE
	PLAN ORIGINATION DATE	NOVEMBER 10, 2017

OFFSITE PATH LANDSCAPING AND SITE PLAN
AS PART OF
CLEMENS' MILL
PREPARED FOR
JEFFREY AND KELLY CLEMENS
SITE SITUATE IN
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA



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RCMA	D.B.C.	2283	2 OF 2

LOWER SALFORD TOWNSHIP
ACT 537 SPECIAL STUDY
(PUMP STATIONS AND OLDS SYSTEMS)

November 2023

Prepared For:

Lower Salford Township
379 Main Street
Harleysville, PA 19438

Prepared by:

Gilmore & Associates, Inc.
184 W. Main Street, Suite 300
Trappe, PA 19426

G&A Project Number 15-10068T

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Appendix J Project Alternative Maps with Detailed Cost Estimates

Appendix K Map of Selected Alternatives

ABBREVIATIONS / ACRONYMS

CAP – Corrective Action Plan

EDU – Equivalent Dwelling Unit

ft - feet

I&I – Inflow and Infiltration

lb/day – Pounds per day

LPS – Lederach Pump Station

LSTA – Lower Salford Township Authority

MGD – Million Gallons per Day

mg/L - milligrams per liter

MRPS – Mainland Ridge Pump Station

NWI – National Wetlands Inventory

OLDS – On-Lot Disposal System(s)

ORPS – Oak Ridge Pump Station

PADEP – Pennsylvania Department of Environmental Protection

PENNVEST - Pennsylvania Infrastructure and Investment Authority

Plan – Act 537 Plan

PNDI – Pennsylvania Natural Diversity Inventory

P.S. – Pump Station

QRPS – Quarry Road Pump Station

SEO – Sewage Enforcement Officer

TDH – Total Dynamic Head

Township – Lower Salford Township

USGS – United States Geological Survey

WQM – Water Quality Management

WWTP – Wastewater Treatment Plant

PLAN SUMMARY

Introduction:

On behalf of Lower Salford Township, the Lower Salford Township Authority (LSTA) has agreed to conduct this Act 537 Special Study. This study has been prepared in accordance with the Pennsylvania Sewage Facilities Act of 1966, P.L. 1535, No. 537 as amended and supplemented, generally referred to as "Act 537", and codified in Chapter 71 of Title 25 adopted August 2, 1971, Sections 71.21 and 71.31, as amended. The purpose of this Special Study is to supplement the Township's existing Act 537 Plan in order to implement their long-term goals of reducing operational costs of their system as well as assessing the need for public sewer within the boundaries of the Township.

Needs Assessment:

The sewage conveyance system within Lower Salford Township includes 15 sewage pump stations. LSTA is responsible for owning, operating, and maintaining all of these pump stations. The number of pump stations is relatively high for a service area that generated just over 1 MGD in 2022. The demands on personnel to service all of these pump stations, and the expenses associated with operating them, have become burdensome. Therefore, the Authority has the need to reduce operating expenses and maintenance associated with their system. This Special Study will evaluate potential ways to reduce maintenance demands and operating costs of the pump stations within the system.

The Authority also manages connections to the public sewer system. In 2019, the homeowner of 756 Harleysville Pike had a failed on-lot system and connected to public sewer. Shortly thereafter, the owner of an adjacent property (752 Harleysville Pike) requested a connection to public sewer. This Special Study will also evaluate several properties with OLDS to determine if these two requests were isolated issues or if there is a need to extend public sewer to this area.

Selected Approach:

When each of the Authority's pump stations were built, a pump station was determined to be the most feasible solution at that time. However, over the years, the gravity collection system has grown and filled-in throughout the Township. As a result, there are opportunities to eliminate pump stations by connecting to gravity lines that did not exist when the pump stations were built.

In 2019, the Authority was able to eliminate their Cheswyck Pump Station by extending a gravity sewer line past the pump station and tying into another branch of their system. Due to the success of that project, the Authority has evaluated each of their remaining pump stations to determine if any other pump stations could be eliminated. Based on their proximity to gravity lines, three pump stations were identified for possible elimination:

1. Lederach
2. Oak Ridge
3. Mainland Ridge

A cost analysis was completed, and it was determined that Oak Ridge and Mainland Ridge will be eliminated. However, it would be cost prohibitive to eliminate Lederach Pump Station.

A consequence of eliminating the two pump stations will be additional flow to the Quarry Road Pump Station. In order to convey the additional flow and accommodate future growth in the service area, the Quarry Road Pump Station will be upgraded from 108,000 gpd to 235,000 gpd (average annual) and from 285 gpm to 770 gpm (peak hourly). This will be accomplished in two phases and ultimately require a complete replacement of the pumps and the forcemain.

The on-lot systems in the vicinity of 756 Harleysville Pike were also evaluated. These systems are generally in good condition. The selected approach is to allow 752 Harleysville Pike to connect to public sewer and allow the remaining OLDS to operate as long as they are functioning properly. In the event that the remaining OLDS do begin to fail, alternatives are included in this Study to show how they could be connected to public sewer.

The estimated total costs to implement the selected approaches are summarized below:

Upgrade capacity of the Quarry Rd Pump Station:	\$2,300,000
Decommission Mainland Ridge Pump Station:	\$400,000
Decommission Oak Ridge Pump Station:	\$275,000
<u>752 Harleysville Pike Sewer Connection:</u>	<u>\$40,000</u>
Total	\$3,015,000

Refer to Section VI for additional information on costs associated with the selected alternatives. Funding for this project will be from existing LSTA capital accounts. The costs will be recaptured from sewer rentals and tapping fees.

Regulatory approvals for the upgrade to Quarry Road Pump Station are anticipated to be received by January 2025 and construction completed by January 2026. The elimination of the Mainland Ridge Pump Station is expected to occur in 2026 and the Oak Ridge Pump Station in 2028. Further detail pertaining to the project milestone is provided in Section VIII of this Plan.

I. PREVIOUS WASTEWATER PLANNING

The capacity of the Quarry Road Pump Station was previously considered under a Special Study dated August 2004. The conclusion of this study was to closely monitor the flow into the pump station and expand the hydraulic capacity of the pump station from 410,400 gpd to 540,000 gpd when needed. A flow meter was installed, and the flow monitored. Based on the recorded data, the pump station has not needed to be upgraded yet.

Lower Salford Township's last major update for their Act 537 Plan was adopted on August 3, 2011 and approved by DEP in March 2013. The Plan Update was primarily focused on OLDS and considered land uses for future development. The 2013 Plan Update had the following recommendations:

1. *Adopt and implement an On-Lot Sewage Management Program Ordinance to guide the regular maintenance of on-lot sewage systems.*

On December 4, 2013, Lower Salford Township adopted Ordinance 2013-6 titled "Sewers: On-Lot Management Program".

2. *Complete flow studies at the Tyson Road and Quarry Road pump stations to establish new station flow capacities based on actual data. Expand stations as needed to meet capacity requirements as identified in the flow studies.*

Flow studies for Tyson Road and Quarry Road pump stations were completed on February 26, 2013. The result was that no capacity improvements were necessary for either pump station at that time. The study noted that future demand for Quarry Road Pump Station would require an upgrade and recommended either replacing the impellers or replacing the pumps and forcemain when needed. The study also noted a limitation in downstream capacity. The existing gravity sewer lines along Upper Mainland Road were operating near capacity and would need to be upgraded if the pump station was upgraded.

3. *Complete the Mainland WWTP rerate study to confirm a future capacity rating of the existing facility.*

A plant expansion and/or rerate of Mainland facility has not been completed. However, the Authority is currently in the preliminary steps of upgrading the Mainland facility.

The Township utilizes planning exemptions for developments situated within the approved planning area. When development occurs beyond the boundary of the planning area, sewage planning modules are required. The on-lot systems for the area being evaluated as part of this Special Study were designated as a “non-growth area to be served with on-lot disposal systems” and are located outside of the existing sewage planning area per the 2013 Act 537 Plan.

It is noted that LSTA is not currently overloaded or under a Corrective Action Plan (CAP).

II. PHYSICAL AND DEMOGRAPHIC ANALYSIS

Lower Salford Township is located in central Montgomery County. The township consists of 9,120 acres of land and is bordered by four townships: Franconia Township to the northeast, Upper Salford Township to the northwest, Skippack Township to the southwest and Towamencin Township to the southeast. The township is approximately 23 miles northwest of downtown Philadelphia. Primary roadways traversing the township include the Pennsylvania Turnpike and State Routes 113 and 63. This highway system makes employment centers in the City of Philadelphia, Montgomery, and Bucks Counties accessible from Lower Salford Township.

The demographic (i.e., population growth and distribution) and physical (i.e., geology, soil types, water bodies, etc.) characteristics of the Township are important considerations in wastewater facilities planning. Physical features determine the suitability of areas in the Township for on-lot sewage disposal as well as dictate the configuration of gravity sewers.

Lower Salford Township is located within the Perkiomen Creek watershed, which can be divided into various smaller drainage areas. The eastern portion of the township drains to the West Branch of the Skippack Creek and the Skippack Creek. Flood mapping for both of these creeks is included in Appendix B.

Indian Creek runs through the northwest portion of the township and into the East Branch of the Perkiomen Creek which drains the west side of the township. All of these tributaries ultimately flow to the Perkiomen Creek, southwest of the township boundary. USGS maps depicting the topography and physical characteristics of the areas are included in Appendix B.

A review of the soil surveys for the OLDS areas indicate that they primarily consist of silt loam with a shallow bedrock and shallow water table. A soil map from NRCS is provided in Appendix B. These soils are not typically conducive for on-lot systems but can be used in a case-by-case basis.

Based on the National Wetlands Inventory Mapping located in Appendix B, there are no existing wetlands within the work areas of the aforementioned projects. A detailed evaluation of the individual sites will be completed during the design phase.

III. EXISTING SEWAGE FACILITIES IN THE PLANNING AREA – IDENTIFYING THE EXISTING NEEDS

Wastewater Treatment Facilities:

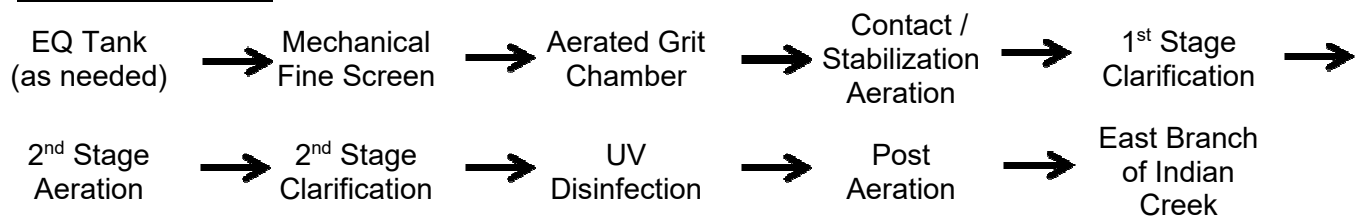
Except for a few isolated locations, all sewage generated within LSTA's service area is conveyed to one of their two wastewater treatment plants. LSTA owns and operates both of these treatment plants.

Sewage generated within the West Drainage Area is conveyed to the Harleysville Wastewater Treatment Plant (NPDES Permit PA0024422 and Clean Stream Permit 4601406 A-4). The plant is located on the south side of Sunnyside Pike near Harleysville Pike. The facility was built in 1963 and expanded in 1978.

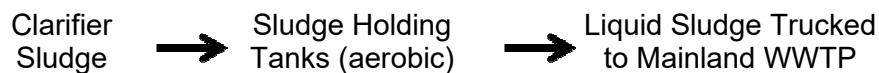
In 2001, the Harleysville Plant was re-rated to have a dry weather capacity of 0.59 MGD and a maximum month capacity of 0.72 MGD. In 2019, the organic capacity was re-rated from 1,636 lbs/day to 1,900 lbs/day.

The Harleysville Plant meets current limits and there are no current plans to upgrade the capacity of this facility. A description of the process is provided below.

Treatment Process:



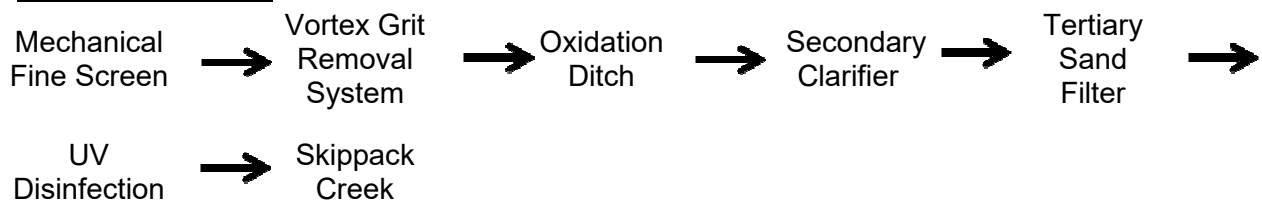
Sludge Process:



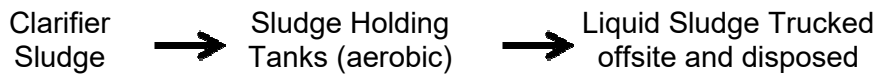
All sewage generated within the East Drainage Area is conveyed to the Mainland Wastewater Treatment Plant (NPDES Permit PA0056413 and Clean Stream Permit 4617401). This plant is located on the north side of Sumneytown Pike near Freed Road.

The Mainland plant was built in 1997 with a capacity of 0.9 MGD and a maximum month of 1.976 MGD. The organic capacity was recently re-rated from 2,252 lbs/day to 3,296 lbs/day. A description of the process is provided below.

Treatment Process:



Sludge Process:



The Authority is currently in the engineering stage for upgrading the capacity of the plant (average and wet weather flows) as well as adding a sludge dewatering process. Those projects are expected to be completed in the next 5 years.

Quarry Road Pump Station:

Quarry Road Pump Station is a duplex pump station with submersible pumps. With 1 pump running, the pump station conveys 300 gpm @ 124 TDH (100 feet is static lift + 24 feet dynamic losses). This system has an energy efficient design with minimal dynamic losses.

The rated Average Annual flow of Quarry Road Pump Station is 108,000 gpd with a hydraulic design capacity of 285 gpm (410,400 gpd). Based on the flow monitoring reports, the peak hourly flow has reached the hydraulic capacity of the pump station multiple times in recent years.

The 6" forcemain from this pump station runs approximately 3,200 linear feet east along Morris Road and turns north before discharging into manhole E6133 at Fairway Drive. From Fairway Drive, sewage flows by gravity to Upper Mainland Road north to the interceptor at Route 63.

The capacity of the receiving gravity system along Upper Mainland Road is 415 gpm (600,000 gpd). There is a known capacity issue with these lines and there have been reported SSOs during extreme wet weather events. Any increase to the capacity of the Quarry Road Pump Station without downstream improvements would exacerbate this problem.

From Upper Mainland Road, sewage flows through the interceptor located on the north side of Sumneytown Pike (A.K.A. Route 63) to the Mainland WWTP Influent Pump Station. There are no known capacity problems along the interceptor or at the Mainland WWTP Influent Pump Station.

Currently, Quarry Road Pump Station serves 636 EDUs. In 2022, the average flow to the pump station was 105,000 gpd with a peak hourly flow of 359 gpm (Appendix C).

Lederach Pump Station:

The Lederach Pump Station is located within a flag lot situated on the east side of Route 113. This pump station receives sewage from both residential and commercial properties along Route 113. The forcemain is approximately 2,800 feet in length and discharges into manhole W2008 located on Route 113 between Landis Road and Cheswyck Drive. The average capacity of this pump station is 24,000 gpd with a hydraulic design capacity of 95 gpm. Currently, this pump station serves 74 EDUs with an average flow of 10,020 gpd. The peak hourly flow is not measured but assumed to be 21 gpm. Flow from this pump station is conveyed to the Harleysville Wastewater Treatment Plant.

Oak Ridge Pump Station:

The Oak Ridge Pump Station is located at the corner of Oak Ridge Lane and Moyer Road, just south of Oak Ridge Elementary School. This pump station was built to serve the Oak Ridge Development. The Oak Ridge Development is a single cul-de-sac development built on the west side of Moyer Road.

The forcemain is approximately 1,700 feet in length and runs from Moyer Road, along Oak Ridge Lane, and discharges into manhole W2700. Manhole W2700 is situated within a Township property and is immediately upstream of the Cheswyck Pump Station that was decommissioned in 2019. The average capacity of the Oak Ridge Pump Station is 11,200 gpd with a hydraulic design capacity of 100 gpm. Currently, the Oak Ridge Pump Station serves 29 EDUs and in 2022 had an average flow of 4,110 gpd with a peak hourly flow of 23 gpm. Flow from this pump station is tributary to Mainland Wastewater Treatment Plant.

Mainland Ridge Pump Station:

The Mainland Ridge Pump Station was built around 1995 to serve the Mainland Ridge Subdivision. The purpose of this pump station was to convey sewage from the low point within Mainland Ridge Subdivision (near Quarry Road) to a higher point within the subdivision (manhole E6128 located within Coachlight Circle).

From the high point, sewage flows southeast by gravity out of the subdivision and to Upper Mainland Road. In total, the forcemain is approximately 1,100 feet in length. The average capacity of this pump station is 38,400 gpd with a hydraulic rating of 30 gpm. Currently, this pump station serves 68 EDUs and in 2022 experience an average flow of 13,720 gpd. The peak hourly flow is not measured but assumed to be 29 gpm. Flow from this pump station is conveyed to the Mainland Wastewater Treatment Plant.

On-lot Disposal Systems:

The southwest portion of the Township remained mostly undeveloped and did not have public sewer until the early 2000s. In 2004, a builder constructed the Lederach Golf Course development and brought public sewer to the area with the installation of the Tyson Road Pump Station. The purpose of this pump station was to serve the “Southwest Drainage Area” consisting of a mixture of gravity and low-pressure sewer lines.

The boundary of the Southwest Drainage Area runs down the center of Harleysville Pike. The homes on the west side fall within the Drainage Area and are connected to public sewer. The properties being evaluated by this Study are situated along the east side and have on-lot systems (refer to Appendix D for map of OLDS properties being evaluated).

In 2018, the owner of 756 Harleysville reported a failed on-lot system and requested a connection to public sewer. The low-pressure forcemain on Sharon Lane was extended across Harleysville Pike to serve this property. The approval for this connection stipulated that sewage planning would need to be performed if any other properties in the area needed a connection to public sewer.

In December of 2020, the owner of 752 Harleysville Pike approached the Township requesting a connection to public sewer. This request triggered the need for an evaluation of the area as part of this 537 Study. Based on a scoping meeting with PA DEP, it was determined that a total of 7 properties in this area will need to be evaluated. The addresses of these properties and the installation date of their OLDS are:

- 450 Morris Road - 1976
- 478 Morris Road - 1950
- 744 Harleysville Pike - 1957
- 752 Harleysville Pike - 1953
- 760 Harleysville Pike - 1979
- 690 Sharon Lane - 1977
- 691 Sharon Lane – 1981

Note: 744 Harleysville Pike consists of a small business (M&B Environmental) while the remainder of the properties are used as single-family residential dwellings.

To provide oversight for the on-lot systems, the Township's OLDS Ordinance requires each property owner verify the function of their on-lot systems at least once every three years. The Township developed a reporting form that is used by pumpers of on-lot systems that also requires them to confirm that the on-site system tank and baffles are functioning properly. A copy of the most recent reports for the subject properties are included in Appendix D. Based on the pumping reports submitted, there were no issues identified with the operation of the OLDS.

To further evaluate the condition of the OLDS systems, the SEO was interviewed for this Study. Montgomery County Health Department is the SEO for Lower Salford Township. According to the SEO's records:

- 752 Harleysville has a permitted holding tank in 2013.
- 760 Harleysville Pike was permitted with a "BTG" Best Technical Guidance system dated May 28, 1998 (Permit O-18094). The system was permitted as a BTG system since the sand mound was installed with 15" of separation to the limiting zone rather than the standard 24". Based on the SEO's opinion, the system appears to still be functioning adequately today.
- The SEO did not have any other issues documented for the 5 other properties.

The types of on-lot system installed within this area are appropriate for the area according to soil, geologic conditions, topographic limitation, and sewage flows. An open records request was also conducted to determine whether any complaints have been filed for the operation of the seven OLDS. No complaints have been filed.

IV. FUTURE GROWTH AND LAND DEVELOPMENT

Planning Documents:

Current land use classifications within Lower Salford Township consists of 13 districts and 2 overlay districts. A copy of the current zoning map delineating the boundaries of these districts is provided in Appendix E. A full description and evaluation of each district was provided in the 2013 537 Plan Update.

Limitations Due to Floodplains or Stormwater Management:

The implementation of this Special Study will not impact any floodplains or streams. This plan does not create any new discharge locations or require construction of new structures within floodplain areas.

Proposed Service Area:

The existing service area for the Quarry Road Pump Station consists of the following three components:

1. Gravity collection area
2. Indian Hill Pump Station
3. Tyson Road Pump Station

With the implementation of this 537 Study and the decommissions of the pump stations, the service area for the Quarry Road Pump Station will be expanded to include:

1. Mainland Ridge Pump Station
2. Oak Ridge Pump Station

(A Map of the proposed service area for Quarry Pump Station is included in Appendix F).

Future Development:

A projection of future growth and anticipated land development for the service area was performed in the 2013 Act 537 Plan Update. Over the past decade, a significant amount of development has occurred throughout the Township. Some of the developments were built in line with the projections made while other developments were modified with zoning changes to obtain denser uses. In addition, new developments that were unknown to the Township in 2013 have arisen and been built.

A new evaluation of the service area has been completed with this special study. A summary of the results are provided in the following table and an itemized list of the properties is included in Appendix G.

Table 1
 Quarry Road Pump Station
 Flow Evaluation
 (Ultimate Buildout)

PUMP STATION AREA	EXISTING					ADDITIONAL FUTURE			TOTAL		
	EDUs	AVERAGE FLOW (GPD)	AVERAGE FLOW PER EDU	PEAK FLOW (GPM)	PEAK FLOW PER EDU	EDUs	AVERAGE FLOW (GPD)	PEAK FLOW (GPM)	EDUs	AVERAGE FLOW (GPD)	PEAK FLOW (GPM)
QUARRY GRAVITY	283	-	-	-	-	417	-	-	-	-	-
INDIAN HILLS	14	-	-	-	-	0	-	-	-	-	-
TYSON	339	-	-	-	-	67	-	-	-	-	-
Total for Existing Quarry Service Area	636	109,000	171	359	0.56	484	82,950	273	1,120	191,950	632
MAINLAND RIDGE	68	13,720	202	29	0.42	9	1,816	4	77	15,536	32
OAK RIDGE	29	4,240	146	29	1.00	7	1,023	7	36	5,263	36
Total for Proposed Quarry Service Area	733	126,960	173	417	0.57	500	86,603	284	1,233	213,563	701

*Notes: Existing and future EDUs based on Service Area Evaluation (Appendix G)
 Average and Peak Flows are based on operating records in the past 5 years (Appendix C)*

Based on Table 1, the design conditions (rounded) for the Quarry Road Pump Station will be:

Average Annual Flow = 235,000 gpd

Peak Hydraulic Flow = 770 gpm

note: Include a 10% buffer for redevelopment and unforeseen growth

Future Growth for OLDS Properties:

All seven properties have been fully developed. It is believed that no further subdivision is possible.

V. ALTERNATIVES TO PROVIDE NEW OR IMPROVED WASTEWATER DISPOSAL FACILITIES

Introduction:

A map depicting each of the alternatives considered is provided in Appendix J. It is noted that the detailed cost estimate for each of these alternatives is provided with these maps.

Improvements to Quarry Road Pump Station and Forcemain:

The existing pump station operates at 300 gpm @ 124-ft TDH. At 526 gpm, the total headloss along the existing 6" forcemain is noticeably greater (TDH = 168-ft). Although this is 44-ft (19 psi) more than the existing conditions, the amount of headloss is acceptable and the forcemain could still be utilized (velocity = 6 fps).

However, to generate the additional head, a larger pump would be required. Based on correspondence with the pump manufacturer, the 40 HP submersible pumps would need to be upgraded to 50 HP. The manufacturer reviewed the as-built drawings and believes the larger pumps could still fit inside the existing wetwell.

As previously mentioned, any improvement to pump capacity would require corresponding improvements on the discharge side. The downstream conveyance is approximately 3,500 linear feet to Sumneytown Pike and has experienced wet weather SSOs in recent years. This restriction could be avoided by extending the existing forcemain along Upper Mainland Road to Route 63. The caveat is that this solution does not have sufficient capacity to meet the ultimate needs of the service area.

The Ultimate Buildout of the Township requires a pump station capacity of 770 gpm. When operating at this flow, the existing portion of the forcemain would be undersized resulting at a large amount of headloss (TDH = 239-ft). Operating at this design point is possible, but not recommended since it is beyond the typical operating range of most pumps and highly inefficient. To achieve 770 gpm, the existing section of forcemain should be replaced. Replacing the forcemain from the Quarry Road Pump Station (QRPS), along Morris Road to Fairway Drive, and installing a new forcemain along Upper Mainland Road all the way to Route 63 would be a total of 6,700 linear feet.

Alternatively, a new forcemain from the QRPS, running north along Quarry Road, and to Route 63 would only be 4,200 linear feet. Based on preliminary sizing, the new forcemain should be 8" and tie-in to the Alderfer Forcemain near the intersection of Route 63 and Quarry Road. The 2018 extension of the Alderfer Forcemain considered this possibility and the forcemain was conservatively sized to accommodate possible flow from the QRPS.

The static lift necessary to pump along Quarry Road or to Upper Mainland Road are similar. The main difference would be a reduction in length of pipe. A new forcemain along Quarry Road would be installed to accommodate 770 gpm but initially the existing pumps could be used to convey 526 gpm by changing the impeller size to 12" (the motor would stay the same).

Decommission of Lederach Pump Station

Once the capacity of QRPS is improved, it will be possible to decommission Lederach Pump Station. To decommission the pump station, it would require the installation of 1,230 linear feet of gravity pipe from the existing pump station site to Truman Court. From Truman Court, sewage would flow along Landis Road eventually reaching the QRPS. The elimination of this pump station would transfer flow from Harleysville WWTP to Mainland WWTP which is also one of the long-term goals of the Township.

Based on the existing inverts of pipes and the preliminary path between the pump station site and Truman Court, the depth of the gravity sewer line is deep (up to 23-feet of depth.). As a result, the installed cost per foot is high.

Decommission of Oak Ridge Pump Station

The Oak Ridge Pump Station currently flows towards Cheswyck development. This pump station could be eliminated by installing 800 linear feet of gravity pipe from the existing pump station to Creekview Drive. From Creekview Drive, sewage would flow to Stover Road and to the QRPS.

Decommission of Mainland Ridge Pump Station

As mentioned previously, an upgrade to QRPS would also allow the Mainland Ridge Pump Station to be decommissioned. This pump station is situated on Quarry Road and is approximately 50-ft higher in elevation than QRPS. To eliminate the pump station, sewage could be diverted either westward and connect to the interceptor along Stover Road or southward along Quarry Road and connect directly to the pump station.

Connecting to the interceptor would be easier to construct. It is a shorter pipe run (roughly half of the other alternative) and the installation would be at a shallower depth. The difficulty with this alternative is that it would require the procurement of easements.

An alternative to the acquisition of easements is to install the gravity line within Quarry Road. Initially, the pipe slope would be going against the grade of the road and the depth of the sewer would hit a maximum of 22-feet resulting in an expensive installation cost per foot. The required pipe length is almost double of the other alternative. However, if this work is combined with the installation of the forcemain along Quarry Road, then there would be road restoration savings by installing the forcemain and the gravity sewer line within the same trench.

Impact of Alternatives to Mainland WWTP:

The Oak Ridge and Mainland Ridge Pump Stations are tributary to Mainland WWTP while Lederach Pump Station is tributary to Harleysville WWTP. The systematic transfer of flow from Harleysville WWTP to Mainland WWTP has been one of the long-term goals of the Township.

As noted in previous 537 Plan Updates, the ultimate build-out of the Township will eventually cause an overload to Mainland WWTP. This will require that the plant to be upgraded at some point in the future. A possible layout of the upgraded plant was provided in the 2013 537 Study. When the overload will occur depends on the growth rate of the Township.

The upgrade to QRPS does not change the growth rate of the Township. It does not expand sewer to areas that were not previously sewered nor does it change the density of development that can occur. The only alternative that will increase the daily flow to Mainland WWTP beyond the amount that has already been planned for is the decommissioning of Lederach Pump Station. As mentioned previously, it has been determined that the decommission of Lederach Pump Station is not economically feasible.

Alternatives for On-lot Systems:

Based on the Needs Analysis, the only property with a known failed system or suspected failing system is 752 Harleysville Pike. This property has had a holding tank since 2013. The property could continue to use a holding tank in perpetuity or be required to connect to public sewer.

If 752 Harleysville Pike connects to public sewer, the most feasible way would be to tie into the low-pressure forcemain that was run across Harleysville Pike for their neighbor, 756 Harleysville Pike. In this case, LSTA would take ownership of the low-pressure forcemain situated within the public right-of-way.

The remaining six properties could either be allowed to utilize their OLDS as long as their system is functioning properly or the Township could allow them to connect to public sewer. Since two of the dwellings front Morris Road and the other four front Harleysville Pike, sewer service would be provided from two different directions. A schematic of a low-pressure system to provide public sewer for all subject properties is included in Appendix J.

No-Action Alternative:

It is possible that the Township could take no action and continue to operate all of the pump stations as they currently do. The pump stations planned for decommission will continue to accumulate operating costs, which will ultimately result in higher customer rates in the future. The Quarry Road Pump Station can safely convey the average and peak flows for the short term but cannot meet future demand. To implement the “no-action alternative”, changes to planned developments and/or zoning would be required to limit future growth.

Regarding the seven on-lot systems, no action would result in 752 Harleysville Pike utilizing their holding tank in perpetuity. The other six properties would continue to utilize their OLDS.

VI. EVALUATION OF ALTERNATIVES

Consistency Determination:

Wastewater management alternatives developed as part of the Act 537 planning process must be evaluated in respect to the goals and objectives of the various planning, environmental, and natural resource laws and policies of the Commonwealth of Pennsylvania. Chapter 71.21(a)(5) of DEP's regulations requires that the Act 537 Plan address the consistency of each wastewater management alternative with eleven of the Commonwealth's goals and policies. If a recommended alternative is determined to conflict with or is inconsistent with one of the goals and objectives, the conflict and inconsistencies must be resolved before DEP will approve the alternative.

The Following is a discussion of the eleven categories under the consistency analysis. The consistency analysis was performed for only those components related to this Special Study. Based on the following, all alternatives identified are consistent with the mandated criteria.

1. *Clean Streams Law / Clean Water Act*

Sections 4 and 5 of the Clean Streams Law require that consideration be given to water quality management and pollution control in a watershed as a whole. Section 208 of the Clean Water Act calls for the development of plans that identify the facilities necessary to meet anticipated municipal and industrial waste treatment needs. The conveyance modifications proposed are conducive with the Clean Streams Law and the existing treatment facilities are permitted to provide treatment in compliance with the law.

2. *Municipal Wasteload Management Plans*

The Authority submits a Chapter 94 Wasteload Management Report to DEP annually. The existing and projected flows utilized in this Special Study are based on these reports and the identified alternatives are consistent. The Authority is not under any DEP imposed Corrective Action Plans.

3. *Title II of the Clean Water Act*

Title II of the Clean Water Act requires the development and implementation of wastewater treatment management plans and practices which provide the application of the best practical waste treatment technology before discharging into receiving waters. The identified alternatives within this study do not propose any new discharges to receiving water and is; therefore, consistent with this act.

4. *Comprehensive Planning*

The Township's Comprehensive Plan formed a basis for the 2013 Act 537 Plan Update. The Comprehensive Plan designated areas for residential, commercial, and industrial development, which was used extensively when developing Sewer Growth Areas in the original plan. The Special Study does not propose any change in uses and is consistent with that plan.

5. *Anti-degradation Requirements Contained in Chapters 93, 95, and 102*

Chapter 93 and 95 under Pennsylvania's Clean Stream Law classifies all surface waters according to protect uses and establishes water quality criteria which need to be maintained in the surface waters. No additional permanent surface water discharges are proposed under this Special Study. Temporary surface water discharges may result from construction activities but will be permitted accordingly.

Chapter 102 requires a soil erosion and sedimentation control plan prepared and followed for any construction activity impacting greater than one acre. Before construction begins, an erosion and sedimentation control plan will be prepared and approved by the appropriate agency.

6. *State Water Resource Planning*

The Water Resources Planning Act requires water plans to be prepared for all major watershed with Pennsylvania. State Water Plans have been developed for use as a management tool to guide in the conservation, development and administration of the Commonwealth's water and related land resources on a comprehensive and coordinated basis. The LSTA service area is under the State Water Plan (SWP-4), Sub-basin 3, Lower Delaware River.

The Special Study is consistent with the objectives of the State Water Plan through existing Lower Salford Township ordinances and zoning, and the NPDES permit for the LSTA WWTPs. This is consistent with the environmental quality goal of the State Water Plan.

7. *Pennsylvania Prime Agricultural Land Policy*

The Prime Agricultural Land Policy was established to protect prime agricultural land from irreversible conversions to users that result in the loss of the land as an environmental or essential food source resource. The Special Study does not propose new public sewer service in designated agricultural areas and is therefore consistent with the Prime Agricultural Land Policy

8. *County Stormwater Management Plans*

Watershed-based stormwater management planning is a requirement of Pennsylvania's Stormwater Management Act (Act 167). The Pennsylvania Department of Environmental Protection oversees the Act 167 program, including designating the watersheds for planning purposes. Through watershed-based planning, municipal stormwater regulations are coordinated so that upstream control requirements in one municipality do not result in downstream flooding in another municipality.

Montgomery County is divided into 17 watersheds. As of 2021, the County has only completed plans for 10 of the 17 watersheds. Montgomery County does not currently have an approved stormwater management plan for the project area (Skippack Creek Watershed).

9. Wetland Protection Under Chapter 105

Areas classified as wetlands are shown in the US Fish and Wildlife Service National Wetlands Inventory Map included in Appendix B. There were no wetlands located within the anticipated work areas. Full site evaluations will be completed during the permitting process to confirm these maps.

10. Protection of Plant and Animal Species of Concern as Designated by the Department of Environmental Protection, Bureau of Forestry, Pennsylvania Game Commission, Pennsylvania Fish Commission, and/or Contained in the Pennsylvania Natural Diversity Inventory (PNDI)

A Pennsylvania National Diversity Inventory (PNDI) search was completed for the anticipated work areas. Results of those searches are included in Appendix H. There were no PNDI “hits” for any of the selected alternatives.

11. Pennsylvania Historical and Museum Commission Site Assessment

The Cultural Resource Notice, by the Pennsylvania Historical Museum Commission (PHMC), has been completed and is included in Appendix I. There was a possible archeological concern in the Stover Road area. A specialist was hired to conduct field excavations. The results of the field study was that there are no archaeological concerns in the anticipated work area.

Resolution of Inconsistencies:

Based on the above analysis, it does not appear that there are any inconsistencies, during the planning phase, between the selected approach and the policies of the Commonwealth of Pennsylvania.

Evaluation of Water Quality Standards:

The selected alternatives are consistent with the above 11 water quality criteria. Effluent limitations for the Authority’s two wastewater treatment plants are established by their NPDES permits to meet the applicable water quality standards.

Cost Opinions:

The preliminary probable cost opinions for the sewage facilities components were developed based on probable construction costs for facilities. Soft costs for surveying, design, construction administration, geotechnical investigation, construction observation, legal, easements, and contingencies were also included to develop the cost. The cost components were segregated based on facilities and anticipated timing of expenditures. The estimate is in 2021 dollars. **The detailed cost opinion is located on the sketch plan for each alternative in Appendix J.** A summary of these costs is provided below.

**Table 2
Summary of Project Costs**

Alternative		Description	Project Cost
Quarry Rd P.S. Upgrade Alternative 1	Phase 1	Extend fm along Upper Mainland Rd. Replace pumps and electrical system.	\$2,000,000
	Phase 2	Replace existing 6" forcemain	\$900,000
	total		\$2,900,000
Quarry Rd P.S. Upgrade Alternative 2	Phase 1	New forcemain along Quarry Road	\$1,700,000
	Phase 2	Replace pumps and electrical system	\$600,000
	total		\$2,300,000
Mainland Ridge P.S. Decommission Alternative 1		Run gravity across to Stover Rd	\$400,000
Mainland Ridge P.S. Decommission Alternative 2		Run gravity along Quarry Rd w/FM	\$800,000
Lederach P.S. Decommission		Gravity line to Truman Ct	\$1,000,000
Oak Ridge P.S. Decommission		Gravity line to Creekview Dr	\$275,000
OLDS Alternative 1		Existing properties to remain as-is	\$0
OLDS Alternative 2		752 Harleysville Connecting to Sewer	*\$40,000
OLDS Alternative 3		Providing public sewer for seven properties	*\$300,000

*note: It is anticipated that these costs will be paid for by owners of the respective properties

Funding/Financing:

This section of the plan addresses financing alternatives that could be applicable for the modifications to the wastewater collection and conveyance system. Three financing alternatives exist: PennVest, municipal bond financing, and bank loans. The selected financing alternative will be determined at project implementation. At this time, LSTA anticipates using their existing capital reserves to finance these projects. The costs will be recaptured from sewer rentals and tapping fees.

Immediate or Phased Implementation:

The first priority of the Township is to upgrade the capacity of QRPS. Completion of this work is necessary before any of the pump stations could be eliminated.

As noted in the cost estimate, the upgrade in capacity to QRPS could be completed in two phases. The first phase would meet 10-year future conditions and the second phase would meet the anticipated ultimate needs of the Township. Once the pump station has been upgraded, work to decommission the pump stations can begin. It is anticipated that the Mainland Pump Station will be decommissioned with some of the work being performed concurrently with the Alderfer Forcemain. The Oak Ridge Pump Station will be decommissioned sometime later.

Regarding the OLDS, 752 Harleysville Pike is the only property with a known issue. Connection of this system to public sewer should be implemented immediately while the remaining properties could be connected in the future, if needed.

Administrative and Legal Authority:

The Township and the Authority both have the administrative structure in place and the necessary legal authority to implement the recommendations of this Special Study.

VII. INSTITUTIONAL EVALUATION

Lower Salford Township is an established municipality with the legal right and ability to implement the project. The Township created the LSTA to administer daily operation and maintenance of the wastewater treatment plants and existing public sewer facilities throughout the entire Township.

The LSTA is an acting Authority under the "Municipality Authorities Act of 1945". The Authority has the power to finance projects, negotiate agreements, set rates, administer operational and maintenance programs and has proven its ability to manage authority operations efficiently.

The LSTA has already procured any and all easements necessary to upgrade the Quarry Road Pump Station, abandon the Mainland Ridge Pump Station, and install the gravity line through private properties to the Stover Road Interceptor.

Regarding Oak Ridge Pump Station, the Authority has procured some of the easements but not all of them. The Quarry Road Pump Station must be upgraded and the forcemain installed before any work on this pump station could begin. It will be at least 5 years until this pump station can be decommissioned and during that time the Authority will procure the remaining easements necessary to implement this alternative. Although discussions with the remaining property owners has been positive, the Authority has the power to take the land by eminent domain, should the need arise.

VIII. IMPLEMENTATION SCHEDULE AND JUSTIFICATION FOR SELECTED TECHNICAL & INSTITUTIONAL ALTERNATIVES

Selected Alternatives:

The Selected Alternatives are presented in Table 3 below and depicted in Appendix K. Based on the evaluation and analysis presented throughout the Plan, these alternatives are the most viable and cost effective for the existing and future wastewater disposal needs.

**Table 3
Selected Alternatives**

Alternative		Description	Project Cost
Quarry Rd P.S. Decommission Alternative 2	Phase 1	New forcemain along Quarry Road	\$1,700,000
	Phase 2	Replace pumps and electrical system	\$600,000
	Total		\$2,300,000
Mainland Ridge P.S. Decommission Alternative 1		Run gravity across to Stover Rd	\$400,000
Oak Ridge P.S. Decommission		Gravity line to Creekview Dr	\$275,000
OLDS Alternative 2		752 Harleysville Connecting to Sewer	\$40,000
		Grand Total	\$3,015,000

Implementation Schedule:

A tentative schedule for implementing the selected alternatives is the following:

<u>Project Milestone</u>	<u>Milestone Date</u>
Submit for Planning Commission Review.....	November 2023
Advertise for Public Comments	December 2023
Plan Adoption by Lower Salford	February 2024
Submit Special Study to DEP.....	February 2024
Receive DEP approval of Special Study.....	July 2024
752 Harleysville Pike connecting to public sewer	2024
Receive Permit approvals for Upgrade to Quarry P.S.....	November 2024
Begin Planning and Permitting for the elimination of Oak Ridge and Mainland Ridge Pump Stations.....	November 2024
Advertise Quarry P.S. for Bidding	December 2024
Begin Construction for Quarry P.S.....	February 2025
Complete Construction for Quarry P.S.....	February 2026
Eliminate Mainland Ridge Pump Station	2027
Eliminate Oak Ridge Pump Station	2028+

Appendix A

Administrative Documents

- Act 537 Plan Checklist
- Task Activity Report (TAR)
- Authorization from PaDEP
- Municipal Adoption Resolutions
- Planning / Health Department Comments
- Publication
- Public Comments



ACT 537 PLAN CONTENT AND ENVIRONMENTAL ASSESSMENT CHECKLIST

PART 1 GENERAL INFORMATION

A. Project Information

1. Project Name Act 537 Special Study (Pump Stations and OLDS Systems)

2. Brief Project Description

Upgrade of Quarry Pump Station, decommission of Mainland Ridge and Oak Ridge Pump Stations, and OLDS study of 7 lots.

B. Client (Municipality) Information

Municipality Name	County	City	Boro	Twp
Lower Salford	Montgomery	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Czajkowski	Joseph			Township Manager
Additional Individual Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1
379 Main Street

Mailing Address Line 2

Address Last Line -- City
Harleysville

State ZIP+4
PA 19438

Phone + Ext.
215-256-8087

FAX (optional)

Email (optional)

C. Site Information

Site (or Project) Name

Lower Salford Township

(Municipal Name) Act 537 Plan

Site Location Line 1

Site Location Line 2

D. Project Consultant Information

Last Name	First Name	MI	Suffix
Duffy	Thomas		

Title
Project Engineer

Consulting Firm Name
Gilmore & Associates, Inc.

Mailing Address Line 1
5100 Tilghman St, Suite 150

Mailing Address Line 2

Address Last Line -- City
Allentown

State ZIP+4 Country
PA 18104 USA

Email Phone + Ext.
tduffy@gilmore-assoc.com 484-550-6661

FAX
610-366-0433

note: Checklist discussed and revised per Dec 11, 2020 TAR Meeting

PART 2 ADMINISTRATIVE COMPLETENESS CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	In addition to the main body of the plan, the plan must include items one through eight listed below to be accepted for formal review by DEP. Incomplete plans may be denied unless the municipality is clearly requesting an advisory review.
_____	_____	1. Table of Contents
_____	_____	2. Plan Summary
_____	<u>1</u>	A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - 25 Pa. Code §71.21(a)(7)(i)).
_____	<u>2</u>	B. Identify the alternative(s) chosen to solve the problems and serve the areas of need identified in the plan. Also, include any institutional arrangements necessary to implement the chosen alternative(s). (Reference - 25 Pa. Code §71.21(a)(7)(ii)).
_____	<u>3</u>	C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed funding method to be used. (Reference - 25 Pa. Code §71.21(a)(7)(ii)).
_____	<u>App. A</u>	D. Identify the municipal commitments necessary to implement the Plan. (Reference - 25 Pa. Code §71.21(a)(7)(iii)).
_____	<u>VIII-2</u>	E. Provide a schedule of implementation for the project that identifies the major milestones with dates necessary to accomplish the project to the point of operational status. (Reference - 25 Pa. Code §71.21(a)(7)(iv)).
_____	<u>App. A</u>	3. Municipal Adoption: <i>Original</i> , signed and sealed Resolution of Adoption by the municipality which contains, at a minimum, alternatives chosen and a commitment to implement the Plan in accordance with the implementation schedule. (Reference - 25 Pa. Code §71.31(f)) Section V.F. of the Planning Guide.
_____	<u>App. A</u>	4. Planning Commission / County Health Department Comments: Evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies of the municipality, planning agencies of the county, planning agencies with area wide jurisdiction (where applicable), and any existing county or joint county departments of health. (Reference - 25 Pa. Code §71.31(b)) Section V.E.1 of the Planning Guide.
_____	<u>App. A</u>	5. Publication: Proof of Public Notice which documents the proposed plan adoption, plan summary, and the establishment and conduct of a 30-day comment period. (Reference - 25 Pa. Code §71.31(c)) Section V.E.2 of the Planning Guide.
_____	<u>App. A</u>	6. Comments and Responses: Copies of all written comments received and municipal response to each comment in relation to the proposed plan. (Reference - 25 Pa. Code §71.31(c)) Section V.E.2 of the Planning Guide.
_____	<u>VIII-2</u>	7. Implementation Schedule: A complete project implementation schedule with milestone dates specific for each existing and future area of need. Other activities in the project implementation schedule should be indicated as occurring a finite number of days from a major milestone. (Reference - 25 Pa. Code §71.31(d)) Section V.F. of the Planning Guide. Include dates for the future initiation of feasibility evaluations in the project's implementation schedule for areas proposing completion of sewage facilities for planning periods in excess of five years. (Reference - 25 Pa. Code §71.21(c)).
_____	<u>App. A</u>	8. Consistency Documentation: Documentation indicating that the appropriate agencies have received, reviewed and concurred with the method proposed to resolve identified inconsistencies within the proposed alternative and consistency requirements in 25 Pa. Code §71.21.(a)(5)(i-iii). (Reference - 25 Pa. Code §71.31(e)). Appendix B of the Planning Guide.

PART 3 GENERAL PLAN CONTENT CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	Item Required
_____	<u>I-1</u>	I. Previous Wastewater Planning
_____		A. Identify, describe and briefly analyze all past wastewater planning for its impact on the current planning effort:
_____	<u>I-1</u>	1. Previously undertaken under the Pennsylvania Sewage Facilities Act (Act). (Reference - Act 537, 35 P.S. §750.5(d)(1)).
_____	<u>I-1</u>	2. Has not been carried out according to an approved implementation schedule contained in the plans. (Reference - 25 Pa. Code §71.21(a)(5)(i)(A-D)). Section V.F of the Planning Guide.
_____	<u>I-2</u>	3. Is anticipated or planned by applicable sewer authorities or approved under a Chapter 94 Corrective Action Plan. (Reference - 25 Pa. Code §71.21(a)(5)(i)(A&B)). Section V.D. of the Planning Guide.
_____	<u>I-2</u>	4. Through planning modules for new land development, planning “exemptions” and addenda. (Reference - 25 Pa. Code §71.21(a)(5)(i)(A)).
_____	<u>II-1</u>	II. Physical and Demographic Analysis utilizing written description and mapping (All items listed below require maps, and all maps should show all current lots and structures and be of appropriate scale to clearly show significant information).
_____	<u>II-1</u>	A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference – 25 Pa. Code §71.21(a)(1)(i)).
_____	<u>II-1 / App.B</u>	B. Identification of physical characteristics (streams, lakes, impoundments, natural conveyance, channels, drainage basins in the planning area). (Reference - 25 Pa. Code §71.21(a)(1)(ii)).
_____	<u>II-1 / App.B</u>	C. Soils - Analysis with description by soil type and soils mapping for areas not presently served by sanitary sewer service. Show areas suitable for in-ground onlot systems, elevated sand mounds, individual residential spray irrigation systems (IRSIS), and areas unsuitable for soil dependent systems. (Reference - 25 Pa. Code §71.21(a)(1)(iii)). Show Prime Agricultural Soils and any locally protected agricultural soils. (Reference - 25 Pa. Code §71.21(a)(1)(iii)).
_____	_____	D. Geologic Features - (1) Identification through analysis, (2) mapping and (3) their relation to existing or potential nitrate-nitrogen pollution and drinking water sources. Include areas where existing nitrate-nitrogen levels are in excess of 5 mg/L. (Reference - 25 Pa. Code §71.21(a)(1)(iii)).
_____	_____	E. Topography - Depict areas with slopes that are suitable for conventional systems; slopes that are suitable for elevated sand mounds and slopes that are unsuitable for onlot systems. (Reference - 25 Pa. Code §71.21(a)(1)(ii)).
_____	_____	F. Potable Water Supplies - Identification through mapping, description and analysis. Include public water supply service areas and available public water supply capacity and aquifer yield for groundwater supplies. (Reference - 25 Pa. Code §71.21(a)(1)(vi)). Section V.C. of the Planning Guide.
_____	<u>II-1 / App.B</u>	G. Wetlands-Identify wetlands as defined in 25 Pa. Code Chapter 105 by description, analysis and mapping. Include National Wetland Inventory mapping and potential wetland areas per the United States Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS) mapped hydric soils. Proposed collection, conveyance and treatment facilities and lines must be located and labeled, along with the identified wetlands, on the map. (Reference - 25 Pa. Code §71.21(a)(1)(v)). Appendix B, Section II.I of the Planning Guide.

- | | | | |
|-------|--------------|-------------|---|
| <hr/> | <u>III-1</u> | III. | Existing Sewage Facilities in the Planning Area - Identifying the Existing Needs |
| <hr/> | <u>III-1</u> | A. | Identify, map and describe municipal and non-municipal, individual and community sewerage systems in the planning area including: |
| <hr/> | <u>III-1</u> | 1. | Location, size and ownership of treatment facilities, main intercepting lines, pumping stations and force mains including their size, capacity, point of discharge. Also include the name of the receiving stream, drainage basin, and the facility's effluent discharge requirements. (Reference - 25 Pa. Code §71.21(a)(2)(i)(A)). |
| <hr/> | <u>III-1</u> | 2. | A narrative and schematic diagram of the facility's basic treatment processes including the facility's National Pollutant Discharge Elimination System (NPDES) permitted capacity, and the Clean Streams Law permit number. (Reference - 25 Pa. Code §71.21(a)(2)(i)(A)). |
| <hr/> | <u>III-1</u> | 3. | A description of problems with existing facilities (collection, conveyance and/or treatment), including existing or projected overload under 25 Pa. Code Chapter 94 (relating to municipal wasteload management) or violations of the NPDES permit, Clean Streams Law permit, or other permit, rule or regulation of DEP. (Reference - 25 Pa. Code §71.21(a)(2)(i)(B)). |
| <hr/> | <u>III-1</u> | 4. | Details of scheduled or in-progress upgrading or expansion of treatment facilities and the anticipated completion date of the improvements. Discuss any remaining reserve capacity and the policy concerning the allocation of reserve capacity. Also discuss the compatibility of the rate of growth to existing and proposed wastewater treatment facilities. (Reference - 25 Pa. Code §71.21(a)(4)(i & ii)). |
| <hr/> | <u>III-1</u> | 5. | A detailed description of the municipality's operation and maintenance (O & M) requirements for small flow treatment facility systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs (SMPs). (Reference - 25 Pa. Code §71.21(a)(2)(i)(C)). |
| <hr/> | <u>III-1</u> | 6. | Disposal areas, if other than stream discharge, and any applicable groundwater limitations. (Reference - 25 Pa. Code §71.21(a)(4)(i & ii)). |
| <hr/> | <u>III-1</u> | B. | Using DEP's publication titled <i>Act 537 Sewage Disposal Needs Identification</i> (3800-BK-DEP1949), identify, map and describe areas that utilize individual and community onlot sewage disposal and, unpermitted collection and disposal systems ("wildcat" sewers, borehole disposal, etc.) and retaining tank systems in the planning area including: |
| <hr/> | <u>III-5</u> | 1. | The types of onlot systems in use. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(A)). |
| <hr/> | <u>III-6</u> | 2. | A sanitary survey complete with description, map and tabulation of documented and potential public health, pollution, and operational problems (including malfunctioning systems) with the systems, including violations of local ordinances, the Act, the Clean Stream Law or regulations promulgated thereunder. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(B)). |
| <hr/> | <u>III-6</u> | 3. | A comparison of the types of onlot sewage systems installed in an area with the types of systems which are appropriate for the area according to soil, geologic conditions, topographic limitations sewage flows, and 25 Pa. Code Chapter 73 (relating to standards for sewage disposal facilities). (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)). |
| <hr/> | <u>III-6</u> | 4. | An individual water supply survey to identify possible contamination by malfunctioning onlot sewage disposal systems consistent with DEP's <i>Act 537 Sewage Disposal Needs Identification</i> publication. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(B)). |

note: only
for 7 OLDS

- _____ 5. Detailed description of O & M requirements of the municipality for individual and small volume community onlot systems, including the status of past and present compliance with these requirements and any other requirements relating to SMPs. (Reference - 25 Pa. Code §71.21(a)(2)(i)(C)).
- _____ C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including:
 - _____ 1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference – 25 Pa. Code §71.71).
 - _____ 2. Quantities of the types of sludges or septage generated. (Reference - 25 Pa. Code §71.71).
 - _____ 3. Present disposal methods, locations, capacities and transportation methods. (Reference - 25 Pa. Code §71.71).

_____ **IV-1** IV. **Future Growth and Land Development**

A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:

- _____ **IV-1 / App.E** 1. All land use plans and zoning maps that identify residential, commercial, industrial, agricultural, recreational and open space areas. (Reference - 25 Pa. Code §71.21(a)(3)(iv)).
- _____ **IV-1 / App.E** 2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference – 25 Pa. Code §71.21(a)(3)(iv)).
- _____ **IV-1** 3. All limitations and plans related to floodplain and stormwater management and special protection (25 Pa. Code Chapter 93) areas. (Reference - 25 Pa. Code §71.21(a)(3)(iv)) Appendix B, Section II.F of the Planning Guide.

B. Delineate and describe the following through map, text and analysis.

- _____ **IV-2 / App.G** 1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of equivalent dwelling units (EDUs) in development, total number of EDUs currently developed and total number of EDUs remaining to be developed (include time schedule for EDUs remaining to be developed). (Reference - 25 Pa. Code §71.21(a)(3)(i)).
- _____ **IV-1 / App.G** 2. Land use designations established under the Pennsylvania Municipalities Planning Code (35 P.S. 10101-11202), including residential, commercial and industrial areas. (Reference - 25 Pa. Code §71.21(a)(3)(ii)). Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning. (Reference - 25 Pa. Code §71.21(a)(3)(iv)).
- _____ **IV-4 / App.G** 3. Future growth areas with population and EDU projections for these areas using historical, current and future population figures and projections of the municipality. Discuss and evaluate discrepancies between local, county, state and federal projections as they relate to sewage facilities. (Reference - 25 Pa. Code §71.21(a)(1)(iv) and (a)(3)(iii)).
- _____ **IV-1** 4. Zoning, and/or subdivision regulations; local, county or regional comprehensive plans; and existing plans of any other agency relating to the development, use and protection of land and water resources with special attention to: (Reference - 25 Pa. Code §71.21(a)(3)(iv)).
 - public ground/surface water supplies
 - recreational water use areas
 - groundwater recharge areas
 - industrial water use
 - wetlands

_____ IV-3

5. Sewage planning necessary to provide adequate wastewater treatment for 5 and 10-year future planning periods based on projected growth of existing and proposed wastewater collection and treatment facilities. (Reference - 25 Pa. Code §71.21(a)(3)(v)).

_____ V-1

V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities

A. Conventional collection, conveyance, treatment and discharge alternatives including:

_____ _____

1. The potential for regional wastewater treatment. (Reference - 25 Pa. Code §71.21(a)(4)).

_____ V-5

2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities. (Reference - 25 Pa. Code §71.21(a)(4)(i)).

_____ V-1

3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one or more of the following: (Reference - 25 Pa. Code §71.21(a)(4)(ii)).

_____ V-1

a. Repair. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(A)).

_____ V-1

b. Upgrading. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(B)).

_____ V-4

c. Reduction of hydraulic or organic loading to existing facilities. (Reference - 25 Pa. Code §71.71).

_____ V-1

d. Improved O & M. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(C)).

_____ V-1

e. Other applicable actions that will resolve or abate the identified problems. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(D)).

_____ V-1

4. Repair or replacement of existing collection and conveyance system components. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(A)).

_____ _____

5. The need for construction of new community sewage systems including sewer systems and/or treatment facilities. (Reference - 25 Pa. Code §71.21(a)(4)(iii)).

_____ _____

6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(B)).

_____ _____

B. The use of individual sewage disposal systems including IRSIS systems based on:

_____ _____

1. Soil and slope suitability. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)).

_____ _____

2. Preliminary hydrogeologic evaluation. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)).

_____ _____

3. The establishment of a SMP. (Reference - 25 Pa. Code §71.21(a)(4)(iv)). See also Part "F" below.

_____ _____

4. The repair, replacement or upgrading of existing malfunctioning systems in areas suitable for onlot disposal considering: (Reference - 25 Pa. Code §71.21(a)(4)).

_____ _____

a. Existing technology and sizing requirements of 25 Pa. Code Chapter 73. (Reference - 25 Pa. Code §73.31-§73.72).

_____ _____

b. Use of expanded absorption areas or alternating absorption areas. (Reference - 25 Pa. Code §73.16).

_____ _____

c. Use of water conservation devices. (Reference - 25 Pa. Code §71.73(b)(2)(iii)).

_____ _____

§71.73(b)(8)).

6. Requirements for bonding, escrow accounts, management agencies or associations to assure O & M for non-municipal facilities. (Reference - 25 Pa. Code §71.71).

G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including: (Reference - 25 Pa. Code §71.21(a)(4)).

1. Modification of existing comprehensive plans involving:

a. Land use designations. (Reference - 25 Pa. Code §71.21(a)(4)).

b. Densities. (Reference - 25 Pa. Code §71.21(a)(4)).

c. Municipal ordinances and regulations. (Reference - 25 Pa. Code §71.21(a)(4)).

d. Improved enforcement. (Reference - 25 Pa. Code §71.21(a)(4)).

e. Protection of drinking water sources. (Reference - 25 Pa. Code §71.21(a)(4)).

2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference - 25 Pa. Code §71.21(a)(4)).

3. Alternatives for creating or changing municipal subdivision regulations to assure long-term use of on-site sewage disposal that consider lot sizes and protection of replacement areas. (Reference - 25 Pa. Code §71.21(a)(4)).

4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference - 25 Pa. Code §71.21(a)(4)).

V-5

H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference - 25 Pa. Code §71.21(a)(4)).

V-5

1. Water quality/public health. (Reference - 25 Pa. Code §71.21(a)(4)).

V-5

2. Growth potential (residential, commercial, industrial). (Reference - 25 Pa. Code §71.21(a)(4)).

V-5

3. Community economic conditions. (Reference - 25 Pa. Code §71.21(a)(4)).

4. Recreational opportunities. (Reference - 25 Pa. Code §71.21(a)(4)).

5. Drinking water sources. (Reference - 25 Pa. Code §71.21(a)(4)).

6. Other environmental concerns. (Reference - 25 Pa. Code §71.21(a)(4)).

VI-1

VI. Evaluation of Alternatives

A. Technically feasible alternatives identified in Section V of this checklist must be evaluated for consistency with respect to the following: (Reference - 25 Pa. Code §71.21(a)(5)(i)).

VI-1

1. Applicable plans developed and approved under **Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act** (33 U.S.C.A. 1288). (Reference - 25 Pa. Code §71.21(a)(5)(i)(A)). Appendix B, Section II.A of the Planning Guide.

VI-1

2. Municipal wasteload management **Corrective Action Plans or Annual Reports** developed under 25 Pa. Code Chapter 94. (Reference - 25 Pa. Code §71.21(a)(5)(i)(B)). The municipality's recent Wasteload Management (25 Pa. Code Chapter 94) Reports should be examined to determine if the proposed alternative is consistent with the recommendations and findings of the report. Appendix B, Section II.B of the Planning Guide.

VI-2

3. Plans developed under **Title II of the Clean Water Act** (33 U.S.C.A.

1281-1299) or **Titles II and VI of the Water Quality Act of 1987** (33 U.S.C.A 1251-1376). (Reference - 25 Pa. Code §71.21(a)(5)(i)(C)). Appendix B, Section II.E of the Planning Guide.

- | | | |
|-------|--------------------|---|
| _____ | <u>VI-2</u> | 4. Comprehensive plans developed under the Pennsylvania Municipalities Planning Code. (Reference - 25 Pa. Code §71.21(a)(5)(i)(D)). The municipality's comprehensive plan must be examined to assure that the proposed wastewater disposal alternative is consistent with land use and all other requirements stated in the comprehensive plan. Appendix B, Section II.D of the Planning Guide. |
| _____ | <u>VI-2</u> | 5. Antidegradation requirements as contained in 25 Pa. Code Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference - 25 Pa. Code §71.21(a)(5)(i)(E)). Appendix B, Section II.F of the Planning Guide. |
| _____ | <u>VI-3</u> | 6. State Water Plans developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference - 25 Pa. Code §71.21(a)(5)(i)(F)). Appendix B, Section II.C of the Planning Guide. |
| _____ | <u>VI-3</u> | 7. Pennsylvania Prime Agricultural Land Policy contained in Title 4 of the Pennsylvania Code, Chapter 7, Subchapter W. Provide narrative on local municipal policy and an overlay map on prime agricultural soils. (Reference - 25 Pa. Code §71.21(a)(5)(i)(G)). Appendix B, Section II.G of the Planning Guide. |
| _____ | <u>VI-3</u> | 8. County Stormwater Management Plans approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference - 25 Pa. Code §71.21(a)(5)(i)(H)). Conflicts created by the implementation of the proposed wastewater alternative and the existing recommendations for the management of stormwater in the county Stormwater Management Plan must be evaluated and mitigated. If no plan exists, no conflict exists. Appendix B, Section II.H of the Planning Guide. |
| _____ | <u>VI-4</u> | 9. Wetland Protection. Using wetland mapping developed under Checklist Section II.G, identify and discuss mitigative measures including the need to obtain permits for any encroachments on wetlands from the construction or operation of any proposed wastewater facilities. (Reference - 25 Pa. Code §71.21(a)(5)(i)(I)) Appendix B, Section II.I of the Planning Guide. |
| _____ | <u>VI-4, App.H</u> | 10. Protection of rare, endangered or threatened plant and animal species as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference - 25 Pa. Code §71.21(a)(5)(i)(J)). Provide DEP with a copy of the completed <i>PNDI Manual Project Submission Form</i> . Also provide a copy of the response letters from the 4 jurisdictional agencies regarding the findings of the PNDI search. Appendix B, Section II.J of the Planning Guide. |
| _____ | <u>VI-4, App.I</u> | 11. Historical and archaeological resource protection under P.C.S. Title 37, Section 507 relating to cooperation by public officials with the Pennsylvania Historical and Museum Commission (PHMC). (Reference - 25 Pa. Code §71.21(a)(5)(i)(K)). Provide DEP with a completed copy of a <i>Cultural Resource Notice</i> and a return receipt for its submission to PHMC. Provide a copy of the response letter or review stamp from the Bureau of Historic Preservation (BHP) indicating the project will have no effect on, or that there may be potential impacts on, known archaeological and historical sites and any avoidance and mitigation measures required. Appendix B, Section II.K of the Planning Guide. |

- _____ VI-4 B. Provide for the resolution of any inconsistencies in any of the points identified in Section VI.A. of this checklist by submitting a letter from the appropriate agency stating that the agency has received, reviewed and concurred with the resolution of identified inconsistencies. (Reference - 25 Pa. Code §71.21(a)(5)(ii). Appendix B of the Planning Guide.
- _____ VI-4 C. Evaluate alternatives identified in Section V of this checklist with respect to applicable water quality standards, effluent limitations or other technical, legislative or legal requirements. (Reference - 25 Pa. Code §71.21(a)(5)(iii)).
- _____ VI-5, App.J D. Provide cost estimates using present worth analysis for construction, financing, ongoing administration, O & M and user fees for alternatives identified in Section V of this checklist. Estimates shall be limited to areas identified in the plan as needing improved sewage facilities within 5 years from the date of plan submission. (Reference - 25 Pa. Code §71.21(a)(5)(iv)).
- _____ VI-6 E. Provide an analysis of the funding methods available to finance the proposed alternatives evaluated in Section V of this checklist. Also provide documentation to demonstrate which alternative and financing scheme combination is the most cost-effective; and a contingency financial plan to be used if the preferred method of financing cannot be implemented. The funding analysis shall be limited to areas identified in the plan as needing improved sewage facilities within 5 years from the date of the plan submission. (Reference - 25 Pa. Code §71.21(a)(5)(v)).
- _____ VI-6 F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference - 25 Pa. Code §71.21(a)(5)(vi)).
 - _____ VI-6 1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of SMPs. (Reference - 25 Pa. Code §71.21(a)(5)(vi)(A)).
 - _____ VI-6 2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a SMP justifying time schedules for each phase. (Reference - 25 Pa. Code §71.21(a)(5)(vi)(B)).
- _____ VI-6 G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - 25 Pa. Code §71.21(a)(5)(vi)(D)).

- _____ **VII. Institutional Evaluation**
 - _____ A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:
 - _____ 1. Financial and debt status. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 2. Available staff and administrative resources. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 3. Existing legal authority to:
 - _____ a. Implement wastewater planning recommendations. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ b. Implement system-wide O & M activities. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ c. Set user fees and take purchasing actions. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ d. Take enforcement actions against ordinance violators. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ e. Negotiate agreements with other parties. (Reference - 25 Pa. Code §71.61(d)(2)).

- _____ f. Raise capital for construction and O & M of facilities. (Reference - 25 Pa. Code §71.61(d)(2)).
- _____ B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:
 - _____ 1. Need for new municipal departments or municipal authorities. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 2. Functions of existing and proposed organizations (sewer authorities, onlot maintenance agencies, etc.). (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 3. Cost of administration, implementability, and the capability of the authority/agency to react to future needs. (Reference - 25 Pa. Code §71.61(d)(2)).
- _____ C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:
 - _____ 1. Incorporation of authorities or agencies. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ VII-1 3. Description of activities to provide rights-of-way, easements and land transfers. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 4. Adoption of other municipal sewage facilities plans. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 5. Any other legal documents. (Reference - 25 Pa. Code §71.61(d)(2)).
 - _____ 6. Dates or timeframes for items 1-5 above on the project's implementation schedule.
- _____ D. Identify the proposed institutional alternative for implementing the chosen technical wastewater disposal alternative. Provide justification for choosing the specific institutional alternative considering administrative issues, organizational needs and enabling legal authority. (Reference - 25 Pa. Code §71.61(d)(2)).

VIII-1

VIII. Implementation Schedule and Justification for Selected Technical & Institutional Alternatives

- _____ A. Identify the technical wastewater disposal alternative which best meets the wastewater treatment needs of each study area of the municipality. Justify the choice by providing documentation which shows that it is the best alternative based on:
 - _____ VIII-1 1. Existing wastewater disposal needs. (Reference - 25 Pa. Code §71.21(a)(6)).
 - _____ VIII-1 2. Future wastewater disposal needs. (5 and 10 year growth areas). (Reference - 25 Pa. Code §71.21(a)(6)).
 - _____ VIII-1 3. O & M considerations. (Reference - 25 Pa. Code §71.21(a)(6)).
 - _____ VIII-1 4. Cost-effectiveness. (Reference - 25 Pa. Code §71.21(a)(6)).
 - _____ VIII-1 5. Available management and administrative systems. (Reference - 25 Pa. Code §71.21(a)(6)).
 - _____ VI-6 6. Available financing methods. (Reference - 25 Pa. Code §71.21(a)(6)).
 - _____ VI-4 7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference - 25 Pa. Code §71.21(a)(6)).

VIII-2

- B. Designate and describe the capital financing plan chosen to implement the selected alternative(s). Designate and describe the chosen back-up financing plan. (Reference - 25 Pa. Code §71.21(a)(6))
- C. Designate and describe the implementation schedule for the recommended alternative, including justification for any proposed phasing of construction or implementation of a SMP. (Reference – 25 Pa. Code §71.31(d))

IX. Environmental Report (ER) generated from the UER Process

- A. Complete an ER as required by the UER process and as described in the DEP Technical Guidance (381-5511-111). Include this document as “Appendix A” to the Act 537 Plan Update Revision. **Note: An ER is required only for Wastewater projects proposing funding through any of the funding sources identified in the UER.**

ADDITIONAL REQUIREMENTS FOR PENNVEST PROJECTS

Municipalities that propose to implement their official sewage facilities plan updates with PENNVEST funds must meet 6 additional requirements to be eligible for such funds. See *A Guide for Preparing Act 537 Update Revisions* (362-0300-003), Appendix N for greater detail or contact the DEP regional office serving your county listed in Appendix J of the same publication.

DEP Use Only	Indicate Page #(s) in Plan	Item Required
_____	_____	1. Environmental Impact Assessment. (Planning Phase) The UER replaces the Environmental Impact Assessment that was a previous requirement for PENNVEST projects.
_____	_____	2. Cost Effectiveness (Planning Phase) The cost-effectiveness analysis should be a present-worth (or equivalent uniform annual) cost evaluation of the principle alternatives using the interest rate that is published annually by the Water Resources Council. Normally, for PENNVEST projects the applicant should select the most cost-effective alternative based upon the above analysis. Once the alternative has been selected the user fee estimates should be developed based upon interest rates and loan terms of the selected funding method.
_____		3. Second Opinion Project Review. (Design Phase)
_____		4. Minority Business Enterprise/Women's Business Enterprise (Construction Phase)
_____		5. Civil Rights. (Construction Phase)
_____		6. Initiation of Operation/Performance Certification. (Post-construction Phase)

TASK/ACTIVITY REPORT

Lower Salford Township Municipality Montgomery County Lower Salford Township Proposed Planning Area (Attach Map) December 16, 2020 Date of Report

Date completed plan will be submitted to DEP IBD Estimated Cost of Plan \$32,060 Sheet 1 of 1

Column Headings May Be Changed To Suit the Needs of the Planning Effort Use Additional Sheets if Necessary

TASK ACTIVITY NUMBER FROM APPENDIX I	PRINCIPAL HR/RATE \$145		PROJECT ENG. HR/RATE \$140		SR. ENG. HR/RATE \$130		ENGINEER HR/RATE \$110		PLANNER		DRAFTSMAN		CLERICAL		LEGAL		SUB TOTAL	
	HRS.	COST	HRS.	COST	HRS.	COST	HRS.	COST	HR/RATE	HRS.	COST	HR/RATE	HRS.	COST	HR/RATE	HRS.		COST
Part 2 Items 1 - 8	8	\$1,160	16	\$2,240			8	\$880										\$4,280
Part 3 Item I			16	\$2,240			4	\$440										\$2,680
Part 3 Item II			2	\$280			4	\$440										\$720
Part 3 Item III			32	\$4,480			8	\$880										\$5,360
Part 3 Item IV			40	\$5,600			8	\$880										\$6,400
Part 3 Item V			32	\$4,480			4	\$440										\$4,920
Part 3 Item VI			28	\$3,920			4	\$440										\$4,360
Part 3 Item VII			2	\$280			2	\$220										\$500
Part 3 Item VIII			14	\$1,960			8	\$880										\$2,840

Thomas J. Duffy, PE Name of Person Completing Report Thomas J. Duffy Signature Project Manager Title [Signature] Municipal Secretary Signature



February 16, 2021

SENT VIA ELECTRONIC MAIL ONLY

Mr. Joseph S. Czajkowski, Manager
Lower Salford Township
379 Main Street
Harleysville, PA 19438
township@lowersalfordtownship.org

Re: Approval Letter - Plan of Study and Task/Activity Report
Act 537 Planning – Special Study
Lower Salford Township
Montgomery County

Dear Mr. Czajkowski:

The Department of Environmental Protection (DEP) has received a Plan of Study and Task/Activity Report for preparation of an Act 537 Official Plan Update – Special Study, submitted by Gilmore & Associates, Inc., dated February 3, 2021.

The Plan of Study proposes the decommissioning of three Lower Salford Township Authority (LSTA) pump stations (Lederach, Mainland Ridge and Oak Ridge), the upgrade of the Quarry Road Pump Station, and associated upgrades to the conveyance system. The Plan of Study also proposes to assess sewage disposal needs in the vicinity of 756 Harleysville Pike, specifically looking at 744 and 752 Harleysville Pike and 691 Sharon Lane. DEP suggests that the preliminary needs analysis be expanded to include properties southeast of Sharon Lane.

DEP approves your Plan of Study for an estimated total cost of \$32,060. In accordance with your approved Task/Activity Report, your completed planning package will be submitted to DEP for review during the last quarter of 2021. The resulting Act 537 Official Plan Update must be consistent with Act 537, Chapter 71, Sections 71.21 and 71.31 of DEP's regulations.

Your municipality's Act 537 Official Plan Update is to be formatted as suggested in the guidance document titled *A Guide for Preparing Act 537 Update Revisions*, including the necessary items listed in the "Act 537 Plan Content and Environmental Assessment Checklist" found in the guidance document. All necessary items must be included, and a copy of the completed checklist must be included with your Act 537 Plan. This form is available on our website at:
<https://www.dep.pa.gov/Business/Water/CleanWater/WastewaterMgmt/Act537/Pages/default.aspx>.

If you have any questions or concerns, please contact me at 484-250-5179 or subanks@pa.gov.

Sincerely,



Suzanne Banks
Sewage Planning Specialist 1
Clean Water

cc: Montgomery County Planning Commission (via email)
Montgomery County Health Department (via email)
Mr. Duffy – Gilmore & Associates, Inc. (via email)
Mr. Dingman – Gilmore & Associates, Inc. (via email)
Ms. Weimer - LSTA (via email)
Mr. Forwood – LSTA (via email)
Planning Section

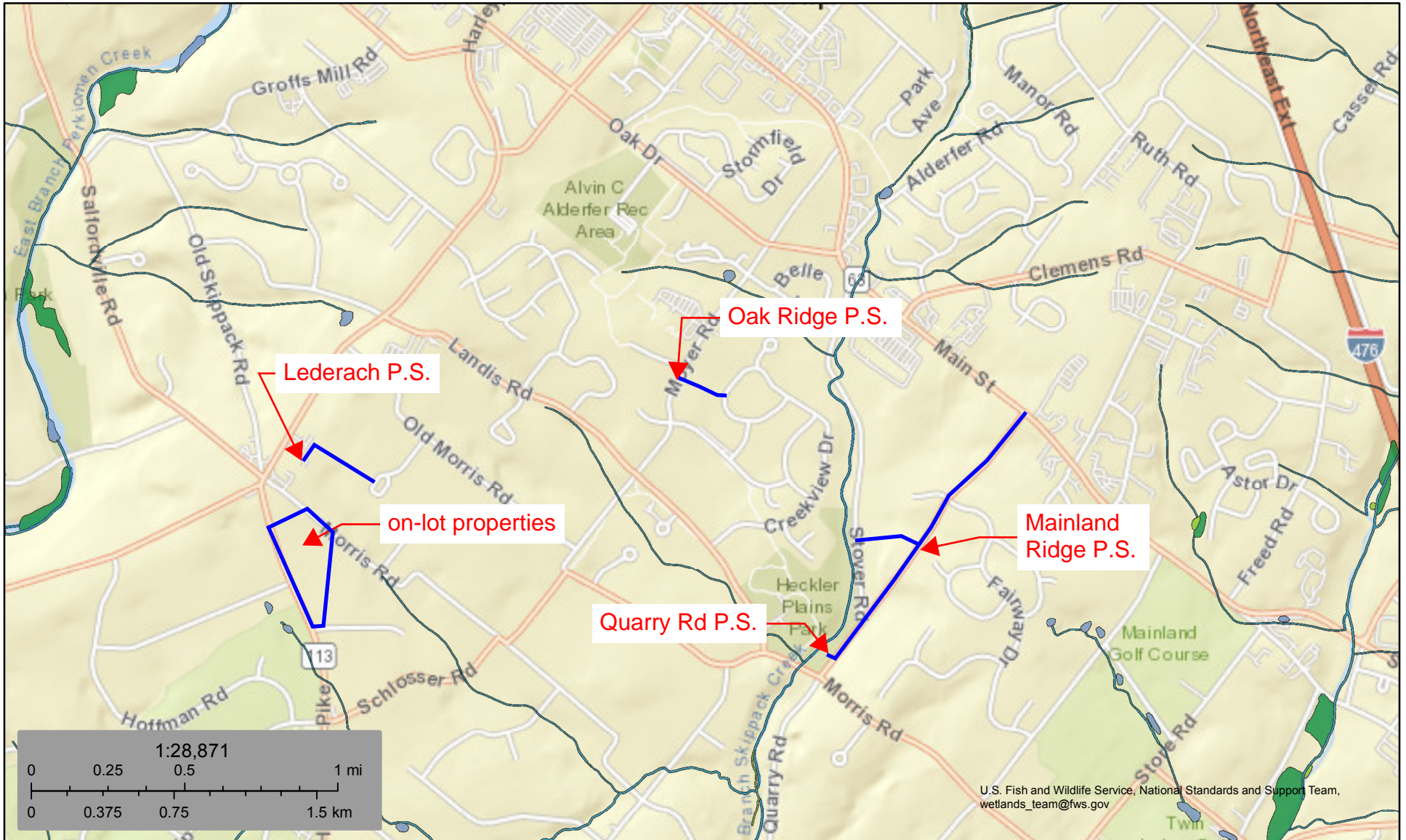
Need to Add:

- Municipal Adoption Resolutions
- Planning / Health Department Comments
- Publication
- Public Comments

Appendix B

Physical Features Mapping

- USGS Map
- Soil Map
- National Wetlands Inventory Map
- FEMA Flood Maps



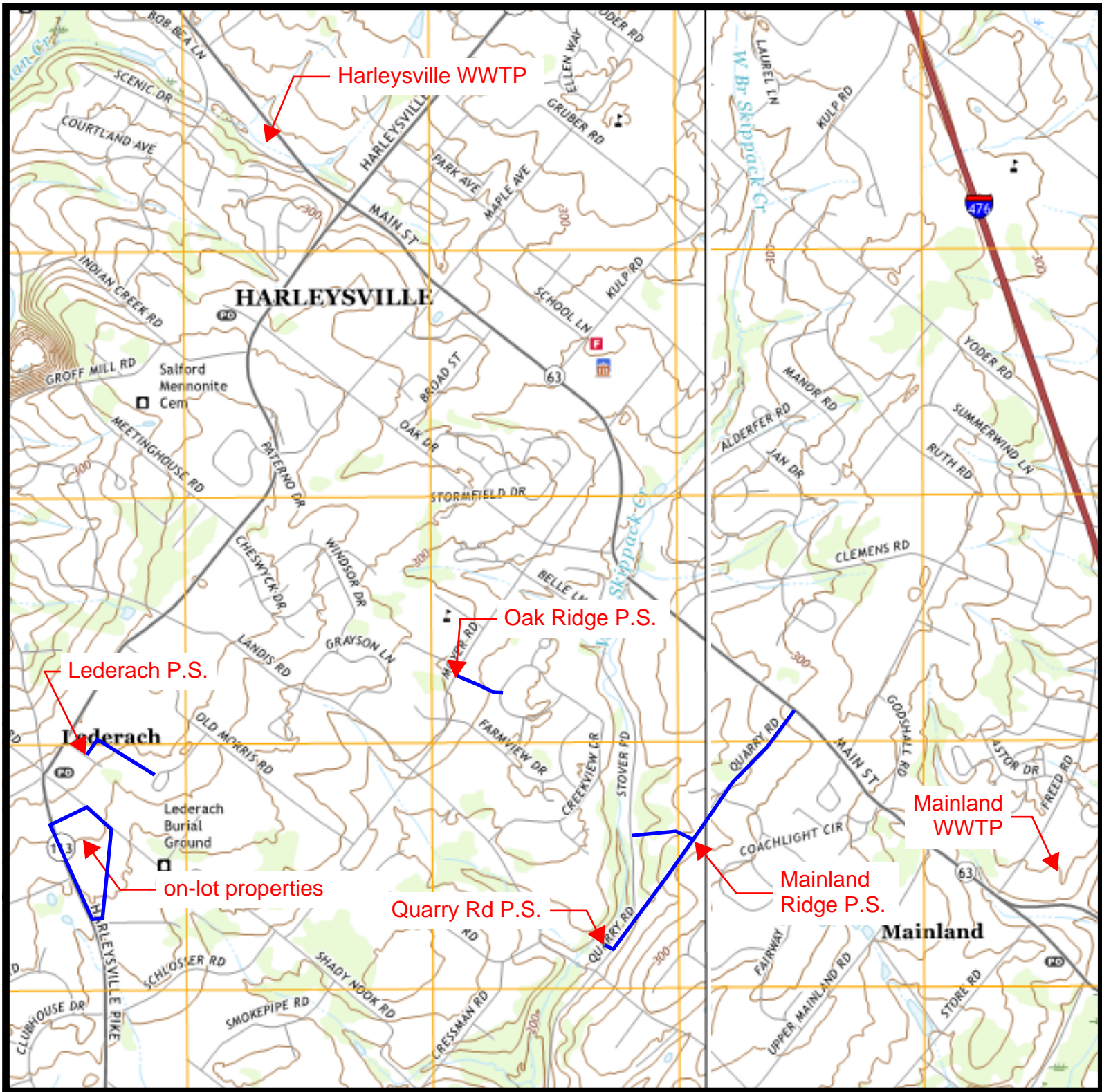
U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov

July 16, 2021

Wetlands

- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Emergent Wetland | Lake |
| Estuarine and Marine Wetland | Freshwater Forested/Shrub Wetland | Other |
| | Freshwater Pond | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



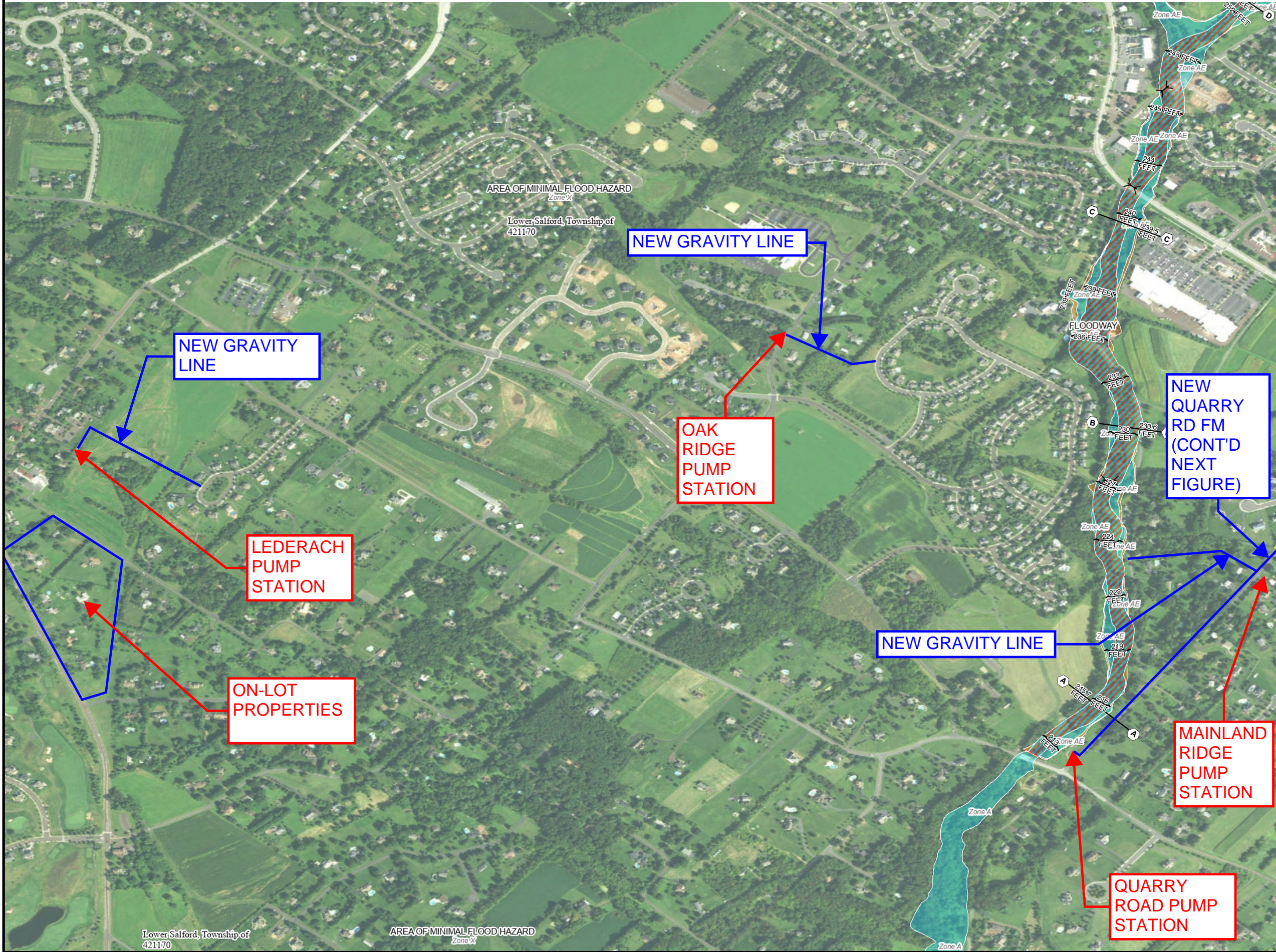
note: project areas shown in blue lines

Perkiomenville and Telford USGS Maps



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AbB	Abbottstown silt loam, 3 to 8 percent slopes	2.0	10.5%
ReB	Readington silt loam, 3 to 8 percent slopes	5.5	29.8%
RhB	Reaville silt loam, 3 to 8 percent slopes	7.1	38.3%
UryB	Urban land-Readington complex, 0 to 8 percent slopes	4.0	21.4%
Totals for Area of Interest		18.5	100.0%





**NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP**

PANEL **119** OF **451**

Panel Contains:

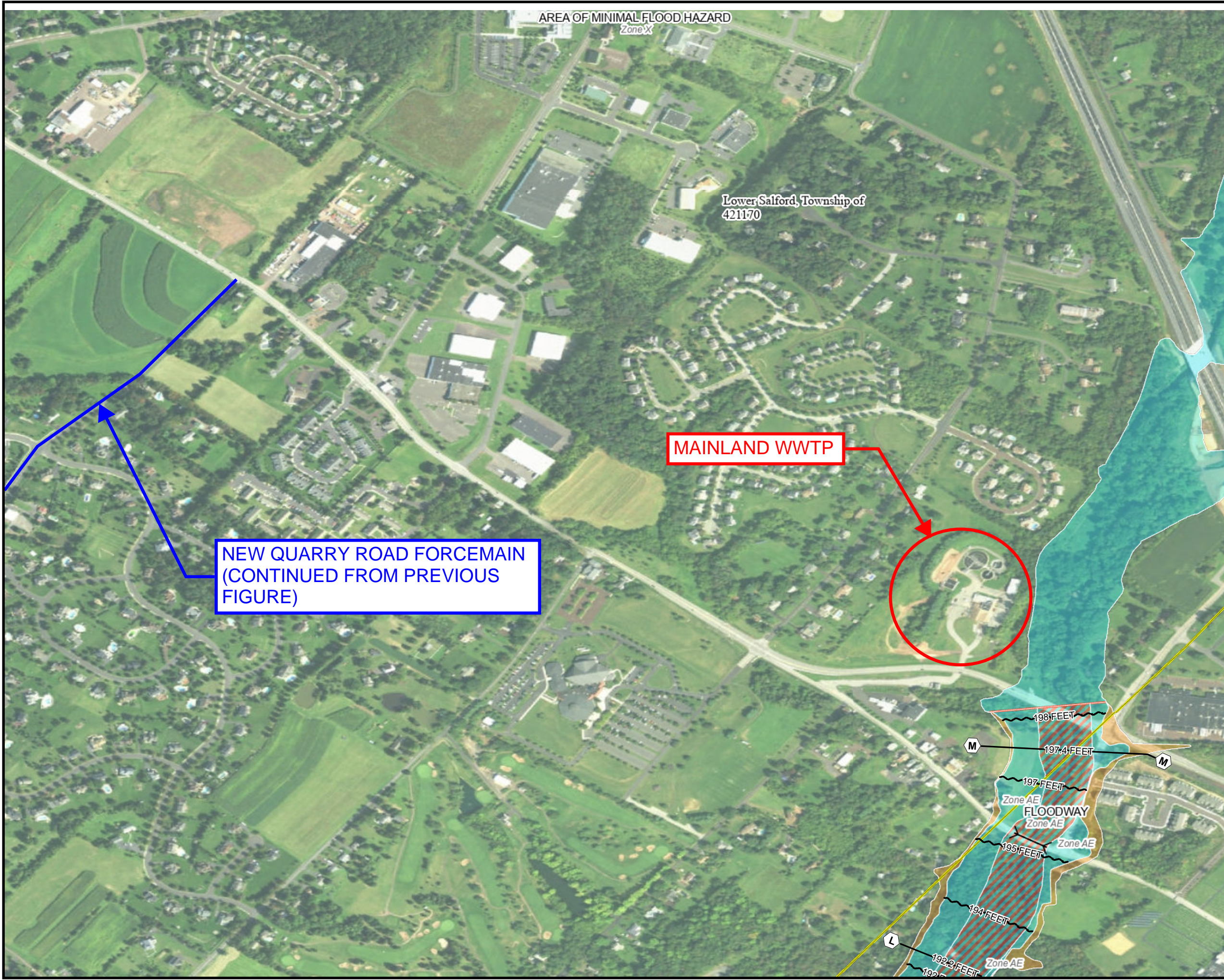
COMMUNITY	NUMBER	PANEL
LOWER SALFORD, TOWNSHIP OF	421170	0119

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X

MAP NUMBER
42091C0119G
EFFECTIVE DATE
March 02, 2016



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

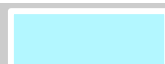



PANEL **138** OF **451**

Panel Contains:

COMMUNITY	NUMBER	PANEL
FRANCONIA, TOWNSHIP OF	422494	0138
LOWER SALFORD, TOWNSHIP OF	421170	0138
TOWAMENCIN, TOWNSHIP OF	422236	0138

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

-  Without Base Flood Elevation (BFE)
Zone A, V, A99
-  With BFE or Depth *Zone AE, AO, AH, VE, AR*
-  Regulatory Floodway
-  0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*

MAP NUMBER
42091C0138G
EFFECTIVE DATE
March 02, 2016

Appendix C

Pump Station Data

- Pump Station Summary (5 Years)
- Pump Station Tables (from Chapter 94 Reports)

Pump Station Summary (5 Years)

AVERAGE ANNUAL FLOW (GPD)							
	2018	2019	2020	2021	2022	AVERAGE	MAX YEAR
QUARRY	109,000	90,480	97,600	108,150	105,000	102,046	109,000
INDIAN HILLS	2,050	2,131	2,310	2,150	2,250	2,178	2,310
TYSON	60,430	37,073	46,640	62,970	61,940	53,811	62,970
MAINLAND RIDGE	13,720	13,720	13,720	13,720	13,720	13,720	13,720
OAK RIDGE	4,240	3,892	4,140	4,000	4,110	4,076	4,240

PEAK HOURLY FLOW (GPM)							
	2018	2019	2020	2021	2022	AVERAGE	MAX YEAR
QUARRY	315	261	213	309	359	291	359
INDIAN HILLS	8	8	13	7	12	10	13
TYSON	138	85	150	139	127	128	150
MAINLAND RIDGE	29	29	29	29	29	29	29
OAK RIDGE	20	11	29	11	23	19	29

PEAKING FACTOR							
	2018	2019	2020	2021	2022	AVERAGE	MAX YEAR
QUARRY	4.2	4.2	3.1	4.1	4.9	4.1	4.7
INDIAN HILLS	5.6	5.4	8.1	4.7	7.7	6.3	8.1
TYSON	3.3	3.3	4.6	3.2	3.0	3.4	3.4
MAINLAND RIDGE	3.0	3.0	3.0	3.0	3.0	3.0	3.0
OAK RIDGE	6.8	4.1	10.1	4.0	8.1	6.6	9.8

Table 11
Lower Salford Township Authority Pump Stations 2018

Pump Station Name	Number Of Pumps	Permitted Capacities		Present Flows		Peak Influent Hourly Flow (GPM)	Projected Flows 2-Year Projected Maximum Flow (gpd)	Projected Flows 5-Year Projected Maximum Flow (gpd)
		AA Permitted Capacity (gpd)	Hydraulic Design capacity (GPD)	Hydraulic Design Capacity (GPM)	Annual Average Flows (gpd)			
TRIBUTARY TO MAINLAND WWTP								
Alderfer Road (4)	5	617,256	3,990,240	2771	628,026	1,874,000	2,115,280	2,248,400
Mainland Ridge (1) (2) (8)	2	38,400	43,200	30	13,720	54,880	54,880	54,880
Summerwind (4)	2	23,040	138,240	96	16,210	24,290	24,290	24,290
Quarry Road (4) (HCPS)	2	108,000	410,400	285	109,000	214,830	215,870	278,270
Tyson Road (4)	2	73,000	288,000	200	60,430	155,710	156,750	217,070
Northeast (4)	2	36,760	576,000	400	21,688	73,152	73,152	73,152
Indian Hills (4)	2	7,020	100,800	70	2,050	10,480	10,480	12,560
Mainland PS (4) (10)	3	900,000	3,369,600	2340	943,000	2,967,000	575,000	580,200
TRIBUTARY TO HARLEYSVILLE WWTP								
Oak Ridge (1) (2)	2	11,200	144,000	100	4,240	15,410	15,410	15,410
Salford Lea (2)	2	27,300	122,400	85	22,690	40,060	40,060	41,100
Bramblewyck (2) (3)	2	34,000	216,000	150	12,750	51,630	51,630	51,630
Cheswyck (2) (8)	2	70,000	432,000	300	33,400	134,268	NA	0
Lederach (2) (3) (8)	2	24,000	136,800	95	10,020	40,080	40,080	40,080
Smith's Corner (4)	2	8,900	37,440	26	4,030	6,830	6,830	6,830
Vernfield (4)	2	103,195	259,200	180	52,620	191,670	191,670	193,750
Harleysville IPS (4) (10)	2	592,000	1,699,200	1180	636,000	1,489,000	1,399,352	1,558,472

- (1) AA Permitted Capacity is based on number of permitted dwelling units times 400 gpd
- (2) Hydraulic Design Capacity not called out on permit, assumed to be equal to the pumping rate of one pump
- (3) Permit does not contain a capacity, AA Capacity is equal to the number of ultimate EDUs times 400 gpd/EDU
- (4) Permitted / Design capacities are directly from permit or design report
- (5) During wet weather events LSTA has observed high wet well levels at the Vernfield PS. LSTA is conducting investigations at the pump station.
- (6) Flow meters are installed at all pump stations except for Cheswyck, Lederach, and Mainland Ridge
- (7) The Quarry Road PS flows are being analyzed for abnormal wet weather events.
- (8) Mainland Ridge, Cheswyck, and Lederach pump station flows are based on connected EDUs times an annual average flow per EDU of 260 gpd/edu. Pump station peak daily flows are based on an assumed 2.0 peaking factor.
- (9) Projected peak flows based on present peak flows plus and additional 1040 gpd per projected EDU connection (260 gpd/edu x PF 4.0)

Table 11
Lower Salford Township Authority Pump Stations 2019

Pump Station Name	Number Of Pumps	Permitted Capacities			Present Flows		Peak Influent Hourly Flow (GPM)	Projected Flows	
		AA Permitted Capacity (gpd)	Hydraulic Design capacity (GPD)	Hydraulic Design Capacity (GPM)	Annual Average Flows (gpd)	Peak Daily Flow (gpd)		2-Year Projected Maximum Flow (gpd)	5-Year Projected Maximum Flow (gpd)
TRIBUTARY TO MAINLAND WWTP									
Alderfer Road (4)	5	617,256	3,990,240	2771	487,756	1,515,300	NA	1,542,340	1,670,260
Mainland Ridge (1) (2) (8)	2	38,400	43,200	30	13,720	54,880	NA	54,880	54,880
Summerwind (4)	2	23,040	138,240	96	15,390	21,642	33	21,642	21,642
Quarry Road (4) (HCPS)	2	108,000	410,400	285	90,480	189,888	261	189,888	253,328
Tyson Road (4)	2	73,000	288,000	200	37,073	68,642	85	68,642	130,002
Northeast (4)	2	36,760	576,000	400	21,373	115,823	NA	127,263	127,263
Indian Hills (4)	2	7,020	100,800	70	2,131	6,017	8	6,017	8,097
Mainland PS (4)	3	900,000	3,369,600	2340	337,000	1,480,000	NA	1,480,000	1,480,000
TRIBUTARY TO HARLEYSVILLE WWTP									
Oak Ridge (1) (2)	2	11,200	144,000	100	3,892	6,814	11	6,814	6,814
Salford Lea (2)	2	27,300	122,400	85	21,835	49,324	65	49,324	50,364
Bramblewyck (2) (3)	2	34,000	216,000	150	22,811	79,005	53	79,005	79,005
Cheswyck (10)									
Lederach (2) (3) (8)	2	24,000	136,800	95	10,020	40,080	NA	40,080	40,080
Smith's Corner (4)	2	8,900	37,440	26	4,197	6,122	9	6,122	6,122
Vernfield (4)	2	103,195	259,200	180	46,576	167,543	213	167,543	169,623
Harleysville IPS (4)	2	592,000	1,699,200	1180	513,000	1,304,000	NA	1,326,880	1,466,240

- (1) AA Permitted Capacity is based on number of permitted dwelling units times 400 gpd
- (2) Hydraulic Design Capacity not called out on permit, assumed to be equal to the pumping rate of one pump
- (3) Permit does not contain a capacity, AA Capacity is equal to the number of ultimate EDUs times 400 gpd/EDU
- (4) Permitted / Design capacities are directly from permit or design report
- (5) During wet weather events LSTA has observed high wet well levels at the Vernfield PS. LSTA is conducting investigations at the pump station.
- (6) Flow meters are installed at all pump stations except for Lederach and Mainland Ridge
- (7) The Quarry Road PS flows are being analyzed for abnormal wet weather events.
- (8) Mainland Ridge and Lederach pump station flows are based on connected EDUs times an annual average flow per EDU of 260 gpd/edu. Pump station peak daily flows are based on an assumed 2.0 peaking factor.
- (9) Projected peak flows based on present peak flows plus and additional 1040 gpd per projected EDU connection (260 gpd/edu x PF 4.0)
- (10) The Cheswyck PS was decommissioned in July 2019 flows are conveyed by gravity to the Alderfer Road PS.

Table 11
Lower Salford Township Authority Pump Stations 2020

Pump Station Name	Permitted Capacities		Present Flows		Peak Influent Hourly Flow (GPM)	Projected Flows		
	AA Permitted Capacity (gpd)	Hydraulic Design capacity (GPD)	Hydraulic Design Capacity (GPM)	Annual Average Flows (gpd)		Peak Daily Flow (gpd)	2-Year Projected Maximum Flow (gpd)	5-Year Projected Maximum Flow (gpd)
TRIBUTARY TO MAINLAND WWTP								
Alderfer Road (4)	617,256	3,990,240	2771	533,954	2,074,117	NA	2,174,997	2,240,517
Mainland Ridge (1) (2) (8)	38,400	43,200	30	13,720	41,160	NA	41,160	41,160
Summerwind (4)	23,040	138,240	96	16,820	24,510	32	24,510	24,510
Quarry Road (4) (HCPS)	108,000	410,400	285	97,600	290,520	213	296,760	364,360
Tyson Road (4)	73,000	288,000	200	46,640	129,440	150	133,600	179,360
Northeast (4)	36,760	576,000	400	18,466	108,055	NA	119,495	119,495
Indian Hills (4)	7,020	100,800	70	2,310	8,785	13	8,785	10,865
Mainland PS (4)	900,000	3,369,600	2340	353,000	1,270,000	NA	1,270,000	1,274,160
TRIBUTARY TO HARLEYSVILLE WWTP								
Oak Ridge (1) (2)	11,200	144,000	100	4,140	13,410	29	13,410	13,410
Salford Lea (2)	27,300	122,400	85	22,570	67,830	78	67,830	67,830
Bramblewyck (2) (3)	34,000	216,000	150	13,130	73,790	144	73,790	73,790
Lederach (2) (3) (8)	24,000	136,800	95	10,020	30,060	NA	30,060	38,380
Smith's Corner (4)	8,900	37,440	26	4,310	6,480	11	6,480	6,480
Vernfield (4) (5)	103,195	259,200	180	36,530	144,830	217	145,870	145,870
Harleysville IPS (4)	592,000	1,699,200	1180	408,000	1,277,000	NA	1,318,600	1,439,240

- (1) AA Permitted Capacity is based on number of permitted dwelling units times 400 gpd
- (2) Hydraulic Design Capacity not called out on permit, assumed to be equal to the pumping rate of one pump
- (3) Permit does not contain a capacity, AA Capacity is equal to the number of ultimate EDUs times 400 gpd/EDU
- (4) Permitted / Design capacities are directly from permit or design report
- (5) During wet weather events LSTA has observed high wet well levels at the Vernfield PS. LSTA is conducting investigations at the pump
- (6) Flow meters are installed at all pump stations except for Lederach and Mainland Ridge
- (8) Mainland Ridge and Lederach pump station flows are based on connected EDUs times an annual average flow per EDU of 260 gpd/edu. Pump station peak daily flows are based on an assumed 3.0 peaking factor.
- (9) Projected peak flows based on present peak flows plus and additional 1040 gpd per projected EDU connection (260 gpd/edu x PF 4.0)

Table 11
Lower Salford Township Authority Pump Stations 2021

Pump Station Name	Permitted Capacities		Present Flows		Peak Influent Hourly Flow (GPM)	Projected Flows 2-Year Projected Maximum Flow (gpd)	Projected Flows 5-Year Projected Maximum Flow (gpd)
	AA Permitted Capacity (gpd)	Hydraulic Design capacity (GPD)	Hydraulic Design Capacity (GPM)	Annual Average Flows (gpd)			
TRIBUTARY TO MAINLAND WWTP							
Alderfer Road (4)	617,256	3,990,240	2771	495,460	1,941,900	2,083,340	2,083,340
Mainland Ridge (1) (2) (8)	38,400	43,200	30	13,720	41,160	41,160	41,160
Summerwind (4)	23,040	138,240	96	15,740	31,810	31,810	31,810
Quarry Road (4) (HCPS)	108,000	410,400	285	108,150	259,500	266,780	317,740
Tyson Road (4)	73,000	288,000	200	62,970	106,270	108,350	149,950
Northeast (4)	36,760	576,000	400	17,622	84,511	84,511	84,511
Indian Hills (4)	7,020	100,800	70	2,150	7,580	7,580	9,660
Mainland PS (4)	900,000	3,369,600	2340	450,630	3,331,810	3,331,810	3,337,010
Oak Ridge (1) (2)	11,200	144,000	100	4,000	19,310	19,310	19,310
TRIBUTARY TO HARLEYSVILLE WWTP							
Salford Lea (2)	27,300	122,400	85	21,440	40,670	41,710	41,710
Bramblewyck (2) (3)	34,000	216,000	150	12,220	53,750	53,750	53,750
Lederach (2) (3) (8)	24,000	136,800	95	10,020	41,160	56,760	71,320
Smith's Corner (4)	8,900	37,440	26	5,070	7,480	7,480	7,480
Vernfield (4) (5)	103,195	259,200	180	42,250	208,370	208,370	214,610
Harleysville IPS (4)	592,000	1,699,200	1180	401,000	1,334,000	1,436,960	1,633,520

- (1) AA Permitted Capacity is based on number of permitted dwelling units times 400 gpd
- (2) Hydraulic Design Capacity not called out on permit, assumed to be equal to the pumping rate of one pump
- (3) Permit does not contain a capacity, AA Capacity is equal to the number of ultimate EDUs times 400 gpd/EDU
- (4) Permitted / Design capacities are directly from permit or design report
- (5) During wet weather events LSTA has observed high wet well levels at the Vernfield PS. LSTA is conducting investigations at the pump
- (6) Flow meters are installed at all pump stations except for Lederach and Mainland Ridge
- (8) Mainland Ridge and Lederach pump station flows are based on connected EDUs times an annual average flow per EDU of 260 gpd/edu. Pump station peak daily flows are based on an assumed 3.0 peaking factor.
- (9) Peak flows exclude IDA storm Sept. 1 and 2, 2021

Table 11
Lower Salford Township Authority Pump Stations 2022

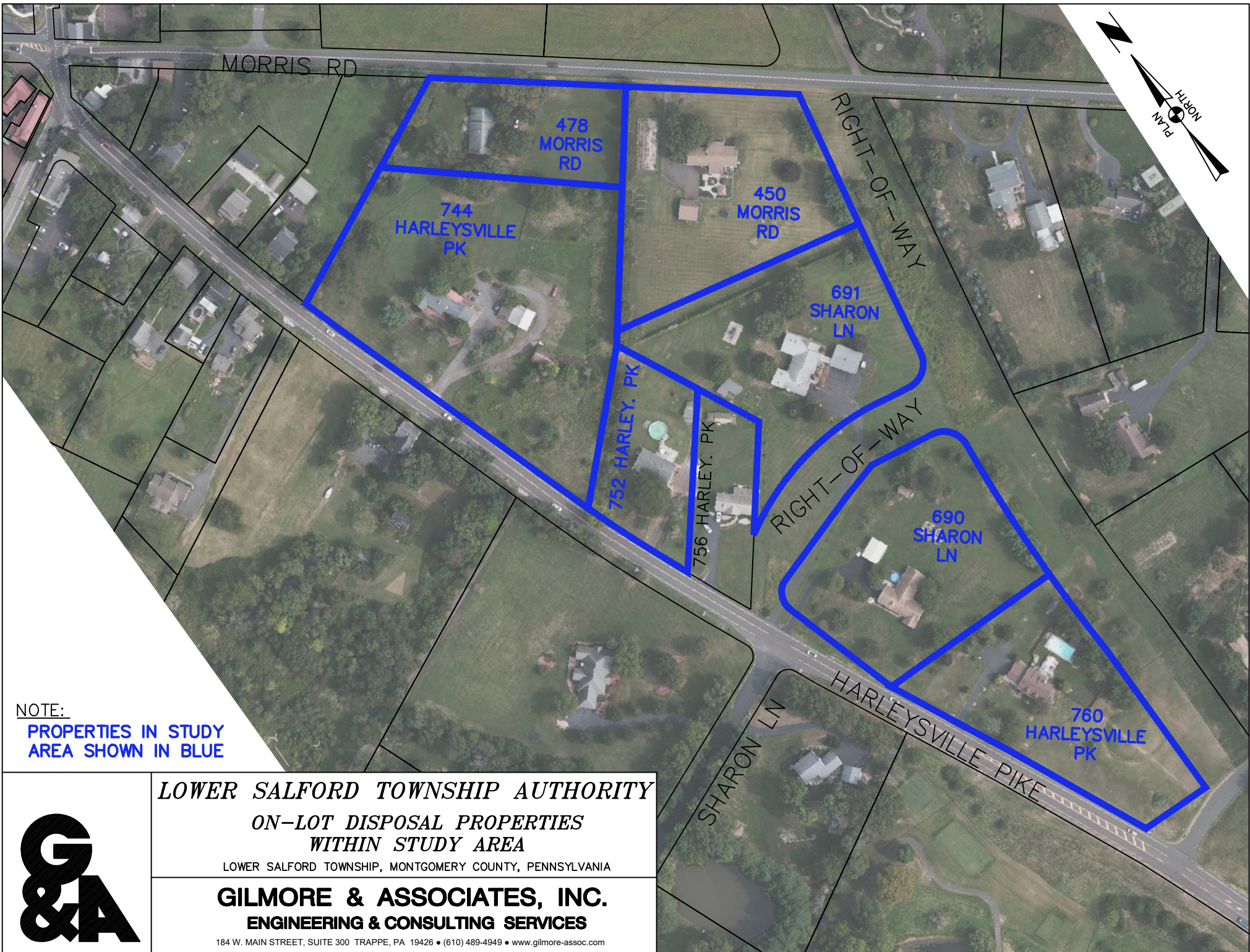
Pump Station Name	Permitted Capacities			Present Flows		Peak Influent Hourly Flow (GPM)	Projected Flows 2-Year Projected Maximum Flow (gpd)
	AA Permitted Capacity (gpd)	Hydraulic Design capacity (GPD)	Hydraulic Design Capacity (GPM)	Annual Average Flows (gpd)	Peak Daily Flow (gpd)		
TRIBUTARY TO MAINLAND WWTP							
Alderfer Road (4)	617,256	3,990,240	2771	551,380	2,471,800	NA	2,511,320
Mainland Ridge (1) (2) (7)	38,400	43,200	30	13,720	41,160	NA	41,160
Summerwind (4)	23,040	138,240	96	15,160	25,800	42	25,800
Quarry Road (4) (HCPS)	108,000	410,400	285	105,000	276,040	359	277,080
Tyson Road (4)	73,000	288,000	200	61,940	114,650	127	120,890
Northeast (4)	36,760	576,000	400	19,330	86,450	100	86,450
Indian Hills (4)	7,020	100,800	70	2,250	7,630	12	7,630
Mainland PS (4)	900,000	3,369,600	2340	465,910	2,147,050	NA	2,149,130
Oak Ridge (1) (2)	11,200	144,000	100	4,110	14,450	23	14,450
TRIBUTARY TO HARLEYSVILLE WWTP							
Salford Lea (2)	27,300	122,400	85	22,260	54,790	68	54,790
Bramblewyck (2) (3)	34,000	216,000	150	12,440	49,370	102	49,370
Lederach (2) (3) (7)	24,000	136,800	95	10,020	30,060	NA	44,620
Smith's Corner (4)	8,900	37,440	26	4,940	7,700	17	7,700
Vernfield (4) (5)	103,195	259,200	180	44,280	247,270	175	254,550
Harleysville IPS (4)(9)	592,000	1,699,200	1180	404,000	1,593,000	NA	1,721,960

- (1) AA Permitted Capacity is based on number of permitted dwelling units times 400 gpd
- (2) Hydraulic Design Capacity not called out on permit, assumed to be equal to the pumping rate of one pump
- (3) Permit does not contain a capacity, AA Capacity is equal to the number of ultimate EDUs times 400 gpd/EDU
- (4) Permitted / Design capacities are directly from permit or design report
- (5) During wet weather events LSTA has observed high wet well levels at the Vernfield PS. LSTA is conducting investigations at the pump station.
- (6) Flow meters are installed at all pump stations except for Lederach and Mainland Ridge
- (7) Mainland Ridge and Lederach pump station flows are based on connected EDUs times an annual average flow per EDU of 260 gpd/edu. Pump station peak daily flows are based on an assumed 3.0 peaking factor.
- (8) Projected peak flows based on present peak flows plus and additional 1040 gpd per projected EDU connection (260 gpd/edu x PF 4.0)
- (9) Flow above the capacity of Harleysville IPS is automatically diverted to an Equalization Tank built in 2004

Appendix D

OLDS Mapping and Reports

- OLDS Properties
- OLDS Waste Hauler Reports



NOTE:
PROPERTIES IN STUDY
AREA SHOWN IN BLUE

LOWER SALFORD TOWNSHIP AUTHORITY
ON-LOT DISPOSAL PROPERTIES
WITHIN STUDY AREA

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

184 W. MAIN STREET, SUITE 300 TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com



B

GEORGE ALLEN WASTEWATER MANAGEMENT
4375 County Line Road
Chalfont, PA 18914
(215) 997-3299 Fax (215) 997-3931

Service Technician Dunnell Mike Date 6-28-18
Customer Name Kammer - Miller
478 Morris Rd
Hartsville



SEPTIC TANK	PUMP PIT	HOLDING TANK	GREASE TRAP	CESSPOOL
GALS. <u>750</u>		<u>Some digging</u>		CHARGE \$ <u>330.00</u>
DIGGING _____ FEET				CHARGE \$ _____
JETTING _____	SNAKING _____	CHEMICAL _____		CHARGE \$ _____
OTHER _____				CHARGE \$ _____
				SUBTOTAL \$ _____
				Fuel Surcharge \$ _____
				Sales Tax \$ _____
				TOTAL CHARGES \$ <u>330.00</u>

CHECK # _____ CASH _____ CREDIT CARD _____
 EXP. DATE _____ CODE # _____
 VISA MC DISC AMEX

*Travis
Excel*

SEPTIC SYSTEM FINDINGS

- high level in tank
- no inlet/outlet baffle
- runback from absorption area
- ground water infiltration
- other _____
- needs to be dug-up
- increased sludge level
- blockage - house to tank
- blockage - tank in absorption area

RECOMMENDATIONS

- more frequent pumping
- baffle replacement
- installation of a riser
- other _____
- shaking or jetting for blocked line
- repair / replacement of pump
- caustic soda treatment

PLEASE CALL THE OFFICE TO SCHEDULE A REPAIR
104073 CUSTOMER SIGNATURE _____
 DELUXE FOR BUSINESS (800) 968-6327

6/29/18 - Spoke w/ Jen @ George Allen:
 Location of disposed contents = Hatfield Sewer
 Authority

673 Keller Creamery Road
Telford, PA 18969
DEP # 46014



ClemensSeptic.com
215-723-2122 Phone
215-723-1915 Fax

Celebrating Over 38 Years of Quality Service

Eastern Environmental Contractors, Inc.
P. O. Box 278
Green Lane, PA 18054

B

Invoice # 35456

Date: 5/1/2018

		P. O. Number	Terms
			<i>Due on receipt</i>
Qty	Description	Rate	Amount
	4/25/18 Job: 744 Route 113, Harleysville, PA		
	Septic Cleaning: 300 gallon septic tank/500 gallons pumped from cesspool	255.00	255.00
	Labor to hand dig coffin tank lid 14' deep/2-men	150.00	150.00
	Labor to repair gray water line	75.00	75.00
<p>Visit our website to pay with PayPal: www.clemenseptic.com</p> <p>- or -</p> <p>If you would like to pay by credit card, please call our office. We accept Visa, MasterCard and Discover.</p>			<p>Travis ✓ Excel ✓</p>
		Total	\$480.00

673 Keller Creamery Road
Telford, PA 18969
DEP # 46014



ClemensSeptic.com
215-723-2122 Phone
215-723-1915 Fax

Celebrating Over 38 Years of Quality Service

Lower Salford Township Septic Waste Hauler's
Residential Septic Tank Baffle Report

We have pumped out the following on-lot septic system and inspected the inlet and outlet baffles and are providing the following information:

Property Owner Name: Doug Miller

Property Address: 744 Harleysville Pike
19438

Date Pumped 4/25/18

Inlet baffle OK X In need of repair _____

Outlet baffle OK X In need of repair _____

Notes _____

Thank you,
Clemens Septic Service
PA DEP #46014



CLEMENS

Septic Service

Since 1979

Stef Ryan
752 Harleysville Pike
Harleysville, PA. 19438

B

Invoice # 44898

Date: 8/31/2021

		P. O. Number	Terms
			<i>Due on receipt</i>
Qty	Description	Rate	Amount
	8/25/21 Septic Cleaning/2000 gallon septic tank	375.00	375.00
	New Customer Discount	-25.00	-25.00
	9/2/21 E-mailed Lower Salford pump out report		
	<i>train</i> <i>Exp</i>		
	<i>Next suggested pump out August 2024</i>		
		Total	\$350.00

We accept    

(215) 723-2122
(215) 723-1915 fax



673 Keller Creamery Rd
Telford, PA 18969



ClemensSeptic.com
DEP #46014



Lower Salford Township Septic Waste Hauler's
Residential Septic Tank Baffle Report

We have pumped out the following on-lot septic system and inspected the inlet and outlet baffles and are providing the following information:

Property Owner Name: Stef Ryan

Property Address: 752 Harleysville Pike
Ledersach

Date Pumped 8/25/21

Inlet baffle OK In need of repair

Outlet baffle OK In need of repair

Notes _____

Thank you,
Clemens Septic Service
PA DEP #46014

B

MANNY'S

SEPTIC/DRAIN/GREASE TRAP SERVICES

P.O. BOX 72831 THORNDALE PA 19372

(610)-755-2639 (610)-656-7335

mannyseptic@gmail.com

mannysepticervices.com

BILL TO
Mr. Todd Koch
760 Harleysville Pike
Harleysville, PA 19438

SHIP TO
Mr. Todd Koch
760 Harleysville Pike
Harleysville, PA 19438

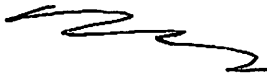
INVOICE # 11234
DATE 03/18/2020
DUE DATE 03/18/2020

ACTIVITY	QTY	RATE	AMOUNT
Dual Compartment 1500 gallons washed and pumped out	1	355.00	355.00
Zabel filter Zabel Filter is Located on the tank before Pump station. Washed and Cleaned		0.00	0.00

PAID

Thank you for your business

PAYMENT	355.00
BALANCE DUE	USD 0.00



Travis
Excel

673 Keller Creamery Road
Telford, PA 18969
DEP # 46014



ClemensSeptic.com
215-723-2122 Phone
215-723-1915 Fax

Celebrating Over 38 Years of Quality Service

Noreen Kelly
690 Sharon Lane
Harleysville, PA 19438



Invoice # 36306

Date: 8/8/2018

		P. O. Number	Terms
			<i>PAID</i>
Qty	Description	Rate	Amount
	7/30/18 Septic Cleaning/1000 gallon septic tank	255.00	255.00
	On line coupon	-35.00	-35.00
	Copy faxed to Lower Salford Twp. 8/8/18		
<p>Visit our website to pay with PayPal: www.clemenseptic.com</p> <p>- or -</p> <p>If you would like to pay by credit card, please call our office. We accept Visa, MasterCard and Discover.</p>			
Next suggested pump out July 2021		Total	\$220.00

*Train ✓
Excel ✓*

Appendix E

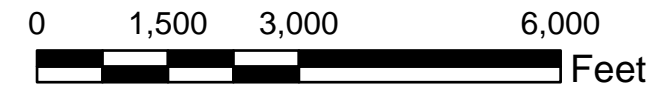
Zoning Map

ZONING MAP

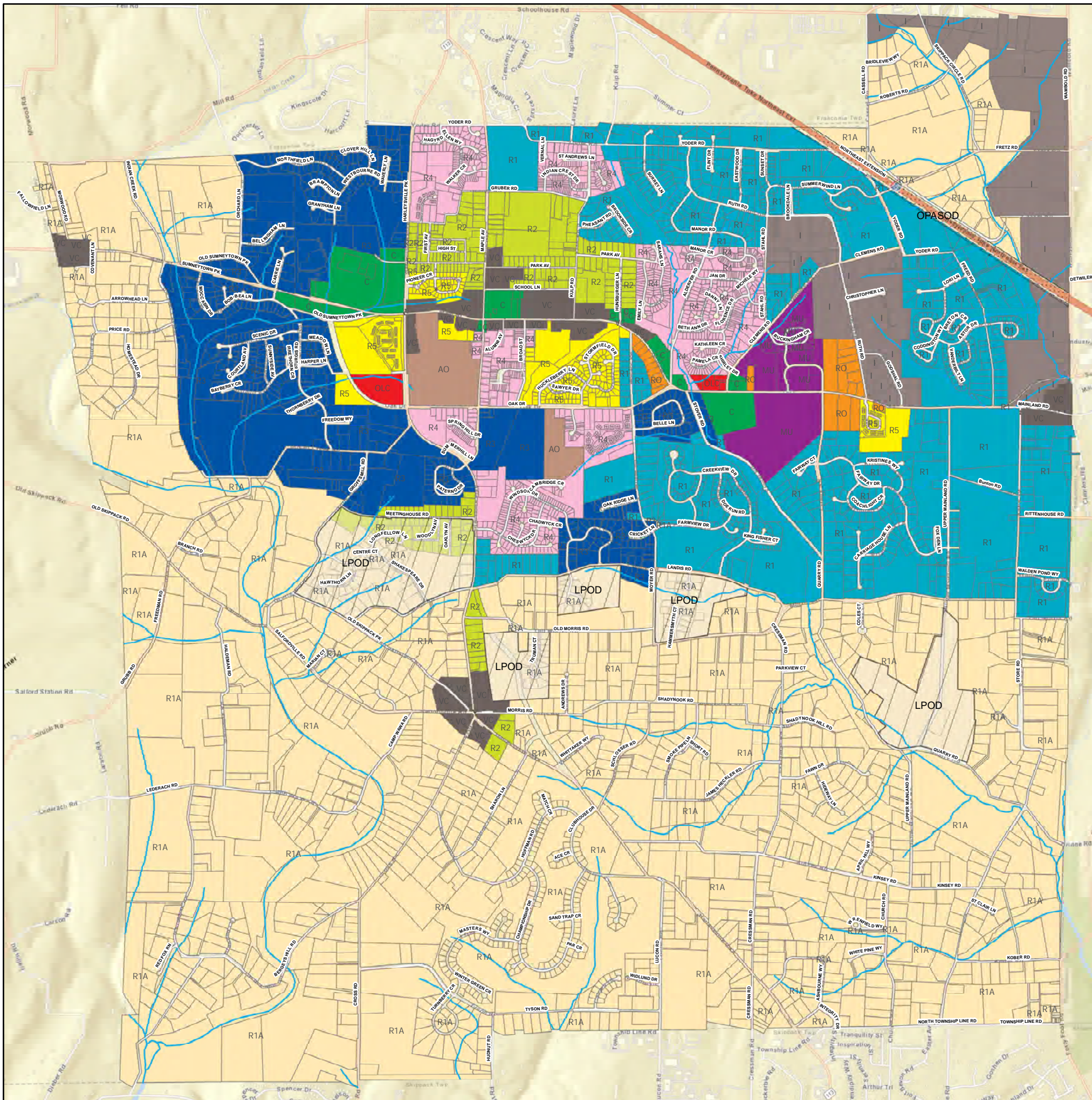
LOWER SALFORD TOWNSHIP

MONTGOMERY COUNTY

PENNSYLVANIA



1 inch = 2,200 feet

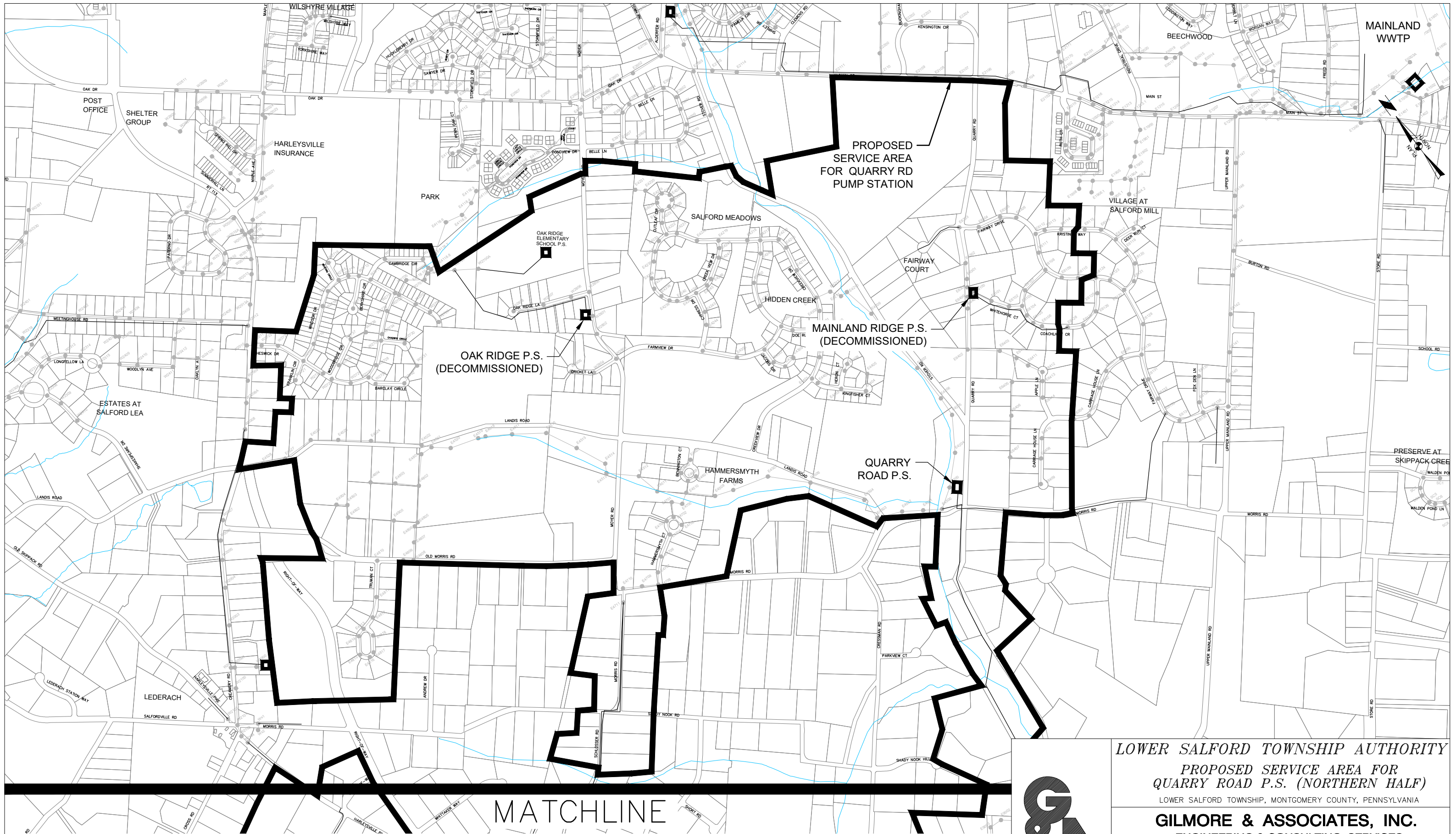


Zoning Map Amendments, Last Revised 03-22-2021			
Lower Salford Township, Montgomery County, PA			
Ordinance #	Date	Parcel #	Zoning Change
2000-04	June 7, 2000		Created RO
2000-07	September 21, 2000	50-00-01430-00-5	R1 to LPOD
2000-07	September 21, 2000	50-00-02917-00-3	R1 to LPOD
2000-12	December 6, 2000	50-00-02728-11-1	R1A to VC
2003-07	July 2, 2003	50-00-03031-00-6	LPOD
2003-07	July 2, 2003	50-00-04495-00-9	LPOD
2003-07	July 2, 2003	50-00-03517-00-6	LPOD
2006-02	June 7, 2006	50-00-00694-00-3	R1A to I
2006-02	June 7, 2006	50-00-04558-00-9	MHP to I
2009-04	July 1, 2009	50-00-00361-00-3	R1 to I
2009-07	September 2, 2009	50-00-04393-00-3	R3 to OLC
2009-07	September 2, 2009	50-00-00718-00-6	R4 to OLC
2012-01	June 6, 2012		Created OPASOD
2012-03	July 11, 2012	50-00-01453-00-9	R1A to LPOD
2014-01	February 5, 2014	50-00-01450-00-3	R1A to R3
2014-03	April 2, 2014	50-00-00968-01-9	R3 to C
2014-03	April 2, 2014	50-00-00964-00-3	R3 to C
2014-03	April 2, 2014	50-00-02182-00-9	R3 to C
2014-03	April 2, 2014	50-00-01904-00-8	R3 to C
2014-03	April 2, 2014	50-00-01903-50-4	R3 to C
2014-03	April 2, 2014	50-00-02179-00-3	R3 to C
2014-03	April 2, 2014	50-00-01903-00-9	R3 to C
2014-10	December 3, 2014	50-00-04393-00-3	OLC to R5
2015-02	September 2, 2015	50-00-02473-00-6	R2 to VC
2015-02	September 2, 2015	50-00-03250-00-3	R2 to VC
2017-02	March 1, 2017	50-00-02806-00-6	R1A to VC
2017-02	March 1, 2017	62-00-02123-00-2	R1A to VC
2019-04	September 4, 2019	50-00-04564-00-3	R1 to I
2019-04	September 4, 2019	50-00-04564-01-2	R1 to I
2019-04	September 4, 2019	50-00-00595-09-3	R1 to I
2019-04	September 4, 2019	50-00-04570-00-6	R1 to I
2019-04	September 4, 2019	50-00-04573-00-3	R1 to I
2019-04	September 4, 2019	50-00-04576-00-9	R1 to I
2019-04	September 4, 2019	50-00-04579-00-6	R1 to I
2019-04	September 4, 2019	50-00-04582-00-3	R1 to I
2019-04	September 4, 2019	50-00-04567-00-9	R1 to I
2020-01	March 4, 2020	50-00-02530-00-3	AO to R3

- Land Preservation Overlay District
- Off-Premises Advertising Sign Overlay District
- R1A Residential District
- R1 Residential District
- R2 Residential District
- R3 Medium-Density Residential District
- R4 Medium-Density Mixed Dwelling Residential District
- R5 High-Density Mixed Dwelling Residential District
- RO Residential Office
- MU Mixed-Use District
- AO Administrative Office District
- OLC Office-Limited Commercial District
- VC Village Commercial
- C Commercial District
- I Industrial District
- Streams

Appendix F

Service Area Mapping



MATCHLINE

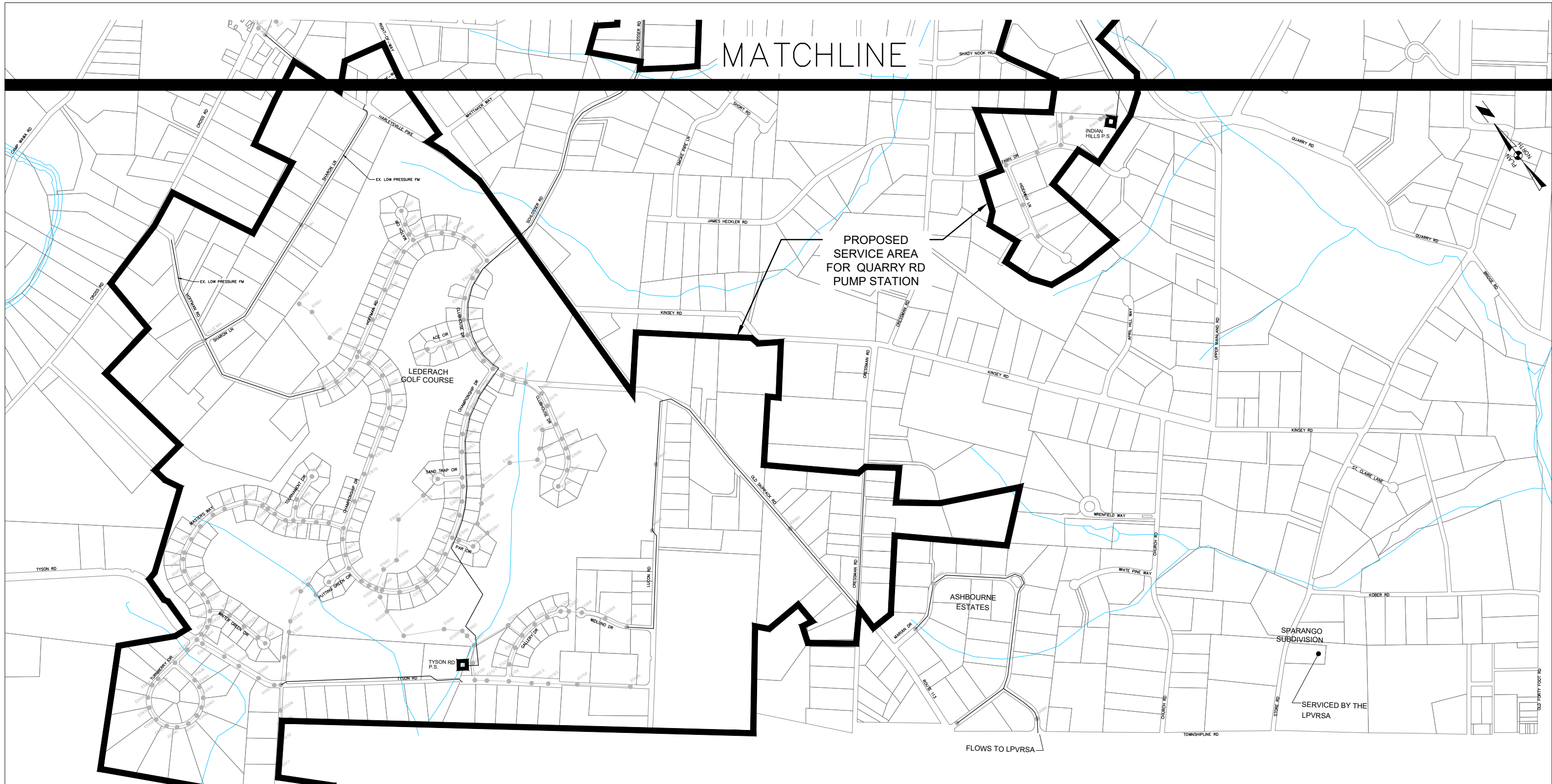


LOWER SALFORD TOWNSHIP AUTHORITY
 PROPOSED SERVICE AREA FOR
 QUARRY ROAD P.S. (NORTHERN HALF)
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
 ENGINEERING & CONSULTING SERVICES

184 W. MAIN STREET, SUITE 300 TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

SCALE: N.T.S.	DATE: 10/25/2023	DESIGNED BY: TJD	JOB NO.: 15-10068T
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MATCHLINE

PROPOSED SERVICE AREA FOR QUARRY RD PUMP STATION

LEDERACH GOLF COURSE

ASHBOURNE ESTATES

SPARANGO SUBDIVISION

SERVICED BY THE LPVRS

FLOWS TO LPVRS



LOWER SALFORD TOWNSHIP AUTHORITY
 PROPOSED SERVICE AREA FOR
 QUARRY ROAD P.S. (SOUTHERN HALF)
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
 ENGINEERING & CONSULTING SERVICES

184 W. MAIN STREET, SUITE 300 TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

SCALE: N.T.S.	DATE: 10/25/2023	DESIGNED BY: TJD	JOB NO.: 15-10068T
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Appendix G

Service Area Evaluation

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000546007	190 FAWN DRIVE	1	0	INDIAN HILLS
500000546034	200 FAWN DRIVE	1	0	INDIAN HILLS
500000546304	201 FAWN DRIVE	1	0	INDIAN HILLS
500000546052	210 FAWN DRIVE	1	0	INDIAN HILLS
500000546079	216 FAWN DRIVE	1	0	INDIAN HILLS
500001062508	770 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062616	771 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062634	779 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062526	780 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062544	786 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062652	787 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062562	790 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062679	795 HIDEAWAY LANE	1	0	INDIAN HILLS
500001062589	796 HIDEAWAY LANE	1	0	INDIAN HILLS
500000053032	508 APPLE LANE	1	0	MAINLAND RIDGE
500000053041	509 APPLE LANE	1	0	MAINLAND RIDGE
500000053023	512 APPLE LANE	1	0	MAINLAND RIDGE
500000053104	513 APPLE LANE	1	0	MAINLAND RIDGE
500000053113	515 APPLE LANE	1	0	MAINLAND RIDGE
500000053014	516 APPLE LANE	1	0	MAINLAND RIDGE
500000053122	517 APPLE LANE	1	0	MAINLAND RIDGE
500000053131	521 APPLE LANE	1	0	MAINLAND RIDGE
500000053005	531 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287248	535 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287158	536 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287239	539 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287167	540 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287221	543 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287176	544 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287212	547 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287185	548 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287203	551 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000287194	555 CARRIAGE HOUSE LANE	1	0	MAINLAND RIDGE
500000412807	466 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500000412951	467 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500000412789	470 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500000412762	474 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500000412744	476 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500000412942	477 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500000412726	478 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500004582489	482 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500000412708	486 COACHLIGHT CIRCLE	1	0	MAINLAND RIDGE
500003532504	200 FAIRWAY COURT	1	0	MAINLAND RIDGE
500003532564	201 FAIRWAY COURT	1	0	MAINLAND RIDGE
500003532515	204 FAIRWAY COURT	1	0	MAINLAND RIDGE
500003532559	205 FAIRWAY COURT	1	0	MAINLAND RIDGE

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500003532526	208 FAIRWAY COURT	1	0	MAINLAND RIDGE
500003532548	209 FAIRWAY COURT	1	0	MAINLAND RIDGE
500003532537	210 FAIRWAY COURT	1	0	MAINLAND RIDGE
500000545966	161 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545981	162 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545999	164 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545965	165 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000412933	166 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545998	170 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545964	171 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545963	173 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545962	175 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545997	176 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545961	177 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545996	180 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545979	181 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545995	184 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545978	185 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500000545994	188 FAIRWAY DRIVE	1	0	MAINLAND RIDGE
500001367446	402 KRISTINES WAY	1	0	MAINLAND RIDGE
500001367329	405 KRISTINES WAY	1	0	MAINLAND RIDGE
500001367428	406 KRISTINES WAY	1	0	MAINLAND RIDGE
500001367302	407 KRISTINES WAY	1	0	MAINLAND RIDGE
500002701003	175 MORRIS ROAD	1	0	MAINLAND RIDGE
500003529003	447 QUARRY RD	1	0	MAINLAND RIDGE
500003541009	491 QUARRY RD	1	0	MAINLAND RIDGE
500003487009	434 QUARRY ROAD	1	0	MAINLAND RIDGE
500003493003	476 QUARRY ROAD	1	0	MAINLAND RIDGE
500003538003	485 QUARRY ROAD	1	0	MAINLAND RIDGE
500003499015	520 QUARRY ROAD	1	0	MAINLAND RIDGE
500003499501	528 QUARRY ROAD	1	0	MAINLAND RIDGE
500004582502	202 WHITEHORSE COURT	1	0	MAINLAND RIDGE
500004582529	203 WHITEHORSE COURT	1	0	MAINLAND RIDGE
500004582547	204 WHITEHORSE COURT	1	0	MAINLAND RIDGE
500004582565	205 WHITEHORSE COURT	1	0	MAINLAND RIDGE
500004582583	206 WHITEHORSE COURT	1	0	MAINLAND RIDGE
500003532009	451 QUARRY RD	0	1	MAINLAND RIDGE
500003484003		0	1	MAINLAND RIDGE
500003490006		0	1	MAINLAND RIDGE
500003534007		0	1	MAINLAND RIDGE
500003535006		0	1	MAINLAND RIDGE
500003544006		0	1	MAINLAND RIDGE
500003499609		0	1	MAINLAND RIDGE
500003499708		0	1	MAINLAND RIDGE
500003499807		0	1	MAINLAND RIDGE
500000544018	340 CRICKET LANE	1	0	OAK RIDGE

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000544027	344 CRICKET LANE	1	0	OAK RIDGE
500000544036	346 CRICKET LANE	1	0	OAK RIDGE
500000544108	347 CRICKET LANE	1	0	OAK RIDGE
500000544045	348 CRICKET LANE	1	0	OAK RIDGE
500000544054	350 CRICKET LANE	1	0	OAK RIDGE
500000544099	351 CRICKET LANE	1	0	OAK RIDGE
500000544063	352 CRICKET LANE	1	0	OAK RIDGE
500000544083	353 CRICKET LANE	1	0	OAK RIDGE
500000544072	354 CRICKET LANE	1	0	OAK RIDGE
500000544081	356 CRICKET LANE	1	0	OAK RIDGE
500000544082	357 CRICKET LANE	1	0	OAK RIDGE
500002878006	491 MOYER ROAD	1	0	OAK RIDGE
500002878051	493 MOYER ROAD	1	0	OAK RIDGE
500002911207	494 MOYER ROAD	1	0	OAK RIDGE
500002878105	499 MOYER ROAD	1	0	OAK RIDGE
500003026002	350 OAK RIDGE LANE	1	0	OAK RIDGE
500003026029	352 OAK RIDGE LANE	1	0	OAK RIDGE
500003026047	354 OAK RIDGE LANE	1	0	OAK RIDGE
500003026083	356 OAK RIDGE LANE	1	0	OAK RIDGE
500003026308	357 OAK RIDGE LANE	1	0	OAK RIDGE
500003026101	358 OAK RIDGE LANE	1	0	OAK RIDGE
500003026281	359 OAK RIDGE LANE	1	0	OAK RIDGE
500003026128	360 OAK RIDGE LANE	1	0	OAK RIDGE
500003026245	361 OAK RIDGE LANE	1	0	OAK RIDGE
500003026146	362 OAK RIDGE LANE	1	0	OAK RIDGE
500003026227	363 OAK RIDGE LANE	1	0	OAK RIDGE
500003026209	365 OAK RIDGE LANE	1	0	OAK RIDGE
500003026182	367 OAK RIDGE LANE	1	0	OAK RIDGE
500002906005	478 MOYER RD	0	1	OAK RIDGE
500002908003	482 MOYER RD	0	1	OAK RIDGE
500002902405	460 MOYER ROAD	0	1	OAK RIDGE
500002902504	466 MOYER ROAD	0	1	OAK RIDGE
500002905006	472 MOYER ROAD	0	1	OAK RIDGE
500002905501	476 MOYER ROAD	0	1	OAK RIDGE
500004333009		0	1	OAK RIDGE
500002903026	550 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002903035	551 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002903044	555 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002903053	559 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002903017	560 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002903062	563 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002903008	566 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002903071	567 BENNINGTON COURT	1	0	QUARRY GRAVITY
500002370055	400 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370064	401 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370046	404 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500002370073	405 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370037	408 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370082	409 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370028	412 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370091	413 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370019	416 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370001	420 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370109	421 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370118	425 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370127	429 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370136	433 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370145	437 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370154	441 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370163	445 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370235	460 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370172	465 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370226	470 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370181	471 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370217	474 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370199	477 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500002370208	478 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414247	498 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414238	500 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414229	502 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414211	504 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414265	505 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414202	506 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414274	507 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414193	508 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414283	509 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414184	510 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414292	511 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414175	512 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414301	513 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414166	514 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414319	515 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414157	516 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414148	518 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414139	522 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414121	524 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414112	526 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414103	528 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414031	530 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414328	531 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414022	532 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414337	533 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000414013	534 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414346	535 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414004	536 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000414355	537 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500001269409	538 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500001269526	540 CREEKVIEW DRIVE	1	0	QUARRY GRAVITY
500000654043	205 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654034	210 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654052	215 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654025	220 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654061	225 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654016	230 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654079	235 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654007	240 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654088	245 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500000654097	255 CUTLEAF CIRCLE	1	0	QUARRY GRAVITY
500001646032	305 CYPRESS DRIVE	1	0	QUARRY GRAVITY
500001646023	315 CYPRESS DRIVE	1	0	QUARRY GRAVITY
500001646014	325 CYPRESS DRIVE	1	0	QUARRY GRAVITY
500001646005	335 CYPRESS DRIVE	1	0	QUARRY GRAVITY
500000548221	300 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548005	301 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548212	302 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548014	303 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548203	304 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548023	305 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548032	307 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548194	314 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548059	315 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548185	316 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548068	317 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548176	318 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548077	319 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548167	320 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548086	321 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548158	322 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548095	323 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548149	324 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548104	325 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548131	326 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548113	327 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000548122	328 DOE RUN ROAD	1	0	QUARRY GRAVITY
500000549094	240 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500000549085	241 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500000549103	242 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500000549076	243 FARMVIEW DRIVE	1	0	QUARRY GRAVITY

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000549058	249 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500000549049	251 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500000549031	253 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500000549022	255 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500000549013	257 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
	333 FARMVIEW DRIVE	1	0	QUARRY GRAVITY
500001453254	501 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453263	503 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453272	505 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453245	506 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453236	508 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453281	509 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453227	510 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453218	512 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453209	514 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453181	516 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453309	517 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453172	518 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453163	520 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453154	522 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453318	523 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453145	524 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453327	525 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453136	526 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453336	527 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453345	529 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453354	531 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453054	532 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453045	534 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453363	535 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453036	536 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453372	537 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453024	538 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453381	539 GRAYSON LANE	1	0	QUARRY GRAVITY
500001453018	540 GRAYSON LANE	1	0	QUARRY GRAVITY
500000927472	601 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927463	604 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927481	605 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927508	609 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927445	610 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927517	613 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927436	614 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927526	617 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927427	618 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927535	621 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927418	622 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000927544	625 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927553	629 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500000927409	630 HAMMERSMYTH COURT	1	0	QUARRY GRAVITY
500002557003	546 HARLEYSVILLE PIKE	1	0	QUARRY GRAVITY
500001008103	528 HERON COURT	1	0	QUARRY GRAVITY
500001008031	531 HERON COURT	1	0	QUARRY GRAVITY
500001008112	532 HERON COURT	1	0	QUARRY GRAVITY
500001008022	535 HERON COURT	1	0	QUARRY GRAVITY
500001008121	536 HERON COURT	1	0	QUARRY GRAVITY
500001008013	539 HERON COURT	1	0	QUARRY GRAVITY
500001008139	540 HERON COURT	1	0	QUARRY GRAVITY
500001008004	543 HERON COURT	1	0	QUARRY GRAVITY
500001251337	272 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251328	275 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251346	276 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251355	280 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251364	284 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251319	285 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251373	288 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251382	292 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251301	295 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001251391	296 JACOBS CIRCLE	1	0	QUARRY GRAVITY
500001269436	218 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269427	221 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269445	222 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269418	225 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269454	226 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269463	230 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269472	234 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269481	238 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269508	242 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001269517	246 KINGFISHER COURT	1	0	QUARRY GRAVITY
500001450003	342 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450054	343 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450045	345 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450118	346 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450036	347 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450027	349 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450018	351 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450109	352 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450009	353 LANDIS ROAD	1	0	QUARRY GRAVITY
500001450081	354 LANDIS ROAD	1	0	QUARRY GRAVITY
500001452001	361 LANDIS ROAD	1	0	QUARRY GRAVITY
500001453009	381 LANDIS ROAD	1	0	QUARRY GRAVITY
500001456006	419 LANDIS ROAD	1	0	QUARRY GRAVITY
500001425208	420 LANDIS ROAD	1	0	QUARRY GRAVITY

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500001459003	425 LANDIS ROAD	1	0	QUARRY GRAVITY
500001425307	430 LANDIS ROAD	1	0	QUARRY GRAVITY
500001462009	431 LANDIS ROAD	1	0	QUARRY GRAVITY
500001465006	437 LANDIS ROAD	1	0	QUARRY GRAVITY
500001425406	440 LANDIS ROAD	1	0	QUARRY GRAVITY
500001468003	443 LANDIS ROAD	1	0	QUARRY GRAVITY
500001471009	449 LANDIS ROAD	1	0	QUARRY GRAVITY
500001474006	455 LANDIS ROAD	1	0	QUARRY GRAVITY
500001426009	460 LANDIS ROAD	1	0	QUARRY GRAVITY
500001477003	461 LANDIS ROAD	1	0	QUARRY GRAVITY
500001480009	467 LANDIS ROAD	1	0	QUARRY GRAVITY
500001429006	470 LANDIS ROAD	2	0	QUARRY GRAVITY
500001483006	473 LANDIS ROAD	1	0	QUARRY GRAVITY
500002767009	302 MORRIS ROAD	1	0	QUARRY GRAVITY
500002769007	310 MORRIS ROAD	1	0	QUARRY GRAVITY
500002770006	316 MORRIS ROAD	1	0	QUARRY GRAVITY
500002714107	317 MORRIS ROAD	1	0	QUARRY GRAVITY
500002714053	321 MORRIS ROAD	1	0	QUARRY GRAVITY
500002773003	322 MORRIS ROAD	1	0	QUARRY GRAVITY
500002776009	328 MORRIS ROAD	1	0	QUARRY GRAVITY
500002779006	344 MORRIS ROAD	1	0	QUARRY GRAVITY
500002902108	440 MOYER RD	1	0	QUARRY GRAVITY
500002911009	490 MOYER RD	1	0	QUARRY GRAVITY
500001450072	503 MOYER ROAD	1	0	QUARRY GRAVITY
500001450063	507 MOYER ROAD	1	0	QUARRY GRAVITY
500003037306	411 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003037351	417 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003037405	421 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003037459	425 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003037504	427 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003037558	431 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003037603	441 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003037657	451 OLD MORRIS ROAD	1	0	QUARRY GRAVITY
500003501004	550 QUARRY ROAD	1	0	QUARRY GRAVITY
500003502003	590 QUARRY ROAD	1	0	QUARRY GRAVITY
500003550009	591 QUARRY ROAD	1	0	QUARRY GRAVITY
500003509005	604 QUARRY ROAD	1	0	QUARRY GRAVITY
500003932005	702 SCHLOSSER ROAD	1	0	QUARRY GRAVITY
500003949006	705 SCHLOSSER ROAD	1	0	QUARRY GRAVITY
500003933004	706 SCHLOSSER ROAD	1	0	QUARRY GRAVITY
500003933058	710 SCHLOSSER ROAD	1	0	QUARRY GRAVITY
500003952003	715 SCHLOSSER ROAD	1	0	QUARRY GRAVITY
500004081009	324 SHADY NOOK ROAD	1	0	QUARRY GRAVITY
500004345006	481 STOVER ROAD	1	0	QUARRY GRAVITY
500004369009	498 STOVER ROAD	1	0	QUARRY GRAVITY
500001453536	549 THEODORE CIRCLE	1	0	QUARRY GRAVITY

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500001453409	550 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453418	552 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453427	554 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453436	556 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453445	558 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453454	560 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453463	562 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453472	564 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453481	566 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453509	568 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453518	570 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500001453527	572 THEODORE CIRCLE	1	0	QUARRY GRAVITY
500003031132	616 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031141	617 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031123	620 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031159	621 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031114	624 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031168	625 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031105	628 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031177	629 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031096	632 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031186	637 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031195	641 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031015	645 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031024	649 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031033	653 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031042	657 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031051	661 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031069	665 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031078	669 TRUMAN COURT	1	0	QUARRY GRAVITY
500003031087	673 TRUMAN COURT	1	0	QUARRY GRAVITY
500001453063	330 WINDSOR DRIVE	1	0	QUARRY GRAVITY
500001453127	331 WINDSOR DRIVE	1	0	QUARRY GRAVITY
500001453072	340 WINDSOR DRIVE	1	0	QUARRY GRAVITY
500001453118	341 WINDSOR DRIVE	1	0	QUARRY GRAVITY
500001453081	350 WINDSOR DRIVE	1	0	QUARRY GRAVITY
500001453109	351 WINDSOR DRIVE	1	0	QUARRY GRAVITY
500000549109	LOT FARMVIEW DRIVE	0	0	QUARRY GRAVITY
500002710003	303 MORRIS ROAD	0	2	QUARRY GRAVITY
500002714008	341 MORRIS ROAD	0	1	QUARRY GRAVITY
500002874001	479 MOYER RD	0	1	QUARRY GRAVITY
500002902009	432 MOYER ROAD	0	1	QUARRY GRAVITY
500002902207	446 MOYER ROAD	0	1	QUARRY GRAVITY
500002902306	454 MOYER ROAD	0	1	QUARRY GRAVITY
500003028009	440 OLD MORRIS ROAD	0	1	QUARRY GRAVITY
500003505009	594 QUARRY ROAD	0	1	QUARRY GRAVITY

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500003553006	597 QUARRY ROAD	0	1	QUARRY GRAVITY
500003508006	598 QUARRY ROAD	0	1	QUARRY GRAVITY
500003556003	605 QUARRY ROAD	0	1	QUARRY GRAVITY
500003513001	620 QUARRY ROAD	0	0	QUARRY GRAVITY
500003559009	715 QUARRY ROAD	0	1	QUARRY GRAVITY
500003559036	0 SHADY NOOK HILL	0	1	QUARRY GRAVITY
500004035883	203 SHADY NOOK HILL RD	0	1	QUARRY GRAVITY
500003559018	208 SHADY NOOK HILL RD	0	1	QUARRY GRAVITY
500003559027	214 SHADY NOOK HILL RD	0	1	QUARRY GRAVITY
500003037009		0	6	QUARRY GRAVITY
500004336006		0	1	QUARRY GRAVITY
500004351009		0	300	QUARRY GRAVITY
500001447006		0	1	QUARRY GRAVITY
500002704009		0	6	QUARRY GRAVITY
500002869006		0	8	QUARRY GRAVITY
500003036901		0	1	QUARRY GRAVITY
500003038008		0	6	QUARRY GRAVITY
500003496009		0	1	QUARRY GRAVITY
500004330003		0	1	QUARRY GRAVITY
500004354006		0	1	QUARRY GRAVITY
500004357003		0	1	QUARRY GRAVITY
500004360009		0	1	QUARRY GRAVITY
500004363006		0	1	QUARRY GRAVITY
500004366003		0	1	QUARRY GRAVITY
500004372006		0	1	QUARRY GRAVITY
500003031006	660 HARLEYSVILLE PIKE	1	6	QUARRY GRAVITY
500001426009	460 LANDIS ROAD	2	3	QUARRY GRAVITY
500002014006	196 MAIN STREET	1	54	QUARRY GRAVITY
500000021073	401 ACE CIRCLE	1	0	TYSON
500000021001	402 ACE CIRCLE	1	0	TYSON
500000021064	405 ACE CIRCLE	1	0	TYSON
500000021019	406 ACE CIRCLE	1	0	TYSON
500000021055	409 ACE CIRCLE	1	0	TYSON
500000021028	410 ACE CIRCLE	1	0	TYSON
500000021046	413 ACE CIRCLE	1	0	TYSON
500000021037	414 ACE CIRCLE	1	0	TYSON
500000428008	500 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428017	502 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428026	504 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428035	506 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428629	507 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428044	508 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428611	509 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428053	510 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428602	511 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428062	512 CHAMPIONSHIP DRIVE	1	0	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000428593	513 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428071	514 CHAMPIONSHIP DRIVE	1	0	TYSON
500004215046	515 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428089	516 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428098	518 CHAMPIONSHIP DRIVE	1	0	TYSON
500004215001	519 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428107	520 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428584	521 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428116	522 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428575	523 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428125	524 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428566	525 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385002	526 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428557	527 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385056	528 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428548	529 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385134	530 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428539	531 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385143	532 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428521	533 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385152	534 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428512	535 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385161	536 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385179	538 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428503	539 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385188	540 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428494	541 CHAMPIONSHIP DRIVE	1	0	TYSON
500004385197	542 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428485	549 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428476	551 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428215	552 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428467	553 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428458	555 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428449	557 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428224	558 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428431	559 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428233	560 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428422	561 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428242	562 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428251	568 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428269	570 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428413	571 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428278	572 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428404	573 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428287	574 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428395	575 CHAMPIONSHIP DRIVE	1	0	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000428296	576 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428386	577 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428305	578 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428377	579 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428368	581 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428314	582 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428359	583 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428323	584 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428341	585 CHAMPIONSHIP DRIVE	1	0	TYSON
500000428332	587 CHAMPIONSHIP DRIVE	1	0	TYSON
500001105024	588 CHAMPIONSHIP DRIVE	1	0	TYSON
	CHAMPIONSHIP DRIVE	1	0	TYSON
500000408208	CLUBHOUSE	2	0	TYSON
500000408001	820 CLUBHOUSE DRIVE	1	0	TYSON
500000408019	824 CLUBHOUSE DRIVE	1	0	TYSON
500000408181	825 CLUBHOUSE DRIVE	1	0	TYSON
500000408199	829 CLUBHOUSE DRIVE	1	0	TYSON
500000408028	830 CLUBHOUSE DRIVE	1	0	TYSON
500000408037	840 CLUBHOUSE DRIVE	1	0	TYSON
500000408046	850 CLUBHOUSE DRIVE	1	0	TYSON
500000408055	860 CLUBHOUSE DRIVE	1	0	TYSON
500000408064	870 CLUBHOUSE DRIVE	1	0	TYSON
500000408172	885 CLUBHOUSE DRIVE	1	0	TYSON
500000408163	919 CLUBHOUSE DRIVE	1	0	TYSON
500000408073	920 CLUBHOUSE DRIVE	1	0	TYSON
500000408154	923 CLUBHOUSE DRIVE	1	0	TYSON
500000408145	929 CLUBHOUSE DRIVE	1	0	TYSON
500001084018	930 CLUBHOUSE DRIVE	1	0	TYSON
500000408136	933 CLUBHOUSE DRIVE	1	0	TYSON
500000408082	934 CLUBHOUSE DRIVE	1	0	TYSON
500000408127	937 CLUBHOUSE DRIVE	1	0	TYSON
500000408091	938 CLUBHOUSE DRIVE	1	0	TYSON
500000408118	941 CLUBHOUSE DRIVE	1	0	TYSON
500000408109	942 CLUBHOUSE DRIVE	1	0	TYSON
	COVERD PAVILION AREA	2	0	TYSON
500000514003	888 CRESSMAN ROAD	1	0	TYSON
500000517009	894 CRESSMAN ROAD	1	0	TYSON
500000475006	895 CRESSMAN ROAD	1	0	TYSON
500000520006	910 CRESSMAN ROAD	1	0	TYSON
500000484006	915 CRESSMAN ROAD	1	0	TYSON
500000523003	916 CRESSMAN ROAD	1	0	TYSON
500000487003	919 CRESSMAN ROAD	1	0	TYSON
500000526009	920 CRESSMAN ROAD	1	0	TYSON
500003778006	923 CRESSMAN ROAD	1	0	TYSON
500000529006	924 CRESSMAN ROAD	1	0	TYSON
500001823077	959 GALLERY DRIVE	1	0	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500001823086	962 GALLERY DRIVE	1	0	TYSON
500001823068	963 GALLERY DRIVE	1	0	TYSON
500001823059	967 GALLERY DRIVE	1	0	TYSON
500001823095	968 GALLERY DRIVE	1	0	TYSON
500001823041	971 GALLERY DRIVE	1	0	TYSON
500001823104	972 GALLERY DRIVE	1	0	TYSON
500001823032	975 GALLERY DRIVE	1	0	TYSON
500001823113	976 GALLERY DRIVE	1	0	TYSON
500001823023	977 GALLERY DRIVE	1	0	TYSON
500001823122	980 GALLERY DRIVE	1	0	TYSON
500001823014	981 GALLERY DRIVE	1	0	TYSON
500001823131	984 GALLERY DRIVE	1	0	TYSON
500001823005	985 GALLERY DRIVE	1	0	TYSON
500003730009	756 HARLEYSVILLE PIKE	1	0	TYSON
500003637003	855 HARLEYSVILLE PIKE	1	0	TYSON
500003739009	862 HARLEYSVILLE PIKE	1	0	TYSON
500003748009	868 HARLEYSVILLE PIKE	1	0	TYSON
500003643006	871 HARLEYSVILLE PIKE	1	0	TYSON
500003754003	872 HARLEYSVILLE PIKE	1	0	TYSON
500003757009	892 HARLEYSVILLE PIKE	1	0	TYSON
500003760006	904 HARLEYSVILLE PIKE	1	0	TYSON
500003763003	910 HARLEYSVILLE PIKE	1	0	TYSON
500003769006	924 HARLEYSVILLE PIKE	1	0	TYSON
500003772003	930 HARLEYSVILLE PIKE	1	0	TYSON
500003775009	936 HARLEYSVILLE PIKE	1	0	TYSON
500003652006	937 HARLEYSVILLE PIKE	1	0	TYSON
500003655003	941 HARLEYSVILLE PIKE	1	0	TYSON
500003781102	950 HARLEYSVILLE PIKE	5	0	TYSON
500001105249	401 HOFFMAN ROAD	1	0	TYSON
500001105058	402 HOFFMAN ROAD	1	0	TYSON
500001105231	403 HOFFMAN ROAD	1	0	TYSON
500000105067	404 HOFFMAN ROAD	1	0	TYSON
500001105222	405 HOFFMAN ROAD	1	0	TYSON
500000105076	406 HOFFMAN ROAD	1	0	TYSON
500003669061	407 HOFFMAN ROAD	1	0	TYSON
500000105085	408 HOFFMAN ROAD	1	0	TYSON
500000105213	409 HOFFMAN ROAD	1	0	TYSON
500000105094	410 HOFFMAN ROAD	1	0	TYSON
500000105204	411 HOFFMAN ROAD	1	0	TYSON
500000105103	412 HOFFMAN ROAD	1	0	TYSON
500000105194	413 HOFFMAN ROAD	1	0	TYSON
500000105112	414 HOFFMAN ROAD	1	0	TYSON
500000105186	415 HOFFMAN ROAD	1	0	TYSON
500000105121	416 HOFFMAN ROAD	1	0	TYSON
500001105177	417 HOFFMAN ROAD	1	0	TYSON
500000105139	418 HOFFMAN ROAD	1	0	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500001105168	419 HOFFMAN ROAD	1	0	TYSON
500000105148	420 HOFFMAN ROAD	1	0	TYSON
500001105159	421 HOFFMAN ROAD	1	0	TYSON
500000105157	422 HOFFMAN ROAD	1	0	TYSON
500001105141	423 HOFFMAN ROAD	1	0	TYSON
500000105166	424 HOFFMAN ROAD	1	0	TYSON
500001105132	425 HOFFMAN ROAD	1	0	TYSON
500000105175	426 HOFFMAN ROAD	1	0	TYSON
500001105123	427 HOFFMAN ROAD	1	0	TYSON
500000105184	428 HOFFMAN ROAD	1	0	TYSON
500001105114	429 HOFFMAN ROAD	1	0	TYSON
500001105105	431 HOFFMAN ROAD	1	0	TYSON
500001105033	432 HOFFMAN ROAD	1	0	TYSON
500001105096	433 HOFFMAN ROAD	1	0	TYSON
500001105042	434 HOFFMAN ROAD	1	0	TYSON
500001105087	435 HOFFMAN ROAD	1	0	TYSON
500001105051	436 HOFFMAN ROAD	1	0	TYSON
500001105078	437 HOFFMAN ROAD	1	0	TYSON
500001105069	438 HOFFMAN ROAD	1	0	TYSON
500001099201	495 HOFFMAN ROAD	1	0	TYSON
500001095502	496 HOFFMAN ROAD	1	0	TYSON
500001095529	510 HOFFMAN ROAD	1	0	TYSON
500001095538	514 HOFFMAN ROAD	1	0	TYSON
500001095547	520 HOFFMAN ROAD	1	0	TYSON
500001102009	535 HOFFMAN ROAD	1	0	TYSON
500001102504	547 HOFFMAN ROAD	1	0	TYSON
500001105015	561 HOFFMAN ROAD	1	0	TYSON
500001141006	995 HUDNUT RD	1	0	TYSON
500001249006	973 HUDNUT ROAD	1	0	TYSON
500001249015	977 HUDNUT ROAD	1	0	TYSON
500001249024	981 HUDNUT ROAD	1	0	TYSON
500001249033	985 HUDNUT ROAD	1	0	TYSON
500001305013	300 KINSEY ROAD	1	0	TYSON
500001657003	860 LUCON ROAD	1	0	TYSON
500001660009	866 LUCON ROAD	1	0	TYSON
500001663006	872 LUCON ROAD	1	0	TYSON
500001666003	878 LUCON ROAD	1	0	TYSON
500001669009	910 LUCON ROAD	1	0	TYSON
500001672006	918 LUCON ROAD	1	0	TYSON
500001633009	925 LUCON ROAD	1	0	TYSON
500001675003	926 LUCON ROAD	1	0	TYSON
500001675012	930 LUCON ROAD	1	0	TYSON
500001636006	931 LUCON ROAD	1	0	TYSON
500001639003	937 LUCON ROAD	1	0	TYSON
500001642009	943 LUCON ROAD	1	0	TYSON
500001645006	949 LUCON ROAD	1	0	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500001648003	955 LUCON ROAD	1	0	TYSON
500001651009	965 LUCON ROAD	1	0	TYSON
500001654006	991 LUCON ROAD	1	0	TYSON
	MAINTENANCE BUILDING	2	0	TYSON
500003678016	923 MASTERS WAY	1	0	TYSON
500003678007	924 MASTERS WAY	1	0	TYSON
500003678358	925 MASTERS WAY	1	0	TYSON
500003678025	926 MASTERS WAY	1	0	TYSON
500003678349	927 MASTERS WAY	1	0	TYSON
500003678034	928 MASTERS WAY	1	0	TYSON
500003678043	930 MASTERS WAY	1	0	TYSON
500003678052	932 MASTERS WAY	1	0	TYSON
500003678061	934 MASTERS WAY	1	0	TYSON
500003678321	935 MASTERS WAY	1	0	TYSON
500003678079	936 MASTERS WAY	1	0	TYSON
500003678322	937 MASTERS WAY	1	0	TYSON
500003678088	938 MASTERS WAY	1	0	TYSON
500003678313	939 MASTERS WAY	1	0	TYSON
500003678097	940 MASTERS WAY	1	0	TYSON
500003678304	941 MASTERS WAY	1	0	TYSON
500003678106	942 MASTERS WAY	1	0	TYSON
500003678295	943 MASTERS WAY	1	0	TYSON
500003678286	945 MASTERS WAY	1	0	TYSON
500003678115	946 MASTERS WAY	1	0	TYSON
500003678277	947 MASTERS WAY	1	0	TYSON
500003678124	948 MASTERS WAY	1	0	TYSON
500003678268	949 MASTERS WAY	1	0	TYSON
500003678133	950 MASTERS WAY	1	0	TYSON
500003678259	951 MASTERS WAY	1	0	TYSON
500003678241	953 MASTERS WAY	1	0	TYSON
500003678142	954 MASTERS WAY	1	0	TYSON
500003678232	955 MASTERS WAY	1	0	TYSON
500003678151	956 MASTERS WAY	1	0	TYSON
500003678223	957 MASTERS WAY	1	0	TYSON
500003678169	958 MASTERS WAY	1	0	TYSON
500003678214	959 MASTERS WAY	1	0	TYSON
500003678178	960 MASTERS WAY	1	0	TYSON
500003678205	961 MASTERS WAY	1	0	TYSON
500005695001	962 MASTERS WAY	1	0	TYSON
500003678196	963 MASTERS WAY	1	0	TYSON
500005695127	964 MASTERS WAY	1	0	TYSON
500003678187	966 MASTERS WAY	1	0	TYSON
500003669025	765 MATCH CIRCLE	1	0	TYSON
500003669034	770 MATCH CIRCLE	1	0	TYSON
500003669016	775 MATCH CIRCLE	1	0	TYSON
500003669043	780 MATCH CIRCLE	1	0	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500003669007	785 MATCH CIRCLE	1	0	TYSON
500003669052	790 MATCH CIRCLE	1	0	TYSON
500004385011	884 PAR CIRCLE	1	0	TYSON
500004385047	885 PAR CIRCLE	1	0	TYSON
500004385029	888 PAR CIRCLE	1	0	TYSON
500004385038	889 PAR CIRCLE	1	0	TYSON
500004385206	920 PUTTING GREEN CIRCLE	1	0	TYSON
500004592047	921 PUTTING GREEN CIRCLE	1	0	TYSON
500004592002	924 PUTTING GREEN CIRCLE	1	0	TYSON
500004592038	925 PUTTING GREEN CIRCLE	1	0	TYSON
500004592011	928 PUTTING GREEN CIRCLE	1	0	TYSON
500004592029	929 PUTTING GREEN CIRCLE	1	0	TYSON
500004215028	875 SAND TRAP CIRCLE	1	0	TYSON
500004215019	879 SAND TRAP CIRCLE	1	0	TYSON
500004215037	880 SAND TRAP CIRCLE	1	0	TYSON
500004082647	730 SHARON LANE	1	0	TYSON
500004082656	740 SHARON LANE	1	0	TYSON
500004082602	741 SHARON LANE	1	0	TYSON
500004082665	750 SHARON LANE	1	0	TYSON
500004082593	751 SHARON LANE	1	0	TYSON
500004082674	760 SHARON LANE	1	0	TYSON
500004082584	761 SHARON LANE	1	0	TYSON
500004082575	771 SHARON LANE	1	0	TYSON
500004082683	774 SHARON LANE	1	0	TYSON
500004082566	781 SHARON LANE	1	0	TYSON
500004082692	784 SHARON LANE	1	0	TYSON
500004082557	791 SHARON LANE	1	0	TYSON
500004082719	794 SHARON LANE	1	0	TYSON
500004082503	797 SHARON LANE	1	0	TYSON
500004082728	798 SHARON LANE	1	0	TYSON
500005407006	430 TOURNAMENT CIRCLE	1	0	TYSON
500005407087	431 TOURNAMENT CIRCLE	1	0	TYSON
500005407015	432 TOURNAMENT CIRCLE	1	0	TYSON
500005407078	433 TOURNAMENT CIRCLE	1	0	TYSON
500005407024	434 TOURNAMENT CIRCLE	1	0	TYSON
500005407069	435 TOURNAMENT CIRCLE	1	0	TYSON
500005407033	436 TOURNAMENT CIRCLE	1	0	TYSON
500005407051	437 TOURNAMENT CIRCLE	1	0	TYSON
500005407042	438 TOURNAMENT CIRCLE	1	0	TYSON
500000345145	967 TURNBERRY CIRCLE	1	0	TYSON
500000345136	969 TURNBERRY CIRCLE	1	0	TYSON
500000345154	970 TURNBERRY CIRCLE	1	0	TYSON
500000345127	971 TURNBERRY CIRCLE	1	0	TYSON
500000345208	972 TURNBERRY CIRCLE	1	0	TYSON
500000345118	973 TURNBERRY CIRCLE	1	0	TYSON
500000345109	975 TURNBERRY CIRCLE	1	0	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500000345199	976 TURNBERRY CIRCLE	1	0	TYSON
500000345091	977 TURNBERRY CIRCLE	1	0	TYSON
500000345082	979 TURNBERRY CIRCLE	1	0	TYSON
500000345073	981 TURNBERRY CIRCLE	1	0	TYSON
500000345181	982 TURNBERRY CIRCLE	1	0	TYSON
500000345064	983 TURNBERRY CIRCLE	1	0	TYSON
500000345055	985 TURNBERRY CIRCLE	1	0	TYSON
500000345172	986 TURNBERRY CIRCLE	1	0	TYSON
500000345046	987 TURNBERRY CIRCLE	1	0	TYSON
500000345037	989 TURNBERRY CIRCLE	1	0	TYSON
500000345163	990 TURNBERRY CIRCLE	1	0	TYSON
500000345028	991 TURNBERRY CIRCLE	1	0	TYSON
500000345019	993 TURNBERRY CIRCLE	1	0	TYSON
500000345001	995 TURNBERRY CIRCLE	1	0	TYSON
500004426006	315 TYSON ROAD	1	0	TYSON
500001087006	320 TYSON ROAD	1	0	TYSON
500004463041	350 TYSON ROAD	1	0	TYSON
500004463032	370 TYSON ROAD	1	0	TYSON
500004463023	390 TYSON ROAD	1	0	TYSON
500004463014	400 TYSON ROAD	1	0	TYSON
500004463005	404 TYSON ROAD	1	0	TYSON
500004432009	407 TYSON ROAD	1	0	TYSON
500004444006	414 TYSON ROAD	1	0	TYSON
500004583443	325 WIDLUND DRIVE	1	0	TYSON
500004583407	326 WIDLUND DRIVE	1	0	TYSON
500004583425	336 WIDLUND DRIVE	1	0	TYSON
500005695073	500 WINTER GREEN CIRCLE	1	0	TYSON
500005695064	501 WINTER GREEN CIRCLE	1	0	TYSON
500005695055	503 WINTER GREEN CIRCLE	1	0	TYSON
500005695082	504 WINTER GREEN CIRCLE	1	0	TYSON
500005695046	507 WINTER GREEN CIRCLE	1	0	TYSON
500005695091	508 WINTER GREEN CIRCLE	1	0	TYSON
500005695037	511 WINTER GREEN CIRCLE	1	0	TYSON
500005695109	512 WINTER GREEN CIRCLE	1	0	TYSON
500005695028	515 WINTER GREEN CIRCLE	1	0	TYSON
500005695118	516 WINTER GREEN CIRCLE	1	0	TYSON
500005695019	519 WINTER GREEN CIRCLE	1	0	TYSON
500000472009	889 CRESSMAN ROAD	0	1	TYSON
500000511132	900 CRESSMAN ROAD	0	1	TYSON
500000511231	904 CRESSMAN ROAD	0	1	TYSON
500000478003	905 CRESSMAN ROAD	0	1	TYSON
500000481009	911 CRESSMAN ROAD	0	1	TYSON
500000490009	947 CRESSMAN ROAD	0	1	TYSON
500003625006	729 HARLEYSVILLE PIKE	0	4	TYSON
500004082611	743 HARLEYSVILLE PIKE	0	2	TYSON
500003727003	752 HARLEYSVILLE PIKE	0	1	TYSON

Parcel Number	Address	Existing EDUs	Future Additional EDUs	PUMP STATION AREA
500003730603	760 HARLEYSVILLE PIKE	0	1	TYSON
500003640009	865 HARLEYSVILLE PIKE	0	1	TYSON
500003751006	870 HARLEYSVILLE PIKE	0	1	TYSON
500003644005	881 HARLEYSVILLE PIKE	0	1	TYSON
500003645004	887 HARLEYSVILLE PIKE	0	1	TYSON
500003646003	891 HARLEYSVILLE PIKE	0	1	TYSON
500003766009	916 HARLEYSVILLE PIKE	0	1	TYSON
500003649009	931 HARLEYSVILLE PIKE	0	4	TYSON
500001093009	440 HOFFMAN ROAD	0	8	TYSON
500001095007	450 HOFFMAN ROAD	0	1	TYSON
500001095511	500 HOFFMAN ROAD	0	1	TYSON
500001095565	530 HOFFMAN ROAD	0	1	TYSON
500001101001	541 HOFFMAN ROAD	0	1	TYSON
500001105006	555 HOFFMAN ROAD	0	1	TYSON
500001095601	LO1 HOFFMAN ROAD	0	1	TYSON
500001099012	LO1 HOFFMAN ROAD	0	3	TYSON
500001144003	980 HUDNUT ROAD	0	1	TYSON
500001305004	308 KINSEY ROAD(LOT)	0	1	TYSON
500001609006	778 LEDERACH CROSS ROAD	0	1	TYSON
500001612003	814 LEDERACH CROSS ROAD	0	2	TYSON
500003730558	690 SHARON LANE	0	1	TYSON
500003730504	691 SHARON LANE	0	1	TYSON
500004082638	720 SHARON LANE	0	1	TYSON
500003628201	721 SHARON LANE	0	1	TYSON
500004429003	325 TYSON RD	0	1	TYSON
500004441009	408 TYSON ROAD	0	0	TYSON
500004447003	430 TYSON ROAD	0	1	TYSON
500004435006	445 TYSON ROAD	0	6	TYSON
500004450009	446 TYSON ROAD	0	1	TYSON
500004453006	452 TYSON ROAD	0	1	TYSON
500004456003	478 TYSON ROAD	0	1	TYSON
500004459009	494 TYSON ROAD	0	1	TYSON
500004583461	331 WIDLUND DRIVE	0	1	TYSON
500004583488	335 WIDLUND DRIVE	0	1	TYSON
500003739009	862 HARLEYSVILLE PIKE	1	3	TYSON

Appendix H

Pennsylvania National Diversity Inventory (PNDI) Search Results

1. PROJECT INFORMATION

Project Name: **Mainland Ridge Pump Station New Gravity Line**

Date of Review: **10/25/2023 07:34:46 AM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewer line (new - construction in new location)**

Project Area: **2.12 acres**

County(s): **Montgomery**

Township/Municipality(s): **LOWER SALFORD TOWNSHIP**

ZIP Code:

Quadrangle Name(s): **PERKIOMENVILLE**

Watersheds HUC 8: **Schuylkill**

Watersheds HUC 12: **Skippack Creek**

Decimal Degrees: **40.259697, -75.376120**

Degrees Minutes Seconds: **40° 15' 34.9102" N, 75° 22' 34.314" W**



2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

Mainland Ridge Pump Station New Gravity Line

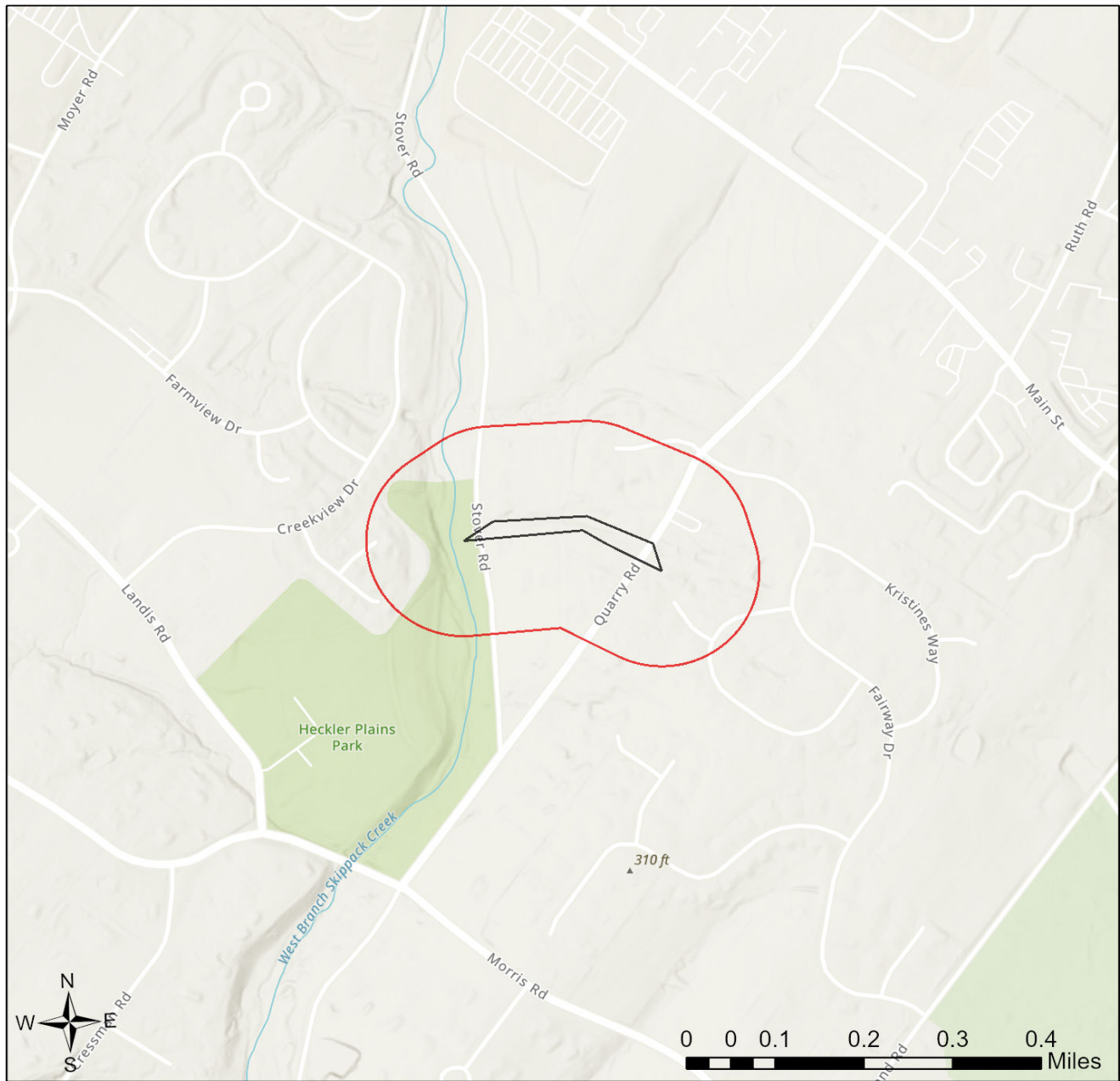




-  Buffered Project Boundary
-  Project Boundary



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

Mainland Ridge Pump Station New Gravity Line



-  Buffered Project Boundary
-  Project Boundary



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

3. AGENCY COMMENTS

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

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

PA Game Commission

RESPONSE:

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

PA Department of Conservation and Natural Resources

RESPONSE:

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

PA Fish and Boat Commission

RESPONSE:

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

U.S. Fish and Wildlife Service

RESPONSE:

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

4. DEP INFORMATION

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

5. ADDITIONAL INFORMATION

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

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

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

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

PA Fish and Boat Commission

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

U.S. Fish and Wildlife Service

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

PA Game Commission

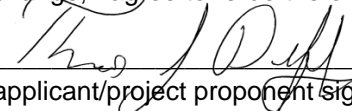
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Thomas J Duffy
Company/Business Name: Gilmore & Associates, Inc.
Address: 5100 W. Tilghman St. Suite 150
City, State, Zip: Allentown, PA 18104
Phone: (610) 366-8064 Fax: (610) 366-0433
Email: tduffy@gilmore-assoc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.


applicant/project proponent signature

10 - 26 - 2023

date

1. PROJECT INFORMATION

Project Name: **New Quarry Rd Forcemain**

Date of Review: **10/25/2023 07:29:25 AM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewer line (new - construction in new location)**

Project Area: **8.16 acres**

County(s): **Montgomery**

Township/Municipality(s): **LOWER SALFORD TOWNSHIP**

ZIP Code:

Quadrangle Name(s): **PERKIOMENVILLE; TELFORD**

Watersheds HUC 8: **Schuylkill**

Watersheds HUC 12: **Skippack Creek**

Decimal Degrees: **40.259510, -75.375363**

Degrees Minutes Seconds: **40° 15' 34.2374" N, 75° 22' 31.3064" W**



2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

New Quarry Rd Forcemain

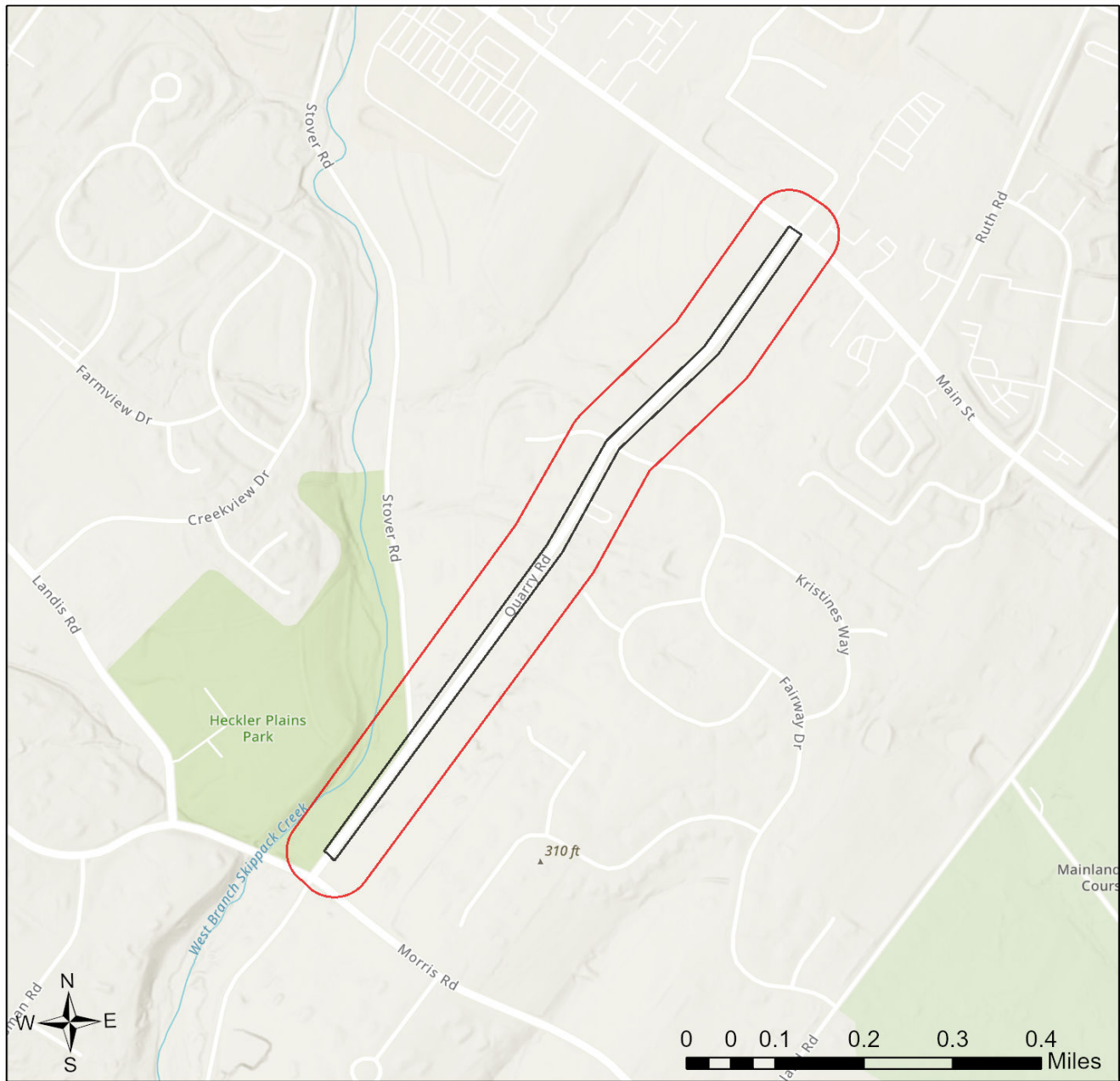




-  Buffered Project Boundary
-  Project Boundary



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

New Quarry Rd Forcemain



-  Buffered Project Boundary
-  Project Boundary



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

3. AGENCY COMMENTS

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

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PA Game Commission

RESPONSE:

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

PA Department of Conservation and Natural Resources

RESPONSE:

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

PA Fish and Boat Commission

RESPONSE:

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

U.S. Fish and Wildlife Service

RESPONSE:

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

4. DEP INFORMATION

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

5. ADDITIONAL INFORMATION

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

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

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

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

PA Fish and Boat Commission

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

U.S. Fish and Wildlife Service

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

PA Game Commission

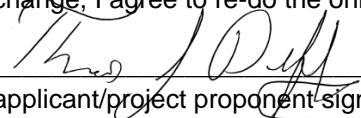
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Thomas J Duffy
Company/Business Name: Gilmore & Associates, Inc.
Address: 5100 W. Tilghman St. Suite 150
City, State, Zip: Allentown, PA 18104
Phone: (610) 366-8064 Fax: (610) 366-0433
Email: tduffy@gilmore-assoc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.



applicant/project proponent signature

10 - 26 - 2023

date

1. PROJECT INFORMATION

Project Name: **Oak Ridge Pump Station New Gravity Line**

Date of Review: **10/25/2023 07:32:28 AM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewer line (new - construction in new location)**

Project Area: **0.75 acres**

County(s): **Montgomery**

Township/Municipality(s): **LOWER SALFORD TOWNSHIP**

ZIP Code:

Quadrangle Name(s): **PERKIOMENVILLE**

Watersheds HUC 8: **Schuylkill**

Watersheds HUC 12: **Skippack Creek**

Decimal Degrees: **40.264697, -75.386055**

Degrees Minutes Seconds: **40° 15' 52.9094" N, 75° 23' 9.7966" W**



2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

Oak Ridge Pump Station New Gravity Line

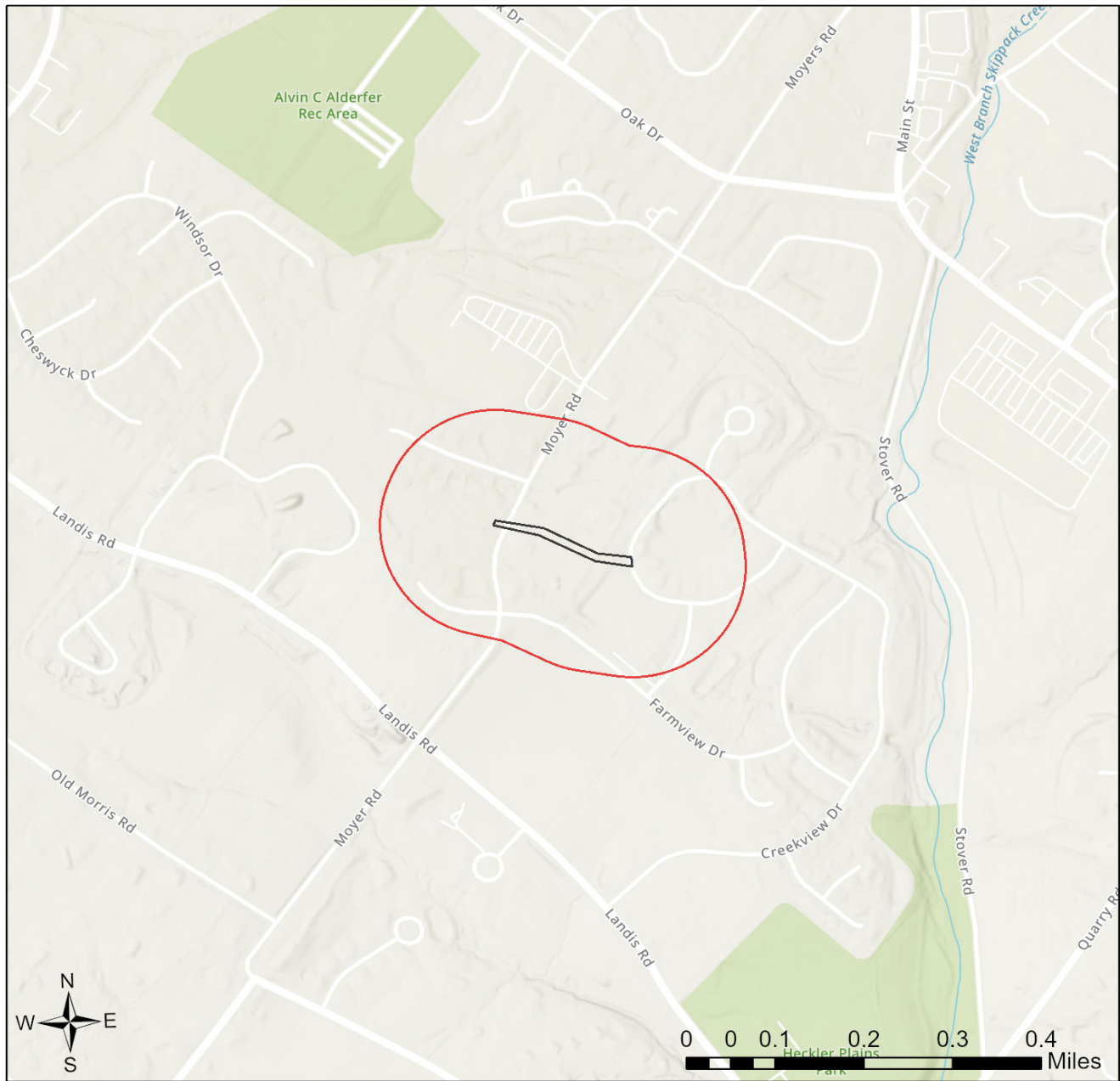




-  Buffered Project Boundary
-  Project Boundary



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

Oak Ridge Pump Station New Gravity Line



-  Buffered Project Boundary
-  Project Boundary



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

3. AGENCY COMMENTS

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

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PA Game Commission

RESPONSE:

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

PA Department of Conservation and Natural Resources

RESPONSE:

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

PA Fish and Boat Commission

RESPONSE:

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

U.S. Fish and Wildlife Service

RESPONSE:

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

4. DEP INFORMATION

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

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

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

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

PA Fish and Boat Commission

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

U.S. Fish and Wildlife Service

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

PA Game Commission

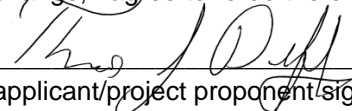
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Thomas J Duffy
Company/Business Name: Gilmore & Associates, Inc.
Address: 5100 W. Tilghman St. Suite 150
City, State, Zip: Allentown, PA 18104
Phone: (610) 366-8064 Fax: (610) 366-0433
Email: tduffy@gilmore-assoc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.


applicant/project proponent signature

10 - 26 - 2023

date

Appendix I

Cultural Resource Notice



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

September 15, 2021

Kevin Beyer
Gilmore & Associates
5100 Tilghman St
Suite 150
Allentown PA 18104000

RE: ER Project # 2021PR05997.001, Quarry Act 537 Plan - Decommission Lederach PS - New Gravity Line - Alternative 1, Department of Environmental Protection, Lower Salford Township, Montgomery County

Dear Kevin Beyer:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources

No Above Ground Concerns - Environmental Review - No Effect - Historic Properties Present - Above Ground

Thank you for submitting information concerning the above-referenced project. The following historic properties, listed in or eligible for the National Register of Historic Places, are located in the project area of potential effect: Lederach Historic District (Resource #1996RE01054). Based on the information received and available in our files, in our opinion, the activity described in your proposal will have no effect on these resources. Should the scope and/or nature of the project activities change and/or should you be made aware of historic property concerns, you will need to notify the PA SHPO at pashare@pa.gov and provide the revised designs for review and comment.

For questions concerning above ground resources, please contact Emma Diehl at emdiehl@pa.gov.

Archaeological Resources

No Archaeological Concerns - Environmental Review - No Effect - Archaeological

Thank you for submitting information concerning the above-referenced project. Based on

the information received and available in our files, in our opinion, the activity described in your proposal should have no effect on archaeological resources. Our analysis indicates that archaeological resources are potentially located in this project area. Should the scope of the project be amended to include additional ground disturbing activity and/or should you be made aware of historic property concerns, you will need to notify the PA SHPO at pashare@pa.gov. A Phase I Archaeological Survey may be necessary to locate all potentially significant archaeological resources.

For questions concerning archaeological resources, please contact Casey Hanson at chanson@pa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Andrea MacDonald". The signature is written in a cursive style with a large initial 'A'.

Andrea MacDonald
Director, State Historic Preservation Office



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

September 15, 2021

Kevin Beyer
Gilmore & Associates
5100 Tilghman St
Suite 150
Allentown PA 18104

RE: ER Project # 2021PR05996.001, Quarry Act 537 Plan - Decommission Oak Ridge PS - New Gravity Line - Alternative 2 , Department of Environmental Protection, Lower Salford Township, Montgomery County

Dear Kevin Beyer:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources

No Above Ground Concerns - Environmental Review - No Historic Properties - Above Ground

Thank you for submitting information concerning the above-referenced project. Based on the information received and available in our files, it is our opinion that there are no above ground historic properties (resources listed in or eligible for listing in the National Register) present in the project area of potential effect. Therefore, no above ground historic properties will be affected by the project as proposed. Should the scope of the project change and/or new information be brought to your attention regarding historic properties located within the project area of potential effect, please notify the PA SHPO at pashare@pa.gov for reconsideration of the project.

For questions concerning above ground resources, please contact Emma Diehl at emdiehl@pa.gov.

Archaeological Resources

No Archaeological Concerns - Environmental Review - No Effect - Archaeological

Thank you for submitting information concerning the above-referenced project. Based on

the information received and available in our files, in our opinion, the activity described in your proposal should have no effect on archaeological resources. Our analysis indicates that archaeological resources are potentially located in this project area. Should the scope of the project be amended to include additional ground disturbing activity and/or should you be made aware of historic property concerns, you will need to notify the PA SHPO at pashare@pa.gov. A Phase I Archaeological Survey may be necessary to locate all potentially significant archaeological resources.

For questions concerning archaeological resources, please contact Casey Hanson at chanson@pa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Andrea MacDonald". The signature is written in a cursive, flowing style.

Andrea MacDonald
Director, State Historic Preservation Office



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

September 15, 2021

Kevin Beyer
Gilmore & Associates
5100 Tilghman St
Suite 150
Allentown PA 18104

RE: ER Project # 2021PR06001.001, Quarry Act 537 Plan - New Quarry Rd Forcemain - Alternative 4, Department of Environmental Protection, Lower Salford Township, Montgomery County

Dear Kevin Beyer:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources

No Above Ground Concerns - Environmental Review - No Historic Properties - Above Ground

Thank you for submitting information concerning the above-referenced project. Based on the information received and available in our files, it is our opinion that there are no above ground historic properties (resources listed in or eligible for listing in the National Register) present in the project area of potential effect. Therefore, no above ground historic properties will be affected by the project as proposed. Should the scope of the project change and/or new information be brought to your attention regarding historic properties located within the project area of potential effect, please notify the PA SHPO at pashare@pa.gov for reconsideration of the project.

For questions concerning above ground resources, please contact Emma Diehl at emdiehl@pa.gov.

Archaeological Resources

No Archaeological Concerns - Environmental Review - No Effect - Archaeological

Thank you for submitting information concerning the above-referenced project. Based on

the information received and available in our files, in our opinion, the activity described in your proposal should have no effect on archaeological resources. Our analysis indicates that archaeological resources are potentially located in this project area. Should the scope of the project be amended to include additional ground disturbing activity and/or should you be made aware of historic property concerns, you will need to notify the PA SHPO at pashare@pa.gov. A Phase I Archaeological Survey may be necessary to locate all potentially significant archaeological resources.

For questions concerning archaeological resources, please contact Casey Hanson at chanson@pa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Andrea MacDonald". The signature is written in a cursive style with a large initial 'A'.

Andrea MacDonald
Director, State Historic Preservation Office



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

September 15, 2021

Kevin Beyer
Gilmore & Associates
5100 Tilghman St
Suite 150
Allentown PA 18104

RE: ER Project # 2021PR06002.001, Quarry Act 537 Plan - Quarry Rd PS sewer line extension - Alternative 5, Department of Environmental Protection, Lower Salford Township, Montgomery County

Dear Kevin Beyer:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources

No Above Ground Concerns - Environmental Review - No Effect - Above Ground

Thank you for submitting information concerning the above-referenced project. There may be above ground historic properties within the project area of potential effect. However, in our opinion the project as proposed will have no effect on historic properties, should they exist. Should the scope of the project change and/or should you be made aware of historic property concerns, you will need to notify the PA SHPO at pashare@pa.gov and provide the revised designs for review and comment.

For questions concerning above ground resources, please contact Emma Diehl at emdiehl@pa.gov.

Archaeological Resources

No Archaeological Concerns - Environmental Review - No Effect - Archaeological

Thank you for submitting information concerning the above-referenced project. Based on the information received and available in our files, in our opinion, the activity described in your proposal should have no effect on archaeological resources. Our analysis indicates that archaeological resources are potentially located in this project area. Should the scope

of the project be amended to include additional ground disturbing activity and/or should you be made aware of historic property concerns, you will need to notify the PA SHPO at pashare@pa.gov. A Phase I Archaeological Survey may be necessary to locate all potentially significant archaeological resources.

For questions concerning archaeological resources, please contact Casey Hanson at chanson@pa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Andrea MacDonald". The signature is written in a cursive style.

Andrea MacDonald
Director, State Historic Preservation Office



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

September 15, 2021

Kevin Beyer
Gilmore & Associates
5100 Tilghman St
Suite 150
Allentown PA 18104

RE: ER Project # 2021PR05995.001, Quarry Act 537 Plan - Decommission Mainland Ridge PS - New Gravity Line - Alternative 3, Department of Environmental Protection, Lower Salford Township, Montgomery County

Dear Kevin Beyer:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources

No Above Ground Concerns - Environmental Review - No Effect - Above Ground

Thank you for submitting information concerning the above-referenced project. There may be above ground historic properties within the project area of potential effect. However, in our opinion the project as proposed will have no effect on historic properties, should they exist. Should the scope of the project change and/or should you be made aware of historic property concerns, you will need to notify the PA SHPO at pashare@pa.gov and provide the revised designs for review and comment.

For questions concerning above ground resources, please contact Emma Diehl at emdiehl@pa.gov.

Archaeological Resources

More Information Requested - Environmental Review - More Info Archaeological - High Prob

Based on an evaluation by our staff, including a review of the Statewide Pre-Contact Predictive Model, there is a high probability that National Register significant archaeological sites are present within this project area. These resources could be adversely affected by

project activities. Our review considers the locations of known archaeological resources, soil type, topographic setting, slope direction and distance to water, among other regionally specific predictive factors for archaeological site locations. It is our opinion that a Phase I archaeological survey should be conducted to locate potentially significant resources. Guidelines and instructions for conducting all phases of archaeological survey in Pennsylvania are available on our website <http://www.phmc.pa.gov/Preservation/About/Documents/SHPO-Guidelines-Archaeological-Investigation.pdf>.

More Information Requested - New Survey

Please use this Request for More Information to enter survey and resource details and upload the survey report. Please submit the requested materials to the PA SHPO through PA-SHARE using the link under SHPO Requests More Information on the Response screen.

For questions concerning archaeological resources, please contact Casey Hanson at chanson@pa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Andrea MacDonald". The signature is written in a cursive style.

Andrea MacDonald
Director, State Historic Preservation Office

A Phase 1 field survey was conducted and it did not reveal any archaeological features. The survey was submitted to SHPO and the following page is their review letter.



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

January 19, 2023

Kevin Beyer
Gilmore & Associates
5100 Tilghman St
Suite 150
Allentown PA 18104

RE: ER Project # 2021PR05995.003, Quarry Act 537 Plan - Decommission Mainland Ridge
PS - New Gravity Line - Alternative 3, Department of Environmental Protection, Lower
Salford Township, Montgomery County

Dear Kevin Beyer:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Archaeological Resources

No Archaeological Concerns - Environmental Review - Negative Survey Report/Negative Survey Form

This report meets our standards and specifications as outlined in Guidelines for Archaeological Investigations in Pennsylvania (SHPO 2021) and the Secretary of the Interior's Guidelines for Archaeological Documentation. We agree with the recommendations of this report, and in our opinion, no further archaeological work is necessary for this project. If project plans should change and/or you should be made aware of historic property concerns, please reinitiate consultation with our office using PA-SHARE.

For questions concerning archaeological resources, please contact Casey Hanson at chanson@pa.gov.

Sincerely,

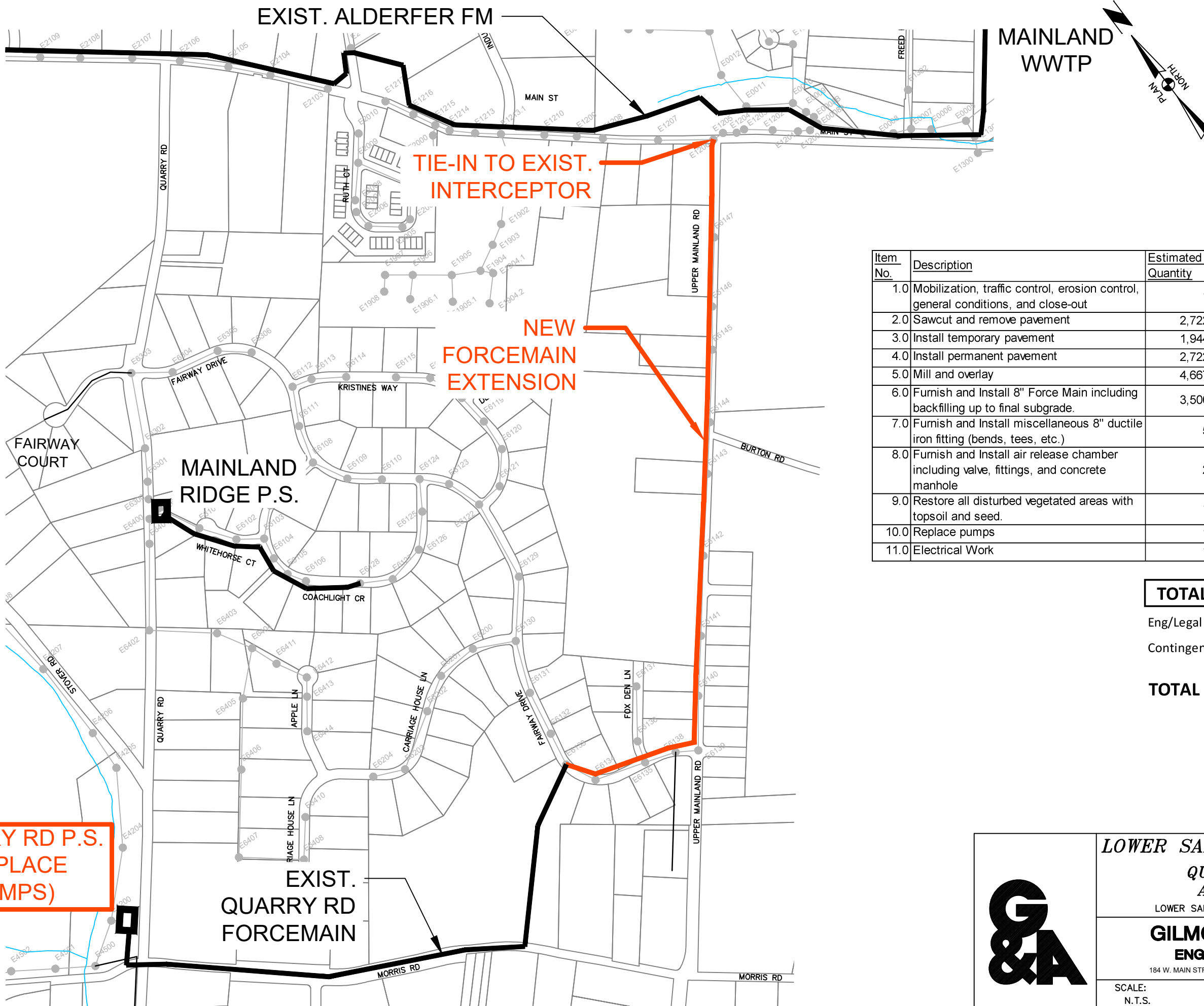
A handwritten signature in black ink that reads 'Emma Diehl'.

Emma Diehl
Environmental Review Division Manager

Appendix J

Project Alternative Maps with Detailed Cost Estimates

- Quarry Road P.S. Upgrade Alternative 1 (Phase 1)
- Quarry Road P.S. Upgrade Alternative 1 (Phase 2)
- Quarry Road P.S. Upgrade Alternative 2 (Phase 1)
- Quarry Road P.S. Upgrade Alternative 2 (Phase 2)
- Mainland Ridge P.S. Decommission Alternative 1
- Mainland Ridge P.S. Decommission Alternative 2
- Lederach P.S. Decommission
- Oak Ridge P.S. Decommission
- OLDS Alternative 1
- OLDS Alternative 2
- OLDS Alternative 3



**QUARRY RD P.S.
(REPLACE PUMPS)**

Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, erosion control, general conditions, and close-out	1	L.S.	\$55,000	\$55,000
2.0	Sawcut and remove pavement	2,722	S.Y.	\$14	\$38,111
3.0	Install temporary pavement	1,944	S.Y.	\$20	\$38,889
4.0	Install permanent pavement	2,722	S.Y.	\$85	\$231,389
5.0	Mill and overlay	4,667	S.Y.	\$22	\$102,667
6.0	Furnish and Install 8" Force Main including backfilling up to final subgrade.	3,500	L.F.	\$140	\$490,000
7.0	Furnish and Install miscellaneous 8" ductile iron fitting (bends, tees, etc.)	5	Ea	\$850	\$4,250
8.0	Furnish and Install air release chamber including valve, fittings, and concrete manhole	2	Ea	\$17,000	\$34,000
9.0	Restore all disturbed vegetated areas with topsoil and seed.	1	L.S.	\$13,000	\$13,000
10.0	Replace pumps	1	L.S.	\$280,000	\$280,000
11.0	Electrical Work	1	L.S.	\$140,000	\$140,000

TOTAL ESTIMATE = \$1,427,306

Eng/Legal (20%) 20% \$ 285,461

Contingency (20%) 20% \$ 285,461

TOTAL PROJECT COST \$ 1,998,228

rounded \$2,000,000

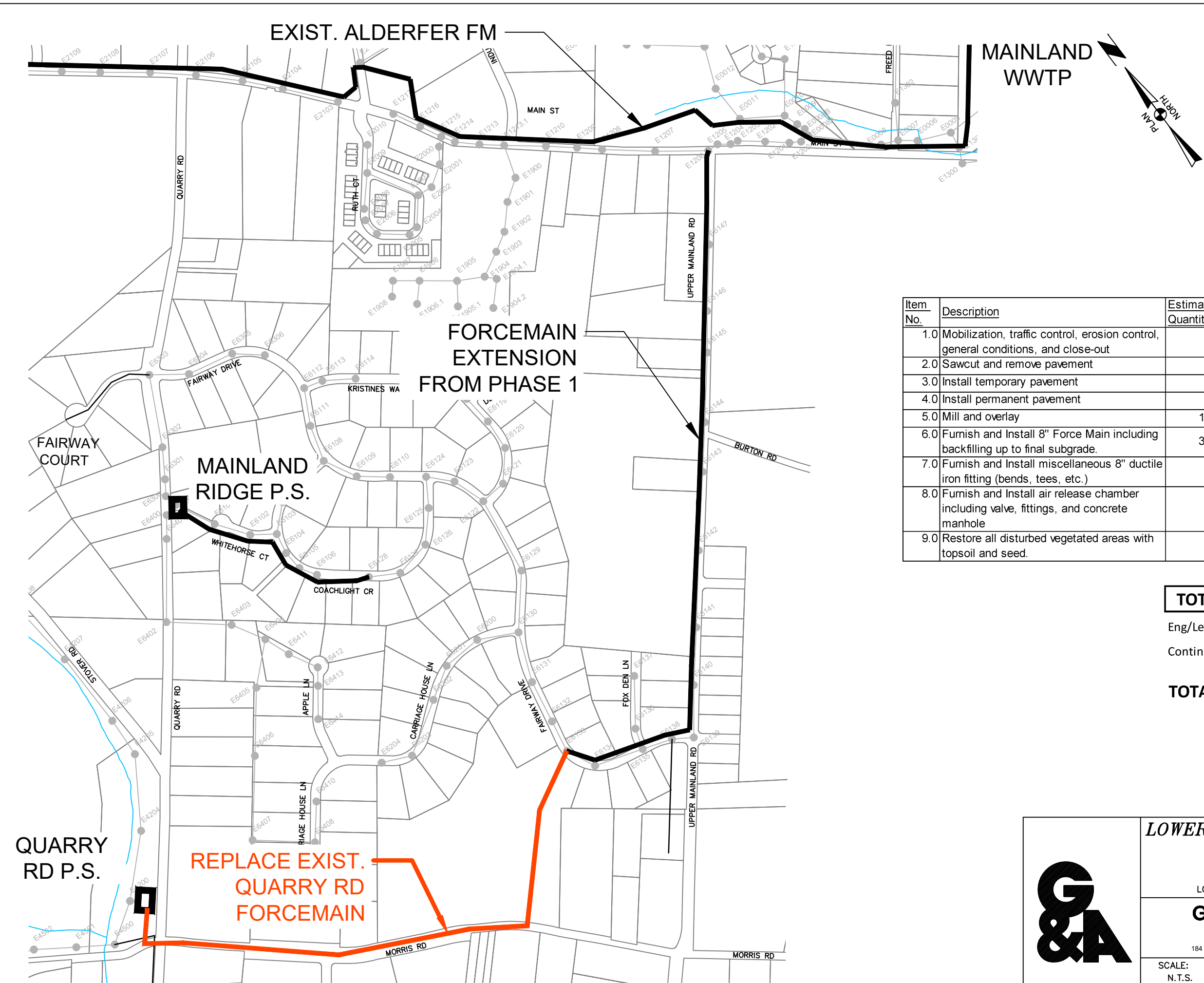


LOWER SALFORD TOWNSHIP AUTHORITY
QUARRY ROAD P.S. UPGRADE
ALTERNATIVE 1 (PHASE 1)
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

184 W. MAIN STREET, SUITE 300 TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

SCALE: N.T.S. DATE: 10/25/2023 DESIGNED BY: TJD JOB NO.: 15-10068T



Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, erosion control, general conditions, and close-out	1	L.S.	\$20,000	\$20,000
2.0	Sawcut and remove pavement	817	S.Y.	\$14	\$11,433
3.0	Install temporary pavement	583	S.Y.	\$20	\$11,667
4.0	Install permanent pavement	817	S.Y.	\$85	\$69,417
5.0	Mill and overlay	1,467	S.Y.	\$22	\$32,267
6.0	Furnish and Install 8" Force Main including backfilling up to final subgrade.	3,200	L.F.	\$140	\$448,000
7.0	Furnish and Install miscellaneous 8" ductile iron fitting (bends, tees, etc.)	5	Ea	\$850	\$4,250
8.0	Furnish and Install air release chamber including valve, fittings, and concrete manhole	2	Ea.	\$17,000	\$34,000
9.0	Restore all disturbed vegetated areas with topsoil and seed.	1	L.S.	\$13,000	\$13,000

TOTAL ESTIMATE = \$644,033

Eng/Legal (20%) 20% \$ **128,807**

Contingency (20%) 20% \$ **128,807**

TOTAL PROJECT COST \$ 901,647

rounded \$ 900,000



LOWER SALFORD TOWNSHIP AUTHORITY

**QUARRY ROAD P.S. UPGRADE
ALTERNATIVE 1 (PHASE 2)**

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

**GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES**

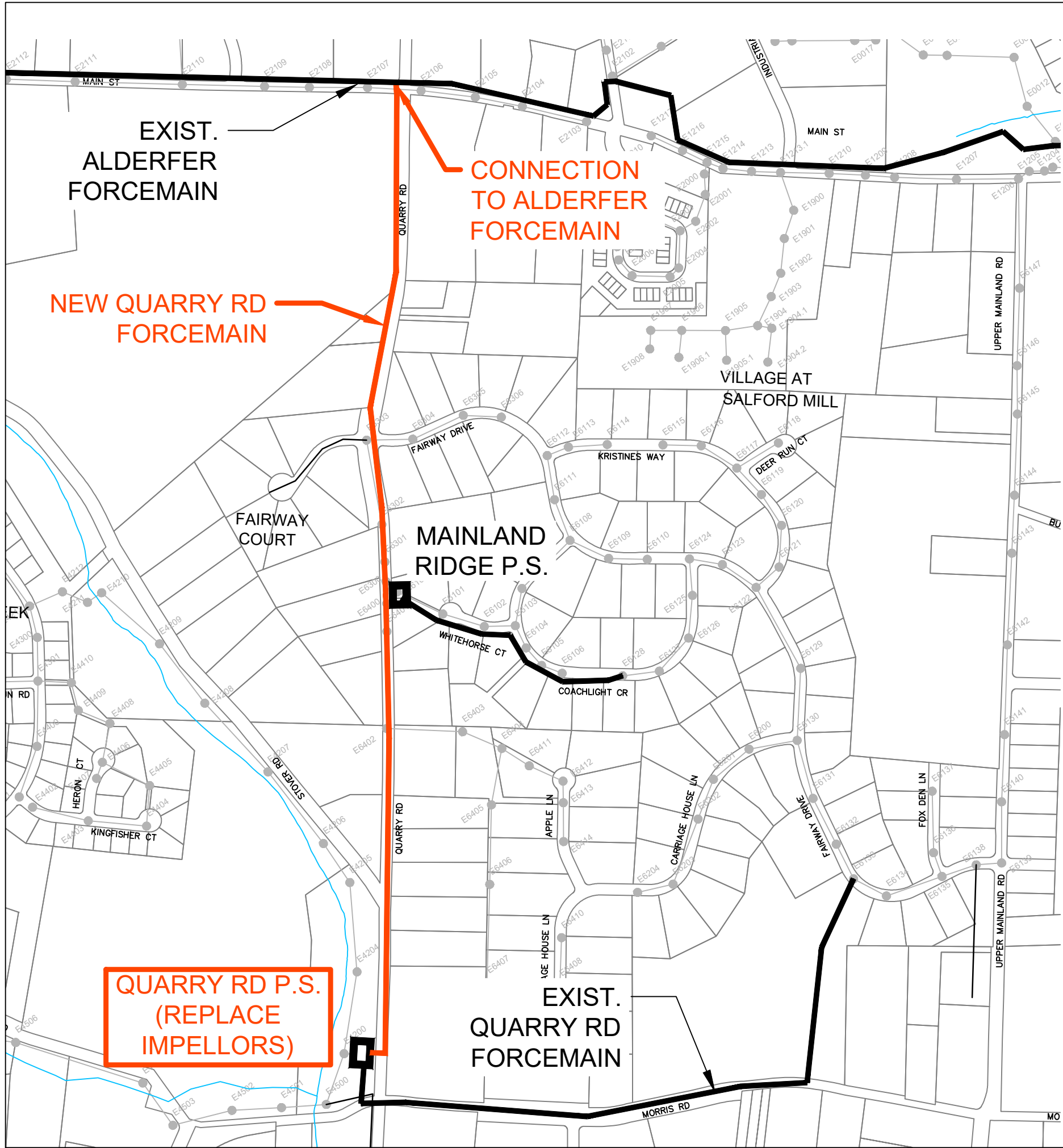
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SCALE:
N.T.S.

DATE:
10/25/2023

DESIGNED BY:
TJD

JOB NO.:
15-10068T



Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, erosion control, general conditions, and close-out	1	L.S.	\$50,000	\$50,000
2.0	Sawcut and remove pavement	3,267	S.Y.	\$14	\$45,733
3.0	Install temporary pavement	2,333	S.Y.	\$20	\$46,667
4.0	Install permanent pavement	3,267	S.Y.	\$85	\$277,667
5.0	Mill and overlay	5,600	S.Y.	\$22	\$123,200
6.0	Furnish and Install 8" Force Main including backfilling up to final subgrade.	4,200	L.F.	\$140	\$588,000
7.0	Furnish and Install miscellaneous 8" ductile iron fitting (bends, tees, etc.)	7	Ea	\$850	\$5,950
8.0	Furnish and Install air release chamber including valve, fittings, and concrete manhole	2	Ea.	\$17,000	\$34,000
9.0	Restore all disturbed vegetated areas with topsoil and seed.	1	L.S.	\$13,000	\$13,000
10.0	Replace Impellers	1	L.S.	\$8,500	\$8,500


TOTAL ESTIMATE = \$1,192,717

Eng/Legal (20%) 20% \$ **238,543**

Contingency (20%) 20% \$ **238,543**

TOTAL PROJECT COST \$ 1,669,803

rounded \$1,700,000



LOWER SALFORD TOWNSHIP AUTHORITY

**QUARRY ROAD P.S. UPGRADE
ALTERNATIVE 2 (PHASE 1)**

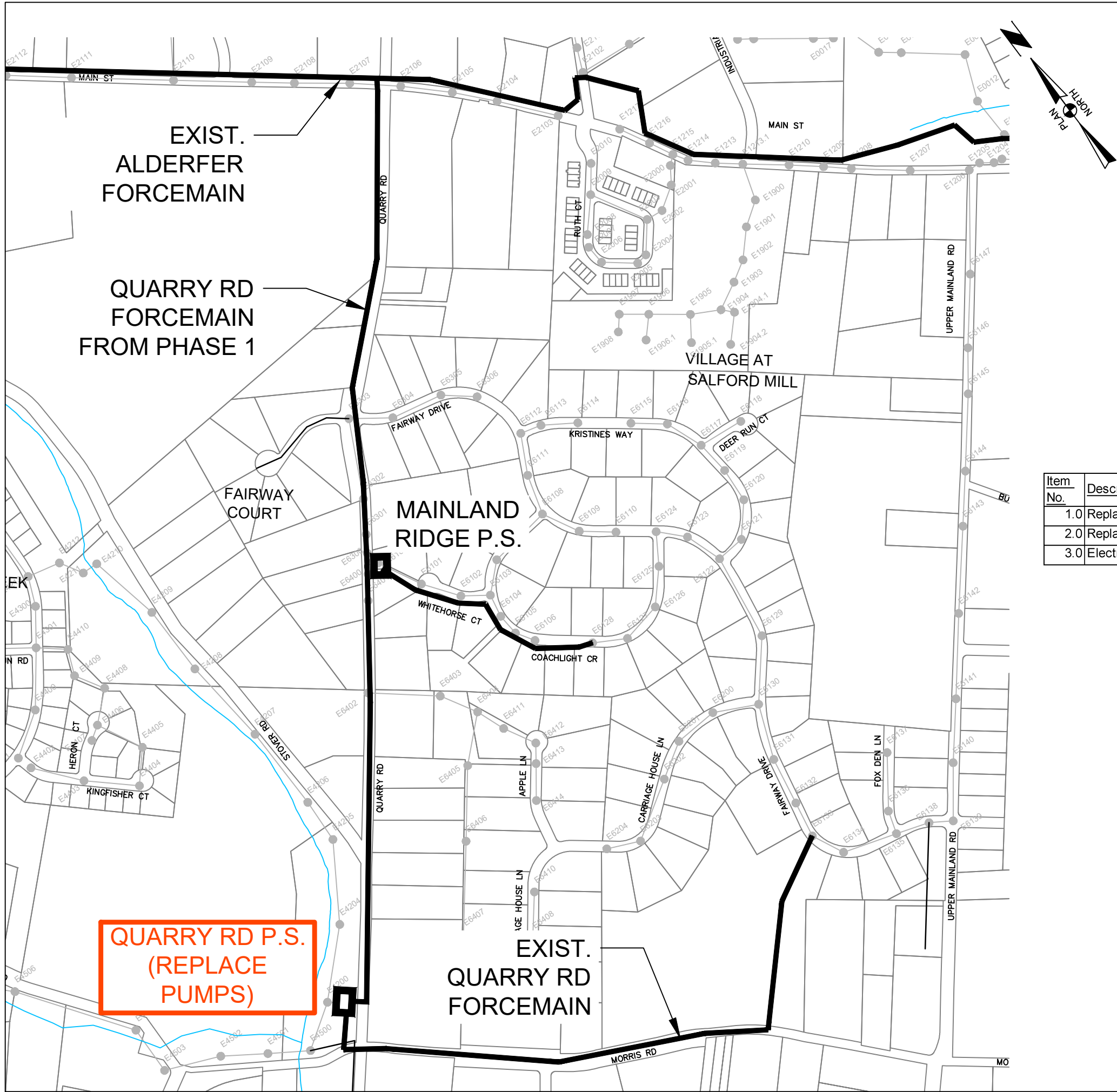
LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.

ENGINEERING & CONSULTING SERVICES

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SCALE: N.T.S.	DATE: 10/25/2023	DESIGNED BY: TJD	JOB NO.: 15-10068T
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Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Replace wetwell	1	L.S.	\$0	\$0
2.0	Replace pumps	1	L.S.	\$280,000	\$280,000
3.0	Electrical Work	1	L.S.	\$140,000	\$140,000

TOTAL ESTIMATE = \$420,000

Eng/Legal (20%) 20% \$ **84,000**

Contingency (20%) 20% \$ **84,000**

TOTAL PROJECT COST \$ 588,000

rounded \$ 600,000

**QUARRY RD P.S.
(REPLACE
PUMPS)**



LOWER SALFORD TOWNSHIP AUTHORITY

**QUARRY ROAD P.S. UPGRADE
ALTERNATIVE 2 (PHASE 2)**

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

**GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES**

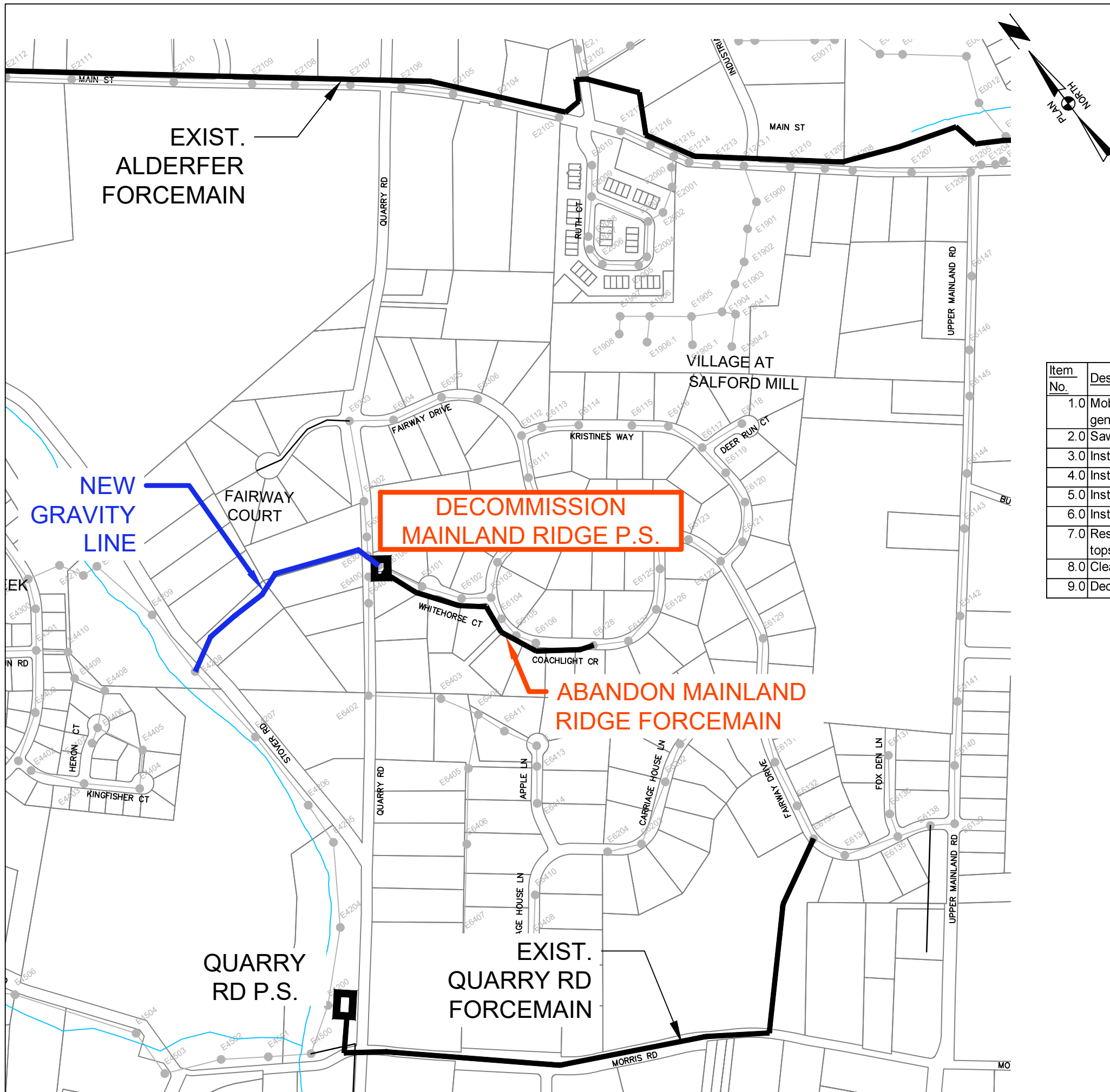
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SCALE:
N.T.S.

DATE:
10/25/2023

DESIGNED BY:
TJD

JOB NO.:
15-10068T



Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, erosion control, general conditions, and close-out	1	L.S.	\$25,000	\$25,000
2.0	Sawcut and remove pavement	19	S.Y.	\$14	\$261
3.0	Install temporary pavement	13	S.Y.	\$20	\$267
4.0	Install permanent pavement	19	S.Y.	\$85	\$1,587
5.0	Install gravity Sewer (5 to 10-ft deep)	1,000	L.F.	\$140	\$140,000
6.0	Install Manholes	5	Ea	\$7,500	\$37,500
7.0	Restore all disturbed vegetated areas with topsoil and seed.	1	L.S.	\$13,000	\$13,000
8.0	Clear Brush / Trees	1	L.S.	\$25,000	\$25,000
9.0	Decommission Pump Station	1	L.S.	\$30,000	\$30,000

TOTAL ESTIMATE = \$272,615

Eng/Legal (20%) 20% \$ **54,523**

Contingency (20%) 20% \$ **54,523**

TOTAL PROJECT COST \$ 381,661

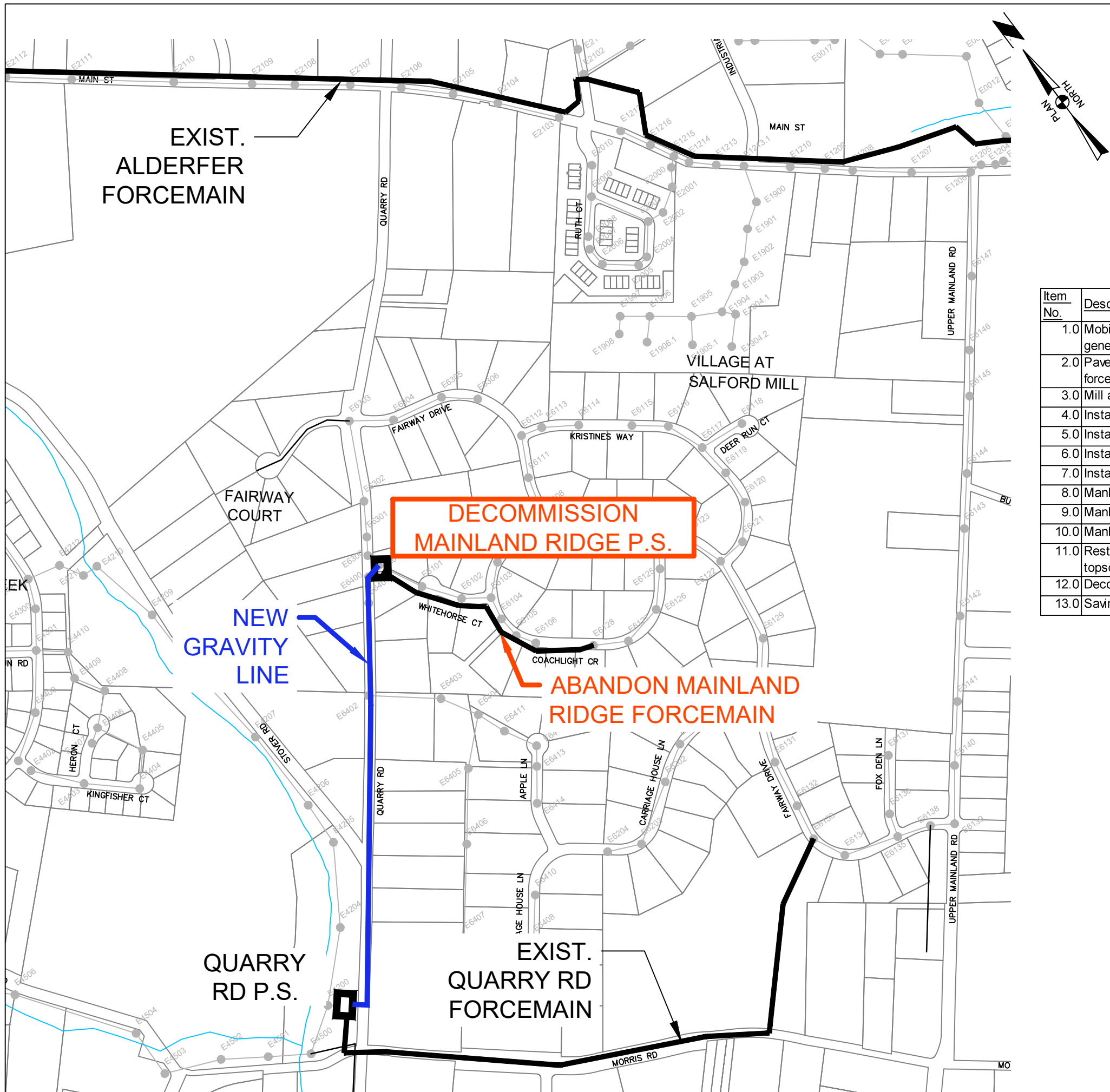
rounded \$ 400,000



LOWER SALFORD TOWNSHIP AUTHORITY
MAINLAND RIDGE P.S. DECOMMISSION
ALTERNATIVE 1
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
 184 W. MAIN STREET, SUITE 300 TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

SCALE: N.T.S.	DATE: 10/25/2023	DESIGNED BY: TJD	JOB NO.: 15-10068T
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Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, erosion control, general conditions, and close-out	1	L.S.	\$20,000	\$20,000
2.0	Pavement replacement (already under forcemain cost)	0	S.Y.	\$0	\$0
3.0	Mill and overlay	2,800	S.Y.	\$22	\$61,600
4.0	Install gravity Sewer (5 to 10-ft deep)	1,400	L.F.	\$140	\$196,000
5.0	Install gravity Sewer (10 to 15-ft deep)	200	L.F.	\$250	\$50,000
6.0	Install gravity Sewer (15 to 20-ft deep)	150	L.F.	\$355	\$53,250
7.0	Install gravity Sewer (20 to 22-ft deep)	350	L.F.	\$430	\$150,500
8.0	Manhole (up to 10-ft)	5	Ea	\$7,500	\$37,500
9.0	Manhole (10 to 15-ft)	3	Ea	\$14,000	\$42,000
10.0	Manhole (15 to 20-ft)	2	Ea	\$22,000	\$44,000
11.0	Restore all disturbed vegetated areas with topsoil and seed.	1	L.S.	\$13,000	\$13,000
12.0	Decommission of Pump Station	1	L.S.	\$30,000	\$30,000
13.0	Savings in FM Installation	2100	L.F.	-\$70	-\$147,000

TOTAL ESTIMATE = \$550,850

Eng/Legal (20%) 20% \$ 110,170

Contingency (20%) 20% \$ 110,170

TOTAL PROJECT COST \$ 771,190

rounded \$ 800,000

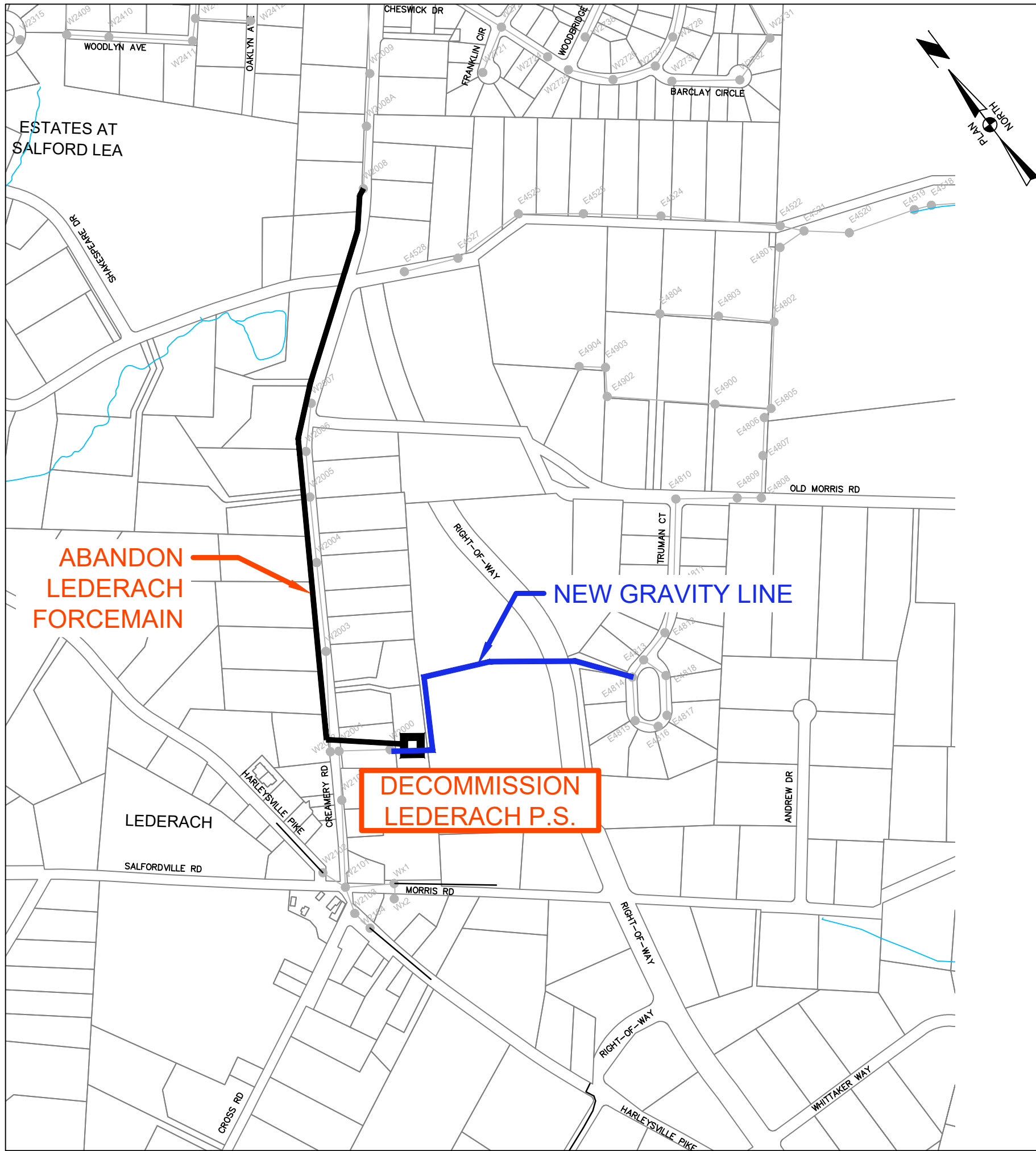


LOWER SALFORD TOWNSHIP AUTHORITY
MAINLAND RIDGE P.S. DECOMMISSION
ALTERNATIVE 2
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

184 W. MAIN STREET, SUITE 300 TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

SCALE: N.T.S.	DATE: 10/25/2023	DESIGNED BY: TJD	JOB NO.: 15-10068T
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Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, etc.	1	L. S.	\$30,000.00	\$30,000
2.0	Sawcut and remove asphalt walkway	5,650	S.F.	\$3.25	\$18,363
3.0	Sawcut and remove asphalt pavement	200	S.F.	\$3.25	\$650
4.0	Sawcut and remove concrete curb	40	L.F.	\$12.00	\$480
5.0	Sawcut and remove concrete sidewalk	100	S.F.	\$3.00	\$300
6.0	Asphalt walkway	5,000	S.F.	\$6.00	\$30,000
7.0	Asphalt Pavement	200	S.F.	\$9.75	\$1,950
8.0	Concrete Curb	40	L.F.	\$69.00	\$2,760
9.0	Concrete Sidewalk	100	S.F.	\$25.00	\$2,500
10.0	Sanitary Manhole (15 to 20-ft deep)	4	Ea.	\$22,000.00	\$88,000
11.0	Sanitary Manhole (20 to 23-ft deep)	1	Ea.	\$26,000.00	\$26,000
12.0	8" Gravity Sewer Pipe (15 to 20-ft)	783	L.F.	\$355.00	\$277,965
13.0	8" Gravity Sewer Pipe (20 to 23-ft)	450	L.F.	\$430.00	\$193,500
14.0	Decommission pump station and restore site	1	L. S.	\$30,000.00	\$30,000
15.0	Core Drill	2	Ea.	\$2,600.00	\$5,200
16.0	Restore Site and seed	1	L. S.	\$13,000.00	\$13,000

TOTAL ESTIMATE = \$720,668

Eng/Legal (20%) 20% \$ **144,134**

Contingency (20%) 20% \$ **144,134**

TOTAL PROJECT COST \$ 1,008,935

rounded \$1,000,000

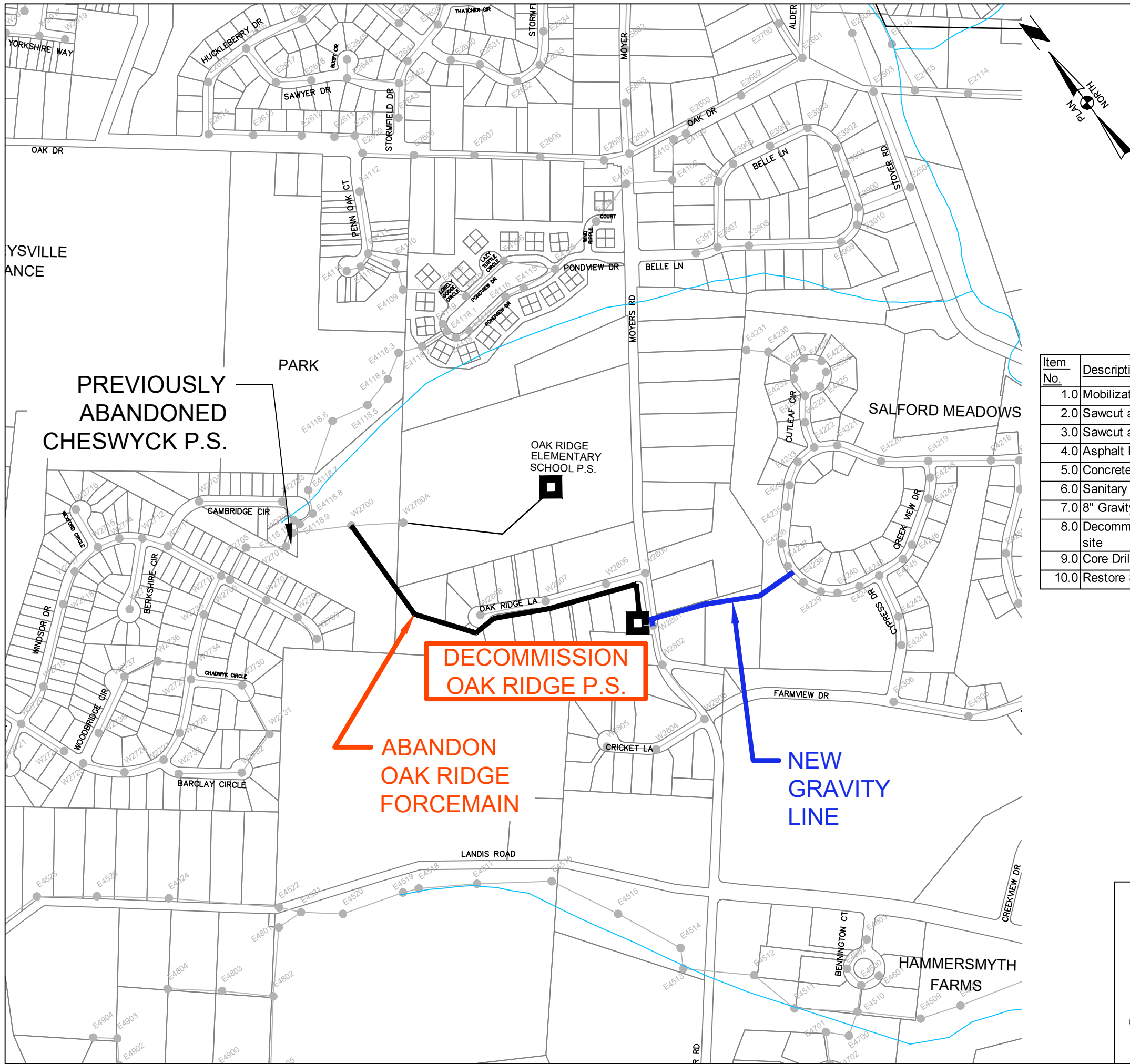


LOWER SALFORD TOWNSHIP AUTHORITY
LEDERACH PUMP STATION
DECOMMISSION
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

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SCALE: N.T.S.	DATE: 10/25/2023	DESIGNED BY: TJD	JOB NO.: 15-10068T
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PREVIOUSLY
ABANDONED
CHESWYCK P.S.

**DECOMMISSION
OAK RIDGE P.S.**

**ABANDON
OAK RIDGE
FORCEMAIN**

**NEW
GRAVITY
LINE**

Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, etc.	1	L.S.	\$20,000.00	\$20,000
2.0	Sawcut and remove asphalt pavement	350	S.F.	\$3.25	\$1,138
3.0	Sawcut and remove concrete curb	20	L.F.	\$12.00	\$240
4.0	Asphalt Pavement	350	S.F.	\$9.75	\$3,413
5.0	Concrete Curb	20	L.F.	\$69.00	\$1,380
6.0	Sanitary Manhole	3	Ea.	\$7,500.00	\$22,500
7.0	8" Gravity Sewer Pipe	800	L.F.	\$140.00	\$112,000
8.0	Decommission pump station and restore site	1	L.S.	\$13,000.00	\$13,000
9.0	Core Drill	2	Ea.	\$2,600.00	\$5,200
10.0	Restore Site and seed	1	L.S.	\$13,000.00	\$13,000

TOTAL ESTIMATE = \$191,870

Eng/Legal (20%) 20% \$ **38,374**
 Contingency (20%) 20% \$ **38,374**

TOTAL PROJECT COST \$ 268,618

rounded \$ 275,000



LOWER SALFORD TOWNSHIP AUTHORITY

**OAK RIDGE PUMP STATION
DECOMMISSION**

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

**GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES**

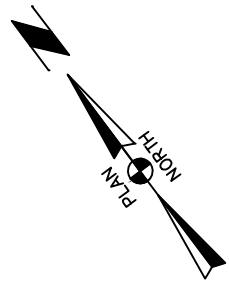
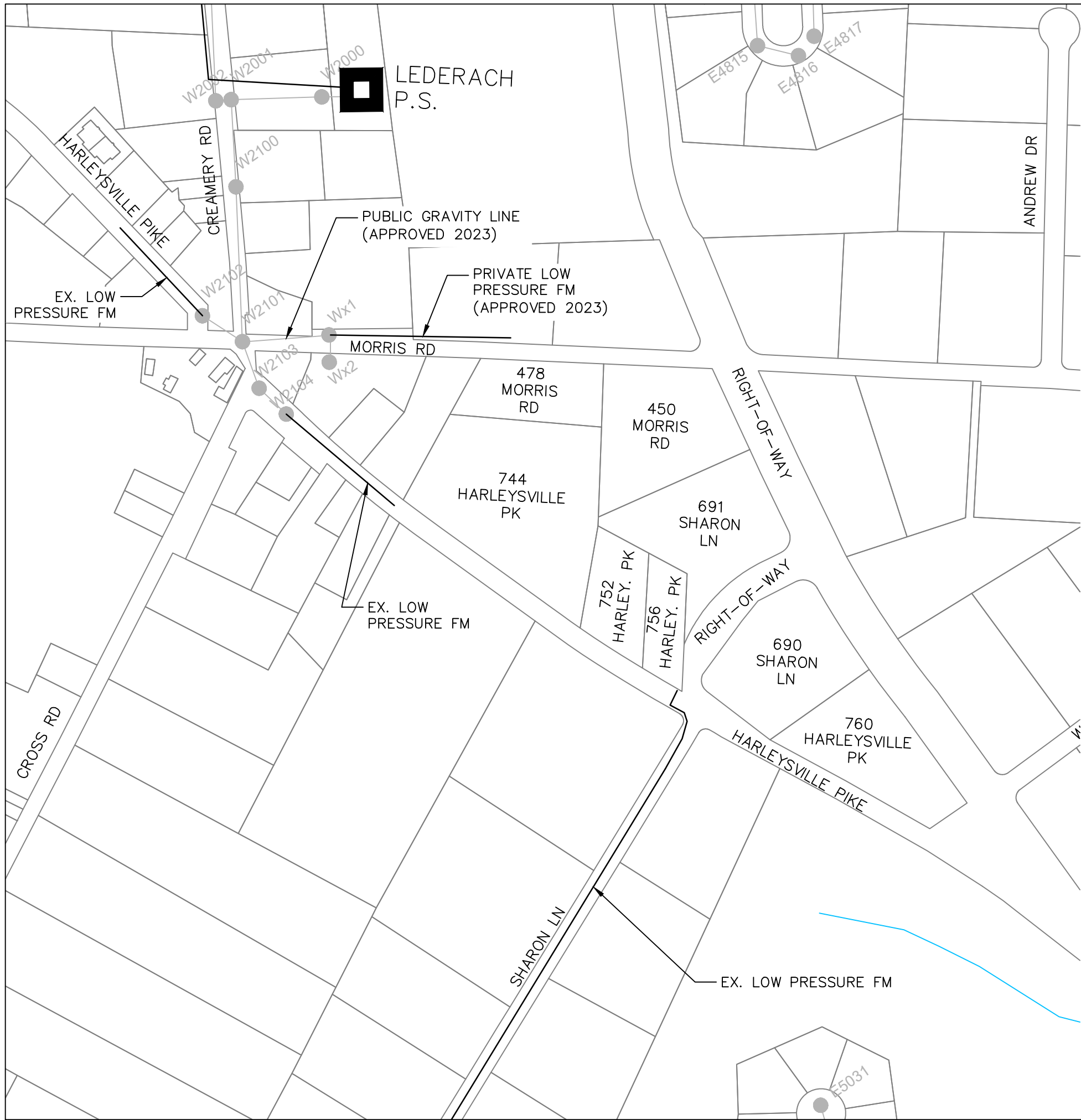
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N.T.S.

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10/25/2023

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15-10068T



Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	No Cost	0	L.S.	\$0.00	\$0

TOTAL ESTIMATE = \$0

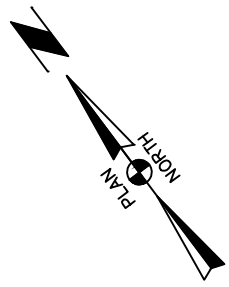
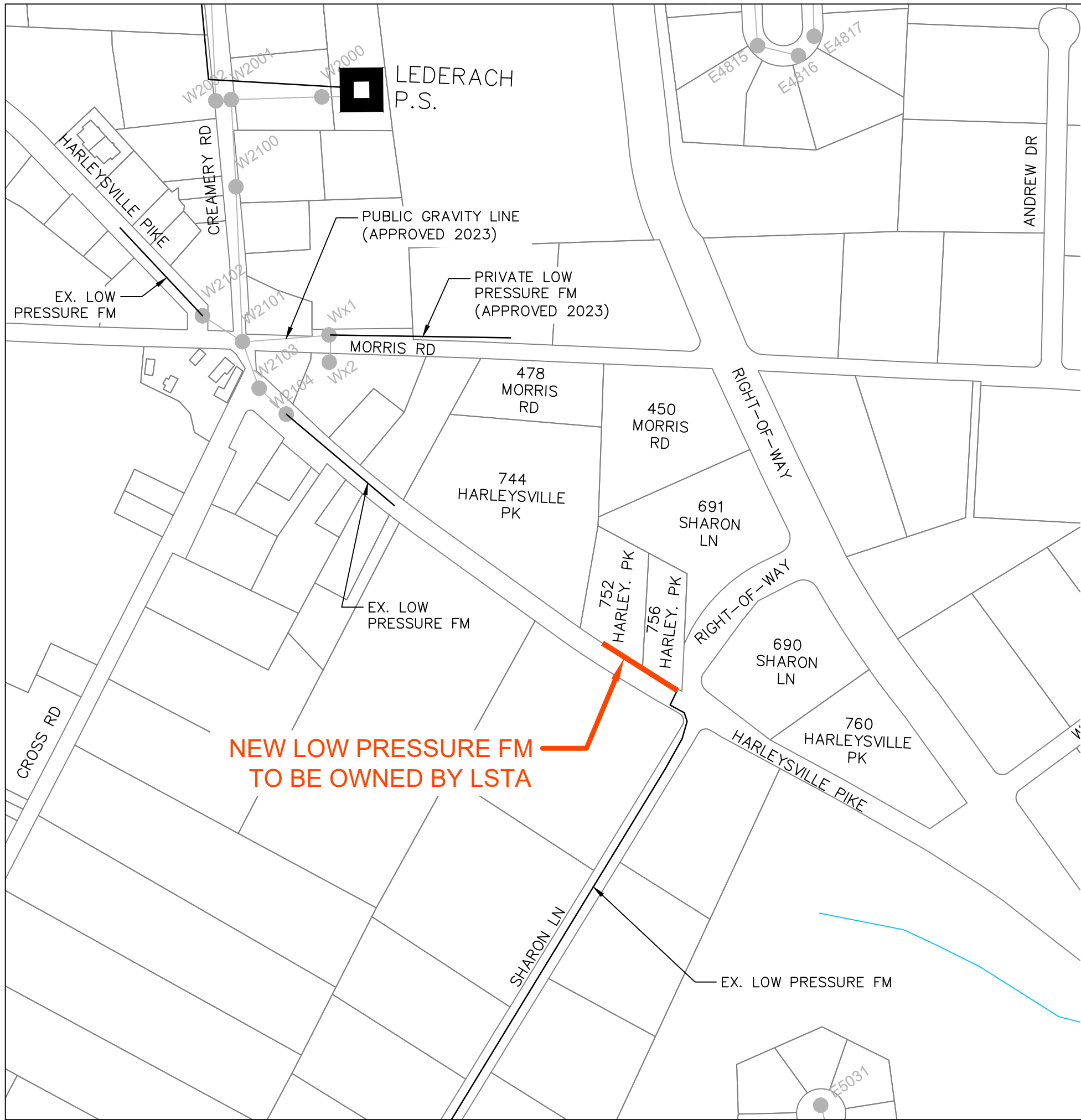


LOWER SALFORD TOWNSHIP AUTHORITY
ON-LOT DISPOSAL SYSTEMS
ALTERNATIVE 1
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

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Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, etc.	1	L.S.	\$3,000.00	\$3,000
2.0	Directional drill low pressure forcemain	210	L.F.	\$55.00	\$11,550
3.0	Directional drill low pressure lateral	100	L.F.	\$50.00	\$5,000
4.0	Connect lateral to main & valve assembly	1	Ea	\$1,300.00	\$1,300
5.0	Grinder Pump	1	Ea	\$7,000.00	\$7,000
6.0	Abandon On-lot System	1	L.S.	\$1,300.00	\$1,300

TOTAL ESTIMATE = \$29,150

Eng/Legal (20%) 20% \$ **5,830**
 Contingency (20%) 20% \$ **5,830**

TOTAL PROJECT COST \$ 40,810

rounded \$ 40,000

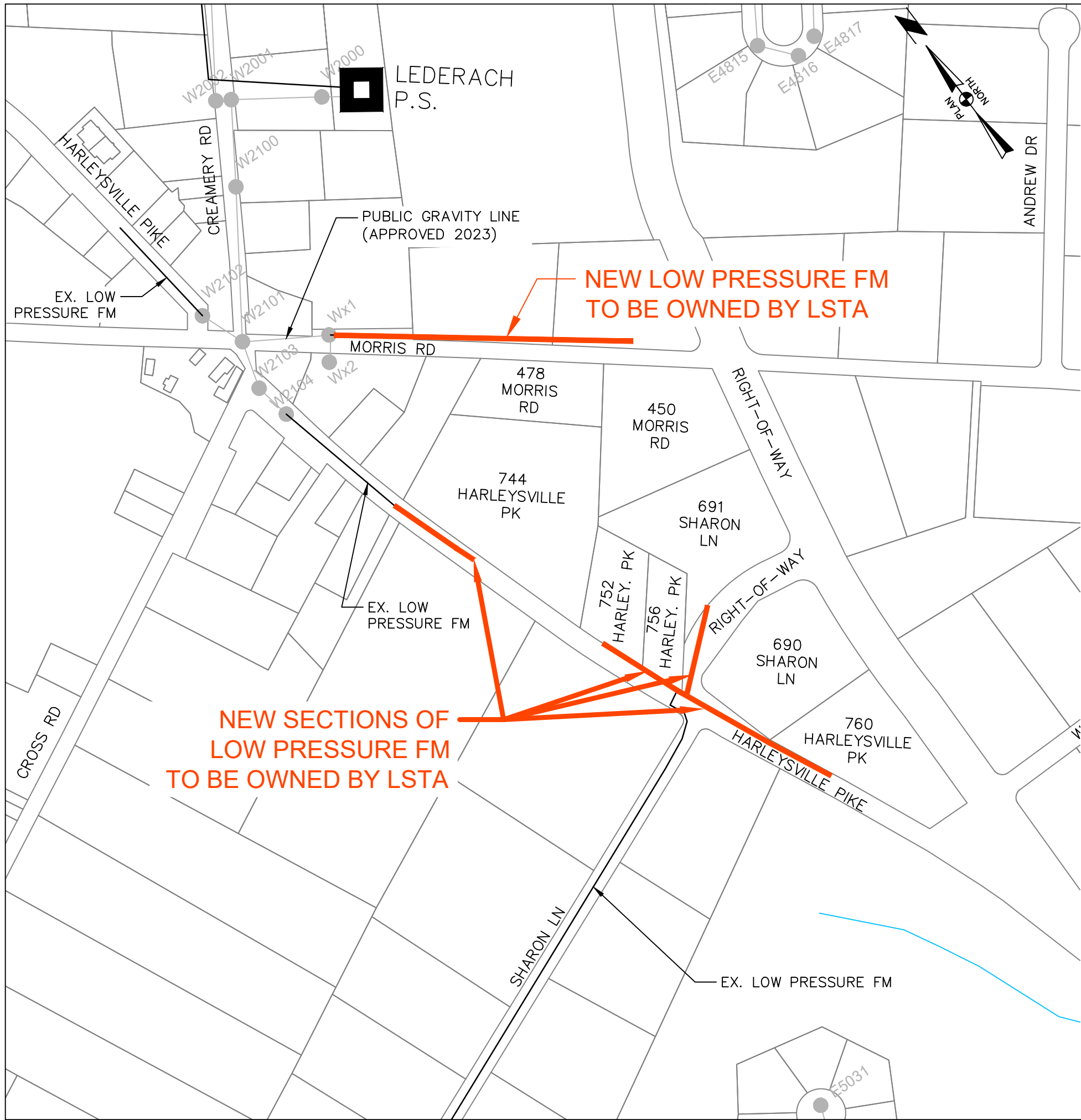
**NEW LOW PRESSURE FM
TO BE OWNED BY LSTA**



LOWER SALFORD TOWNSHIP AUTHORITY
ON-LOT DISPOSAL SYSTEMS
ALTERNATIVE 2
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

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Item No.	Description	Estimated Quantity	Units	Unit Price	Total Price
1.0	Mobilization, traffic control, etc.	1	L.S.	\$15,000.00	\$15,000
2.0	Directional drill low pressure forcemain	1,230	L.F.	\$55.00	\$67,650
3.0	Directional drill low pressure lateral	995	L.F.	\$50.00	\$49,750
4.0	Connect lateral to main & valve assembly	7	Ea	\$1,300.00	\$9,100
5.0	Grinder Pump	7	Ea	\$7,000.00	\$49,000
6.0	Abandon On-lot System	7	L.S.	\$1,300.00	\$9,100

TOTAL ESTIMATE = \$199,600

Eng/Legal (20%) 20% \$ **39,920**
 Contingency (20%) 20% \$ **39,920**

TOTAL PROJECT COST \$ 279,440
rounded \$ 300,000



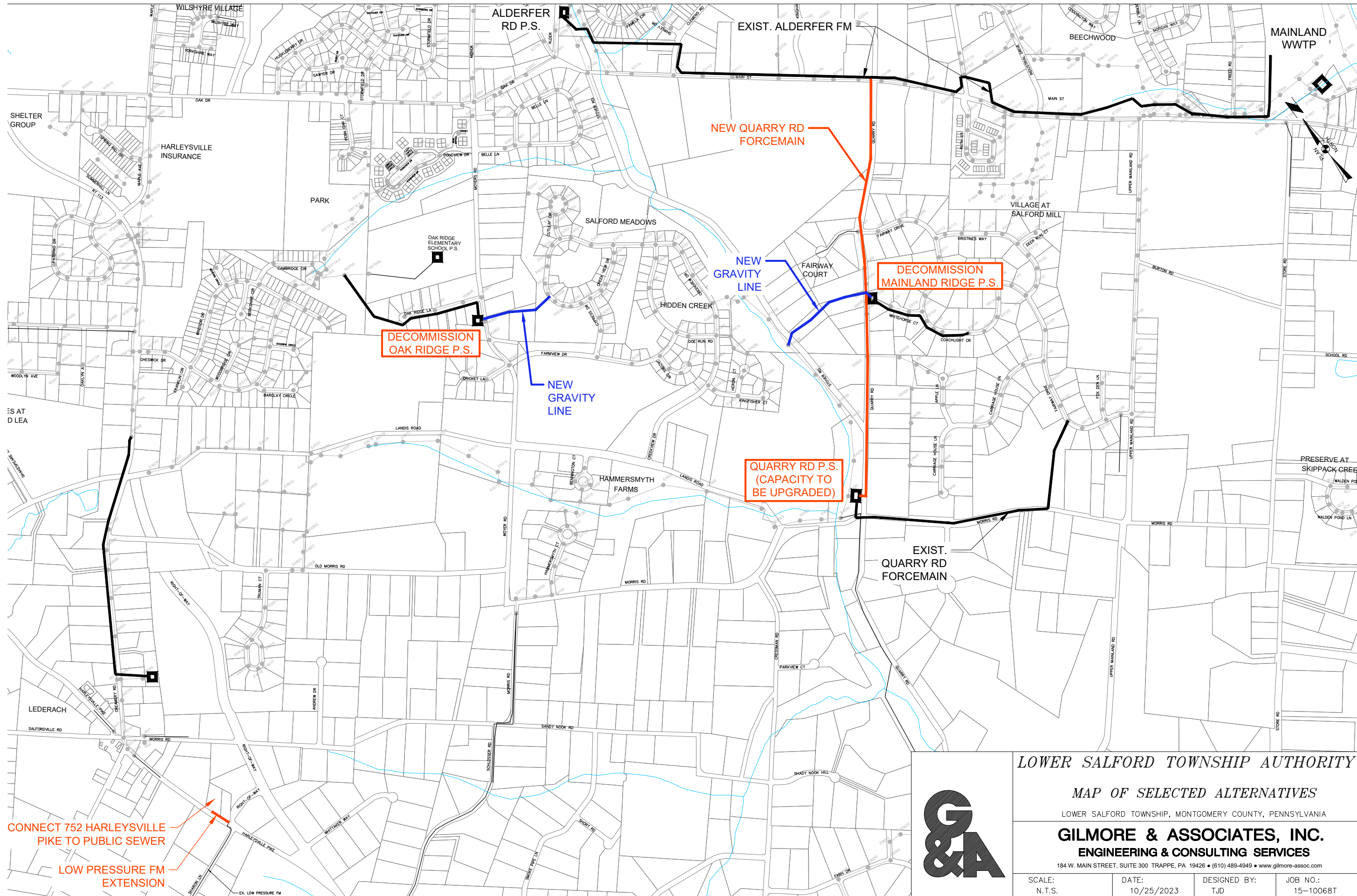
LOWER SALFORD TOWNSHIP AUTHORITY
ON-LOT DISPOSAL SYSTEMS
ALTERNATIVE 3
 LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

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Appendix K

Map of Selected Alternatives



LOWER SALFORD TOWNSHIP AUTHORITY

MAP OF SELECTED ALTERNATIVES

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

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