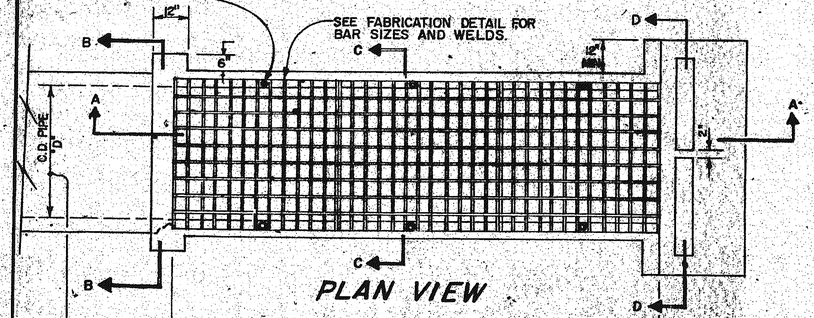
5/8"x 6" GALVANIZED ANCHOR BOLT, NUT, & WASHER (COMMERCIAL GRADE) TO SECURE GRATE ON EACH SIDE

SEE FABRICATION DETAIL FOR BAR SIZES AND WELDS.



PLAN VIEW

G1

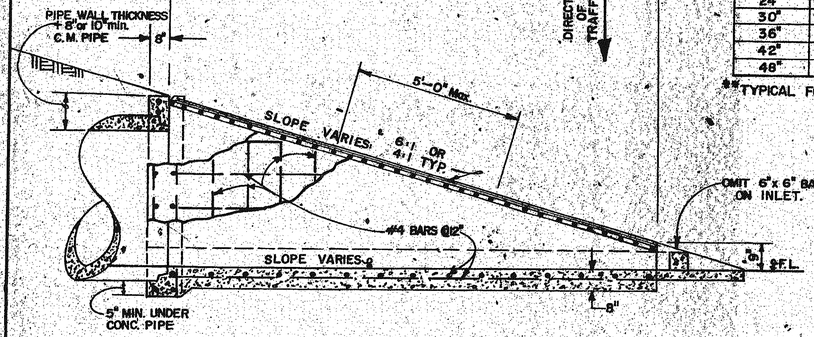
STRAIGHT TYPE

FOR SKEWED PIPES, INCREASE 'D' FOR SKEWED WIDTH (4'-0" MAX)

DIRECTION OF TRAFFIC

MINIMUM LENGTH OF GRATE**		
SIZE	G_1	G_2
15"	6'-0"	8'-0"
18"	7'-0"	9'-0"
24"	9'-6"	11'-6"
30"	11'-6"	13'-6"
36"	14'-0"	15'-6"
42"	16'-0"	18'-0"
48"	18'-0"	20'-0"

**TYPICAL FOR 4:1 SLOPES

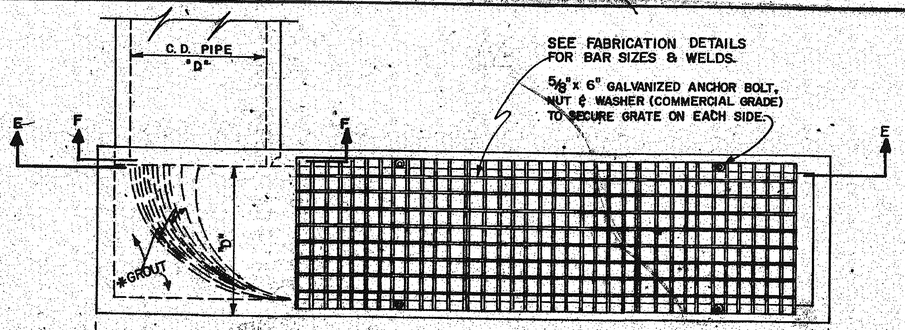


SECTION A-A (SHOWN FOR OUTLET)

C.D. PIPE "D"

SEE FABRICATION DETAILS FOR BAR SIZES & WELDS.

5/8"x 6" GALVANIZED ANCHOR BOLT, NUT & WASHER (COMMERCIAL GRADE) TO SECURE GRATE ON EACH SIDE.



PLAN VIEW

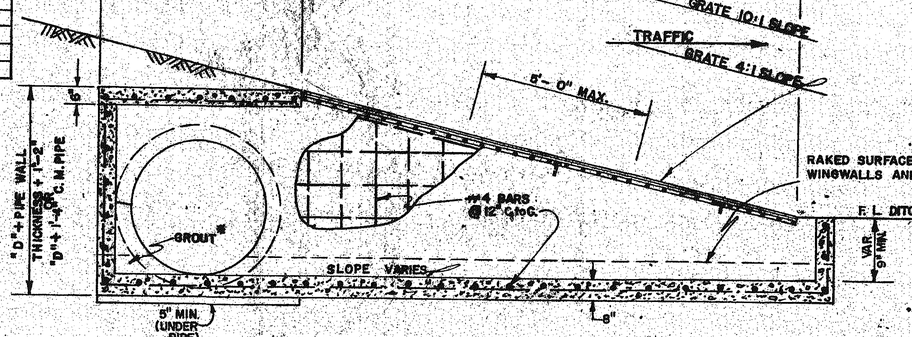
OUTSIDE DIAMETER OF CONCRETE PIPE + 1'-0"

G2

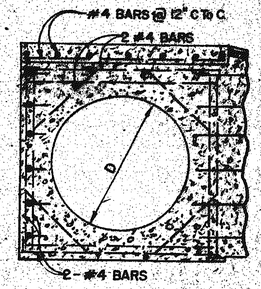
"L" TYPE

6"
6"

GRATE SLOPE
TRAFFIC
GRATE 10:1 SLOPE
TRAFFIC
GRATE 4:1 SLOPE



SECTION E-E (SHOWN FOR INTLET)



SECTION F-F

NOTE: A MAXIMUM TRANSVERSE SPACE OF 3" IS PERMITTED BETWEEN ABUTTING GRATE SECTIONS.

NOTE:
* GROUT TO MEET THE REQ'MTS. OF SECTION 834.

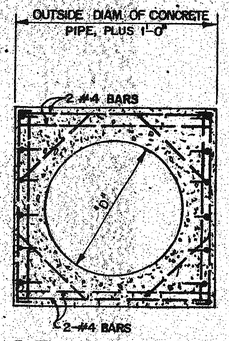
SUMMARY OF QUANTITIES				
CULV'T. DIAM. INCHES	STRAIGHT TYPE		"L" TYPE	
	CONC. CU. YDS.	REINF. STEEL LBS.	CONC. CU. YDS.	REINF. STEEL LBS.
15"	0.96	71	1.49	136
18"	1.07	75	1.87	142
24"	1.93	111	2.69	197
30"	2.52	179	3.63	248
36"	3.30	220	5.07	315
42"	3.90	298	6.10	427
48"	4.90	353	7.28	510

BASIS OF PAYMENT:

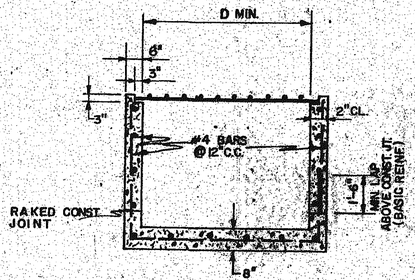
HEADWALL: CUBIC YDS. OF CONC. INCLUDING REINF. STEEL.

GRATE: SAFETY GRATE TYPE _____ Sq. Ft.

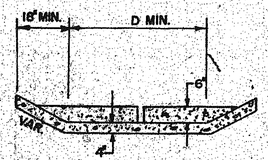
NOTE: QUANTITIES ARE TYPICAL FOR 4:1 SLOPE.



SECTION B-B



SECTION C-C



SECTION D-D

SPECIAL NOTE:

TYPICAL USE OF THESE STRUCTURES IS WHERE THE ENDS OF STORM DRAIN PIPES UNDER THE MAINLINE FALL INSIDE THE CLEAR ZONE.

FOR DETAILS OF SAFETY END SECTIONS (FOR SIDE DRAIN PIPE OR STORM DRAIN PIPE PARALLEL TO MAINLINE), SEE SEPARATE DETAILS.

REVISIONS	DATE
Corr. Revision	6-21-73
Grade Slope	10-4-73
Grade Slope	11-5-73
Grade Slope	12-3-73

CONSTRUCTION DETAILS
—HEADWALLS—
SAFETY INLETS WITH GRATES

SCALE: 1"=1'-0" JULY, 1970

DESIGNED: J.L.P.
DRAWN: G.M.W.
TRACED: A.V.E.
CHECKED: H.R.

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