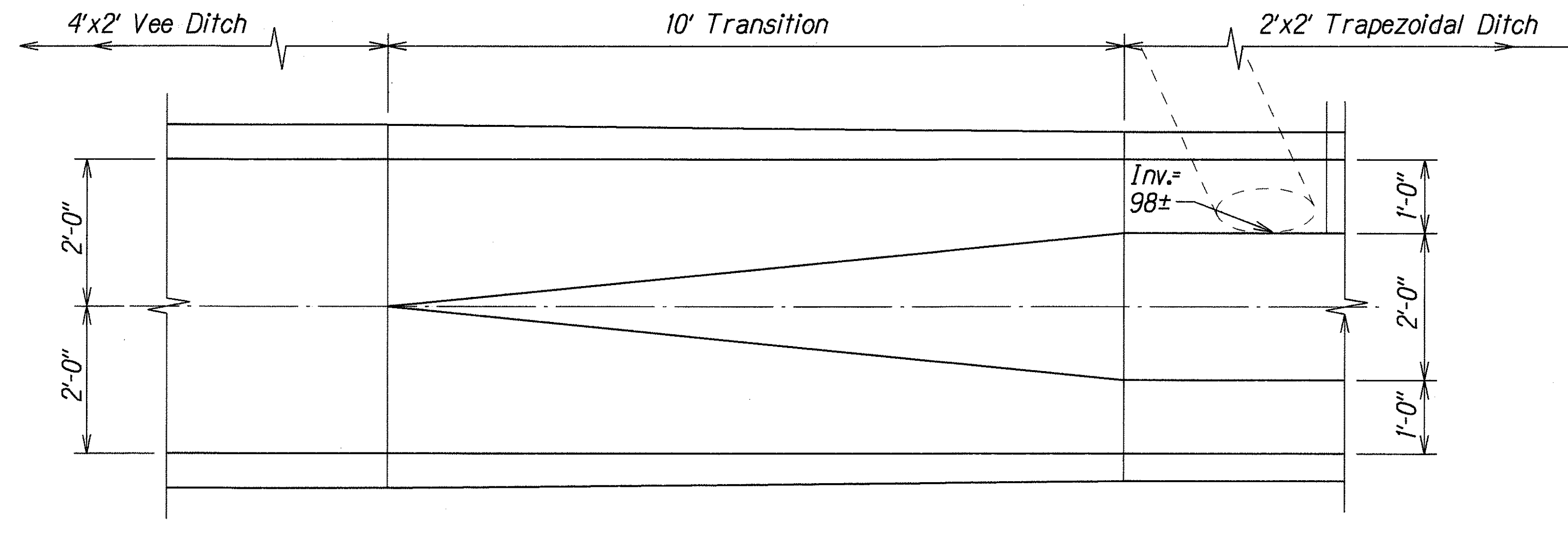


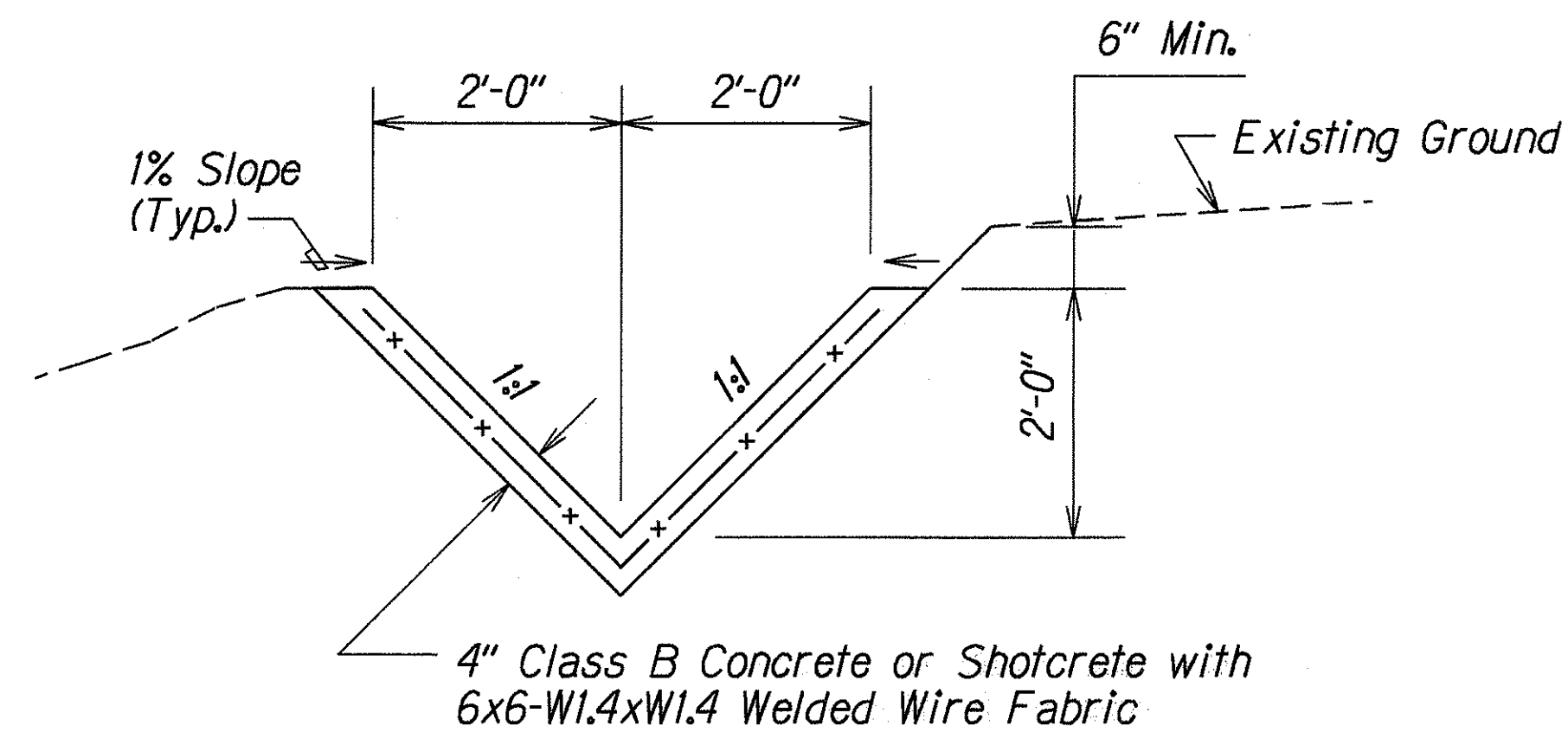
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	30	70

GENERAL NOTES:

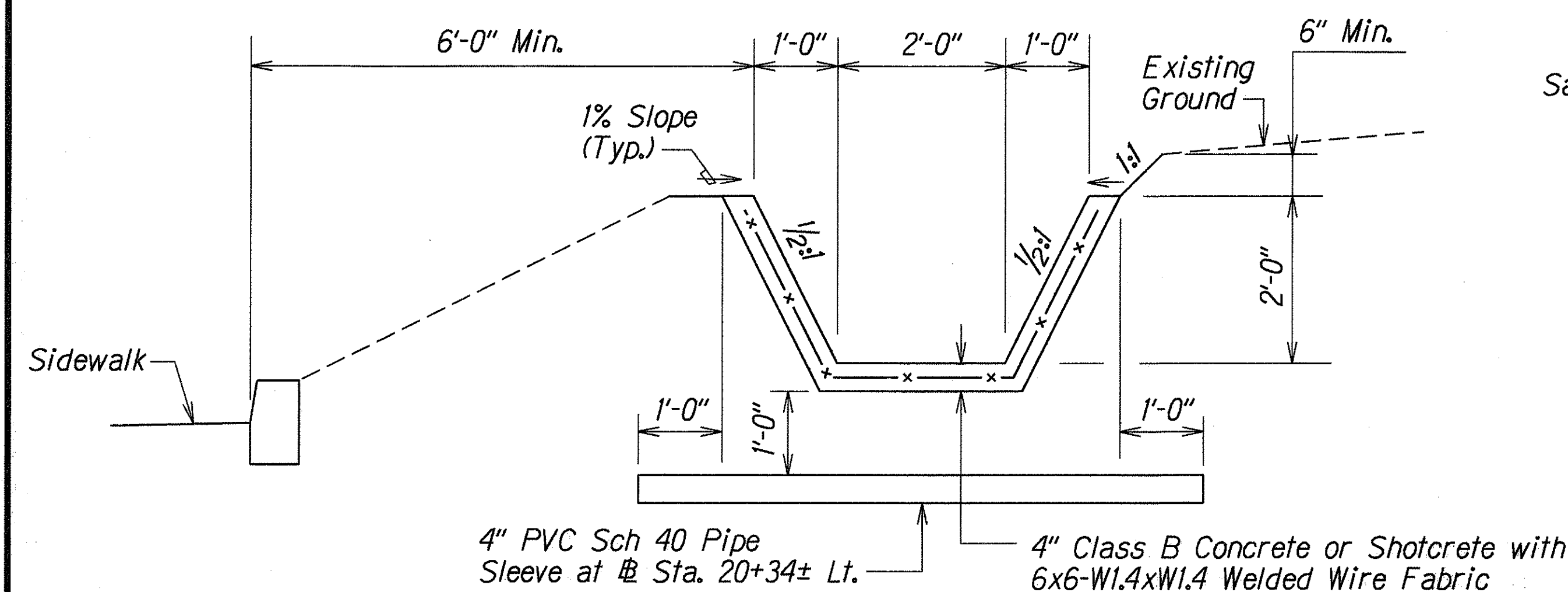
- Existing drainage systems will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. The cost for this work shall be incidental to the various Contract Items.
- The Contractor shall verify the locations of all existing culverts, underdrain and utilities in the field. Any existing culverts, underdrains and utilities damaged during construction shall be repaired or replaced by the Contractor at his expense.
- Only non-pneumatic type of drill as approved by the Engineer will be permitted for drilling holes in concrete. The approximate diameter of drilled holes for installation of dowels shall be $1\frac{1}{4}$ inches. After installing dowels, the voids shall be filled with epoxy grout as directed by the Engineer. Above work shall be considered incidental to the drainage structure.
- Whenever possible salvaged Frames and Covers shall be cleaned, painted and reused. Frames and Covers not used shall be returned to 727 Kakoi St., Honolulu, Hawaii 96819. Above work shall be considered incidental to the drainage structure.
- Concrete shall be Class A unless otherwise noted.
- Chamfer all exposed concrete edges 1".



TRANSITION PLAN



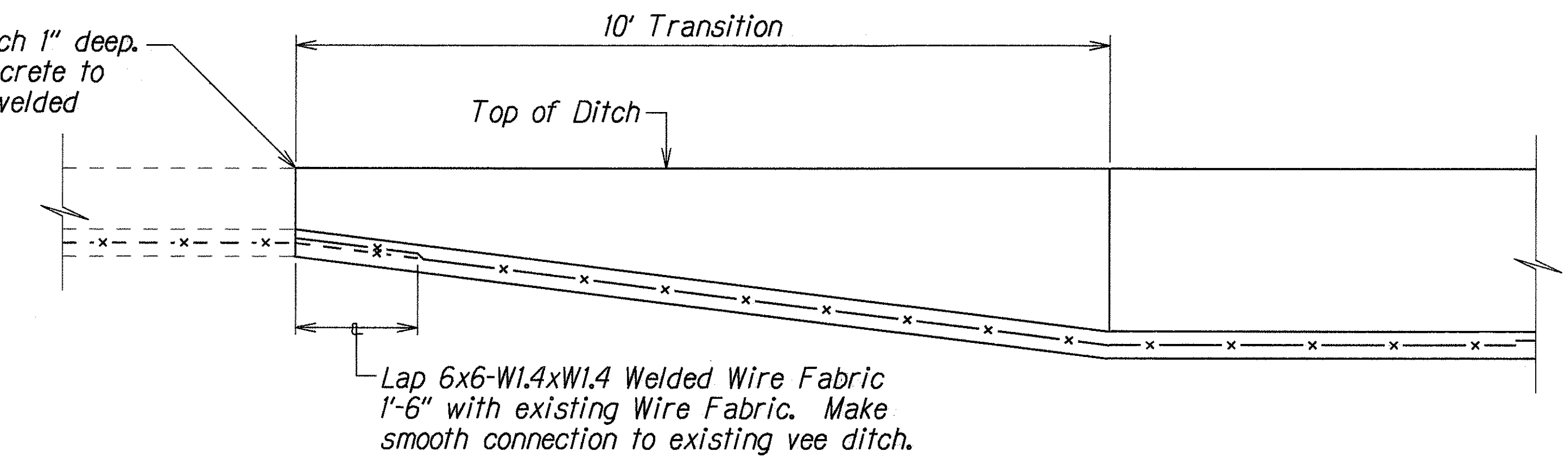
DETAIL OF 4 FT.x2 FT. LINED VEE DITCH



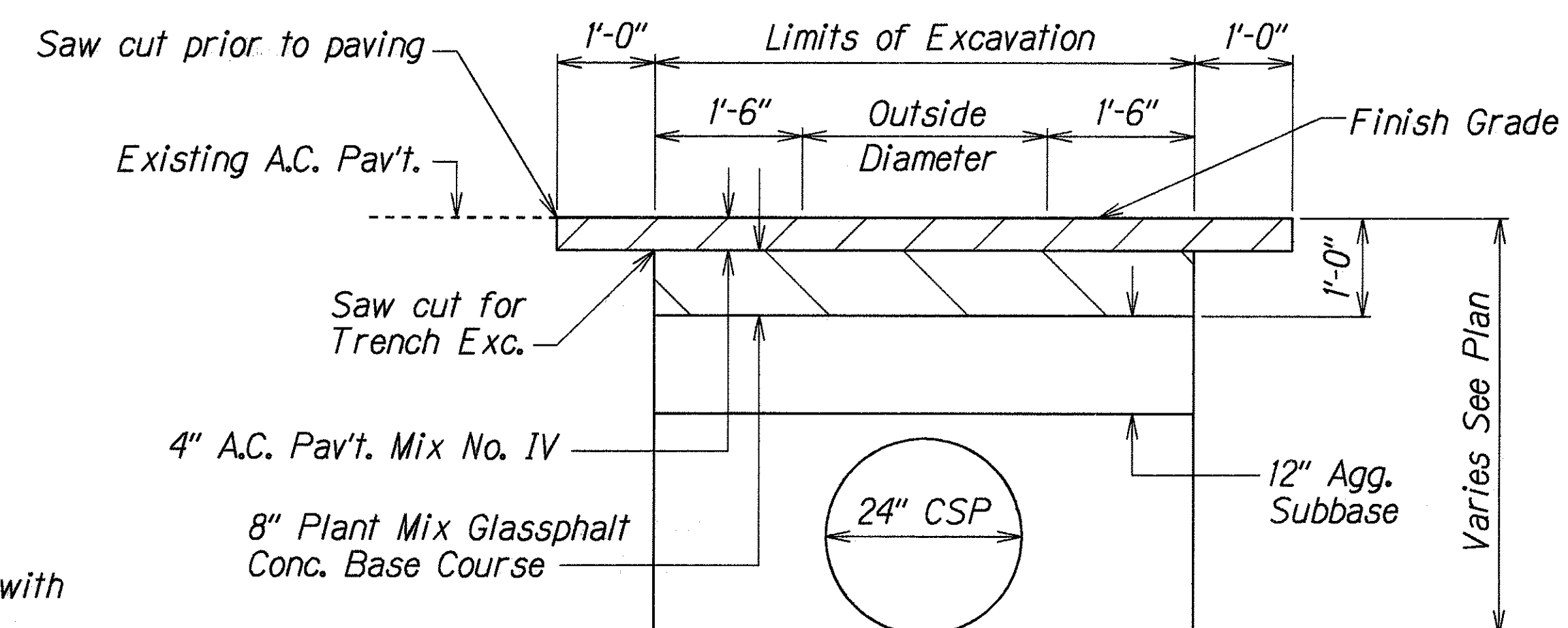
NOTE: 4" Pipe Sleeve shall be considered incidental to the Lined Trapezoidal Ditch

DETAIL OF 2 FT.x2 FT. LINED TRAPEZOIDAL DITCH

Saw cut existing vee ditch 1" deep. Demolish and remove concrete to expose 1'-6" of existing welded wire fabric.



CONNECTION TO EXISTING VEE DITCH



TRENCH AND A.C. PAV'T. RESTORATION DETAIL

NOTE:

Pavement restoration shall be paid for under the various contract items: A.C. Pavement Mix No. IV, Plant Mix Glassphalt Concrete Base Course, and Aggregate Subbase.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

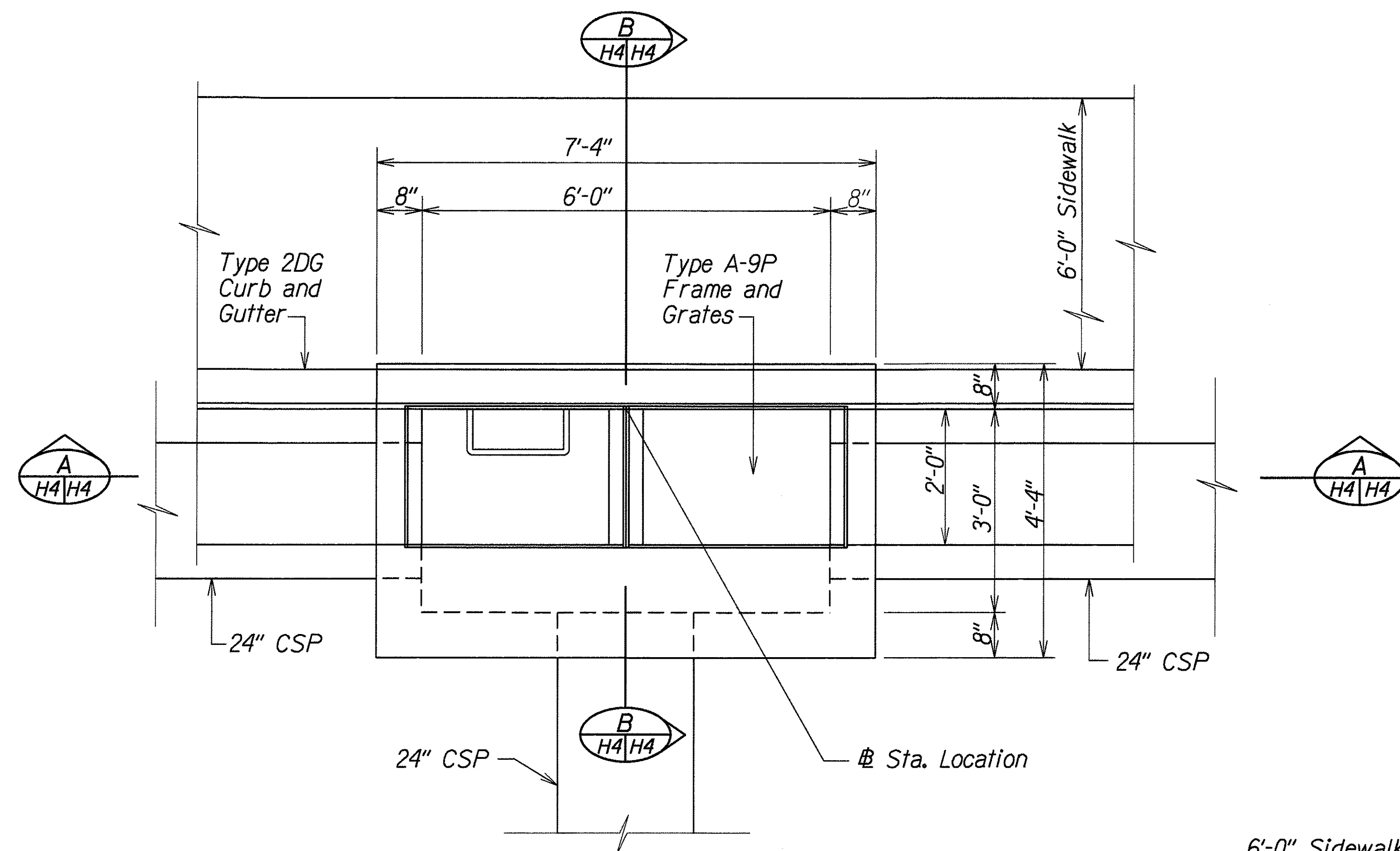
DRAINAGE DETAILS

ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
And
HALAWA VALLEY ROAD IMPROVEMENTS
Ulune Street to Iwaiwa Street
Fed. Aid Project No. STP-0300(39)

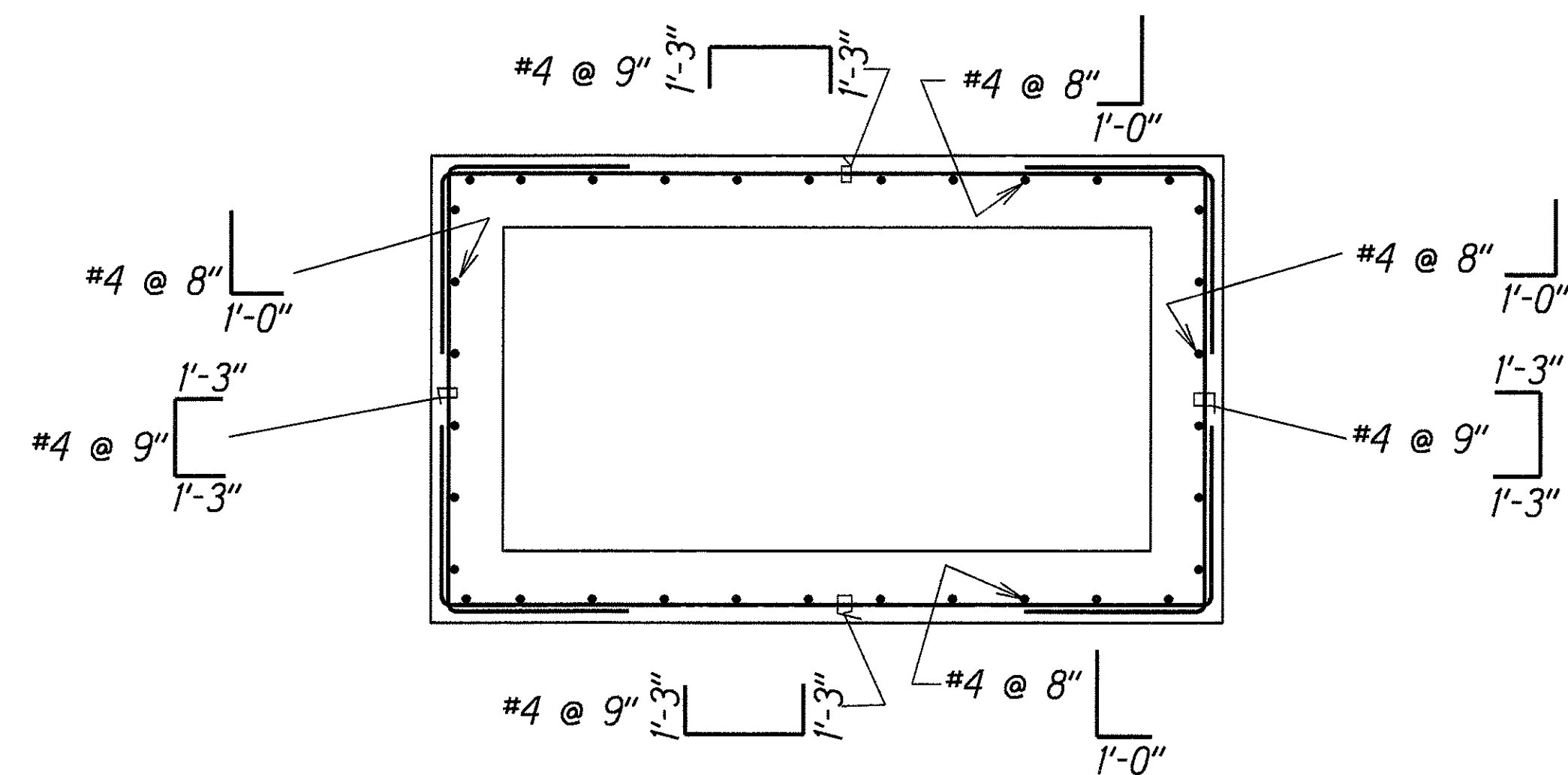
Scale: $\frac{3}{4}$ "=1'-0" Date: Feb., 1996

SHEET No. H3 OF 8 SHEETS

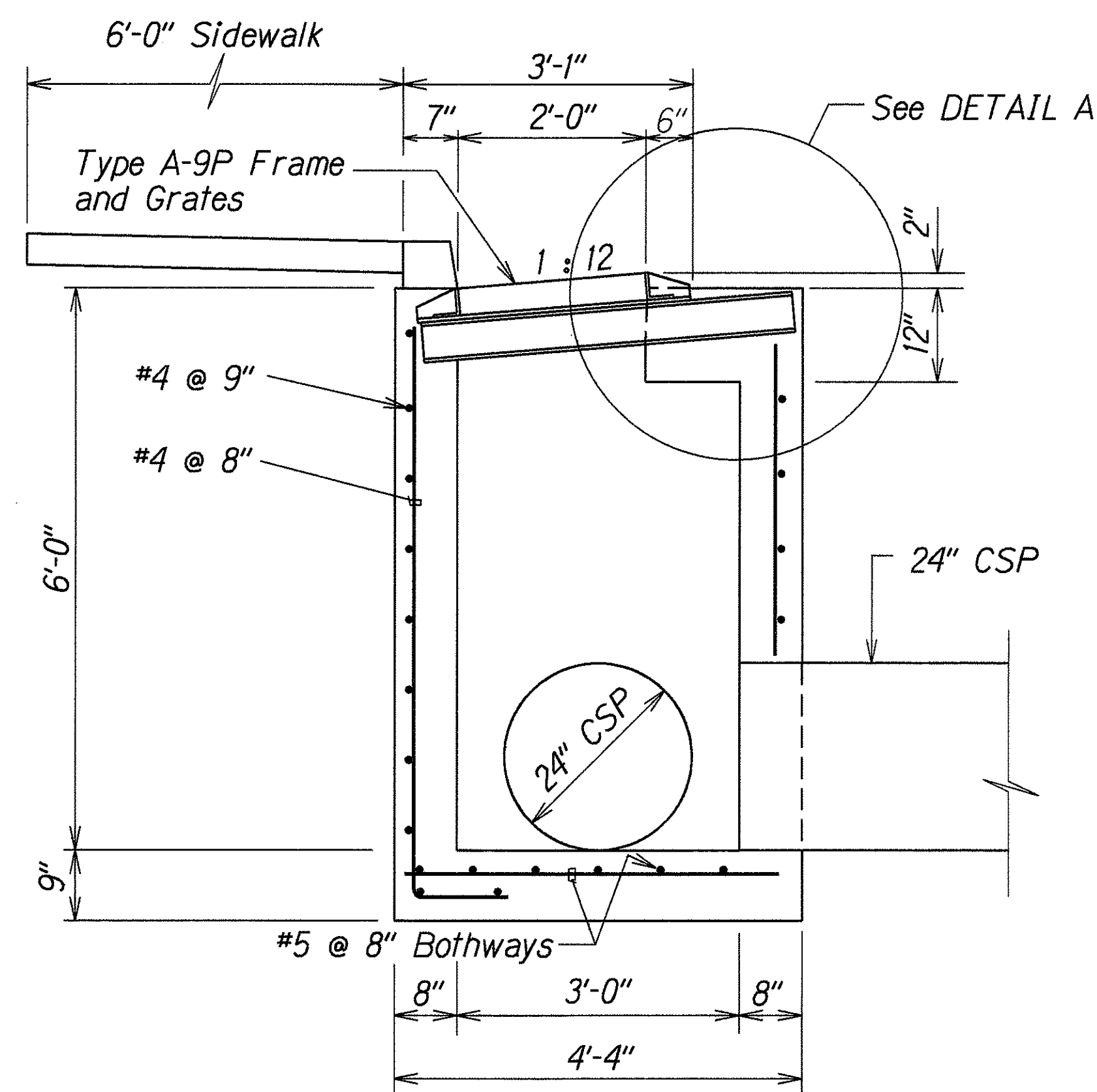
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	31	70



PLAN

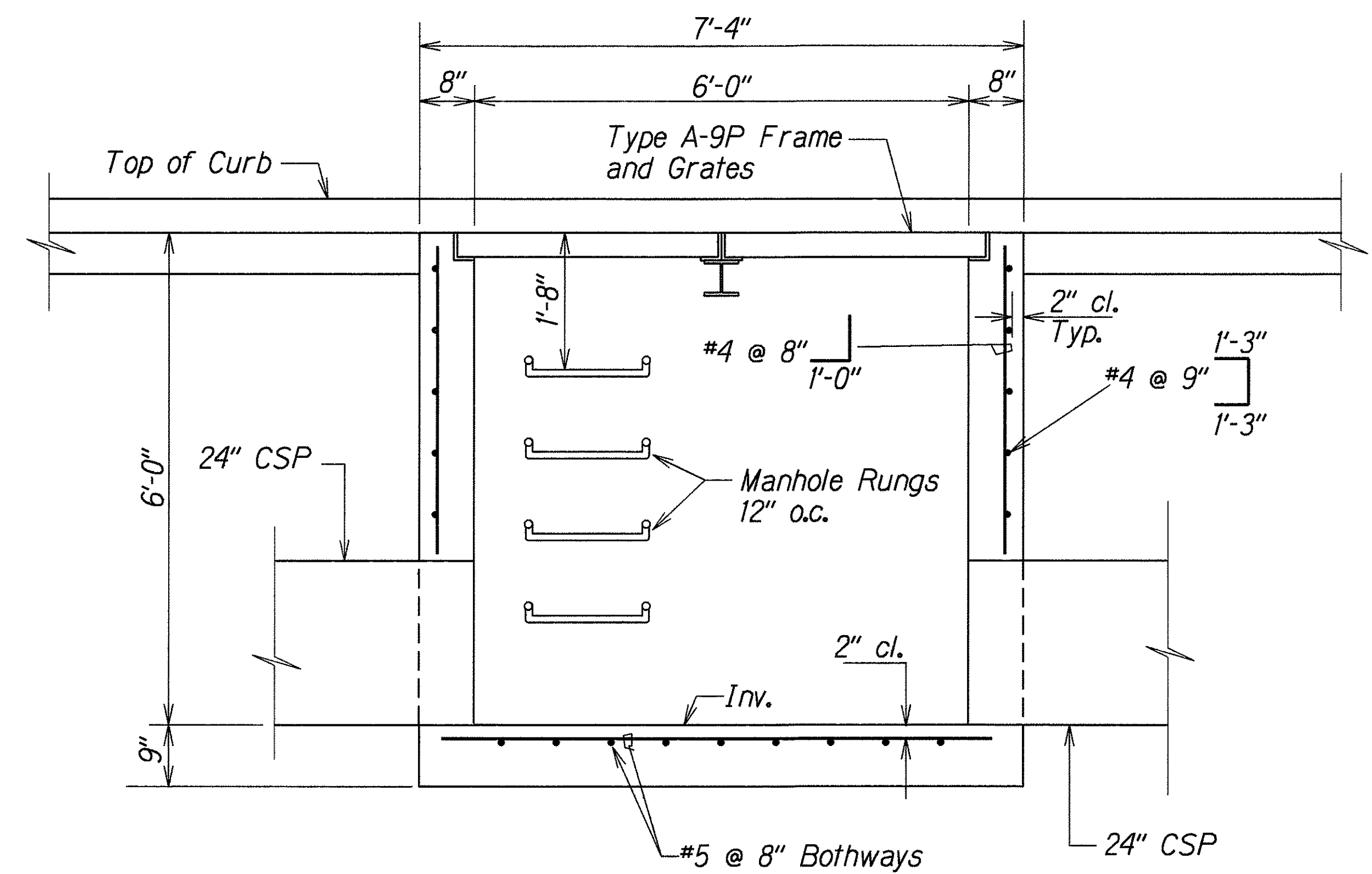


PLAN VIEW OF WALL REINFORCING

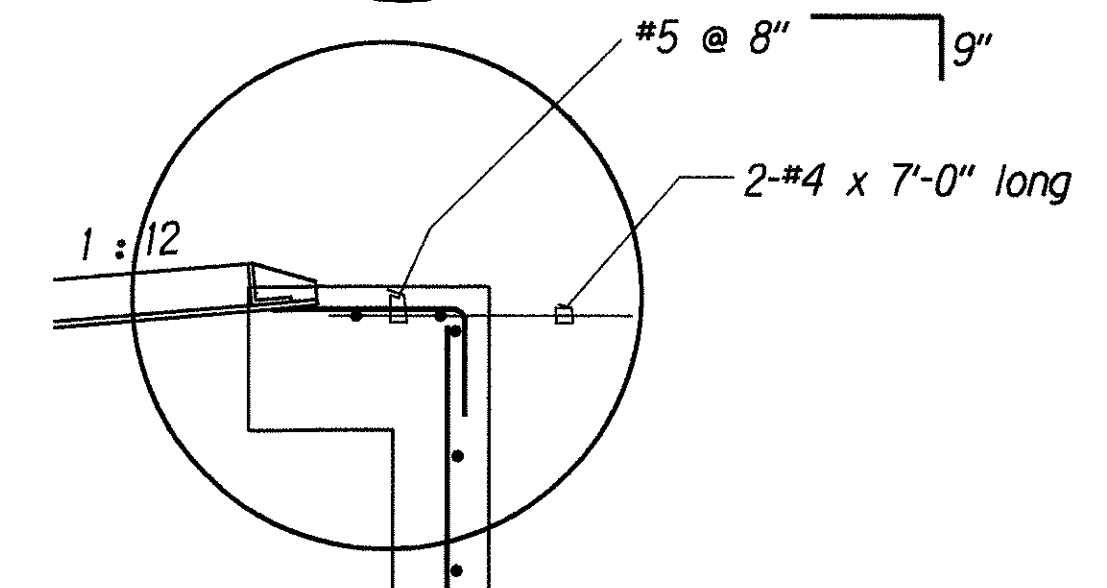


SECTION B H4/H4

DETAILS OF TYPE 2 GRATED DROP INLET



SECTION A H4/H4

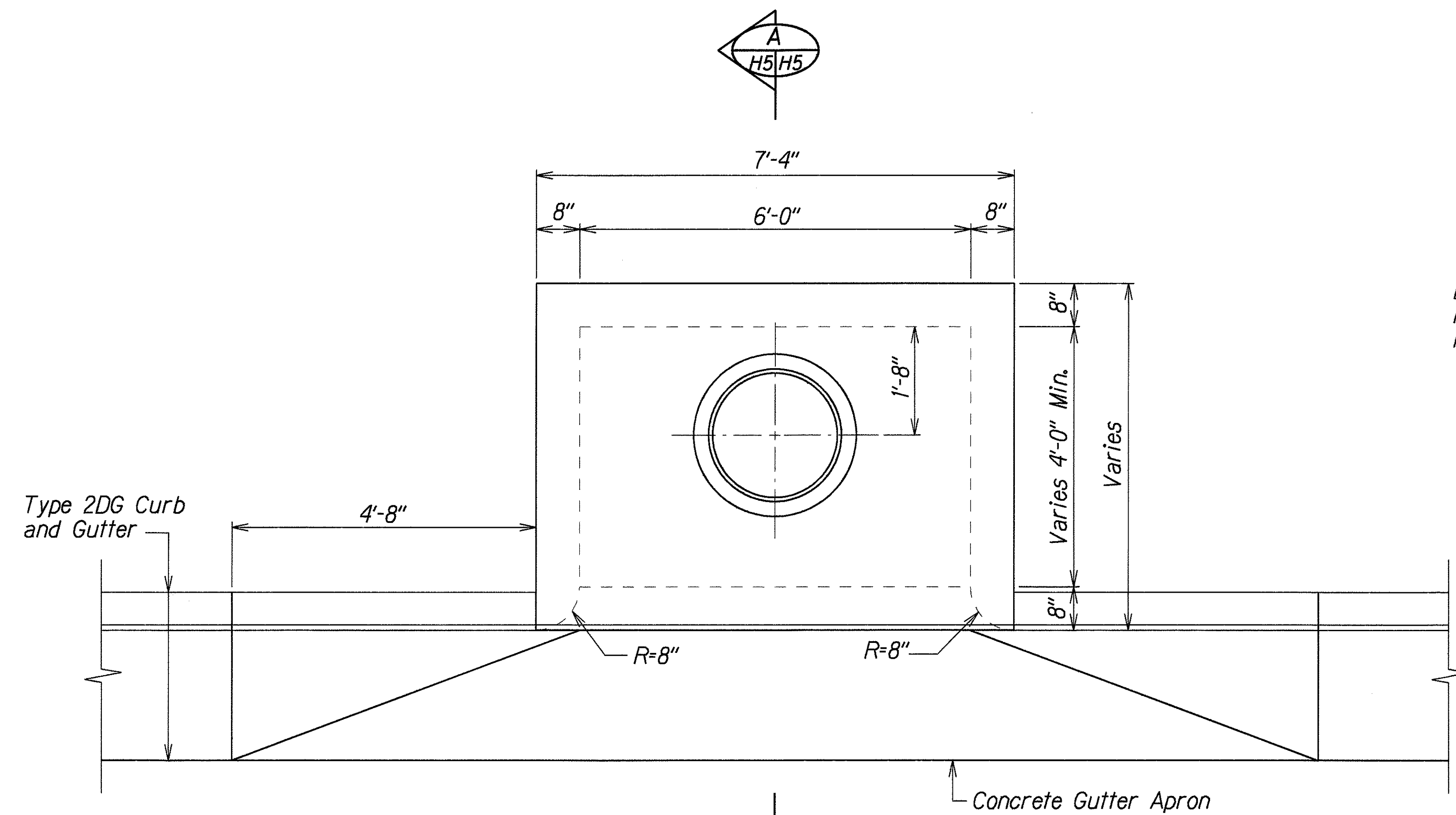


DETAIL A

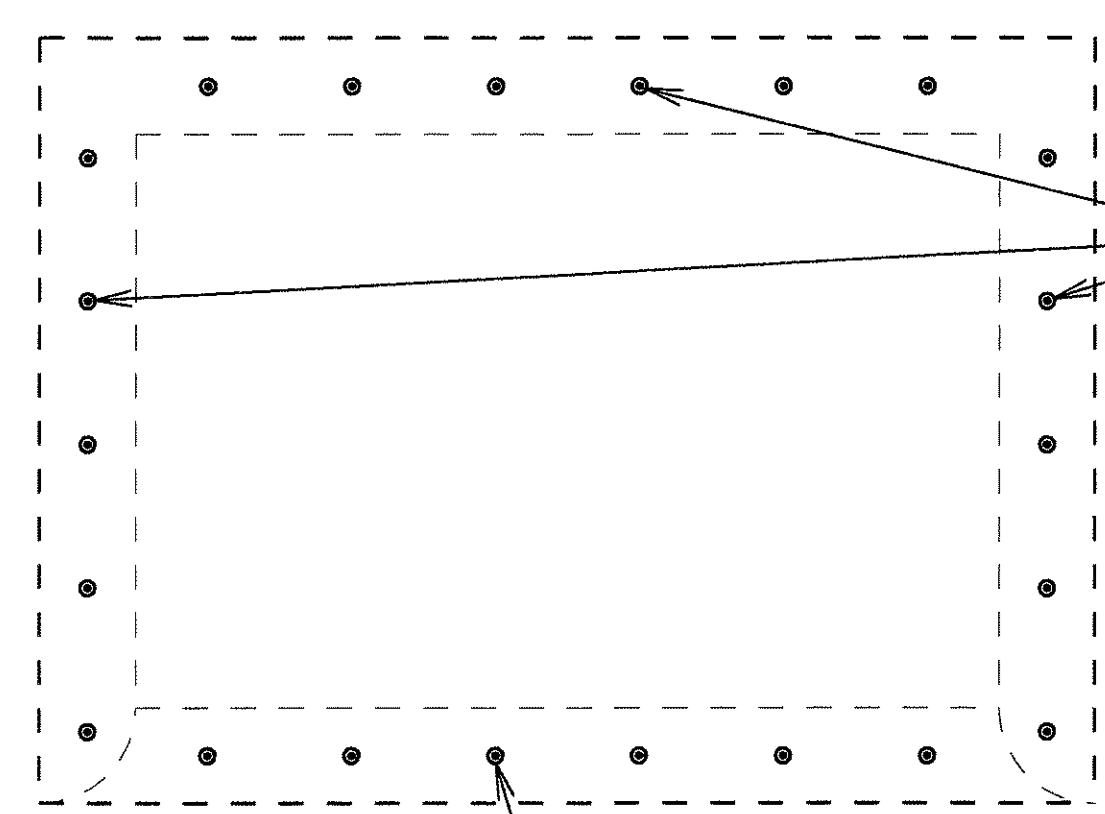
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	1/22/96
DRAWN BY	Russell Sato
DESIGNED BY	Roy Salas
CHECKED BY	Michael

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
And
HALAWA VALLEY ROAD IMPROVEMENTS
Ulune Street to Iwaiwa Street
Fed. Aid Project No. STP-0300(39)
Scale: 3/4"=1'-0" Date: Feb., 1996
SHEET No. H4 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	32	70



PLAN



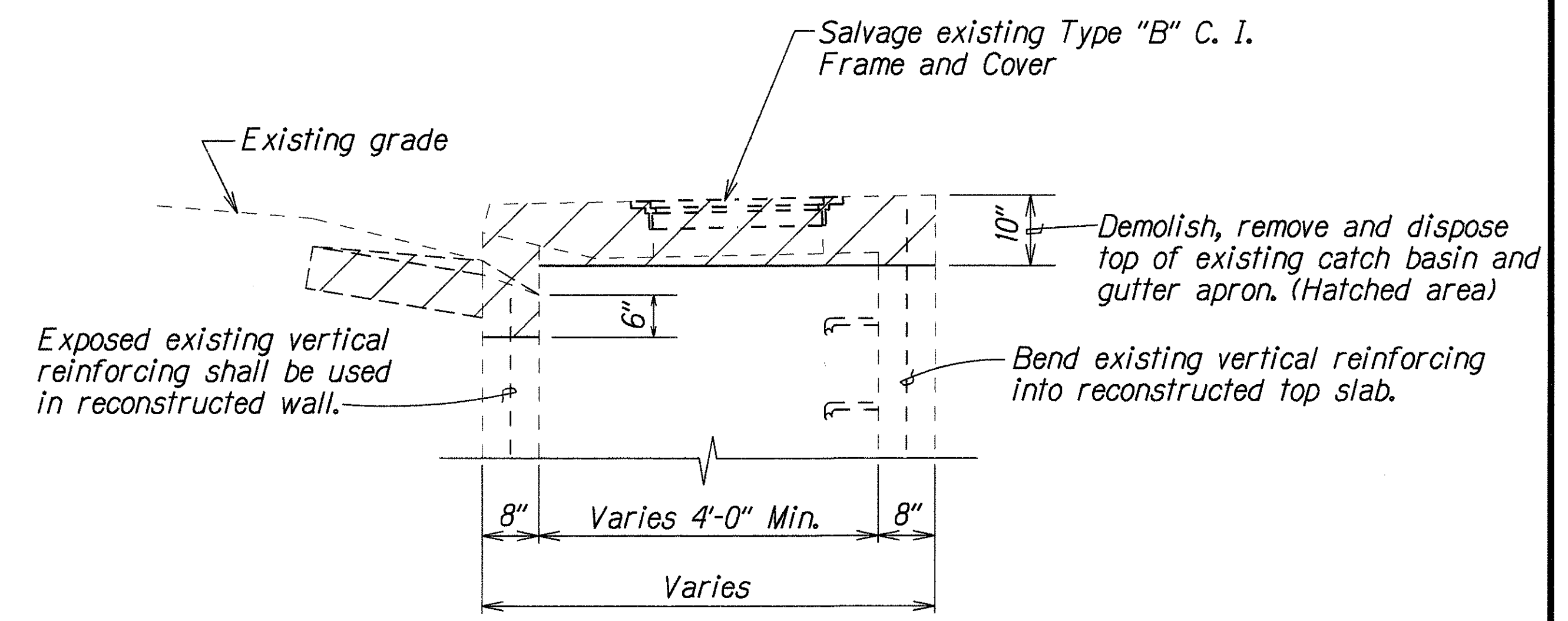
#5 dowels @ 12" o.c.
Bend as required

Dowels shall be located between existing vertical bars.

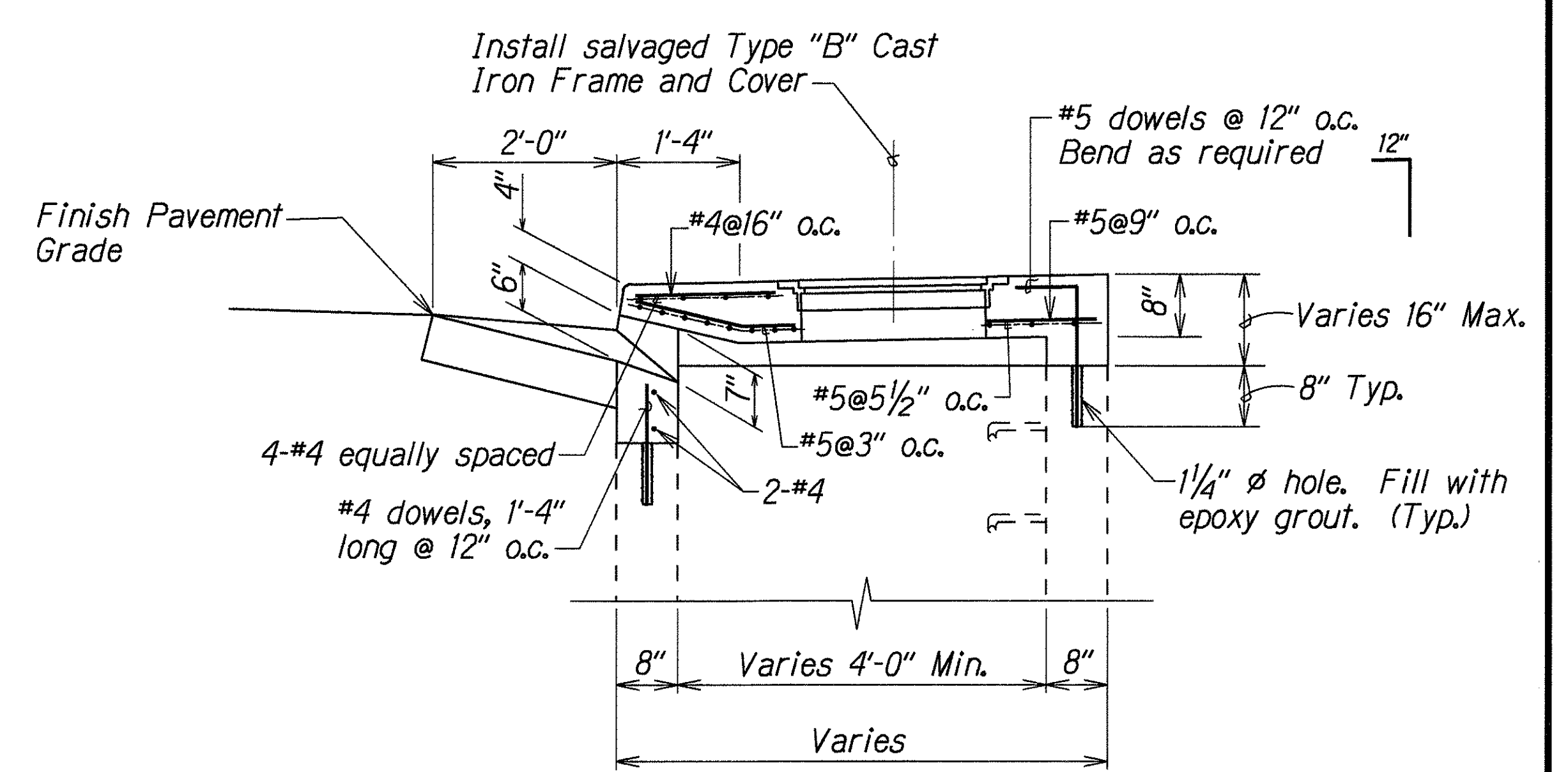
#4 dowels, 1'-4" long @ 12" o.c.

PLAN VIEW OF DOWEL LOCATION

DETAILS OF MODIFICATION TO TYPE "DM" CATCH BASIN



SECTION A
DEMOLITION PLAN



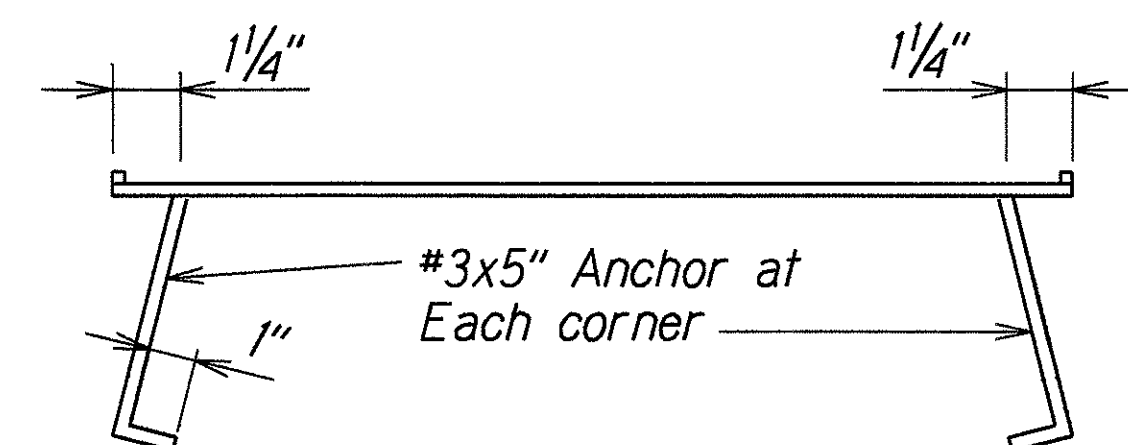
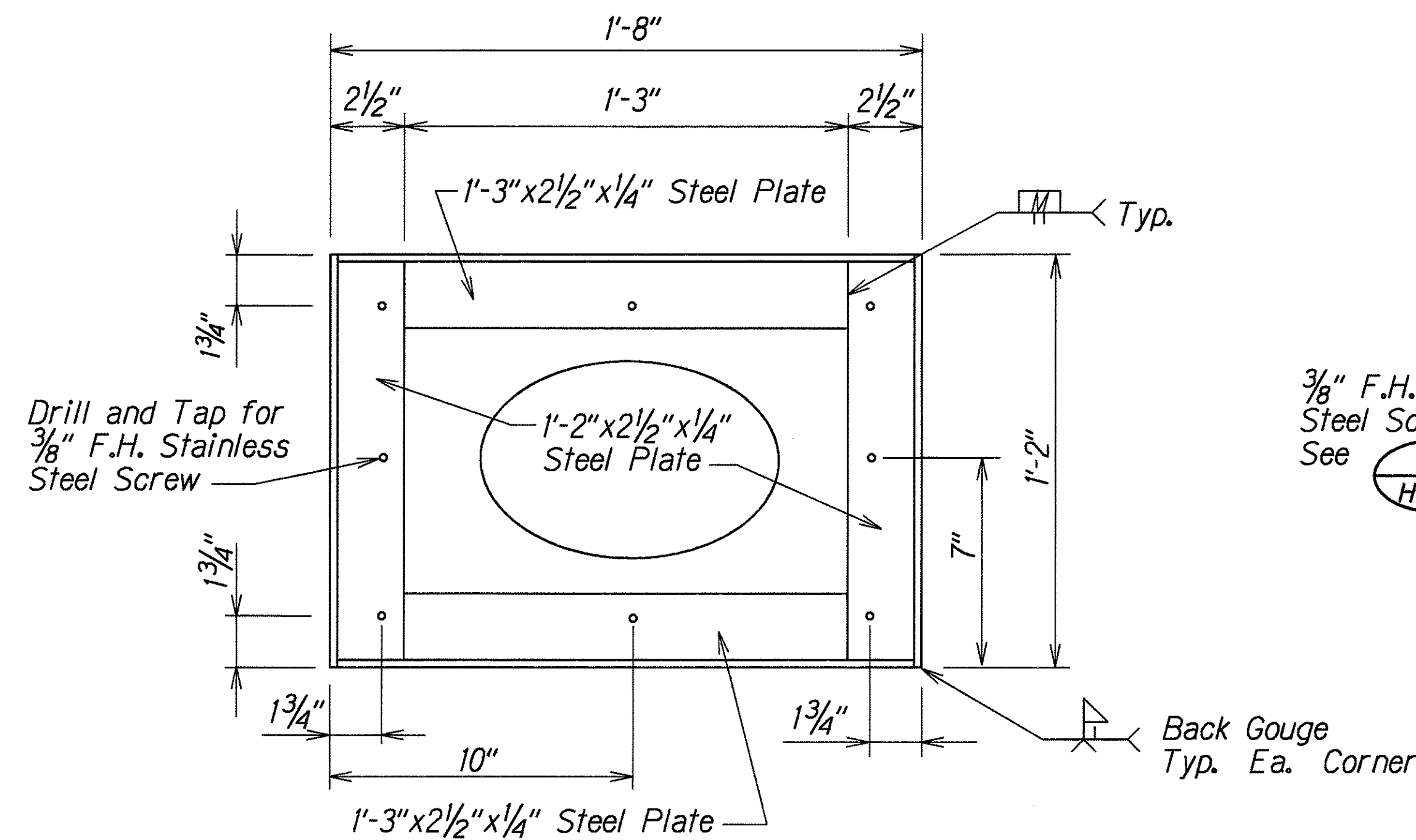
SECTION A
H5/H5

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION


DRAINAGE DETAILS
ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
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Ulune Street to Iwaiwa Street
Fed. Aid Project No. STP-0300(39)
Scale: 3/4"=1'-0" Date: Feb, 1996

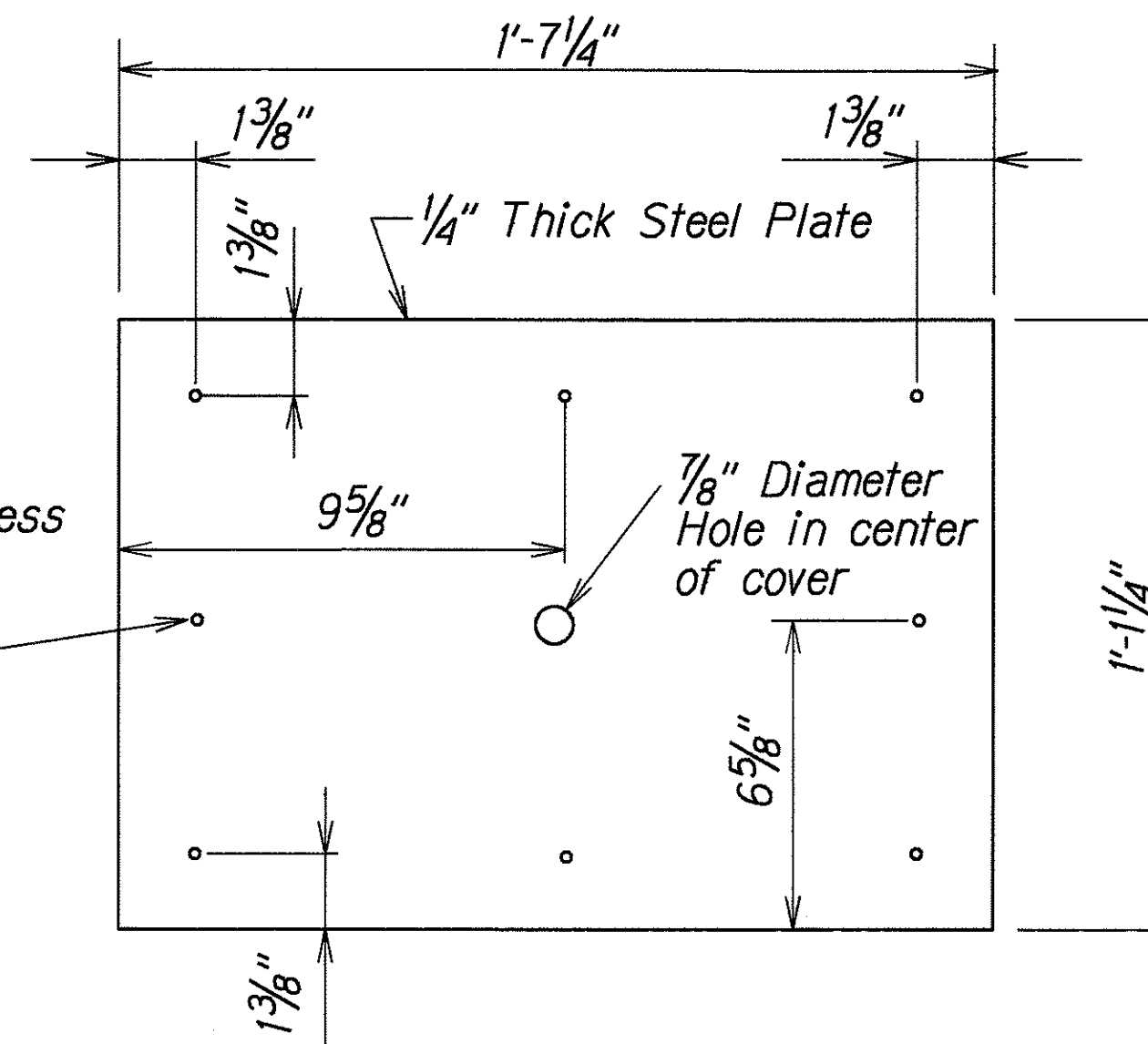
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
PLAN	DRAWN BY	DATE
NOTE BOOK	DESIGNED BY	DATE
CHITRUS	QUANTITIES BY	DATE
1/2"=1'-0"	CHECKED BY	DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	34	70



DETAIL OF STEEL FRAME

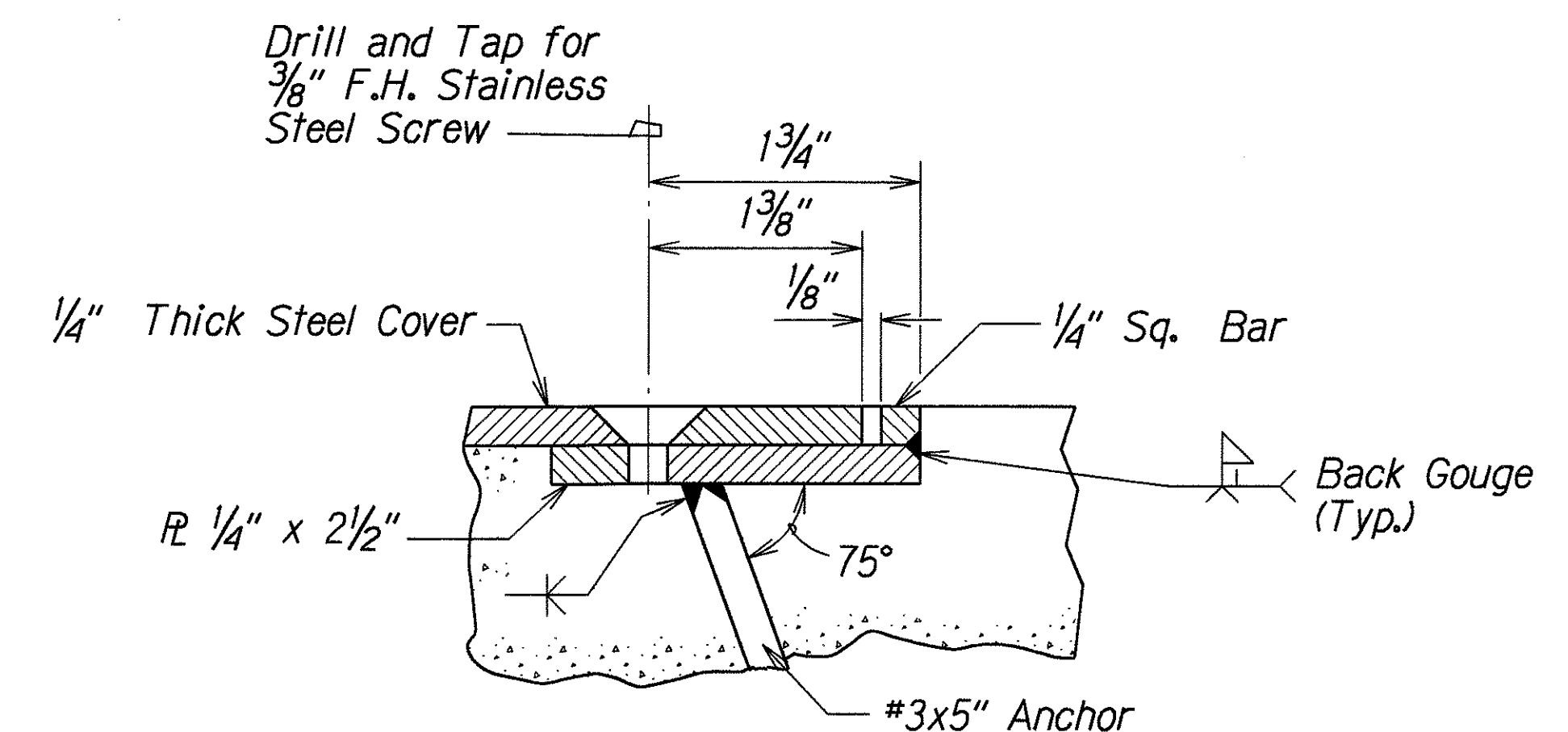
3/8" F.H. Stainless Steel Screws. See 



PLAN

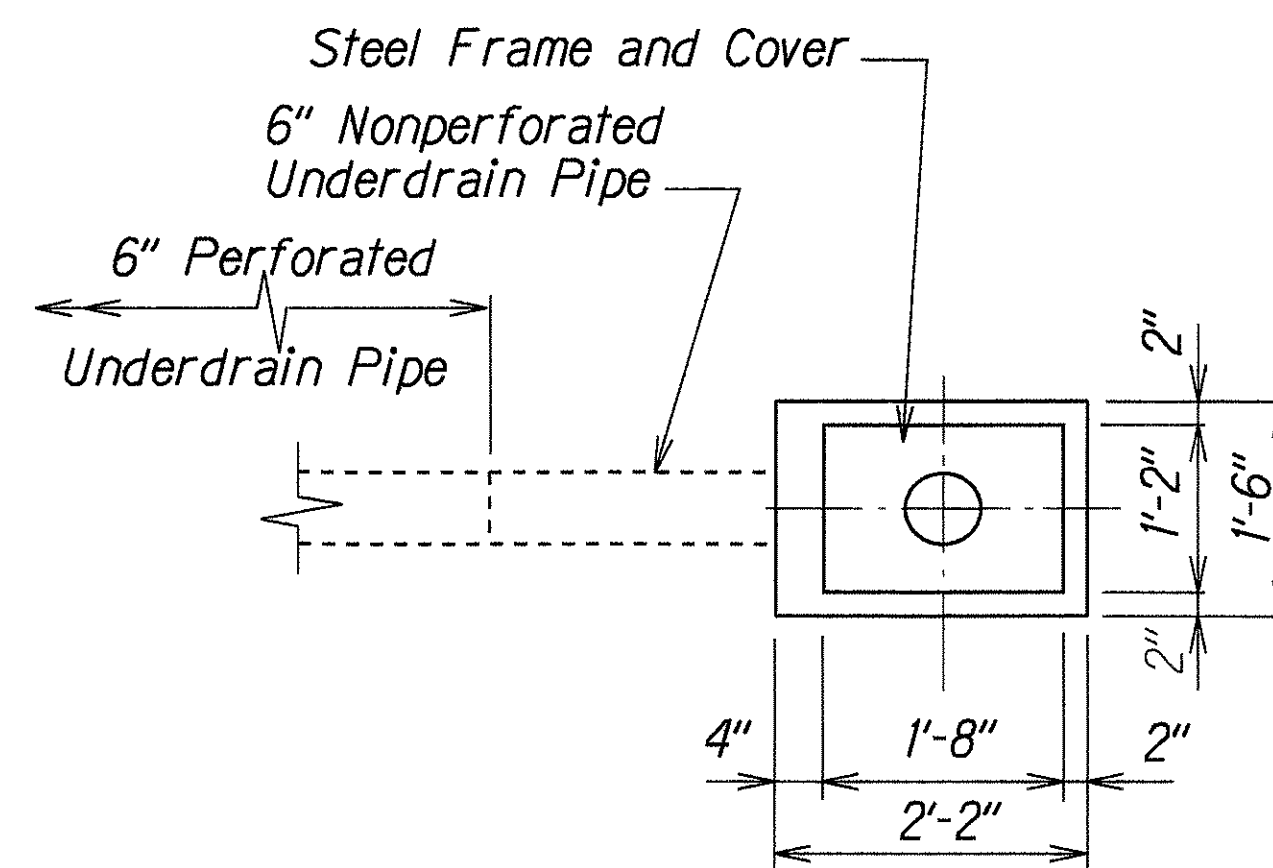
DETAIL OF STEEL COVER

NOTE:
All Steel Parts Shall Be Galvanized in Accordance with the Requirements of ASTM A123.



DETAILS OF STEEL FRAME AND COVER FOR CLEANOUT

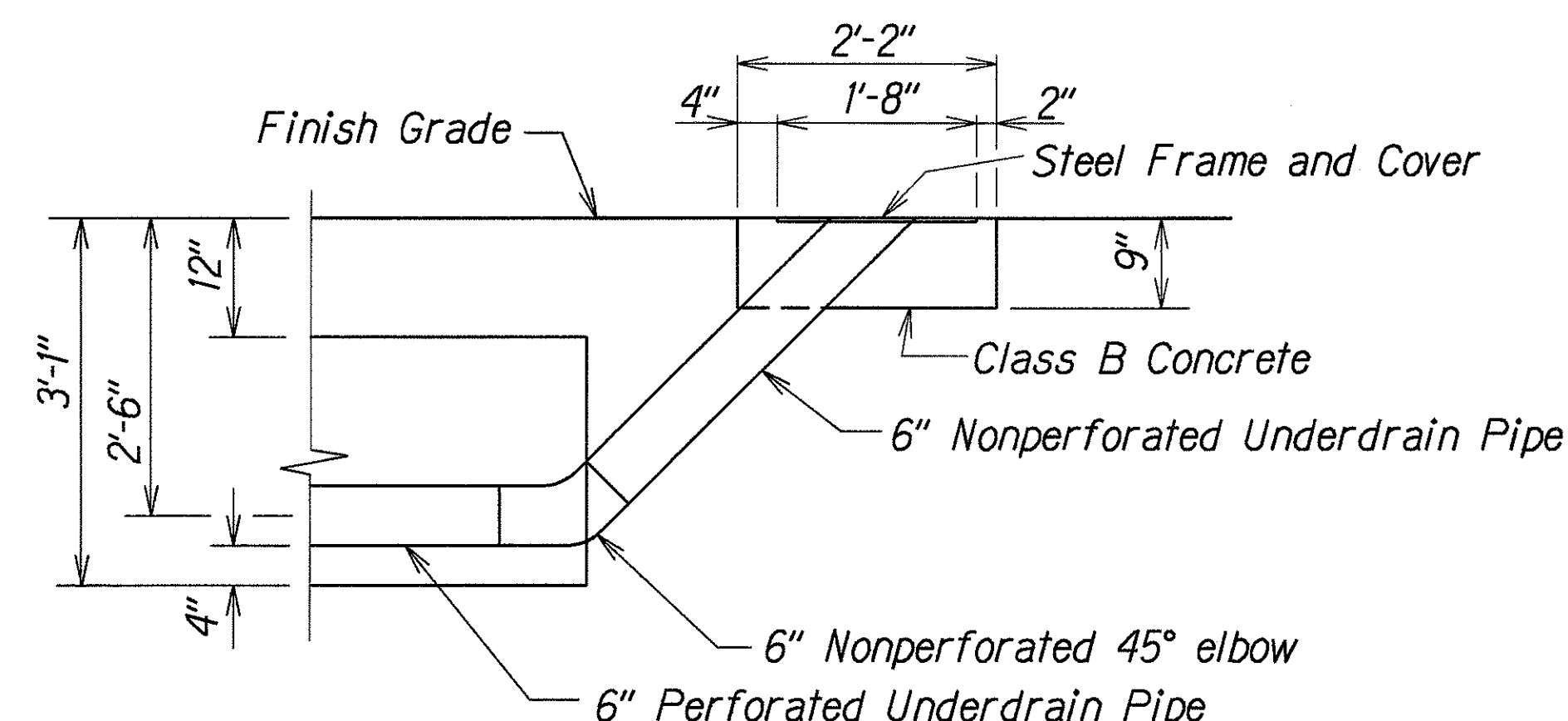
Scale: 3"=1'-0"



PLAN

TYPICAL DETAILS OF CLEANOUT

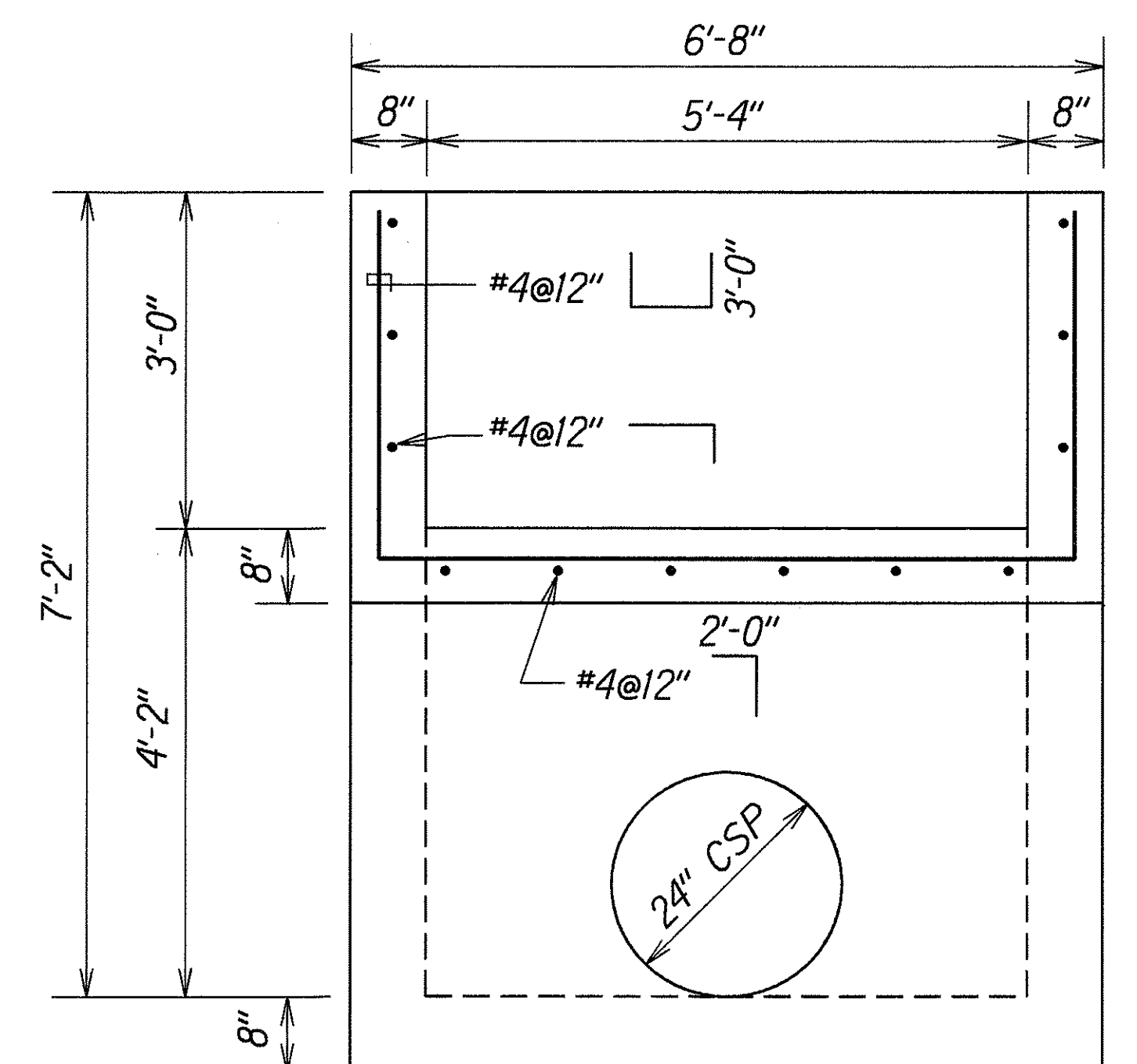
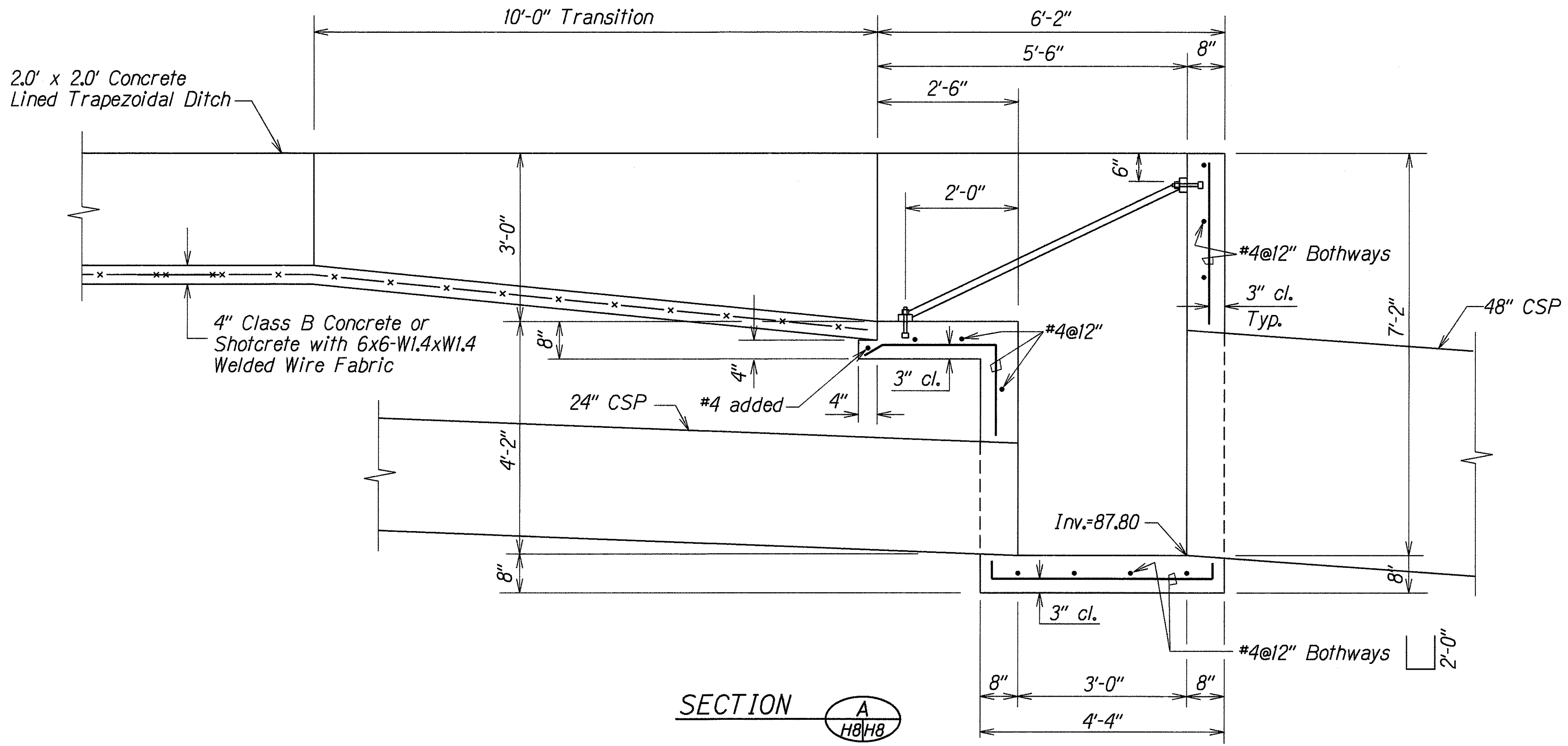
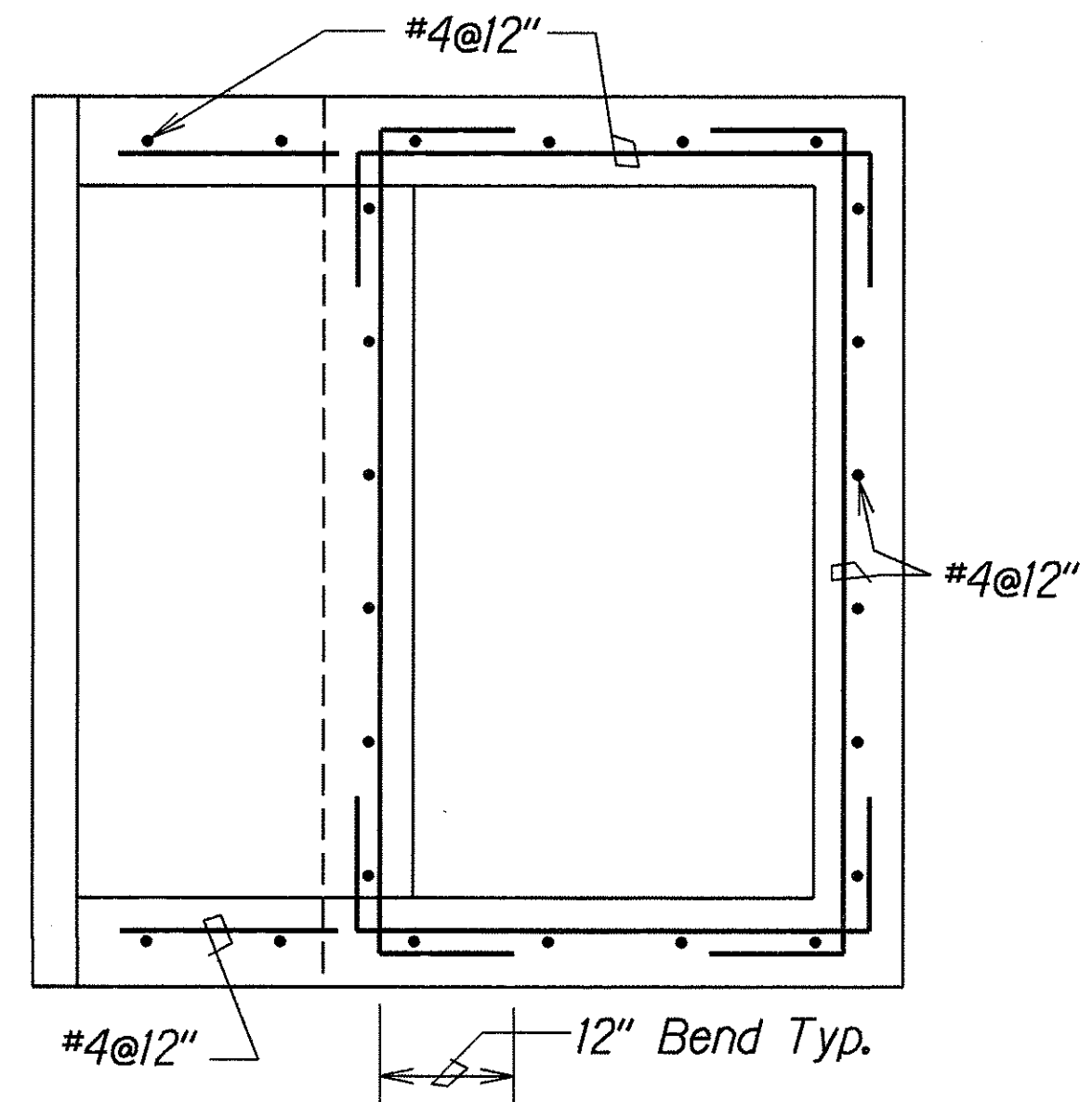
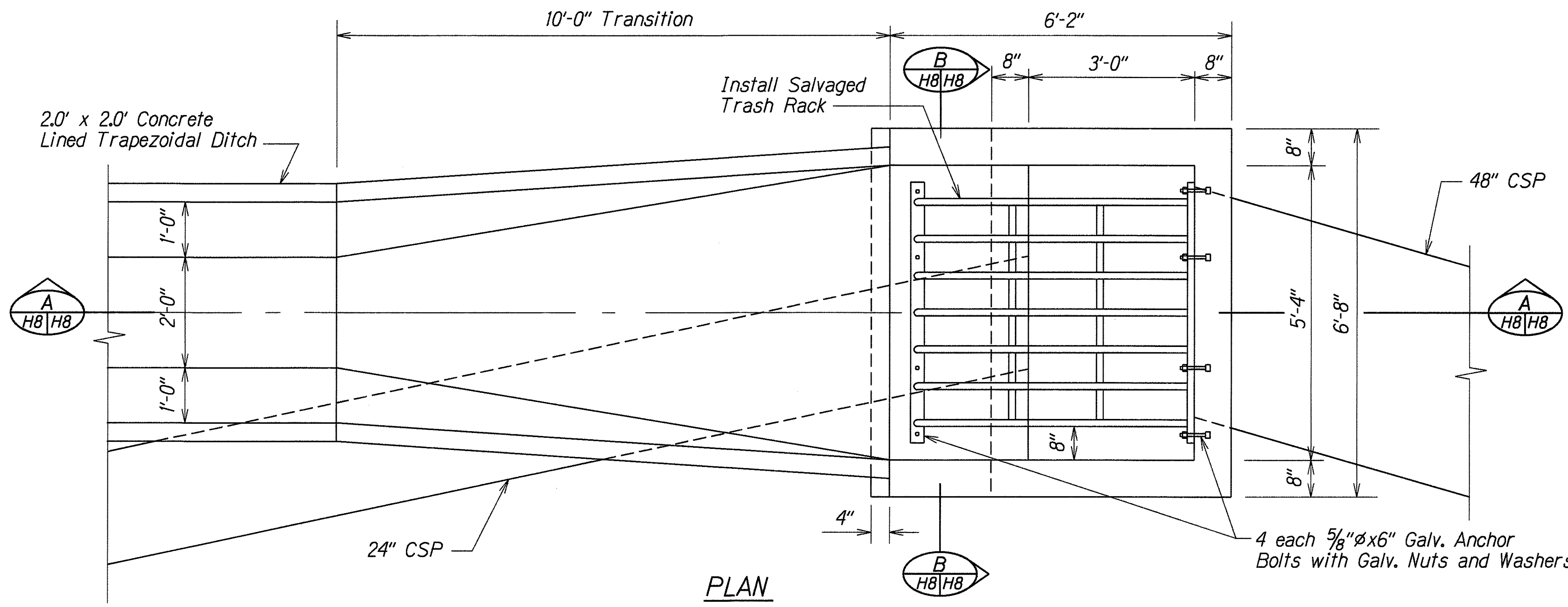
Scale: 3/4"=1'-0"



ELEVATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
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Halawa Hts. Rd. to Halawa Valley Rd.
And
HALAWA VALLEY ROAD IMPROVEMENTS
Ulune Street to Iwaiwa Street
Fed. Aid Project No. STP-0300(39)
Scale: As Shown Date: Feb., 1996
SHEET No. H7 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	35	70



DETAIL OF INLET STRUCTURE AT STA. 21+00 O/S 42± LT.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	2/15/96
DRAWN BY	L. Cockrell, A. Namura
TRACED BY	Boy Saramago
NOTED BY	dhruv
CHECKED BY	dhruv

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
And
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Ulune Street to Iwaiwa Street
Fed. Aid Project No. STP-0300(39)

Scale: 3/4"=1'-0" Date: Feb., 1996

SHEET No. H8 OF 8 SHEETS