# SUBDIVISION PLANS

2711 & 2725 WOODLAND AVENUE

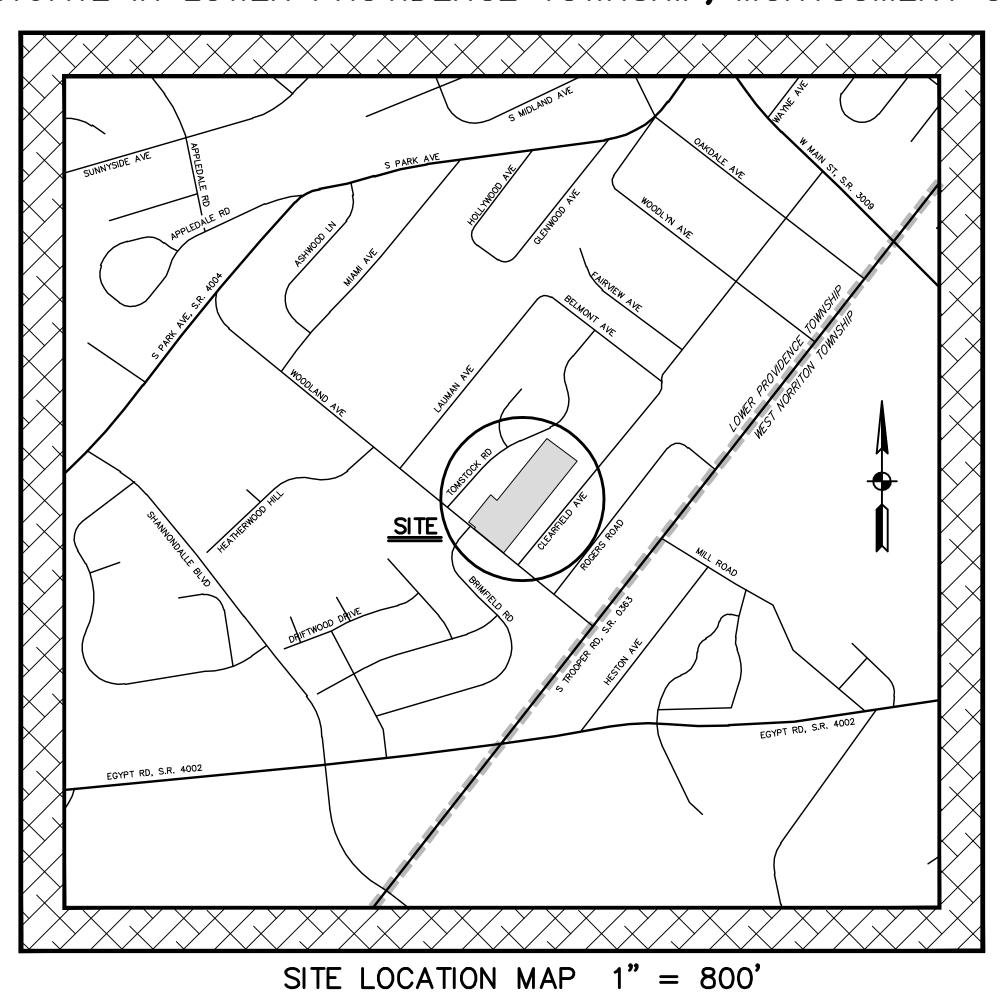
SITE SITUATE IN LOWER PROVIDENCE TOWNSHIP, MONTGOMERY COUNTY

# PLAN SHEET INDEX

SH	HEET	<u>NO.</u>	PLAN TITLE	DATE	LAST REV
			COVER SHEET		
1	OF	14	RECORD PLAN OF SUBDIVISION	JANUARY 9, 2017	_
2	OF	14	EXISTING FEATURES/DEMOLITION PLAN	JANUARY 9, 2017	_
3	OF	14	GRADING AND DRAINAGE PLAN	JANUARY 9, 2017	_
4	OF	14	UTILITY PLAN	JANUARY 9, 2017	_
5	OF	14	EROSION AND SEDIMENT CONTROL PLAN	JANUARY 9, 2017	_
6	OF	14	EROSION AND SEDIMENT CONTROL DETAIL SHEET	JANUARY 9, 2017	_
7	OF	14	PCSM PLAN	JANUARY 9, 2017	_
8	OF	14	PCSM DETAIL SHEET	JANUARY 9, 2017	_
9	OF	14	PCSM LANDSCAPE PLAN	JANUARY 9, 2017	_
10	OF	14	PLAN AND PROFILE OF ROAD 'A'	JANUARY 9, 2017	_
11	OF	14	PROFILES - STORM SEWER	JANUARY 9, 2017	_
12	OF	14	CONSTRUCTION DETAIL SHEET - STORM SEWER	JANUARY 9, 2017	_
13	OF	14	CONSTRUCTION DETAIL SHEET - SITE IMPROVEMENTS	JANUARY 9, 2017	_
14	OF	14	CONSTRUCTION DETAIL SHEET - SANITARY SEWER & WATER FACILITIES		

### SUPPORTING DOCUMENTATION SUBMITTED TO LOWER PROVIDENCE TOWNSHIP AS PART OF THIS APPLICATION:

1. POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN NARRATIVE REPORT	JANUARY 9, 2017
2. EROSION & SEDIMENT CONTROL PLAN NARRATIVE REPORT	JANUARY 9, 2017
3. STORMWATER INFILTRATION TEST REPORT BY PENNSTRAIL ENVIRONMENTAL, LLC	DECEMBER 16, 2016



PREPARED FOR

# SITE STATISTICS

1. SUBJECT TRACTS MAY BE IDENTIFIED BY MONTGOMERY COUNTY TAX ASSESSMENT INFORMATION AS FOLLOWS:

LOWER PROVIDENCE TOWNSHIP

A. PARCEL NO. 43-00-16081-00-4 B. PARCEL NO. 43-00-16084-00-1

2. RECORDED DEED DATA IS AS FOLLOWS:

AS RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC., IN AND FOR THE COUNTY OF

MONTGOMERY AT NORRISTOWN, PENNSYLVANIA. A. DEED BOOK 5720, PAGE 1362

B. DEED BOOK 5504, PAGE 1599 3. NAME AND ADDRESS OF THE OWNER OF THE SUBJECT TRACTS:

> A. SUSAN GAMBONE 2711 WOODLAND AVENUE EAGLEVILLE, PA 19403

B. RALPH V. & THERESA L. GAMBONE

P.O. BOX 186 FAIRVIEW VILLAGE, PA 19409

4. AREA STATISTICS:

A. GROSS TRACT AREA = 7.0297 Ac. (TO DEED TITLE LINES) B. GROSS TRACT AREA = 0.4744 Ac. (TO DEED TITLE LINES)

C. TOTAL GROSS TRACT AREA = 7.5040 Ac. (TO DEED TITLE LINES)

### ACT 121 UTILITY NOTE

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDER-GROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 121 AS PER THE AMENDMENT OF PA ACT 287 OF 1974, EFFECTIVE OCTOBER 9, 2008 CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK. REFERENCE UTILITY CASE NUMBER: 20162453241.

PENNSYLVANIA AMERICAN WATER COMCAST

4 WELLINGTON BLVD WYOMISSING, PA. 19610 alfonso.rossi@amwater.com

AT&T ATLANTA 360 GEES MILL BUSINESS PKWY NE CONYERS, GA. 30013 NANCY SPENCE

COMCAST CABLEVISION 1 APOLLO RD PLYMOUTH MEETING, PA. 19462

4400 WAYNE AVENUE PHILADELPHIA, PA. 19140 bob\_harvey@cable.comcast.com PECO ENERGY C/O USIC 450 S HENDERSON RD SUITE B

KING OF PRUSSIA, PA. 19406 NIKKIA SIMPKINS nikkiasimpkins@usicllc.com LOWER PROVIDENCE TOWNSHIP 100 PARKLANE DR EAGLEVILLE, PA. 19403 JOSEPH CHILLANO

jchillano@lowerprovidence.org

LOWER PROVIDENCE TOWNSHIP SEWER AUTHORITY 20 PARKLANE DRIVE EAGLEVILLE, PA. 19403 THOMAS CICIPPIO JR tcicippio@lptsa.org

VERIZON PENNSYLVANIA LLC

15 MONTGOMERY AVENUE, FLOOR 2 PITTSBURGH, PA. 15212 DEBORAH BARUM deborah.d.delia@verizon.com AUDUBON WATER COMPANY 2650 EISENHOWER AVE PO BOX 7337 NORRISTOWN, PA. 19403

jh@audubonwater.com

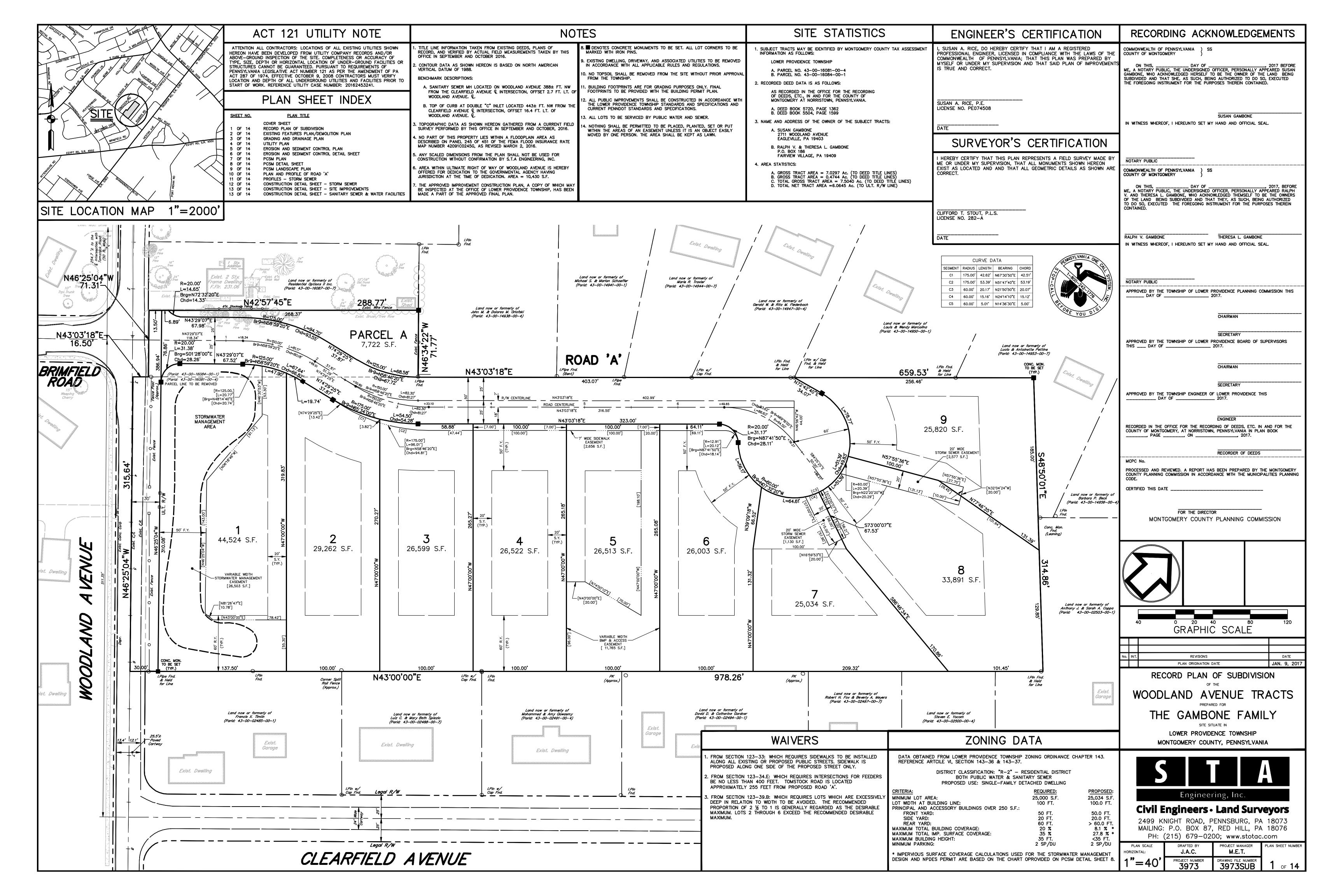
J RUSSELL

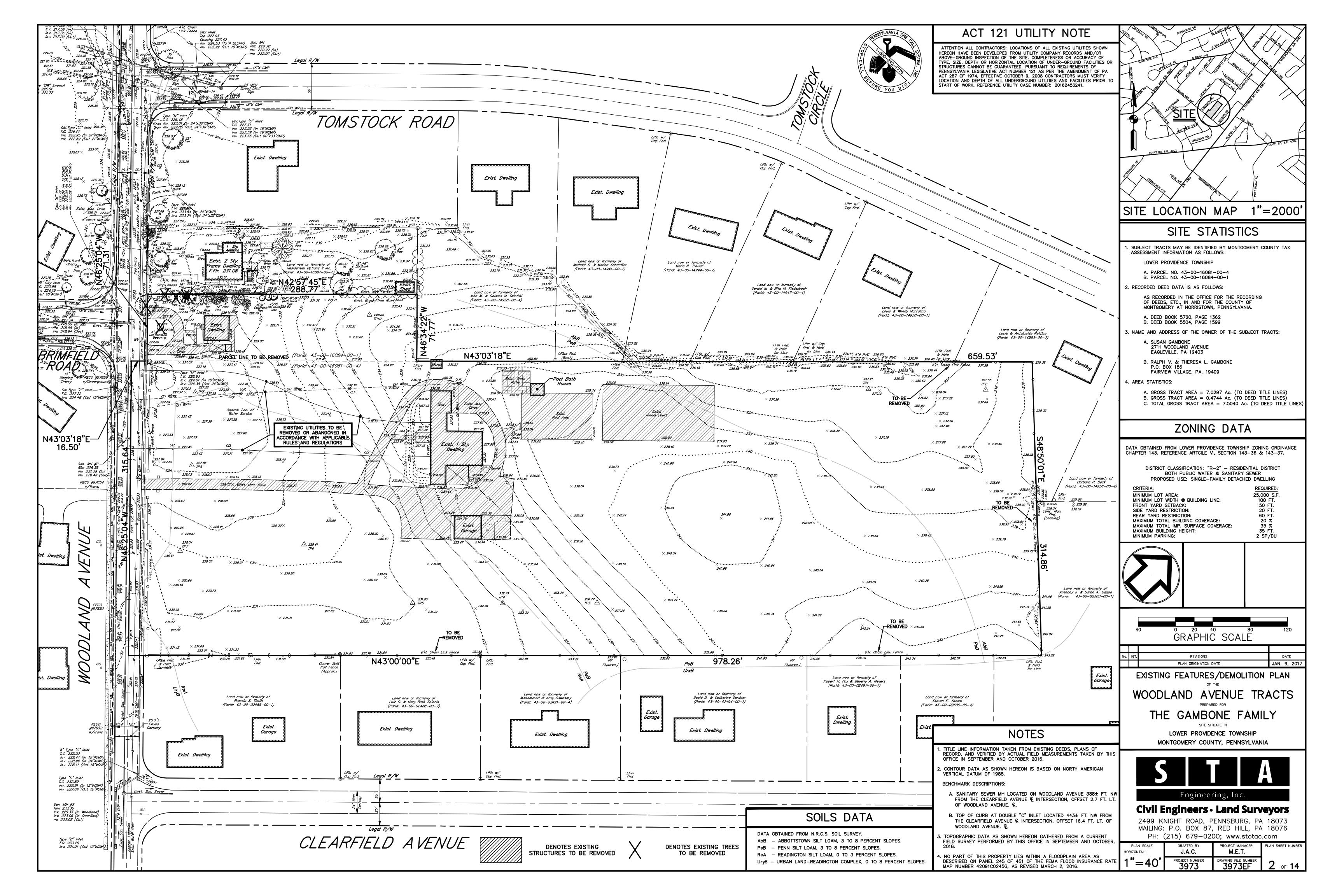


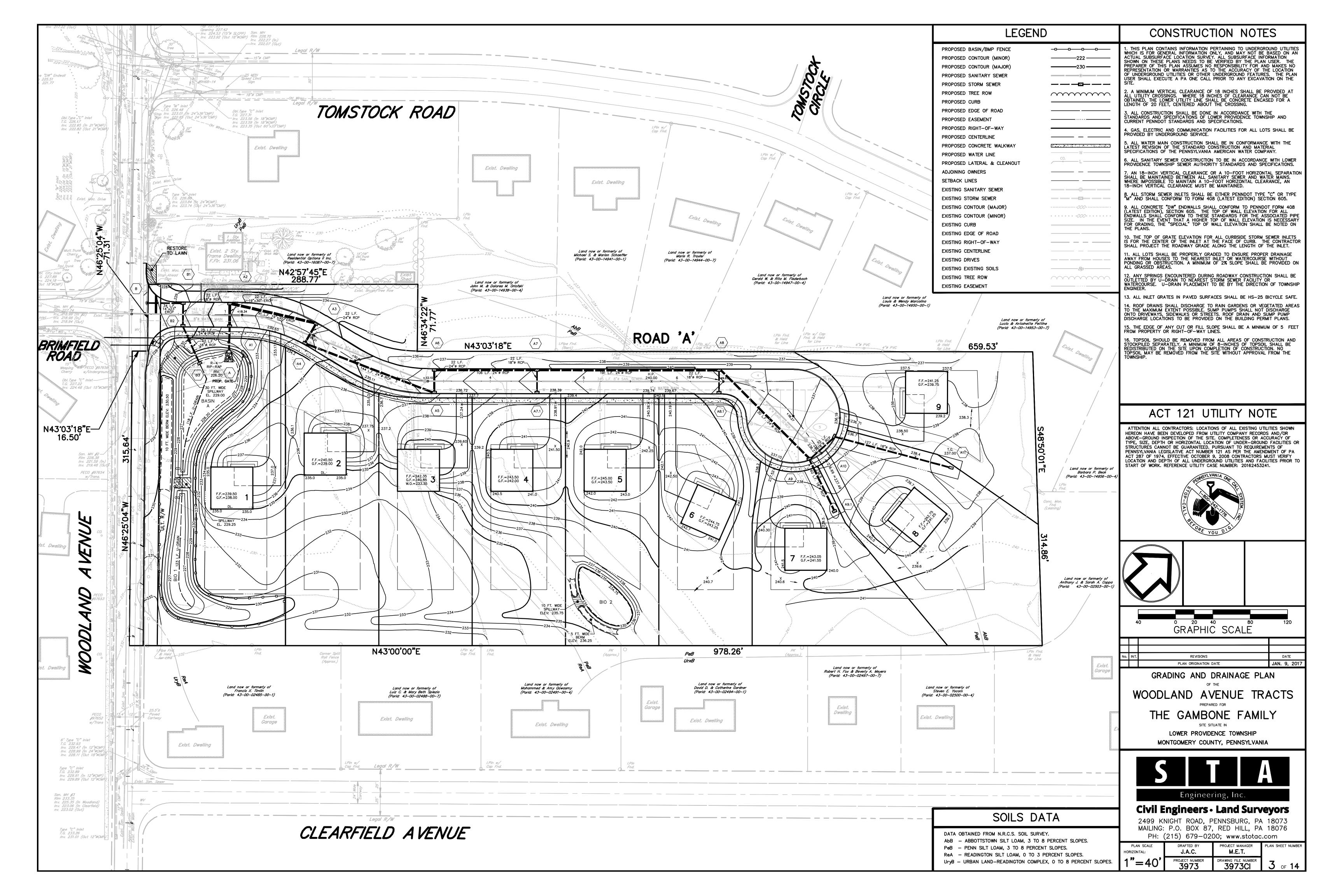
# THE GAMBONE FAMIL

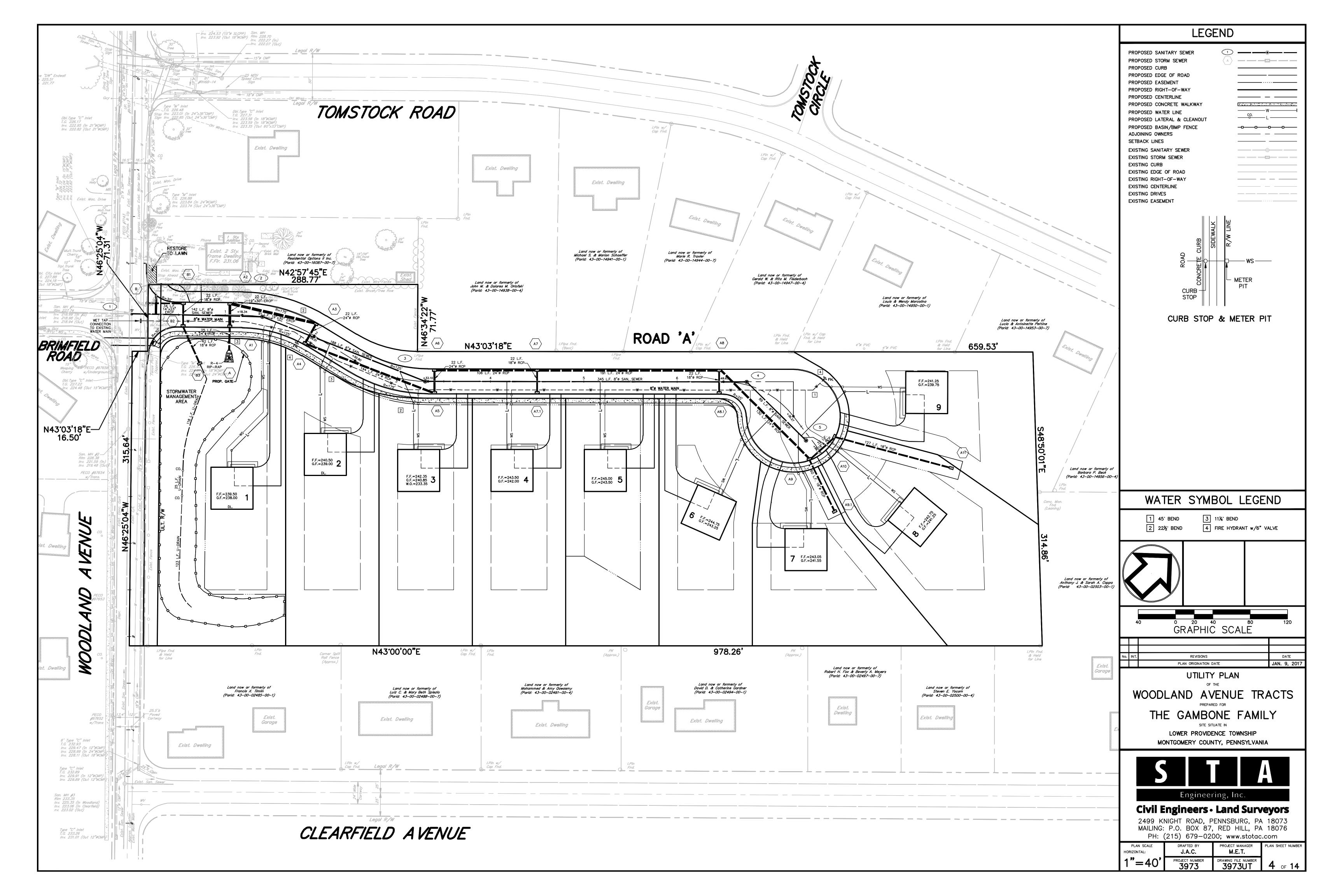
2711 WOODLAND AVENUE EAGLEVILLE, PA. 19403

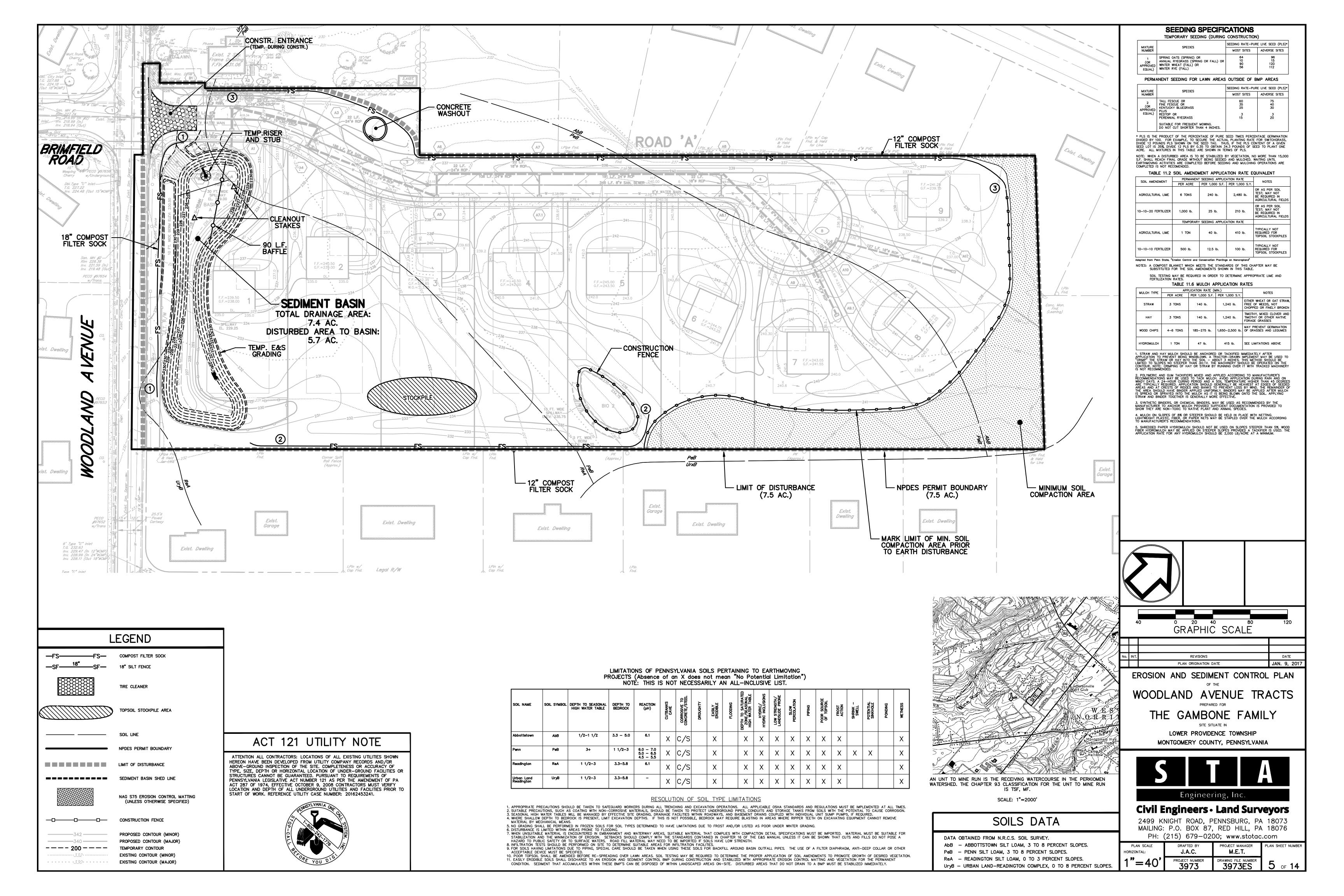












### E & S NOTES

- 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.
- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE 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 OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION

DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.

- AT LEAST 3 DAYS PRIOR TO STARTING ANY FARTH DISTURBANCE ACTIVITIES, OR EXPANDING INT AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIE AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO
- . AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED II EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE
- E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALL AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT I
- MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN 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 DRAWNGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- . ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATION AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTE  $\overline{\mathbb{D}}$ R UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE
- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCA CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED. 2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON 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.
- . ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDUR DESCRIBED IN THIS PLAN, OR UNDISTURBED VEGETATED AREAS.
- PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMINICHING AND RENETTING MIJST BE PERFORMED IMMEDIATELY, IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE
- i. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUN 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.
- . SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED 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 SURFACE WATER.
- . ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON TI 8. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM OF 3 TO 5 INCHES -
- 6 TO 12 INCHES ON COMPACTED SOILS PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING ANI MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- 9. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR
- ). ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN . FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN
- OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS. 2. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- 23. FILLS SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- 4. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHO GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED.
  SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- 3. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREA. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE. WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREA WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH
- . PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- 8. 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 DEPARTMENT.
- 9. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S
- 30. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING THE 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 31. 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. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT—LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO THE PROPERTY OF RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000
- PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION. 33. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR
- GROUNDWATER SYSTEMS. 4. SEDIMENT BASINS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- 35. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES. 6. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, ADN THE OWNER OF THE DAMAGED PROPERTY.
- 7. UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWNG) FOR ANY SEDIMENT BASIN TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION
- 8. GEOLOGIC FORMATION: NO GEOLOGIC FORMATION OR SOIL CONDITIONS HAVING POTENTIAL TO CAUSE POLLUTION TO SURFACE WATERS EXISTS ON THE SITE. 39. THERMAL IMPACT: STORMWATER RUNOFF FROM THE PROPOSED IMPERVIOUS SURFACES WILL BE DIRECTED INTO A BIO-RETENTION STORMWATER MANAGEMENT FACILITY BEFORE LEAVING THE SITE IN ORDER TO MINIMIZE THE POTENTIAL FOR THERMAL IMPACTS UPON THE RECEIVING WATERCOURSES. STORMWATER RUNOFF WILL BE TREATED AND FILTERED IN THE FACILITY BEFORE ENTERING THE STORMWATER CONVEYANCE SYSTEM WHERE THE RUNOFF
- 40. EROSION & SEDIMENT CONTROL PLANNING AND DESIGN:
- A. THE EROSION & SEDIMENT CONTROL PLAN MINIMIZES EXTENT AND DURATION OF EARTH THE REQUIRED INSTURBANCE IS LIMITED TO ONLY WHAT IS NECESSARY TO CONSTRUCT THE REQUIRED IMPROVEMENTS. A LIMIT OF DISTURBANCE IS DELINEATED ON THE EROSION AND SEDIMENT CONTROL PLAN. NO EARTH DISTURBANCE SHALL OCCUR OUTSIDE

HAS ADDITIONAL TIME TO COOL BEFORE REACHING THE SURFACE WATERS.

- B. THE EROSION & SEDIMENT CONTROL PLAN MAXIMIZES PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION. DISTURBANCE IS LIMITED TO ONLY WHAT IS NECESSARY TO CONSTRUCT THE REQUIRED IMPROVEMENTS AND EXISTING VEGETATION IS PROTECTED TO
- C. THE EROSION & SEDIMENT CONTROL PLAN MINIMIZES SOIL COMPACTION. DISTURBANCE IS LIMITED TO ONLY WHAT IS NECESSARY TO CONSTRUCT THE REQUIRED IMPROVEMENTS. NO EARTH DISTURBANCE IS TO OCCUR OUTSIDE THE LIMIT OF DISTURBANCE.
- D. THE EROSION & SEDIMENT CONTROL PLAN UTILIZES OTHER MEASURES OR CONTROLS THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF. ALL SEDIMENT—LADEN WATER ULTIMATELY FLOWS TO THE SEDIMENT BASIN WHERE SEDIMENT LADEN STORMWATER RUNOFF IS DETAINED AND SLOWLY REALEASED. PEAK FLOW CALCULATIONS DEMONSTRATE THAT POST-DEVELOPMENT FLOW IS EQUAL TO OR LESS THAN PRE-DEVELOPMENT FLOW.

## CONSTRUCTION SEQUENCE

At least 7 days prior to starting any earth disturbance 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 and a representative from the Montgomery County Conservation District to an on—site pre—construction meeting. At least 3 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 All earth disturbance activities shall proceed in accordance with the following sequence.
- Each step of the sequence shall be completed before proceeding to the next step, except where noted. Deviation from the sequence must be approved by the Montgomery County Conservation District or by the department prior to implementation. 4. Field-mark the limits of disturbance in accordance with erosion and sediment control plan
- 5. Install the temporary stone construction entrance/tire cleaner in accordance with the

6. Install compost filter socks 1, 2 and 3 as shown on the erosion and sediment control plan.

- 7. Clear, grub and strip topsoil from the area for the construction of the Sediment Basin A. A. Stockpile topsoil as shown on the erosion and sediment control plan. B. Stabilize stockpile and protect area with silt fence. (note: whenever disturbed areas
- are left exposed, temporarily seed and mulch in accordance with the seeding C. Ensure that compost filter sock is installed downstream of berm area as indicated of
- 8. Construct the sediment basin. Install permanent outlet structure and emergency spillway. Install baffles, if necessary, and sediment clean out stakes as indicated. Complete final grading of sediment trap areas, replace topsoil, seed and mulch. Drainage shall be directed to the sediment basin throughout construction and before the on—site storm
- 9. Upon installation and stabilization of the temporary sediment basin and all perimeter sediment control bmp's and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the department or authorized conservation district.

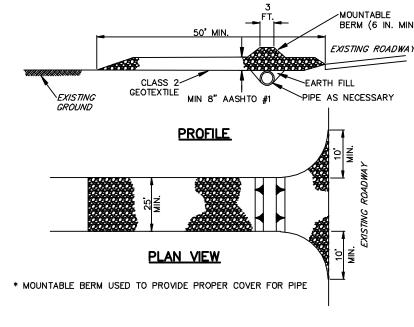
## NOTE: SEDIMENT BASIN MUST BE COMPLETELY STABILIZED AND ON—LINE PRIOR TO ANY EARTH DISTURBANCE OF THE RESPECTIVE TRIBUTARY DRAINAGE AREA.

- 10. Strip any remaining topsoil and stockpile. Stabilize stockpile and protect with silt fence. Clear and grub any remaining areas left to be disturbed. Install construction safety fence around proposed BMP's as shown. 11. Demolish existing structures and utilities in accordance with applicable rules and
- Rough grade Road A. Install sanitary sewer starting with the most downstream connection and proceed upslope. Construct all storm sewer structures and piping. Simultaneously install remainder of utilities (water, electric, gas, cable, etc.). Install curbing, stone base course and bituminous base course. Stabilize disturbed areas immediately with seed and
- 13. Construction of dwellings can begin except on lots used for stockpile or erosion and sediment control facilities. If roadway is not stabilized, access to the constructed units shall be stabilized to a minimum of a stone base for construction vehicle access. Pad
- out building sites. Construct buildings, sidewalks and interior paving. 14. Replace topsoil to a minimum depth of 6—in. And finish grade, wherever and whenever possible. Seed and mulch each area of disturbance immediately after construction is completed. No more than 15,000 s.f. of disturbed area shall reach final grade before initiating seeding and mulching operations. Graded areas should be scarified or otherwise oosened to a depth of 3— to 5—inches prior to topsoil placement.
- 15. **Critical Stage** When upstream tributary areas are permanently stabilized, install bio-infiltration facility Bio2 in accordance with the following sequence and construction
- a. A licensed professional engineer (or authorized representative) knowledgeable in the design and construction of stormwater BMP's, preferably the design engineer, shall conduct the oversight of installation of the rain gardens (bio—infiltration area).
- o. Complete site grading and stabilize areas tributary to the rain garden area. . Excavate rain garden to proposed invert depth and scarify the existing soil surfaces. Do not compact in—situ soils. d. If the area is subject to compaction or sedimentation during construction, infiltration testing may need to be performed during/prior to the construction of the BMP to verify the volume credits taken by design. . Backfill rain garden with amended soil as shown on plans and specifications. Overfill
- is recommended to account for settlement. Light hand tamping is acceptable if f. Presoak the planting soil prior to planting vegetation to aid in settlement g. Complete final grading to achieve proposed design elevations, leaving space for upper layer of compost, mulch or topsoil as specified on plans.
- i. Mulch and install erosion protection at surface flow entrance where necessary. 16. Perform final landscaping operations. In such cases, permanently seed and mulch disturbed areas. Seeding shall follow fertilization and seeding rates specified in seeding specification chart. If finish grading is not practical, temporarily seed all disturbed areas. OTE: THE MONTGOMERY COUNTY CONSERVATION DISTRICT MUST BE NOTIFIED PRIOR TO THE

. Plant vegetation according to landscape plan

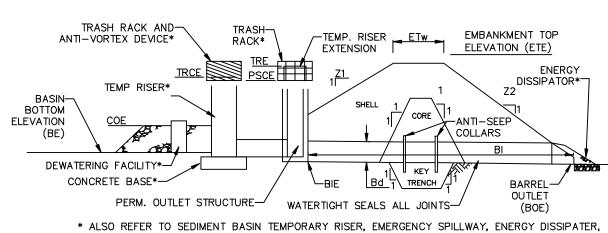
- CONVERSION OR REMOVAL OF PRIMARY EROSION AND SEDIMENT CONTROL BMP'S. 17. **Critical Stage** — upon establishing a minimum uniform 70 % perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements in areas upstream of the sediment basin, the sediment basin can be converted to the permanent bio—retention facility. Convert the facility in accordance with
- a. Notify the Conservation District prior to conversion. b. A licensed professional engineer (or authorized representative) knowledgeable in the design and construction of stormwater bmp's, preferably the design engineer, shall
- conduct the oversight of conversion of the stormwater facility. c. Insure that all areas tributary to the basin are stabilized prior to basin construction. d. Remove temporary riser, stub and dewatering facility
- e. Remove the upper one foot of existing soil that has clogged with accumulated sediment and then excavate bio—retention area to proposed invert depth and scarify the existing soil surfaces. Do not compact in-situ soils.
- f. Grade subsoil in bottom of basin being careful not to compact the basin bottom area. g. Install u-drain and cap with dewatering orifice. Should groundwater be encountered and prove to be constantly present, install groundwater u-drain as needed.
- h. Construct spillway between BMP Bio 1 and Basin A in accordance with PCSM detail. i. Install amended soil (topsoil thoroughly mixed with leaf compost) to required design depth and fine grade, being careful not to compact.
- j. Prepare for seeding by eliminating any weed growth prior to seed installation using an appropriate herbicide to control undesirable vegetation. For optimal seed establishment, soil ph shall be between 5.5 and 6.5. k. Apply seed by carefully proportioning seed for the entire area. Broadcast seed in two
- separate applications by applying seed at half the suggested rate for each application to ensure even and adequate coverage. After the full rate of seeding has been achieved, follow by rolling or tracking seed into the top 1/4 inch of soil to achieve good seed to soil contact — do not roll or track the seed when soil is wet. Cover seeded area with a light layer of salt hay, threshed straw or pine needles or apply erosion control matting over 3:1 slopes.
- m. Plant and mulch according to specifications on the landscape plan.
- 18. Perform final landscaping operations.
- 19. After all construction work is completed, install final paving, permanent striping and
- 20. Upon final stabilization, remove all other temporary sediment controls. An area shall be considered to have achieved final stabilization when it has minimum uniform 70 % perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.
- 21. 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. Completion certificates are needed to ensure that all vork is performed in accordance with the terms and conditions of the permit and

ANY SEDIMENT CONTROL, SUCH AS A SILT FENCE, ROCK FILTER, OR INLET FILTER MUST NOT BE REMOVED UNTIL ALL VEGETATION (UPSTREAM OF THAT PARTICULAR CONTROL) HAS BEEN RE-ESTABLISHED. ANY AREA (S) DISTURBED DURING THE REMOVAL OF SEDIMENT CONTROLS SHALL BE RE-STABILIZED.



REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-ROCK CONSTRUCTION ENTRANCE



TRASH RACK	AND ANTI-	-VORTEX DEVI	CE, AND SEDII	MENT STORAGE	DEWATERING	FACIL
<u>EMBANI</u>	<b>KMENT</b>	<b>SECTION</b>	ALONG	PRINCIPA	AL SPILLY	<b>WA</b>

	EMBANKMENT SECTION ALONG PRINCIPAL SPILLWAY												
				TEMPOR	ARY RIS	ER			BARREL				
BASIN NO.	Z1 (FT)	Z2 (FT)	DIA TRd (IN)	CREST ELEV TRCE (FT)	MATL	TEMP RISER EXT. ELEV TRE (FT)	DIA Bd (IN)	INLET ELEV BIE (FT)	MATL	LENGTH BI (FT)	OUTLET ELEV BOE (FT)		
Α	3	3	15	228.70	CMP	228.70	12	225.25	RCP	42	225.00		
	FMRANKMENT												

LEANOUT I BOTTOM TOP | TOP | KEY | KEY ELEV ELEV
COE BE
(FT) (FT) ELEV WIDTH TRENCH TRENCH ETE ETW DEPTH WIDTH 
 (FT)
 (FT)
 (FT)
 (FT)
 (FT)

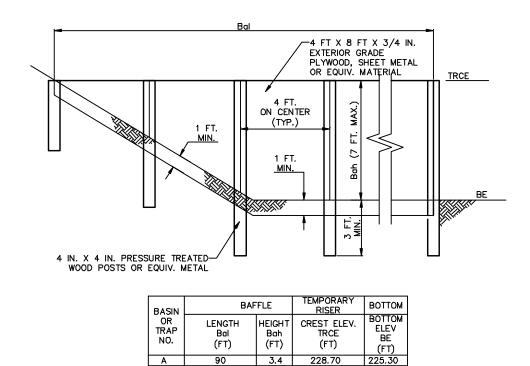
 230.50
 10.0
 3.0
 8.0
 226.30
 225.30

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LITS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

ALL SEDIMENT BASINS SHALL BE INSPECTED ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE CHECKED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE BASIN STABILIZED BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

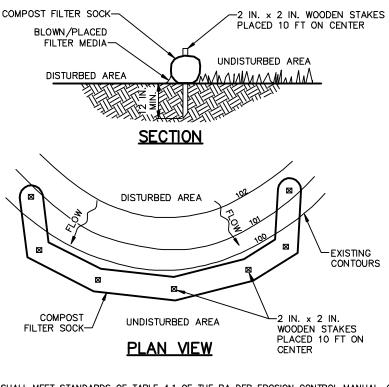
STANDARD CONSTRUCTION DETAIL #7-8 SEDIMENT BASIN DETENTION POND EMBANKMENT AND SPILLWAY DETAILS NOT TO SCALE



SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION. AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION. BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION. DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

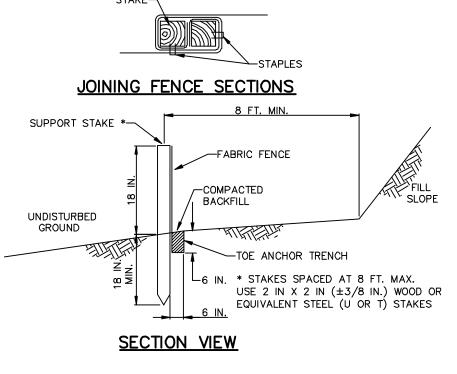
BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS. STANDARD CONSTRUCTION DETAIL #7-14 BAFFLE

NOT TO SCALE



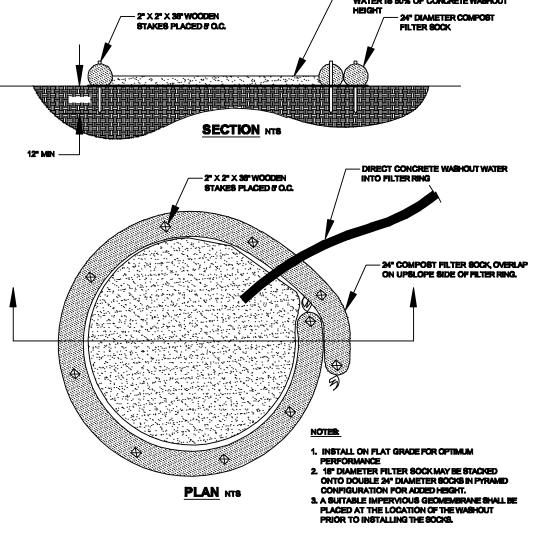
NOTES:
SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
ACCUMULIATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

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

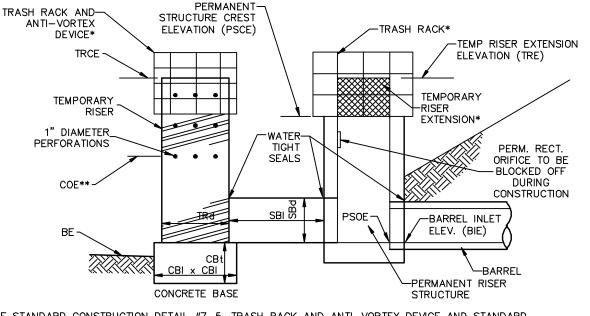


FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL. FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES. SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE. ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6). FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

STANDARD CONSTRUCTION DETAIL #4-7 STANDARD SILT FENCE (18" HIGH)



SILTSOCK CONCRETE WASHOUT



\*SEE STANDARD CONSTRUCTION DETAIL #7-5, TRASH RACK AND ANTI-VORTEX DEVICE AND STANDARD CONSTRUCTION DETAIL #7-7, SEDIMENT BASIN TEMPORARY RISER, TOP OF TEMPORARY RISER EXTENSION (TRE) SHALL BE EQUAL TO OR ABOVE TEMPORARY RISER CREST ELEVATION (TRCE) AND 6 IN. MIN. BELOW CREST OF EMERGENCY SPILLWAY. REMOVE FLAT GRATE FROM PERMANENT RISER FOR AS LONG AS BASIN FUNCTIONS AS A SEDIMENT REMOVAL BMP.

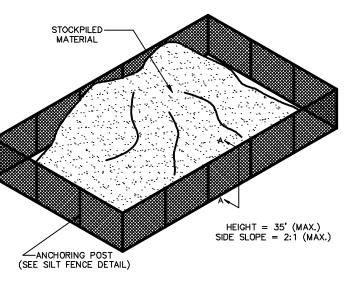
\*\* LOWES

	TE	MPORARY	RISER		PERFOR	CONCR	ETE BASE		
BASIN NO.	DIA TRd (IN)	CREST ELEV TRCE (FT)	MAT'L	LOWEST ROW OF HOLES ELEV (FT)	NO. ROWS**	NO. HOLES PER ROW	VERT. SPACING OF ROWS (FT)	LENGTH AND WIDTH CBI (FT)	THICKNESS CBt (IN)
Α	15	228.70	СМР	226.30	3	1	1.0	3.25	0.50

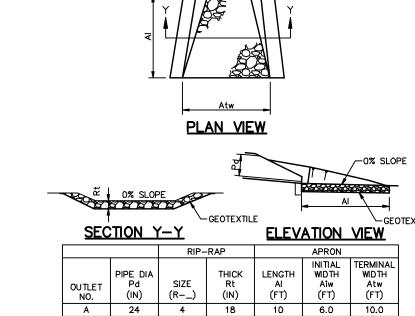
		TEMPO	RARY STUB		PERMAN	NENT STR	JCTURE	BARREL
BASIN NO.	DIA SBd (IN)	INVERT ELEV SBIE (FT)	MAT'L	LENGTH SBI (FT)	CREST ELEV PSCE (FT)	CREST ELEV TRE (FT)	OUTLET ELEV PSOE (FT)	INLET ELEV BIE (FT)
Α	12	255.29	СМР	8	228.50	228.70	225.25	225.25

A MINIMUM OF 2-#8 REBAR SHALL BE PLACED AT RIGHT ANGLES AND PROJECTING THROUGH SIDES OF RISER TO ANCHOR IT TO CONCRETE BASE. REBAR SHALL PROJECT A MINIMUM OF 1/4 RISER DIAMETER BEYOND OUTSIDE OF RISER. CONCRETE BASE SHALL BE POURED IN SUCH A MANNER SO AS TO INSURE THAT CONCRETE FILLS BOTTOM OF RISER TO INVERT OF THE OUTLET PIPE TO PREVENT RISER FROM BREAKING AWAY FROM THE BASE. MINIMUM BASE WIDTH EQUALS 2 TIMES RISER EMBEDDED SECTION OF ALUMINUM OR ALUMINIZED PIPE SHALL BE PAINTED WITH ZINC CHROMATE OR EQUIVALENT. CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

STANDARD CONSTRUCTION DETAIL #7-9 SEDIMENT BASIN/DETENTION POND RISER STRUCTURES

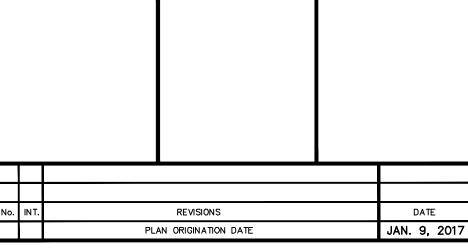


STOCKPILE CONTROL



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

STANDARD CONSTRUCTION DETAIL #9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL



EROSION AND SEDIMENT CONTROL DETAIL SHEET WOODLAND AVENUE TRACTS

THE GAMBONE FAMILY

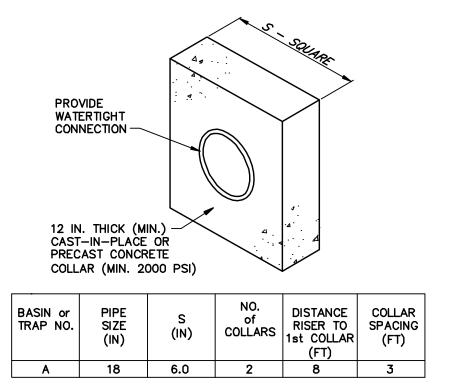
SITE SITUATE IN LOWER PROVIDENCE TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA



**Civil Engineers - Land Surveyors** 

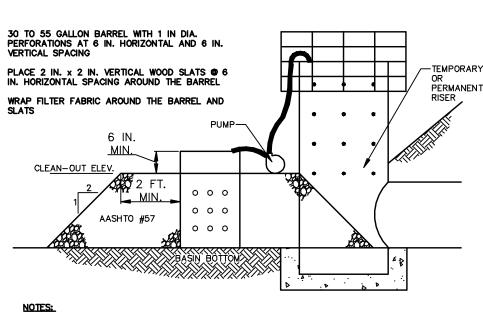
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PH: (	(215) 679-02	00; www.stotac	.com
PLAN SCALE HORIZONTAL:	DRAFTED BY  J.A.C.	PROJECT MANAGER <b>M.E.T.</b>	PLAN SHEET NUMBER
1"=40'	PROJECT NUMBER 3973	DRAWING FILE NUMBER 3973ESDET	6 of 14



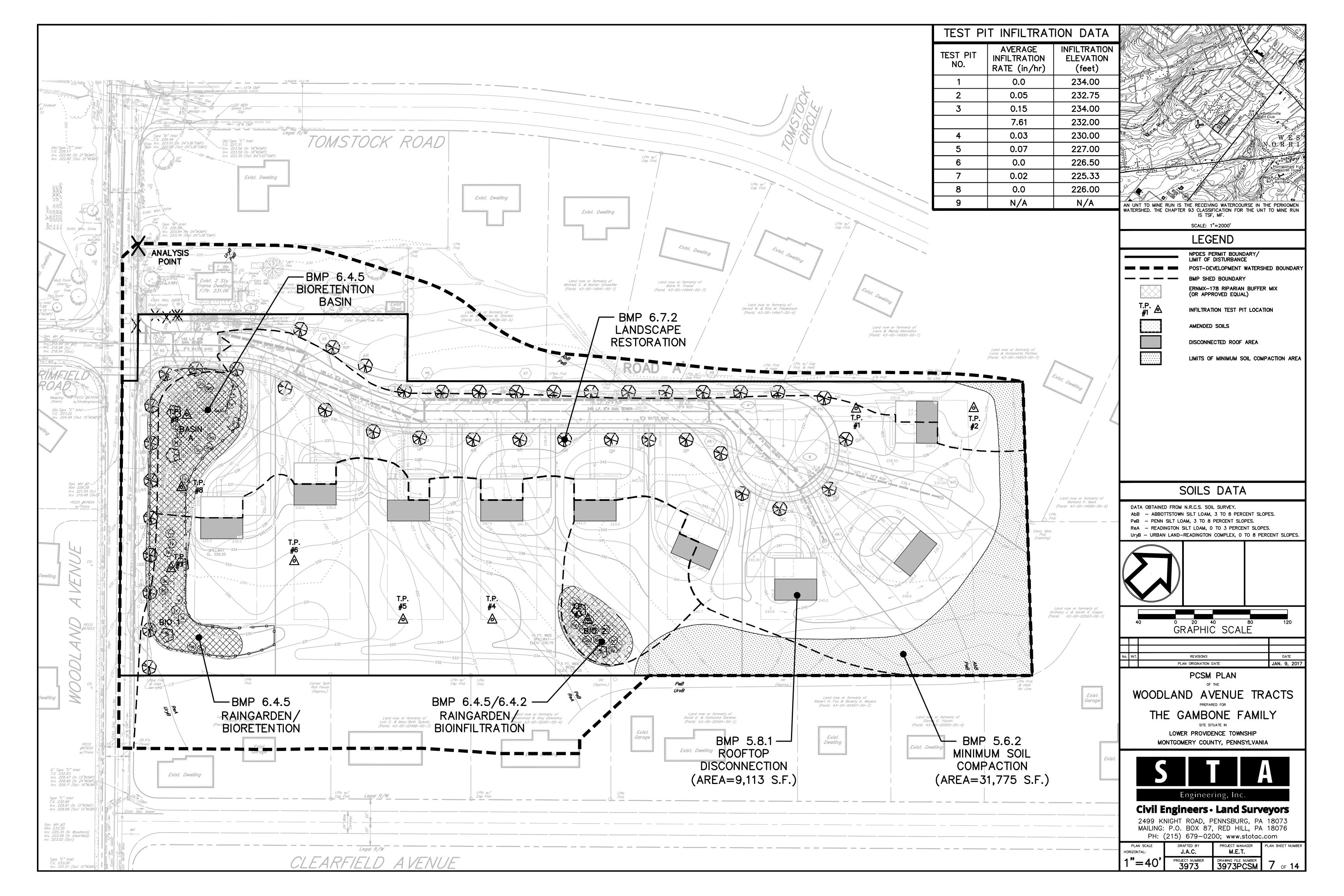
ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

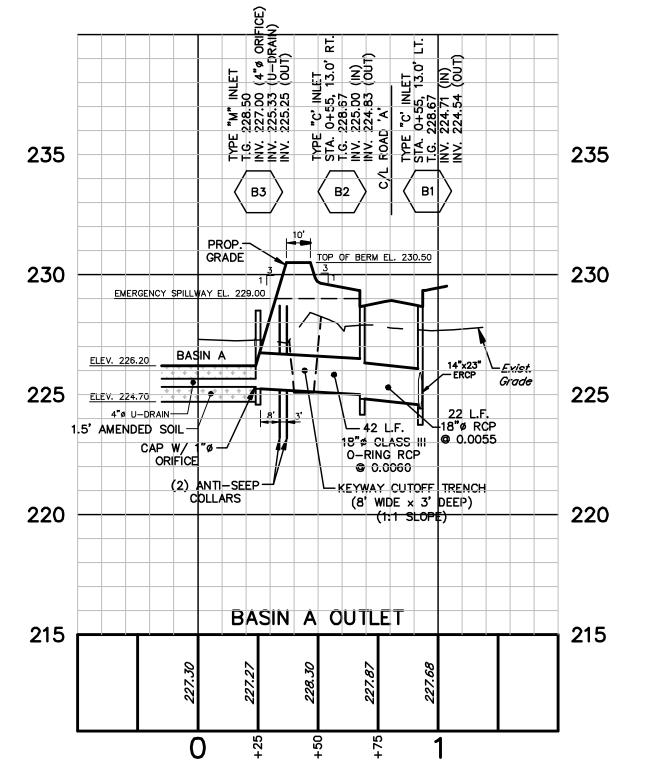
STANDARD CONSTRUCTION DETAIL #7-16 CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS NOT TO SCALE

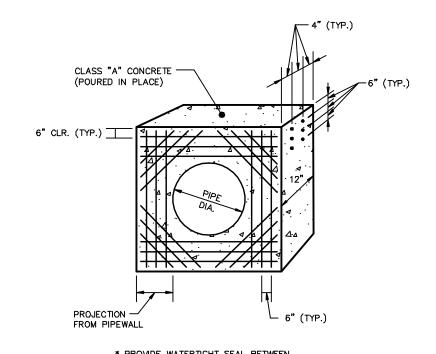


DEWATERING FACILITY SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF BASIN/TRAP. PRIOR TO INITIATING OPERATION OF DEWATERING FACILITY, ALL ACCUMULATED SEDIMENT SHALL BE CLEANED FROM THE INSIDE OF THE BARREL. DEWATERING FACILITY SHALL BE CONTINUOUSLY MONITORED DURING OPERATION. IF FOR ANY REASON THE DEWATERING FACILITY CEASES TO FUNCTION PROPERLY, IT SHALL BE IMMEDIATELY SHUT DOWN AND NOT RESTARTED UNTIL THE PROBLEM HAS BEEN CORRECTED.

STANDARD CONSTRUCTION DETAIL #7-18 SEDIMENT BASIN OR SEDIMENT TRAP SEDIMENT STORAGE DEWATERING FACILITY NOT TO SCALE

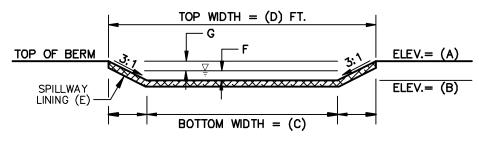






\* PROVIDE WATERTIGHT SEAL BETWEEN PIPE AND COLLAR. COLLARS SHALL NOT BE PLACED CLOSER THAN 2 FEET FROM ANY PIPE JOINT. DESIGN COLLAR BASIN/ POND (IN.) FROM PIPE DIMENSIONS COLLARS A 18 2.00 6.00

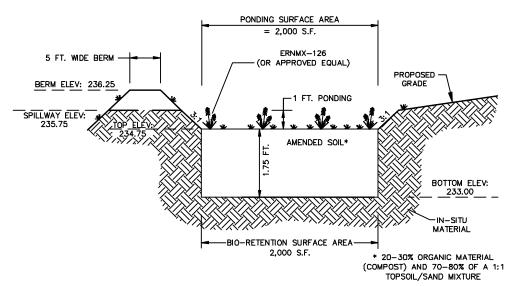
REINFORCED CAST-IN-PLACE ANTI-SEEP COLLAR



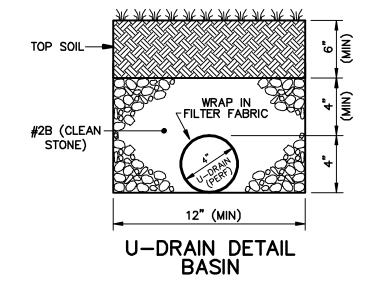
	TOP OF BERM	EMERGENCY	воттом	TOP		FLOW	
BASIN	ELEV.	SPILLWAY ELEV.	WIDTH	WIDTH	SPILLWAY	DEPTH	FREEBOARD
I.D.	(FT.)	(FT.)	(FT.)	(FT.)	LINING	(FT.)	(FT.)
	(A)	®	0	0	(E)	(E)	G G
Α	230.50	229.00	30	34.5	P300	0.50	1.00

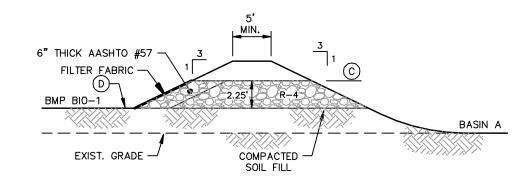
<sup>1.</sup> THE UPSTREAM EDGE OF THE SPILLWAY LINING IS TO EXTEND A MINIMUM OF 3 FEET BELOW THE SPILLWAY CREST ELEVATION AND THE DOWNSTREAM SLOPE OF THE SPILLWAY SHALL AS A MINIMUM EXTEND TO THE TOE OF THE EMBANKMENT.

BASIN EMERGENCY SPILLWAY CROSS-SECTION

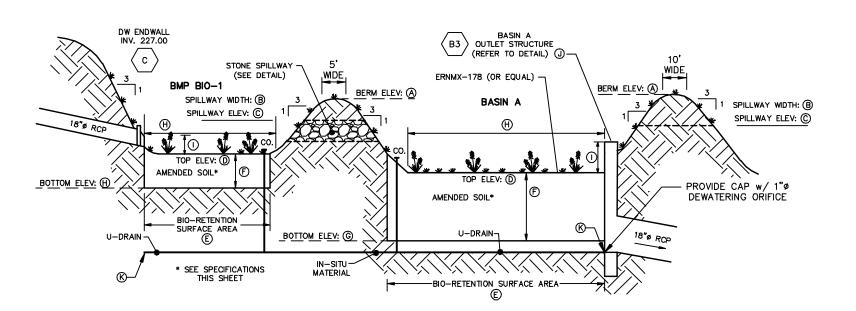


INFILTRATION BMP BIO-2 RAIN GARDEN



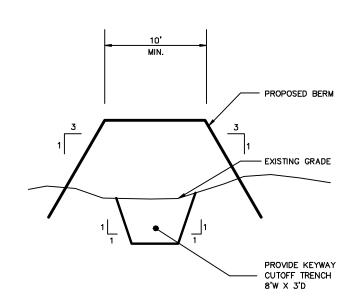


### SECTION THROUGH STONE SPILLWAY



### NOTE: LIMITS OF AMENDED SOIL TO BE STAKED IN THE FIELD PRIOR TO PLACEMENT FOR FINAL CONVERSION. BIO-RETENTION BASIN A AND BIO-RETENTION BIO-1 CROSS-SECTION DETAIL

SYSTEM NO.		SPILLWAY WIDTH SPILLWAY LINING B	SPILLWAY ELEV.	TOP ELEV.	AMENDED SOIL SURFACE AREA (E)	AMENDED SOIL DEPTH F	BOTTOM ELEV.	PONDING SURFACE AREA AT TOP ELEV. (H)	SURFACE STORAGE DEPTH	T.G.	U-DRAIN INV. (K)
BMP BIO-1	231.25	10 FT. N/A	229.25	227.00	1,675 S.F.	1.5 FT.	225.25	3,830 S.F.	1.5 FT.	_	225.33
BASIN A	230.50	30 FT. N.A.G. P300	229.00	226.20	3,265 S.F.	1.5 FT.	224.70	4,050 S.F.	0.75 FT.	228.50	225.33

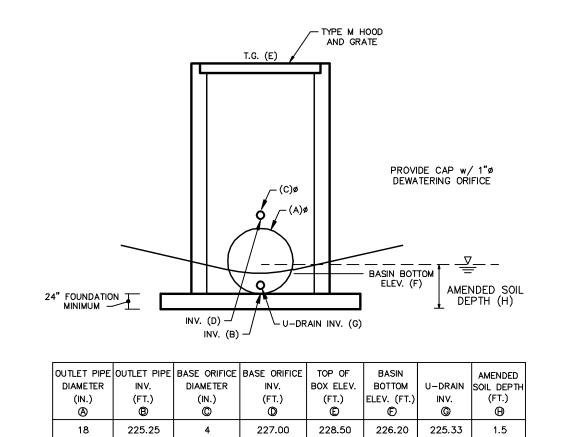


CONSTRUCTION NOTES: SITE PREPARATION — Areas under the embankment and any structural works shall be cleared, grubbed and the topsoil stripped to remove the trees, vegetation, roots, or objectionable material. In order to facilitate clean—out and other restoration, the

2. CUT OFF TRENCH — A cut—off trench will be excavated along the centerline dam on earth fill embankments. the minimum depth shall be 3 feet. The cut—off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be 8 feet but wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for embankment. The trench shall be kept free from standing water during backfilling operations.

 EMBANKMENT — The fill material shall be taken from selected borrow areas. It shall be free of roots, woody vegetation, oversized stones, rocks or other abjectionable material. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material should contain sufficient moisture so that it can be formed be hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction Fill material will be placed in 6 to 8 inch layers and shall be continuous over the entire length of the fill. Compaction will be obtained by routing earthmoving equipment and vibratory roller compactors over the fill so that the entire surface of the fill is traversed but at least one tread track of the equipment and compactor drum. The embankment shall be constructed to an elevation of 5% higher than the design height to allow for settlement.

BASIN BERM CONSTRUCTION DETAIL



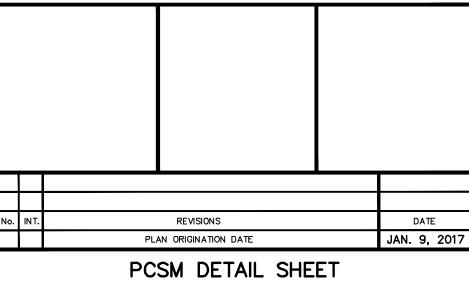
BASIN 'A' OUTLET STRUCTURE

### WOODLAND AVENUE TRACTS - IMPERVIOUS COVER CHART 1/9/2017

LOTNO	PROP. LOT AREA (S.F.)	APPROX. BUILDING FOOTPRIN T (S.F.)	BLDG. COV.	DRIVE (S.F.)	PATIO/DEC K (S.F.)	SIDEWALK (S.F.)	PORCH & SERVICE WALK (S.F.)	ADDITIONAL IMPERVIOUS (S.F.)	TOTAL IMP. COV.* (S.F.)	IMP. COV.
1	44,524	2,025	4.5%	2230	200	0	115	1,800	6,370	14.3%
2	29,262	2,025	6.9%	1200	200	0	115	1,800	5,340	18.2%
3	26,599	2,025	7.6%	1310	200	225	115	1,800	5,675	21.3%
4	26,522	2,025	7.6%	1310	200	300	115	1,800	5,750	21.7%
5	26,513	2,025	7.6%	1310	200	300	115	1,800	5,750	21.7%
6	26,003	2,025	7.8%	1660	200	220	115	1,800	6,020	23.2%
7	25,034	2,025	8.1%	1450	200	0	115	1,800	5,590	22.3%
8	33,891	2,025	6.0%	1830	200	0	115	1,800	5,970	17.6%
9	25,820	2,025	7.8%	1420	200	0	115	1,800	5,560	21.5%

TOTAL OVER THE LOTS	264,168				52,025	19.7%
ROADS & SIDEWALK IN ROAD 'A' R/W AREA					34,865	
	TOTAL SITE AREA (TO TITLE LINE)					
TOTAL IMP. FOR THE SITE	326,876				86,890	26.6%

<sup>\*</sup> This chart is used to document the impervious surface used in the design calculations for stormwater management. Actual building footprint, porch/service walk, patio/deck and driveway areas submitted as part of the building permit plan may deviate from



WOODLAND AVENUE TRACTS

THE GAMBONE FAMILY

SITE SITUATE IN LOWER PROVIDENCE TOWNSHIP

MONTGOMERY COUNTY, PENNSYLVANIA



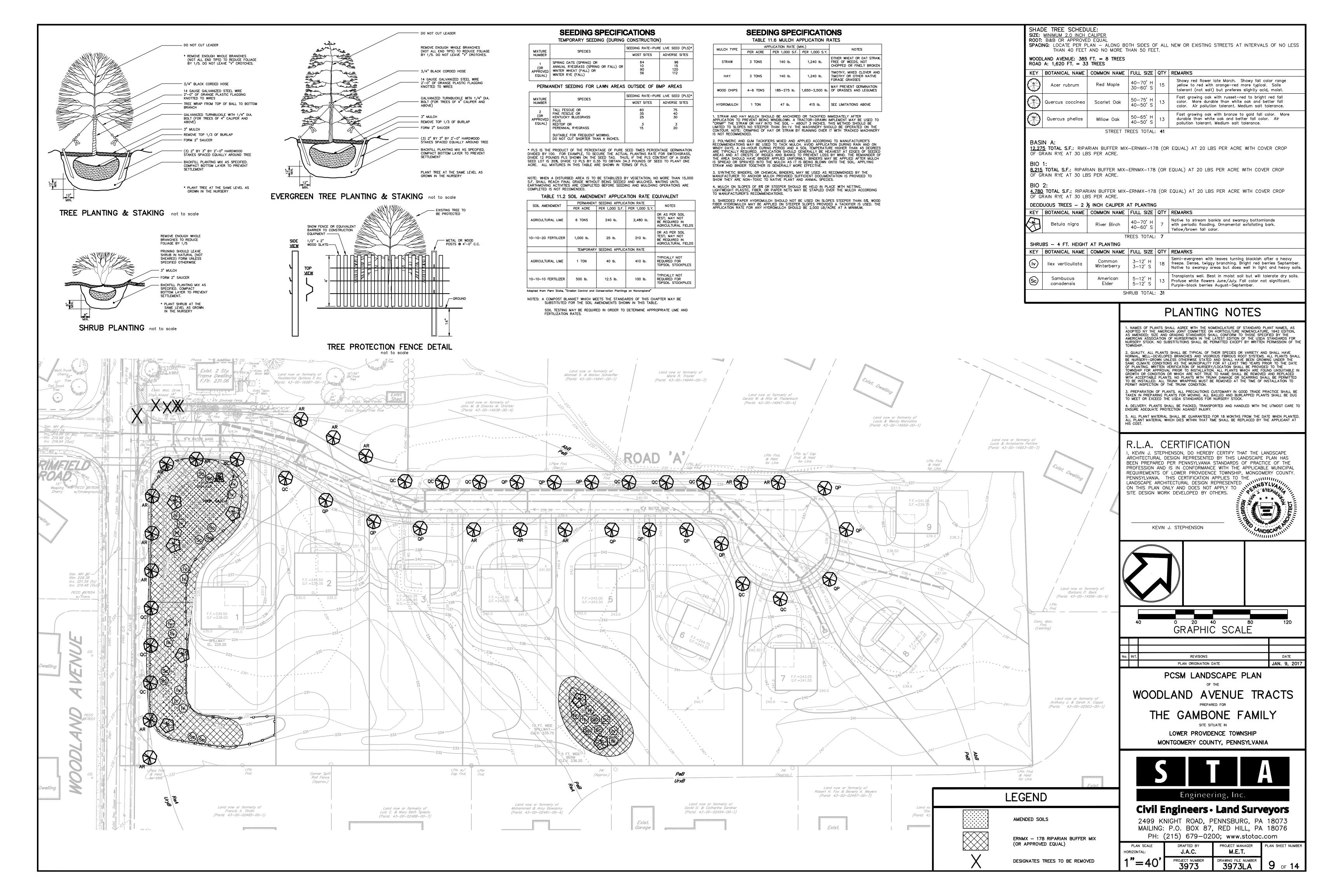
**Civil Engineers • Land Surveyors** 2499 KNIGHT ROAD, PENNSBURG, PA 18073

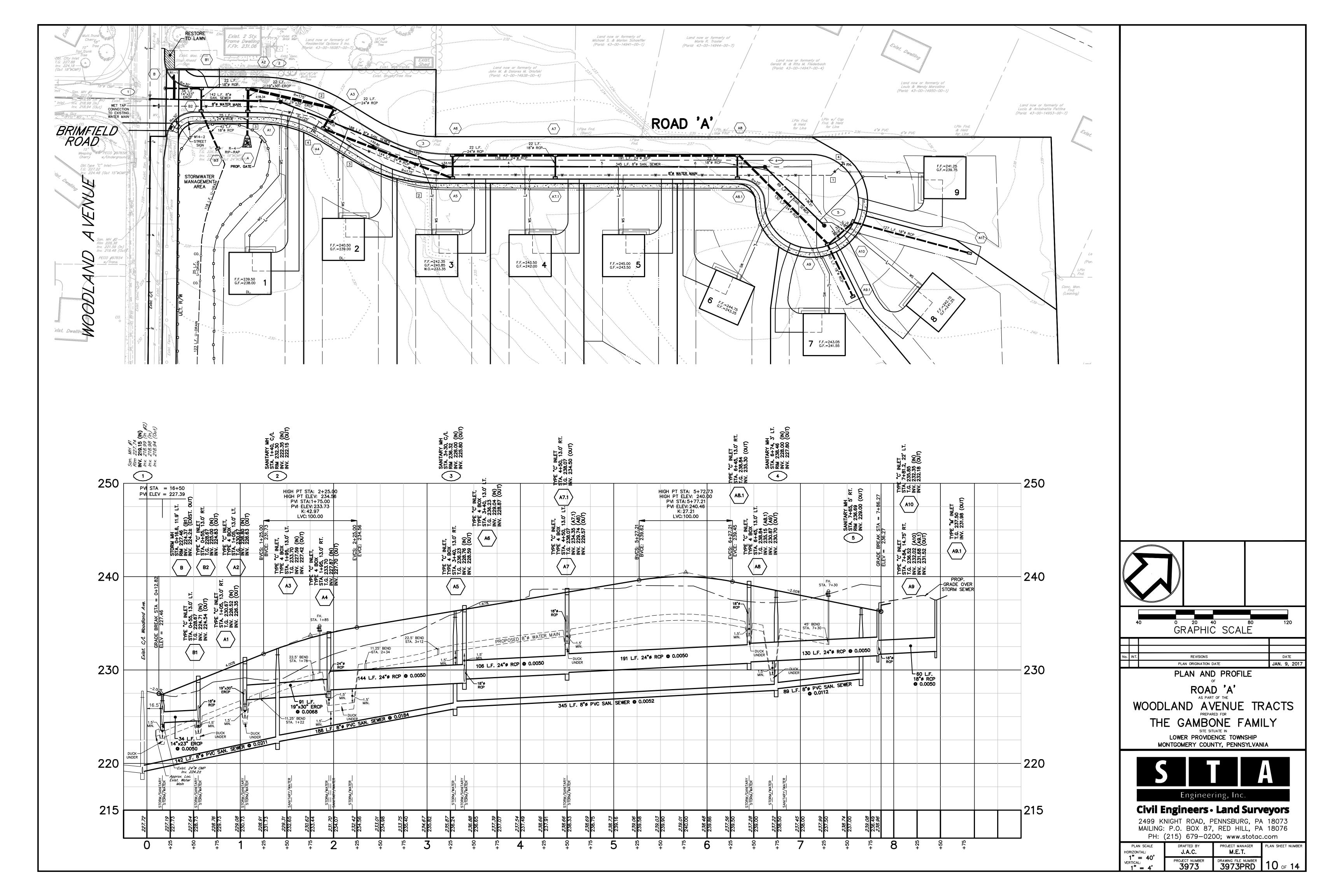
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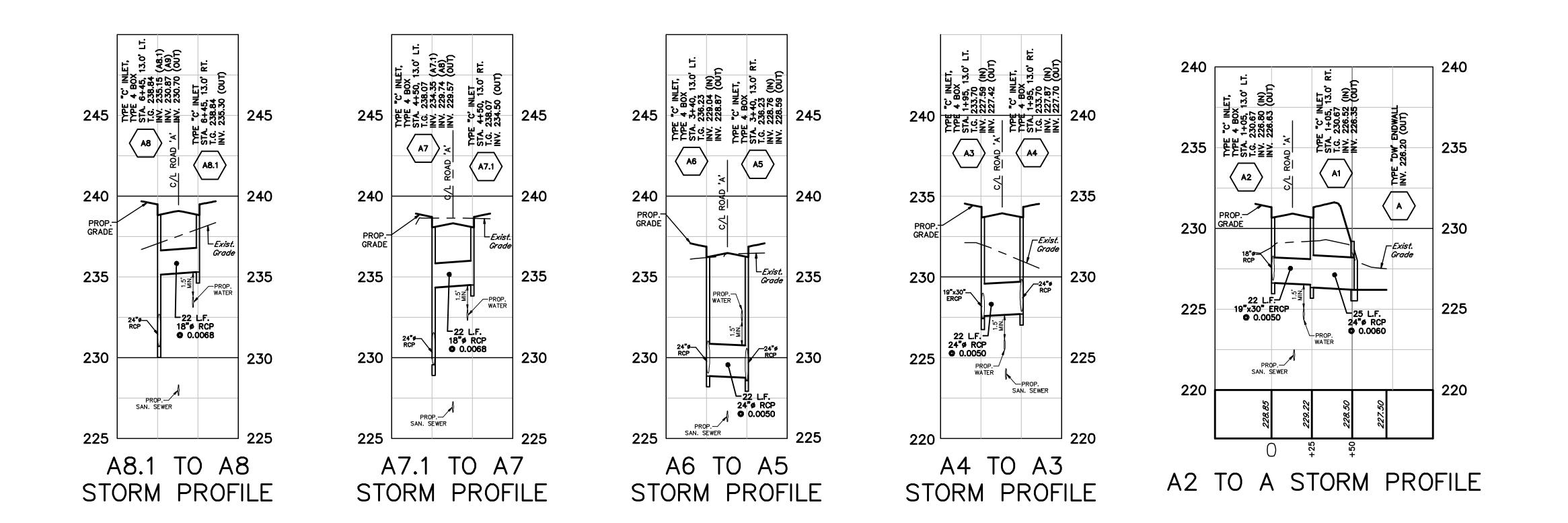
PLAN SHEET NUMBER M.E.T. J.A.C. HORIZONTAL: DRAWING FILE NUMBER 3973DET 3973

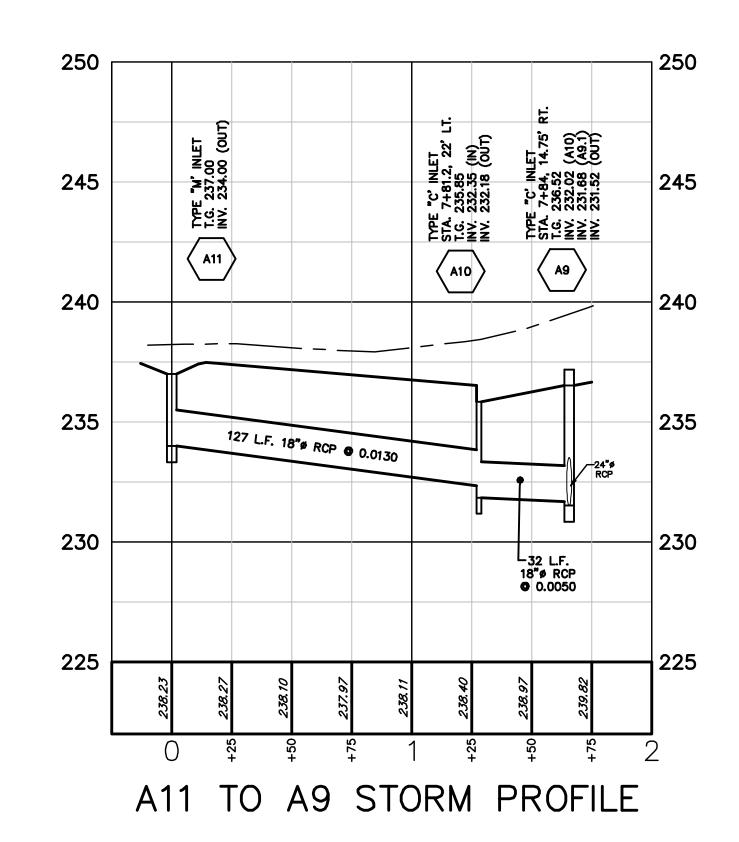
<sup>2.</sup> SPILLWAY SHALL BE PERMANENTLY SEEDED IN ACCORDANCE WITH SPECIFICATIONS ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEET.

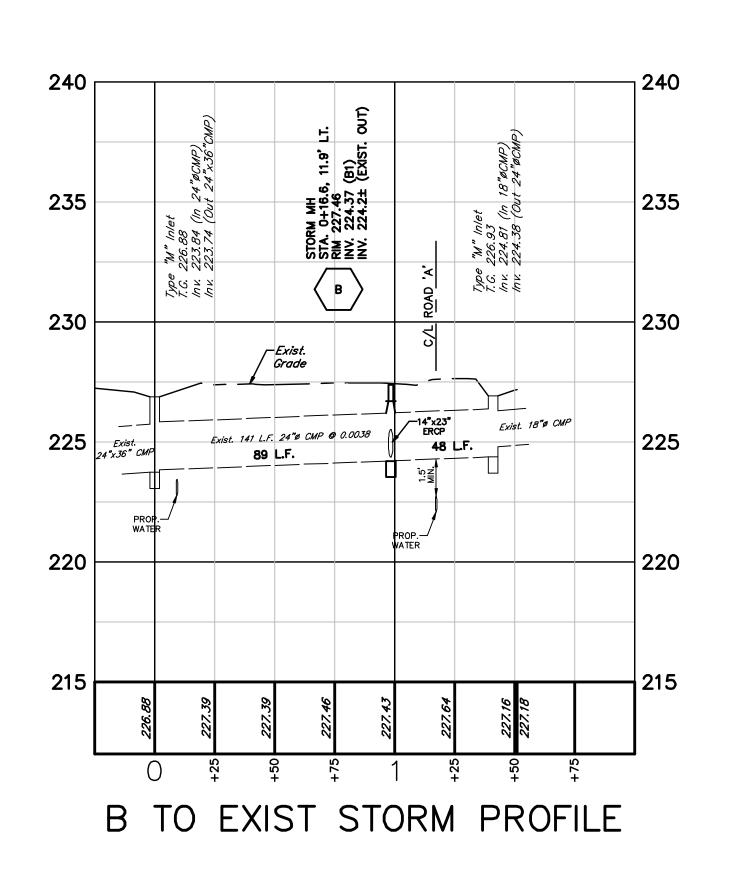
<sup>3.</sup> SPILLWAY LINING TO BE PERMANENT SPECIFIED N.A.G. LINING OR APPROVED EQUAL.

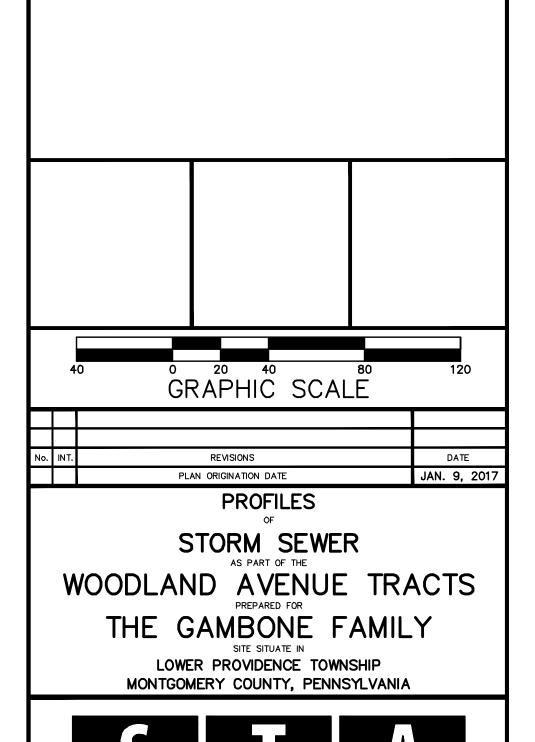












Engineering, Inc.

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M.E.T.

TRAWING FILE NUMBER 3973PSTM 11 OF 14

J.A.C.

PROJECT NUMBER 3973

HORIZONTAL:

1" = 40'
VERTICAL:
1" = 4'

