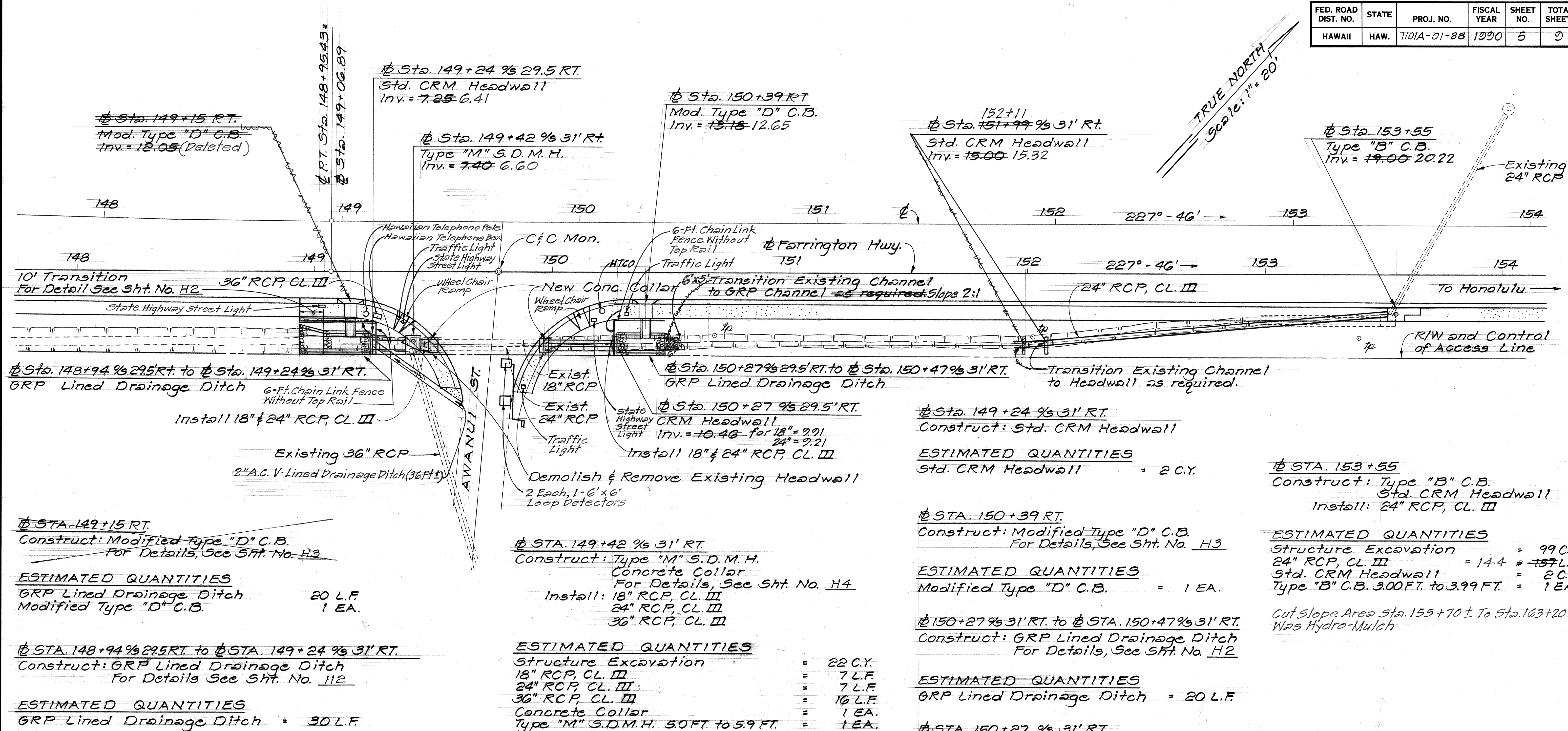


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-88	1990	5	9



DRAINAGE NOTES:

- The Contractor shall verify and check all dimensions and details on the drawings before proceeding with the work. Any discrepancy shall be brought to the attention of the Engineer for clarification.
- All existing utilities and improvements, whether or not shown on plans shall be protected at all times by the Contractor unless specified otherwise. Any damages resulting from the Contractor's operation shall be immediately repaired or restored as directed by the Engineer at the Contractor's expense.
- The Contractor at his own expense shall keep the project area and surrounding area free from rubbish, noise, dust, erosion etc. The work shall be done in conformance with the air and water pollution control standards and regulations of the State Dept. of Health.
- The Contractor is responsible for maintaining existing drainage flow condition until final construction is completed.
- The Concrete Channel at the rear of the Modified Type "D" Catch Basin at Sta. 150+39 3/8 13' Rt. & Sta. 149+15 3/8 13' Rt. shall not be paid for separately but shall be considered incidental to the various contract items.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

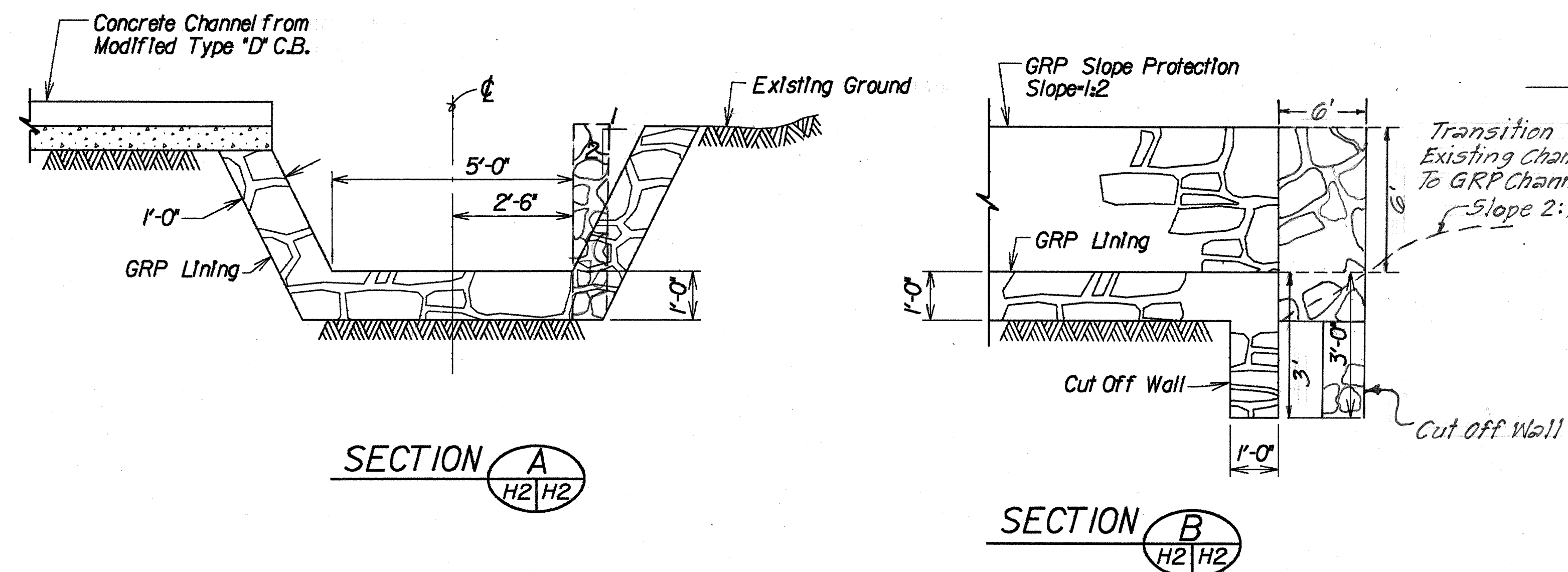
DRAINAGE PLAN

FARRINGTON HIGHWAY SIDEWALK
Vicinity of Awanui Street to
Waipio Point Access Road
Project No. 7101A-01-88

Scale: 1" = 20' Date: April, 1989

SHEET No. H1 OF 4 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____	
	DRAWN BY _____	
NOTE BOOK	TRACED BY _____	
	DESIGNED BY _____	
	QUANTITIES BY _____	
	CHECKED BY _____	
N _o _____		



The technical drawings illustrate the proposed drainage system components and their dimensions:

- SECTION:** This cross-sectional view shows the vertical arrangement of the system. From top to bottom, it includes:
 - Existing Ground:** The natural surface level.
 - 18" RCP, CL.III:** A 18-inch rigid concrete pipe with Class III bedding.
 - GRP Lined Drainage Ditch:** A ditch lined with glass-reinforced plastic.
 - CRM Headwall:** A concrete headwall structure at the bottom of the ditch.
 - Dimensions:** The ditch is 5'-0" wide at the top and 2'-0" wide at the bottom. The headwall is 2'-0" wide. The ditch is 1'-6" deep from the existing ground level.
- ELEVATION:** This plan view shows the horizontal layout of the system.
 - 18" RCP, CL.III:** A 18-inch rigid concrete pipe with Class III bedding, shown in plan view with an invert elevation of 291.
 - 24" RCP, CL.III:** A 24-inch rigid concrete pipe with Class III bedding, shown in plan view with an invert elevation of 292.
 - CRM Headwall:** The concrete headwall structure shown in plan view.
 - Dimensions:** The system is 8'-0" wide at the top and 4'-0" wide at the bottom. The headwall is 1'-0" wide. The ditch is 2'-0" deep from the existing ground level.

10' Transition

Sta. 149 + 04

Slope 2:1

Slope Varies

Slope 1:2

Existing Drainage Structure

GRP Lined Drainage Ditch

Slope 2:1

Slope Varies

Slope 1:2

R/W

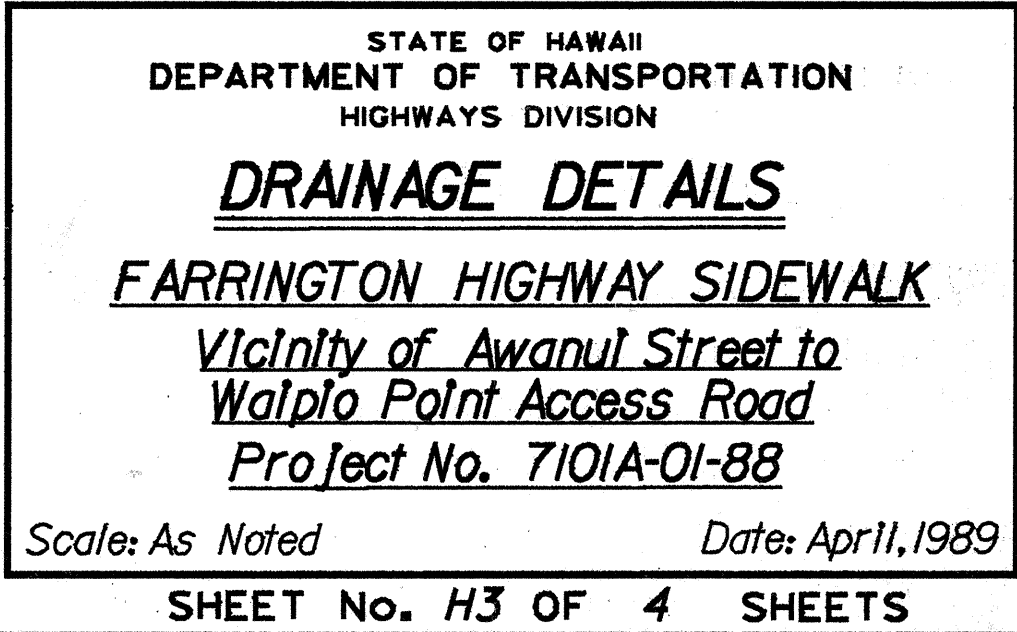
TRANSITION DETAIL

Scaled 1/2" = 1'-0"

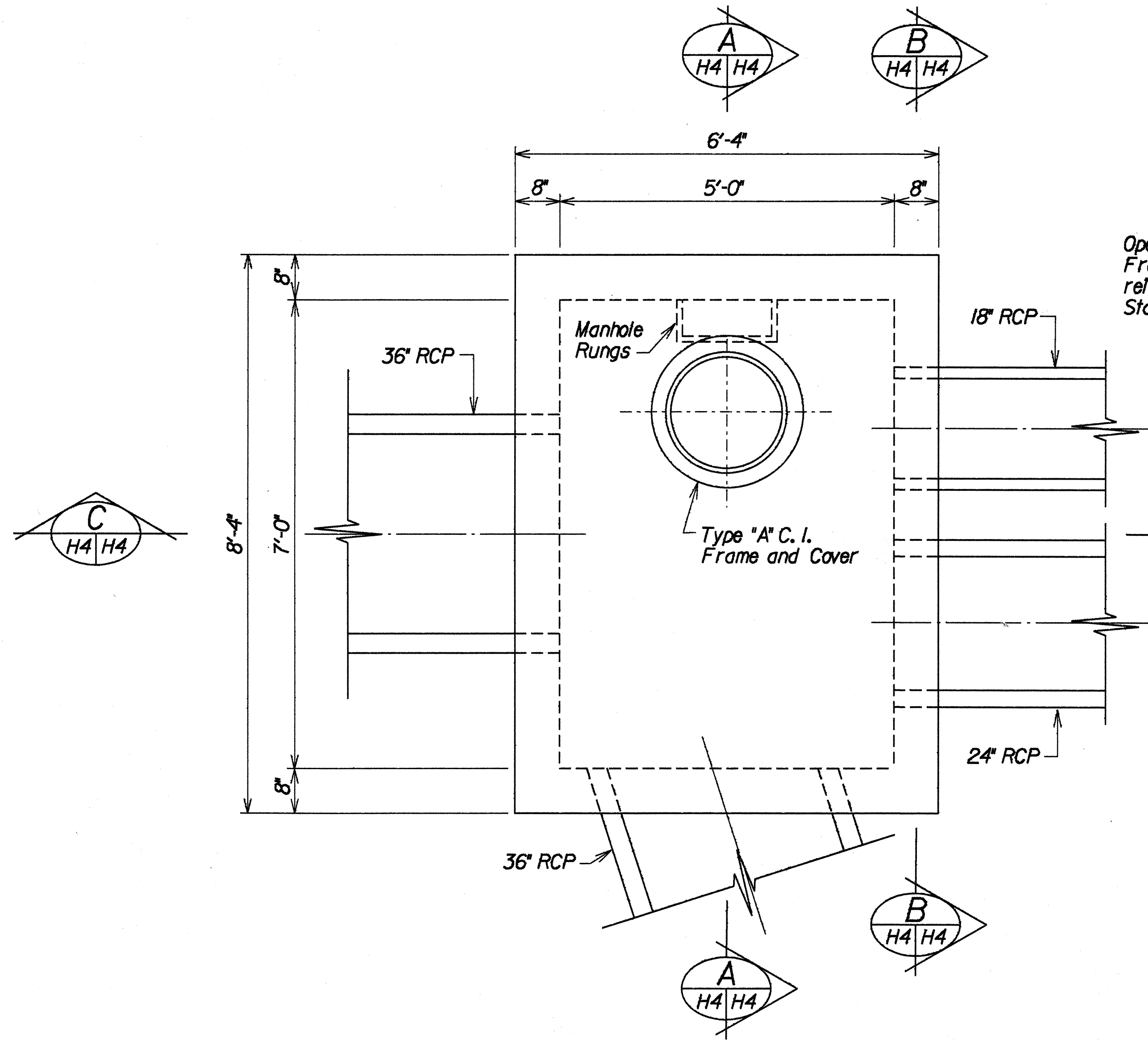
TRANSITION DETAIL
Scale: 1/2"=1'-0"

6

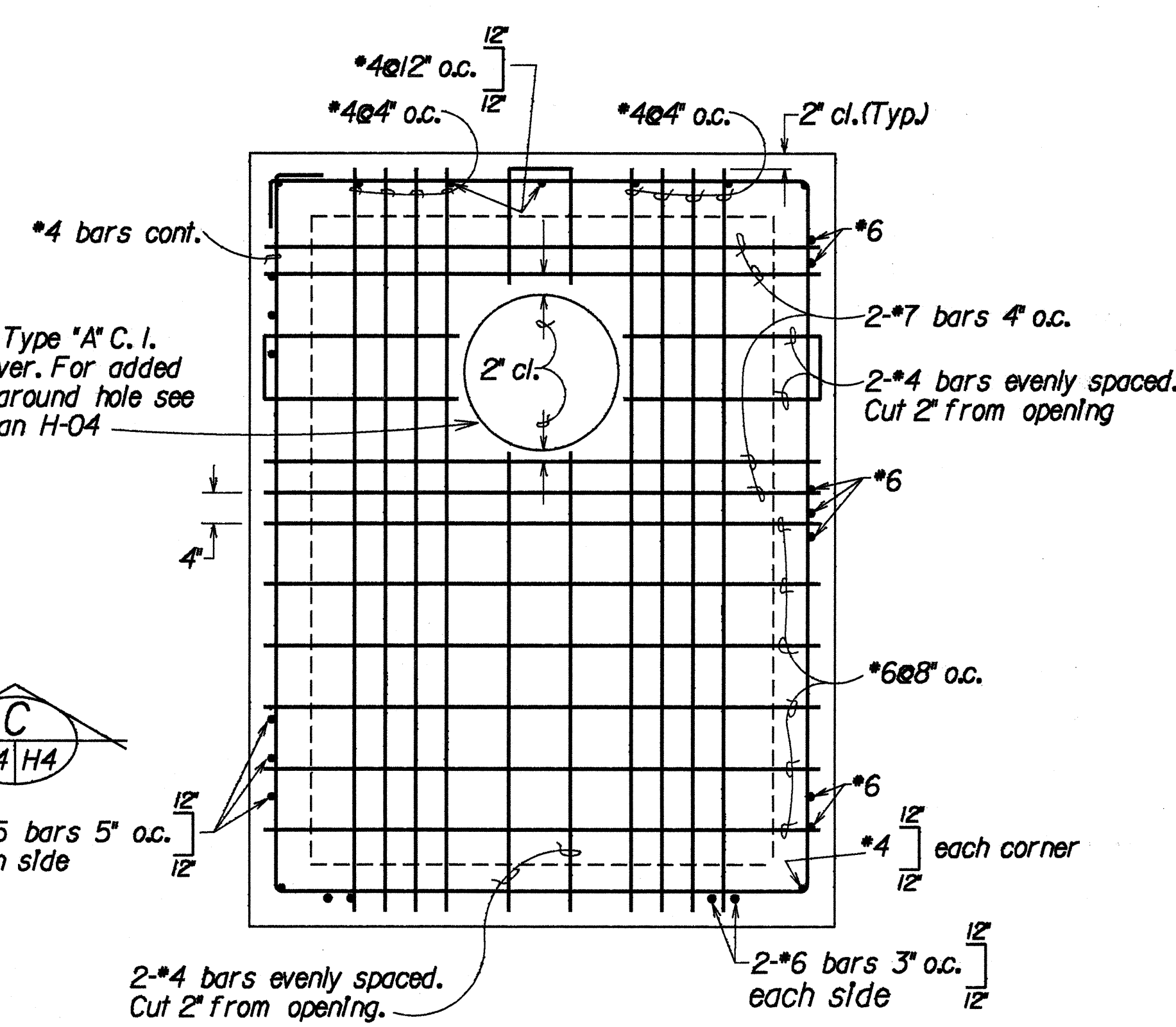
ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	" _____
	TRACED BY _____	" _____
	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
No. _____	CHECKED BY _____	" _____



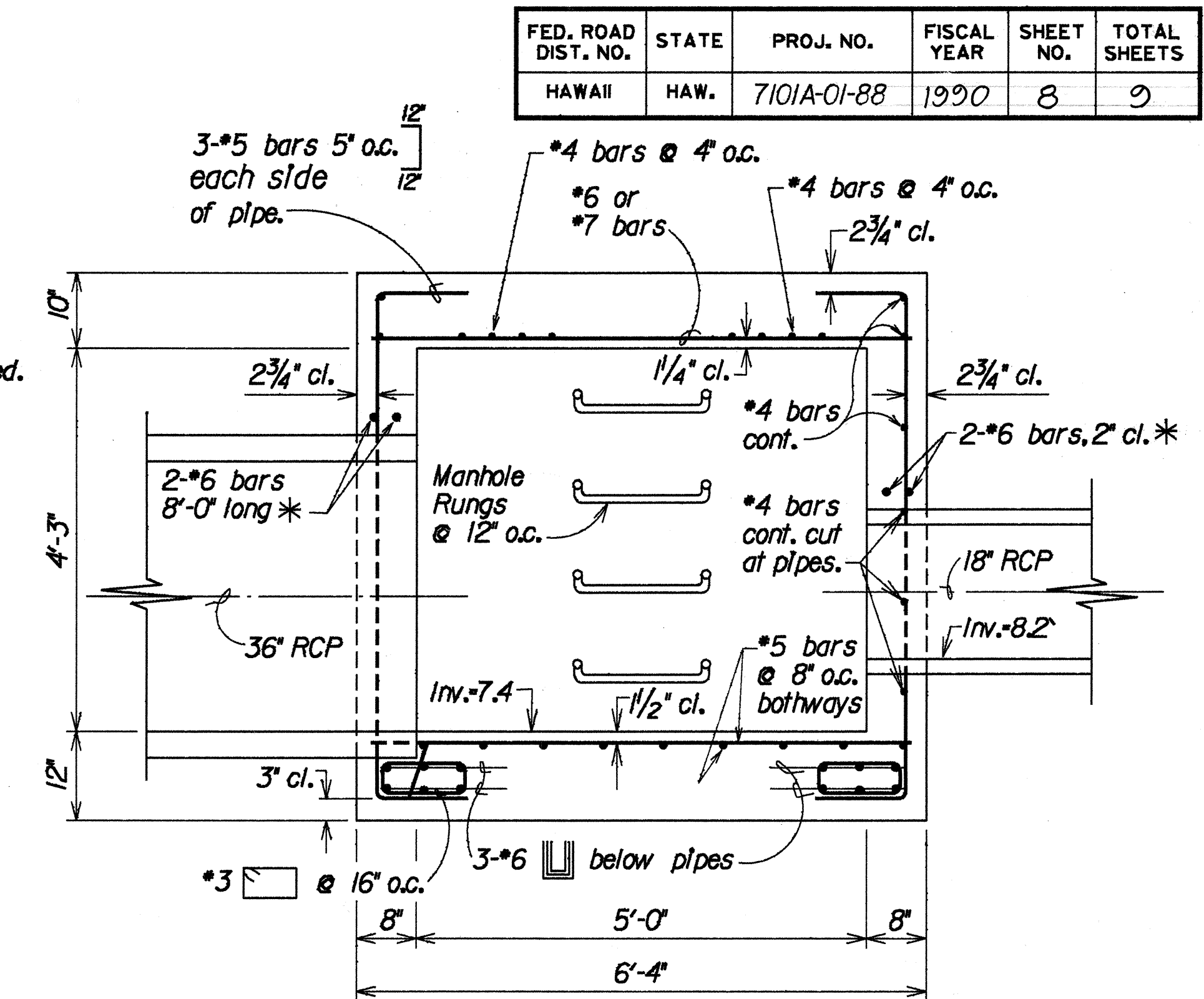
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-88	1990	8	9



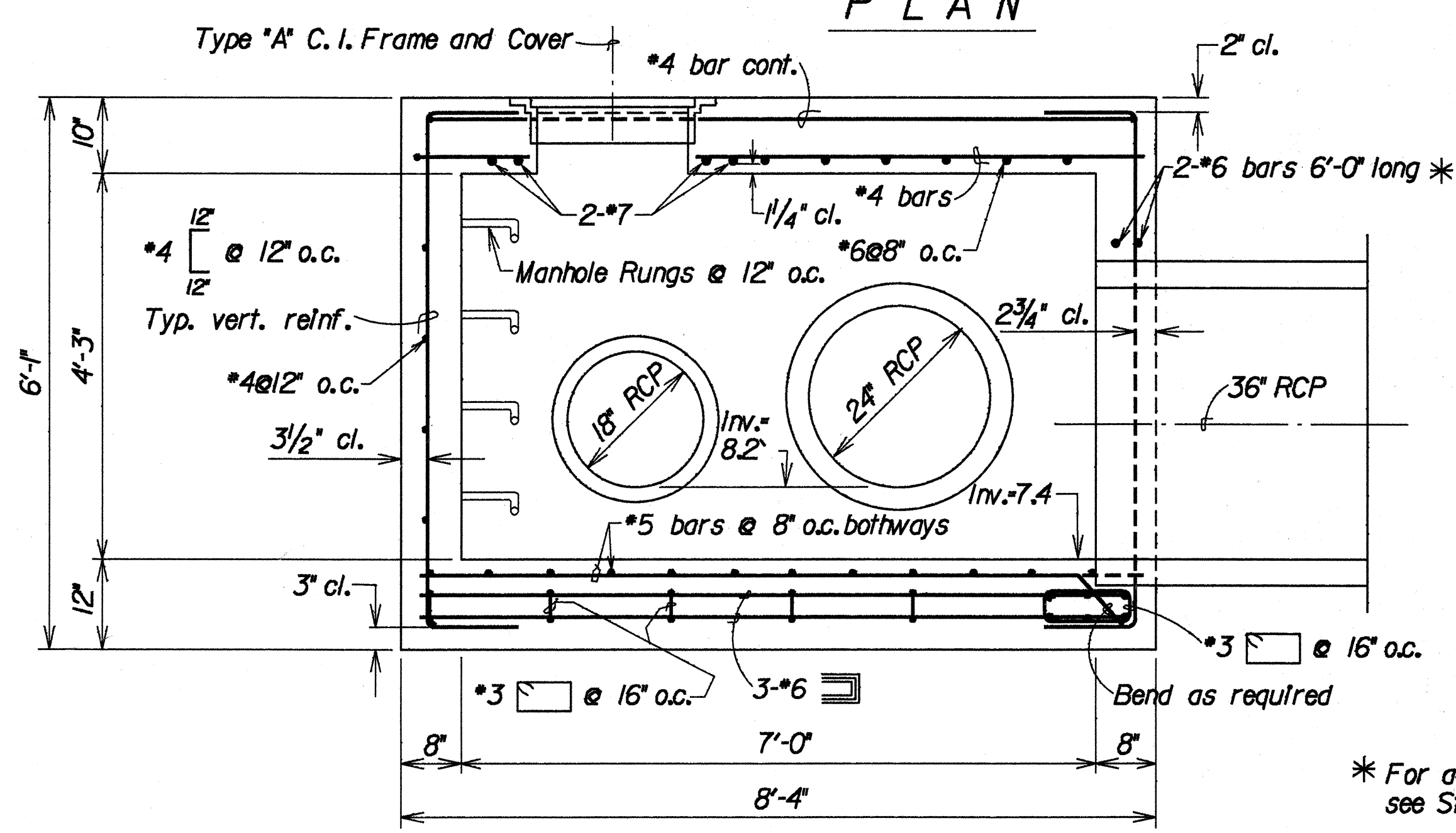
PLAN



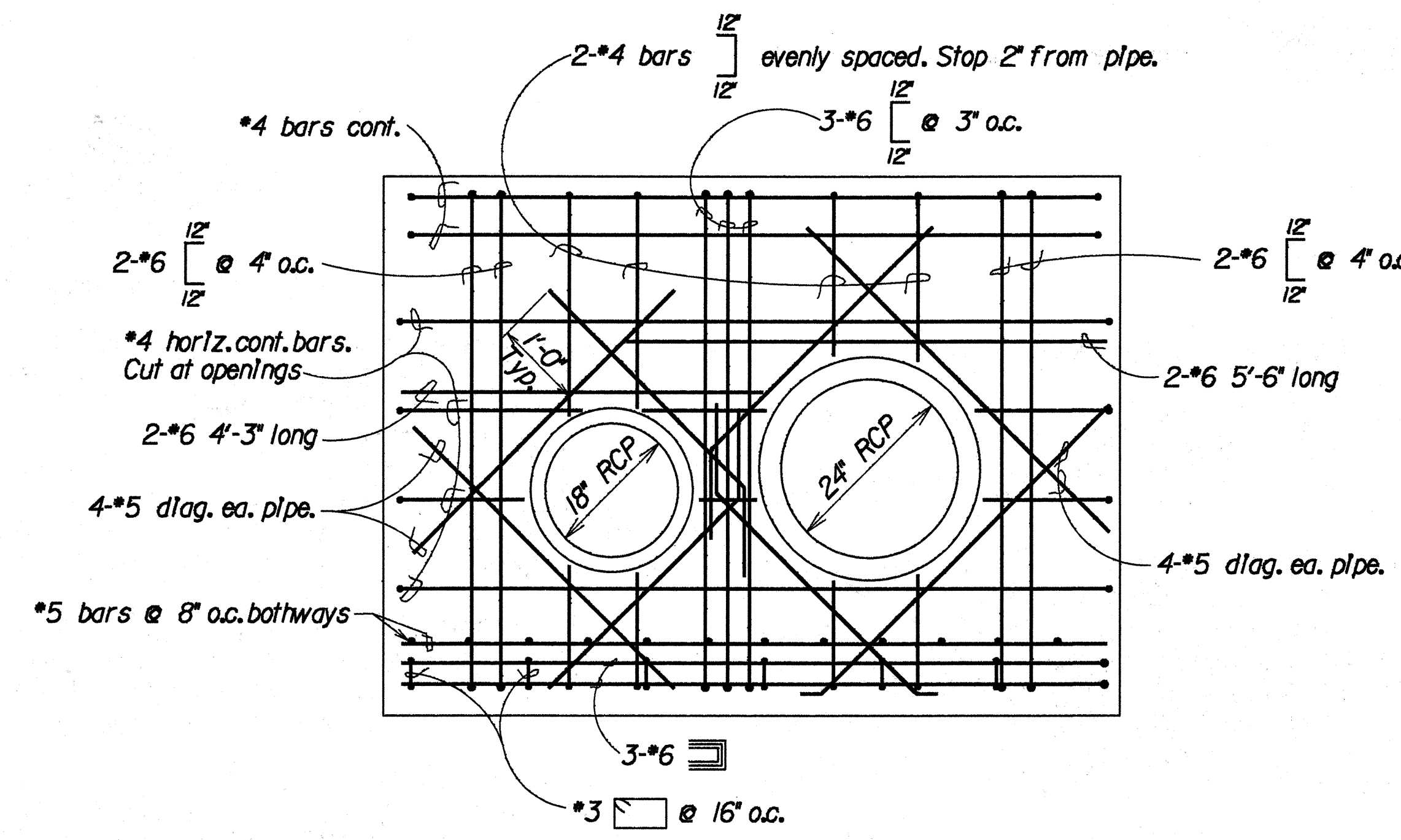
PLAN VIEW OF REINFORCING STEEL



SECTION C
H4 H4



SECTION A
H4 H4

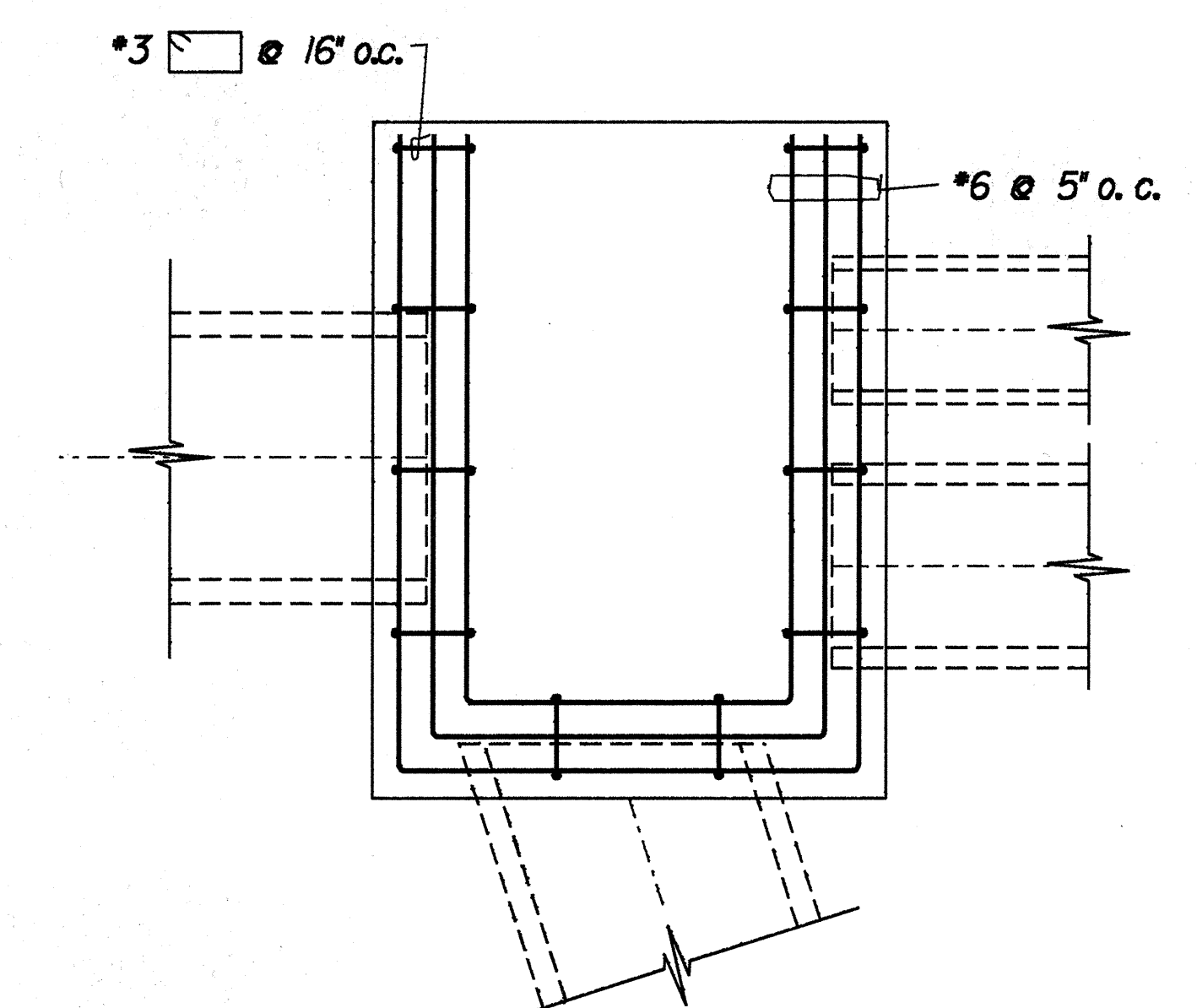


SECTION B
H4 H4

* For added reinforcing around culvert opening see Standard Plan H-04

DETAILS OF TYPE "M" STORM DRAIN MANHOLE

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



PLAN VIEW OF REINFORCING STEEL FOR CULVERT SEAT

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

FARRINGTON HIGHWAY SIDEWALK
Vicinity of Awanui Street to
Walpole Point Access Road
Project No. 7101A-01-88

Scale: As Noted Date: April 11, 1989

SHEET No. H4 OF 4 SHEETS