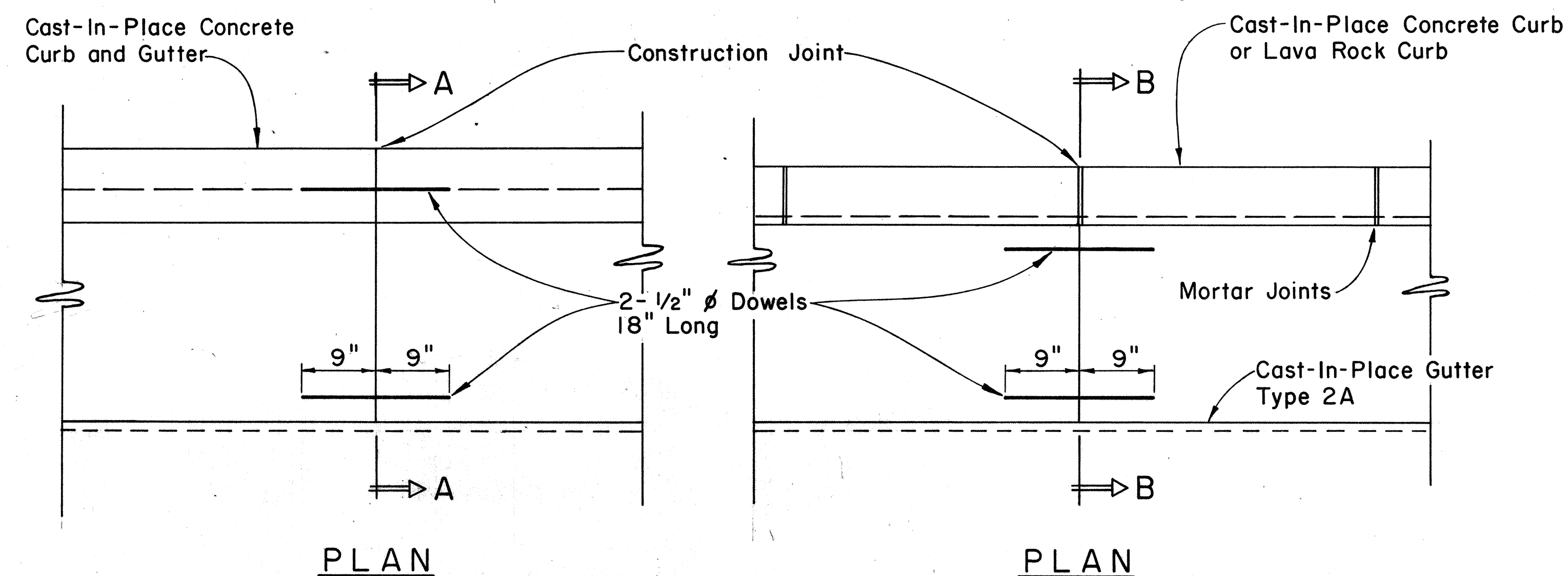
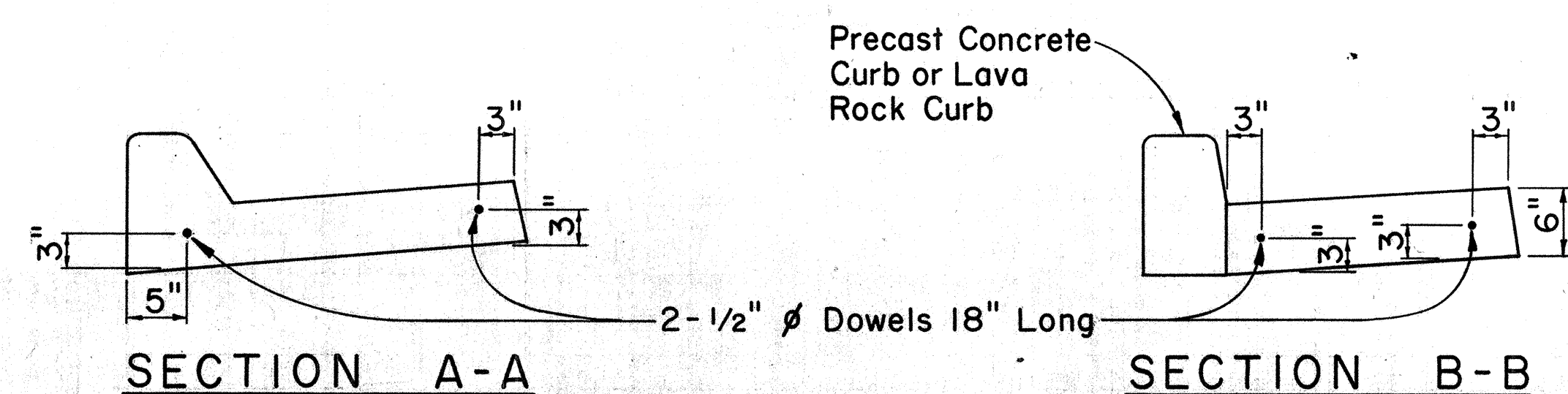
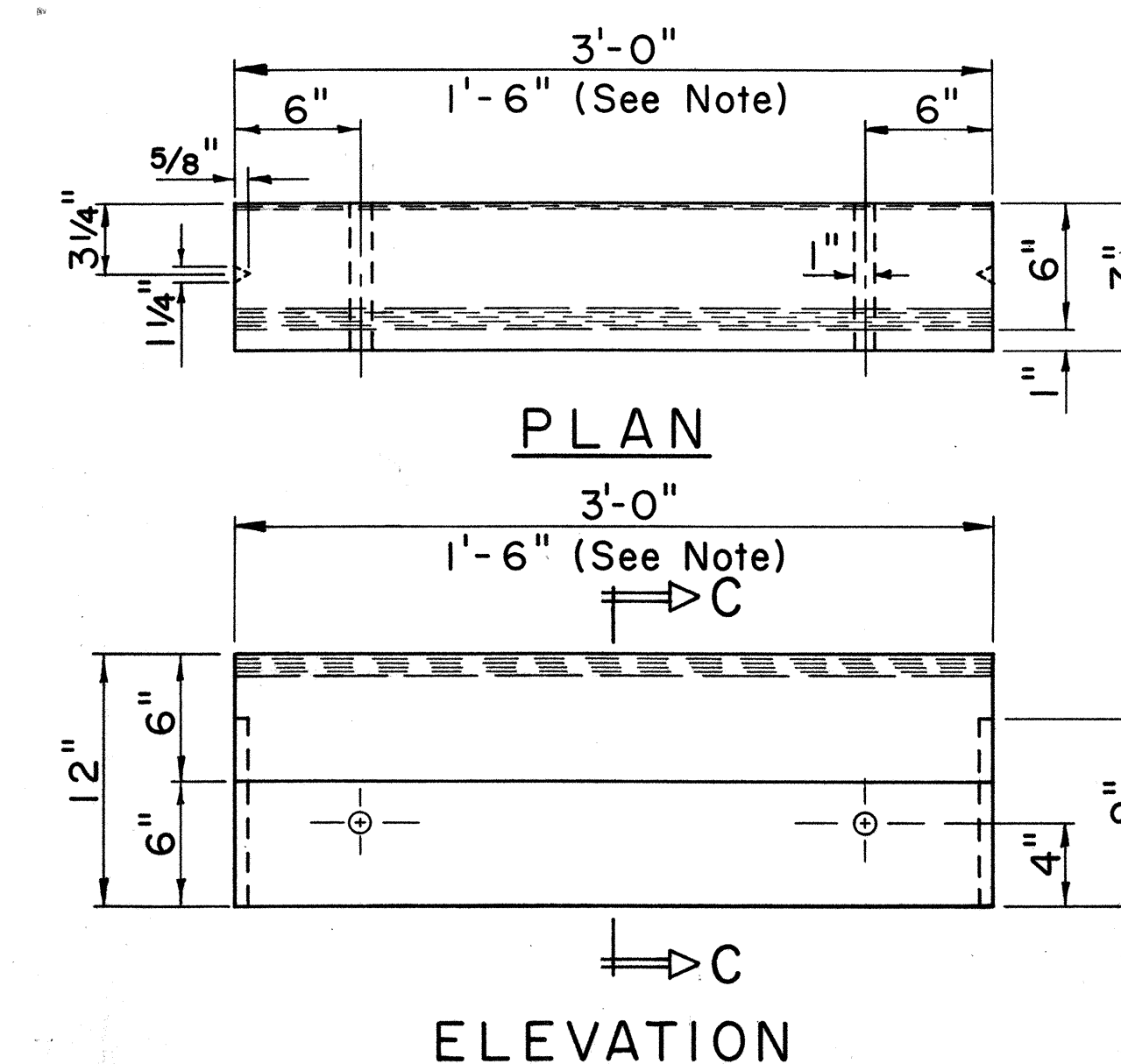


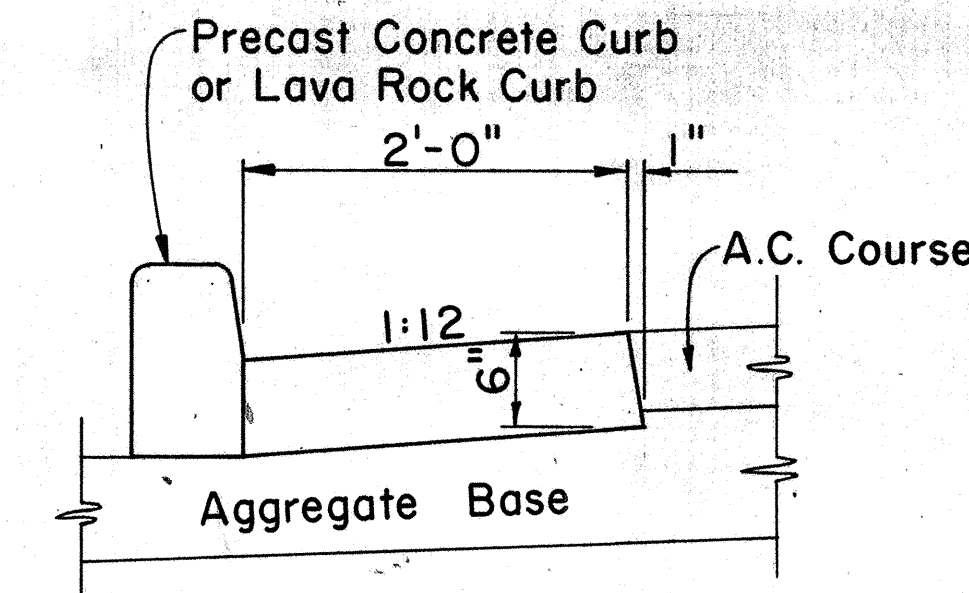
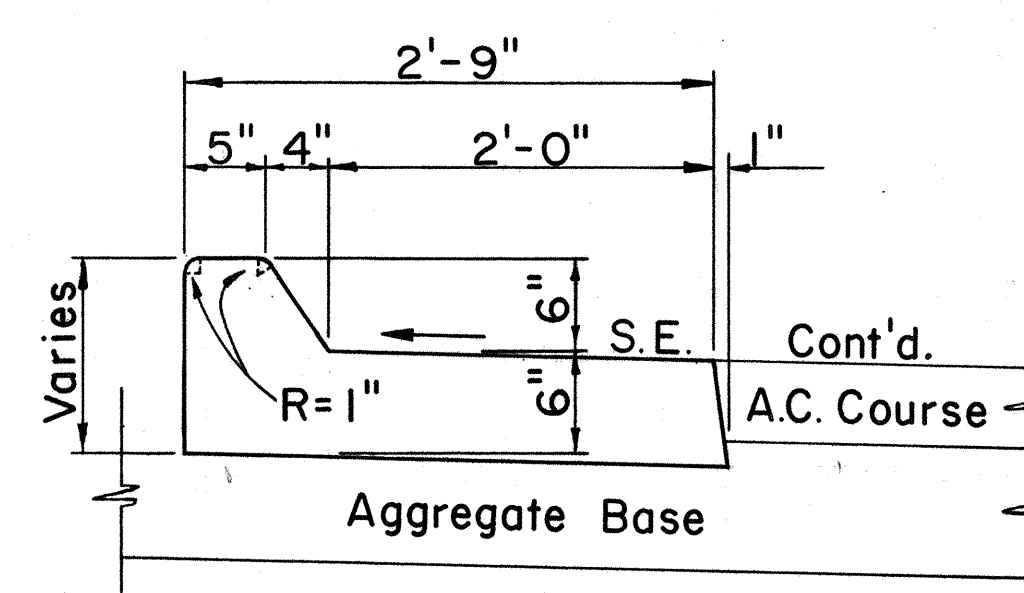
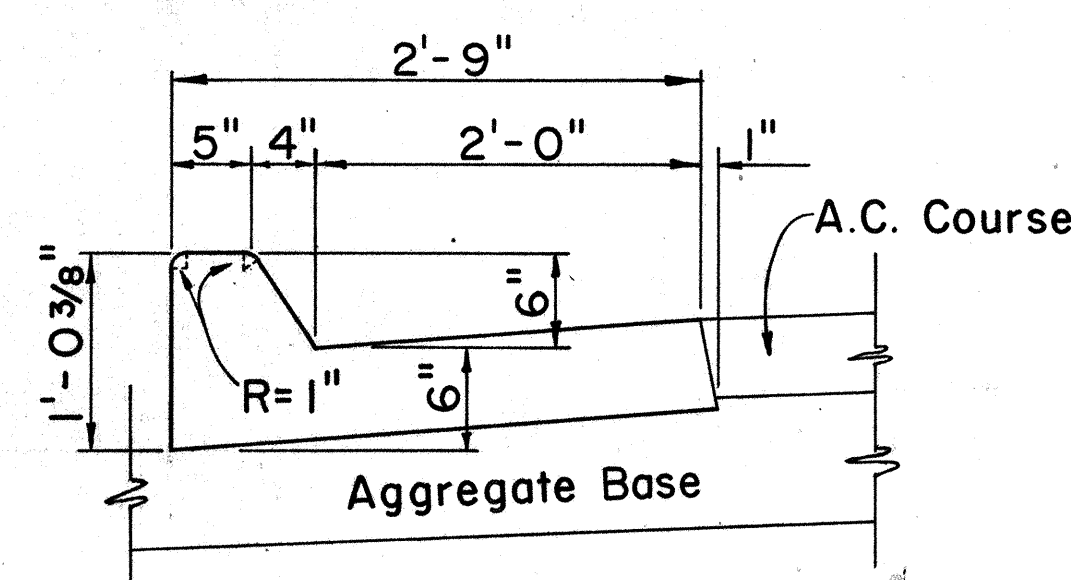
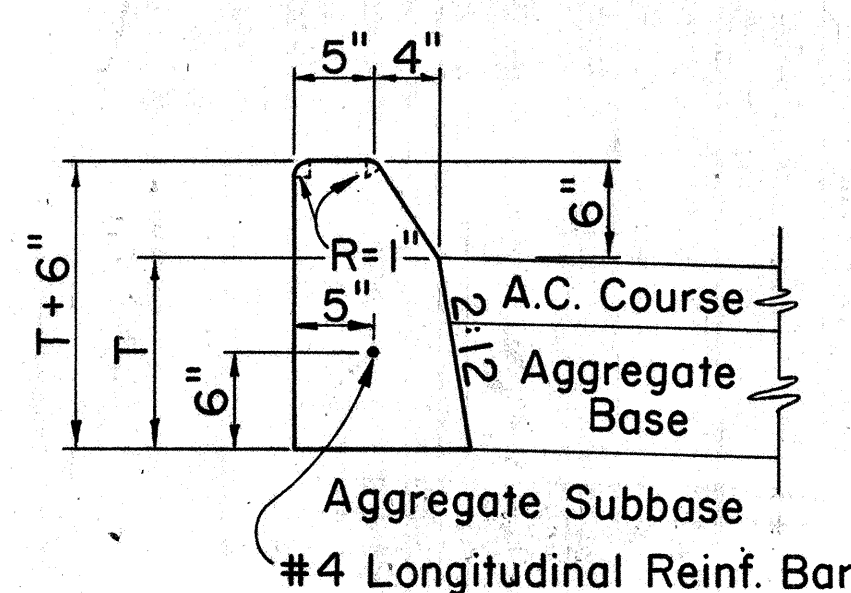
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	B069-464	1972	10	23



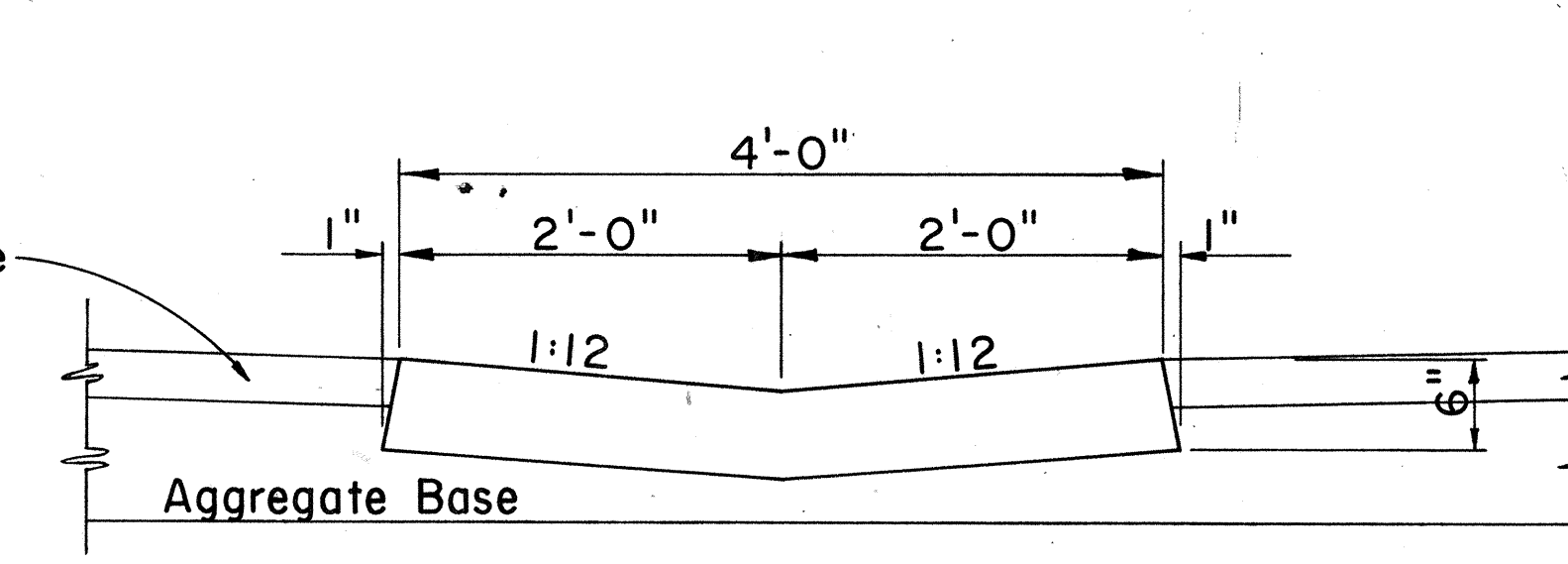
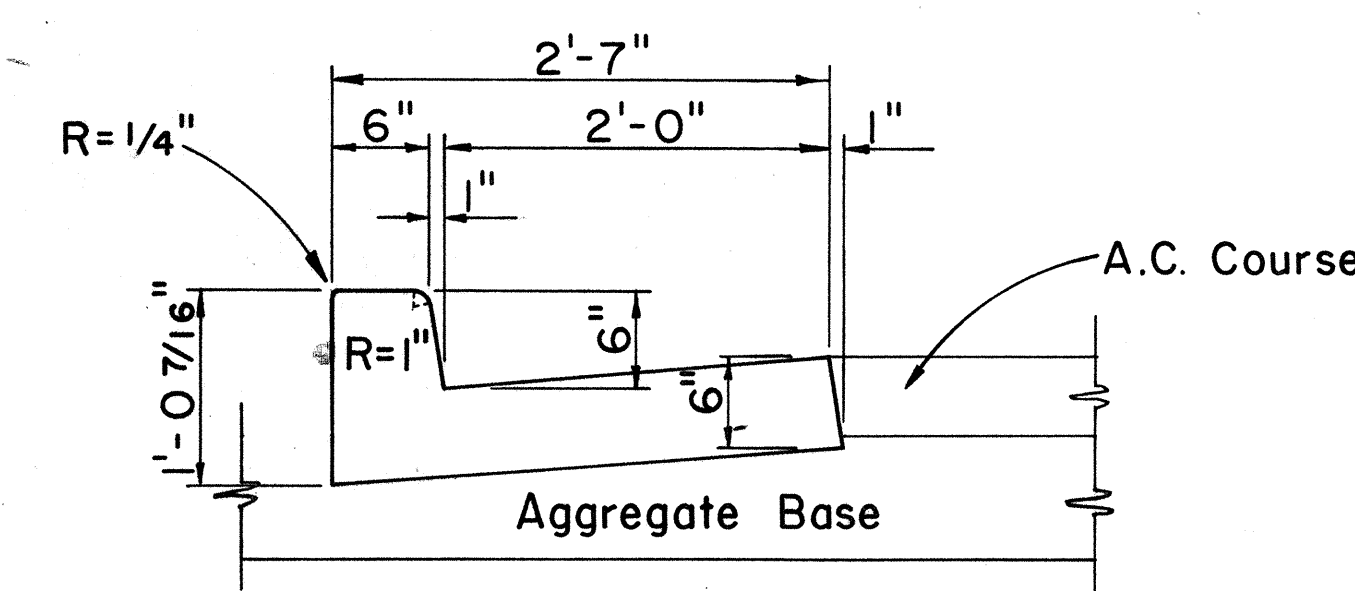
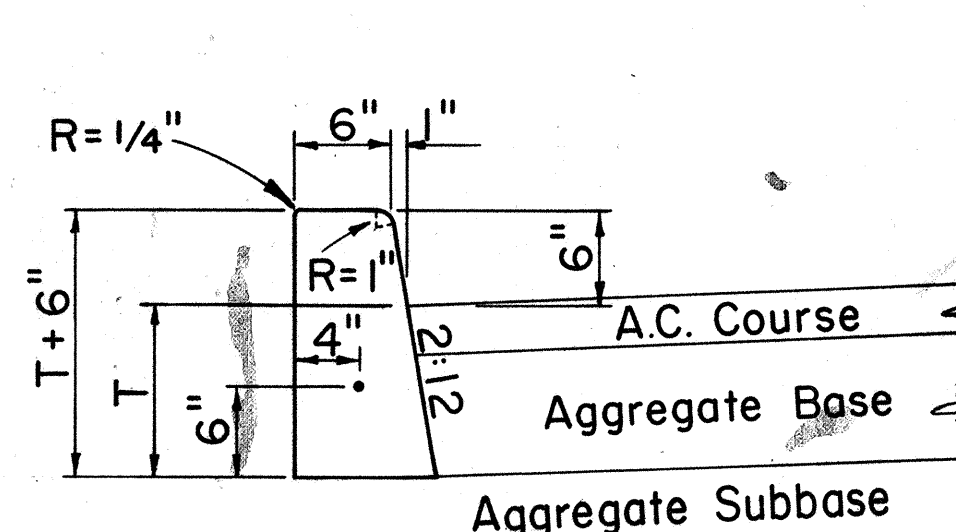
CURB, TYPE 6
BITUMINOUS CURB
Scale: 1 1/2" = 1' - 0"



CAST-IN-PLACE CURB & GUTTER CAST-IN-PLACE GUTTER
CONSTRUCTION JOINT DETAIL
 Scale: 1" = 1'-0"

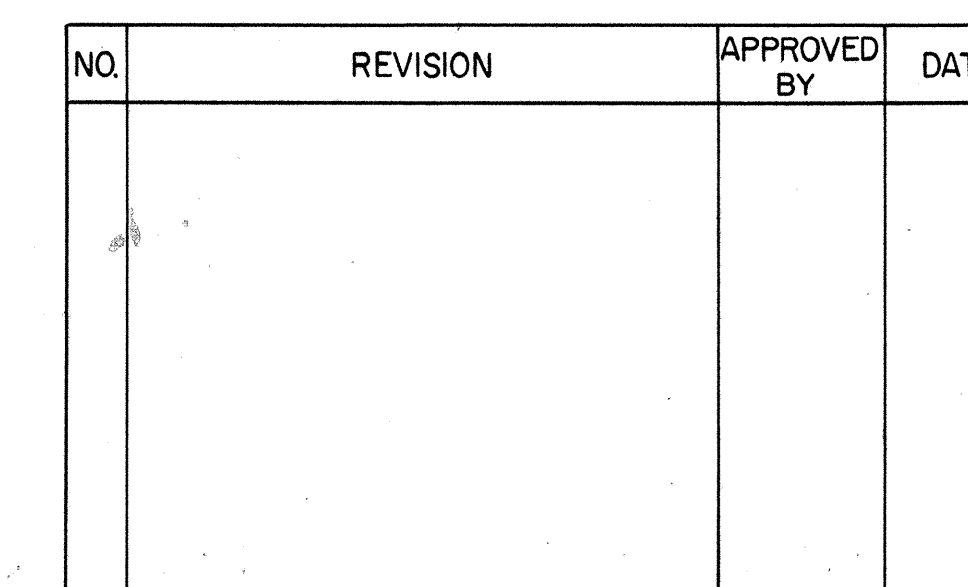


<u>CURB, TYPE 2A</u>	<u>CURB & GUTTER, TYPE 2AG</u>	<u>CURB & GUTTER, TYPE 2AGM</u>	<u>GUTTER, TYPE 2A</u>
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CURB, TYPE 2D CURB & GUTTER, TYPE 2DG GUTTER, TYPE 2G

CAST-IN-PLACE CONCRETE CURBS AND/OR GUTTERS



APPROVAL RECOMMENDED: M. J. J. J. J. 12-4-69
HIGHWAY DESIGN ENGINEER DATE

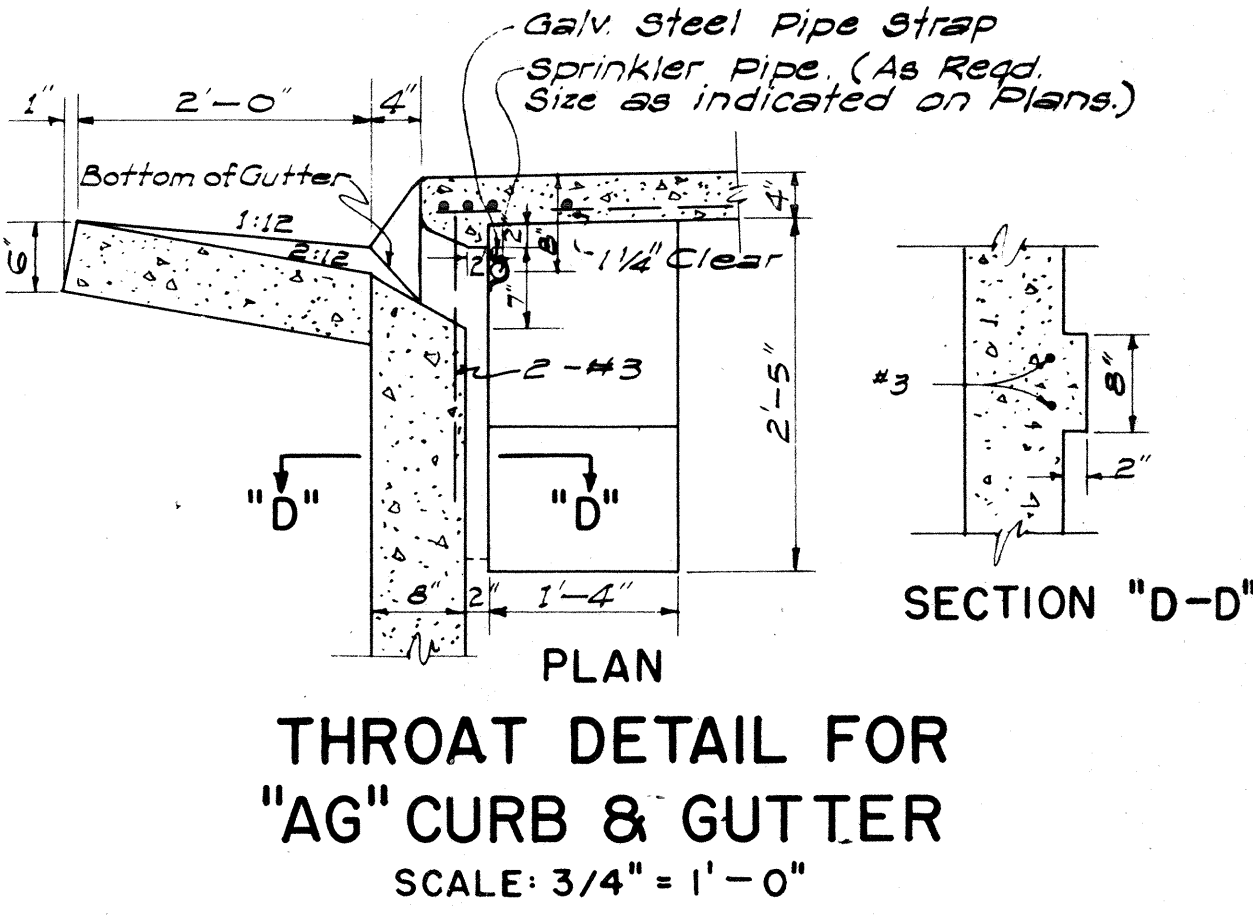
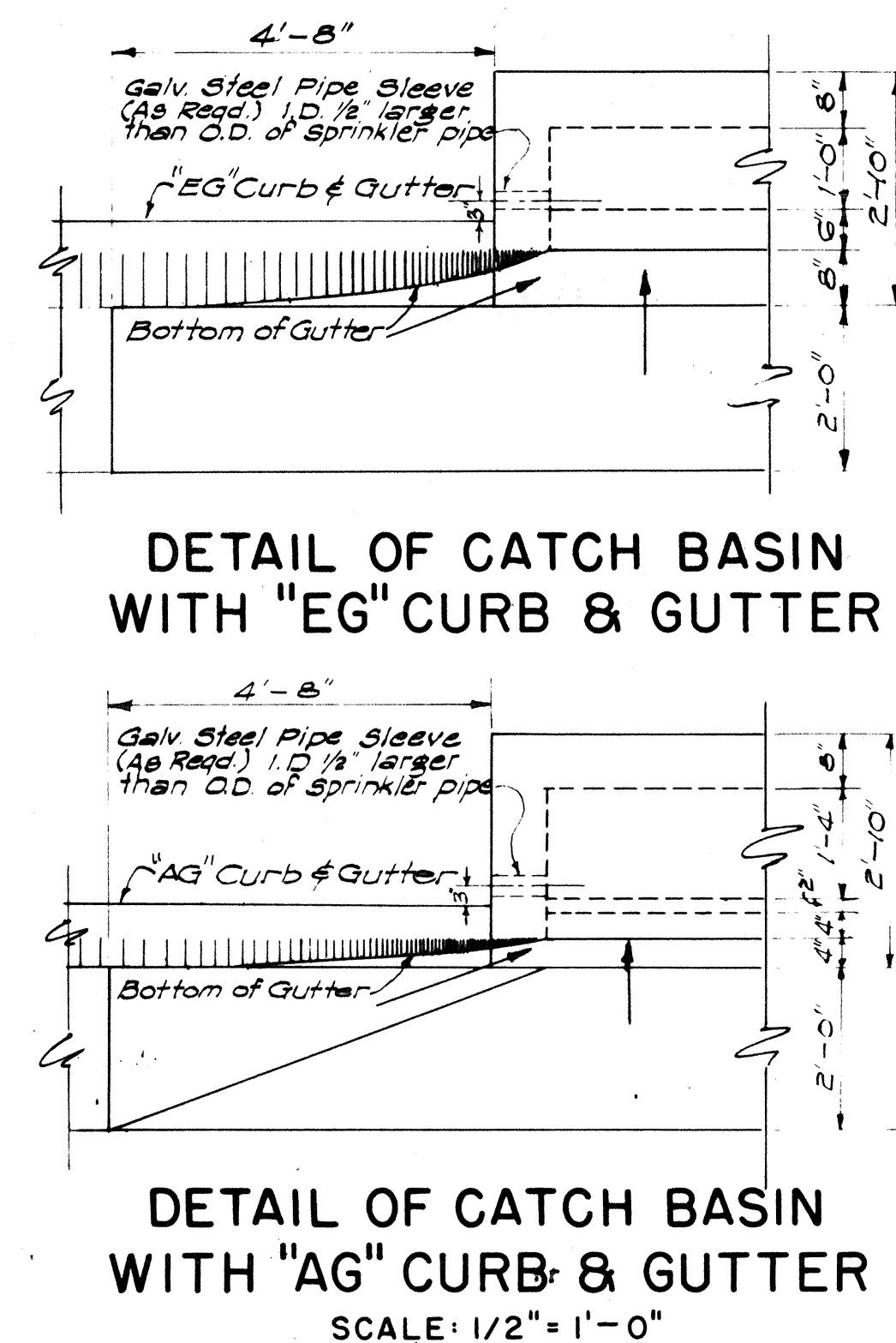
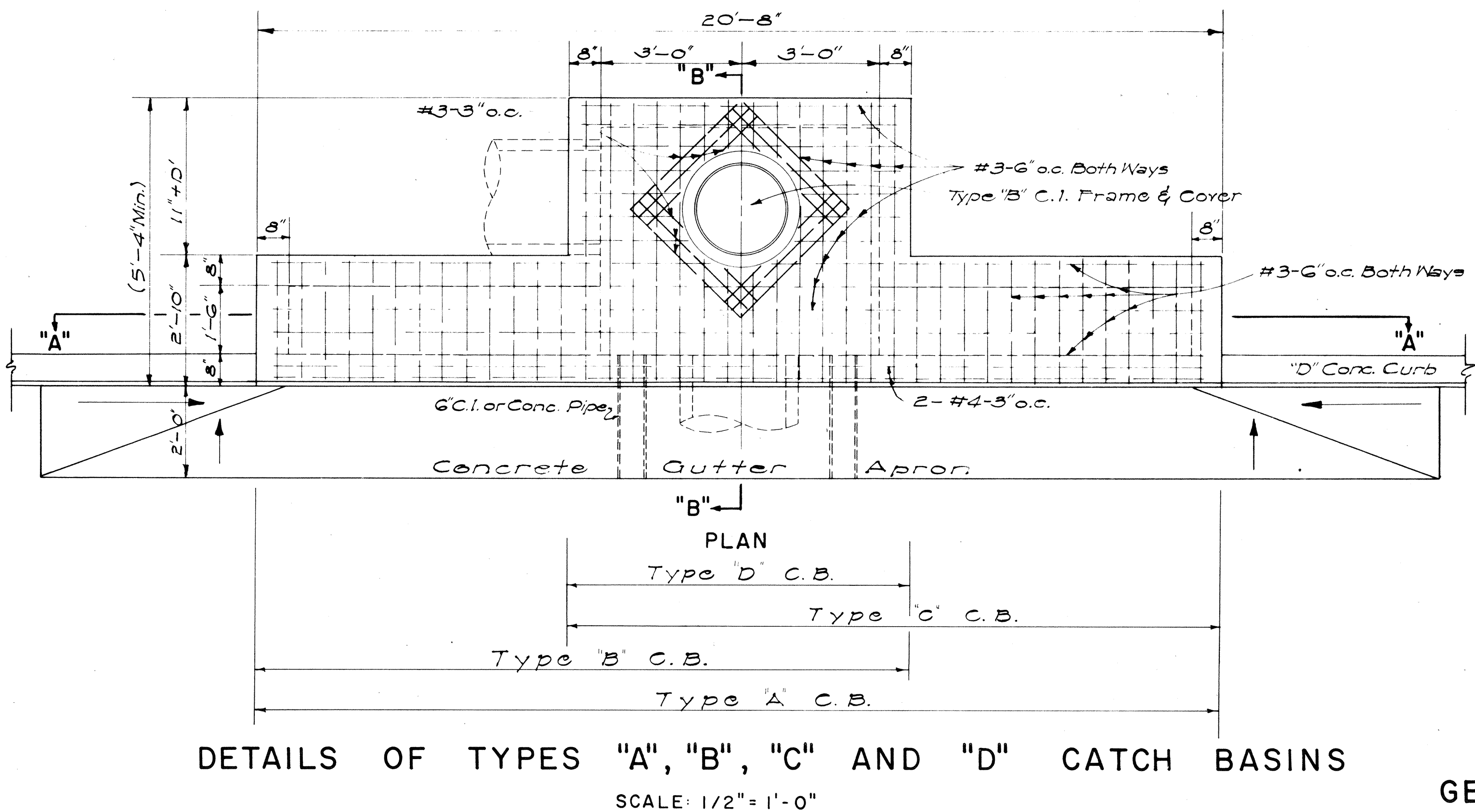
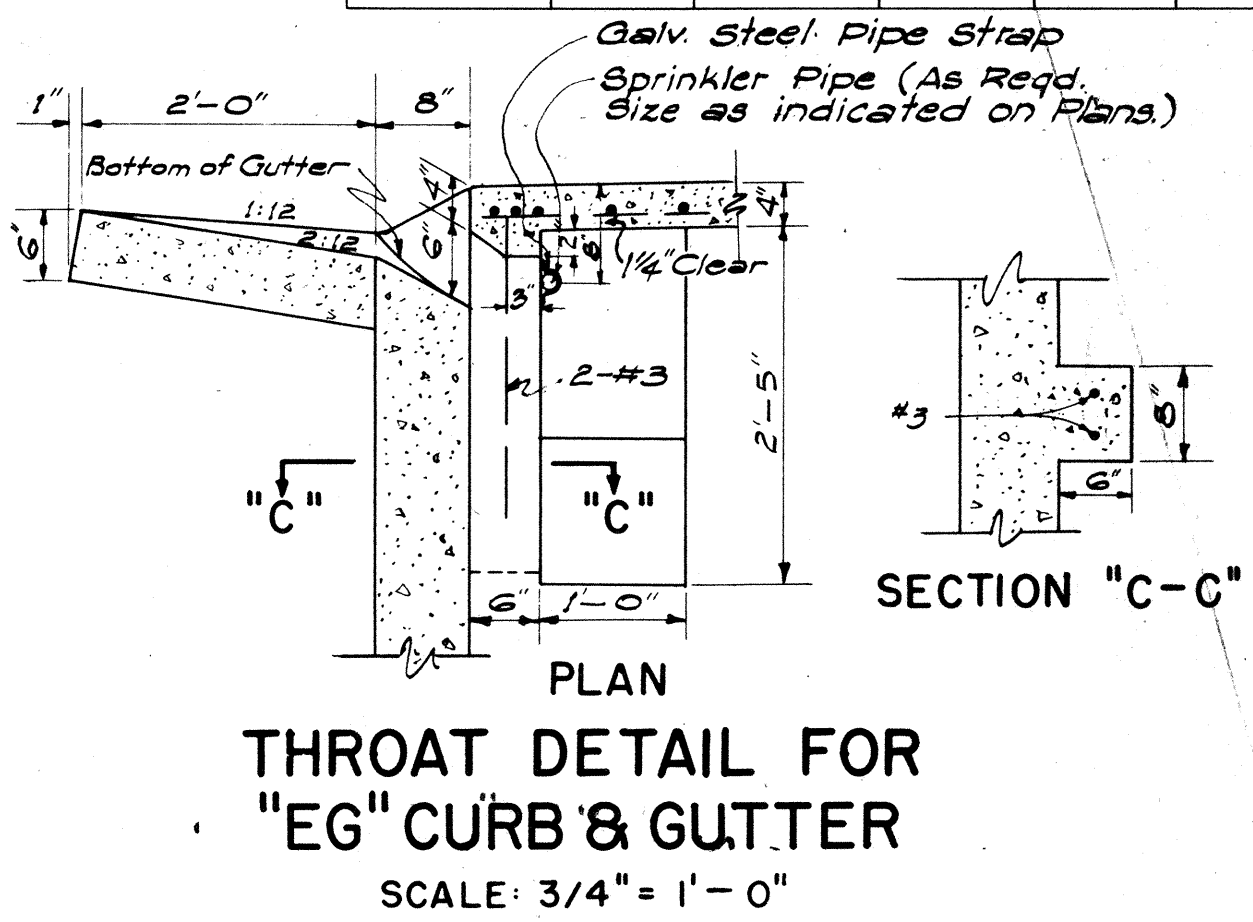
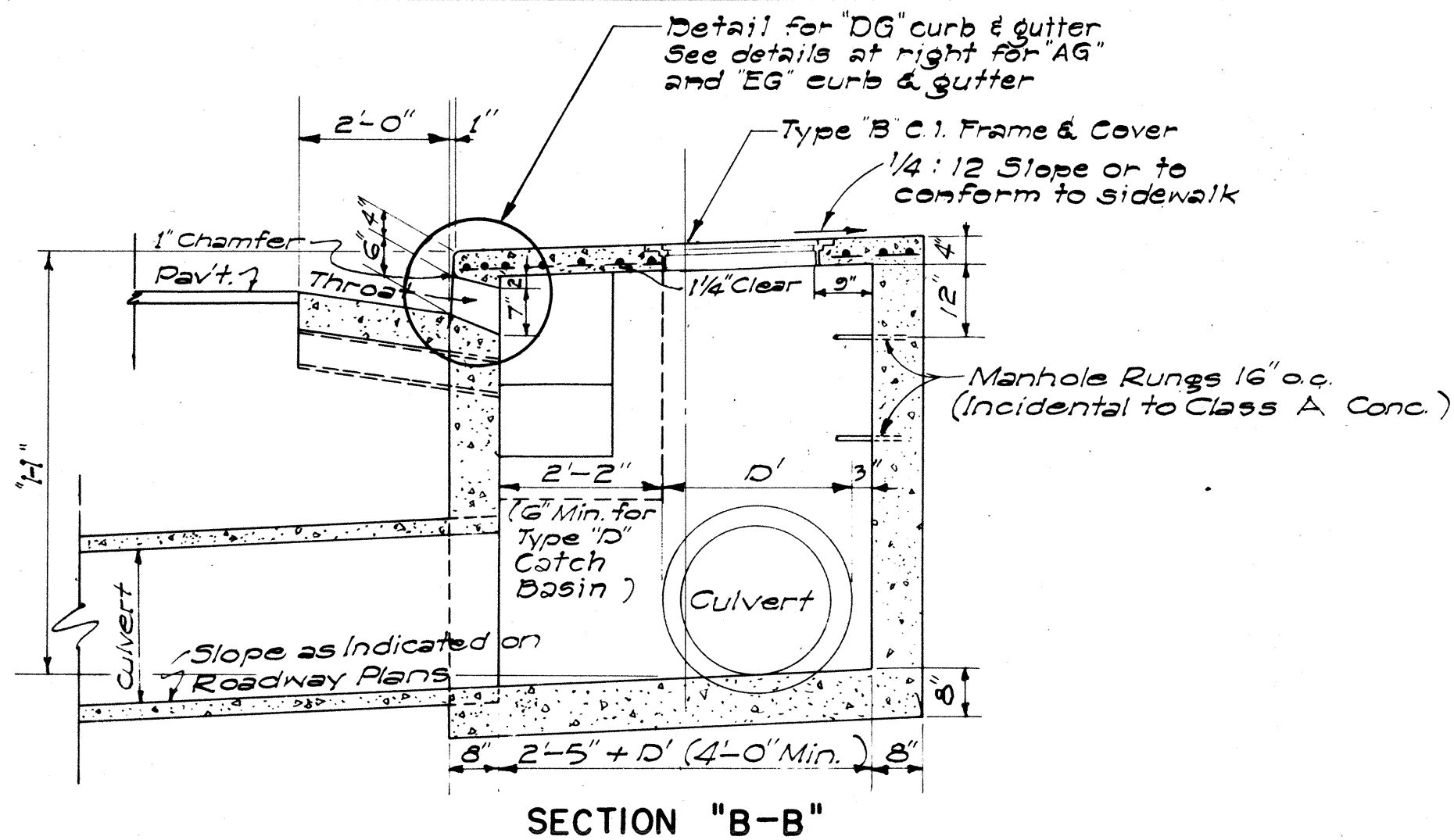
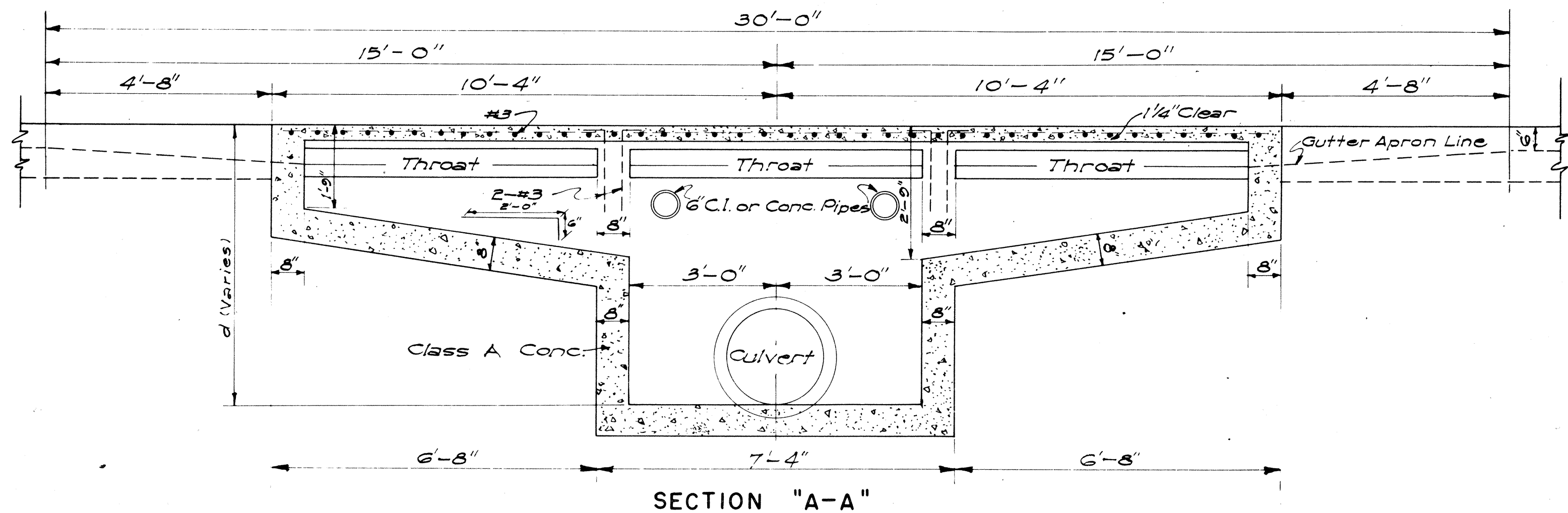
APPROVED: W. J. J. J. J. 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
TYPICAL DETAILS OF CURE
AND/OR GUTTERS

Scale: As Shown

SHEET No. 1 OF 10 SHEETS DD 6091

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BD67-464	1972	11	23



GENERAL NOTES

1. Quantities based on d = 5.75' and D' = 30".
2. Quantities do not include concrete for Gutter Apron.
3. The Contractor shall install two 6" Cast Iron or Concrete Pipes as incidental to Class A Concrete for Construction Drainage. The Engineer shall determine the exact location in the field.
4. Culvert shall leave C.B. from any position and any direction indicated by plans or ordered by the Engineer. Culvert may both enter and leave C.B. so that C.B. will also act as Manhole.
5. The Contractor shall install Galvanized Steel Pipe Sleeves and Straps as incidental to Sprinkler System.
6. The type of curb and/or gutter (Type 1, 2, 3, etc.) shall conform to the type specified on the Roadway plans.
7. Manhole Rungs (16" o.c.) are required when "H" is greater than 4 feet 6 inches. Only one rung (12 inches from the bottom) is required if "H" is 4 feet 6 inches or less. Type "B" Cast Iron Frame and Cover and Manhole Rungs may be placed at any location as ordered by the Engineer.

ESTIMATED QUANTITIES

Type	Class A Conc. Struct. Exc.	Reinf. Steel	Gutter Length
"A"	7.5 c.y.	24.7 lb.	30'-0"
"B"	6.0 c.y.	21.5 lb.	23'-4"
"C"	6.0 c.y.	21.5 lb.	23'-4"
"D"	4.0 c.y.	16.5 lb.	16'-8"

APPROVAL RECOMMENDED:
J. J. J. 12-17-69
HYDRAULIC DESIGN ENGINEER DATE

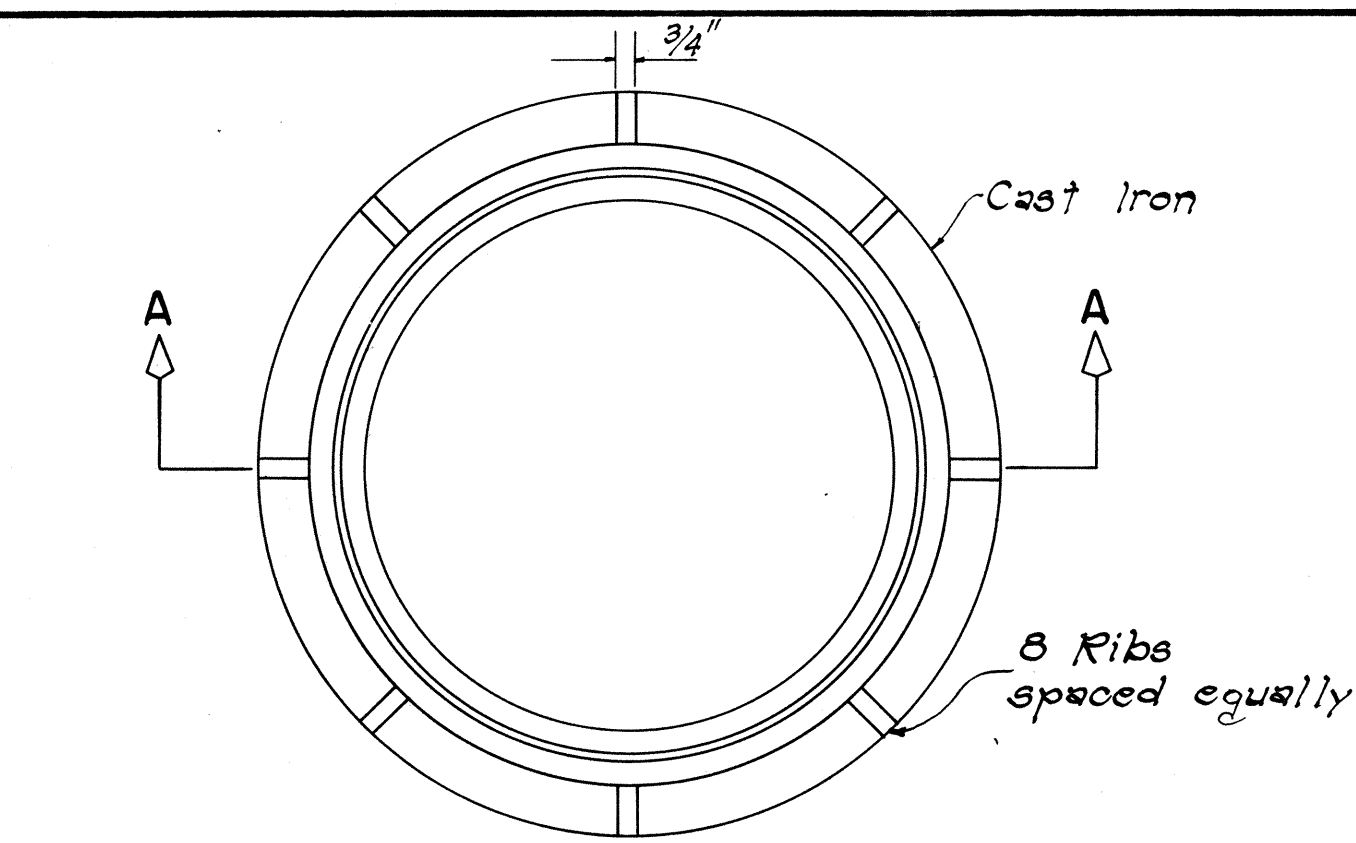
APPROVED:
J. J. J. 12-17-69
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
CATCH BASINS

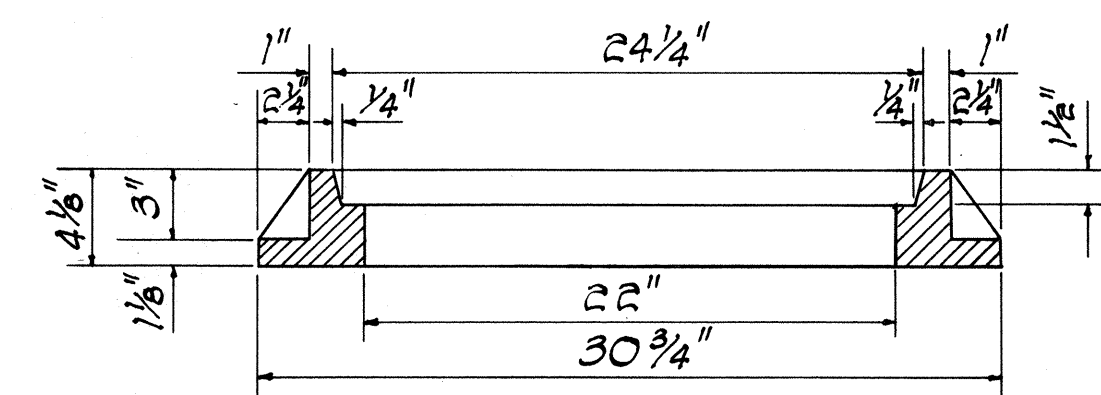
Scale: As Noted Date: July, 1969
SHEET NO. 2 OF 6 SHEETS

DATE: 2/17/59
DESIGNED BY: J. J. J.
DRAWN BY: J. J. J.
CHECKED BY: J. J. J.
ORIGINAL PLAN
NOTE BOOK
No. 1

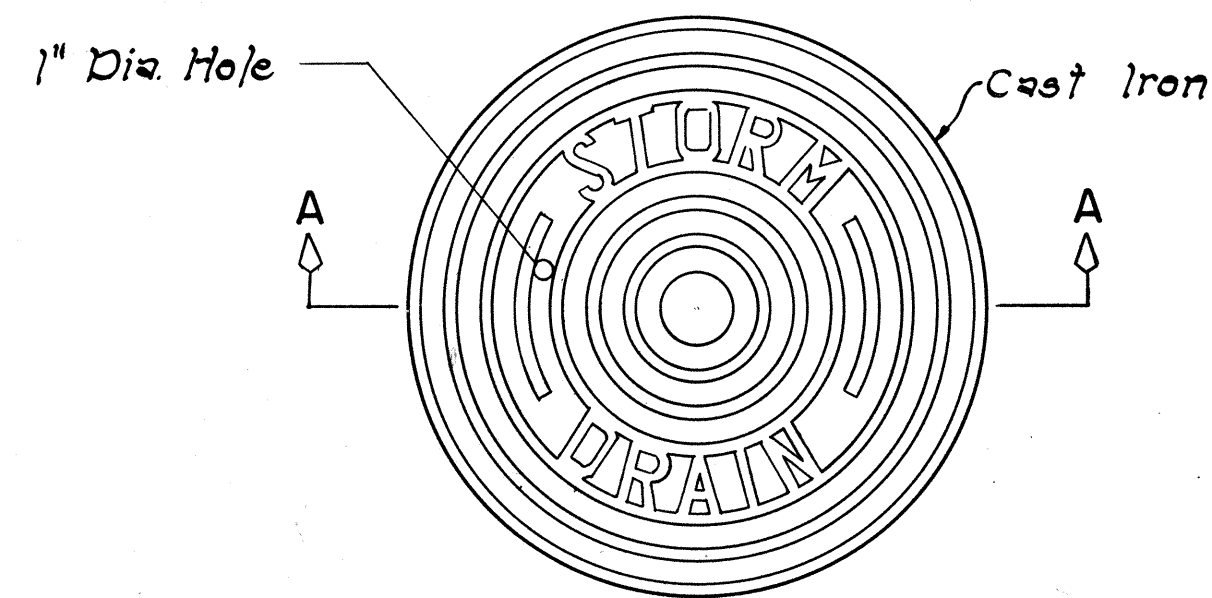
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DD69-464	1972	12	23



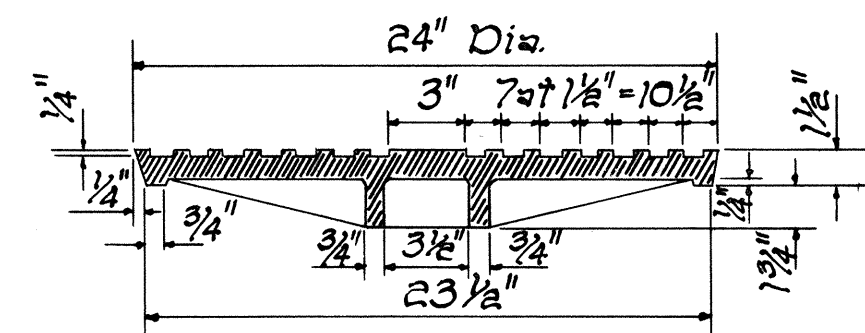
PLAN



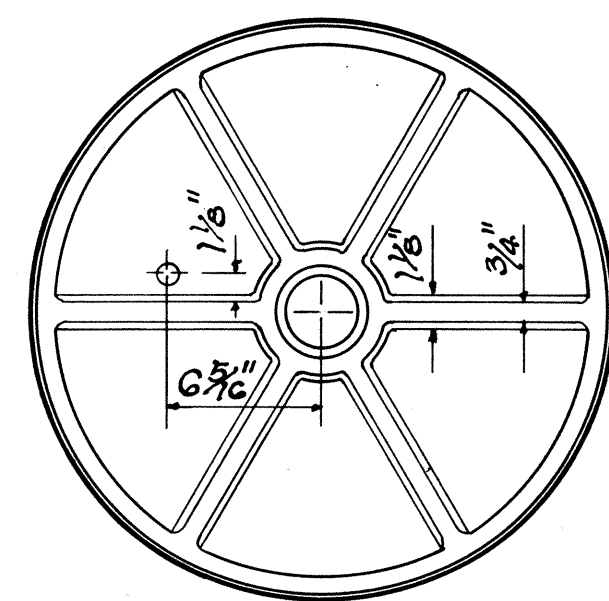
SECTION A-A



PLAN



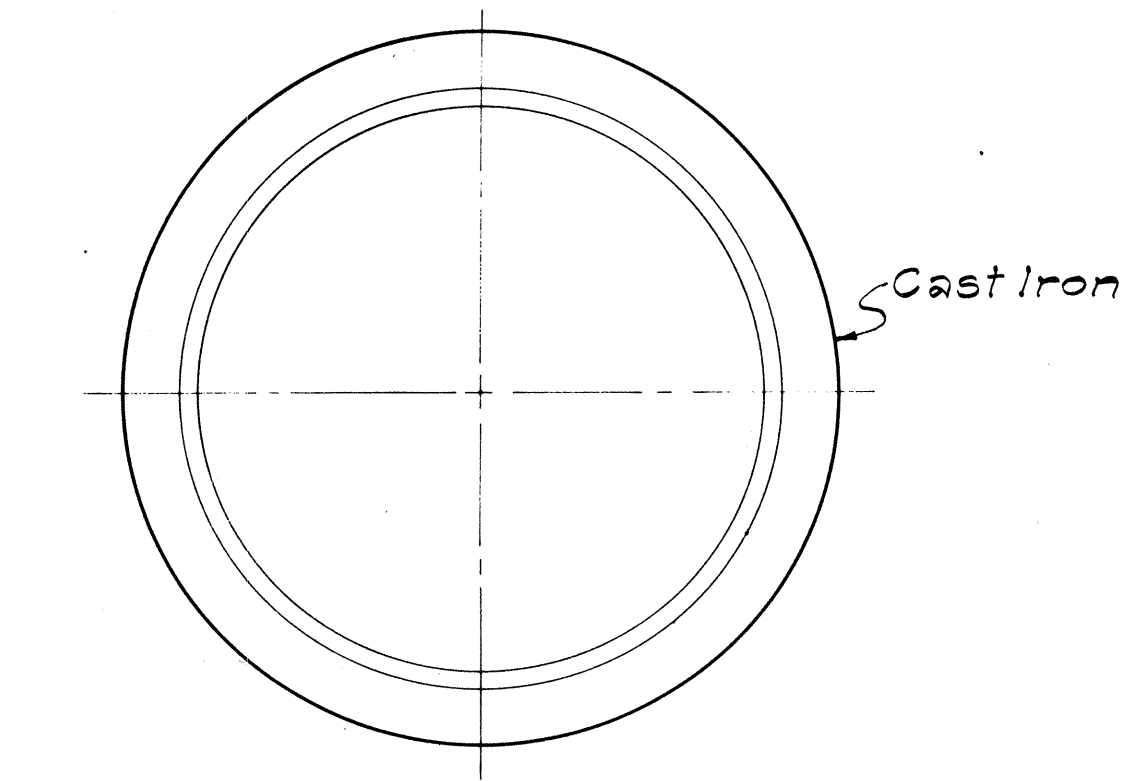
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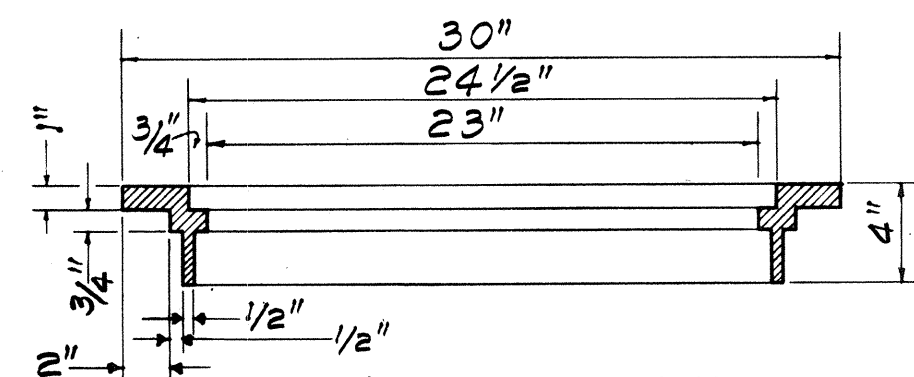
BOTTOM VIEW OF COVER

DETAILS OF TYPE "P"
CAST IRON FRAME AND COVER

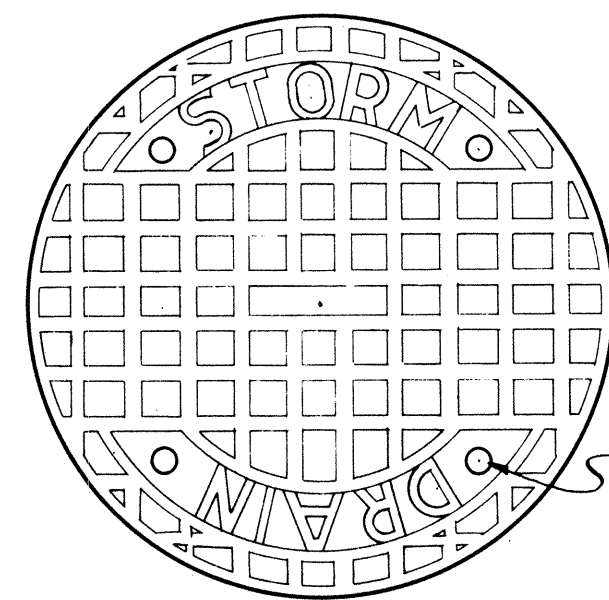
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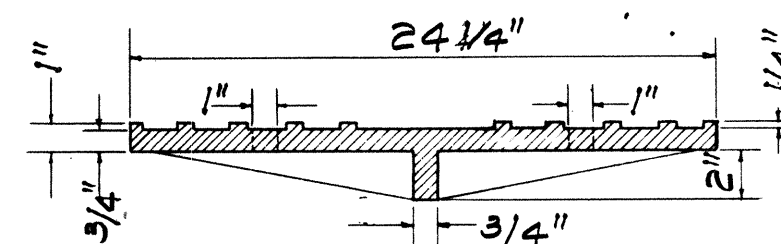
PLAN OF RIM



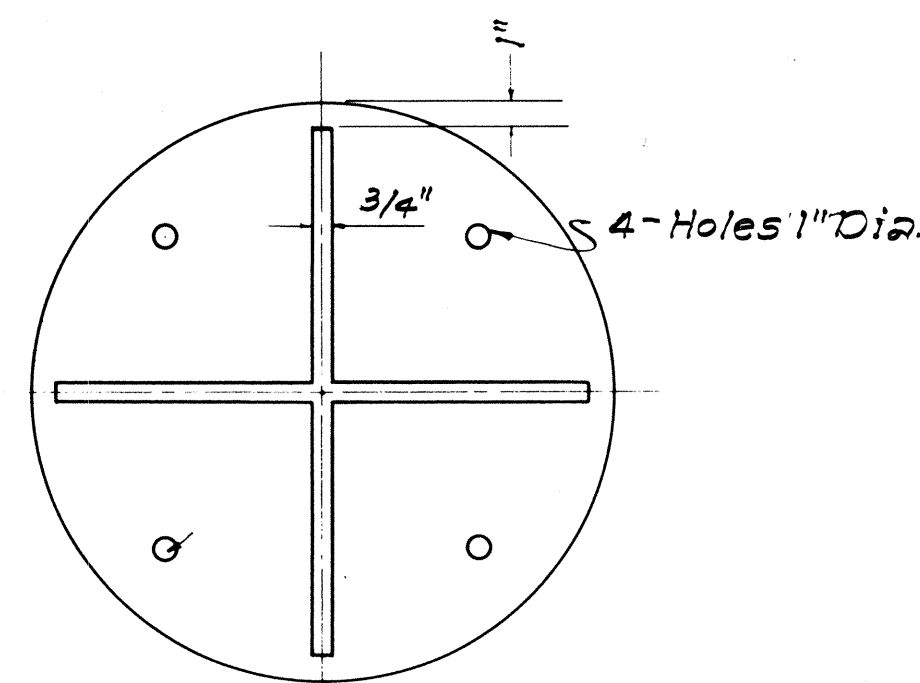
SECTION OF RIM



TOP VIEW OF COVER



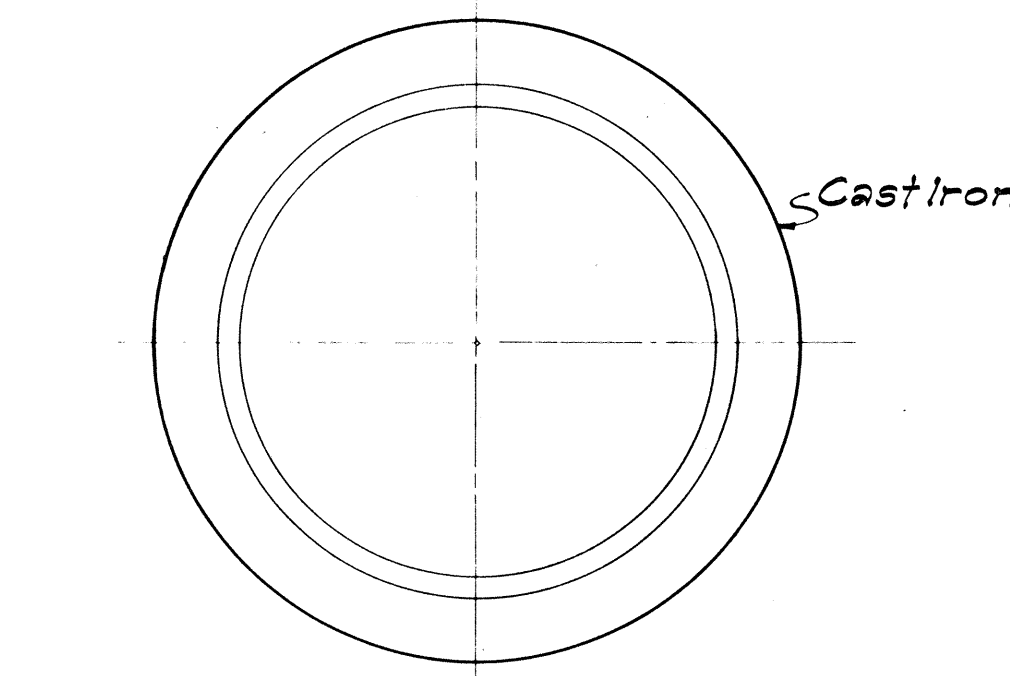
SECTION



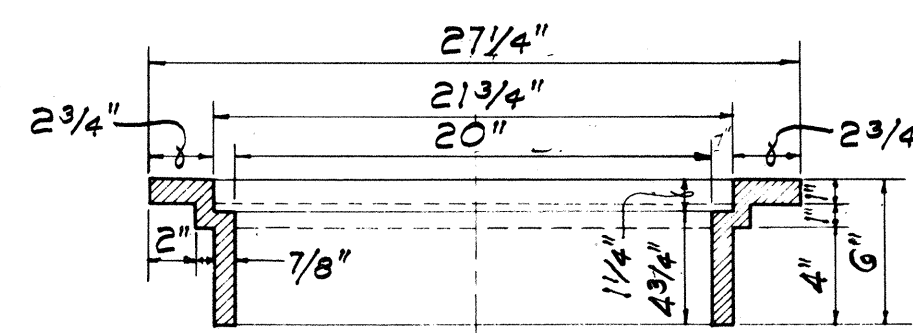
BOTTOM VIEW OF COVER

DETAILS OF TYPE "B"
CAST IRON FRAME AND COVER

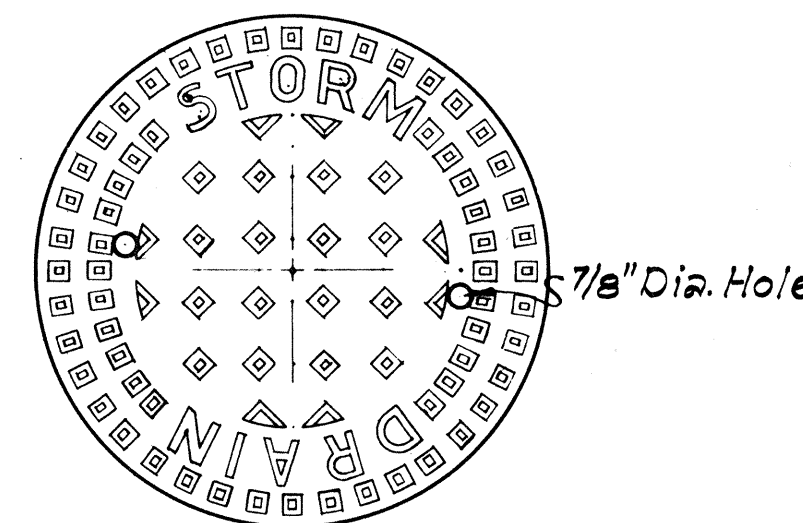
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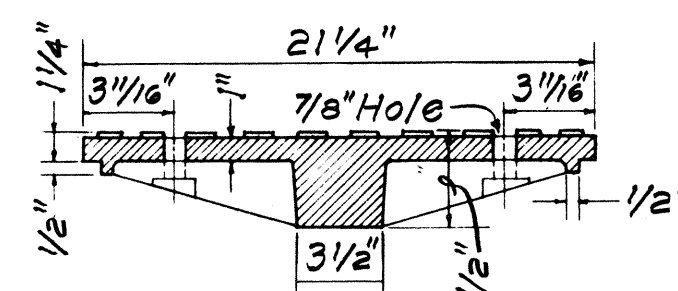
PLAN OF RIM



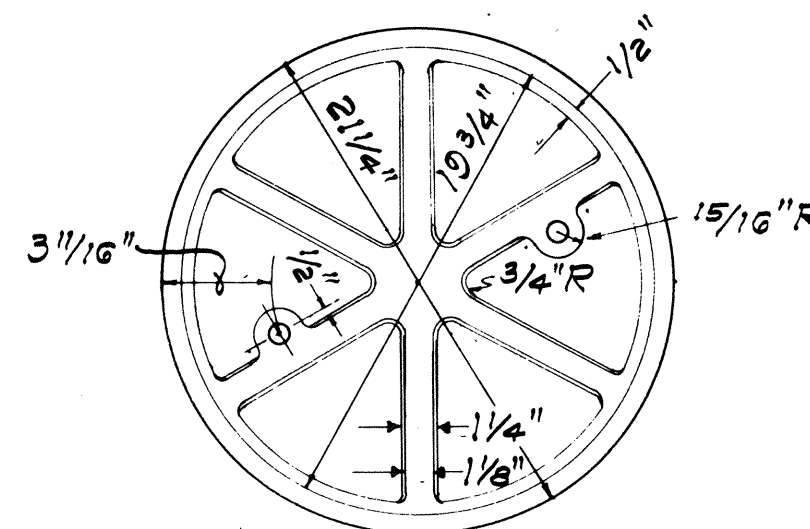
SECTION OF RIM



TOP VIEW OF COVER



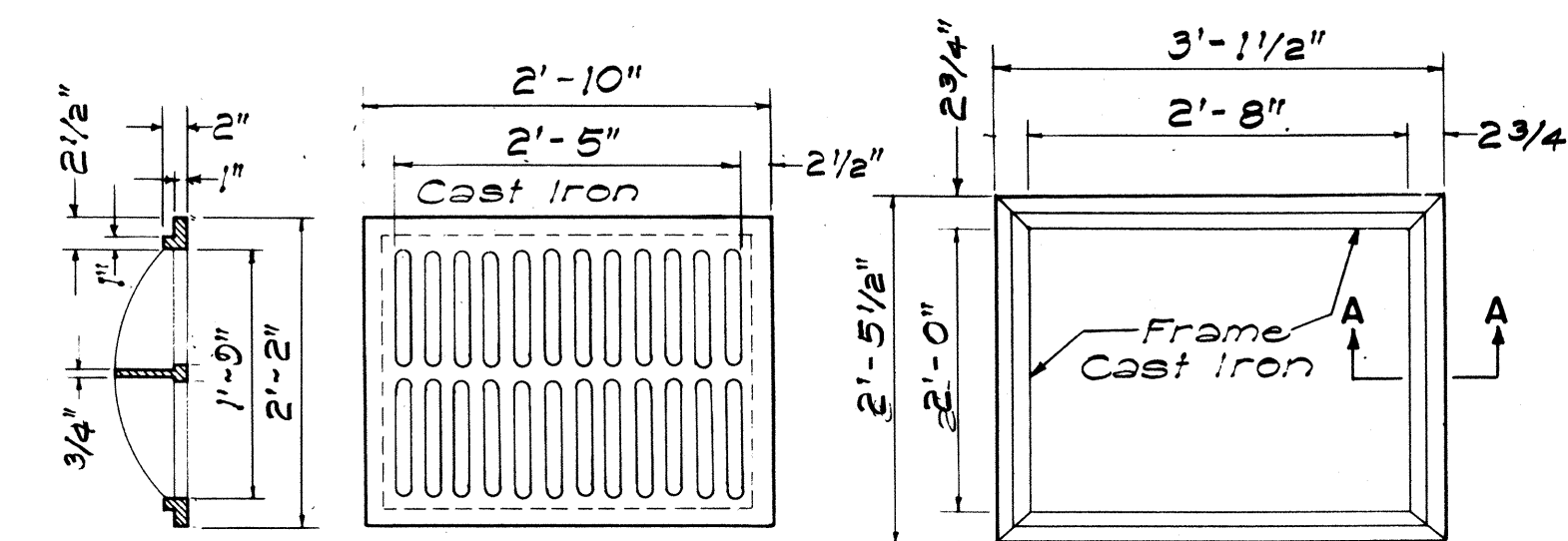
SECTION



BOTTOM VIEW OF COVER

DETAILS OF TYPE "A"
CAST IRON FRAME AND COVER

SCALE: 1-1/2" = 1'-0"



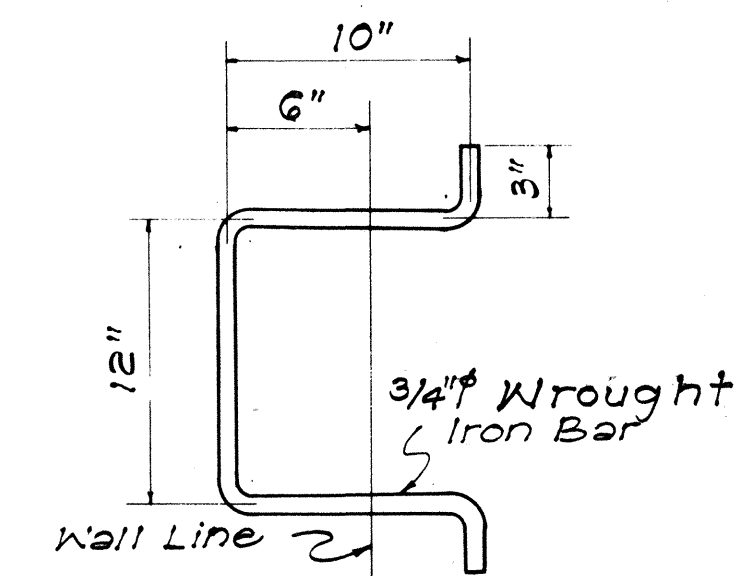
SECTION

TOP VIEW

TOP VIEW

TYPE C C.I. FRAME AND GRATE

SCALE: 3/4" = 1'-0"



MANHOLE RUNG

SCALE: 1-1/2" = 1'-0"

SECTION "A-A"
SCALE 3" = 1'-0"

APPROVAL RECOMMENDED:
P. P. P.
HYDRAULIC DESIGN ENGINEER 12-17-69
DATE

APPROVED:
P. P. P.
ASSISTANT CHIEF, ENGINEERING 12-17-69
DATE

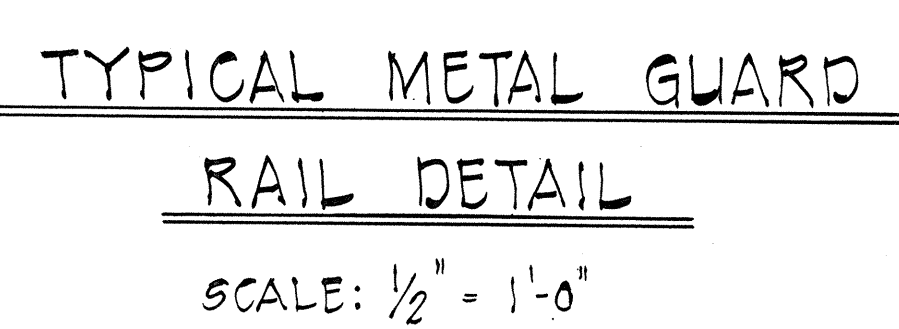
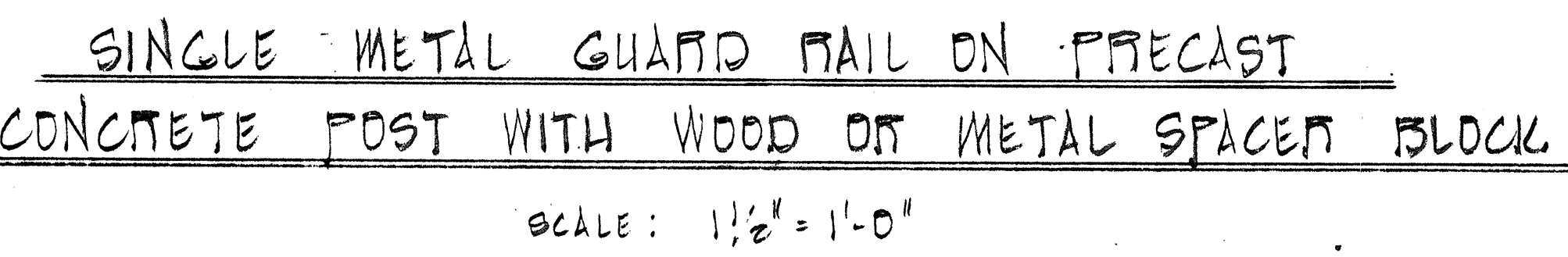
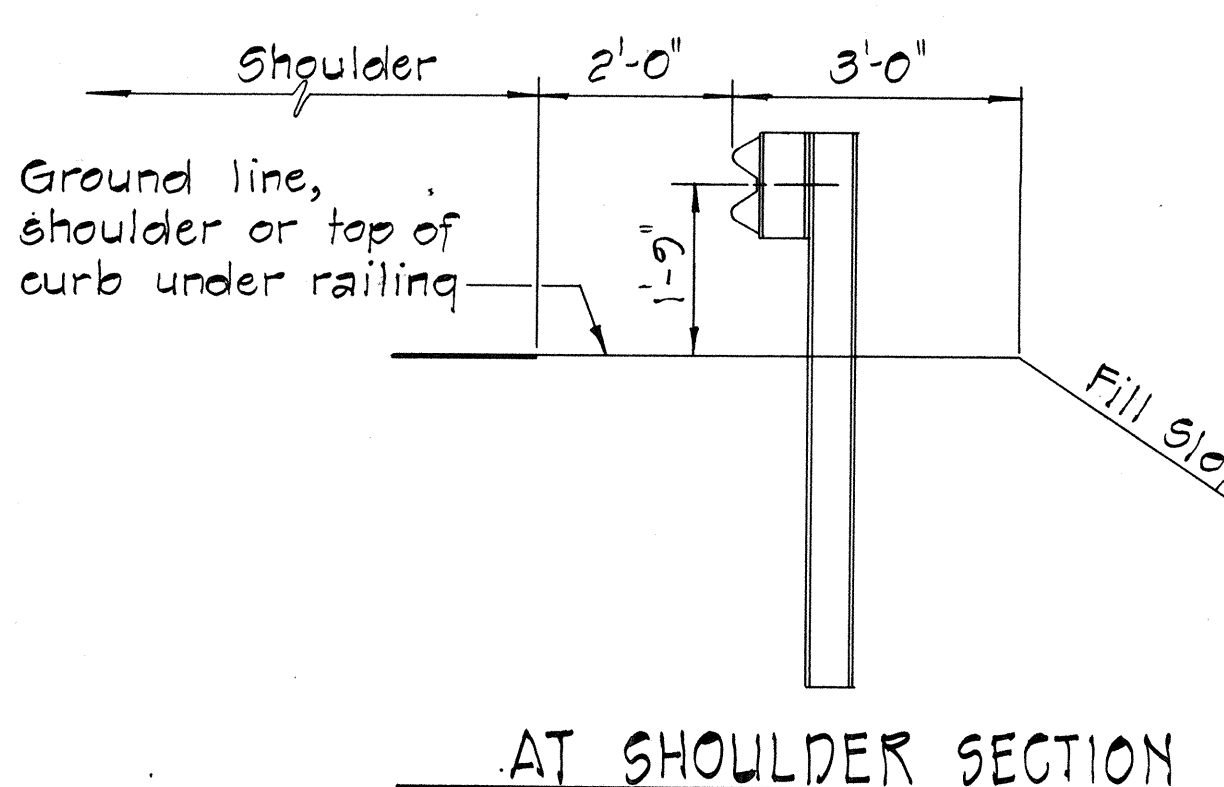
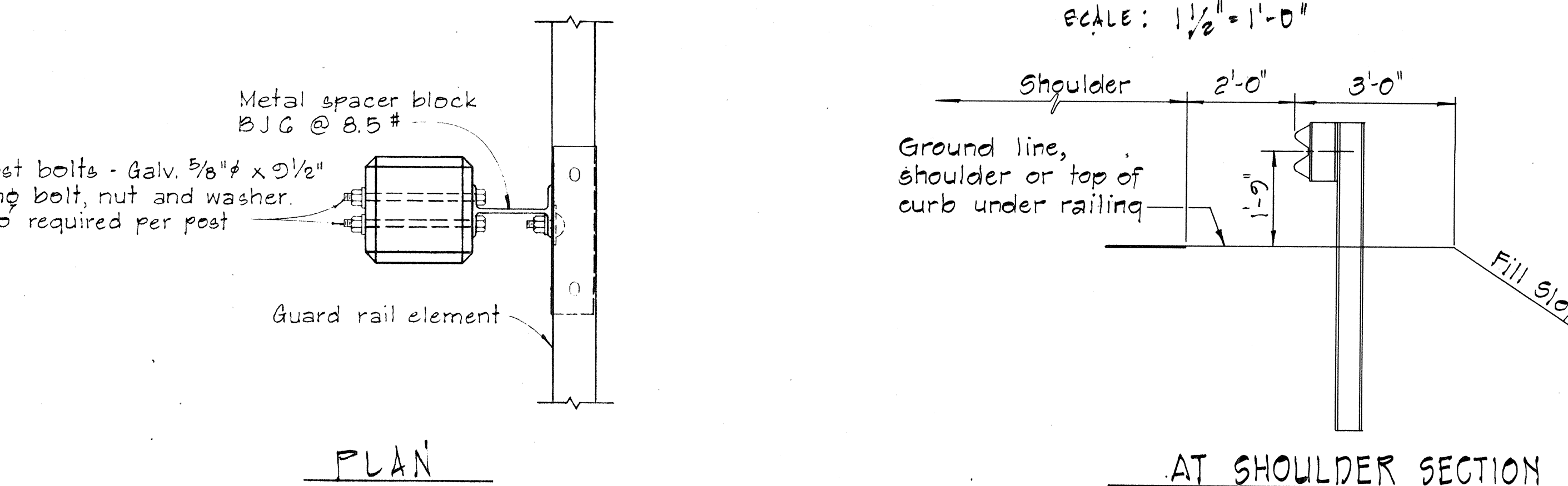
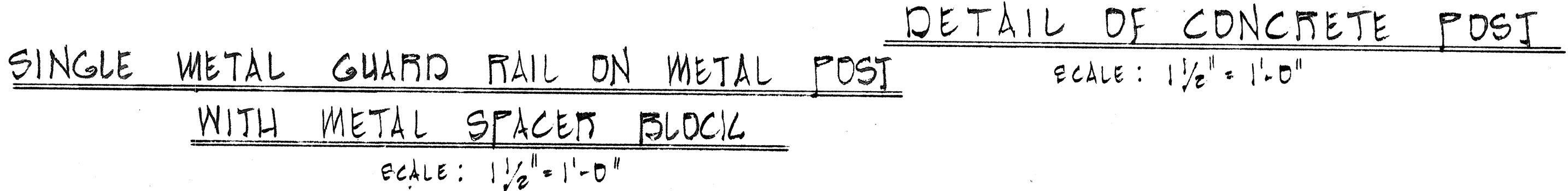
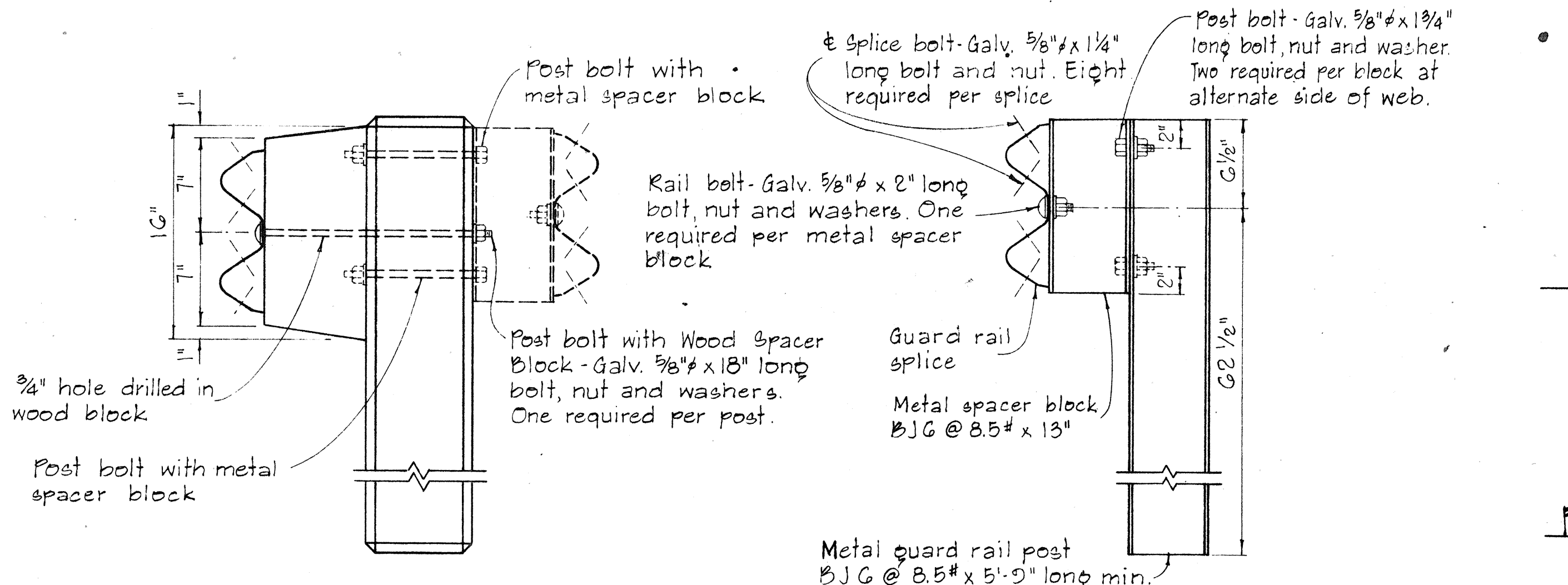
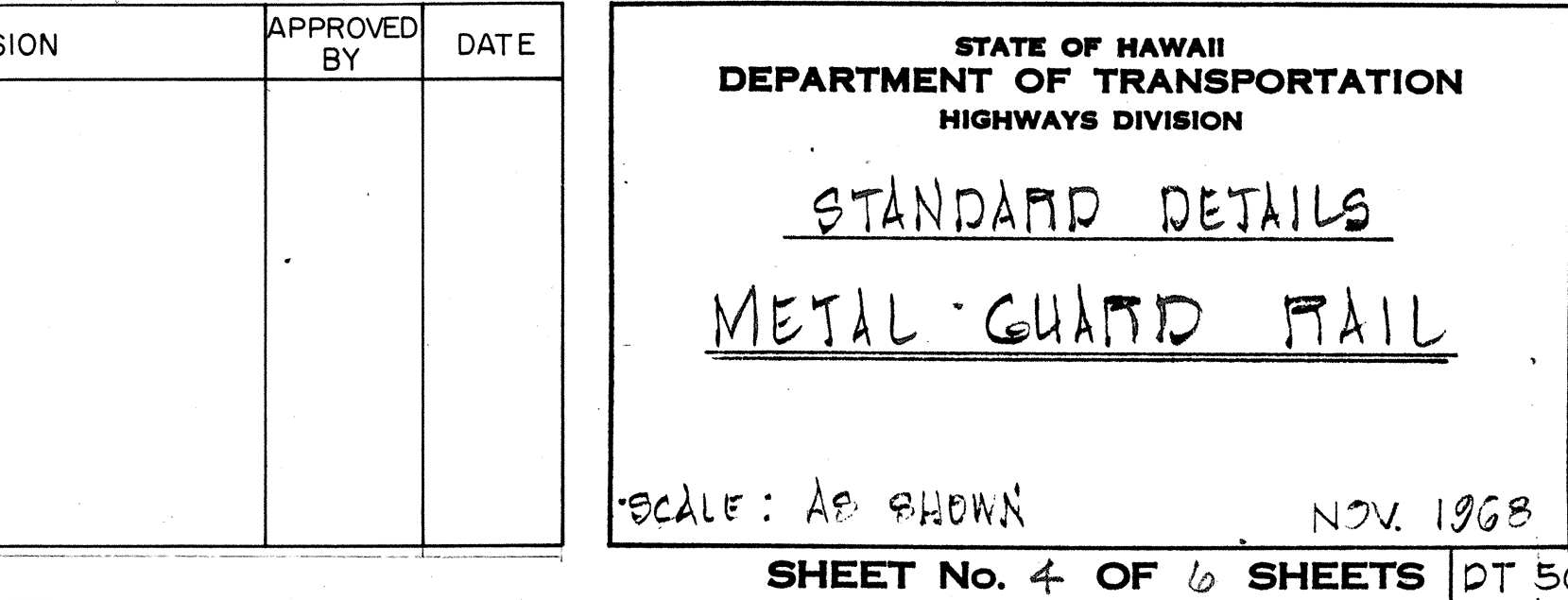
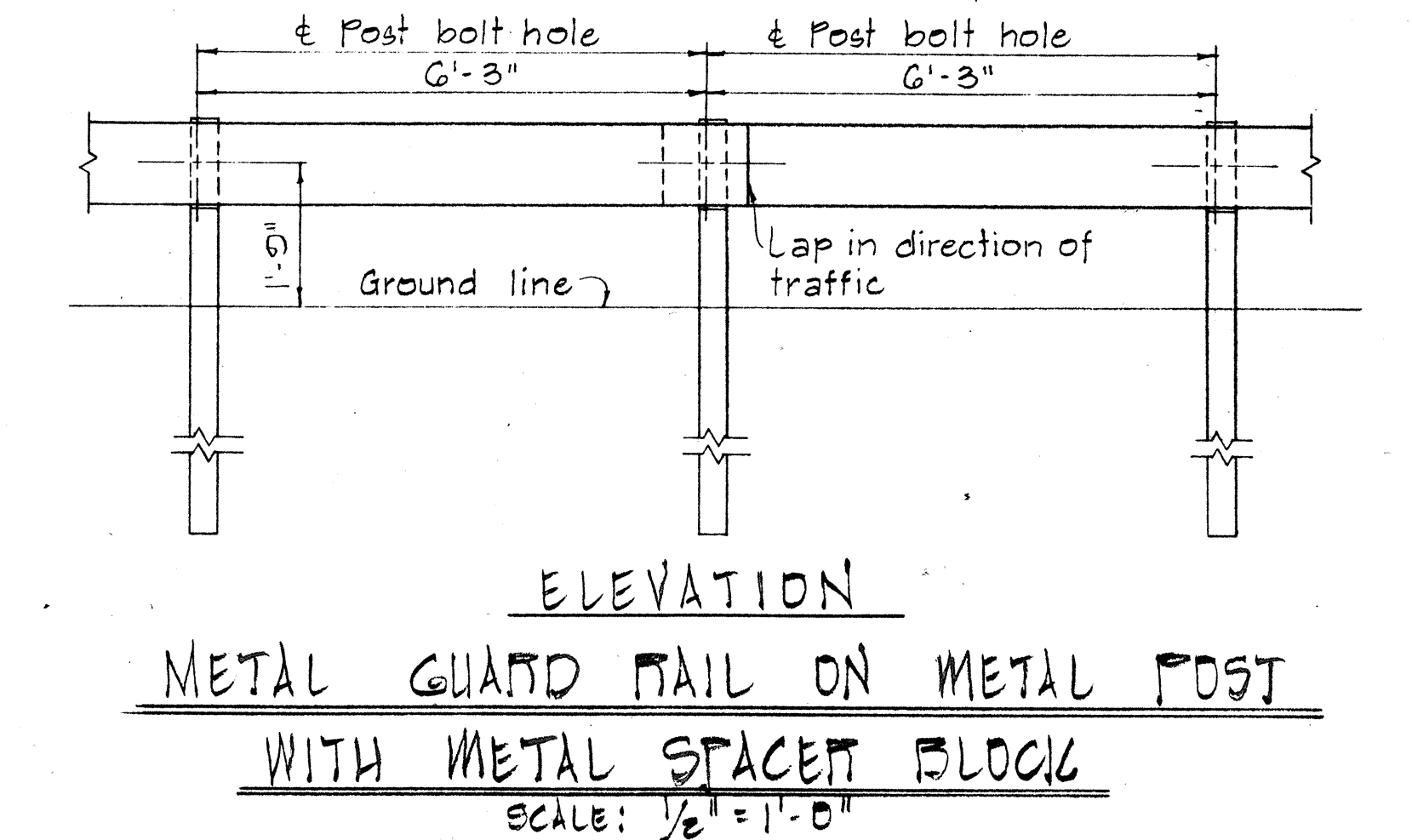
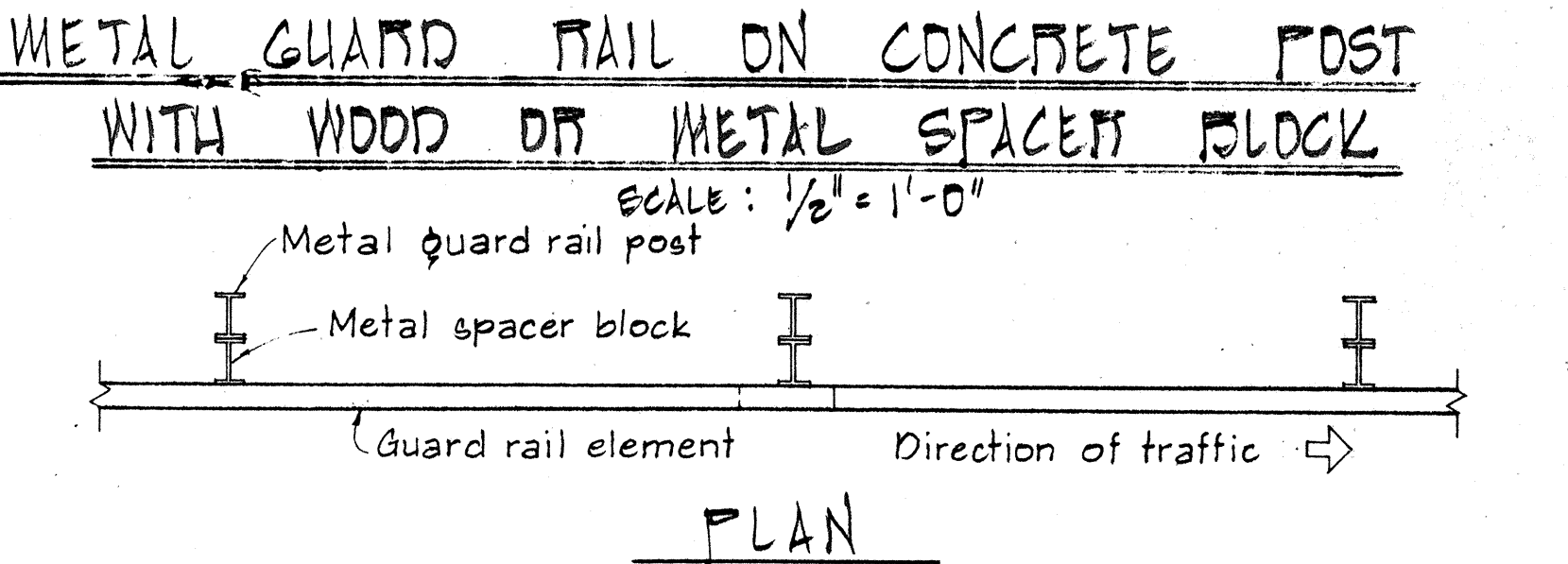
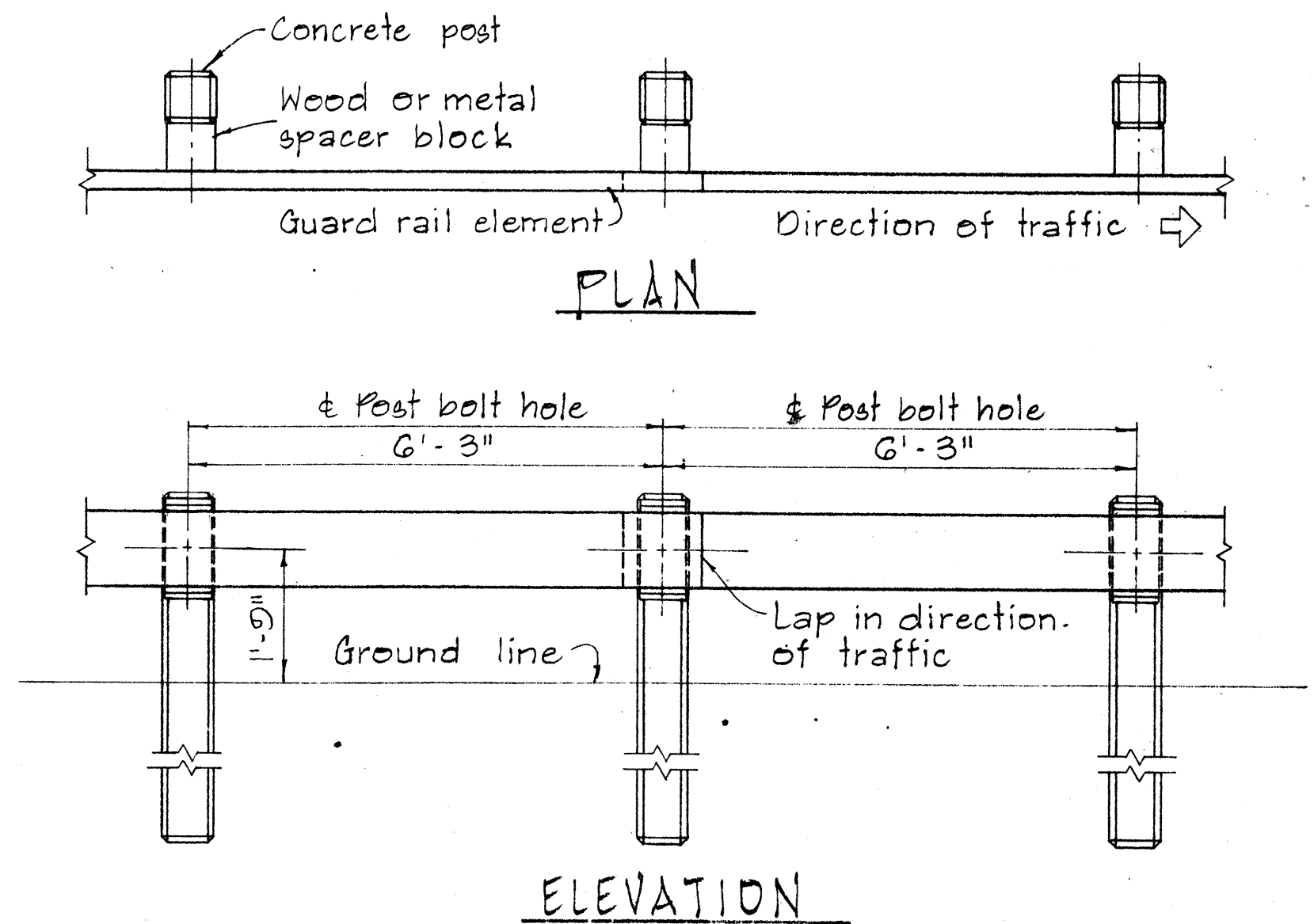
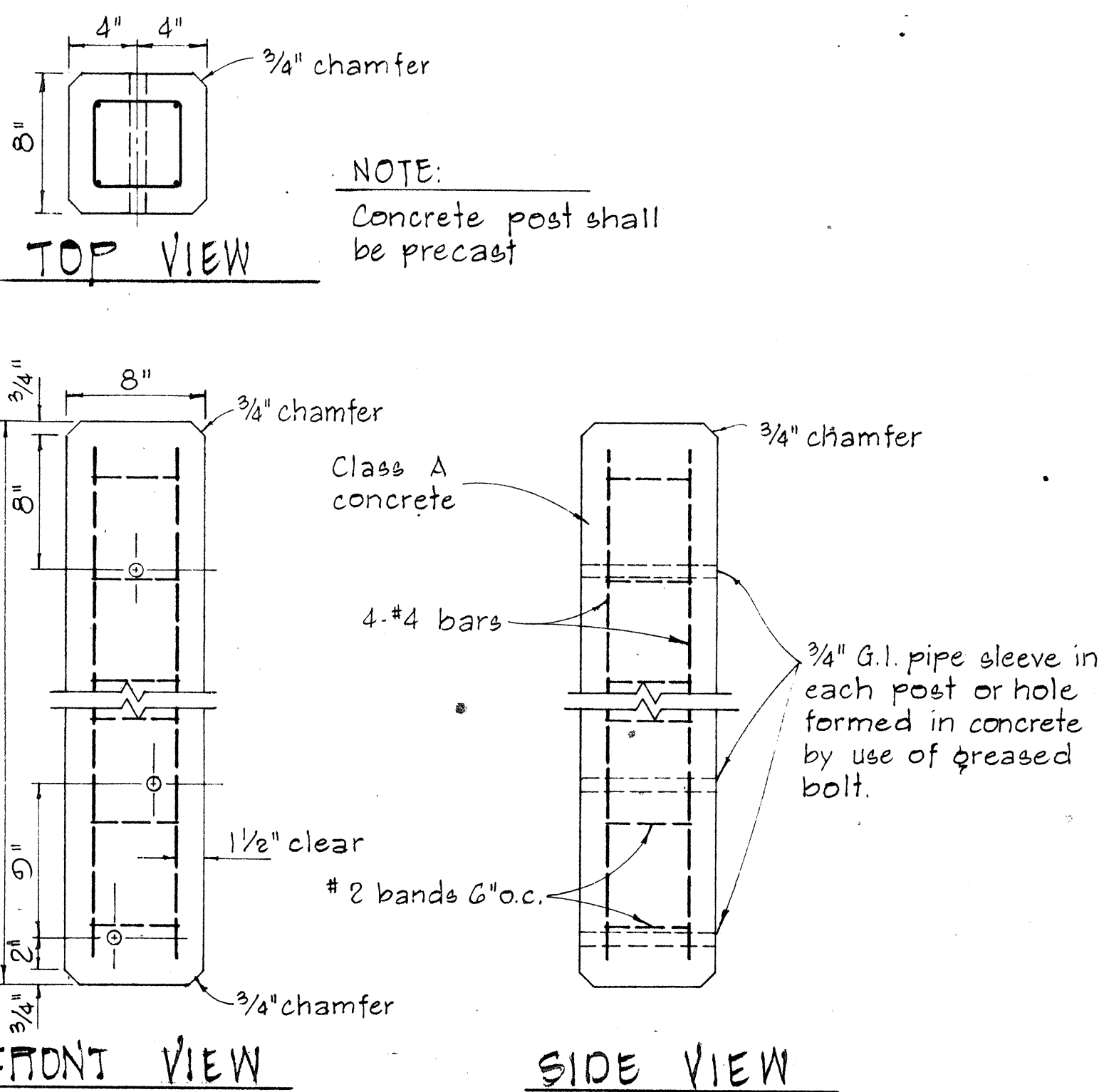
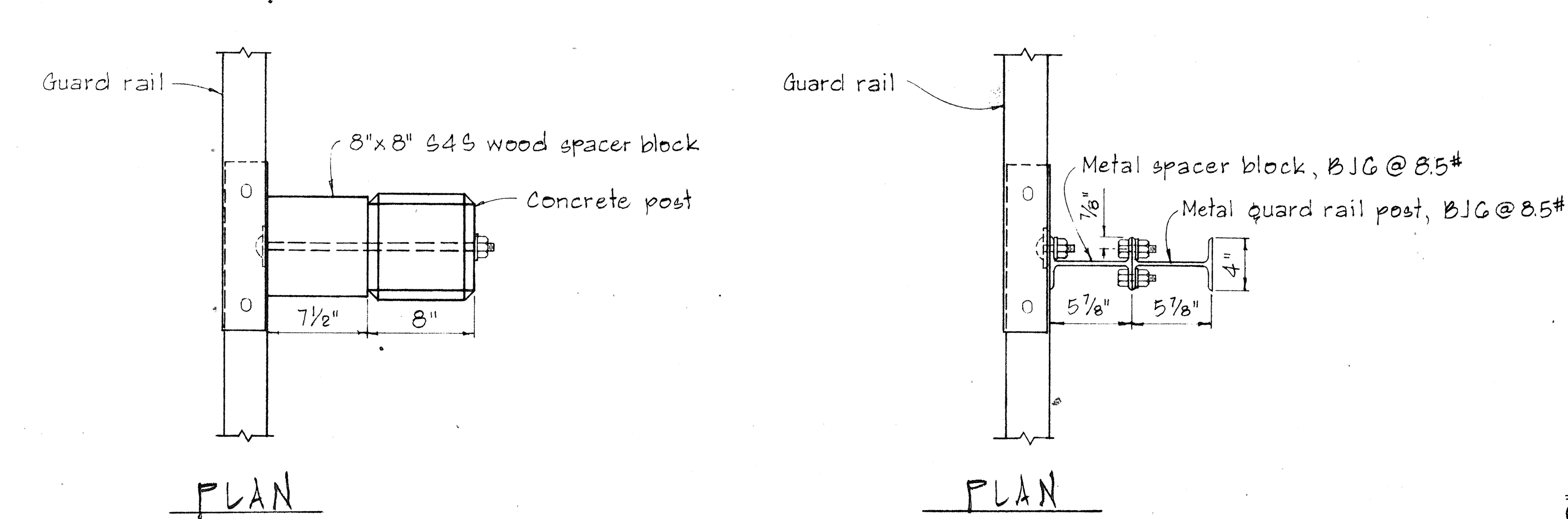
NO.	REVISION	APPROVED BY	DATE
1.	Detail of Type "P" Cast Iron Frame and Cover	H.T.	1-6-71

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**STANDARD DETAILS
CATCH BASIN AND
MANHOLE CASTINGS**

Scale: As Noted Date: July, 1969
SHEET NO 3 OF 6 SHEETS DH 6.

ORIGINAL PLAN	DATE
DRAWN BY: <i>Calisto</i>	
CHECKED BY:	
NOTED BY:	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	3069-464	1972	13	23



APPROVAL RECOMMENDED:
Traffic Engineer
12/29/69
DATE

APPROVED:
Assistant Chief, Engineering
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

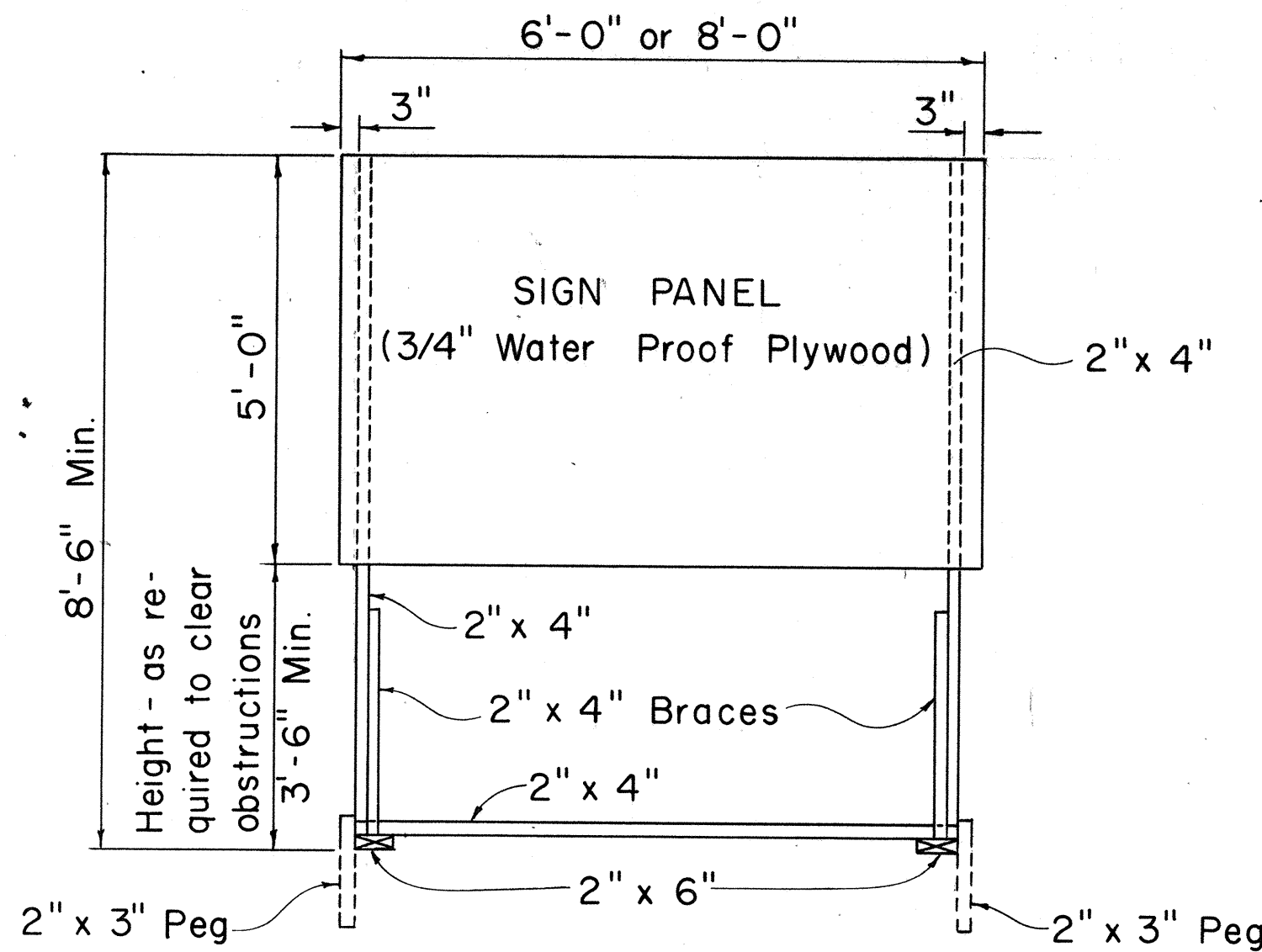
STANDARD DETAILS
METAL GUARD RAIL

SCALE: AS SHOWN
NOV. 1968

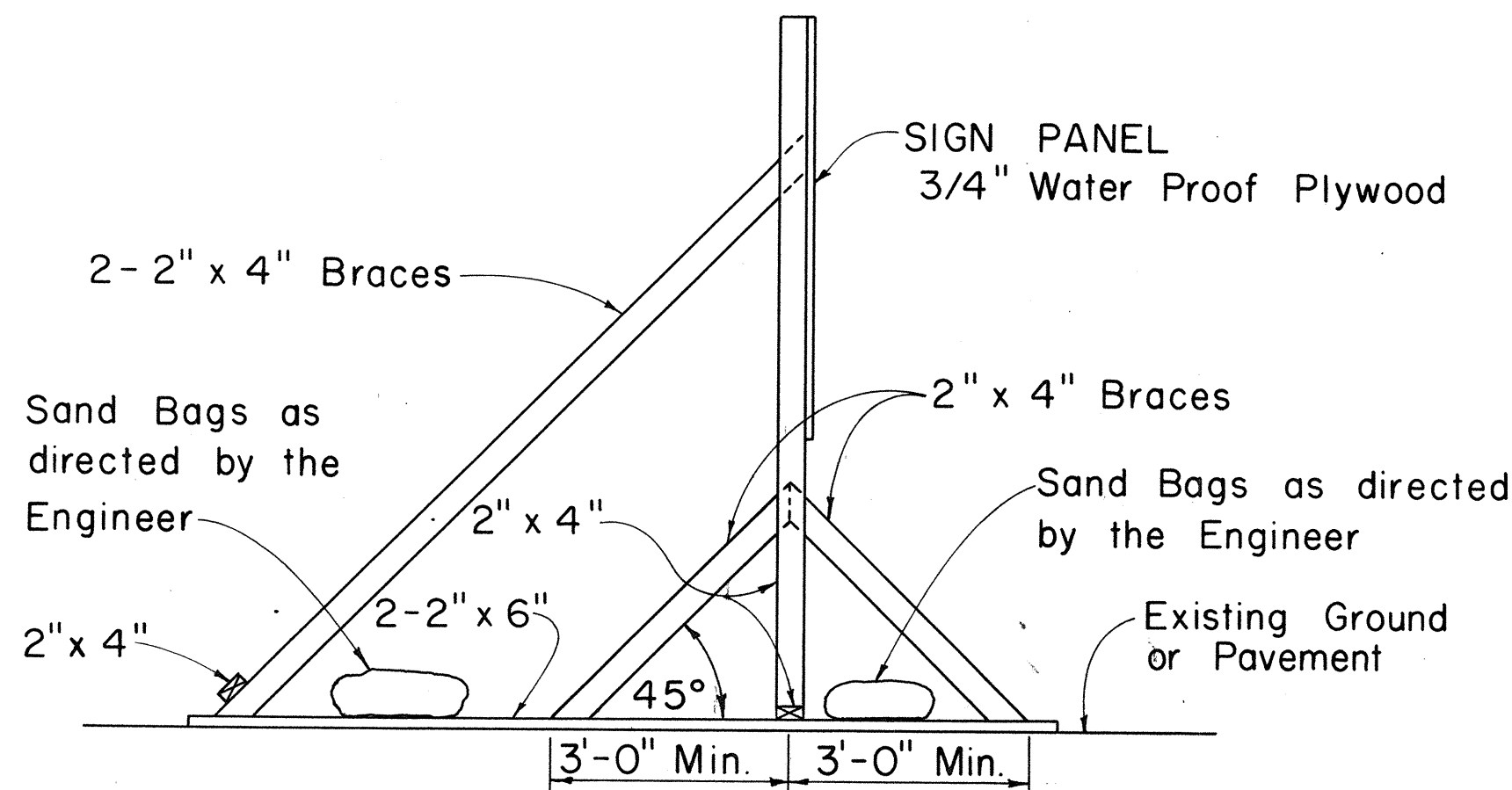
SHEET No. 4 OF 6 SHEETS DT 500

DATE	
SURVEY PLOTTED BY	
PLAN	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

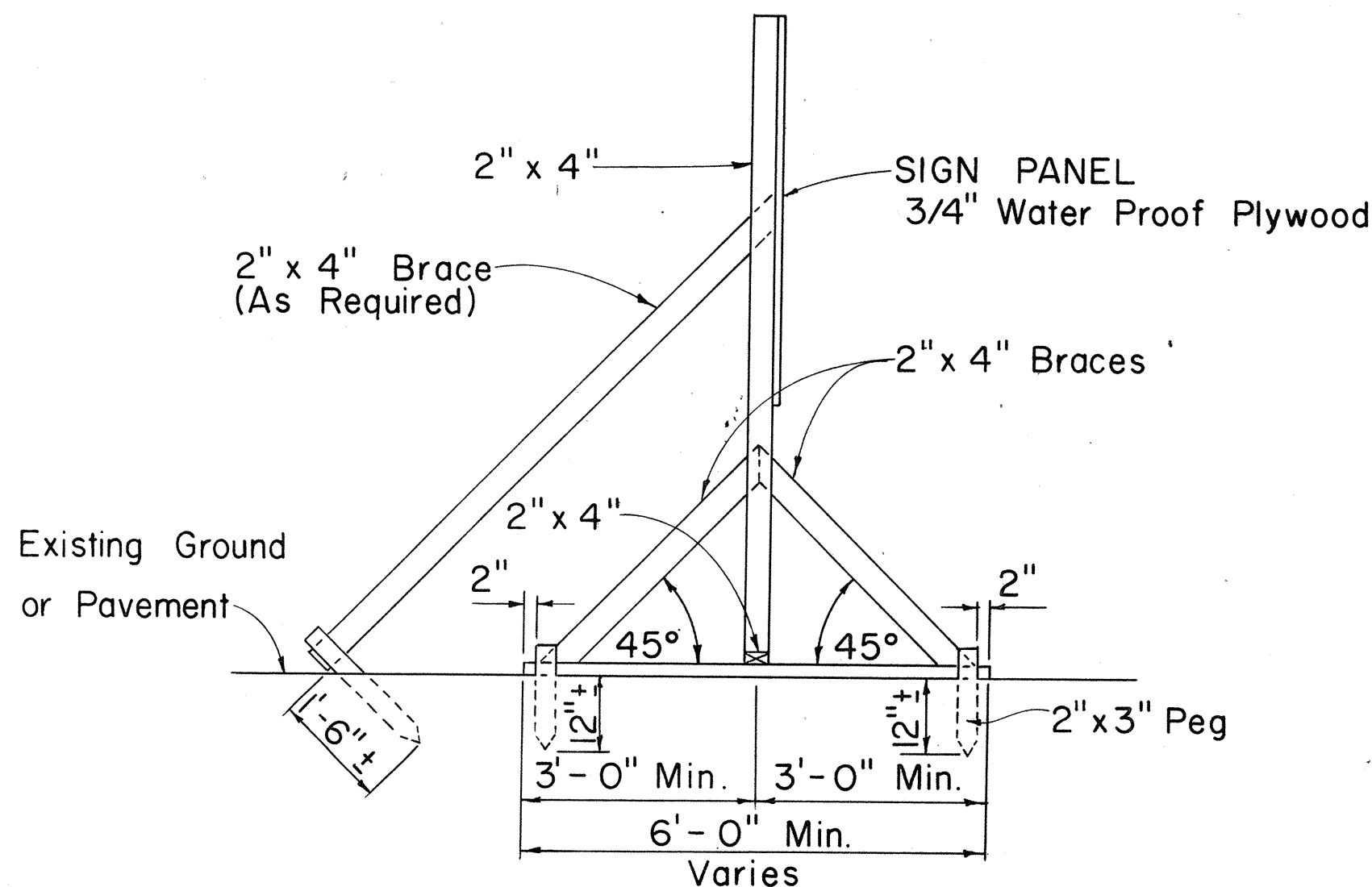
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BD69-464	1972	15	23



FRONT VIEW
Scale: 1/2" = 1'-0"

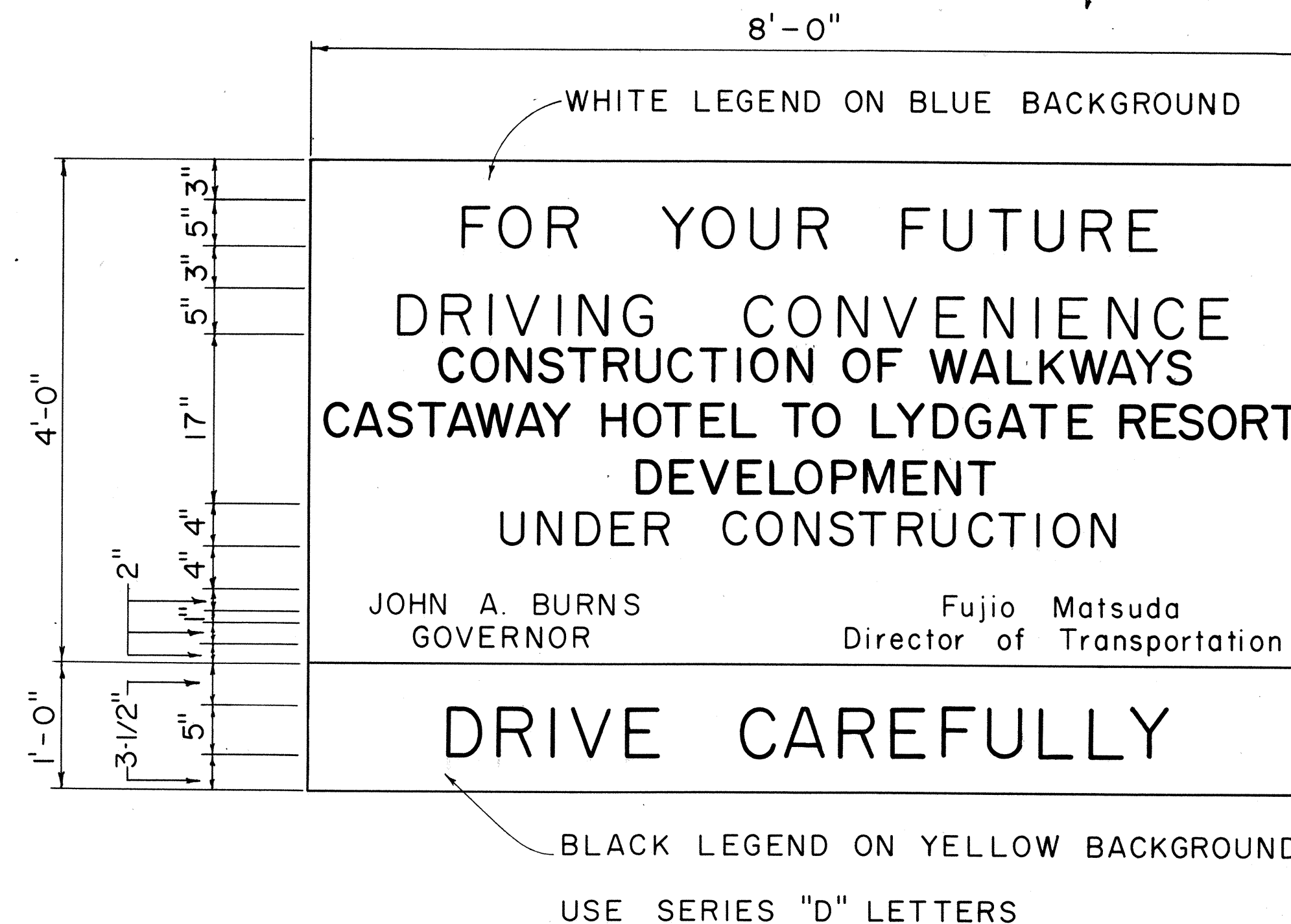


SIDE VIEW
(SIGN SUPPORT AND FRAME WEIGHTED DOWN)
Scale: 1/2" = 1'-0"



SIDE VIEW
(SIGN SUPPORT AND FRAME ANCHORED IN GROUND)
Scale: 1/2" = 1'-0"

SIGN SUPPORT AND FRAME
Scale: As Shown



GENERAL NOTES

1. The sign panels will be constructed by the State and will be available for pick up by the Contractor from the State Highway Maintenance Yard.
2. The Contractor shall construct the sign supports and frames and install the sign panels at the locations shown on the plans and as ordered by the Engineer.
3. At the end of construction the Contractor shall remove the sign panels and return it to the State Highway Maintenance Yard. Sign supports and frames shall be removed and cleared from the project site.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DETAILS
PROJECT INFORMATION SIGN
Scale: As Shown
SHEET No. 6 OF 6 SHEETS

15