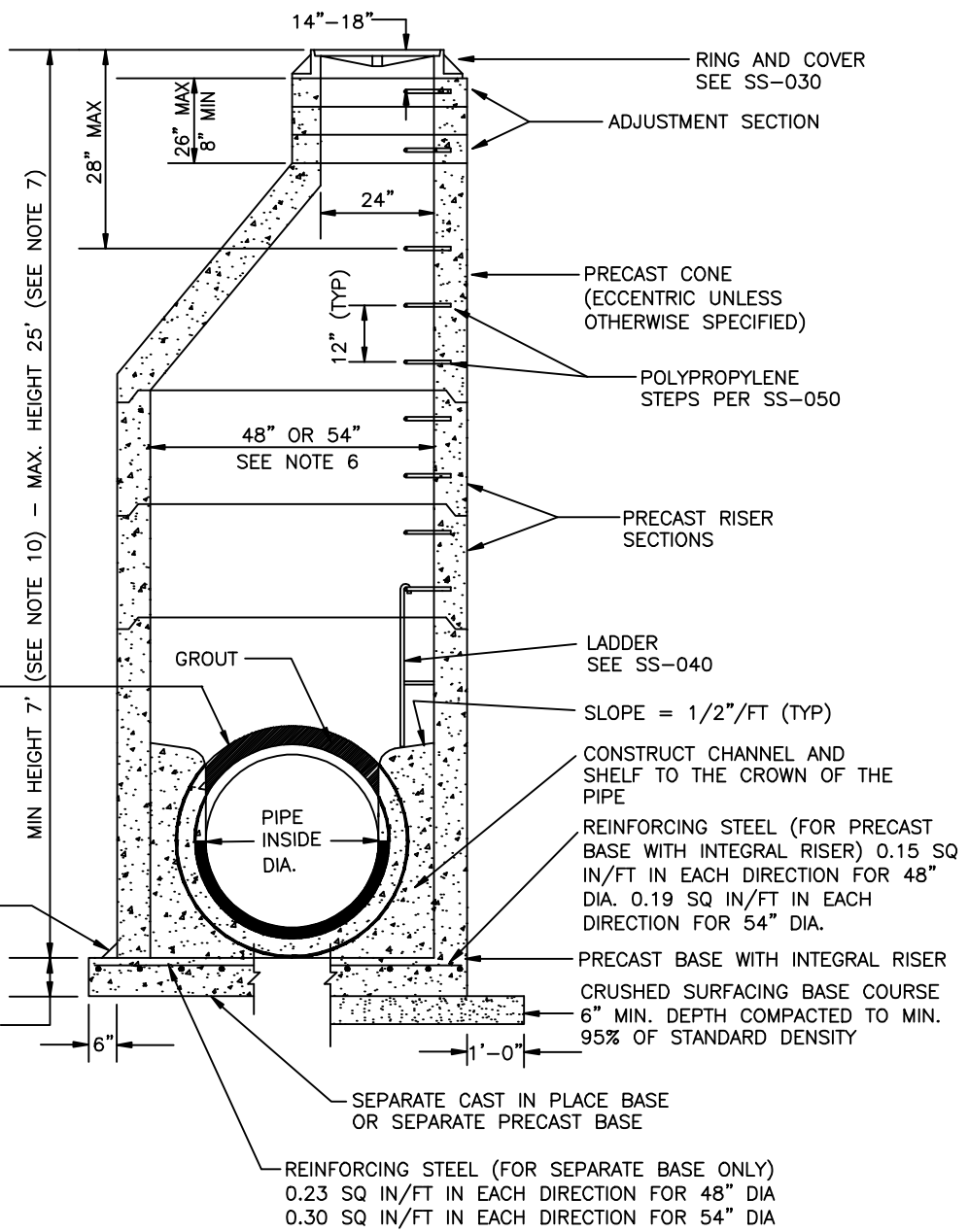


**NOTES:**

1. MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M-199 (ASTM C 478) UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN STANDARD SPECIFICATIONS.
2. ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS 4000. NON-REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
3. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS.
4. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
5. CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS MANHOLE WALL THICKNESS. MAXIMUM PIPE SIZE IS 12" FOR 48" MANHOLE, 24" FOR 54" MANHOLE. MINIMUM DISTANCE BETWEEN HOLES IS 8"(MEASURED ON THE INSIDE OF THE MANHOLE).
6. MANHOLE SIZE DEPENDS ON SIZES, LOCATION AND NUMBERS OF HOLES FOR PIPES. MANHOLE DESIGN AND SIZE SHALL BE APPROVED AND WARRANTED BY THE MANHOLE SUPPLIER.
7. FOR DEPTHS OVER 25' MANHOLE BASE SLAB DESIGN SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.
8. ALL INTERIOR AND EXTERIOR JOINTS TO BE GROUTED (SEE GROUT SPECIFICATIONS). GROUT TO BE 1/2" THICK MINIMUM AND 3" EACH SIDE OF JOINT MINIMUM. THEY MUST BE INSPECTED PRIOR TO BACKFILL.
9. CORE DRILLING ONLY, HAMMERING KNOCKOUTS WILL NOT BE ALLOWED. KOR-N-SEAL FACTORY INSTALLED BOOTS ARE ALLOWED.
10. MANHOLES 5'-7' DEEP MUST BE FLAT TOPS.

MAX. HOLE SIZE IS 12" FOR 48" MANHOLE, 24" FOR 54" MANHOLE. (SEE NOTES 5 & 6 ABOVE)

MIN HEIGHT 7' (SEE NOTE 10) - MAX. HEIGHT 25' (SEE NOTE 7)



APPROVED BY	L. OLIVE
DATE	07/31/2008
REF STAD SPEC	

**DEPARTMENT OF PUBLIC WORKS**  
**STANDARD DETAIL**

**MANHOLE TYPE I**

STANDARD DETAIL NUMBER  
**SS-010**