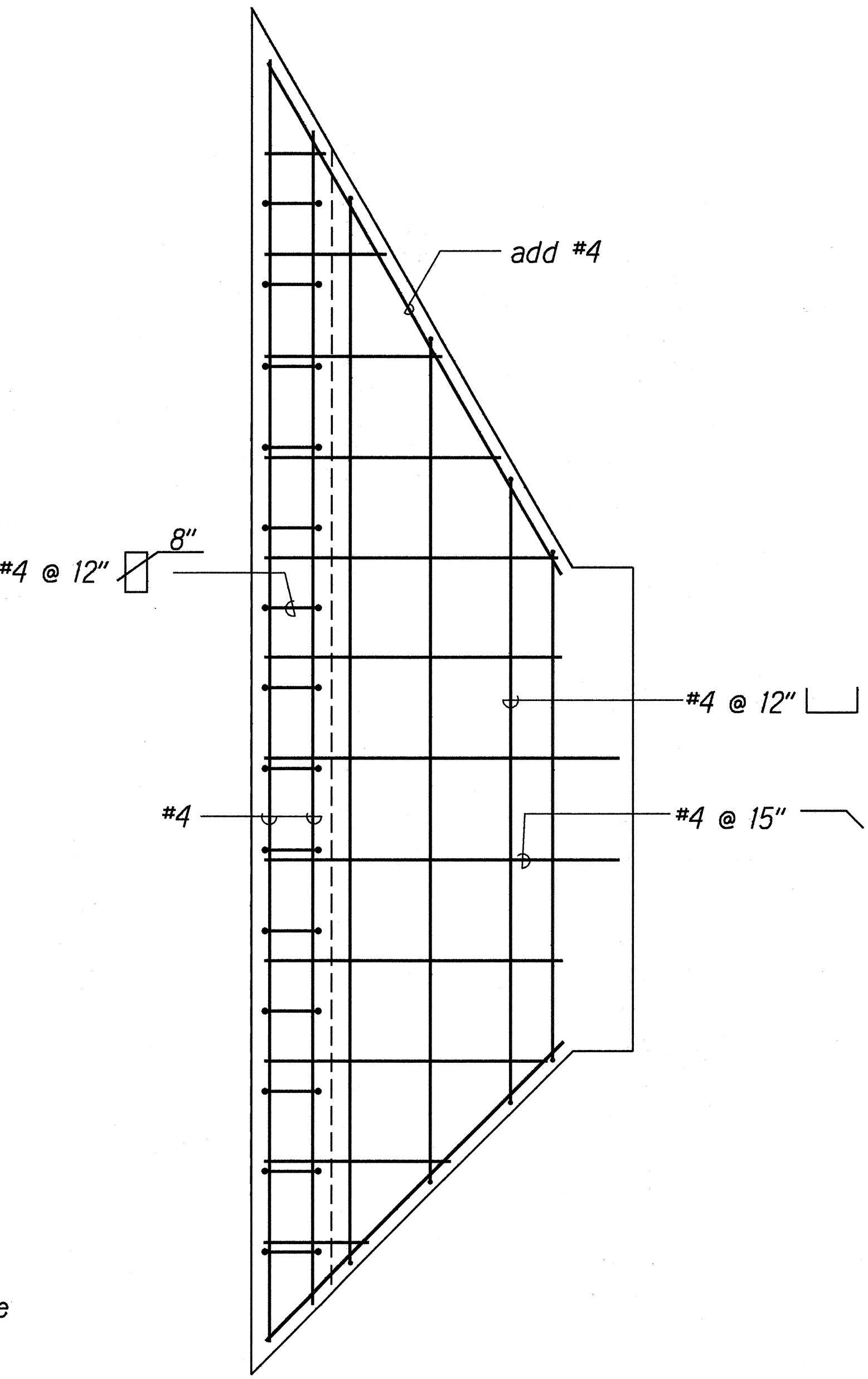
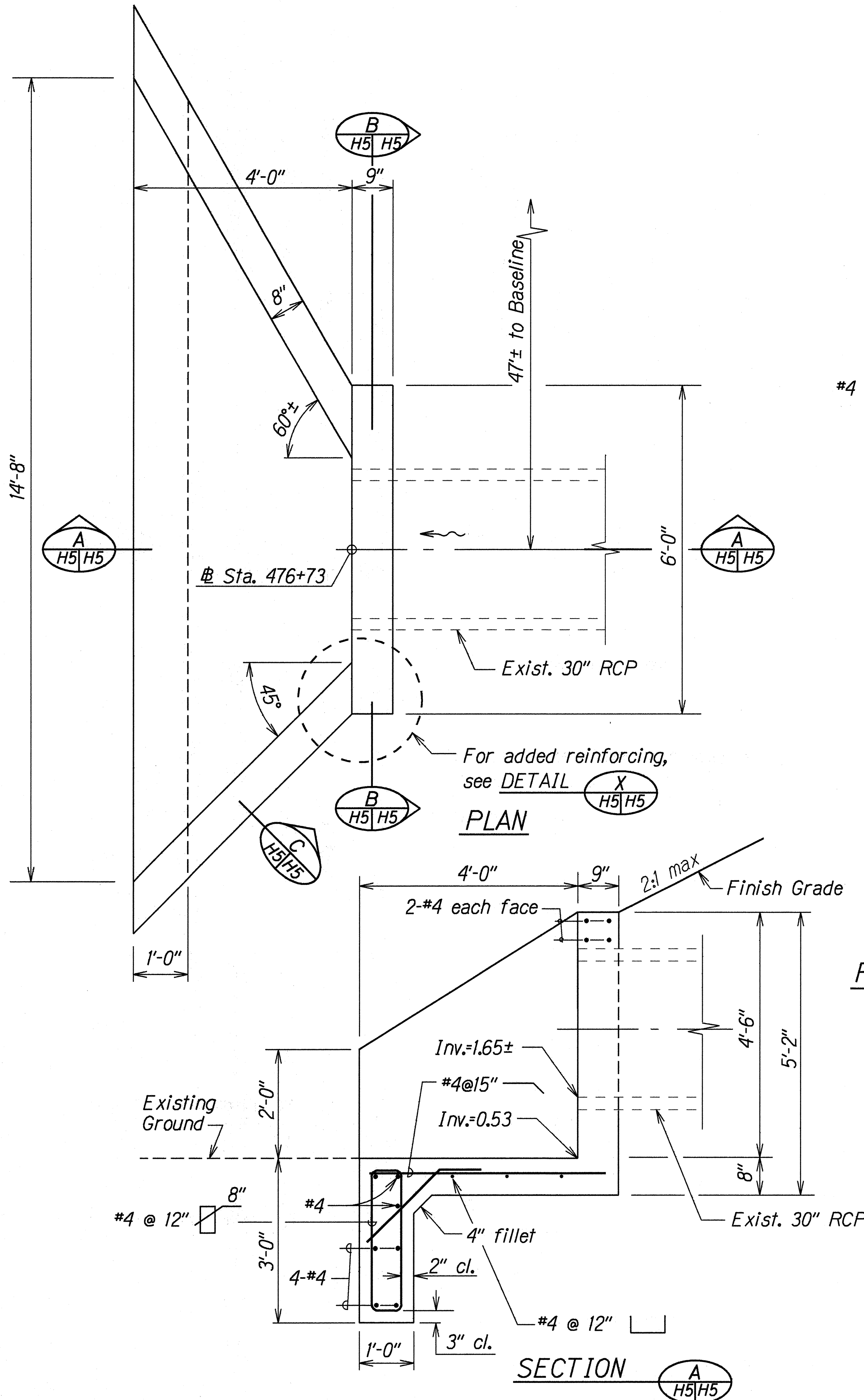
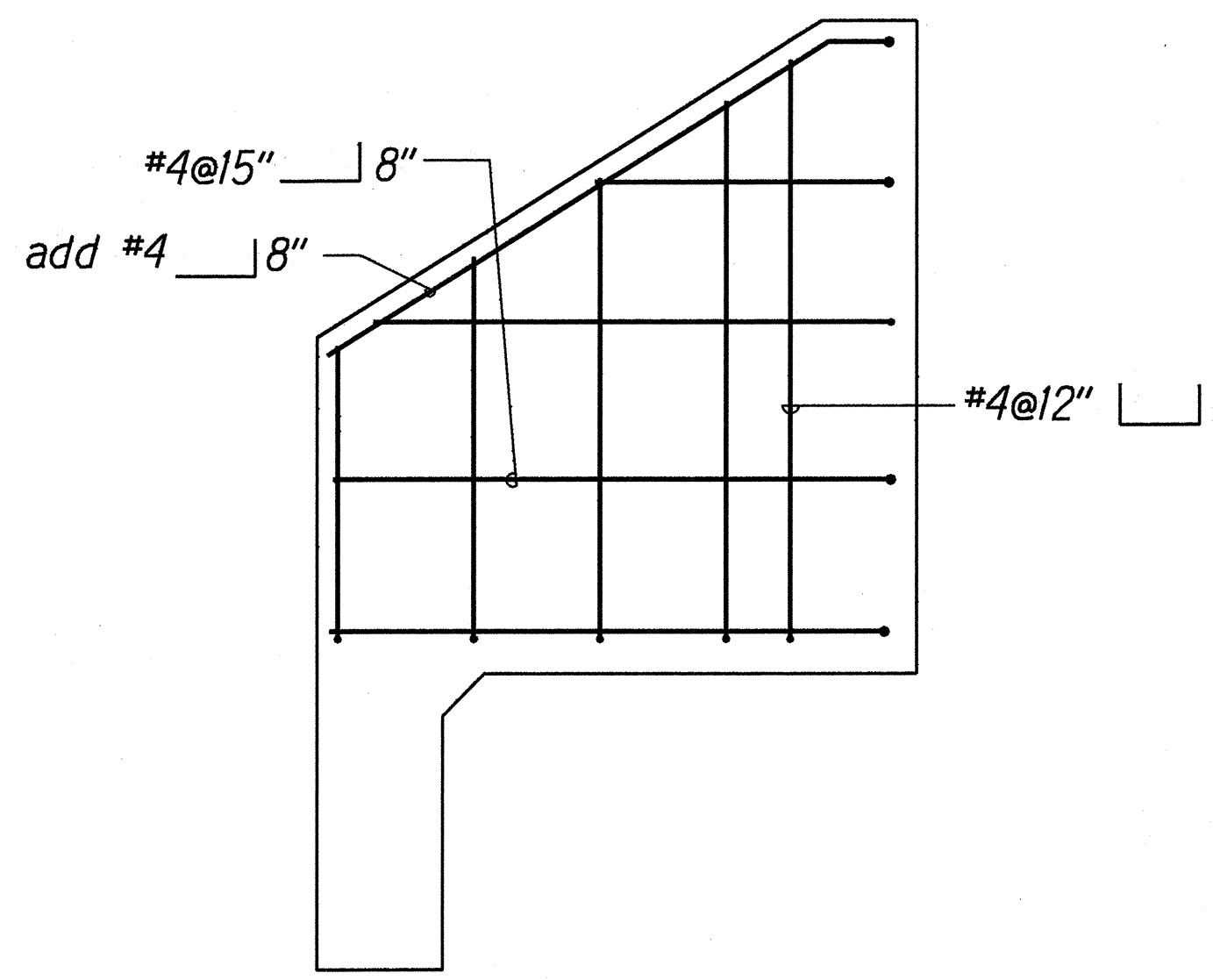
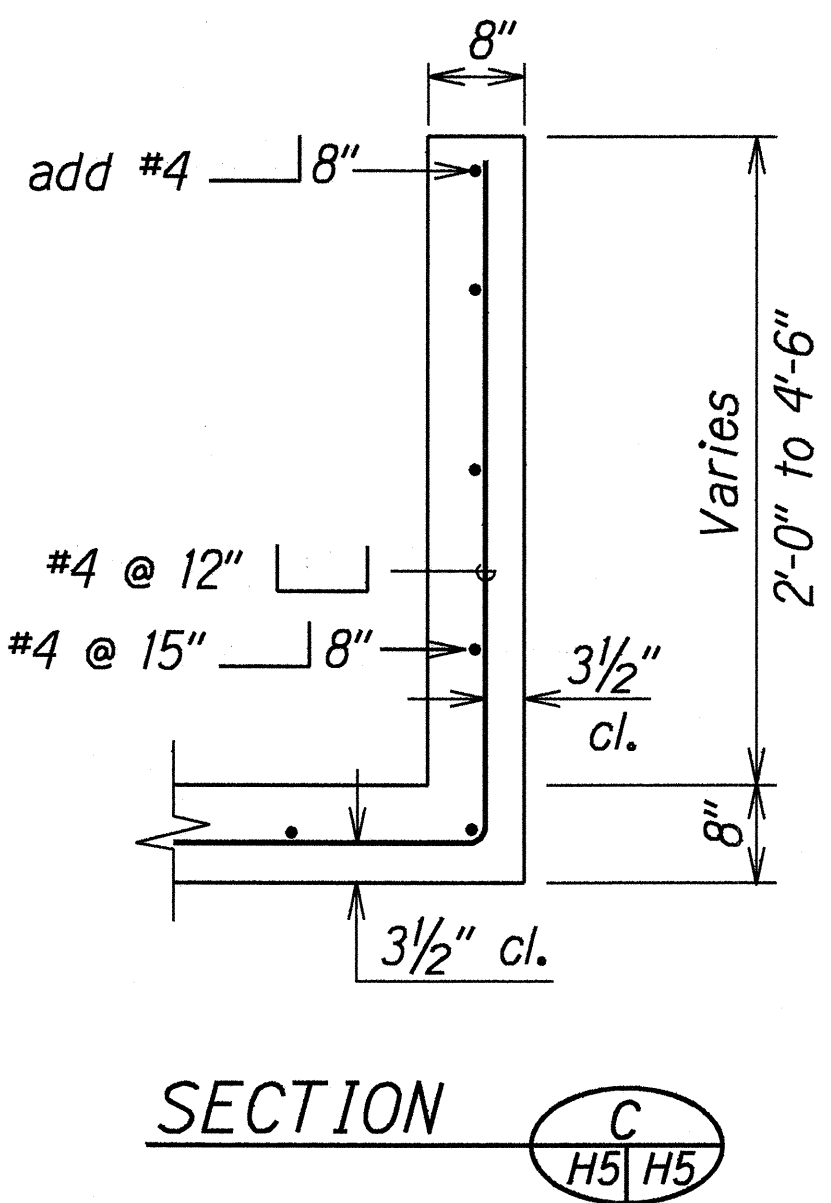
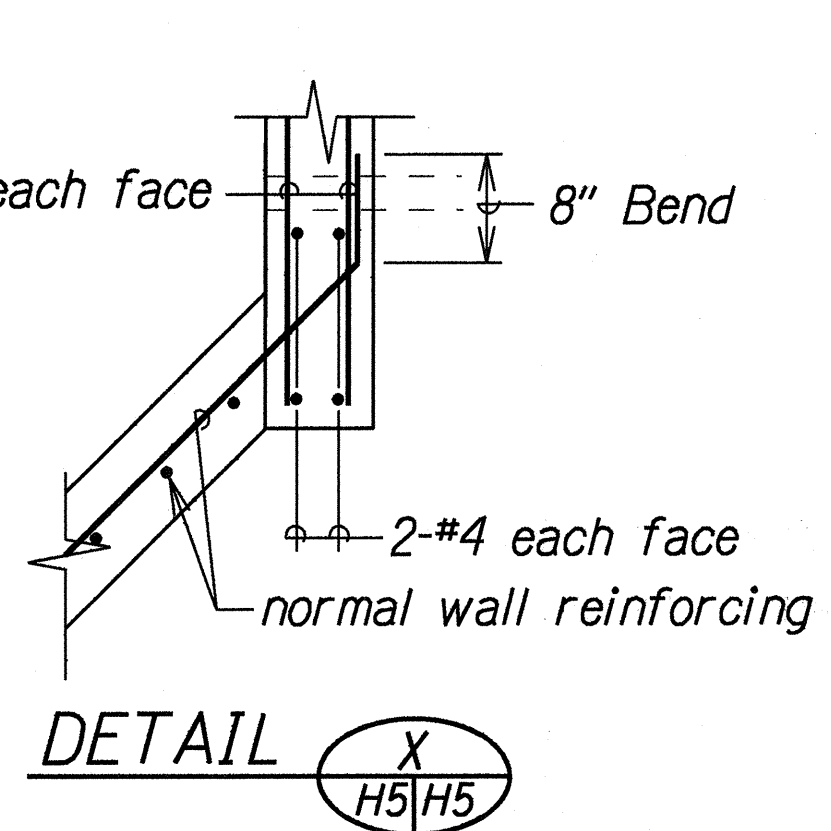
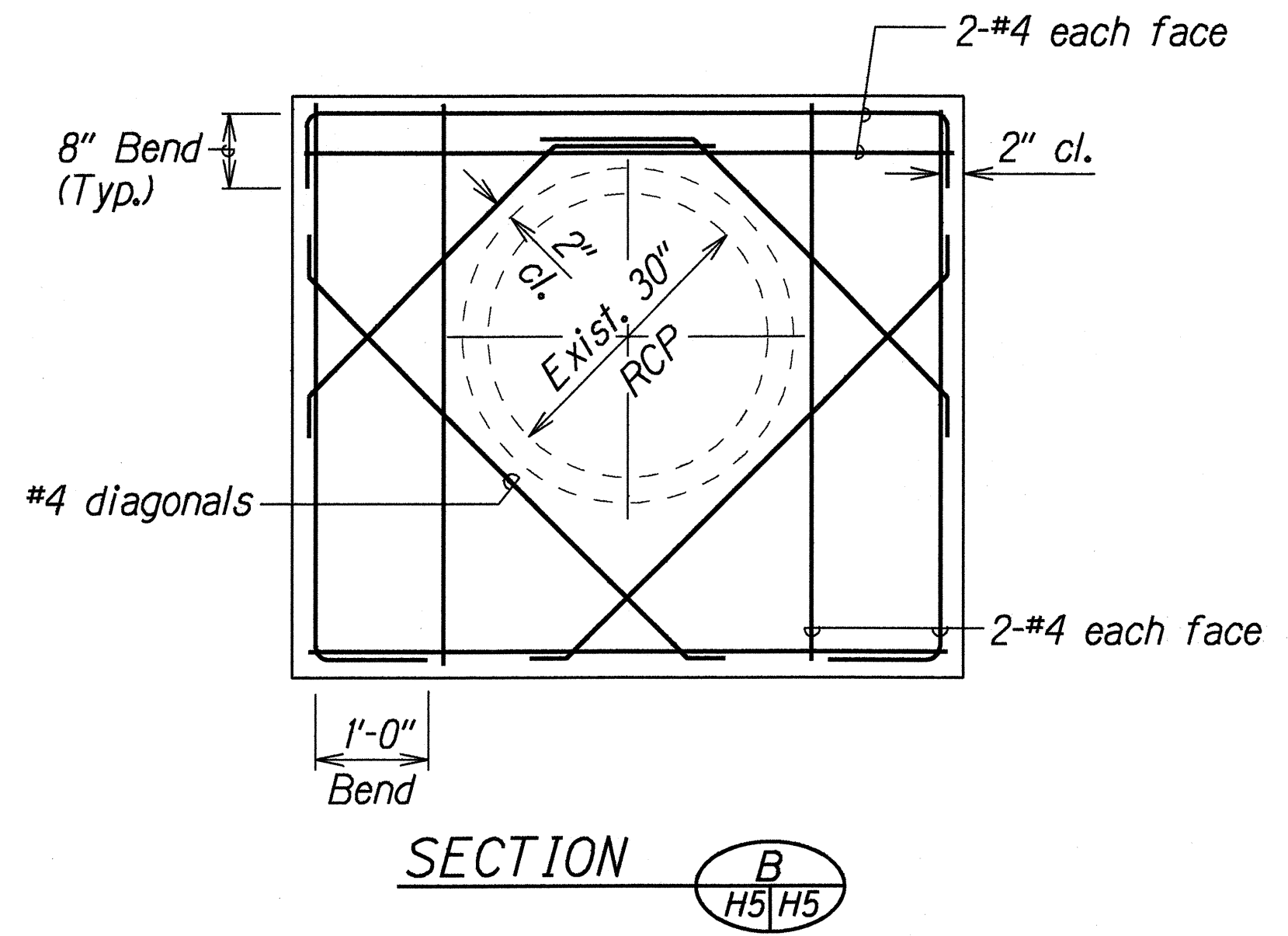


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50B-01-99	2000	8	11



PLAN VIEW OF REINFORCING STEEL AT BOTTOM SLAB



PLAN VIEW OF REINFORCING STEEL THROUGH WALL SECTION

DETAILS OF TYPE "I" OUTLET STRUCTURE AT STA. 476+73 o/s 47' RT.

ORIGINAL PLAN	DATE: 9/13/99
SURVEY PLOTTED BY: A. Manuwa	
DESIGNED BY: B. Kawahara	
CHECKED BY: B. Kawahara	
QUANTITIES BY: B. Kawahara	
REVISIONS BY: B. Kawahara	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

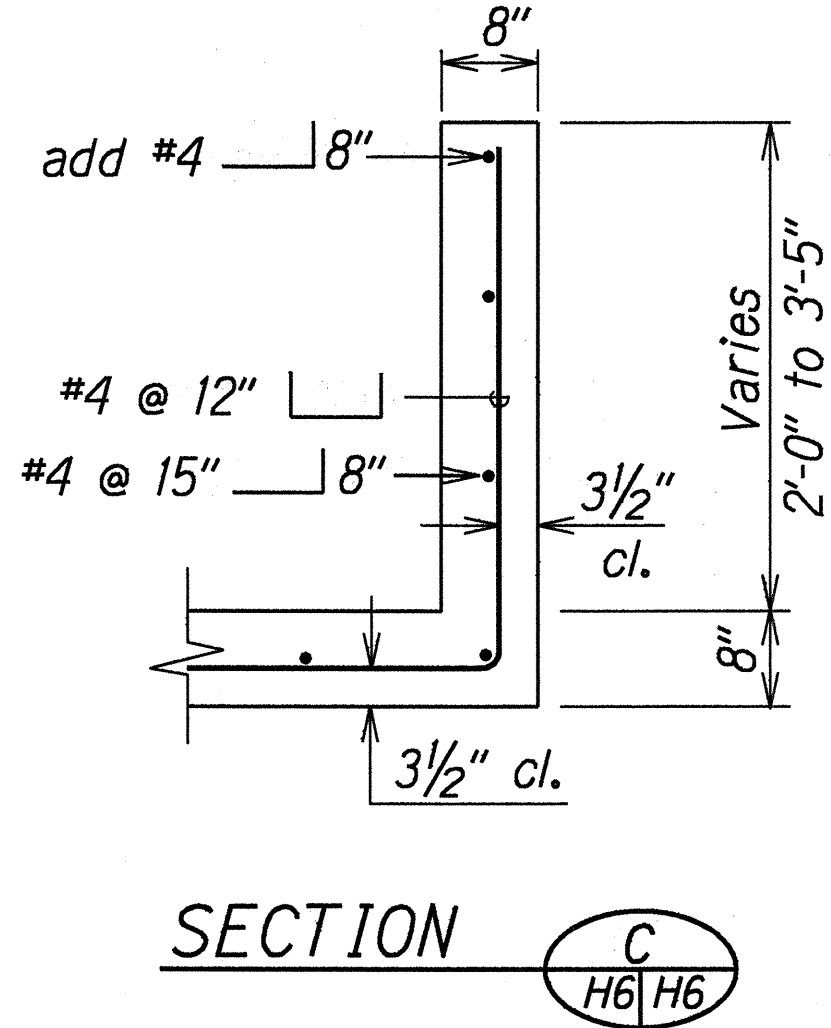
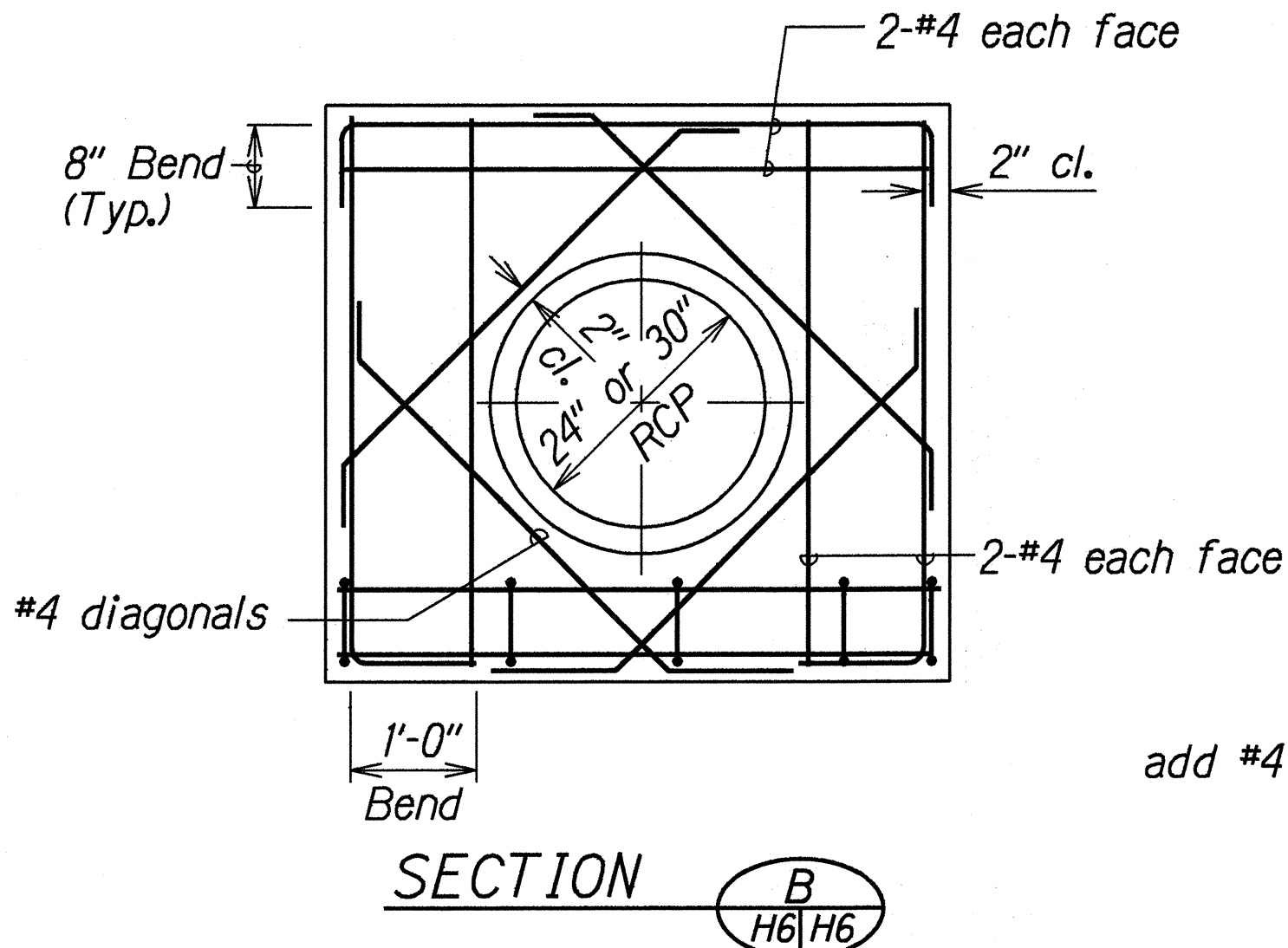
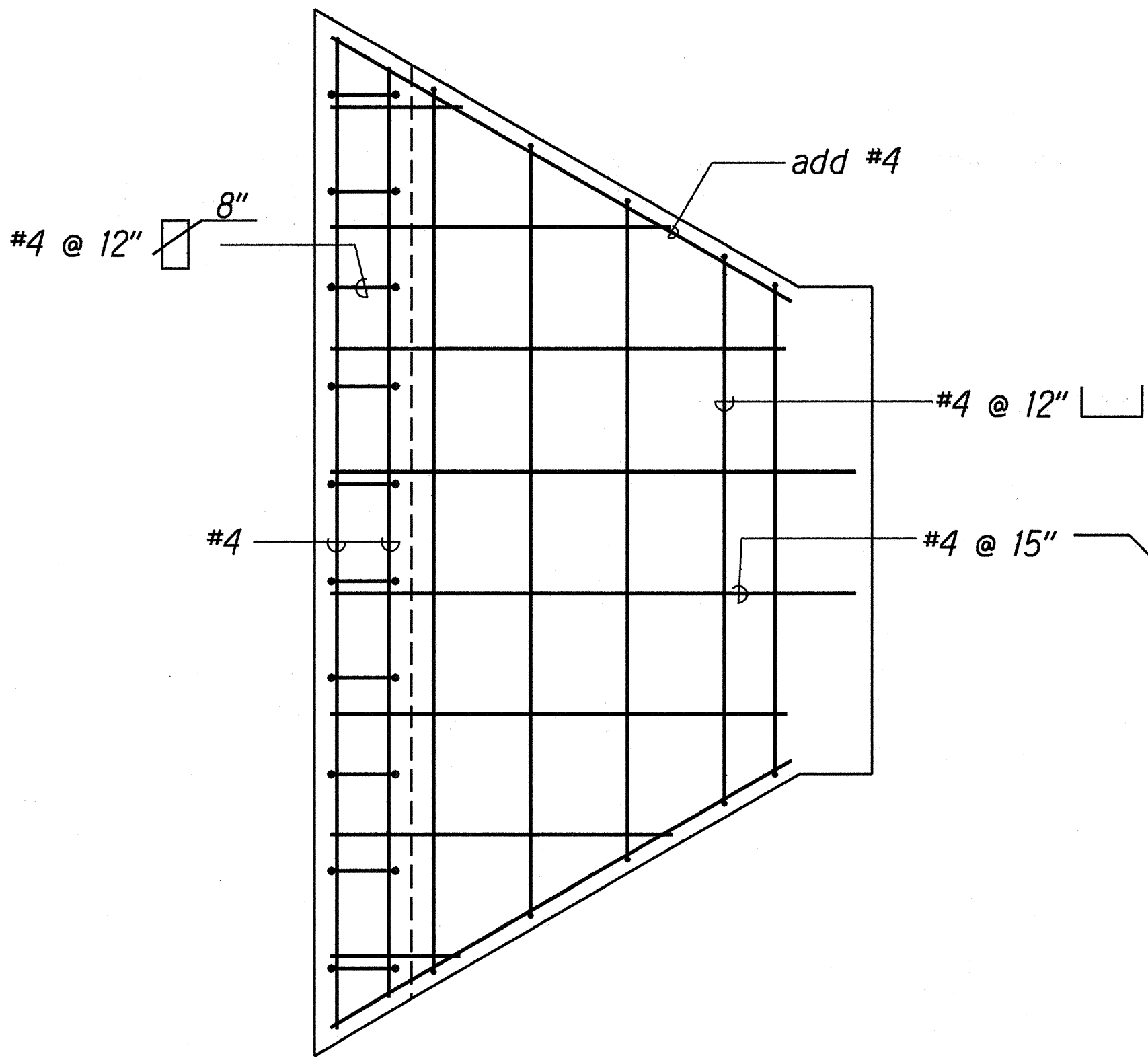
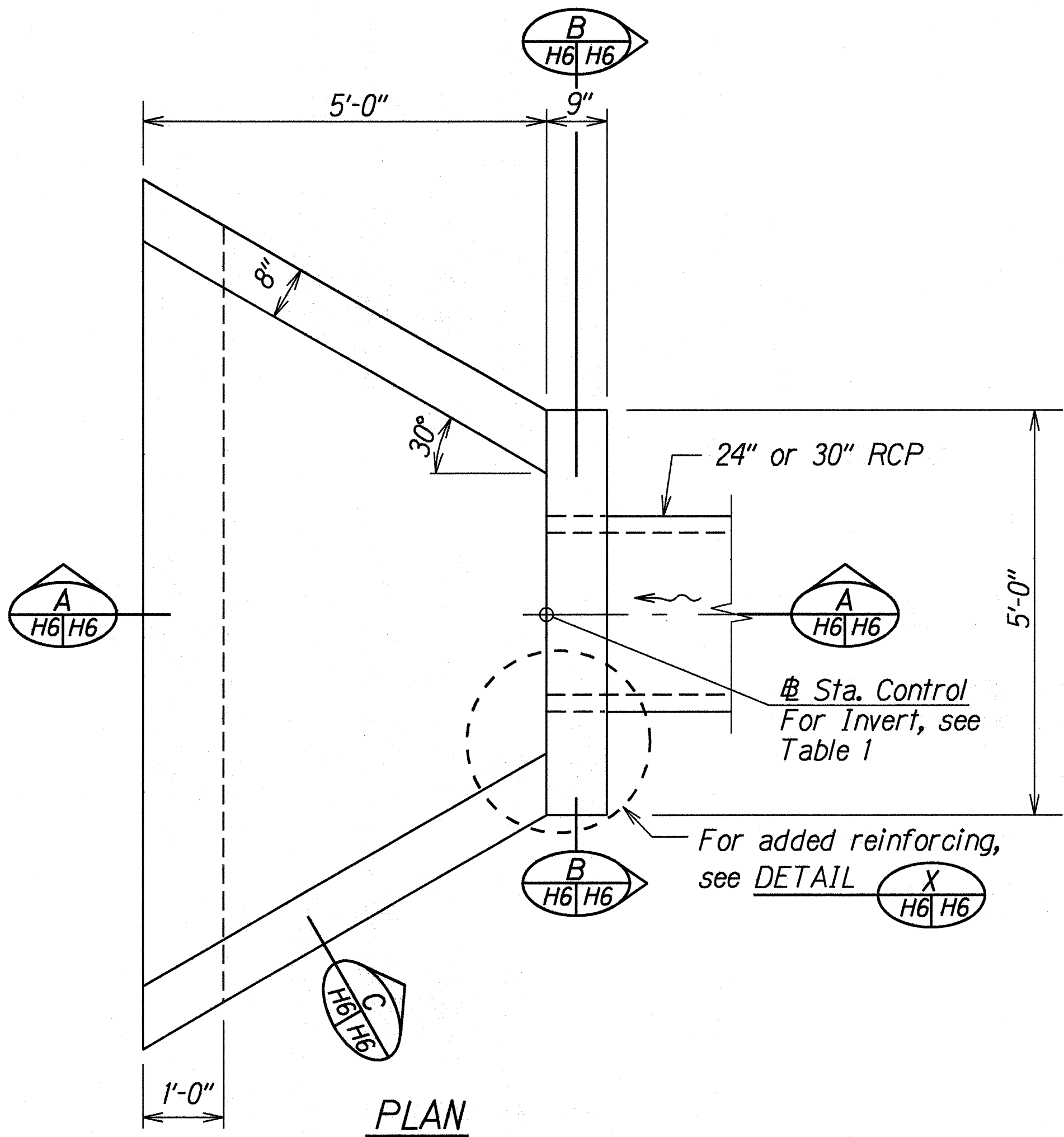
DRAINAGE DETAILS

KAUMUALII HWY. DRAINAGE IMPROVEMENTS
Vicinity of Kikiaola Boat Harbor
Project No. 50B-01-99

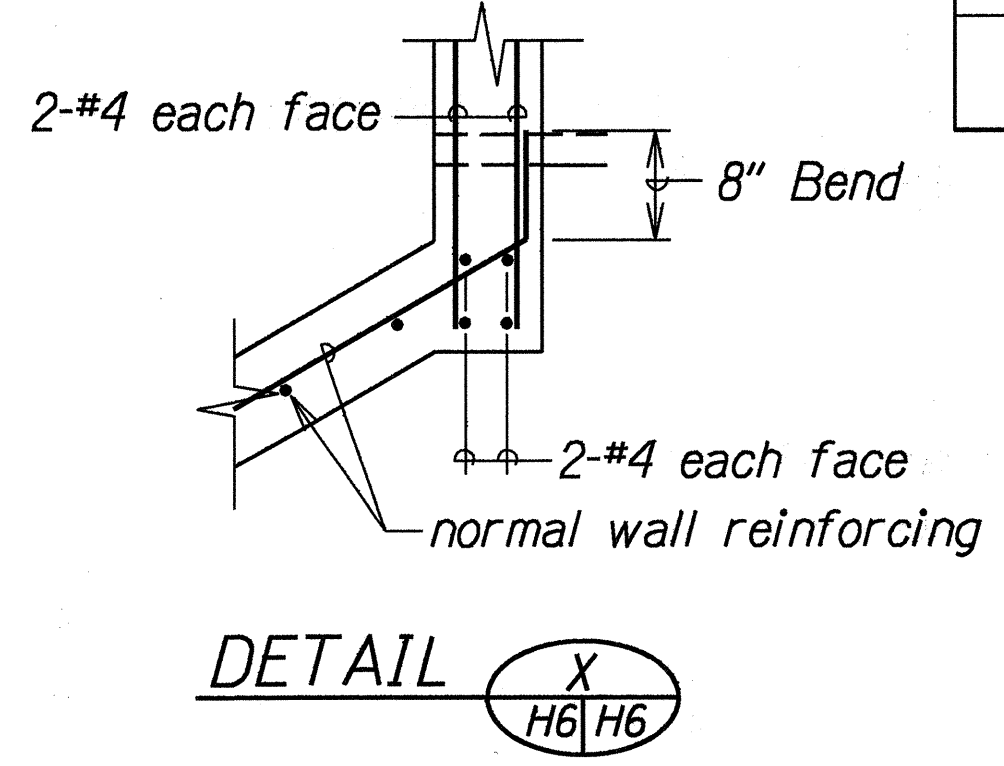
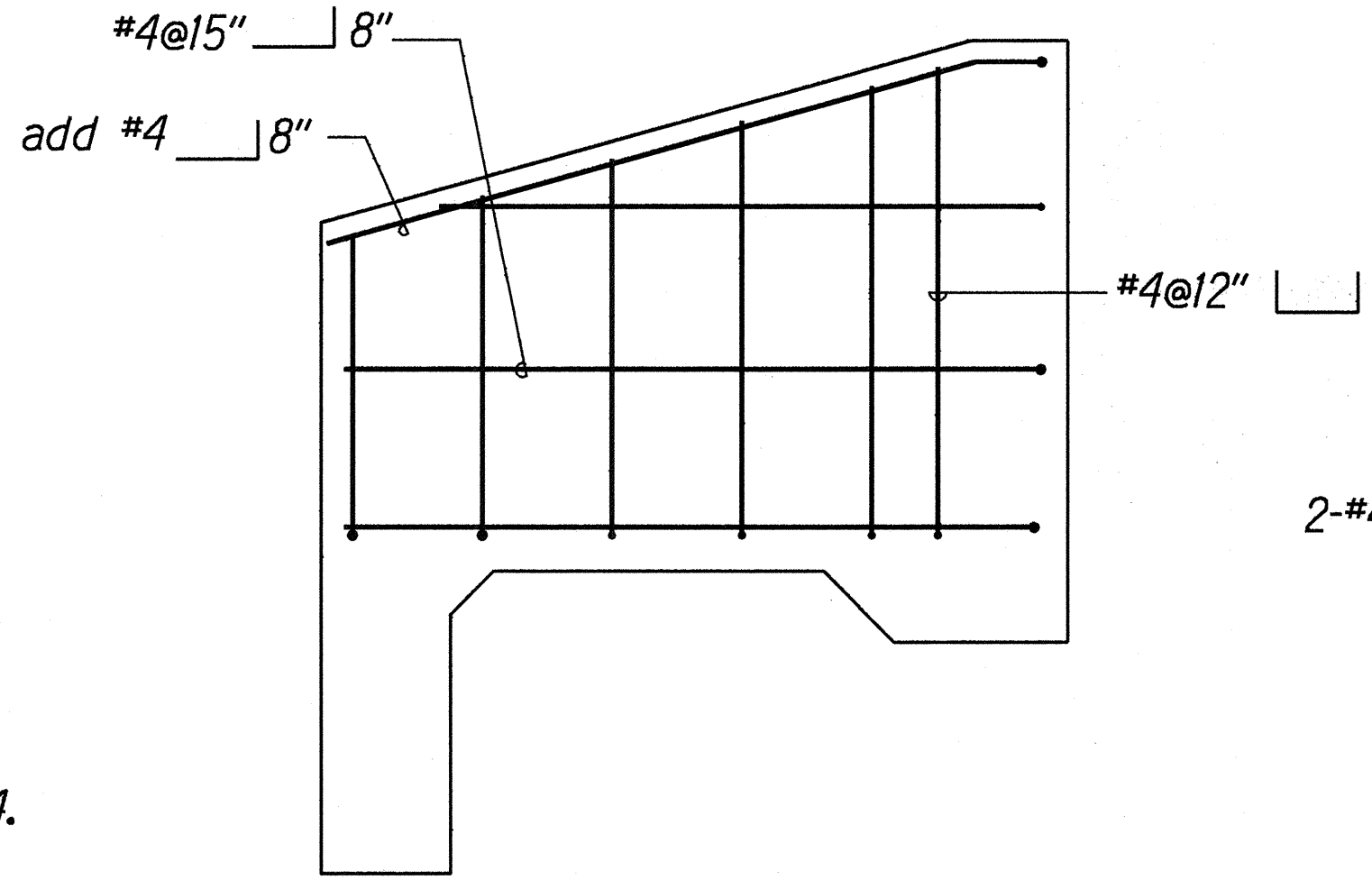
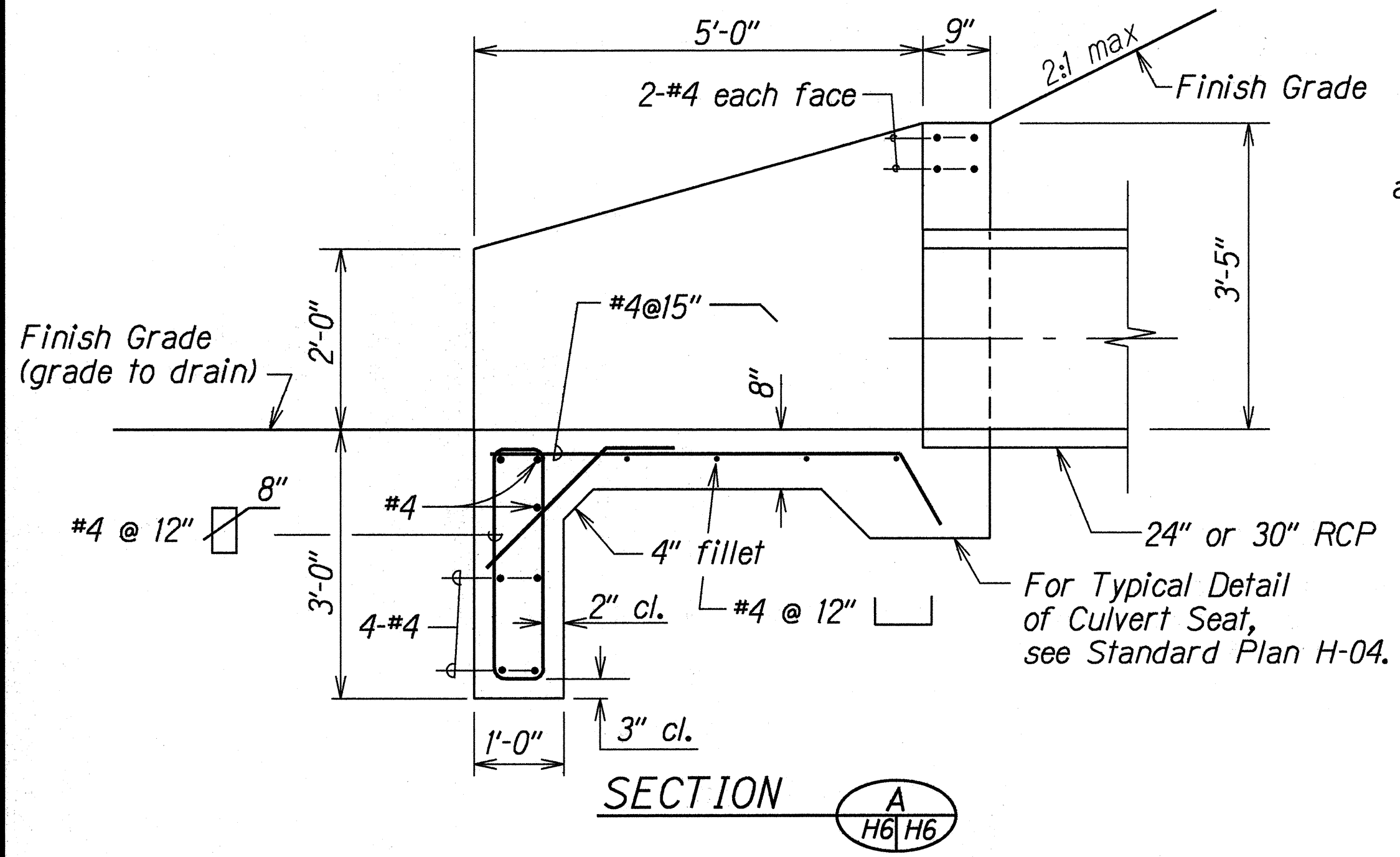
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SHEET No. H5 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50B-01-99	2000	9	11



PLAN VIEW OF REINFORCING STEEL
AT BOTTOM SLAB



PLAN VIEW OF REINFORCING STEEL
THROUGH WALL SECTION

TABLE 1 (For Type "2" Structures)

# STATION	INLET/OUTLET	INVERT
477+28 o/s 47' Rt.	Inlet	1.90±
138+00 o/s 34' Lt.	Outlet	2.86±
143+00 o/s 34' Lt.	Outlet	3.19
149+50 o/s 34' Lt.	Outlet	2.96
153+50 o/s 32' Lt.	Outlet	3.15
153+50 o/s 31' Rt.	Inlet	3.49

TYPICAL DETAILS OF TYPE "2"
INLET/OUTLET STRUCTURES

ORIGINAL PLAN
DATE: 9/9/99
DESIGNED BY: A. Manu
CHECKED BY: B. Kawai
QUANTITIES BY: B. Kawai
CONSTRUCTION BY: B. Kawai

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

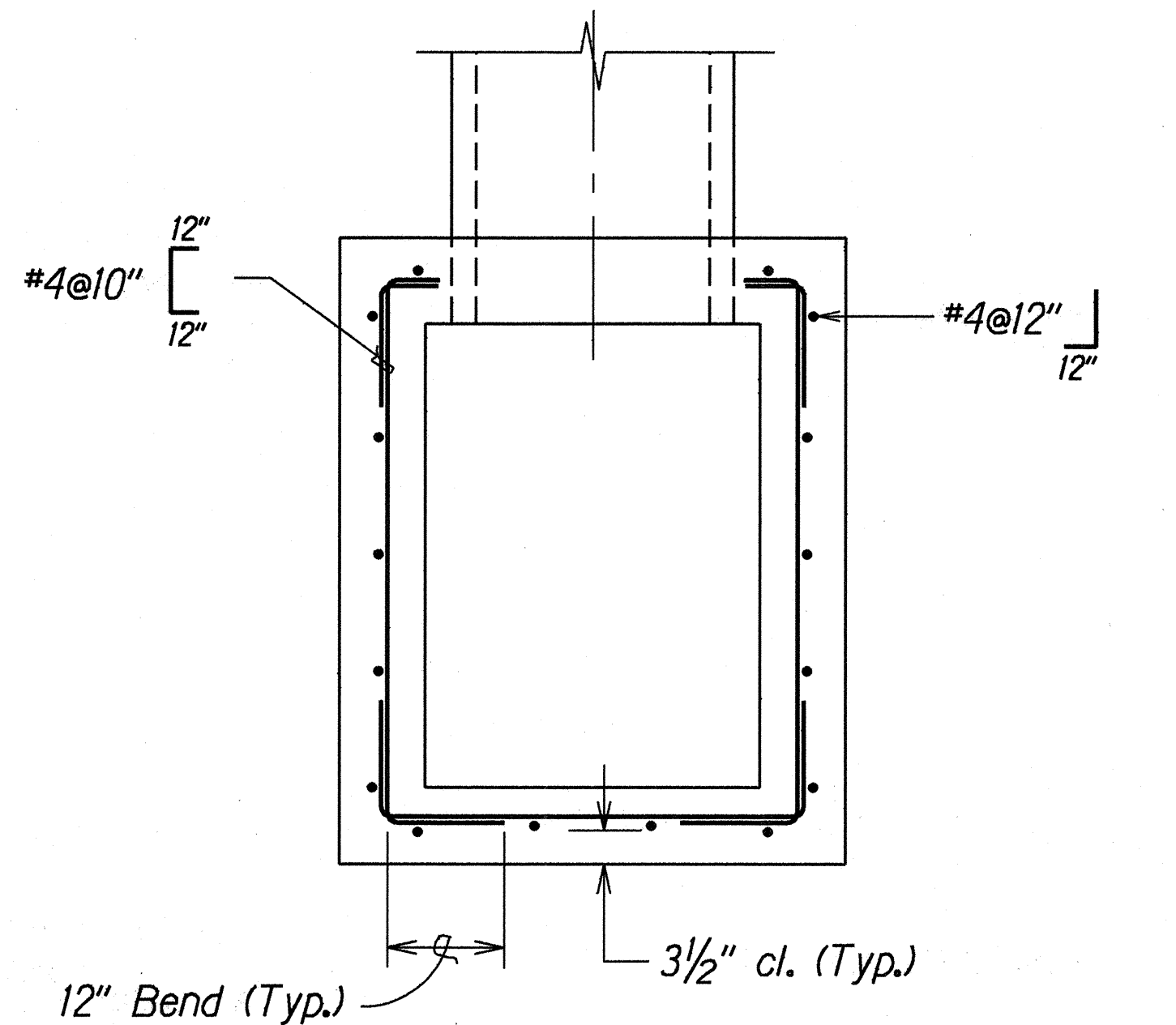
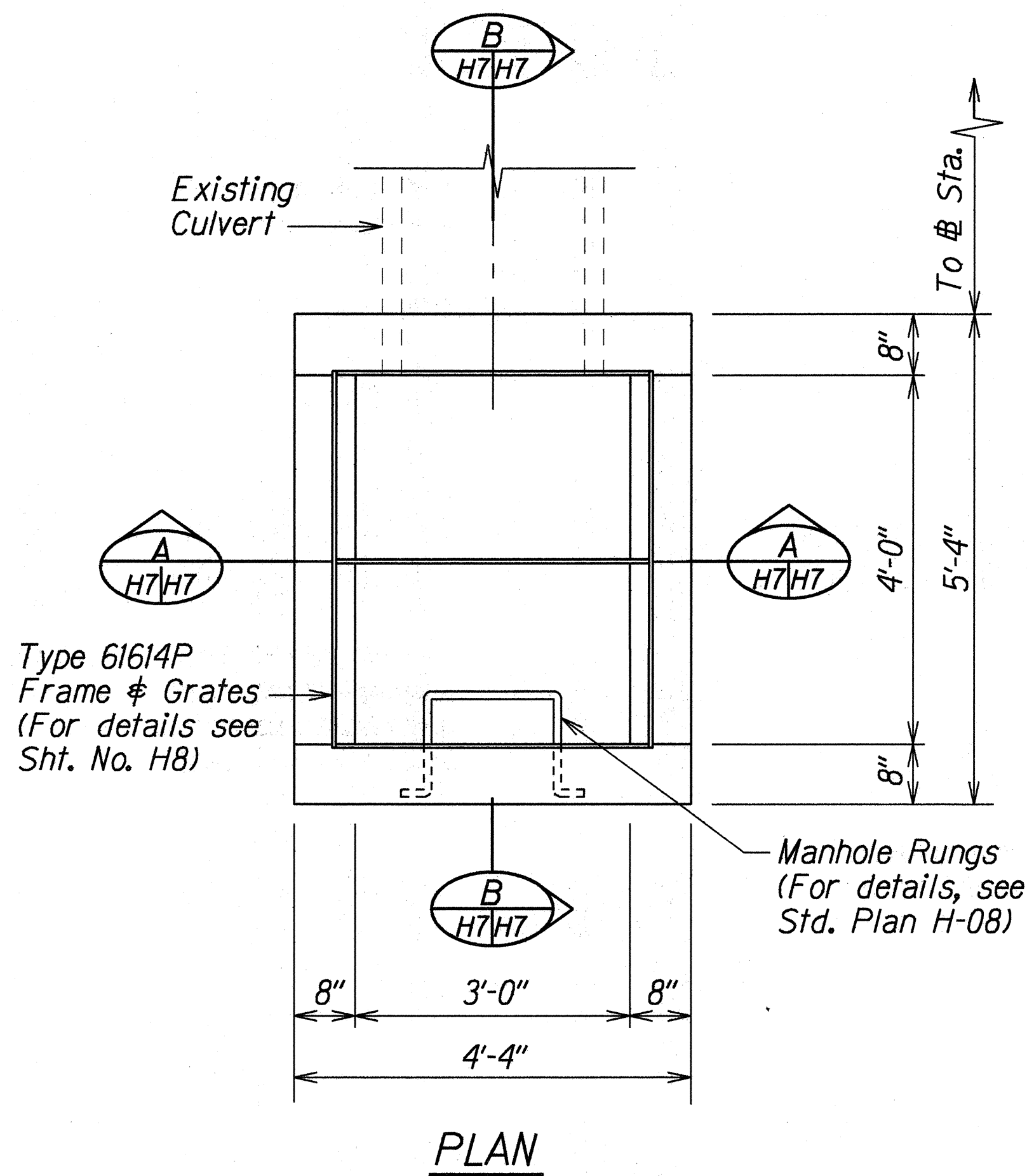
DRAINAGE DETAILS

KAUMUALII HWY. DRAINAGE IMPROVEMENTS
Vicinity of Kikiaola Boat Harbor
Project No. 50B-01-99

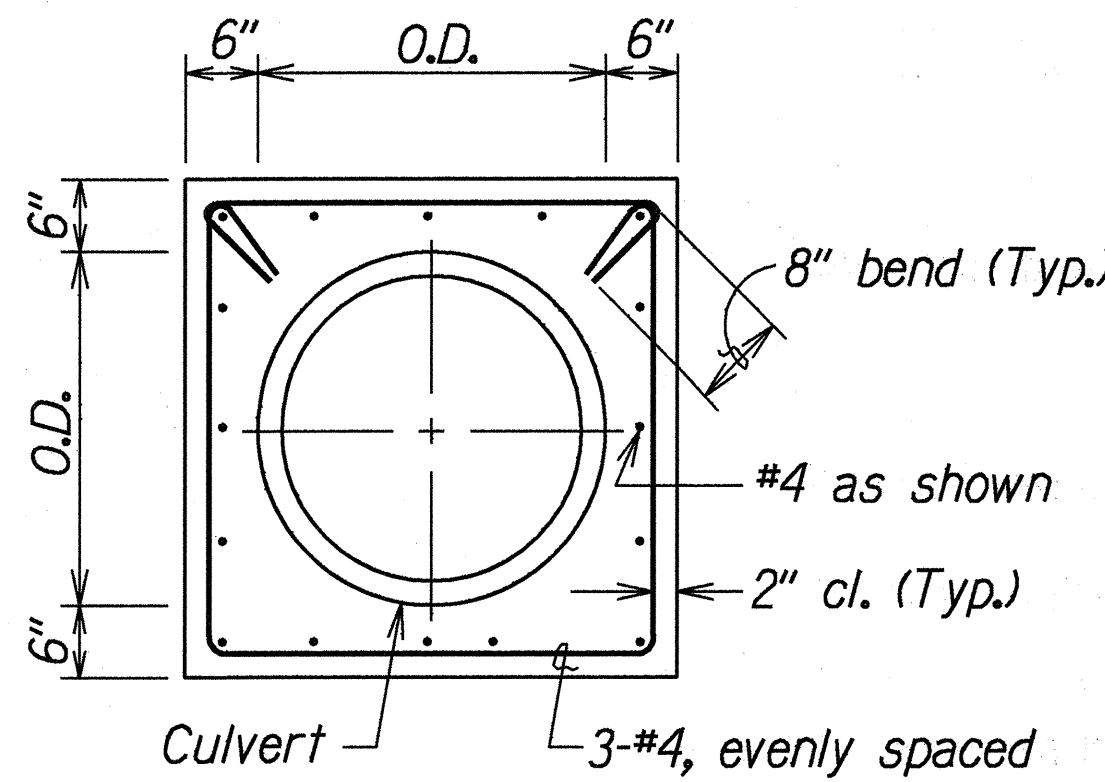
Scale: 3/4"=1'-0" Date: Sept. 1999

SHEET No. H6 OF 8 SHEETS

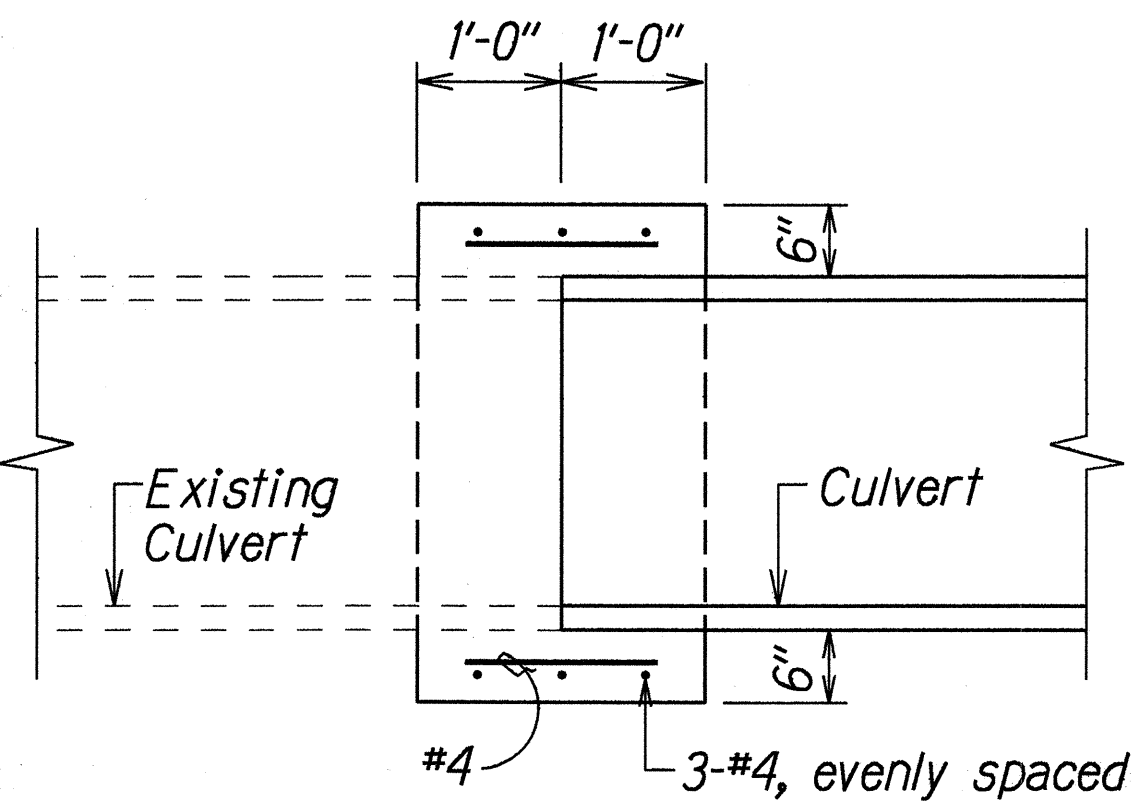
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50B-01-99	2000	10	11



PLAN VIEW OF WALL REINFORCING

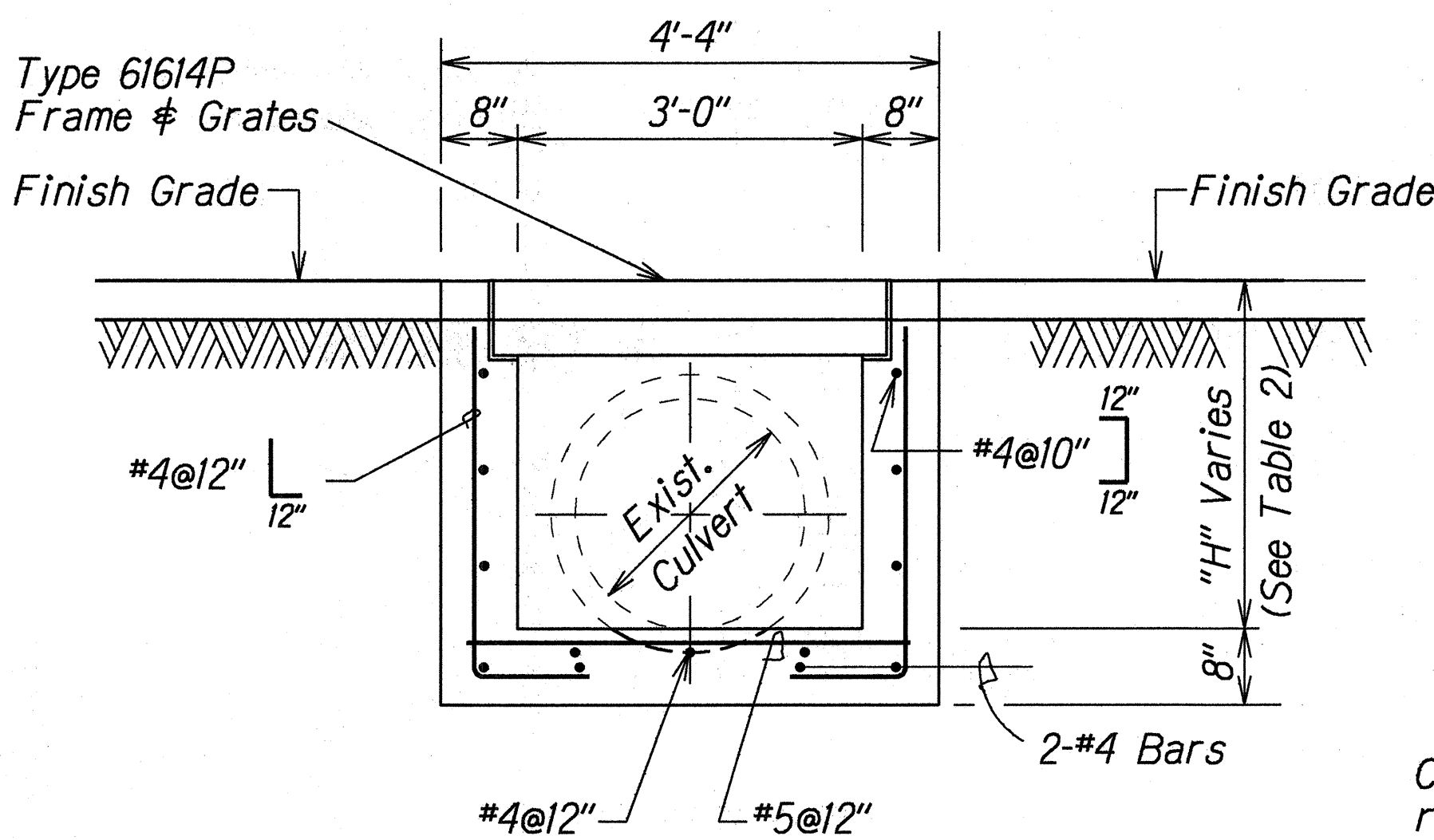


ELEVATION

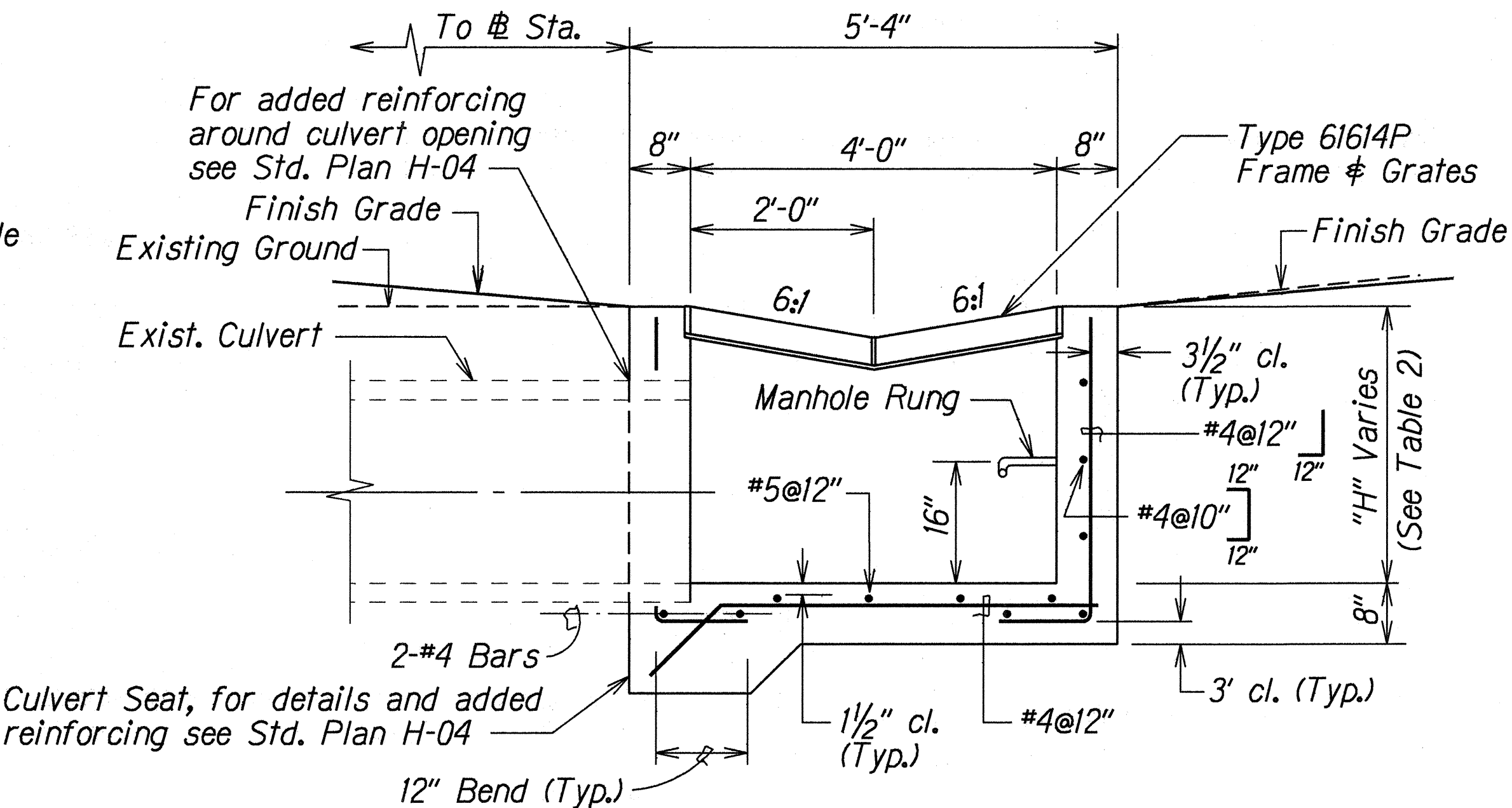


SECTION

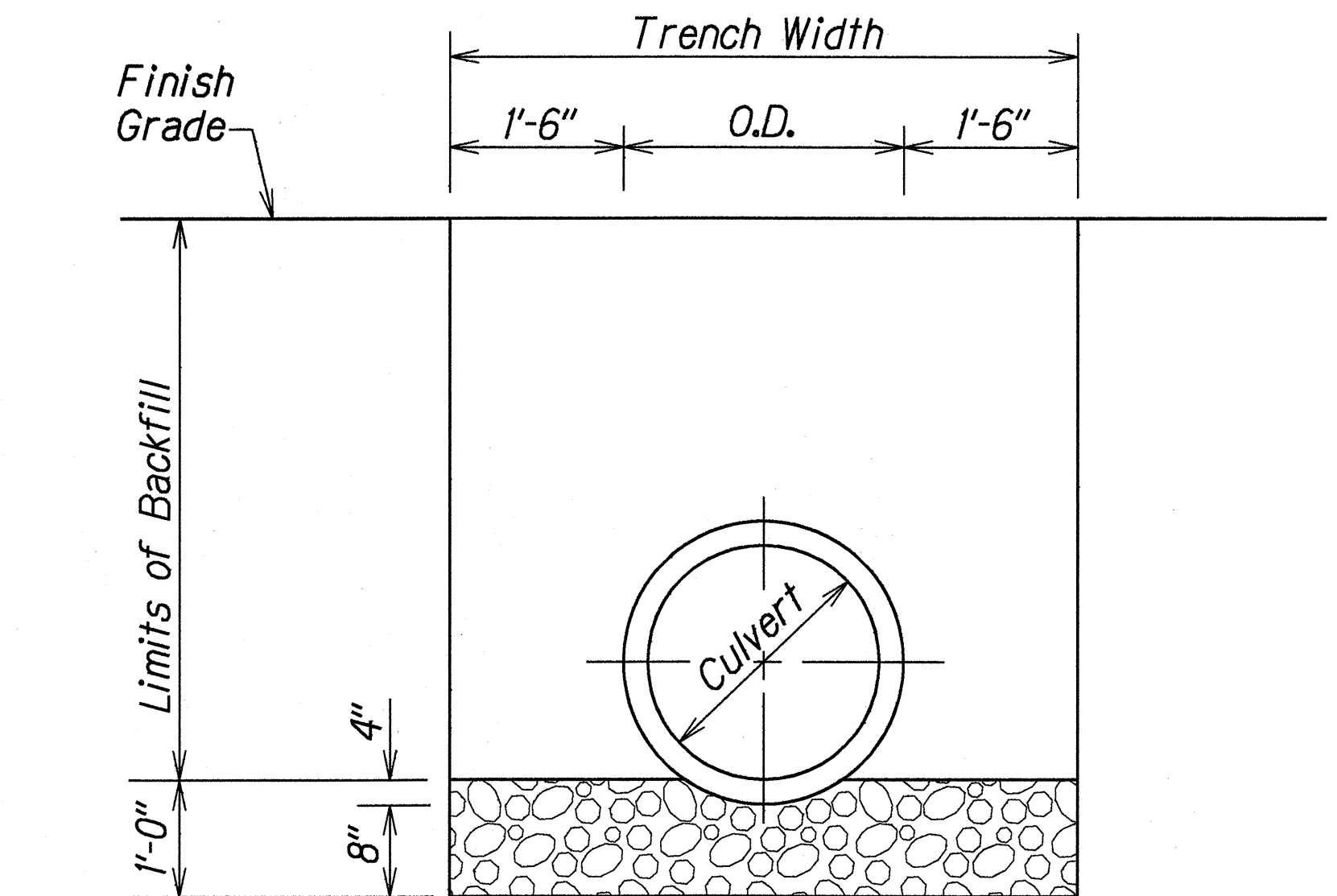
TYPICAL DETAILS OF REINFORCED CONCRETE COLLAR



SECTION A A



SECTION B B



TYPICAL DETAIL OF CULVERT TRENCH AND BACKFILL RESTORATION

# STATION	H (feet)
143+00 o/s 27' Rt.	3.0
149+50 o/s 30' Rt.	3.5
159+25 o/s 25' Rt.	2.5

TYPICAL DETAILS OF TYPE 61614P GRATED DROP INLET

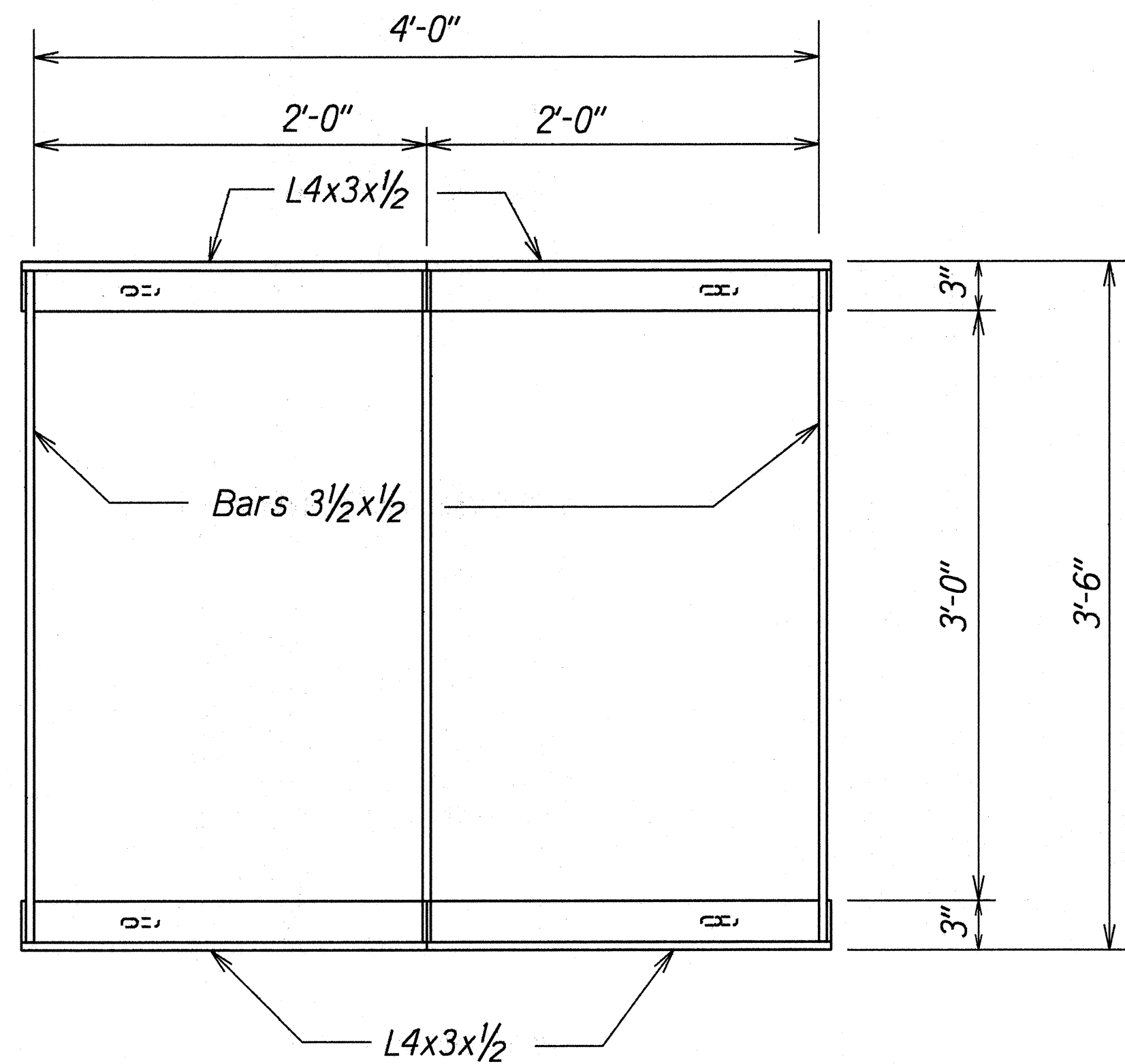
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
KAUMUALII HWY. DRAINAGE IMPROVEMENTS
Vicinity of Kikiaola Boat Harbor
Project No. 50B-01-99

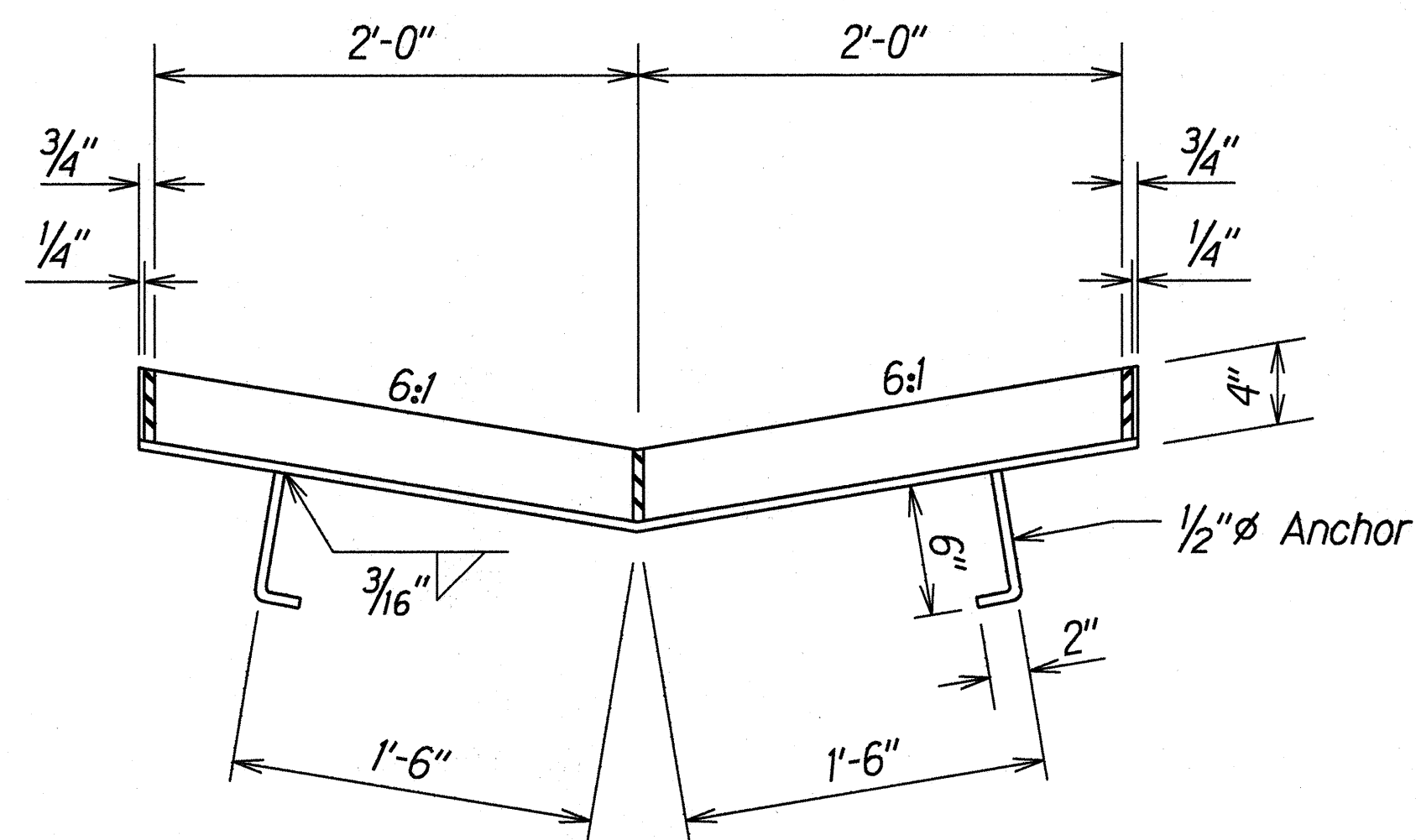
Scale: 3/4"=1'-0"
Date: Sept. 1999

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	9/20/99
DRAWN BY	A. Nishida
DESIGNED BY	R. Kawahara
CHECKED BY	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50B-01-99	2000	11	11



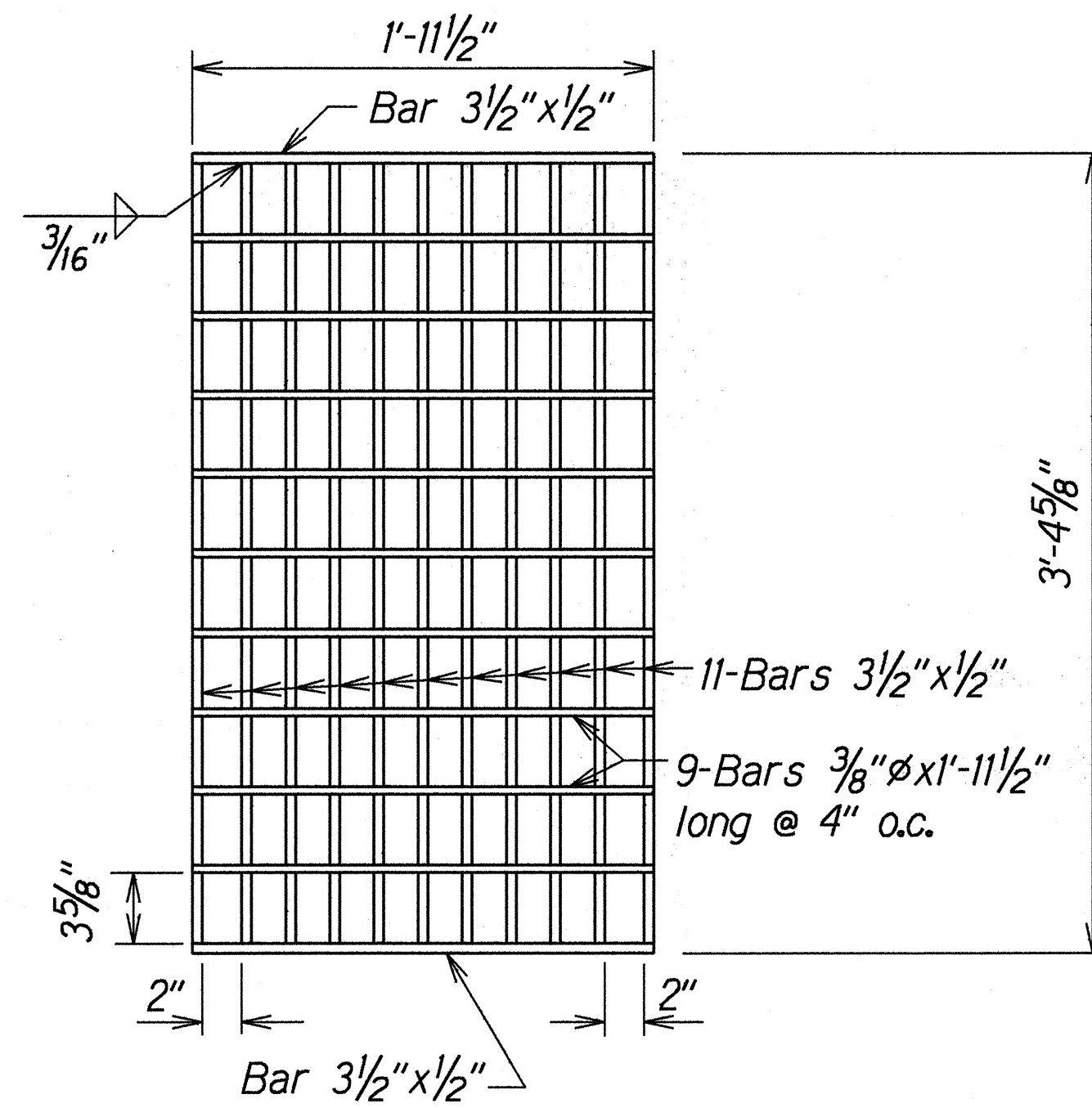
PLAN



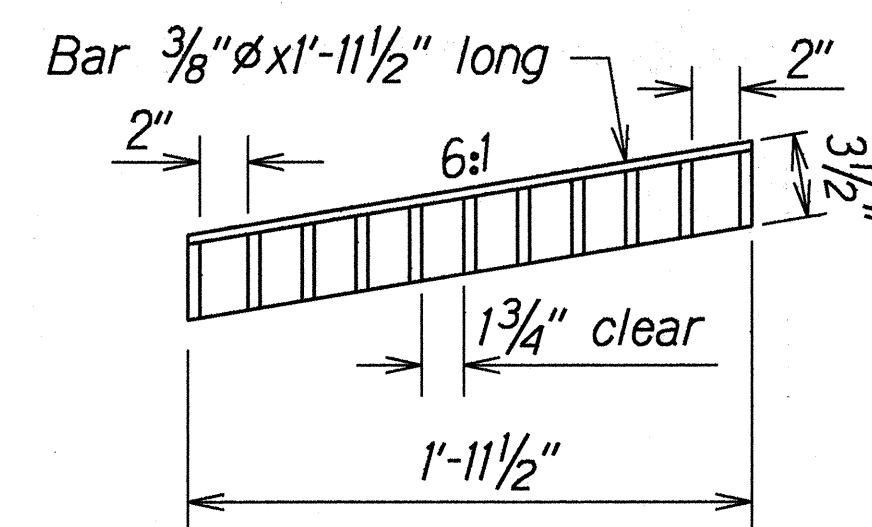
SECTION
FRAME

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

NOTE:
All welds 3/8" unless otherwise noted.



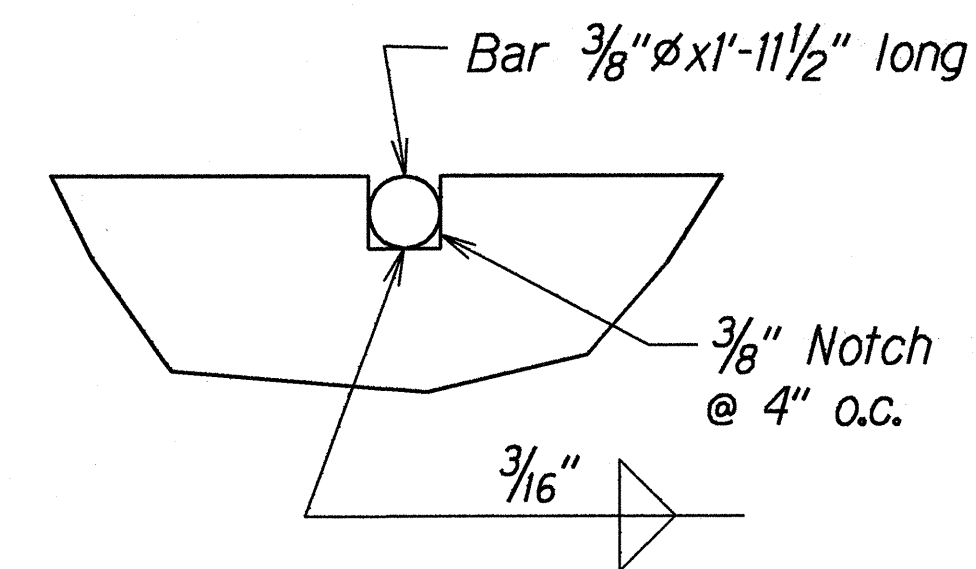
PLAN



SECTION

GRATE

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



NOTCH DETAIL
Full Size

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	9/15/99
DRAWN BY	Alice Manuwa
DESIGNED BY	R. Kawamata, C. Matsuda
NOTES	
QUANTITIES BY	
CHECKED BY	

TYPICAL DETAILS OF TYPE 61614P STEEL FRAME AND GRATES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
KAUMUALII HWY. DRAINAGE IMPROVEMENTS
Vicinity of Kikiaola Boat Harbor
Project No. 50B-01-99
Scale: As Shown Date: Sept. 1999
SHEET No. H8 OF 8 SHEETS