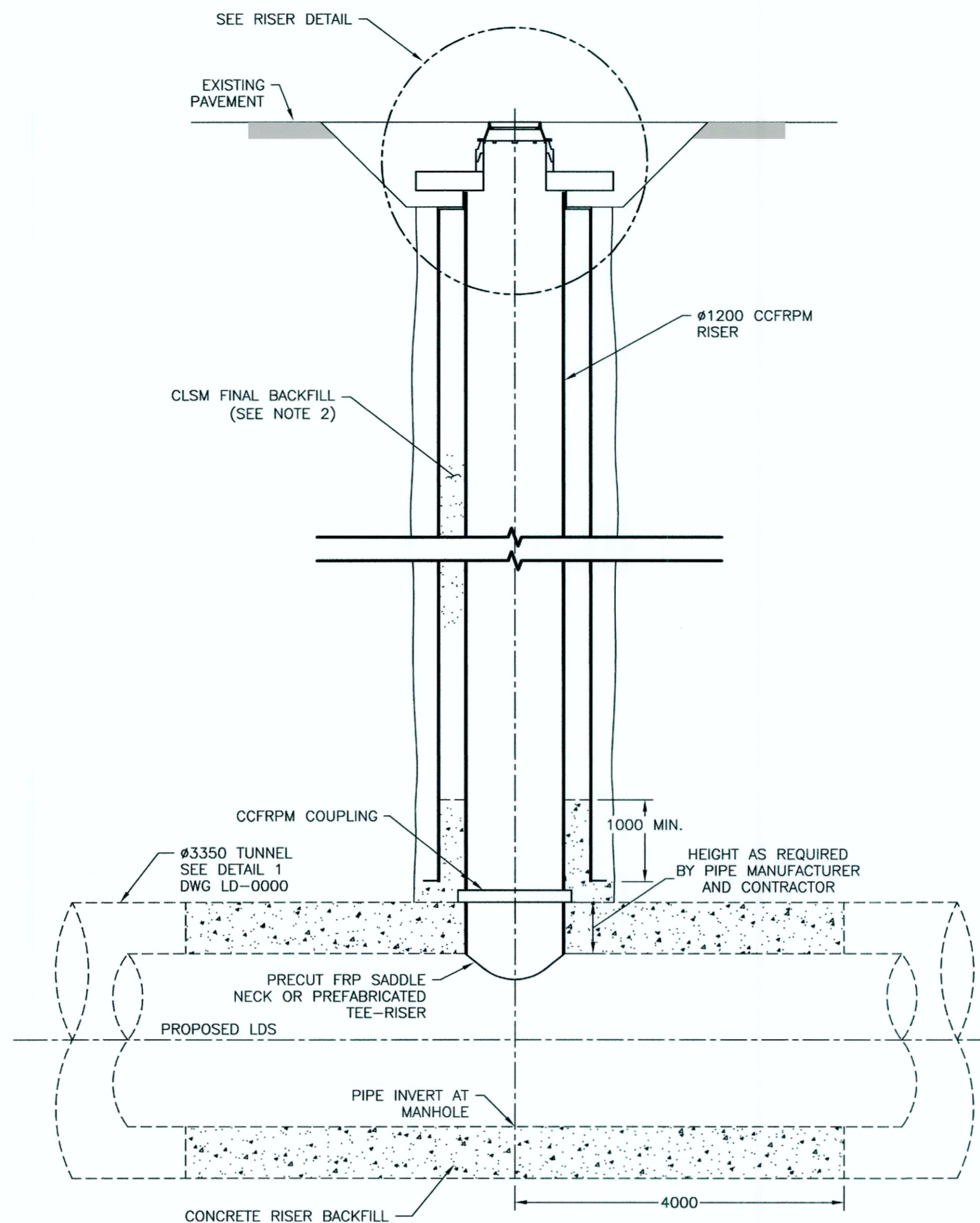
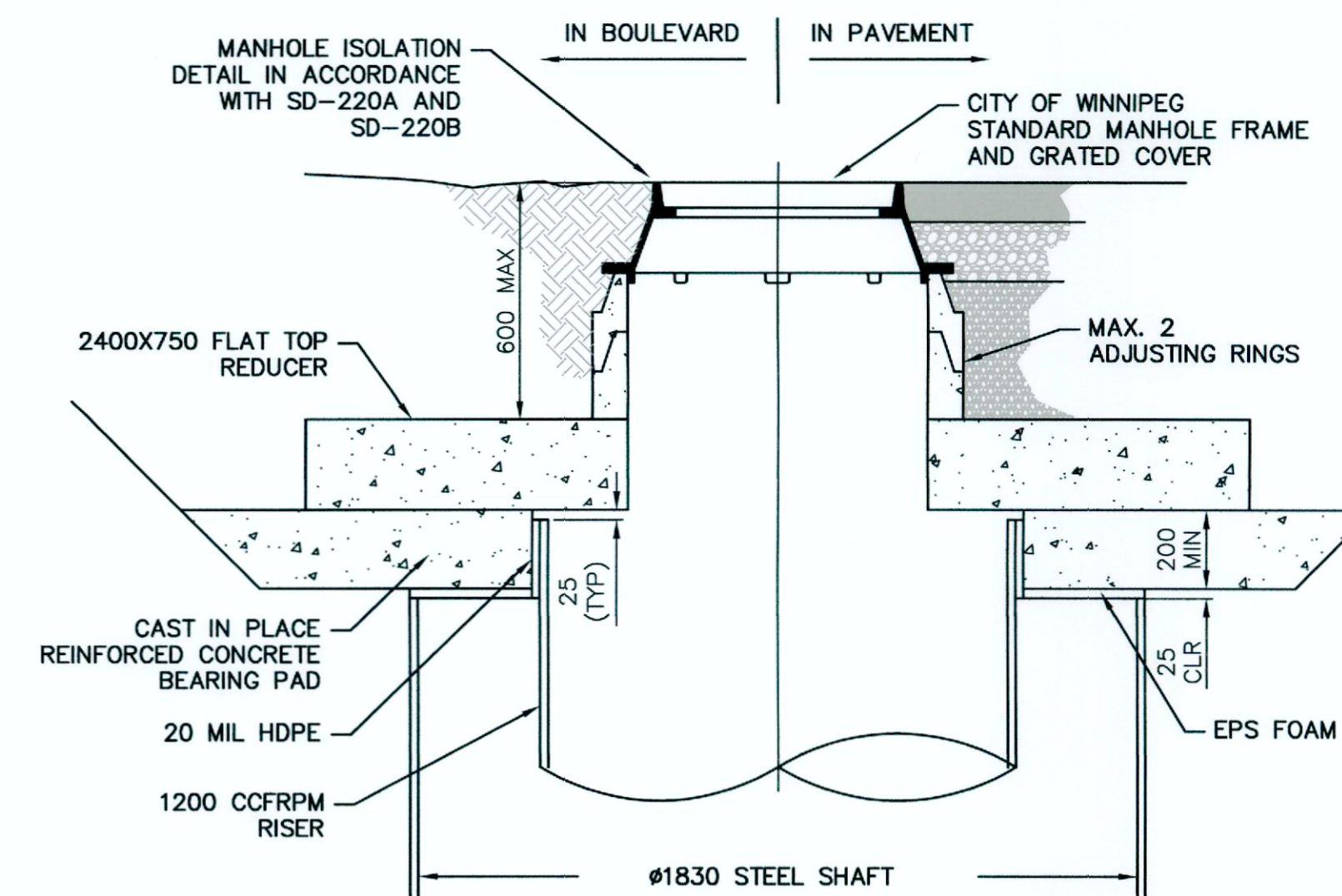


1 MANHOLE SHAFT DETAIL (DURING TUNNELLING)
NTS



2 MANHOLE SHAFT DETAIL
NTS



RISER DETAIL

NOTES:

1. SHAFT EXCAVATION, PLACEMENT OF CLSM INITIAL BACKFILL AND INSTALLATION AND GROUTING OF CASING TO BE COMPLETED PRIOR TO TUNNELLING.
2. POUR MANHOLE RISER BACKFILL IN LIFTS (AS REQUIRED) TO AVOID DISPLACING RISER. AS IDENTIFIED IN SPECIFICATION CLAUSE E31.
3. SHAFT COVER DESIGN IS FOR SHORT TERM USE DURING CONSTRUCTION PERIOD ONLY.
4. STEEL DESIGN AS PER CSA-S16-09 DESIGN OF STEEL STRUCTURES.
5. CONTRACTOR MAY ELECT TO REPLACE BUOYANCY RING WITH EXTERNAL STUDS DESIGNED TO ENGAGE CONCRETE SHAFT BACKFILL TO RESIST UPLIFT.
6. MANHOLE SEQUENCE SIMILAR FOR DIRECT JACKED CONCRETE PIPE EXCEPT CONTRACTOR TO PROVIDE AND ANCHOR CCFRPM SADDLE TO CONCRETE PIPE.
7. THIS DRAWING ONLY APPLIES TO THE TWO-PASS METHOD. SEE LD-8905 FOR INTERMEDIATE MANHOLE ON RCP.

File Name C:\pwworkdir\ch2mhill\wbg\cortez\0443046\



B.M. ELEV.		KGS GROUP CONSULTING ENGINEERS	JACOBS	ENGINEER'S SEAL		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT
				DESIGNED BY AF		
		DRAWN BY JBC	APPROVED BY <i>R&O (KGS Group)</i>	RELEASED FOR CONSTRUCTION: <i>R&O</i>	DATE: <i>01/27/19</i>	CONSULTANT DRAWING NO. C-512
0 ISSUED FOR TENDER	01/2019	JBC				
NO. REVISIONS	DATE	BY	DATE			

PROJECT TITLE	COCKBURN AND CALROSSIE COMBINED SEWER RELIEF WORKS - CONTRACT 5	SHEET OF	14 OF 19
TWO-PASS TUNNELLING	INTERMEDIATE MANHOLE DETAILS	COMPUTER FILE NAME	C-512.dwg
		CITY DRAWING NUMBER	LD-8903