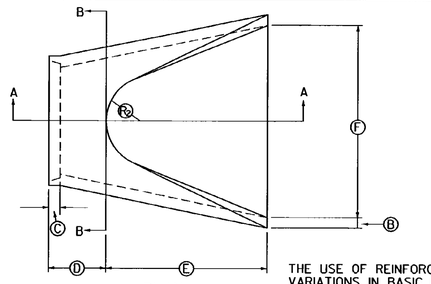
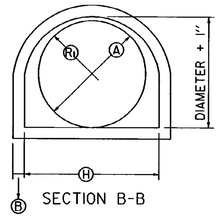
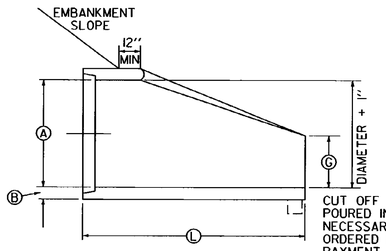


PLAN



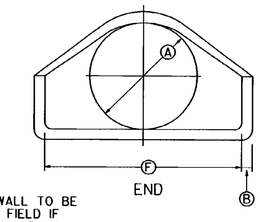
SECTION B-B

THE USE OF REINFORCED CONCRETE END SECTIONS HAVING VARIATIONS IN BASIC DIMENSIONS FROM THOSE SHOWN ON THIS SHEET SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.



SECTION A-A

CUT OFF WALL TO BE POURED IN FIELD IF NECESSARY AND AS ORDERED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER APPROPRIATE CONTRACT ITEMS.



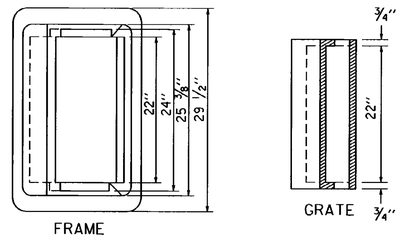
END

BASIC DIMENSIONS													
A	B	C	D	E	F	G	H	DIAM+1"	SLOPE	R_1	R_2	* RATIO $\frac{A2}{A1}$	L
12"	2"	SEE NOTE	48 3/8"	24"	24"	4"	19 15/16"	13"	2.7 :1	10 1/8"	9"	1.92	6'-0 3/8"
18"	2 1/2"		46"	27"	36"	9"	29"	19"	2.7 :1	15 1/2"	12"	1.88	6'-1"
24"	3"		30"	43 1/2"	48"	9 1/2"	33 3/16"	25"	2.8 :1	16 15/16"	14"	1.58	6'-1 1/2"
30"	3 1/2"		19 3/4"	54"	60"	12"	37"	31"	2.8 :1	18 1/2"	15"	1.41	6'-1 3/4"
36"	4"		34 3/4"	63"	72"	15"	47 13/16"	37"	2.9 :1	24 5/16"	20"	1.50	8'-1 3/4"
42"	4 1/2"		35"	63"	78"	21"	53 1/8"	43"	2.9 :1	27 1/2"	22"	1.46	8'-2"
48"	5"		26"	72"	87"	24"	59 1/2"	49"	2.9 :1	30"	22"	1.40	8'-2"

NOTE: JOINTS SHALL BE TONGUE AND GROOVE OR BELL AND SPIGOT AS REQUIRED AND DIMENSIONS SHALL CONFORM TO STANDARD REINFORCED CONCRETE PIPE SPECIFICATIONS.

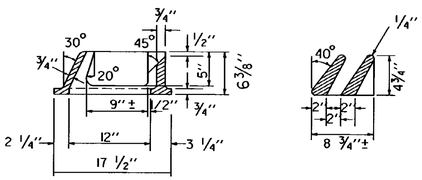
REINFORCED CONCRETE PIPE END SECTION

* AREA-1 = AREA OF NOMINAL DIAMETER
AREA-2 = AREA THRU SECTION B-B

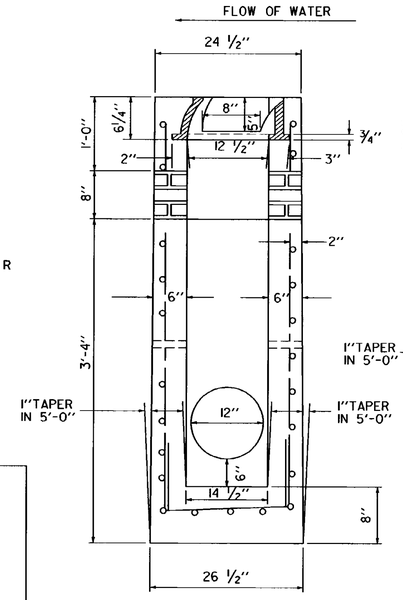


FRAME

GRATE

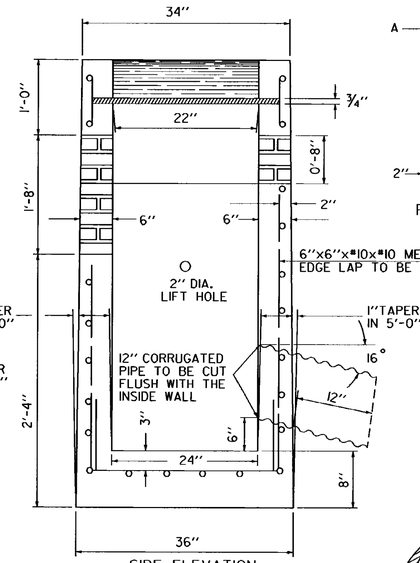


ALTERNATE GRATE AND FRAME



END ELEVATION

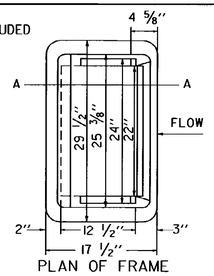
FURNISHING AND LAYING OF BRICKS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EACH DROP INLET.



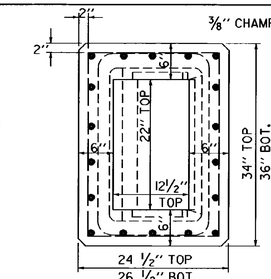
SIDE ELEVATION

ALLOW FOR 1'-8" OF BRICKS ON SIDE OPPOSITE OUTLET PIPE, 0'-8" BRICKS ON OTHER 3 SIDES.

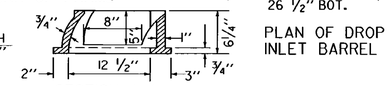
PRECAST REINFORCED CONCRETE CURB DROP INLET WITH CAST IRON GRATE



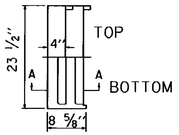
PLAN OF FRAME



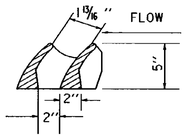
PLAN OF DROP INLET BARREL



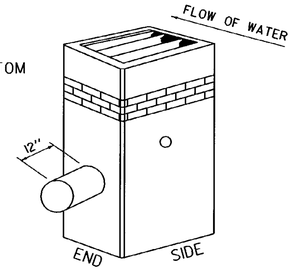
SECTION A-A



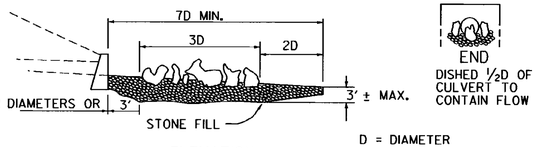
PLAN OF GRATE



SECTION A-A
GRATE



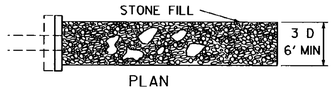
ISOMETRIC



ELEVATION

END
DISHED 1/2D OF CULVERT TO CONTAIN FLOW

D = DIAMETER



PLAN

FOR USE ONLY AT LOCATIONS OF VERY HIGH DISCHARGE AND ERODABLE SOIL CONDITIONS.

IRREGULAR COBBLES APPROXIMATING THE MAXIMUM SIZE FOR TYPE OF SPECIFIED STONE FILL TO BE PLACED IN GENERAL PATTERN AS SHOWN. NO STONE TO BE CLOSER THAN 2D TO OUTLET OF PIPE. STONES SHOULD NOT BE PLACED TO DAM FLOW, BUT TO INDUCE TURBULENCE AND REDUCE VELOCITY. PLAN MAY BE ADAPTED TO FIELD CONDITIONS PREVAILING AT OUTLET. WHERE FLOW IS TO ULTIMATELY FOLLOW TOE OF SLOPE, DESIGN MAY BE SHORTENED OR WIDENED TO ACT AS A STILLING BASIN, AND DIRECT FLOW INTO DITCH.

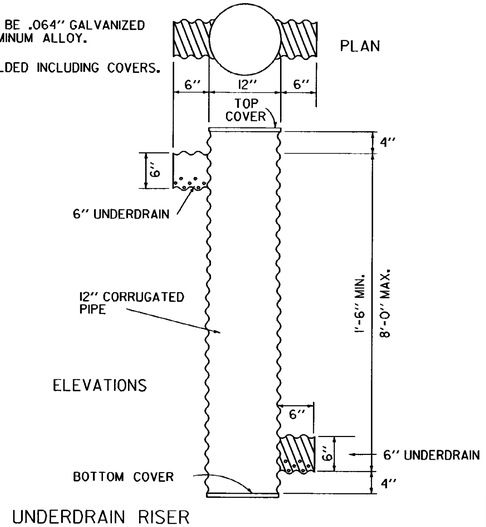
STONES FORMING BREAK SHOULD PROJECT ABOVE AND BELOW SURFACE OF STONE FILL APPROXIMATELY 3/4 THE DIAMETER OF THE PIPE.

STONE FILL TYPE TO BE SPECIFIED ON PLANS.

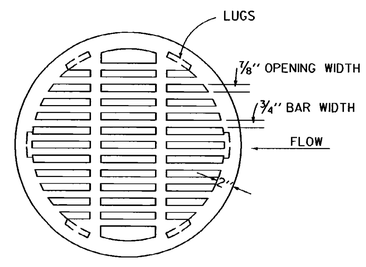
ENERGY DISSIPATOR FOR CULVERTS

TOP AND BOTTOM COVERS TO BE .064" GALVANIZED IRON OR STEEL, OR .060" ALUMINUM ALLOY.

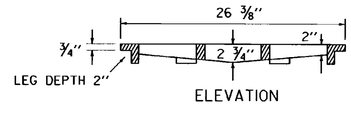
ALL FITTINGS TO BE SHOP WELDED INCLUDING COVERS.



UNDERDRAIN RISER

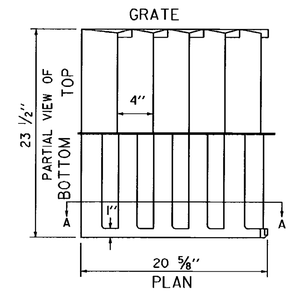


PLAN

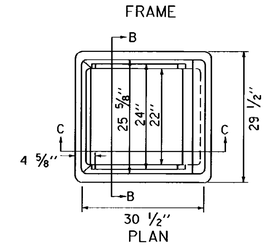


ELEVATION

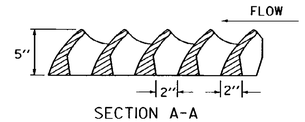
CAST IRON GRATE, TYPE C
TO BE USED IN CONJUNCTION WITH 24" CORRUGATED STEEL PIPE



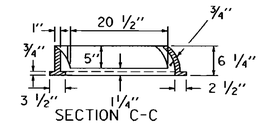
PLAN



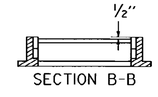
PLAN



SECTION A-A



SECTION C-C



SECTION B-B

CAST IRON GRATE WITH FRAME, TYPE B

REVISIONS AND CORRECTIONS

DEC. 8, 1971 - ORIGINAL APPROVAL
NOV. 14, 1972 - RCP END SECTION DIMENSION VARIANCE NOTE ADDED
OCT. 30, 1985 - REVISED TO CONFORM WITH 1986 SPECIFICATIONS
JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

APPROVED

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

Gordon H. MacAllister, P.E.
DIRECTOR OF ENGINEERING

John M. Murphy, PE
DESIGN ENGINEER

PRECAST REINFORCED CONCRETE CURB DROP INLET WITH CAST IRON GRATE
CAST IRON GRATE, TYPE B
CAST IRON GRATE, TYPE C
UNDERDRAIN RISER
REINFORCED CONCRETE PIPE END SECTION
ENERGY DISSIPATOR FOR CULVERT

VERMONT AGENCY OF TRANSPORTATION

STANDARD D-16