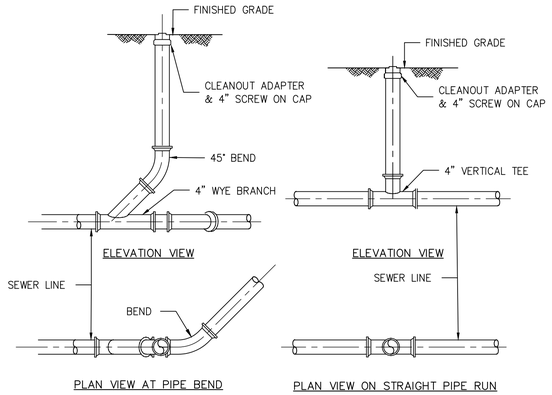
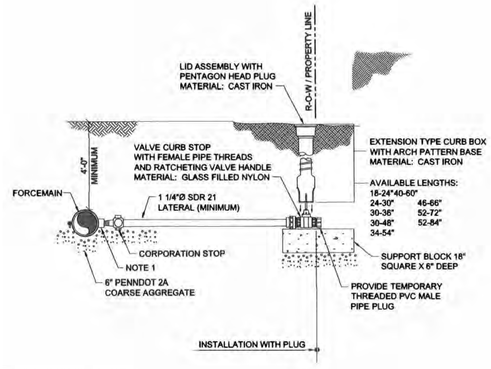


SANITARY CLEAN OUT DETAILS – GRAVITY PIPES

N.T.S.



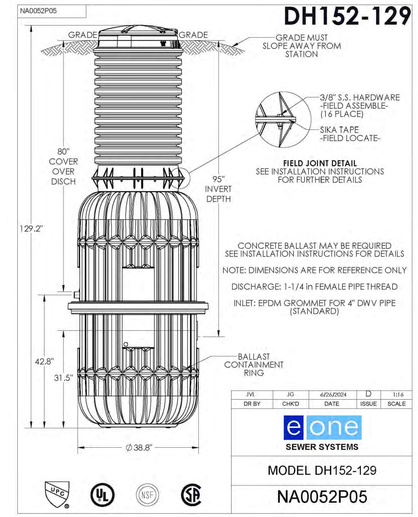
DRAWING NOTES:

1. FOR CONNECTION TO EXISTING FORCEMAIN PROVIDE WET SADDLE TAP.

   FOR CONNECTION TO NEW FORCEMAIN PROVIDE SANITARY PRESSURE WYE FITTING AND 45° BEND ON LATERAL.

SANITARY FORCE MAIN DETAIL

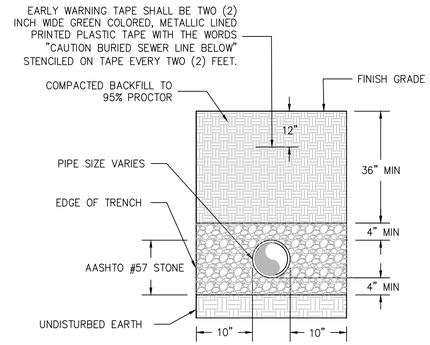
N.T.S.



NOTES:
1. MANUFACTURER: E-ONE SEWER SYSTEMS
2. MODEL: DH152-93

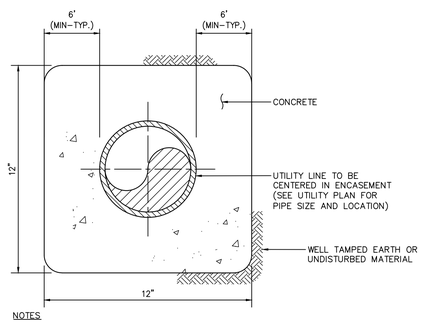
GRINDER PUMP DETAILS

N.T.S.



STANDARD SANITARY SEWER PIPE BEDDING DETAIL

N.T.S.

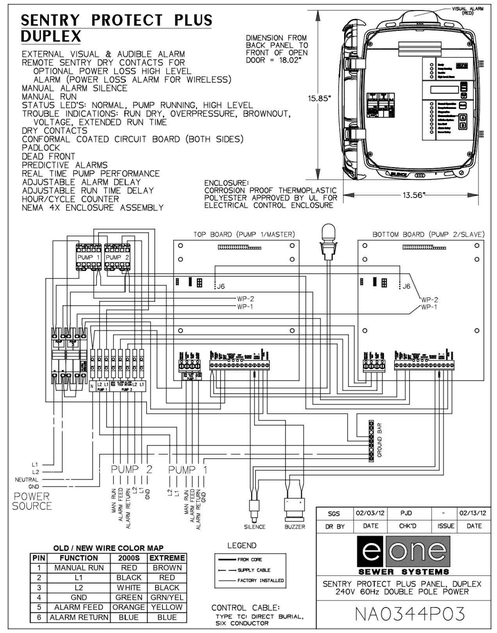


NOTES

1. 20 FT. LONG ENCASEMENT SHALL BE CENTERED OVER CROSSING UTILITY.

UTILITY PIPE CONCRETE ENCASEMENT DETAIL

N.T.S.



OLD / NEW WIRE COLOR MAP

PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

LEGEND
- FROM CORE
- SUPPLY CABLE
- FACTORY INSTALLED

CONTROL CABLE:
TYPE TC DIRECT BURIAL,
SIX CONDUCTOR

NOTES

1. MANUFACTURER: E-ONE SEWER SYSTEMS
2. MODEL: SENTRY PROTECT PLUS PANEL, DUPLEX, 240V, 60Hz, DOUBLE POLE POWER

GRINDER PUMP ALARM PANEL DETAILS

N.T.S.

DRAWING NOTES:

1. PROVIDE CONTINUOUS UPWARD SLOPE TO THE LATERAL ASSEMBLY CONNECTION.
2. INSTALL CONCRETE AS REQUIRED TO PROPERLY ANCHOR THE UNIT. MINIMUM DIMENSIONS: 50 INCHES DIAMETER, AS HIGH AS THE FLUTED SECTIONS OF THE STATION. INSTALL TWO EMBEDDED LIFT HOOKS INTO THE TOP OF THE CONCRETE AT 180°.

   TO PROVIDE THE MINIMUM 6-INCH CONCRETE FOUNDATION, PRECAST CONCRETE BASES MAY ALSO BE USED. THEY MUST BE AT LEAST 6 INCHES THICK BY 50 INCHES IN DIAMETER, AND CAST WITH AT LEAST 6 NUMBER 4 REBARS EXTENDING AT LEAST 4 INCHES (AND HOOKED) INTO THE BASE AND AT LEAST 8 INCHES (AND HOOKED) INTO THE COLLAR.
3. GRINDER PUMP SHALL BE SIZED TO EXCEED THE PRESSURE IN THE SANITARY SEWER FORCEMAIN.

GRINDER PUMP INSTALLATION DETAIL

N.T.S.

UTILITY DETAILS (SANITARY)

NO.	DATE	REVISION

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.	F.B.
22096-2000	

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

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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).

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

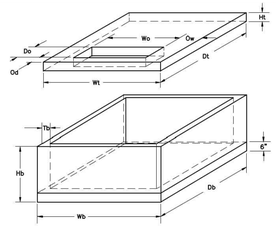
SEE SHEET 02 FOR FACILITY OWNER'S DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

General Notes:

1. The contractor shall contact the Company prior to beginning work to discuss the details of the transformer foundation such as position, orientation, working clearances, barrier protection, construction specifications, and inspection procedures. The contractor is responsible for purchasing,as well as , installing, and maintaining the pre-cast transformer foundation and associated secondary rack equipment (if needed). The contractor/developer shall coordinate site preparations with the desired delivery date. The contractor shall provide a clear and firm (e.g., concrete, asphalt, or grasscrete) approach to within ten (10) feet of the point of delivery and keep the area clear of obstructions that may block the use of delivery vehicles or Company vehicles (e.g., crane access to the transformer).
2. The developer /contractor is responsible for the excavation to install the transformer foundation and for backfilling afterward. The excavation shall be two (2) feet wider than the vault dimensions (shown Exhibit 25, page 2). The excavation depth shall be 45- inches deep for 42-inch high foundations bases or 57-inches deep for 54-inch high foundation bases. Six (6) inches of AASHTO #57 crushed stone shall be leveled and compacted in the bottom of the excavation as a base. Pavement (concrete, asphalt, or grass-crete) shall be provided to within ten (10) feet of the installation for Company trucks. The contractor should provide three (3) pieces of 4" X 4" X 8' lumber off to the side for temporarily unloading the foundation top at delivery time.
3. Conduits shall enter near the corners of the foundation (refer to Exhibit 25, page 1) through knockouts to provide for proper cable bending radius and pulling set-up and to facilitate cable racking (when needed). Conduits shall have end bells and shall be terminated flush with the inside surface of the foundation. The customer/contractor shall re-mortar the knockout area around the conduit penetration into transformer foundation to prevent water migration.
4. The developer /contractor will furnish and install all service cables as required per Exhibit 1. The developer /contractor shall allow sufficient slack, approximately five (5) feet, in the service lateral cables after they are racked. The slack allows the service cables to be trained so that the weight of the cables is supported by the cable racks and not supported by the transformer bushings. When requested, the developer /contractor shall supply and install cable racks (e.g., 30-inch rack made by A. B. Chance (Hubbell), using the inserts, on the side(s) of the foundation to support the service cables a minimum of 12 inches above floor level (per NEC Article 300.32). Refer to ANSI C135.35 for galvanized cable rack and hooks, and ASTM A153 for zinc coating (hot dip) on iron and steel hardware.
5. The contractor shall seal around the service cables inside the conduits (with approved foam) to prevent migration of water or gases. All unused ducts shall also be caped.
6. Backfill on all sides up to finish grade with 6" minimum of AASHTO #57 crushed stone to form a reservoir to contain the transformer oil in case of a leak.
7. The contractor shall install a continuous loop of #2 bare, seven (7) strand, soft drawn copper ground wire connected to two (2) 5/8" X 8' ground rods installed in opposite corners of the vault excavation in undisturbed earth (refer to Exhibit 25, page 1). Both ends of the ground wire shall enter the foundation through a one (1) inch diameter hole to be drilled or chiseled in the upper right-hand corner of the knockout panel. Each ground wire tail shall extend fifteen (15) feet inside the vault beyond the knockout point.
8. The decision to open the sump drainage or leave it closed will be made by the Company based on field conditions. The contractor is responsible for taking corrective action (improve drainage, sump pump, etc.) for a foundation that fills with water and water is leaking through service conduits into the customer's building. The area surrounding the foundation shall be graded so that ground water will not collect.
9. The contractor shall install protective barriers when the transformer is located in an area exposed to vehicular traffic (refer to Exhibit 30), consult the Company for details.
10. The deeper base for the 1500-2000 kVA transformer is used when secondary conduit configuration requires a deeper wall to maintain NEC/NESC minimum cover over the conduit.
11. Foundation for 34.5 kV live-front transformer includes a six-inch thick dividing wall between the high voltage and the low voltage compartments centered 55-1/2" from the inside edge of the low voltage compartment side wall.

TRANSFORMER PRE-CAST CONCRETE FOUNDATION AND VAULT NOTES



SELECTED

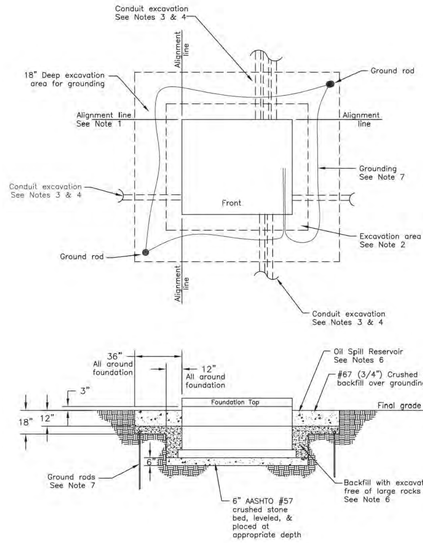
Transformer Size (kVA)	Found. Code	Base Wb	Base Db	Base Hb	Base Tb	Base WT.	Top Wt	Top Dt	Top Ht	Top WT.	Opening in Top Wo	Opening in Top Do	Opening in Top Ow	Opening in Top Od
22,940 GrdY/14,400 Volt & Below														
45 – 150	J1	72"	54"	42"	4"	4,275#	72"	54"	6"	1,725#	35"	14"	8.5"	6"
225 – 1000	J2	78"	66"	42"	4"	8,000#	78"	66"	6"	2,400#	60"	19"	9"	6"
1500 – 2500	J3	96"	96"	42"	6"	12,000#	96"	96"	9"	6,400#	60"	19"	18"	9"
1500 – 2500 (Note 7)	J4	96"	96"	54"	6"	14,000#	96"	96"	9"	6,400#	60"	19"	18"	9"
34,500 GrdY/19,920 Volt														
1500 – 2500	J3	96"	96"	42"	6"	12,000#	96"	96"	9"	6,400#	60"	19"	18"	9"
1500 – 2500 (Note 7)	J4	96"	96"	54"	6"	14,000#	96"	96"	9"	6,400#	60"	19"	18"	9"
34,500 Delta Volt Live-Front (Includes CE) 36 kV System)														
All Sizes (Note 8)	J5	138"	120"	54"	6"	24,655#	138"	120"	9"	10,270#	102"	36"	18"	18"

Transformer Size (kVA)	Found. Code	Width	Depth	Height	Stone Base
22,940 GrdY/14,400 Volt & Below					
45 – 150	J1	96"	78"	45"	6"
225 – 1000	J2	102"	90"	45"	6"
1500 – 2500	J3	120"	120"	45"	6"
1500 – 2500 (Note 7)	J4	120"	120"	57"	6"
34,500 GrdY/19,920 Volt					
1500 – 2500	J3	120"	120"	45"	6"
1500 – 2500 (Note 7)	J4	120"	120"	57"	6"
34,500 Delta Volt Live-Front (Includes CE) 36 kV System)					
All Sizes (Note 8)	J5	162"	144"	57"	6"

NOTES:
1. SELECTED: 225 - 1000 kVa

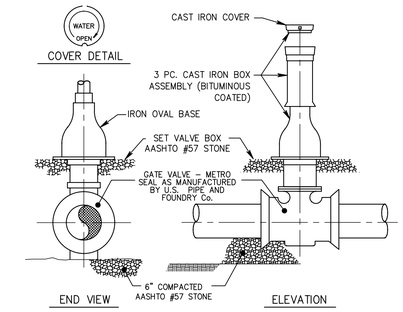
TRANSFORMER PRE-CAST CONCRETE FOUNDATION AND VAULT DETAIL

N.T.S.



TRANSFORMER PRE-CAST CONCRETE FOUNDATION AND VAULT DETAIL

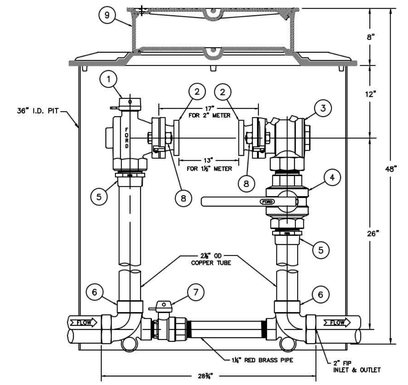
N.T.S.



NOTES:
1. FOR STANDARD 2" CONNECTION, PROVIDE A TAPPED COUPLING WITH THREADED INSERT OR DOUBLE-STRAPPED SADDLE CLAMP.
2. DO NOT PLACE CURB BOX IN PAVED AREAS.
3. ALL SERVICE CONNECTIONS SHALL BE LOCATED AT THE MIDPOINT BETWEEN SIDE LOT LINES.
4. WHERE SIDEWALK PARALLELS ROADWAY, THE CURB BOX SHALL BE PLACED BETWEEN THE CURB AND SIDEWALK. ALL OTHER LOCATIONS, CURB BOX TO BE PLACED WHERE DIRECTED BY AUTHORITY.

GATE VALVE DETAILS

N.T.S.



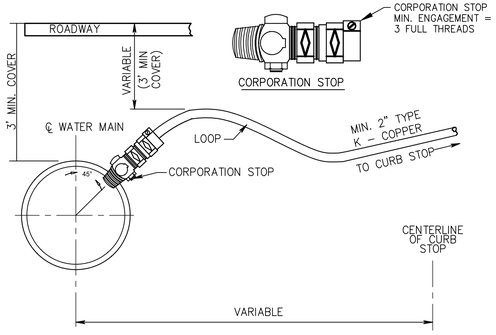
NOTES:
1. CATALOG NUMBERS SHOWN ARE AS MANUFACTURED BY THE FORD METER BOX COMPANY, INC. "I" IN CATALOG NUMBERS SHOULD BE REPLACED FOR THE FORD CATALOG TO INDICATE THE TYPE OF INLET AND OR OUTLET REQUIRED.
2. PROVIDE TWO (2) COPPER OR BRASS REDUCERS AT INLET AND OUTLET FOR 1-1/2" SERVICE.
3. METER PIT SHALL BE 36" I.D. PVC SCHO-LOC AS MANUFACTURED BY SCHOCO PRODUCTS, OR APPROVED EQUAL.
4. METER PIT COVER SHALL BE MONITOR COVER WITH INNER LID, MC-36-MB, AS MANUFACTURED BY THE FORD METER BOX COMPANY, INC. OR APPROVED EQUAL.
5. DOMESTIC SERVICE REQIRES BACKFLOW DEVICE, BACKFLOW DEVICE TO BE LOCATED ON SERVICE LINE AT ENTRY POINT INTO BLDG. BEFORE ANY CONNECTIONS.
6. MARK INLET, OUTLET, & DIRECTION OF FLOW ON LINT.
7. ALL BRASS OF 85-5-5-5 RED BRASS AWWA C800-89 ASTM B62-93.

ITEM	DESCRIPTION	QTY.	CAT. NO.
1	ANGLE BALL VALVE	1	BFAX3-777W-MSB
2	METER ADAPTERS/PAIR	1	A67
3	ANGLE DUAL CHK VALVE (NSF) 1024	1	HFFAXK-777-MSB
4	BALL VALVE	1	BXK-777-MB-87
5	SOLDER BUSHING	2	CSB-77
6	TEE	2	CSTEE-79-T
7	BALL VALVE	1	BXK-455W
8	BOLT & NUT / PR	2	PSB
9	MONITOR COVER W/ INNER LID *	1	MC-36-MB

* ORDERED SEPARATELY

WATER METER PIT DETAIL

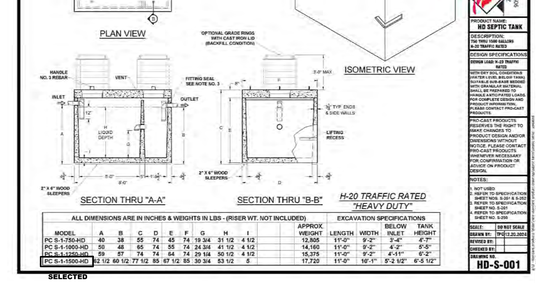
N.T.S.



NOTES:
1. FOR STANDARD 2" CONNECTION, PROVIDE A TAPPED COUPLING WITH THREADED INSERT OR DOUBLE-STRAPPED SADDLE CLAMP.
2. DO NOT PLACE CURB BOX IN PAVED AREAS.
3. ALL SERVICE CONNECTIONS SHALL BE LOCATED AT THE MIDPOINT BETWEEN SIDE LOT LINES.
4. WHERE SIDEWALK PARALLELS ROADWAY, THE CURB BOX SHALL BE PLACED BETWEEN THE CURB AND SIDEWALK. ALL OTHER LOCATIONS, CURB BOX TO BE PLACED WHERE DIRECTED BY AUTHORITY.

CORPORATION STOP DETAILS

N.T.S.

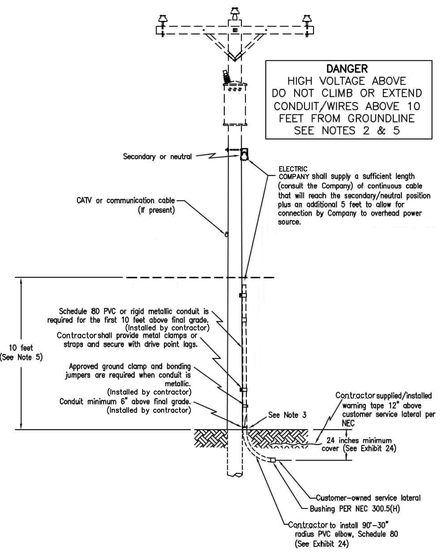


NOTES:
1. TANK SHALL BE INSTALLED SUBSURFACE AND SHALL BE H-20 TRAFFIC RATED "HEAVY DUTY".
2. BACK FILLING SHALL BE 8" LIFTS TO 95% COMPACTION WITH NATIVE SOIL.
3. TANKS TO BE INSTALLED AS PER MANUFACTORIES' SPECIFICATIONS.

HOLDING TANK DETAIL

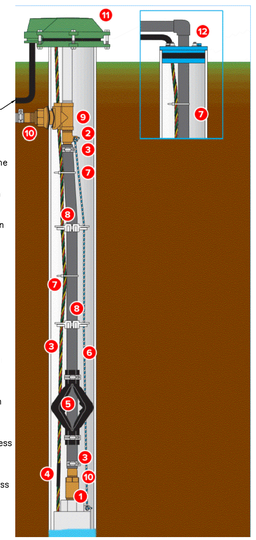
N.T.S.

NOTES:
1. MET-ED IS RESPONSIBLE FOR ALL UTILITIES ABOVE 10 FT. ELEVATION. INCLUDING INSTALLING ELECTRIC WIRES FROM POLE TO TRANSFORMER.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL PROPOSED UTILITY IMPROVEMENTS BELOW 10 FT. ELEVATION.
3. MET-ED SHALL CONNECT ALL WIRES TO THE TRANSFORMER, INCLUDING TRANSFORMER INSTALLATION.
4. CAUTION: ONLY QUALIFIED PERSONNEL ARE PERMITTED TO INSTALL ELECTRICAL EQUIPMENT IN THE VICINITY OF ENERGIZED ELECTRICAL LINES AS DESCRIBED IN OSHA 1910 SUBPART R. AND S.
5. THE ELECTRIC COMPANY SHALL DETERMINE THE LOCATION/POSITION OF VERTICAL RISERS ON THE POLE BASED ON TRAFFIC FLOW AND LOCATION OF CATV, OR TELEPHONE CO. ATTACHMENTS.
6. ALL SERVICE INSTALLATIONS SHALL MEET NEC, STATE, AND LOCAL CODES AND REGULATIONS.
7. THE ELECTRIC COMPANY SHALL PROVIDE THE CONDUIT, BRACKETS, WEATHERHEAD(S), IF REQUIRED BY EXHIBIT 1 OF THE MET ED CUSTOMER GUIDE FOR ELECTRIC SERVICE. THE FIRST TEN (10) FEET OF CONDUIT SHALL BE SCHEDULE 80 PVC OR RIGID METALLIC CONDUIT. IF REQUIRED BY EXHIBIT 1. THE ELECTRIC COMPANY W COMPLETE THE INSTALLATION. CUSTOMER SHALL COORDINATE THE INSTALLATION WITH THE COMPANY
8. CONDUIT SIZE LIMITED TO 4" DIAMETER CONDUIT SI; FOR CONDUIT DIAMETER GREATER THAN 4", SEE EX 10A OF THE MET ED CUSTOMER GUIDE FOR ELECTR SERVICE.
9. PENN POWER CUSTOMERS SHALL CONTEXT ENGINEEI



DIRECT ATTCHEMENT OF CUSTOMER-OWNED UNDERGROUND SECONDARY SERVICE LATERAL(S) ON PA OPERATING COMPANY'S POLES DETAIL

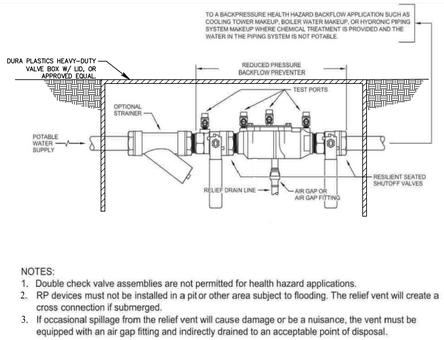
N.T.S.



NOTES:
1. CHECK VALVE
   Located at the top of the pump. It prevents backflow into the pump and holds the head of the water in the system.
2. BRASS ROPE ADAPTER
   Connects the Pitless Adapter and the Submersible Pump with Safety Rope.
3. IDEAL CLAMPS
   All-stainless steel clamps for dependable connections between Pip and Insert Fittings or Torque Arrestor.
4. 3M HEAT SHRINK SLICE KIT
   For waterproof electric cable splices in submersible pump installations.
5. TORQUE ARRESTOR
   Installed directly above Submersible Pumps to protect pump and well components from starting torque damage.
6. SAFETY ROPE
   A safety line from the top of the well to the pump.
7. CABLE TIE
   Fastens cable to Drop Pipe.
8. CABLE GUARD
   US Patent #6,595,284. Protects submersible cable wires from abrading against sides of well. Two styles available. Self-clamping snap in.
9. PITLESS ADAPTER
   Provides a watertight, sanitary, removable connection between the pump and the house. Installed in casing below the frost line to prevent freezing.
10. BRASS INSERT FITTING
    Provides connection between poly pip and pipe thread of Pitless Adapter.
11. WATER TIGHT WELL CAP
    Inner gasket compresses to outside diameter of casing to provide a watertight seal. Top of cap removed easily to access well for service.
12. WELL SEAL
    Used in above-ground installations to provide a positive seal inside casing.

WELL WATER CONNECTION DETAIL

N.T.S.



NOTES:
1. Double check valve assemblies are not permitted for health hazard applications.
2. RP devices must not be installed in a pit or other area subject to flooding. The relief vent will create a cross connection if submerged.
3. If occasional spillage from the relief vent will cause damage or be a nuisance, the vent must be equipped with an air gap fitting and indirectly drained to an acceptable point of disposal.

BACKFLOW PREVENTER DETAILS – IN METER PIT

N.T.S.

UTILITY DETAILS (WATER & ELECTRIC)

NO.	DATE	REVISION

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.chestercve.com

PROJECT NO. 22096-2000
F.B.

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

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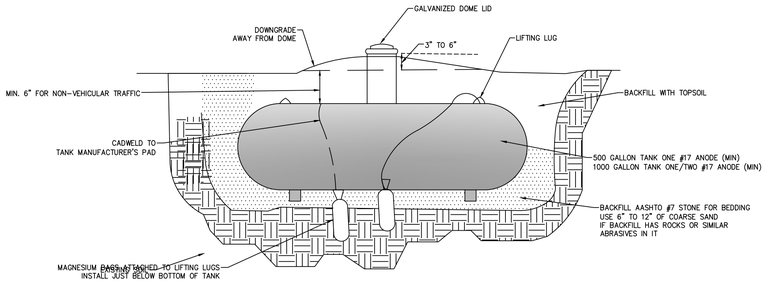
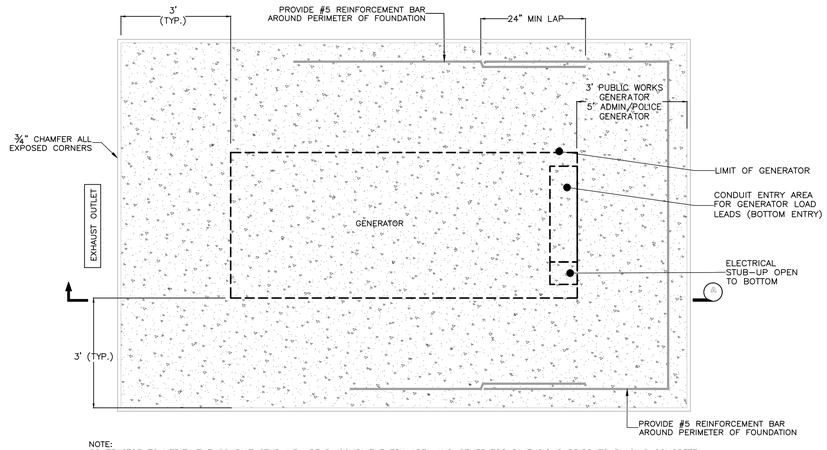
PENNSYLVANIA ONE CALL SYSTEM, INC.
CALL 3 WORKING DAYS BEFORE YOU DIG
1-800-242-1776
POCS SERIAL NUMBER: 20243300770

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



UNDERGROUND PROPANE TANK BEDDING DETAIL

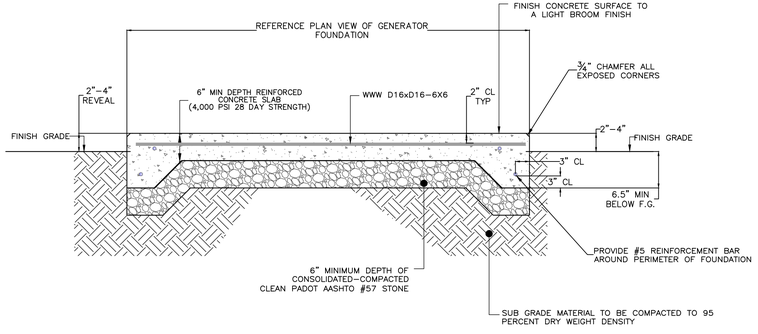
N.T.S.



NOTE:
CONTRACTOR TO VERIFY THE CONDUIT STUB-UP AREAS, CONDUIT ENTRY AREA AND GENERATOR DIMENSIONS PRIOR TO PLACING CONCRETE.

PLAN VIEW GENERATOR SLAB

N.T.S.



SECTION A–A GENERATOR SLAB (POLICE/ADMIN)

N.T.S.

STANDBY POWER RATING

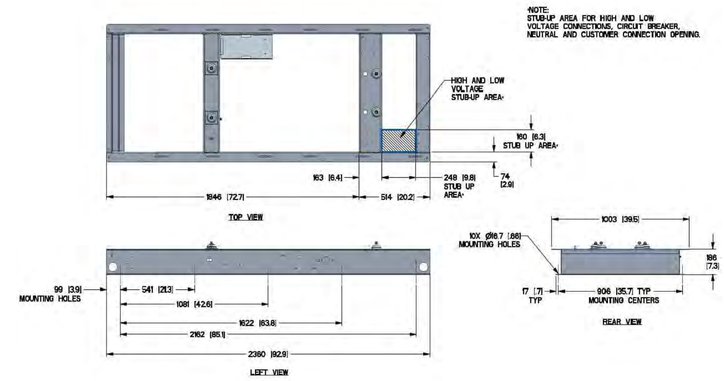
Model RG10090 - 100 kW, 60 Hz Emergency Standby Power Generator

NOTES

1. MANUFACTURER: GENERAC
2. MODEL: PROTECTOR SERIES, RG10090– 100 kW, 60Hz EMERGENCY STANDY POWER GENERATOR

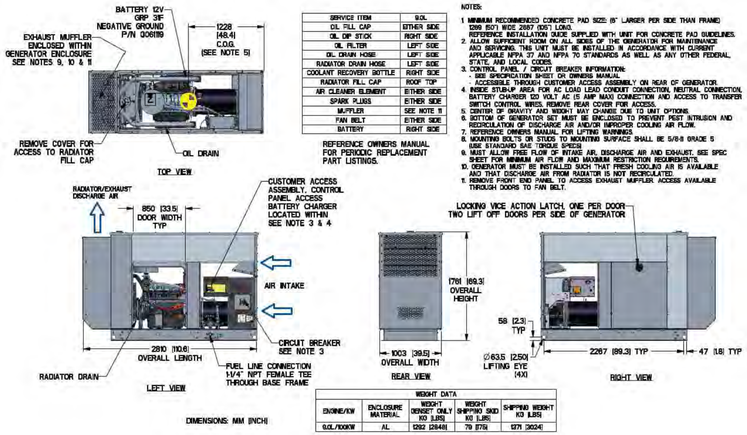
GAS GENERATOR BOX DETAIL

N.T.S.



GAS GENERATOR INSTALLATION LAYOUT DETAIL

N.T.S.



SERVICE ITEM	SIDE
OIL FILL CAP	EITHER SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	LEFT SIDE
OIL DRAIN HOSE	LEFT SIDE
RADIATOR DRAIN HOSE	LEFT SIDE
COOLANT RECOVERY BOTTLE	RIGHT SIDE
RADIATOR FILL CAP	ROOF TOP
AIR CLEANER ELEMENT	EITHER SIDE
SPARK PLUGS	EITHER SIDE
MUFFLER	SEE NOTE 11
FAN BELT	EITHER SIDE
BATTERY	RIGHT SIDE

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS.

NOTES:
1. MINIMUM RECOMMENDED CONCRETE PAD SIZE (6" LARGER PER SIDE THAN FRAME) 1269 [50"] WIDE 2897 [105"] LONG.
   REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
2. ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND VENTILATION. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
3. CONTROL PANEL / CIRCUIT BREAKER INFORMATION:
   - SEE SPECIFICATION SHEET ON OWNERS MANUAL
   - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY ON REAR OF GENERATOR
4. INSIDE STUB-UP AREA FOR AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC 15 AMP MAXI CONNECTION AND ACCESS TO TRANSFER SWITCH CONTROL WIRES. REMOVE REAR COVER FOR ACCESS.
5. CENTERS OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.
6. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
7. REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
8. MOUNTING BOLTS OR STUDS TO MOUNTING SURFACE SHALL BE 5/8-8 GRADE 5 BOLT (STANDARD SAE THROUGH SPEED).
9. MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
10. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADIATOR IS NOT RECIRCULATED.
11. REMOVE FRONT END PANEL TO ACCESS EXHAUST MUFFLER. ACCESS AVAILABLE THROUGH DOORS TO FAN BELT.

WEIGHT DATA				
ENGINE/kW	ENCLOSURE MATERIAL	WEIGHT DRYSET ONLY KG [LBS]	WEIGHT SHIPPING SKID KG [LBS]	SHIPPING WEIGHT KG [LBS]
6.0L/100kW	AL	1262 [2648]	79 [176]	1271 [2824]

GAS GENERATOR INSTALLATION LAYOUT DETAIL

N.T.S.

Notes:

1. Contractor shall provide trenching, conduit, and backfill to Company specifications.
2. The contractor shall contact the Company for placement of both Company and customer electrical facilities and the approved trench route for connecting them.
3. The contractorshall not deviate from the Company's approved trench route unless expressly approved in writing by the Company's engineering group representative. It shall be the contractor's responsibility to notify the Company of any conflicts that the proposed electrical design creates with obstacles, other facilities, or easements. Changes requested following the design acceptance by the contractor may require the Company to be compensated if facilities need to be relocated or project delays.
4. Before excavation begins, the excavator shall mark the proposed facilities (in white) and then notify the appropriate state One-Call agency to mark other underground facilities (refer to Sections 3.13 and 3.14).
5. The contractor shall also coordinate the installation of all other buried utilities that are installing their facilities nearby, jointly occupying the trench (with Company approval), or crossing the electrical supply trench.
6. Below are the Company's required minimum clearances between electric supply lines and the following utility lines:
   - Steam or cryogenic lines - six (6) feet (use of an approved thermal barrier may reduce this clearance).
   - Fuel lines: four (4) feet for low-pressure natural gas, oil, propane, or other like fuels or ten (10) feet for gas lines that are high-pressure lines or are greater than four (4) inches in diameter.
   - Water, sewer, and telecommunication (i.e., telephone & CATV) lines - one (1) foot.
   - Clearances from telephone and CATV lines may be reduced to zero (0) feet or no deliberate separation (a.k.a. – random lay) if all involved parties agree and NESC [2017] Rule 354 is met.
   - Other utility companies (e.g., local steam, water, communication, sewer, and fuel companies) may require greater clearances than stated above.
   - If required clearances cannot be met (e.g., trenching through solid rock), clearances may be reduced to one (1) foot minimum if all involved parties agree.
   - Other facilities are prohibited from running above/below and parallel to the electrical cable without specific Company's approval.
7. The Company's minimum cover requirements for the primary (> 600 V) and secondary (< 600 V) conduits are based on providing adequate cover per NESC Code (depth). It shall be the responsibility of the customer to ensure that the minimum required coverages over the conduits are always maintained. Any necessary corrections to the depth of cover or required mechanical protection to prevent damage to the conduits from surface activity shall be the responsibility of the customer. Minimum cover over the conduits shall be maintained until all stages of the construction are completed.

Minimum Cover Requirements

VoltageV (Φ–Φ)	Minimum Cover Over Conduit(s)
< 600 V	24 inches
> 600 V to 50 kV	30 inches

8. When primary (> 600 V to 50 kV) and secondary (< 600 V) conduits share the same trench and are located side-by-side, the depth of cover for both conduits shall be to the primary conduit requirement with a minimum of two (2) inches of separation. If the conduits are stacked, the primary conduit(s) shall be on the bottom at the required primary depth. The secondary/service conduit(s) shall be on top of the primary conduit(s) with a minimum separation of two (2) inches between the conduits.
9. See Exhibit 24, page 1 for details on the trench dimensions (width and depth requirements). Contractor shall contact the Company representative if the trench must be more than four (4) feet deep.
10. The contractor shall clear the cable route of trees, tree stumps, boulders, or other obstructions at and below grade. The excavator shall grade the trench route to final grade level. The contractor shall be responsible for any damage caused by the excavator. This includes damage to any tree whose root system is subsequently damaged from the trenching operations. The excavator shall grade all trench routes to final grade.
11. The contractor shall not use power-excavating equipment within 18 inches of any existing buried cables or other electrical or communications facilities.
12. Excavated material ("spoils") should be placed on the field side of the trench (unless directed by the Company otherwise), two (2) feet from the edge of excavations (per OSHA Standard 1926.651(j) (2)).
13. Standing water in the trench should be removed by pumping or draining (per OSHA Standard 1926.651(h)).
14. The bottom of the trench shall be relatively smooth, undisturbed earth, sand, or well-tamped earth which is free of rock, cinders, or sharp objects. Trench excavations in rocky soil may require a two-inch layer of select backfill on the bottom of the trench as determined by the Company.
15. Buried conduits shall be rigid PVC, heavy wall, sunlight resistant, listed and labeled, Schedule 40 conduit per NEMA TC2 (i.e., electrical grade). Additional requirements, such as concrete encasement of elbows or galvanized steel elbows, may be specified by the Company based on the specific design parameters of the conduit system and will be detailed in the electrical layout drawing. Contractor shall contact the Company for the proper minimum conduit diameters.

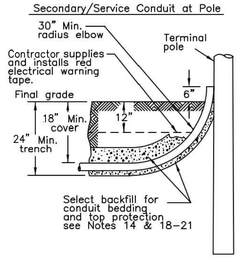
Conduit Requirements

Conduit Size	Conduit Type	Conduit Bend Radius
6" – 8"	Sch40 PVC	48"
3" – 5"	Sch40 PVC	36"
1-1/2" or 2"	Sch40 PVC	18"

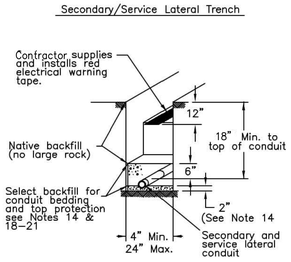
UTILITY POLE TO TRANSFORMER
TRANSFORMER TO BUILDINGS

16. Customer-owned service lateral conduits (if used) shall be sized per NEC. Those conduits shall be supplied, installed, and covered by thecontractor. Conduit for service laterals shall be a minimum of 3-inch diameter conduit.
17. Secondary/service conduit elbows shall have a minimum radius of 30 inches. Service riser conduit shall be rigid PVC, heavy wall, sunlight resistant, listed and labeled, Schedule 80 conduit per NEMA TC2. Primary conduit elbows shall have a minimum radius of 36 inches for sizes from 3" to 5". For conduits 6 inch and larger, the elbows shall have a minimum radius of 48 inches.
18. All joints shall be glued together. Conduit shall be cleaned and confirmed with a mandrel 1/2 inch smaller than the conduit inside diameter. Unused conduits shall be plugged at each end to keep water and dirt out. When conduit runs are greater than twenty (20) feet, a ¼-inch unbroken nylon or polypropylene pulling rope shall be installed in each conduit. If the Company cannot pull conductors through the conduit run, or if the pulling rope is broken or unusable because it is glued to the conduit, the contractor shall make the necessary repairs.
19. Before backfilling, the contractor shall verify that the Company and local electrical inspector have completed all required inspections of the trench and conduit. In addition, the customer shall verify other utilities that were approved to use joint trench have completed their work.
20. The contractor shall backfill around all conduits with six (6) inches of select backfill. Select backfill shall be graded sand, stone dust, limestone dust, rock free earth or topsoil. Materials that "set up" such as fly ash, culm and foundry waste are not acceptable. The remainder of the trench shall be backfilled with native soil and not contain large rocks (greater than two (2) inch diameter), rocks with sharp edges or other debris. An additional six (6) inches of mounded backfill is recommended to allow for settling.
21. Backfill should be compacted in six-inch layers by hand or using a pneumatic or vibrating tamping equipment to lessen the effects of settling. Note: machine compaction should not be used within six inches of the conduit (per NESC Rule 353A). Do not run wheels or tracks of equipment along the trench to compact the backfill as this could damage the conduits.
22. The contractor shall provide and bury a red "electrical" warning tape at least three (3) inches wide directly above all conduits twelve (12) inches below final grade as shown in Exhibit 24 (refer to NEC 300.5(D)(3).
24 For cables located beneath roads under PennDOT jurisdiction, cables shall be installed in conduit, have a minimum of 36 inches of cover, and shall be completely backfilled with #2 RC aggregate.

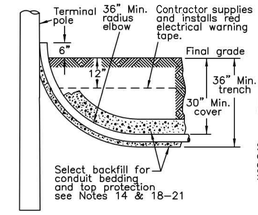
Secondary/Service Conduit at Pole



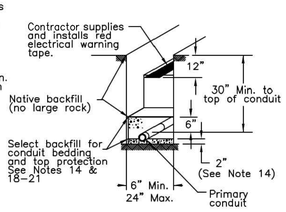
Secondary/Service Lateral Trench



Primary Conduit at Pole



Primary Trench



ELECTRIC CONDUIT TRENCHING AND BACKFILL DETAIL AND NOTES

N.T.S.

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MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

PENNSYLVANIA ACT 187 REQUIREMENTS
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PENNSYLVANIA ONE CALL SYSTEM, INC.
CALL 3 WORKING DAYS BEFORE YOU DIG
1-800-242-1776
POCS SERIAL NUMBER: 20243300770

UTILITY DETAILS (ELECTRIC & GAS)

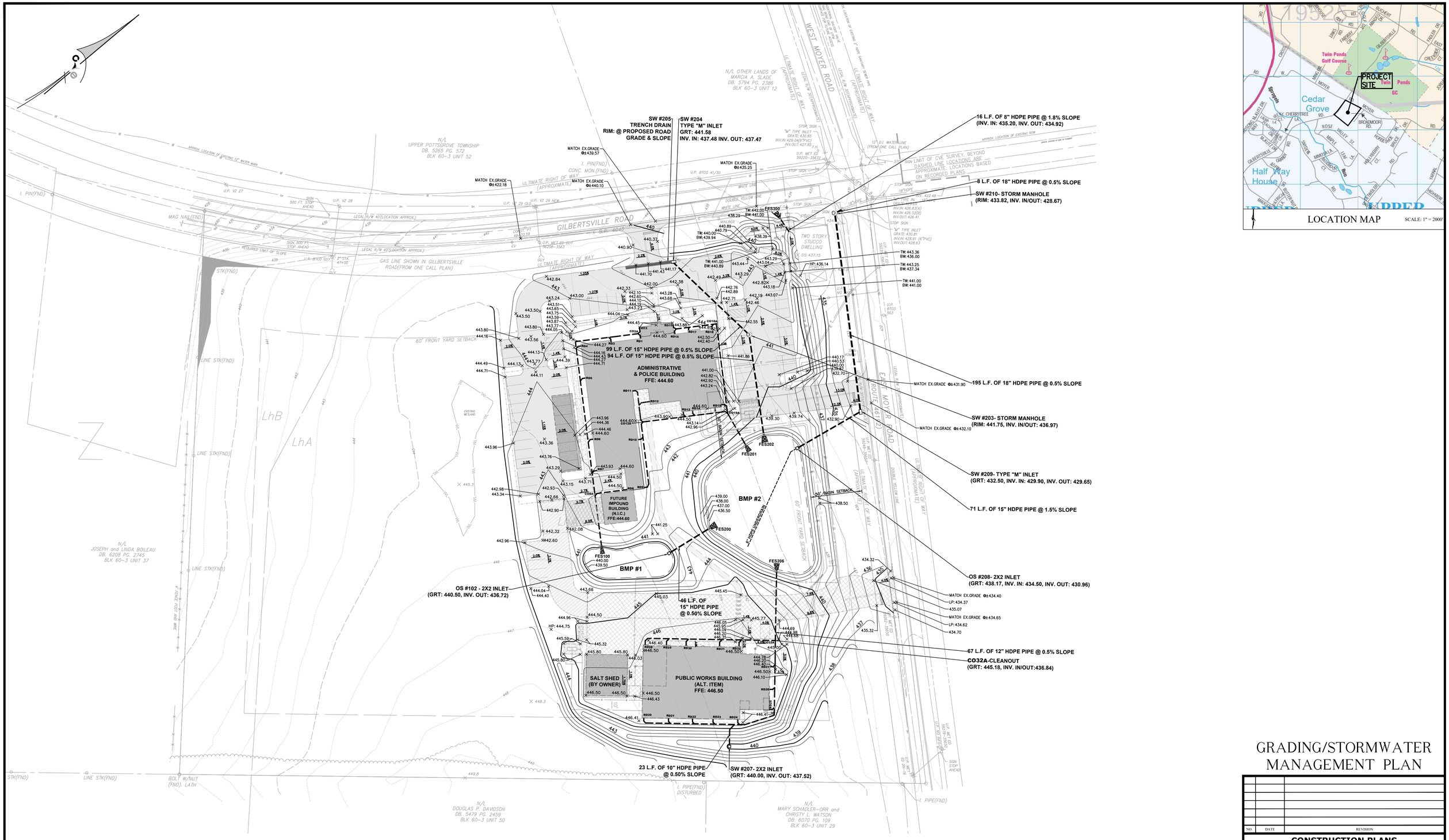
NO.	DATE	REVISION

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	MJ	



LOCATION MAP SCALE: 1" = 2000'

GRADING/STORMWATER MANAGEMENT PLAN

NO.	DATE	REVISION

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.	F.B.
22096-2000	

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

SHEET 13 OF 23

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	NO
LhB	3% TO 8% SLOPES	6" – 36"	40"–60"	NONE	NONE	C/D	NO

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

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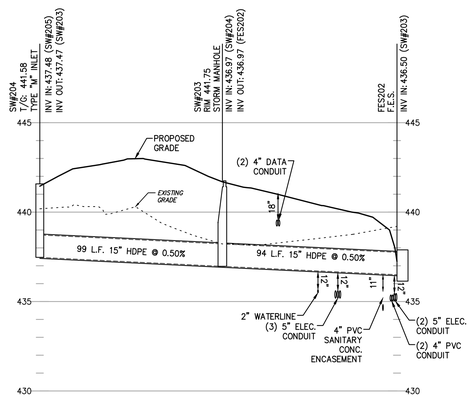
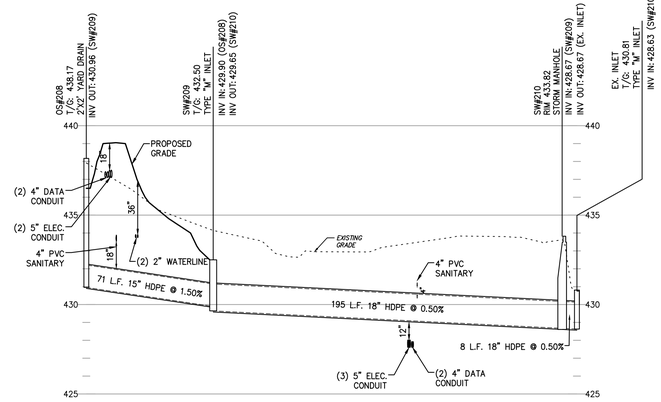


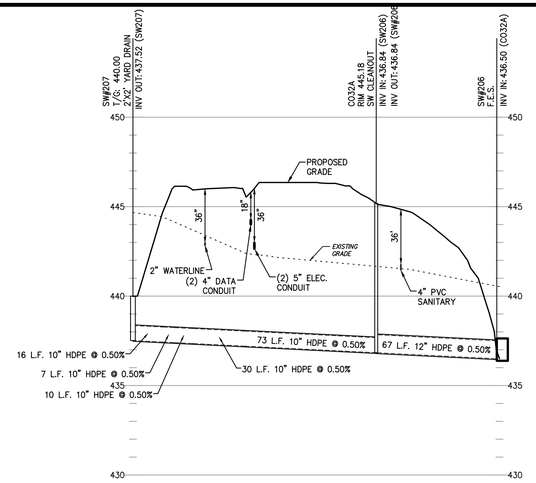
STORMWATER PROFILE
FROM SW205 TO SW202

SCALE: 1"=40' HORIZ. 1"=4' VERT.



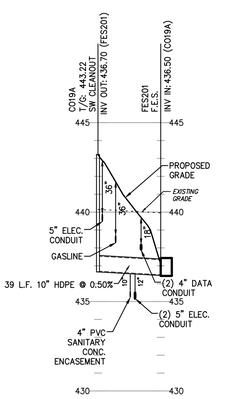
STORMWATER PROFILE
FROM OS#208 TO SW210

SCALE: 1"=40' HORIZ. 1"=4' VERT.



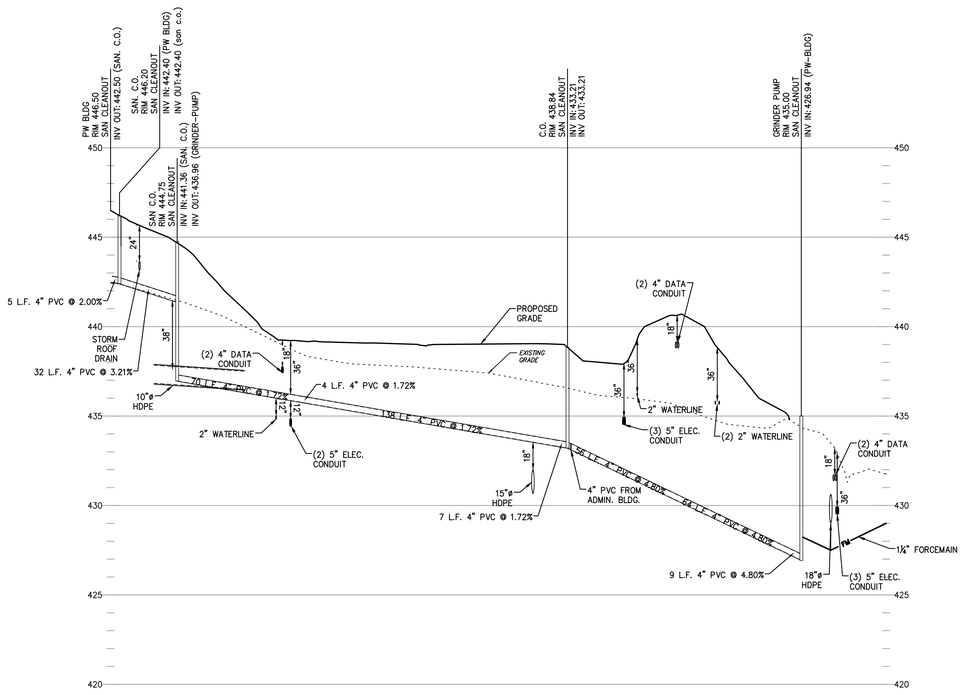
STORMWATER PROFILE
FROM SW207 TO SW206

SCALE: 1"=40' HORIZ. 1"=4' VERT.



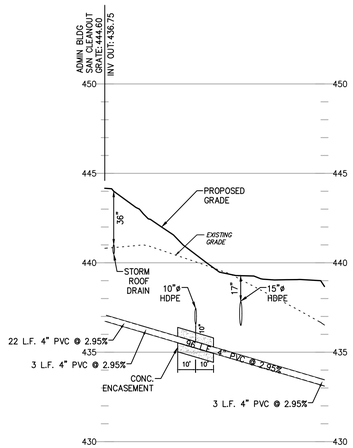
STORMWATER PROFILE
FROM CO19A TO FES201

SCALE: 1"=40' HORIZ. 1"=4' VERT.



SANITARY SEWER PROFILE
FROM PUBLIC WORKS BUILDING

SCALE: 1"=40' HORIZ. 1"=4' VERT.



SANITARY SEWER PROFILE
FROM ADMIN. BUILDING

SCALE: 1"=40' HORIZ. 1"=4' VERT.

PROFILES

NO.	DATE	REVISION

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FOR
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UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

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PROJECT NO.	F.B.
22096-2000	

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1"=40'	03/31/2025	PT	MJ	

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

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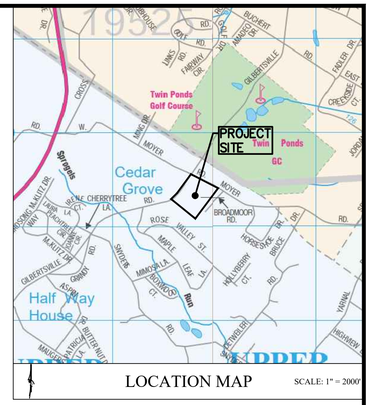
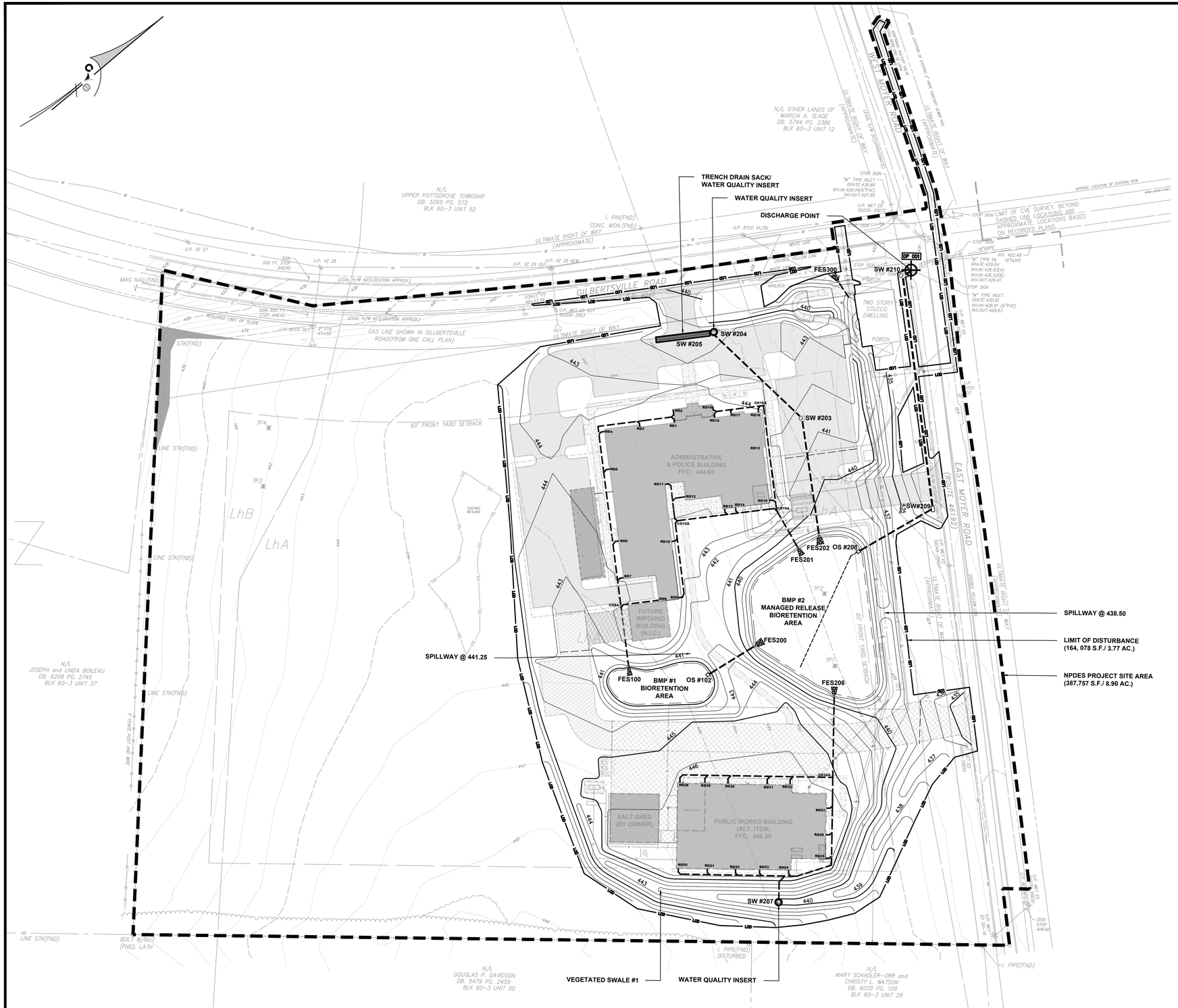
SEE SHEET 02 FOR FACILITY OWNER'S DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.

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

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



LOCATION MAP SCALE: 1" = 2000'



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	–	–

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	NO
LhB	3% TO 8% SLOPES	6" – 36"	40"–60"	NONE	NONE	C/D	NO

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

POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

NO.	DATE	REVISION

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.	F.B.
22096-2000	

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

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 ON 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 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 OWNER'S DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.

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 AREA.

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 INSTALLATION 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 FILTER SOCK AND/OR OR OTHER APPROPRIATE TEMPORARY EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING THE PRACTICE DURING CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, BIORETENTION AREA/BIO-FILTRATION AREAS SHALL BE MARKED OFF IN THE FIELD. THE AREAS SHALL BE DELINEATED WITH CONSTRUCTION FENCING OR TAPE IN SUCH A MANNER AS TO PREVENT THE PARKING OR REPEATED MOVEMENT OF CONSTRUCTION TRAFFIC.
3. ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMP'S MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITY BEGINS.
4. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
5. INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER OPTIC, ETC) PRIOR TO SETTING FINAL GRADE OF BIORETENTION DEVICE.
6. ROUGH GRADE THE SITE. IF BIORETENTION AREAS ARE BEING USED AS TEMPORARY SEDIMENT BASINS LEAVE A MINIMUM OF 1 FOOT OF COVER OVER THE PRACTICE TO PROTECT THE UNDERLYING SOILS FROM CLOGGING.
7. PERFORM ALL OTHER SITE IMPROVEMENTS.
8. TRIM AND MULCH ALL AREAS AFTER DISTURBANCE.
9. CONSTRUCT BIORETENTION DEVICE UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA.
10. CONSTRUCT CURB CUTS OR OTHER INFLOW BUT PROVIDE PROTECTION TO PROHIBIT SEDIMENT LADEN WATER FROM ENTERING THE BMP.
11. CRITICAL STAGE OF CONSTRUCTION: CONTACT ENGINEER TO VERIFY INSTALLATION OF BIORETENTION AREA.
12. IMPLEMENT TEMPORARY AND PERMANENT EROSION CONTROL PRACTICES.
13. PLANT AND MULCH BIORETENTION DEVICE.
14. 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

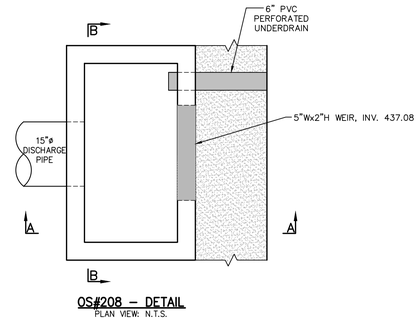
INSPECTION REQUIREMENTS:
1. ALL DRAINAGE COLLECTION STRUCTURES SHALL BE INSPECTED ANNUALLY FOR THE FIRST FIVE (5) YEARS AND ONCE EVERY THREE (3) YEARS THEREAFTER, FOR TRASH, DEBRIS OR EVIDENCE OF PIPE LEAKAGE OR SAGGING; REMOVE TRASH OR DEBRIS IMMEDIATELY; IMMEDIATELY REPAIR OR REPLACE LEAKING/SAGGING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

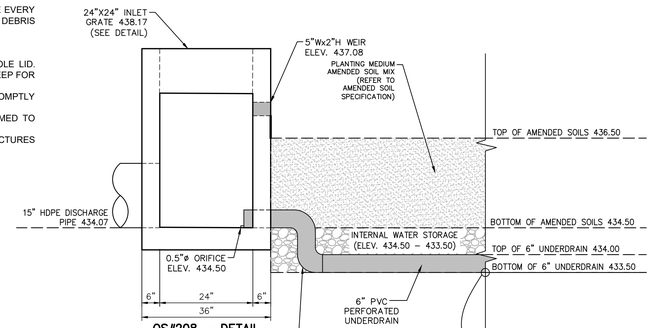
SITE RESTORATION O&M REQUIREMENTS

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

PERFORM ROUTINE INSPECTIONS AND CORRECT EROSION PROBLEMS, IF ENCOUNTERED.



OS#208 – DETAIL
PLAN VIEW: N.T.S.



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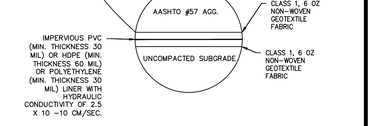
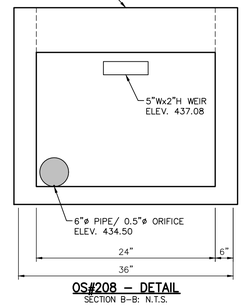
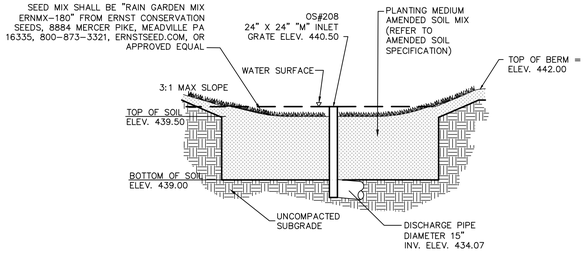
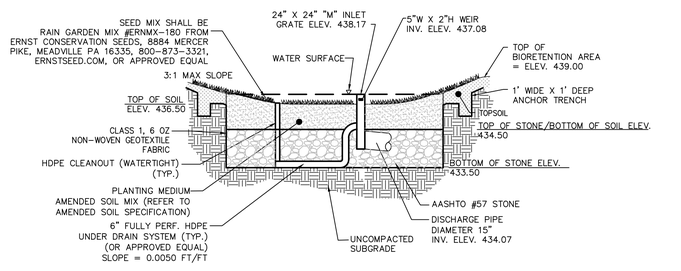




OS#208 – DETAIL
SECTION B–B: N.T.S.



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.

POST-CONSTRUCTION STORMWATER MANAGEMENT NOTES/DETAILS

NO.	DATE	REVISION

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX

UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

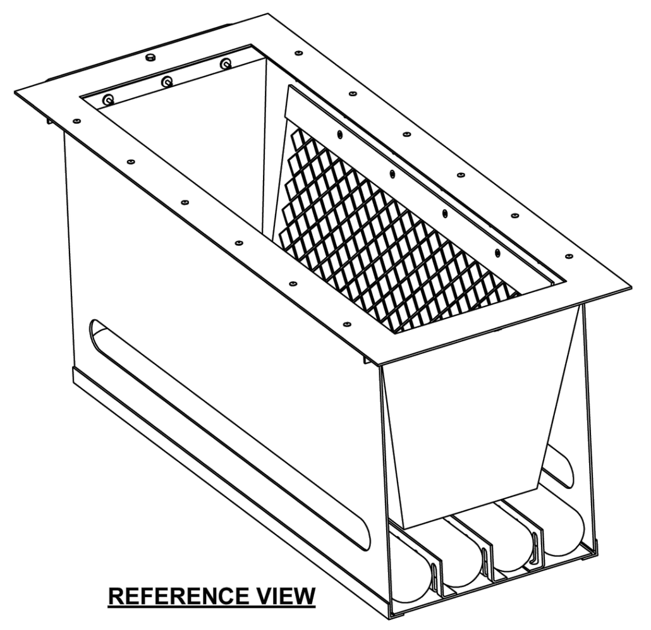
ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervy.com

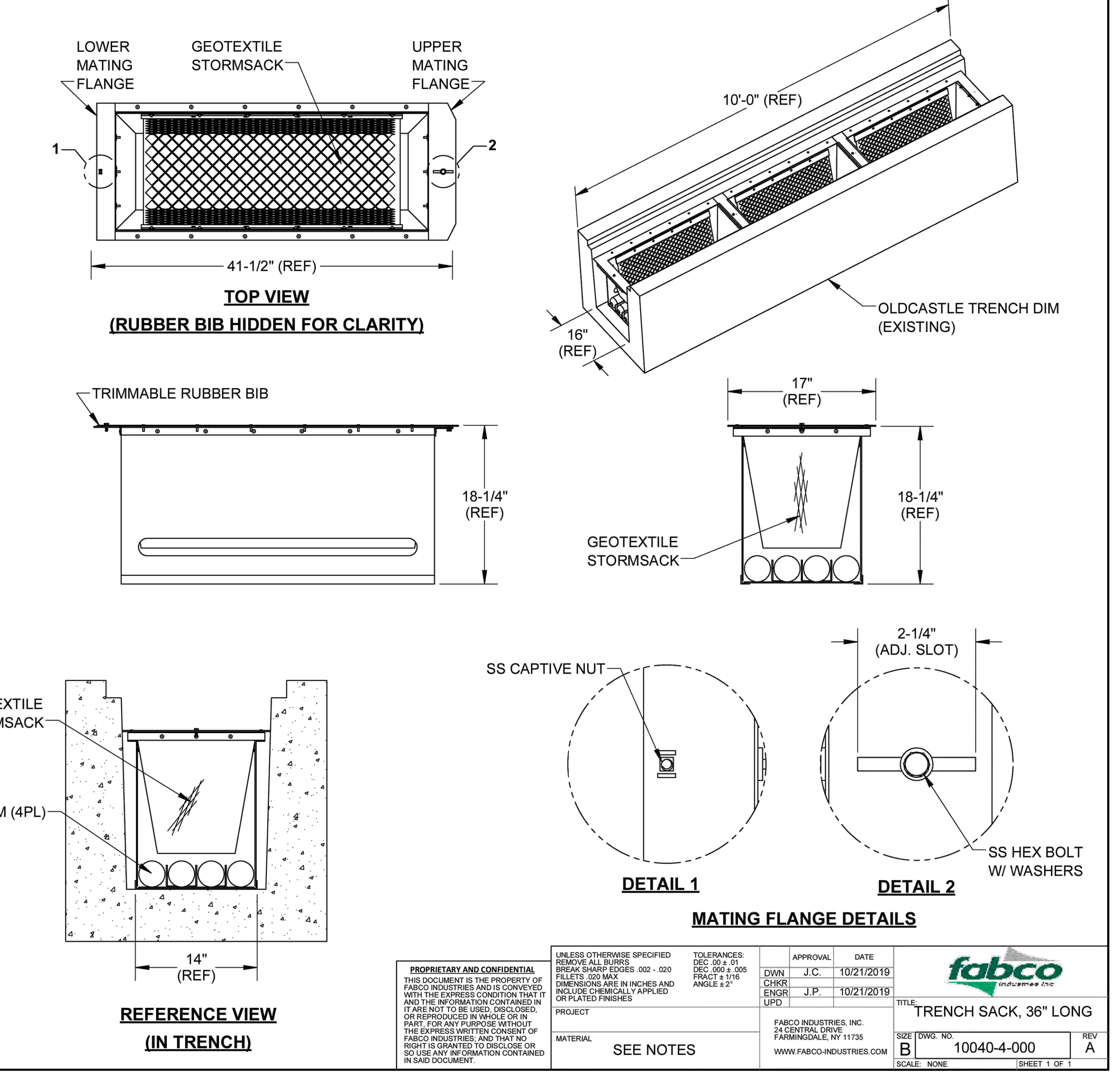
PROJECT NO. 22096-2000
F.B.

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

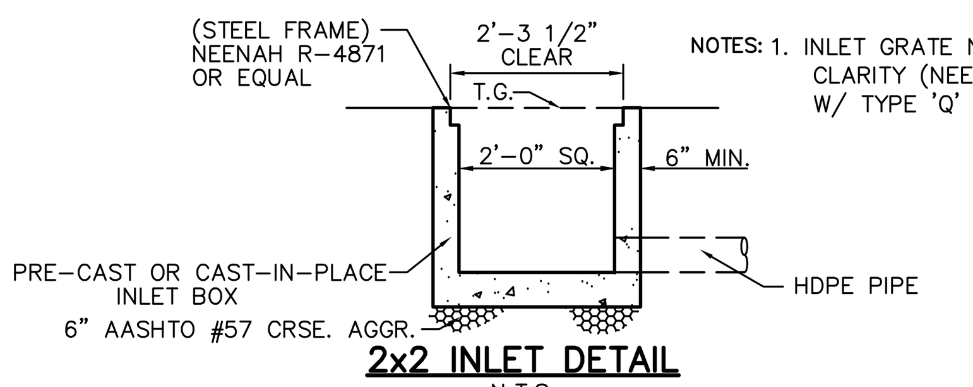
NOTES:

1. WEIGHT (EMPTY): 30 LB MAX
2. MATERIAL:
   A) ALUMINUM FRAME: ALUM. ALLOY SHEET, 5000 SERIES
   B) STORMSACK: GEOTEXTILE, 20 US MESH
   C) MESH LINER (INNER): HDPE, 1" DIAMOND CONFIGURATION
   D) SUPPORT HARDWARE: STAINLESS STEEL
   E) OIL BOOM: 100% POLYPROPYLENE
3. PERFORMANCE CHARACTERISTICS (TYP):
   A) DEBRIS CAPACITY: 3.0 CU-FT
   B) FILTERED (CLEAN) FLOW RATE: 3250 GPM (8.7 CFS)
4. FRAMES ARE DESIGNED WITH MATING FLANGES AND CAN BE BOLTED TOGETHER (END-TO-END) IF MORE THAN ONE FILTER UNIT IS REQUIRED, SEE DETAILS.
5. TYPICAL MAINTENANCE: REMOVE EACH TRENCH FILTER SEGMENT, EMPTY AND HOSE CLEAN. ALTERNATE METHOD: VACUUM AND POWER-WASH.
6. FABCO REPLACEABLE OIL BOOM, P/N: 10040-4-730.
7. DESIGNED SPECIFICALLY TO FIT OLDCASTLE TRENCH DIM WITH "A" = 16", SECTION LENGTH IS 10'



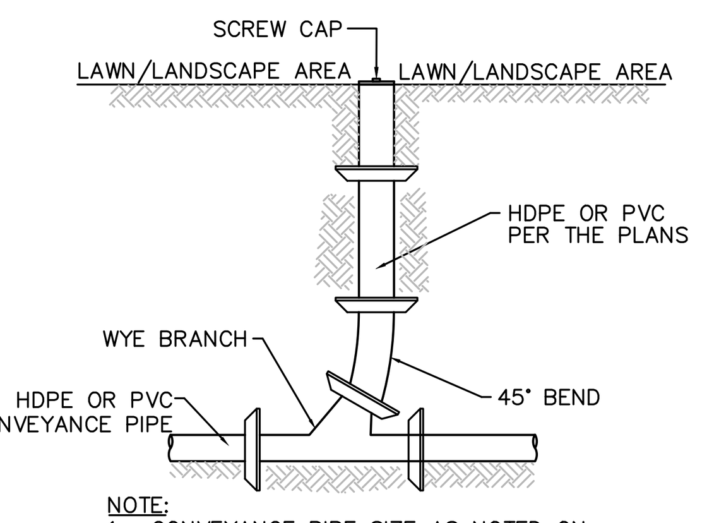


2x2 INLET DETAIL
N.T.S.



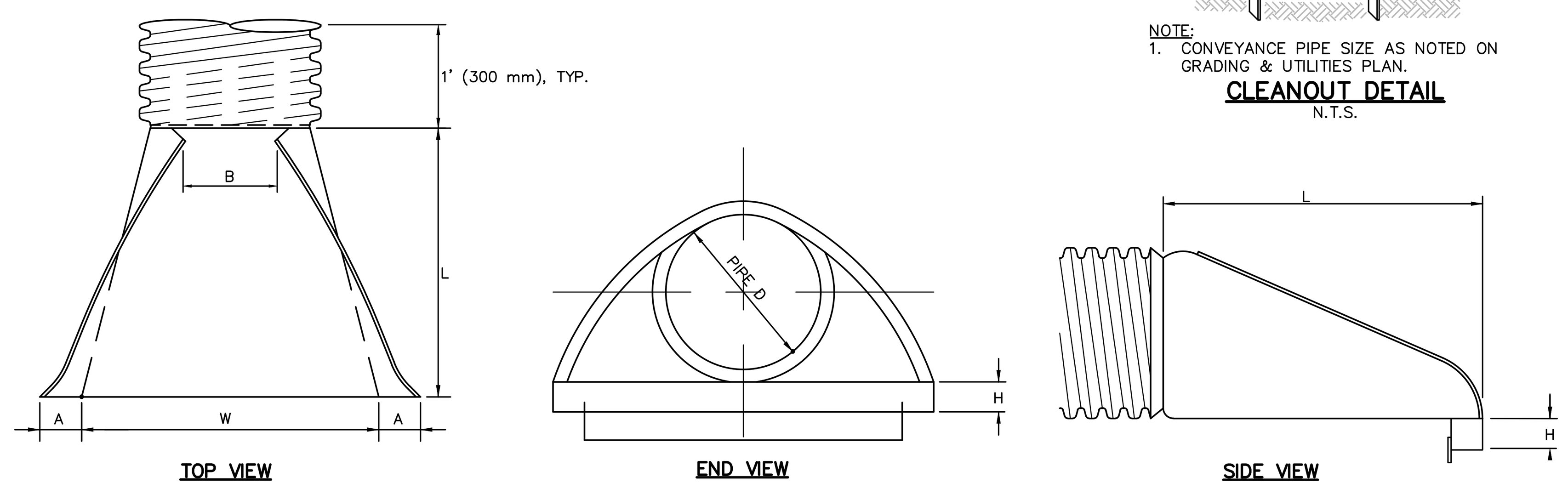
NOTES: 1. INLET GRATE NOT SHOWN FOR CLARITY (NEENAH R-4859 W/ TYPE 'Q' GRATE, OR EQUAL.)

CLEANOUT DETAIL
N.T.S.



NOTE:
1. CONVEYANCE PIPE SIZE AS NOTED ON GRADING & UTILITIES PLAN.

FLARED END SECTION DETAIL
N.T.S.



PIPE DIAMETER	DIMENSIONS, INCHES (mm)					
	PART NO.	A, ±1 (25)	B MAX	H, ±1 (25)	L, ±1/2 (13)	W, ±2 (50)
10 (250)	1015 NP	3.5 (95)	10 (254)	6.5 (168)	28 (711)	34.5 (876)
12, 15 (300, 375)	1215 NP	6.5 (165)	10 (254)	6.5 (165)	25 (635)	29 (736)

MANHOLE STEPS
N.T.S.

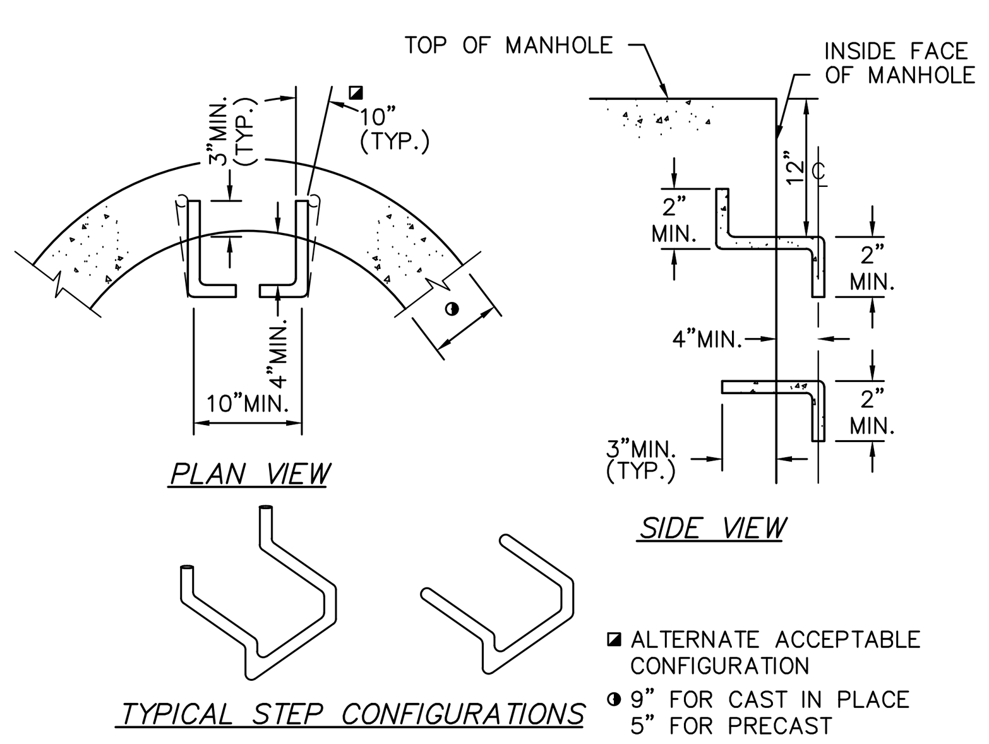
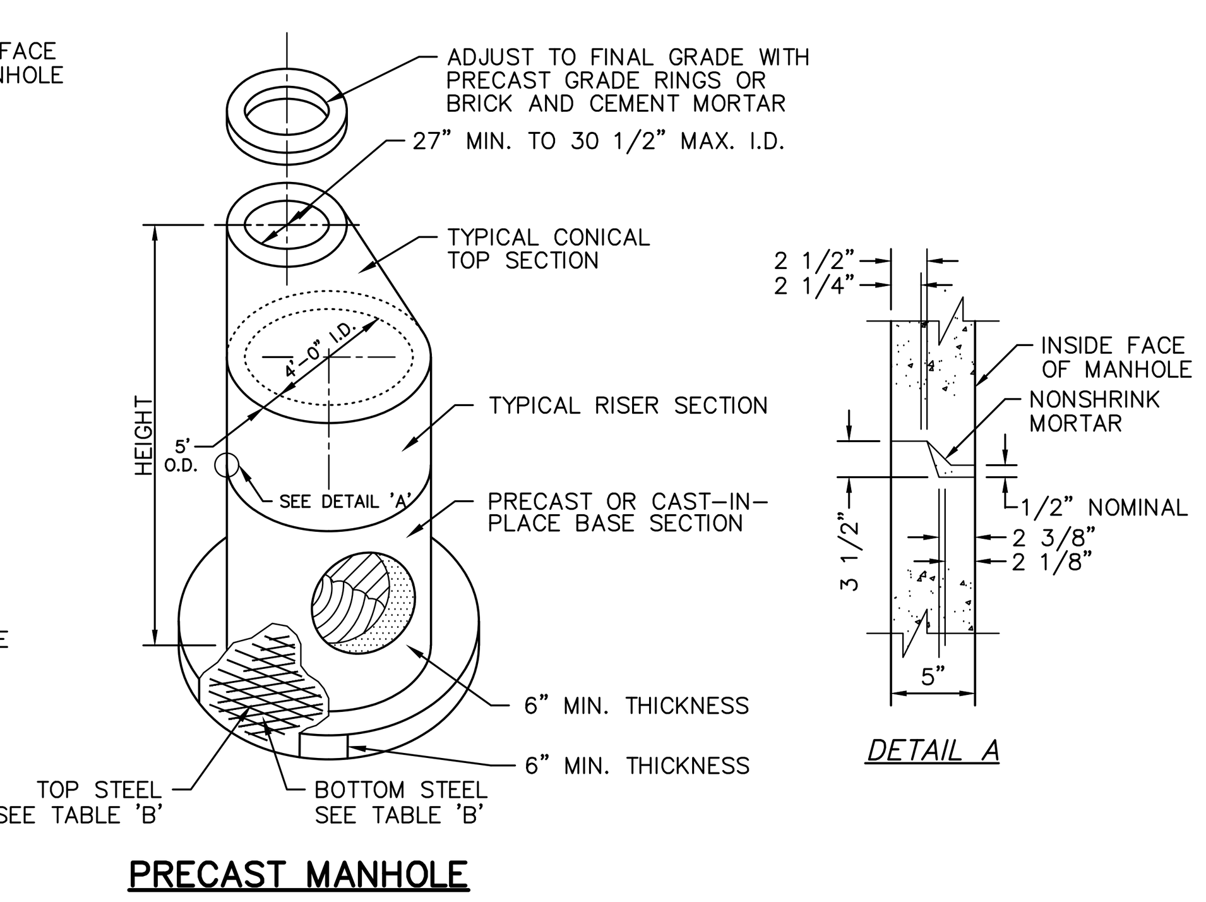


TABLE B		
Precast Manhole Height	Top Steel Requirements	Bottom Steel Requirements
< 30'–0"	#5 Bars @ 12" ℄. To ℄. or 0.18 In^2/Ft. WWF	#4 Bars @ 12" ℄. To ℄. or 0.28 In^2/Ft. WWF *
> 30'–0" To 60'–0"	#6 Bars @ 12" ℄. To ℄. or 0.15 In^2/Ft. WWF *	#4 Bars @ 6" ℄. To ℄. or 0.24 In^2/Ft. WWF *

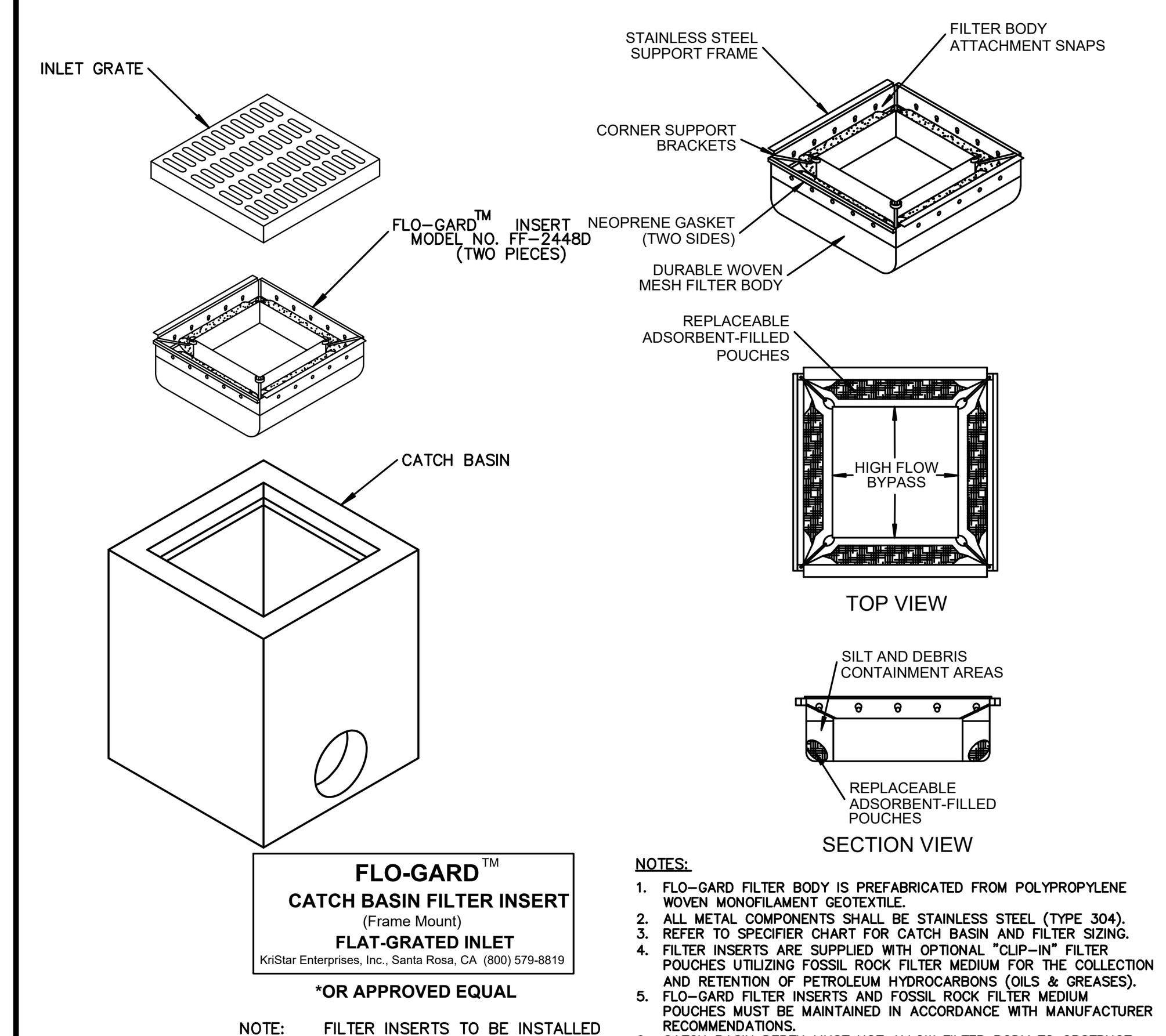
* Provide Welded Wire Fabric Meeting the Requirements of Publication 408 Specifications, Section 709.3.

PRECAST MANHOLE
N.T.S.



NOTES
1. Precast manholes meeting the requirements of publication 408 specifications, section 605.2(C), may be substituted for type 'A' and 'B' manholes.
2. Provide manhole steps meeting the requirements of publication 408 specifications, section 605.2(C). Alternate configurations and dimensions, as approved by the engineer, may be used.

WATER QUALITY INSERT DETAIL
N.T.S.

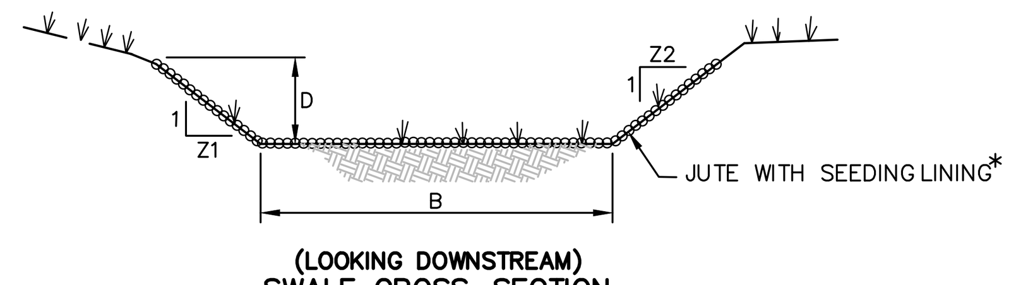


*OR APPROVED EQUAL

NOTE: FILTER INSERTS TO BE INSTALLED INTO ALL PROPOSED INLETS.

NOTES:
1. FLO–GARD FILTER BODY IS PREFABRICATED FROM POLYPROPYLENE WOVEN MONOFILAMENT GEOTEXTILE.
2. ALL METAL COMPONENTS SHALL BE STAINLESS STEEL (TYPE 304).
3. REFER TO SPECIFIER CHART FOR CATCH BASIN AND FILTER SIZING.
4. FILTER INSERTS ARE SUPPLIED WITH OPTIONAL "CLIP–IN" FILTER POUCHES UTILIZING FOSSIL ROCK FILTER MEDIUM FOR THE COLLECTION AND RETENTION OF PETROLEUM HYDROCARBONS (OILS & GREASES).
5. FLO–GARD FILTER INSERTS AND FOSSIL ROCK FILTER MEDIUM POUCHES MUST BE MAINTAINED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
6. CATCH BASIN DEPTH MUST NOT ALLOW FILTER BODY TO OBSTRUCT OUTLET PIPE.

VEGETATED SWALE DETAIL
N.T.S.

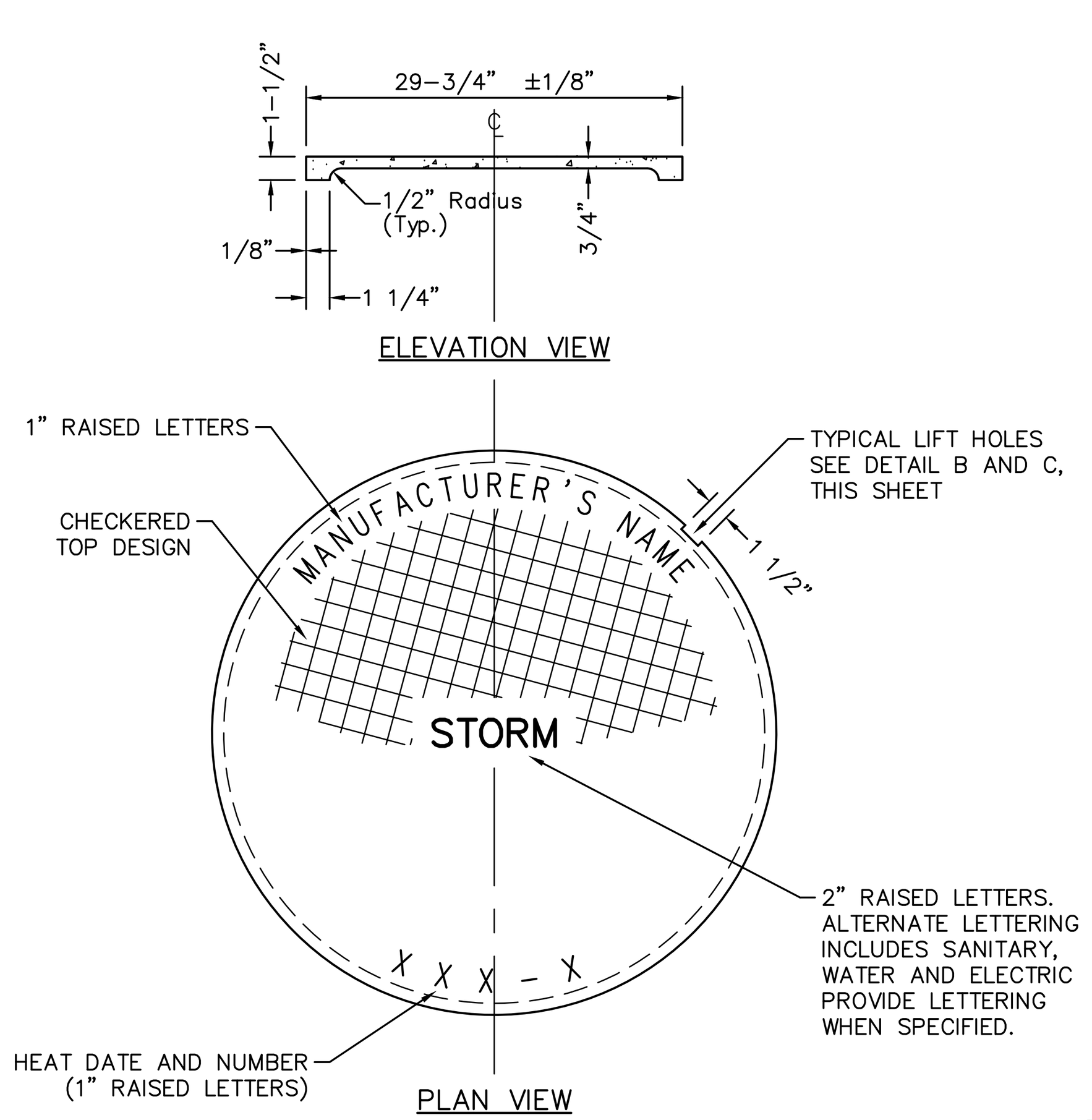


*SEE EROSION CONTROL BLANKET DETAIL FOR STAPLE PATTERNS, SEED MIX SHALL BE RAIN GARDEN MIX #ERNMX-180 FROM ERNST CONSERVATION SEEDS

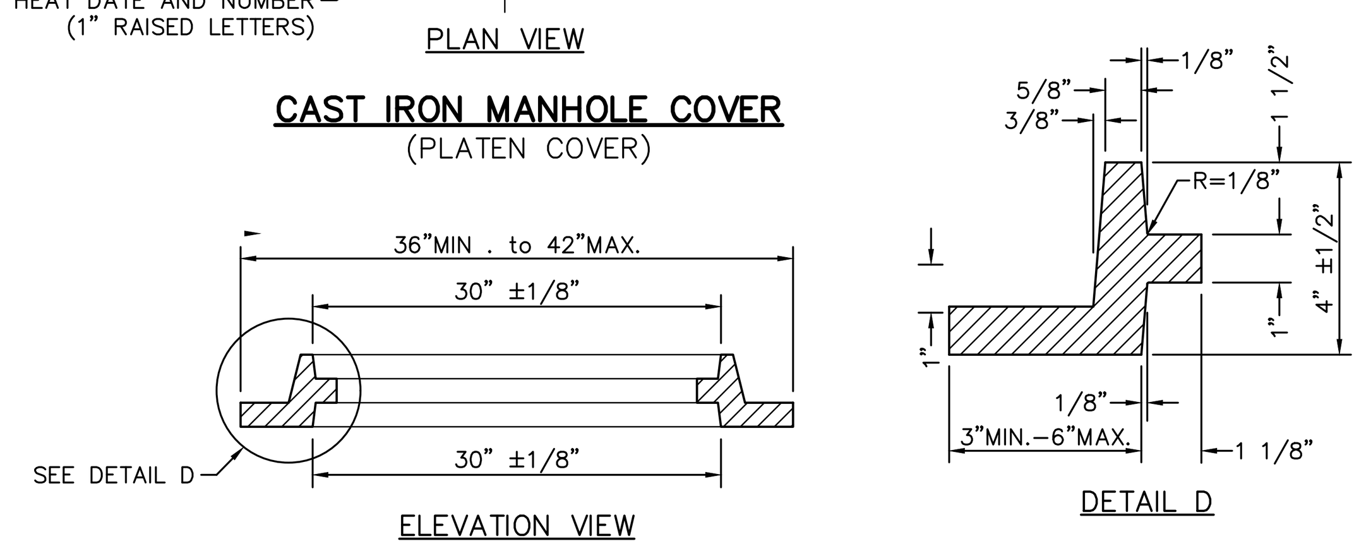
CHANNEL NO.	BOTTOM WIDTH B (FT)	SLOPE (%)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)
1	6	2.0	1.5	15.00	3	3

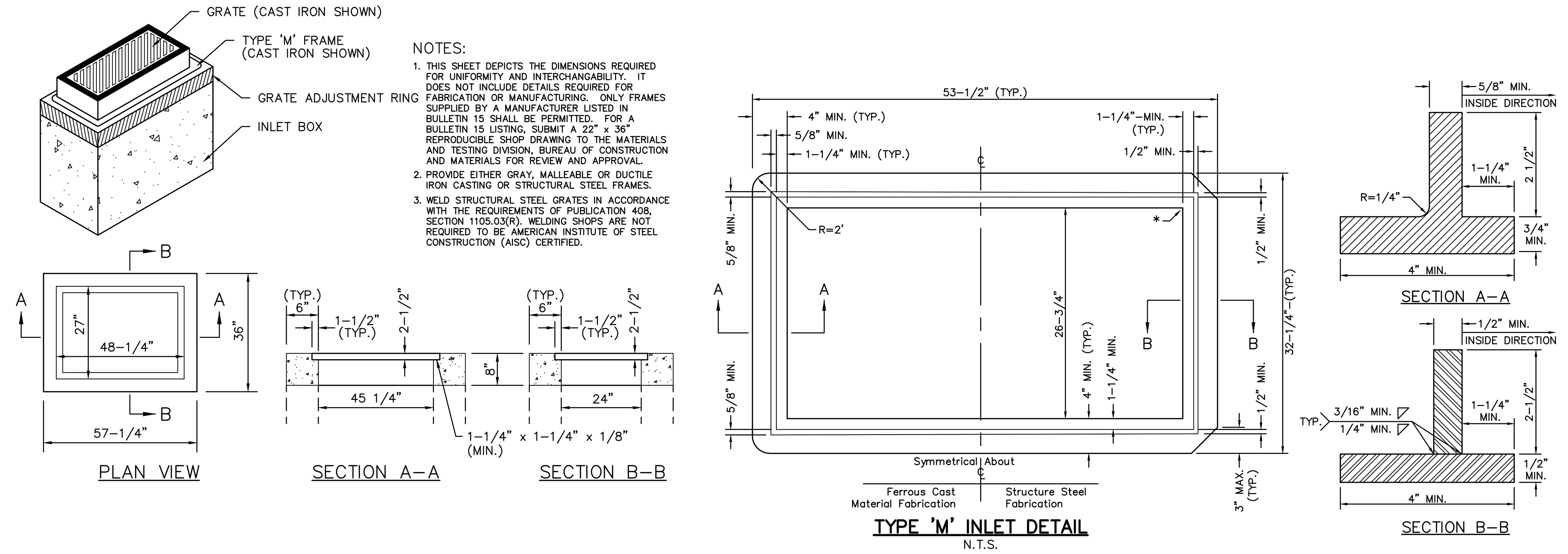
NOTES:
1. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED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

CAST IRON MANHOLE COVER
(PLATEN COVER)



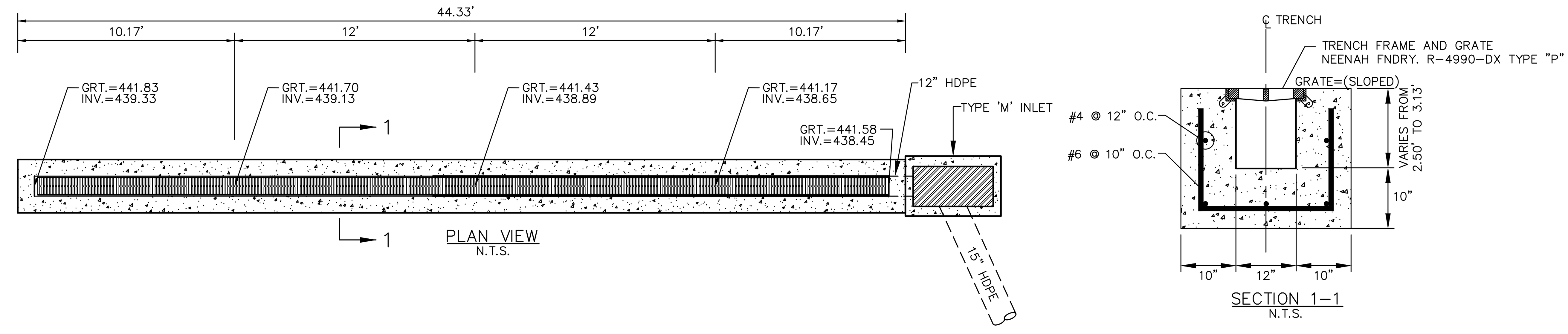
CAST IRON MANHOLE FRAME
(MAKE ALL ROUNDS AND FILLETS 1/4" UNLESS OTHERWISE NOTED)



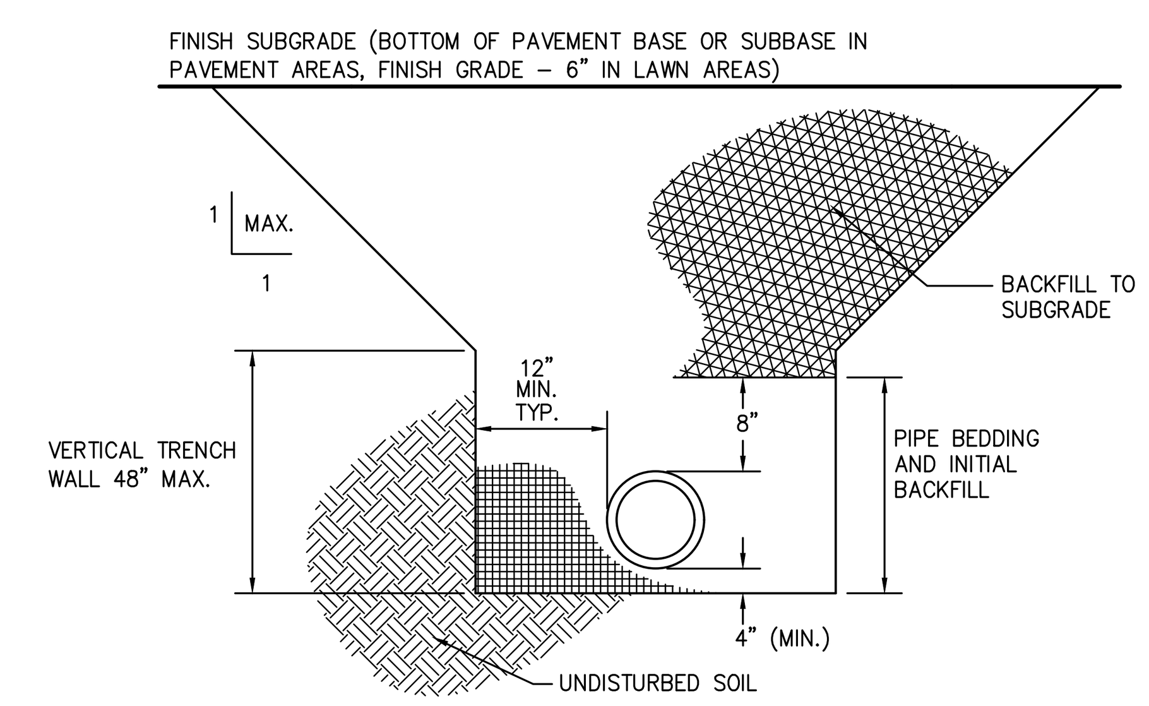


NOTES:
1. THIS SHEET DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. ONLY FRAMES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED. FOR A BULLETIN 15 LISTING, SUBMIT A 22" x 36" REPRODUCIBLE SHOP DRAWING TO THE MATERIALS AND TESTING DIVISION, BUREAU OF CONSTRUCTION AND MATERIALS FOR REVIEW AND APPROVAL.
2. PROVIDE EITHER GRAY, MALLEABLE OR DUCTILE IRON CASTING OR STRUCTURAL STEEL FRAMES.
3. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03(R). WELDING SHOPS ARE NOT REQUIRED TO BE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CERTIFIED.

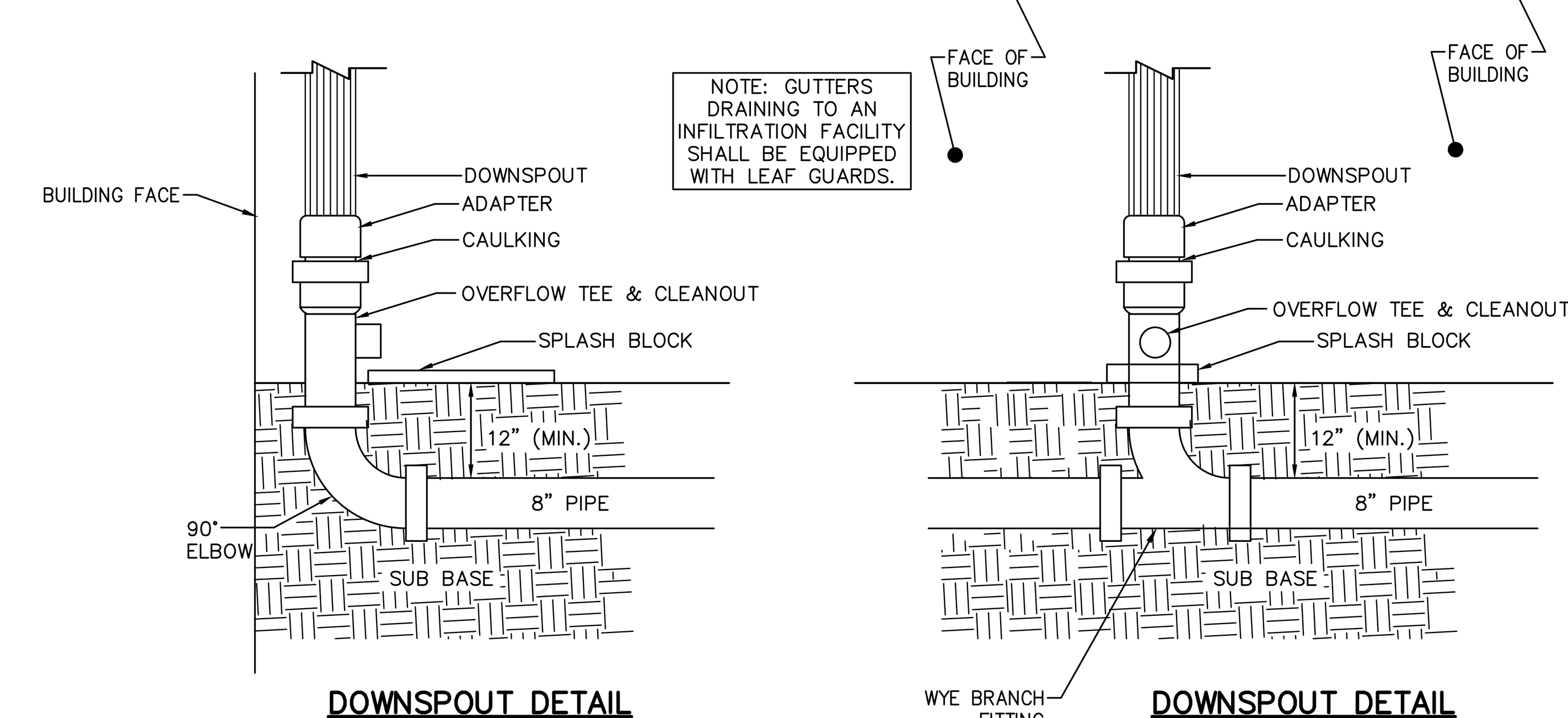
TRENCH DRAIN DETAIL
N.T.S.



TYPICAL PIPE TRENCH DETAIL
N.T.S.



DOWNSPOUT DETAIL
N.T.S.



SUITABLE MATERIAL

SUITABLE MATERIAL – CLEAN SOIL CONTAINING NOT MORE THAN 30% SILT/CLAY PARTICLES FINER THAN THE NO. 200 SIEVE (BY WEIGHT), AS DETERMINED BY SOIL LABORATORY TESTING AND METHOD OF ASTM D-2487, WHICH IS CAPABLE OF BEING COMPACTED TO THE REQUIRED DENSITY AT THE PROPER MOISTURE CONTENT, AND WHICH IS FREE OF TOPSOIL, ROOTS, TRASH, DEBRIS, FROZEN MATERIAL, ORGANIC MATTER, EXCESS MOISTURE (WATER CONTENT AT COMPACTION MUST BE WITHIN 2% OF OPTIMUM) AND OTHER DELETERIOUS INCLUSIONS. THE LIMITS OF ROCK AS SUITABLE MATERIAL SHALL NOT EXCEED 4 INCHES (4") IN SIZE. THE REMAINDER OF ROCK SHALL BE CLASSED AS UNSUITABLE. THE PERCENTAGE OF ROCK IN SUITABLE MATERIAL SHALL BE LIMITED TO THAT WHICH WILL PERMIT COMPACTION OF FILL TO THE REQUIRED DENSITY. SUITABLE FILL SHALL BE APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER AND TOWNSHIP PRIOR TO PLACEMENT AND COMPACTION.

SUITABLE FILL

1. PLACEMENT OF BACKFILL MATERIAL IN 8 INCH LAYERS (LIFTS) SHALL BE PERMITTED WHEN USING VIBRATORY COMPACTION EQUIPMENT.

TRENCH REQUIREMENTS (SEE NOTES)

PIPE TYPE	BEDDING	INITIAL BACKFILL	BACKFILL TO SUBGRADE	
			BENEATH BITUMINOUS PAVEMENT (EXISTING TO REMAIN OR PROPOSED), CONCRETE SIDEWALK OR PAVERS	BENEATH OTHER AREA
ANY PIPE WITHIN PUBLIC ROW	AASHTO #57 COARSE AGGREGATE	PA DOT NO. 2A COARSE AGGR.	PA DOT NO. 2A COARSE AGGREGATE	PA DOT NO. 2A COARSE AGGR.
STORM (METAL)	AASHTO #57 COARSE AGGREGATE	PA DOT NO. 2A COARSE AGGR.	PA DOT NO. 2A COARSE AGGREGATE	SUITABLE MATERIAL
STORM (RCP)	AASHTO #57 COARSE AGGREGATE	PA DOT NO. 2A COARSE AGGR.	PA DOT NO. 2A COARSE AGGREGATE	PA DOT NO. 2A COARSE AGGR.
STORM (OTHER)	AASHTO #57 COARSE AGGR.	PA DOT NO. 2A COARSE AGGR.	PA DOT NO. 2A COARSE AGGREGATE	SUITABLE MATERIAL
SANITARY	AASHTO #57 COARSE AGGREGATE	PA DOT NO. 2A COARSE AGGR.	SUITABLE MATERIAL	SUITABLE MATERIAL
WATER (PIPE)	NONE REQUIRED	PA DOT NO. 2A COARSE AGGR.	SUITABLE MATERIAL	SUITABLE MATERIAL
WATER (TUBING)	CEMENT CONCRETE SAND, TYPE A, PA DOT, PUB. 408, § 703.1	CEMENT CONCRETE SAND, TYPE A, PA DOT, PUB. 408, § 703.1	SUITABLE MATERIAL	SUITABLE MATERIAL
OTHER PIPE, CONDUIT	AASHTO #57 COARSE AGGREGATE	PA DOT NO. 2A COARSE AGGR.	SUITABLE MATERIAL	SUITABLE MATERIAL

NOTE:

1. ALL STORM SEWERS SHALL BE CONSTRUCTED PER PENNDOT SPECIFICATIONS AS OUTLINED IN PUBLICATION 408 DESIGN MANUAL, PART 2, HIGHWAY DESIGN AND STANDARDS FOR ROADWAY CONSTRUCTION, RC-SERIES UNLESS OTHERWISE DICTATED BY THE TOWNSHIP CODE.
2. ALL STORM SEWER UTILITIES BENEATH A PAVED SURFACE SHALL BE BEDDED AND BACKFILLED WITH PENNDOT 2A STONE. THE BACKFILL SHALL BE PLACED IN SIX-INCH LIFTS AND SOLIDLY COMPACTED TO THE SATISFACTION OF THE TOWNSHIP.

POST-CONSTRUCTION STORMWATER MANAGEMENT DETAILS

NO.	DATE	REVISION

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX

UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

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

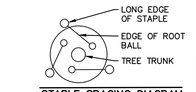
PROJECT NO. 22096-2000

F.B.

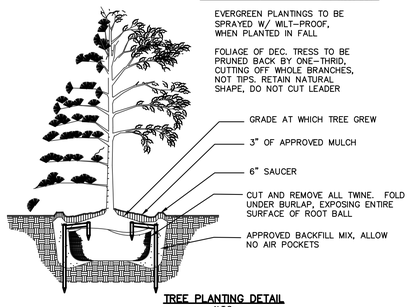
SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
As Noted	03/31/2025	HL	MJ	

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

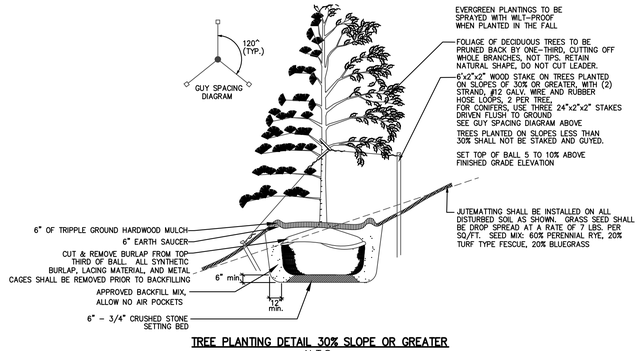
TREE STAPLE CHART		
TREE CALIPER	TREE STAPLE MODEL	NO. OF STAPLE PER TREE
1 – 2"	TS24 (24")	2 with up to 16" Root Ball
2 – 4"	TS36 (36")	2 with a 24" Root Ball
4 – 6"	TS42 (42")	3 with a 30" + Root Ball



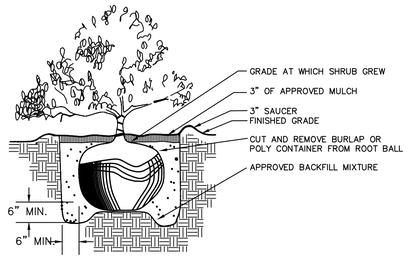
STAPLE SPACING DIAGRAM



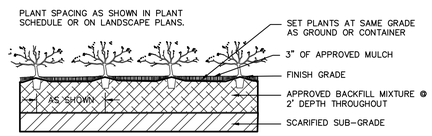
TREE PLANTING DETAIL
N.T.S.



TREE PLANTING DETAIL 30% SLOPE OR GREATER
N.T.S.



SHRUB PLANTING DETAIL
N.T.S.



PERENNIAL & GRASS PLANTING DETAIL
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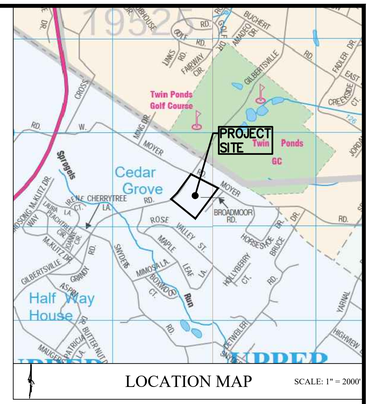

LOCATION MAP

TREES

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	ZONE	DISTANCE
AG	*Acer griseum*	PAPERBARK MAPLE	2"-2.5" CAL.	2	4-8	AS SHOWN
AR	*Acer rubrum*	RED MAPLE	2"-2.5" CAL.	6	3-9	AS SHOWN
BN	*Betula nigra*	RIVER BIRCH	2"-2.5" CAL.	6	4-9	AS SHOWN
CC	*Cercis canadensis*	EASTERN REDBUD	2"-2.5" CAL.	5	4-9	AS SHOWN
CK	*Cornus kousa*	KOUSA DOGWOOD	2"-2.5" CAL.	2	5-8	AS SHOWN
CP	*Crataegus phaenopyrum*	WASHINGTON HAWTHORN	2"-2.5" CAL.	3	4-8	AS SHOWN
JV	*Juniperus virginiana*	EASTERN RED CEDAR	2"-2.5" CAL.	1	3-9	AS SHOWN
KP	*Koelreuteria paniculata*	GOLDEN RAIN TREE	2"-2.5" CAL.	9	6-9	AS SHOWN
QP	*Quercus phellos*	WILLOW OAK	2"-2.5" CAL.	6	6-9	AS SHOWN

SHRUBS

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	ZONE	DISTANCE
AA	*Aronia arbutifolia*	RED CHOKEBERRY	5 GAL.	13	3-9	6' O.C.
AP	*Aesculus parviflora*	BOTTLEBRUSH BUCKEYE	3 GAL.	8	4-8	10' O.C.
CA	*Clethra alnifolia*	SWEET PEPPERBUSH	4 GAL.	21	3-9	6' O.C.
CS	*Cornus sericea 'Kelseyi'*	REDTWIG DOGWOOD	2 GAL.	7	3-8	8' O.C.
HS	*Hydrangea macrophylla 'Endless summer'*	ENDLESS SUMMER HYDRANGEA	3 GAL.	15	4-9	5' O.C.
IC	*Ilex crenata 'Compacta'*	COMPACT JAPANESE HOLLY	2 GAL.	23	3-9	4' O.C.
IV	*Ilex verticillata*	WINTERBERRY	3 GAL.	6	3-9	6' O.C.
RA	*Rhus aromatica 'Gro-Low'*	GRO-LOW SUMAC	2 GAL.	51	3-9	AS SHOWN
RW	*Rhododendron 'White Lights'*	AZALEA WHITE LIGHTS	3 GAL.	7	4-8	6' O.C.
SJ	*Spiraea japopica*	JAPANESE SPIREA	3 GAL.	17	4-9	5' O.C.
SV	*Spiraea x vanhouttei*	VANHOUTTE SPIREA	4 GAL.	10	3-8	7' O.C.

PERENNIALS & GRASSES

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	ZONE	DISTANCE
AC	*Astilbe 'Chocolate Cherry'*	CHINESE ASTILBE 'CHOCOLATE CHERRY'	1 GAL.	32	3-8	2' O.C
HM	*Hakonechloa macra*	HAKONE GRASS	1 GAL.	86	5-9	2' O.C.
LI	*Lavandula x intermedia*	PHENOMENAL LAVENDER	1 GAL.	28	5-9	2' O.C.
LM	*Liriope Muscari 'Silvery Sunproof'*	SILVERY SUNPROOF LILYTURF	1 GAL.	133	5-10	1.5' O.C.
NR	*Nepeta racemosa*	CATMINT	1 GAL.	10	4-8	2' O.C.
PV	*Panicum virgatum 'Purple Tears'*	PURPLE TEARS SWITCHGRASS	1 GAL.	27	4-9	2' O.C

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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).

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.

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

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	NO
LhB	3% TO 8% SLOPES	6" – 36"	40"-60"	NONE	NONE	C/D	NO

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

LANDSCAPE PLAN/ DETAILS

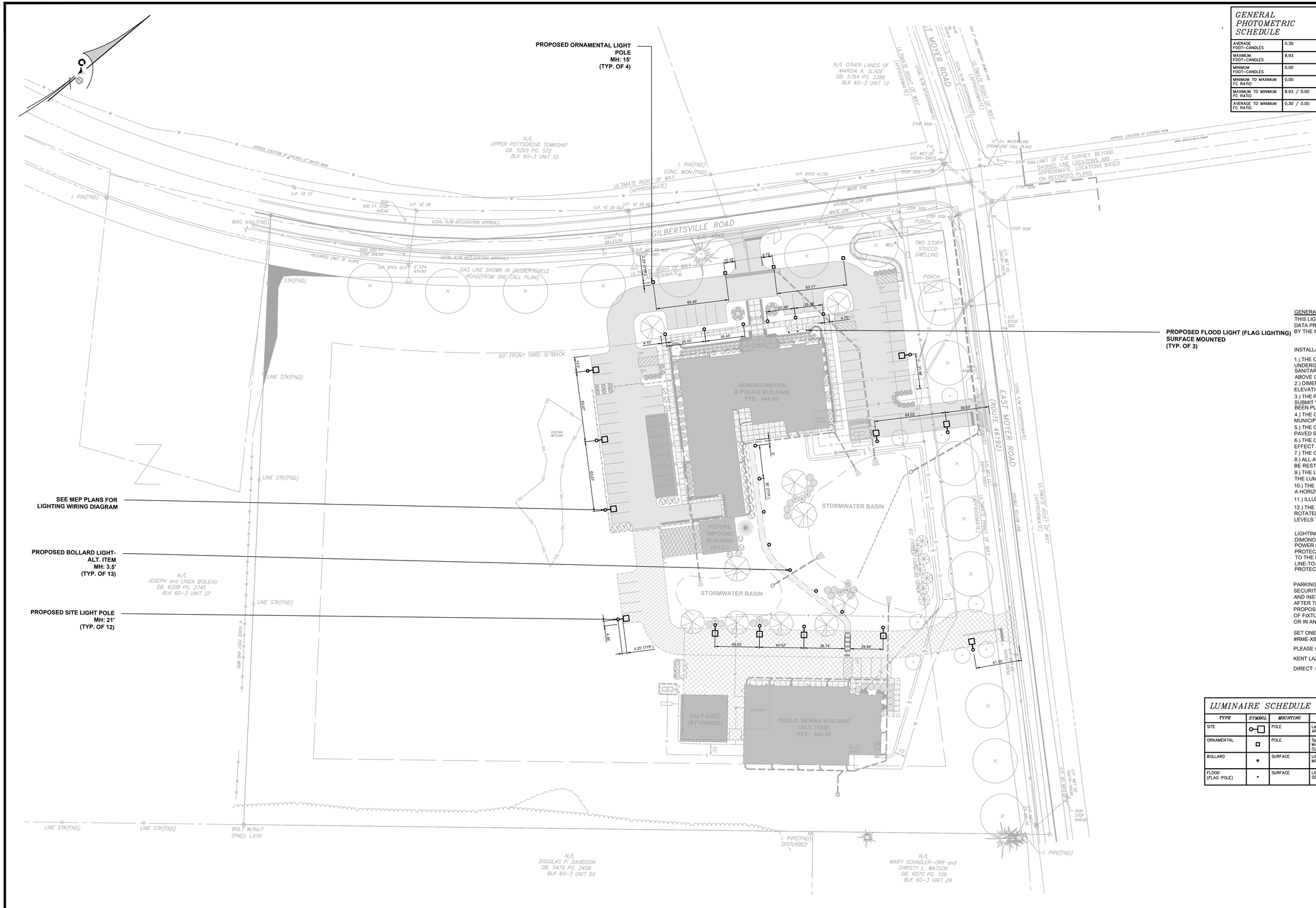
NO.	DATE	REVISION

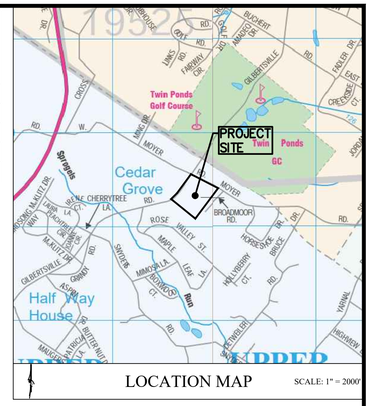
CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX
2290 GILBERTSVILLE ROAD
UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

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

PROJECT NO.	F.B.
22096-2000	

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





LOCATION MAP

SCALE: 1" = 2000'

GENERAL PHOTOMETRIC SCHEDULE

AVERAGE FOOT-CANDLES	0.30
MAXIMUM FOOT-CANDLES	8.93
MINIMUM FOOT-CANDLES	0.00
MINIMUM TO MAXIMUM FC RATIO	0.00
MAXIMUM TO MINIMUM FC RATIO	8.93 / 0.00
AVERAGE TO MINIMUM FC RATIO	0.30 / 0.00

GENERAL LIGHTING NOTES

THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURERS.

INSTALLATION NOTES:

1.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL EXISTING UNDERGROUND STRUCTURES AND UTILITIES, SUCH AS WATER MAINS, SANITARY AND STORM SEWERS, TELEPHONE AND ELECTRIC CONDUITS, AND GAS LINES, ETC. AND ABOVE GROUND UTILITIES WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION OPERATIONS.

2.) DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL ELEVATIONS, INVERTS, AND DIMENSIONS IN THE FIELD PRIOR TO THE COMMENCEMENT OF WORK.

3.) THE PENNSYLVANIA ONE CALL NUMBER IS 1-800-242-1776. THE CONTRACTOR IS REQUIRED TO SUBMIT VERIFICATION TO THE MUNICIPALITY THAT A ONE "ONE-CALL" HAS BEEN PLACED PRIOR TO THE START OF DEMOLITION WORK.

4.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS FROM THE MUNICIPALITY RELATIVE TO THE PROPOSED PROJECT.

5.) THE CONTRACTOR SHALL REPAIR ALL UTILITY TRENCHING WORK LOCATED WITHIN EXISTING PAVED STREETS.

6.) THE CONTRACTOR SHALL COMPLY WITH ALL CITY, STATE, AND FEDERAL REGULATIONS IN EFFECT AT THE TIME OF CONSTRUCTION.

7.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL.

8.) ALL AREAS DISTURBED AS A RESULT OF THE INSTALLATION OF LIGHTING IMPROVEMENTS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.

9.) THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF SHOWN IN THE LUMINAIRE SCHEDULE.

10.) THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED.

11.) ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDLES (FC).

12.) THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.

LIGHTING CONTROLS AND SURGE PROTECTION: ALL NEW FIXTURES ARE TO BE EQUIPPED WITH DIMONOFF RME-XBP PHOTOCELLS AND ABLE POWER PRODUCTS RWL-S SURGE DEVICE. FIXTURES MUST BE EQUIPPED WITH ALL-MODE PROTECTION (L-N, L-G, N-G). SURGE PROTECTION INTEGRAL TO THE PHOTOCONTROL SHOULD HAVE 3 MODES OF PROTECTION, LINE-TO-NEUTRAL, LINE-TO-GROUND AND NEUTRAL-TO-GROUND. THE MINIMUM SURGE PROTECTION SPECIFICATIONS SHOULD BE 10KA IN, 25KA IMAX AND 20KV UOC.

PARKING FACILITY AND VEHICULAR AND PEDESTRIAN WAY LIGHTING (EXCEPT FOR SAFETY AND SECURITY APPLICATIONS AND ALL-NIGHT BUSINESS OPERATIONS), FOR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL USES SHALL BE AUTOMATICALLY EXTINGUISHED NO LATER THAN ONE HOUR AFTER THE CLOSE OF BUSINESS OR FACILITY OPERATION. WHEN SAFETY OR SECURITY LIGHTING IS PROPOSED FOR AFTER-HOURS ILLUMINATION, IT SHALL NOT BE IN EXCESS OF 33% OF THE NUMBER OF FIXTURES REQUIRED OR PERMITTED FOR ILLUMINATION DURING REGULAR BUSINESS HOURS, OR IN AN AMOUNT JUDGED NECESSARY BY THE TOWNSHIP ENGINEER.

SET ONE SMART PHOTOCELL TO CONTROL ALL OTHER SITE LIGHTING FIXTURES (DIMONOFF #RME-XBP).

PLEASE CONTACT INDEPENDENCE LIGHTING FOR PRICING:

KENT LAZOR

DIRECT: 610-363-5271

LUMINAIRE SCHEDULE

TYPE	SYMBOL	MOUNTING	MODEL	VOLTS	QUANTITY	LLD	LDD	LLF
SITE	o-□	POLE	Leotek Electronics USA LLC, AR13-CG2-N-MV-30K-T3-BK-120	120V 1P 2W	12	0.9	0.9	0.810
ORNAMENTAL	□	POLE	Spring City Electrical Manufacturing Co, CLW-LE100-2F2-30-CR3-YPLF	120V 1P 2W	4	0.9	0.9	0.810
BOLLARD	⊙	SURFACE	LIGMAN, MC-10013-W-W30	120V 1P 2W	13	0.9	0.9	0.810
FLOOD (FLAG POLE)	•	SURFACE	LIGMAN, OD-50161-VN-8040	120V 1P 2W	3	0.9	0.9	0.810

LIGHTING PLAN/ NOTES

NO.	DATE	REVISION

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX
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1"=40'	03/31/2025	ND	AG	

SHEET 19 OF 23

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MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

PENNSYLVANIA ACT 187 REQUIREMENTS

UNDERGROUND UTILITIES SERIAL NOs. 20243300770

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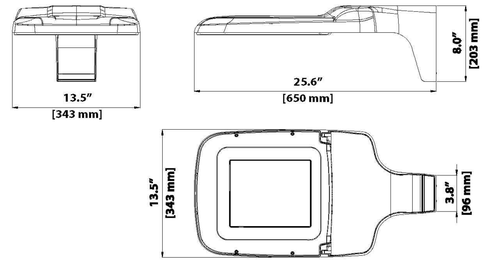
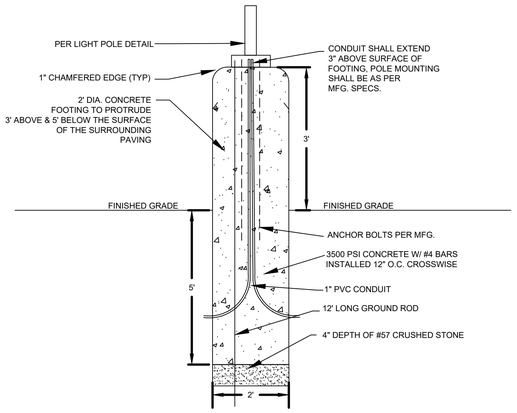


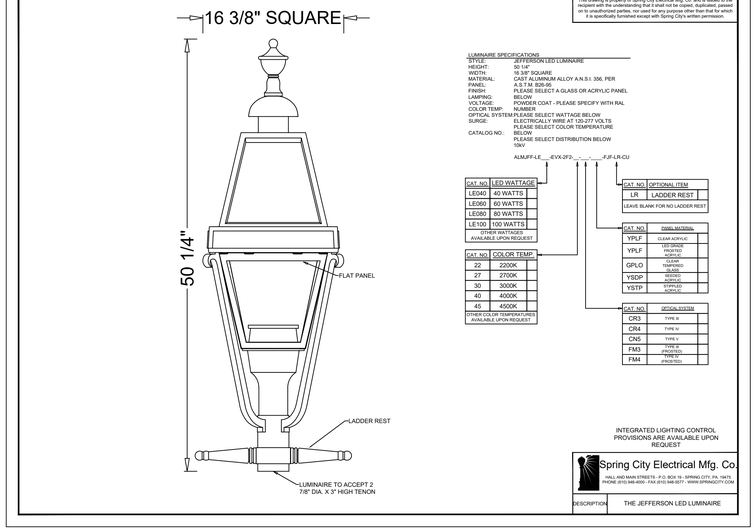
PARKING LIGHT FIXTURE DETAIL
N.T.S.

PARKING LOT LUMINARY SPECIFICATIONS

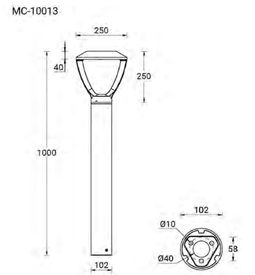
LEOTEK ARIETA LUMINARE
- MODEL: (SEE LUMINAIRE SCHEDULE)
- IES FULL CUTOFF
- DISTRIBUTION TYPE (SEE LUMINAIRE SCHEDULE)
- COLOR: BRONZE
- QTY: 12
- OPTIONS: DIMONOFF PHOTOCELL & RWL-S SURGE DEVICE



PARKING LIGHT POLE FOOTING DETAIL
N.T.S.



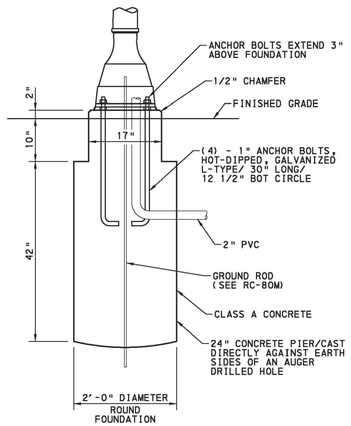
ORNAMENTAL LIGHT FIXTURE DETAIL
N.T.S.



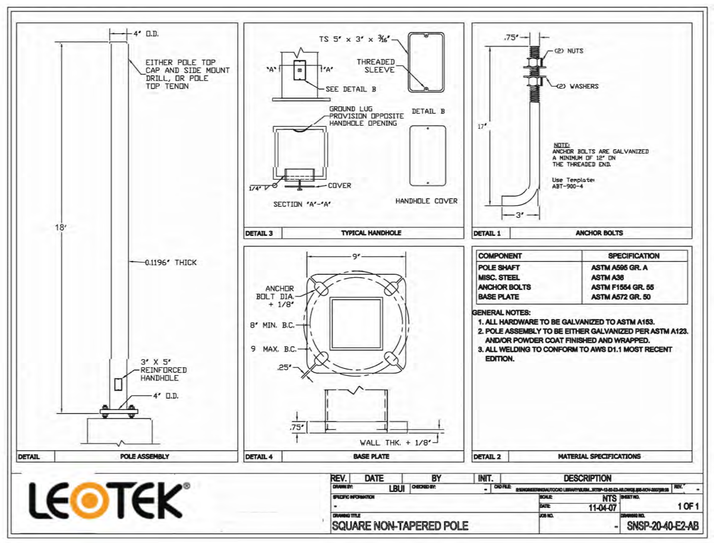
BOLLARD LIGHT DETAIL
N.T.S.

BOLLARD LIGHT SPECIFICATIONS

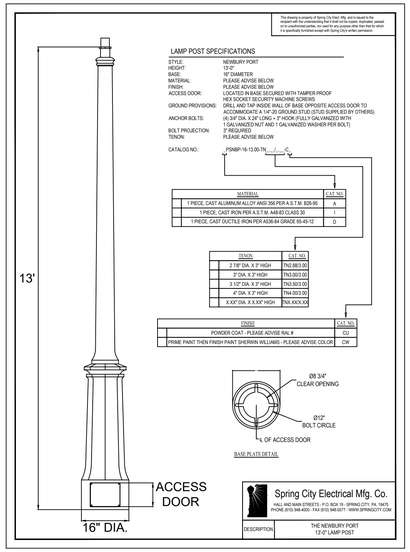
LIGMAN - MACARON 5 BOLLARD LIGHT
- MODEL: (SEE LUMINAIRE SCHEDULE)
- IES FULL CUTOFF
- DISTRIBUTION TYPE (SEE LUMINAIRE SCHEDULE)
- COLOR: BRONZE
- QTY: 13
- OPTIONS: DIMONOFF PHOTOCELL & RWL-S SURGE DEVICE



ORNAMENTAL LIGHT POLE FOOTING DETAIL
N.T.S.

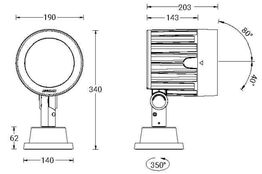


PARKING LIGHT POLE DETAILS
N.T.S.



ORNAMENTAL LIGHT POLE DETAIL
N.T.S.

OD-50161



FLOOD LIGHT (FLAG POLE) DETAIL
N.T.S.

FLOOD LIGHT (FLAG POLE) SPECIFICATIONS

LIGMAN - ODESSA 14 OUTDOOR FLOODLIGHT
- MODEL: (SEE LUMINAIRE SCHEDULE)
- HIGH EFFICIENCY PMMA LENS
- DISTRIBUTION TYPE: VN
- COLOR: BRONZE
- QTY: 3
- OPTIONS: ANTI GLARE VISOR (A54431)

LIGHTING DETAILS

NO.	DATE	REVISION

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX

UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

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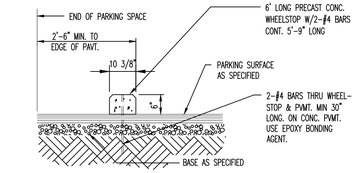
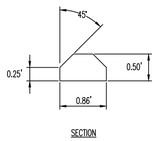
22096-2000	

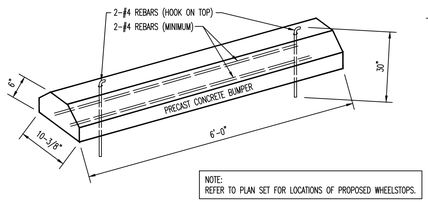
SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
As Noted	03/31/2025	ND	AG	

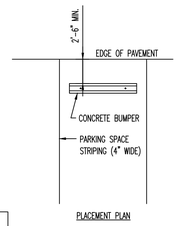
MONTGOMERY COUNTY BLOCK 60-3 UNIT 12





SECTION

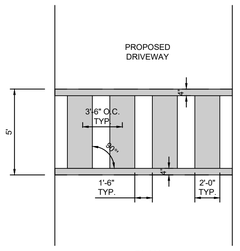




PLACEMENT PLAN

NOTE:
REFER TO PLAN SET FOR LOCATIONS OF PROPOSED WHEELSTOPS.

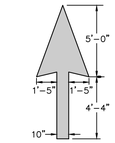
CONCRETE WHEEL STOP DETAIL
N.T.S.



PLAN

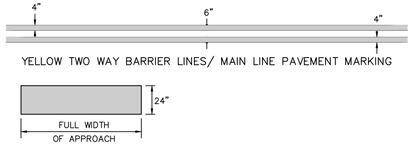
NOTES:
1. PAVEMENT MARKINGS SHALL BE PAINTED IN ACCORDANCE WITH PA DOT FORM 408, SECTION 962, LATEST REVISION.
2. ALL STRIPING SHALL BE COMPRISED OF HOT THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH PA DOT FORM 408, SECTION 961, LATEST REVISION.

CROSSWALK PAVEMENT MARKING DETAIL
N.T.S.

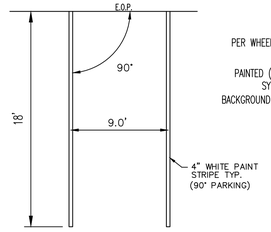


PAVEMENT LEGENDS
N.T.S.

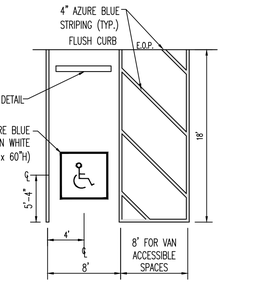
NOTE: ALL LEGENDS SHALL BE WHITE.



STOP BAR MARKING DETAIL
N.T.S.



TYPICAL PARKING STALL STRIPING
N.T.S.

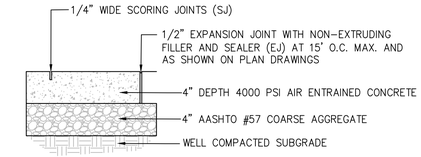


NOTES:
1.) CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED ISLAND.

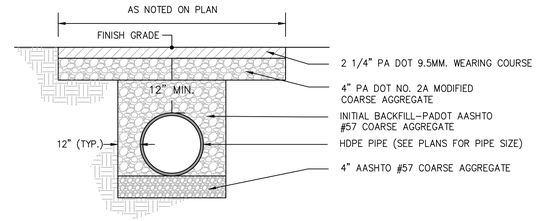
2.) CURB RAMPS, PAVEMENT MARKINGS, & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

3.) ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH A SLOPE OF NO MORE THAN 2% IN ALL DIRECTIONS. THIS INCLUDES BOTH "RUNNING SLOPES" AND "CROSS SLOPES".

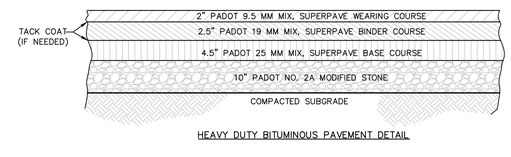
A.D.A ACCESSIBLE PARKING STRIPING
N.T.S.



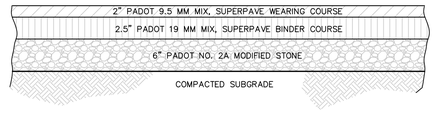
CONCRETE SIDEWALK DETAIL
N.T.S.



ASPHALT TRAIL AND PIPE DETAIL
N.T.S.



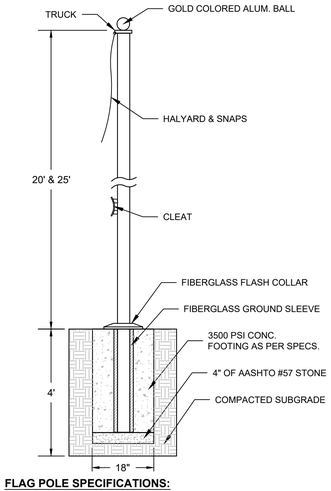
HEAVY DUTY BITUMINOUS PAVEMENT DETAIL



STANDARD BITUMINOUS PAVEMENT DETAIL

NOTE:
1. GEOTEXTILE FABRIC WITH R-3 RIPRAP STONE SHALL BE INSTALLED OVER COMPACTED SUBGRADE WHERE UNSUITABLE SOILS EXISTS.
2. PAVEMENT SHOULD BE INSTALLED LATE IN CONSTRUCTION WHEN MOST HEAVY CONSTRUCTION TRAFFIC WILL NO LONGER BE ON-SITE. PRIOR TO PAVING, THE SITE SHOULD BE PROOFROLLED AGAIN, NEW SOFT AREAS TREATED IN ACCORDANCE WITH SOIL REMEDIATION NOTES, THE BASE LEVELED AND THICKENED AS REQUIRED, AND THE SITE PAVED AT THE END OF CONSTRUCTION.
3. FOR PAVEMENT WHERE UNCURBED, EXTEND SUBBASE AND/OR BASE COURSE EIGHT INCHES BEYOND EACH REQUIRED EDGE OF THE BINDER AND SURFACE COURSES.
4. AGGREGATE BASE SHOULD BE COMPACTED TO 100% OF THE MATERIAL'S MAXIMUM DRY DENSITY AS PER MODIFIED PROCTOR (ASTM D-1557).
5. PAVEMENT MUST BE PLACED OVER WELL PREPARED SUBRADE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR (ASTM D-698) DENSITY IN THE UPPER 2' BELOW SUBGRADE AND TO AT LEAST 95% OF THE STANDARD PROCTOR (ASTM D-698) MAXIMUM DRY DENSITY ELSEWHERE.
6. SEALING MATERIAL FOR FILLING PAVEMENT JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D3405 OR D1190. ALTERNATIVELY, LOW MODULUS MATERIALS SUCH AS SILICONE, HOT OR COLD-POURED RUBBERIZED ASPHALT OR NITRILE RUBBER MEETING THE MANUFACTURER'S SPECIFICATIONS MAY BE USED.
7. CAR TRAFFIC SHOULD SHOULD NOT BE ALLOWED ON THE NEW PAVEMENT FOR AT LEAST 3-DAYS; SIMILARLY NO TRUCK TRAFFIC FOR 7-DAYS.

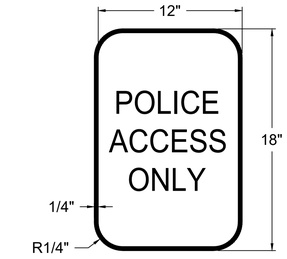
BITUMINOUS PAVEMENT DETAIL
N.T.S.



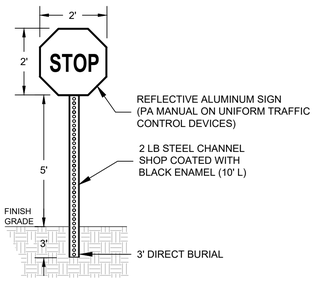
FLAG POLE SPECIFICATIONS:
MODEL NO: AEOLUS SERIES, External Groundset, 20X AND 25X
QUANTITY: (2) 20' H. & (1) 25' H.
COLOR: BRONZE
MANUFACTURER: PLP COMPOSITE TECHNOLOGIES
Address: 57 Creamery Road, PO Box 429,
Fitzwilliam, New HampShire 03447
Phone: 800-262-6075 Fax: 603-585-3470
Email: info@plpcomp.com

NOTE:
1. SEE MANUFACTURER SPECIFICATION FOR INSTALLATION AND ACCESSORIES.

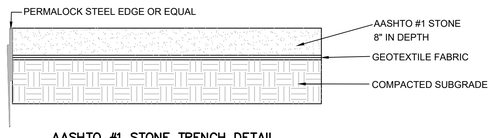
FLAG POLE DETAIL
N.T.S.



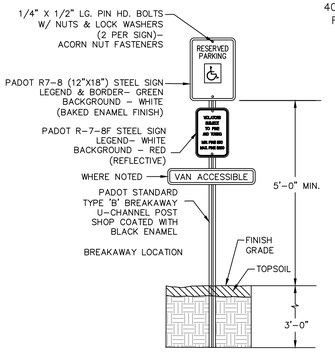
POLICE ACCESS ONLY SIGN DETAIL (POLICE PARKING GATES)
N.T.S.



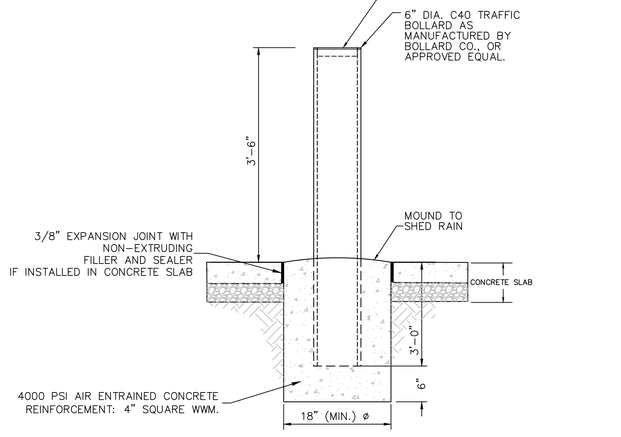
STOP SIGN DETAIL
N.T.S.



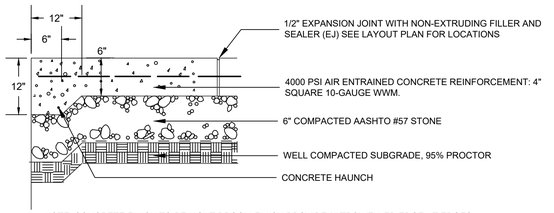
AASHTO #1 STONE TRENCH DETAIL
N.T.S.



HANDICAP/VAN ACCESSIBLE SIGN DETAIL
N.T.S.



BOLLARD DETAIL
N.T.S.



NOTE: CONCRETE FINISH TO BE LIGHT BROOM FINISH PROVIDE 3" TROWELLED EDGE AT EDGES.

CONCRETE SLAB DETAIL (COVERED PARKING & PUBLIC WORK BUILDING ENTANCE)
N.T.S.

CONSTRUCTION DETAILS

NO.	DATE	REVISION

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX

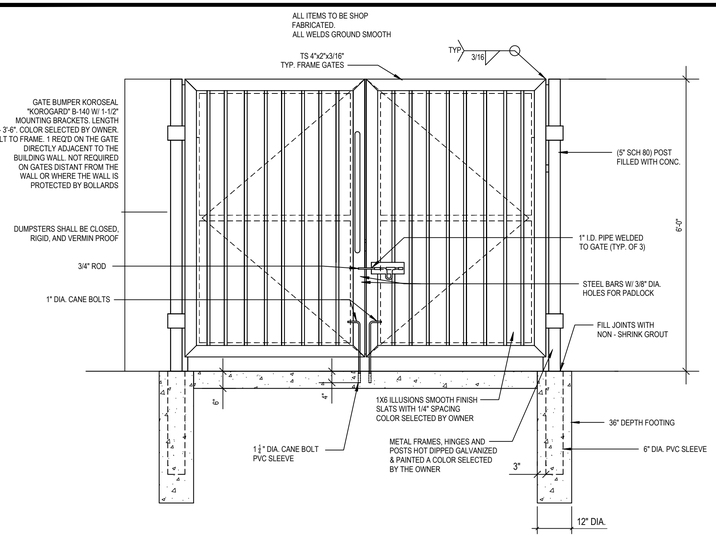
UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

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

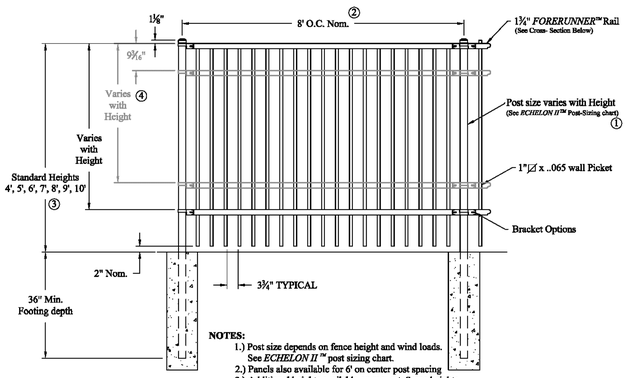
PROJECT NO. 22096-2000
F.B.

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

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

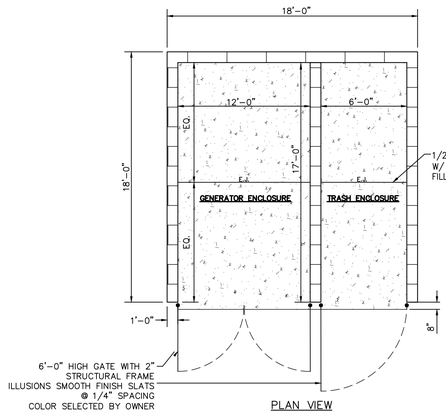


GATE DETAIL FOR TRASH ENCLOSURE & GENERATOR
N.T.S.

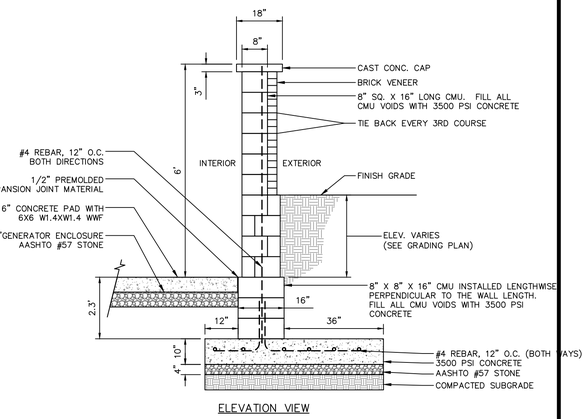


NOTES:
1. FENCE TO BE FITTED WITH BARRIER SCREEN

ORNAMENTAL SECURITY FENCE DETAIL
N.T.S.



PLAN VIEW



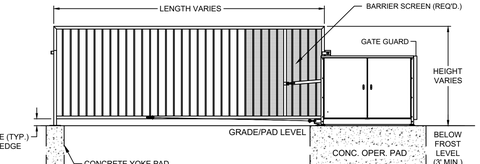
ELEVATION VIEW

TRASH/GENERATOR ENCLOSURE WALL DETAIL (POLICE/ADMIN BUILDING)
N.T.S.

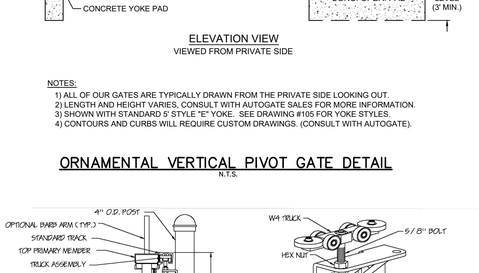
NOTES:
1. FOOTING WIDTH TO BE (4)X POST WIDTH. MINIMUM DEPTH 36".
2. FENCE TO BE FITTED WITH BARRIER SCREEN

NOTES:
1. ALL MATERIAL TO CONFORM TO FEDERAL SPEC RR-F-191G (1-25-74).
2. ALL GALVANIZED FITTINGS TO CONFORM TO ASTM-A153.

FENCE SECTION ELEVATION AND DETAILS–ROUND END POST
N.T.S.



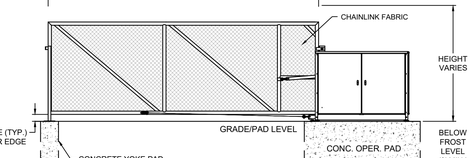
PLAN VIEW



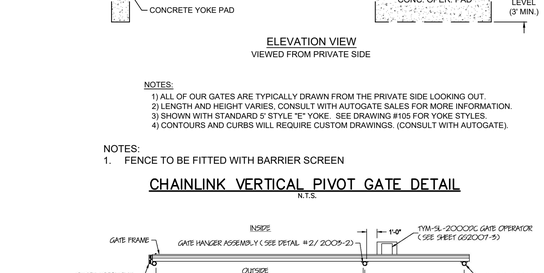
ELEVATION VIEW
VIEWED FROM PRIVATE SIDE

NOTES:
1) ALL OF OUR GATES ARE TYPICALLY DRAWN FROM THE PRIVATE SIDE LOOKING OUT.
2) LENGTH AND HEIGHT VARIES, CONSULT WITH AUTOGATE SALES FOR MORE INFORMATION.
3) SHOWN WITH STANDARD 5' STYLE "E" YOKE. SEE DRAWING #105 FOR YOKE STYLES.
4) CONTOURS AND CURBS WILL REQUIRE CUSTOM DRAWINGS. (CONSULT WITH AUTOGATE).

ORNAMENTAL VERTICAL PIVOT GATE DETAIL
N.T.S.



PLAN VIEW

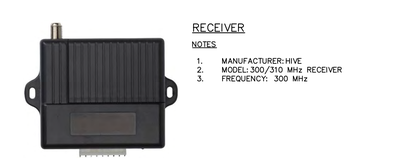


ELEVATION VIEW
VIEWED FROM PRIVATE SIDE

NOTES:
1) ALL OF OUR GATES ARE TYPICALLY DRAWN FROM THE PRIVATE SIDE LOOKING OUT.
2) LENGTH AND HEIGHT VARIES, CONSULT WITH AUTOGATE SALES FOR MORE INFORMATION.
3) SHOWN WITH STANDARD 5' STYLE "E" YOKE. SEE DRAWING #105 FOR YOKE STYLES.
4) CONTOURS AND CURBS WILL REQUIRE CUSTOM DRAWINGS. (CONSULT WITH AUTOGATE).

NOTES:
1. FENCE TO BE FITTED WITH BARRIER SCREEN

CHAINLINK VERTICAL PIVOT GATE DETAIL
N.T.S.



ACCESS CONTROL OPTIONS

NOTES:
1. MANUFACTURER: ILLUSIONS VINYL FENCE OR EQUAL.
MANUFACTURED AND NATIONALLY DISTRIBUTED BY:
EASTERN WHOLESALE FENCE LLC
266 MIDDLE ISLAND RD.
MEDFORD, NY 11763ALL
2. FASTENERS TO BE GALVANIZED.
3. FENCE PANEL PATTERN SHOWN IS TYPICAL. FENCE COLOR TO BE SELECTED BY OWNER.
4. GATES TO BE EQUIPPED WITH HARDWARE TO SECURELY CLOSE THE GATES.
5. CONCRETE FINISH TO BE LIGHT BROOM FINISH PROVIDE 3" TROWELLED EDGE AT EDGES.
6. CONTACTOR SHALL PURCHASE HARDWARE #VRPMHC (POST MOUNT HARDWARE FOR CONCRETE INSTALLATION) FOR EACH POST.
7. CONTRACTOR SHALL INSTALL FENCING PER MANUFACTURERS SPECIFICATION.

SECTION (TRASH ENCLOSURE & GENERATOR)

TRASH ENCLOSURE DETAIL (PUBLIC WORKS BUILDING)
N.T.S.

CHAINLINK CANTILEVER GATE UTILITY DETAILS
N.T.S.

NOMINAL GATE SIZE	CRITICAL DIMENSION CHART	
A	CLEAR OPENING	A
B	COUNTERBALANCE POST SPACING C/C	(A/2) - 11"
C	OVERALL GATE LENGTH	A x 1.5
D	COUNTERBALANCE LENGTH	A x 0.5
E	NOMINAL GATE HEIGHT	E
F	POST HEIGHT	E + 1'-6"
G	FABRIC HEIGHT	E - 1'-0"

NOTES:
1. ALL FITTINGS PROVIDED FOR 4" O.D. POSTS. OTHER SIZES ARE AVAILABLE UPON REQUEST.
2. GATE ELEVATION IS VIEWED FROM OUTSIDE OF THE SECURE AREA LOOKING IN.
3. BARB ARMS ARE OPTIONAL.
4. THIS GENERIC DRAWING SHOWS A TYPICAL GATE. GATE MANUFACTURED MAY NOT BE EXACTLY AS SHOWN.
5. GATE TO HAVE MILL FINISH.
6. FOR GATES THAT REQUIRE TWO PIECE FABRICATION, A 5" ALUMINUM CHANNEL WILL BE SUBSTITUTED FOR THE 2" x 5" ALUMINUM TUBE.

CHAINLINK CANTILEVER GATE DETAIL
N.T.S.

CONSTRUCTION DETAILS

NO.	DATE	REVISION

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX

UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
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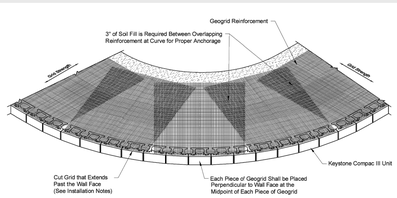
PROJECT NO. 22096-2000
F.B.

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

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12

Convex (Outside) Curves: Installation Details

C:17 - TYPICAL OUTSIDE CURVE GEOGRID PLAN



NOTES:

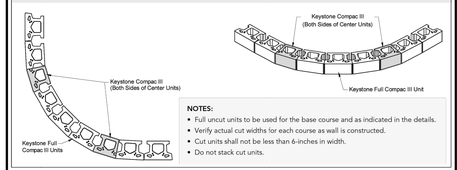
- Drainage zone and backfill materials should be placed and compacted up to the geogrid elevation prior to geogrid being installed at design elevation. Place geogrid in strength direction, perpendicular to wall face
- Measure, cut and orient the geogrid, as per the engineer's design, in the correct strength direction.
- Place the geogrid over the Keystone units within 1-inch of the front block face, then place next course units over grid to hold grid in place. Next, tension the geogrid by pulling it back away from the wall. Place a stake through the geogrid at the back to tension the geogrid in place.
- Proceed with placement of additional Keystone units, then drainage zone and backfill material. Starting at the wall and moving away from the wall, place the drainage zone and backfill materials over the geogrid to hold the geogrid in place under tension.
- Compact the backfill materials in 8-inch lifts up to the next reinforcement elevation.
- Cut grid that extends beyond curved wall face 1-inch back from wall face. The minimum geogrid length must match design length.
- Where geogrid tail overlap naturally occurs, place 3-inches of rock or soil between the overlapping layers.

Convex (Outside) Curves: Installation Details

Keystone units can be easily integrated with multiple curves within the same wall. However, convex curves require attention to details during construction. Every wall system has a minimum radius that can be built before the tails of the units come into contact with each other. This minimum radius is unique to the shape of each individual block system. In convex curves, the tightest radius will always be the top course of the wall. This means that the radius at the base course of a convex curve wall will be larger than the desired radius at the top of the wall. Care should be taken when laying out a wall horizontal location in the field given these wall batter and radius relationships.

The minimum radius of an outside curve should not be less than 5-feet. When constructing an outside curve, we recommend performing the following steps to maintain running bond configuration. It is recommended to construct the wall into the curve, maintaining a running bond pattern in the straight sections of the wall on either side of the curve. ***(See Figure C:15, below.)*** Due to the unit setback, the radius change in a curved wall will cause the units to migrate off from running bond. When this occurs, it will be necessary to cut a block to maintain running bond; cut unit width shall be no smaller than 6-inches. Use exterior grade concrete adhesive to secure the partial unit. When coming out of the radius, do not stack cut units. Cutting of another block may be required to maintain a more precise running bond on the straight wall extending away from the curve.

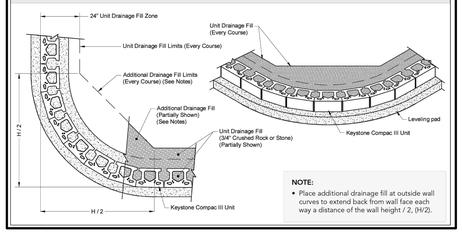
C:15 - OUTSIDE CURVE RUNNING BOND



NOTES:

- Full uncut units to be used for the base course and as indicated in the details.
- Verify actual cut widths for each course as wall is constructed.
- Cut units shall not be less than 6-inches in width.
- Do not stack cut units.

C:16 - OUTSIDE CURVE ADDITIONAL DRAINAGE FILL



NOTE:

- Place additional drainage fill at outside wall curves to extend back from wall face each way a distance of the wall height / 2, (H/2).

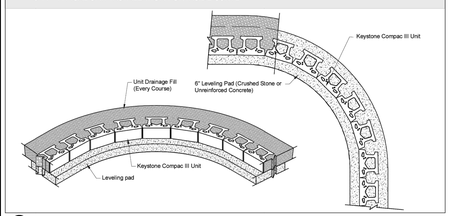
Concave (Inside) Curves: Installation Details

Inside curves for moderately tall Keystone walls are more difficult to construct than a straight wall due to the complex geometry resulting from a battered wall face in a curve. Inside curves allow good access for compaction and the wall face units tend to support each other like an arch when the soil strain associated with the active earth pressure condition develops. As the wall gets taller, inside curves will result in the top of the wall becoming longer than the base. For wall systems to maintain the desired running bond configuration, gaps between units tend to form.

The following is an outline to a process of constructing inside curves in taller walls. See the illustrations below.

1. Units can be moved laterally to remove gapping. Eventually, cutting partial units will be necessary to get the coursing back on the running bond pattern.
2. The minimum inside radius at the base of the wall course should not be less than 6 feet.

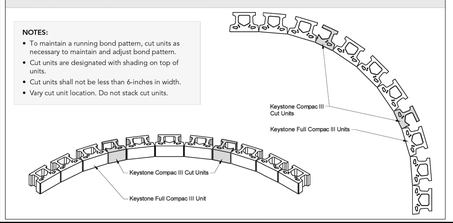
C:11 - TYPICAL UNIT INSTALLATION FOR INSIDE CURVE



C:12 - IN CURVE CUT UNITS EXAMPLE COURSE

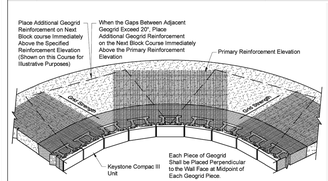
NOTES:

- To maintain a running bond pattern, cut units as necessary to maintain and adjust bond pattern.
- Cut units are designated with shading on top of units.
- Cut units shall not be less than 6-inches in width.
- Vary cut unit location. Do not stack cut units.



Concave (Inside) Curves: Installation Details

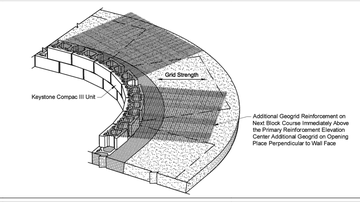
C:13 - INSIDE CURVE GEOGRID INSTALLATION (PRIMARY ELEVATION)



NOTES:

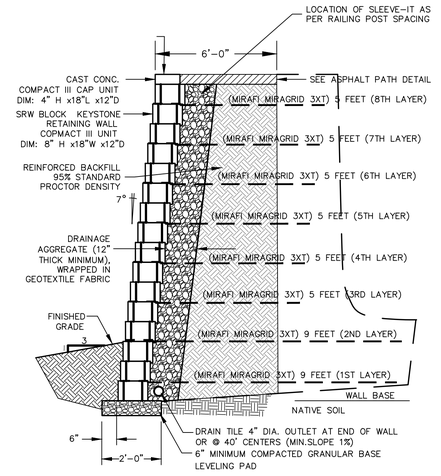
- Drainage zone and backfill materials should be placed and compacted up to the primary geogrid elevation prior to geogrid installation.
- Measure, cut and orient the geogrid, as per the engineer's design, in the correct strength direction.
- Place the geogrid over the Keystone units within 1-inch of the front block face, then place next course units over grid to hold grid in place. Next, tension the geogrid by pulling it back away from the wall. Place a stake through the geogrid at the back to tension the geogrid in place.

C:14 - INSIDE CURVE TYPICAL GEOGRID INSTALLATION (SECONDARY ELEVATION)



NOTES:

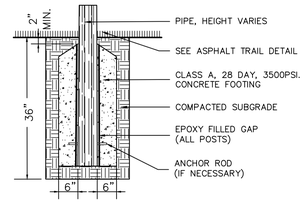
- Proceed with placement of additional Keystone units and unit drainage fill. Start backfilling nearest the Keystone units and then move away from the wall placing backfill materials over the geogrid.
- Compact the backfill materials in 8-inch lifts up to the next reinforcement elevation.
- If the radius of the wall creates a gap between adjacent primary elevation geogrid layers ***(see Figure C:13, above)*** of greater than 20 degrees, mark the wall units in the center of the gap, then place an additional secondary elevation on the course above the primary elevation geogrid, with the middle of the secondary elevation geogrid centered on the mark made in the center of the gapped geogrid below.
- The use of 12-foot wide rolls of geogrid will not be possible in walls with anything tighter than a gradual inside radius curve. Very tight inside radius curves may even require cutting the width of the roll to maintain the geogrid being as perpendicular as possible to the wall units.



NOTE:
CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS (SIGNED & SEALED BY REGISTERED ENGINEER) FOR REVIEW APPROVAL PRIOR TO INSTALLING PROPOSED WALLS. DETAILS SHALL INCLUDE THE PROPOSED SLEEVE AT ANCHORING SYSTEM.

KEYSTONE RETAINING WALL COMPACT III UNIT DETAIL

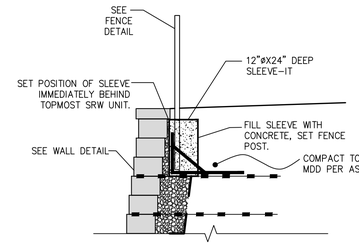
N.T.S.



NOTE:
THIS DETAIL SHALL BE USED WHEN INSTALLING RAILING BEYOND WALL AREAS.

RAILING FOOTING DETAIL

N.T.S.

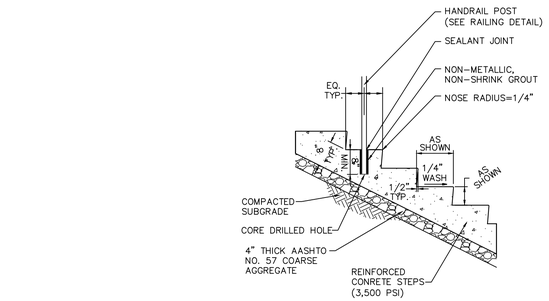


NOTES:

1. FENCING SYSTEMS APPROVED FOR USE WITH SLEEVE–IT ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK – UP TO 8–FT, PRIVACY – UP TO 6–FT (WOODEN, PVC, METAL). POST SIZE 4"X4" MAX.
2. THIS DETAIL SHALL BE USED FOR FENCE/RAILING INSTALLED BEHIND RETAINING WALL.

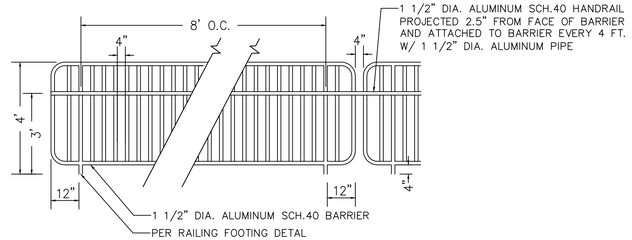
FENCE SLEEVE–IT DETAIL

N.T.S.



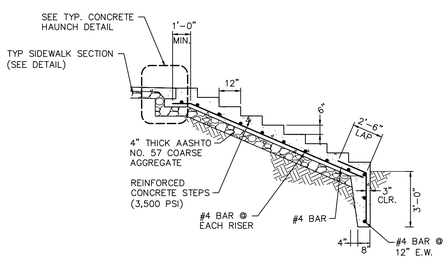
TYPICAL HANDRAIL POST DETAIL

N.T.S.



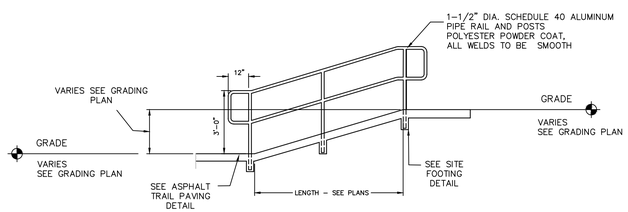
ADA ALUMINUM BARRIER AND HANDRAIL DETAIL

N.T.S.



TYPICAL STEPS STRUCTURAL DETAIL

N.T.S.



NOTES:
1. ALL RAMPS, LANDINGS AND RAILINGS SHALL COMPLY WITH THE APPROPRIATE BUILDING CODE.

TYPICAL HC RAMP & RAILING DETAIL

N.T.S.

CONSTRUCTION DETAILS

NO.	DATE	REVISION

CONSTRUCTION PLANS
FOR
UPPER POTTSGROVE MUNICIPAL COMPLEX

UPPER POTTSGROVE TOWNSHIP - MONTGOMERY COUNTY - PENNSYLVANIA

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

PROJECT NO. 22096-2000
F.B.

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

MONTGOMERY COUNTY BLOCK 60-3 UNIT 12