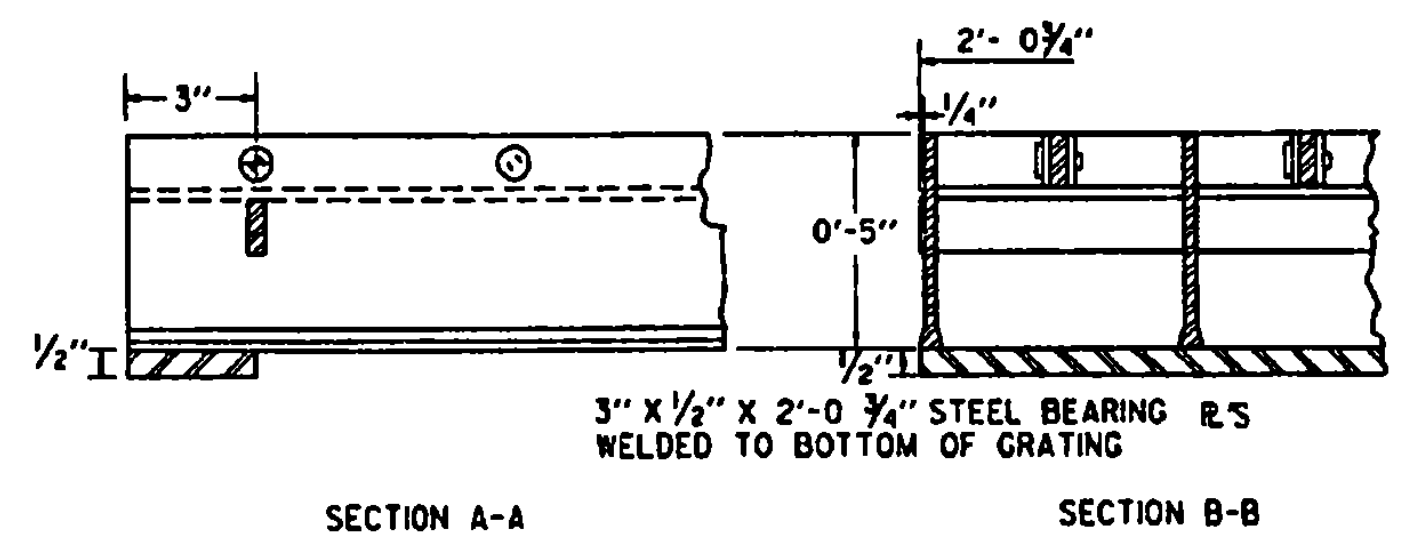


GRATE SIZE SINGLE 24 3/4" x 30"
DOUBLE 24 3/4" x 54"

WEIGHT 95 LBS OR MORE
GRATES SHALL BE CAPABLE OF SUPPORTING H-20 (32,000 LB. AXLE LOAD) INCLUDING 30% IMPACT.

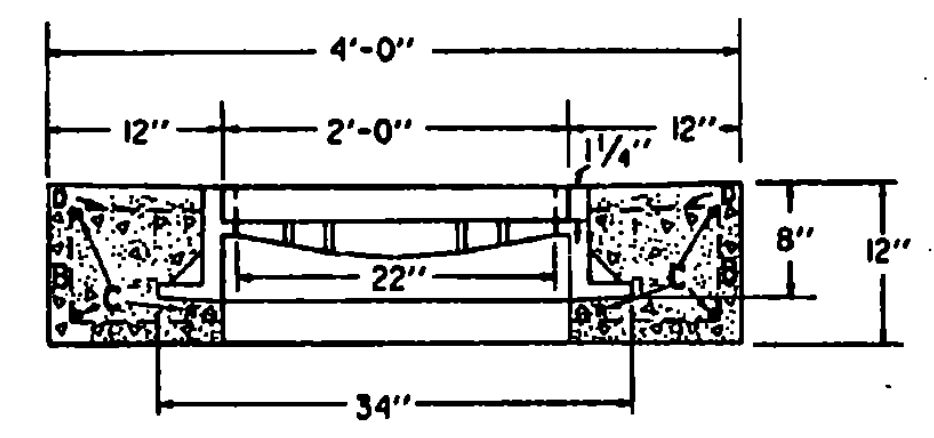
UNIT STRESSES (LBS PER SQ. IN.)	18,000	20,000
MAIN BAR PARALLEL TO TRAFFIC	H-20 49"	53"
MAIN BAR PERPENDICULAR TO TRAFFIC	H-20 39"	42"



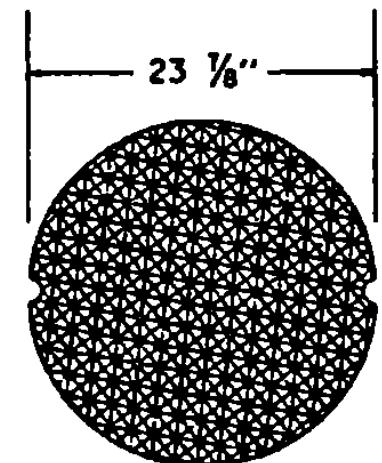
CAST IRON COVER WITH FRAME

BAR NO.	LENGTH	TYPE
B	4	8" 3'-8" 8"
C	6	3'-8" STRAIGHT
D	4	3'-8" STRAIGHT

ALL REINFORCING STEEL TO BE NO. 5 DEFORMED BARS



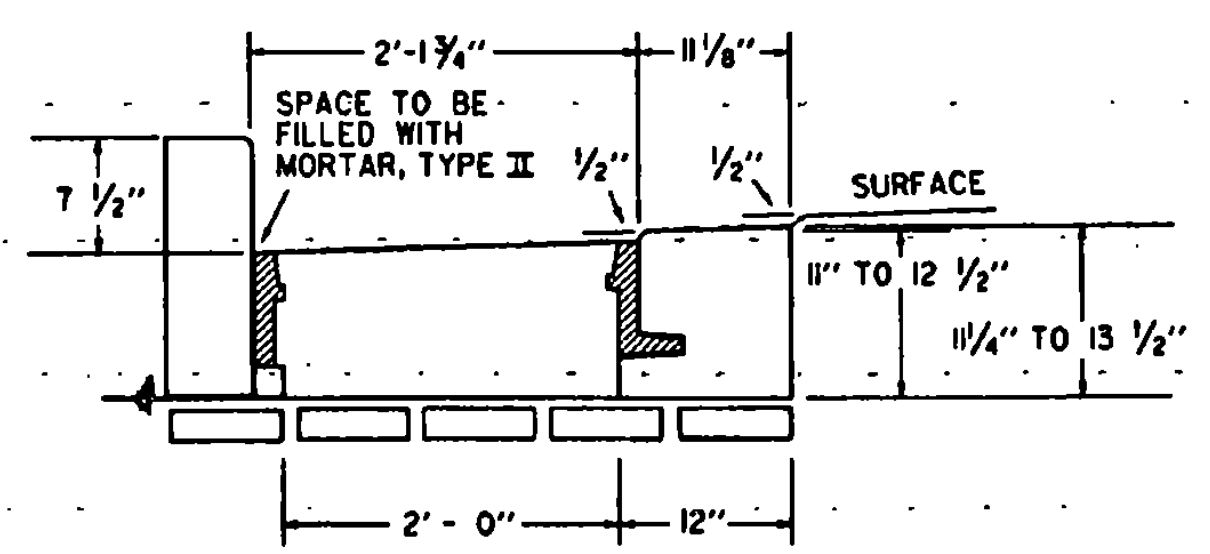
ELEVATION



PLAN

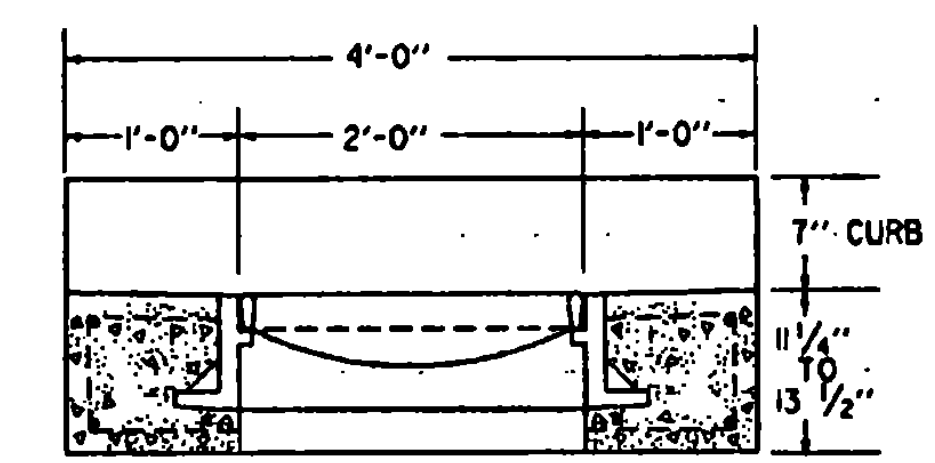
GENERAL NOTES:
WEIGHT OF FRAME AND COVER = 425 LBS.

CAST IRON GRATE WITH FRAME



ELEVATION OF REINFORCED CONCRETE DROP INLET WITH VERTICAL GRANITE CURB AND 3 FLANGE CAST IRON FRAME FOR CAST IRON GRATE

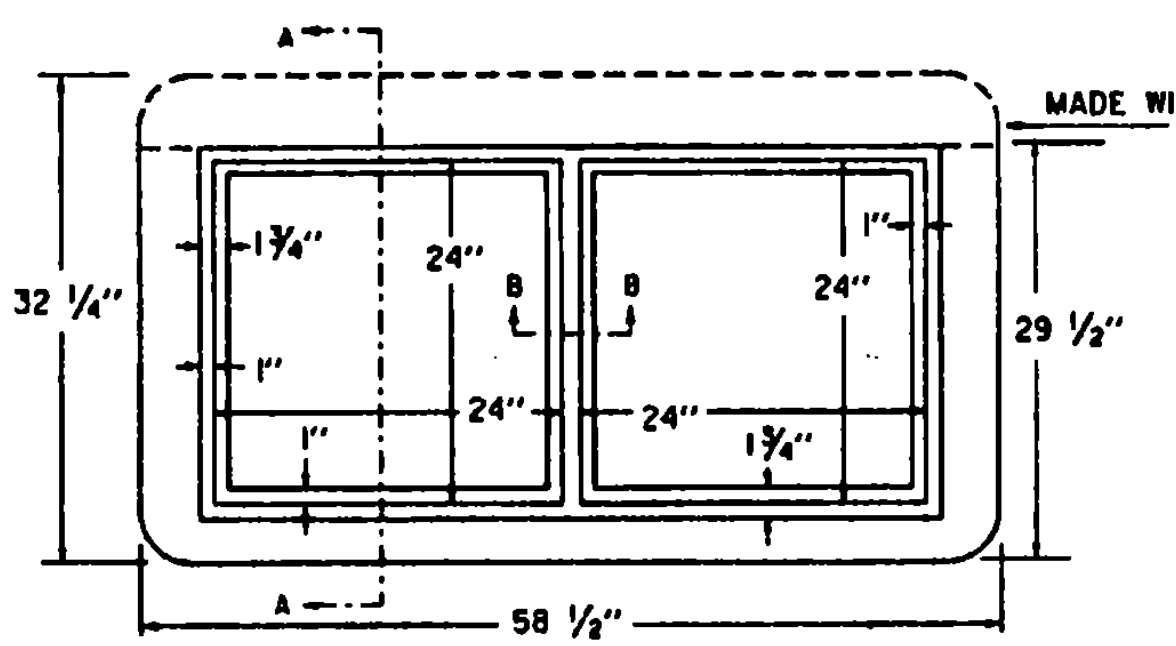
SEE STANDARD D-9 FOR CONCRETE VOLUME, REINFORCING STEEL SCHEDULE, AND CURB JOINT DETAIL.



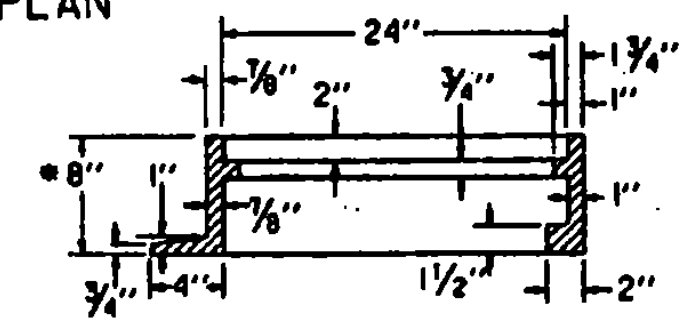
ELEVATION

WEIGHT OF 3 FLANGED FRAME AND GRATE

GRATE	220 LBS
FRAME	260 LBS
TOTAL	480 LBS

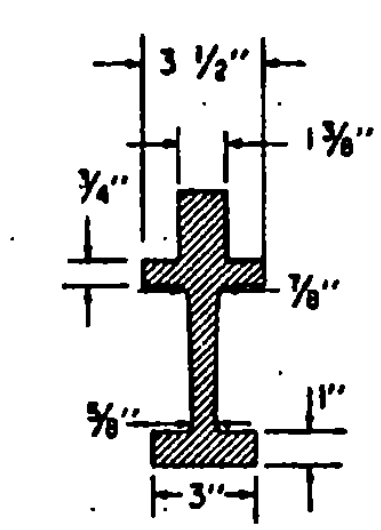


PLAN

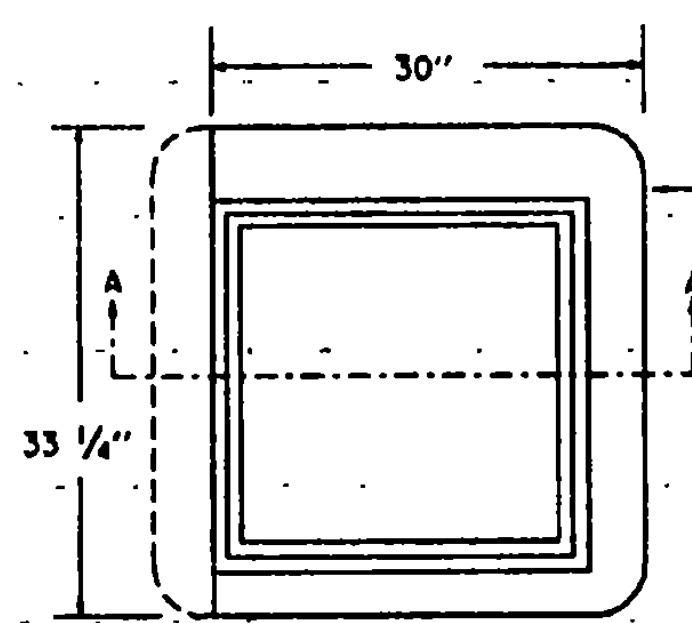


SECTION A-A

RECTANGULAR CAST IRON FRAME FOR TWO 24" SQUARE CAST IRON GRATES



SECTION B-B

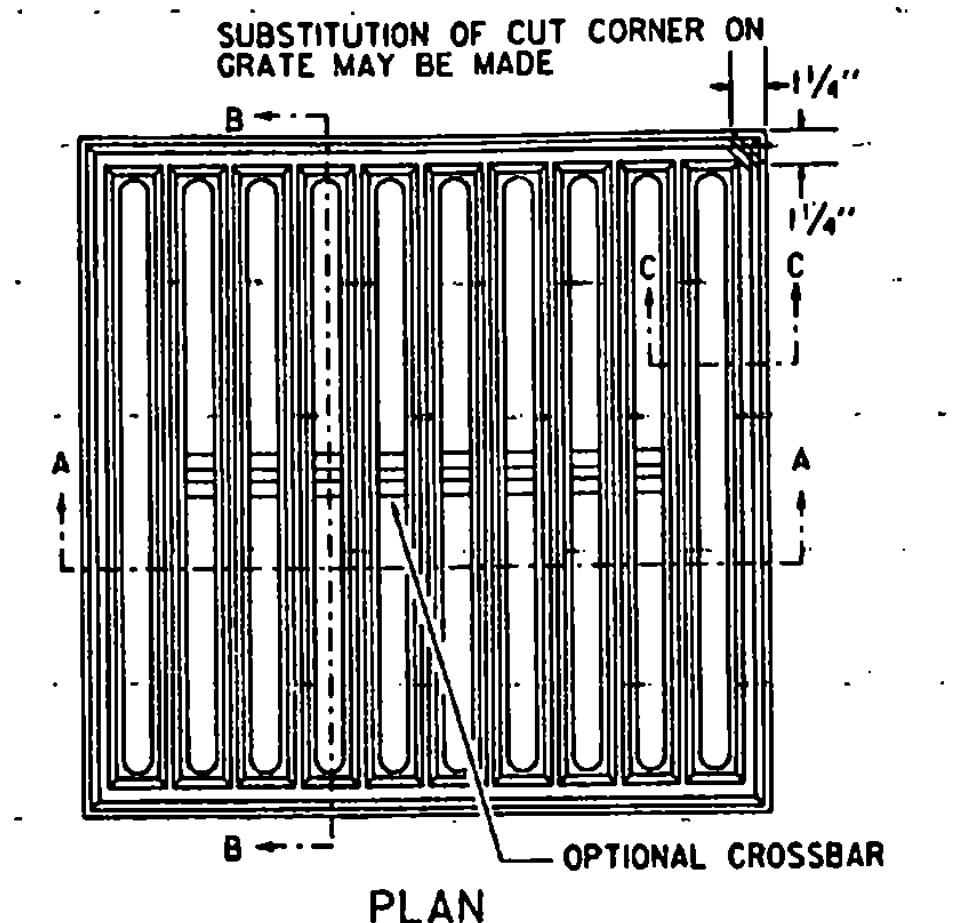


PLAN

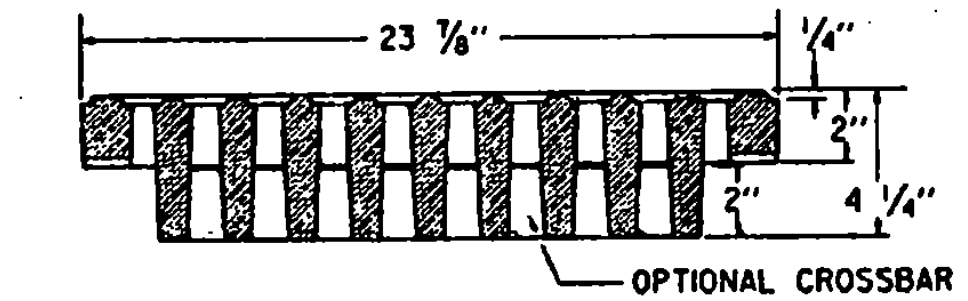
SQUARE CAST IRON FRAME FOR CAST IRON GRATE TYPE A

* NOTE: FRAME DEPTH TO BE "6" WHEN USED IN CONJUNCTION WITH DROP INLET DETAILED ON STANDARD D-6.

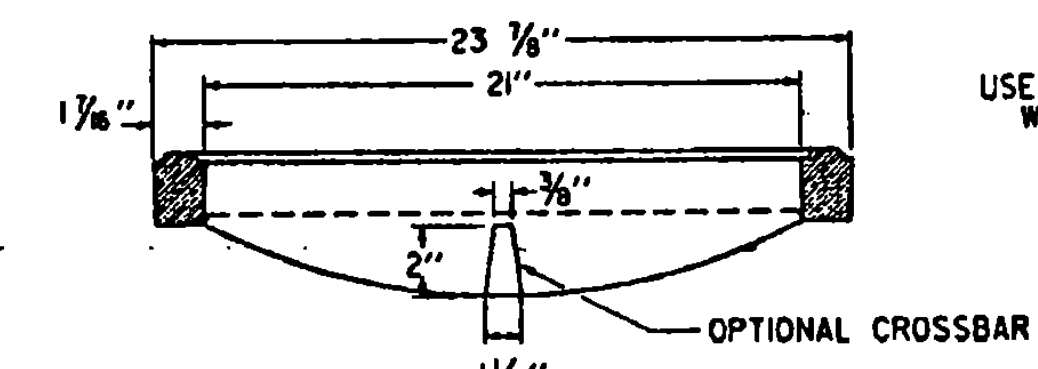
CAST IRON GRATE, TYPE A



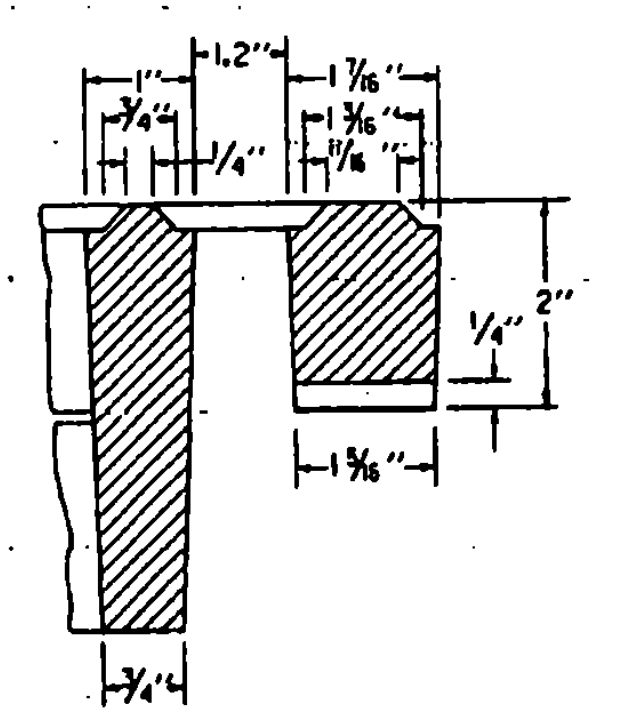
PLAN



SECTION A-A



SECTION B-B



SECTION C-C

USE OF THE TYPE A GRATE IS PROHIBITED WHERE BICYCLE TRAFFIC IS EXPECTED

THIS FRAME TO BE PLACED IN DROP INLET TOP BEFORE CONCRETE IS POURED.

4 FLANGES UNLESS OTHERWISE INDICATED. FRAMES TO BE FURNISHED WITH 3 FLANGES WHEN USED IN CONJUNCTION WITH CURB OR AS DIRECTED BY THE ENGINEER.

REVISIONS AND CORRECTIONS

DEC. 6, 1971 - ORIGINAL APPROVAL

APR. 25, 1972 - CAST IRON COVER CHANGED FROM SQUARE TO CIRCULAR

SEPT. 4, 1980 - OPTIONAL CROSSBAR ADDED TO A GRATE; NOTE ADDED TO A GRATE FRAME DETAIL

AUG. 25, 1981 - NOTE ADDED RESTRICTING USE OF TYPE A GRATE

JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

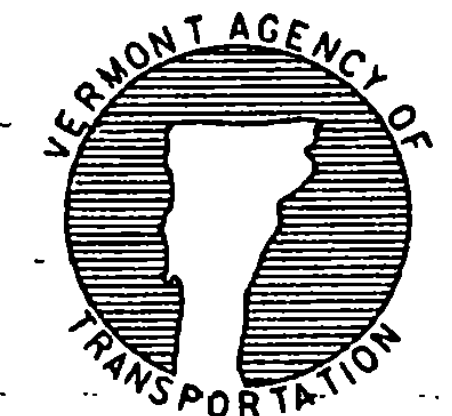
APPROVED

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

Stephen D. MacArthur, P.E.
DIRECTOR OF ENGINEERING

Robert M. Murphy, PE
DESIGN ENGINEER

STEEL GRATE
CAST IRON GRATE TYPE A
CAST IRON COVER



STANDARD
D-11