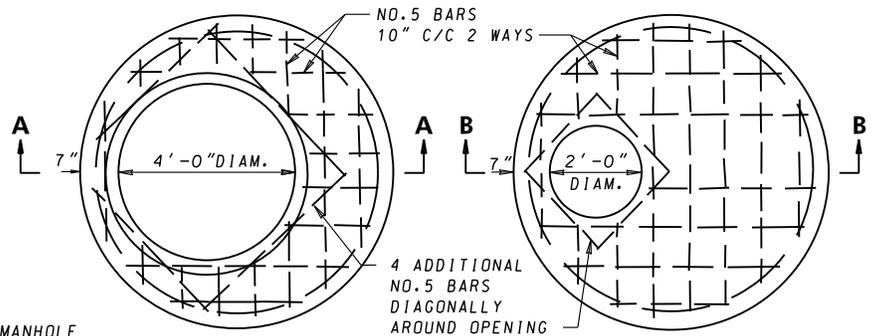


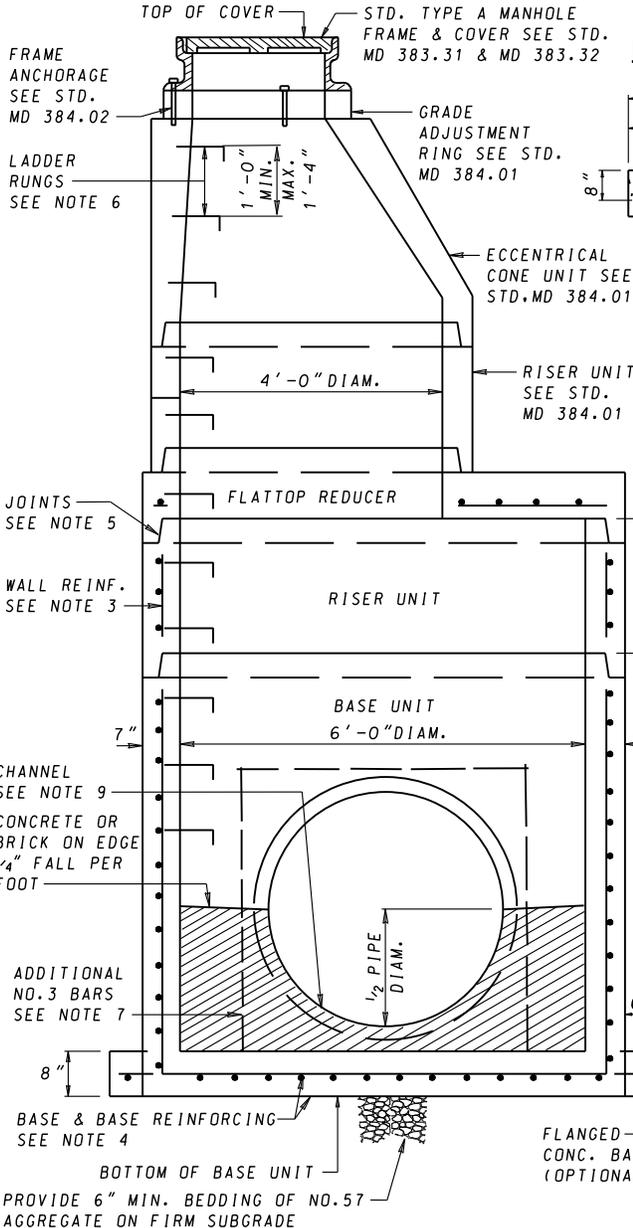
**ECCENTRIC CONE REDUCER**  
(ALTERNATE FOR FLATTOP REDUCER)



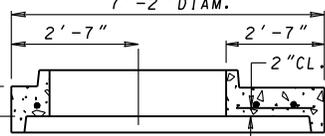
**FLATTOP REDUCER**

**FLAT SLAB TOP**

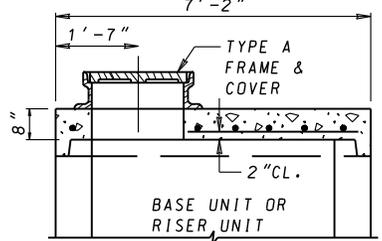
(SHOWN WITHOUT FRAME & COVER)  
7'-2"



**SECTION VIEW**



**SECTION A-A**



**SECTION B-B**

**NOTES**

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4500PSI.
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRIC CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.18 IN.<sup>2</sup>/FT AND MAXIMUM SPACING OF 6" FOR THE 72" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615 OR ASTM A 706, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.27 IN.<sup>2</sup>/FT. AND A MAXIMUM SPACING OF 4" WITH 2" COVERED FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE BASE UNIT OR JOINTED PER MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTAR, RUBBER O-RING GASKETS MEETING ASTM C 361 & C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198, TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. TYPES SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR 383.92. LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN THE MULTIPLE OPENINGS IN THE BASE UNIT OR IN ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO.3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO.2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. MD 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'-0". THE COST OF THE DRIP STONE LANDING, NO.57 AGGREGATE, GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

SPECIFICATION <b>305</b>	CATEGORY CODE ITEMS
APPROVED	DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
	APPROVAL • SHA REVISIONS
	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 2-22-91
	APPROVAL 1-2-91
	REVISD 4-12-16
REVISD 3-4-16	
REVISD	REVISD
REVISD	REVISD

**Maryland Department of Transportation**  
**STATE HIGHWAY ADMINISTRATION**  
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**72" DIAMETER PRECAST MANHOLE**  
**FOR 42" & 48" PIPES**  
**STANDARD NO. MD 384.05**