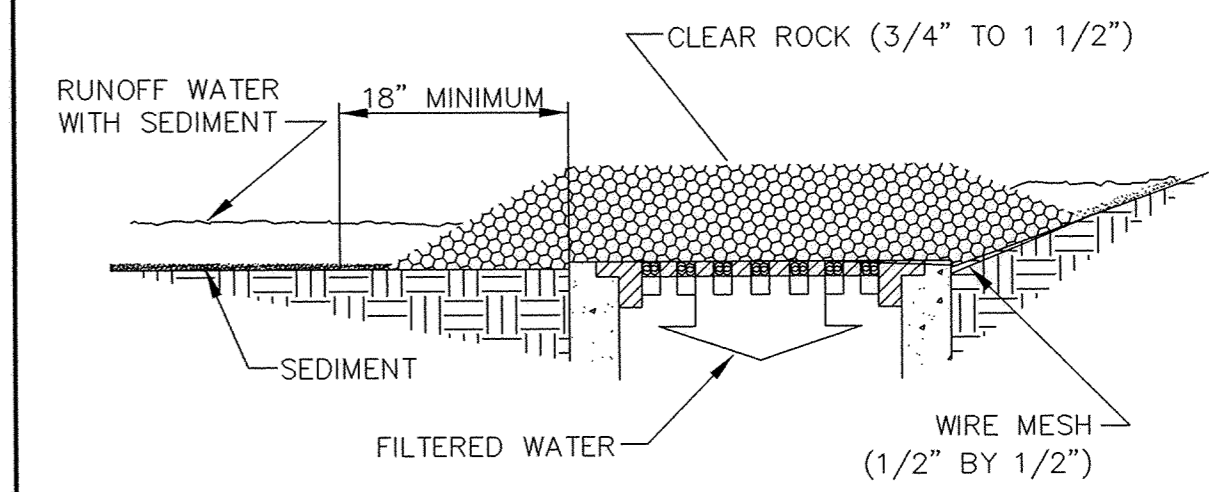
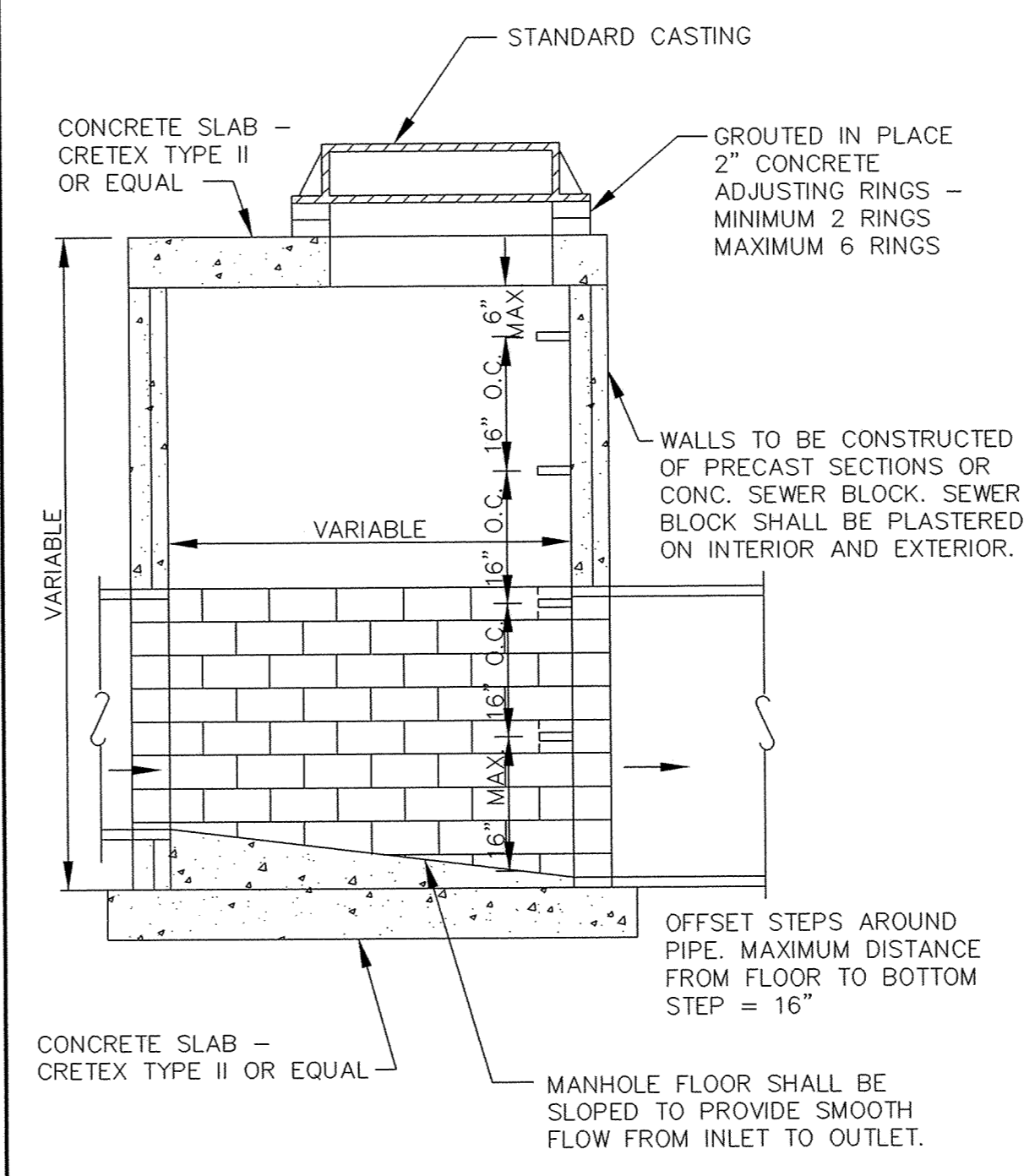


Westwood Professional Services, Inc.
 7599 Anagram Drive
 Eden Prairie, MN 55344
 Phone: 612/937-5150 Fax: 612/937-5822

PREPARED FOR:
D. R. Horton, Inc.
 20860 Kenbridge Court
 Lakeville, Minnesota 55044

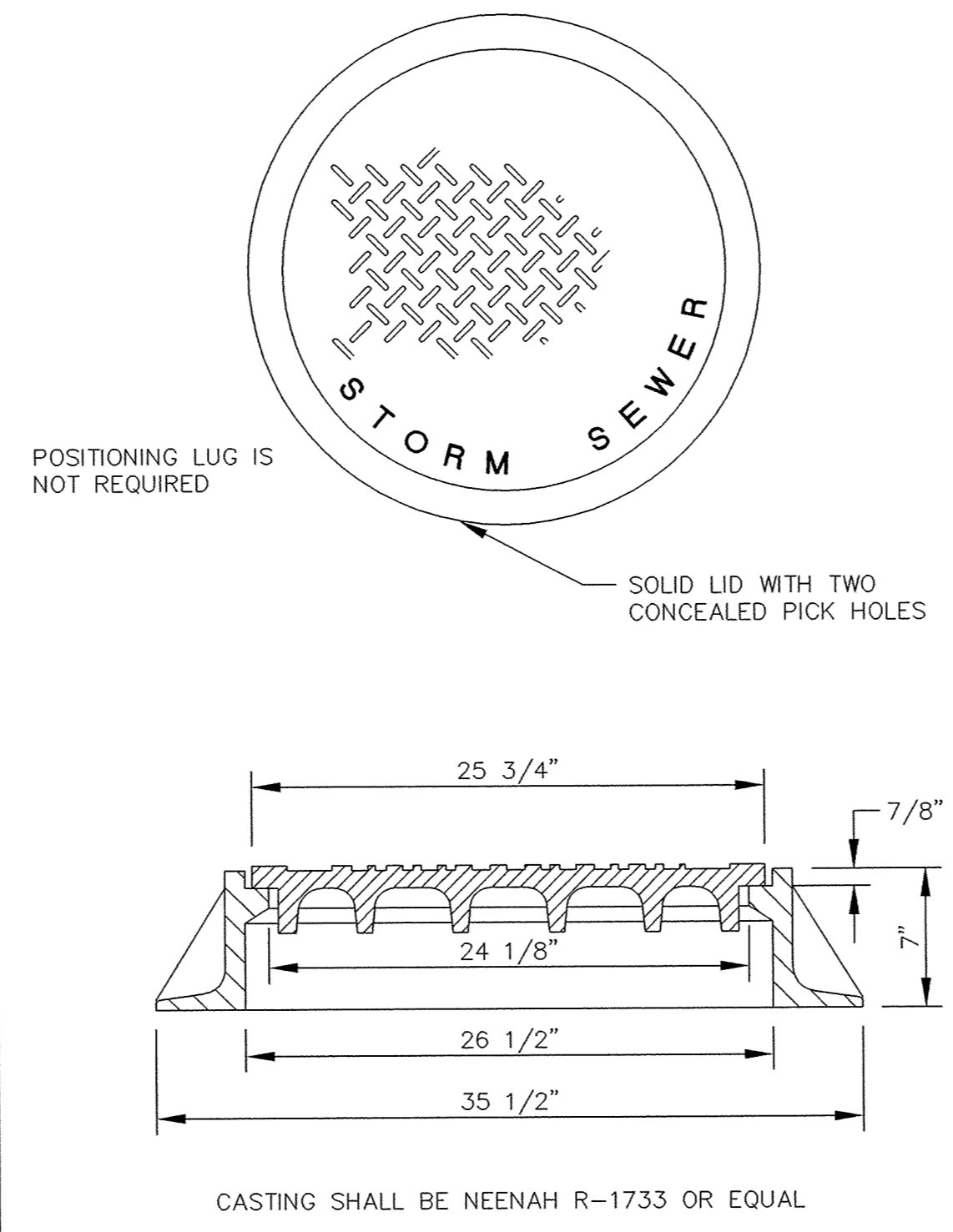


CATCH BASIN SEDIMENTATION BARRIER



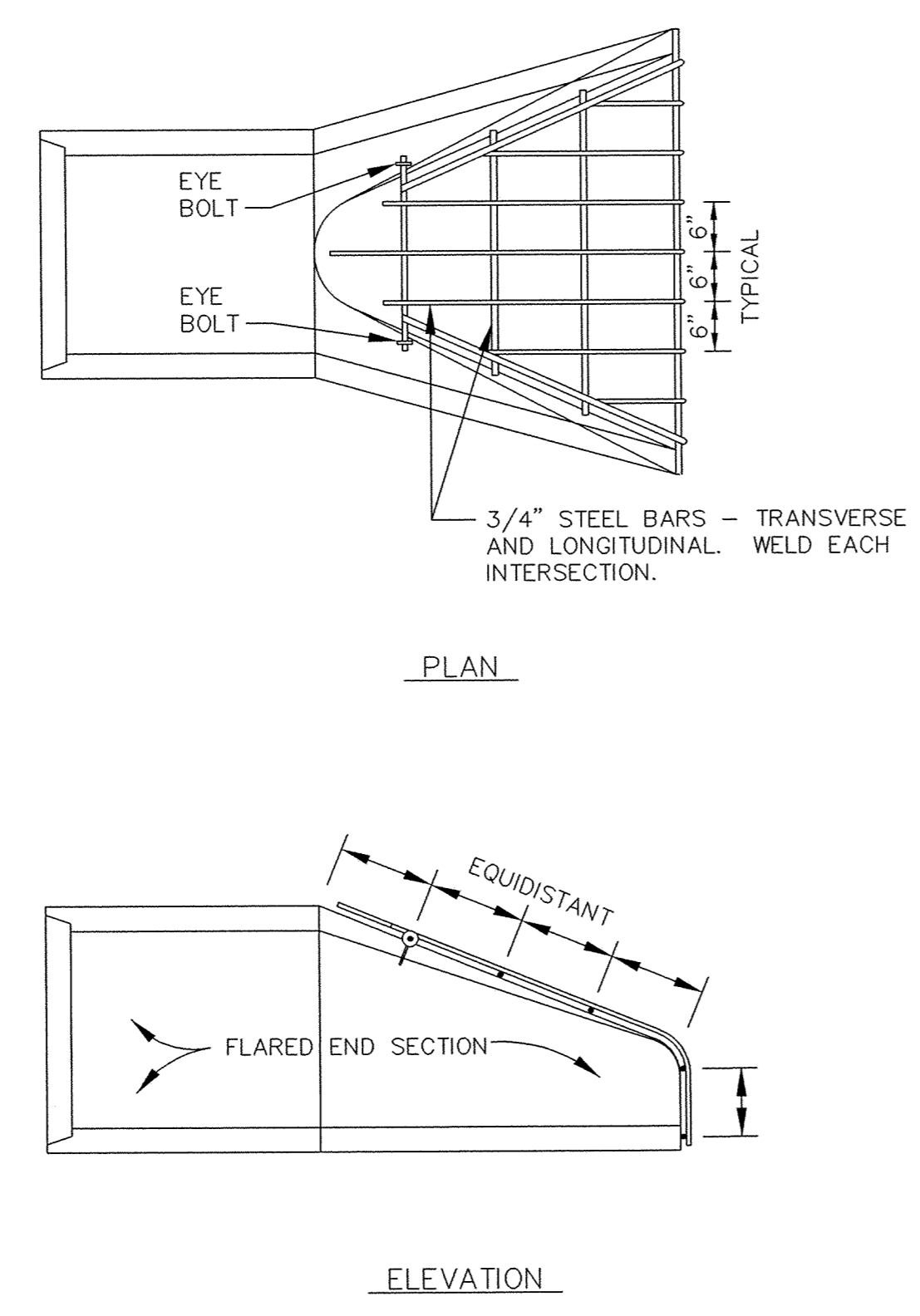
NOTE:
 THIS TYPE MANHOLE SHALL BE USED
 WHEN SPECIFIED OR WHEN THE MANHOLE
 DEPTH IS LESS THAN EIGHT FEET.

SLAB TOP MANHOLE



CASTING SHALL BE NEENAH R-1733 OR EQUAL

STANDARD MANHOLE CASTING



ELEVATION

TRASH GUARD

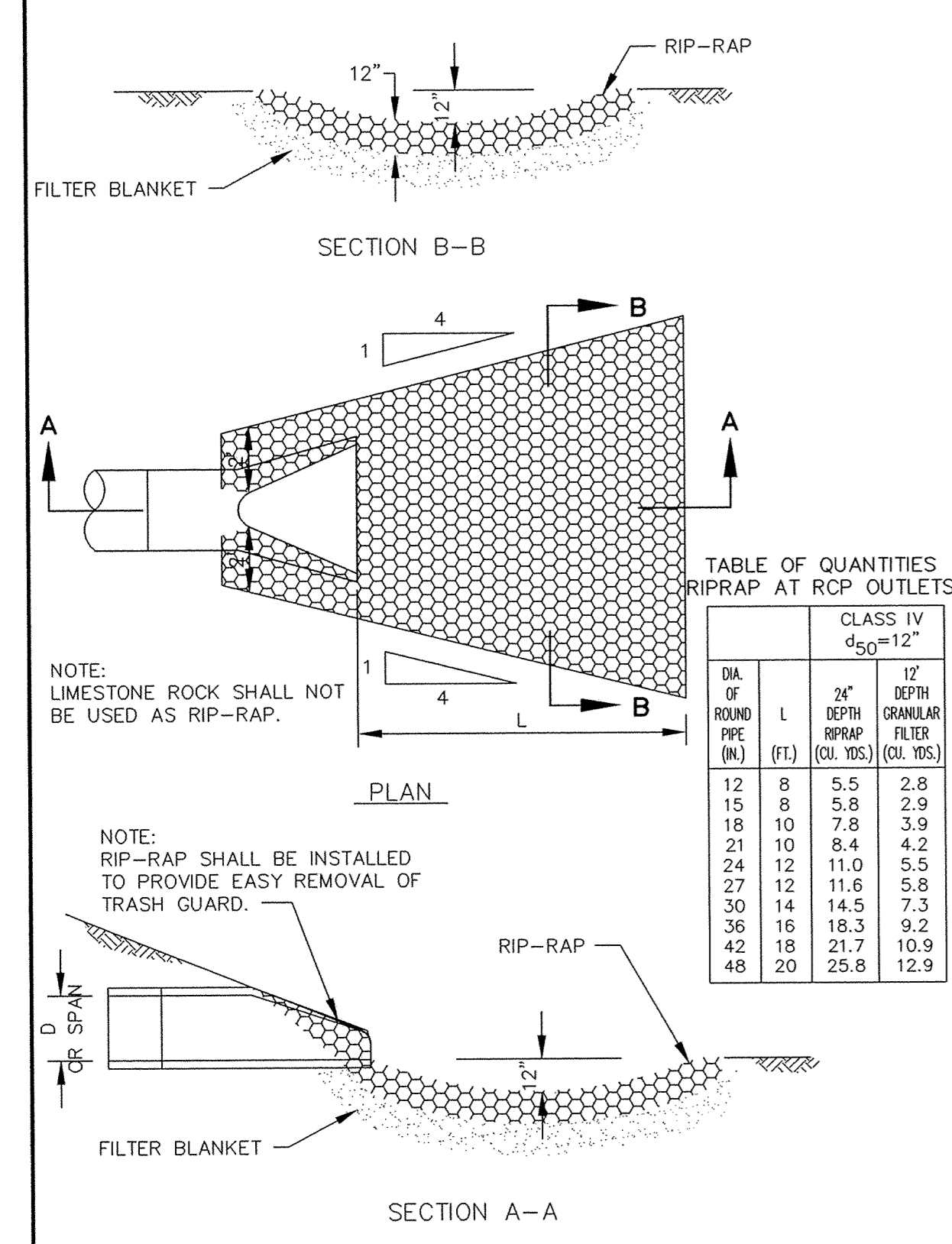
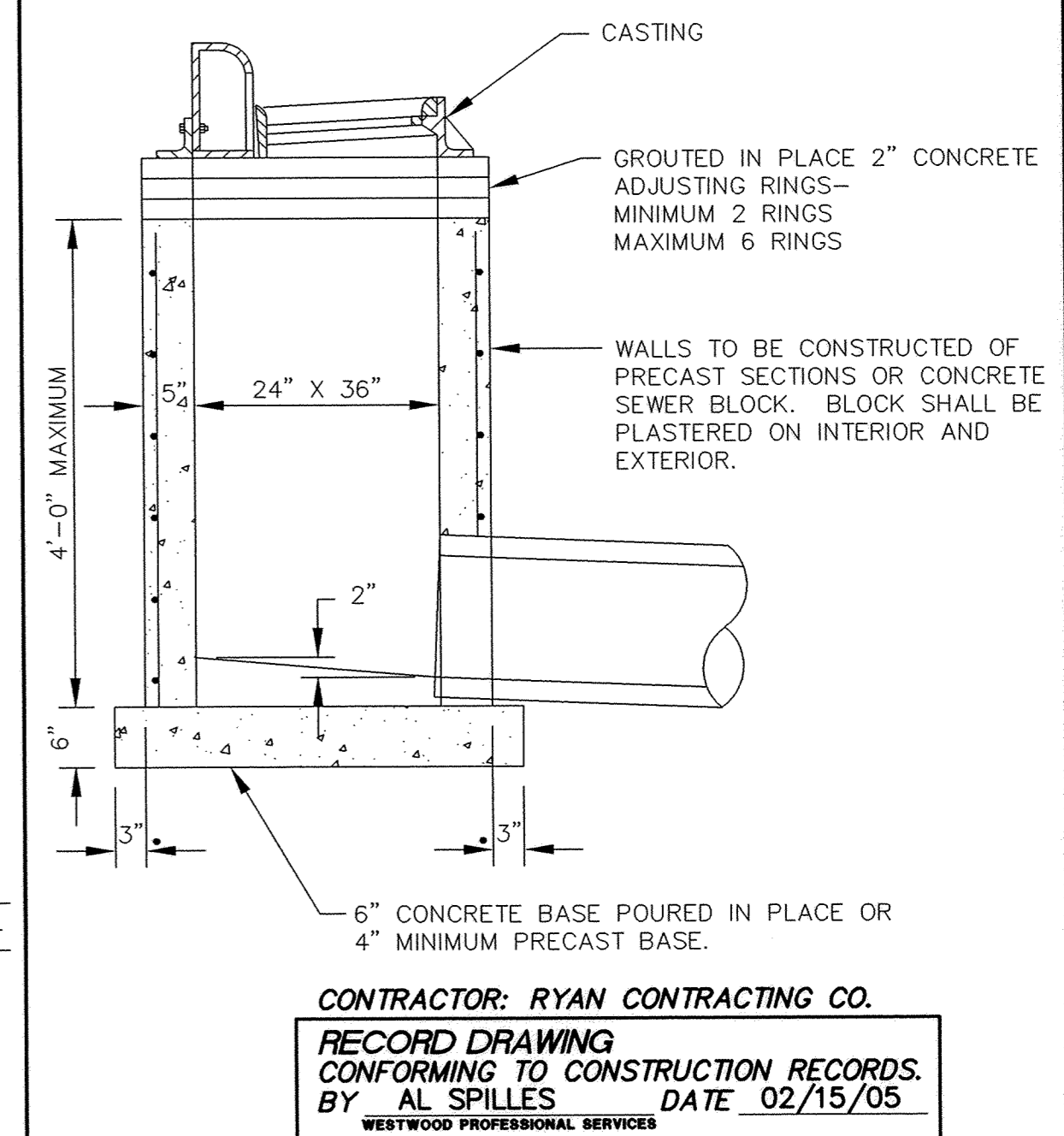


TABLE OF QUANTITIES
 RIPRAP AT RCP OUTLETS

DIA. OF ROUND PIPE (IN.)	L (FT.)	CLASS IV d ₅₀ =12"	
		24" DEPTH RIPRAP (CU. YDS.)	12" DEPTH GRANULAR FILTER (CU. YDS.)
12	8	5.5	2.8
15	8	5.8	2.9
18	10	7.8	3.9
21	10	8.4	4.2
24	12	11.0	5.5
27	12	11.6	5.8
30	14	14.5	7.3
36	16	18.3	9.2
42	18	21.7	10.9
48	20	25.8	12.9

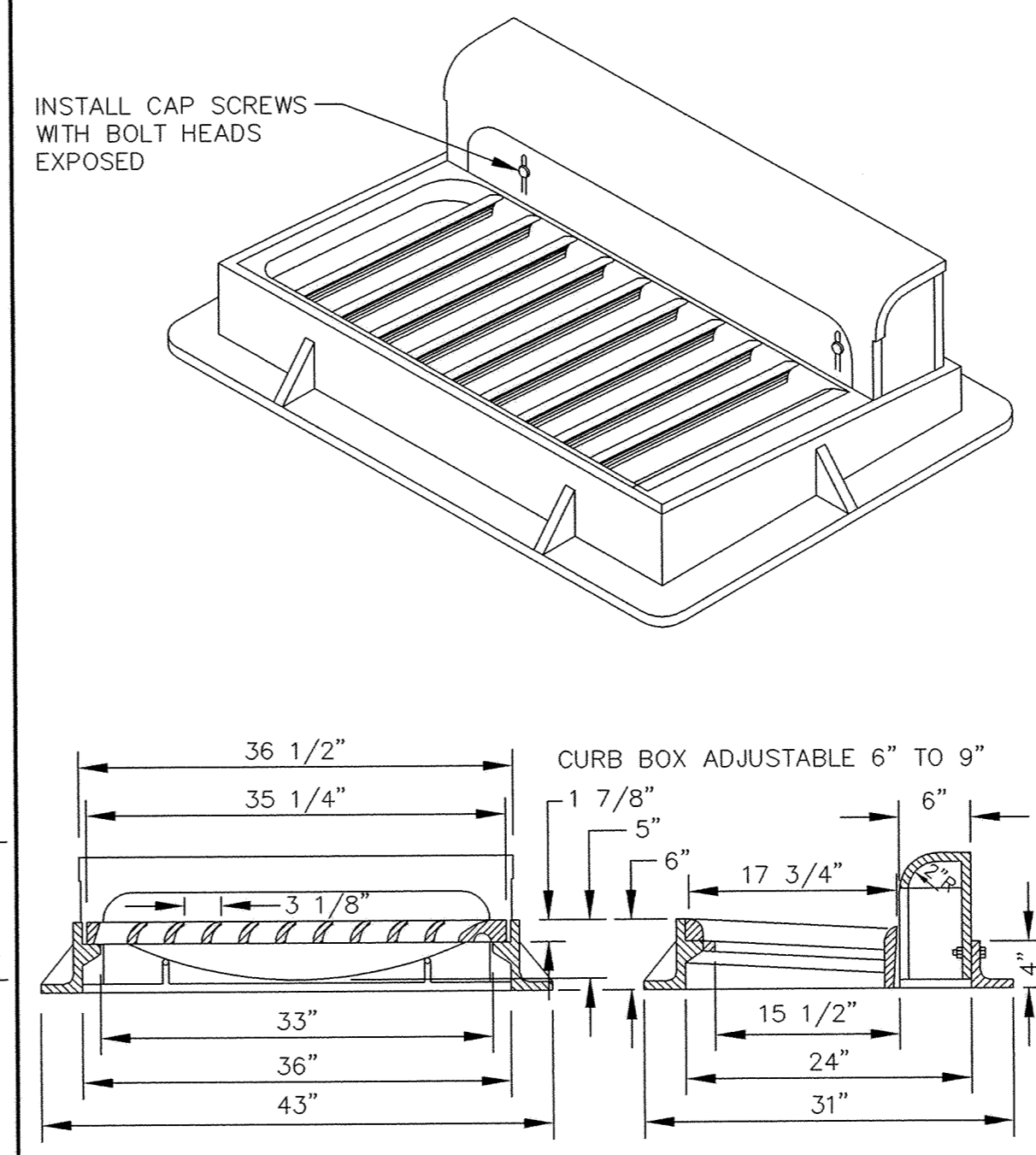
RIP-RAP INSTALLATION



CONTRACTOR: RYAN CONTRACTING CO.
 RECORD DRAWING
 CONFORMING TO CONSTRUCTION RECORDS.
 BY AL SPILLES DATE 02/15/05
 WESTWOOD PROFESSIONAL SERVICES

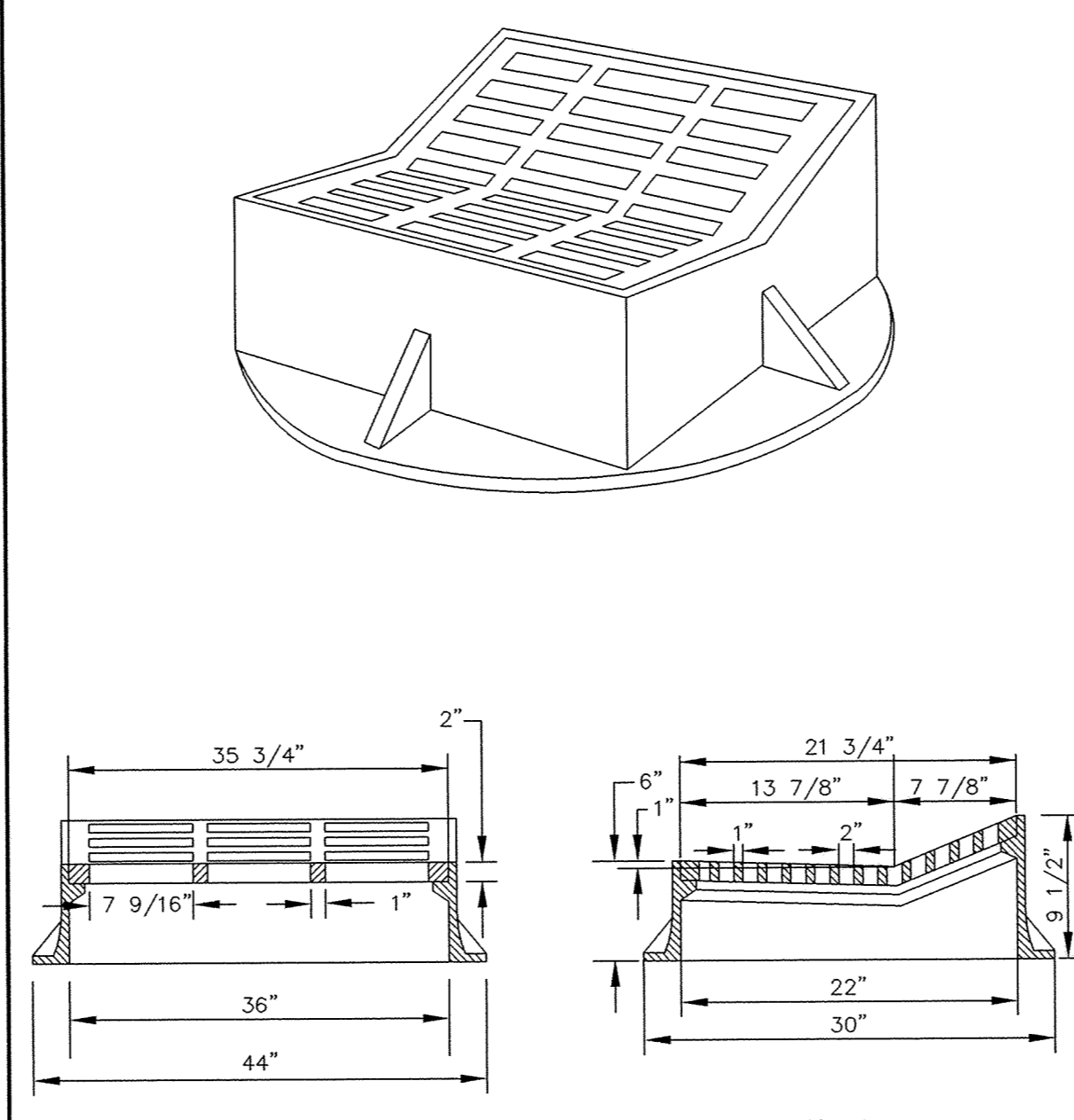
NOTE:
 REINFORCING SHALL CONSIST OF A SINGLE LINE
 OF STEEL WIRE FABRIC HAVING AN AREA OF
 NOT LESS THAN 0.17 SQ. IN. PER FOOT OF HEIGHT.

SHALLOW CATCH BASIN



CASTINGS SHALL BE NEENAH R-3067-V OR EQUAL

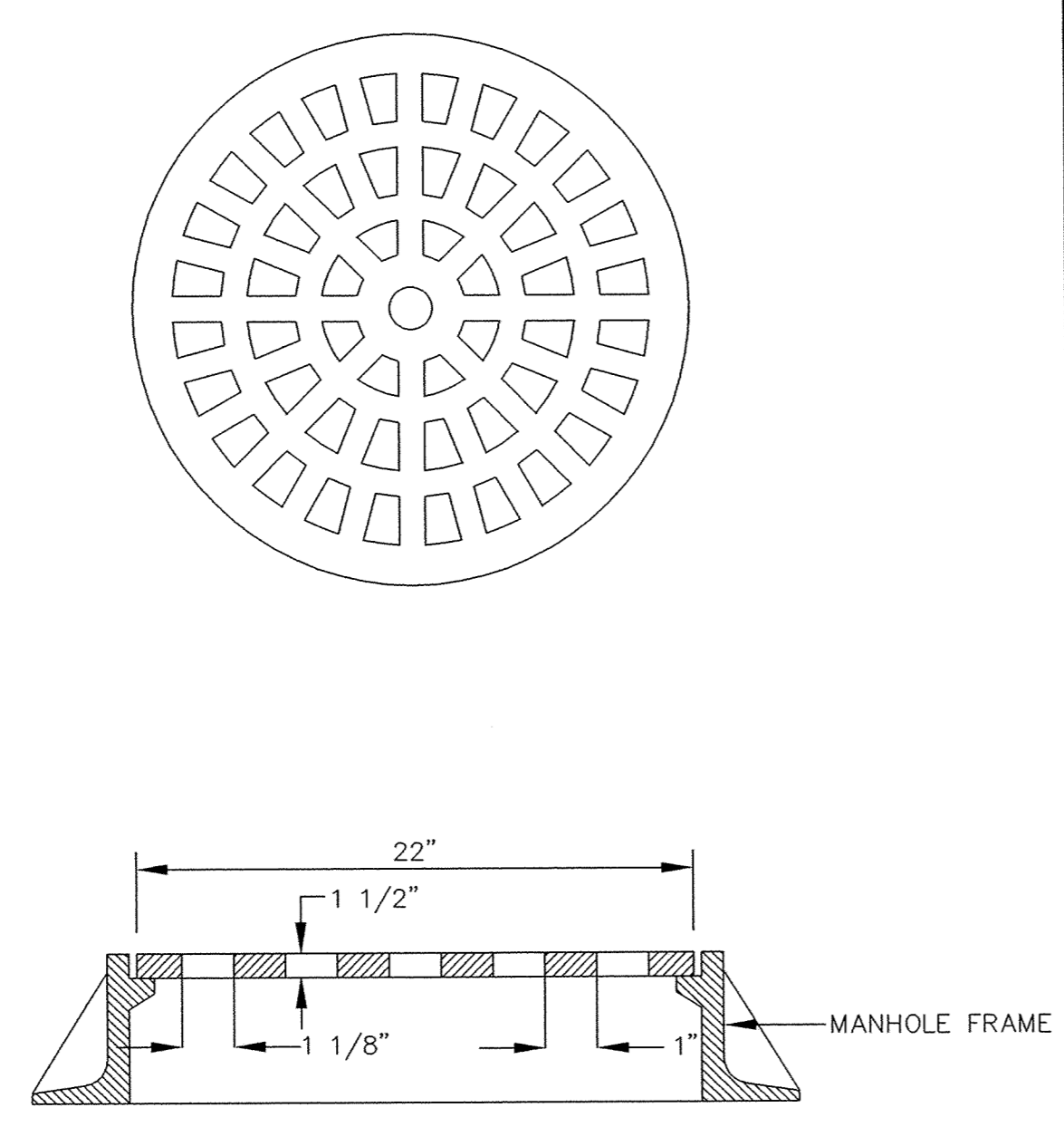
STANDARD INLET CASTING



CASTINGS SHALL BE NEENAH R-3508-A OR EQUAL

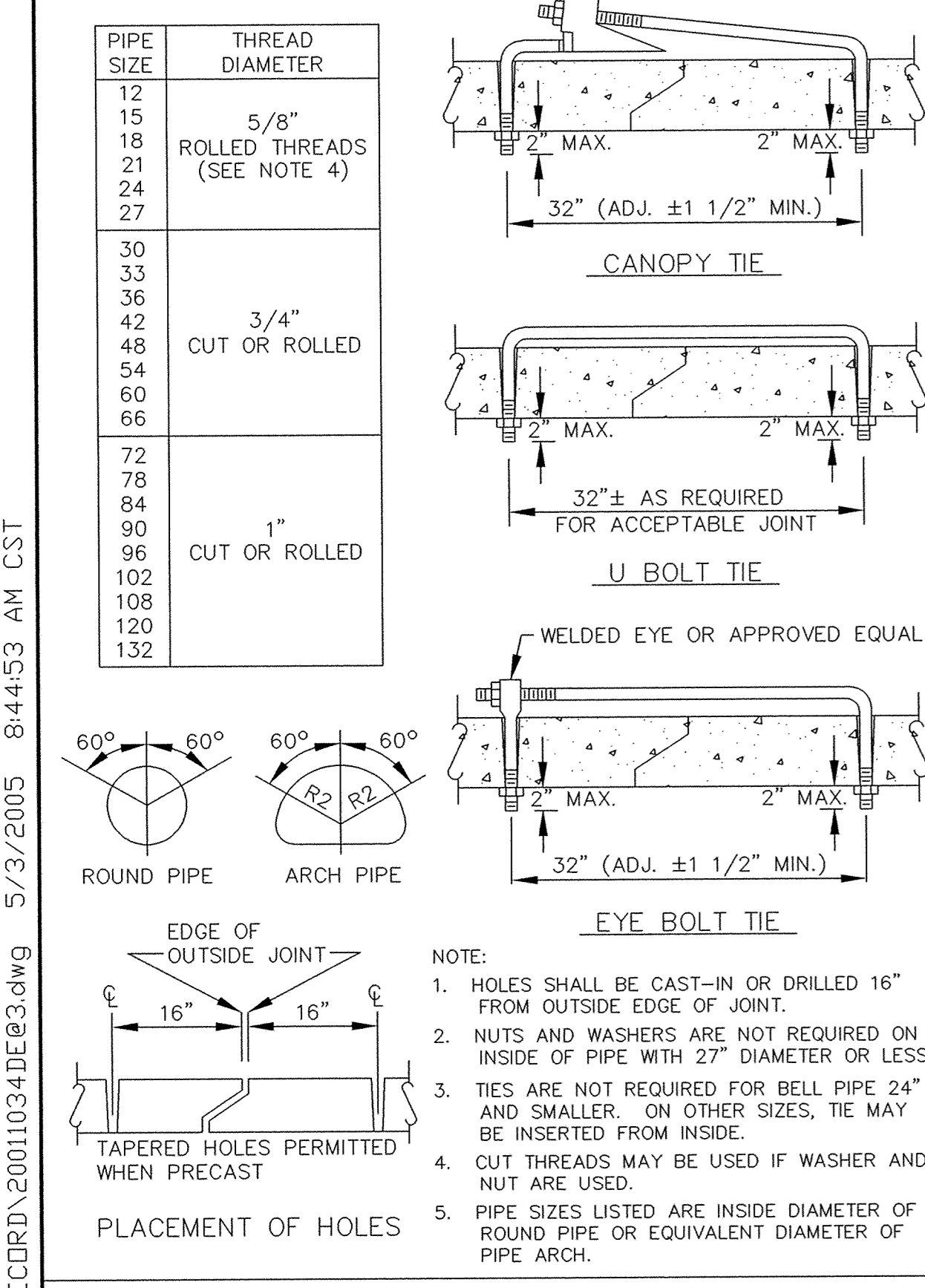
NOTE:
 THIS TYPE INLET CASTING SHALL BE USED WHEN SPECIFIED.
 STANDARD MANHOLE ON SLAB TOP MANHOLE ONLY.

STANDARD INLET CASTING



CASTING SHALL BE NEENAH R-4370 TYPE C OR EQUAL FOR YARDS
 CASTING NEENAH R-4342 TYPE C FOR DITCHES

GRATE CASTING



CONCRETE PIPE JOINT TIES

DESIGNED BY: --- DRAWN BY: ---
 APPROVED: --- JOB NUMBER ---
 CAD DATE: April 14, 1999 11:14:59 a.m.
 CAD FILE: 230000m\ER-SM.DWG

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION,
 OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT
 SUPERVISION AND THAT I AM A DULY REGISTERED
 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
 STATE OF MINNESOTA.
 DATE: _____ REG. NO. _____

NO.	DATE	BY	REVISION DESCRIPTION
1	06/17/04	AS	RECORD DRAWING
2	02/15/05	GKB	RECORD DRAWING

1326 ENERGY PARK DRIVE
 ST. PAUL, MINNESOTA 55108
 (612) 644-4389

Howard R. Green Company
 CONSULTING ENGINEERS

CITY OF ELK RIVER
TROTT BROOK FARMS SOUTH
STORM SEWER DETAILS

SHEET NO.
19
 OF
21

P:\20011034\dwg\RECORD\20011034DE@3.dwg 5/3/2005 8:44:53 AM CST

PROJECT: TROTT BROOK FARMS SOUTH STORM SEWER
 DRAWING NO: 19 OF 21
 DATE: 02/15/05
 DRAWN BY: GKB
 CHECKED BY: AS
 APPROVED BY: [Signature]