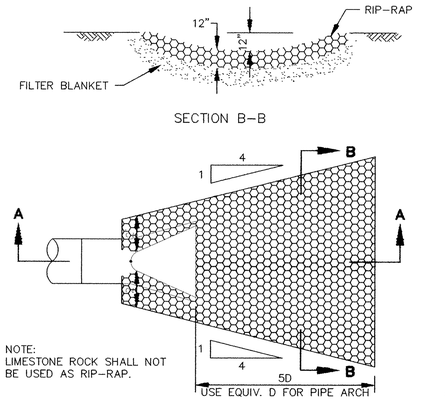
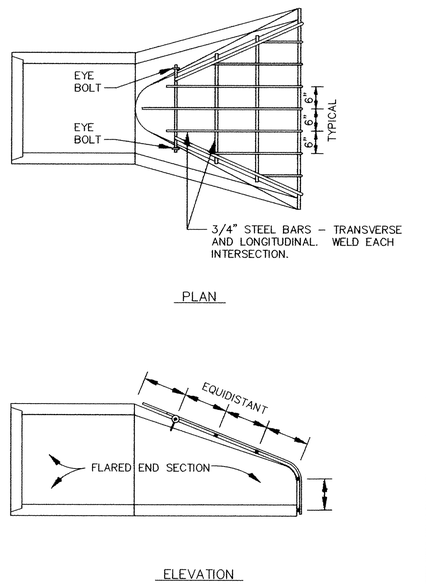
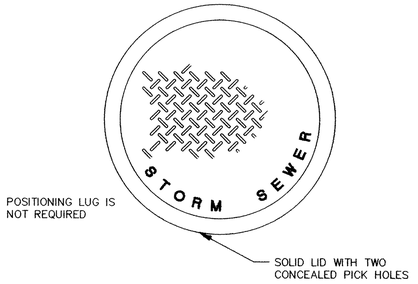
RIP–RAP INSTALLATION



TRASH GUARD

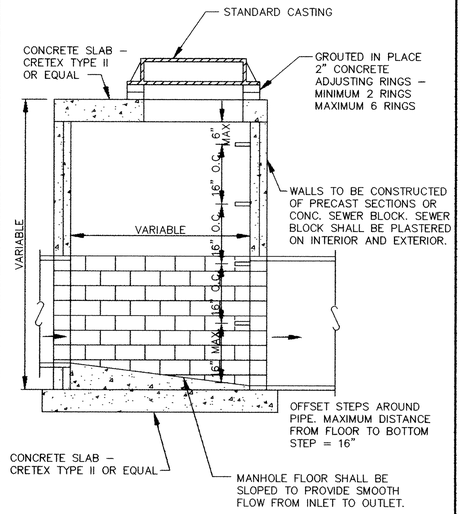


STANDARD MANHOLE CASTING



CASTING SHALL BE NEENAH R–1733 OR EQUAL

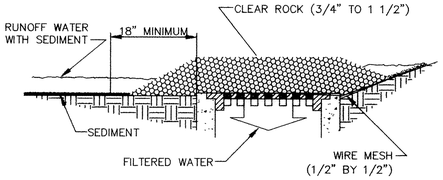
SLAB TOP MANHOLE



NOTE:

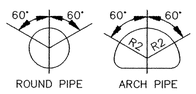
THIS TYPE MANHOLE SHALL BE USED WHEN SPECIFIED OR WHEN THE MANHOLE DEPTH IS LESS THAN EIGHT FEET.

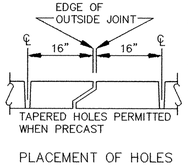
CATCH BASIN SEDIMENTATION BARRIER



CONCRETE PIPE JOINT TIES

PIPE SIZE	THREAD DIAMETER
12 15 18 21 24 27	5/8" ROLLED THREADS (SEE NOTE 4)
30 33 36 42 48 54 60 66	3/4" CUT OR ROLLED
72 78 84 90 96 102 108 120 132	1" CUT OR ROLLED

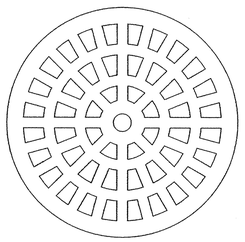




NOTE:

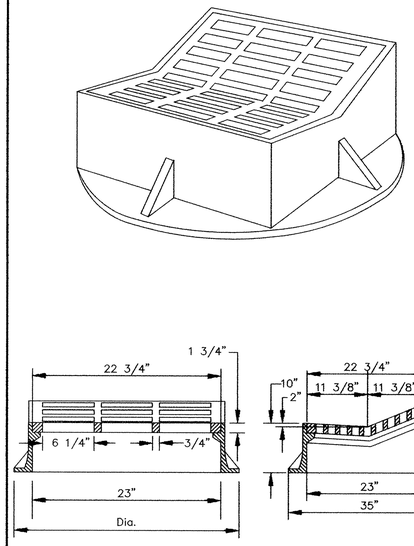
1. HOLES SHALL BE CAST–IN OR DRILLED 16" FROM OUTSIDE EDGE OF JOINT.
2. NUTS AND WASHERS ARE NOT REQUIRED ON INSIDE OF PIPE WITH 27" DIAMETER OR LESS.
3. TIES ARE NOT REQUIRED FOR BELL PIPE 24" AND SMALLER. ON OTHER SIZES, TIE MAY BE INSERTED FROM INSIDE.
4. CUT THREADS MAY BE USED IF WASHER AND NUT ARE USED.
5. PIPE SIZES LISTED ARE INSIDE DIAMETER OF ROUND PIPE OR EQUIVALENT DIAMETER OF PIPE ARCH.

GRATE CASTING



CASTING SHALL BE NEENAH R–4370 TYPE C OR EQUAL

STANDARD INLET CASTING

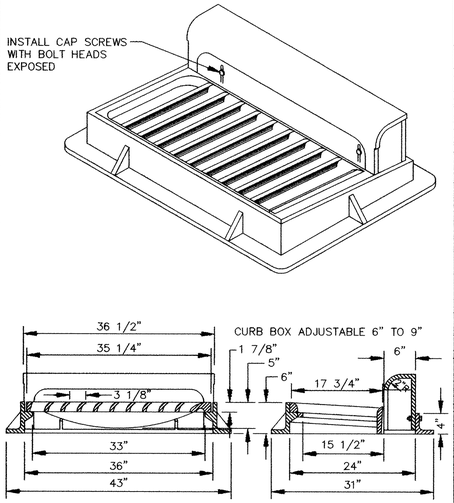


CASTINGS SHALL BE NEENAH R–3508–A2 OR EQUAL

NOTE:

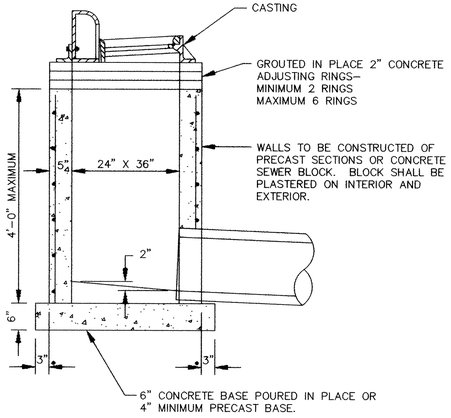
THIS TYPE INLET CASTING SHALL BE USED WHEN SPECIFIED.

STANDARD INLET CASTING



CASTINGS SHALL BE NEENAH R–3067–V OR EQUAL

SHALLOW CATCH BASIN



NOTE:

REINFORCING SHALL CONSIST OF A SINGLE LINE OF STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.17 SQ. IN. PER FOOT OF HEIGHT.

DESIGNED BY: – DRAWN BY: EY
APPROVED BY: – JOB NUMBER 811385J
CAD DATE: February 01, 2003 9:49:50 a.m.
CAD FILE: 811385j\dwg\811385–SM.DWG (JLALLEN)

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICSENED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 8/05/2002
TERRY J. MAURER, P.E. LIC.NO. 15316

NO.	DATE	BY	REVISION DESCRIPTION

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1326 ENERGY PARK DRIVE
ST. PAUL, MINNESOTA 55108
(651) 644–4389

CITY OF ELK RIVER
THE WOODS OF HILLSIDE III
STREET AND UTILITY IMPROVEMENTS

STORM SEWER CONSTRUCTION DETAILS

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