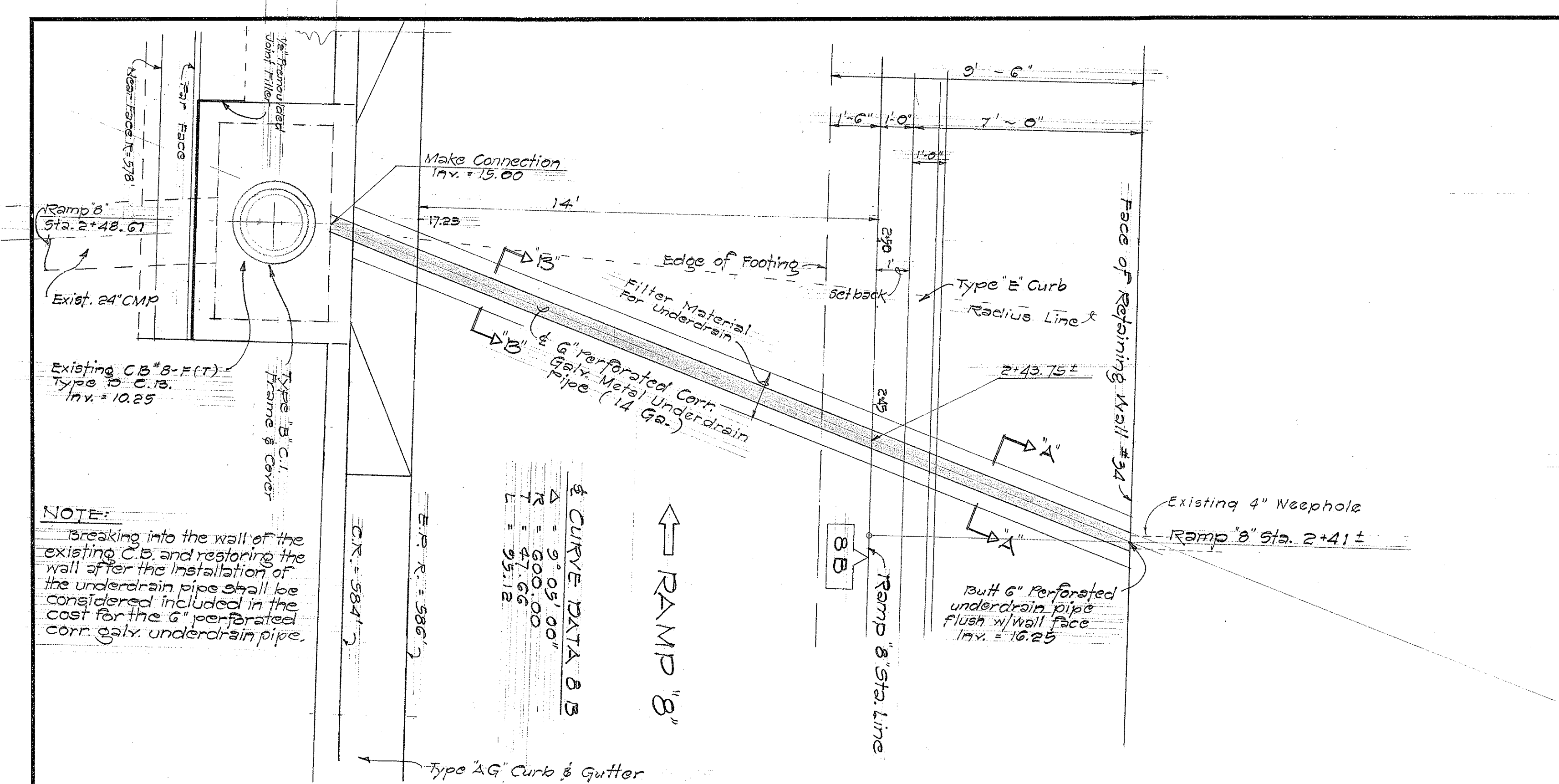


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IHI-1(24)	1965	19	64

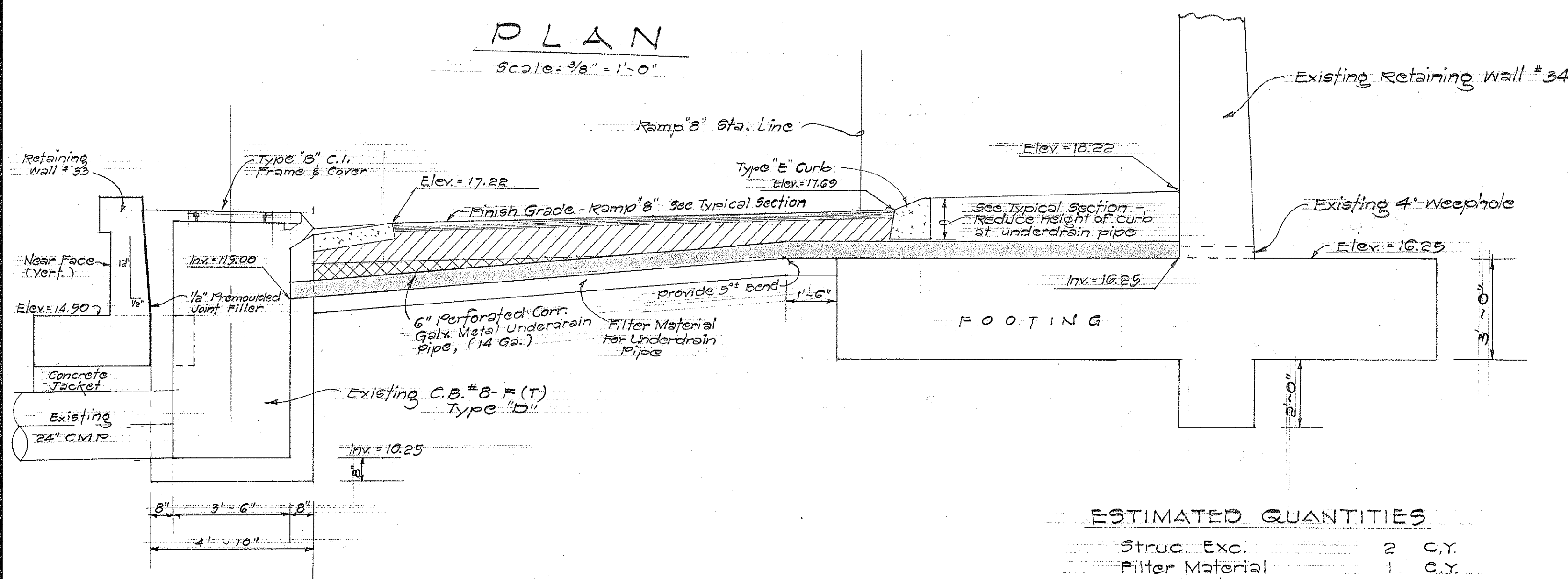


NOTE:
Breaking into the wall of the existing C.B. #8-F(T) and restoring the wall after the installation of the underdrain pipe shall be considered included in the cost for the 6" perforated corr. galv. underdrain pipe.

Curve Data B.B.

R	= 905.00'
T	= 47.66'
L	= 95.12'

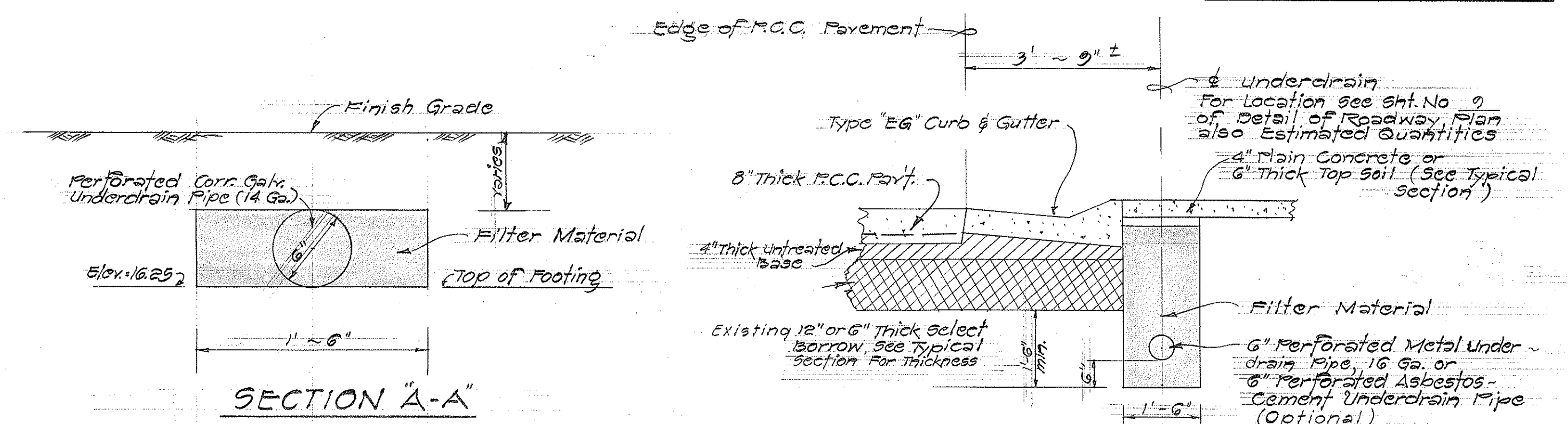
PLAN
Scale: 3/8" = 1'-0"



ESTIMATED QUANTITIES

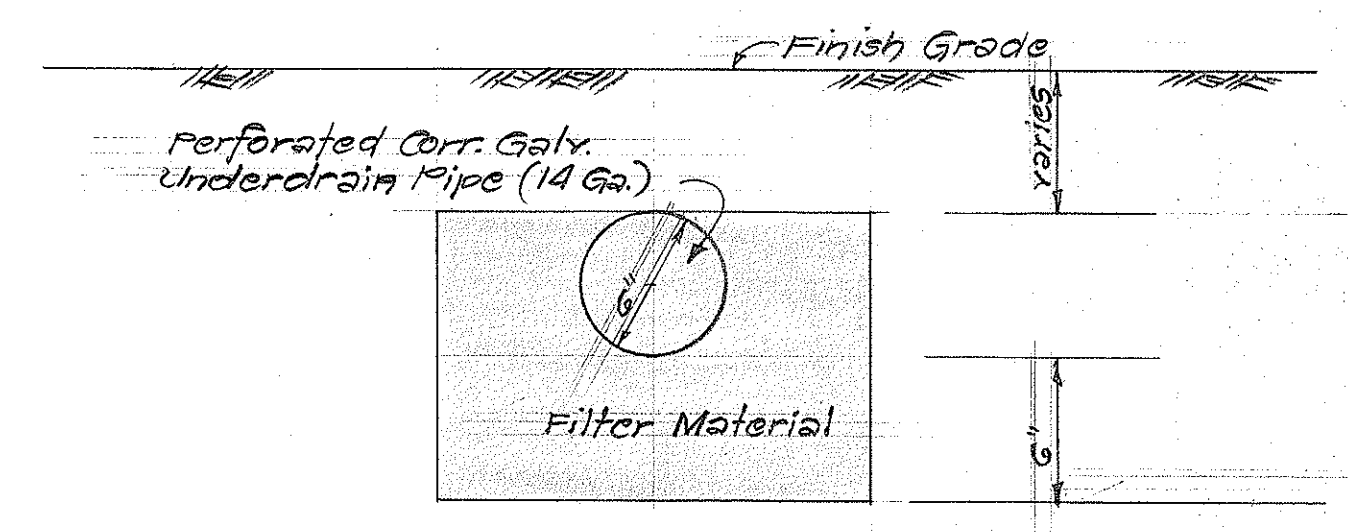
Struc. Exc.	2	C.Y.
Filter Material	1	C.Y.
6" Perforated Corr. Galv. Underdrain Pipe (14 Ga.)	28	L.F.

PROFILE ALONG & OF PERFORATED PIPE
Scale: 3/8" = 1'-0"



SECTION "A-A"
(Edge of Retaining Wall Footing to Face of Retaining Wall)
Scale: 1 1/2" = 1'-0"

TYPICAL SECTION OF 6" PERFORATED UNDERDRAIN PIPE
Sta. 134+44 to Sta. 136+65 (Elev. = -50.27)
Scale: 1/2" = 1'-0"



SECTION "B-B"
(C.B. #8-F(T) to Edge of Retaining Wall Footing)
Scale: 1 1/2" = 1'-0"

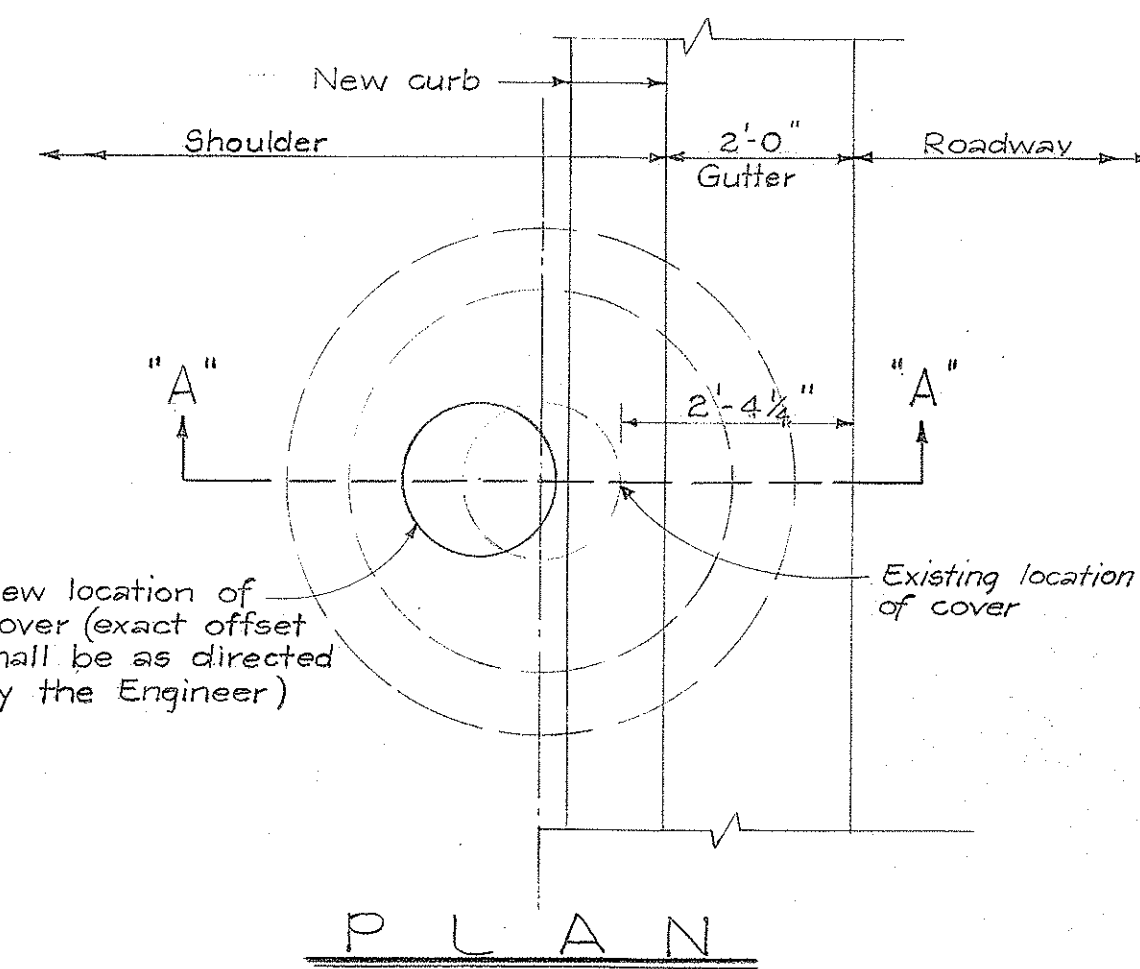
NOTE:
Breaking into the wall of the existing C.B. #8-F(T) and restoring the wall after the installation of the underdrain pipe shall be considered included in the cost for the 6" perforated underdrain pipe.

DETAILS OF 6" PERFORATED UNDERDRAIN PIPE AT RAMP "B" STA. 2+43.75±

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

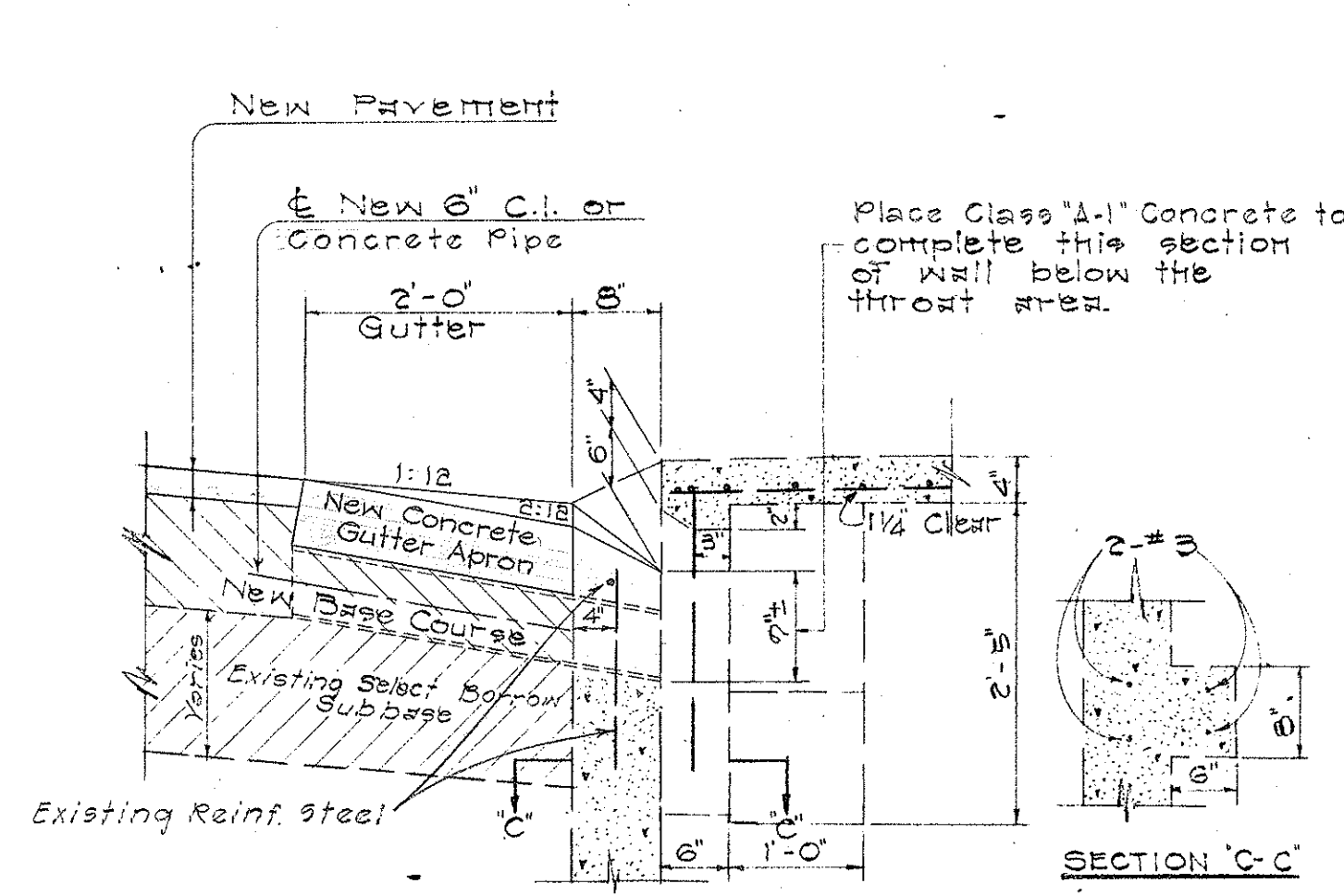
DETAILS OF
6 INCH PERFORATED
UNDERDRAIN PIPES

INTERSTATE HIGHWAY (LUNALILO FWY)
F.A.I. PROJ. No. IHI-1(24)
Scale: As Shown Date: April, 1965
SHEET No. 1 OF 6 SHEETS

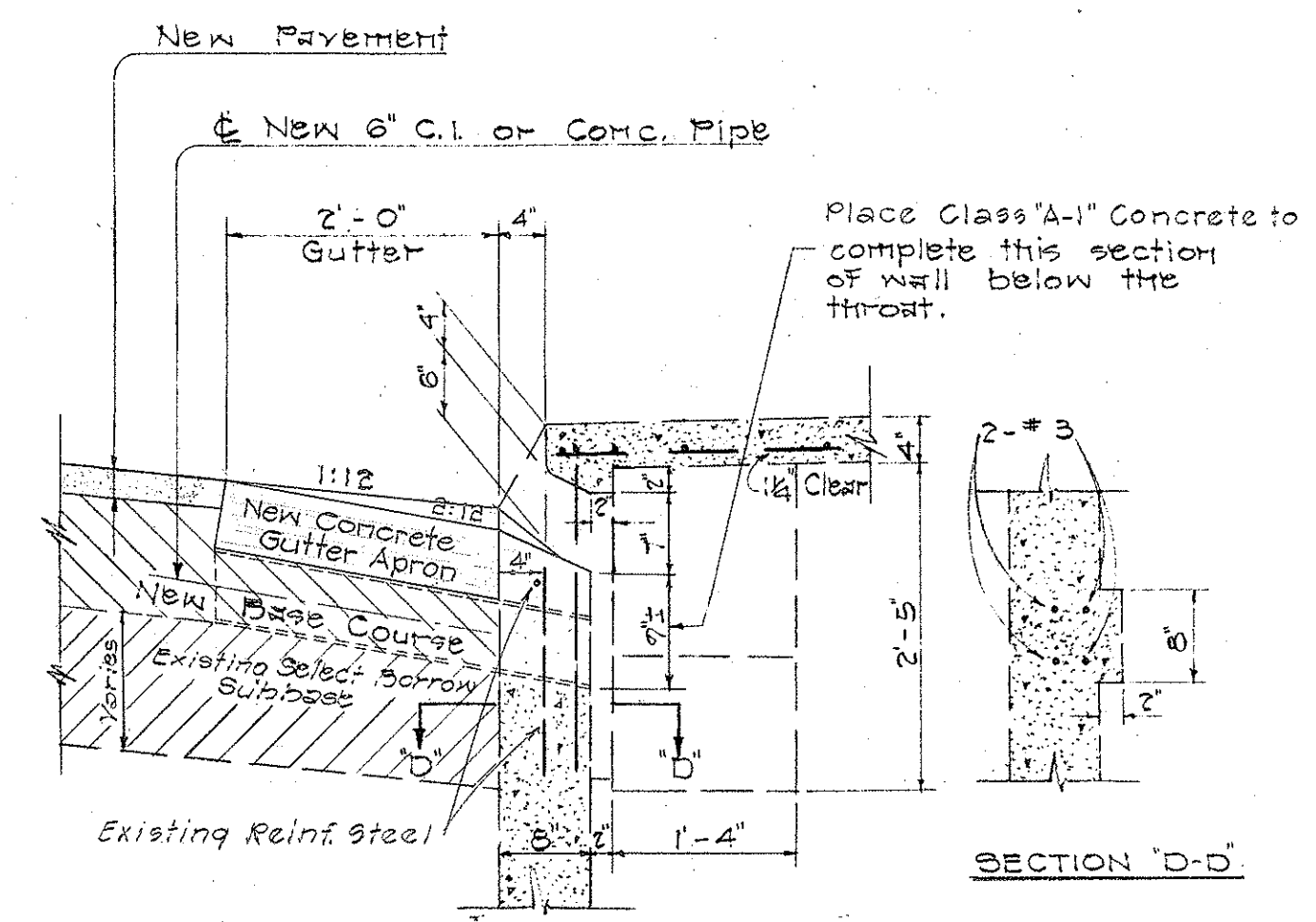


New location of cover (exact offset shall be as directed by the Engineer)

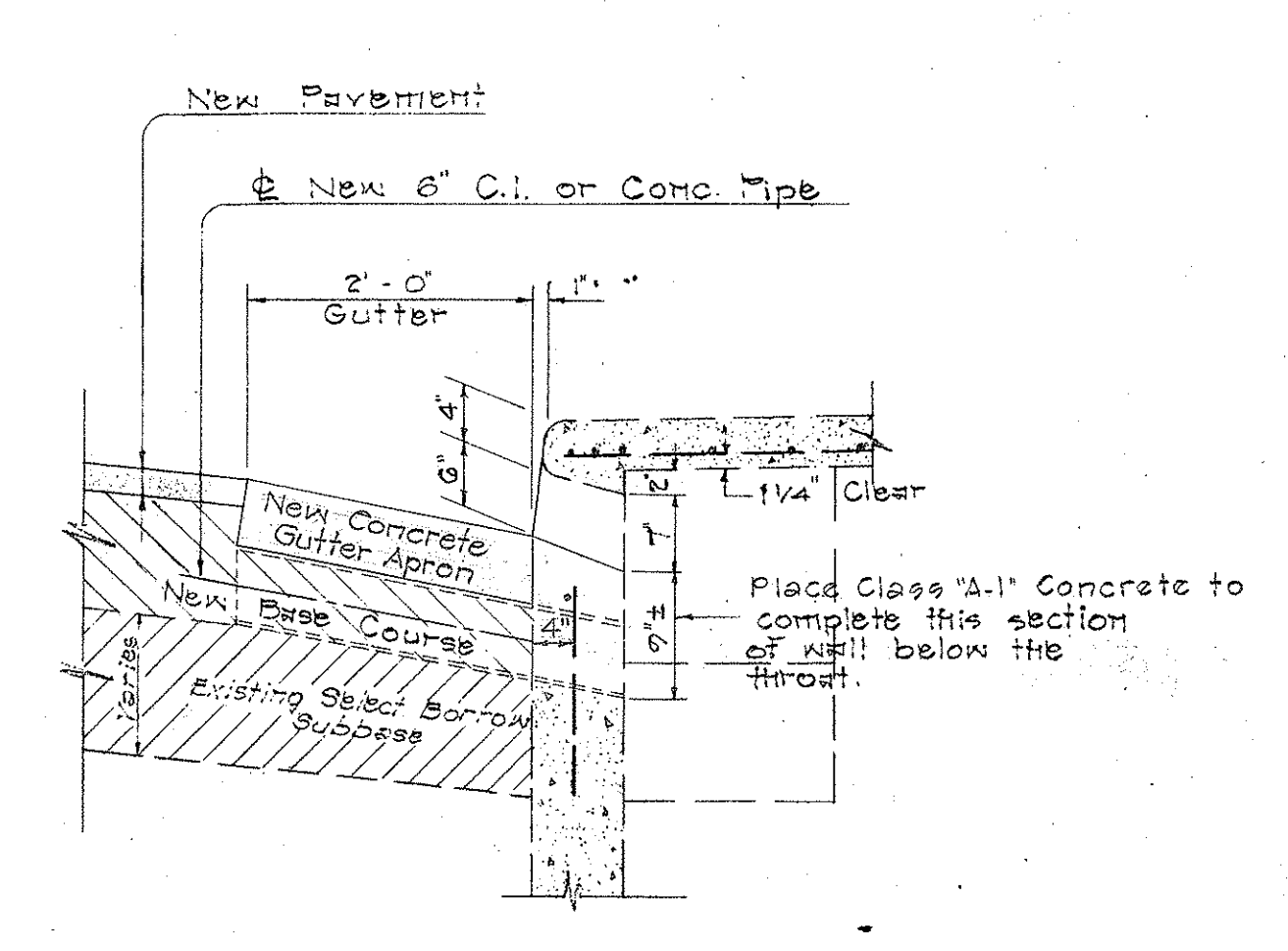
PLAN



THROAT DETAIL FOR TYPE 'EG' CURB & GUTTER
SCALE: 3/4" = 1'-0"



THROAT DETAIL FOR TYPE 'AG' CURB & GUTTER
SCALE: 3/4" = 1'-0"

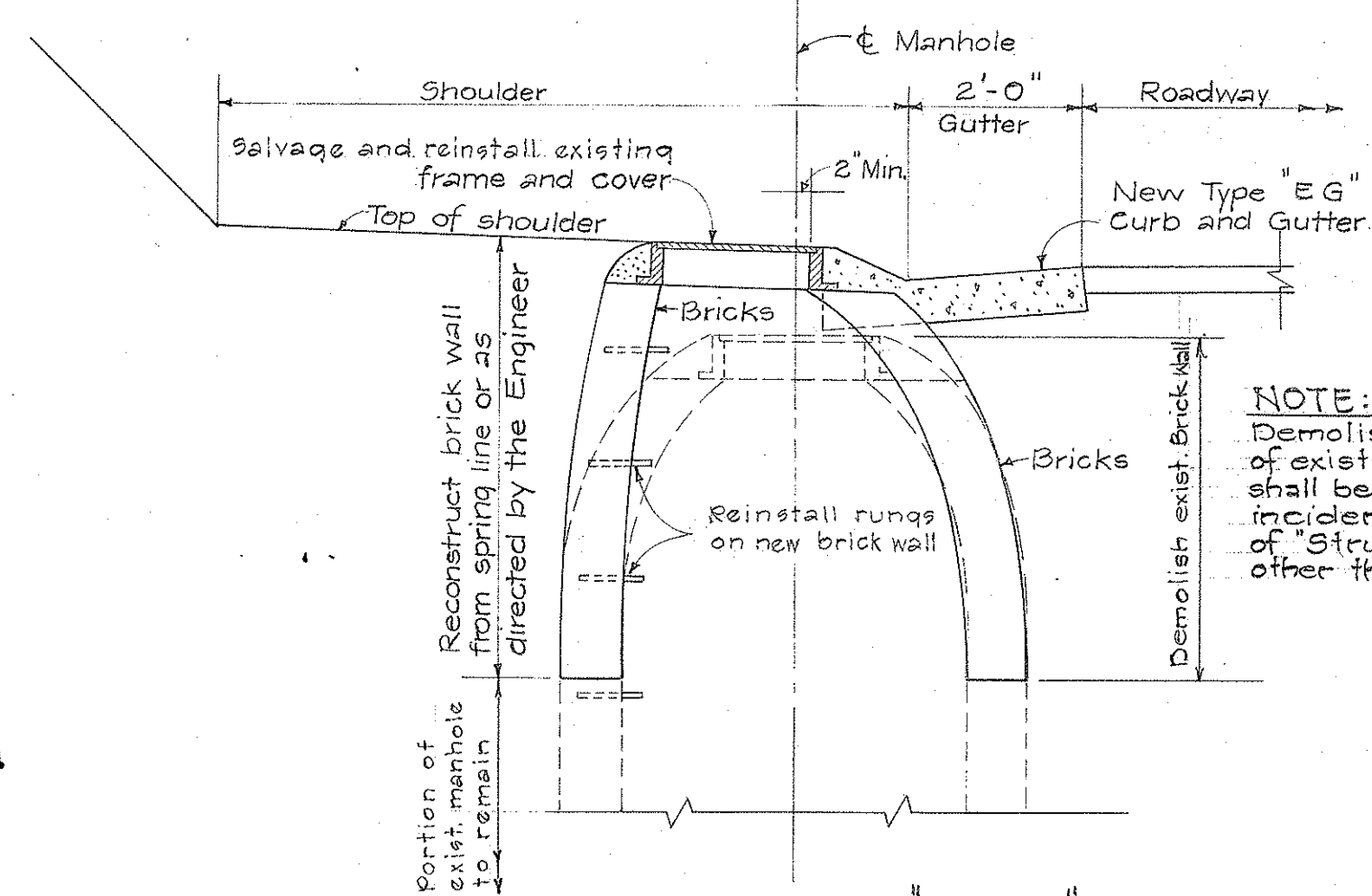


THROAT DETAIL FOR TYPE 'DG' CURB & GUTTER
SCALE: 3/4" = 1'-0"

SECTIONS "A-A"

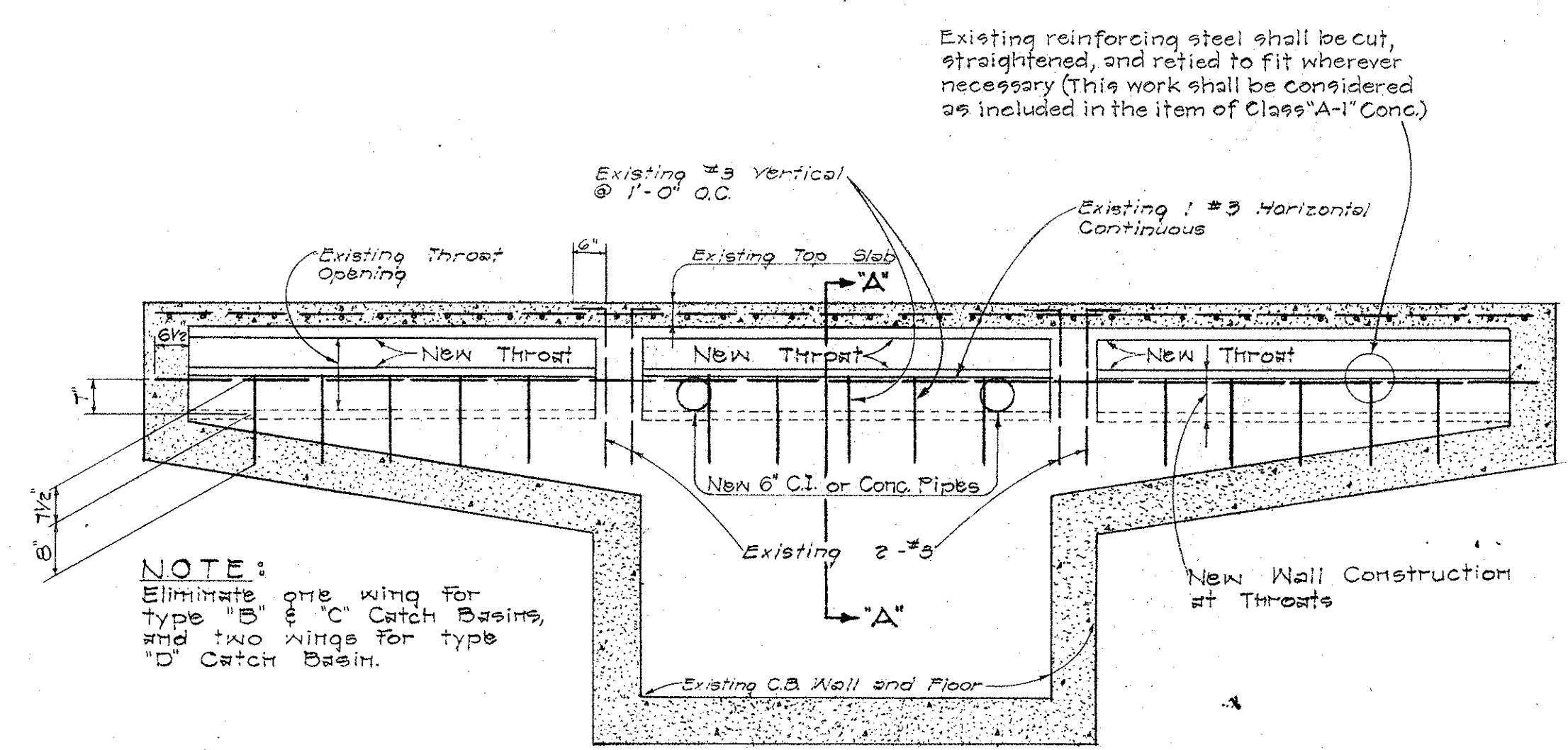
NOTE

- For location of catch basins and type of curb and gutter adjacent to it, see detail plan of roadway sheets No. 2 to 12, inclusive.
- For additional details of catch basins, see standard details.
- All reinforcing steel shown are existing. However any reinforcing steel found to be missing shall be replaced by the Contractor. (Any replacement of reinforcing steel if required, shall not be paid for separately, but shall be considered as included in the item of Class "A-1" Concrete.)
- New concrete gutter aprons shall be constructed in front of catch basins throats to be completed as shown in the standard details. Concrete gutter aprons in front of catch basin shall not be paid for separately but will be paid for at the contract unit price per linear foot for "Cast-In-Place Concrete Curb and Gutter" of the respective type adjacent to the catch basin.



SECTION "A-A"

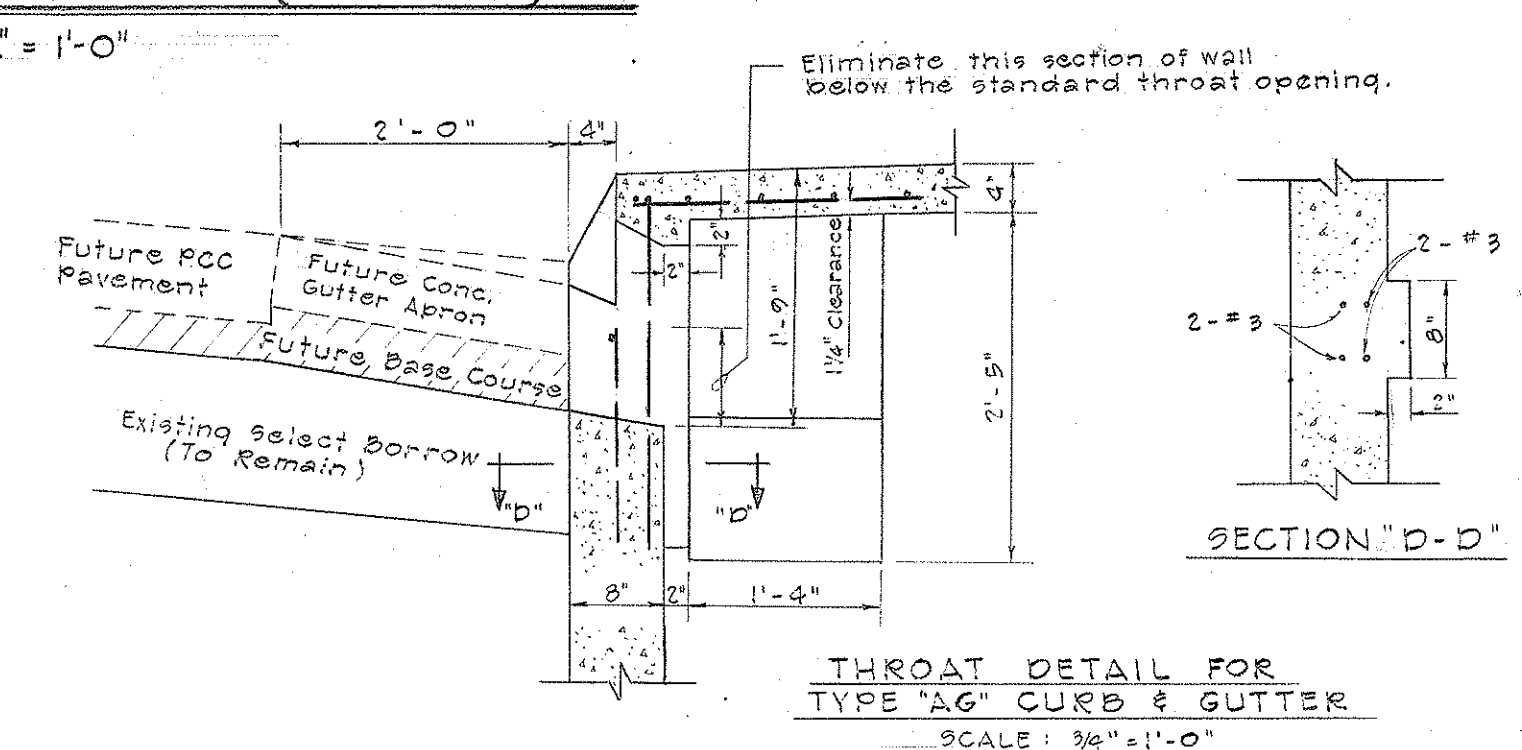
DETAIL FOR RECONSTRUCTION OF EXISTING SEWER M.H. TO OFFSET FRAME AND COVER AT STA. 127+46 (RIGHT)
SCALE: 1/2" = 1'-0"



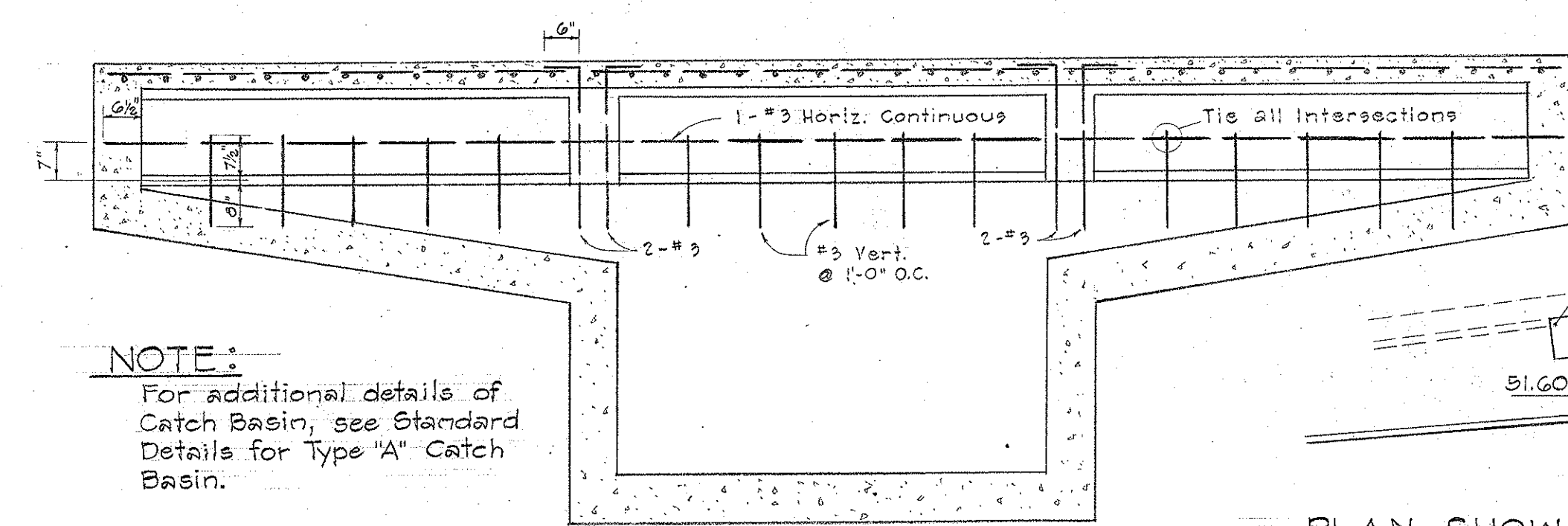
NOTE: Eliminate one wing for type "B" & "C" Catch Basins, and two wings for type "D" Catch Basin.

TYPE "A" CATCH BASIN
SCALE: 1/2" = 1'-0"

DETAILS OF EXISTING CATCH BASINS WITH TEMPORARY THROATS TO BE COMPLETED
SCALE: AS NOTED



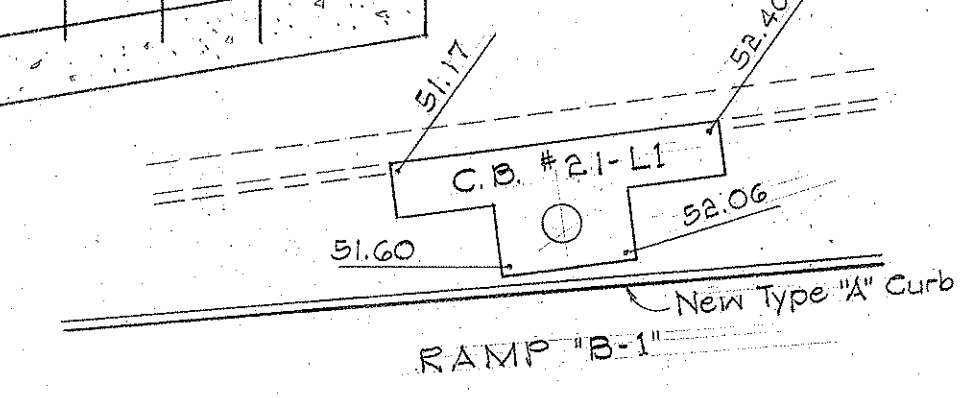
THROAT DETAIL FOR TYPE 'AG' CURB & GUTTER
SCALE: 3/4" = 1'-0"



NOTE: For additional details of Catch Basin, see Standard Details for Type "A" Catch Basin.

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

DETAILS FOR CATCH BASIN NO. 21-11



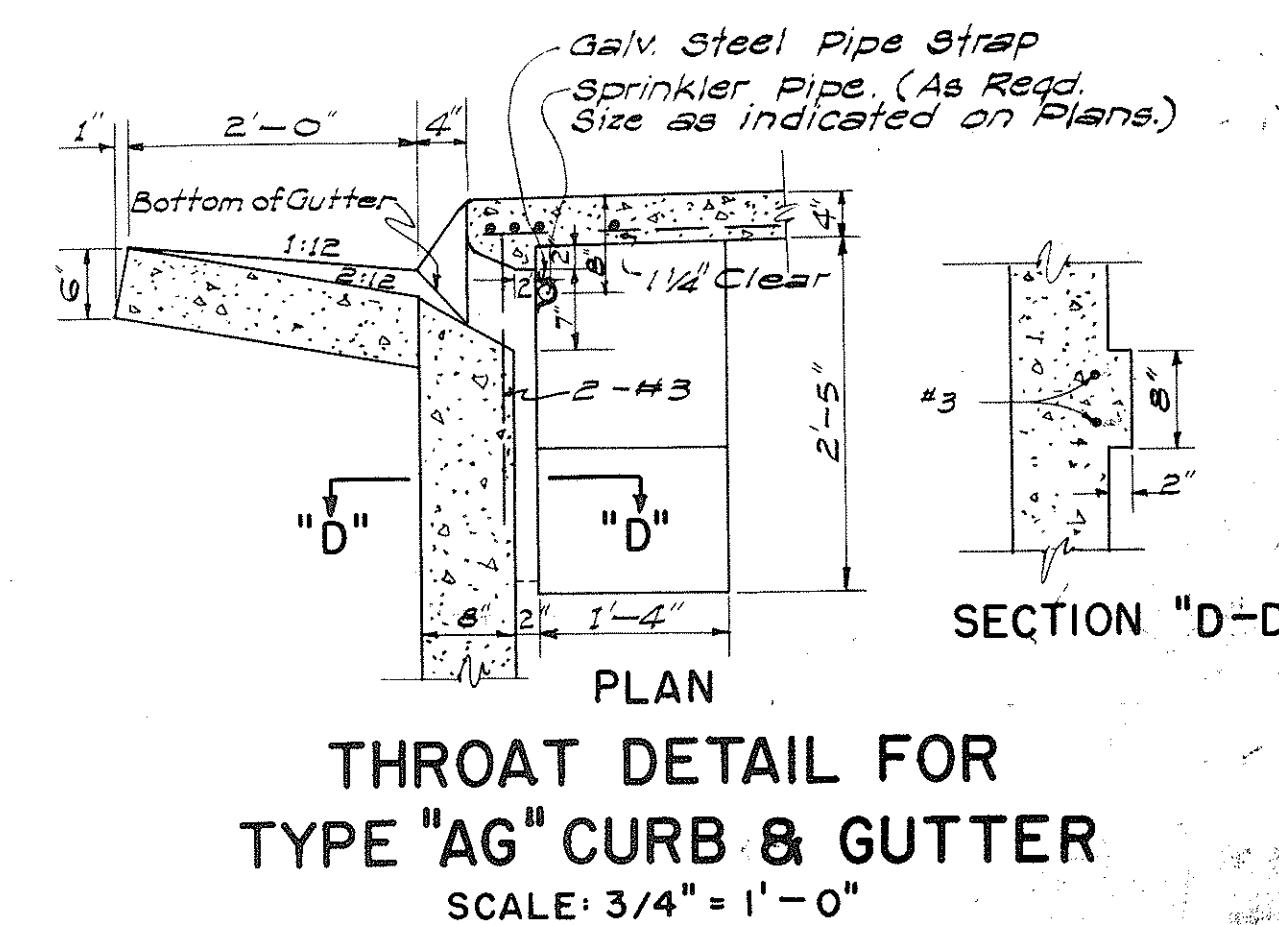
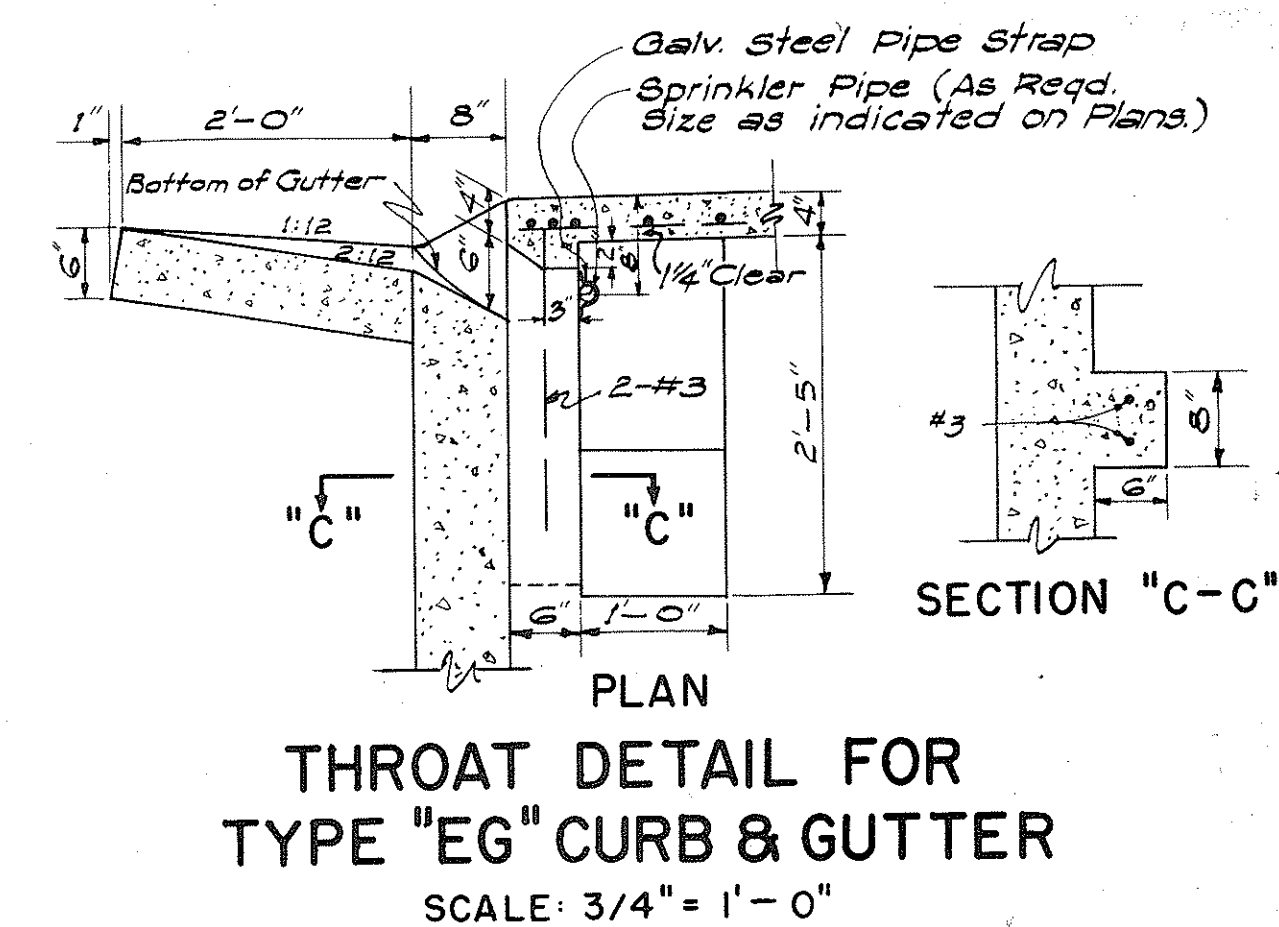
PLAN SHOWING FINISHED ELEVATION OF TOP SLAB FOR C.B. #21-11
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPECIAL SEWER MANHOLE AND DRAINAGE DETAILS

INTERSTATE HIGHWAY (LUNALILO FWY)
F.A.I. PROJ. No. I-HI-1(24)
Scale: As Noted FEB. 1965

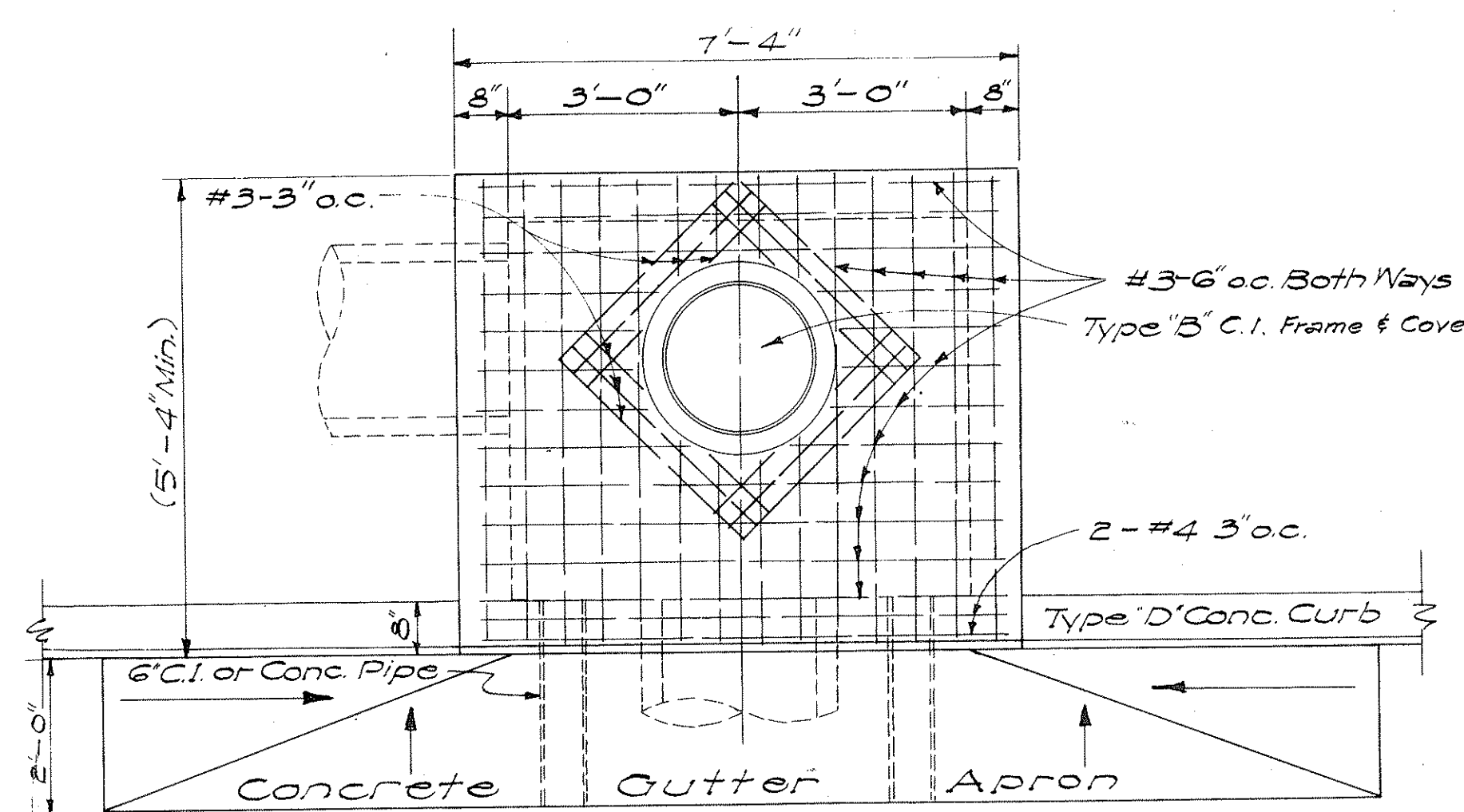
SHEET No. 2 OF 6 SHEETS



DETAIL OF CATCH BASIN
WITH TYPE "AG" CURB & GUTTER
SCALE: 1/2" = 1'-0"

Type	Class A-1 Conc.	Struct. Exc.	Reinf. Steel	Gutter Length
"A" 	7.5 c.y.	24.7 c.y.	145 lb.	30'-0"
"B" 	6.0 c.y.	21.5 c.y.	108 lb.	23'-4"
"C" 	6.0 c.y.	21.5 c.y.	108 lb.	23'-4"
"D" 	4.9 c.y.	16.5 c.y.	77 lb.	16'-8"

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-1 Concrete for Construction Drainage.
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.



DETAIL OF TYPE "D" CATCH BASIN
SCALE: 1/2" = 1'-0"

APPROVED: _____ DATE Aug 26, 1970

 STATE HIGHWAY ENGINEER

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

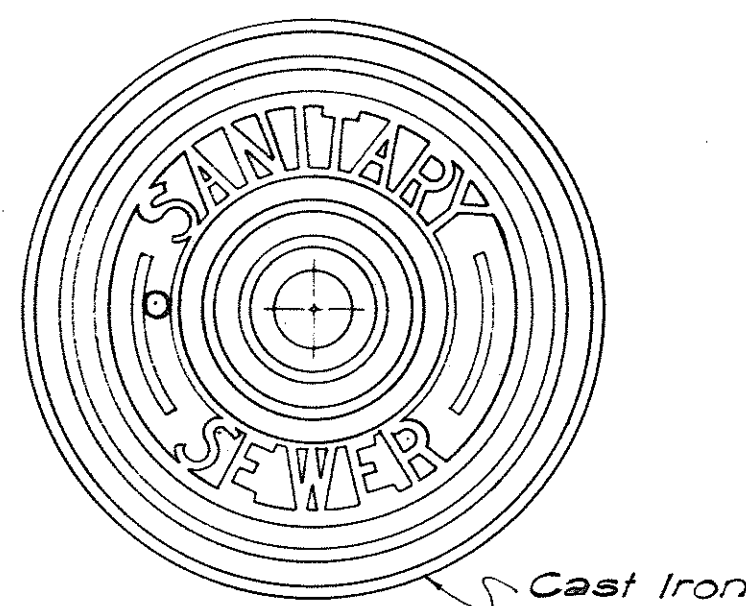
SCALES AS NOTED.

SHEET No 3 OF 6 SHEETS

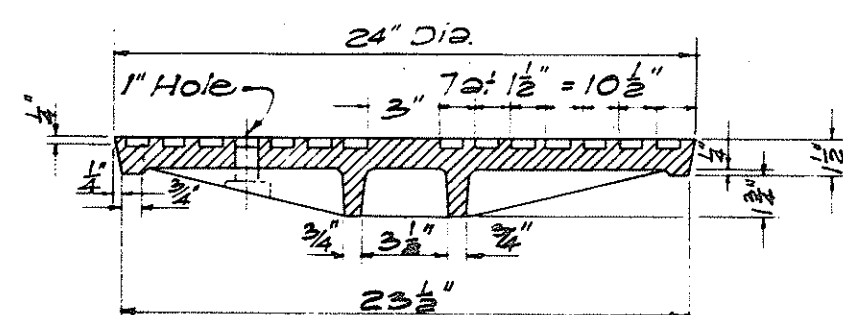
2/17/57
8:45:50

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-124	1965	22	64
August 1957					

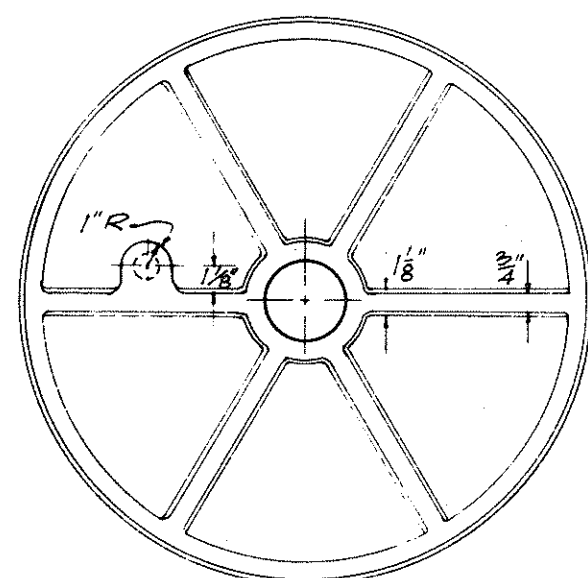
NOTE: Stock Pattern From Novelty Foundry ~ Honolulu



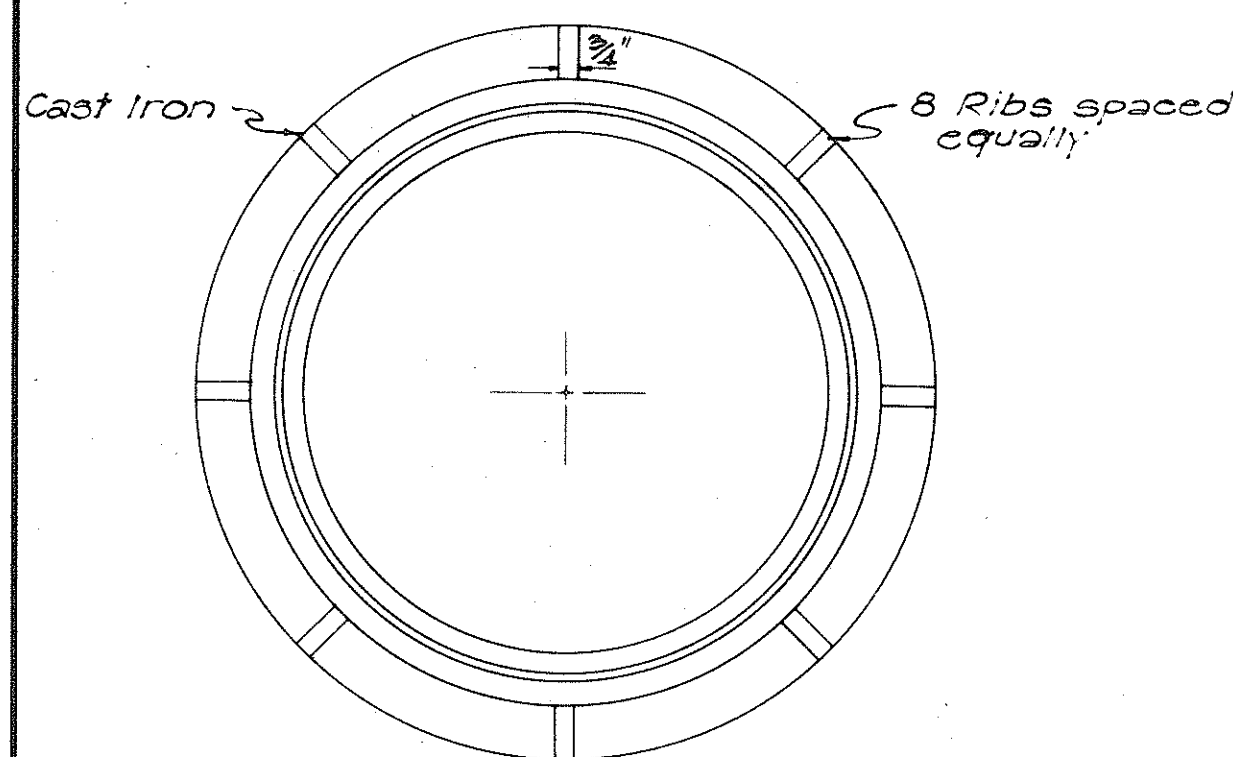
TOP VIEW OF COVER



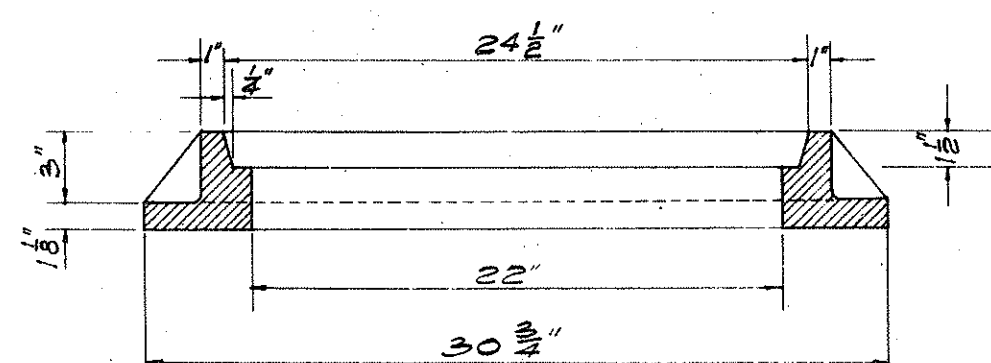
SECTION



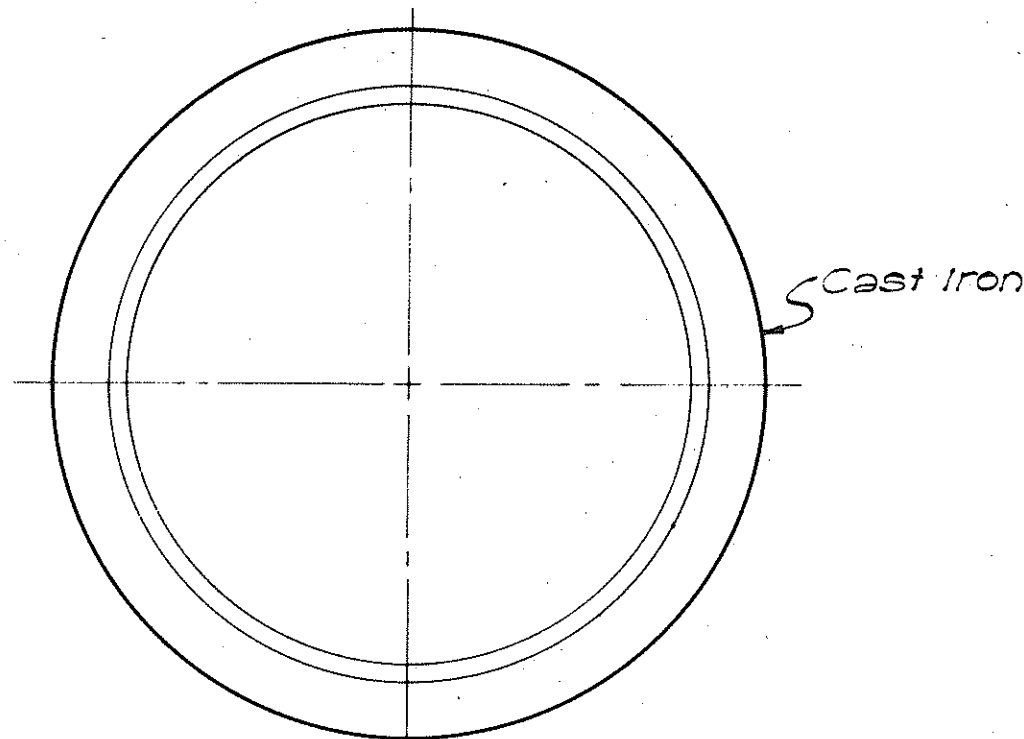
BOTTOM VIEW OF COVER



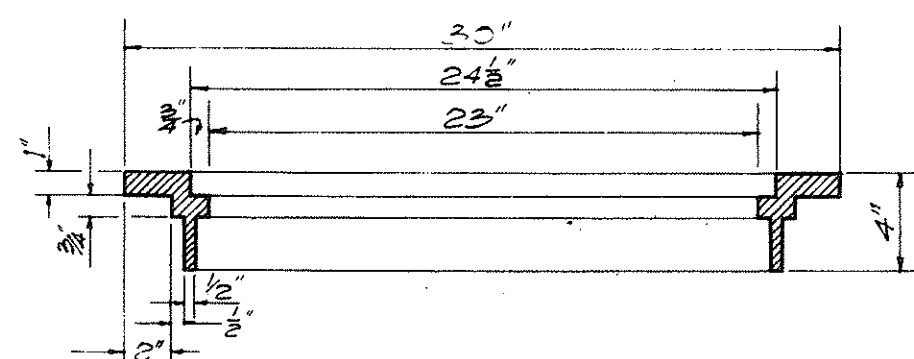
PLAN OF RIM



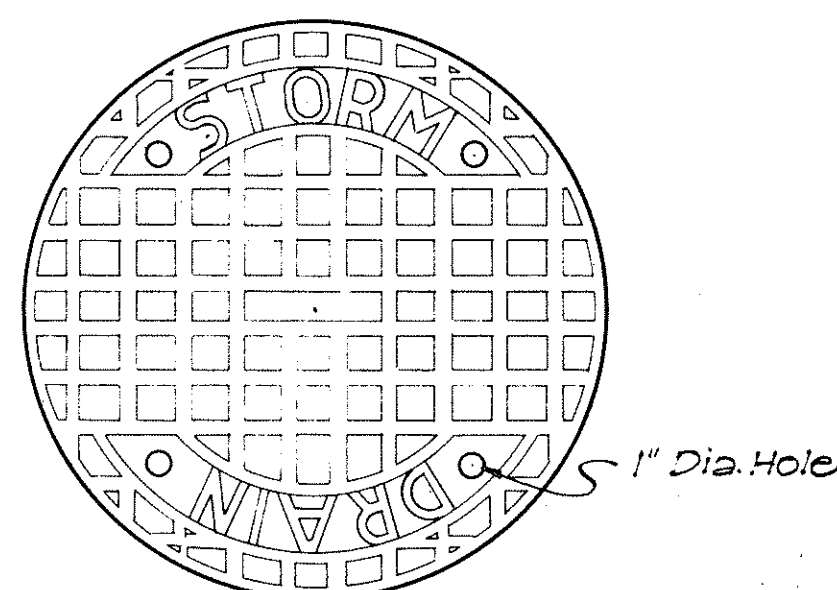
SECTION OF RIM
DETAILS OF TYPE "S"
CAST IRON FRAME AND COVER
SCALE: 1-1/2" = 1'-0"



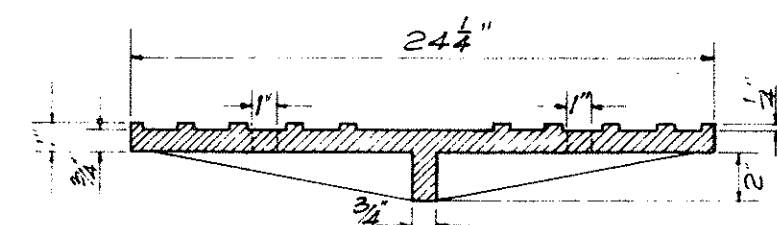
PLAN OF RIM



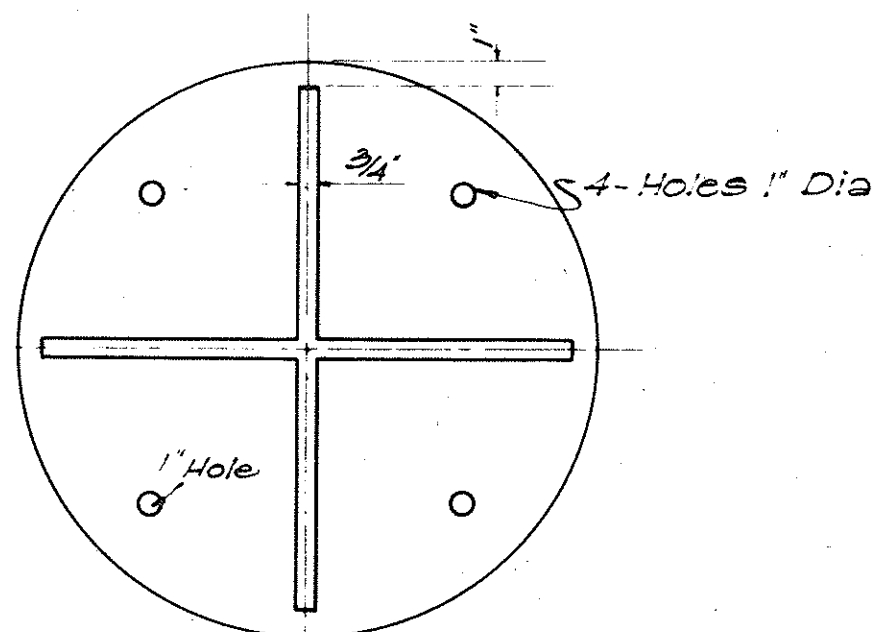
SECTION OF RIM



TOP VIEW OF COVER

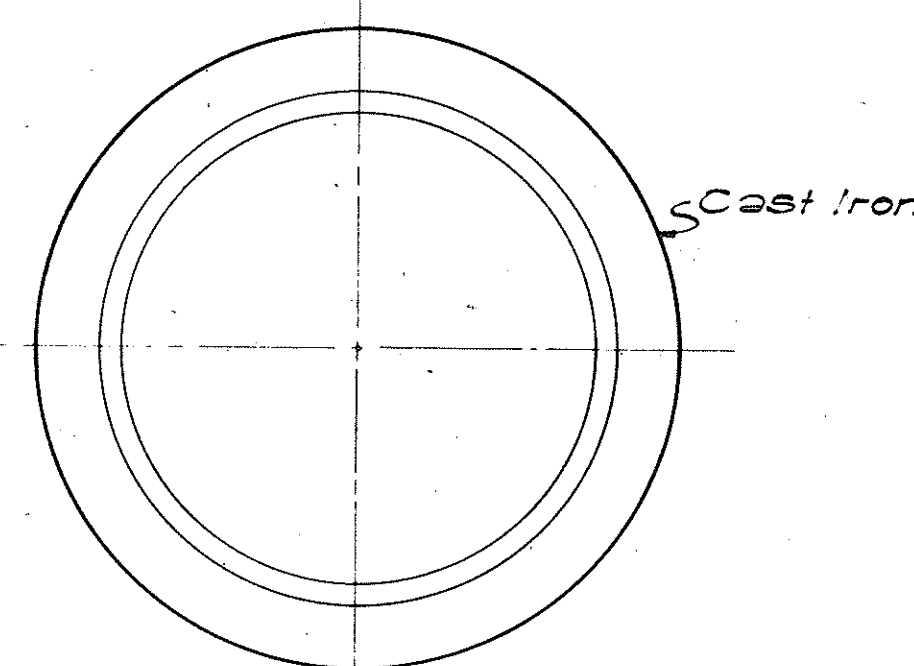


SECTION

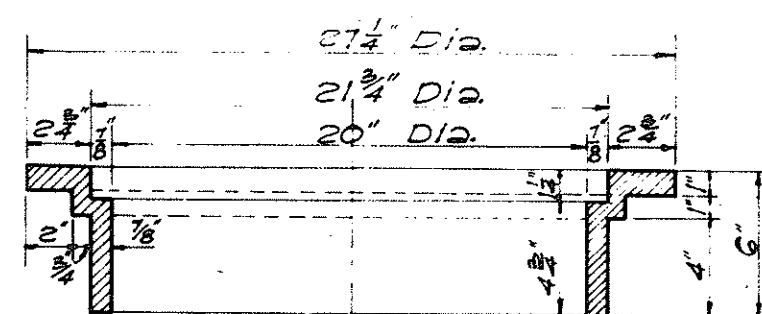


BOTTOM VIEW OF COVER

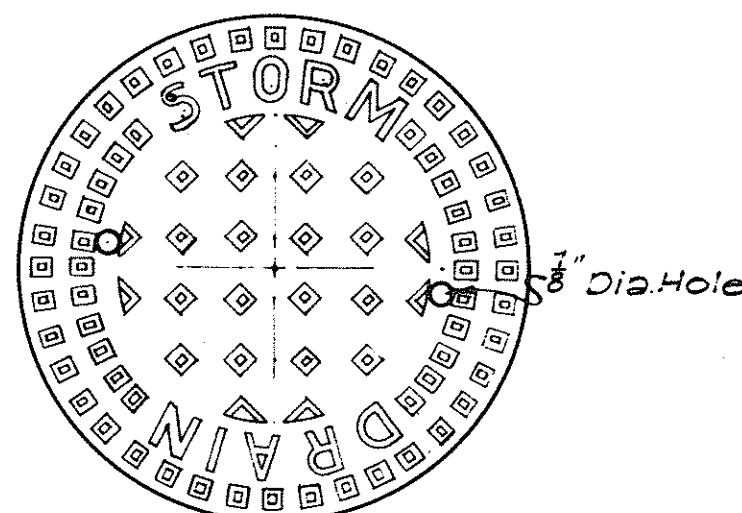
DETAILS OF TYPE "B"
CAST IRON FRAME AND COVER
SCALE: 1-1/2" = 1'-0"



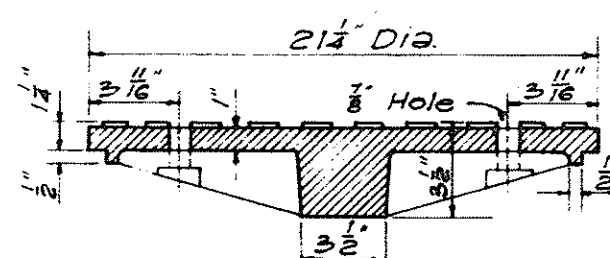
PLAN OF RIM



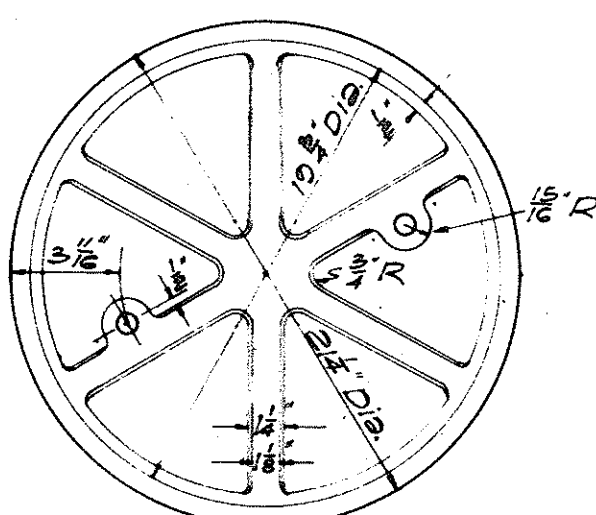
SECTION OF RIM



TOP VIEW OF COVER

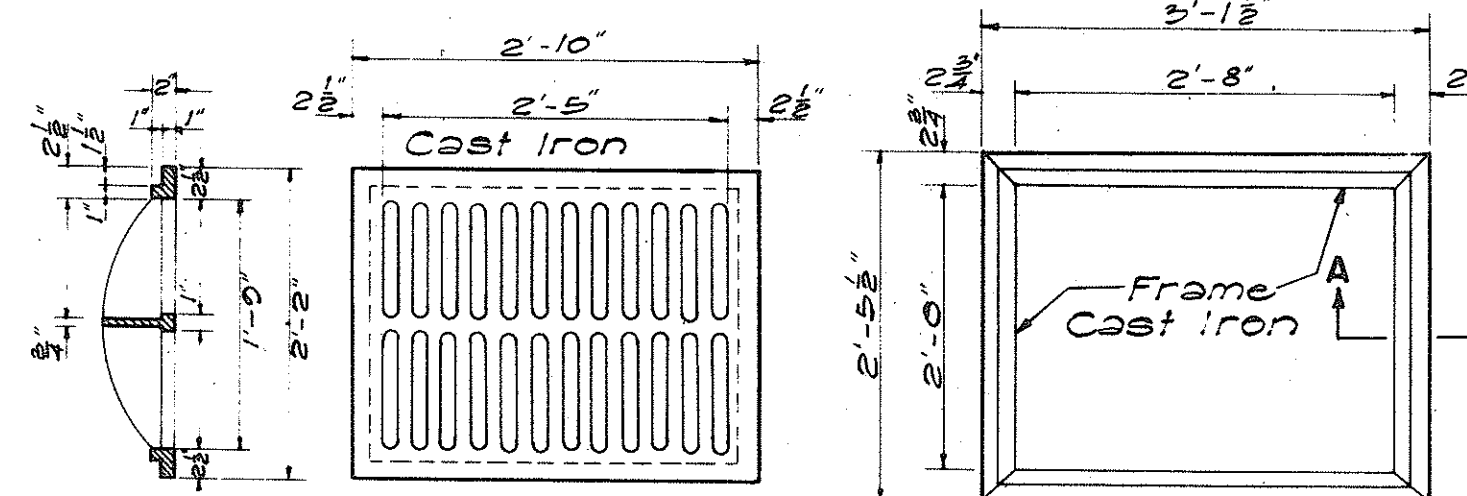


SECTION

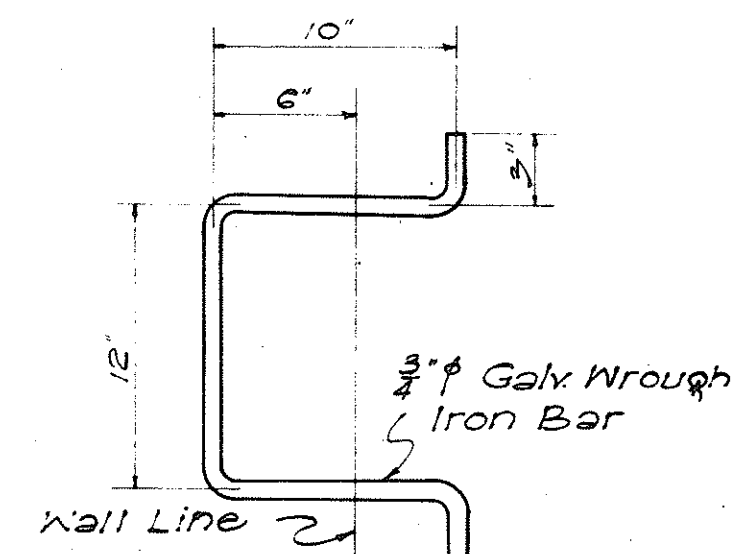


BOTTOM VIEW OF COVER

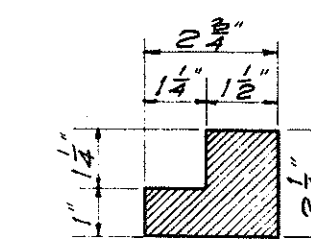
DETAILS OF TYPE "A"
CAST IRON FRAME AND COVER
SCALE: 1-1/2" = 1'-0"



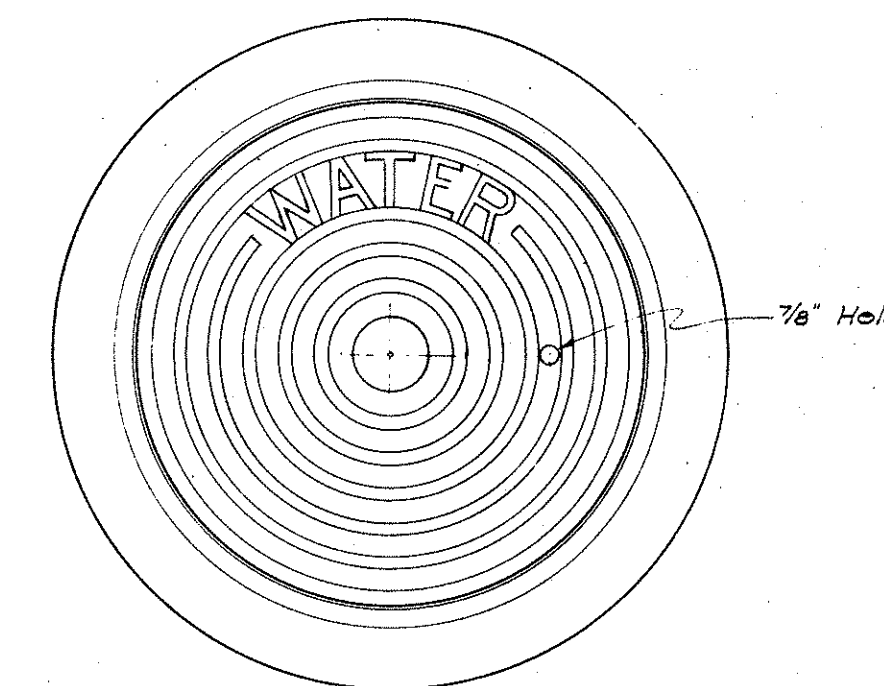
SECTION TOP VIEW
TYPE C C.I. FRAME AND GRATING
SCALE: 3/4" = 1'-0"



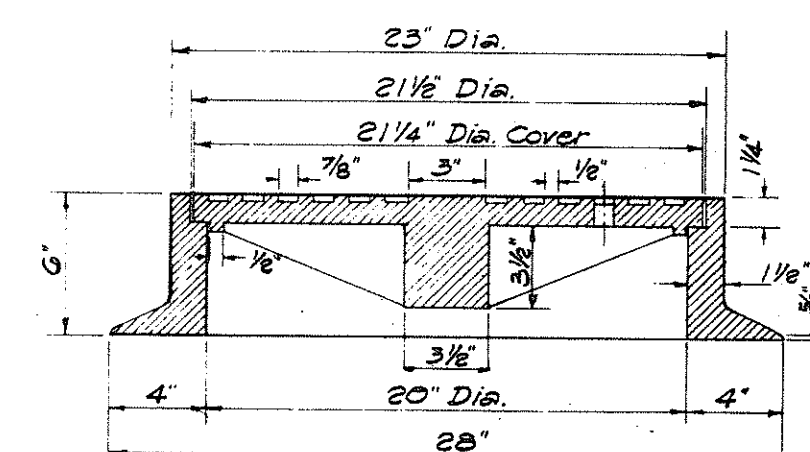
MANHOLE RUNG
SCALE: 1-1/2" = 1'-0"



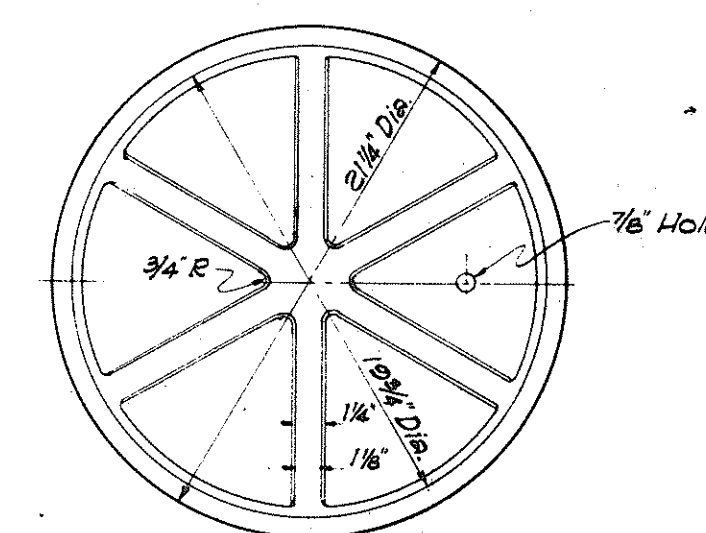
SECTION "A-A"
SCALE 3" = 1'-0"



PLAN OF FRAME AND COVER



SECTION OF FRAME AND COVER



BOTTOM VIEW OF COVER

DETAILS OF TYPE "W"
CAST IRON FRAME AND COVER
SCALE: 1-1/2" = 1'-0"

NOTE:

THE TYPE "S" CAST IRON FRAME AND COVER SHOWN ON THIS SHEET IS EQUIVALENT TO THE CITY AND COUNTY OF HONOLULU, DIVISION OF SEWERS' TYPE "A" CAST IRON MANHOLE FRAME AND COVER.

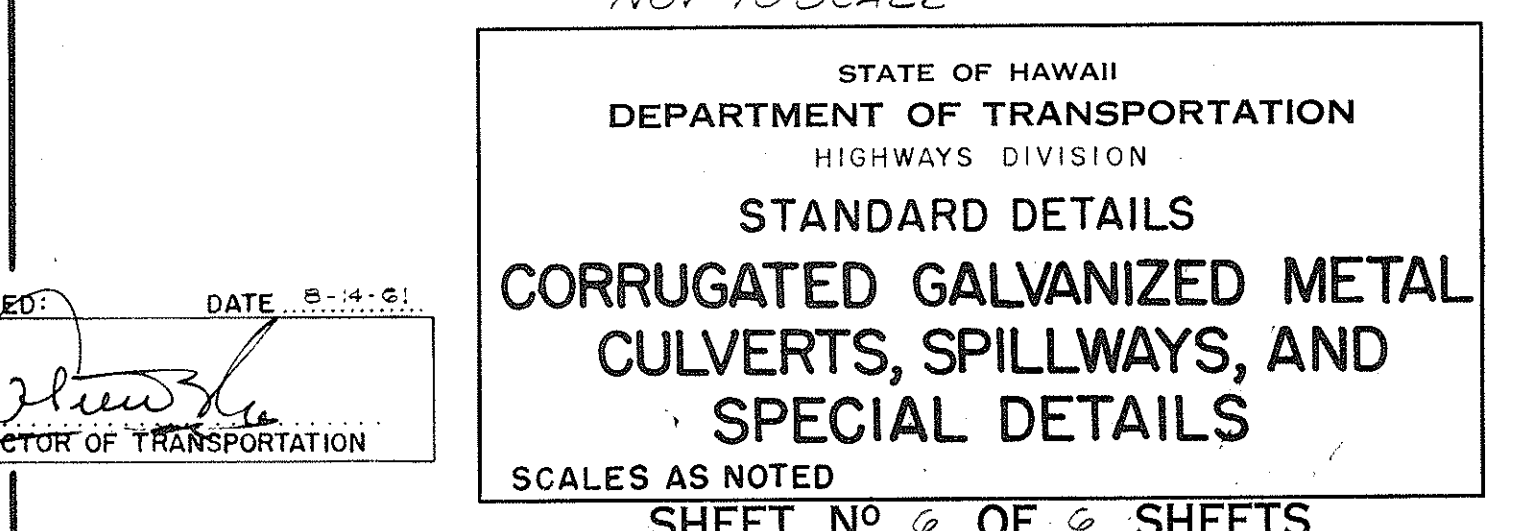
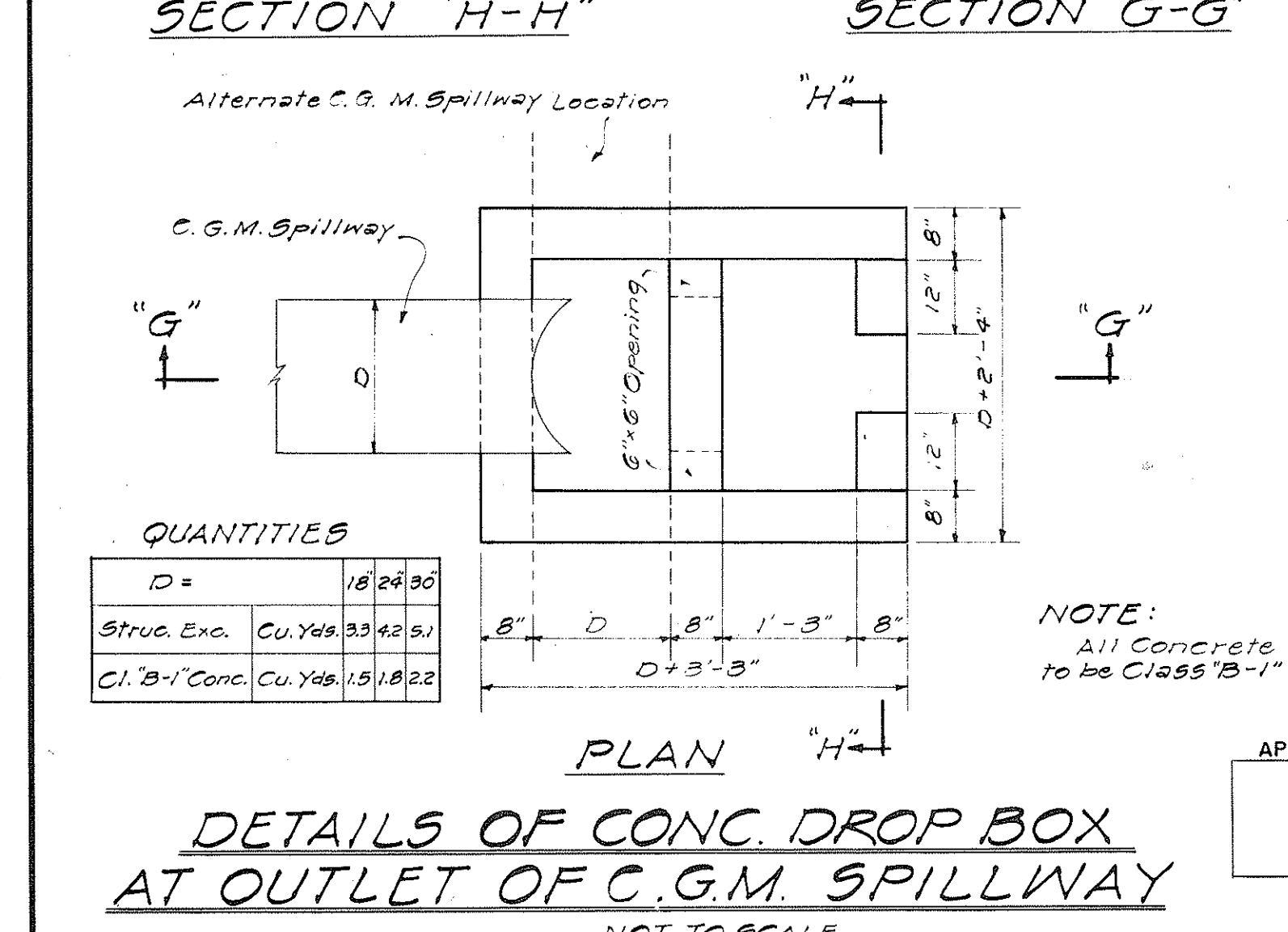
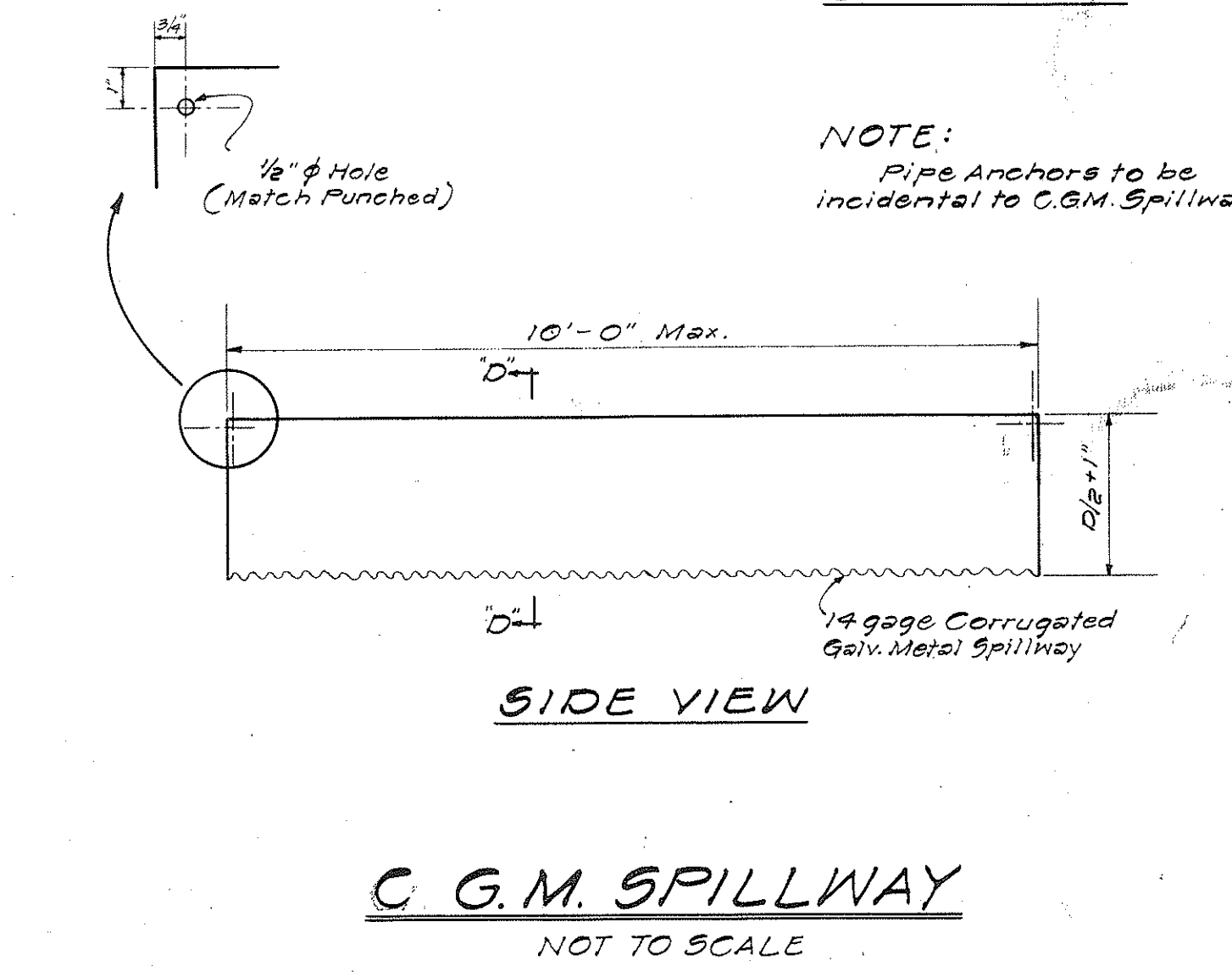
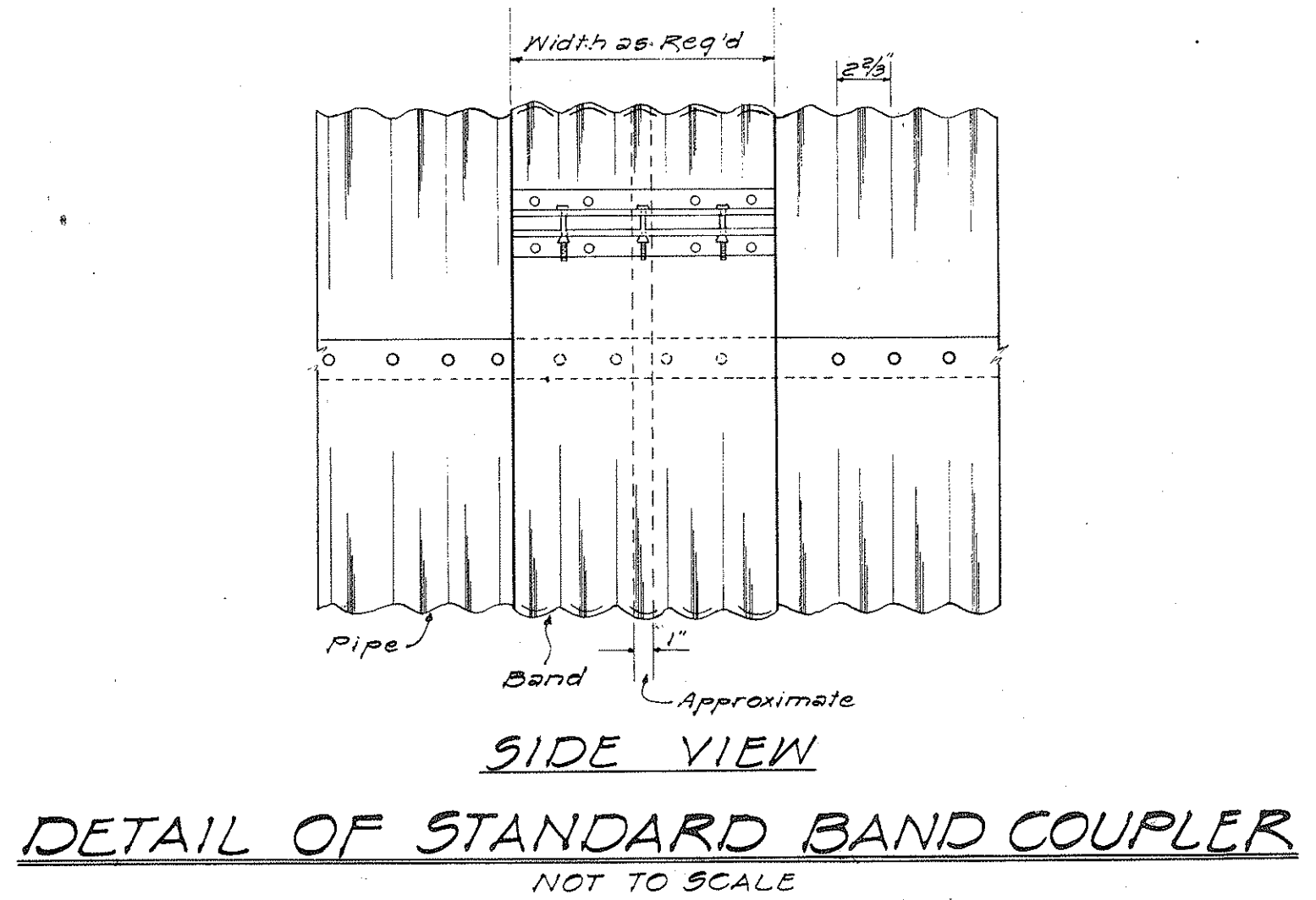
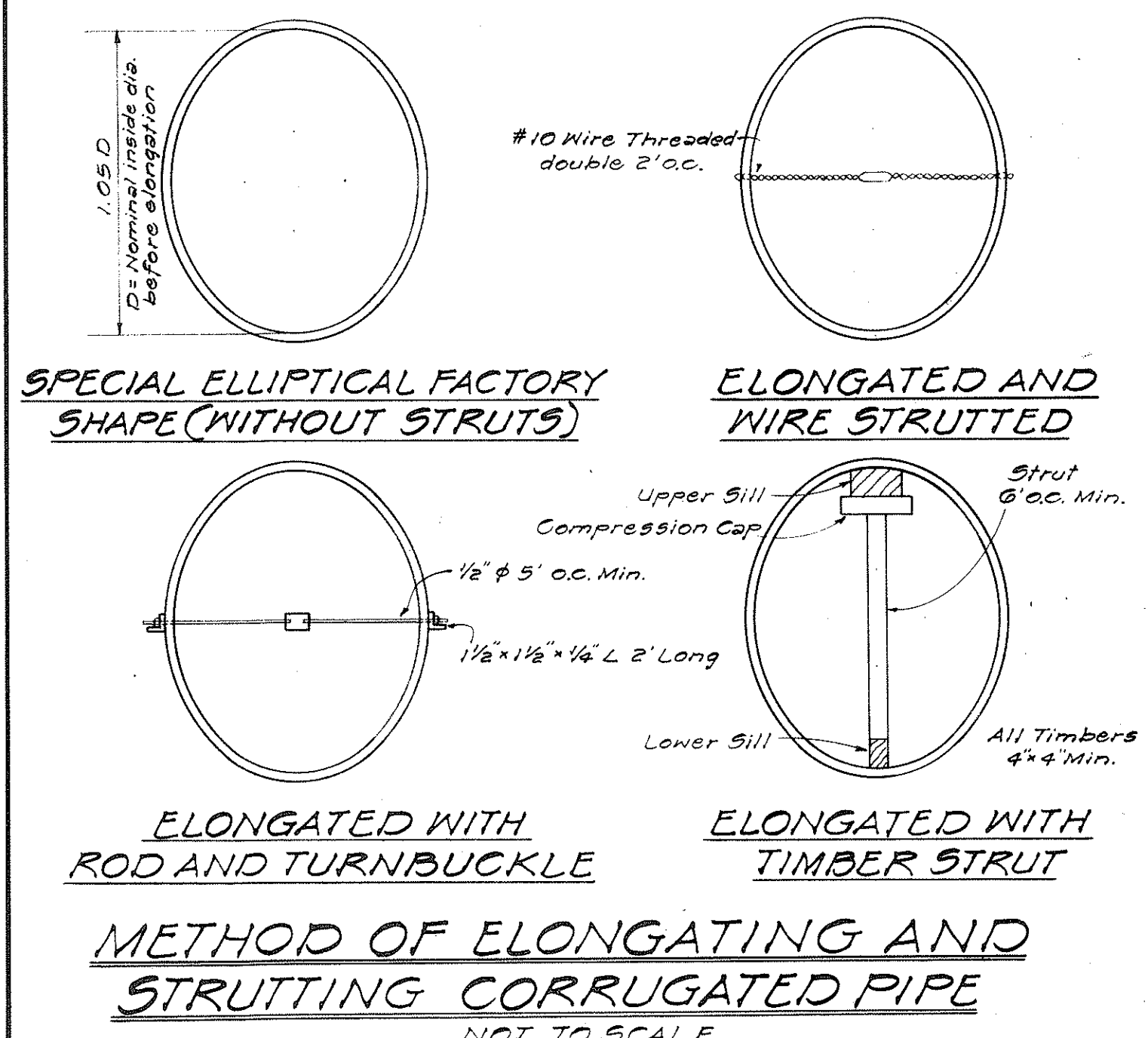
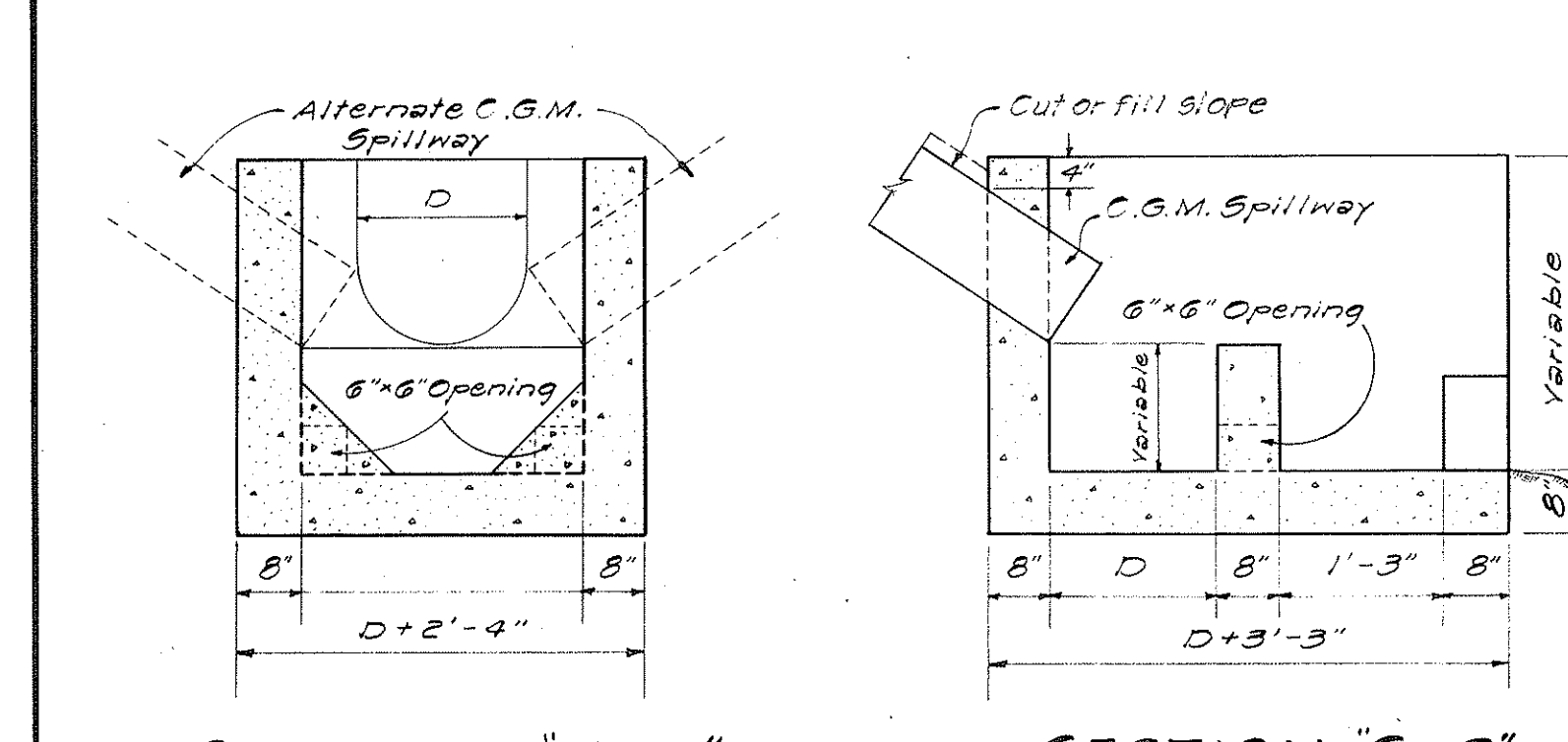
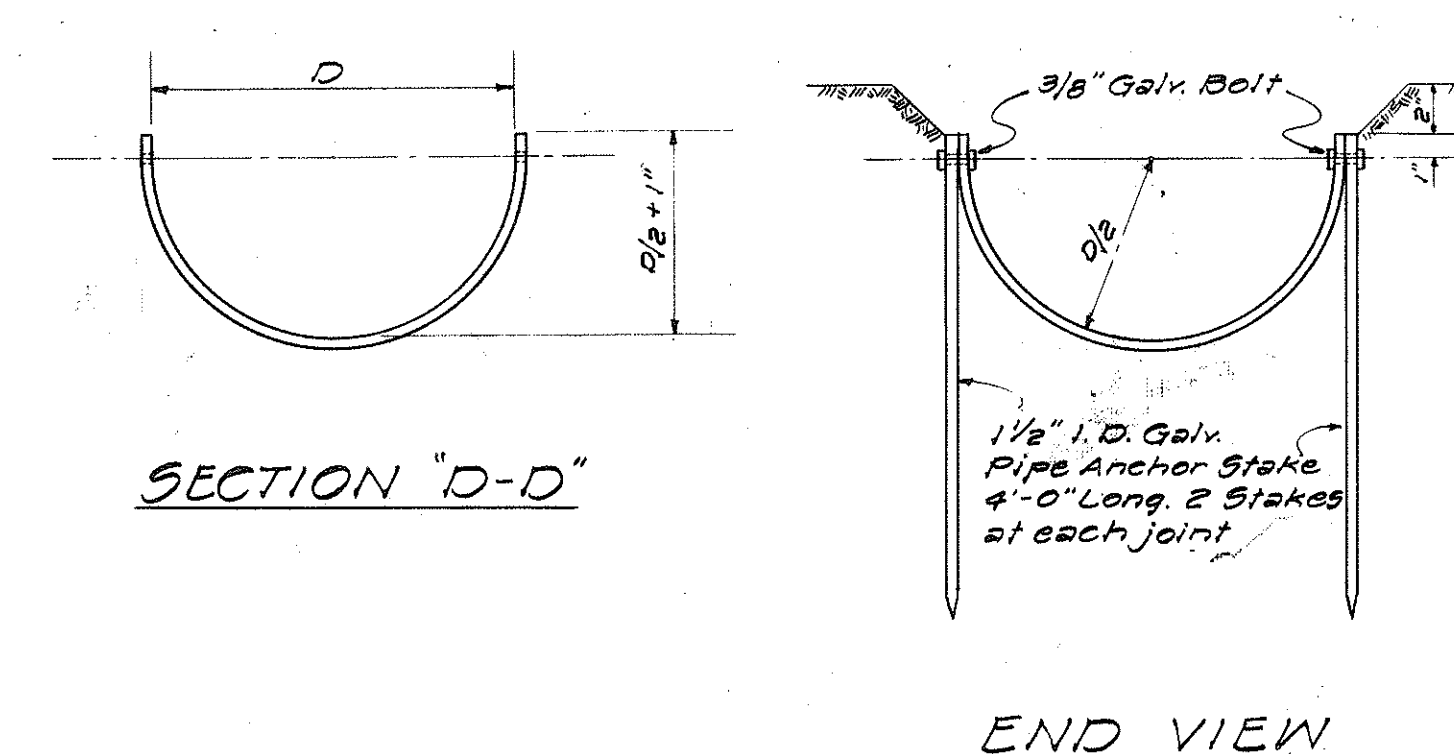
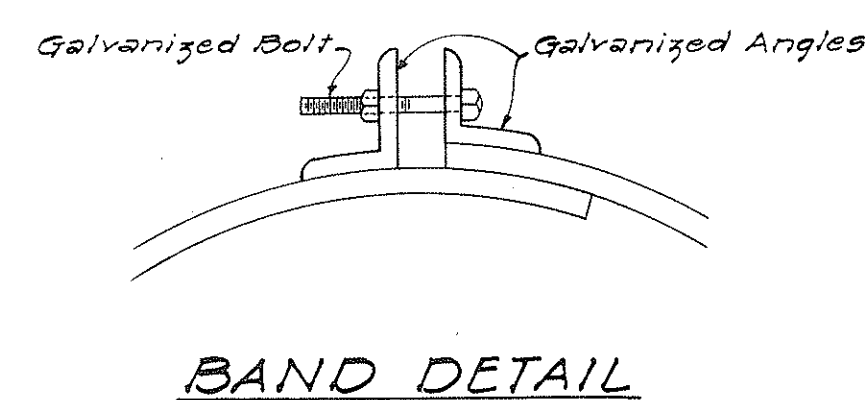
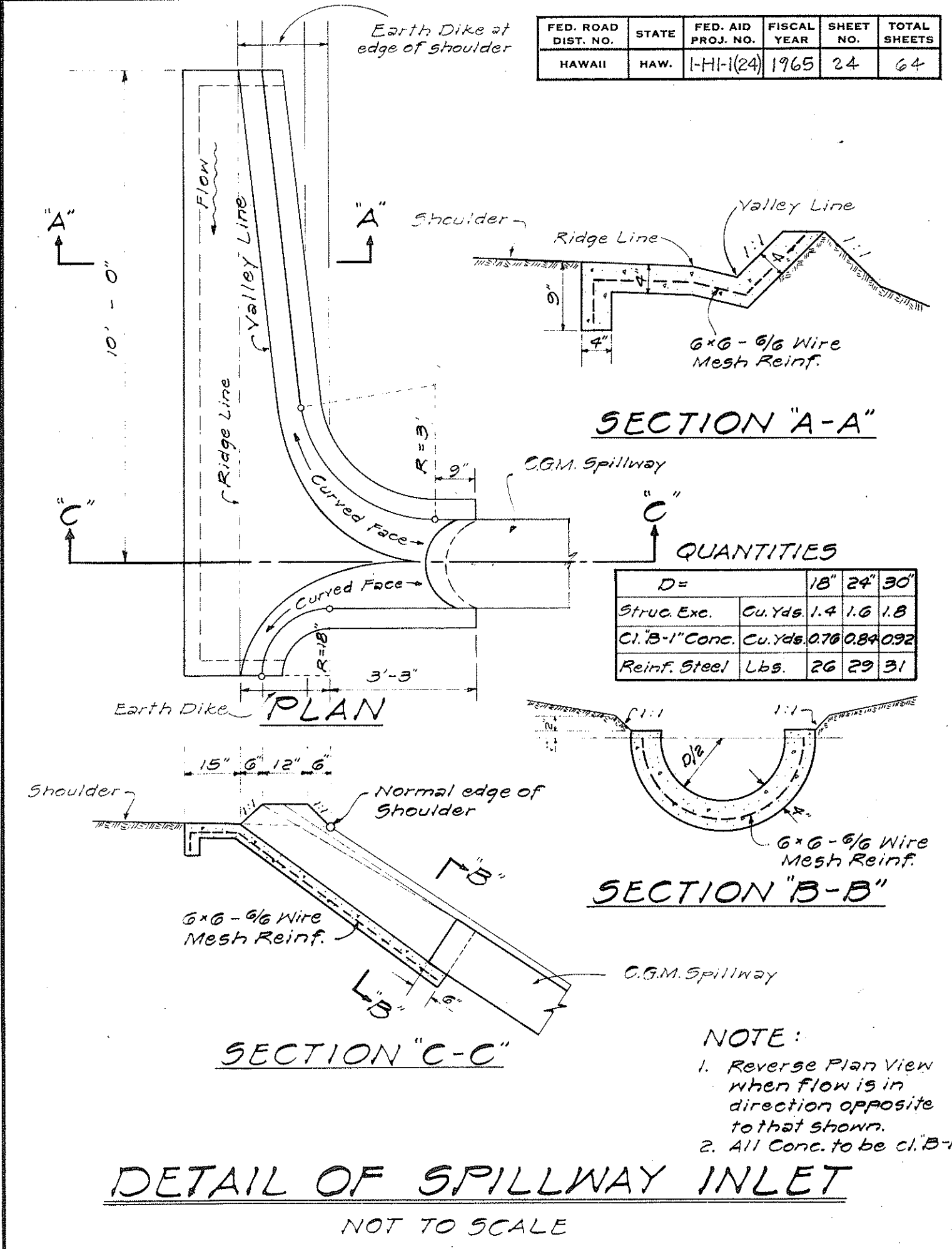
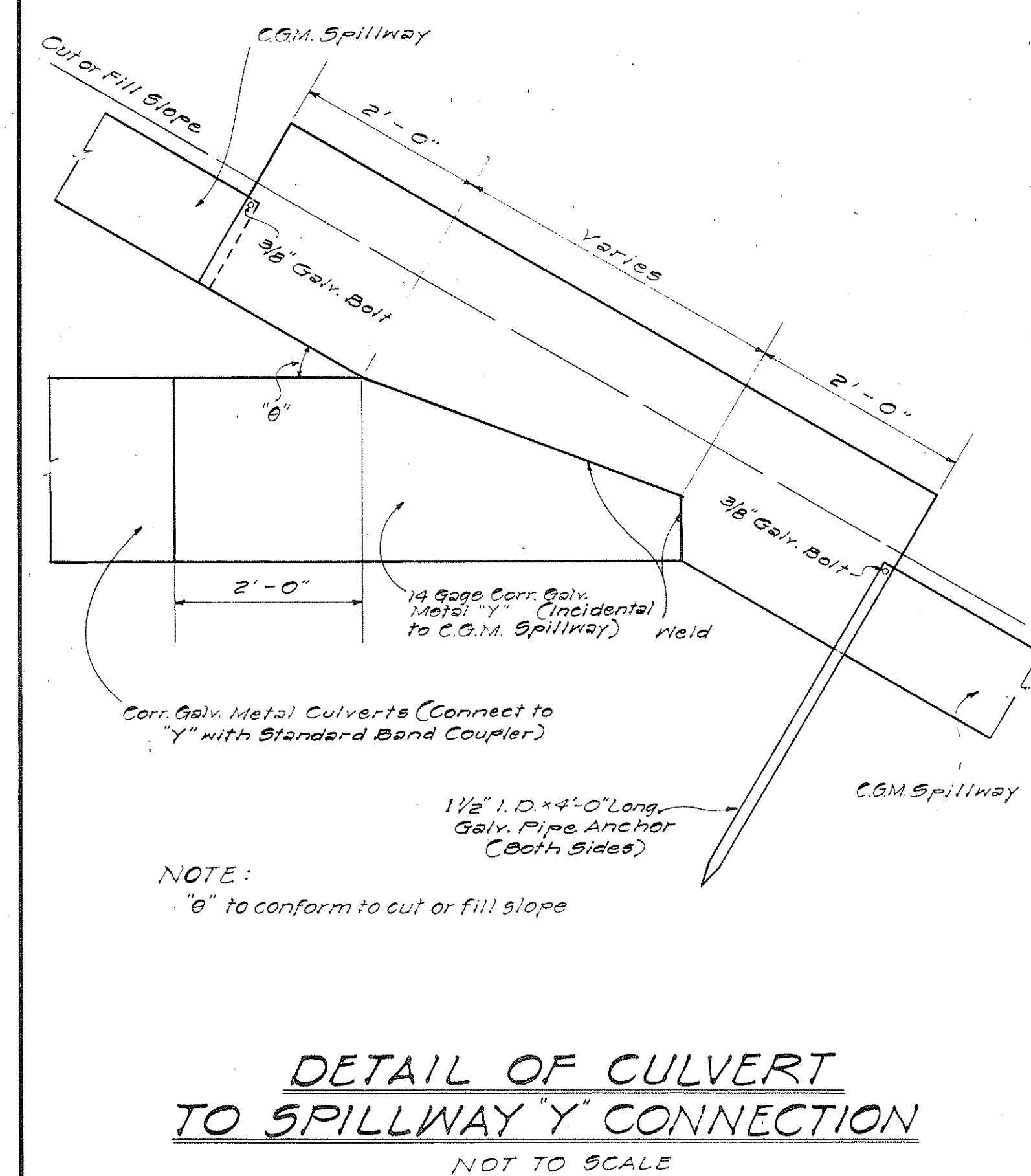
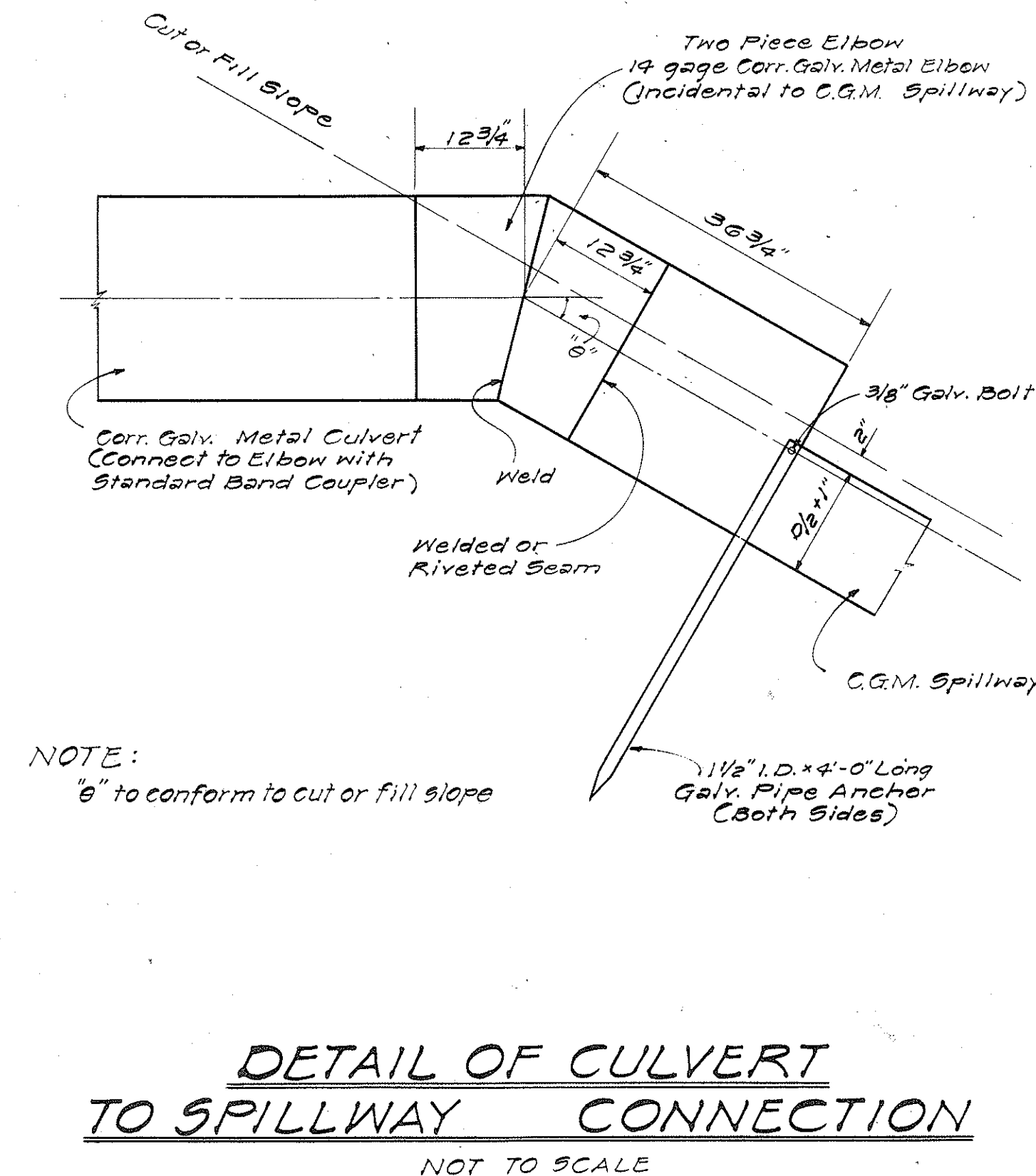
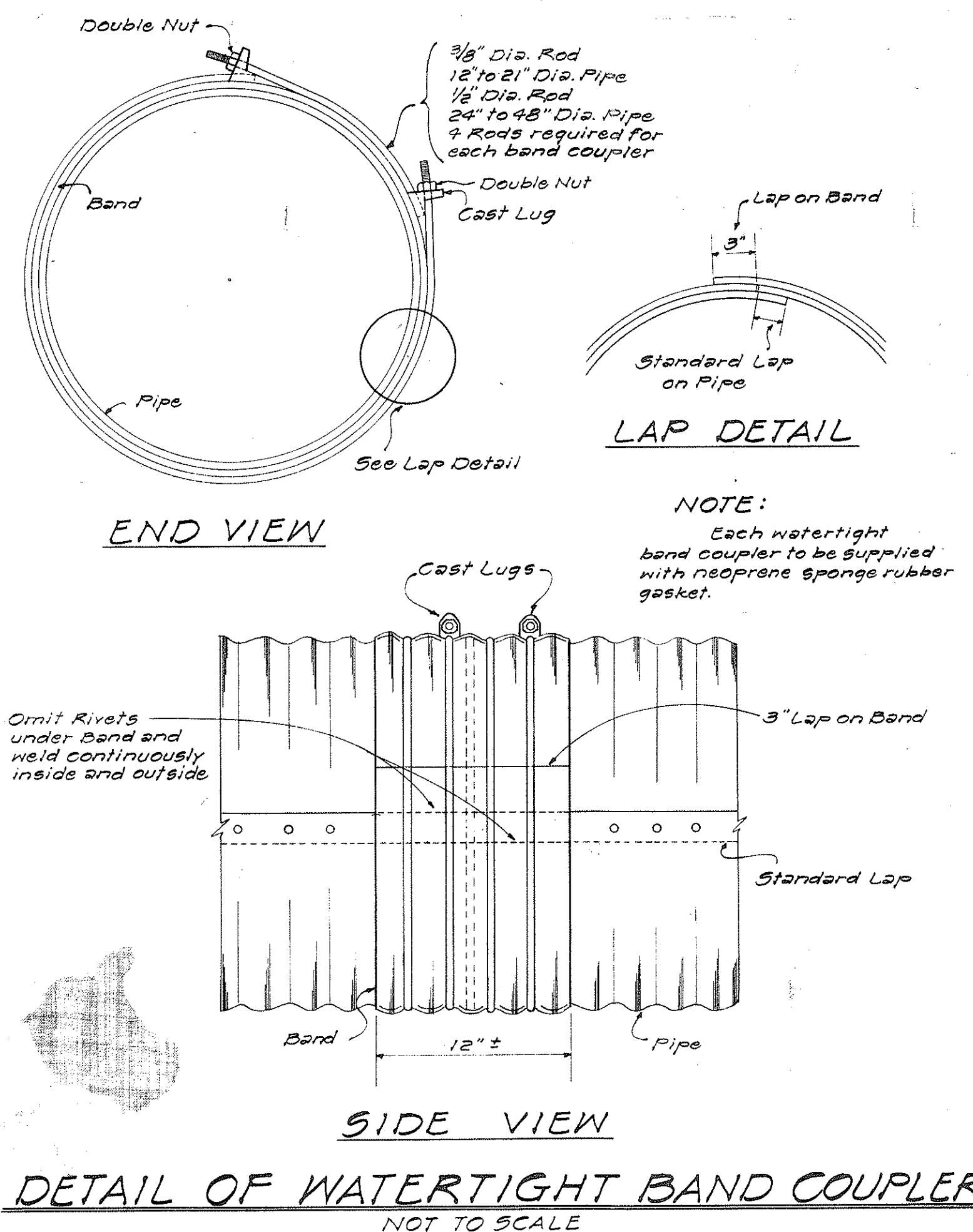
THE TYPE "W" CAST IRON FRAME AND COVER SHOWN ON THIS SHEET IS EQUIVALENT TO THE CITY AND COUNTY OF HONOLULU, BOARD OF WATER SUPPLY'S CAST IRON MANHOLE FRAME AND COVER, 20" SIZE.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CATCH BASIN AND
MANHOLE CASTINGS
SCALES AS NOTED

SHEET NO. 4 OF 6 SHEETS

22



DATE: 5-24-66
SURVEYED BY: R. Y.
DESIGNED BY: G. M.
NOTED BY: G. M.
CHECKED BY: G. M.