

**Vendor Name:** Penticton Foundry Ltd.

**MR #:** ALB-000-MR-PI-000003

**PO#:** 1399742

**CNRL PROJECT NUMBER:** KI191025-JPM INPIT CELL 1

**MOC #:** 2019-JPP-001

**Document Title:** ~~Bill of Materials~~ & Detailed Fabrication Drawings

**CNRL VP Number:** ~~JPP-300-C04-PI-000002-V~~/JPP-300-H03-PI-000095-V

**Vendor Document Number:** C04/H03

**Vendor Document REV:** Revision 0

**SDRL Code:** C04/H03

**EQUIPMENT NUMBER:** n/a

**Total Number of Pages:** 3



**Canadian Natural Resources Limited**

**Albian - Oilsands Projects**

**VENDOR PRINT REVIEW STAMP**

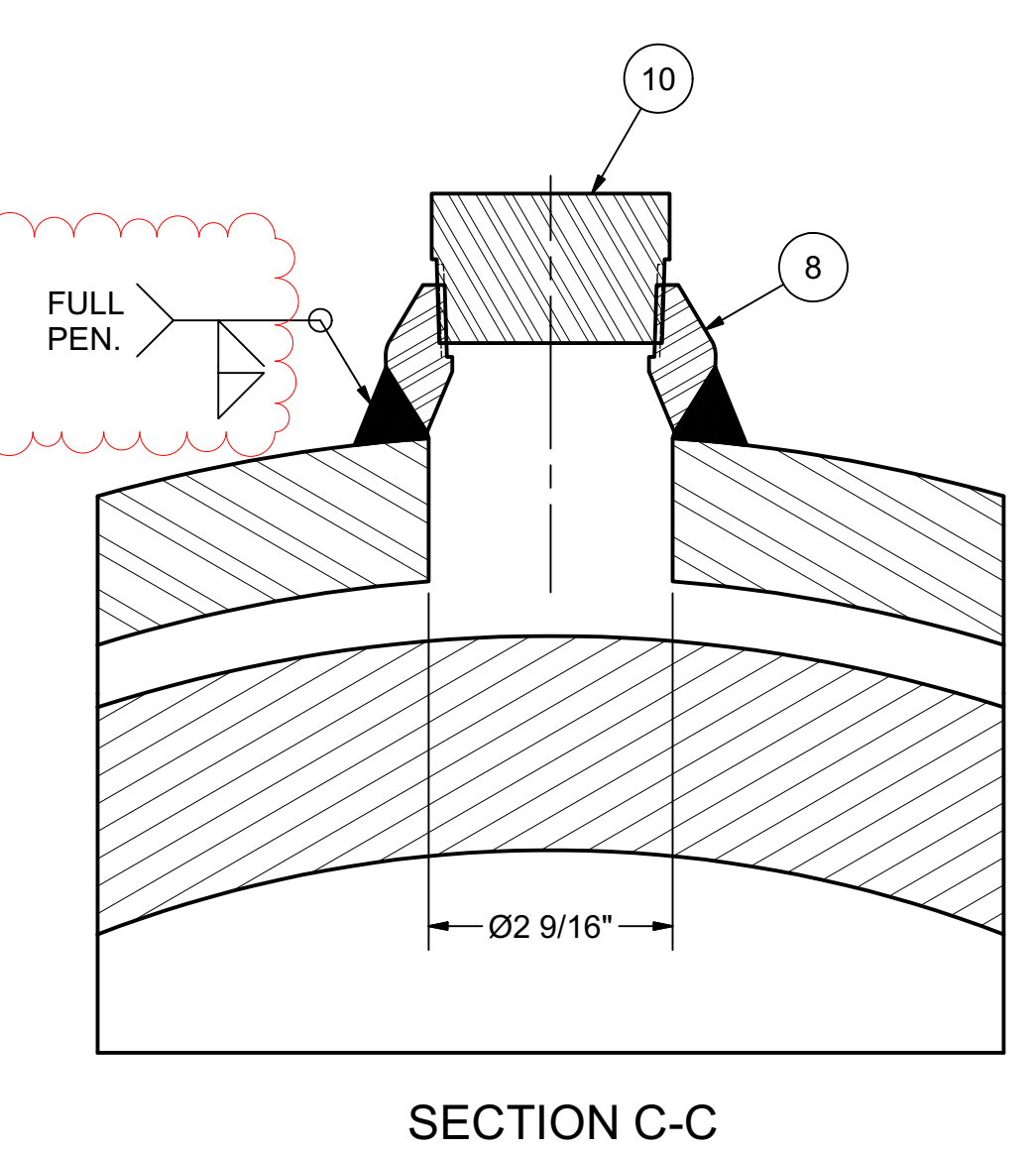
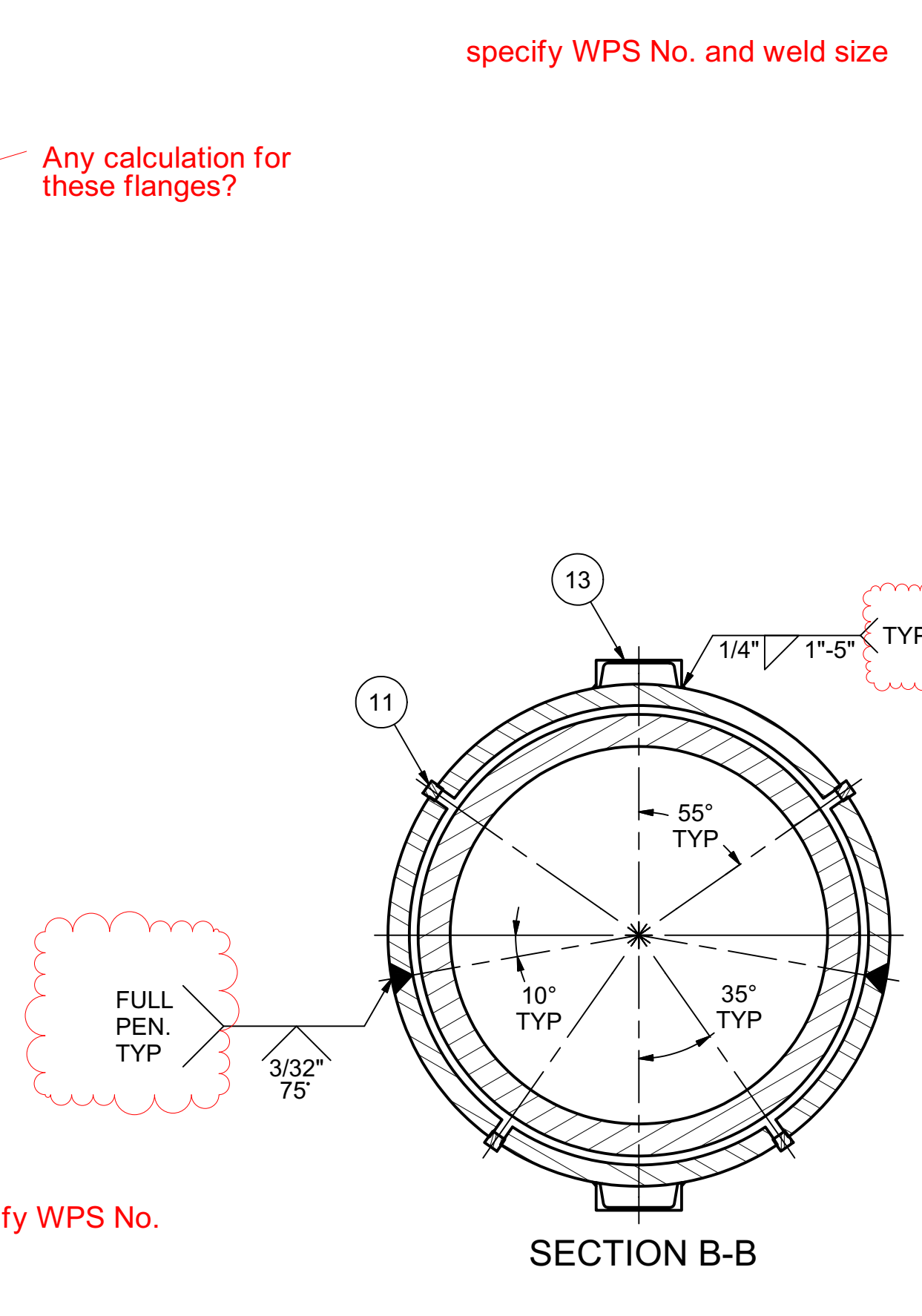
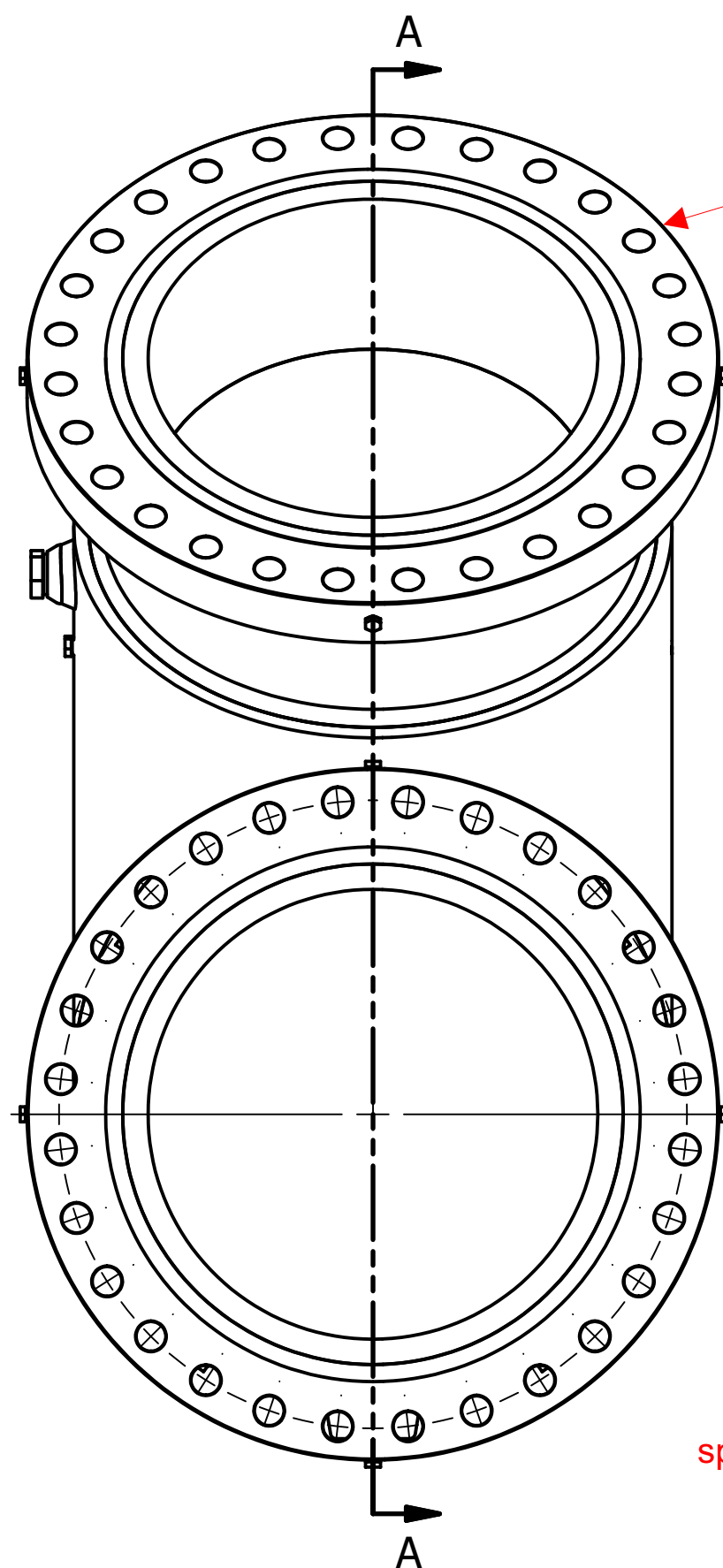
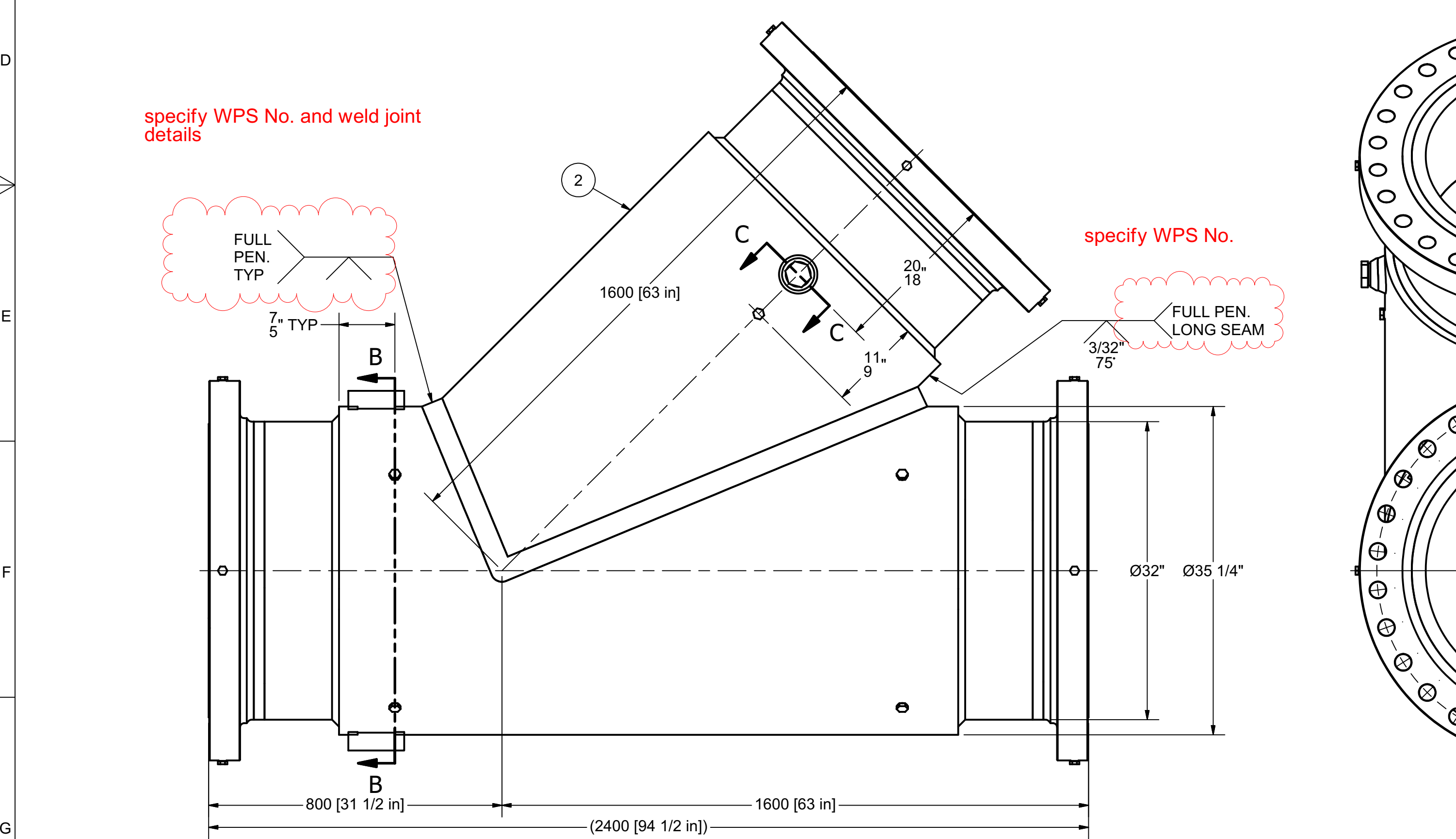
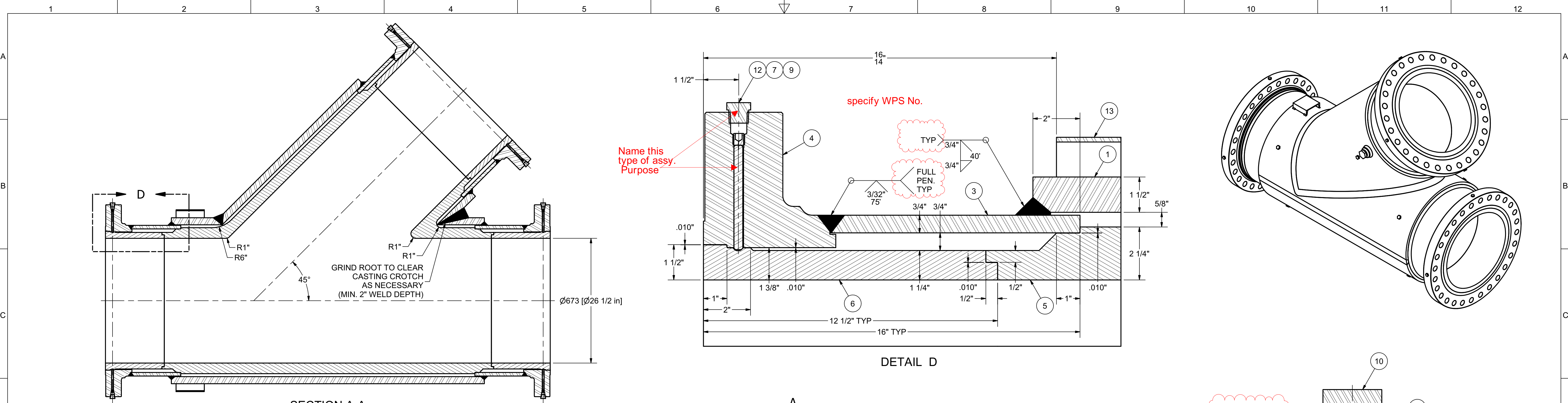
**Submittal No.** 001

Permission to proceed does not constitute acceptance of design, details, calculations or analysis, test methods or materials developed or selected by Supplier and does not relieve Supplier from full compliance with contractual or other obligations

- ☐ 1. Accepted, proceed.
- ☐ 2. Proceed, incorporate comments and resubmit as final.
- ☒ 3. Do **NOT** proceed, revise and resubmit.
- ☐ 4. Proceed, review not required/completed.

Signature: **Pir Dhalwala**

Date: **Dec 18, 2019**



ITEM		ITEM QTY	PART NUMBER	BILL OF MATERIAL	
				DESCRIPTION	
1	1		A1-19037-100-01 Trunk shell	106 1/32\" x 66 1/2\" x 1 1/2\" PLATE, A516 Gr.70N, ROLLED TO 35 1/4\" OD	
2	1		A1-19037-100-02 Branch shell	106 1/32\" x 48 15/16\" x 1 1/2\" PLATE, A516 Gr.70N, ROLLED TO 35 1/4\" OD	
3	3		A1-19037-100-03 32in pipe	32\" x 3/4\" WALL x 10 17/32\" PIPE, API 5L X52 PSL-2	
4	3		A1-19037-100-04 28in CL300 RF flange - custom	28\" CLASS 300 B16.47 Ser.A FFSO FLANGE, A105N, Ø28 7/8\" BORE	
5	1		A1-19037-100-05 HCWI lateral	26 1/2\" ID x 2 1/4\" WALL x 45° HCWI LATERAL, 19 1/2\" x 51\" x 51\", ASTM A532 CLASS III TYPE A, LEVEL 2, PF#(TBD)	
6	3		A1-19037-100-06 HCWI liner - pup	26 1/2\" ID x 1 1/4\" WALL x 12 1/2\" HCWI LINER, ASTM A532 CLASS III TYPE A, LEVEL 2, PF#(TBD)	
7	12		A1-19037-100-07 Trap rod	Ø3/8\" x 4 7/16\" ROUND BAR, A36	
8	1		A1-19037-100-08 2in x 36in threadolet	2\" x 36\" CLASS 3000 THREADOLET, A105N	
9	12		ANSI B18.3 - 1/2-13 UNC x 0.5	1/2\"-NC x 1/2\" FLAT POINT SOCKET HEAD SET SCREW, PLATED	
10	1		ASME B16.11 Hex Head Plug 2	2\"-NPT HEX HEAD PLUG, A105N	
11	9		ASME B16.11 Hex Head Plug 3/4	3/4\"-NPT HEX HEAD PLUG, A105N	
12	12		ASME B16.11 Hex Head Plug 1/2	1/2\"-NPT HEX HEAD PLUG, A105N	
13	2		Tag mount - 6in	C6x8.2 x 6\" [152mm], 44W	

weld map shall be added in the fabrication drawings

REVISION HISTORY		
REV	DATE	DESCRIPTION
B	11/25/19	32\" PIPE WAS PSL-1, ADDED \"LEVEL 2\" TO HCWI DESCRIPTIONS, UPDATED DESIGN DATA, ADDED TAG MOUNTS
A	11/14/19	ISSUED FOR REVIEW

EST. WT. 13,020 lbs.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES. BREAK ALL SHARP EDGES 0.1\"-0.04\" OR 45° RADI PER ANSI Y14.5 STANDARD.

TOLERANCES:

X	= ± .116
X.X	= ± .030
X.XX	= ± .015
X.XXX	= ± .005
ANGLES	= ± 1/2°

125/✓ FINISH ON ALL MACHINED SURFACES

DO NOT SCALE

DRAWN BY: GVD DATE: 11/25/19

CHECKED BY: DATE:

APPROVED: DATE:

MATERIAL & HEAT TREAT

TITLE: 28\" x 28\" x 45\" HCWI LATERAL CNUL ALBIAN

PROJECT No: A1-19037 REFERENCE: 3-2-0218 Sht.4 OF 7

FILE NAME: A1-19037-100-00 28in lateral.idw

REV. B SHEET 1 OF 1

ALCO Industrial

2103 - 8 Street, Nisku, Alberta, Canada T9E 7Y9

Phone: (780) 451-8222 • Fax: (780) 452-4355

DESIGN CODE: ASME B31.4, 2016

LINE CLASS: USX

SERVICE: COARSE TAILING SANDS

DESIGN PRESSURE: 4447 kPag (645 psig)

DESIGN TEMPERATURE: 93°C (199°F)

TEST PRESSURE: 4892 kPag (710 psig)

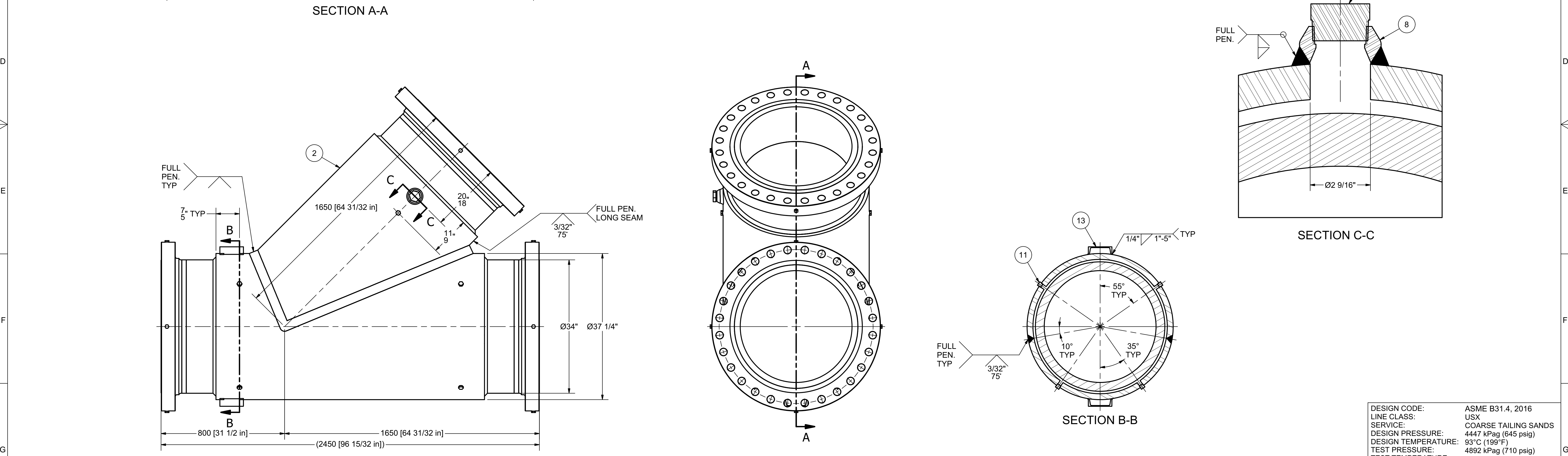
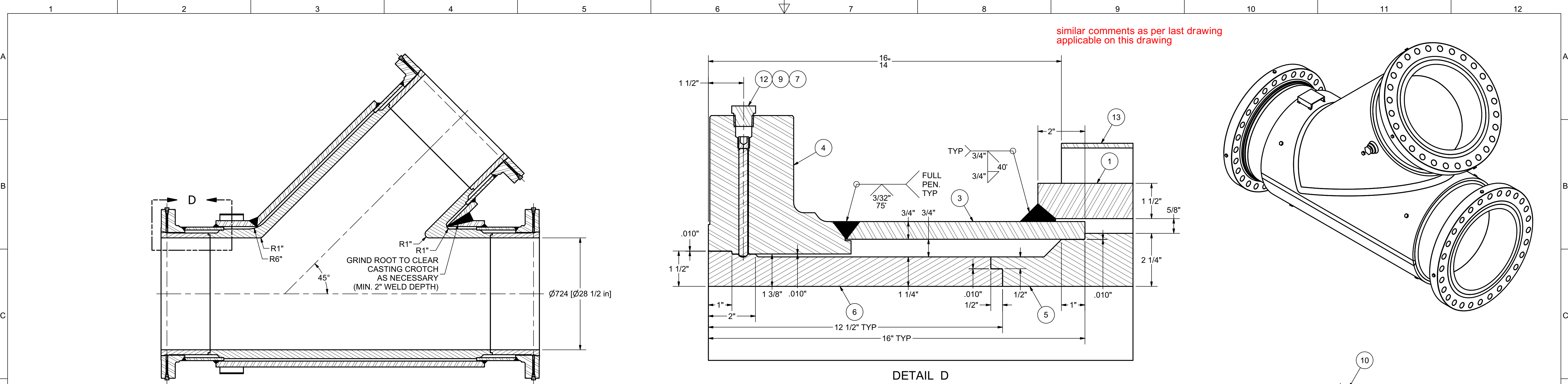
TEST TEMPERATURE: 15°C (59°F)

TEST DURATION: 30 MINUTES

CNRL-OVR-STD-MC-00007 Shall follow

REFER TO DRAWING A1-00001-100-01 FOR ALL GENERAL NOTES AND SPECIFICATIONS





BILL OF MATERIAL			
ITEM	ITEM QTY	PART NUMBER	DESCRIPTION
1	1	A1-19037-200-01 Trunk shell	112 5/16" x 69 15/32" x 1 1/2" PLATE, A516 Gr.70N, ROLLED TO 37 1/4" OD
2	1	A1-19037-200-02 Branch shell	112 5/16" x 50 29/32" x 1 1/2" PLATE, A516 Gr.70N, ROLLED TO 37 1/4" OD
3	3	A1-19037-200-03 34in pipe	34" x 3/4" WALL x 10 3/32" PIPE, API 5L X52 PSL-2
4	3	A1-19037-200-04 30in CL300 RF flange - custom	30" CLASS 300 B16.47 Ser.A FFSO FLANGE, A105N, Ø31 1/4" BORE
5	1	A1-19037-200-05 HCWI lateral	28 1/2" ID x 2 1/4" WALL x 45° HCWI LATERAL, 19 1/2" x 52 31/32" x 52 31/32", ASTM A532 CLASS III TYPE A, LEVEL 2, PF#(TBD)
6	3	A1-19037-200-06 HCWI liner - pup	28 1/2" ID x 1 1/4" WALL x 12 1/2" HCWI LINER, ASTM A532 CLASS III TYPE A, LEVEL 2, PF#(TBD)
7	12	A1-19037-200-07 Trap rod	Ø3/8" x 4 9/16" ROUND BAR, A36
8	1	A1-19037-200-08 2in x 38in threadolet	2" x 36" CLASS 3000 THREADOLET, A105N
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10	1	ASME B16.11 Hex Head Plug 2	2"-NPT HEX HEAD PLUG, A105N
11	10	ASME B16.11 Hex Head Plug 3/4	3/4"-NPT HEX HEAD PLUG, A105N
12	12	ASME B16.11 Hex Head Plug 1/2	1/2"-NPT HEX HEAD PLUG, A105N
13	2	Tag mount - 6in	C6x8.2 x 6" [152mm], 44W

REVISION HISTORY		
REV	DATE	DESCRIPTION
B	11/25/19	34" PIPE WAS PSL-1, ADDED "LEVEL 2" TO HCWI DESCRIPTIONS, UPDATED DESIGN DATA, ADDED TAG MOUNTS
A	11/14/19	ISSUED FOR REVIEW

DESIGN CODE: ASME B31.4, 2016  
LINE CLASS: USX  
SERVICE: COARSE TAILING SANDS  
DESIGN PRESSURE: 4447 kPag (645 psig)  
DESIGN TEMPERATURE: 93°C (199°F)  
TEST PRESSURE: 4892 kPag (710 psig)  
TEST TEMPERATURE: 15°C (59°F)  
TEST DURATION: 30 MINUTES

CNRL-OVR-STD-MC-000007

ALCO Industrial  
2103 - 8 Street,  
Nisku, Alberta, Canada T9E 7Y9  
Phone: (780) 451-8222 • Fax: (780) 452-4355

30" x 30" x 45° HCWI LATERAL  
CNUL ALBIAN

PROJECT No: A1-19037  
REFERENCE: 3-2-0218 Sht 5 OF 7  
FILE NAME: A1-19037-200-00 30in lateral.idw

REV: B  
SHEET 1 OF 1

# Changemark History

There are no outstanding changemarks on this document.