



ADJUSTMENT RINGS SHALL BE SEALED TO THE MANHOLE SECTION, CASTING, AND ONE ANOTHER BY USING A PREPACKAGED MOTOR MIX IN ACCORDANCE WITH PROPORTIONS OF MNDOT SPECIFICATION 2506.2B AND ASTM C 270 OR MFG SPECIFIED MIX FOR NON-CONCRETE RINGS. TOTAL ADJUSTMENT MINIMUM 4" MAX 14". THERE SHALL ALSO BE A CONCRETE COLLAR SURROUNDING ALL THE CONCRETE RINGS BY A MINIMUM 4" THICK.

KEY TOP SLAB  
 PRECAST SECTIONS CONFORMING TO ASTM C478

JOINTS BETWEEN PRECAST SECTIONS SHALL USE PRELUBRICATED PROFILE GASKETS CONFORMING TO ASTM C443.

MANHOLE STEPS, NEENAH R-1981-N OR APPROVED EQUAL, 16" ON CENTER. COPOLYMER POLYPROPYLENE PLASTIC (PS1-PF) AND ALUMINUM STEPS APPROVED.

GROUT BOTTOM TO 1/2 Ø OF PIPE

MINIMUM THICKNESS OF PRECAST BASE IS 6" FOR 14' DEEP OR LESS, AND INCREASES 1" IN THICKNESS FOR EVERY 4' OF DEPTH GREATER THAN 14', AND REINFORCE AS PER MN/DOT STD PLATE 4011

**NOTES:**

- FRAME AND GRATE FOR BULKHEAD STYLE CURB SHALL BE A NEENAH R-3067-V OR NEENAH R-3067-VB
- FRAME AND GRATE FOR SURMOUNTABLE STYLE CURB OR DRIVEWAYS SHALL BE A NEENAH R-3501-TR OR R-3501-TL LOW POINTS 3501-TB
- FRAME AND GRATE FOR OFF ROAD LOCATION (DITCH GRATE, STOOL TYPE) R-4342
- ALL MANHOLES WITH FRAME AND LID IN A PAVED AREA SHALL USE A NEENAH R-1642 WITH SOLID B LID WITH 2 CONCEALED PICK HOLES OR APPROVED EQUAL. LID SHALL BE LETTERED "STORM SEWER" WITH 2" RAISED LETTERS
- DOG HOUSES SHALL BE GROUTED ON BOTH THE OUTSIDE AND INSIDE OF THE STRUCTURE