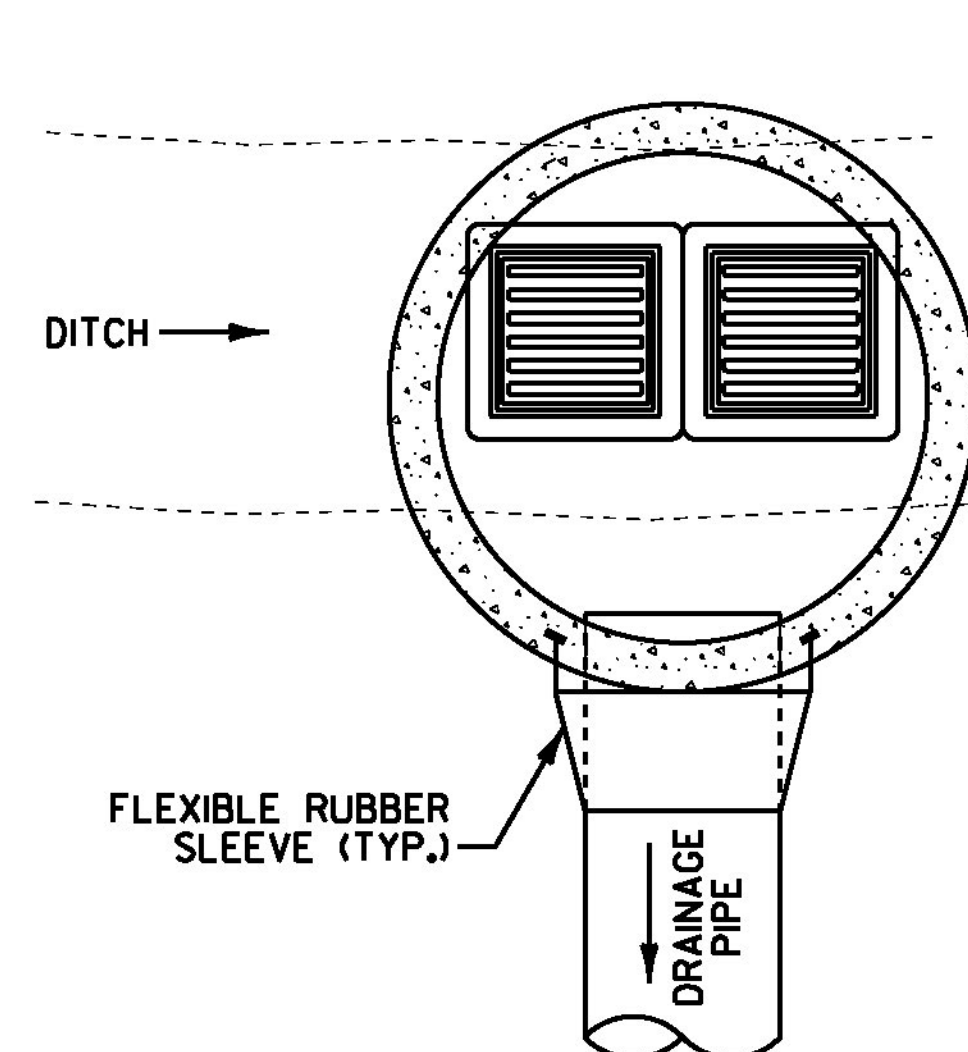
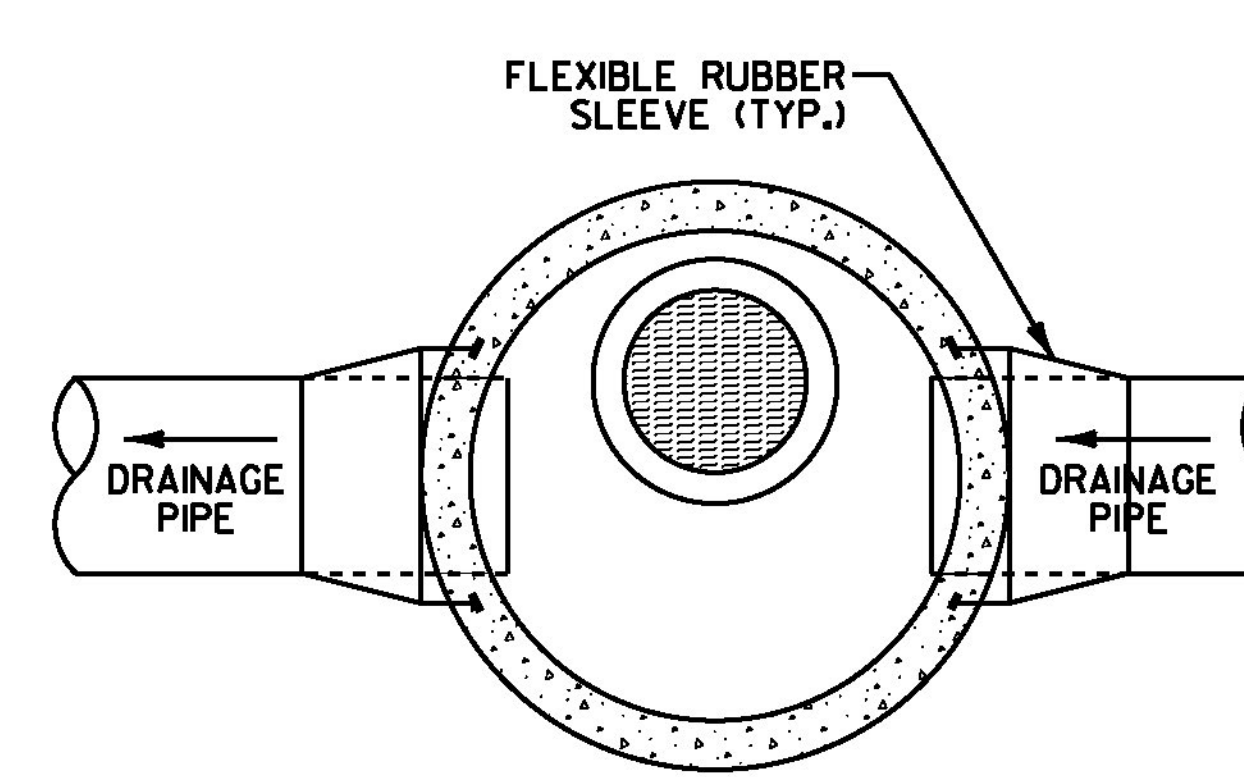


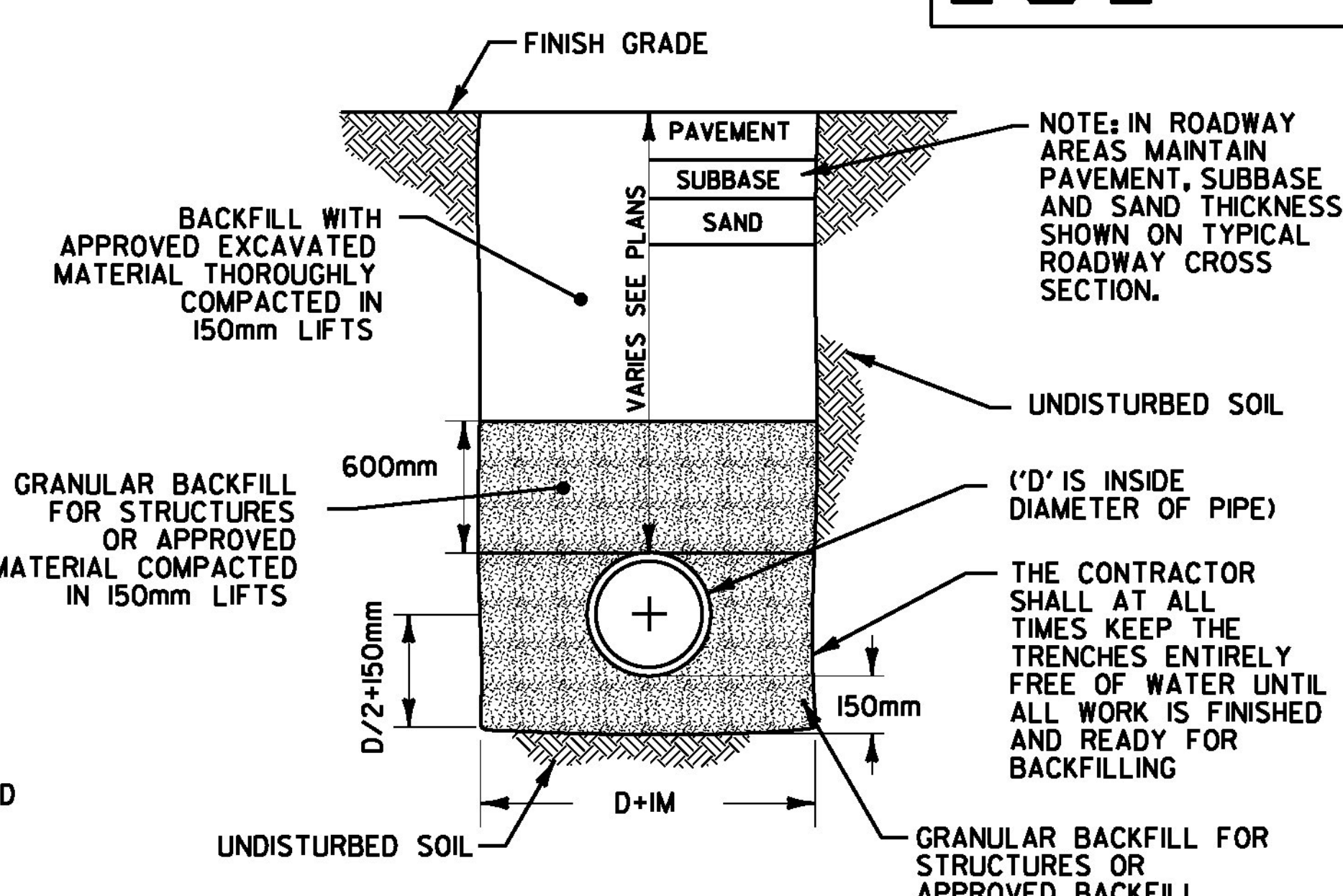
**CATCH BASIN (PLAN)
WITH UNDERDRAIN**
NOT TO SCALE



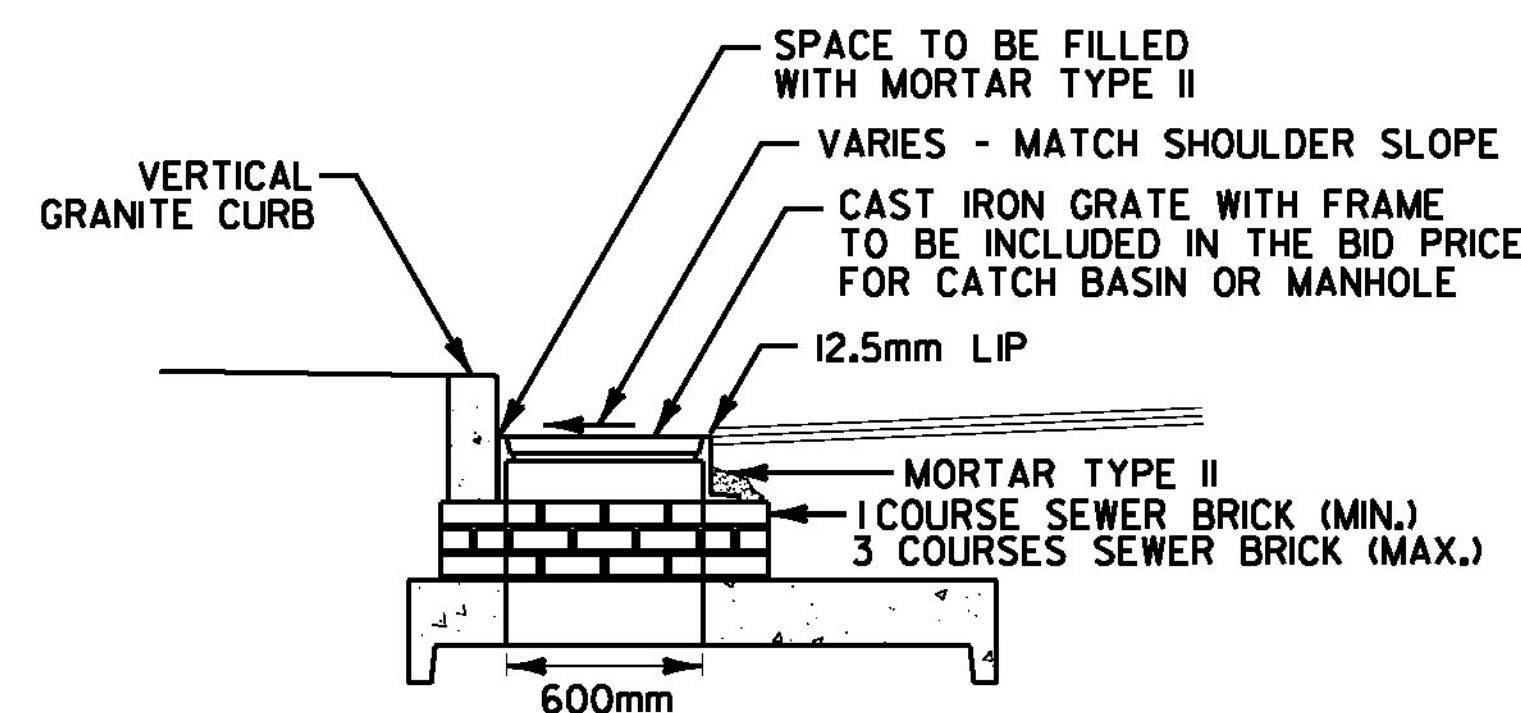
DOUBLE GRATE CATCH BASIN (PLAN)
NOT TO SCALE



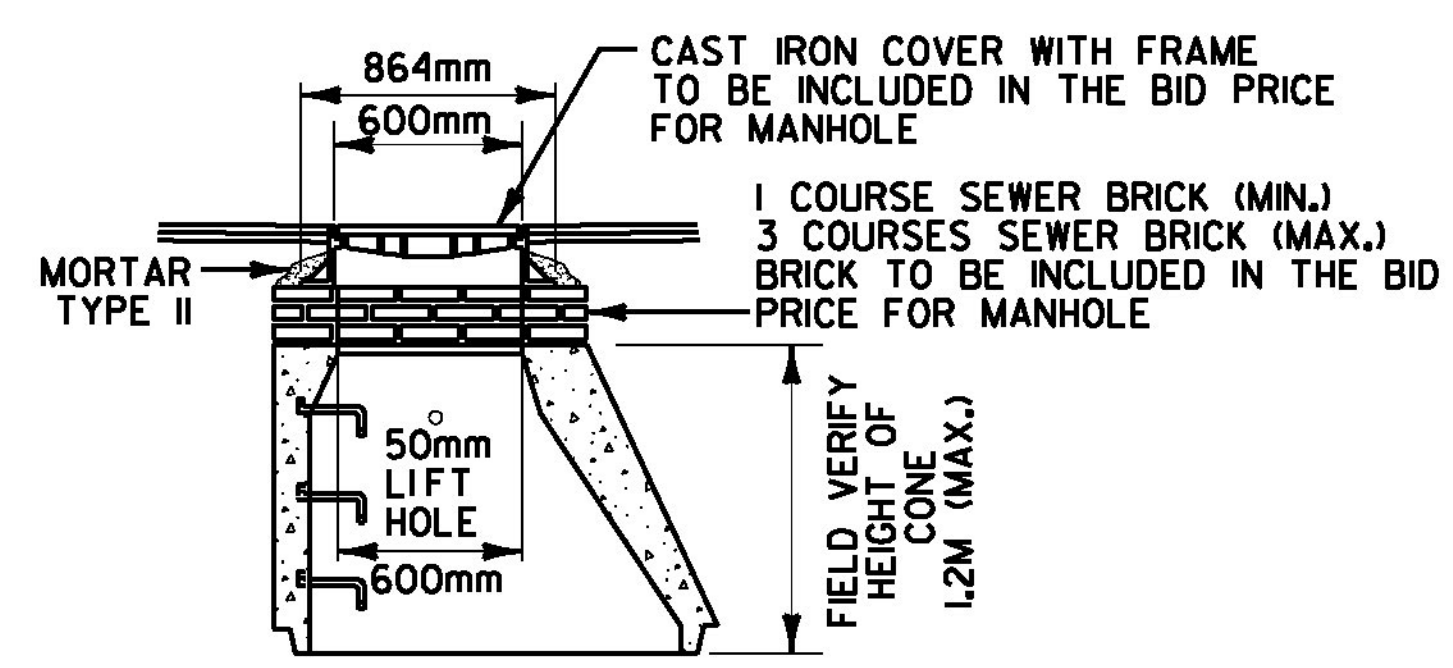
MANHOLE (PLAN)
NOT TO SCALE



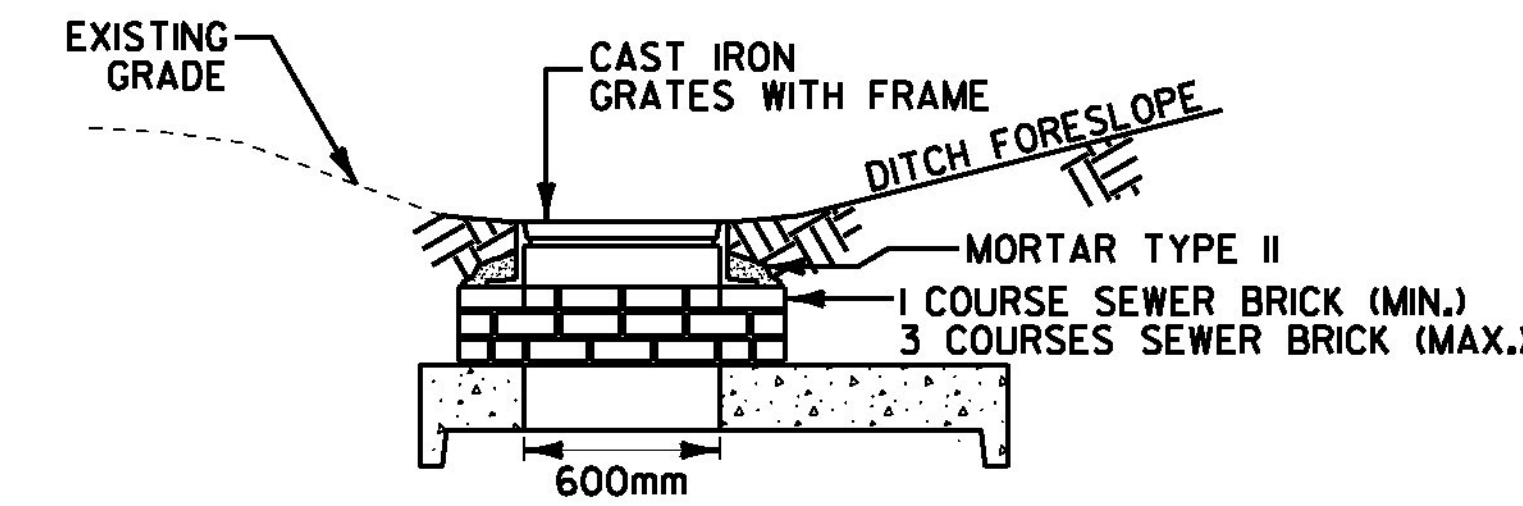
**TYPICAL STORM DRAIN
AND PIPE SLEEVE TRENCH**
NOT TO SCALE



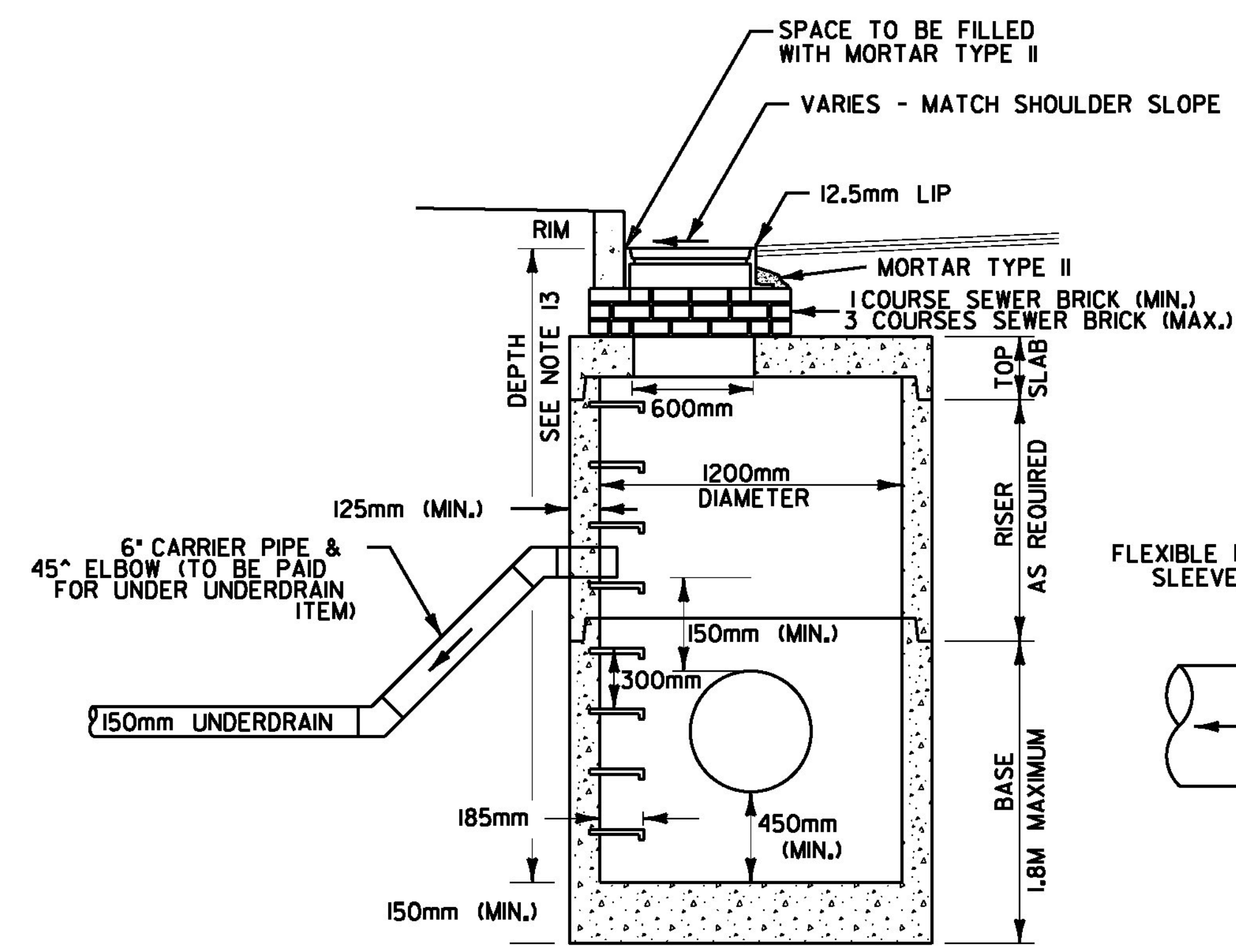
**TYPICAL GRATE INSTALLATION WITH
VERTICAL GRANITE CURB (ELEVATION)**
NOT TO SCALE



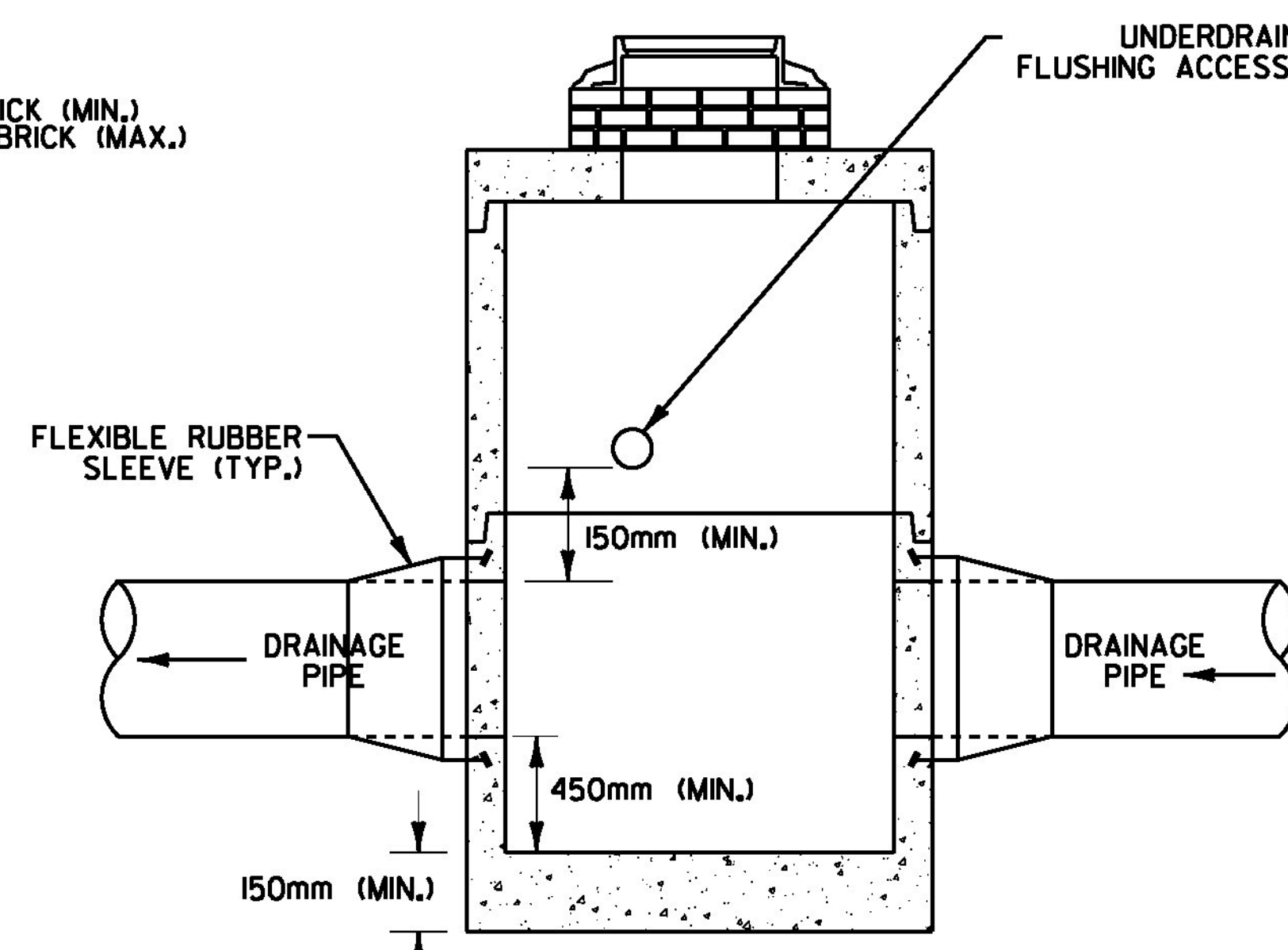
MANHOLE CONE SECTION
NOT TO SCALE



**TYPICAL GRATE INSTALLATION
IN DITCH (ELEVATION)**
NOT TO SCALE



ELEVATION VIEW



SIDE VIEW

**TYPICAL PRECAST CATCH BASIN OR MANHOLE
WITH UNDERDRAIN FLUSHING ACCESS**
NOT TO SCALE

GENERAL NOTES: PRECAST REINFORCED CONCRETE CATCH BASINS

1. PRECAST CONCRETE SECTIONS SHALL CONFORM TO SUBSECTION 705.04 OF THE STANDARD SPECIFICATIONS.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH: 5,000 PSI AT 28-DAYS.
3. STEEL REINFORCING SHALL CONFORM TO ASTM A185 OR A82 FOR HS-25 LOADING.
4. MANHOLE STEPS SHALL BE 360mm WIDE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC AND SHALL BE CAST INTO MANHOLE SECTIONS BY THE PRECAST CONCRETE MANUFACTURER. MANHOLE STEPS IN THE RISER SHALL ALIGN WITH THE MANHOLE STEPS IN BASE OF THE STRUCTURE.
5. FACE OF PIPE SHALL NOT PROJECT MORE THAN 50mm OR LESS THAN 25mm FROM INSIDE WALL OF STRUCTURE.
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 300mm OF OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 75mm TO JOINTS.
7. FITTING FRAME TO FINAL GRADE MAY BE DONE WITH BRICK OR PRECAST CONCRETE GRADE RINGS OF APPROPRIATE THICKNESS (3 COURSES MAX.).
8. FLAT SLAB TOPS SHALL BE USED FOR ALL CATCH BASINS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
9. ALL PIPE INVERTS AND PENETRATION ANGLES SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT AND BE ASSEMBLED USING A BUTYL RUBBER OR APPROVED EQUAL SEALANT.
11. PROVIDE FLEXIBLE RUBBER SLEEVES CONFORMING TO ASTM C-923, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO STRUCTURE. SLEEVES SHALL BE CAST INTO PRECAST STRUCTURE BY THE MANUFACTURER FOR ALL PIPE PENETRATIONS.
12. PAYMENT FOR INSTALLATION OF THE CATCH BASINS SHALL BE MADE UNDER THE PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE ITEM (604.20).
13. DEPTH AS SHOWN ON THE DRAINAGE DETAIL SHEET AND DRAINAGE PROFILE SHEETS IS DEFINED AS THE VERTICAL DISTANCE BETWEEN RIM ELEVATION AND THE BOTTOM OF SUMP.

PROJECT NAME:	MORRISTOWN
PROJECT NUMBER:	STP F 029-1(2)C/1
FILE NAME:	z10b194drainagedet.dgn
PROJECT LEADER:	DMB
DESIGNED BY:	BRC
DRAINAGE DETAILS	
PLOT DATE:	29-MAR-2012
DRAWN BY:	MAL
CHECKED BY:	DMB
SHEET	37 OF 123