

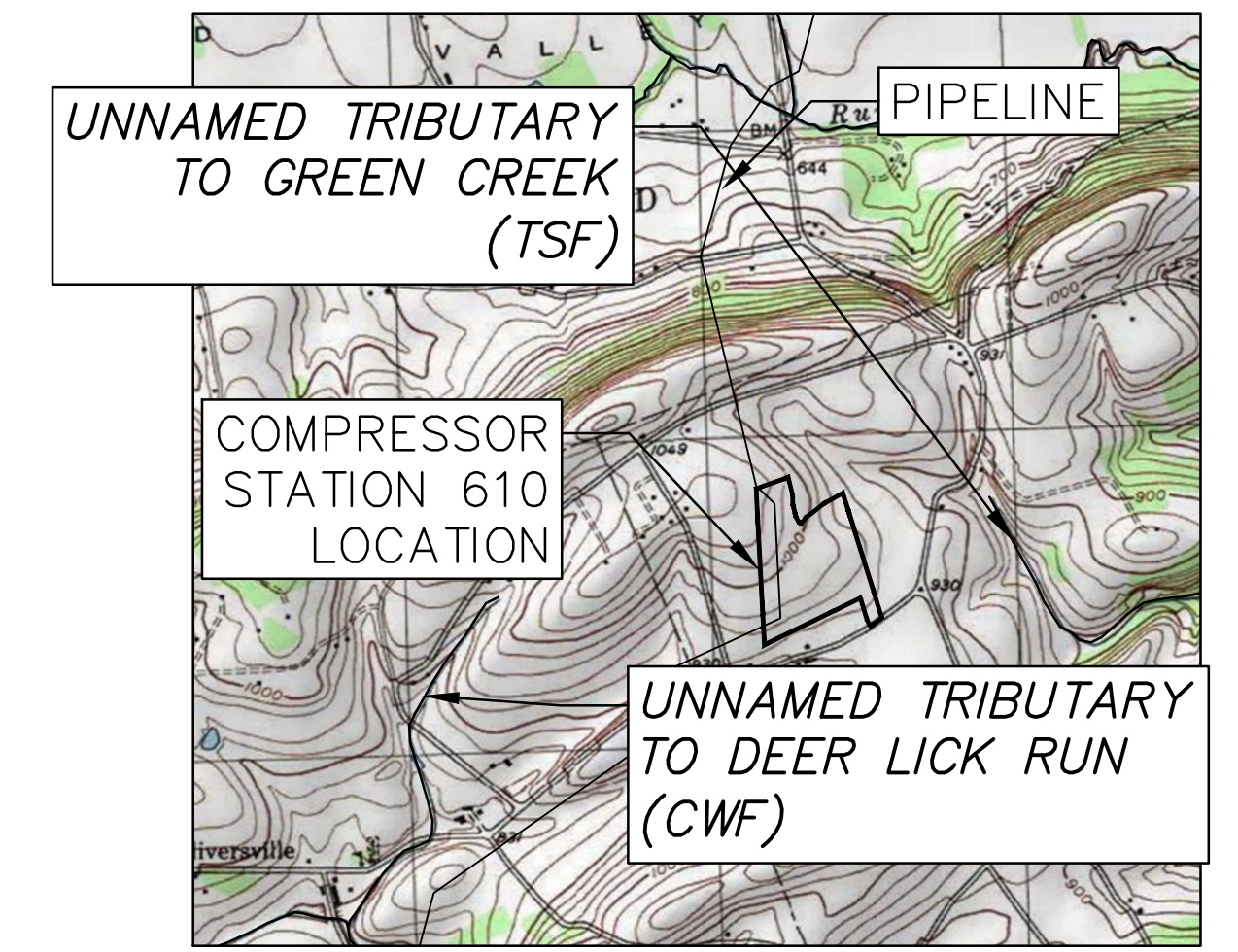
ATLANTIC SUNRISE PROJECT PROPOSED 42" NATURAL GAS PIPELINE

SOIL EROSION & SEDIMENT CONTROL AND LAYOUT PLANS FOR COMPRESSOR STATION 610

PHASE 1

ORANGE TOWNSHIP
COLUMBIA COUNTY

PENNSYLVANIA



USGS BLOOMSBURG QUADRANGLE
VICINITY MAP
SCALE: 1"=2,000'

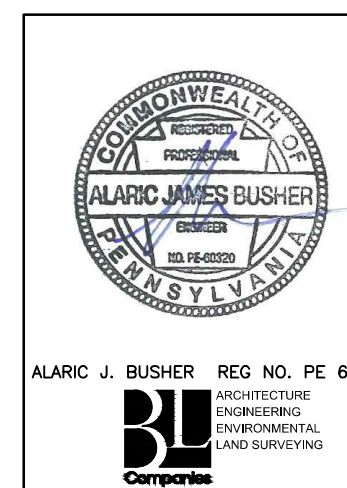
FACILITY NAME & TYPE	DRAWING NO.	SHEET NO.	DRAWING NAME
CS-610 COMPRESSOR STATION	(66-0610)F-1A-11	1 of 13	COVER SHEET <i>REVISED</i>
	(66-0610)F-1A-11	2 of 13	EXISTING CONDITIONS MAP
	(66-0610)F-1A-11	3 of 13	OVERALL DRAINAGE AREA MAP
	(66-0610)F-1A-11	4 of 13	TEMPORARY BMP DRAINAGE AREA MAP
	(66-0610)F-1A-11	5 of 13	SWALE DRAINAGE AREA MAP
	(66-0610)F-1A-11	6 of 13	SOIL EROSION & SEDIMENT CONTROL PLAN
	(66-0610)F-1A-11	7 of 13	SOIL EROSION & SEDIMENT CONTROL NOTES
	(66-0610)F-1A-11	8 of 13	SOIL EROSION & SEDIMENT CONTROL NOTES
	(66-0610)F-1A-11	9 of 13	SOIL EROSION & SEDIMENT CONTROL NOTES AND DETAILS
	(66-0610)F-1A-11	10 of 13	SOIL EROSION & SEDIMENT CONTROL DETAILS
	(66-0610)F-1A-11	11 of 13	SOIL EROSION & SEDIMENT CONTROL DETAILS <i>REVISED</i>
	(66-0610)F-1A-11	12 of 13	SOIL EROSION & SEDIMENT CONTROL DETAILS
	(66-0610)F-1A-11	13 of 13	SOIL EROSION & SEDIMENT CONTROL DETAILS

Drawn By & Date/Time: rkiernon Jul 28, 2017 - 1:17pm
Drawing Location & Name: G:\08514\14C\14C4909\DWG\020-CPLS\FOS_CV14C4909(20)_EC-COL-610.dwg



PENNSYLVANIA ACT 287 (1974)
AS AMENDED BY PENNSYLVANIA
ACT 199 (2004) REQUIRES NO
LESS THAN THREE (3) WORKING
DAYS AND NO MORE THAN (10)
WORKING DAYS NOTICE TO
UTILITIES BEFORE YOU EXCAVATE,
DRILL, BLAST OR DEMOLISH.

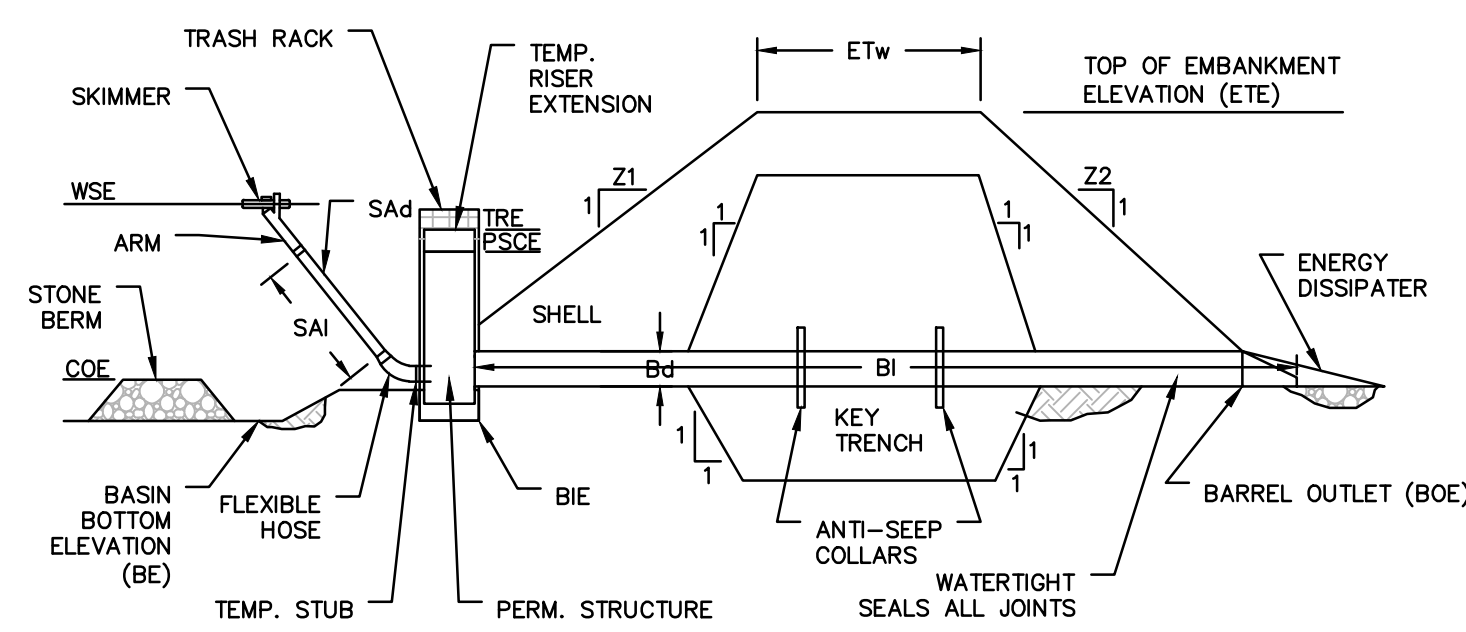
ENGINEER OF RECORD
BL COMPANIES
4242 CARLISLE PIKE, SUITE 260
CAMP HILL, PA 17011
P:717-651-9850
F:717-651-9858



REVISIONS						
NO.	DATE	BY	DESCRIPTION	W.O. NO.	CHK.	APP.
0	08/26/2015	BL	ISSUED FOR PADEP SUBMITTAL	W0161505	DAK	AJB
1	12/02/2015	BL	ISSUED FOR PADEP RESUBMITTAL	W0161505	DAK	AJB
2	05/27/2016	BL	UPDATED PER BASIN SYSTEMS DESIGN COORDINATION	W0161505	AJB	AJB
3	Oct. 2016	BL	PADEP TECHNICAL DEFICIENCY RESPONSE #1	W0161505	AJB	AJB
4	Apr 2017	BL	PADEP TECHNICAL DEFICIENCY RESPONSE #2	W0161505	AJB	AJB
5	AUG 2017	BL	PADEP TECHNICAL DEFICIENCY RESPONSE #3	W0161505	AJB	AJB

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC			
ATLANTIC SUNRISE PROJECT- PROPOSED 42" NATURAL GAS PIPELINE			
SOIL EROSION & SEDIMENT CONTROL AND LAYOUT PLANS			
FOR COMPRESSOR STATION 610			
ORANGE TOWNSHIP, COLUMBIA COUNTY, PENNSYLVANIA			
COVER SHEET			
DRAWN BY:	JEC	DATE:	04/03/15
CHECKED BY:	AJB	DATE:	04/03/15
APPROVED BY:	AJB	DATE:	07/17/15
W.O.:	1161505	DRAWING NUMBER:	(66-0610)F-1A-11
ISSUED FOR:	CONSTRUCTION	SCALE:	AS NOTED
REVISION:	5	SHEET:	1
		OF:	13





BASIN NO.	Z1 (FT)	Z2 (FT)	TEMP. RISER EXT. ELEV. TRE (FT)	EMBANKMENT			CLEAN OUT ELEV. COE (FT)	BOTTOM ELEV. BE (FT)
				TOP ELEV. ETE (FT)	TOP WIDTH ETW (FT)	KEY TRENCH DEPTH (FT)		
1	3	3	958.59	960.33	8	4	955.28	953.00

SKIMMER			OUTLET BARREL				
DIA SAd (IN)	LENGTH SAI (FT)	MAT'L	DIA Bd (FT)	INLET ELEV. BIE (FT)	MAT'L	LENGTH BI (FT)	OUTLET ELEV. BOE (FT)
4	5.0	PVC	18	952.45	RCP	45	952.00

SEDIMENT BASINS INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6" TO 9". THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

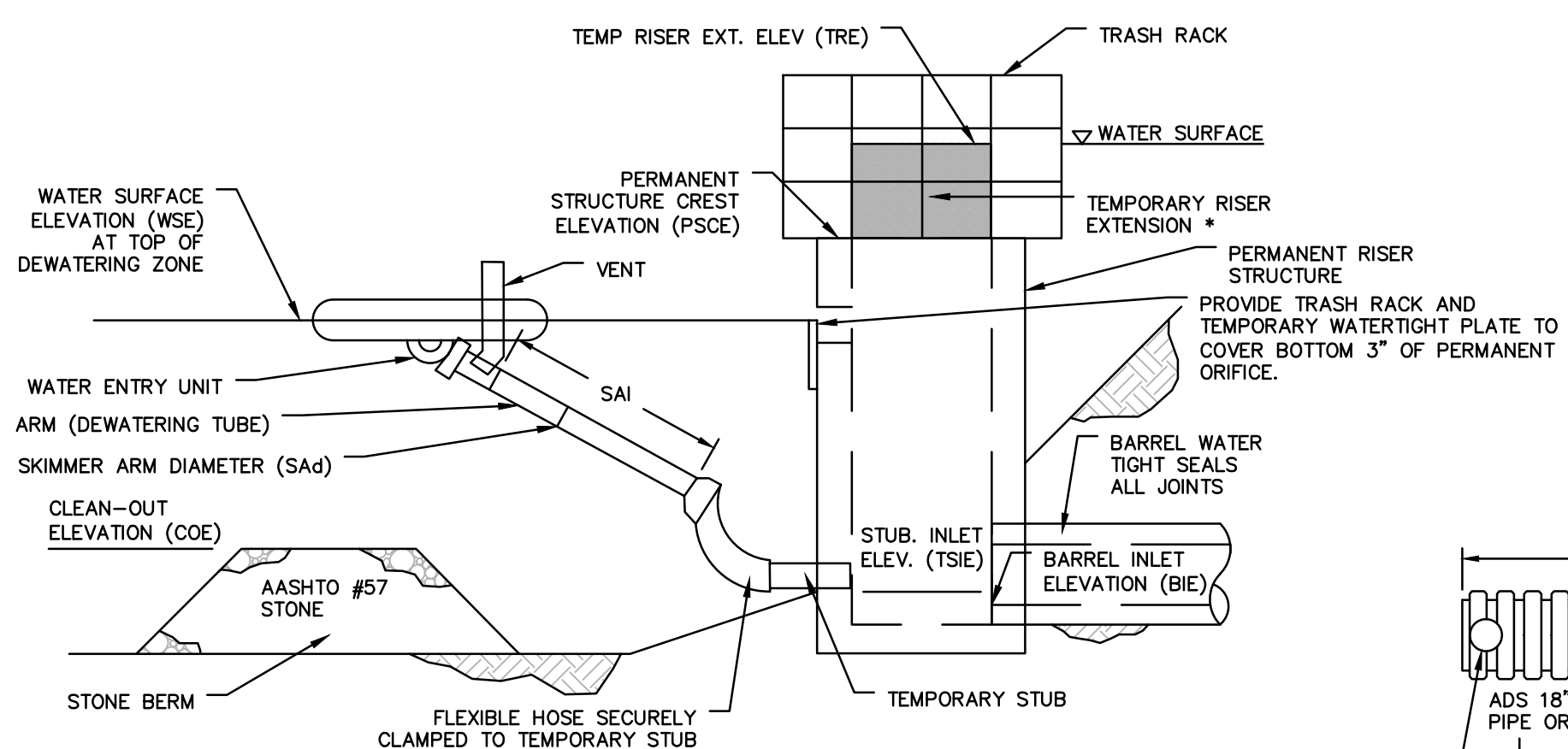
INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION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

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATE. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 (CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS) MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER DETAIL

N.T.S. PADEP-7-4



BASIN NO.	WATER SURFACE ELEV. WSE (FT)	SKIMMER			FLEXIBLE HOSE			
		ORIFICE DIA (IN)	HEAD (FT)	ARM DIA SAd (IN)	LENGTH SAI (FT)	MAT'L	DIA (IN)	LENGTH (FT)
1	957.68	3	0.21	4	5	PVC	4	3

TEMPORARY STUB	PERMANENT RISER	RISER EXTENSION	BARREL								
				INSIDE DIA (IN)	INVERT ELEV. TSIE (FT)	MAT'L	CREST ELEV. PSC (FT)	FLEXIBLE HOSE LENGTH (IN)	WIDTH (IN)	CREST ELEV. TRE (FT)	HORIZ. OPENING LENGTH (IN)
4	955.28	PVC	958.59	3	4	N/A	N/A	N/A	N/A	N/A	952.45

MALL ORIFICES ON PERMANENT RISER BELOW TEMPORARY RISER EXTENSION SHALL HAVE WATER-TIGHT TEMPORARY SEALS PROVIDED. TEMPORARY STUB INVERT ELEVATION SHALL BE SET AT OR BELOW SEDIMENT CLEAN-OUT ELEVATION.

A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED. SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

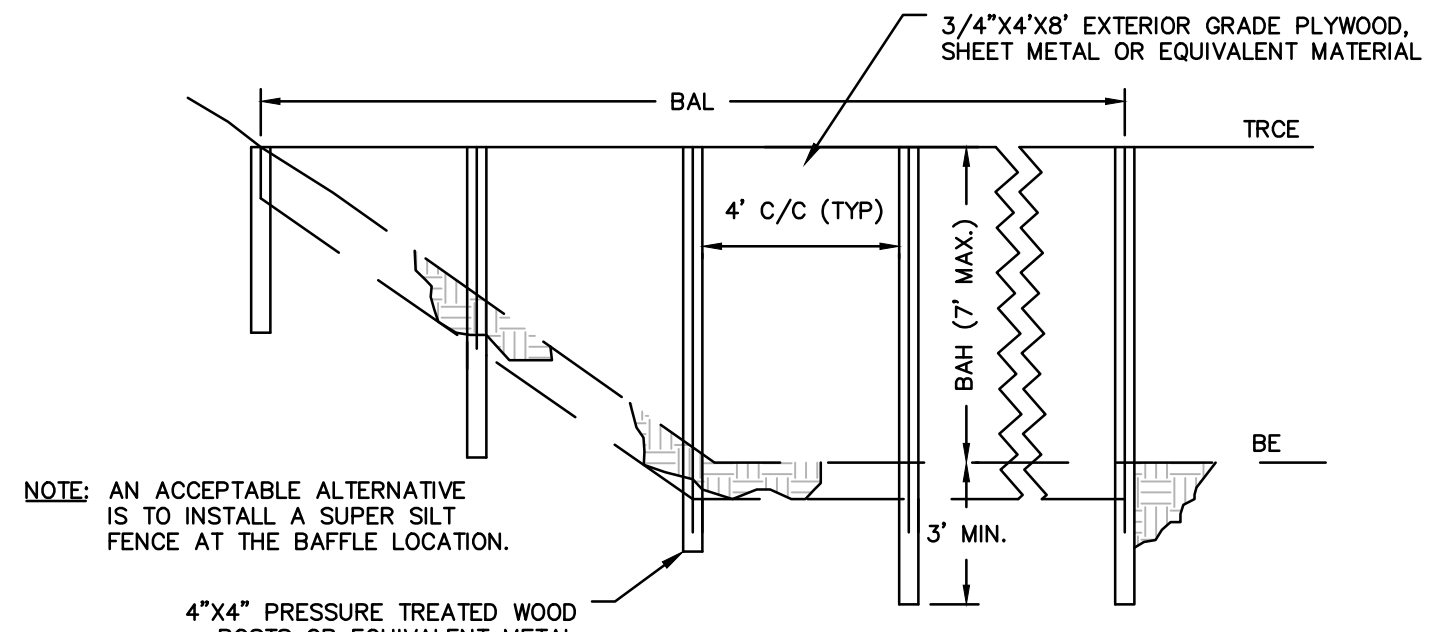
ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE STONE BERM. SEE STANDARD CONSTRUCTION DETAIL #7-3 (SKIMMER WITH STONE LANDING BERM) FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

SKIMMER ATTACHED TO A PERMANENT RISER DETAIL

N.T.S. PADEP-7-2



NOTE: AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION.

4"x4" PRESSURE TREATED WOOD POSTS OR EQUIVALENT METAL IN POOLS WITH DEPTHS EXCEEDING 7'; THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

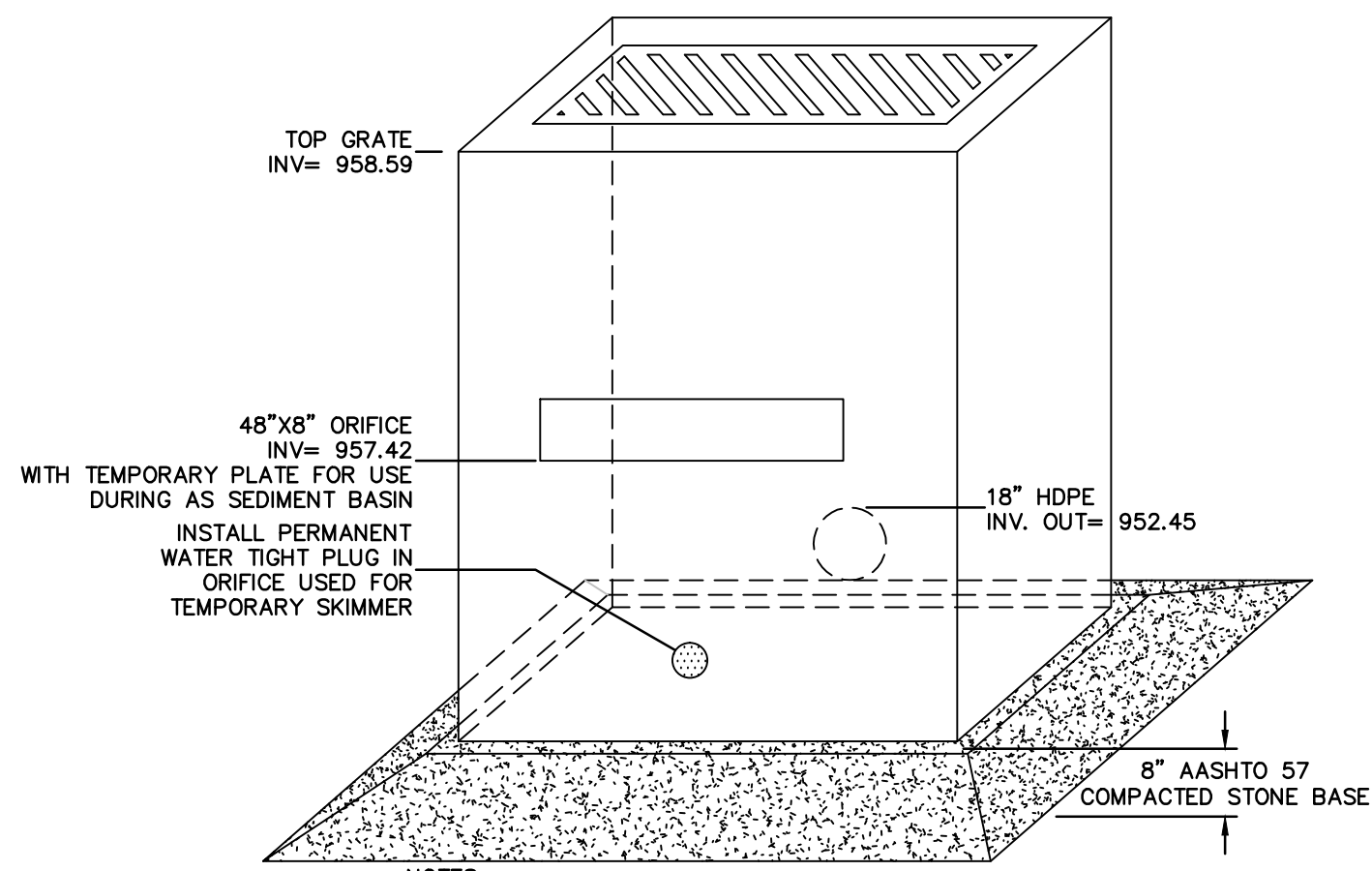
BASIN	BAFFLE	TEMP. RISER	BOTTOM
BASIN OR TRAP NO.	LENGTH BAL (FT)	HEIGHT BAH (FT)	CREST ELEV. TRCE (FT)
1	264	5.59	958.59

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION. BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION. BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

BAFFLE

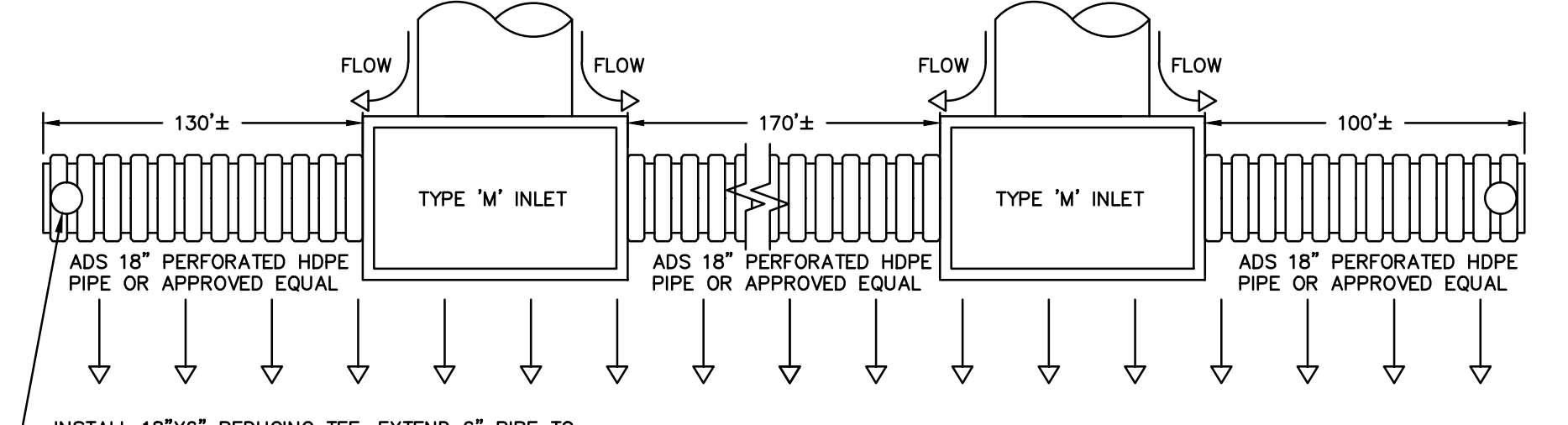
N.T.S. PADEP-7-14



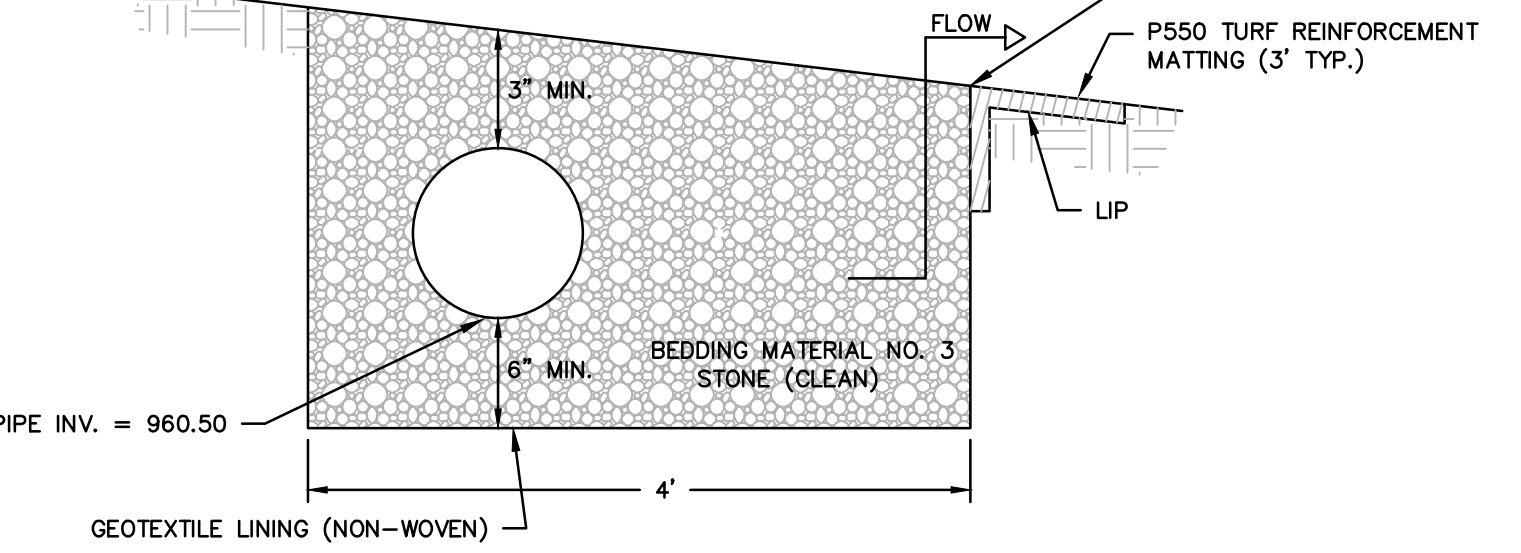
NOTES:
1. THE PROPOSED OUTLET STRUCTURE SHALL BE A TYPE 'M' INLET IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 605 AND STANDARDS FOR ROADWAY CONSTRUCTION, RC-34.
2. OUTLET STRUCTURE SHALL CONTAIN A TRASH RACK.
3. FILL INLET BOX WITH 6" OF CONCRETE BELOW INVERT.

INFILTRATION AREA PERMANENT OUTLET STRUCTURE

N.T.S.



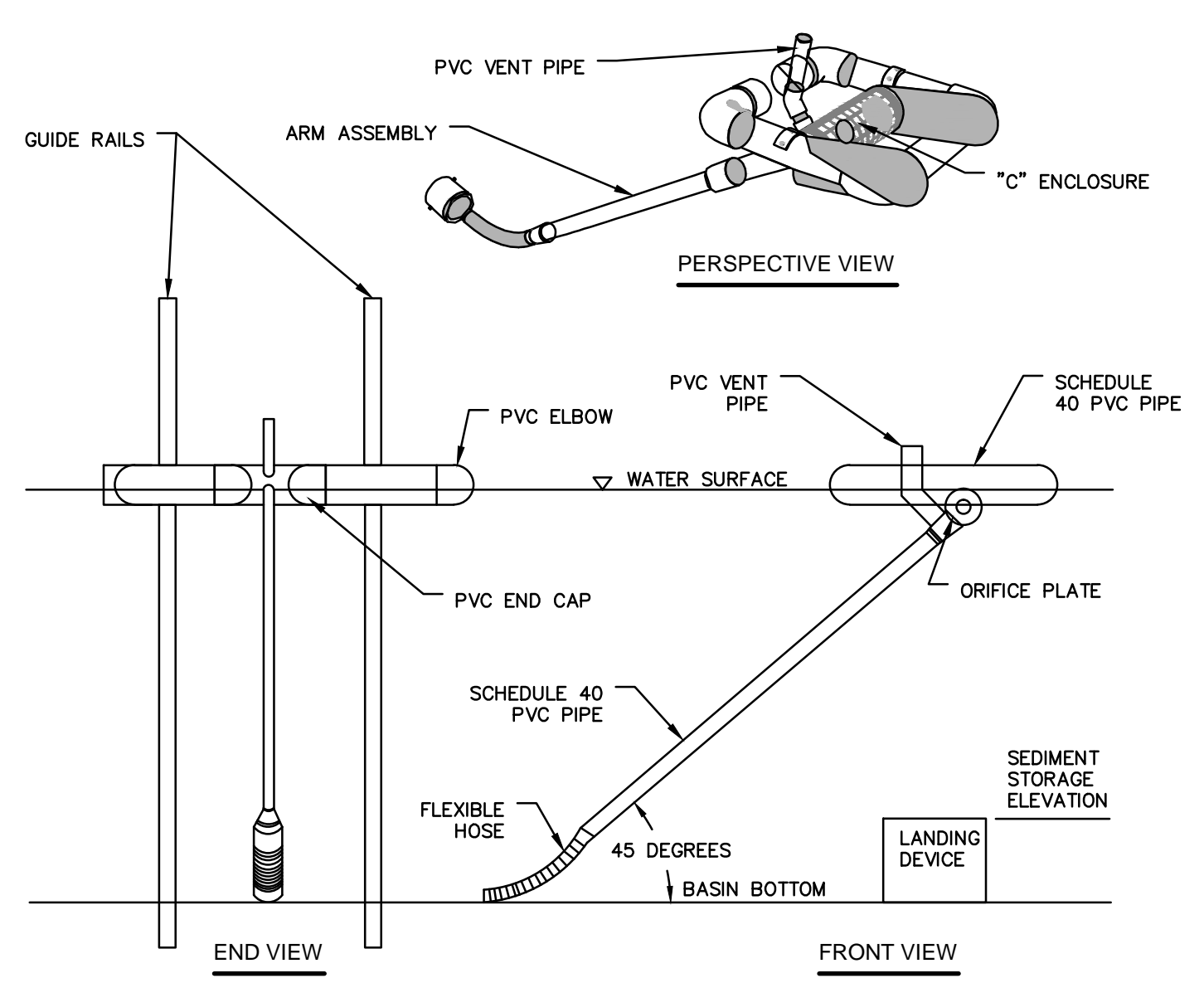
INSTALL 18"x6" REDUCING TEE. EXTEND 6" PIPE TO 1' ABOVE PROPOSED GRADE AND INSTALL PLUG. THE 6" PIPE IS TO BE USED AS A CLEANOUT. (TYP. FOR 2)



LEVEL SPREADER WITH SUBSURFACE DISCHARGE

N.T.S.

LEVEL SPREADER SUMMARY TABLE			
LEVEL SPREADER NO.	LENGTH (L) (FT)	PIPE INVERT	SPREADER INVERT OUT
BASIN 1	400	960.50	963.00



BASIN NO.	WATER SURFACE ELEVATION (FT)	ARM LENGTH (FT)	ARM DIA. (IN)	ORIFICE SIZE* (IN)	TOP OF LANDING DEVICE ELEV. (FT)	FLEXIBLE HOSE LENGTH (IN)	FLEXIBLE HOSE ATTACHMENT ELEV. (FT)
1	957.68	5	4	3	955.28	3	955.28

*MUST BE EQUAL TO OR LESS THAN ARM DIAMETER. A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED. SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

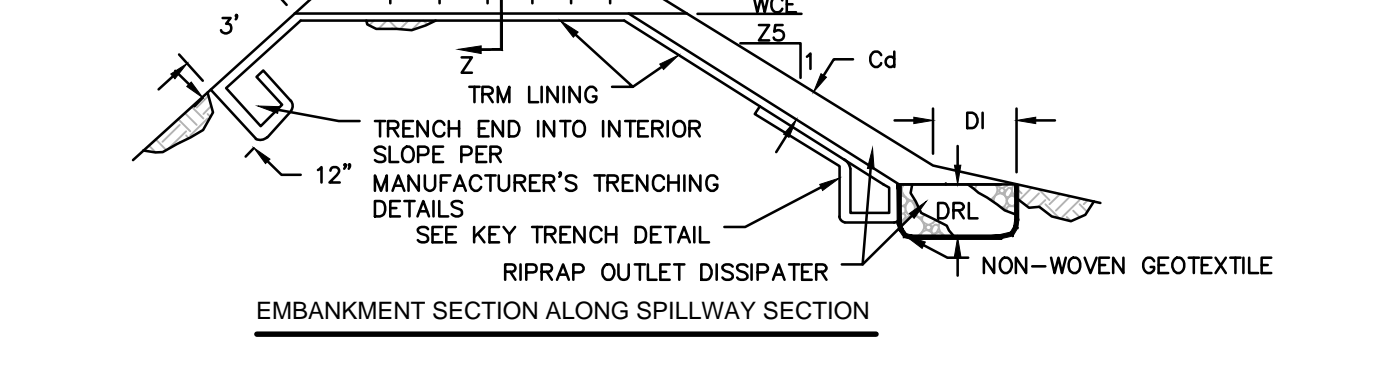
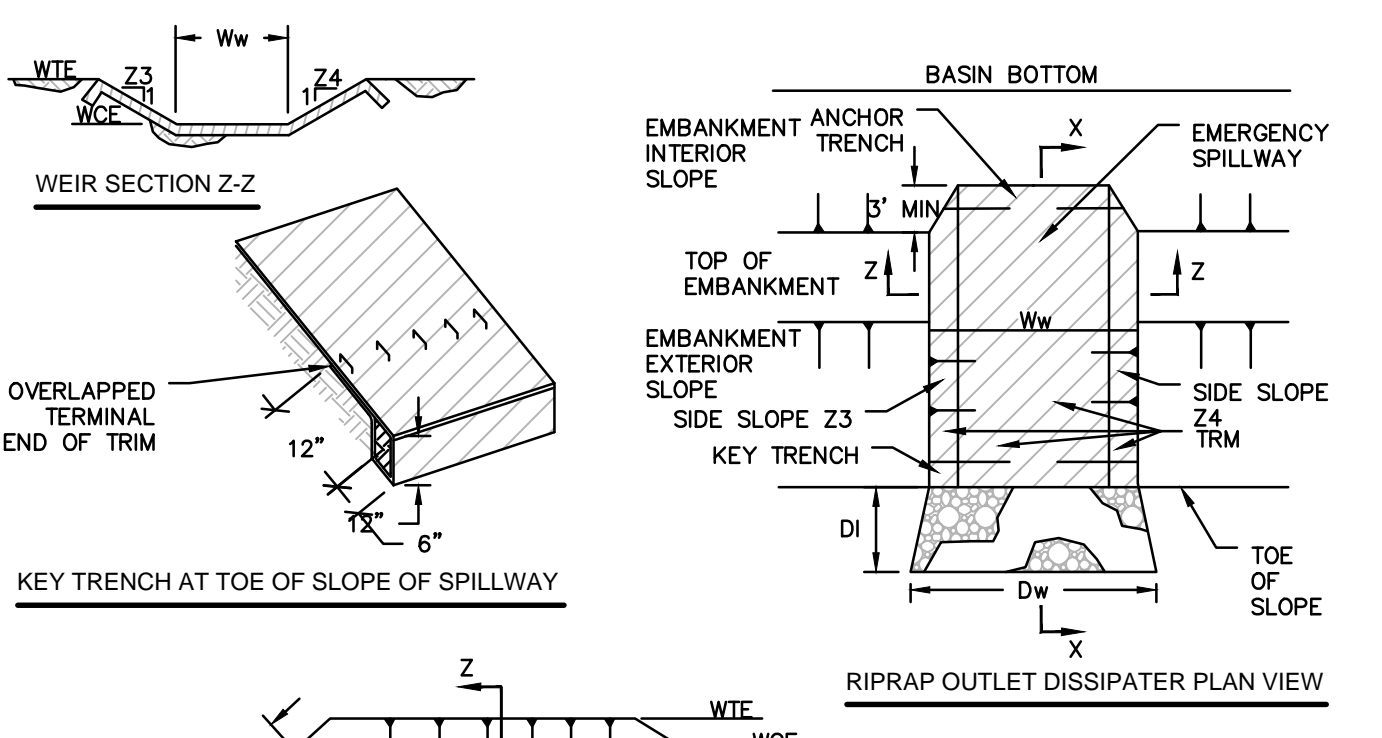
ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE LANDING DEVICE.

A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS (PADEP #7-3 SKIMMER WITH STONE LANDING BERM, FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.)

SKIMMER DETAIL

N.T.S. PADEP-7-1



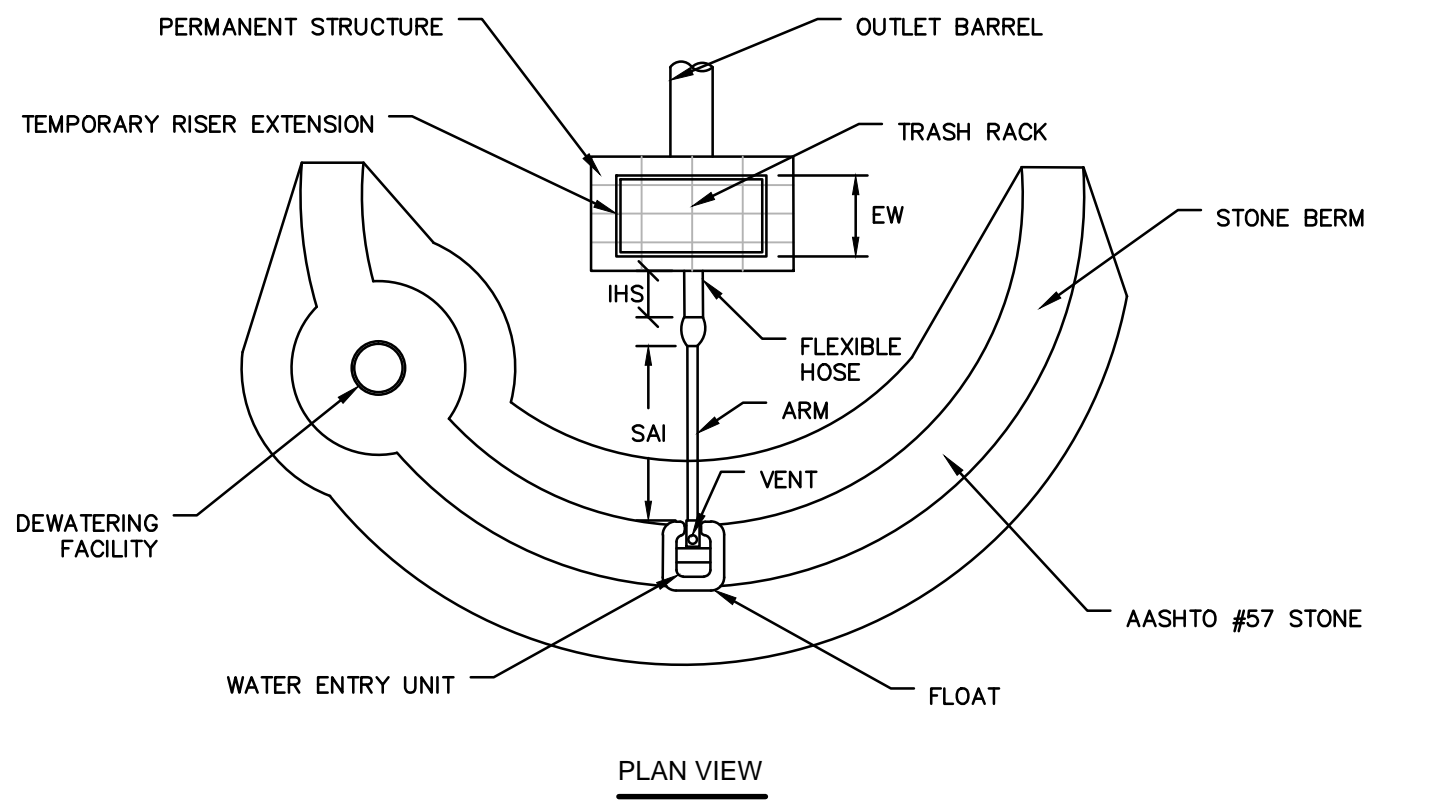
BASIN NO.	Z3 (FT)	Z4 (FT)	TOP ELEV. WTE (FT)	CREST ELEV. WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)	LENGTH DI (FT)	WIDTH Dd (FT)	RIPRAP SIZE (R-...)	RIPRAP THICK. DRT (IN)
2	3	3	960.33	958.75	15	W3000	NA	N/A	1.25	SEE APRON TABLE			

HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING. DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET SWALE SHALL BE REPLACED IMMEDIATELY. RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.

THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.

BASIN EMERGENCY SPILLWAY WITH TRM LINING

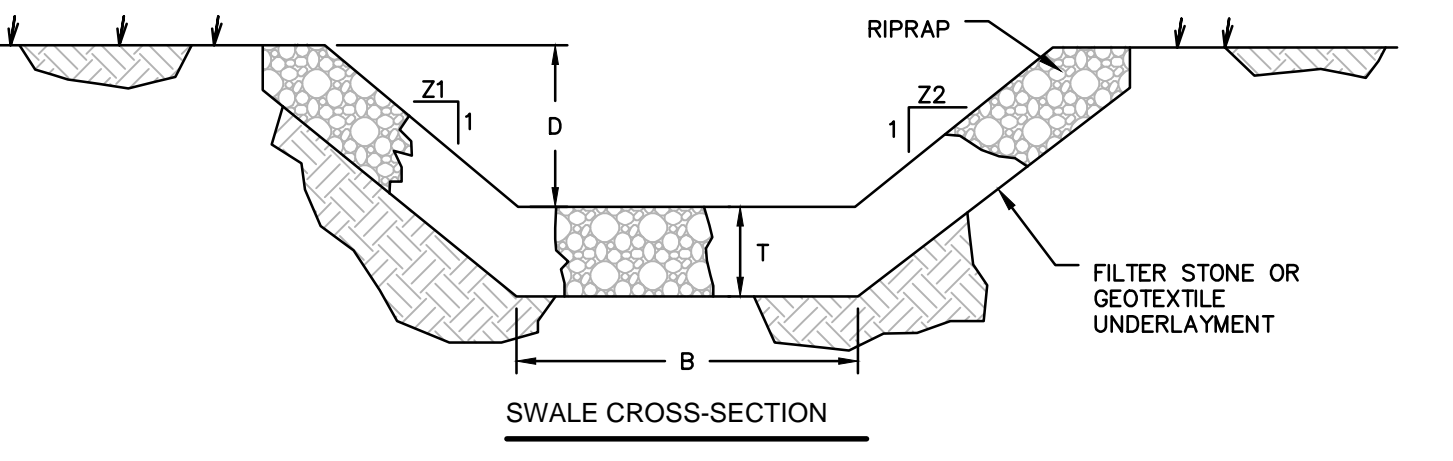
N.T.S. PADEP-7-13



NO GUIDE RAILS SHALL BE REQUIRED IN THIS INSTALLATION. THIS DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD CONSTRUCTION DETAILS #7-2 (SKIMMER ATTACHED TO A PERMANENT RISER) AND #7-4 (SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER)

SKIMMER WITH STONE LANDING BERM DETAIL

N.T.S. PADEP-7-3



SWALE	STATIONS	B	D	Z1	Z2	RIPRAP GRADATION	T	UNDERLAYMENT	UNDERLAYMENT THICKNESS
DITCH 1	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 2A	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 2B	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 3	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 4	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 5	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 6	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 7	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 8	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA
DITCH 9A	NA	2	2	2	2	R-4	18	GEOTEXTILE	NA

FILTER STONE UNDERLAYMENT FOR BED SLOPES GREATER THAN OR EQUAL TO .10 FT/FT SHALL BE USED.

SWALE DIMENSIONS ARE FOR THE COMPLETED SWALE AFTER ROCK PLACEMENT. SWALE MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE SWALE WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.

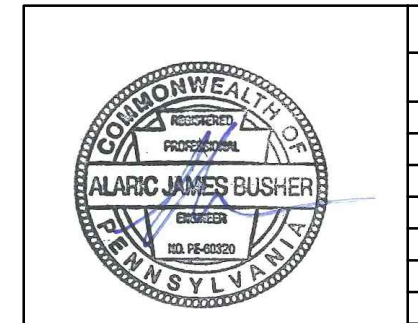
SWALE DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. SWALE SHALL BE CLEANED WHENEVER TOTAL SWALE DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO SWALE WITHOUT FURTHER DAMAGE.

DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY. THE MINIMUM ROCK THICKNESS (T) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

RIPRAP SWALE DETAIL

N.T.S. PADEP-6-3

Drawn By & Date/Time: hthomas Jul 25, 2017 - 1:08pm
Drawing Location & Name: G:\JOBS\14\14C\14C\020-CPLS\FCS_EC14C4909(20N)_L610.dwg



ALARIC J. BUSHER REG. NO. PE 66320
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

REVISIONS			
NO.	DATE	BY	DESCRIPTION
0	08/28/2015	BL	ISSUED FOR PADEP SUBMITTAL
1	12/02/2015	BL	ISSUED FOR PADEP RESUBMITTAL
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5	AUG. 2017	BL	PADEP TECHNICAL DEFICIENCY RESPONSE #3

DRAWN BY:				DATE:				ISSUED FOR:				SCALE:			
A.D.E.				04/03/15				ISSUED FOR BID:				AS NOTED			
A.B.				04/03/15				ISSUED FOR CONSTRUCTION:				REVISION: 5			
A.B.				07/17/15				DRAWING NUMBER:				(66-0610)F-1A-11			
1161505								SHEET 11				OF 13			



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