PLANTING NOTES

1. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS SHOWN ON THE THE DRAWINGS, AS SPECIFIED, AND IN QUANTITIES INDICATED ON THE PLANT LIST.
2. ALL PLANTS SHALL BE NURSERY GROWN.
3. ALL PLANTS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION.
4. 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 FREE OF DISEASE AND INSECT PESTS, EGGS OR LARVAE. THEY SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS.
5. 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 OWNER OR HIS REPRESENTATIVE AND THE TOWNSHIP. CONTRACTOR SHALL NOTIFY THE OWNER, IN WRITING OF ANY PLANT MATERIALS WHICH THEY FEEL WILL NOT BE AVAILABLE OR LIKELY TO THRIVE IN THE LOCATIONS INDICATED ON THE PLAN.
6. MEASUREMENT: DIMENSIONS OF TREES AND SHRUBS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION.
7. SIZE: ALL PLANTS SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE PLANT LIST, UNLESS AUTHORIZED IN WRITING BY AND THE TOWNSHIP LANDSCAPE ARCHITECT/ENGINEER.
8. 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 & WHOLE. NO PLANTS SHALL BE LOOSE IN THE CONTAINER.
9. PLANT MATERIALS NOT PLANTED THE DAY OF DELIVERY ARE TO BE HEALED IN SO THAT ROOT SYSTEMS ARE PROTECTED FROM THE DRYING FORCES OF THE WIND AND SUN. TEMPORARY WATER SYSTEMS ARE TO BE USED FOR PLANT MATERIALS WHICH WILL BE STORED FOR MORE THAN ONE WEEK.
10. THE TOWNSHIP LANDSCAPE ARCHITECT/ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING PLANTING OPERATIONS, IN WRITING.
11. PLANTS WITH DAMAGED OR BROKEN ROOT BALLS OR EXCESSIVE DAMAGE TO THE CROWN AS DETERMINED BY THE TOWNSHIP LANDSCAPE ARCHITECT/ENGINEER WILL NOT BE ACCEPTED AND ARE TO BE REMOVED FROM THE SITE AND REPLACED WITH ACCEPTABLE MATERIAL.
12. TREE STAPLING SHALL BE INSTALLED ACCORDING TO THE PLANTING DETAILS. TREE STAPLES SHALL BE INSTALLED ON ALL DECIDUOUS AND EVERGREEN TREES. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ASSURING THAT TREES ARE MAINTAINED STRAIGHT AND UPRIGHT THROUGHOUT THE GUARANTEE PERIOD. THE TREE STAPLES REMAIN INSTALLED AS THEY WILL DETERIORATE WITHIN THE SUBGRADE.
13. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA) STANDARDS TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ONLY DEAD WOOD OR SUCKERS AND ALL BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED AT TIME OF PLANTING. TREES AND SHRUBS ARE TO BE PRUNED ONE YEAR AFTER PLANTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PRUNE TREES AND SHRUBS AT THE APPROPRIATE TIME.
14. MULCH FOR TREES, SHRUBS AND GROUND COVER SHALL BE FINELY SHREDDED OAK BARK, DARK BROWN IN COLOR: AGED AT LEAST ONE YEAR AND CLEAN AND FREE OF WEEDS. PRE-EMERGENT WEED KILLER SHALL BE 'TREFLAN' OR APPROVED EQUAL. APPLY WEED KILLER TO TOPSOIL PRIOR TO MULCHING BED PLANTINGS. ALL SHRUBS TO BE PLANTED IN CONTINUOUS BEDS UNLESS OTHERWISE NOTED. ALL SHRUB BEDS TO RECEIVE 3" DEEP CONTINUOUS MULCH COVER. MULCH MAY NOT TOUCH THE TRUNKS OF TREES OR THE MAIN STEMS OF SHRUBS.
15. TREES IN LEAF WHEN PLANTED SHALL BE TREATED WITH ANTI-DESICANT SUCH AS WILT-PROOF.
16. PREPARATION OF PLANTING SOIL - BEFORE MIXING, CLEAN TOPSOIL OF ROOTS, PLANTS, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL OR TOXIC TO PLANT GROWTH. SOIL (BACKFILL) FOR TREES, SHRUBS, AND GROUNDCOVER SHALL BE A MIXTURE BY VOLUME OF THE FOLLOWING MATERIALS IN QUANTITIES SPECIFIED: 20% PEAT MOSS, 75% TOPSOIL AND 5% ORGANIC MATTER. ADD AN ORGANIC FERTILIZER TO THE ABOVE MIXTURE AT THE RATES SPECIFIED BY THE MANUFACTURER, FOR NEW TREES AND SHRUBS.
17. WARRANT TREES AND SHRUBS FOR A PERIOD OF 12 MONTHS AFTER WRITTEN DATE OF ACCEPTANCE BY THE TOWNSHIP LANDSCAPE ARCHITECT AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. PLANTS THAT DIE DURING THE WARRANTY PERIOD SHALL BE REMOVED IMMEDIATELY. REPLACEMENTS SHALL BE PLACED UNDER WARRANTY AN ADDITIONAL 12 MONTH PERIOD. A PLANT SHALL BE CONSIDERED DEAD IF 25% OR MORE OF THE PLANT HAS DIED.
18. CONDITIONS DETRIMENTAL TO PLANTS: THE CONTRACTOR SHALL NOTIFY THE PROJECT REPRESENTATIVE AND THE TOWNSHIP ENGINEER IN WRITING OF ALL SOIL OR DRAINAGE CONDITIONS WHICH THE CONTRACTOR CONSIDERS DETRIMENTAL TO THE GROWTH OF PLANTS. HE 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.
19. MINOR ADJUSTMENTS TO TREE LOCATION MAY BE NECESSARY DUE TO FIELD CONDITIONS AND FINAL GRADING. THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP'S REPRESENTATIVE IF MAJOR ADJUSTMENTS ARE REQUIRED.
20. TOPSOIL SHALL BE REPLACED AT A THICKNESS OF APPROXIMATELY EIGHT (8) INCHES. MINIMUM OF SIX (6) INCHES IN ALL NEWLY ESTABLISHED LAWN AREAS AND A MINIMUM OF TWELVE (12) INCHES IN FOUNDATION PLANTING AREAS. THE MATERIAL MUST MEET THE REQUIREMENTS OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION FORM 408 SPECIFICATIONS, AS AMENDED. ANY EXCAVATED ROCK DUE TO LANDSCAPE INSTALLATION MUST BE DISPOSED OF OFF SITE.
21. THE CONTRACTOR SHALL CONTACT THE TOWNSHIP IN WRITING TO REQUEST A FINAL INSPECTION FOR ACCEPTANCE AT THE END OF THE GUARANTEE PERIOD. THESE INSPECTIONS WILL BE PERFORMED WHEN MATERIALS ARE IN FULL LEAF ONLY (MAY 1 THROUGH NOVEMBER 15). ALL GUARANTEE ESCROW FUNDS WILL BE RELEASED UPON ACCEPTANCE AT THE END OF THE GUARANTEE PERIOD. THE GUARANTEE WILL BE EXTENDED UNTIL THIRTY (30) DAYS AFTER RECEIPT OF THE REQUEST LETTER FOLLOWING MAY 1. SHOULD THE END OF THE GUARANTEE PERIOD OCCUR AFTER NOVEMBER 15, THE GUARANTEE SHALL BE EXTENDED TO MAY 15.
22. PERMANENT SEED MIX SHALL BE AS NOTED ON EROSION AND SEDIMENTATION NOTES. THE FALL PLANTING SEASON SHALL EXTEND FROM SEPTEMBER 1 TO OCTOBER 15. THE SPRING PLANTING SEASON SHALL EXTEND FROM APRIL 1 TO MAY 15.

CONSTRUCTION NOTES

1. WORK IN THE SITEWORK CONSTRUCTION CONTRACT INCLUDES ALL LABOR, MATERIALS EQUIPMENT, AND SERVICES NECESSARY FOR THE CIVIL CONSTRUCTION. WORK SHALL BE DEFINED IN THE CIVIL (C-SERIES) AND HIGHWAY OCCUPANCY PERMIT (HOP) DRAWINGS, AS DESCRIBED IN THE GENERAL CONDITIONS AND SPECIFICATIONS DIVISIONS 01, 31, 32, AND 33. WORK OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
   - 1.1. SITE PREPARATION, INCLUDING CLEARING, EARTHWORK, DEMOLITION, AND GRADING.
   - 1.2. IMPORT AND/OR EXPORT OF FILL MATERIAL.
     - 1.2.1. THIS INCLUDES LOADING, HAULING, INSTALLATION, IMPORT, EXPORT, AND DISPOSAL OF FILL MATERIAL LOCATED ON THE FARM PROPERTY ACROSS MOYER ROAD AT THE EVANS SITE.
     - 1.2.2. THIS INCLUDES IMPORT OF FILL MATERIAL TO THE EVANS SITE, AND EXPORT OF FILL MATERIAL FROM THE GILBERTSVILLE SITE. SITE CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY STOCKPILING APPROXIMATELY 3,800CY OF MATERIAL AND THE APPROPRIATE E&S MEASURES AT THE GILBERTSVILLE SITE AS SHOWN ON THE CVE CIVIL PLANS. IN LATE FALL OR WINTER, AS DIRECTED BY THE CONSTRUCTION MANAGER, THE SITE CONTRACTOR IS RESPONSIBLE FOR LOADING, HAULING AND DUMPING ALL MATERIAL TO 370 EVANS ROAD, POTTSTOWN, PA.
   - 1.3. SITE IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, ROADWAYS, PARKING LOTS, PEDESTRIAN PAVING WHERE NOT ASSIGNED TO THE GC, SITE DEVELOPMENT FURNISHINGS, EQUIPMENT, AND LANDSCAPING. ALL CURBS, ISLANDS, ACCESS ROADS, RETAINING WALLS, FENCING, OPERABLE GATES, RAIN GARDENS, UTILITY INSTALLATION UP TO WITHIN 5 FEET OF THE BUILDING.
   - 1.4. ESTABLISHMENT OF BUILDING PAD TO BE PROVIDED AT FINISH FLOOR MINUS CONCRETE STAB AND STONE THICKNESS.
   - 1.5. SANITARY, STORM, AND WATER PIPING TO WITHIN 5 FEET OUTSIDE THE BUILDING FOOTPRINT, INCLUDING EXCAVATION, PATCHING IF REQUIRED, AND BACKFILL.
   - 1.6. AQUA AMERICA WILL INSTALL THE PROPOSED COPPER WATER SUPPLY PIPE, LOCATED BETWEEN THE CONNECTION WITH THE MAIN AND THE PROPOSED WATER METER, ALONG WITH MAKING THE CONNECTION AT THE MAIN. THE SITE CONTRACTOR SHALL PERFORM ALL OTHER WATER RELATED UTILITY WORK IN SUPPORT OF AQUA AMERICA'S WORK INCLUDING BUT NOT LIMITED TO: ROADWAY AND NON-ROADWAY EXCAVATION/REPAIR, METER PIT/BACKFLOW PREVENTER INSTALLATION, AND ALL ON SITE WATER COMPONENTS. SITE CONTRACTOR WILL BE RE-SPONSIBLE FOR ALL SAW CUTTING, TRENCH EXCAVATION, BACKFILLING OF TRENCH, AND RESTORE EITHER IN GRASS OR PAVED AREAS FROM THE MAIN CONNECTION TO THE METER PIT. THE SITE CONTRACTOR IS RESPONSIBLE FOR FULL INSTALLATION METHODS OF THE WATER FROM THE METER PIT TO 5 FEET FROM THE BUILDING
2. 2. THE PUBLIC WORKS AND IMPOUND BUILDINGS, ALONG WITH THE ASSOCIATED ENTRY DRIVE AND PARKING LOT, ARE DESIGNATED AS ALTERNATE BID ITEMS; HOWEVER, ALL UTILITIES, STORMWATER MANAGEMENT FACILITIES, AND FINAL GRADING SHALL BE COMPLETED AS PART OF THE BASE BID.
3. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WITHIN THE WORK AREA BEFORE THE START OF CONSTRUCTION. IF A CONFLICT EXISTS, CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY, FOR RESOLUTION.
4. COST OF BUILDING REPAIRS ASSESSED TO CONTRACTOR RESPONSIBLE FOR BUILDING & FACADE DAMAGE DURING CONSTRUCTION.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT SEALED DRAWINGS AND CALCULATIONS FOR THE RETAINING WALL TO THE TOWNSHIP AND LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. ALL SUCH DOCUMENTS SHALL BE SEALED BY A PENNSYLVANIA-LICENSED STRUCTURAL ENGINEER.

DEMOLITION NOTES:

1. REMOVAL OF EXISTING SANITARY INCLUDES THE REMOVAL OF THE ENTIRE SEPTIC SYSTEM AND ANY UNSUITABLE SOILS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WITHIN THE WORK AREA BEFORE THE START OF CONSTRUCTION. IF A CONFLICT EXISTS, CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY.
3. IF REQUIRED, CONTRACTOR IS RESPONSIBLE FOR GRADE ADJUSTMENT OF ALL SURFACE UTILITIES, INCLUDING BUT NOT LIMITED TO VALVES, LIDS, GRATES, RIMS, CAPS, STORM AND SANAITARY STRUCTURES WITHIN THE LIMITS OF WORK. GRADE ADJUSTMENTS SHALL BE MADE PRIOR TO THE INSTALLATION OF PAVEMENT WEARING COURSE OR PLACEMENT OF TOPSOIL IN UNPAVED AREAS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL EXISTING FEATURES WHICH ARE DAMAGED DURING CONSTRUCTION AND ARE INDICATED TO REMAIN.
5. REMOVAL OF EXISTING PAVED SURFACES INCLUDES THE REMOVAL OF CRUSHED STONE BASE MATERIALS.
6. DEMOLITION OF TREES AND OTHER VEGETATION INCLUDES REMOVAL OF ALL STUMPS AND ROOT SYSTEMS WITHIN 24" OF EXISTING GRADE.

GRADING NOTES:

1. ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS.
2. ADA RAMP TO EXISTING RESIDENCE IS AN ALTERNATE ITEM. IF NOT SELECTED, A 3:1 FILL SLOPE AND SWALE AT BUILDING SHALL BE INSTALLED AS PART OF THE BASE BID.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTING SITE AND SUBSURFACE CONDITIONS PRIOR TO PROCEEDING AND WHILE PROGRESSING WITH THE WORK.
4. CLASSIFICATION OF EXCAVATION: IF ROCK AS HEREIN DEFINED, IS ENCOUNTERED WITHIN THE LIMITS OF EXCAVATION, THE CONTRACT PRICE WILL BE ADJUSTED UPON AN AGREED UNIT PRICE PER CUBIC YARD AND INFORM THE TOWNSHIP REPRESENTATIVE IMMEDIATELY. ROCK EXCAVATION WILL CONSIST OF THE REMOVAL AND DISPOSAL OF BOULDERS ONE CUBIC YARD OR MORE IN VOLUME; SOLID ROCK; MATERIALS THAT CANNOT BE REMOVED WITHOUT SYSTEMATIC DRILLING AND BLASTING SUCH AS ROCK MATERIAL IN LEDGES OR AGGREGATE CONGLOMERATE DEPOSITS THAT ARE SO FIRMLY CEMENTED AS TO POSSESS THE CHARACTERISTICS OF SOLID ROCK; AND CONCRETE OR MASONRY STRUCTURES EXCEEDING ONE CUBIC YARD IN VOLUME, EXCEPT SIDEWALKS AND PAVING.
5. HARD AND COMPACT MATERIALS SUCH AS CEMENTED-GRAVEL, GLACIAL TILL, AND RELATIVELY SOFT OR DISINTEGRATED ROCK THAT CAN BE REMOVED WITHOUT CONTINUOUS AND SYSTEMATIC DRILLING AND BLASTING WILL NOT BE CONSIDERED AS ROCK EXCAVATION. ROCK EXCAVATION WILL NOT BE CONSIDERED SUCH BECAUSE OF INTERMITTENT DRILLING AND BLASTING THAT IS PERFORMED MERELY TO INCREASE PRODUCTION. EXCAVATION OF THE MATERIAL CLAIMED AS ROCK WILL NOT BE PERFORMED UNTIL THE MATERIAL HAS BEEN CROSS-SECTIONED AND CLASSIFIED BY THE ENGINEER.
6. ALL PROPOSED SLOPES SHALL BE ROUNDED INTO THE EXISTING TERRAIN TO PRODUCE A CONTOURED TRANSITION FROM CUT OR FILL FACES TO NATURAL GROUND AND ABUTTING CUT OR FILL SURFACES.
7. ALL PROPOSED CONTOUR GRADES AND SPOT ELEVATIONS SHOWN ARE TO TOP OF PAVING, FINISHED FLOOR OR FINISH GRADE IN LANDSCAPED AREAS.

PA ONE CALL OWNERS LIST:

COMPANY:COMCAST
ADDRESS:1250 HADDONFIELD-BERLIN RD.
CHERRY HILL, NJ. 08034
CONTACT:WYATT PARRISH
EMAIL:WYATT_PARRISH@CABLE.COMCAST.COM
PHONE:484-368-4391

COMPANY:AQUA PENNSYLVANIA
ADDRESS:762 LANCASTER AVE.
BRYN MAWR, PA. 19010
CONTACT:THOMAS WADDY
EMAIL:TBWADDY@AQUAAMERICA.COM
PHONE:610-525-1400 EXT. 52105

COMPANY:PECO AN EXELON COMPANY C/O USIC
ADDRESS:450 S HENDERSON ROAD SUITE B
KING OF PRUSSIA, PA. 19406
CONTACT:NIKKIA SIMPKINS
EMAIL:NIKKIASIMPKINS@USICLLC.COM
PHONE:484-681-5720

COMPANY:FIRSTENERGY CORPORATION
ADDRESS:21 S MAIN ST.
AKRON, OH. 44308
CONTACT:MELLYSSA ADAMS
EMAIL:MADAMS@FIRSTENERGYCORP.COM
PHONE:330-604-4073

COMPANY:UGI UTILITIES INC
ADDRESS:225 MORGANTOWN RD.
READING, PA. 19611
CONTACT:KURT ZIELASKOWSKI
EMAIL:KZIELASKOWSKI@UGI.COM
PHONE:610-736-5571

COMPANY:UPPER POTTSGROVE TOWNSHIP
ADDRESS:1409 FARMINGTON AVE.
POTTSTOWN, PA. 19464
CONTACT:KEVIN SNYDER
EMAIL:PUBLICWORKS@UPTOWNSHIP.ORG
PHONE:610-326-9938

LEGENDS

PROPOSED GRADING FEATURES

- PROPOSED SPOT ELEVATION (× 443.50)
- PROPOSED SLOPE (2%)
- PROPOSED 1' CONTOURS (443)
- PROPOSED 5' CONTOURS (445)

PROPOSED STORMWATER FEATURES

- PROPOSED STORM PIPE
- PROPOSED YARD DRAIN
- PROPOSED TYPE 'M' INLET BOX
- PROPOSED TRENCH DRAIN
- PROPOSED STORM MANHOLE
- PROPOSED FLARED END SECTION & RIPRAP APRON

PROPOSED LANDSCAPING FEATURES

- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUB
- PROPOSED PERENNIAL & GRASS

LIGHTING LEGEND

- SITE LIGHT POLE
- ORNAMENTAL LIGHT POLE
- WALL SCONCE LIGHT
- BOLLARD LIGHT
- 2" PVC ELECTRIC CONDUIT (c)
- ELECTRIC PULL BOX

PROPOSED UTILITY FEATURES

- PROPOSED WATER LINE (W)
- PROPOSED SANITARY LINE (S)
- PROPOSED ELECTRIC LINE (E)
- PROPOSED DATA LINE (T)
- PROPOSED GAS LINE (G)
- PROPOSED XFMR VAULT
- PROPOSED GENERATOR (G)
- PROPOSED PROPANE TANK (LP)

EXISTING FEATURES

- EXISTING 1' CONTOURS (201)
- EXISTING 5' CONTOURS (205)
- EXISTING SPOT ELEVATION (× 212.20)
- EXISTING PROPERTY BOUNDARY
- EXISTING RIGHT OF WAY (LEGAL R/W)
- BUILDING SETBACK
- EXISTING FENCE LINE (x x x x x x x)
- EXISTING EDGE OF PAVING (E.O.P.)
- SOILS LINE AND DESCRIPTION (EcB2 / BdA)
- EXISTING OVERHEAD WIRES (OH)
- EXISTING WATER LINE (W)
- EXISTING HDPE PIPE
- EXISTING WETLAND BOUNDARY (WL)
- EXISTING FIRE HYDRANT
- EXISTING INLETS
- EXISTING UTILITY POLE
- EXISTING TRAFFIC CONTROL SIGNS
- INFILTRATION TESTING LOCATION (TP1)
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EDGE OF BRUSH
- EXISTING MANHOLE (SAN, STORM, GAS, WATER, WATER, ELECTRIC, TELEPHONE, ETC.)
- STEEP SLOPES 15-->

PROPOSED DEMOLITION FEATURES

- EXISTING PAVING TO BE DEMOLISHED
- EXISTING PLANTS TO BE DEMOLISHED

PROPOSED SITE FEATURES

- PROPOSED STANDARD BITUMINOUS PAVEMENT
- PROPOSED STANDARD BITUMINOUS PAVEMENT (ALT. ITEM)
- PROPOSED HEAVY DUTY BITUMINOUS PAVEMENT (ALT. ITEM)
- FUTURE STANDARD BITUMINOUS PAVEMENT (N.I.C.)
- PROPOSED CONCRETE PAVING
- PROPOSED BUILDING
- PROPOSED PARKING OVERHANG
- PROPOSED PATIO
- PROPOSED PAVEMENT MARKING
- PROPOSED FENCE/GATE
- PROPOSED SPARE CONDUIT
- PROPOSED DRIVE PAVEMENT MARKING
- PROPOSED DUMPSTER
- PROPOSED SIGN
- PROPOSED WHEEL STOP
- PROPOSED HANDICAP MARKING
- PROPOSED BOLLARD
- PROPOSED FLAG POLE
- PROPOSED PARKING STALL QUANTITY (1)
- FUTURE E.V. CHARGING STATION
- PROPOSED POLICE PARKING ACCESS KEY PAD

PROPOSED E&S FEATURES

- PROPOSED CONSTRUCTION ENTRANCE
- PROPOSED CONCRETE WASHOUT
- PROPOSED TEMPORARY TOPSOIL STOCKPILE
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED LIMIT OF DISTURBANCE (LOD)
- NPDES PROJECT SITE AREA
- PROPOSED TREE PROTECTION FENCE/ ORANGE CONSTRUCTION FENCE
- PROPOSED COMPOST FILTER SOCK
- DURING CONSTRUCTION DRAINAGE AREA TO BMPs
- PROPOSED INLET PROTECTION
- PROPOSED TEMPORARY INLET SEAL
- DISCHARGE POINT (SP 001)

ITEMS INCLUDED IN 04/11/2025 REVISIONS:

- LIGHTING LEGEND ITEMS ADDED

ITEMS INCLUDED IN 05/01/2025 REVISIONS:

- DURING CONSTRUCTION DRAINAGE AREA TO BMPs ITEM ADDED TO THE PROPOSED E&S FEATURES LEGEND.

NOTES

NO.	DATE	REVISION
02	05/01/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025
01	04/11/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX
2290 GILBERTSVILLE ROAD
UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervalley.com

PROJECT NO. 22096-2000

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
As Noted	03/31/2025	HL	AG	F.B.

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

PENNSYLVANIA ACT 187 REQUIREMENTS
UNDERGROUND UTILITIES SERIAL NO(s). 20243300770
CHESTER VALLEY ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS, NOR DOES CHESTER VALLEY ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START OF WORK.

EXCAVATIONS, TRENCHING, AND SHORING
ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PUBLICATIONS OR THE LATEST REVISIONS THERETO:

(1) CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS (OSHA 2207), SUBPART "P", PART 1926/1910 – "EXCAVATIONS, TRENCHING AND SHORING".

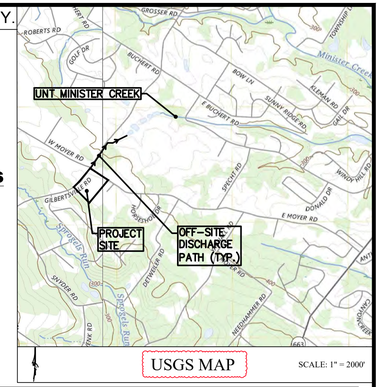
(2) "EXCAVATIONS AND TRENCHING OPERATIONS" (OSHA 2226) DATED 1985 (REVISED).

PENNSYLVANIA ONE CALL SYSTEM, INC.
CALL 3 WORKING DAYS BEFORE YOU DIG
1-800-242-1776
POCS SERIAL NUMBER: 20243300770

SEE SHEET 02 FOR FACILITY OWNER'S DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.

THIS PLAN IS FOR EROSION & SEDIMENTATION CONTROL PURPOSE ONLY.

SURFACE WATER FROM THE SITE ENTERS AN UNNAMED TRIBUTARY OF MINISTER CREEK (TSF–MF)



USGS MAP SCALE: 1" = 2000'

NPDES PROJECT SITE IMPERVIOUS AREAS

EX. BUILDING	1,804 S.F.
EX. CONCRETE SURFACES*	907 S.F.
EX. STONE DRIVEWAY	1,650 S.F.
EX. ROAD	16,998 S.F.
TOTAL PRE-CONSTRUCTION IMPERVIOUS	21,359 S.F. (0.49 ACRES)
*INCLUDES :CONCRETE PAD, WALKWAY, AND STEPS	
PROP. ASPHALT DRIVEWAY/PARKING/TRAIL	45,864 S.F.
PROP. CONCRETE SURFACES	6,634 S.F.
PROP. BUILDINGS	22,823 S.F.
PROP. STONE	164 S.F.
TOTAL PROPOSED IMPERVIOUS	75,485 S.F. (1.73 ACRE)
TOTAL POST CONSTRUCTION IMPERVIOUS	94,287 S.F. (2.16 ACRE)

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, TOWNSHIP ENGINEER/INSPECTOR, MONTGOMERY COUNTY CONSERVATION DISTRICT AND LICENSED PROFESSIONAL ENGINEER OR DESIGNEE TO AN ON-SITE PRE-CONSTRUCTION MEETING.

UPON INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE TOWNSHIP.

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 SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED BY THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP, EXCEPT WHERE NOTED.

UPON COMPLETION OR TEMPORARY CESSATION OF EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

1. FIELD DELINEATE LIMITS OF DISTURBANCE PRIOR TO EARTH MOVING ACTIVITIES.
2. PLACE ALL FILTER SOCKS SHOWN ON THE PLANS AT THE TOE/DOWNSIDE OF EXISTING/PROPOSED SLOPES (PARALLEL WITH EXISTING CONTOURING, PERPENDICULAR WITH EXISTING SLOPES AND AT TERMINUS ENDS).
3. PLACE THE ROCK CONSTRUCTION ENTRANCE. INSTALL FILTER SOCKS AND PERFORM SITE GRADING WITHIN THIS AREA, ONLY AS NEEDED TO INSTALL THE CONSTRUCTION ENTRANCES. INSTALL FILTER SOCKS #13 AND #14 ALONG THE EDGE OF PAVING ON GILBERTSVILLE ROAD TO FACILITATE THE EFFICIENT REMOVAL OF THE EXISTING DRIVEWAY.
4. THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL ENSURE THAT ALL SITE STORM WATER, INCLUDING THAT COMING OFF OF THE ROCK CONSTRUCTION ENTRANCE (RCE), IS DIRECTED INTO AN E&S CONTROL BMP.
5. INSTALL ORANGE CONSTRUCTION FENCE PRIOR TO ANY EARTH DISTURBANCE WITHIN AREAS OF PROPOSED STORMWATER MANAGEMENT FACILITIES TO PREVENT SOIL COMPACTION AS SHOWN ON THE PLAN.
6. MARK AND INSTALL TEMPORARY TOPSOIL/SOIL STOCKPILE AND CONCRETE WASH AREAS AND FINISH INSTALLING ALL EROSION AND SEDIMENTATION CONTROL MEASURE.
7. PERFORM SITE DEMOLITION PER DEMOLITION PLAN AND NOTES.
8. RELOCATE FILTER SOCKS #13 AND #14 TO THE DESIGNATED AREA SHOWN ON THIS PLAN.
9. STRIP AND STORE TOPSOIL AT DESIGNATED TEMPORARY TOPSOIL STOCKPILE LOCATION.
10. EXCAVATE FOR BUILDING FOUNDATION, SEWER MAIN (INCL. MANHOLE), ASPHALT PAVING, SIDEWALKS, CULVERT, DRAIN BASIN, ALL PIPES, SWALES AND INCIDENTALS.
11. THE CONTRACTOR RESPONSIBLE FOR TEMPORARILY STOCKPILING APPROXIMATE 3,600 CY OF MATERIAL AND THE APPROPRIATE E&S MEASURES AT THE GILBERTSVILLE SITE AS SHOWN ON THE E&S PLAN. IN LATE FALL OR WINTER, SITE CONTRACTOR IS RESPONSIBLE FOR LOADING, HAULING AND DUMPING ALL MATERIAL AT 370 EVANS ROAD, POTTSTOWN, PA. A SEPARATE CONTRACTOR SHALL BE RESPONSIBLE FOR SPREADING AND COMPACTING MATERIAL
12. CONSTRUCT BUILDINGS AND ALL ARCHITECTURAL ELEMENTS.
13. INSTALL SEWER MAIN AND MANHOLES AND CONNECT TO EXISTING SEWER LATERAL.
14. PERFORM AND FINISH ALL SITE GRADING INCLUDING; SUB-BASE FOR PARKING LOT, CONCRETE PADS AND WALKWAYS.
15. INSTALL ALL PROPOSED UTILITIES, EXCLUDING STORM SEWER PIPING AND STRUCTURES WITHIN LIMITS OF STORMWATER MANAGEMENT FACILITIES BMP#1 AND BMP#2. ALL INLETS INSTALLED DURING THIS STEP SHALL BE TEMPORARILY SEALED.
16. INSTALL ALL SITE LIGHTING ELEMENTS.
17. INSTALL FLAG POLES FOUNDATION AND COVERED PARKING POSTS' FOOTINGS.
18. INSTALL ALL CONCRETE PAVING, STAIRS, AND BOLLARDS.
19. INSTALL ASPHALT BASE COURSE.
20. FINE GRADE/REDISTRIBUTE TOPSOIL THROUGHOUT DISTURBED AREAS.
21. INSTALL EROSION CONTROL BLANKET FOR STEEP SLOPES AS REQUIRED.
22. CONSTRUCT ASPHALT PARKING TACK AND WEARING COURSE.
23. PERFORM LINE STRIPING.
24. INSTALL PARKING LOT BUMPER BLOCKS.
25. INSTALL FENCING AND GATES.
26. INSTALL ALL LANDSCAPING INCLUDING TREES. SHRUBS. GROUNDCOVER.
27. INSTALL ALL SIGNS, FLAG POLES AND COVERED PARKING STRUCTURE.
28. ****CRITICAL STAGE** - UPON STABILIZATION OF UPLSOPE DISTURBED AREAS, CONSTRUCT BIORETENTION AREA BMP#1 AND MANAGED RELEASE BIORETENTION AREA BMP#2 AND CONTACT PROJECT ENGINEER PRIOR TO FINAL GRADING TO VERIFY THAT BMPs ARE INSTALLED, FUNCTIONING, AND HAVE NOT BEEN IMPACTED BY CONSTRUCTION ACTIVITIES. REFER TO BIORETENTION AREA CONSTRUCTION SEQUENCE ON SHEET 15 FOR BMP-SPECIFIC CONSTRUCTION SEQUENCE AND CRITICAL STAGES.**
29. INSTALL REMAINING STORM SEWER PIPING, FLARED END SECTIONS, AND RIPRAP APRONS INCLUDING WITHIN LIMITS OF BMP #1 AND BMP #2.
30. FINE GRADE BIORETENTION AREAS WITH AMENDED SOIL. ALL PREVIOUSLY DISTURBED AREAS THAT ARE READY FOR FINAL STABILIZATION SHALL BE STABILIZED IMMEDIATELY WITH SEEDING AND HAY OR STRAW MULCH CONSISTENT WITH IMMEDIATE STABILIZATION CRITERIA.
31. COMPLETE FINAL GRADING OF THE BIORETENTION AREAS AFTER THE TOP LAYER OF SOIL IS ADDED.
32. INSTALL SEED MIX WITHIN BIORETENTION AREAS AND STABILIZE SLOPES WITH EROSION BLANKET.
33. REINSTALL THE CONSTRUCTION FENCE AROUND THE BIORETENTION AREAS.
34. INSTALL ANY ANTI-GRAZING MEASURES FOR BIORETENTION AREAS, IF NECESSARY.
35. ****CRITICAL STAGE** REMOVE COVERS FROM INLETS TRIBUTARY TO BMP#2 AND INSTALL WATER QUALITY INSERTS.**
36. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AND TREE PROTECTION/CONSTRUCTION FENCING FROM THE BASIN. FINAL STABILIZATION IS DEFINED AS A UNIFORM 70% PERENNIAL VEGETATION COVER.
37. SUBMIT A NOTICE OF TERMINATION TO THE COUNTY CONSERVATION DISTRICT ONCE ALL TEMPORARY E&S BMPS HAVE BEEN REMOVED AND THE ENTIRE PROJECT SITE IS PERMANENTLY STABILIZED.

INFILTRATION TESTING RESULTS

TEST ID	EX. GROUND ELEVATION	TEST DEPTH (IN)	TEST ELEVATION	MEASURED INF. RATE	LIMITING ZONE	LIMITING ZONE ELEVATION	BMP NAME	BMP BOTTOM ELEVATION
TP1	440.22	23	438.30	0.05 IN/HR	ROCK	437.30	BMP #2	436.50
TP2	439.51	32	436.84	0.10 IN/HR	ROCK	435.84	BMP #2	436.50
TP3	442.18	40	438.85	0.44 IN/HR	ROCK	437.84	–	–
TP4	442.03	19	440.45	0.00 IN/HR	ROCK	439.44	–	–
TP5	445.72	26	443.55	0.00 IN/HR	ROCK	443.55	BMP #1	439.50
TP6	444.33	25	442.25	0.31 IN/HR	ROCK	442.25	BMP #1	439.50

SOILS LIST

SYMBOL	DESCRIPTION	DEPTH TO SEASONALLY HIGH WATER TABLE	DEPTH TO BEDROCK	FREQUENCY OF: FLOODING	FREQUENCY OF: PONDING	HYDROLOGIC SOIL GROUP	HYDRIC SOIL RATING
LEHIGH SILT LOAM							
LhA	0% TO 3% SLOPES	6" – 36"	40"–60"	NONE	NONE	C/D	YES
LhB	3% TO 8% SLOPES	6" – 36"	40"–60"	NONE	NONE	C/D	YES

ITEMS INCLUDED IN 05/01/2025 REVISIONS:
- INFILTRATION TESTING RESULT CHART UPDATED WITH 2 NEW TEST PITS FOR BMP#1 (TP5 & TP6)
- DURING CONSTRUCTION DRAINAGE AREA TO BMPs ADDED TO THE PLAN.
- PROPOSED INLET PROTECTION REPLACED BY TEMPORARY INLET SEALS.
- DISCHARGE POINT #2 (DP 002) ADDED TO THE PLAN.
- CONSTRUCTION SEQUENCE ITEM #28 REVISED.
- CONSTRUCTION SEQUENCE ITEM #29 ADDED.

ITEMS INCLUDED IN 04/11/2025 REVISIONS:
- PROFESSIONAL SEAL ADDED TO PLAN.
- SOIL LIST CHART UPDATED.
- LOCATION MAP REPLACED WITH USGS MAP.
- CONSTRUCTION SEQUENCE REVISED.
- FILTER SOCK LOCATION, LENGTH, AND DIAMETER REVISED.
- ROCK CONSTRUCTION ENTRANCE CHANGED.
- LIMIT OF DISTURBANCE AREA EXPANDED.
- NPDES PROJECT SITE AREA DECREASED.
- CONCRETE WASHOUT AREA SLIGHTLY MOVED.
- WATER/SAND JERSEY BARRIER ADDED TO THE PLAN.
- VEGETATED SWALE #1 CALLOUT ADDED TO THE PLAN.

Scale in Feet
0 10 20 30 40 80 120 160
1" = 40'

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

PENNSYLVANIA ACT 187 REQUIREMENTS
UNDERGROUND UTILITIES SERIAL No. 20243300770

CHESTER VALLEY ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS, NOR DOES CHESTER VALLEY ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START OF WORK.

EXCAVATIONS, TRENCHING, AND SHORING

ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PUBLICATIONS OR THE LATEST REVISIONS THERETO:

(1) CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS (OSHA 2207) SUBPART "P", PART 1926/1910 – "EXCAVATIONS, TRENCHING AND SHORING".

(2) "EXCAVATIONS AND TRENCHING OPERATIONS" (OSHA 2226) DATED 1985 (REVISED).

PENNSYLVANIA ONE CALL SYSTEM, INC.
CALL 3 WORKING DAYS BEFORE YOU DIG
1-800-242-1776
POCS SERIAL NUMBER: 20243300770

SEE SHEET 02 FOR FACILITY OWNERS DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.

EROSION & SEDIMENTATION CONTROL PLAN

NO.	DATE	REVISION
02	05/01/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025
01	04/11/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025

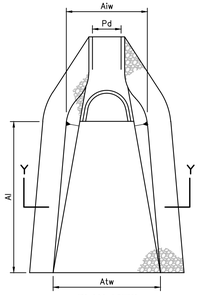
CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX
2290 GILBERTSVILLE ROAD
UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervalley.com

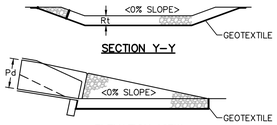
PROJECT NO. 22096-2000
F.B.

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1"=40'	03/31/2025	HL	AG	

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT REGISTRATION NUMBER LA001567



PLAN VIEW



SECTION Y–Y

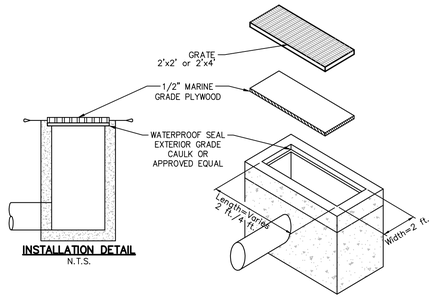
ELEVATION VIEW

RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL DETAIL

N.T.S.

OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE (R–__)	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
FES100	8"	3	9	6	2	4.4
FES200	15"	3	9	6	3.75	6.15
FES201	10"	3	9	6	2.5	4.9
FES202	15"	3	9	6	3.75	6.15
FES206	12"	3	9	6	3	5.4
FES300	8"	3	9	6	2	4.4

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



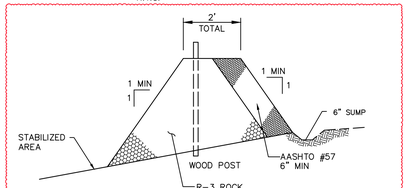
INSTALLATION DETAIL
N.T.S.

INLET TEMPORARY SEAL DETAIL

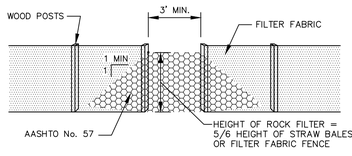
N.T.S.

ITEMS INCLUDED IN 04/11/2025 REVISIONS:
- PROFESSIONAL SEAL ADDED TO PLAN.
- NEW ROCK CONSTRUCTION ENTRANCE DETAIL ADDED TO THIS SHEET.
- VEGETATED SWALE DETAIL ADDED TO THIS SHEET.
- ROCK FILTER OUTLET DETAIL REVISED.

ITEMS INCLUDED IN 05/01/2025 REVISIONS:
- FILTER BAG INLET PROTECTION FOR 2'X2' YARD DRAIN DETAIL OMITTED.



OUTLET CROSS–SECTION

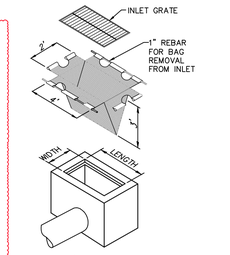


UP SLOPE FACE

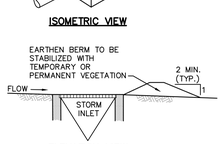
NOTES:
1. A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.
2. IF INSTALLED, INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED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

ROCK FILTER OUTLET DETAIL

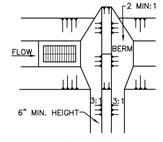
N.T.S.



ISOMETRIC VIEW



ELEVATION VIEW



PLAN VIEW

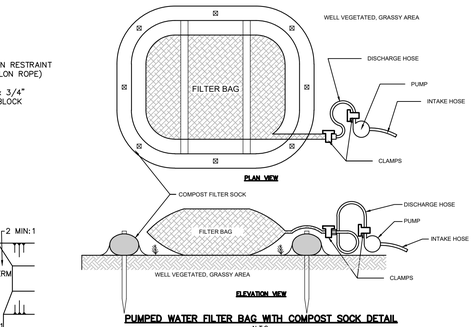
FILTER BAG INLET PROTECTION – TYPE M INLET DETAIL

N.T.S.

NOTES:
1. MAXIMUM DRAINAGE AREA = ½ ACRE.
2. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
3. ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.
4. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
5. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

INSTALLATION DETAIL



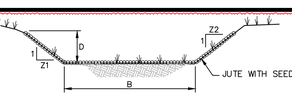
PUMPED WATER FILTER BAG WITH COMPOST SOCK DETAIL

N.T.S.

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

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D–4884	60 LB/IN
GRAB TENSILE	ASTM D–4632	205 LB
PUNCTURE	ASTM D–4833	110 LB
MULLEN BURST	ASTM D–3786	350 PSI
UV RESISTANCE	ASTM D–4355	70%
AOS % RETAINED	ASTM D–4751	80 SIEVE

2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
3. BAGS SHALL BE LOCATED IN WELL–VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON–ERODIBLE AND NON–POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
4. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.
5. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
6. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
7. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.



(LOOKING DOWNSTREAM)
SWALE CROSS–SECTION

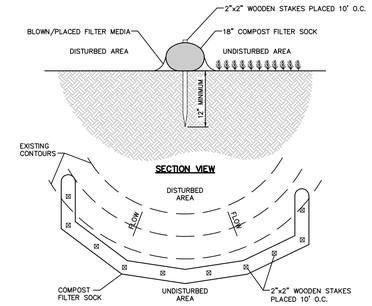
*SEE EROSION CONTROL BLANKET DETAIL FOR STAPLE PATTERNS, SEED MIX SHALL BE RAIN GARDEN MIX #ERNMX–180 FROM ERNST CONSERVATION SEEDS

VEGETATED SWALE DETAIL

N.T.S.

CHANNEL NO.	BOTTOM WIDTH B (FT)	SLOPE (%)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)
1	6	2.0	1.5	15.00	3	3

NOTES:
1. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
2. NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.



NOTES:
1. SOCK FABRIC SHALL MEET THE STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF TECH SOCK AND DISPOSED IN THE MATTER DESCRIBED ELSEWHERE IN THE PLAN.
5. 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.
6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
8. REFER TO E&S PLAN FOR COMPOST SOCK LOCATIONS, SIZE, IDENTIFICATIONS AND CONSTRUCTION SPECIFICATIONS.

COMPOST FILTER SOCK DETAIL

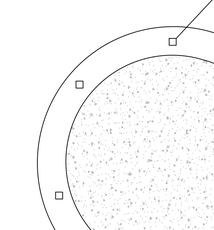
N.T.S.

TABLE 4.1 – COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI–FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI–FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO–DEGRADABLE	PHOTO–DEGRADABLE	BIO–DEGRADABLE	PHOTO–DEGRADABLE	PHOTO–DEGRADABLE
SOC DIAMETERS	12"	12"	12"	12"	12"
	12"	18"	18"	18"	18"
	18"	24"	24"	24"	24"
		32"	32"	32"	32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM D–155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	6 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO–PLY SYSTEMS					
INNER CONTAMINANT NETTING	HDPE BIAXIAL NET				
	CONTINUOUSLY WOUND				
	FUSION–WELDING JUNCTURES				
	3/4" x 3/4" MAX. APERTURE SIZE				
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON–WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)				
	3/16" MAX. APERTURE SIZE				
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.					

TABLE 4.2 – COMPOST STANDARDS

ORGANIC MATTER CONTENT	80% – 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 – 8.0
MOISTURE CONTENT	35% – 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM

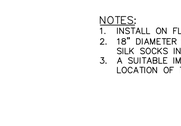


SECTION A–A

NOTES:
1. PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN.
2. ALL SIDE SLOPES SHALL BE 2 TO 1 OR FLATTER.
3. STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQUIREMENTS.
4. COMPOST FILTER SOCK SHALL BE INSTALLED AS DETAILED HEREON.
5. LOCATION OF PROPOSED STOCKPILE WHICH AFFECT EROSION CONTROLS ARE SHOWN SCHEMATICALLY ONLY. ACTUAL STOCKPILE LOCATION MAY CHANGE DURING CONSTRUCTION.
6. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET.
7. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FORE MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

STOCKPILE DETAIL

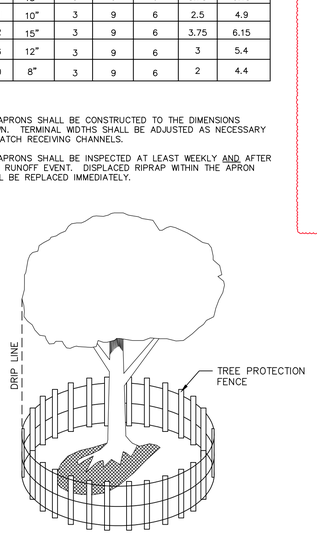
N.T.S.



TYPICAL COMPOST SOCK WASHOUT INSTALLATION DETAIL

N.T.S.

NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" DIAMETER SILT SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SILK SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
3. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.



TREE PROTECTION FENCE DETAIL

N.T.S.

ALL WOODY VEGETATION TO BE RETAINED WITHIN 25 FEET OF A BUILDING SITE, PARKING AREA, DRIVEWAY OR OTHER PROPOSED IMPROVEMENT SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING OR OTHER EFFECTIVE BARRIERS APPROVED BY THE TOWNSHIP ENGINEER / LANDSCAPE ARCHITECT. FENCING OR BARRIERS SHALL BE PLACED AS NOTED BELOW, UNLESS PRIOR DETERMINATION HAS BEEN MADE BY THE TOWNSHIP ENGINEER / LANDSCAPE ARCHITECT REGARDING A MORE APPROPRIATE LOCATION.

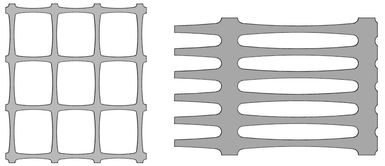
DESCRIPTION: TREES ARE OFTEN DAMAGED BY MOVING CONSTRUCTION EQUIPMENT OR BY SEDIMENT BUILDUP AROUND THE ROOTS. TREE PROTECTION FENCING, WHEN PLACED ALONG OR AROUND TREES, SERVES AS A BOUNDARY MARKER TO INDICATE THAT CLEARING AND STOCKPILING ARE NOT PERMITTED BEYOND THAT POINT.

WHEN USED: TREE PROTECTION FENCE MAY BE USED WHENEVER THERE ARE SPECIFIC TREES OR WOODED AREAS THAT MUST BE PROTECTED.

REQUIREMENTS FOR INSTALLATION: THE TREE PROTECTION FENCE IS INSTALLED BY HAMMERING WOOD OR METAL STAKES INTO THE GROUND AND CONNECTING THE FENCING MATERIAL SECURELY TO THE POSTS PER THE MANUFACTURERS' INSTRUCTIONS.

PLACE THE TREE PROTECTION FENCE ALONG THE DRIPLINES OF TREES OR 1 FOOT FROM THE TREE TRUNK FOR EVERY INCH OF TRUNK DIAMETER, WHICHEVER IS GREATER. A DRIPLINE IS AN IMAGINARY LINE EXTENDING DOWN FROM THE OUTER–MOST BRANCHES OF A TREE TO THE GROUND. THIS IS GENERALLY THE OUTER BOUNDARY FOR TREE ROOTS. IF THE TREE PROTECTION FENCE IS PLACED ANY CLOSER TO A TREE, ITS PURPOSE MAY BE DEFEATED.

MAINTENANCE: INSPECT THE TREE PROTECTION FENCING PERIODICALLY DURING CONSTRUCTION TO MAKE SURE THAT IT IS POSITIONED SECURELY.

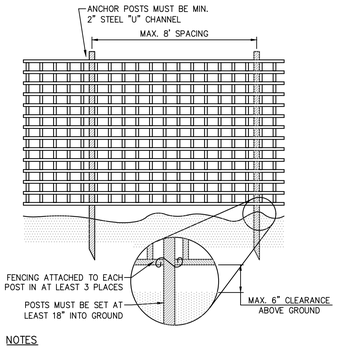


BX2051 UX4250

FOR GENERAL USE:
TENSAR SAFETY FENCE BX 2051, 4' HT., ORANGE
FOR EXTRA PROTECTION:
TENSAR SAFETY FENCE UX 4250, 4' HT., ORANGE
INSTALLATION: ATTACH FENCE TO 2" x 2" PINE STAKES DRIVEN AT LEAST 18" INTO THE GROUND, SPACED 8' ON CENTER, WITH WIRE FASTENERS IN 3 PLACES PER STAKE.

ORANGE CONSTRUCTION FENCE DETAIL

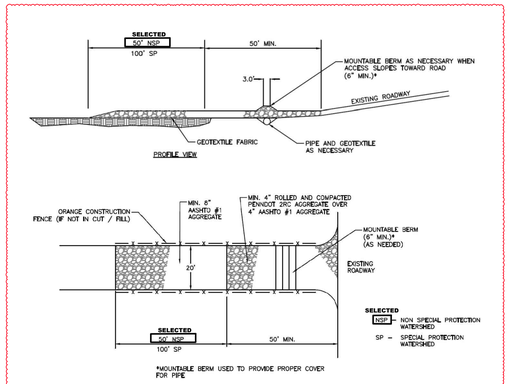
N.T.S.



NOTES
1. PROTECTION BARRIER SHALL BE 4 FEET HIGH, CONSTRUCTED OF DURABLE AND HIGHLY VISIBLE MATERIAL (PLASTIC ORANGE CONSTRUCTION FENCE AND/OR SNOW–FENCE MAY BE USED).
2. PROTECTION BARRIERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE WORK AT THE SITE.

TREE PROTECTION BARRIER FENCE DETAIL

N.T.S.



NOTES:
1. THE PROJECT SITE IS LOCATED IN NON SPECIAL PROTECTION WATERSHED. CONTRACTOR SHALL CONSTRUCT THE TOTAL LENGTH OF 100 FT FOR ALL CONSTRUCTION ENTRANCES PER THIS DETAIL.
2. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE OR MINIMUM OF 20 FEET.
3. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
4. 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. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ROCK CONSTRUCTION ENTRANCE DETAIL

N.T.S.

Seed and soil amendments shall be applied according to the rates in the plan drawings prior to installing the blanket.

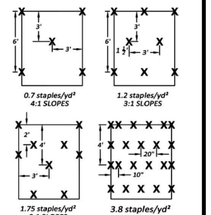
Provide anchor trench at toe of slope in similar fashion as at top of slope.

Slope surface shall be free of rocks, clods, sticks, and grass.

Blanket shall have good continuous contact with underlying soil throughout entire length. Lay blanket loosely and stake or staple to maintain direct contact with soil. Do not stretch blanket.

The blanket shall be stapled in accordance with the manufacturer's recommendations.

Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.



STAPLE PATTERN

NOTES:
1. USE JUTE OR COIR MATTING W/ WOOD STAKES.
2. NO PLASTIC/ POLYPROPYLENE MATERIALS ARE ALLOWED.

EROSION CONTROL BLANKET DETAIL

N.T.S.

EROSION & SEDIMENTATION CONTROL DETAILS

NO.	DATE	REVISION
02	05/01/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025
01	04/11/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX
2290 GILBERTSVILLE ROAD
UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervc.com

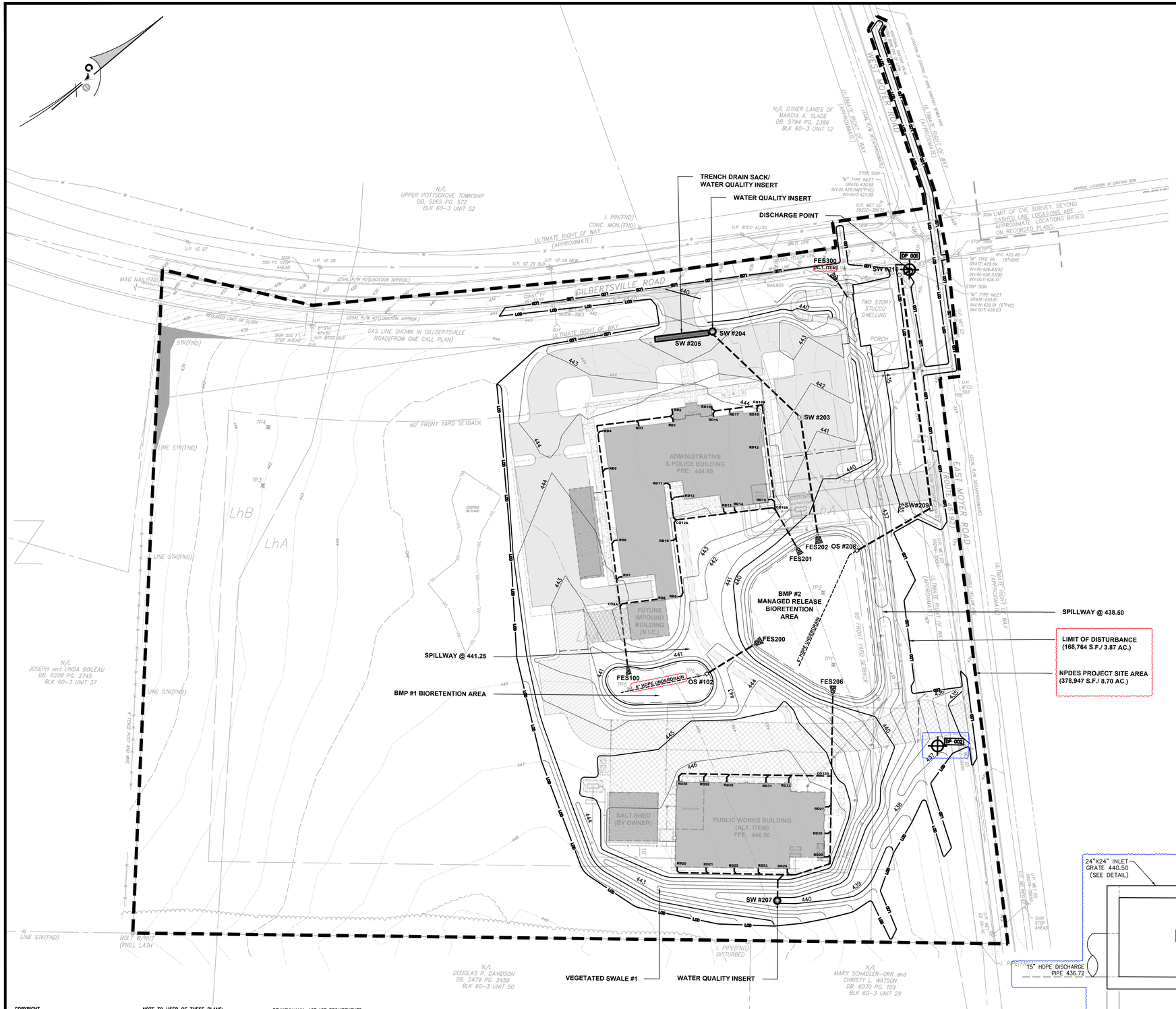
PROJECT NO. 22096-2000
F.B.

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
As Noted	03/31/2025	HL	AG	

PENNSYLVANIA LICENSED PROFESSIONAL REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NUMBER LA001517

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

THIS PLAN IS FOR EROSION & SEDIMENTATION CONTROL PURPOSE ONLY.



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE (R-__)	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
FES100	8"	3	9	6	2	4.4
FES200	15"	3	9	6	3.75	6.15
FES201	10"	3	9	6	2.5	4.9
FES202	15"	3	9	6	3.75	6.15
FES206	12"	3	9	6	3	5.4
FES300	8"	3	9	6	2	4.4

TEST ID	EX. GROUND ELEVATION	TEST DEPTH (IN)	TEST ELEVATION	MEASURED INF. RATE	LIMITING ZONE	LIMITING ZONE ELEVATION	BMP NAME	BMP BOTTOM ELEVATION
TP1	440.22	23	438.30	0.05 IN/HR	ROCK	437.30	BMP #2	436.50
TP2	439.51	32	436.84	0.10 IN/HR	ROCK	435.84	BMP #2	436.50
TP3	442.18	40	438.85	0.44 IN/HR	ROCK	437.84	–	–
TP4	442.03	19	440.45	0.00 IN/HR	ROCK	439.44	–	–
TP5	445.72	26	443.55	0.00 IN/HR	ROCK	443.55	BMP #1	439.50
TP6	444.33	25	442.25	0.31 IN/HR	ROCK	442.25	BMP #1	439.50

SYMBOL	DESCRIPTION	DEPTH TO SEASONALLY HIGH WATER TABLE	DEPTH TO BEDROCK	FREQUENCY OF: FLOODING	FREQUENCY OF: PONDING	HYDROLOGIC SOIL GROUP	HYDRIC SOIL RATING
LEHIGH SILT LOAM							
LhA	0% TO 3% SLOPES	6" – 36"	40"–60"	NONE	NONE	C/D	YES
LhB	3% TO 8% SLOPES	6" – 36"	40"–60"	NONE	NONE	C/D	YES

NOTE TO USER OF THESE PLANS:
WARNING: THE INFORMATION CONTAINED ON THIS PLAN MAY NOT BE CONSISTENT WITH CONDITIONS IN THE FIELD. ANY PERSON OR ORGANIZATION USING OR RELYING ON THESE PLANS MUST CONTACT CVE FOR VERIFICATION OF ANY APPARENT DISCREPANCY BEFORE PROCEEDING OR RELYING UPON THESE PLANS FOR ANY PURPOSE. NO CONSTRUCTION OR INSTALLATION OF IMPROVEMENTS SHOULD OCCUR UNTIL ALL DISCREPANCIES HAVE BEEN VERIFIED WITH CHESTER VALLEY ENGINEERS. CHESTER VALLEY ENGINEERS, THEIR OFFICERS, EMPLOYEES AND REPRESENTATIVES SHALL NOT BE LIABLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USERS FAILURE TO OBTAIN CURRENT VERIFICATION AND VALIDATION OF THE INFORMATION CONTAINED IN THIS FILE TO THE USER OR ANY THIRD PARTY. THE USER ASSUMES ANY RISK OF ANY AND ALL PROPERTY OR FINANCIAL LOSS OR DAMAGES OF ANY KIND RESULTING FROM THE USE OF THIS DOCUMENT WITHOUT FIRST OBTAINING FULL VERIFICATION AND VALIDATION OF THE INFORMATION CONTAINED IN THIS FILE.

PENNSYLVANIA ACT 187 REQUIREMENTS
UNDERGROUND UTILITIES SERIAL NOs. 20243300770
CHESTER VALLEY ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS, NOR DOES CHESTER VALLEY ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START OF WORK.

EXCAVATIONS, TRENCHING, AND SHORING
ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PUBLICATIONS OR THE LATEST REVISIONS THERETO:
(1) CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS (OSHA 2207) SUBPART "P", PART 1926/1910 – "EXCAVATIONS, TRENCHING AND SHORING".
(2) "EXCAVATIONS AND TRENCHING OPERATIONS" (OSHA 2226) DATED 1985 (REVISED).

GENERAL NOTES:

1. IT SHALL BE THE SOLE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN THE POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES.

2. STORMWATER MANAGEMENT DESIGN: REFER TO "POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT FOR PROPOSED MUNICIPAL COMPLEX," PREPARED BY CHESTER VALLEY ENGINEERS.

3. EROSION AND SEDIMENTATION CONTROL: REFER TO "EROSION AND SEDIMENTATION CONTROL PLAN", PREPARED BY CHESTER VALLEY ENGINEERS.

4. MAINTENANCE NOTES:
   A. THE BMP'S LISTED BELOW WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER.
      - BIORETENTION AREAS
      - STORM SEWER AND ASSOCIATED STRUCTURES
   B. THE PARTY RESPONSIBLE FOR THE LONG TERM OPERATIONS AND MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES SHALL MAKE RECORDS OF THE INSTALLATION AND ALL MAINTENANCE AND REPAIRS, AND SHALL RETAIN THE RECORDS FOR AT LEAST TEN (10) YEARS. THESE RECORDS SHALL BE SUBMITTED TO THE TOWNSHIP AS ESTABLISHED BY THE OPERATION AND MAINTENANCE PLAN OR IF OTHERWISE REQUIRED BY THE TOWNSHIP

4. THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN HAS BEEN DESIGNED TO MEET THE FOLLOWING GOALS AND GUIDELINES:
   A. PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF RECEIVING STREAMS THROUGH THE IMPLEMENTATION OF WATER QUALITY BMP's TO TREAT THE RUNOFF PRODUCED BY THE PROPOSED DEVELOPMENT BEFORE DISCHARGING FROM THE SITE.
   B. PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF AT THE DISCHARGE POINTS.
   C. MINIMIZE ANY INCREASE IN STORMWATER RUNOFF VOLUME.
   D. MINIMIZE IMPERVIOUS AREAS TO ONLY THOSE WHICH ARE NECESSARY FOR THE SITE TO FUNCTION AS INTENDED.
   E. MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION.
   F. MINIMIZE LAND CLEARING AND GRADING.
   G. MINIMIZE SOIL COMPACTION.
   H. UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMP'S TO PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF RESULTING FROM THE CHANGE IN IMPERVIOUS AREAS.

5. THE RECEIVING WATERCOURSE FOR THIS PROJECT IS AN UNNAMED TRIBUTARY OF MINISTER CREEK (TSF-MF) .

6. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE. CONSTRUCTION WASTES MUST BE RECYCLED TO THE EXTENT PRACTICABLE, AND DISPOSAL METHODS MUST COMPLY WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS.

7. THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPS. A LICENSED PROFESSIONAL ENGINEER KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPS, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

8. AS-BUILT PLANS OF THE STORMWATER BMP'S SHALL BE PROVIDED WITHIN SIX MONTHS FOLLOWING THE COMPLETION OF EACH PHASE. THE AS-BUILT PLANS SHALL BE SIGNED AND SEALED BY A PA REGISTERED PROFESSIONAL ENGINEER.

9. A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING APPROVAL OF THE FINAL AS-BUILT PLANS. PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION TO ENSURE SITE STABILIZATION AND VERIFY ADEQUATE INSTALLATION AND FUNCTION OF STORMWATER BMP'S.

10. PCSM REPORTING AND RECORDKEEPING. THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

11. FINAL CERTIFICATION. THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

"I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. § 4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND RELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

(1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.
(2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS.

12. UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER § 102.22(A)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPS IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §§ 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS; AND PCSM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION MUST INCLUDE:
(1) THE FACILITY NAME, ADDRESS AND LOCATION.
(2) THE OPERATOR NAME AND ADDRESS.
(3) THE PERMIT NUMBER.
(4) THE REASON FOR PERMIT TERMINATION.
(5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS IN ACCORDANCE WITH §102.8(M) AND PROOF OF COMPLIANCE WITH § 102.8(M)(2).

PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION.

GENERAL CONSERVATION NOTES AND SPECIFICATIONS

INTENT OF CONSERVATION PROGRAM: THE INTENT OF THIS PROGRAM IS TO PREVENT ACCELERATED EROSION OF THE EXPOSED SITE SOILS DURING THE CONSTRUCTION AND PERMANENT LIFE PERIODS OF THE DEVELOPMENT. THE PROGRAM REQUIRES RETENTION OF ALL SEDIMENTS ON THE CONSTRUCTION SITE TO MINIMIZE THE IMPACT OF DEVELOPMENT ON EXISTING STREAMS AND ADJACENT PROPERTY OWNERS. THESE OBJECTIVES WILL BE ACHIEVED BY MINIMIZING THE EXPOSURE TIME OF POTENTIALLY EROSIVE SOILS TO RUNOFF AND IMPLEMENTATION OF THE TEMPORARY CONSTRUCTION. THE INTENT OF THIS PROGRAM SHOULD BE UNDERSTOOD AND IMPLEMENTED THROUGHOUT THE ENTIRE DEVELOPMENT. THE VARIOUS CONSTRUCTION TRADES SHOULD BE APPRAISED OF THIS PROGRAM AND DIRECTED TO PREVENT UNDUE DISTURBANCE OF PREPARED AND PROTECTED SURFACES.

SURFACE STABILIZATION CRITERIA: ALL DISTURBED SOIL SURFACES, INCLUDING SOIL STOCKPILES, ARE SUBJECT TO EROSION AND SHALL BE STABILIZED EITHER TEMPORARILY OR PERMANENTLY. IMMEDIATELY DURING NON-GERMINATION PERIODS. MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUBGRADES IS CONSIDERED ADEQUATE PROTECTION. ALL DISTURBED ZONES AND VEGETATED REGIONS SHALL BE STABILIZED. PREFERABLY WITH A PERMANENT TREATMENT.

DISPOSAL AND RECYCLING

THE OWNER IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL WASTES ONSITE. GARBAGE SHALL BE COLLECTED ON-SITE UNTIL RETRIEVED BY AN APPROVED DISPOSAL OR RECYCLING COMPANY, CONTRACTOR SHALL NOT INCINERATE EXCESS MATERIALS.

SILT REMOVED FROM POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS LOCATED OUTSIDE OF VEGETATED RAIN GARDEN AREAS. AREAS OF SEDIMENT DISPOSAL SHALL BE CONSIDERED CRITICAL VEGETATION AREAS (CVA).

LIKELY WASTE TO BE GENERATED DURING MAINTENANCE OF THE POST-CONSTRUCTION BMP'S ARE:
- ACCUMULATED SEDIMENT IN THE BIORETENTION AREAS AND STORM SYSTEM.
- ACCUMULATED GARBAGE AND DEBRIS IN THE BIORETENTION AREAS AND STORM SEWER.

CRITICAL STAGES OF CONSTRUCTION

THE PROFESSIONAL DESIGN ENGINEER, GEOTECHNICAL ENGINEER, OR SOILS PROFESSIONAL MUST BE PRESENT ON-SITE FOR THE ENTIRE INSTALLATION AND INSPECTION OF THE STORMWATER BMPs. THE SPECIFIC CRITICAL STAGES OF CONSTRUCTION FOR EACH BMP ARE:
1. FOR BIORETENTION AREAS: EXCAVATION OF BIORETENTION AREA, PREPARATION OF THE SUBGRADE, PLACEMENT OF THE GEOTEXTILE FABRIC, INSTALLATION OF THE UNDERDRAIN, INSTALLATION OF AMENDED SOILS, CONSTRUCTION OF THE BIORETENTION BERM, AND INSTALLATION OF THE OUTLET STRUCTURE.
2. FOR ALL WATER QUALITY INLETS: VERIFY INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.

CRITICAL VEGETATION AREAS (CVA)

CRITICAL VEGETATION AREAS ARE TO BE GRADED, HYDROSEEDED, AND MULCHED WITHIN 10 DAYS OF THE BEGINNING OF EXCAVATION. IN GENERAL, CRITICAL VEGETATION AREAS ARE DEFINED AS CUT SLOPES STEEPER THAN 3:1, ALL FILL SLOPES STEEPER THAN 4:1, IN ALL DRAINAGE SWALES, BASIN AND RAIN GARDEN AREAS.

POST CONSTRUCTION STORMWATER MANAGEMENT REPORTING AND RECORD KEEPING

A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ALL BMP REPAIRS AND MAINTENANCE ACTIVITIES MUST BE PROVIDED AS PART OF THE LONG-TERM OPERATION AND MAINTENANCE PROGRAM.

THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

BIORETENTION AREAS
- BMP #1 & BMP #2, AS INDICATED ON PCSM PLAN

PLANTING NOTES AND SPECIFICATIONS:

1. DEVELOP A PLANTING MEDIUM IN ACCORDANCE WITH THE APPROVED DETAIL SHOWN ON POST-CONSTRUCTION STORMWATER MANAGEMENT DETAIL SHEET.

INSPECTION REQUIREMENTS
1. ALL STORMWATER MANAGEMENT SYSTEMS SHALL BE INSPECTED ANNUALLY FOR THE FIRST FIVE (5) YEARS AND ONCE EVERY THREE (3) YEARS THEREAFTER, FOR ACCUMULATION OF SEDIMENT, TRASH AND DEBRIS, DAMAGE TO OUTLET STRUCTURES, EROSION, SIGNS OF CONTAMINATION OR SPILLS AND BERM STABILITY.

MAINTENANCE/REPAIR INSTRUCTIONS
1. THE SUGGESTED ITEMS IN THIS SECTION INCLUDE, BUT ARE NOT LIMITED TO THE THOSE LISTED BELOW:
   - ACCUMULATED SEDIMENT SHALL BE RESPREAD ON-SITE AS DESCRIBED IN THE DISPOSAL AND RECYCLING SECTION OF THIS PLAN SHEET;
   - ANY DISCOVERED TRASH OR DEBRIS SHALL BE REMOVED IMMEDIATELY;
   - REPAIR OR REPLACE OUTLET STRUCTURE AS NEEDED;
   - STABILIZE ERODED AREAS IN ACCORDANCE WITH APPROVED E&S SEEDING AND MULCHING NOTES;
   - IN THE EVENT OF CONTAMINATION OR SPILL, IMMEDIATELY CONTACT AN ENVIRONMENTAL PROFESSIONAL QUALIFIED TO IDENTIFY AND EXECUTE THE REQUIRED CLEANUP METHODS THAT ADHERE TO LOCAL, STATE AND FEDERAL REGULATIONS;
   - IMMEDIATELY AFTER DISCOVERY OF BERM INSTABILITY, CONTACT A GEOTECHNICAL ENGINEER AND SITE CONTRACTOR TO DETERMINE AND EXECUTE METHODS TO REMEDY THE UNSTABLE BERM.

GENERAL MAINTENANCE NOTES:

1. INSPECT BMP FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
2. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MY BE REQUIRED.
3. RE-SPREAD MULCH WHEN EROSION IS EVIDENT AND REPLENISH AS NEEDED. REPLENISH MULCH ONCE EVERY 2 TO 3 YEARS.
4. INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN > 3 INCHES AT ANY SPOT OR COVERING VEGETATION).
5. WATER AS NEEDED DURING PERIODS OF EXTENDED DROUGHT.
6. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES, CORRECT AS NEEDED.
7. INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE.
8. TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION; DISPOSE OF CUTTINGS IN A LOCAL COMPOSTING FACILITY, MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING.
9. INSPECT FOR LITTER; REMOVE PRIOR TO TRIMMING.
10. INSPECT FOR UNIFORMITY IN CROSS-SECTION, CORRECT AS NEEDED.
11. INSPECT INFLOW POINTS (CURB CUTS, INLETS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED.
12. CONTACT DESIGN ENGINEER IMMEDIATELY AFTER DISCOVERY OF SINKHOLE OCCURRENCE, SINKHOLE SHOULD BE PROMPTLY AND PROPERLY REPAIRED.
13. THE VEGETATION (FOR BMP CONTRIBUTING DRAINAGE AREA) SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED.
14. CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS. MOW ONLY AS APPROPRIATE FOR VEGETATIVE SPECIES.
15. INSPECT BMP #2 AT LEAST TWO TIMES PER YEAR AFTER RUNOFF EVENTS GREATER THAN 0.8 INCH AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN THE DESIGN PARAMETERS (THE LICENSED PROFESSIONAL ENGINEER SHOULD CLEARLY IDENTIFY WHAT THESE PARAMETERS ARE).
16. ALL CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED AT LEAST TWO (2) TIMES PER YEAR.
17. AS NEEDED, REMOVE ACCUMULATED SEDIMENT AS REQUIRED TO MAINTAIN INFILTRATION THROUGH THE MRC STONE MEDIA AND TO MAINTAIN WATER QUALITY FUNCTIONALITY. RESTORE ORIGINAL CROSS SECTION. PROPERLY DISPOSE OF SEDIMENT.
18. ALL MRC BMP COMPONENTS SHOULD BE MAINTAINED AS INDICATED IN THE STORMWATER BMP MANUAL.
19. AT LEAST TWO TIMES PER YEAR, OR MORE IF HISTORICAL MAINTENANCE INDICATE IT IS NECESSARY, INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION, SIGNS OF WATER CONTAMINATION/SPILLS, AND INSTABILITY.
20. LEAF LITTER NEEDS TO BE REMOVED ANNUALLY.

WINTER MAINTENANCE NOTES:
21. BMP SHOULD BE INSPECTED IMMEDIATELY AFTER THE SPRING MELT, REMOVE RESIDUALS AND REPLACE DAMAGED VEGETATION.
22. IF ROADSIDE OR PARKING LOT RUNOFF IS DIRECTED TO THE BMP, MULCHING AND/OR SOIL AERATION/MANIPULATION MAY BE REQUIRED IN THE SPRING TO RESTORE SOIL STRUCTURE AND MOISTURE CAPACITY AND TO REDUCE THE IMPACTS OF DEICING AGENTS.
23. USE NONTOXIC, ORGANIC DEICING AGENTS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS OR AS PRETREATED SALT.
24. USE SALT-TOLERANT VEGETATION.
25. CLOSE MOW OR TRIM PERENNIAL MATERIAL TO ALLOW PROPER GERMINATION AND TO CONTROL INVASIVE SPECIES (TO BE DONE ONCE IN LATE FALL, WINTER OR EARLY SPRING).
26. REPLENISH MULCH IN AREAS WHERE EROSION IS EVIDENT. REPLENISH MULCH IN ENTIRE INFILTRATION AREA AT LEAST EVERY 2 TO 3 YEARS.

CONSTRUCTION SEQUENCING
1. INSTALL THE BMP DURING FINAL PHASES OF SITE CONSTRUCTION, FOLLOWING PERMANENT STABILIZATION OF THE BMP'S DRAINAGE AREA, TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT-LADEN WATER FROM ENTERING THE FACILITY.
2. INSTALL AND MAINTAIN PROPER E&S BMPs DURING CONSTRUCTION.
3. CRITICAL STAGE OF CONSTRUCTION: EXCAVATE BIORETENTION AREA. FOR BMP #2 (MRC), INSTALL LAYER OF GEOTEXTILE FABRIC PER CONSTRUCTION DETAIL.
4. INSTALL INLET AND OUTLET STRUCTURES, SPILLWAY, UNDERDRAIN PIPING WITH AGGREGATE ENVELOPE, CLEANOUTS, ORIFICE/WEIR, ETC.
5. PLACE SOIL MEDIA GENTLY. DO NOT COMPACT SOIL MEDIA OR THE BASIN BOTTOM. THE PLACEMENT OF SOIL MEDIA SHOULD BE DONE FROM OUTSIDE THE BMP FOOTPRINT TO AVOID COMPACTION BY CONSTRUCTION EQUIPMENT. EQUIPMENT SHOULD NEVER DRIVE OVER PLACED SOIL MEDIA.
6. VEGETATE THE BMP WITH NATIVE PLANTINGS AND SEED MIXES, AS APPLICABLE.
7. MAINTAIN INLET PROTECTION AND OTHER E&S CONTROLS UNTIL THE SITE IS FULLY STABILIZED.
8. CRITICAL STAGE OF CONSTRUCTION: CONTACT ENGINEER TO VERIFY INSTALLATION OF BIORETENTION AREA.
9. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.

BMP FAILURE NOTES (PER PROTOCOL 2 OF THE BMP MANUAL)

THE TERM "FAILURE" FOR THE PROPOSED BIORETENTION AREAS SHALL BE DEFINED AS:
1) THE LOSS OF FUNCTIONALITY OF THE PROPOSED OUTLET STRUCTURE, DISCHARGE PIPE, UNDERDRAIN SYSTEM OR ANY OTHER DRAINAGE STRUCTURE/PIPE WITHIN THE BMP
2) THE LOSS OF STRUCTURAL INTEGRITY OF THE PROPOSED BERM
3) THE INABILITY OF THE BIORETENTION AREA TO SUPPORT SURFACE VEGETATION DUE TO TOO MUCH OR TOO LITTLE WATER
4) EXCESSIVE EROSION OR ACCUMULATION OF SEDIMENT OR DEBRIS
5) STANDING WATER IS OBSERVED IN THE BIORETENTION AREA AFTER 72-HOURS.

THE PERMITTEE SHALL MAKE THE NECESSARY REPAIRS TO THE OUTLET STRUCTURE, DISCHARGE PIPING, UNDERDRAIN SYSTEM, OTHER DRAINAGE STRUCTURES/PIPES WITHIN THE BMP, SURFACE VEGETATION, AND BERM AS NEEDED. REMOVE SEDIMENT OR DEBRIS THAT HAS ACCUMULATED IN THE BMP BOTTOM AND STABILIZE EROSION USING PERMANENT STABILIZATION TECHNIQUES INDICATED ON THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN. DEWATER BIORETENTION AREAS.

THE TERM "FAILURE" FOR THE PROPOSED WATER QUALITY INLETS (FILTER INSERTS) SHALL BE DEFINED AS:
1) DISCOVER EVIDENCE OF DAMAGED FILTER MEDIA
2) DISCOVER EVIDENCE OF THE FILTER MEDIA'S INABILITY TO SUPPORT ACCUMULATED SEDIMENT OR DEBRIS.

THE PERMITTEE SHALL REPAIR BMP FAILURE BY REPLACING THE FILTER MEDIA IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

THERMAL IMPACT

THERE ARE SEVERAL PROPOSED/IN PLACE MEASURES INTENDED TO TREAT RUNOFF FOR THERMAL IMPACTS. FIRSTLY, THE PROPOSED LANDSCAPING TREES WITHIN AND BORDERING THE NEW BUILDING AND SIDEWALK AREAS WILL SHADE THE ADJACENT IMPERVIOUS SURFACES WHICH WILL KEEP THE AREAS COOL. SECONDLY, THE STORMWATER RUNOFF COLLECTED BY THE STORM SEWER SYSTEM WILL BE COOLED BY THE LOWER UNDERGROUND TEMPERATURE AS THE RUNOFF FLOWS THROUGH THE SYSTEM. THIRDLY, THE WATER DETAINED IN THE BIORETENTION AMENDED SOILS WILL BE COOLED AS IT IS SLOWLY RELEASED AS A RESULT OF THE LOWER UNDERGROUND TEMPERATURE.
AS THE POST DEVELOPMENT FLOWS ARE LOWER THAN THE PRE-DEVELOPMENT FLOWS THE REDUCED RATE MEANS THE RUNOFF WILL HAVE MORE TIME TO COOL IN THE PROPOSED BMPS. THE COOLING INFLUENCES OF THE ONSITE BMPS WILL NEUTRALIZE/REMOVE THE HEAT ENERGY ABSORBED BY THE PROJECT SITE RUNOFF PRIOR TO DISCHARGE INTO THE RECEIVING WATERCOURSE.

STORM SEWER

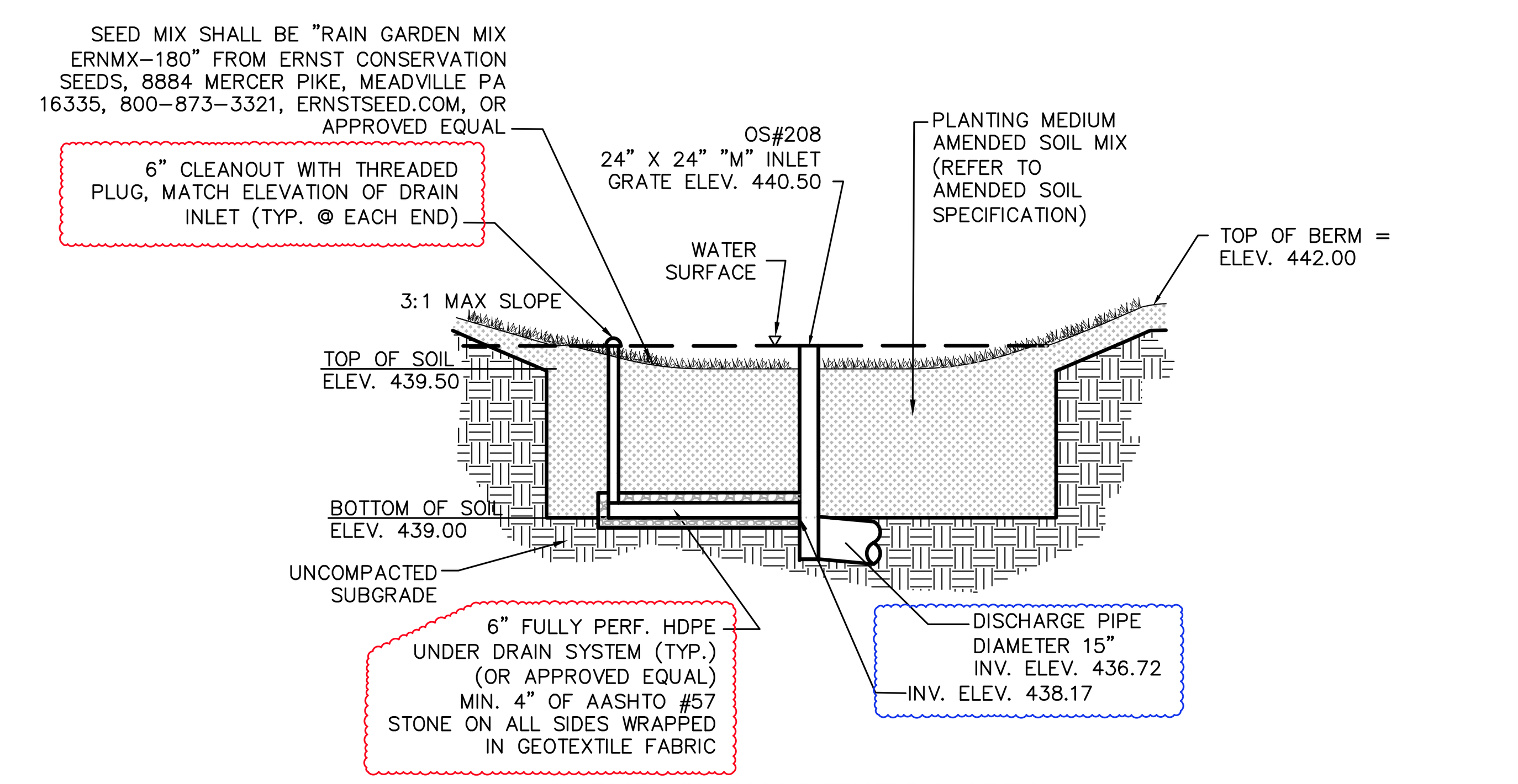
INSPECTION REQUIREMENTS:
1. ALL DRAINAGE COLLECTION STRUCTURES SHALL BE INSPECTED ANNUALLY FOR THE FIRST FIVE (5) YEARS AND ONCE EVERY THREE (3) YEARS THEREAFTER, FOR TRASH, DEBRIS OR EVIDENCE OF PIPE LEAKAGE OR SAGGING; REMOVE TRASH OR DEBRIS IMMEDIATELY; IMMEDIATELY REPAIR OR REPLACE LEAKING/SAGGING DRAINAGE FEATURES.

GENERAL MAINTENANCE NOTES:
1. ACCESS CAN BE GAINED TO EACH COLLECTION STRUCTURE THROUGH THE REMOVABLE INLET GRATE OR MANHOLE LID. STEEL OR OTHER APPROVED RUNGS HAVE BEEN INSTALLED ON THE INSIDE OF EACH STRUCTURE OVER FOUR FEET DEEP FOR ANY NECESSARY ENTRY. GRATES AND LIDS SHALL BE REPLACED SECURELY IMMEDIATELY AFTER MAINTENANCE.
2. CONTACT DESIGN ENGINEER IMMEDIATELY AFTER DISCOVERY OF SINKHOLE OCCURRENCE, SINKHOLE SHOULD BE PROMPTLY AND PROPERLY REPAIRED.
3. IF SEDIMENT/TRASH/DEBRIS IS FOUND IN THE CONVEYANCE SYSTEM, THE SYSTEM SHALL BE JETTED AND VACUUMED TO REMOVE ALL SEDIMENT/TRASH/DEBRIS AND DISPOSED OF APPROPRIATELY.
4. REFER TO WATER QUALITY INLET MAINTENANCE GUIDELINES FOR ADDITIONAL DETAIL IN CLEANING OF THOSE STRUCTURES WITH WATER QUALITY APPARATUS INSTALLED.

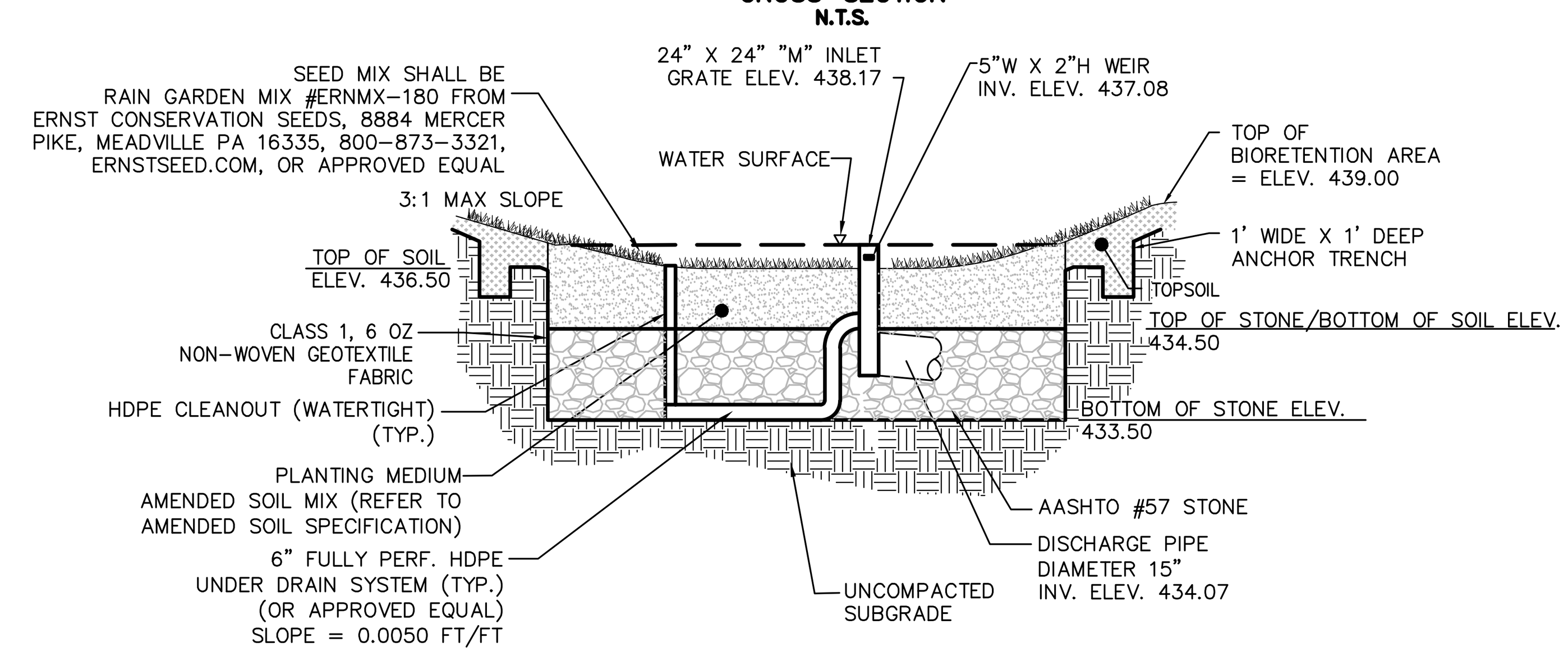
SITE RESTORATION O&M REQUIREMENTS

ESTABLISH AND MAINTAIN VEGETATIVE COVER IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.

PERFORM ROUTINE INSPECTIONS AND CORRECT EROSION PROBLEMS, IF ENCOUNTERED.



BMP #1 BIORETENTION AREA
CROSS-SECTION
N.T.S.



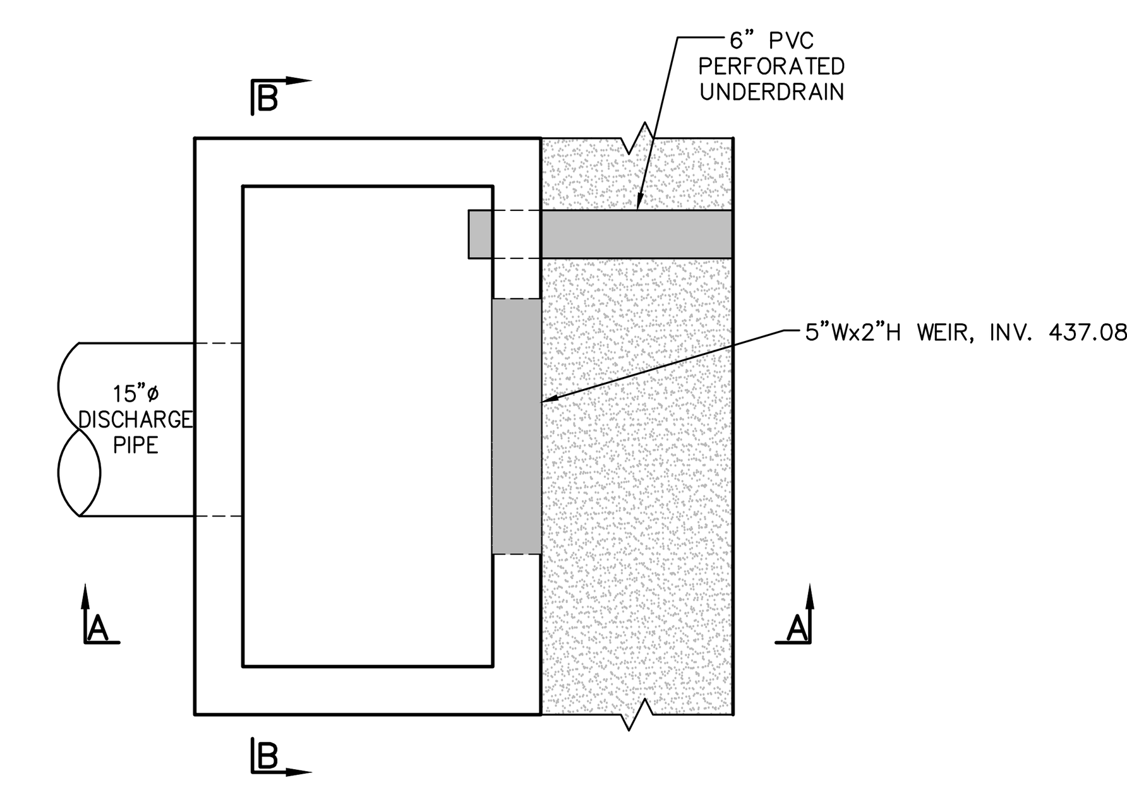
AMENDED SOILS SPECIFICATION:
A WELL BLENDED MIXTURE (BY VOLUME):
40-60% ORGANIC LEAF COMPOST
40-60% NATIVE TOPSOIL

0.50 IN/HR (MIN.) TO 1.00 IN/HR (MAX.)*
*THE AMENDED SOIL MIX SHALL BE INSPECTED AND TESTED DURING INSTALLATION BY A GEOTECHNICAL ENGINEER TO VERIFY ACCEPTABILITY OF THE MIXTURE AND PERMEABILITY.

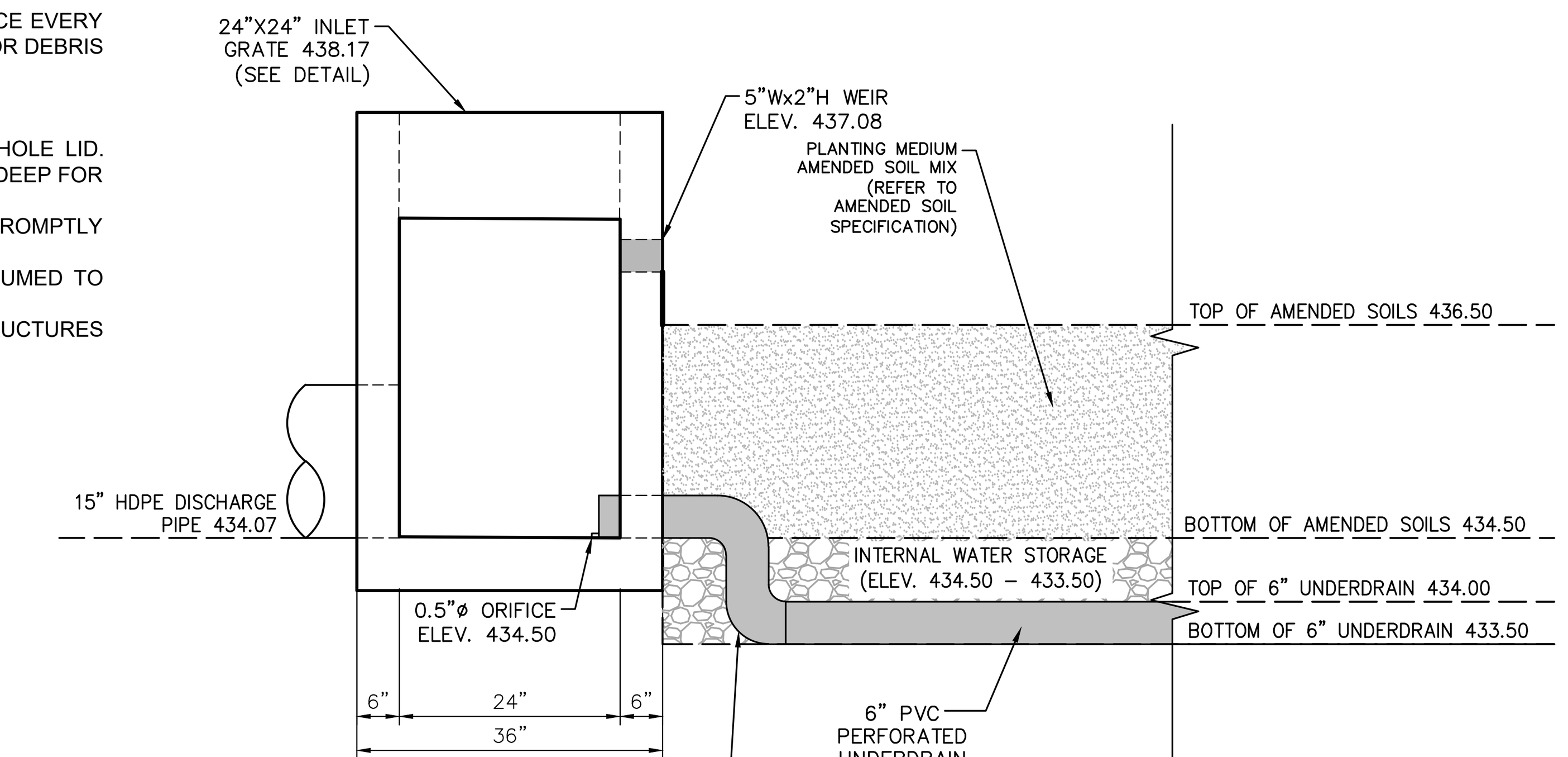
BMP #2 M.R. BIORETENTION AREA
CROSS-SECTION
N.T.S.

TYPICAL BIORETENTION AREA NOTES:

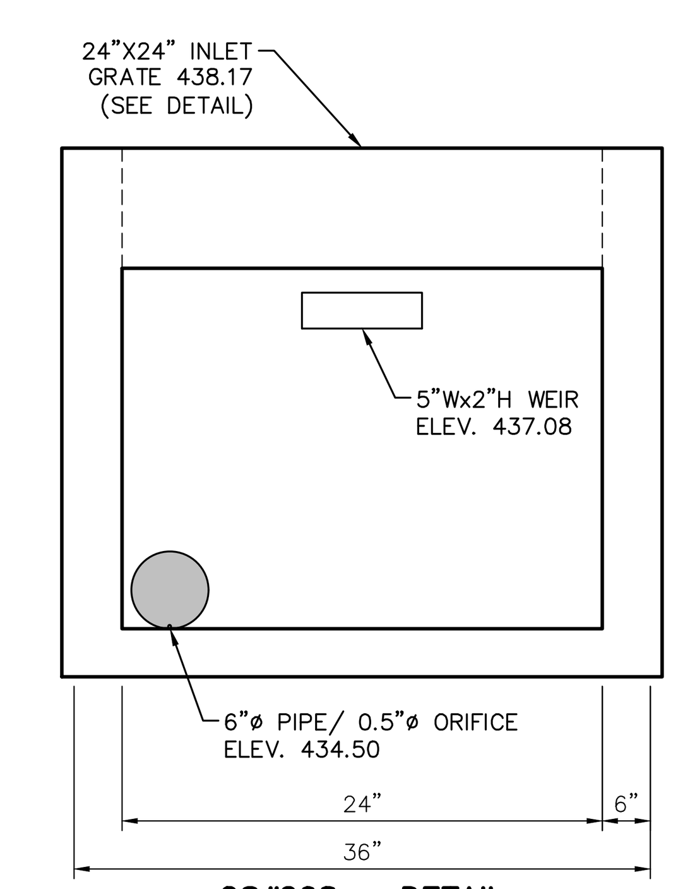
1. CONTRACTOR SHALL TREAT COMPACTED SUBGRADE SOILS AS SPECIFIED IN THE SOIL AMENDMENT SPECIFICATION PRIOR TO PLACEMENT OF THE UNDERDRAIN AND SOIL AMENDMENT SHOWN ON SHEET 9F.
2. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
3. GRADING OF AREAS SHALL BE ACCOMPLISHED USING LOW-COMPACTION EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF UNDERLYING SOILS.
4. ALL SUB MATERIALS BELOW THE SPECIFIED BIORETENTION DEPTH (ELEVATION) SHALL BE UNDISTURBED, UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHOULD PROVIDE A ONE-YEAR 100% CARE AND REPLACEMENT WARRANTY FOR ALL PLANTING BEGINNING AFTER INSTALLATION AND INSPECTION OF ALL PLANTS.
6. REFER TO OPERATIONS AND MAINTENANCE PLAN FOR POST-DEVELOPMENT CONSTRUCTION SEQUENCING AND MAINTENANCE SPECIFICATIONS.
7. ALL CONNECTIONS TO INLET/OUTLET STRUCTURES AND CLEANOUT PIPES SHALL HAVE WATERTIGHT SEALS.



OS#208 – DETAIL
PLAN VIEW: N.T.S.



OS#208 – DETAIL
SECTION A–A: N.T.S.



OS#208 – DETAIL
SECTION B–B: N.T.S.

POST-CONSTRUCTION STORMWATER MANAGEMENT NOTES/DETAILS

ITEMS INCLUDED IN 04/11/2025 REVISIONS:
- PROFESSIONAL SEAL ADDED TO PLAN.
- BMP #1 DETAIL REVISED TO INCLUDE UNDERDRAIN, STONE, GEOTEXTILE FABRIC, AND CLEANOUT.

ITEMS INCLUDED IN 05/01/2025 REVISIONS:
- OS#208 POND LINER OMITTED.
- BMP #1 BIORETENTION AREA DETAIL– DISCHARGE PIPE INVERT ELEVATION REVISED.
- BMP #1 BIORETENTION AREA DETAIL– UNDER DRAIN INVERT ELEVATION ADDED.
- CONSTRUCTION SEQUENCING NOTE REVISED.

NO.	DATE	REVISION
02	05/01/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025
01	04/11/2025	REVISED PER MCCD REVIEW LETTER DATED 03/25/2025

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER PE079

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX
2290 GILBERTSVILLE ROAD
UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chesterv.com

PROJECT NO. 22096-2000
F.B.

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
As Noted	03/31/2025	HL	MJ	