

LEGEND:

	Project boundary		Pipe
	Disturbance boundary		Paved road
	Existing major contour		Unpaved road
	Existing minor contour		Culvert
	Proposed major contour		Telephone pole, guy line
	Proposed minor contour		Electric line
	Surface water		Vegetation
	PennDOT ROW		Stone
			Top of berm

No.	Date	Description	By
1	10/18/19	File creation	NAW

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Pittsburgh, PA 15228
www.hedinenv.com

As-Built Sheet C-1
Overall Site Plan

Potts Run AMD Treatment Project

MUNICIPALITY: Knox Township	DATE: See revision block	FILE NAME:
COUNTY: Clearfield	DRAWN BY: NAW	SCALE: As Shown

Notes:

TOPOGRAPHY SOURCE: PA DCNR PAMAP PROGRAM PRE-CONSTRUCTION SITE FEATURES SURVEYED BY PA DEP

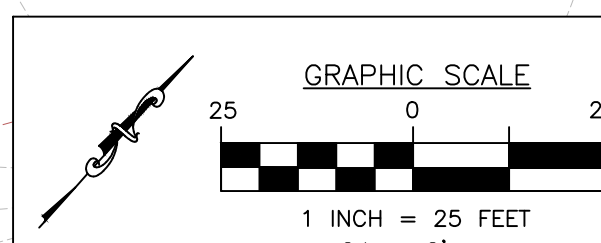
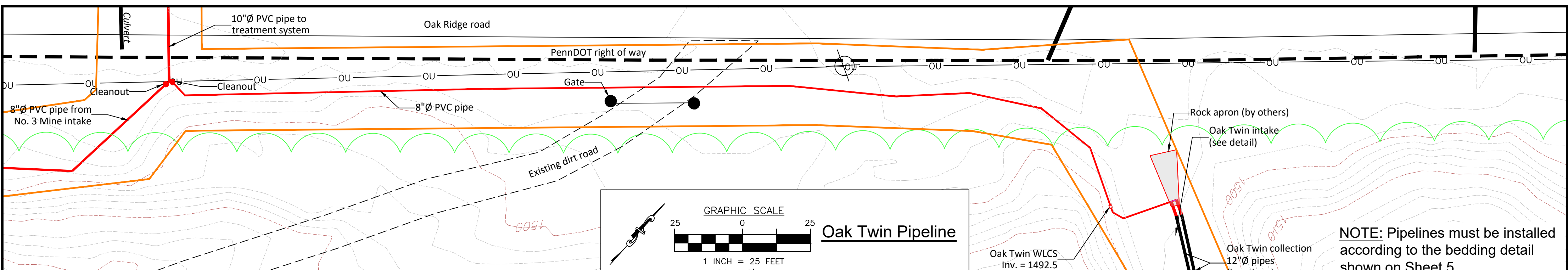
NOTES:

- ELEVATIONS NAVD88 DATUM, HORIZONTAL CONTROL NAD 1983 PA NORTH ZONE SPC FEET.
- AS-BUILT WLCS AND PIPE OUTFALLS SURVEYED BY DEM SURVEYING, BROOKVILLE, PA

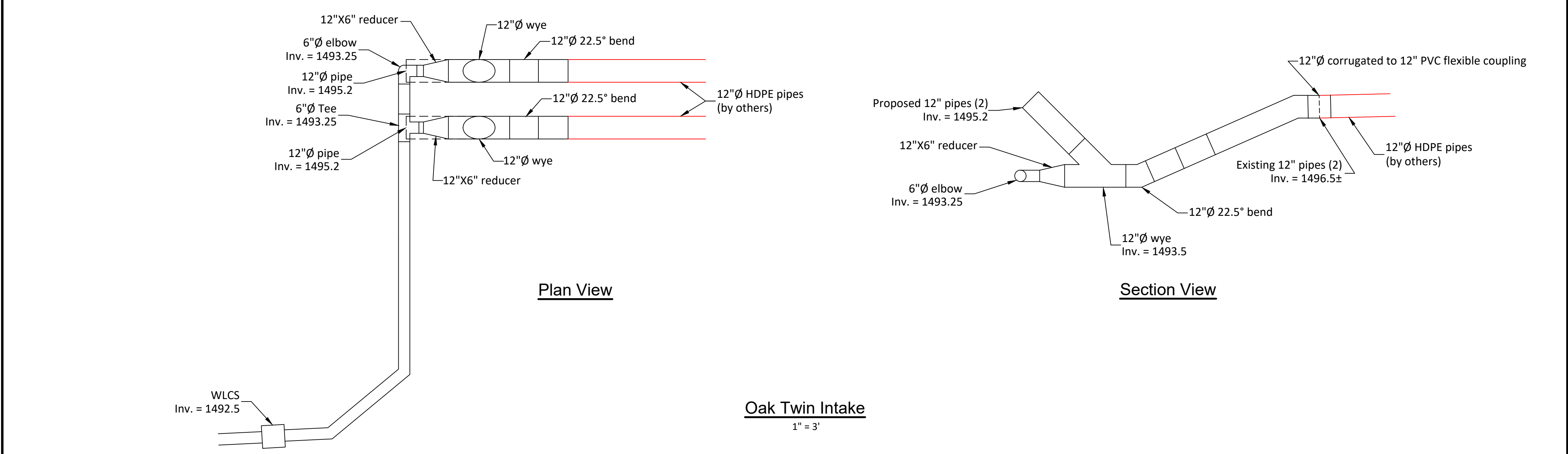
GRAPHIC SCALE

1 INCH = 60 FEET
C.I. = 2'

1
OF **6**



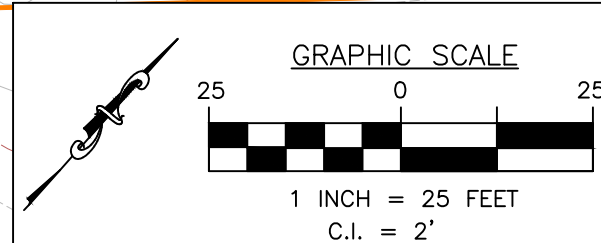
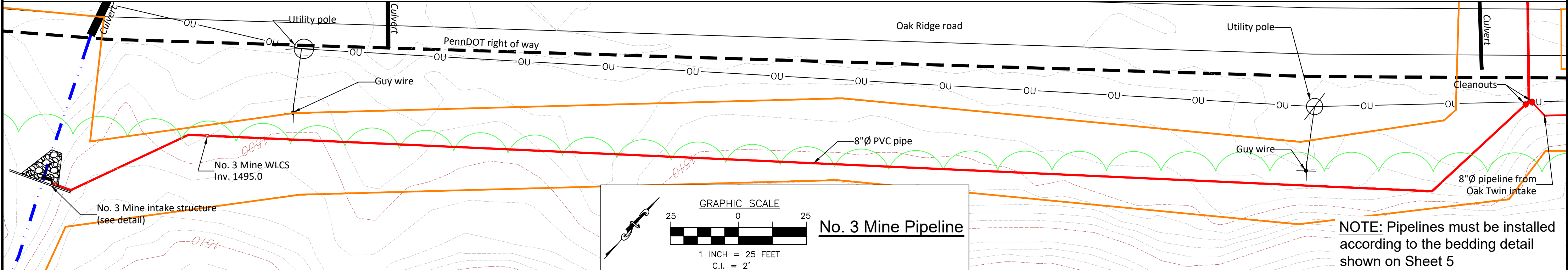
NOTE: Pipelines must be installed according to the bedding detail shown on Sheet 5



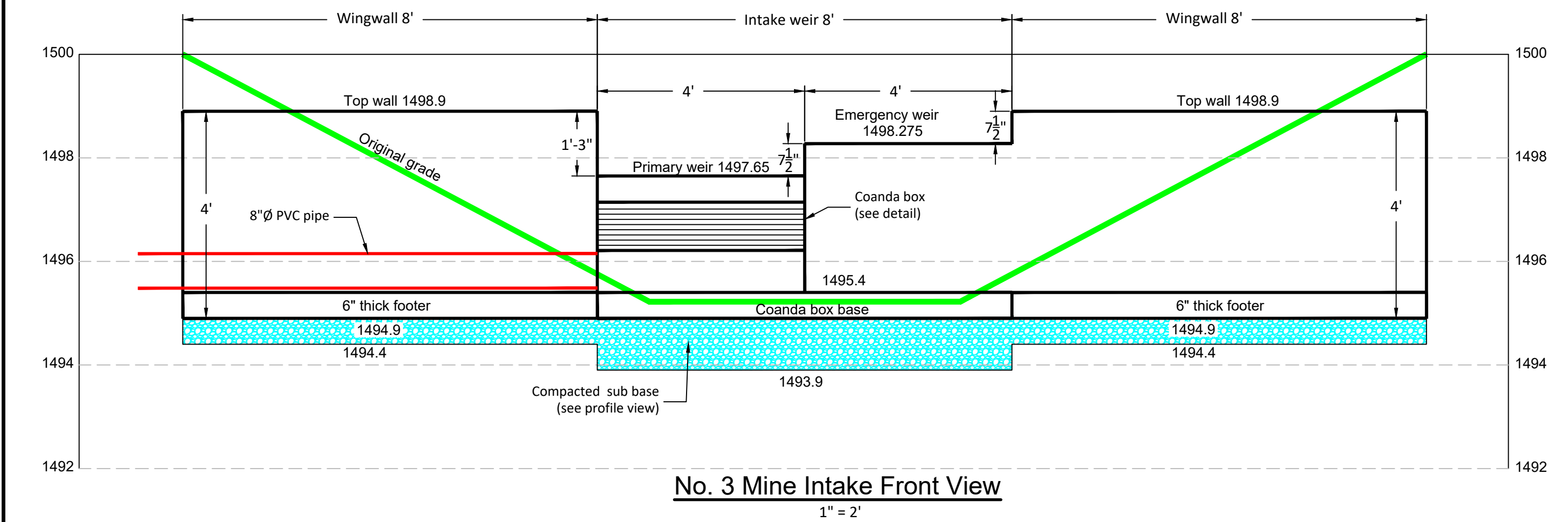
Plan View

Section View

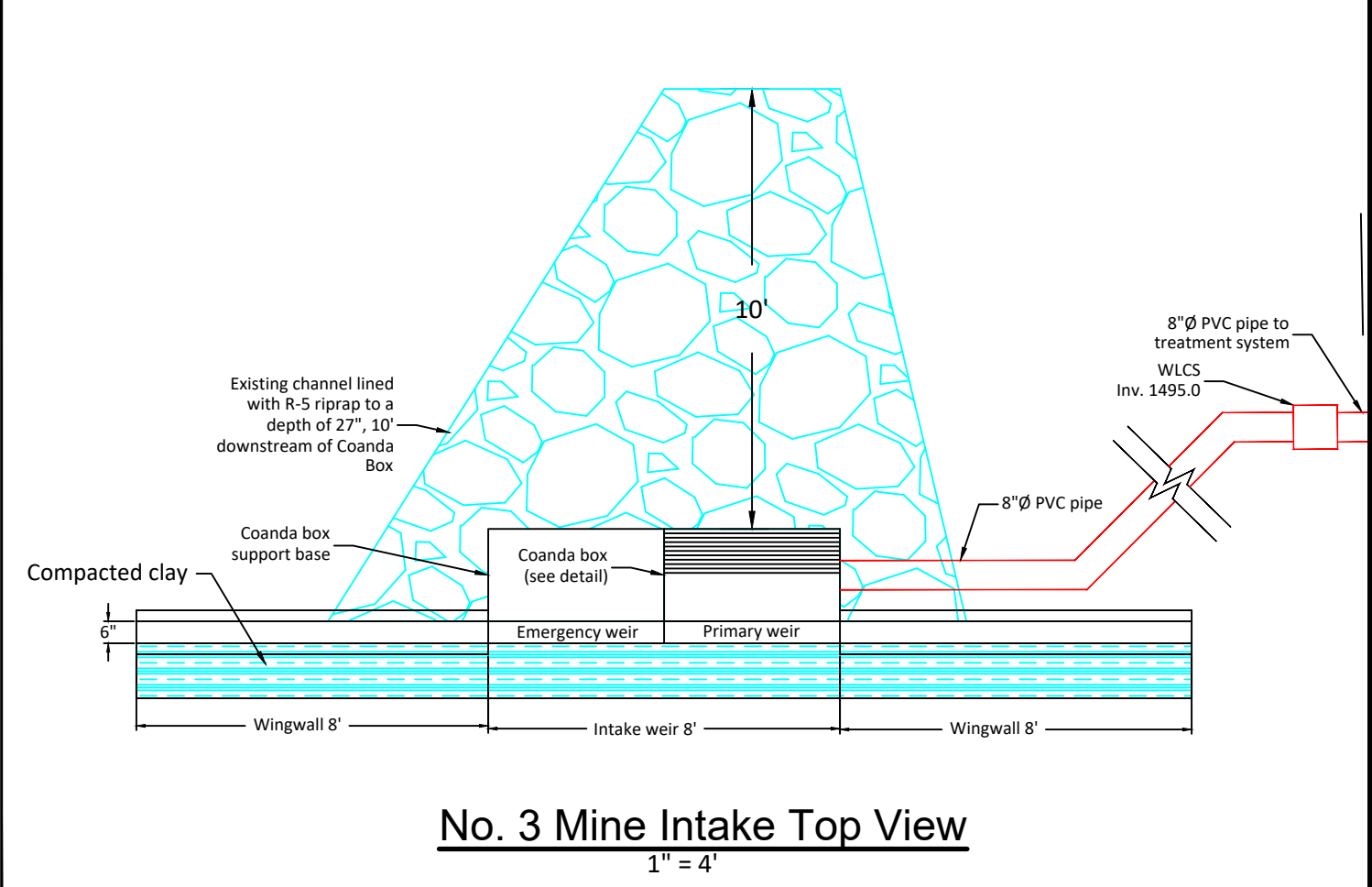
Oak Twin Intake
1" = 3'



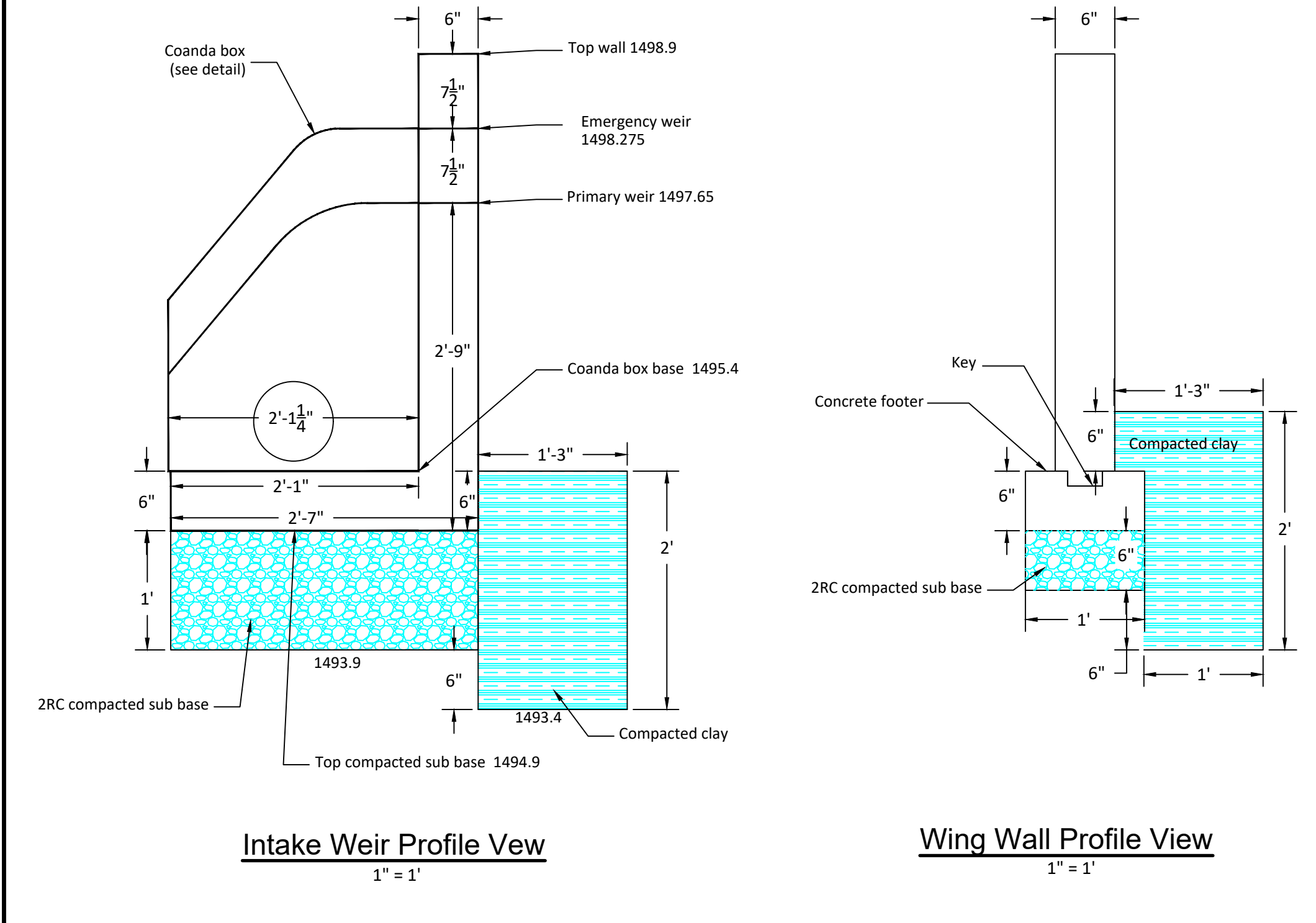
NOTE: Pipelines must be installed according to the bedding detail shown on Sheet 5



No. 3 Mine Intake Front View
1" = 2'

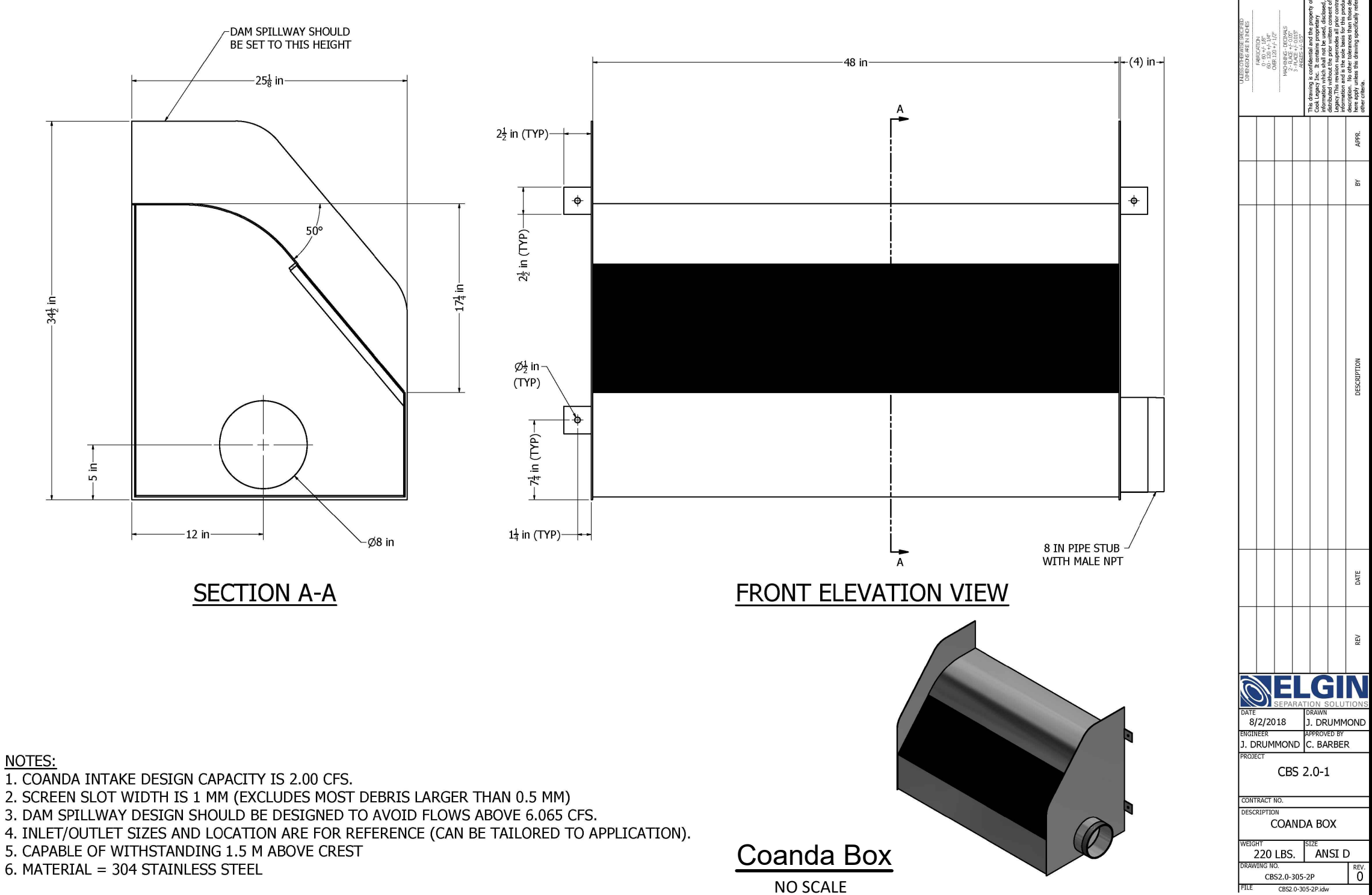


No. 3 Mine Intake Top View
1" = 4'



Intake Weir Profile View
1" = 1'

Wing Wall Profile View
1" = 1'



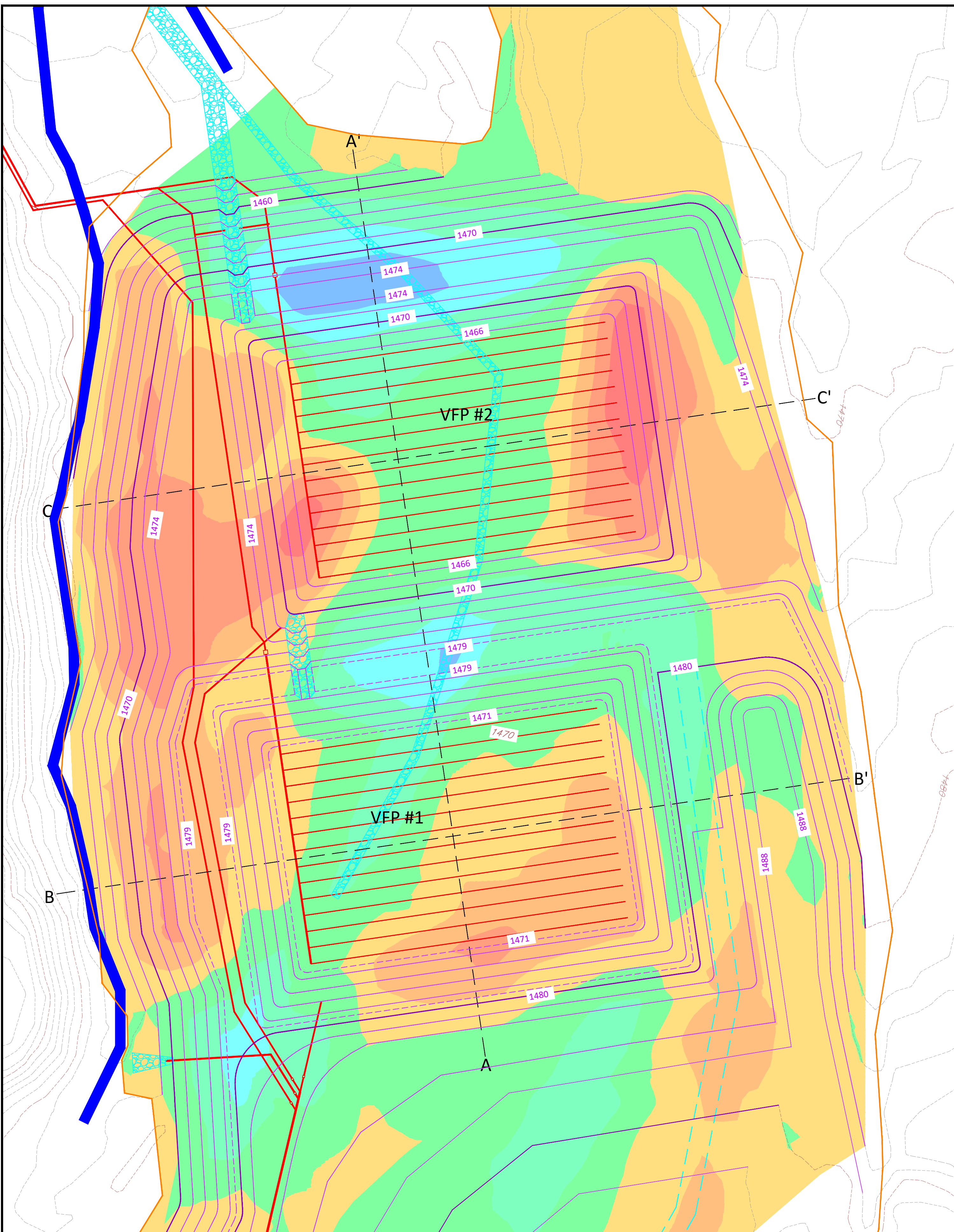
SECTION A-A

FRONT ELEVATION VIEW

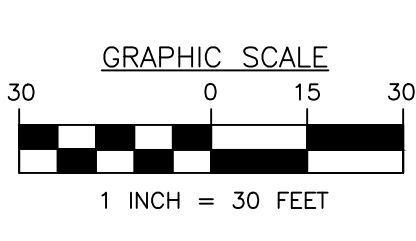
Coanda Box
NO SCALE

- NOTES:
1. COANDA INTAKE DESIGN CAPACITY IS 2.00 CFS.
 2. SCREEN SLOT WIDTH IS 1 MM (EXCLUDES MOST DEBRIS LARGER THAN 0.5 MM)
 3. DAM SPILLWAY DESIGN SHOULD BE DESIGNED TO AVOID FLOWS ABOVE 6.065 CFS.
 4. INLET/OUTLET SIZES AND LOCATION ARE FOR REFERENCE (CAN BE TAILORED TO APPLICATION).
 5. CAPABLE OF WITHSTANDING 1.5 M ABOVE CREST
 6. MATERIAL = 304 STAINLESS STEEL

PROJECT:	AMD Collection and Conveyance
CLIENT:	ELGIN
DATE:	8/22/2018
DRAWN BY:	C. BARBER
CHECKED BY:	
SCALE:	AS SHOWN
PROJECT NO.:	CBS 2.0-1
DATE:	8/22/2018
PROJECT:	AMD Collection and Conveyance
CLIENT:	ELGIN
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DRAWN BY:	C. BARBER
CHECKED BY:	
SCALE:	AS SHOWN
PROJECT NO.:	CBS 2.0-1
DATE:	8/22/2018



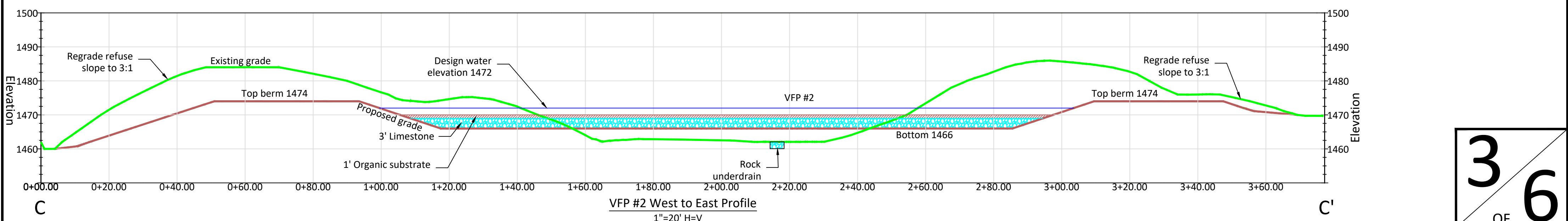
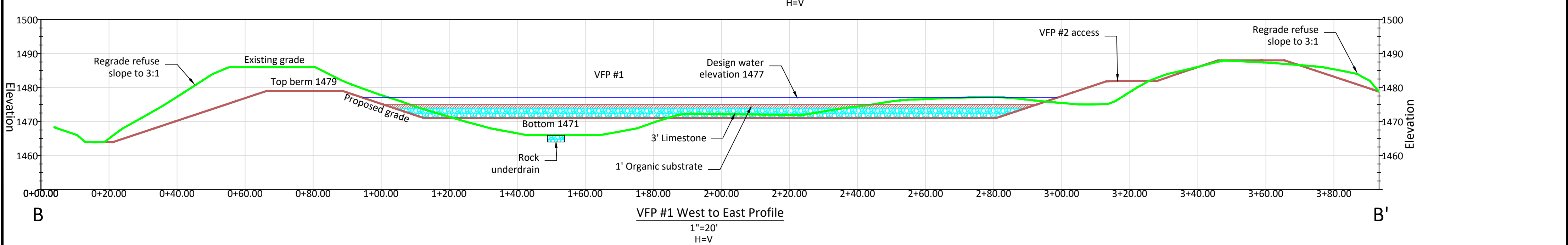
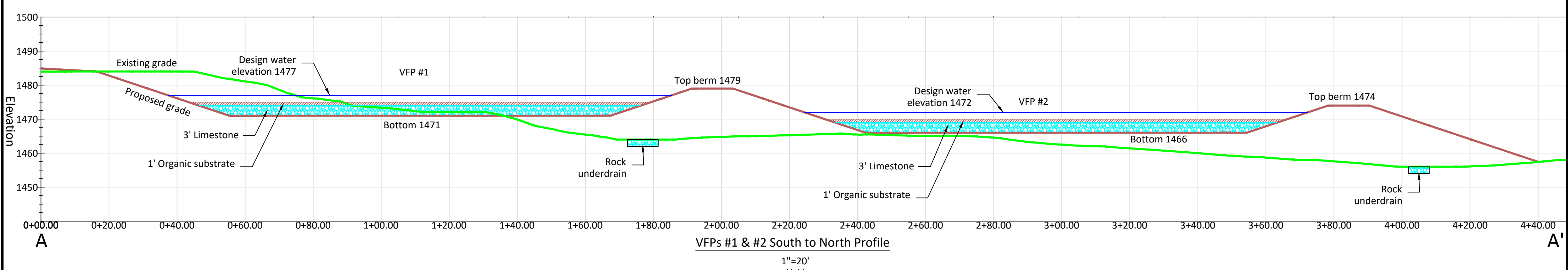
Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-20.000	-15.000	Red
2	-15.000	-10.000	Orange
3	-10.000	-5.000	Yellow
4	-5.000	0.000	Light Green
5	0.000	5.000	Green
6	5.000	10.000	Light Blue
7	10.000	15.000	Blue
8	15.000	20.000	Dark Blue



VFP Grading Plan

Site Volumes*			
Cut (CY)	Fill (CY)	Net (CY)	Refuse removal by others (CY)
22,711	15,667	7,044 (cut)	1,400

*Note: No swell and/or shrinkage factors were applied to these volume calculations. All earthwork to balance on site with no off-site disposal.



3 OF 6

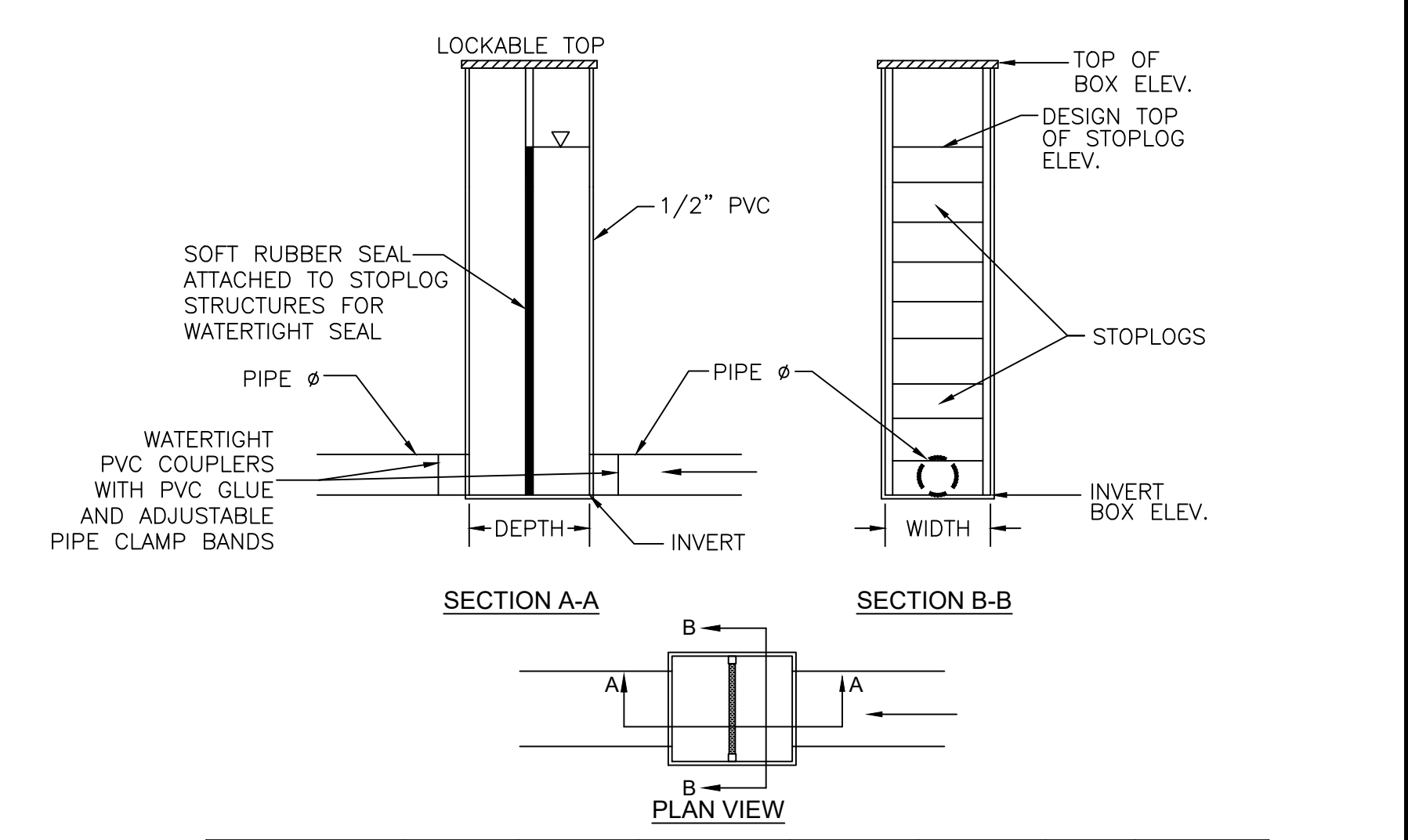
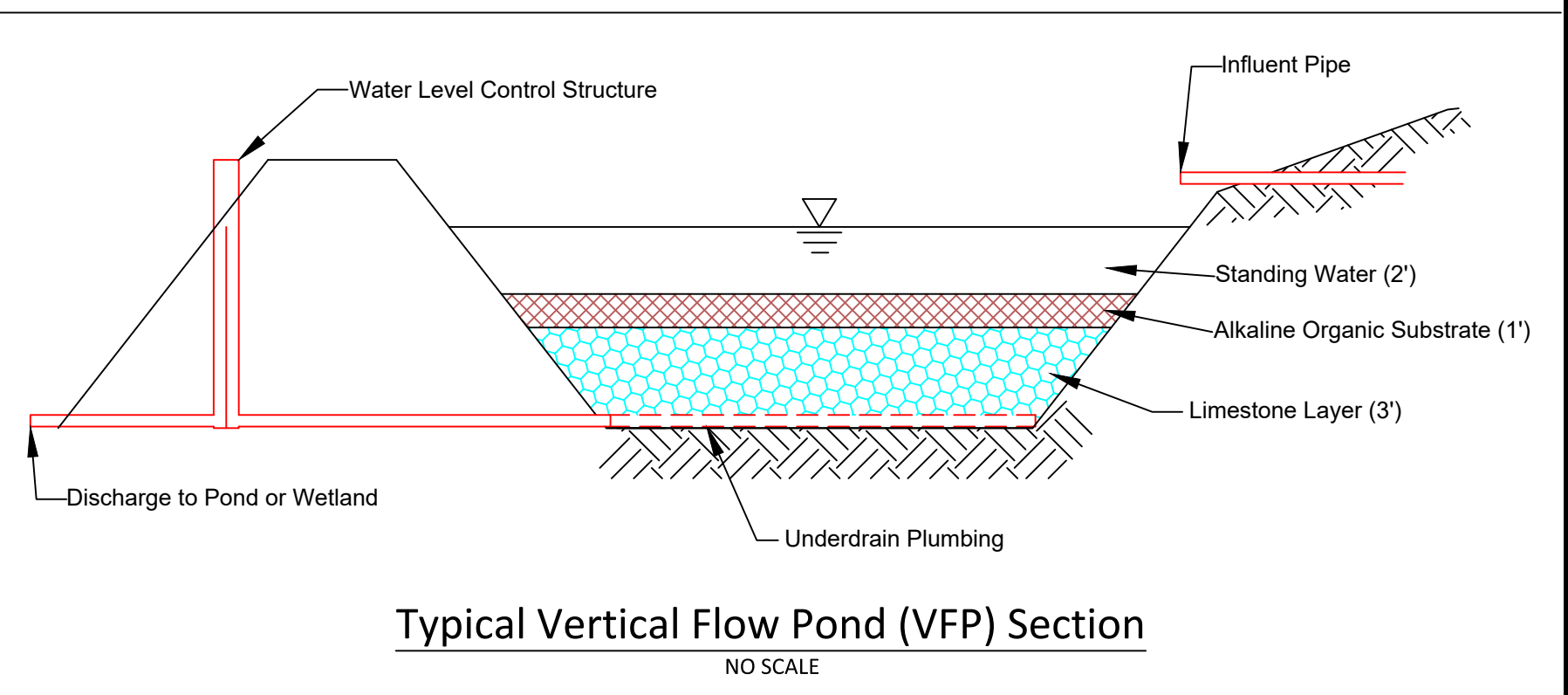
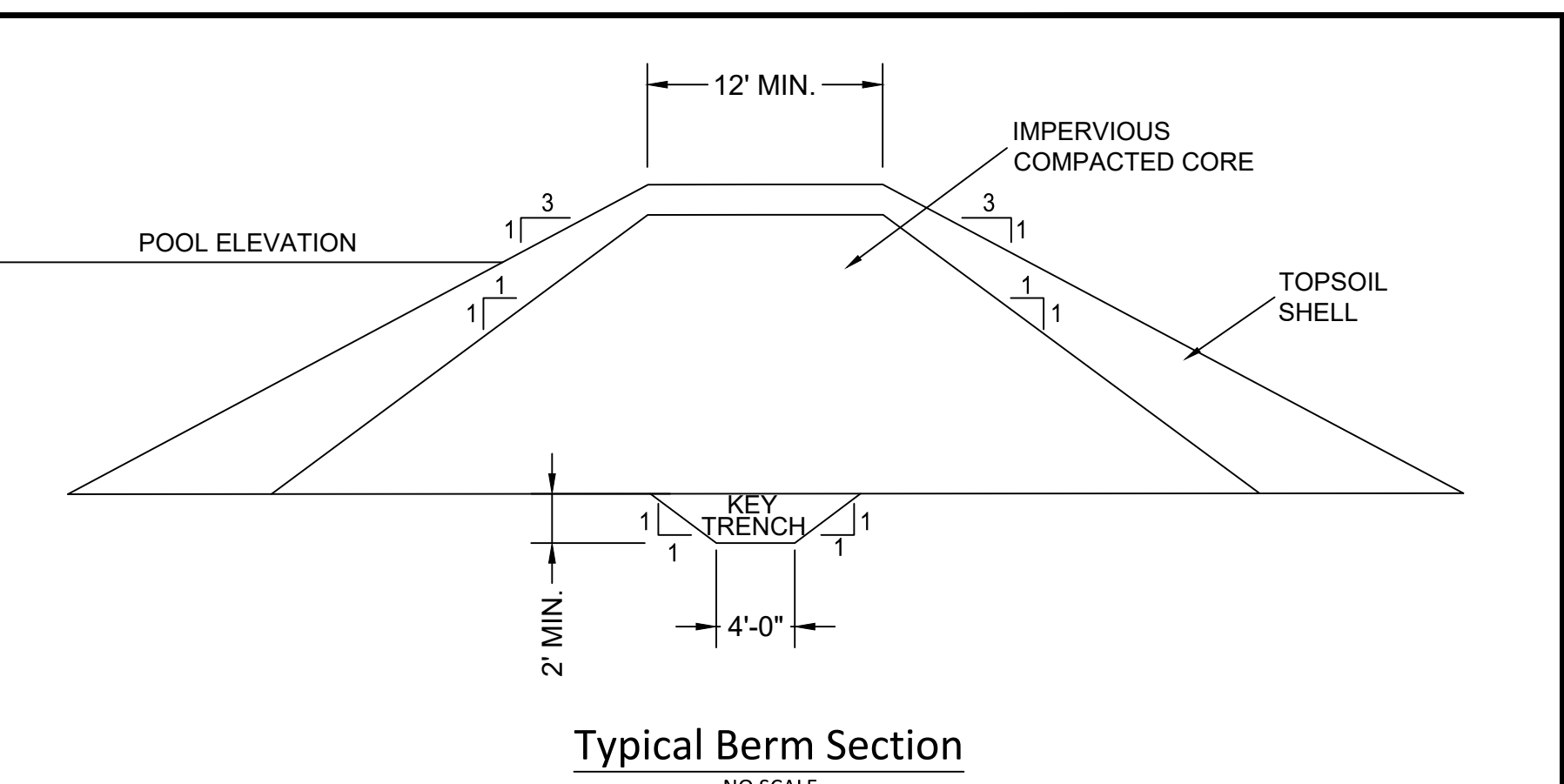
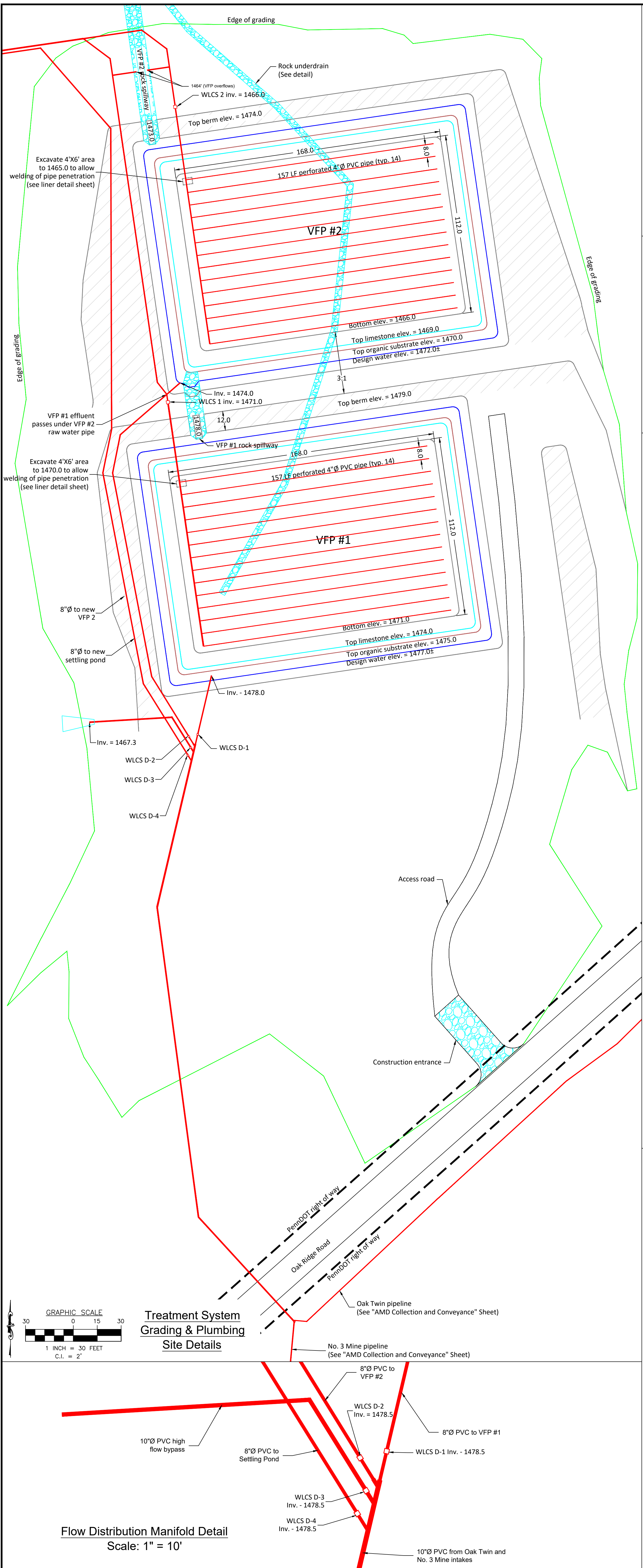
Notes:

No.	Date	Description	By
1	10/18/19	File creation	NAW

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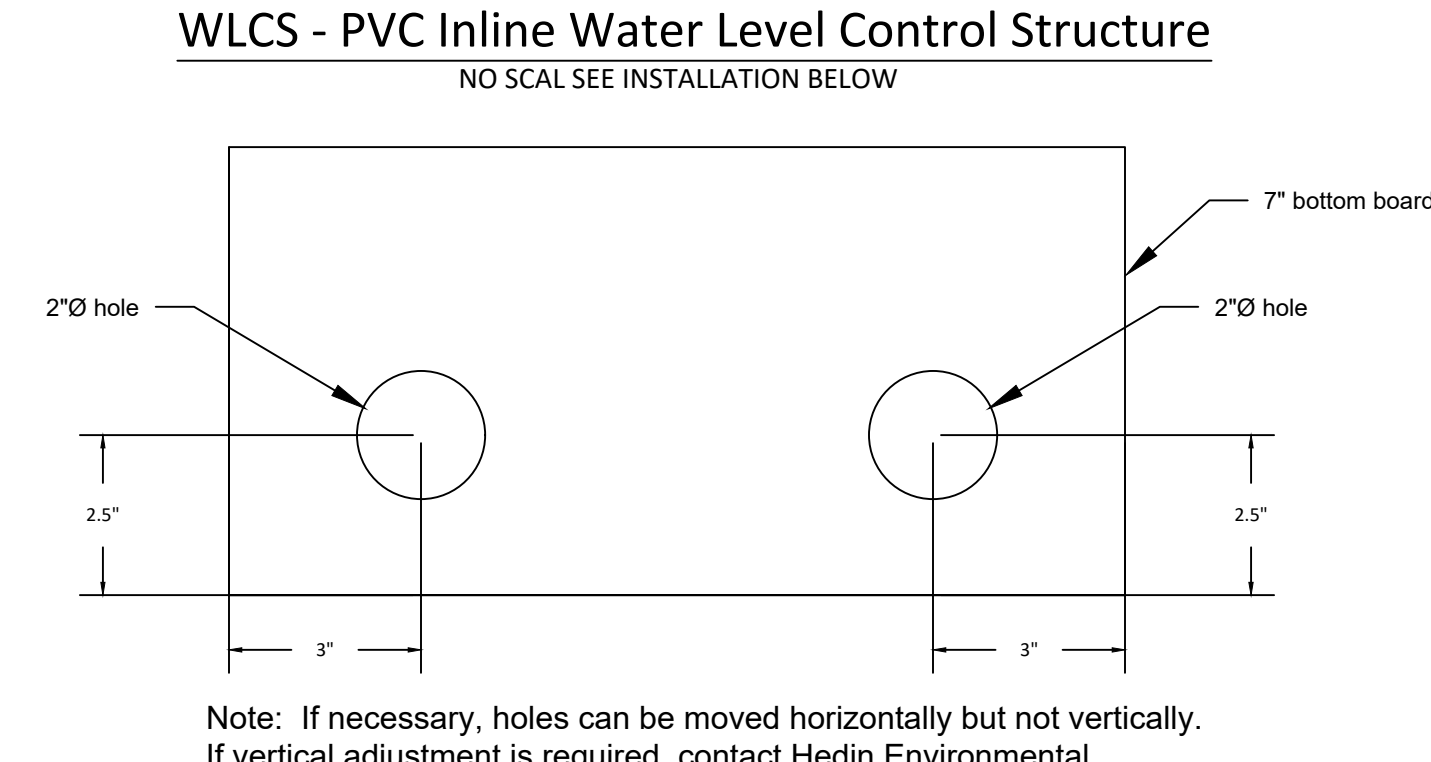
As-Built Sheet C-3
Treatment System Grading Plan
Potts Run AMD Treatment Project

MUNICIPALITY: Knox Township	DATE: See revision block	FILE NAME:
COUNTY: Clearfield	DRAWN BY: NAW	SCALE: As Shown



INLINE STRUCTURE	TOP OF BOX ELEV.	INVERT BOX ELEV.	STRUCTURE HEIGHT (FT)	INSIDE DIMENSION WIDTH	INSIDE DIMENSION DEPTH	PIPE Ø	TOP STOPLOG ELEV.
Oak Twin Intake	1,498.5	1,492.5	6	8"	10"	6"	1,495.0
No. 3 Mine	1,499.5	1,494.5	6	11-5/8"	12"	8"	1,495.6
VFP #1	1,478.0	1,470.0	8	11-5/8"	12"	8"	1,477.0
VFP #2	1,473.6	1,465.6	8	11-5/8"	12"	8"	1,472.0
D-1*	1,483.3	1,477.3	6	11-5/8"	12"	8"	1,483.5
D-2*	1,483.3	1,477.3	6	11-5/8"	12"	8"	1,483.5
D-3*	1,483.3	1,477.3	6	14"	16"	10"	1,481.0
D-3*	1,483.3	1,477.3	6	11-5/8"	12"	8"	1,480.5

*Add orifice restriction by perforating bottom board as shown in detail below



WLCs - Bottom Board Orifice Restriction (D-1, D-2, D-3 Only)
NO SCALE



Note: The WLCs will have corrugated smooth wall pipe placed on outside of the boxes to prevent distortion of the WLCs during backfilling. The pipe should extend from top of pipe at bottom of the box to one foot above the surface. The annulus shall be filled with AASHTO #57 aggregate

WLCs Installation Detail
NO SCALE

LEGEND:

- Proposed major contour
- Proposed minor contour
- Edge of grading
- Pipe
- Stone
- Top of berm

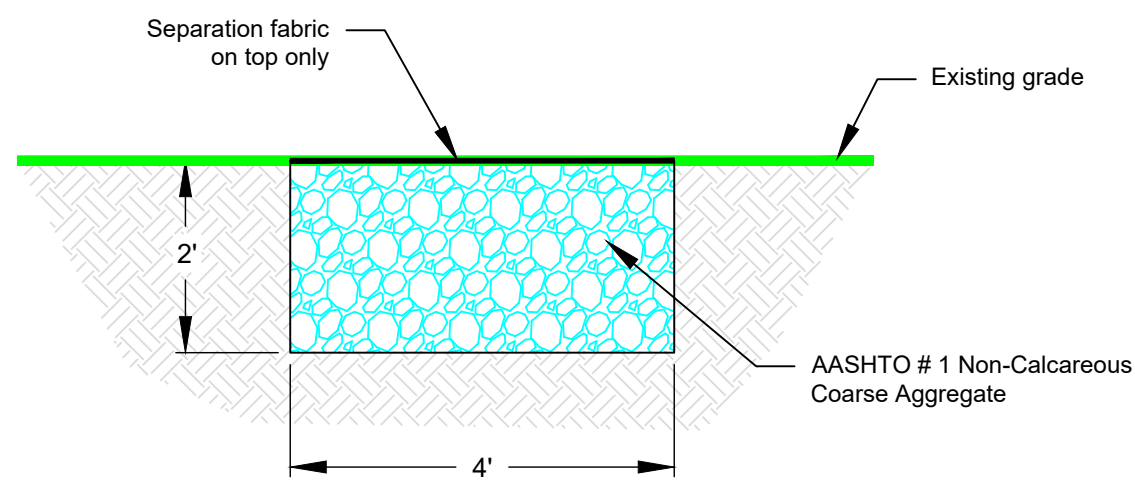
No.	Date	Description	By
1	10/18/19	File creation	NAW

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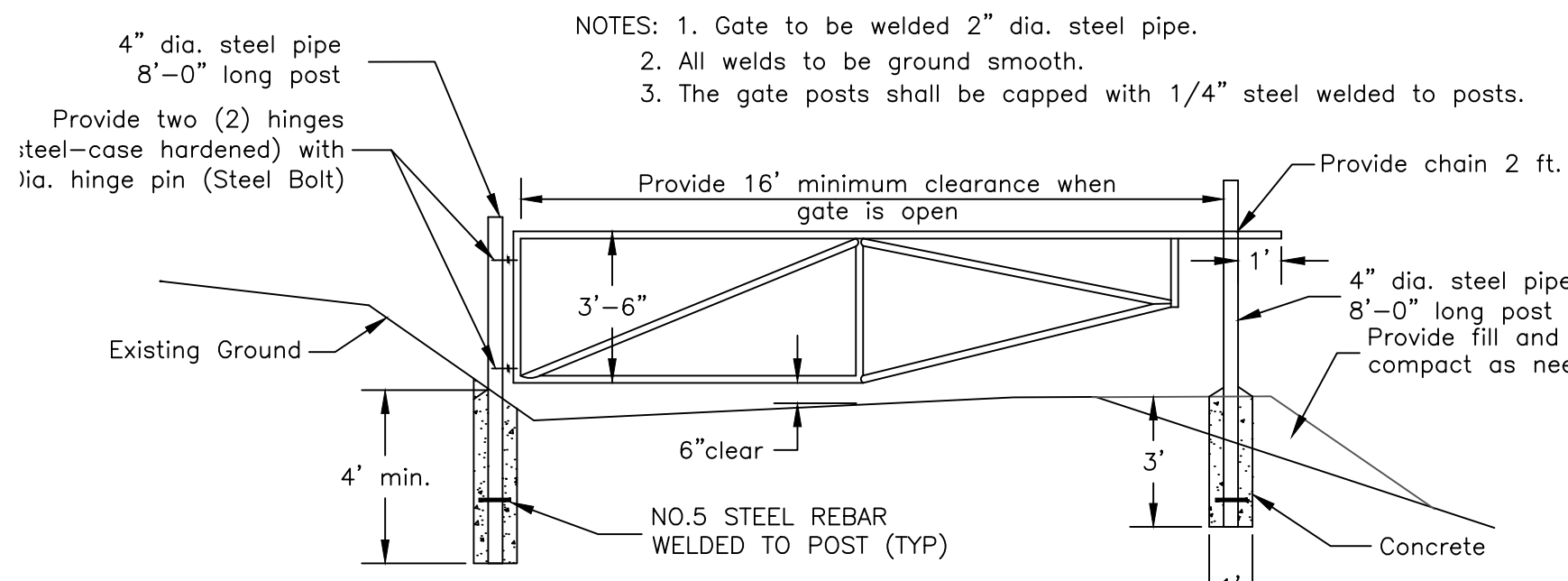
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As-Built Sheet C-4
Treatment System Details
Potts Run Reclamation and AMD Treatment

MUNICIPALITY: Knox Township	DATE: See revision block	FILE NAME:
COUNTY: Clearfield	DRAWN BY: NAW	SCALE: As Shown



Rock Underdrain Detail
SCALE: 1" = 2'



Gate Detail
SCALE: 1" = 4'

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD)**
12"-48"	12"	48"
54"-60"	24"	60"

PIPE DIAM.	COOPER E-80**
UP TO 24"	24"
30"-36"	36"
42"-60"	48"

NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

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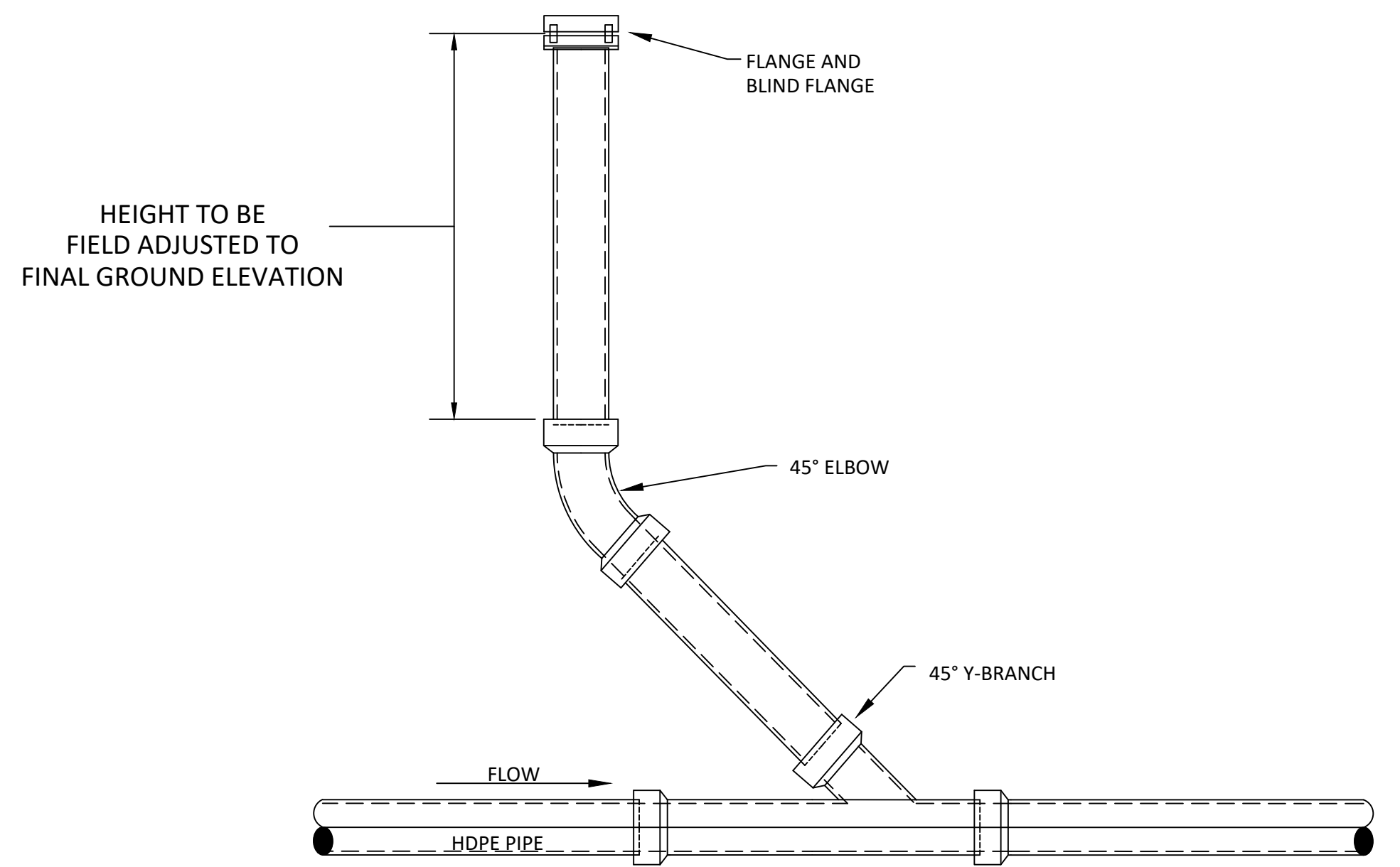
REV. 2 ADDED E-80 INFORMATION T.J.R. 02/20/07
DESCRIPTION BY M.W./D.V.V. CHECKED

TYPICAL TRENCH DETAIL
DRAWING NUMBER: STD-101

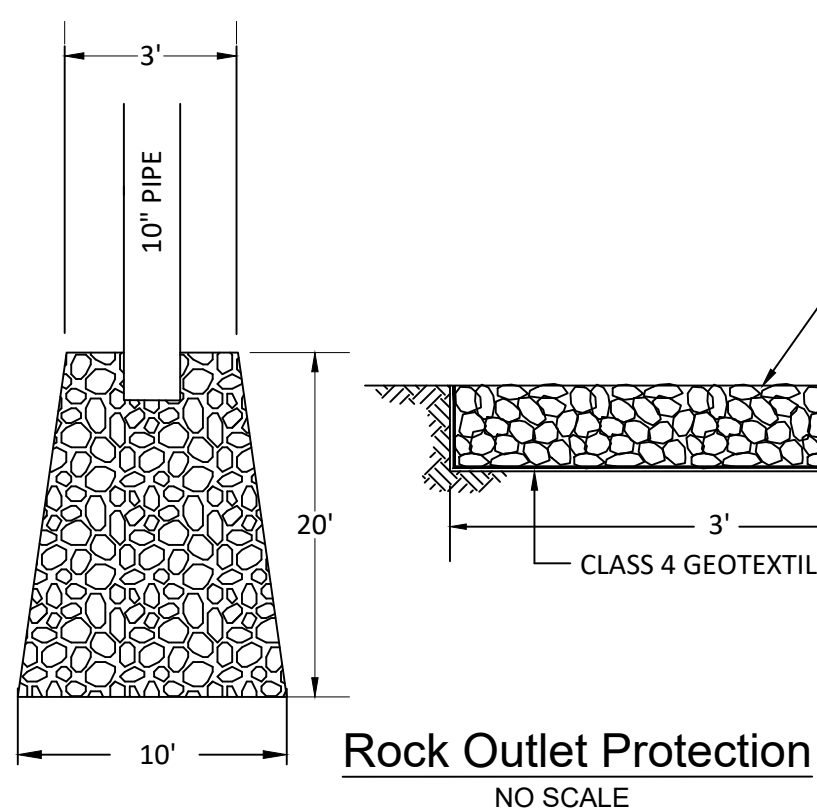
Hancor
401 D.L.H. ST.
FINDLAY, OHIO 45839

DATE: 10/18/09
REV. 1: 10/18/09
REV. 2: 02/20/07
SCALE: NTS
SHEET: 1 OF 1

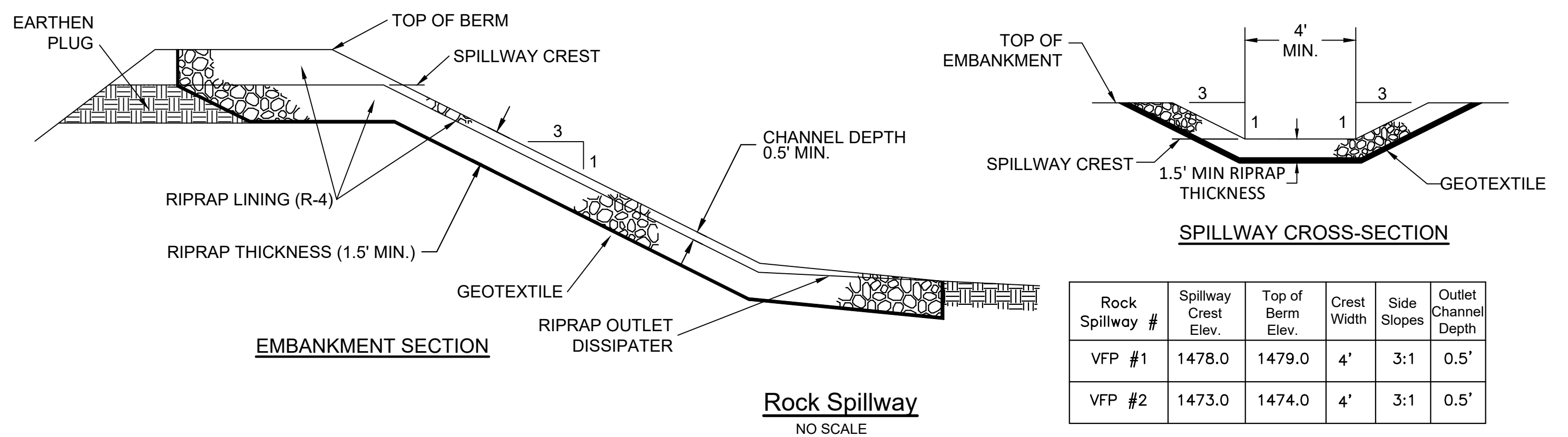
Pipe Bedding Detail
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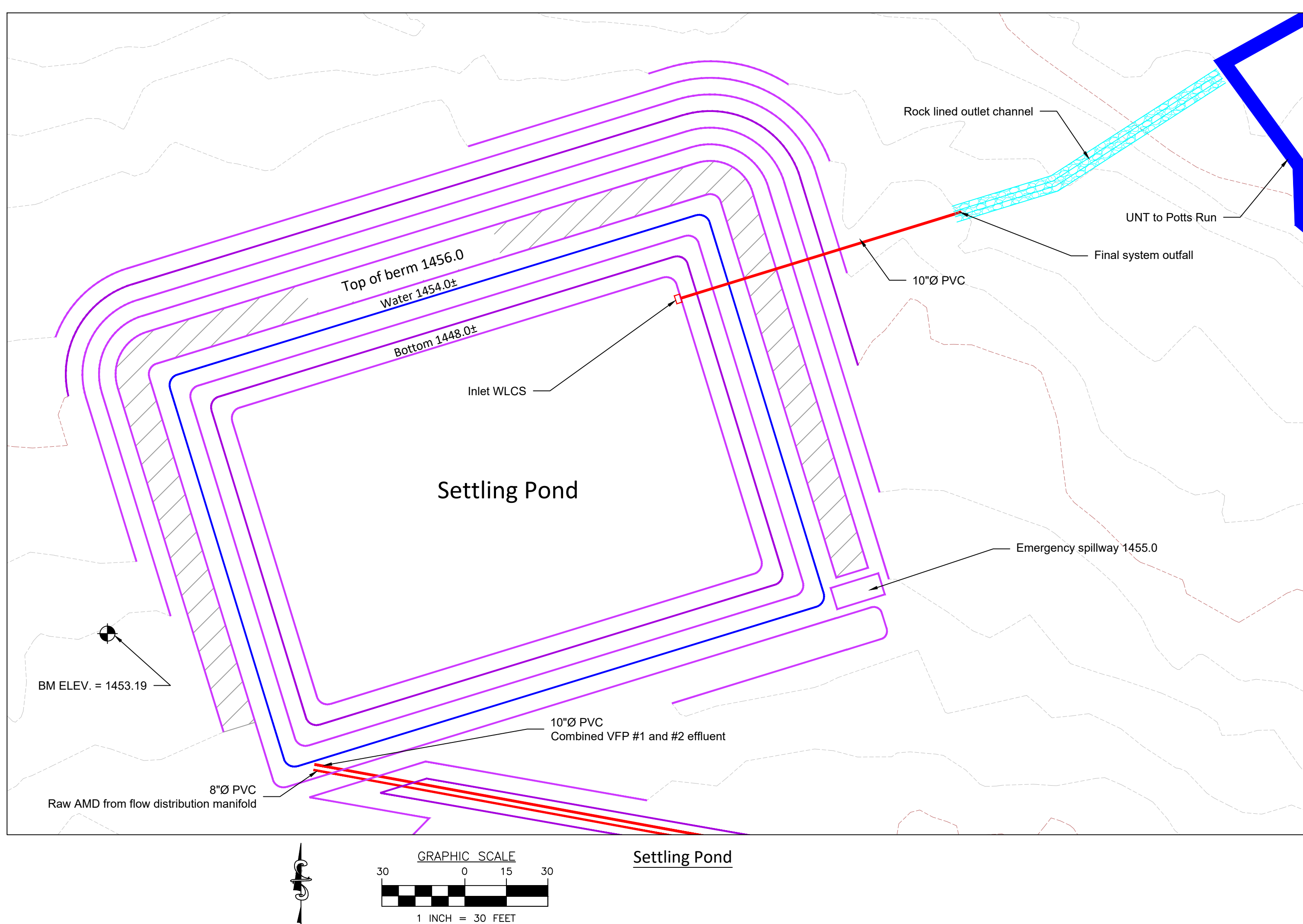
Typical Cleanout Detail
NO SCALE



Rock Outlet Protection
NO SCALE



Rock Spillway
NO SCALE



Settling Pond

LEGEND:

No.	Date	Description	By
1	10/18/19	File creation	NAW

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As-Built Plan Sheet C-5
Miscellaneous Details

Potts Run Reclamation and AMD Treatment

MUNICIPALITY: Knox Township	DATE: See revision block	FILE NAME:
COUNTY: Clearfield	DRAWN BY: NAW	SCALE: As Shown

