



DUCKS UNLIMITED

EDUCATION WETLAND

STATE GAME LAND 214 CRAWFORD COUNTY, PENNSYLVANIA

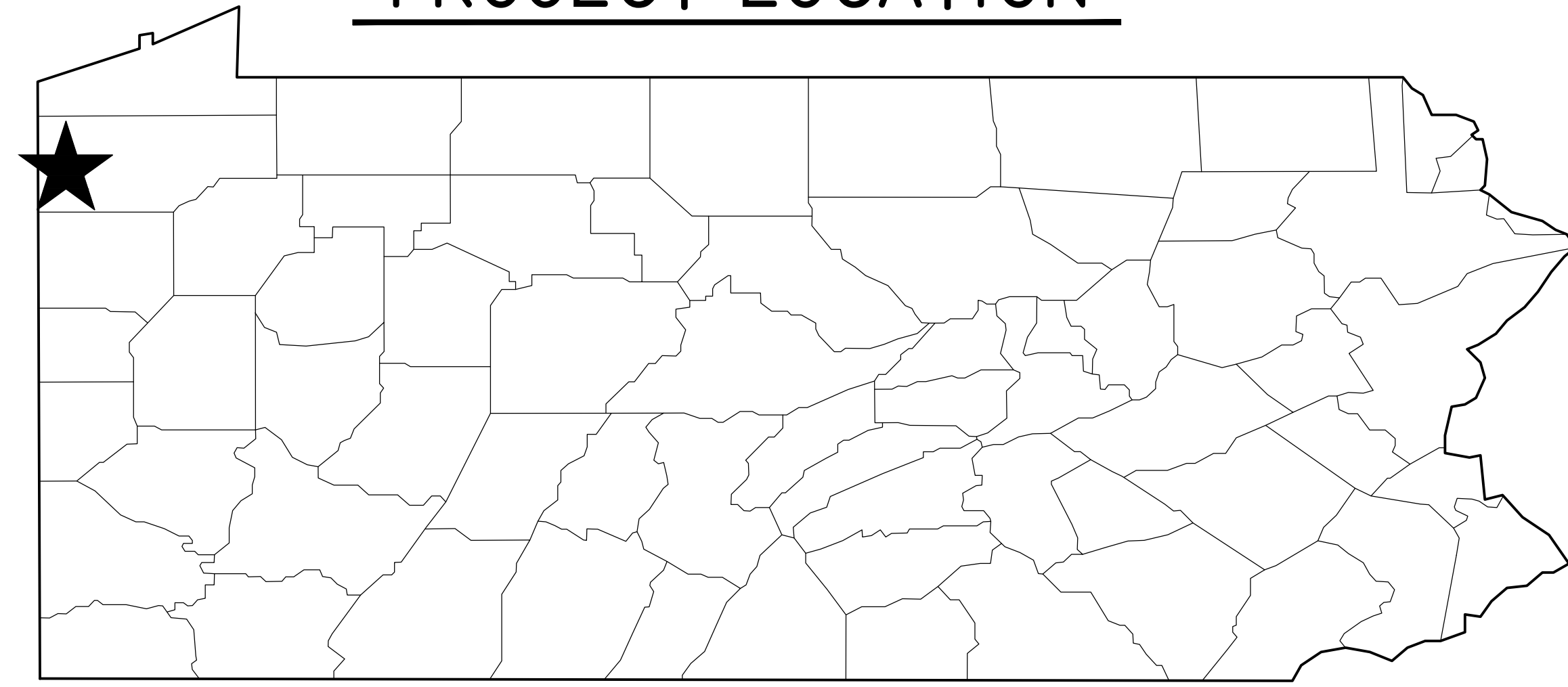
IN COOPERATION WITH PENNSYLVANIA GAME COMMISSION

SPECIFICATIONS

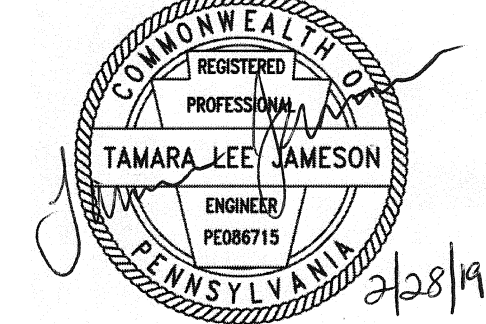
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PROJECT LOCATION



PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the Commonwealth of Pennsylvania.
 LICENSE # PE086715 EXP. DATE 09/30/19



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GREAT LAKES/ATLANTIC REGIONAL OFFICE
 DEXTER, MICHIGAN (734) 623-2000
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COVER SHEET
 EDUCATION WETLAND
 STATE GAME LAND 214
 CRAWFORD COUNTY, PENNSYLVANIA

Revision No.	By	Date	Comments
1	JP	4/20/18	TU
2	TJ	2/27/19	x
			x
			x
			x
			x

- ### INDEX
- COVER SHEET
 - ESTIMATED QUANTITIES AND NOTES
 - SITE PLAN & EROSION CONTROL PLAN
 - DETAIL SHEET 1
 - DETAIL SHEET 2
 - CROSS SECTIONS
 - EROSION CONTROL DETAILS & NOTES

CAD FILE: COVER and DETAILS
DESIGNED BY: JP
DRAWN BY: JP
SURVEYED BY: JP / GB
BIOLOGIST: JP
DATE: 04/10/2018
PROJECT NO: US-PA-112-1
GLARO-PA1-18-01

ESTIMATED QUANTITIES

NOTE	SPEC #	ITEM	UNIT	QUANTITY
1	201	MOBILIZATION	LS	1
2	202	SITE PREPARATION	CY-P	1105
3	204	EMBANKMENT CONSTRUCTION	CY-P	1539
4	301	WATER CONTROL STRUCTURE – PURCHASE / INSTALL	EA	1
5	305	RIPRAP PLACEMENT	TON	5
6	401	SOIL EROSION POLLUTION CONTROL	LS	1
7	402	SEEDING & MULCHING	AC-P	0.5

SEEDING SUMMARY				
PERMANENT SEEDING				
SEED TYPE	SEEDING DATE	SEEDING RATE	FERTILIZER	LIME
Perennial Ryegrass	March 15 – May 1	25 lbs / ac	400 lbs / ac	500 lbs / ac
Tall Fescue	Aug 1 – Sept 1	25 lbs / ac		
TEMPORARY SEEDING				
Annual Ryegrass	3/15 – 9/01	40 lbs / ac		
MULCH – 2 tons / ac – Straw or Hay				

Sequence of Construction:

1. Notify Crawford County CD at least fourteen (14) days before starting authorized activities to schedule a preconstruction meeting. For Crawford County CD call 814-763-5269.
2. Hold pre-construction meeting.
3. Notify sediment control inspector 24 hours prior to start of construction.
4. Perform grubbing required for installation of perimeter controls for the wetland project.
5. Install perimeter controls for project; notify sediment control inspector and obtain approval before proceeding further.
6. Remove topsoil under proposed dike and stockpile for replacement.
7. Remove topsoil in borrow area and stockpile for replacement.
8. Complete excavation of borrow area and dike construction.
9. Install water control structure & pipe.
10. Install riprap outfall.
11. Complete planting and stabilization of upland areas.
12. Notify sediment control inspector and obtain approval to remove sediment and erosion control measures.
13. Notify Crawford County CD within five (5) days after completing authorized activities.

NOTE: NOTIFY THE SEDIMENT CONTROL INSPECTOR TO OBTAIN DIRECTION AS TO ANY SEDIMENT AND EROSION CONTROL CONCERNS THAT ARISE.

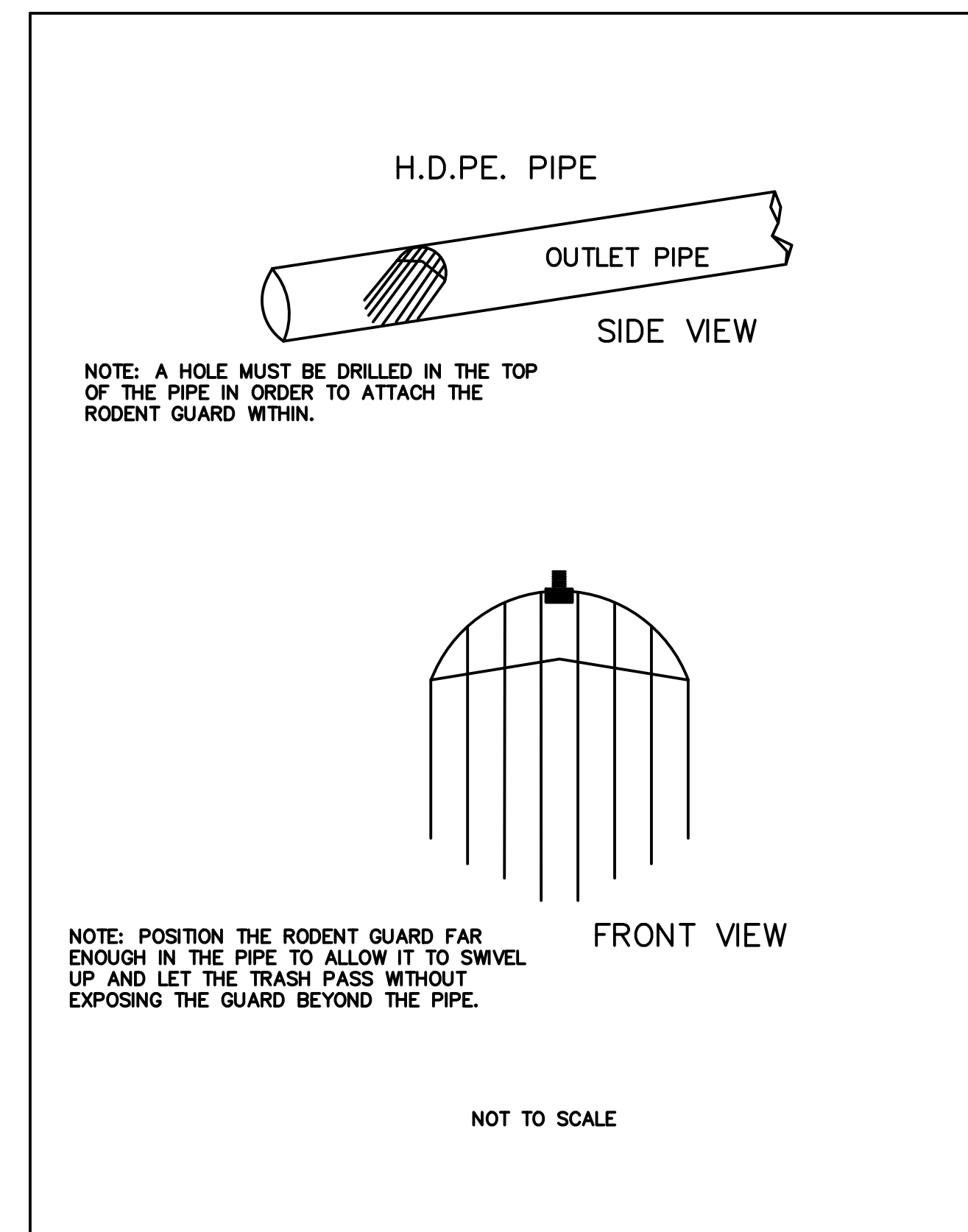
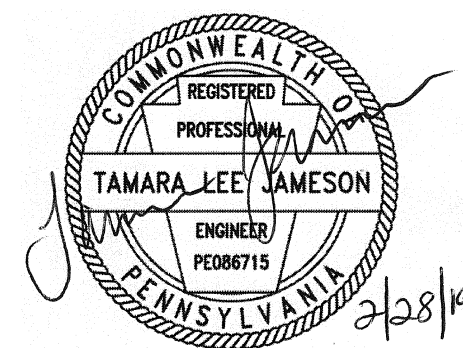
CONSTRUCTION NOTES:

1. BID ITEM FOR MOBILIZATION SHALL INCLUDE THE SUPPLY OF ALL LABOR, MATERIAL AND EQUIPMENT TO TRANSPORT ALL NEEDED LABOR, MATERIAL AND EQUIPMENT TO AND FROM A PROJECT SITE TO SUCCESSFULLY COMPLETE THAT PROJECT AS SHOWN ON THE PLANS OR DESCRIBED BY THE ENGINEER, REFER TO MOBILIZATION SPECIFICATION 201.
2. SITE PREPARATION BID ITEM SHALL INCLUDE STRIPPING BENEATH EMBANKMENT FOOTPRINT AND GRADING/BORROW AREA, TOPSOIL SHALL BE STOCKPILED AND REPLACED OVER COMPLETED EMBANKMENT AND GRADING/BORROW AREA, BID ITEM SHALL INCLUDE LEVELING AND DRAGGING OR DISK PRIOR TO PLACEMENT OF SEED MIX, BID ITEM SHALL ALSO INCLUDE ANY TREE BRUSH CLEARING WITHIN CONSTRUCTION AREA, REFER TO SITE PREPARATION SPECIFICATION 202.
3. BID ITEM FOR EMBANKMENT CONSTRUCTION SHALL INCLUDE ALL WORK REQUIRED TO HAUL, PLACE AND COMPACT FILL MATERIAL TO CONSTRUCT EMBANKMENT TO THE LINES AND GRADES SHOWN ON THE PLANS. THE ESTIMATED QUANTITY FOR EMBANKMENT CONSTRUCTION IS COMPACTED IN PLACE, REFER TO EMBANKMENT CONSTRUCTION SPECIFICATION 204. ALL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT MORE THAN EIGHT (8) INCHES IN THICKNESS AND SHALL BE COMPACTED BY SUITABLE COMPACTION EQUIPMENT TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D698. MATERIAL SHALL BE FREE OF VEGETATION, ROOTS, OTHER ORGANICS, STONES GREATER THAN 6 INCHES IN DIAMETER, AND FROZEN OR OTHER OBJECTIONABLE MATERIAL. REFER TO CONSTRUCTED TOPOGRAPHY SPECIFICATION 205.
4. BID ITEM FOR WATER CONTROL STRUCTURE AND APPURTENANCES SHALL INCLUDE THE PURCHASE AND INSTALLATION OF THE STRUCTURE, COUPLERS, PIPE, PIPE ANCHORS, SEALANTS, BAR GUARDS, AND ALL APPURTENANCES NECESSARY TO COMPLETE THE INSTALLATION AS SHOWN ON THE PLANS. REFER TO WATER CONTROL STRUCTURES, SPECIFICATION 301, STRUCTURE AND CULVERT APPURTENANCES SPECIFICATION 302, AND CULVERT AND PIPE INSTALLATION SPECIFICATION 303.
5. BID ITEM FOR RIPRAP DU CLASS I IS AS SHOWN ON THE PLANS. NON-WOVEN FILTER FABRIC IS REQUIRED BENEATH ALL ROCK RIPRAP AND SHALL BE SECURED TO SLOPES AND BOTTOM USING PINS AS NOTED IN SPECIFICATION 305. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY INSTALLED. QUANTITIES ARE BASED ON TONS. CONTRACTOR SHALL PROVIDE SCALE TICKETS WITH WEIGHTS INCLUDING TARE WEIGHTS, GROSS WEIGHTS, AND NET WEIGHTS OF MATERIAL DELIVERED.
6. THE BID ITEM FOR SOIL EROSION AND POLLUTION CONTROL SHALL INCLUDE THE SUPPLY, INSTALLATION AND MAINTENANCE OF SILT FENCE IN COMPLIANCE WITH PENNSYLVANIA STATE REGULATIONS. EXACT LOCATION AND QUANTITY MAY VARY DEPENDING ON ACTUAL SITE CONDITIONS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF WORK AND WILL BE MAINTAINED UNTIL FINAL INSPECTION OF THE SITE. THE CONTRACTOR SHALL BE PAID A LUMP SUM FOR THE EROSION AND SEDIMENT CONTROL MEASURES LISTED ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL, INSPECT AND MAINTAIN THE BEST MANAGEMENT PRACTICE MEASURES REQUIRED TO PREVENT SILT AND POLLUTION RUNOFF. THE CONTRACTOR SHALL MAINTAIN, INSPECT AND PROVIDE ALL PROPER REPORTS ACCORDING TO THE PERMIT REGULATIONS.
7. BID ITEM SEEDING AND MULCHING THE "STANDARD SEED MIX" (EMBANKMENT) SHALL INCLUDE THE MATERIAL, EQUIPMENT, AND LABOR REQUIRED TO LEVEL AND PREPARE TOPSOIL FOR SEEDING AND MULCHING MATERIAL. APPROVED MULCH SHALL BE APPLIED TO ALL AREAS SEEDED AS DIRECTED BY THE DU FIELD ENGINEER. REFER TO DU SPECIFICATION 402. PAYMENT WILL BE BASED ON PLANNED ACRES.

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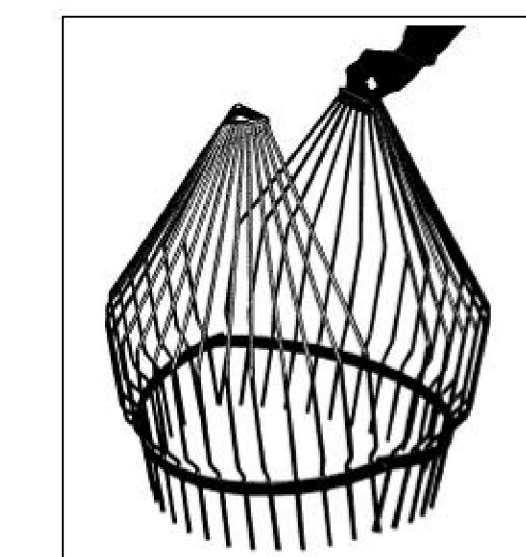
Bar Guards

Eliminate plugged inlets with Bar Guard Intakes.

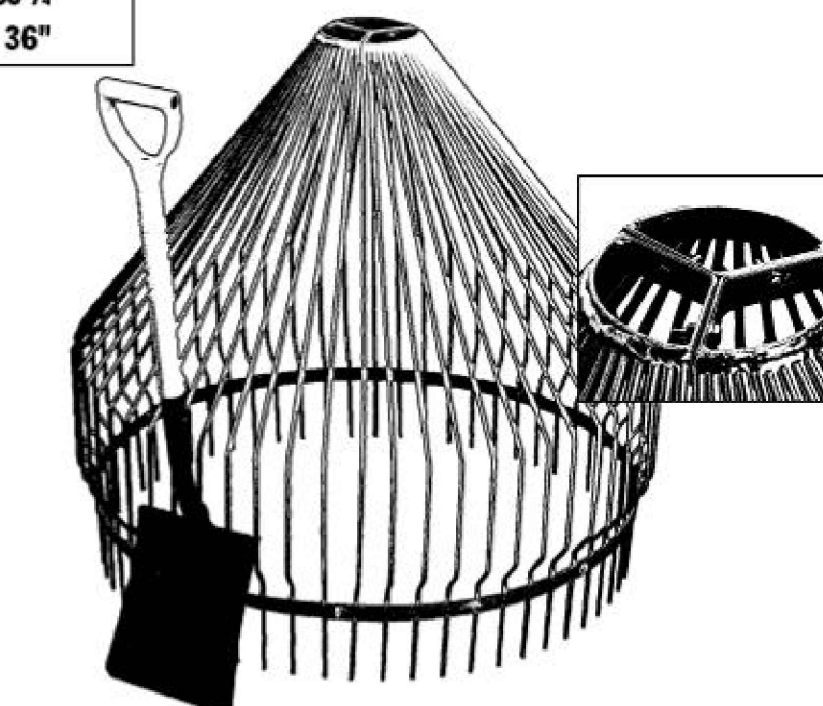
- Fights trash to keep intakes flowing freely.
- The Bar Guard Intake is an excellent choice in any situation where a low profile, high capacity intake is required.
- Its unique design helps keep intakes from plugging with crop residue or any other type of trash.
- The Bar Guard may also protect a pond tube from rodent entry.
- Yellow powder coated finish resists corrosion and is brighter for better visibility.

Bar Guard Size	Bar Diameter	Bar Spacing	Over-all O.D.	Over-all Height
4"	1/4"	1 1/4"	5 1/2"	17 1/4"
5"	1/4"	1 1/4"	6 1/4"	17 1/4"
6"	1/4"	1 1/4"	7 1/2"	18"
8"	1/4"	1 1/4"	9 1/2"	19 1/4"
8" H"	1/4"	1 1/4"	9 1/2"	19 1/2"
10"	1/4"	1 1/4"	11 1/4"	20"
10" H"	1/4"	1 1/4"	12 1/4"	20 1/4"
12"	1/4"	1 1/4"	13 1/2"	21 1/4"
12" H"	1/4"	1 1/4"	15 1/4"	22"
15"	1/2"	1 1/2"	16 1/2"	22 1/4"
18"	1/2"	1 1/2"	19 1/4"	23 1/4"
24"	1/2"	2"	25 1/4"	26 1/2"
30"	1/2"	2"	31 1/2"	31"
36"	1/2"	2"	37 1/2"	33 1/4"
42"	1/2"	2 1/4"	43 1/4"	35 1/4"
48"	1/2"	3 1/4"	49 1/4"	36"

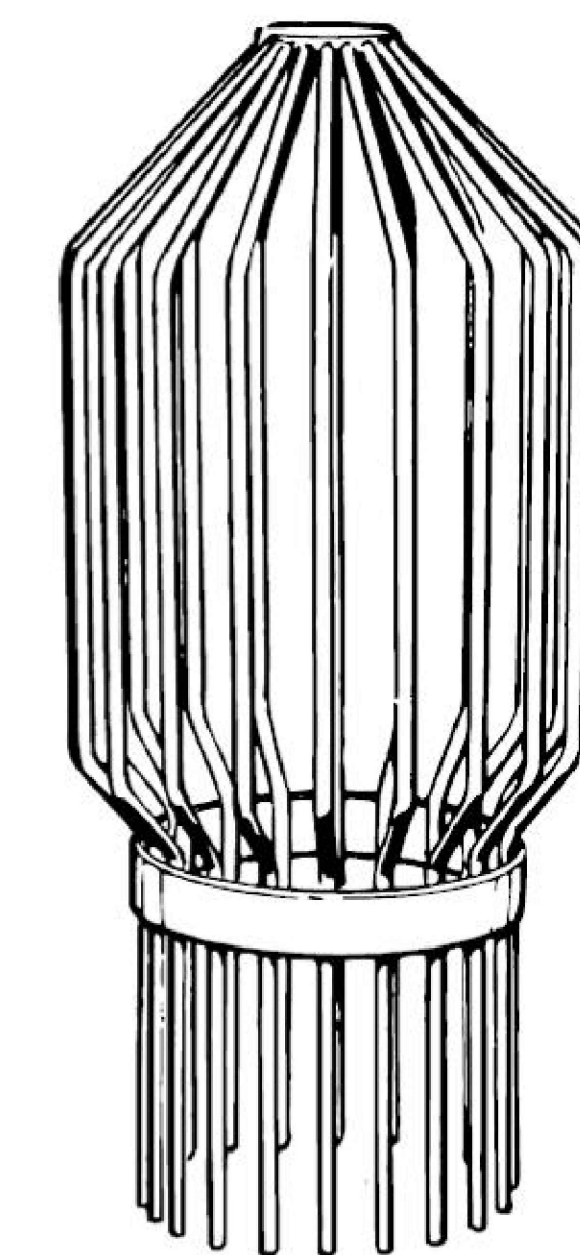
*Special sized Bar Guards to fit Hickenbottom Intakes.



24" through 30" Bar Guards are in 2 pieces.



36" are in 3 pieces. 42" & 48" are in 4 pieces. (Bolts, washers, and nuts are included)



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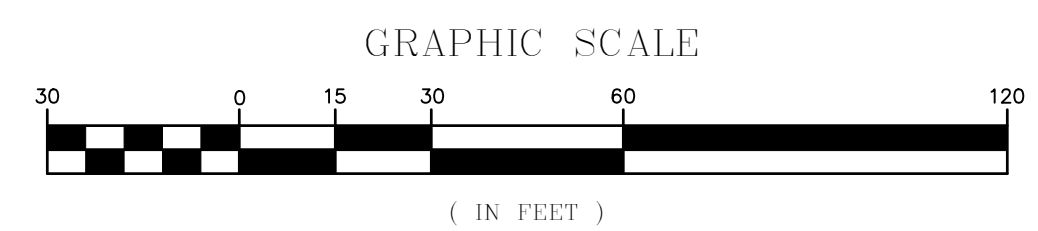
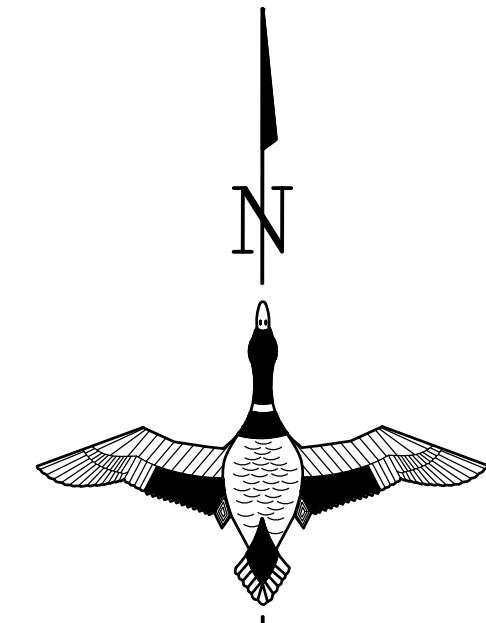
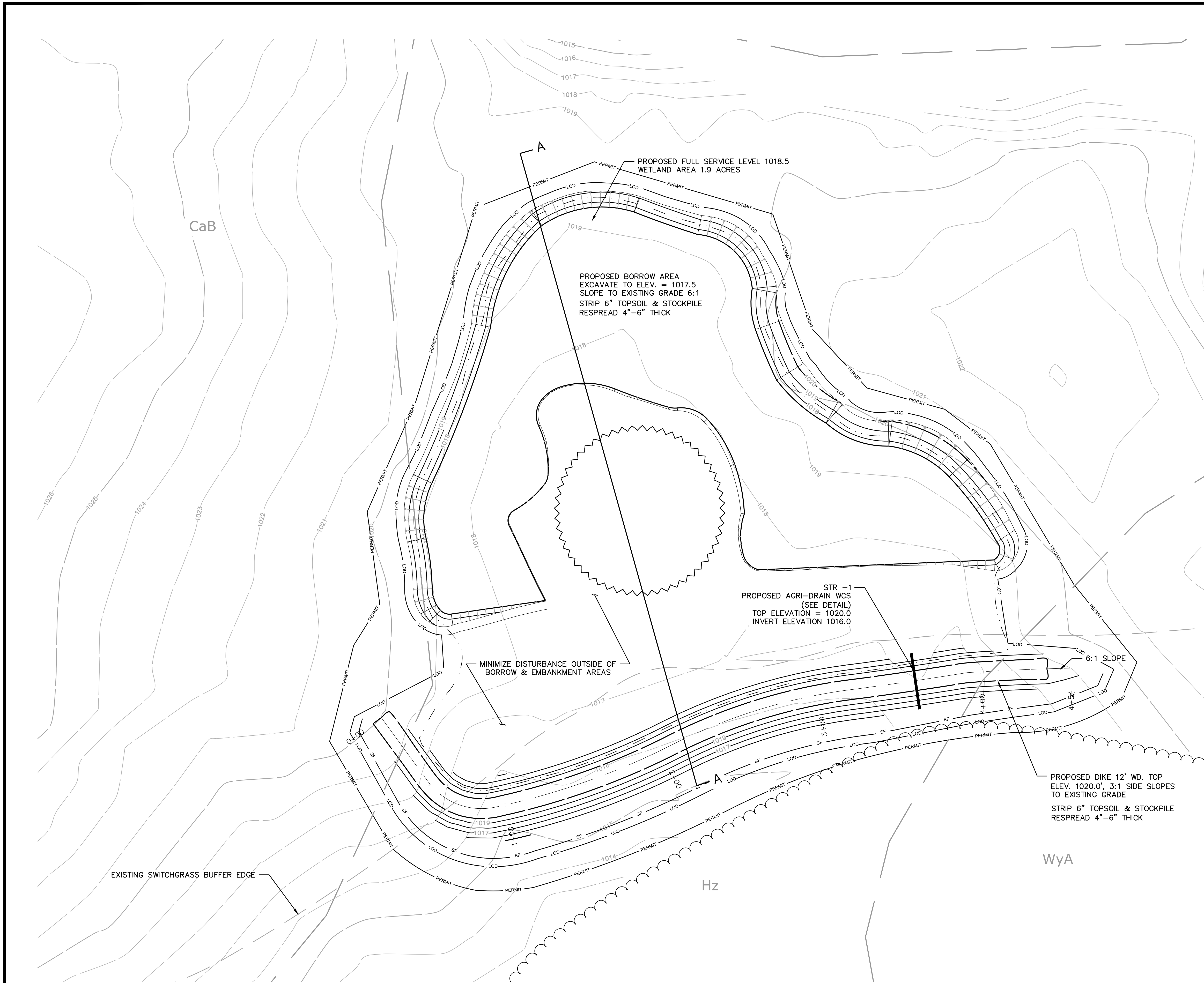
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ESTIMATED QUANTITIES AND NOTES
EDUCATION WETLAND
STATE GAME LAND 214
CRAWFORD COUNTY, PENNSYLVANIA

Revision No.	Sheet No.	Revisions	Date	By
1	2	Per T. Jameson	4/20/18	JP
2	2	Per Crawford County Comments	2/27/19	TU

CAD FILE:
COVER and DETAILS
DESIGNED BY: JP
DRAWN BY: JP
SURVEYED BY: JP / GB
BIOLOGIST: JP
DATE:
04/10/2018
PROJECT NO:
US-PA-112-1
GLARO-PA-18-02



LEGEND

- + 000.0 EXISTING SPOT ELEVATION
- ⊕ HORIZONTAL & VERTICAL CONTROL
- 000 EXISTING MAJOR CONTOUR
- 000 EXISTING MINOR CONTOUR
- ~~~~~ EXISTING TREE LINE
- ~~~~~ EDGE OF VEGETATION LINE
- ~~~~~ EDGE OF SWITCHGRASS
- APPROXIMATE WATERLINE (PROPOSED)
- PROPOSED DIKE
- ~~~~~ TEMPORARY SOIL STOCKPILE AREA
- SF 12" DIAM. COMPOST FILTER SOCK
- LOD LIMIT OF DISTURBANCE
- PERMIT PERMIT BOUNDARY
- SOIL TYPE BOUNDARY

HORIZONTAL AND VERTICAL CONTROL - Coordinates are NAD 83 (CORS 1996) Pennsylvania State Plane Coordinates, Zone #3701, units U.S. Survey Feet. Coordinates established from NGS OPUS (National Geodetic Survey, Online Positioning User Service) solution for control point 10-2013. Raw data was collected for 6 hours on June 5, 2013 using a Trimble 5800 GPS base receiver. OPUS solution for control point 10, North 546821.044, East 1235638.615, Elevation 1039.93.

Control Point # 10 - Set 24" x 8" rebar with 1" Red DUCKS UNLIMITED cap. Located 118' east of the centerline of the maintenance shed.
N: 546821.044
E: 1235638.615
ELEV.: 1039.93

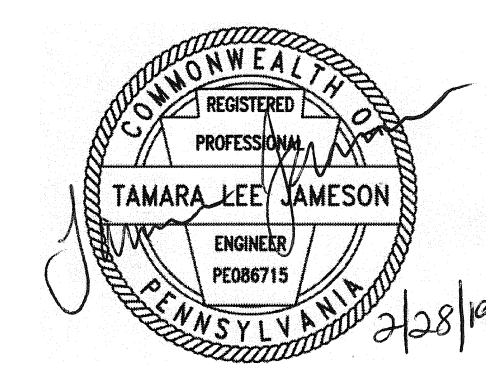
TOTAL DISTURBED AREA - 1.6 AC
(BORROW & EMBANKMENT)
LIMIT OF DISTURBANCE - 2.6 AC
PERMIT BOUNDARY - 3.0 AC
TOTAL CUBIC YARDS - 2,644 CY

SOIL SUMMARY

CaB - Cambridge silt loam
Hz - Holly silty clay loam
WyA - Wyoming gravelly sandy loam

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SITE PLAN & EROSION CONTROL PLAN
EDUCATION WETLAND
STATE GAME LAND 214
CRAWFORD COUNTY, PENNSYLVANIA

Revision No.	By	Date	Revisions	Sheet No.
1	JP	4/20/18		3
2	TU	2/27/19	Per Crawford County Comments	3

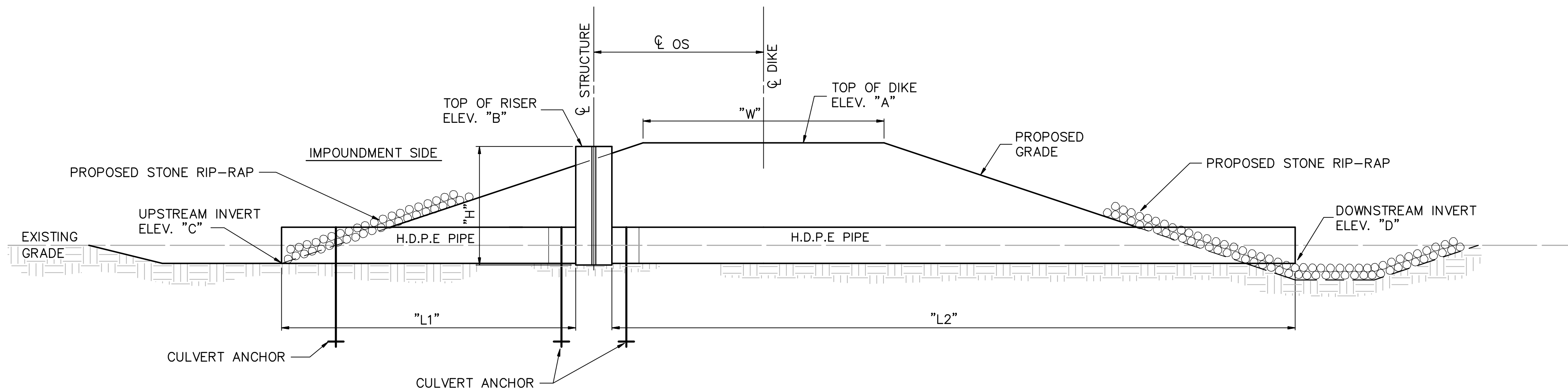
CAD FILE:
SITE PLAN PA-112-1

DESIGNED BY: JP
DRAWN BY: JP
SURVEYED BY: JP / GB
BIOLOGIST: JP

DATE:
04/10/2018

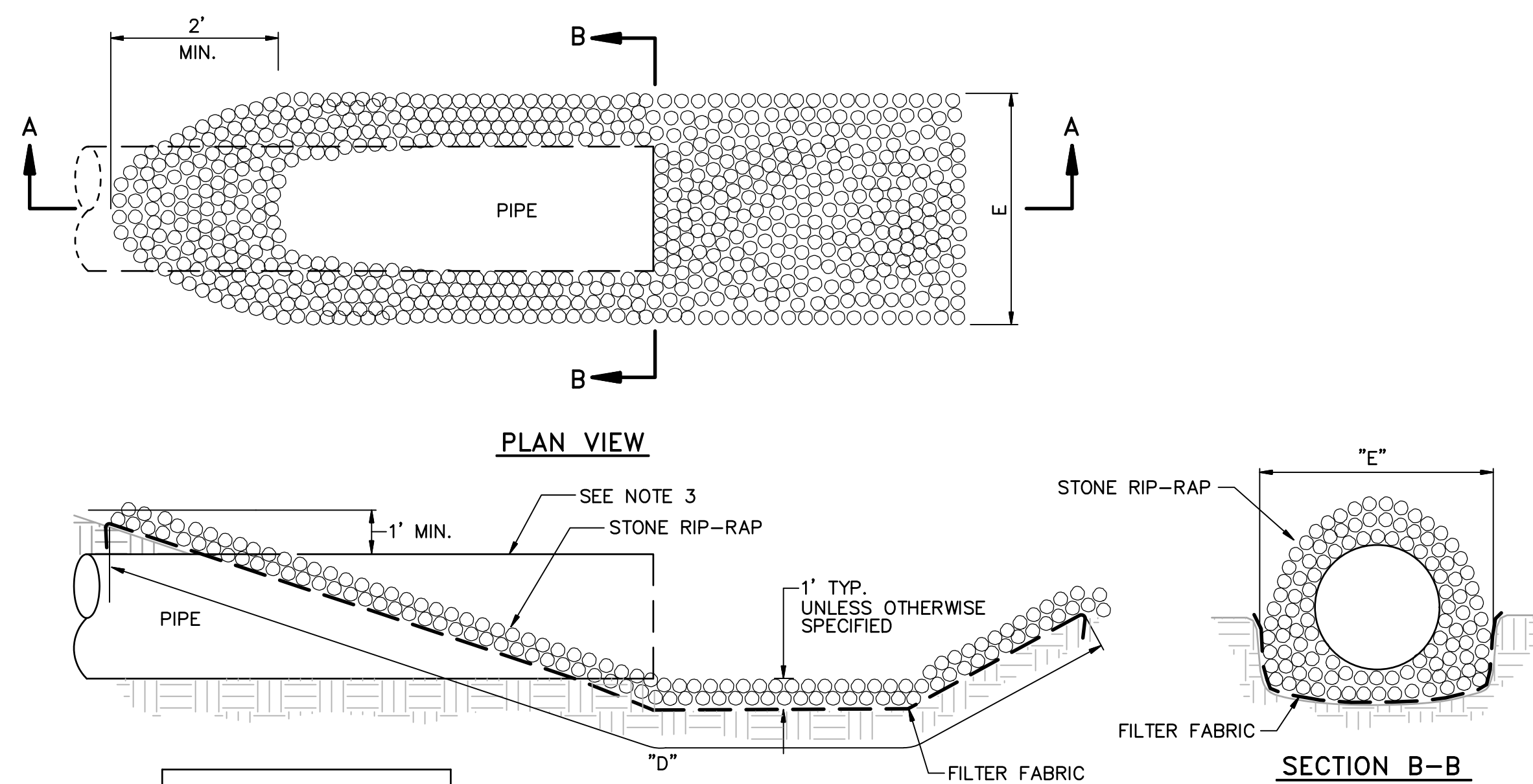
PROJECT NO:
US-PA-112-1

GLARO-PA-18-03



PROFILE OF AGRI-DRAIN® WATER CONTROL STRUCTURE
NOT TO SCALE

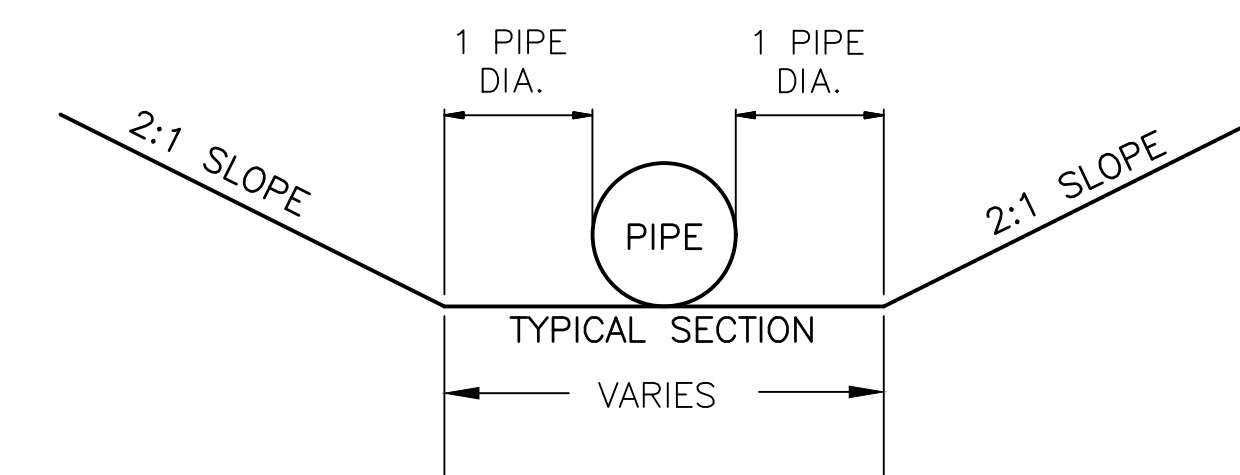
STRUCTURE	PIPE SIZE	RISER SIZE	TOP OF DIKE EL. "A"	TOP OF RISER EL. "B"	FULL SERVICE LEVEL	INLET I.E. EL. "C"	OUTLET I.E. EL. "D"	TOP WIDTH "W"	INLET LENGTH "L1"	OUTLET LENGTH "L2"	℄ - ℄ OFFSET	RISER HEIGHT "H"
STR-1	18"	24"x28"	1020.0	1020.0	1018.5	1016.0	1016.0	12'	9'	26'	8'	4.0'



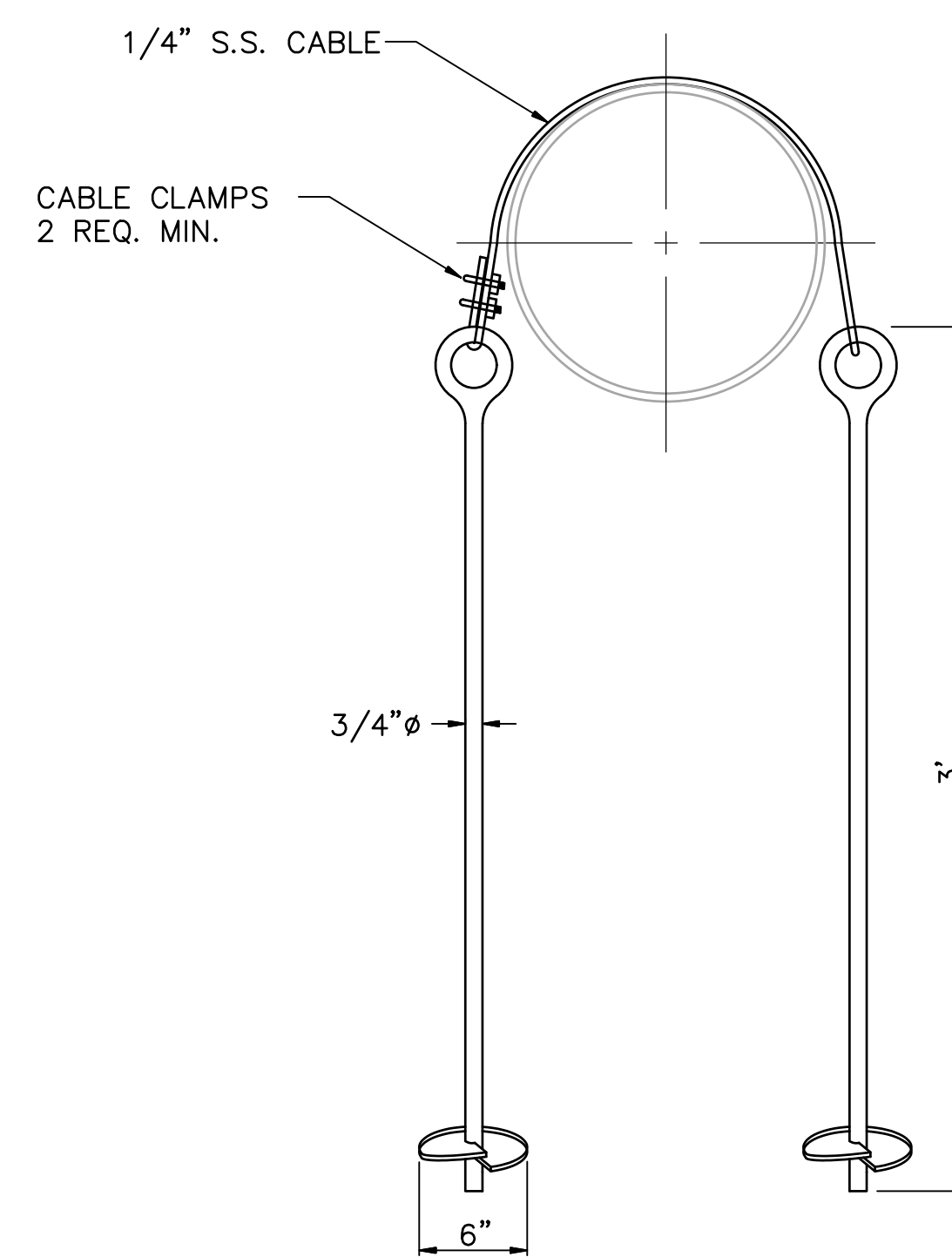
CLASS I STONE			
PIPE DIA.	D	E	Sq.Yds.
12"	17'	3'	5.5
15"	18'	3.75'	7.2
18"	19'	4.5'	8.3
21"	20'	5.25'	11.0
24"	21'	6'	13.2
27"	22'	6.75'	15.4
30"	27'	10'	28.7
36"	29'	10'	30.3
42"	31'	10'	31.8
48"	33'	10'	33.2
54"	35'	10'	34.5
60"	37'	10'	35.7

- NOTES:
- IF THE RIP-RAP CLASS DESIGNATION IS NOT SPECIFIED ON THE CONSTRUCTION PLANS, CLASS 1 ROCK RIP-RAP SHALL BE UTILIZED. THE ROCK SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
 - FILTER FABRIC SHALL BE UTILIZED IN THE INSTALLATION OF RIP-RAP.
 - DOWNSTREAM PIPE OUTLET SHALL CONFORM TO SLOPE FOR PIPE DIAMETERS 30" AND LARGER

OUTLET AND STONE RIP-RAP DETAIL
NOT TO SCALE



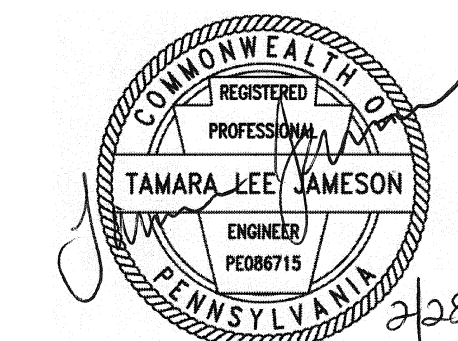
PIPE INSTALLATION & REMOVAL DETAIL
NOT TO SCALE



CULVERT ANCHOR
NO SCALE

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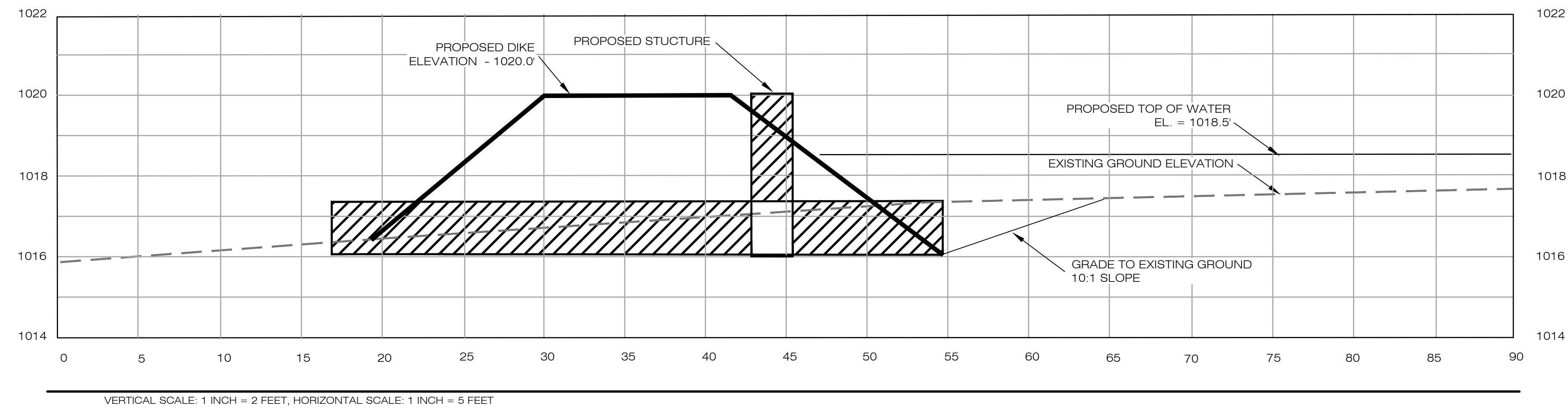
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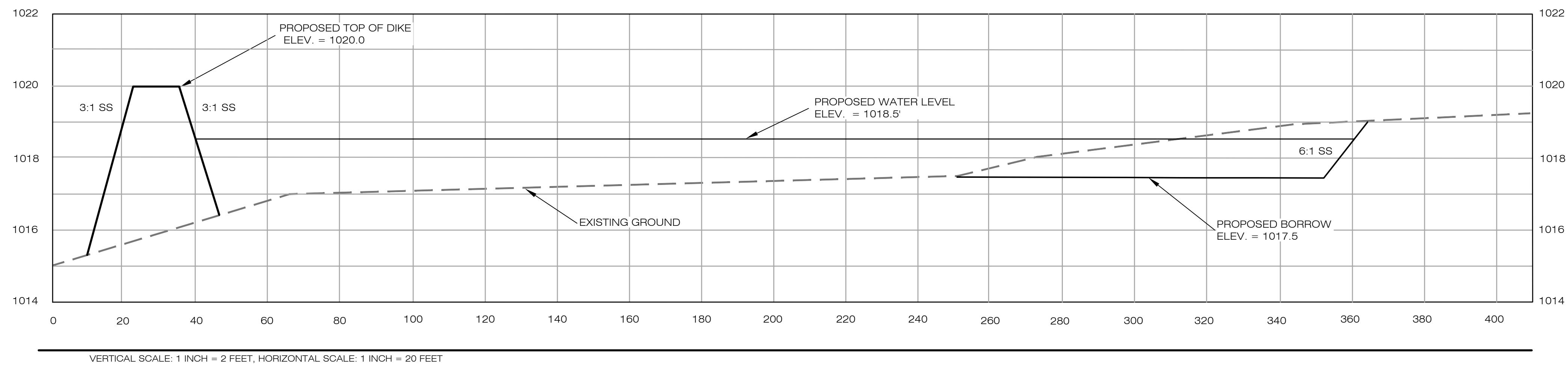
CAD FILE:
COVER and DETAILS
DESIGNED BY: JP
DRAWN BY: JP
SURVEYED BY: JP / GB
BIOLOGIST: JP

DATE:
04/10/2018
PROJECT NO:
US-PA-112-1
GLARO-PA1-18-04

PROPOSED DIKE CROSS SECTION

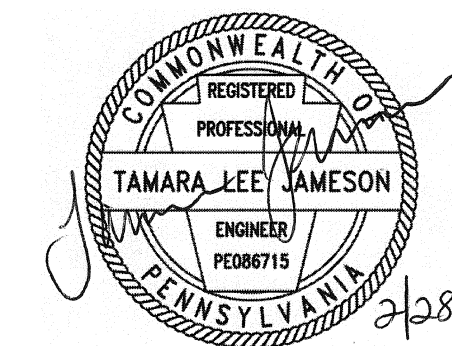


PROPOSED WETLAND CROSS SECTION A-A



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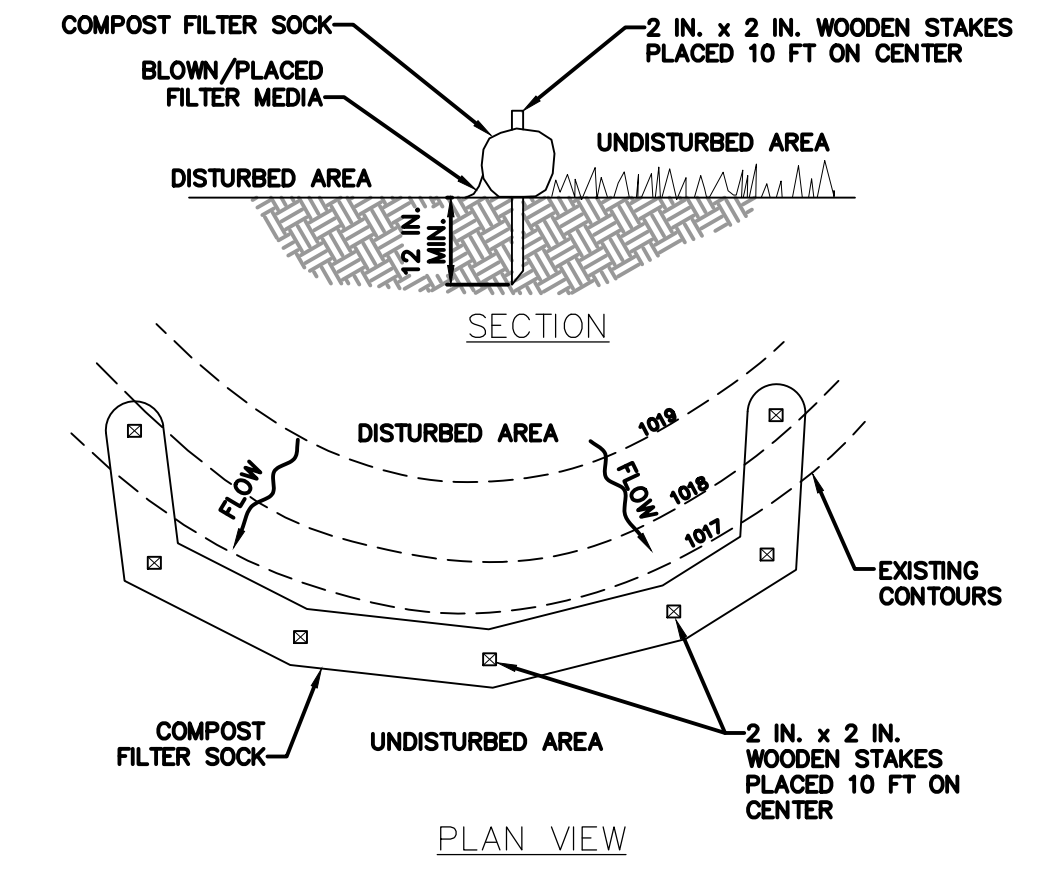
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2	TU	2/27/19	Per Crawford County Comments	6

CAD FILE: SITE PLAN PA-112-1
DESIGNED BY: JP
DRAWN BY: JP
SURVEYED BY: JP / GB
BIOLOGIST: JP
DATE: 04/10/2018
PROJECT NO: US-PA-112-1
GLARO-PA1-18-06

EROSION AND SEDIMENT POLLUTION CONTROL NOTES:

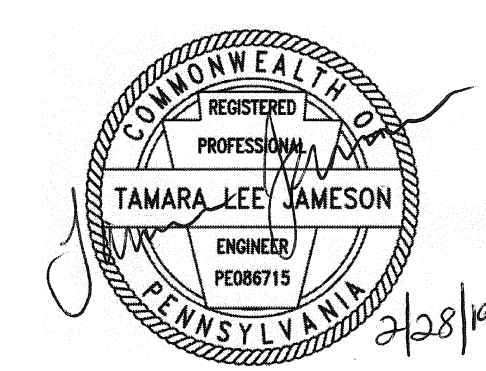
- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS (SHEET 2). DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM LOTS (SPECIFY LOT NUMBERS) ONTO (SPECIFY ROAD NAMES).
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES --- 6 TO 12 INCHES ON COMPACTED SOILS --- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDING AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.



NOTES:
 SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
 COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
 TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
 ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
 COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS. PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

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

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PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the Commonwealth of Pennsylvania.
 LICENSE # PE086715 EXP. DATE 09/30/19

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DUCKS UNLIMITED

EROSION CONTROL DETAILS & NOTES
 EDUCATION WETLAND
 STATE GAME LAND 214
 CRAWFORD COUNTY, PENNSYLVANIA

Revision No.	Revisions	Date	By
1	Per Crawford County Comments	2/27/19	Tu
			Tu
			W
			Th
			F
			Sa
			Su

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 DESIGNED BY: JP
 DRAWN BY: JP
 SURVEYED BY: JP / GB
 BIOLOGIST: JP

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