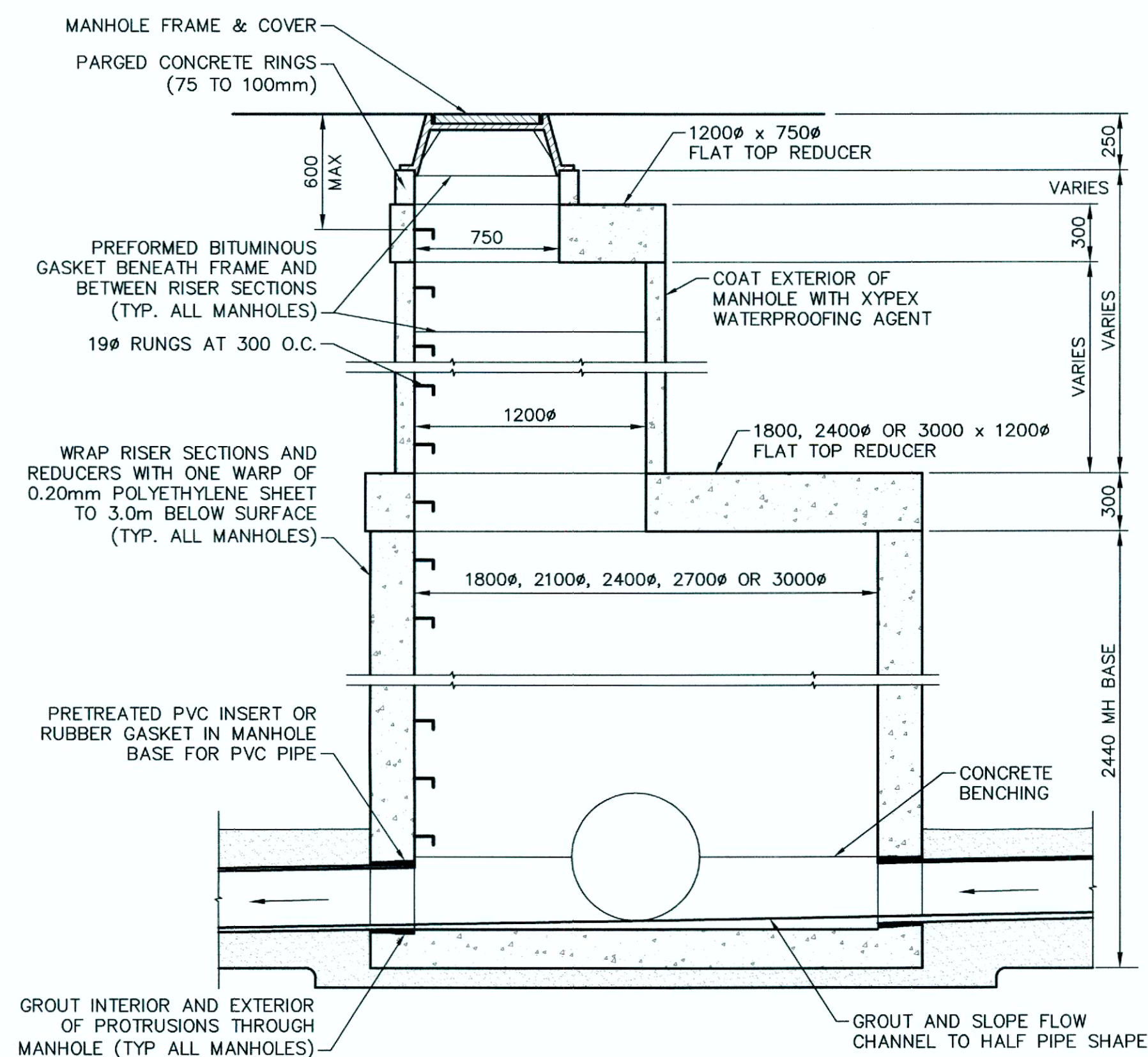
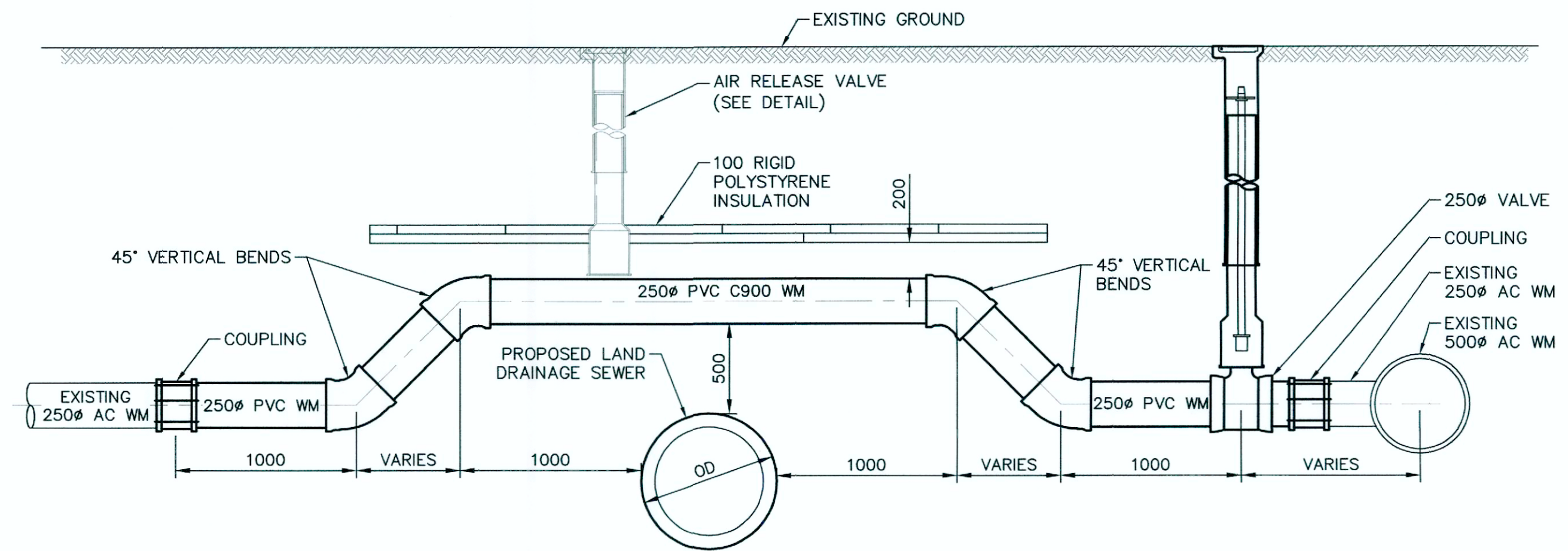


**TYPICAL 1200Ø - 1500Ø MANHOLE DETAIL**  
SCALE 1:25



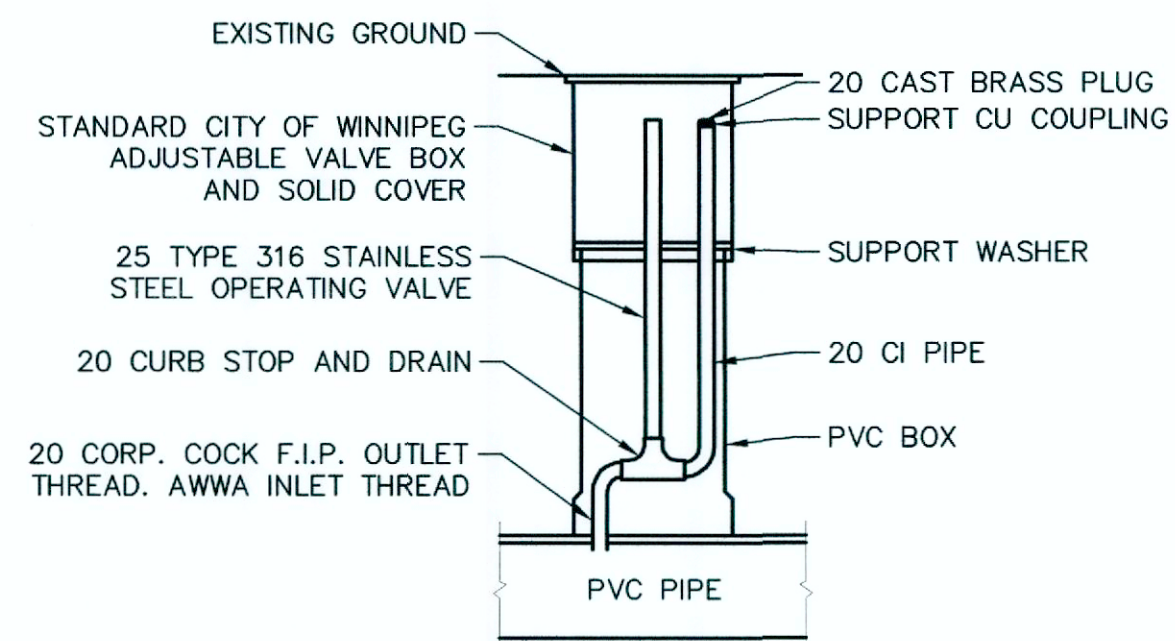
**TYPICAL LARGE DIAMETER (1800Ø-3000Ø) MANHOLE DETAIL**  
SCALE 1:25



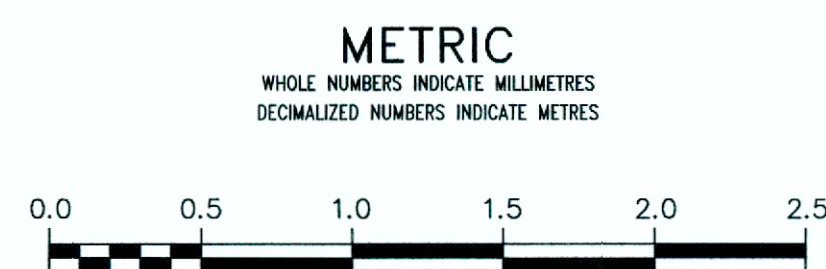
**NOTES:**

1. ALL 45° VERTICAL BENDS SHALL BE INSTALLED WITH MECHANICAL RESTRAINT JOINTS.
2. WATER MAIN INSULATION TO BE INSTALLED AS PER CITY OF WINNIPEG STANDARD DETAIL SD-018.
3. EXACT LOCATION OF THE AIR RELEASE VALVE TO BE CONFIRMED ON SITE.

**250Ø WATER MAIN CROSSING DETAIL**  
SCALE 1:25



**AIR RELEASE VALVE DETAIL**  
SCALE N.T.S.



**WARNING**  
IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:  
1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.  
2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.  
SEE PROVINCIAL REGULATION 210/72 FOR DETAILS

**LOCATION APPROVED**  
UNDERGROUND STRUCTURES  
SUPV. U/G STRUCTURES COMMITTEE DATE  
NOTE:  
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
2	ISSUED FOR ADDENDUM 3	2019/05/07	MID
1	ISSUED FOR ADDENDUM 2	2019/05/02	MID
0	ISSUED FOR CONSTRUCTION	2019/04/17	MID

<b>KGS GROUP CONSULTING ENGINEERS</b>		DESIGNED BY MID		CHECKED BY JMM	
		DRAWN BY GEL		APPROVED BY RBO	
		SCALE: HORIZONTAL 1:250		RELEASED FOR CONSTRUCTION	
		VERTICAL 1:50		DATE 2019 05 07	
		PLOT DATE: 2019 05 07		DATE	

**ENGINEERS GEOSCIENTISTS MANITOBA**  
Certificate of Authorization  
KGS Group  
No. 245

ENGINEER'S SEAL  
CONSULTANT DRAWING NUMBER  
11-0107-18-C12\_LD-8954

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
ENGINEERING DIVISION  
COCKBURN & CALROSSIE SEWER RELIEF WORKS  
CONTRACT 12  
MISCELLANEOUS DETAILS  
SHEET 12 OF 12  
CITY DRAWING NUMBER  
LD-8954