

PROJECT:
42 Inch PCCP Raw Water
Conveyance Pipeline and EDV
Facility
1515 Granville Road
Westfield, MA 01085
Project No. 24-01

ADDENDUM NO. 1 03/14/2024

Posted: 03/14/2024 at 4:37PM EDT

Awarding Authority/Owner:
Springfield Water and Sewer Commission
250 M Street Extension
Agawam, MA 01001

Reference Contract Documents (drawings and specifications) dated 02/21/2024

The attention of Bidders submitting proposals for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications are all to be included in and form a part of the proposal submitted.

THE NUMBER OF THIS ADDENDUM (1) MUST BE ENTERED IN THE APPROPRIATE SPACE "B" PROVIDED AFTER THE WORD "NUMBERS" OF THE CONTRACT FORM ENTITLED "FORM FOR GENERAL BID," AND IN SPACE "B" OF THE "FORM FOR SUB-BID."

BID DOCUMENT MODIFICATIONS ARE AS FOLLOWS.

Other Modifications / Attachments:

The following attachment includes additional modifications, clarifications and/or provisions not included in the items above in this Addendum.
See document at the end of document.

All other of the portions of the Contract Documents remain unchanged. Please be reminded to acknowledge this Addendum on the bid forms.

ATTACHMENTS

IFB 24-01 42 Inch Rehab and EDV Chamber Addendum 1 March 14 2024.pdf

--- End of Addendum No. 1 ---

SPRINGFIELD WATER AND SEWER COMMISSION

ADDENDUM No. 1

**TO
CONTRACT DOCUMENTS
FOR**

**IFB# 24-01 WEST PARISH FILTERS WATER TREATMENT PLANT 42 INCH
RAW WATER CONVEYANCE REHABILITATION AND ENERGY
DISSIPATION VALVE CHAMBER
WESTFIELD, MASSACHUSETTS 01201**

Bidders are hereby notified of the following additions, deletions, and modifications to the Contract Documents for IFB# 24-01 42 Inch Raw Water Conveyance Rehabilitation and Energy Dissipation Valve Chamber.

Bidders shall acknowledge receipt of this Addendum in the space provided on the bid forms.

A. ANNOUNCEMENTS

See attached agenda and sign-in sheet for the Optional Pre-Bid Conference held on March 6, 2024, at the West Parish Filters Water Treatment Plant located at 1515 Granville Road, Westfield, MA.

B. QUESTIONS

Question 1: Is fuel storage and/or re-fueling allowed along pipeline route?

Response 1: Refueling along the pipeline route is allowed outside of wetland boundaries, streams (both intermittent and perennial), and dewatering areas. This applies to all areas up to 100 feet away from any Sedimentation Basin wetlands. Care should be taken when refueling upslope of these features. Fuel storage will not be allowed.

Question 2: What type of upstream isolation is provided at the inlet works to the pipeline?

Response 2: Record drawings of the inlet works valve vault showing work conducted in 2019 are provided as an attachment to this Addendum.

Question 3: What is the condition of the pipeline in terms of leakage?

Response 3: The inlet works valve vault contains 1 to 2 feet of water believed to be infiltration of groundwater combined with a faulty connection to the existing sump pump. The pipeline itself downstream of the inlet works is in good condition. There could be some

water infiltration in low spots along the pipeline such as near Manway 10. Some biofilm is also possible inside the pipeline making it slippery.

Question 4: Is there footage available of the inside of the pipeline?

Response 4: No video footage is available for the inside of the pipeline. AECOM's field inspection presentation dated February 10, 2021, is provided as an attachment to this addendum which includes photographs along the inside of the pipeline.

Question 5: Is the drone footage of the pipeline routing available?

Response 5: The drone footage can be accessed at the link provided below.

<https://swsc.sharefile.com/d-s690c65b039c94fe9990f79f762347168>

C. ATTACHMENTS

- 1.1 – Pre-bid Conference Sign-in Log
- 1.2 – Drawing M-3, 42-Inch Pipe Inlet Works Details, 2019
- 1.3 – AECOM Pipeline Field Inspection Presentation, February 10, 2021

END OF ADDENDUM

Attachment 1-1: Pre-Bid Conference Sign-in Sheet

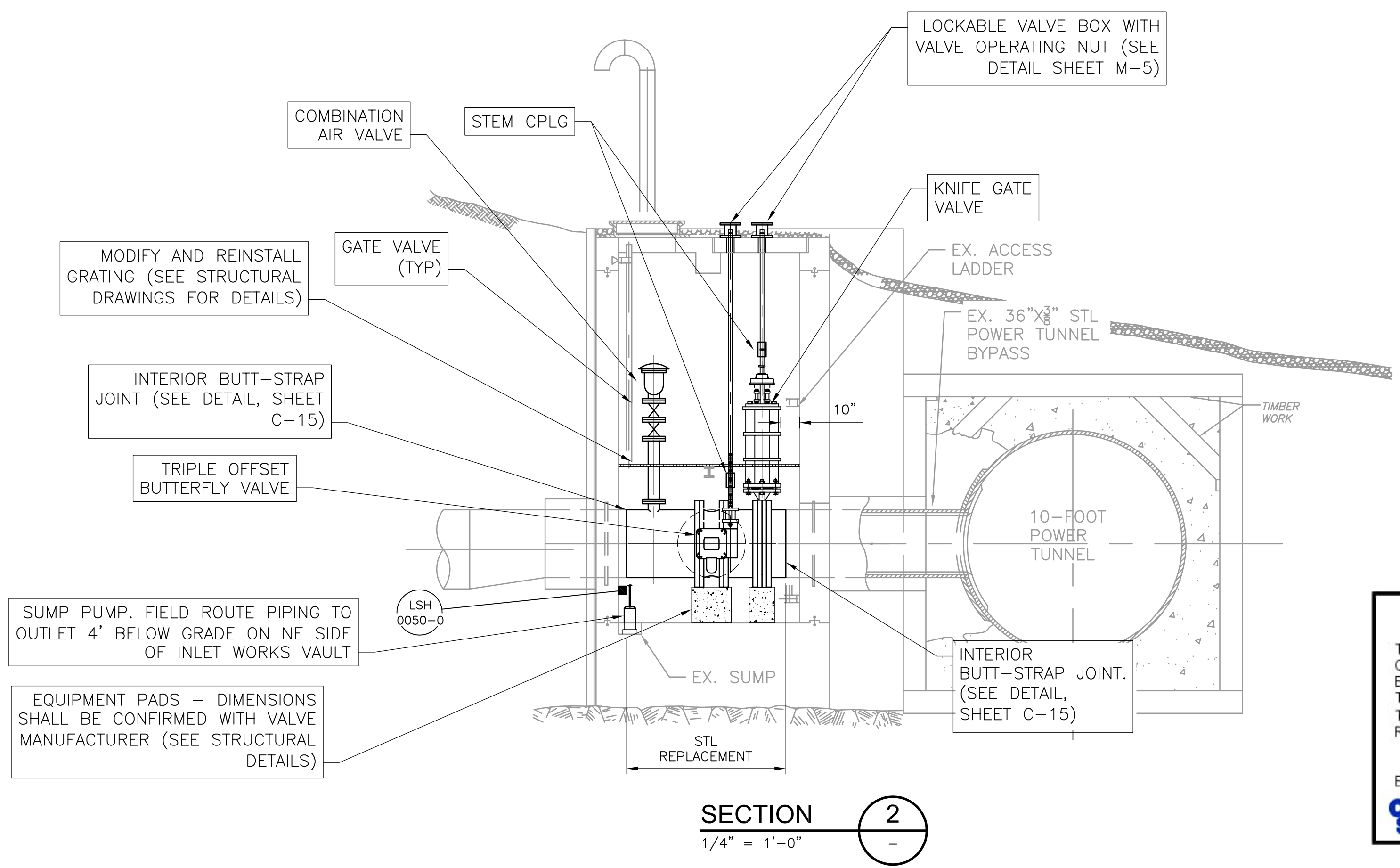
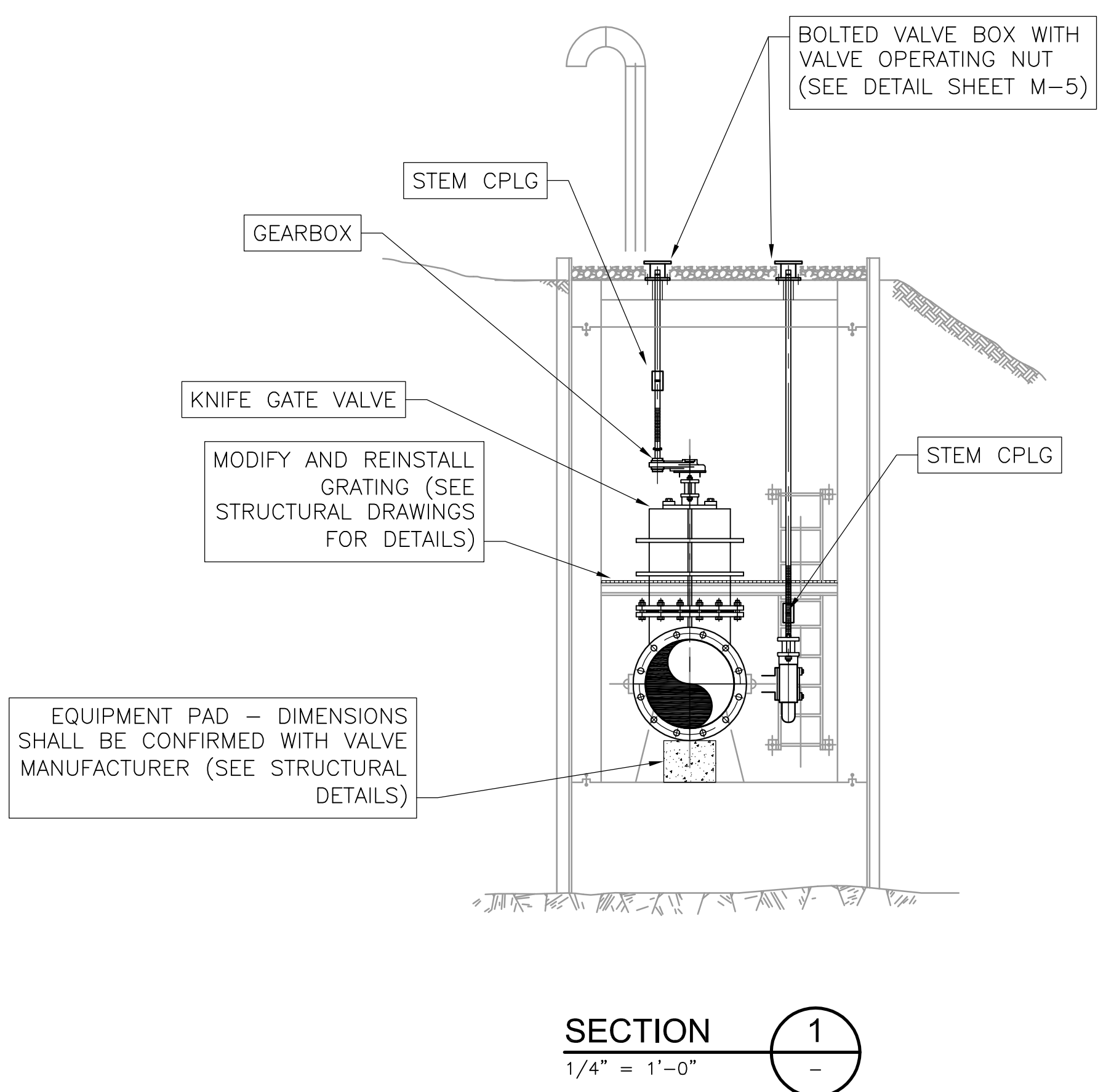
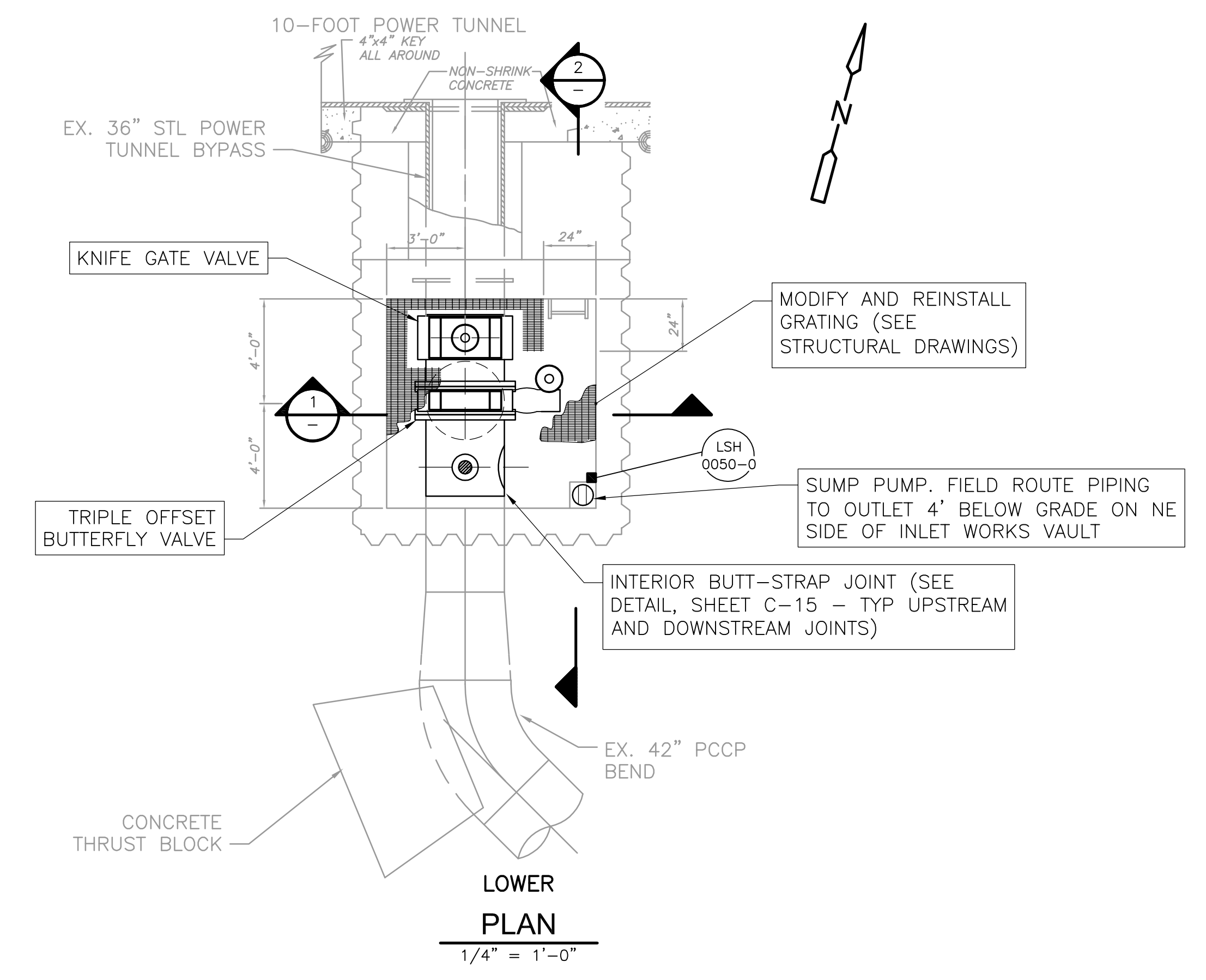
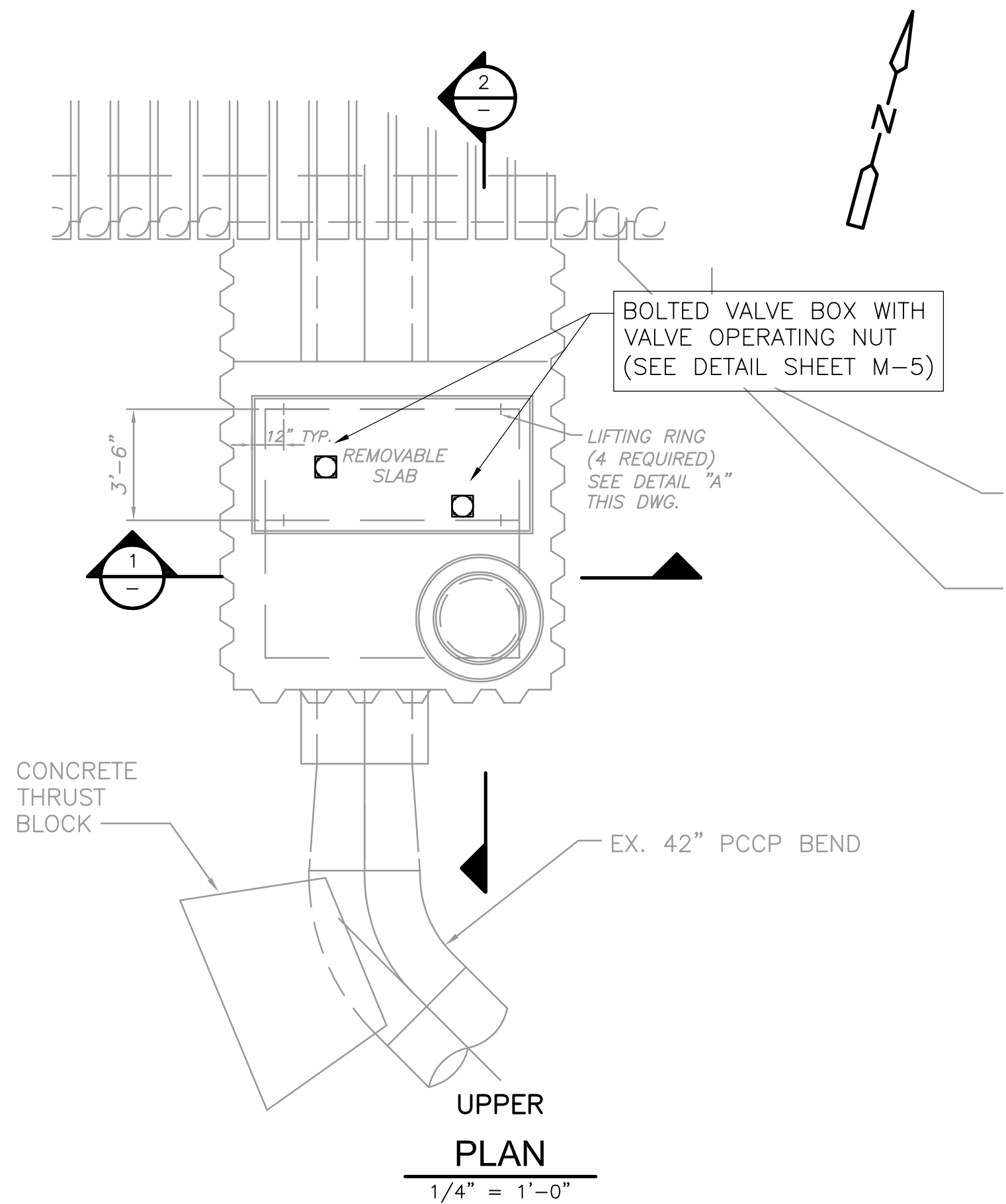
SWSC 42-Inch Rehab and EDV Chamber

Pre-Bid Conference Sign-In

Wednesday, March 6, 2024

| Proper Name | Company | Best Telephone No. | Email Address |
|-----------------|-----------------------------|--------------------|--|
| ROB NORRIS | STRUCTURAL | 248-499-0623 | rnorris@structuraltec.com |
| Aaron Key | Structural | 860-637-3761 | AKey@Structural.net |
| David Gibson | STRUCTURAL TECH | 443-829-7165 | dgibson@structuraltec.com |
| Edgar Vidal | FEMENA CONSTRUCTION | 914-379-1937 | evidal@FEMENA CONSTRUCTION .COM |
| JOHN FORD | FYFE | 774-226-6938 | JFORD@CS-NRI.COM |
| GREG MELLOR | CONCRETE SYSTEMS CONSULTING | 860-835-5652 | GMELLOR@COCONSYSTEMS.COM |
| KEITH G. KRUSE | CSC | 443-858-7600 | KEITH@KRUSE.GURU |
| CHARLETRIPP | AECOM | 774-218-4257 | CHARLES.TRIPP@AECOM.COM |
| Dinis Baltazar | Baltazar Contractors | 413-315-0374 | dbaltazar@baltazarci.com |
| Bryan In | Structural | 914-960-5108 | bpon@structural.net |
| Joe Underkofler | Ludbu Construction | 413-583-2522 | Jun.derkofler@ludlowconstruction.com PJFrago50@ludlowconstruction.com |
| Michael Cronin | Institutum | 413-346-8657 | mcronin@aeigrid.com |

Attachment 1-2: Drawing M-3, 42-Inch Pipe Inlet Works Details, 2019



RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY OTHERS AND BY CDM SMITH. THEREFORE, THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION. TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.

By *Michael Mancini* Date 1-24-2020

CDM Smith

XREFS: [CDMS_2436_MWFD02AV_MW5002W] Images: []
 Last saved by: O'DONNELLJ Time: 7/28/2017 12:12:39 PM
 p:\p\cdmsmith.com\PM_PL\10946\217028\04 Design Services NL_60%\05 Process Mechanical\10 CADD\M003VPL.dwg
 © 2017 CDM SMITH ALL RIGHTS RESERVED.
 REUSE OF DOCUMENTS: THESE DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|----------|------|------|------|---------|
| | | | | |
| | | | | |
| | | | | |

DESIGNED BY: M. MIGLIORI
 DRAWN BY: M. MIGLIORI
 SHEET CHK'D BY: J. PESCATORE
 CROSS CHK'D BY: B. HICKEY
 APPROVED BY: M. MIGLIORI
 DATE: AUGUST 2017

75 Slate Street
 Boston, MA 02109
 Tel: (617) 452-6000

SPRINGFIELD WATER AND SEWER COMMISSION
 SPRINGFIELD, MASSACHUSETTS
WEST PARISH FILTERS
 RAW WATER CONVEYANCE SYSTEM IMPROVEMENTS

INLET WORKS
 PLANS AND SECTIONS

PROJECT NO. 10946-217028
 FILE NAME: M003VPL.DWG
 SHEET NO.
M-3

**Attachment 1-3: AECOM Pipeline Field Inspection Presentation,
February 10, 2021**

SWSC 42-inch Diameter RWC PCCP

Internal Inspection Findings – Summary

February 10, 2021 (Rev. 3/8/24)

Mark C. Webb, Ph.D, P.E., F.ASCE
Discipline Lead - Pipeline Design & Condition Assessment

Presentation Outline

- Background & Purpose
- Pipeline Profile, Access Manways, Pressure Classes, Soil Cover
- Summary – Visual Pipe Observations (Profile View)
- Inspection of Old Manways
- Internal Inspection Days 1 to 5 (2 to 6 November 2020)
- External Inspection Days 6 to 8 (9 to 11 November 2020)
- Electromagnetic Results

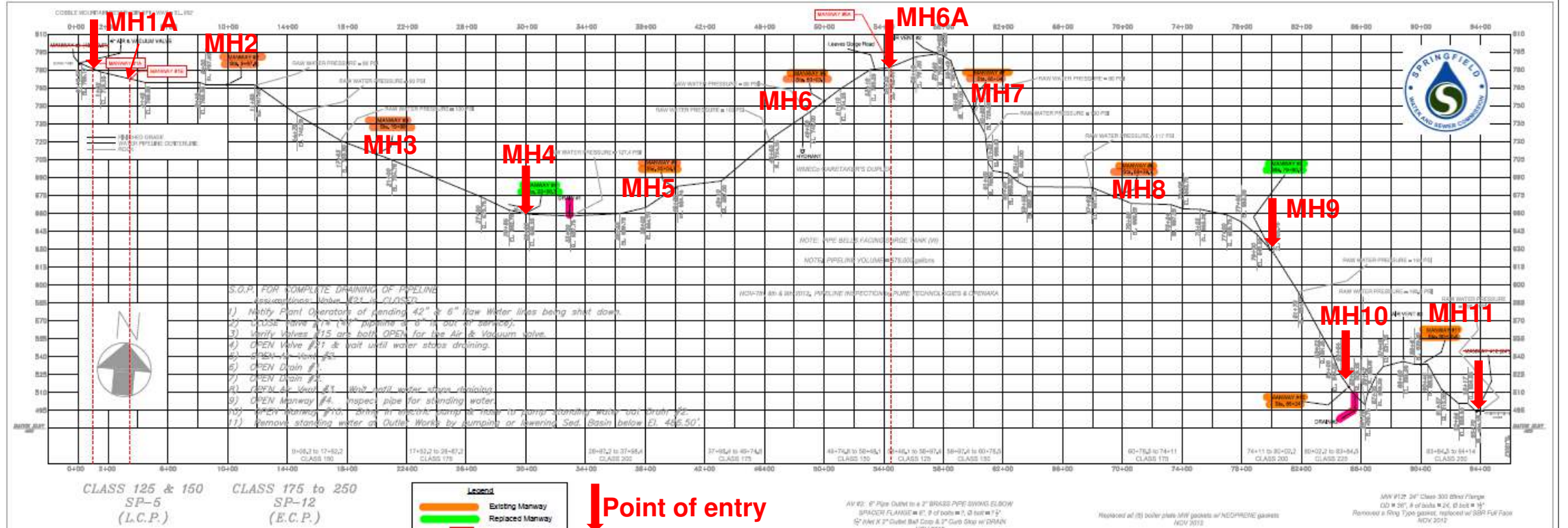
Background

- The Raw Water Conveyance System (RWCS) is owned & operated by SWSC.
- It carries raw water from Cobble Mountain Reservoir to West Parish Water Filtration Plant in Westfield, MA.
- Pipeline is 42 in. diameter prestressed concrete cylinder pipe (PCCP):
 - Manufactured by Lock Joint Pipe Company in 1958.
 - 6 pressure classes
 - Lined cylinder pipe (LCP)
 - Embedded cylinder pipe (ECP)
 - Specials manufactured by Thompson Pipe in 2018 (new manways, pipe adapters)
 - Miller Pipeline (subcontractor to Ludlow Construction) repaired 323 joints (removal of loose joint mortar & surface corrosion on the steel joint ring, replacing interior joint mortar).
- Pure Technologies conducted visual, sounding, & electromagnetic (EM) inspections in 2012 & 2019.
 - Observed missing or spalled mortar at joints, noted circumferential & longitudinal cracking
 - Identified 4 (2012) & 7 (2019) distressed pipes with EM signals indicative of broken wires.

Purpose

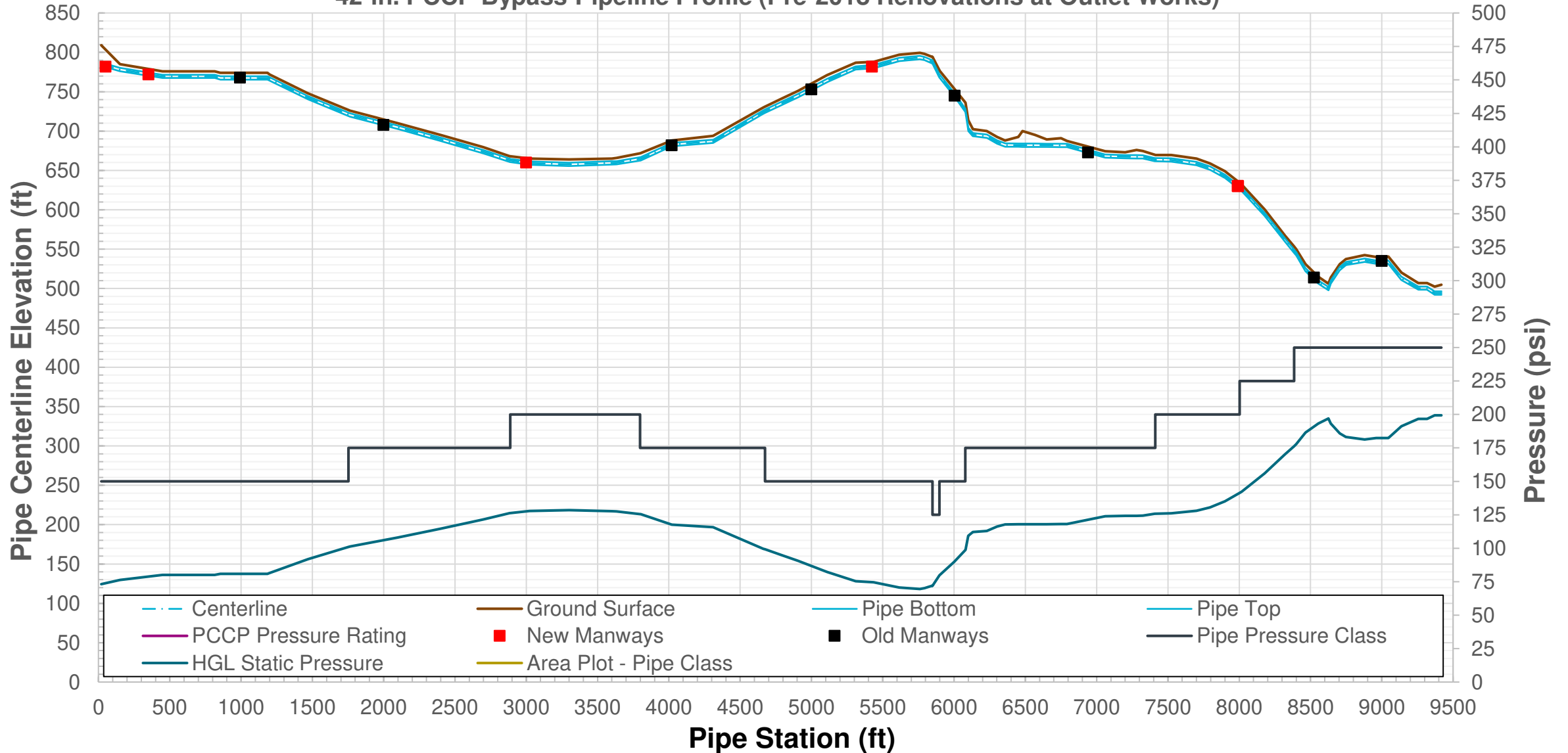
- Perform internal pipe inspections:
 - Inspect manways (old & new).
 - Inspect pipe joints.
 - Document circumferential & longitudinal cracks.
 - Perform pipe sounding inspection.
 - Document other anomalies in pipes & joints.
- Perform external pipe inspections:
 - Inspect pipes of interest (POI) based on Pure/SGH/AECOM findings.
 - Visually inspect and document pipe exterior, joints & backfill material.
 - Perform sounding inspection on pipe exterior.
 - Perform pipe continuity testing on Pipe 7-57 (ECP175) to verify wire breaks.
- Perform soil conductivity / resistivity & stray current surveys.

Pipeline Profile, Access Manways, Pressure Classes, Soil Cover



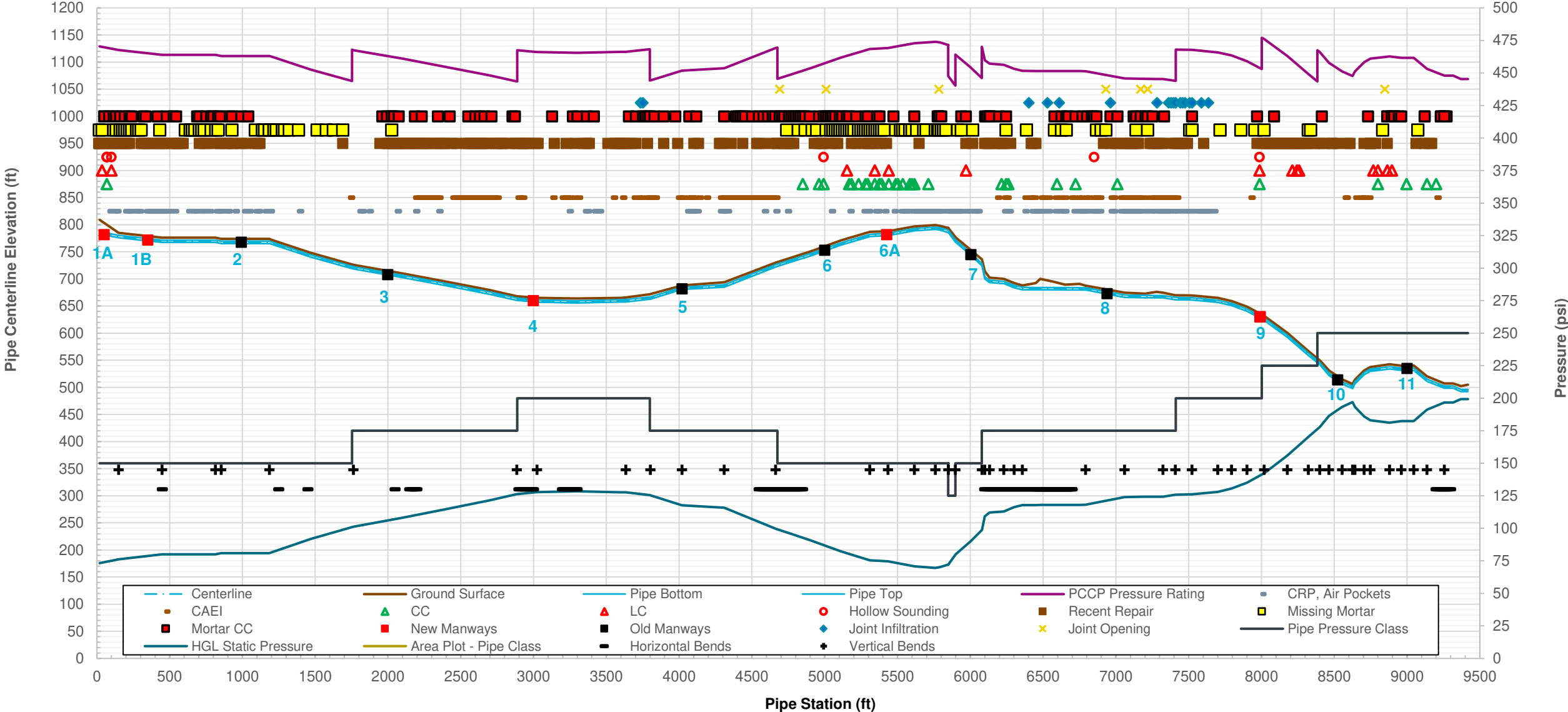
Pipeline Profile, Access Manways, Pressure Classes, Soil Cover

42-in. PCCP Bypass Pipeline Profile (Pre-2018 Renovations at Outlet Works)



Summary – Visual Pipe Observations (Profile View)

42-in. PCCP Bypass Pipeline Profile (Pre-2018 Renovations at Outlet Works)

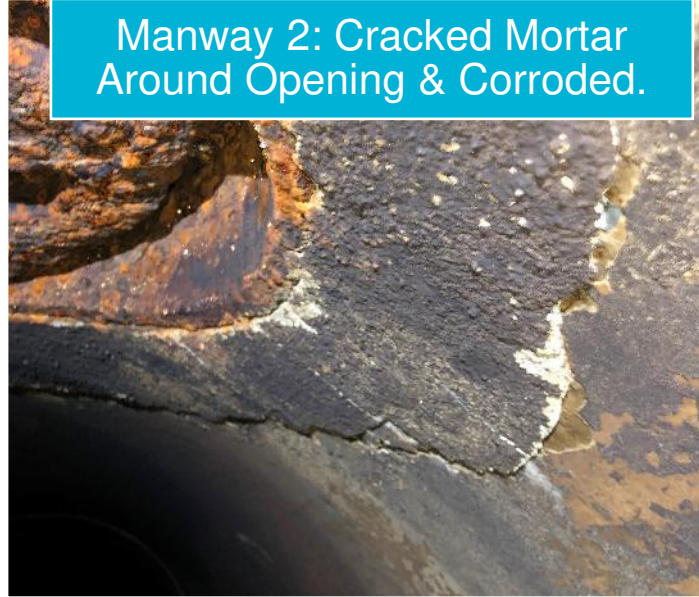


Inspection of Old Manways

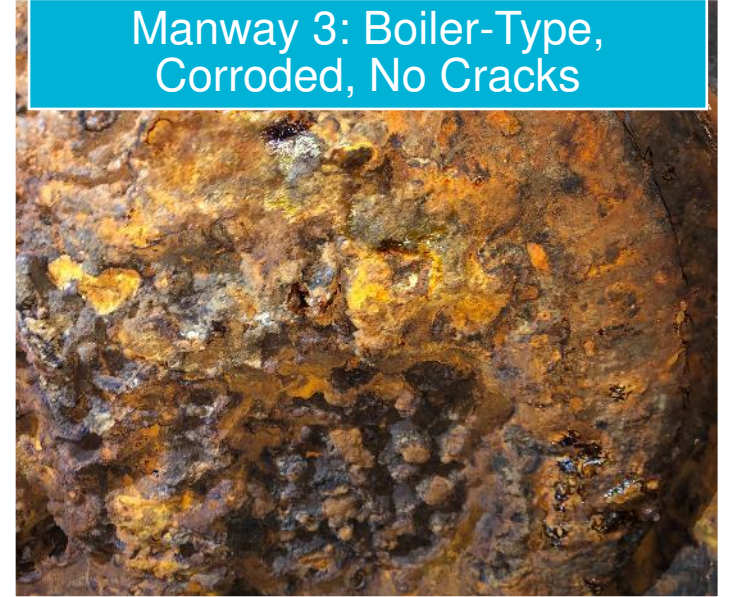
Manway 2: Boiler-Type



Manway 2: Cracked Mortar Around Opening & Corroded.



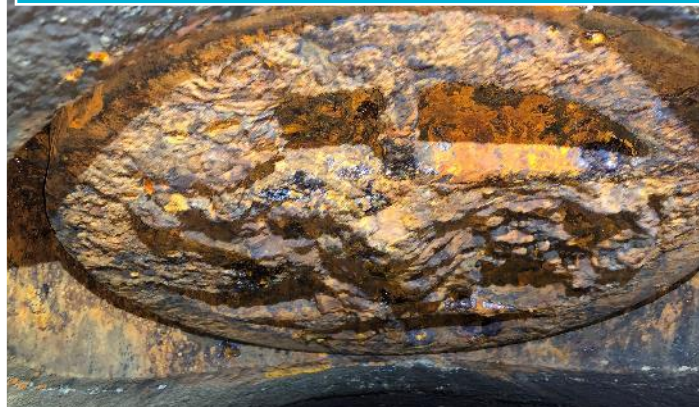
Manway 3: Boiler-Type, Corroded, No Cracks



Manway 5: Boiler-Type, Corroded, No Cracks



Manway 6: Boiler-Type, Corroded. No major cracks but faint mortar crack around opening. Couple of circumferential hairline cracks near manhole opening, autogenous healing visible.



Manway 6: Ditto



Inspection of Old Manways

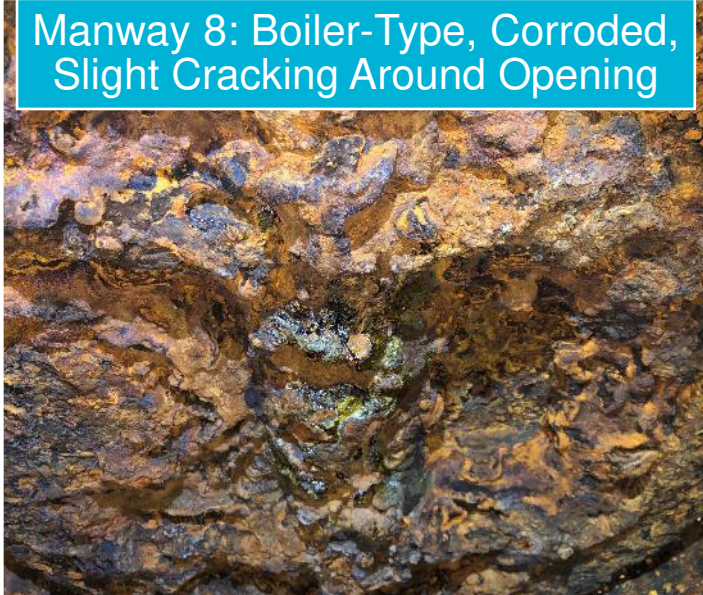
Manway 7: Boiler-Type, Corroded, Joints Old + Good



Manway 7: Ditto



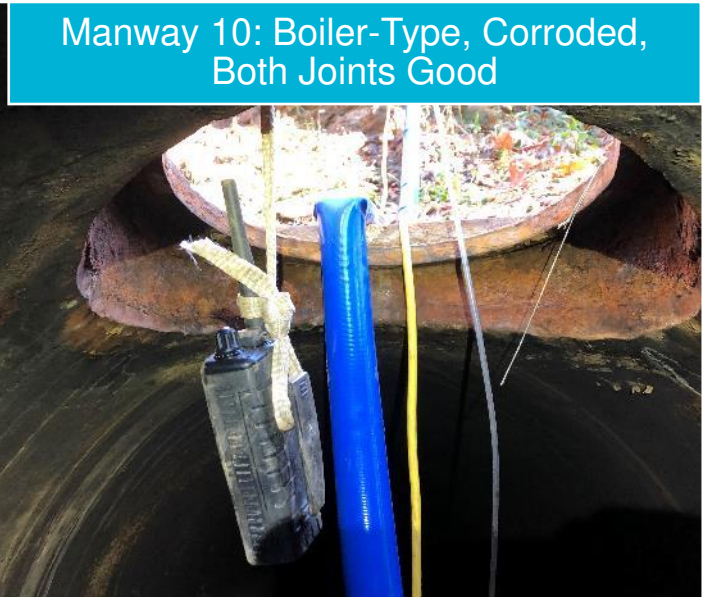
Manway 8: Boiler-Type, Corroded, Slight Cracking Around Opening



Manway 8: Ditto



Manway 10: Boiler-Type, Corroded, Both Joints Good



Manway 11: Boiler-Type, Corroded, No Cracking



Manway 1B: Inspection Day 1 – 2 November 2020

Manway 1B (P1-28A)



Missing Mortar



Rust Staining



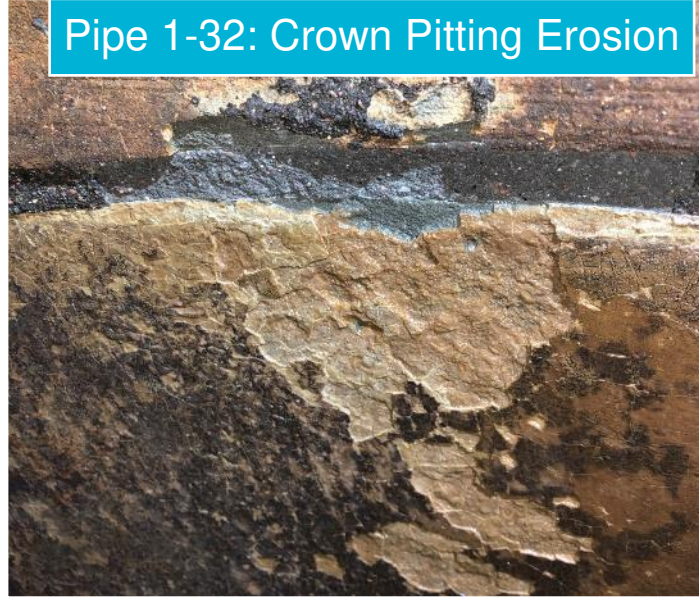
Efflorescence

Inspection Day 1 – 2 November 2020

Pipe 1-29: Crown Pitting Erosion



Pipe 1-32: Crown Pitting Erosion



Pipe 1-32: Ditto



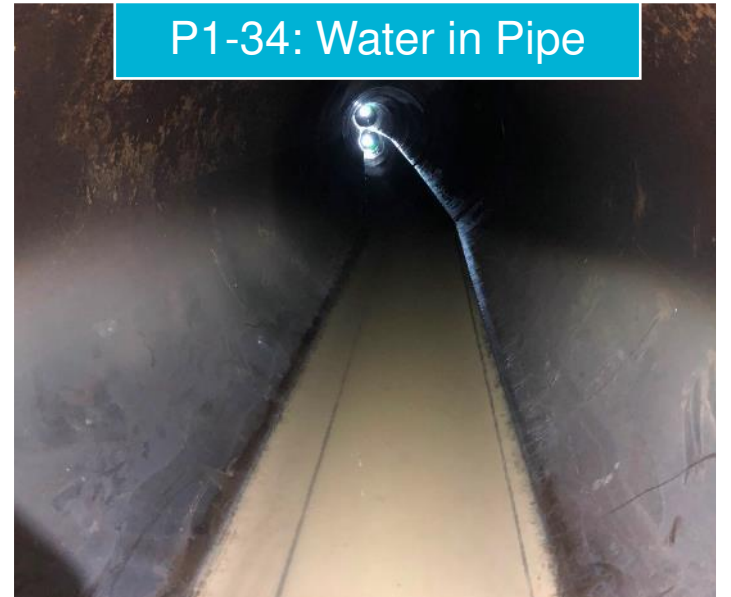
J1-32/33: Missing Mortar



P1-34: Discoloration / CRP



P1-34: Water in Pipe



Inspection Day 2 – 3 November 2020



FDTSC at Manway-6A



P6-48: Air Valve



P6-48: Ditto



P6-49: Exposed Rebar



P6-49: Ditto



P6-49: Ditto

Inspection Day 2 – 3 November 2020

P6-55: Short pipe. Steep Downslope



J6-65/66: Old Joint. Good. Steep



MH-7



MH-7 (P6-68): Boiler Type



MH-7: Ditto

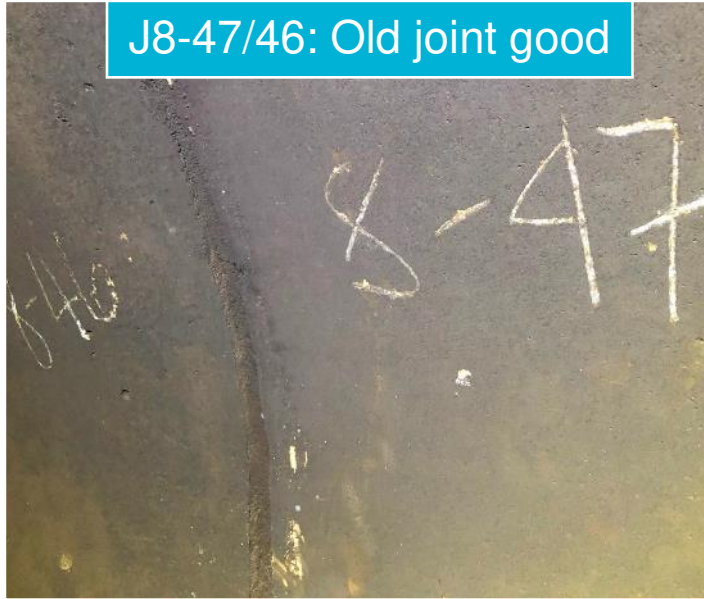


P7-3: Before Steep Section



Inspection Day 3 – 4 November 2020

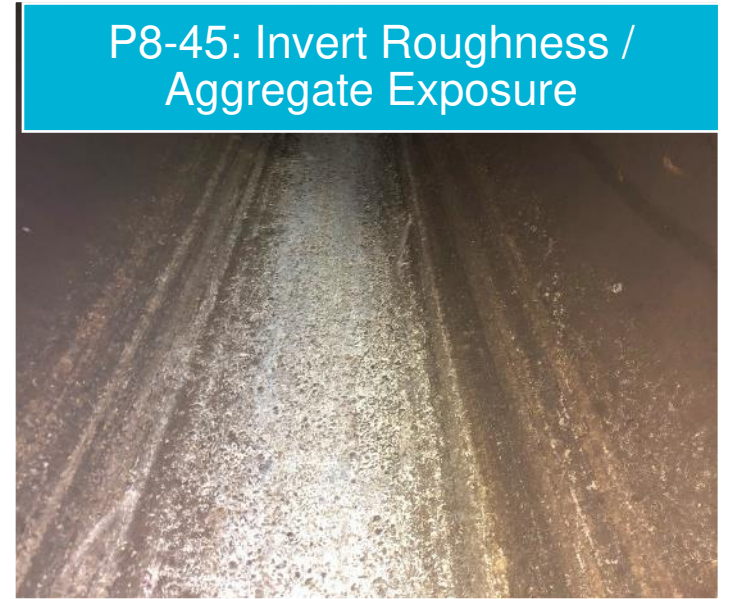
J8-47/46: Old joint good



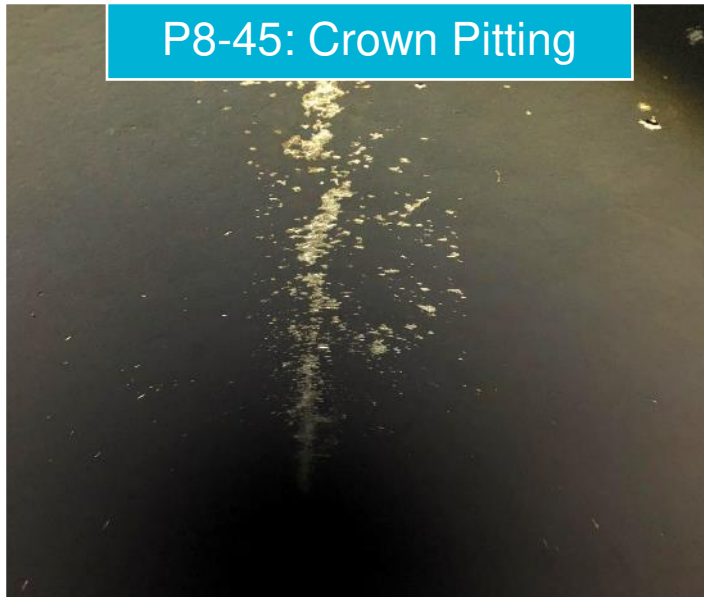
P8-45: Crown Pitting



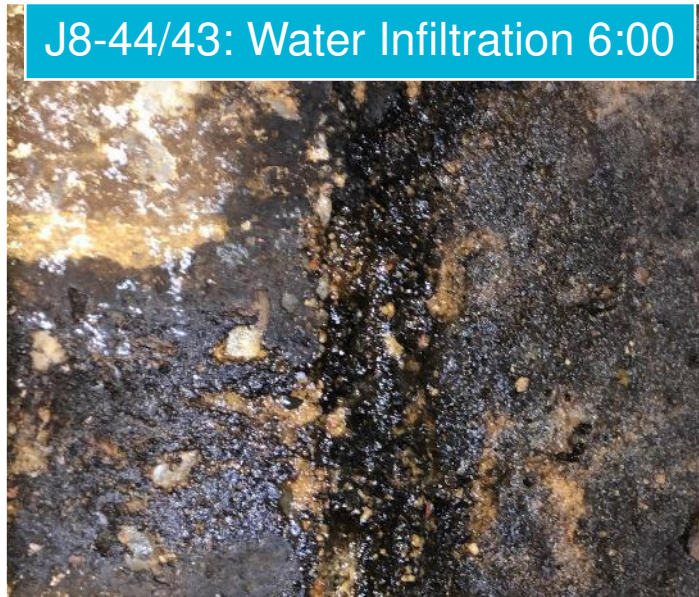
P8-45: Invert Roughness / Aggregate Exposure



P8-45: Crown Pitting



J8-44/43: Water Infiltration 6:00



J8-41/40: Water Infiltration 6:00



Inspection Day 4 – 5 November 2020

P7-57: POI-5-10 WB's



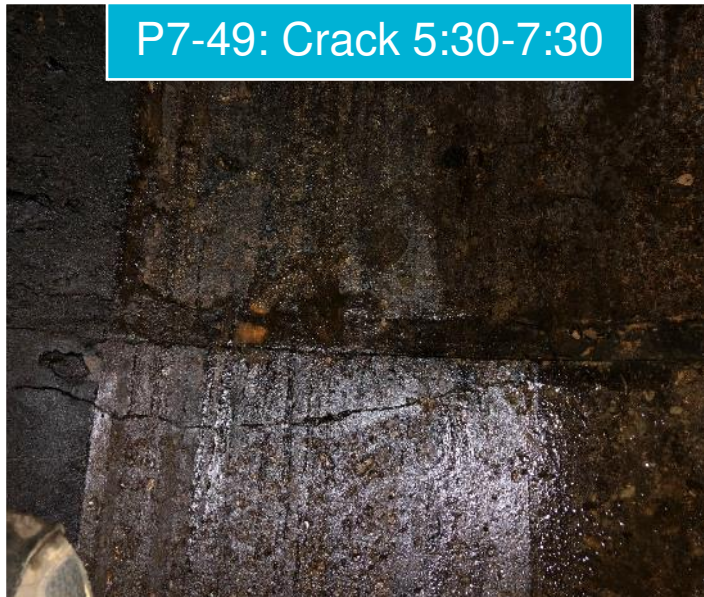
P7-57: Ditto



P7-52 & 51: CRP at 12:30



P7-49: Crack 5:30-7:30



P7-41: Circumferential Cracks
10:30-12:00; 4:30-5:30; 2:00-3:00

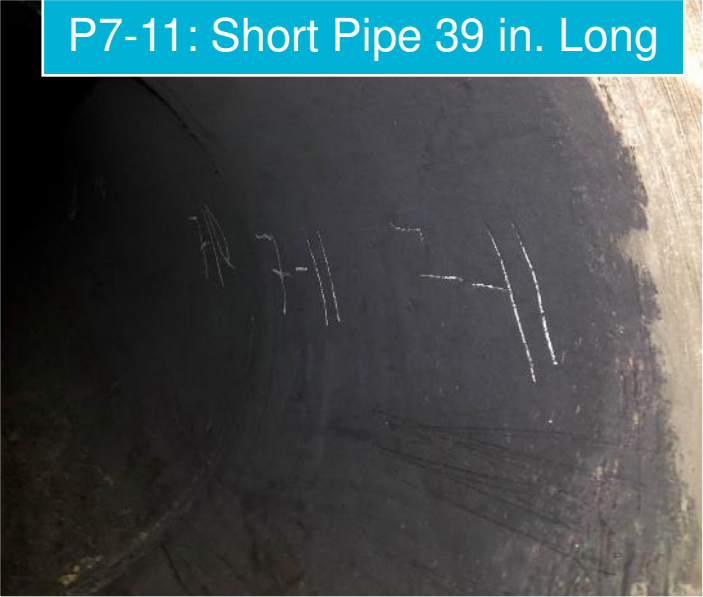


P7-41: Ditto



Inspection Day 4 – 5 November 2020

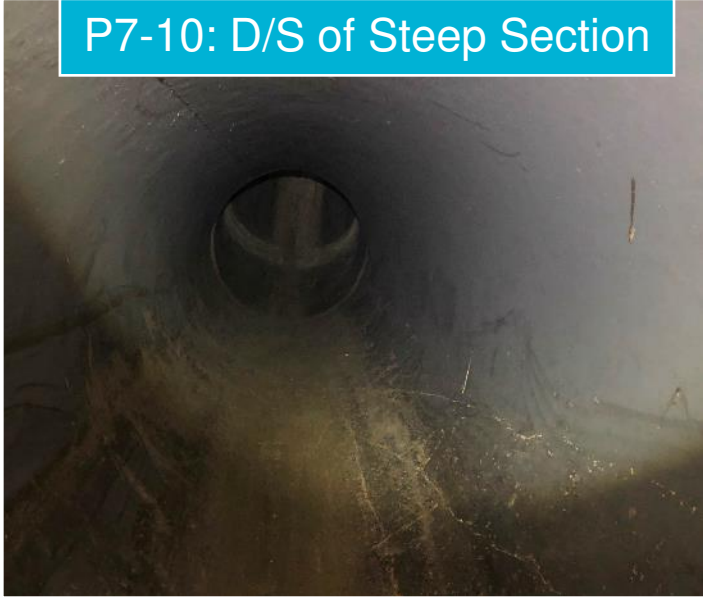
P7-11: Short Pipe 39 in. Long



P7-10: Sloping Uphill
(Looking U/S)



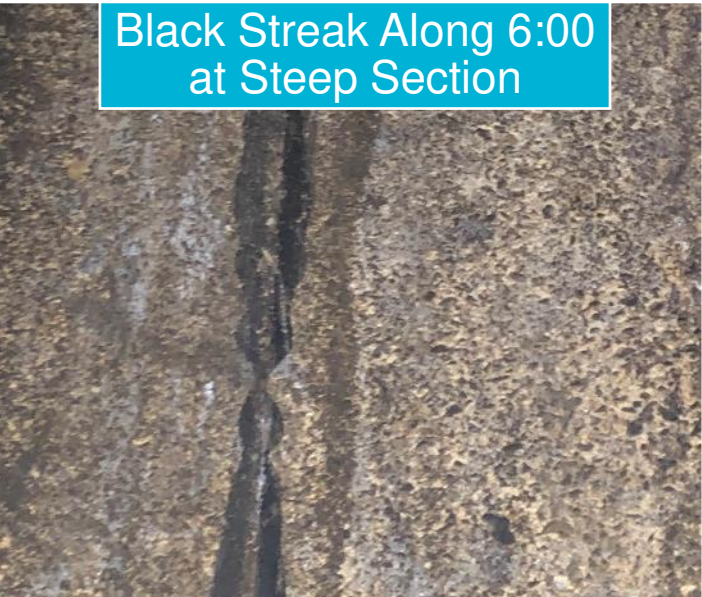
P7-10: D/S of Steep Section



Unnumbered Pipes Steep Section



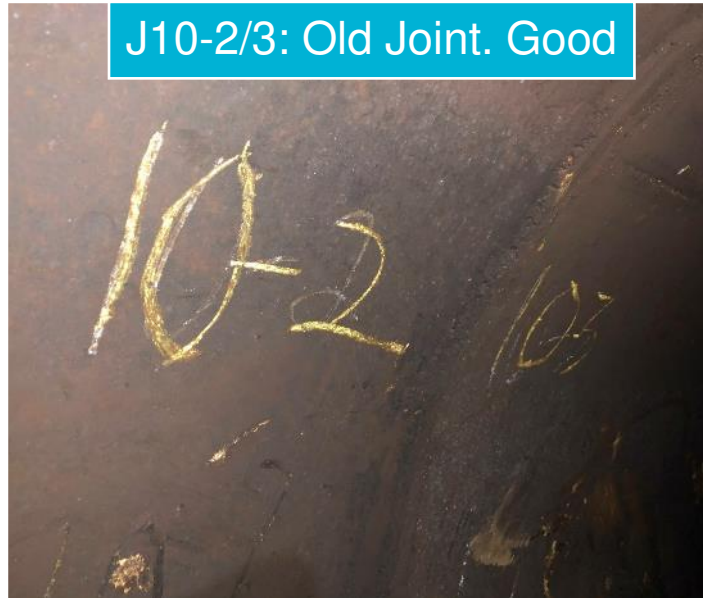
Black Streak Along 6:00
at Steep Section



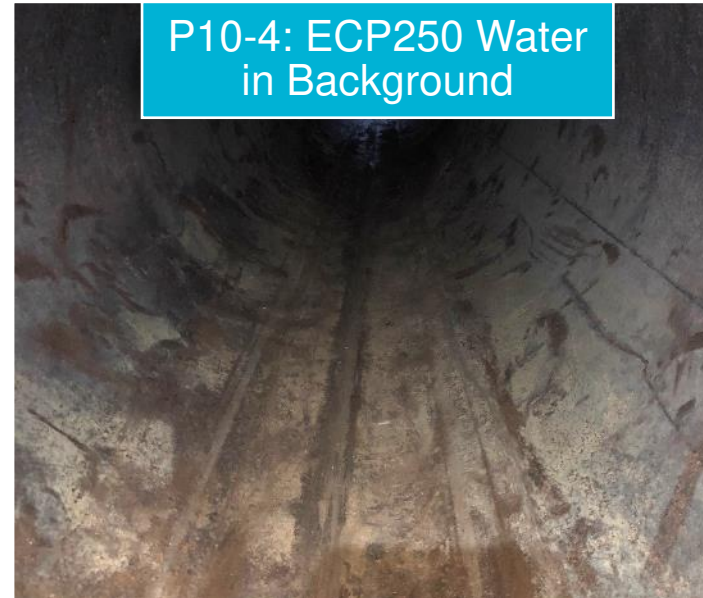
Ditto



Inspection Day 4 – 5 November 2020



J10-2/3: Old Joint. Good



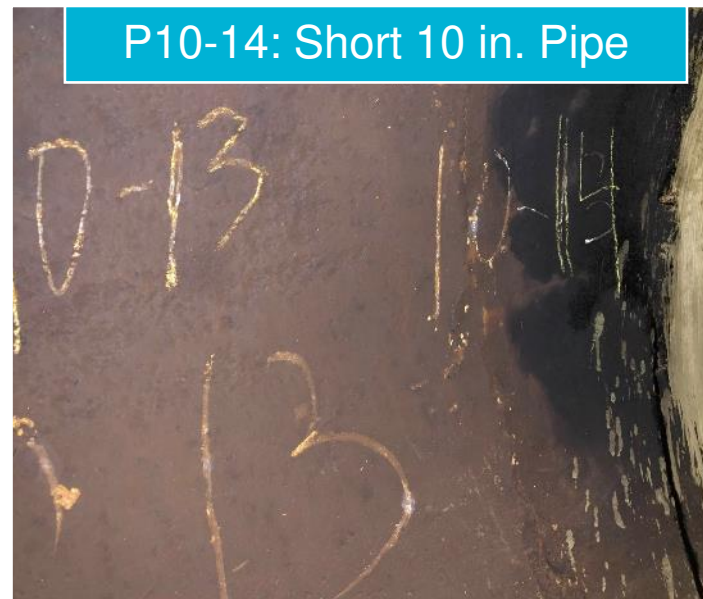
P10-4: ECP250 Water in Background



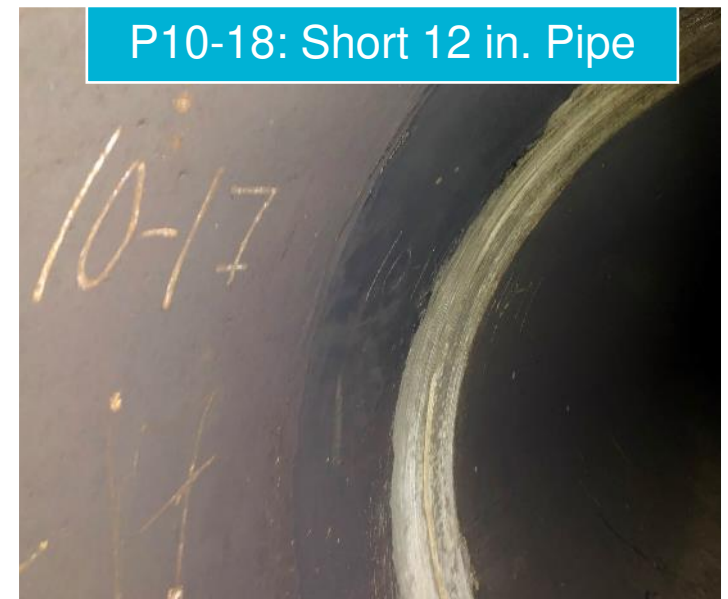
P10-4: Ditto



P10-7: Elbow. Good

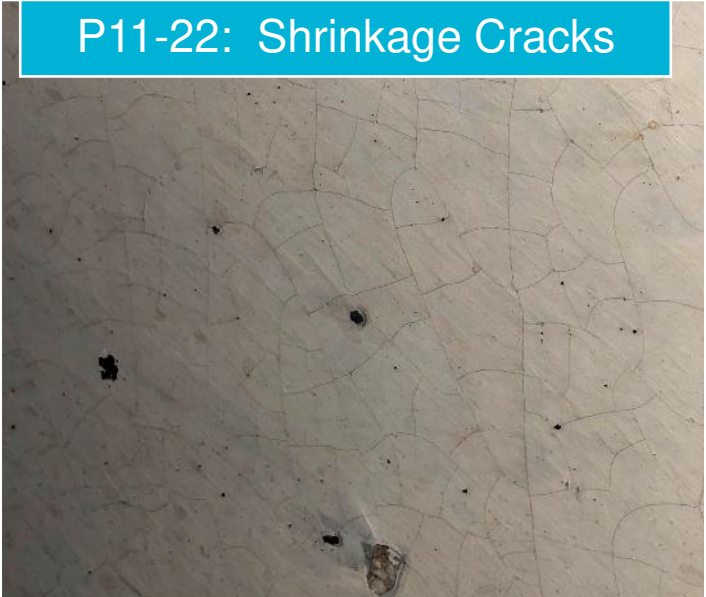
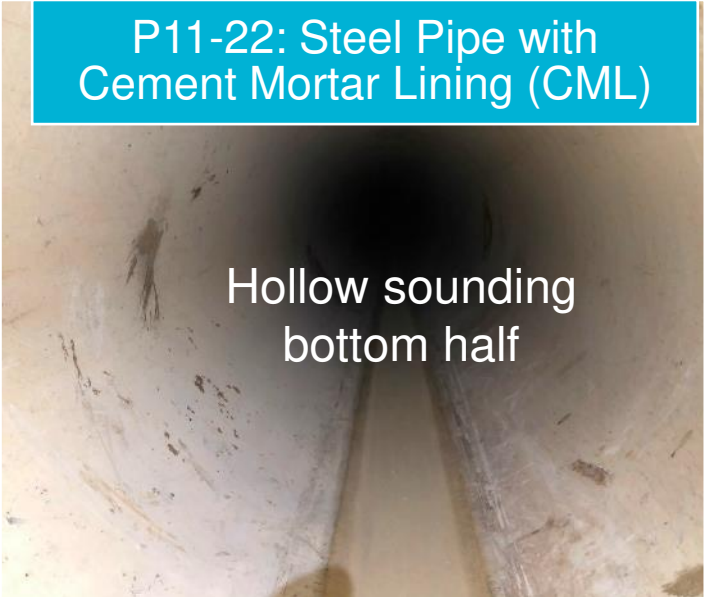


P10-14: Short 10 in. Pipe



P10-18: Short 12 in. Pipe

Inspection Day 4 – 5 November 2020



Inspection Day 4 – 5 November 2020



P11-22: 7 in. Side Outlet



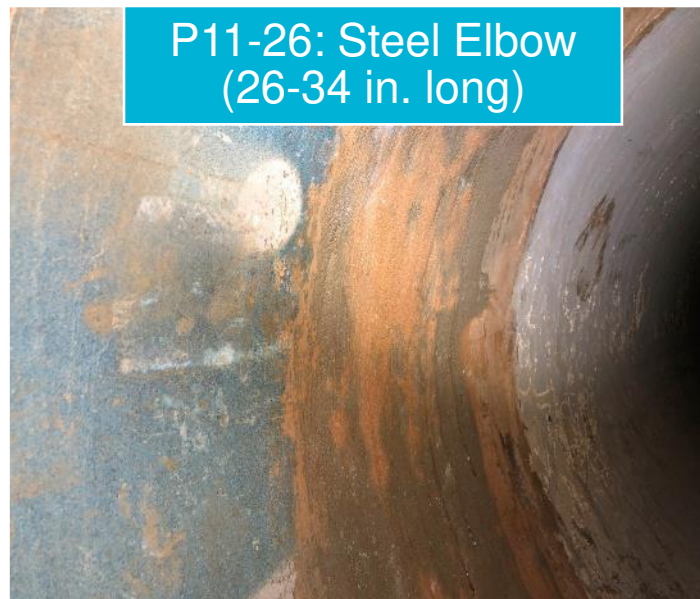
Pipe 11-24: Short 7 in. Steel Adapter



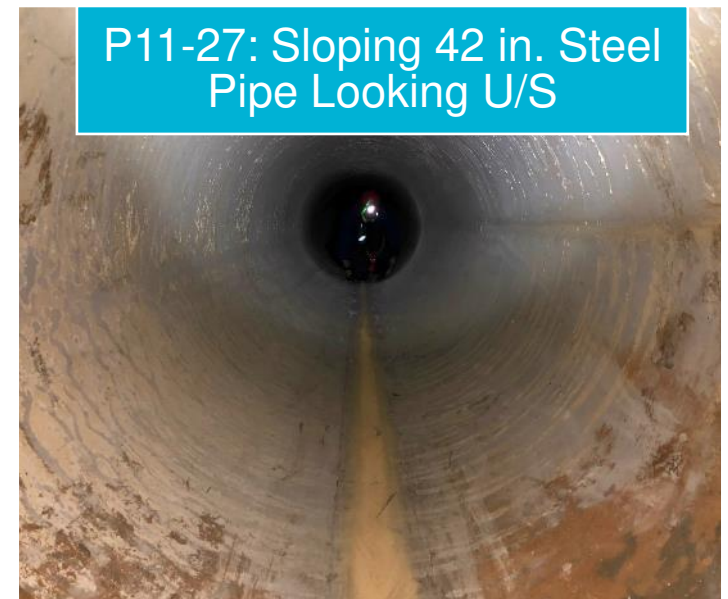
J11-24/25: Rough Joint



P11-25: 2 in. Outlet

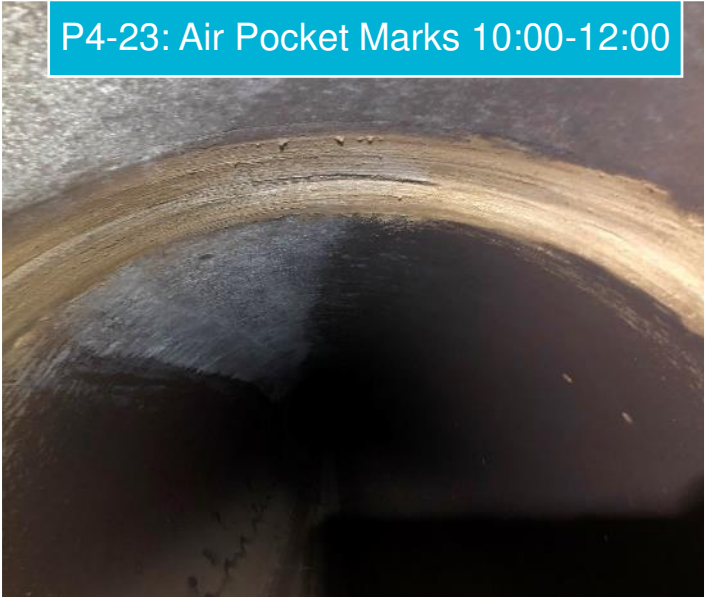


P11-26: Steel Elbow (26-34 in. long)

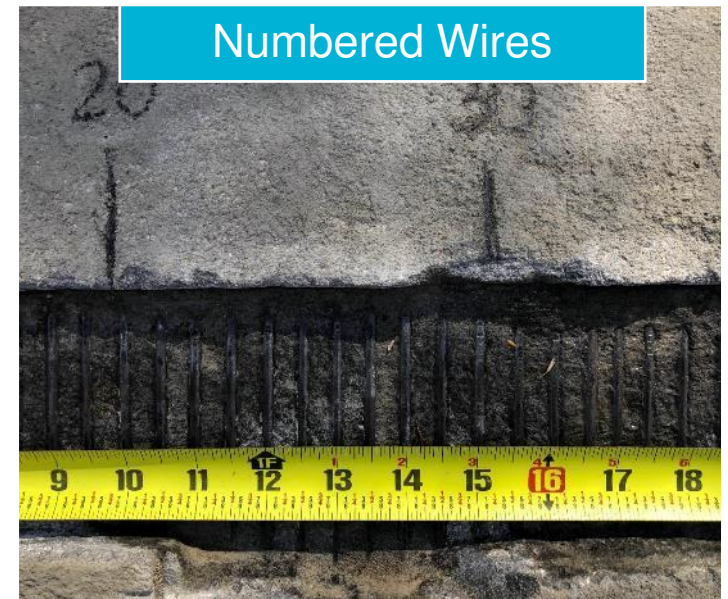
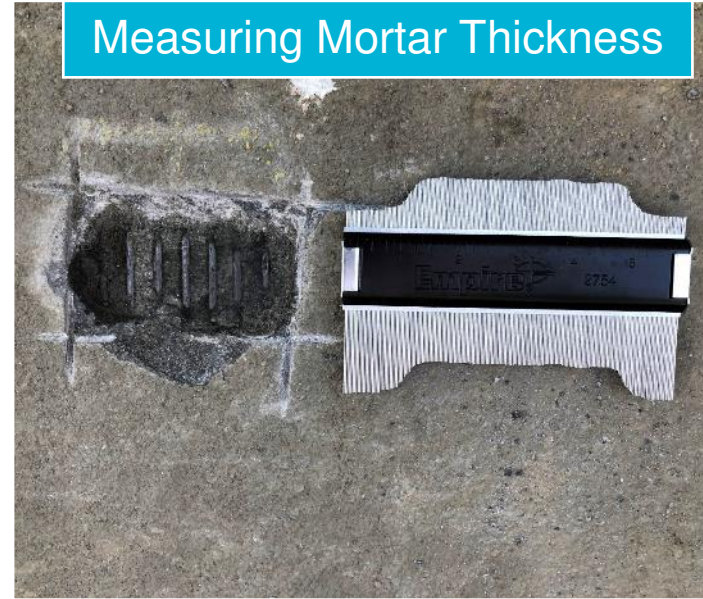


P11-27: Sloping 42 in. Steel Pipe Looking U/S

Inspection Day 5 – 6 November 2020

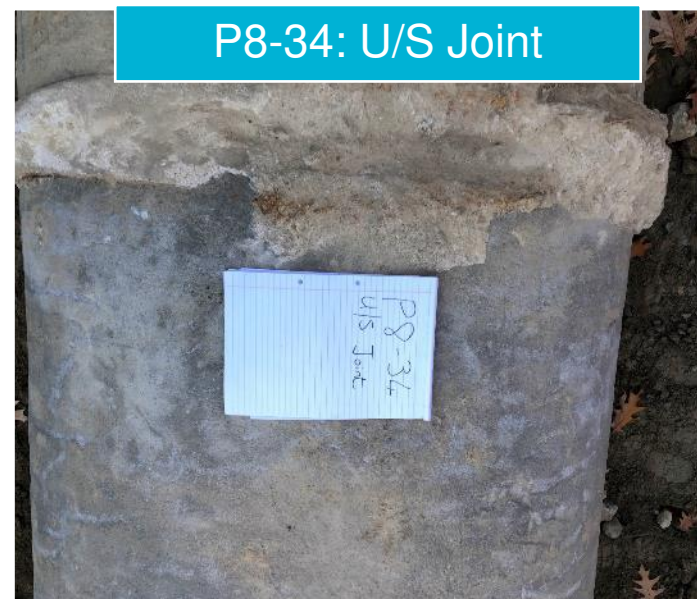


Inspection Day 6 – 9 November 2020: Continuity Testing on Pipe “7-56”



External Inspection: Day 6 – 9 November 2020 : Pipe 8-34

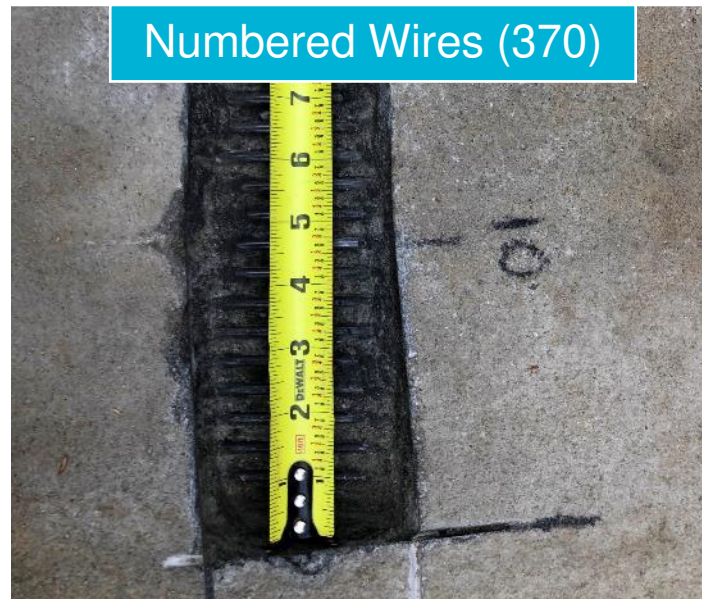
- Pipe 8-34 ECP 175 [5 wire breaks near joint] CH74+91.
- No visual signs of cracking, wire breaks, or damage.
- Performed hammer-sounding along full exposed length (crown, shoulder & springlines) & adjacent pipes.
 - No hollow sounds.
- Backfill material is imported clean fine sand (sample collected).
- Joint diaphragms appear acceptable and holding.



External Inspection: Day 7 – 10 November 2020 : Pipe 10-22 (ECP250)



Inspection Day 8 – 11 November 2020: Continuity Testing on Pipe 7-57



Electromagnetic (EM) Inspection Results

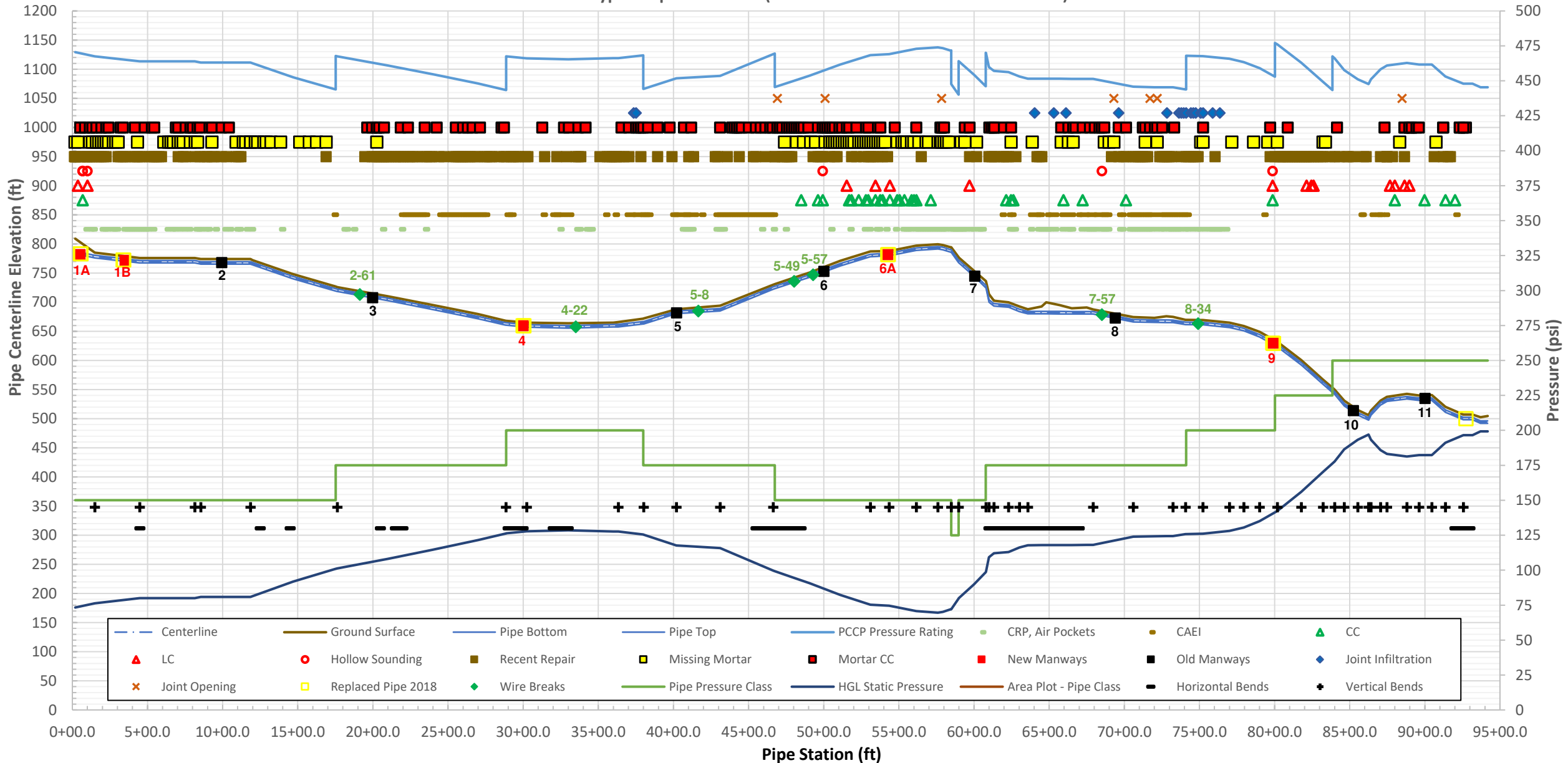
Table 4: PCCP with Broken Wires Identified by Pure Technologies During 2012 & 2019 Inspections

| Internal Pipe No | Low STA., ft | Dia. In. | Pipe Class | Pipe Length, ft | Distance to BWZ ¹ , ft (2012) | Total NBW ² (2012) | Distance to BWZ ¹ , ft (2019) | Total NBW ² (2019) | Change |
|------------------|--------------|----------|------------|-----------------|--|-------------------------------|--|-------------------------------|--------------|
| 2-61 | 19+13 | 42 | ECP175 | 16 | 12.0 | 5 | 12.0 | 5 | 0 |
| 4-22 | 33+50 | 42 | ECP200 | 16 | - | - | 10.0 | 5 | New Distress |
| 5-8 | 41+65 | 42 | ECP175 | 16 | 3.0 | 5 | 3.0 | 5 | 0 |
| 5-49 | 48+02 | 42 | LCP150 | 16 | 7.0 | 5 | 7.5 | 10 | 5 |
| 5-57 | 49+29 | 42 | LCP150 | 16 | - | - | 4.0 | 5 | New Distress |
| 7-57 | 68+51 | 42 | ECP175 | 16 | 2.0 | 5 | 2.5 | 10 | 5 |
| 8-34 | 74+91 | 42 | ECP200 | 16 | - | - | 14.5 | 5 | New Distress |

1. The break position of the region with broken wire wraps is measured from the low station of the distressed pipe to the center of the distress region rounded to the nearest 0.5 feet. BWZ is the broken wire zone.
2. Pure rounds the number of broken wire (NBW) wraps by region to the nearest 5 broken wire wraps. Regions with fewer than 5 broken wire wraps are reported as having 5 broken wire wraps. Similarly, regions with 5 to 10 broken wire wraps are rounded to 10 broken wire wraps.

Summary – Visual Pipe Observations (Profile View)

42-in. PCCP Bypass Pipeline Profile (Pre-2018 Renovations at Outlet Works)



Thank you

AECOM

Imagine it.
Delivered.