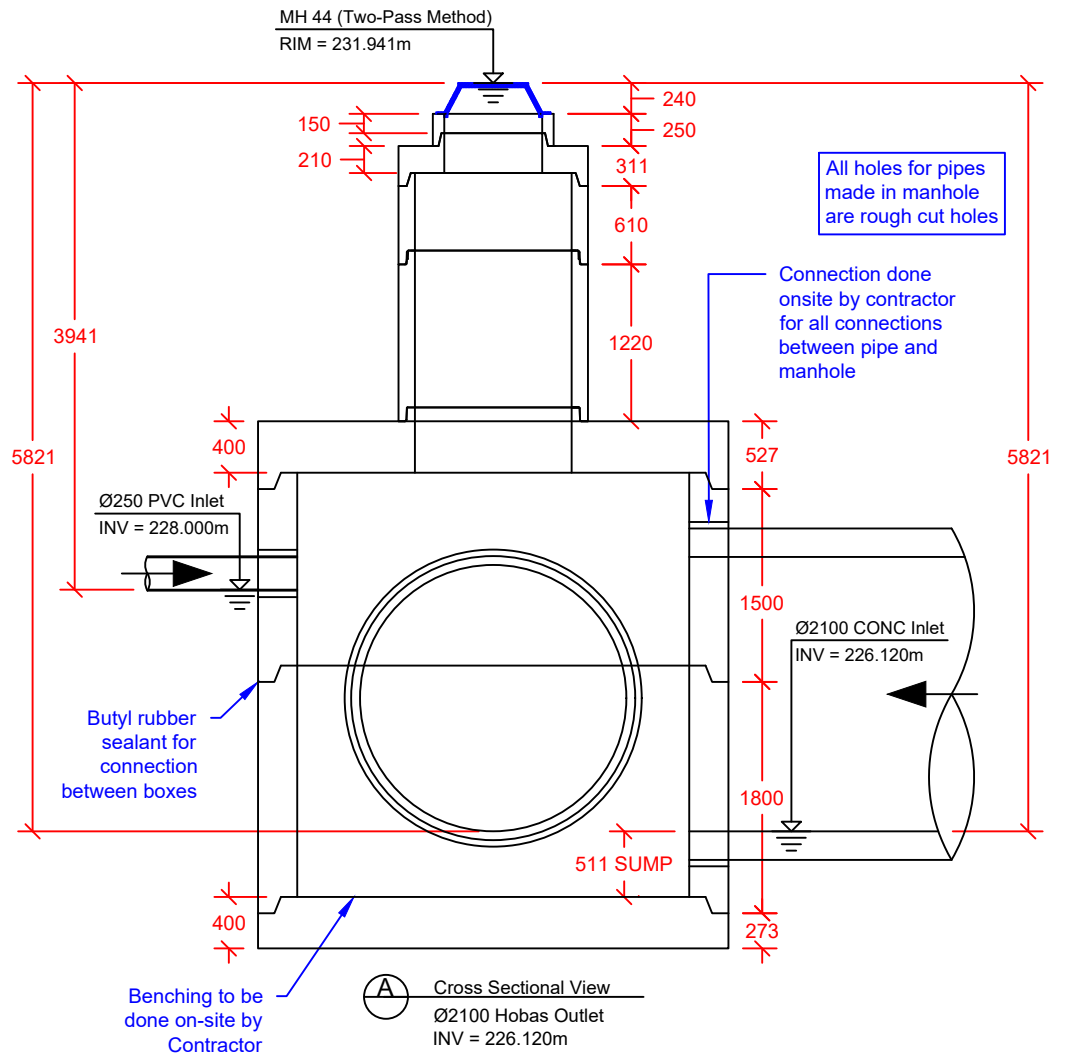


Plan View
 MH 44 (Two-Pass Method)
 3.6x3.0m Box Manhole

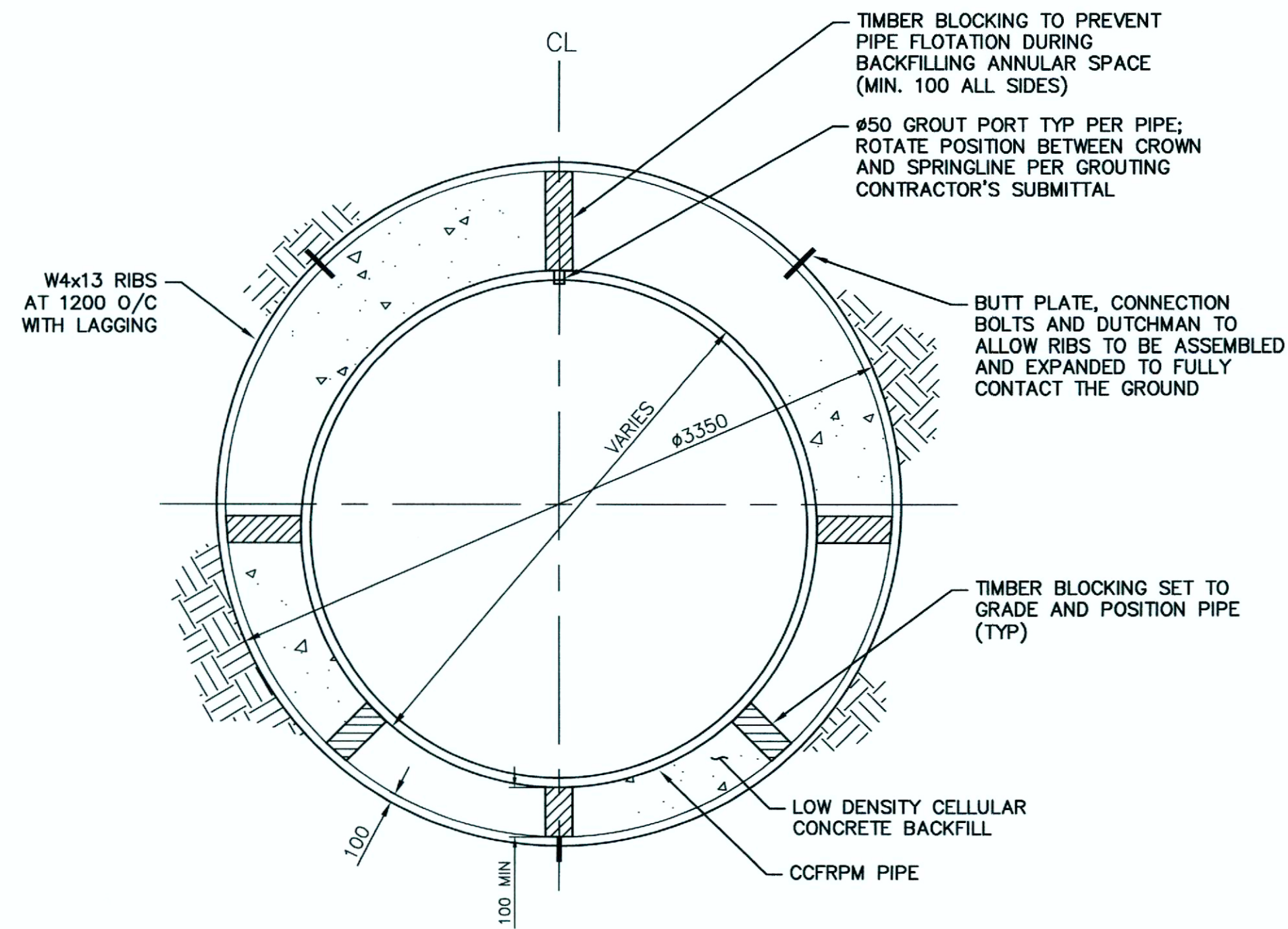


Cross Sectional View
 Ø2100 Hobas Outlet
 INV = 226.120m

DRAWN BY:	A.C.
SCALE:	N/A
DATE:	February 18, 2020
PROJECT #:	19-693
REVISION #:	Rev. 5
CHECKED BY:	

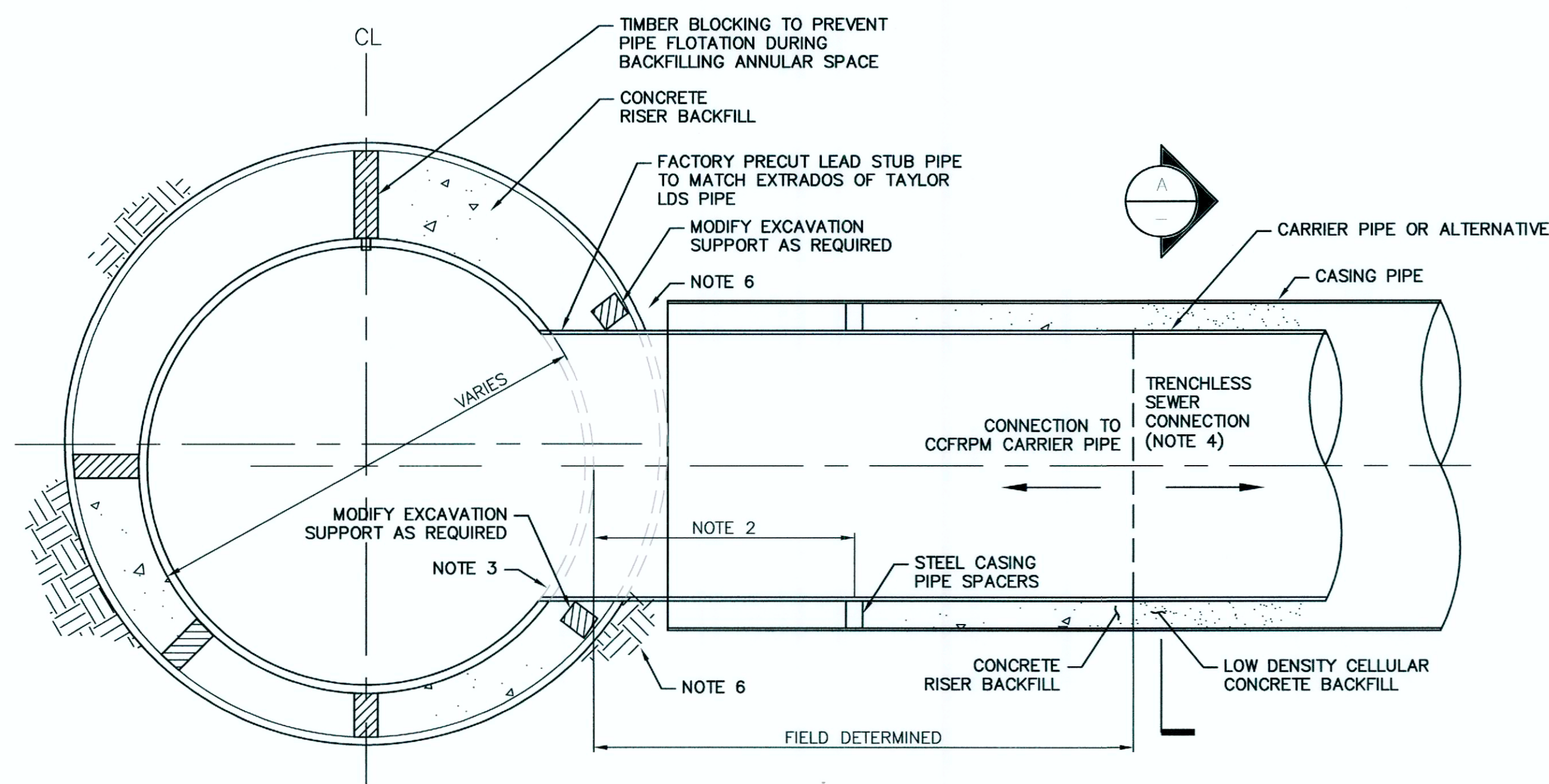
MH 44 (Two-Pass Method) 3.6x3.0m Box Manhole	
JCON COW 1067-2018B	
<i>All units in mm unless otherwise specified</i>	

INLAND
Pipe
 2494 FERRIER ST. WINNIPEG, MB.
 PH: 204 334-4300 FAX: 204 334-7957



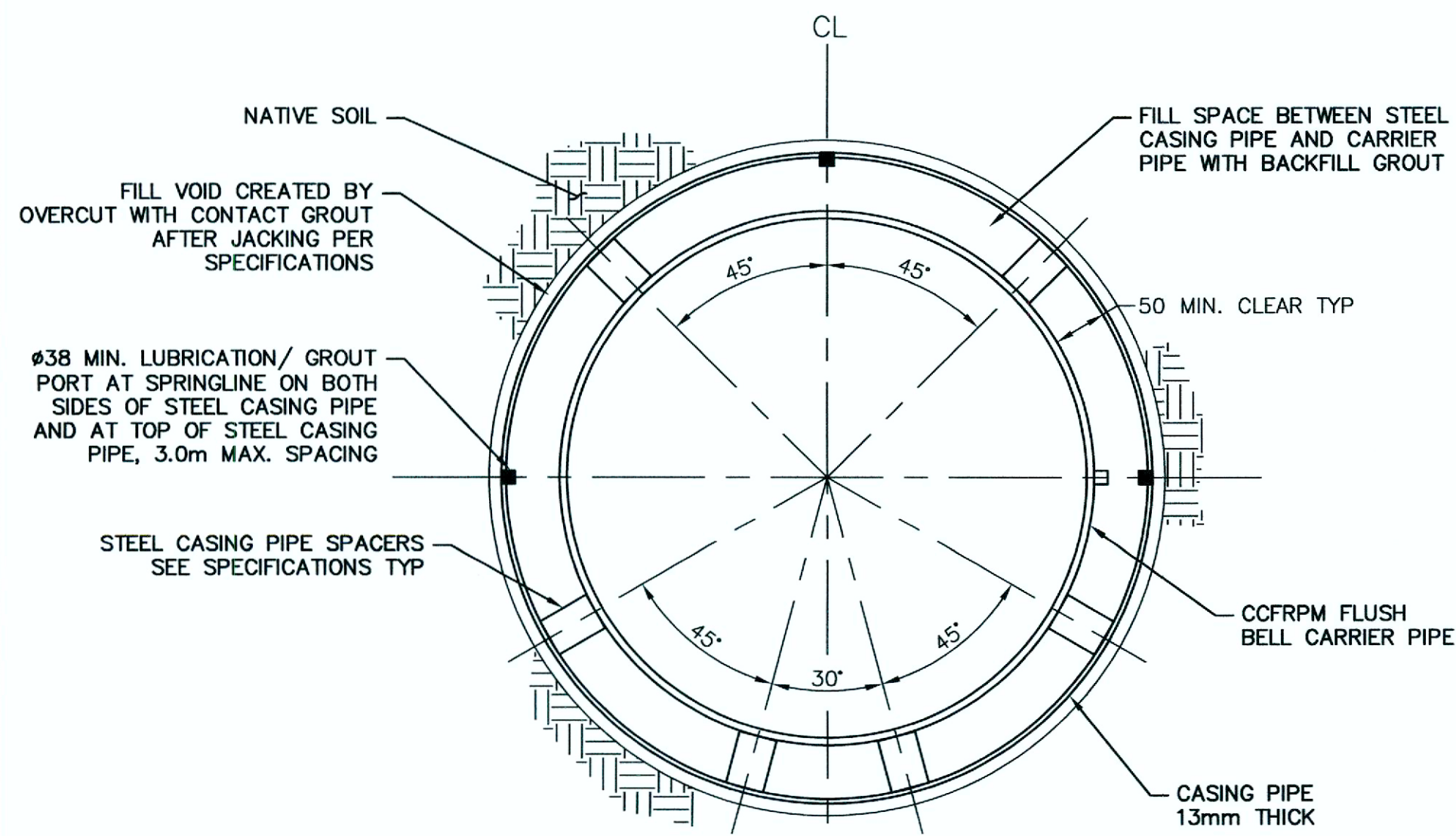
NOTE
1. ADJUST BLOCKING HEIGHTS TO MAINTAIN CARRIER PIPE SLOPE AND INVERTS AS INDICATED ON THE DRAWINGS.

1 TUNNEL DETAIL
NTS



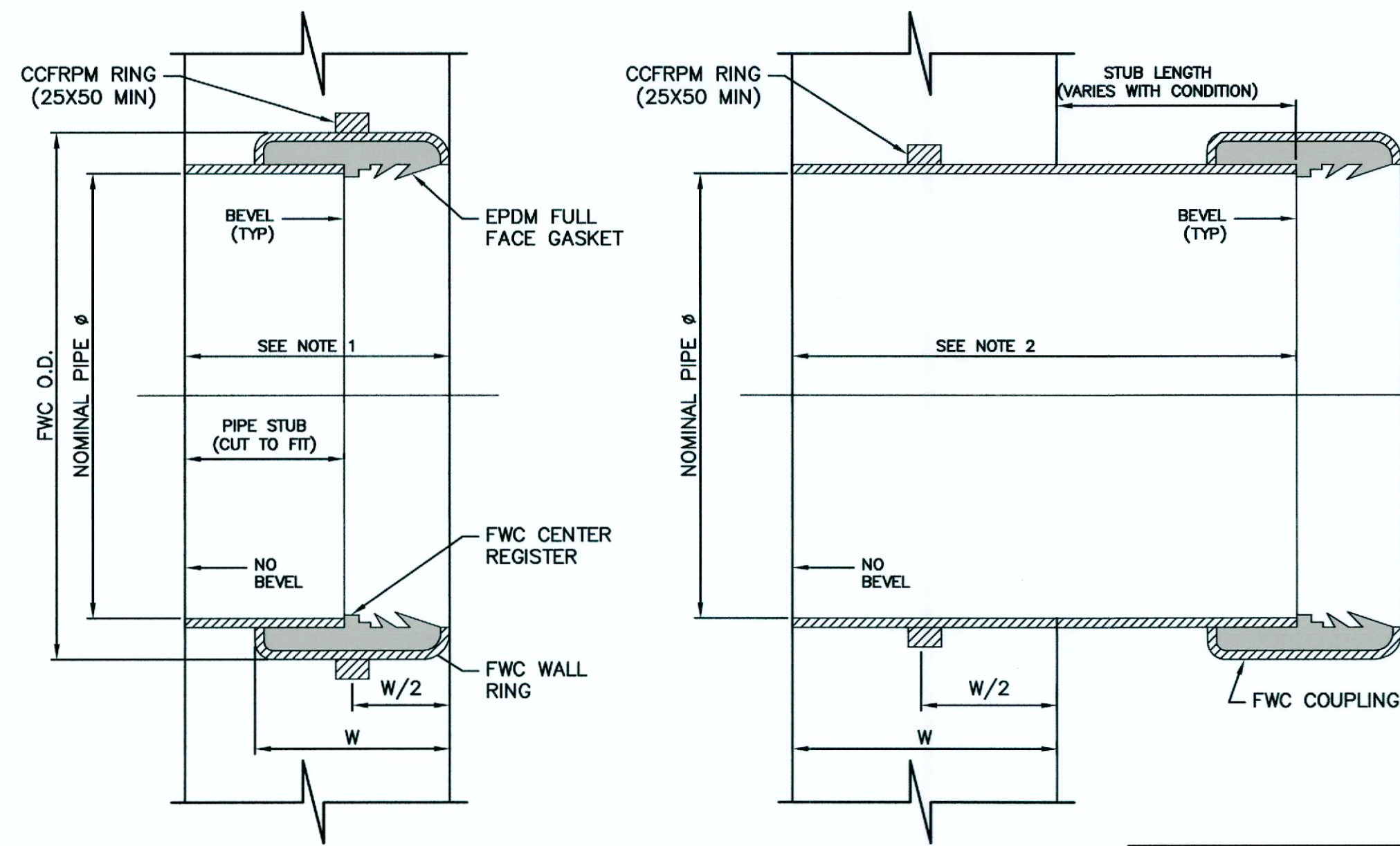
NOTES
1. ONLY ONE STUB SHOWN FOR CLARITY.
2. STEEL CASING PIPE SPACERS PER PIPE MANUFACTURER'S RECOMMENDATIONS.
3. LAMINATE STUB CONNECTION PER CCFRPM PIPE MANUFACTURER'S RECOMMENDATIONS.
4. STUB OUT TO CONTINUE AS CCFRPM PIPE INSIDE STEEL CASING AND EXTEND A MIN. OF 2 METERS FROM TUNNEL AND TRANSITION TO ALTERNATE MATERIAL IN ACCORDANCE WITH B7 OF THE SPECIFICATIONS.
5. METHODS ALTERNATIVE TO AUGER BORING ARE SUBJECT TO ACCEPTANCE IN ACCORDANCE WITH B7 OF THE SPECIFICATION.
6. PROVIDE GROUND SUPPORT AS REQUIRED TO COMPLETE CONNECTION TO LDS TRUNK. SUBMIT PROPOSED METHOD TO CONTRACT ADMINISTRATOR FOR APPROVAL.

2 STUB TUNNEL CONNECTION DETAIL
NTS



NOTE:
ALTERNATIVE CASING DIAMETER MAY BE PROPOSED BY THE CONTRACTOR, SUBJECT TO CONTRACT REQUIREMENTS AND CONTRACT ADMINISTRATOR'S APPROVAL.

A CCFRPM TUNNEL FLUSH BELL PIPE (WITH CASING PIPE)
NTS



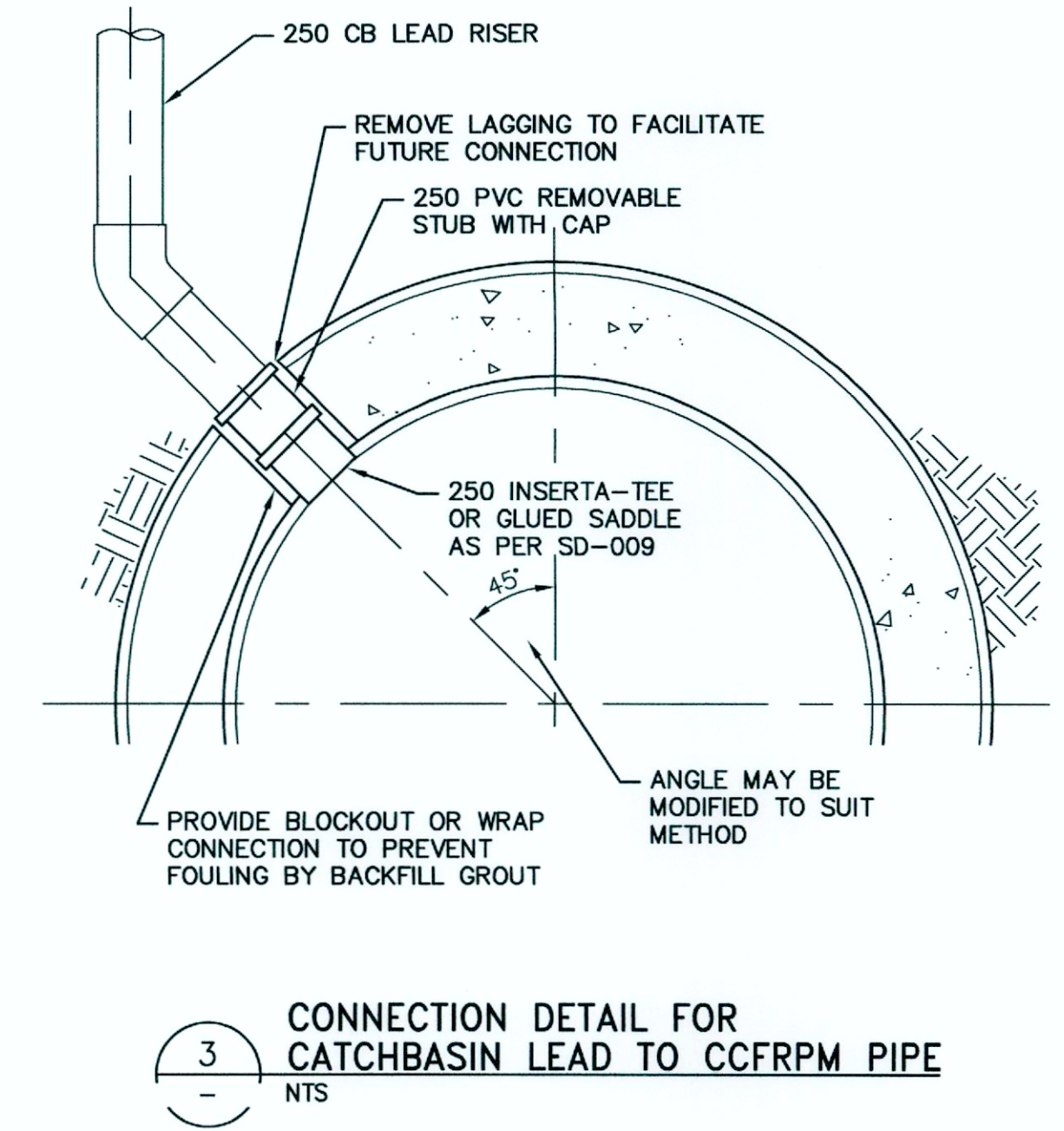
FWC COUPLING WALL FITTING (WITH PIPE STUB)

WALL PIPE FITTING

NOMINAL PIPE Ø	FWC WIDTH (APPROX.)
450-500	200mm
600-1350	250mm
1425-2750	290mm

NOTES:
1. TOTAL WIDTH OF STRUCTURE WALLS GREATER THAN 290mm (AT CONTRACTOR'S OPTION)
2. MINIMUM WALL PIPE LENGTH EQUAL TO STRUCTURE THICKNESS (W) PLUS STUB LENGTH
3. WALL FITTING TO BE CAST IN PLACE ON SITE OR PRECAST BY MANHOLE MANUFACTURER.

4 HOBAS PIPE CONNECTION DETAIL
NTS

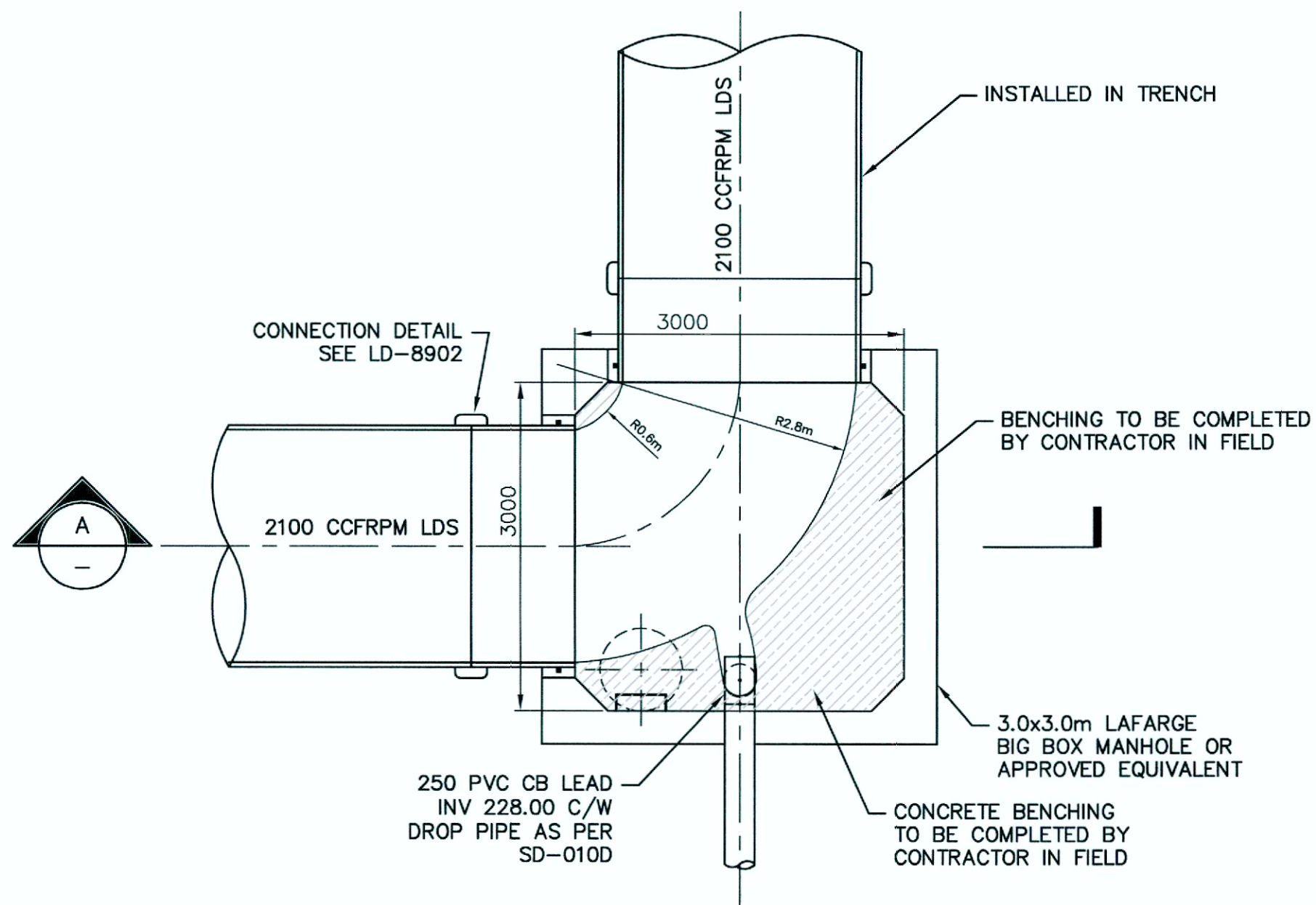


3 CONNECTION DETAIL FOR CATCHBASIN LEAD TO CCFRPM PIPE
NTS

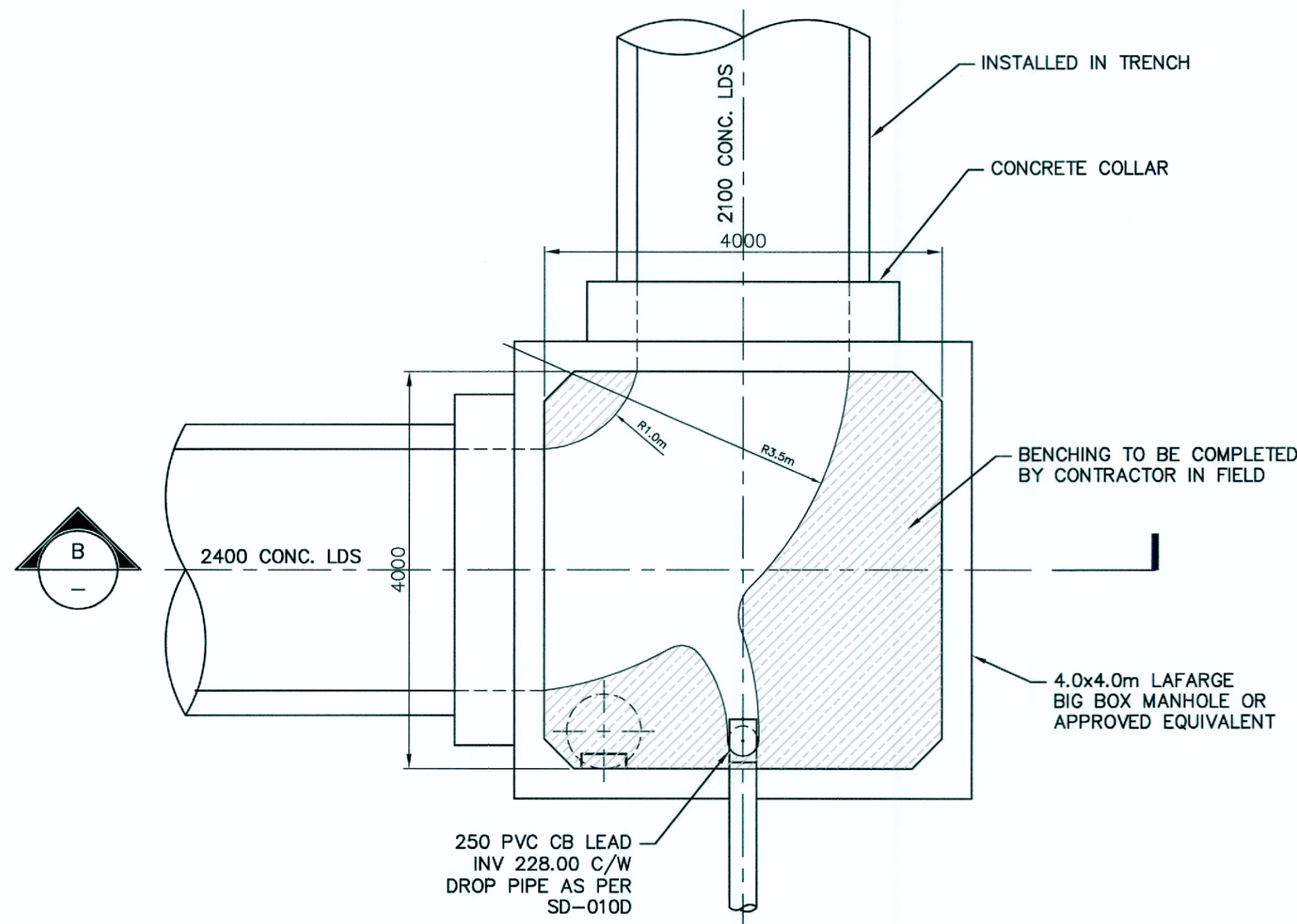
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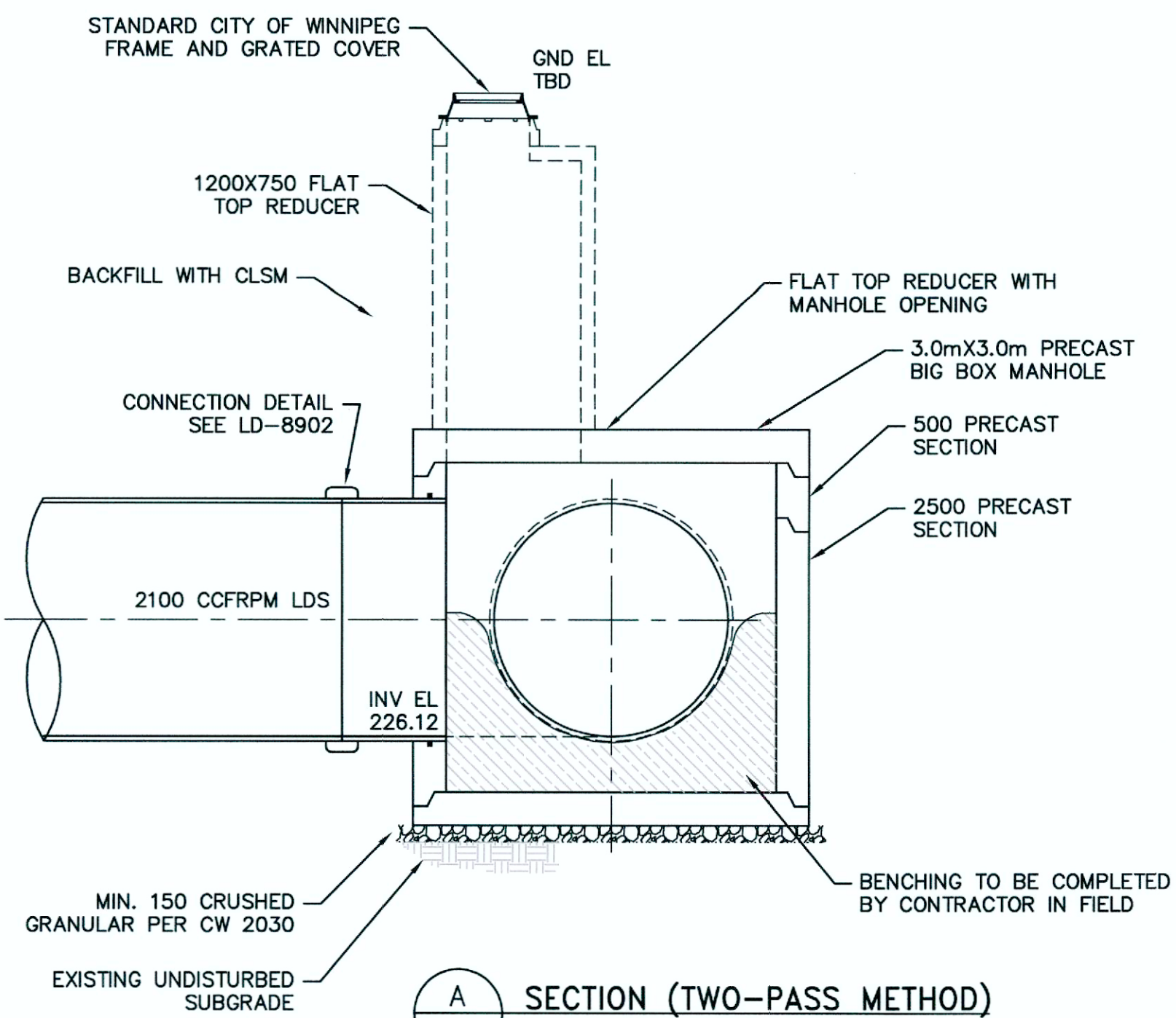
B.M. ELEV.		KGS GROUP CONSULTING ENGINEERS	JACOBS	ENGINEER'S SEAL 	THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT		
DESIGNED BY	AF			CHECKED BY		MD	PROJECT TITLE
DRAWN BY	JBC	HOR. SCALE: AS NOTED VERTICAL: -		APPROVED BY 	COCKBURN AND CALROSSIE COMBINED SEWER RELIEF WORKS - CONTRACT 5 TWO-PASS TUNNELLING DETAILS	13 OF 19	
ISSUED FOR TENDER	01/2019	JBC		RELEASED FOR CONSTRUCTION: 	CONSULTANT DRAWING NO. C-511	COMPUTER FILE NAME	C-511.dwg
NO. REVISIONS	DATE	BY	DATE			CITY DRAWING NUMBER	LD-8902



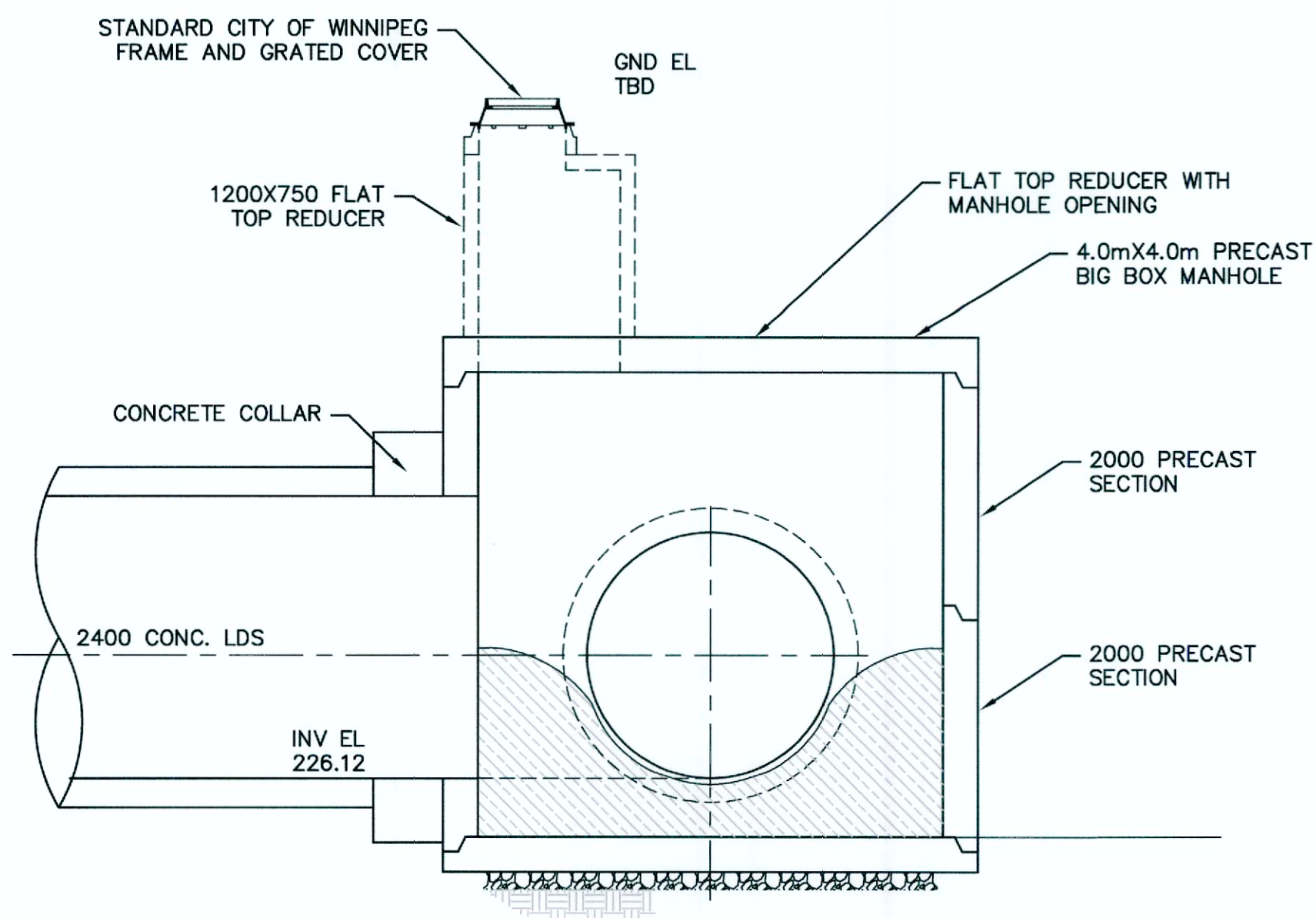
1 PLAN (TWO-PASS METHOD)
1:50



2 PLAN (PIPE JACKING METHOD)
1:50



A SECTION (TWO-PASS METHOD)
1:50



B SECTION (PIPE JACKING METHOD)
1:50

CONSTRUCTION NOTES:

- SEWER AND WATER SERVICES SHOWN ON DRAWING ARE APPROXIMATE ONLY.
- LOCATION OF ALL SEWER AND WATER LINES TO BE CONFIRMED IN FIELD.
- TRAFFIC MANAGEMENT PLAN TO BE IMPLEMENTED AS PER SPECIFICATIONS.
- CONTRACTOR TO DESIGN TEMPORARY SHORING WORKS. SEE TRAFFIC RESTRICTIONS WITHIN THE DETAIL SPECIFICATIONS FOR CONSTRAINTS.
- PRECAST BIG BOX TO BE INSTALLED AS PER CW2130 UNLESS OTHERWISE NOTED.
- BIG BOX MANHOLE MANUFACTURED BY LAFARGE OR APPROVED EQUIVALENT IN ACCORDANCE WITH B7 OF THE SPECIFICATION.
- TWO INDEPENDENT DETAILS ARE SHOWN, ONE FOR EACH PIPE MATERIAL.

NOTE:
IN ADDITION TO THE JACKING FORCE REQUIREMENTS, PIPES WITHIN THE SHAFT TO BE CLASSIFIED FOR OPEN CUT INSTALLATION, INSTALLATION INCLUDING BACKFILLING WITH CLSM TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

File name: C:\pw_workdir\ch2mhill_wbg\cortez1\c0443046\



B.M. ELEV.						
DESIGNED BY	MD				CHECKED BY	MD
DRAWN BY	JBC	APPROVED BY	RJS (KGS Group)	COCKBURN AND CALROSSIE COMBINED SEWER RELIEF WORKS - CONTRACT 5	19 OF 19	
HOR. SCALE: AS NOTED		RELEASED FOR CONSTRUCTION:			COMPUTER FILE NAME	
VERTICAL: -		DATE: 01/29/19			S-522.dwg	
0 ISSUED FOR TENDER	01/2019 JBC	CONSULTANT DRAWING NO.		MANHOLE CHAMBER MH-44	CITY DRAWING NUMBER	
NO. REVISIONS	DATE BY	S-522		DETAILS	LD-8908	