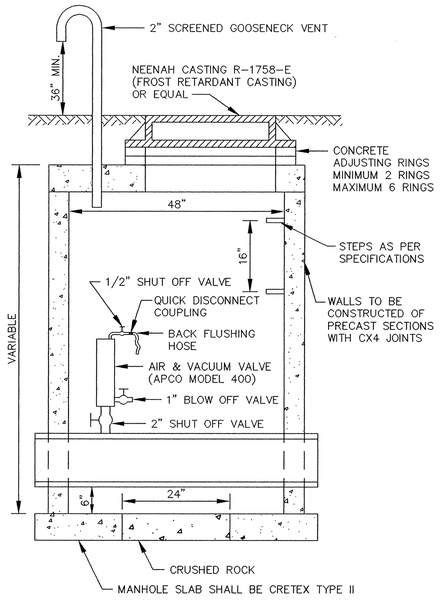
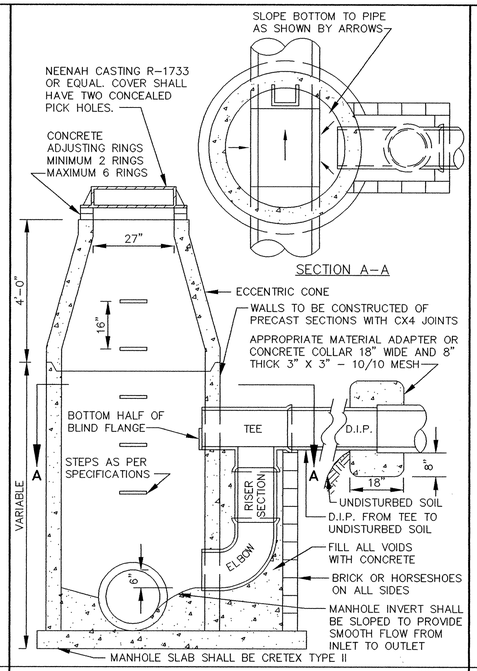
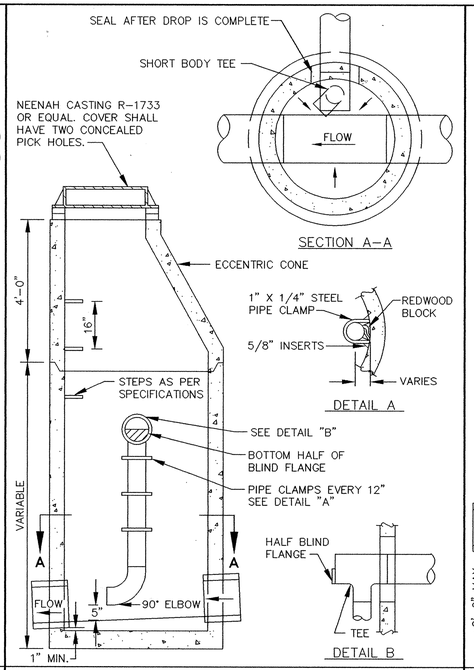


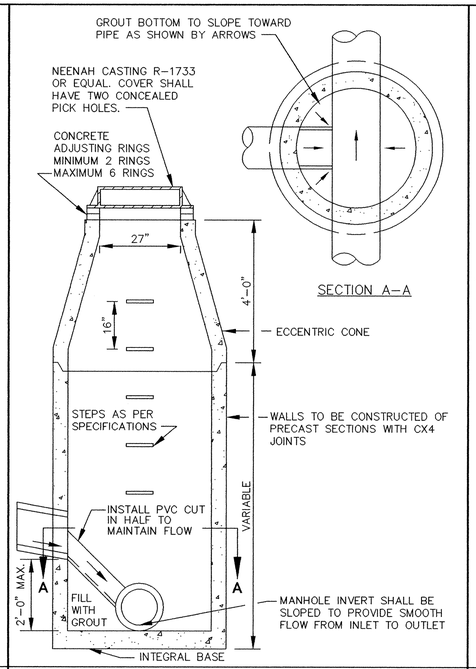
STANDARD AIR RELIEF MANHOLE



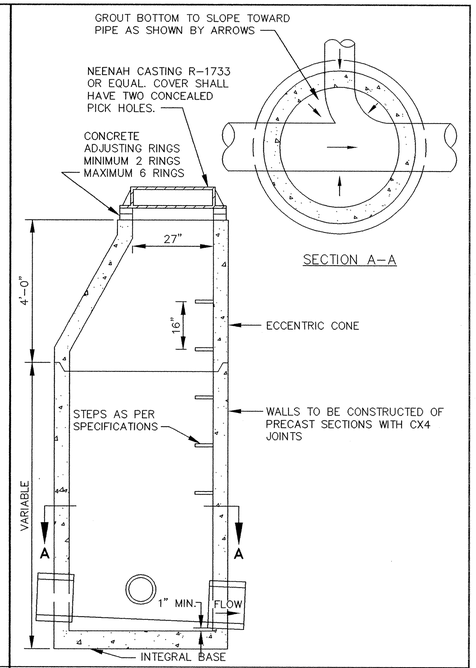
OUTSIDE DROP MANHOLE



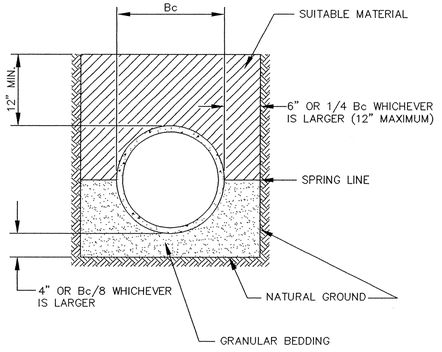
INSIDE DROP MANHOLE



INSIDE DROP MANHOLE (TWO FEET OR LESS)

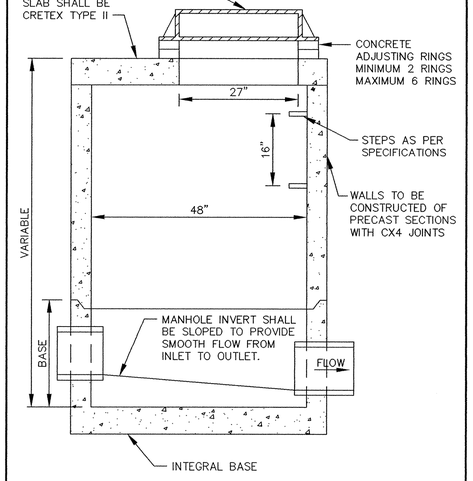


STANDARD MANHOLE



NOTE: ALL COSTS OF EXCAVATION BELOW GRADE AND PLACEMENT OF GRANULAR BEDDING SHALL BE INCLUDED IN THE BID PRICES FOR PIPE ITEMS.

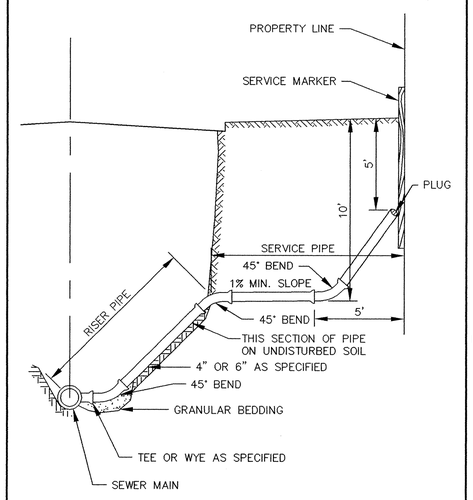
CLASS B PIPE BEDDING



NOTE:

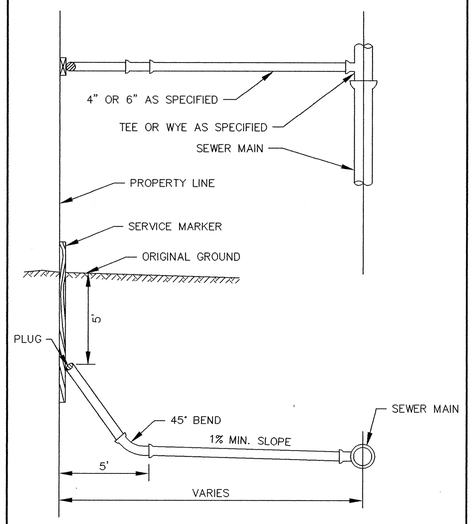
THIS TYPE MANHOLE SHALL BE USED WHEN SPECIFIED OR WHEN THE MANHOLE DEPTH IS LESS THAN EIGHT FEET.

SLAB TOP MANHOLE



TO BE USED AS SERVICE CONNECTIONS ON DEEP LINES

SERVICE RISER SECTION



TYPICAL HOUSE SERVICE

RECORD PLAN
SEPT. 1994

ER215-D1

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.
Paul Boettcher
DATE 3-28-94 REG.NO. 13929

MSA CONSULTING ENGINEERS
1326 ENERGY PARK DRIVE
ST. PAUL, MINNESOTA 55108
(612) 644-4389
9800 SHELARD PARKWAY
MINNEAPOLIS, MINNESOTA 55441
(612) 546-0432

REVISIONS	DATE	DESCRIPTION

DESIGNED
CHECKED PEB
DRAWN CLS
GRAPHIC SCALE
HORIZ. N/A
VERT.

CITY OF ELK RIVER
TRUNK SANITARY AND WATERMAIN-ELK PARK CENTER
SANITARY SEWER DETAILS

DATE MARCH 1994 | SHEET 15 OF 17 SHEETS | PROJECT NO. 230-215

DRAWING NUMBER
ELKPAT.94
15

SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REORDER BY PART NUMBER 6582
DRAWING NUMBER

Mon Mar 28 06:30:00 1994

7847