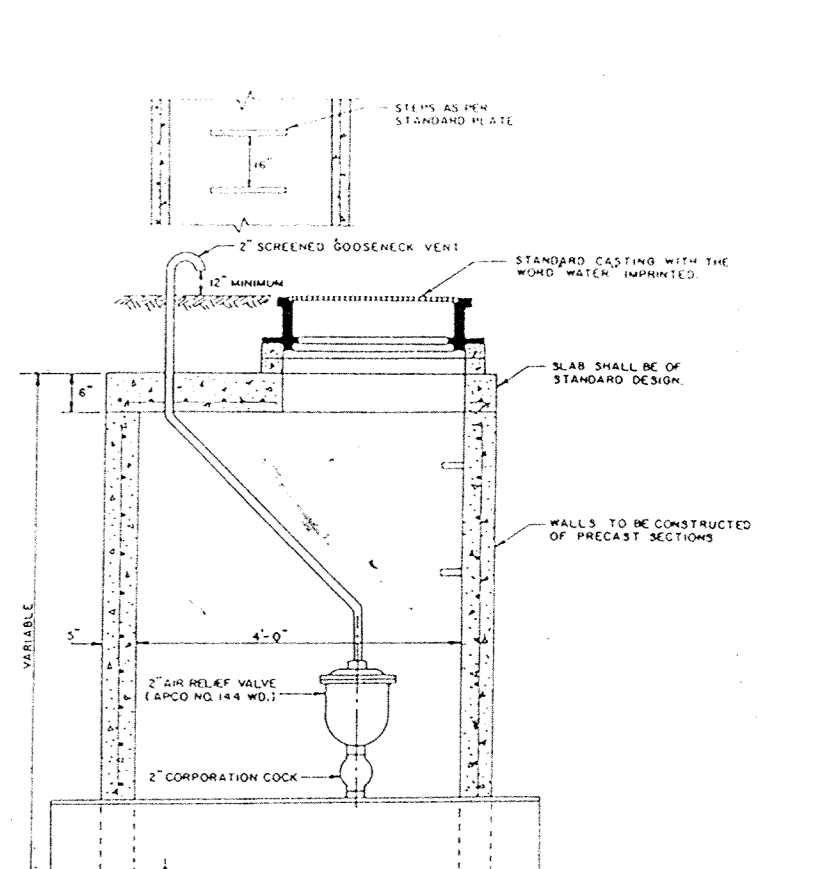


NOMINAL FITTING INCHES	FEET, W.T. PLUG ON CAP	90° BEND, PLUGGED	FEET PLUGGED ON RUN	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1.0	1.4	1.9	1.4	1.0	-
6	2.1	3.0	4.3	3.0	1.4	1.0
8	3.4	5.3	7.4	5.4	2.9	1.3
10	5.9	8.4	11.8	8.4	4.4	1.8
12	8.5	12.0	17.0	12.0	6.6	3.1
14	11.5	16.3	23.0	16.3	8.9	4.4
16	15.0	21.3	30.0	21.3	11.6	6.0
18	18.0	27.0	38.0	27.0	14.4	7.4
20	23.5	33.3	47.0	33.3	18.1	9.4
24	34.0	48.0	68.0	48.0	26.2	13.4



Typical Watermain Layout

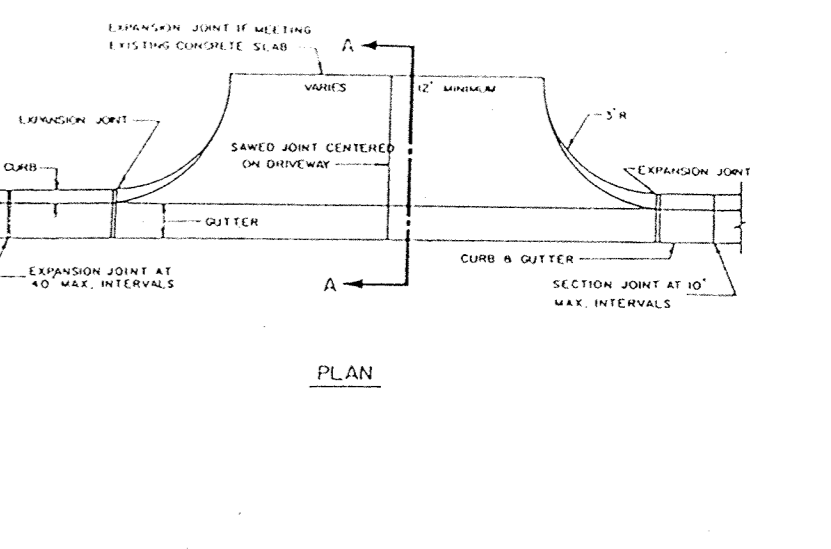
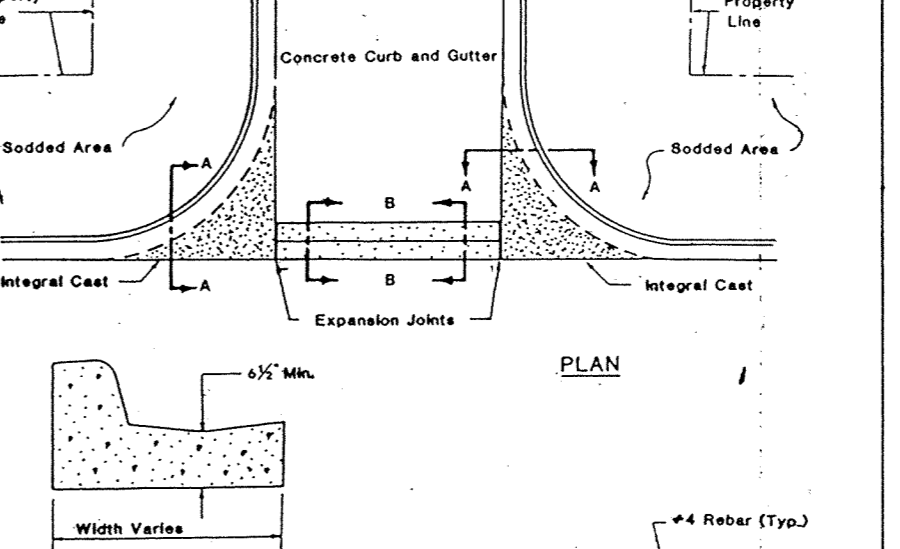
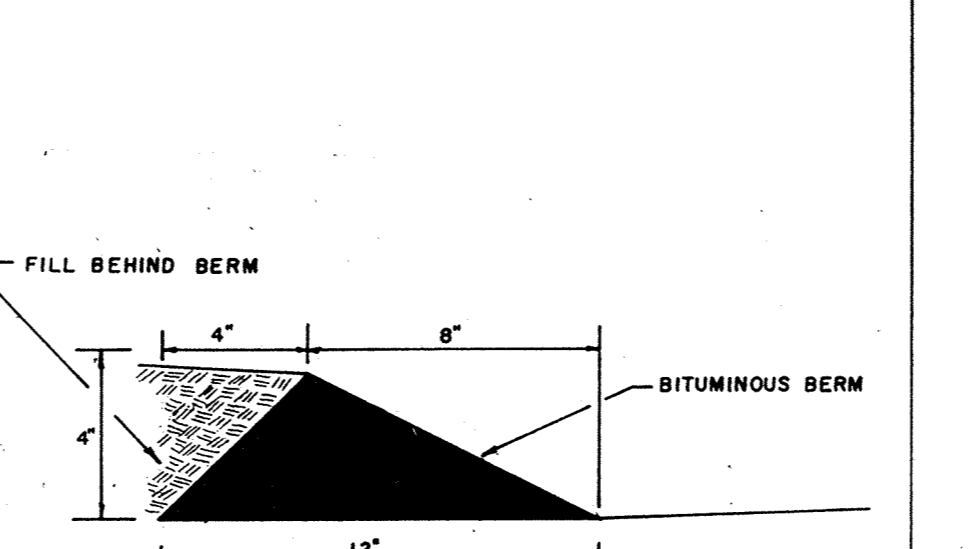
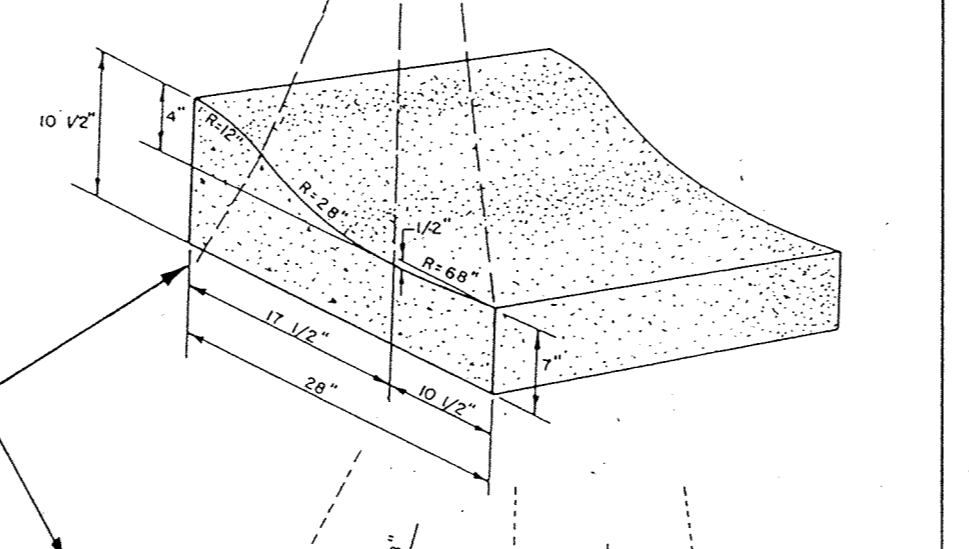
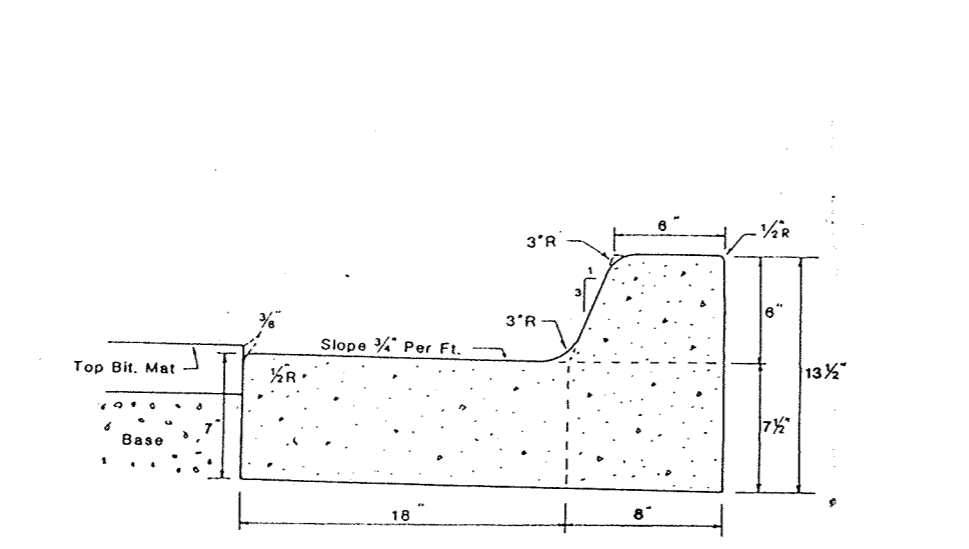
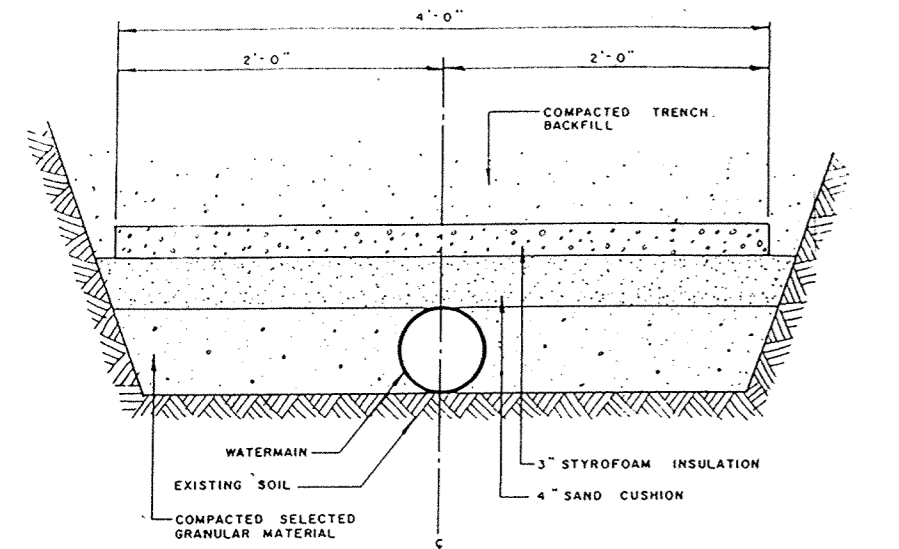
Typical Hydrant Lead Detail

Typical Water Service Connection

Pacer Traffic Flange Hydrant

Thrust Blocking Detail

Standard Air Relief Manhole



Pipe Insulation Detail

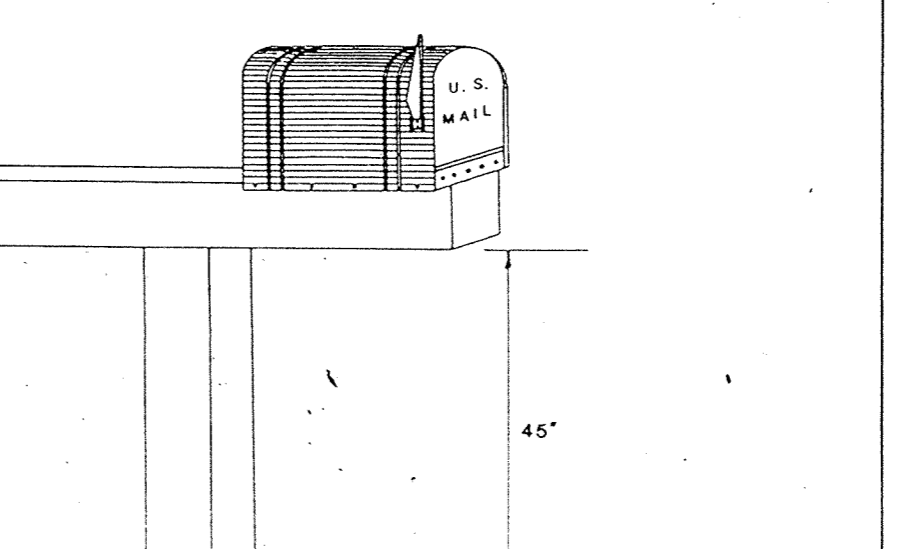
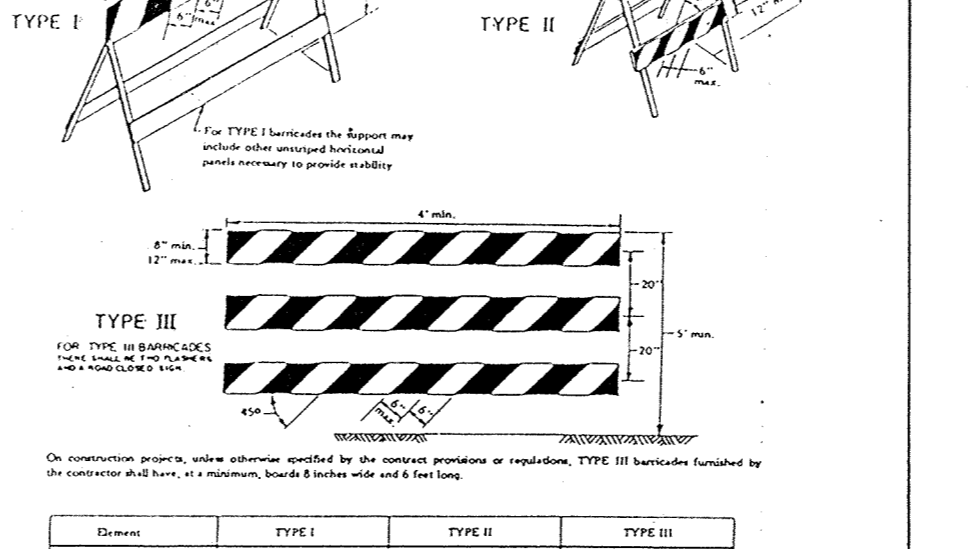
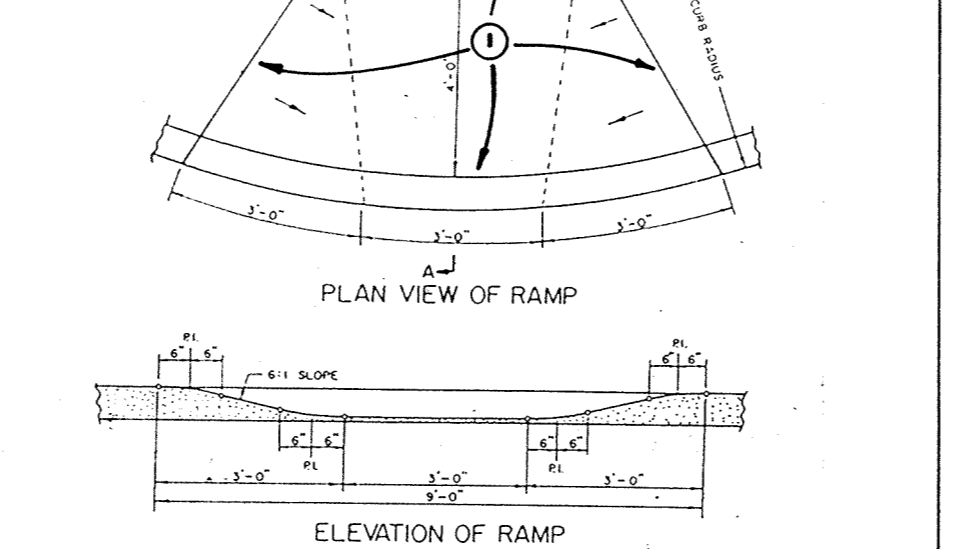
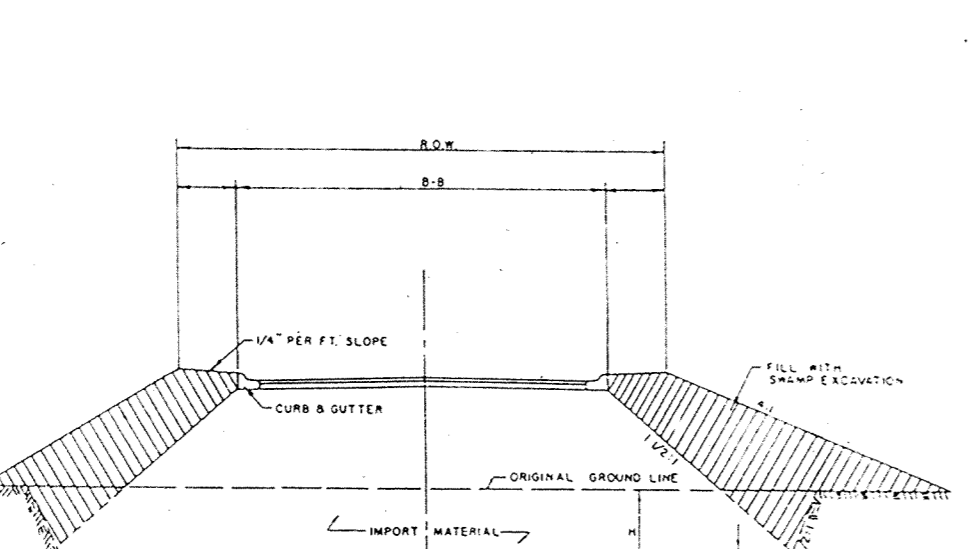
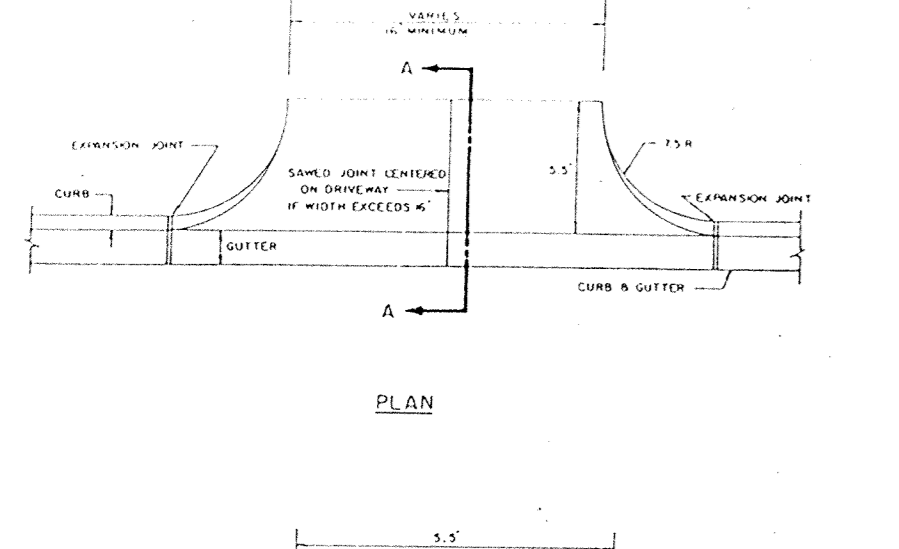
Concrete Curb & Gutter B-618

Surmountable Curb & Gutter

Integral Bituminous Berm

Concrete "V" Gutter Detail

Residential Driveway Apron Detail



AS-BUILT
 DRAWN BY: MLK Date 2-4-85
 CHECKED BY:
 INSPECTOR CR Date 2-11-85
 DESIGN ENGR. SS Date 2-11-85

Commercial Driveway Apron Detail

Typical Swamp Section

Pedestrian Curb Ramp

Standard Barricades

Mailbox Detail

SAP 204-113-01

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 State of Minn. Statutes Sections 326.02 to 326.16.
Larry J. Maurer
 Date 11/9/83 Minn. Reg. No. 15316

consulting engineers diversified inc.

civil municipal planning environmental land surveying soil exploration

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DESIGNED BY	<u>TJM</u>
CHECKED BY	<u>TJM</u>
DRAWN BY	<u>NR</u>

REVISIONS

SCALE NONE

HORIZ. NONE

VERT. NONE

CITY OF ELK RIVER
 DETAIL PLATES
 WATERMAIN & STREET CONSTRUCTION

DATE FEB 1983 SHEET 13 OF 14 SHEETS FILE NO. ER3M02