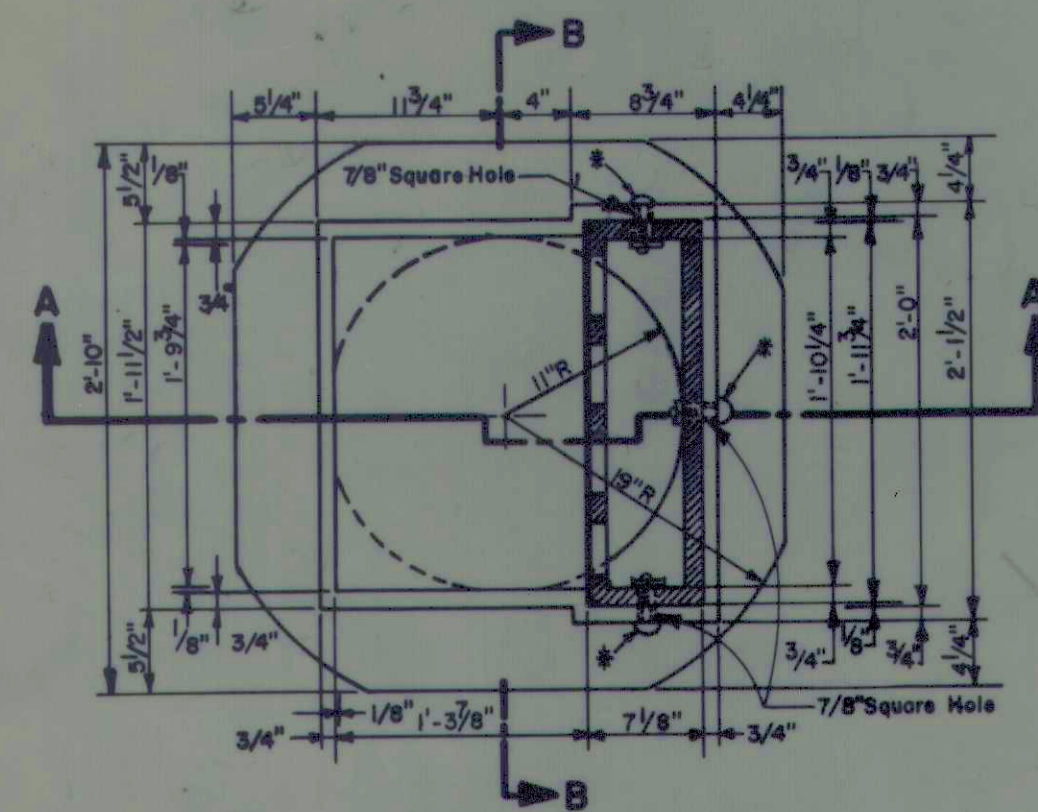
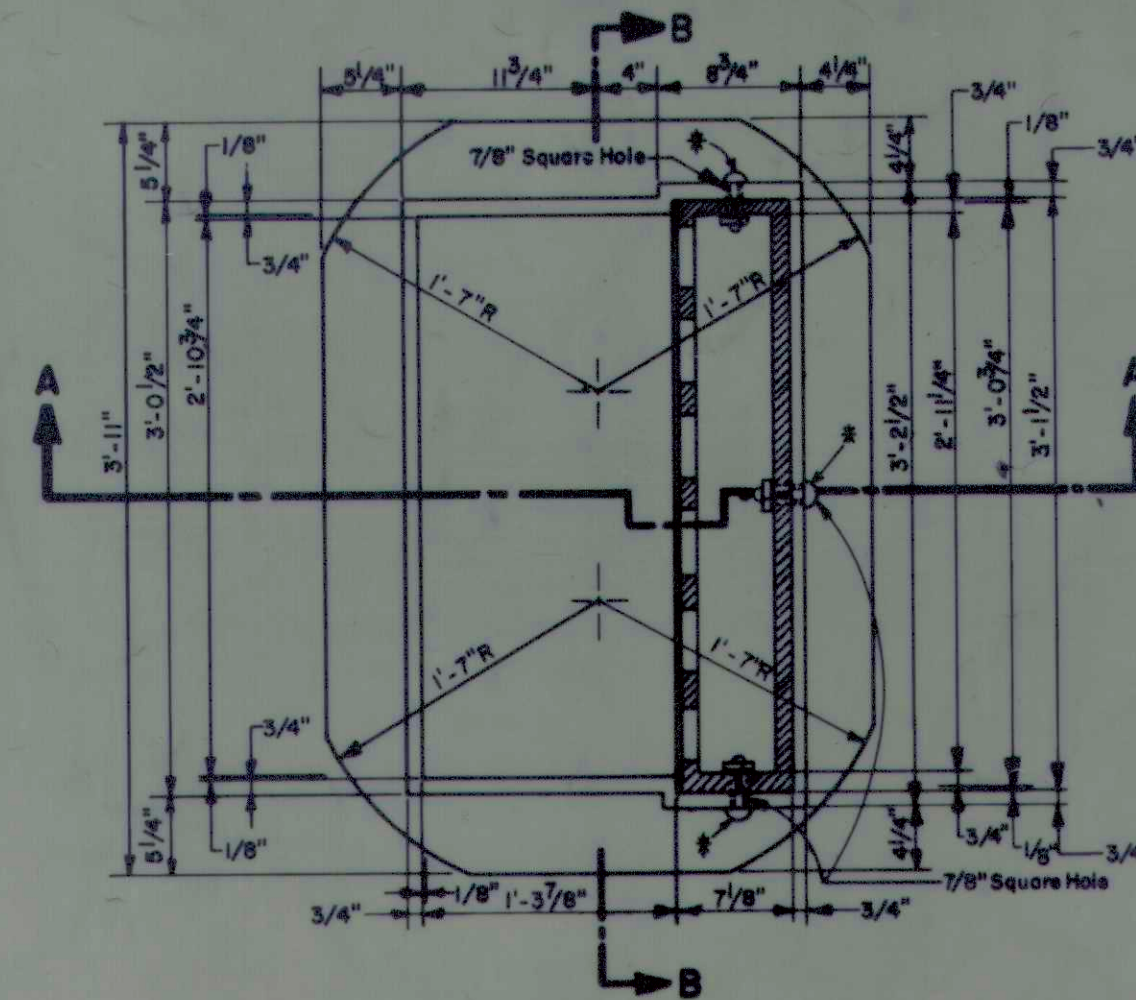




PLAN

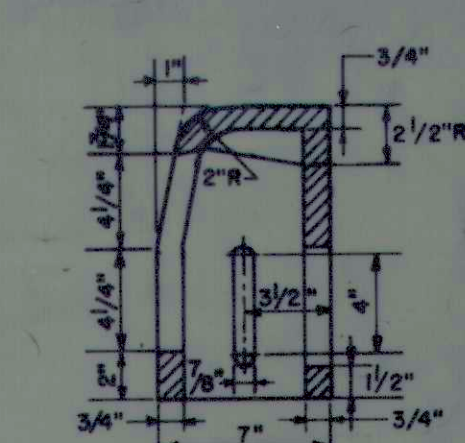
PLAN of CASTINGS TYPE 8 & 9 ARE SIMILAR.
FRAME and GRATING ARE THE SAME

* 3/4" x 3 1/2" Galvanized, Round-Head
Square Shoulder Bolt with Lock Washer.

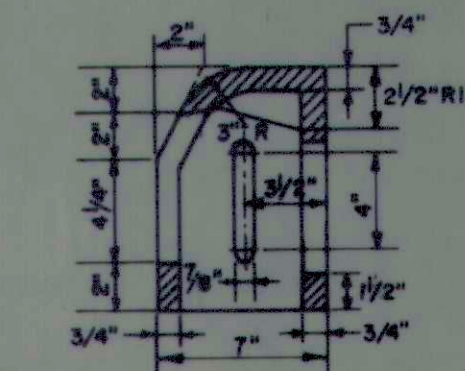


PLAN

PLAN of CASTINGS TYPE 10 & 11 ARE SIMILAR.
FRAME and GRATING ARE THE SAME



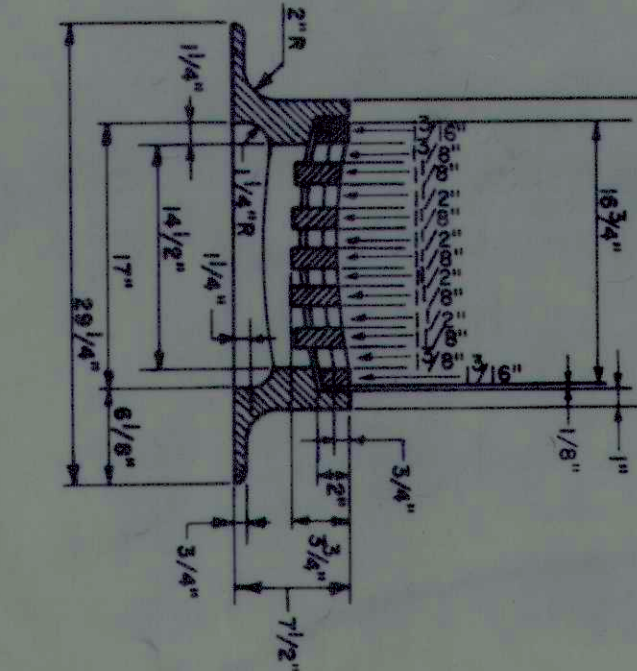
CURB CASTING SECTION
CASTINGS TYPE 8 & 10



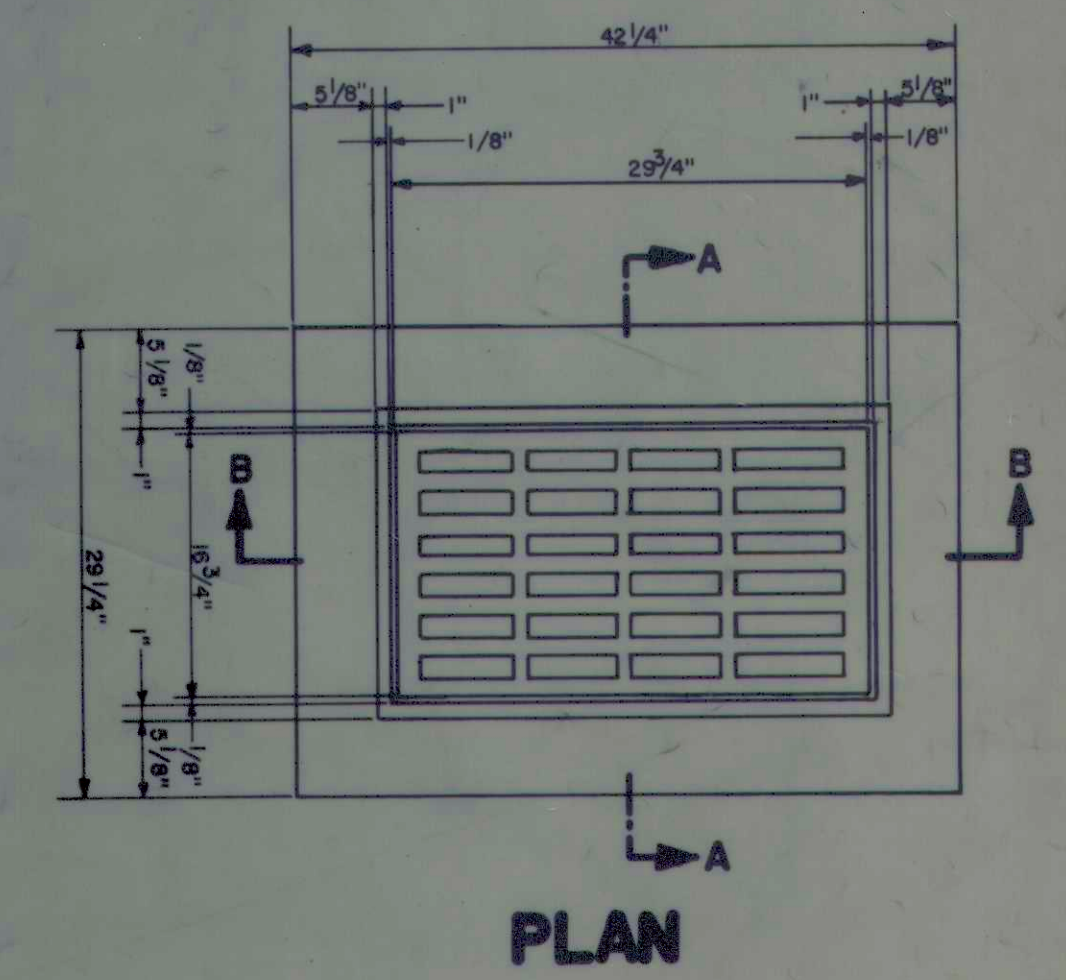
CURB CASTING SECTION
CASTINGS TYPE 9 & 11

GENERAL NOTES

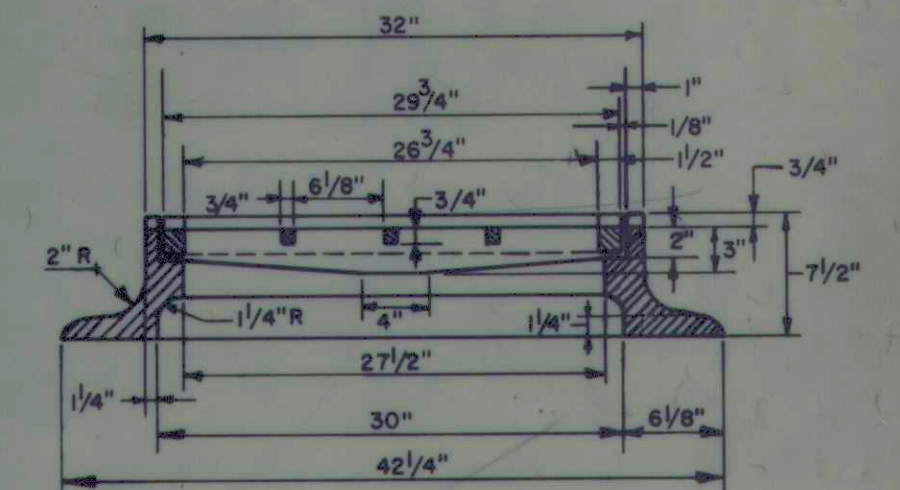
- All Grates and Manhole Covers shall be Cast of Ductile Iron or Steel and all Frames, Rings and Curb Boxes shall be cast of Gray Iron. Unless otherwise specified. See Section 909.05 of the STANDARD SPECIFICATION.
- Grates shall be placed with the MAXIMUM dimension of the RECTANGULAR OPENING parallel to the DIRECTION of FLOW, (CASTINGS TYPE 13 and 14).



SECTION "A-A"

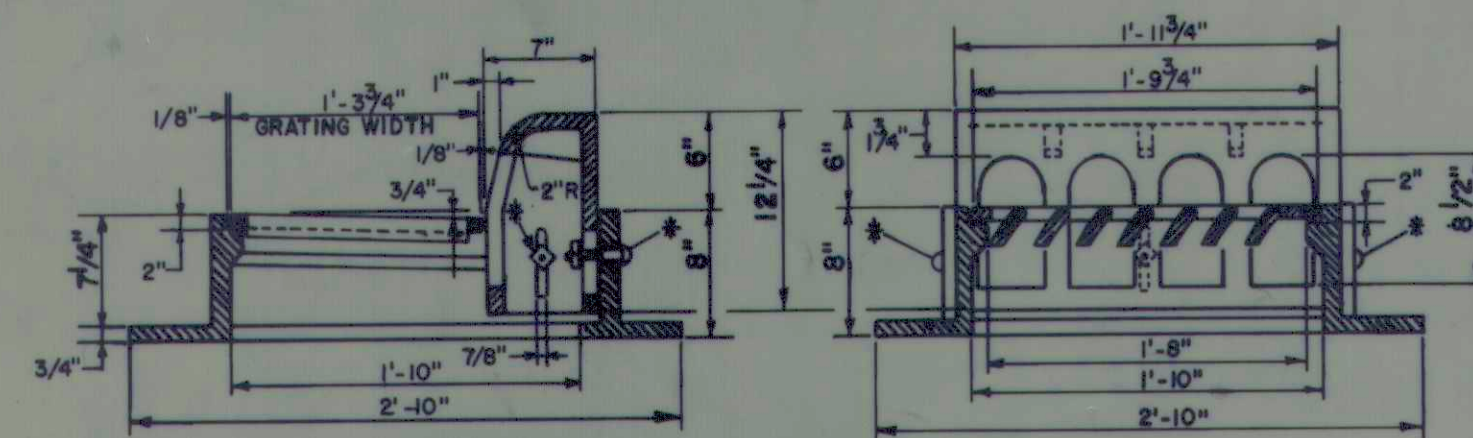


PLAN



SECTION "B-B"

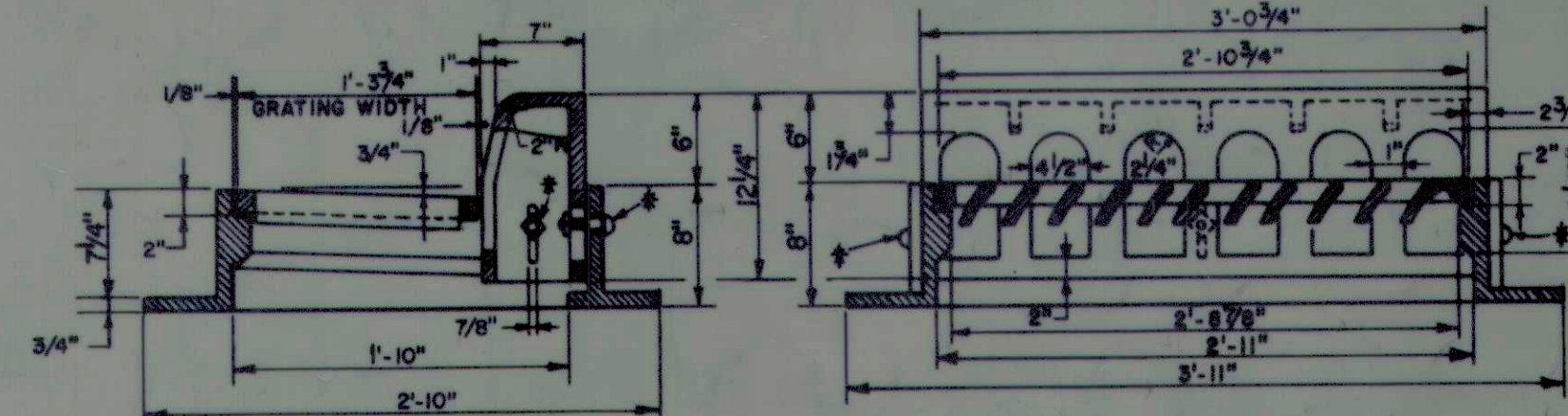
CASTING TYPE 13



SECTION "A-A"

SECTION "B-B"

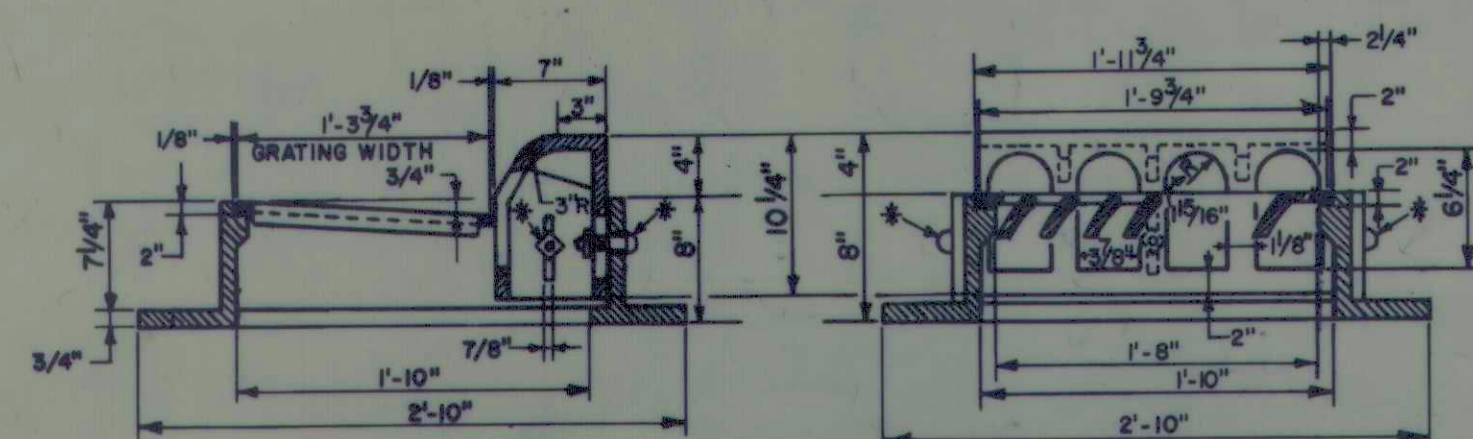
CASTING TYPE 8



SECTION "A-A"

SECTION "B-B"

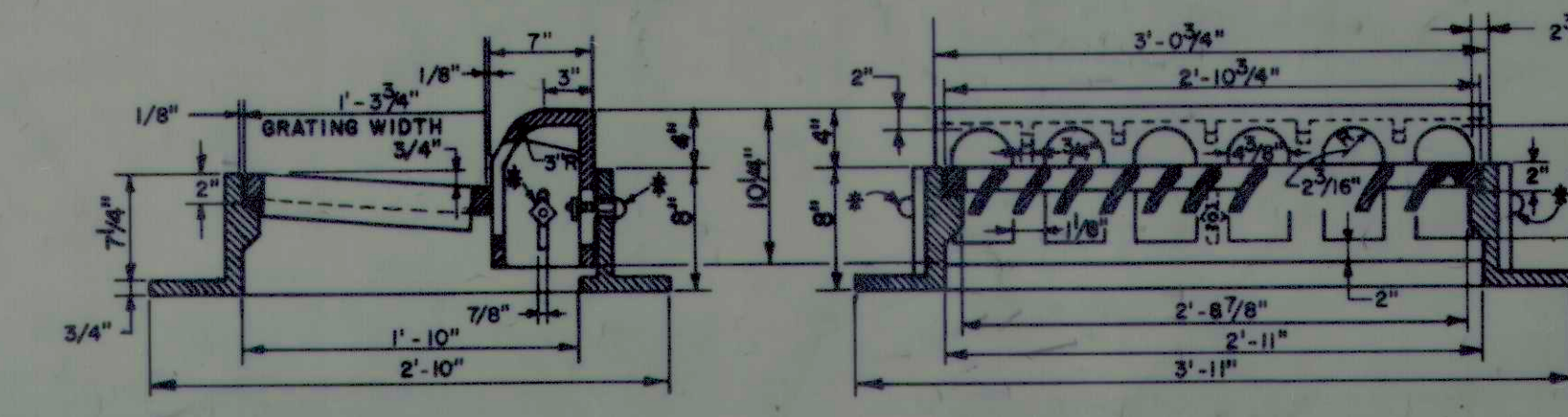
CASTING TYPE 10



SECTION "A-A"

SECTION "B-B"

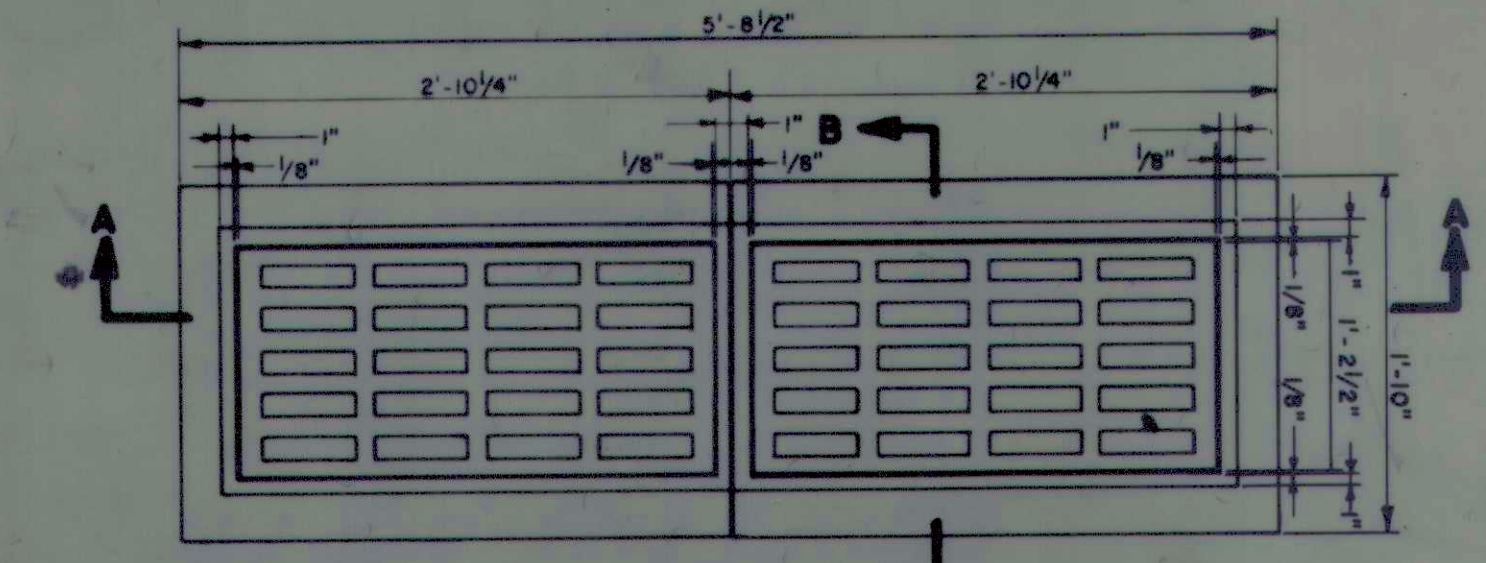
CASTING TYPE 9



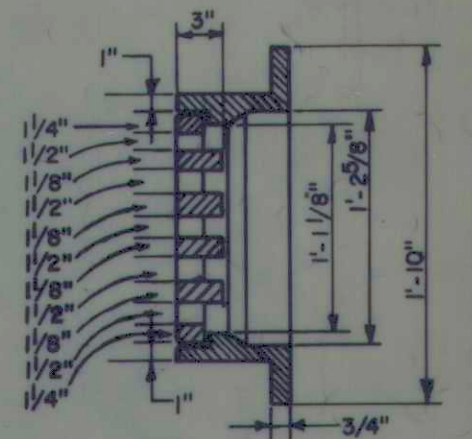
SECTION "A-A"

SECTION "B-B"

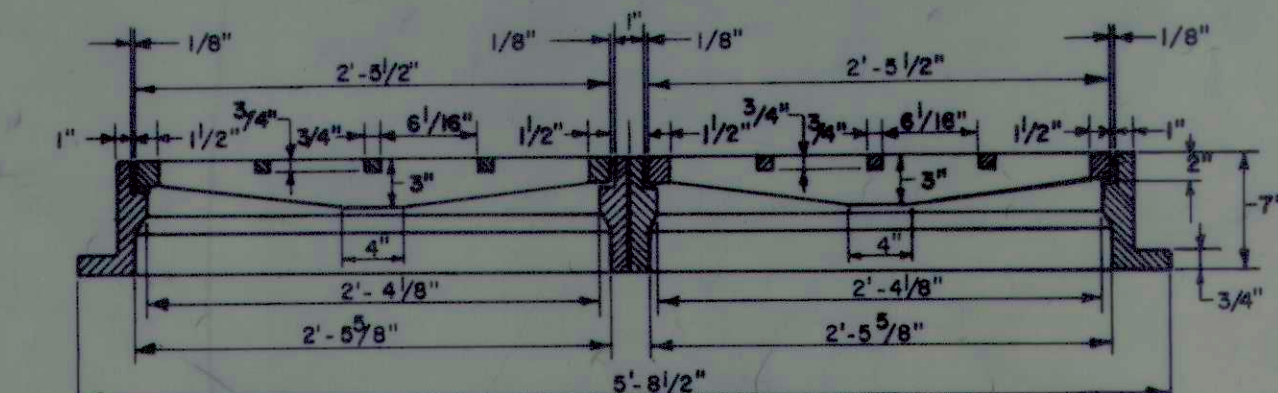
CASTING TYPE 11



PLAN

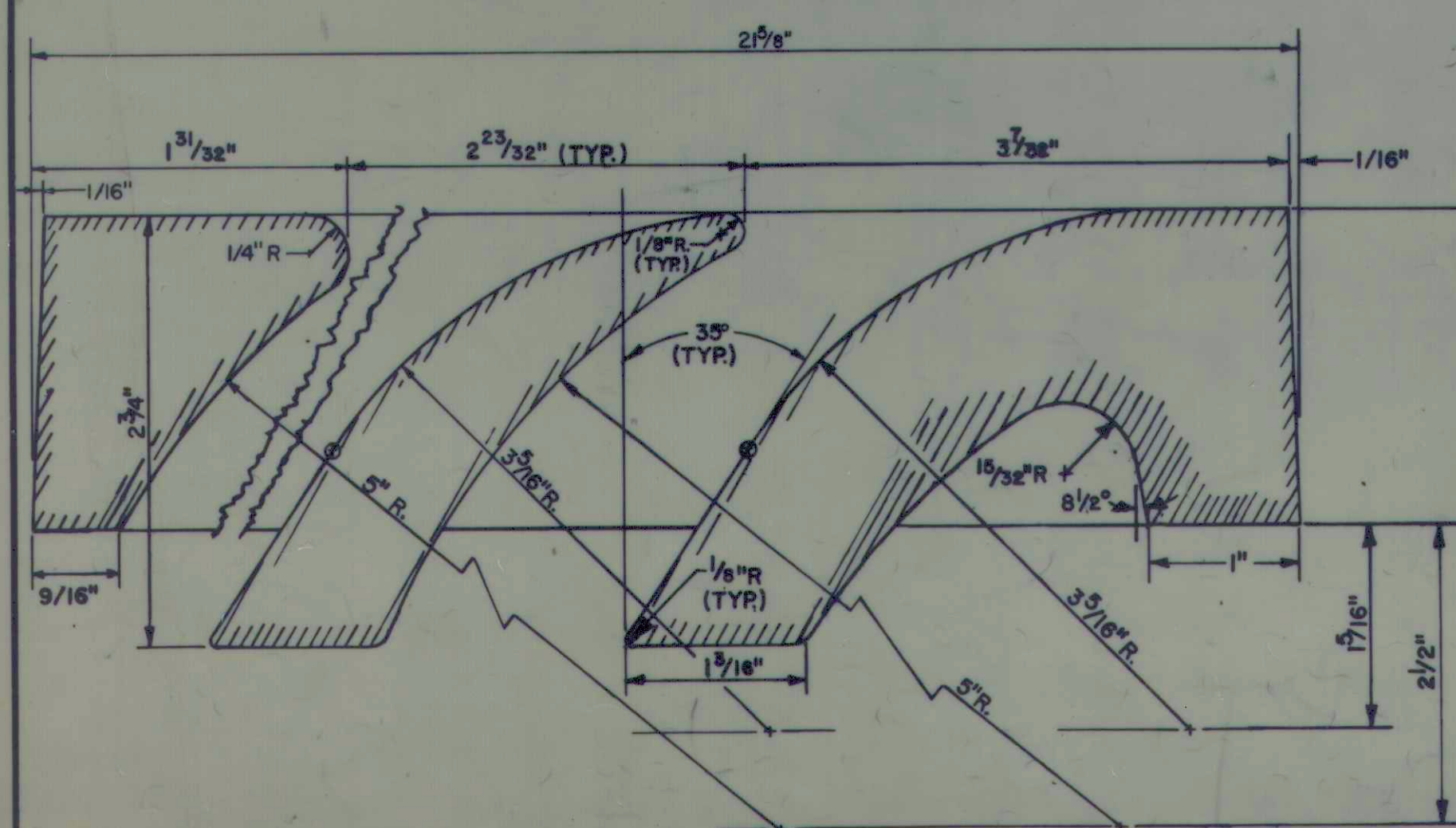


SECTION "B-B"

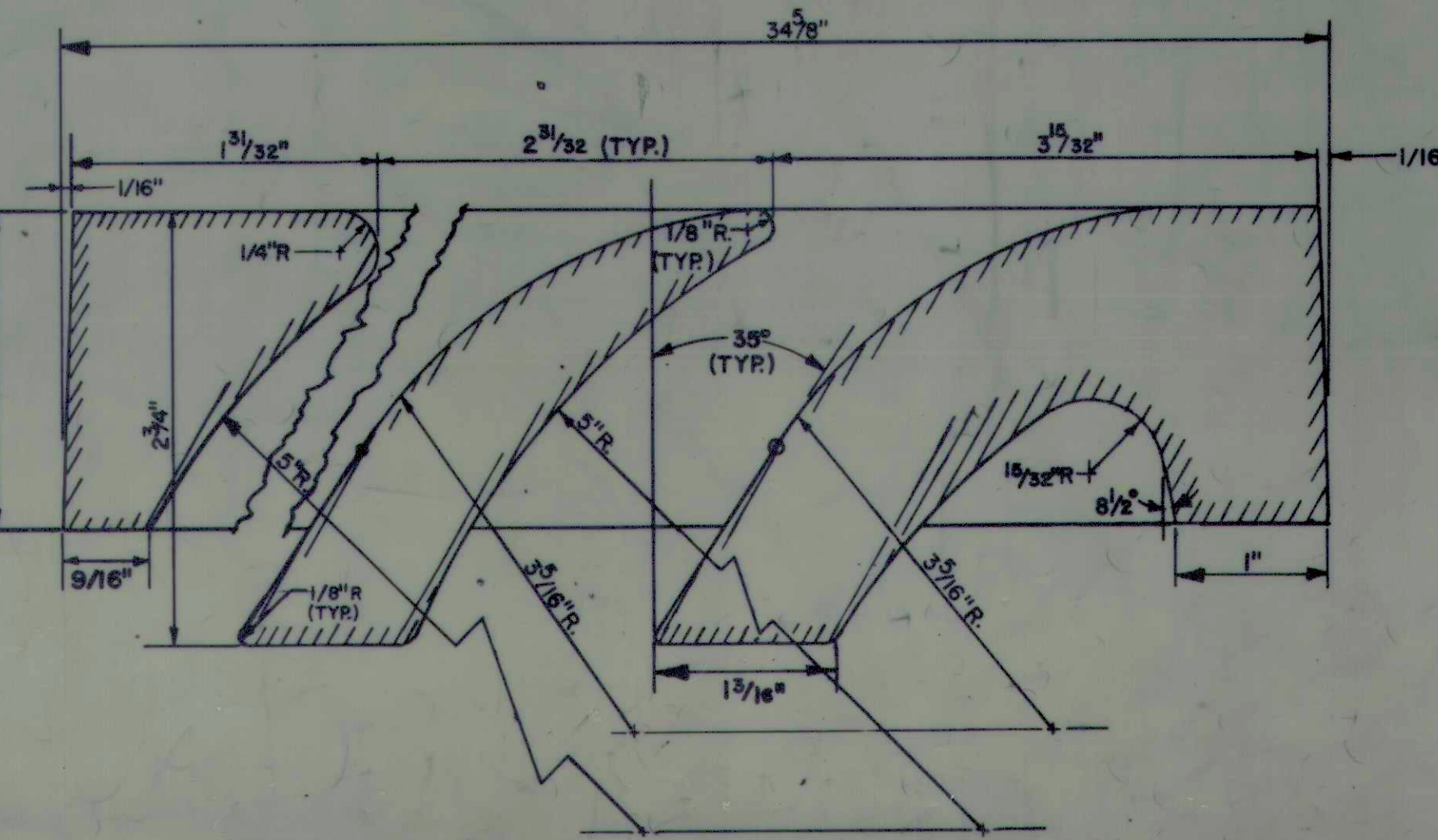


SECTION "A-A"

CASTING TYPE 14



FIN DETAIL FOR CASTINGS TYPE 8 & 9



FIN DETAIL FOR CASTINGS TYPE 10 & 11

REVISIONS	
DATE	REMARKS



RECOMMENDED for APPROVAL *Brian R. Burch* 9/25/74
ENGINEER OF ROAD DESIGN
APPROVED *SR Under* 9/25/74
CHIEF DIVISION OF DESIGN
APPROVED *T.K. Hallmark* 9-26-74
CHIEF HIGHWAY ENGINEER

MISCELLANEOUS STANDARDS STATE OF INDIANA SEPT. 1974

SHEET

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