

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-I(27)	1992	ADD.64	223

GENERAL NOTES

DESIGN SPECIFICATIONS -- AASHTO:

AASHTO Standard Specifications for Highway Bridges (14th edition), with subsequent Interim Specification 1991.

DESIGN LIVE LOAD:

HS-20-44 or Interstate Loading.

ALLOWABLE DESIGN STRESSES:

- Reinforced concrete: $f_c = 0.40 f'_c$
- Reinforced steel: $f_s = 20,000$ psi for Grade 40; 24,000 psi for Grade 60
- Except as noted otherwise, all structural steel plates and members shall conform to ASTM A 36 and be hot-dip galvanized after fabrication.

MATERIALS:

- Reinforced concrete: Class A
- Reinforced steel: ASTM A 615, Grade 40 or Grade 60
- Admixture in concrete: see Special Provisions
- All expansion and premolded joint filler shall be incidental to concrete and will not be paid for separately.

CONSTRUCTION METHODS:

- Refer to Standard Specifications for Road and Bridge Construction, 1985 Edition and Special Provisions.
- In the installation of anchor bolts for highway lighting standards and expressway signs, the Contractor shall provide rigid templates to maintain the proper locations and protection of such anchor bolts at all times during the period of construction. Exact methods shall be approved by the Engineer.
- Except as noted otherwise, all vertical dimensions are measured plumb.
- For concrete finish, see Special Provisions.
- Pneumatic or impacting type of equipment will not be permitted for drilling of holes.
- Top of existing concrete median barrier shall be cleaned and wetted down before pouring the glare screen.
- Contraction and expansion joints shall be placed in the concrete glare screen at locations identical to those of the concrete median barrier.
- All welds shall be 1/4 inch, unless noted otherwise.

REFERENCE:

- Refer to Standard Plans for additional details and notes not covered by details and typical drawings.

GENERAL:

- All items noted incidental will not be paid for separately.
- The Contractor shall verify the locations of all existing utility lines and notify their respective owners before commencing with any work.
- The Contractor shall verify all grades and dimensions in the field before commencing with any work.
- The Contractor shall be solely responsible for the protection of adjacent property, utility and existing and new structures from damage due to construction and repair any damage at his own expense, to the satisfaction of the Engineer. He shall conduct his work in such a manner and provide such temporary shoring or other measures as may be necessary to insure the safety of all concerned.
- Excavation for all footings and stems shall be accomplished by maintaining as near a vertical cut as possible.
- In the event of over-excavation, the space between the footing and ground shall be filled with a minimum of class D concrete at the Contractor's expense and as directed by the Engineer.
- Unless noted otherwise, chamfer all exposed concrete edges three quarters (3/4") of an inch.

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITIES
206.5000	Structural Excavation For Retaining Walls	Cu. Yd.	23,200 cy.
206.7250	Structural Backfill For Retaining Walls	Cu. Yd.	21,833 cy.
503.1051	Concrete In Retaining Walls	Lump Sum	(7,912 cy.)
507.7020	Conc. Barriers And End Posts For Retaining Walls	Lin. Ft.	5,100 lf.
602.0050	Reinforcing Steel In Retaining Walls	Lump Sum	(905,889 lbs.)
646.1000	Geocomposite Drain	Sq. Yd.	5,079 sy.
646.2000	4-Inch Perforated Drain Pipe	Lin. Ft.	8604 lf.

SURVEY PLOTTED BY	DATE
DRAWN BY	SEPT 1991
DESIGNED BY	SEPT 1991
QUANTITIES BY	SEPT 1991
CHECKED BY	SEPT 1991



8/11/92 DATE	Removed note no. 8 from General notes. Revised estimated quantity REVISION	Scale: As Noted SHEET No. R1 OF 28 SHEETS
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

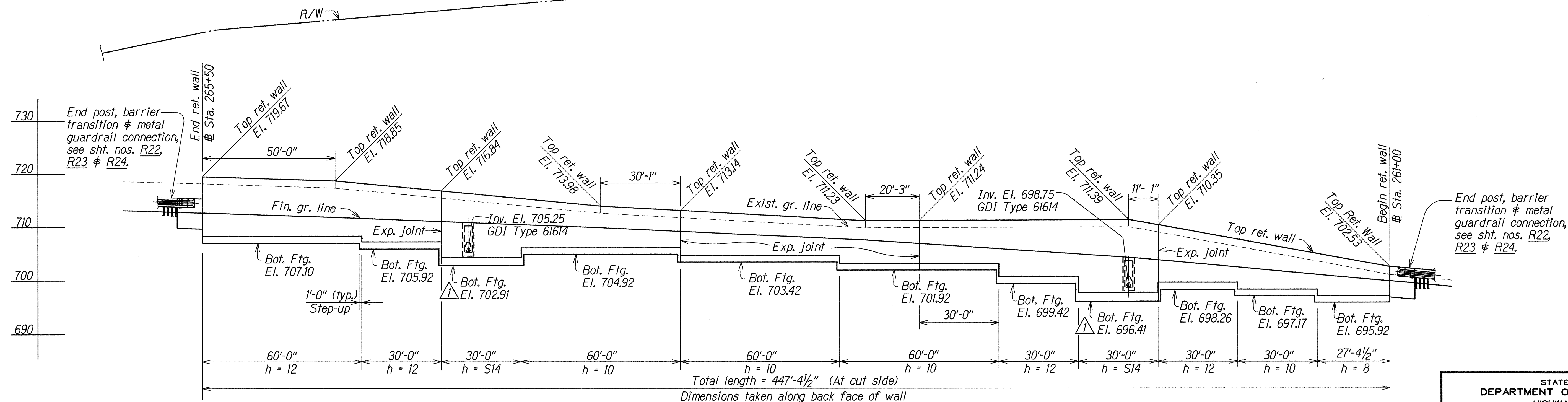
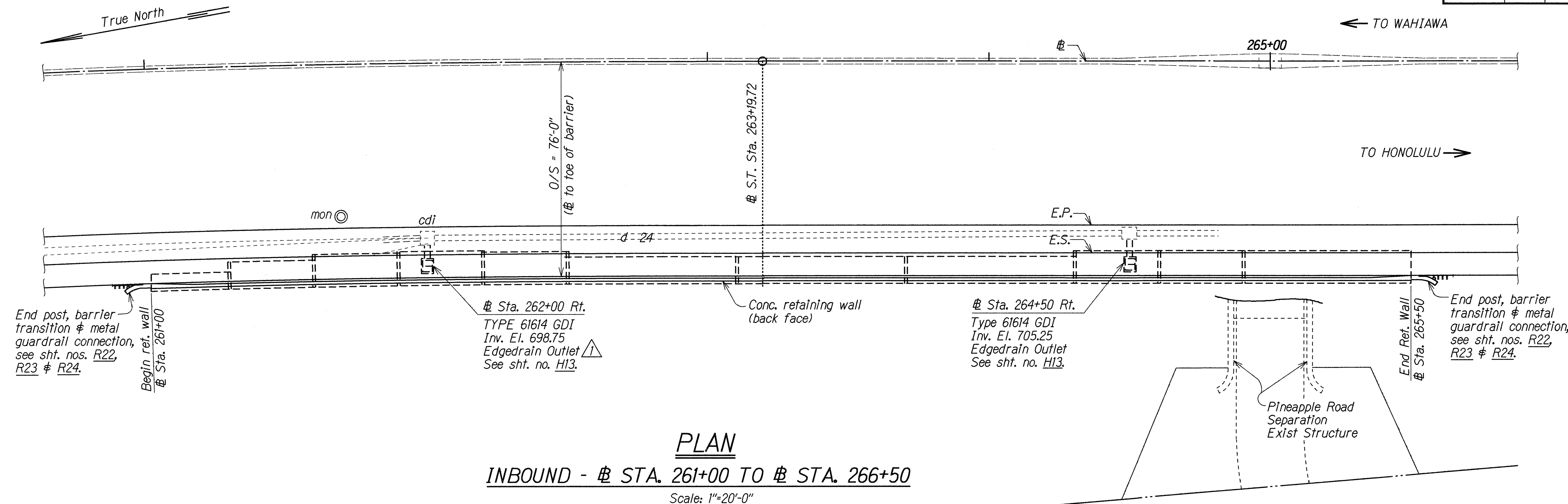
RETAINING WALLS

GENERAL NOTES & ESTIMATED QUANTITIES

INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILITARY INTERCHANGE TO WAIPIO INTERCHANGE
Project No. IR-H2-I(27)

Date: Apr, 1992

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	ADD.65	223



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL
PLAN AND ELEVATION
1.B - STA. 261+00 TO STA. 266+50
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. 1R-H2-1(27)

Scale: As Noted Date: Apr. 1992

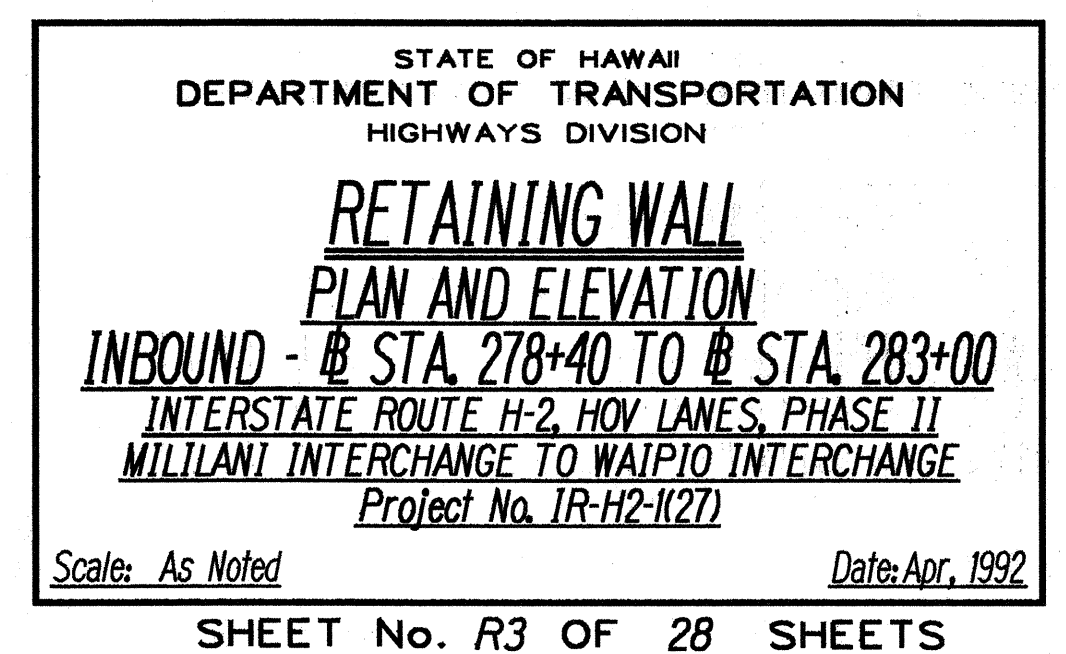
8/11/92	Changed bottom footing elevations & corrected spelling.
DATE	REVISION

SHEET No. R2 OF 28 SHEETS

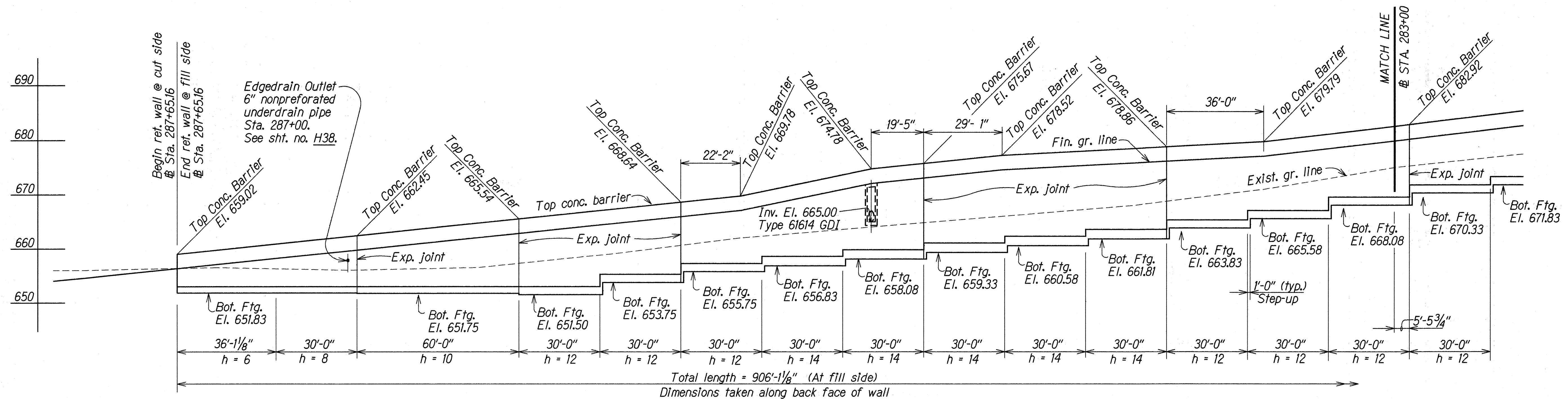
ADD. 65

ORIGINAL PLAN	DATE	SEPT 92
DESIGNED BY	DESIGNED BY	DESIGNED BY
CHECKED BY	CHECKED BY	CHECKED BY
DATE	DATE	DATE

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DESIGN FILE	DRAWN BY	LMA	XXX 1991
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	DESIGNED BY	DKT	XXX 1991
	QUANTITIES BY	DKT	XXX 1991
No. 12/20122	CHECKED BY	XXX	XXX 1991

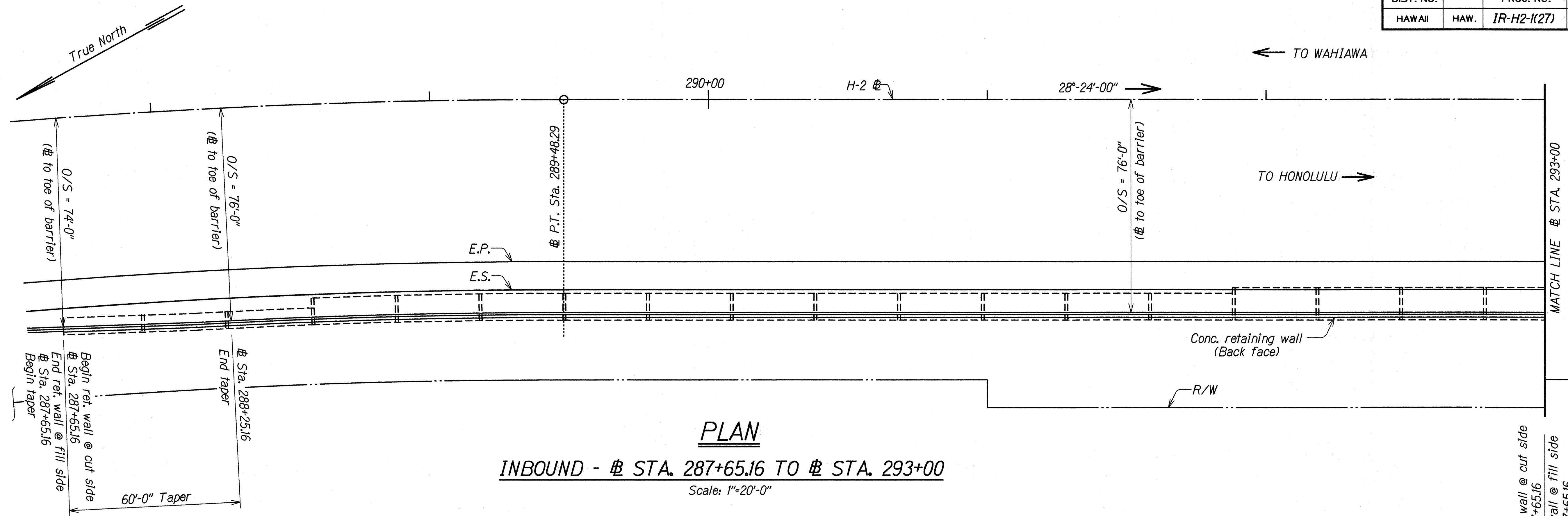


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	CHECKED BY	XXX	* XXX 1991
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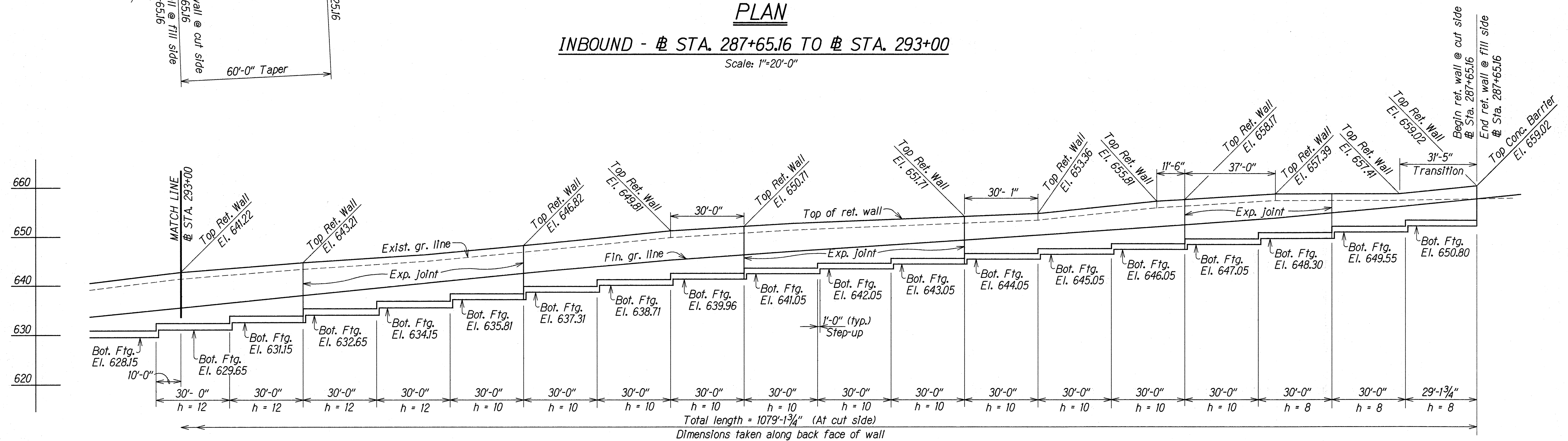


SHEET No. *R4* OF *28* SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	68	223



PLAN
INBOUND - @ STA. 287+65.16 TO @ STA. 293+00
 Scale: 1"=20'-0"



ELEVATION
INBOUND - @ STA. 287+65.16 TO @ STA. 293+00
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

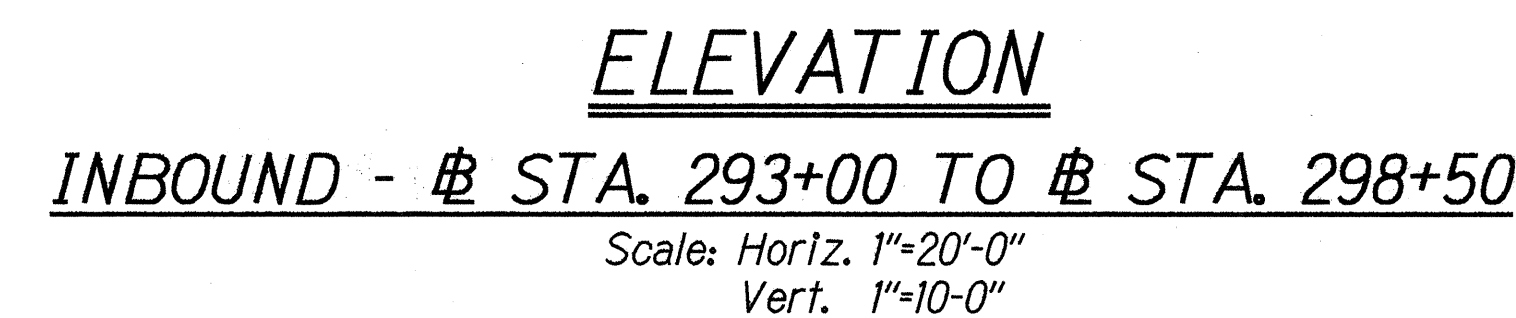
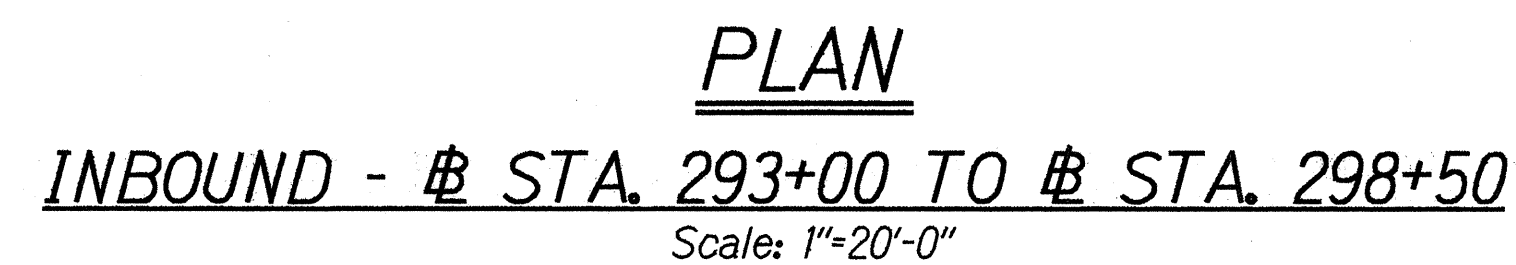
ORIGINAL PLAN	DATE: SEPT 1991
DRAWN BY: LMA	DESIGNED BY: DKL
CHECKED BY: XXX	QUANTITIES BY: DKL
	DATE: SEPT 1991

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

RETAINING WALL
PLAN AND ELEVATION
INBOUND @ STA. 287+65.16 TO @ STA. 293+00
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
 Project No. IR-H2-1(27)

Scale: As Noted Date: Apr. 1992

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGN FILE	DRAWN BY	
	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

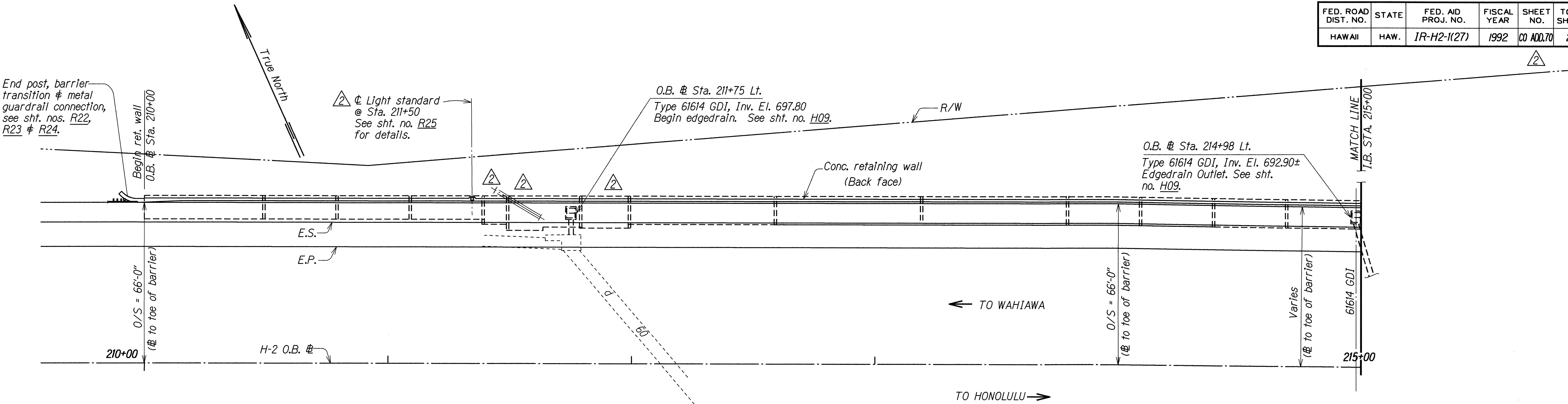
RETAINING WALL
PLAN AND ELEVATION

INBOUND @ STA. 293+00 TO @ STA. 298+50
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILITARY INTERCHANGE TO WAIPIO INTERCHANGE
Project No. IR-H2-1K27

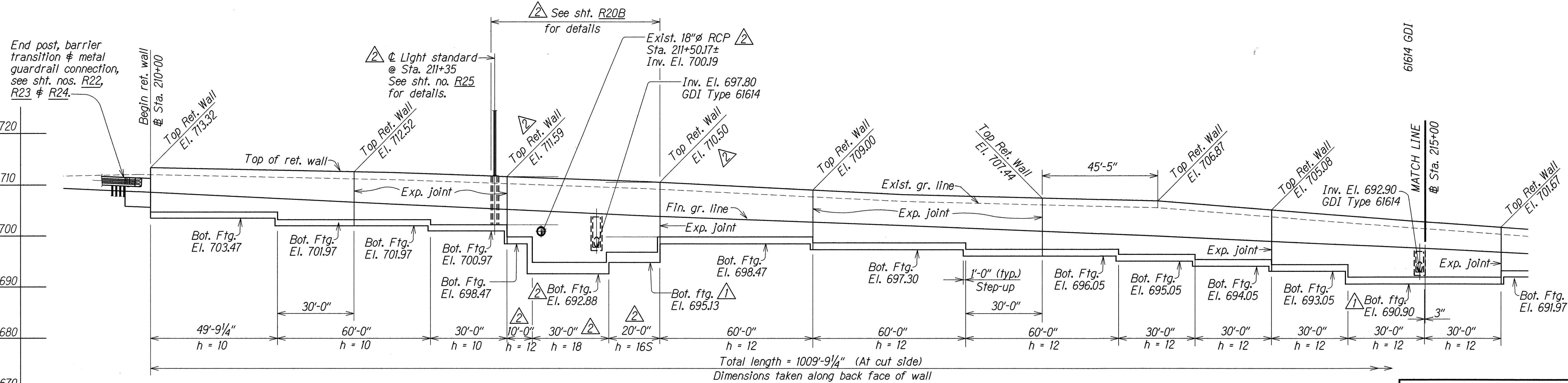
Scale: As Noted Date: Apr., 1992

SHEET No. R6 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	CO ADD.70	223



PLAN
OUTBOUND - STA. 210+00 TO STA. 215+00
 Scale: 1"=20'-0"



ELEVATION
OUTBOUND - STA. 210+00 TO STA. 215+00
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

DATE	SEPT 1992
DRAWN BY	LMA
DESIGNED BY	OKT
CHECKED BY	XXX
ORIGINAL PLAN	
DESIGN FILE	
QUANTITIES BY	
CHECKED BY	

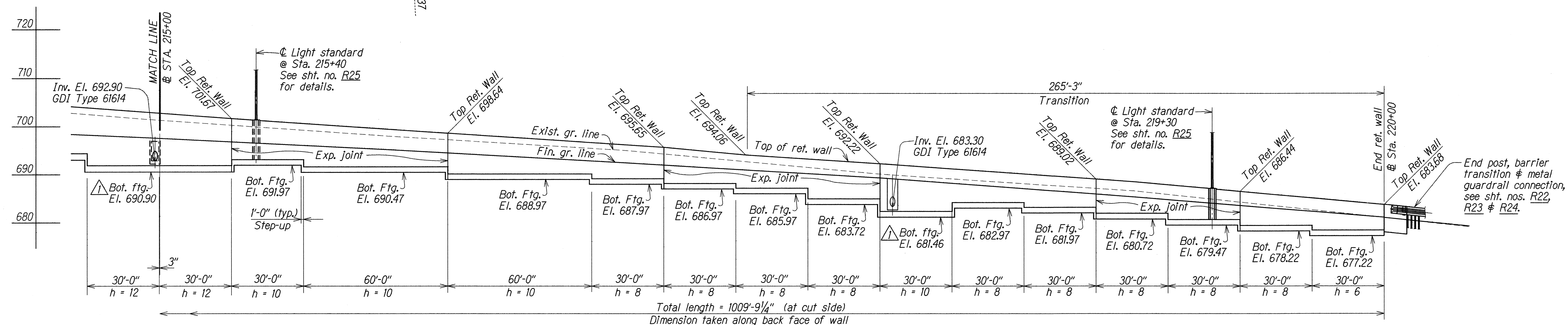
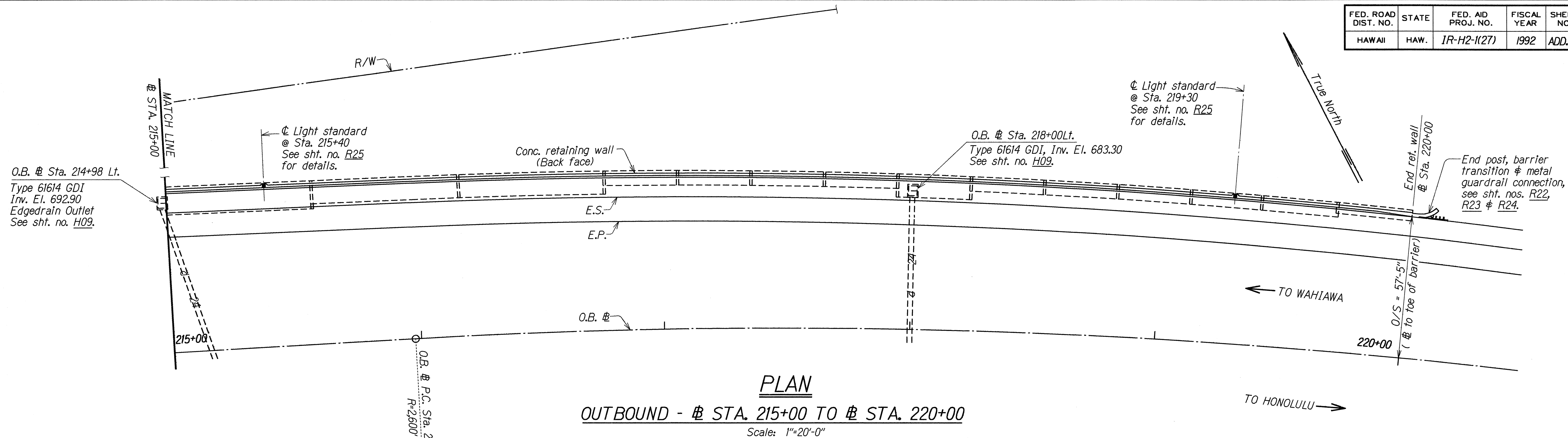
DATE	REVISION	SHEET No. 70 OF 28 SHEETS
10/8/93	Lowered bottom footing elevation, moved light standard & expansion joints, and showed approximate location of 18" RCP pipe. Relabelled plan sht.	
8/11/92	Changed bottom footing elevations.	

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

RETAINING WALL
PLAN AND ELEVATION
OUTBOUND STA. 210+00 TO STA. 215+00
 INTERSTATE ROUTE H-2, HOV LANES, PHASE II
 MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
 Project No. 1R-H2-1(27)

Scale: As Noted Date: Apr. 1992

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	ADD.71	223



SURVEY PLATTED BY	DATE
DESIGNED BY	SEPT 1992
DRAWN BY	SEPT 1992
CHECKED BY	SEPT 1992
QUANTITIES BY	SEPT 1992
NO. OF SHEETS	223

8/11/92	Changed bottom footing elevations.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

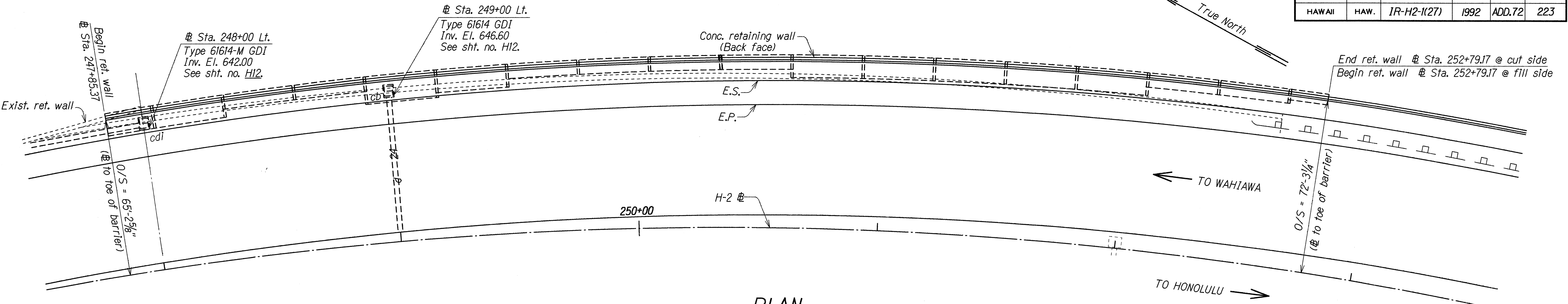
RETAINING WALL
PLAN AND ELEVATION
OUTBOUND STA. 215+00 TO STA. 220+00
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILITARY INTERCHANGE TO WAIPIO INTERCHANGE
Project No. IR-H2-1(27)

Scale: As Noted Date: Apr. 1992

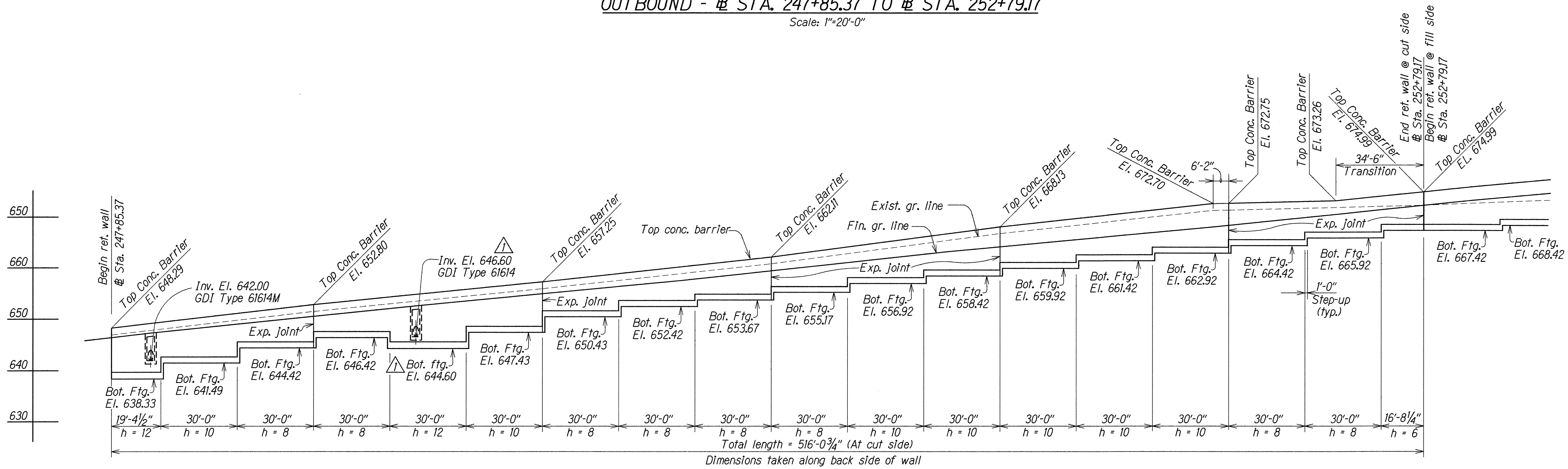
SHEET No. R8 OF 28 SHEETS

ADD. 71

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	ADD.72	223



PLAN
OUTBOUND - # STA. 247+85.37 TO # STA. 252+79.17
 Scale: 1"=20'-0"



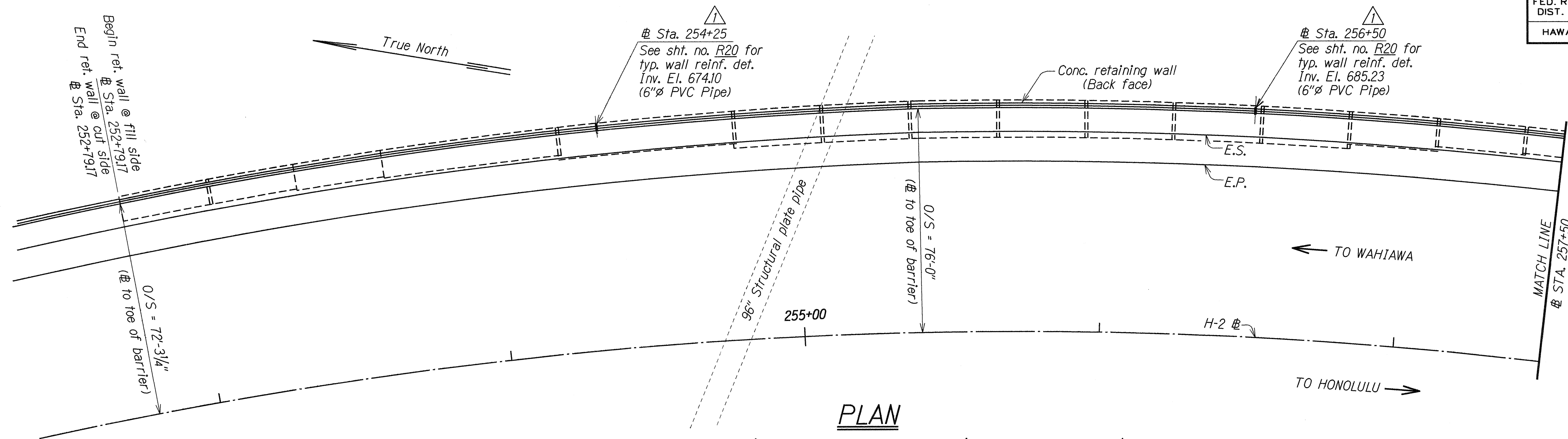
ELEVATION
OUTBOUND - # STA. 247+85.37 TO # STA. 252+79.17
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

SURVEY PLOTTED BY	DATE	SECT
DRAWN BY	8/11/92	099
DESIGNED BY		
QUANTITIES BY		
CHECKED BY		

 8/11/92 DATE	Changed bottom footing elevation and inv. elevation. REVISION	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION RETAINING WALL PLAN AND ELEVATION OUTBOUND - # STA. 247+85.37 TO # STA. 252+79.17 INTERSTATE ROUTE H-2, HOV LANES, PHASE II MILILANI INTERCHANGE TO WAIPIO INTERCHANGE Project No. IR-H2-1(27) Scale: As Noted Date: Apr., 1992 SHEET No. R9 OF 28 SHEETS
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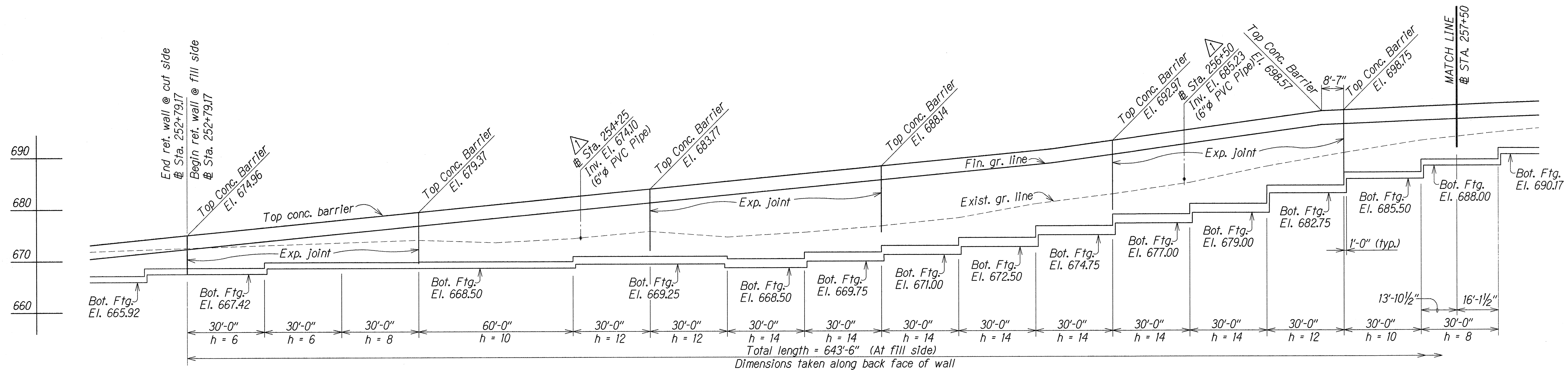
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	C.O. ADD. 73	223

2



PLAN
OUTBOUND - # STA. 252+79.17 TO # STA. 257+50

Scale: 1"=20'-0"



ELEVATION
OUTBOUND - # STA. 252+79.17 TO # STA. 257+50

Scale: Horiz. 1"=20'-0"
Vert. 1"=10'-0"

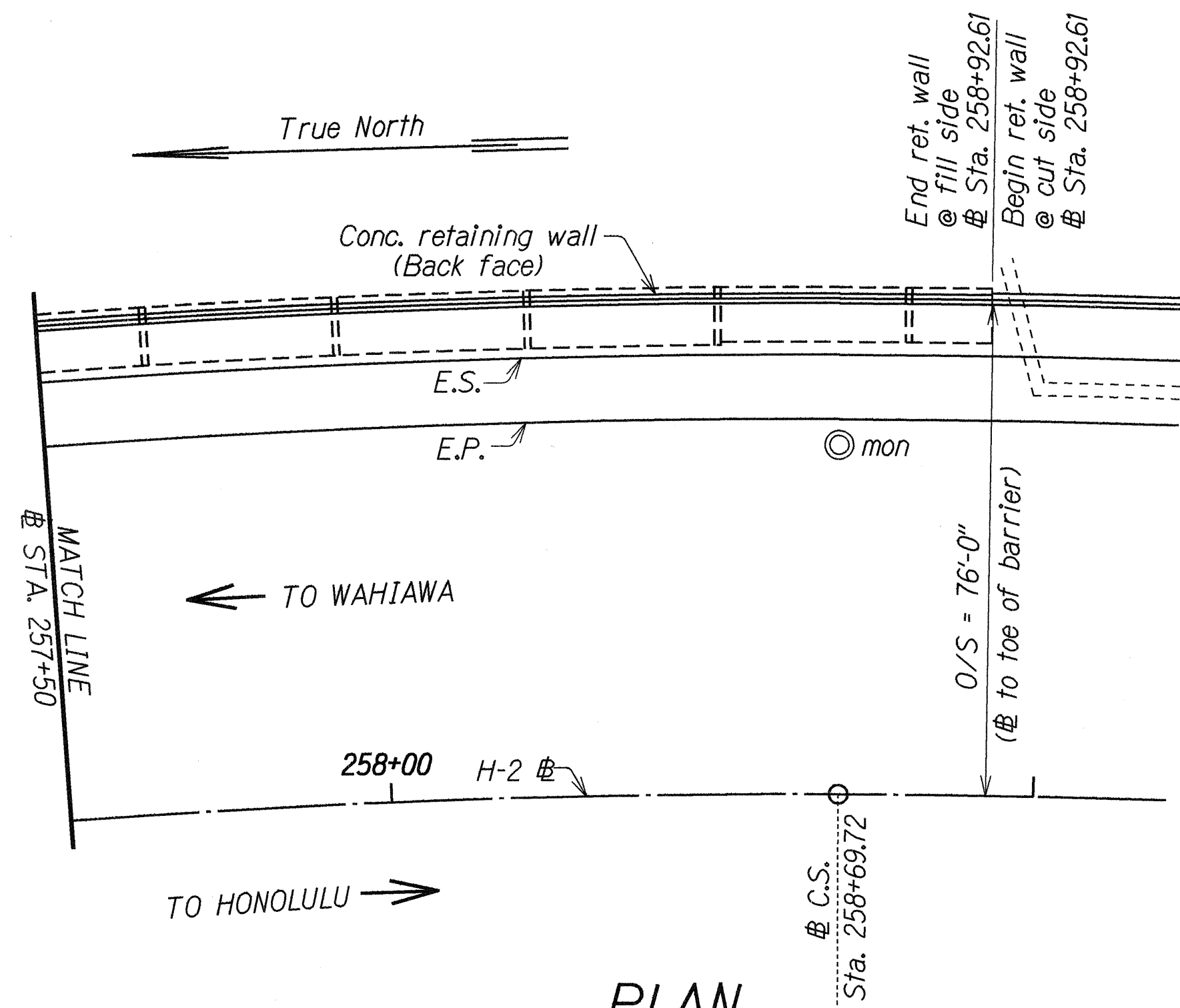
ORIGINAL PLAN	DATE	SEPT 1991
DRAWN BY	LMA	
DESIGNED BY	DKT	
QUANTITIES BY	DKT	
CHECKED BY	XXX	
NO. 0000000000	0000000000	0000000000

4/27/93	Revised bott. ftg. elev., exist. ground line & height of wall (h =).
8/11/92	Added 6"Ø non-perforated PVC pipes.
DATE	REVISION

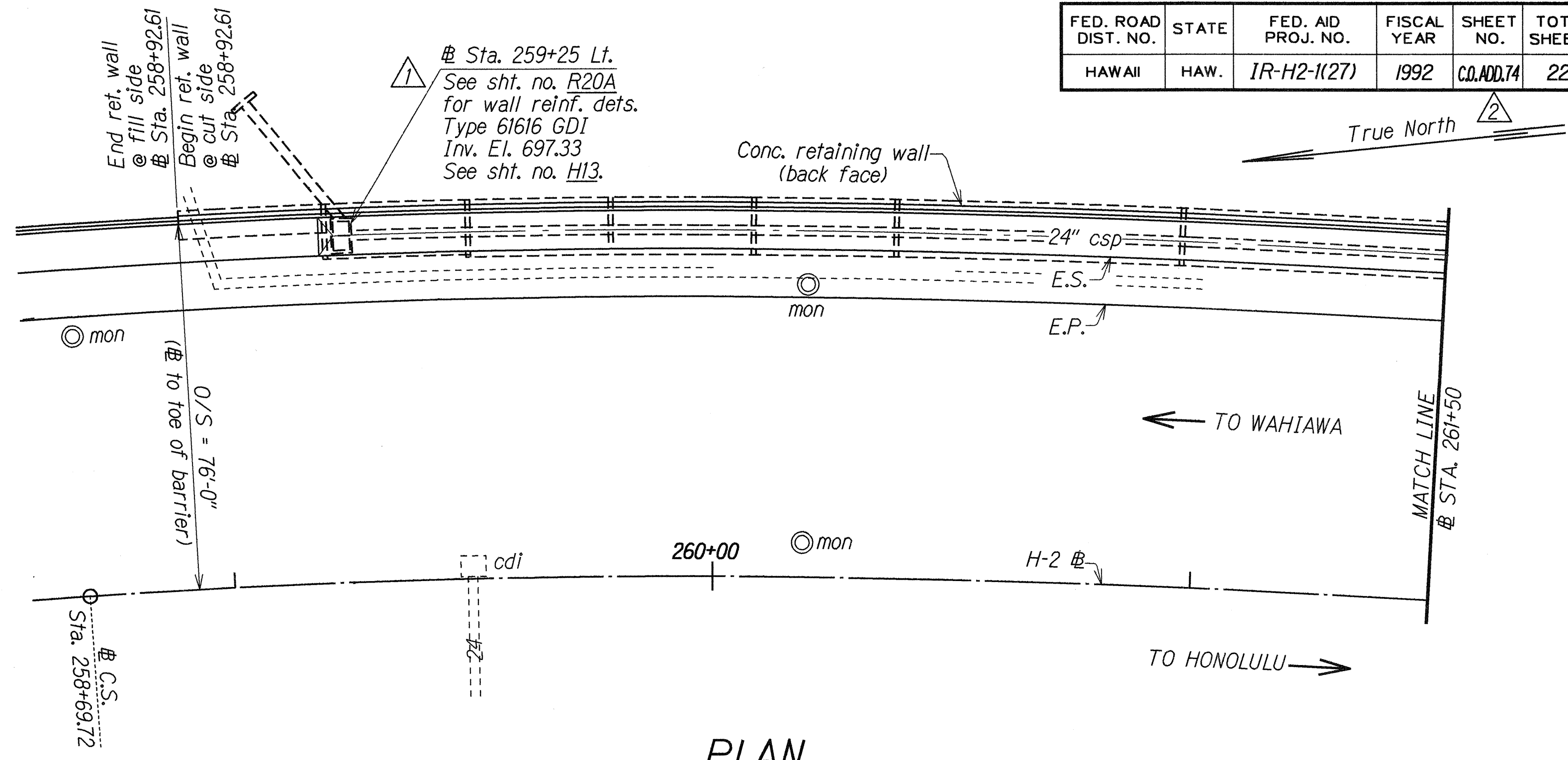
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
RETAINING WALL
PLAN AND ELEVATION
OUTBOUND - # STA. 252+79.17 TO # STA. 257+50
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILLANIT INTERCHANGE TO WAIPIO INTERCHANGE
Project No. 1R-H2-1(27)
Scale: As Noted
Date: Apr. 1992
SHEET No. R10 OF 28 SHEETS

C.O. ADD. 73

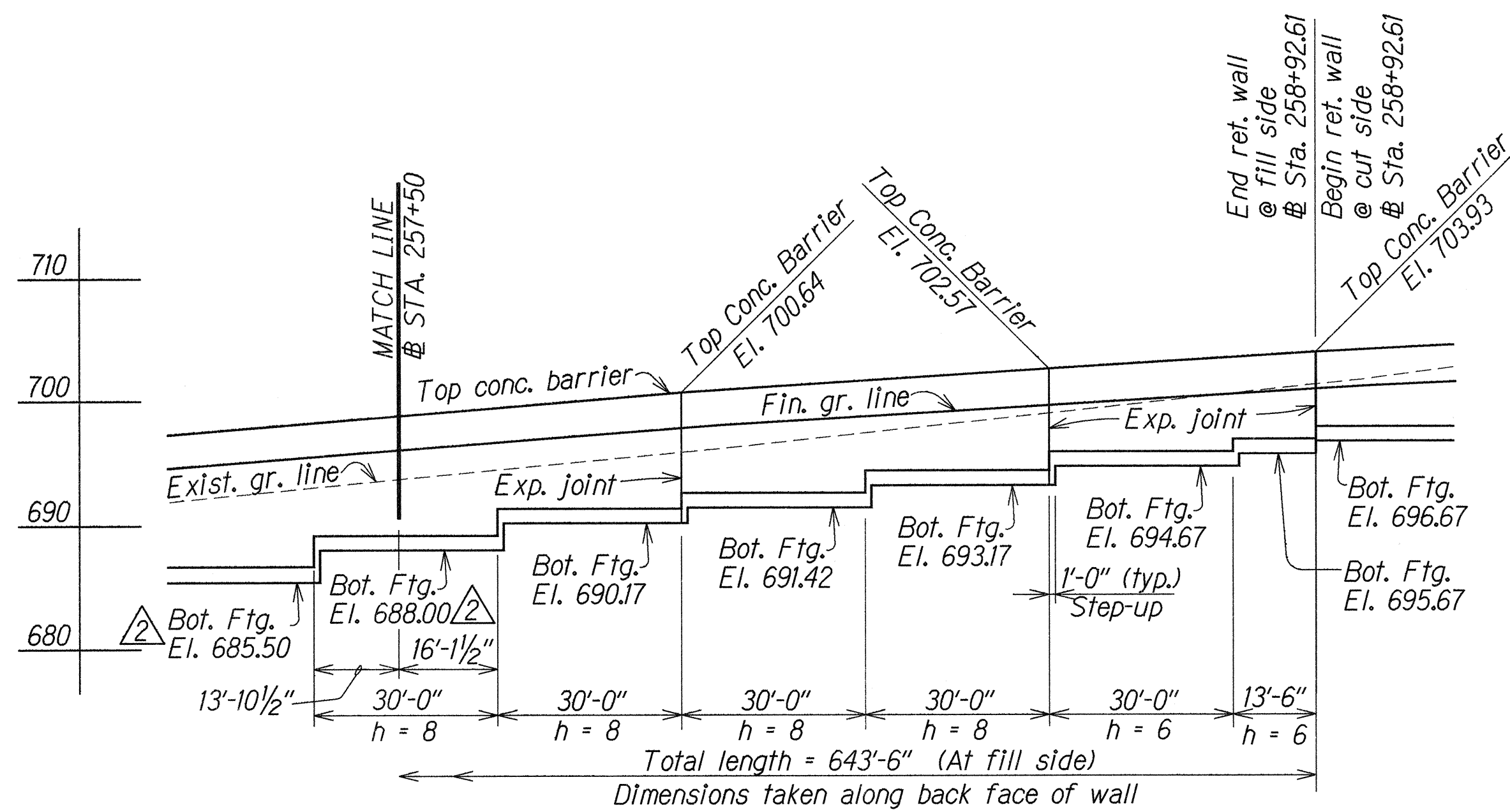
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	CO.ADD.74	223



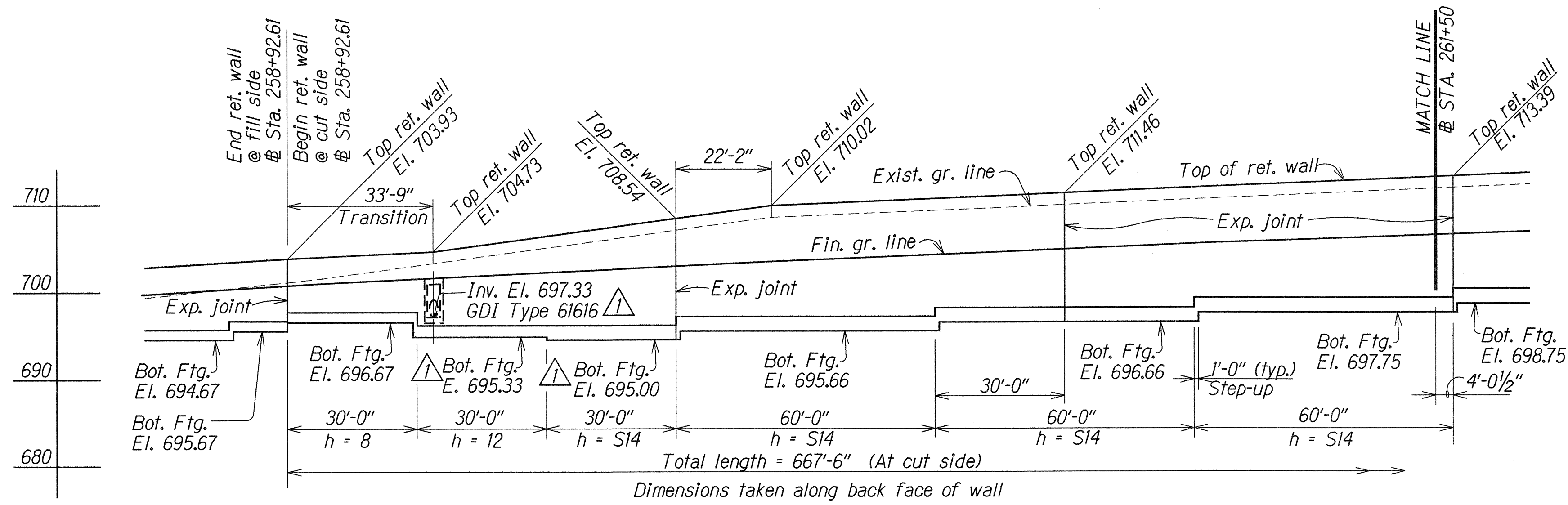
PLAN
OUTBOUND - # STA. 257+50 TO # STA. 258+92.61
 Scale: 1"=20'-0"



PLAN
OUTBOUND - # STA. 258+92.61 TO # STA. 261+50
 Scale: 1"=20'-0"



ELEVATION
OUTBOUND - # STA. 257+50 TO # STA. 258+92.61
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"



ELEVATION
OUTBOUND - # STA. 258+92.61 TO # STA. 261+50
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

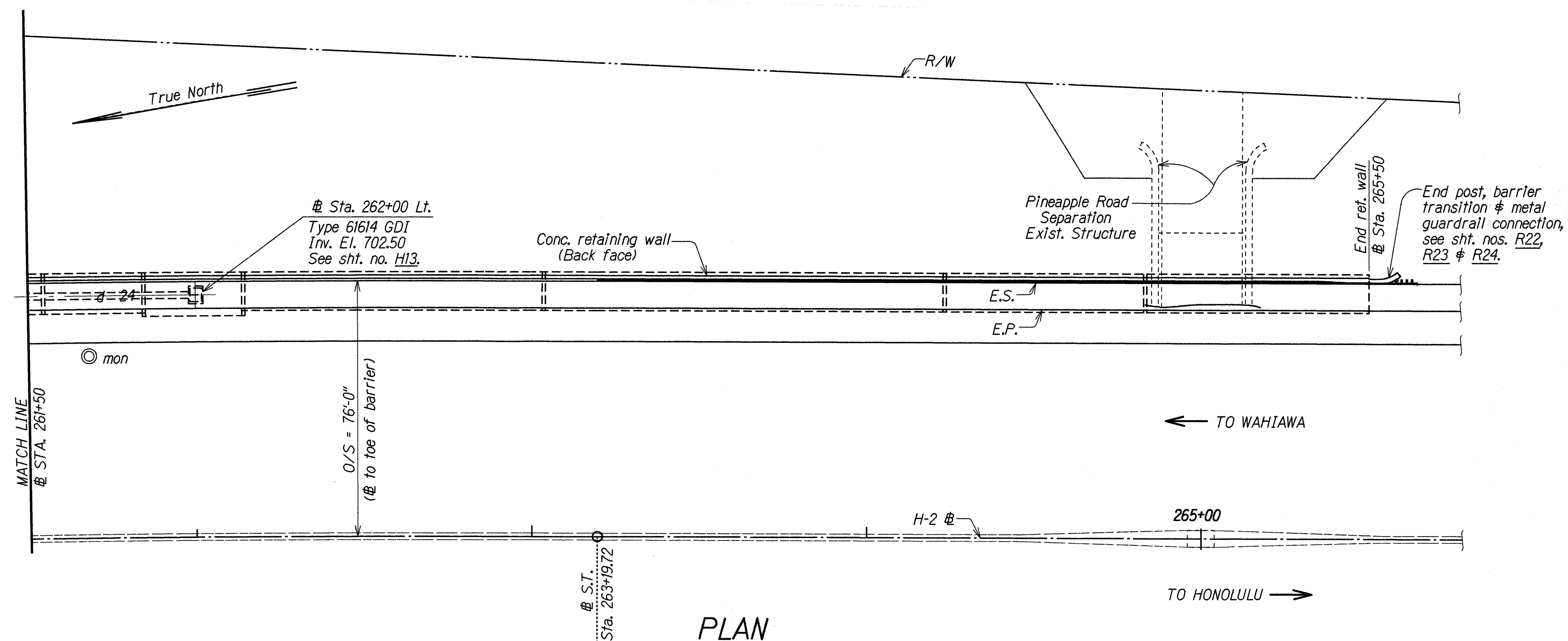
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DRAWN BY	LMA	SEPT 99
DESIGN FILE	DKL	SEPT 99
QUANTITIES BY	XXX	SEPT 99
CHECKED BY	NAJ	SEPT 99

5/3/93	Revised bott. ftg. elev., exist. ground line.
8/11/92	Changed bottom of footing elevations # GDI Type. Added reference sheet no. for detail.

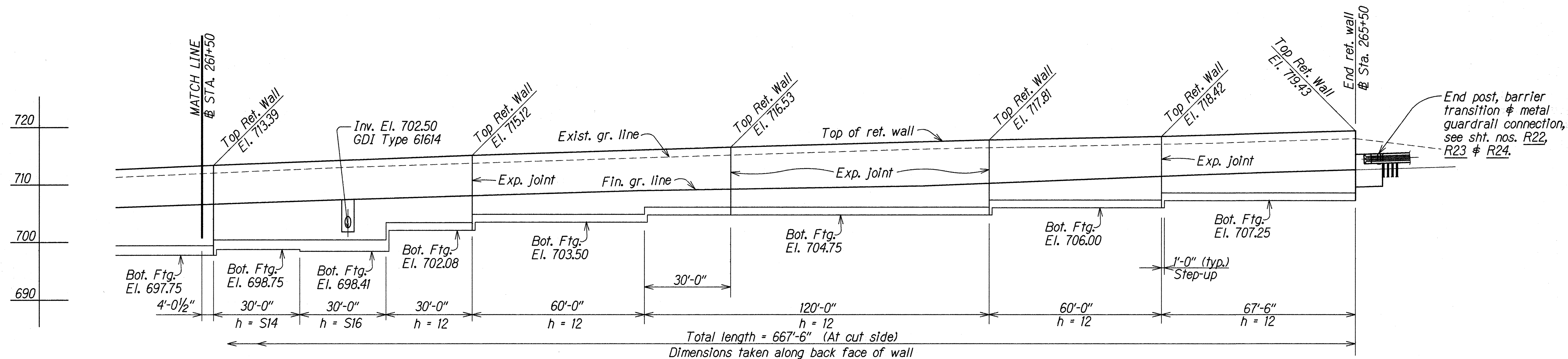
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
RETAINING WALL
PLAN AND ELEVATION
OUTBOUND - # STA. 257+50 TO # STA. 258+92.61
OUTBOUND - # STA. 258+92.61 TO # STA. 261+50
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILLIANI INTERCHANGE TO WAIPIO INTERCHANGE
 Scale: As Noted Project No. IR-H2-1(27) Date: Apr. 1992

DATE	REVISION	SHEET No. R11 OF 28 SHEETS
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	75	223



PLAN
OUTBOUND - STA. 261+50 TO STA. 265+50
 Scale: 1"=20'-0"



ELEVATION
OUTBOUND - STA. 261+50 TO STA. 265+50
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

ORIGINAL PLAN	DESIGNED BY	DATE
XXXXXXXX	LMA	SEPT 1991
XXXXXXXX	DESIGNED BY	SEPT 1991
XXXXXXXX	QUANTITIES BY	SEPT 1991
XXXXXXXX	CHECKED BY	SEPT 1991

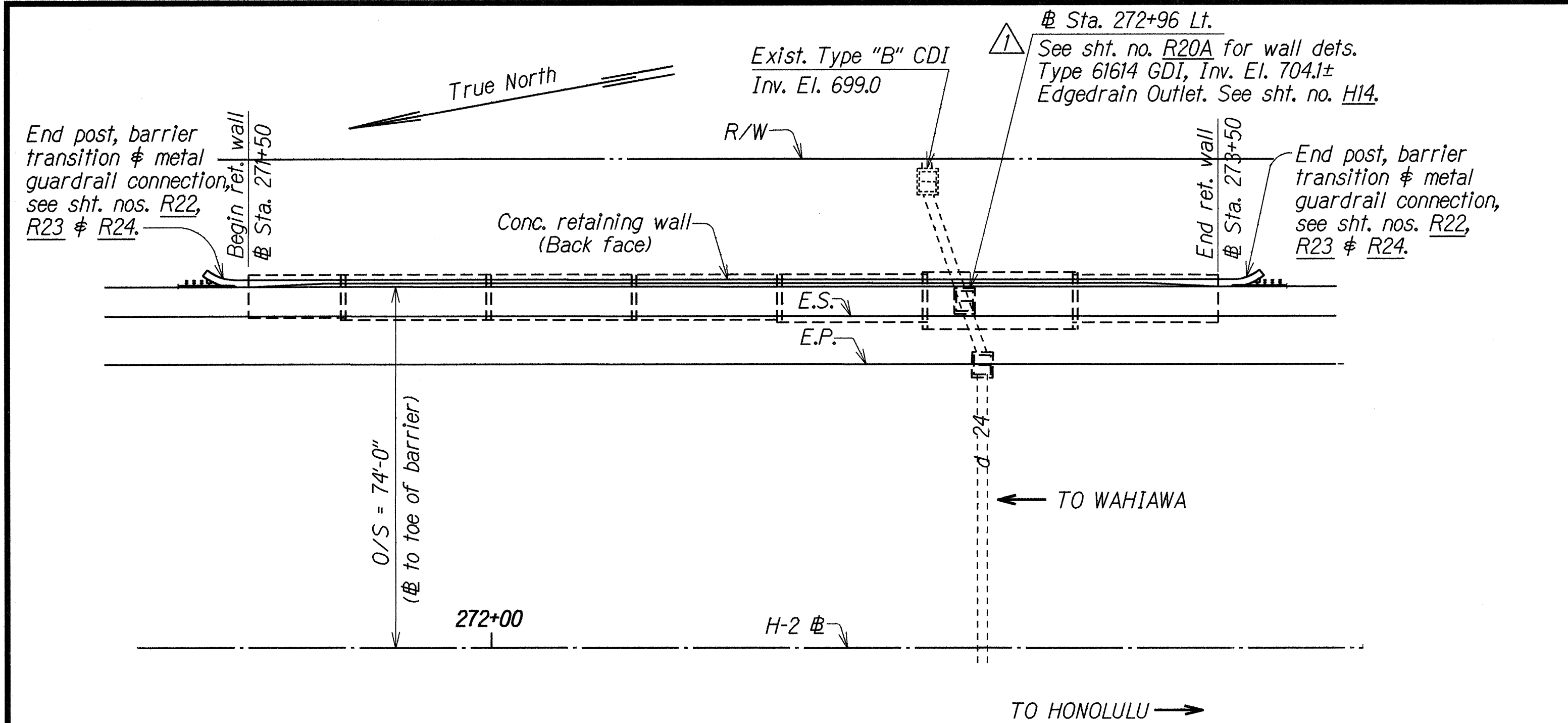
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

RETAINING WALL
PLAN AND ELEVATION
OUTBOUND STA. 261+50 TO STA. 265+50
 INTERSTATE ROUTE H-2 HOV Lanes, PHASE II
 MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
 Project No. IR-H2-1(27)

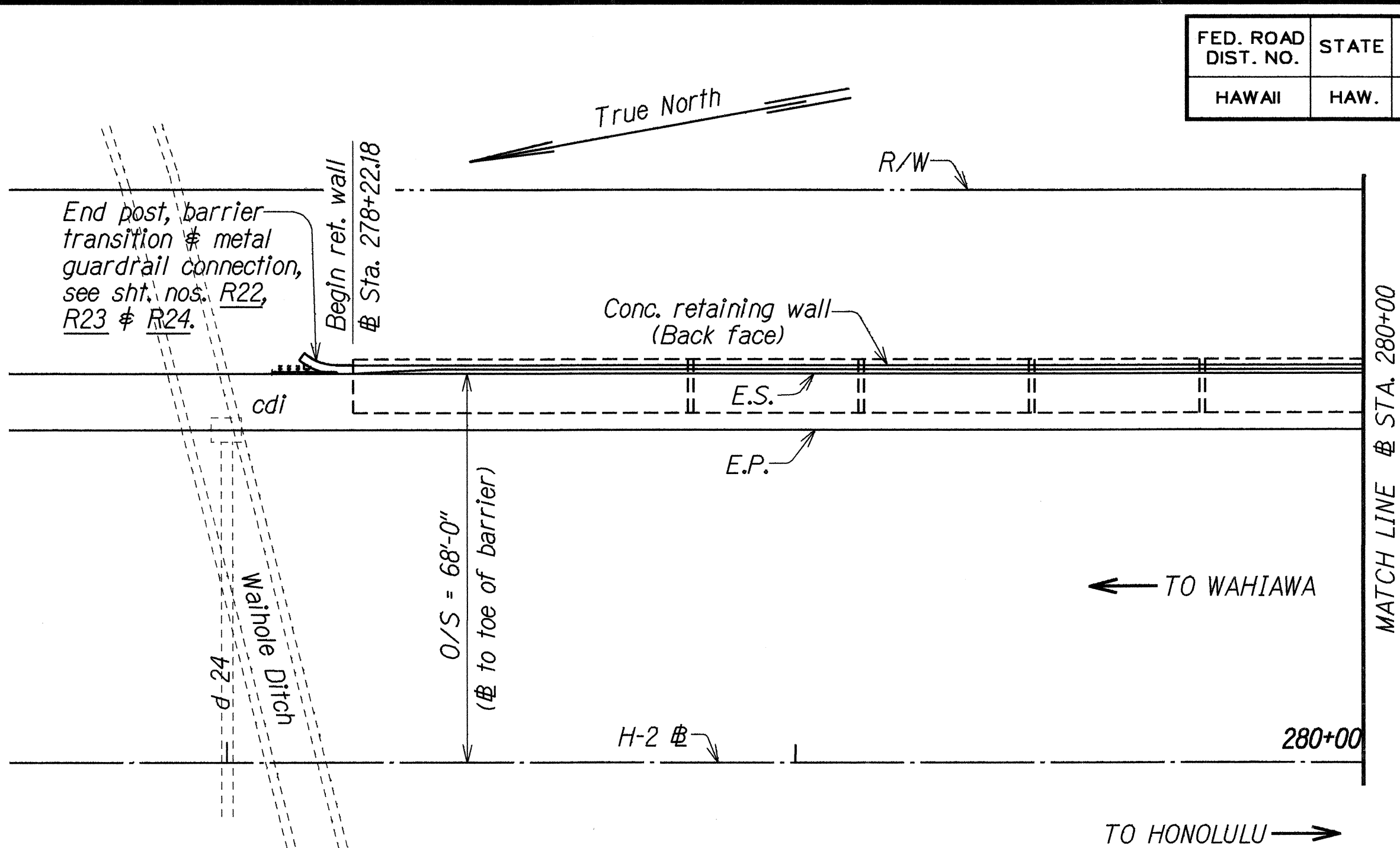
Scale: As Noted Date: Apr, 1992

SHEET No. 75 OF 28 SHEETS

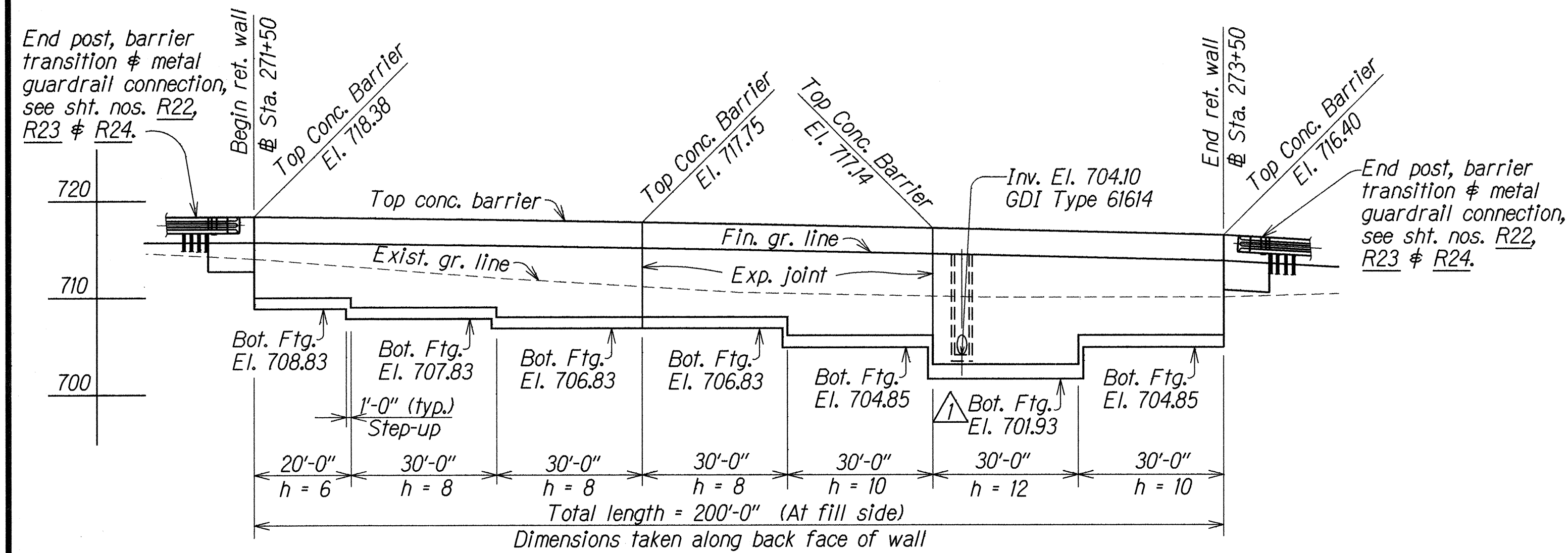
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	ADD.76	223



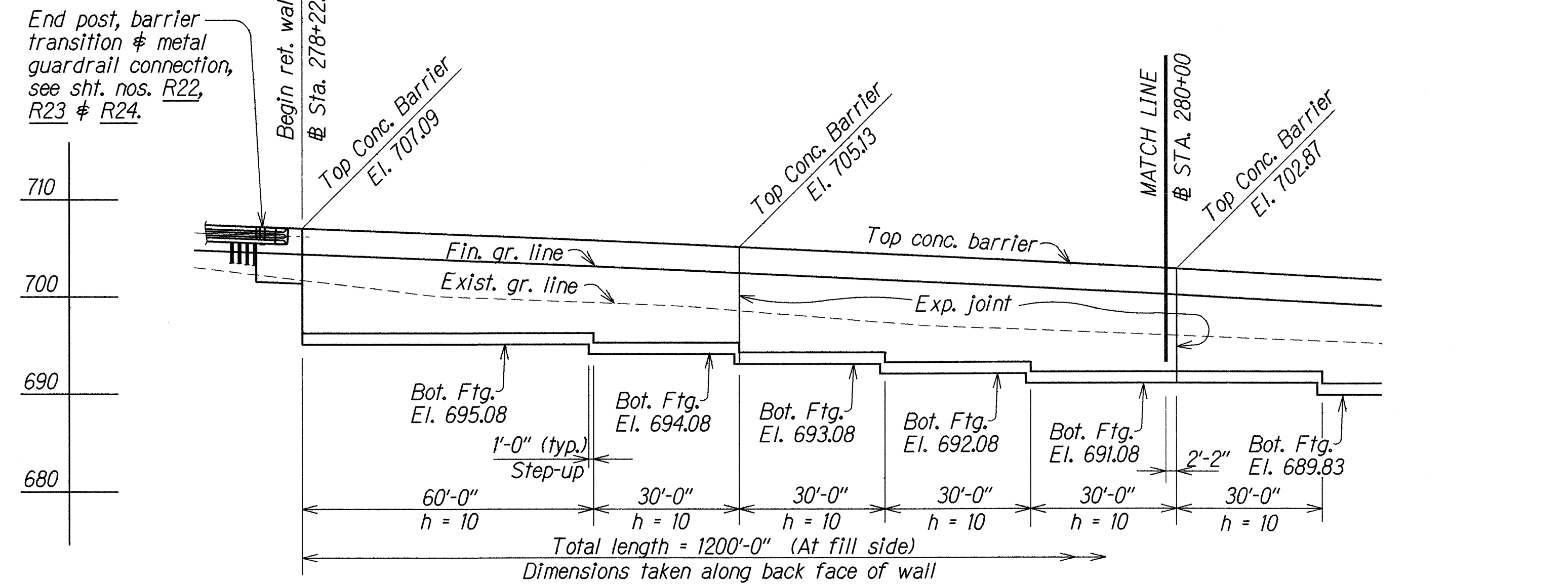
PLAN
OUTBOUND - STA. 271+50 TO STA. 273+50
Scale: 1"=20'-0"



PLAN
OUTBOUND - STA. 278+22.18 TO STA. 280+00
Scale: 1"=20'-0"



ELEVATION
OUTBOUND - STA. 271+50 TO STA. 273+50
Scale: Horiz. 1"=20'-0"
Vert. 1"=10'-0"



ELEVATION
OUTBOUND - STA. 278+22.18 TO STA. 280+00
Scale: Horiz. 1"=20'-0"
Vert. 1"=10'-0"

DATE	BY	REVISION
SEPT 1991	LM	1
SEPT 1991	LM	2
SEPT 1991	LM	3
SEPT 1991	LM	4
SEPT 1991	LM	5
SEPT 1991	LM	6
SEPT 1991	LM	7
SEPT 1991	LM	8
SEPT 1991	LM	9
SEPT 1991	LM	10
SEPT 1991	LM	11
SEPT 1991	LM	12
SEPT 1991	LM	13
SEPT 1991	LM	14
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SEPT 1991	LM	17
SEPT 1991	LM	18
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SEPT 1991	LM	86
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SEPT 1991	LM	89
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SEPT 1991	LM	93
SEPT 1991	LM	94
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SEPT 1991	LM	99
SEPT 1991	LM	100

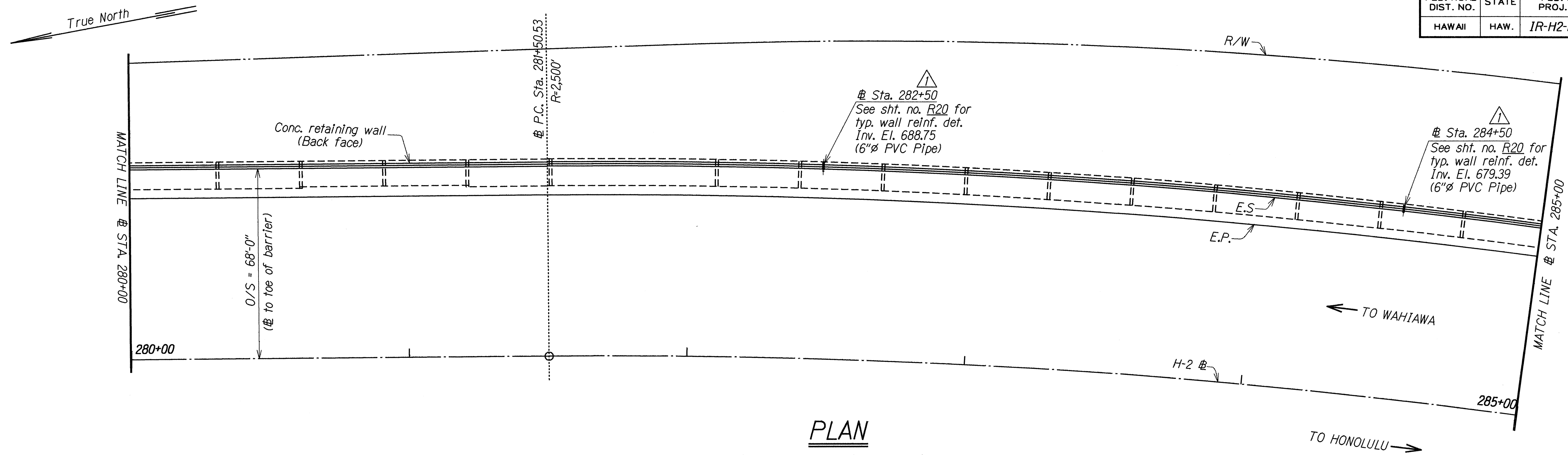
8/11/92	Changed bottom of footing elevation. Added reference sht. no. for detail.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

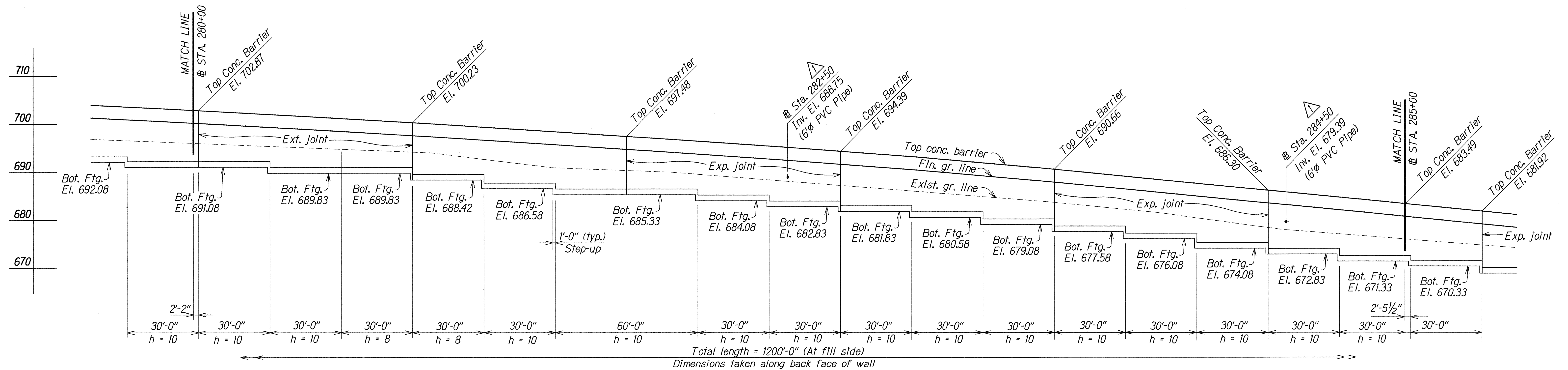
RETAINING WALL
PLAN AND ELEVATION
OUTBOUND STA. 271+50 TO STA. 273+50
OUTBOUND STA. 278+00 TO STA. 280+00
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. 1R-H2-1(27)

Scale: As Noted
Date: Apr. 1992

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-K27	1992	ADD.77	223



PLAN
OUTBOUND - STA. 280+00 TO STA. 285+00
 Scale: 1"=20'-0"



ELEVATION
OUTBOUND - STA. 280+00 TO STA. 285+00
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

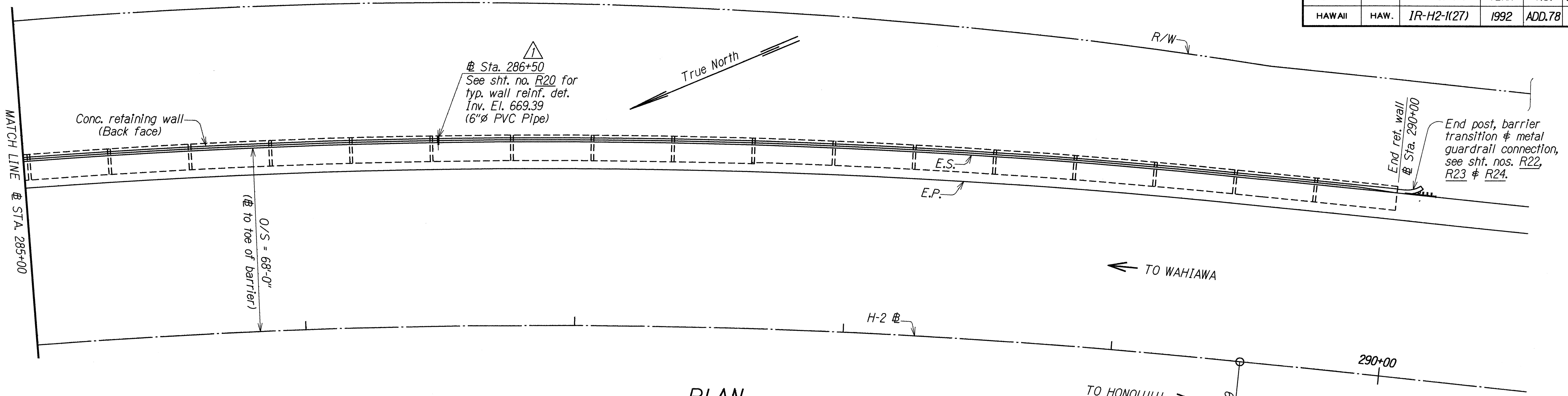
ORIGINAL PLAN	DESIGNED BY	DATE
PLAN	DESIGNED BY	SEPT 1991
QUANTITIES BY	DESIGNED BY	SEPT 1991
CHECKED BY	DESIGNED BY	SEPT 1991

8/11/92	Added 6"Ø non-perforated PVC pipes.
DATE	REVISION

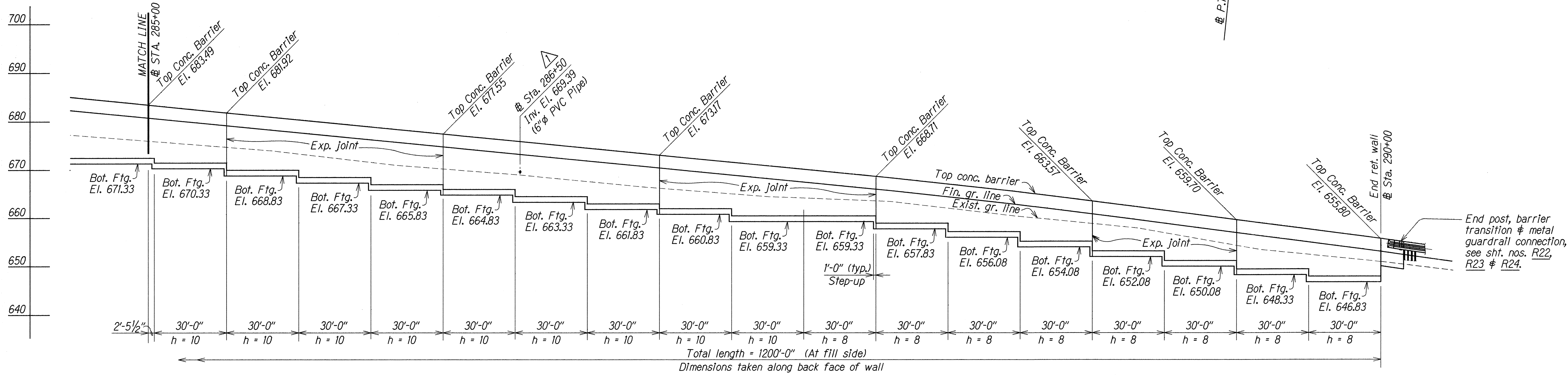
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
RETAINING WALL	
PLAN AND ELEVATION	
OUTBOUND STA. 280+00 TO STA. 285+00	
INTERSTATE ROUTE H-2 HOV LANES, PHASE II	
MILLITANT INTERCHANGE TO WAIPIO INTERCHANGE	
Project No. IR-H2-K27	
Scale: As Noted	Date: Apr. 1992
SHEET No. R14 OF 28 SHEETS	

ADD. 77

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	ADD.78	223



PLAN
OUTBOUND - STA. 285+00 TO STA. 290+00
 Scale: 1"=20'-0"



ELEVATION
OUTBOUND - STA. 285+00 TO STA. 290+00
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

ORIGINAL PLAN	DESIGNED BY	DATE
FILED	DESIGNED BY	DATE
QUANTITIES BY	DESIGNED BY	DATE
CHECKED BY	DESIGNED BY	DATE

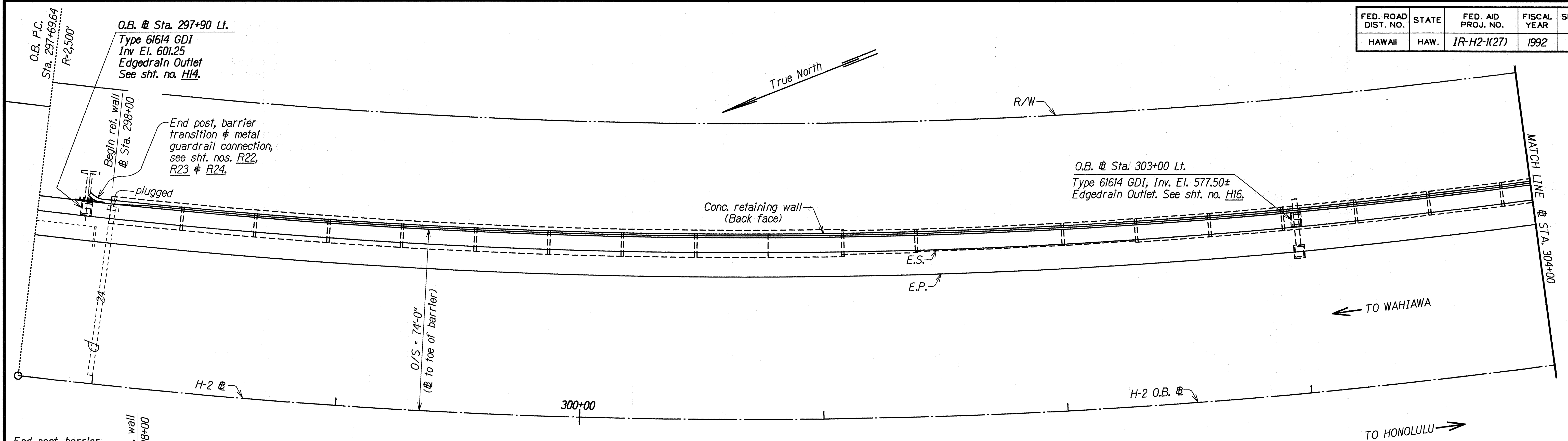
DATE	REVISION	SHEET No. 15 OF 28 SHEETS
8/11/92	Added 6"Ø non-perforated PVC pipe.	

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

RETAINING WALL
PLAN AND ELEVATION
OUTBOUND STA. 285+00 TO STA. 290+00
 INTERSTATE ROUTE H-2, HOV LANES, PHASE II
 MILITARY INTERCHANGE TO WAIPIO INTERCHANGE
 Project No. IR-H2-1(27)

Scale: As Noted Date: Apr., 1992

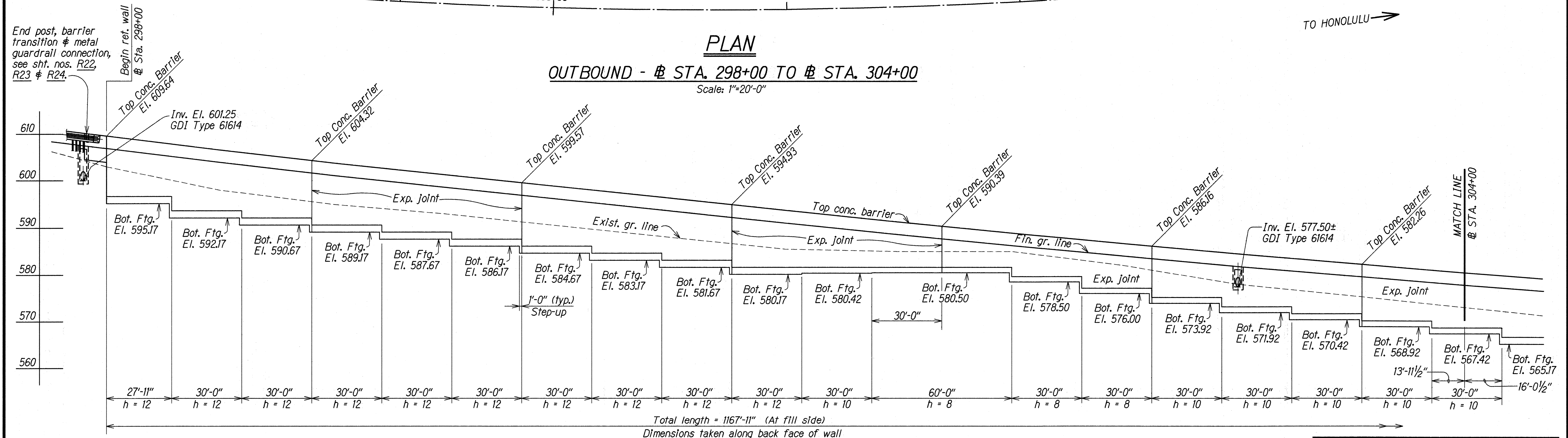
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	79	223



PLAN

OUTBOUND - STA. 298+00 TO STA. 304+00

Scale: 1"=20'-0"



ELEVATION

OUTBOUND - STA. 298+00 TO STA. 304+00

Scale: Horiz. 1"=20'-0"
Vert. 1"=10'-0"

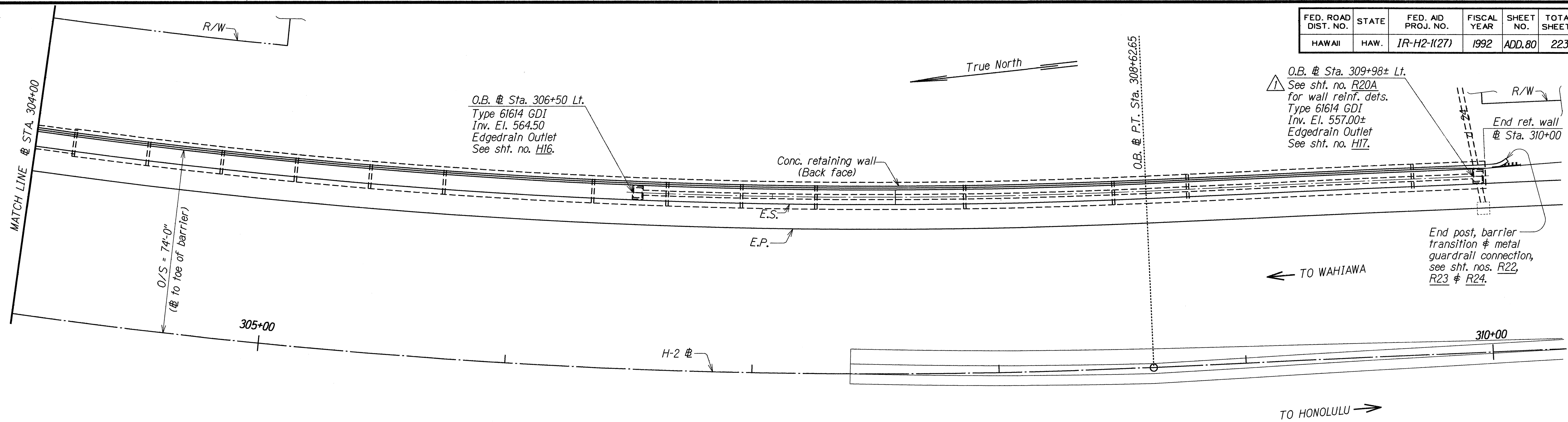
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL
PLAN AND ELEVATION
OUTBOUND STA. 298+00 TO STA. 304+00
INTERSTATE ROUTE H-2 HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. 1R-H2-1(27)

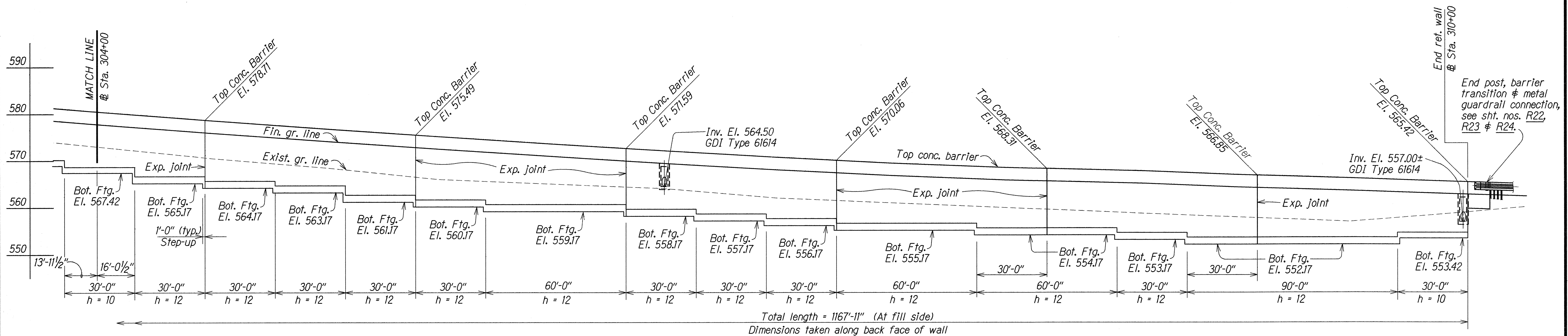
Scale: As Noted
Date: Apr. 1992

SHEET No. R16 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	ADD.80	223



PLAN
OUTBOUND - @ STA. 304+00 TO @ STA. 310+00
 Scale: 1" = 20'-0"



ELEVATION
OUTBOUND - @ STA. 304+00 TO @ STA. 310+00
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

ORIGINAL PLAN	DATE: SEPT 1991
DRAWN BY: LMA	TRACED BY: DKT
DESIGN FILE: N:\00002\00021	CHECKED BY: XXX
QUANTITIES BY: XXX	

8/11/92	Added reference sht. no. for detail.
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

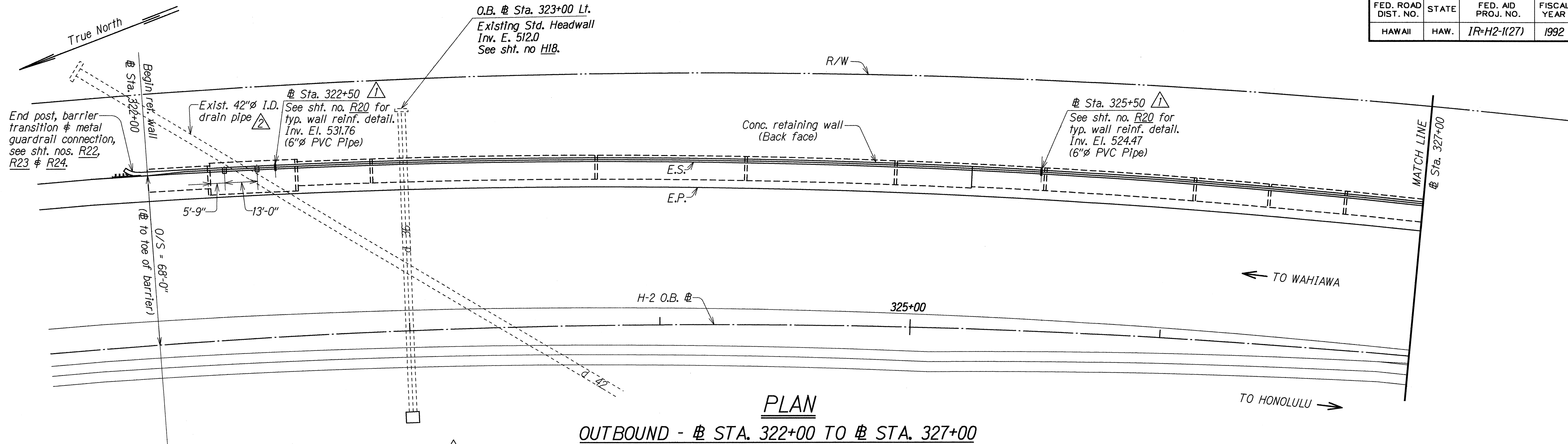
RETAINING WALL
PLAN AND ELEVATION
OUTBOUND @ STA. 304+00 TO @ STA. 310+00
 INTERSTATE ROUTE H-2 HOV LANES, PHASE II
 MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
 Project No. IR-H2-1(27)

Scale: As Noted Date: Apr. 1992

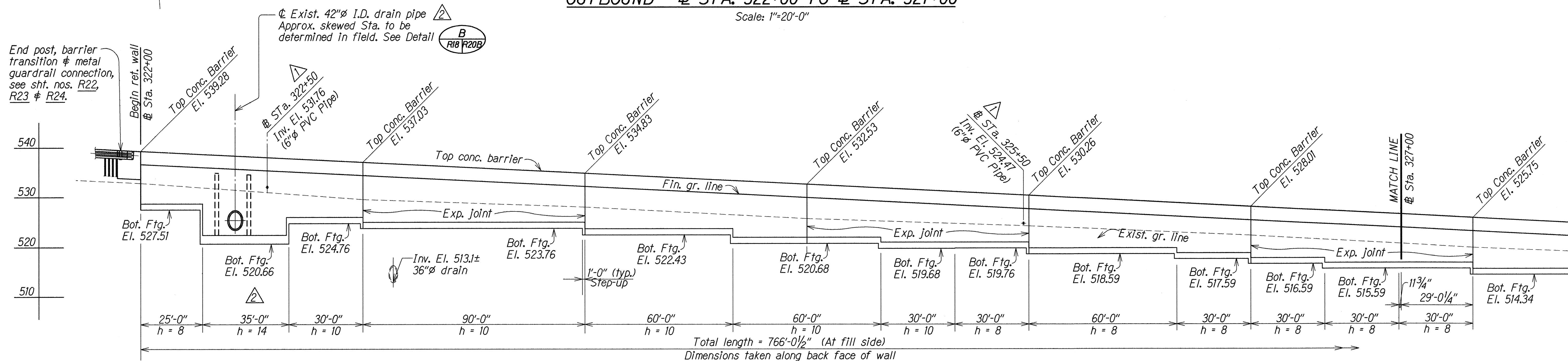
SHEET No. R17 OF 28 SHEETS

ADD. 80

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	C.O. ADD. 81	223



PLAN
OUTBOUND - # STA. 322+00 TO # STA. 327+00
 Scale: 1"=20'-0"



ELEVATION
OUTBOUND - # STA. 322+00 TO # STA. 327+00
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

ORIGINAL PLAN	DATE	5/17/93
DRAWN BY	LMA	
DESIGN FILE	DKT	
QUANTITIES BY	XXX	
CHECKED BY	N. J. J. J.	

5/17/93	Exist. 42" I.D. drain pipe added. Bottom ftg. El. lowered & length of retaining wall lengthened.
8/11/92	Added 6" non-perforated PVC pipes. Changed sht. no.
DATE	REVISION

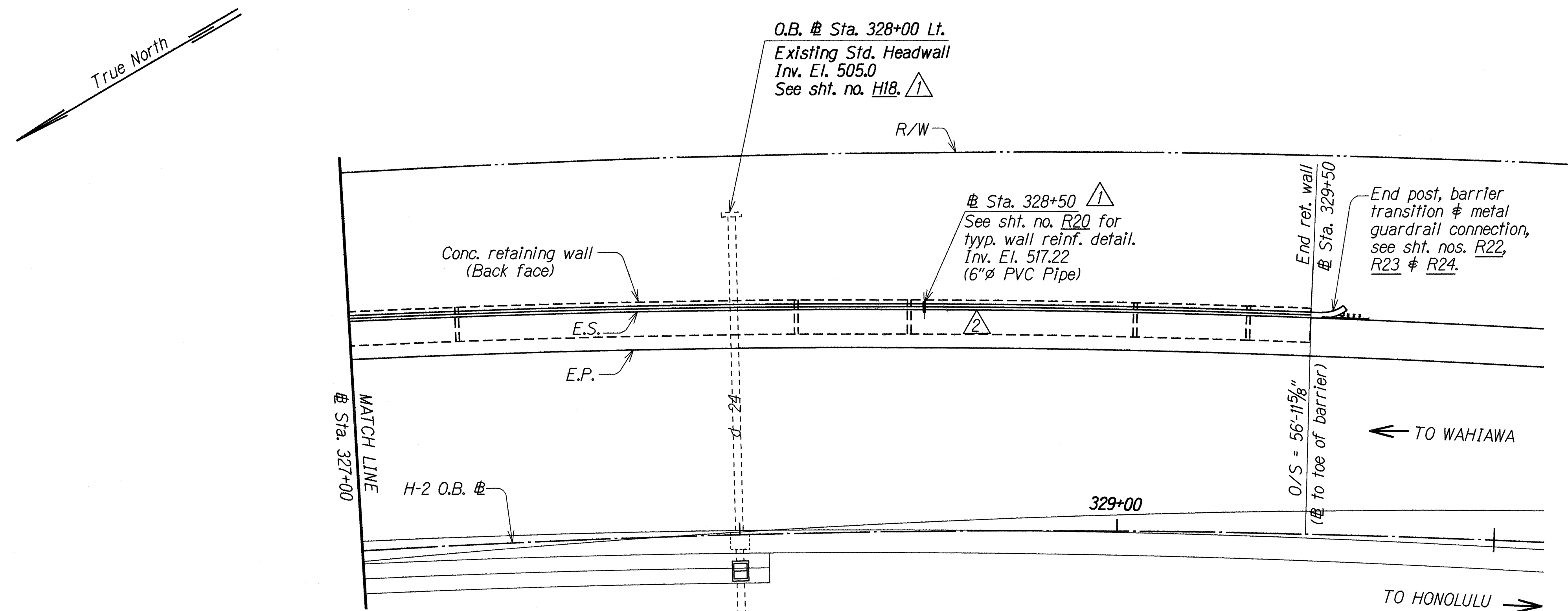
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

RETAINING WALL
PLAN AND ELEVATION
OUTBOUND # STA. 322+00 TO # STA. 327+00
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILLIANT INTERCHANGE TO WAIPIO INTERCHANGE
 Project No. 1R-H2-1(27)

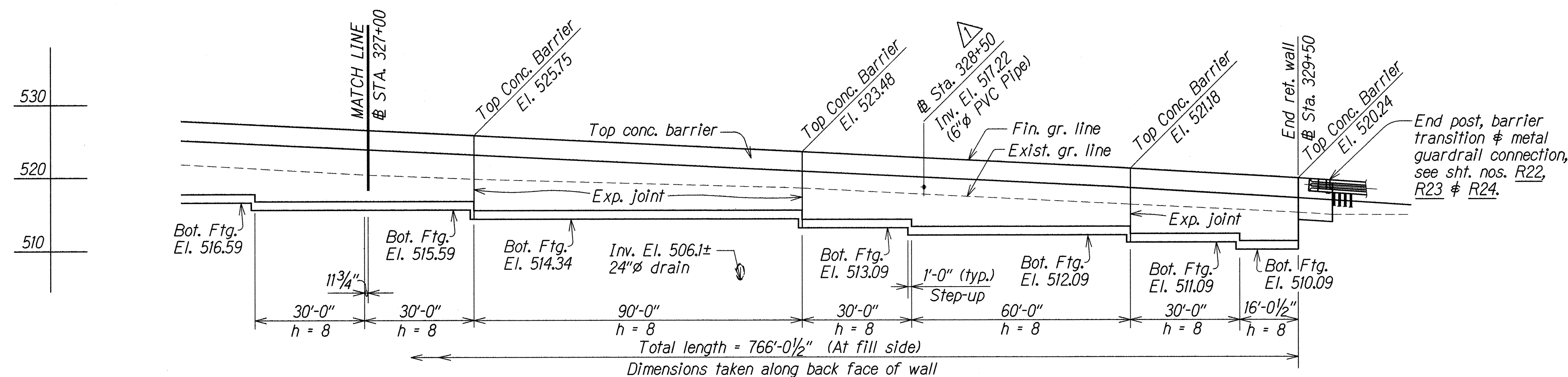
Scale: As Noted Date: Apr. 1992

SHEET No. R18 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	82	223



PLAN
OUTBOUND - # STA. 327+00 TO # STA. 329+50
 Scale: 1"=20'-0"



ELEVATION
OUTBOUND - # STA. 327+00 TO # STA. 329+50
 Scale: Horiz. 1"=20'-0"
 Vert. 1"=10'-0"

ORIGINAL PLAN	DATE	SEPT 1992
SURVEY PLOTTED BY	LMA	
DRAWN BY	DKT	
DESIGN FILE	DKT	
QUANTITIES BY	XXX	
CHECKED BY		

2	Moved Plan of Ret. Wall to match with E.S. line. Added C.O. to sht. no.
1	Added 6"Ø non-perforated PVC pipe. Changed sht. no.
8/11/92	
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

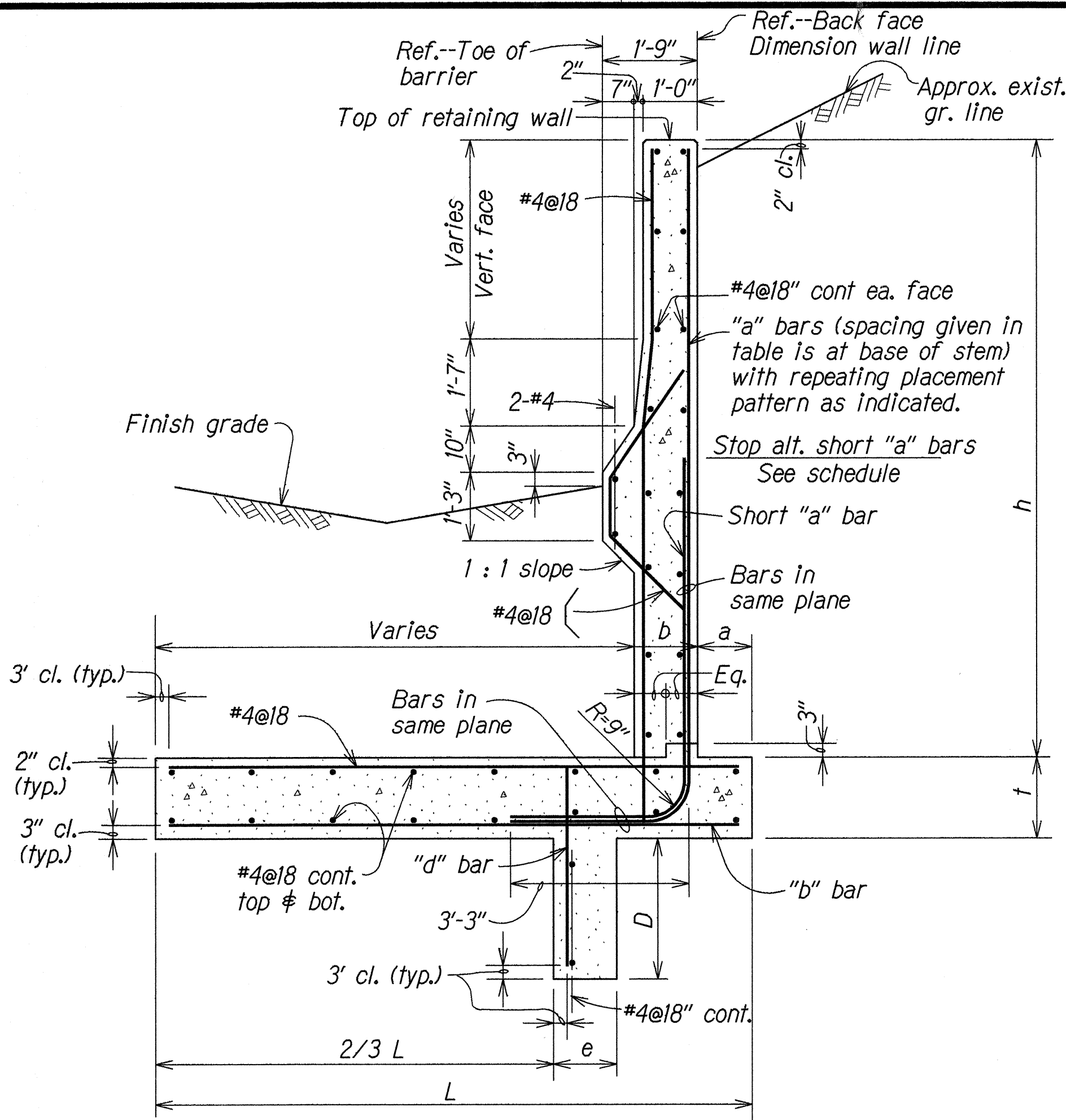
RETAINING WALL
PLAN AND ELEVATION
OUTBOUND - # STA. 327+00 TO # STA. 329+50
 INTERSTATE ROUTE H-2, HOV LANES, PHASE II
 MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
 Project No. 1R-H2-1(27)

Scale: As Noted Date: Apr., 1992

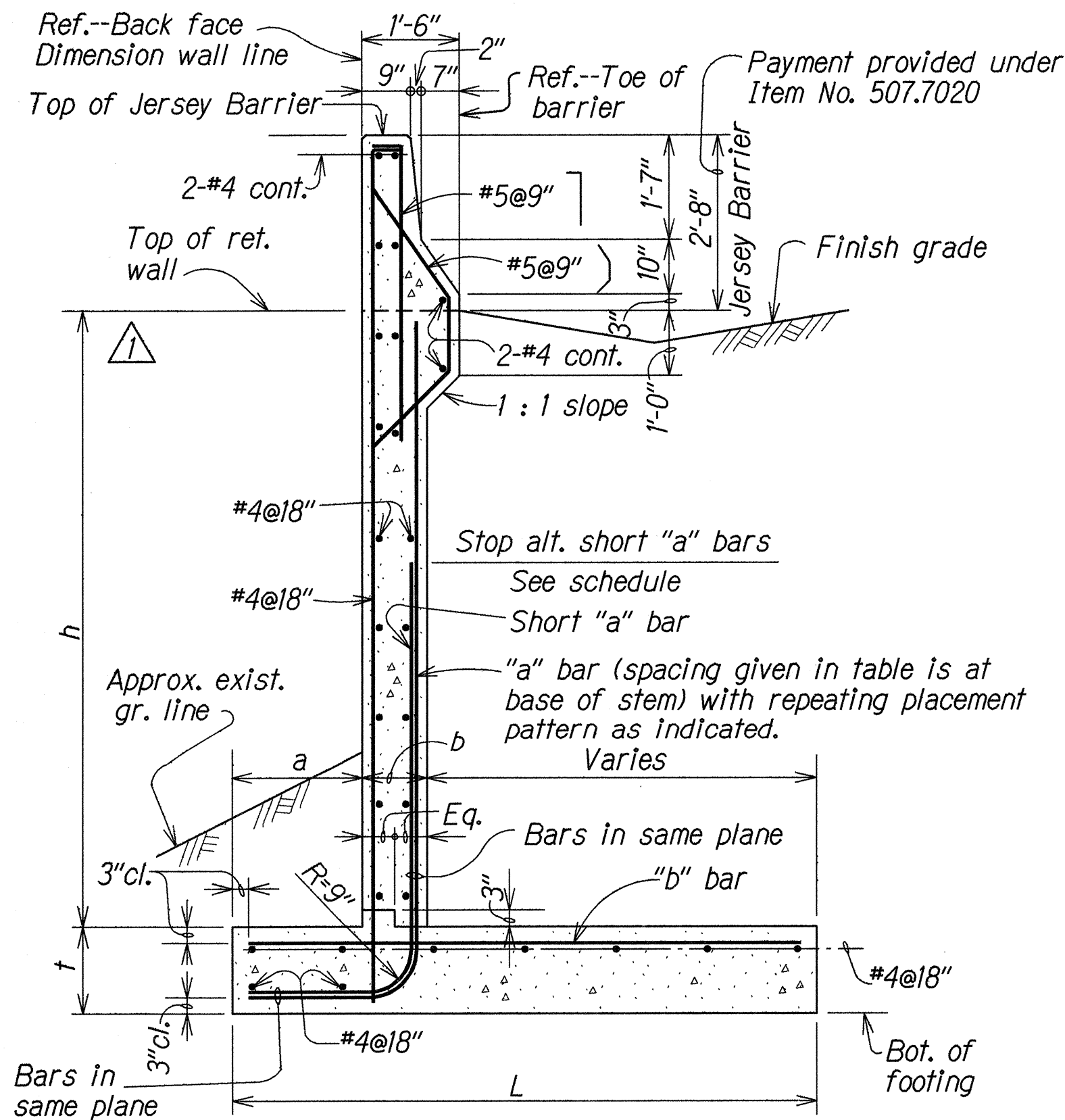
SHEET No. R19 OF 28 SHEETS

C.O. ADD. 82

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-(K27)	1992	ADD.83	223



AT CUT SIDE
RETAINING WALL SECTION



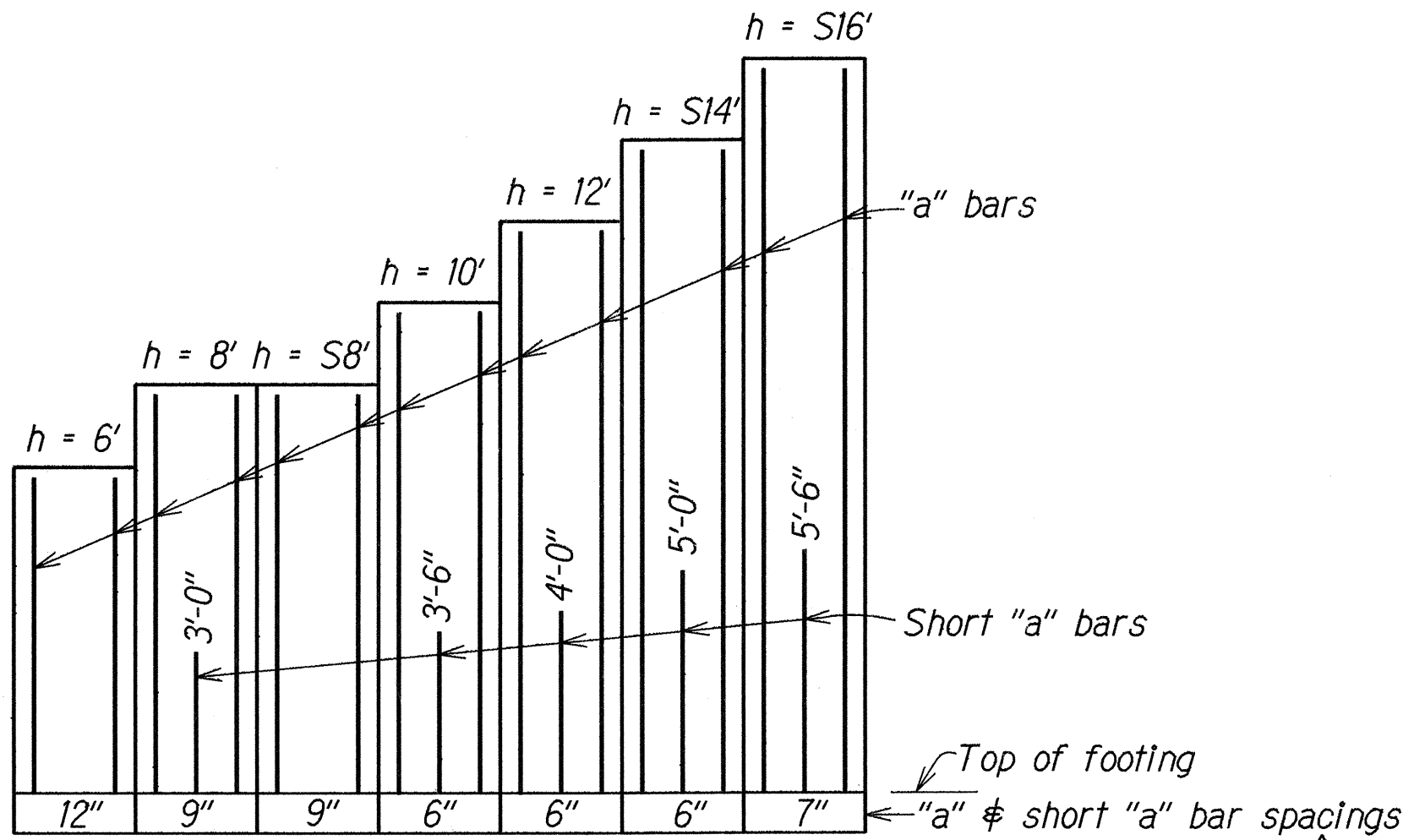
AT FILL SIDE
Scale: 1/2" = 1'-0"

SCHEDULE OF DIMENSIONS AND REINFORCING STEEL AT CUT SIDE							
MAXIMUM h	6'	8'	S8'	10'	12'	S14'	S16'
a	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
b	12"	12"	12"	12"	14"	16"	20"
t	14"	14"	14"	14"	16"	20"	24"
L	4'-6"	6'-0"	7'-0"	9'-6"	11'-6"	12'-0"	13'-0"
D		1'-3"	1'-3"	2'-0"	3'-0"	3'-0"	3'-0"
e		14"	14"	14"	14"	14"	14"
"a" bars	#4@12"	#5@18"	#6@9"	#6@12"	#7@12"	#8@12"	#9@14"
Short "a" bars		#5@18"		#6@12"	#7@12"	#8@12"	#9@14"
"b" bars	#4@12"	#5@9"	#6@9"	#6@5"	#7@5"	#8@5"	#10@7"
"d" bars		#4@12"	#4@12"	#4@12"	#5@9"	#6@8"	#6@7"

SCHEDULE OF DIMENSIONS & REINFORCING STEEL AT FILL SIDE							
MAXIMUM h	6'	8'	10'	12'	14'	16'	
a	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	
b	12"	12"	12"	14"	16"	18"	
t	14"	14"	15"	18"	21"	24"	
L	8'-6"	9'-0"	9'-6"	11'-0"	12'-6"	14'-0"	
"a" bars	#5@6"	#6@12"	#7@12"	#7@10"	#8@12"	#9@12"	
Short "a" bars	---	#6@12"	#7@12"	#7@10"	#8@12"	#9@12"	
"b" bars	#6@6"	#7@6"	#8@6"	#8@5"	#10@7"	#10@6"	

Note:

Dimension of "a" bars & short "a" bars given in table is at base of stem with repeating placement pattern as indicated.

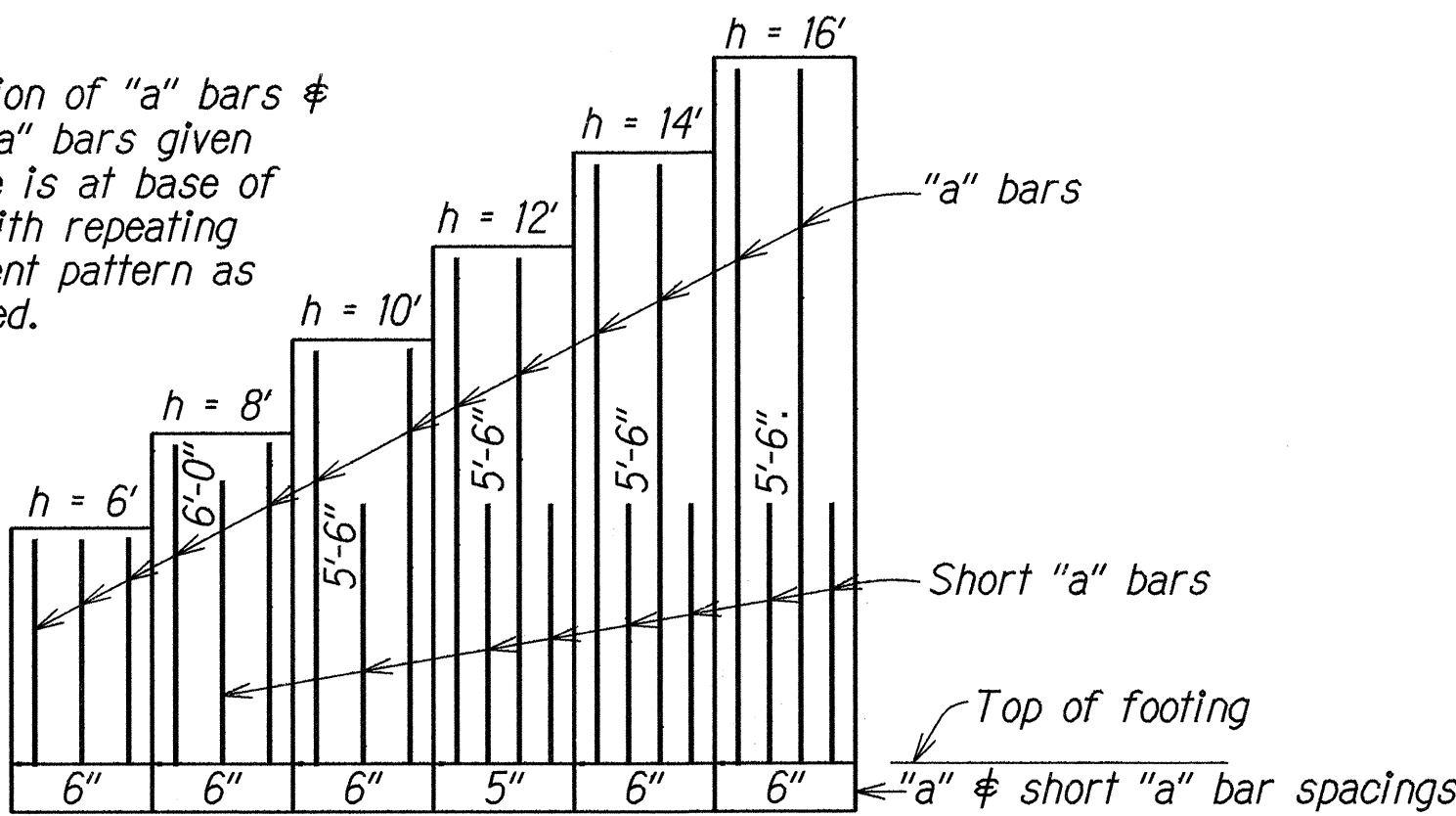


VERTICAL REINFORCING STEEL
ARRANGEMENT AT CUT SIDE

N.T.S.

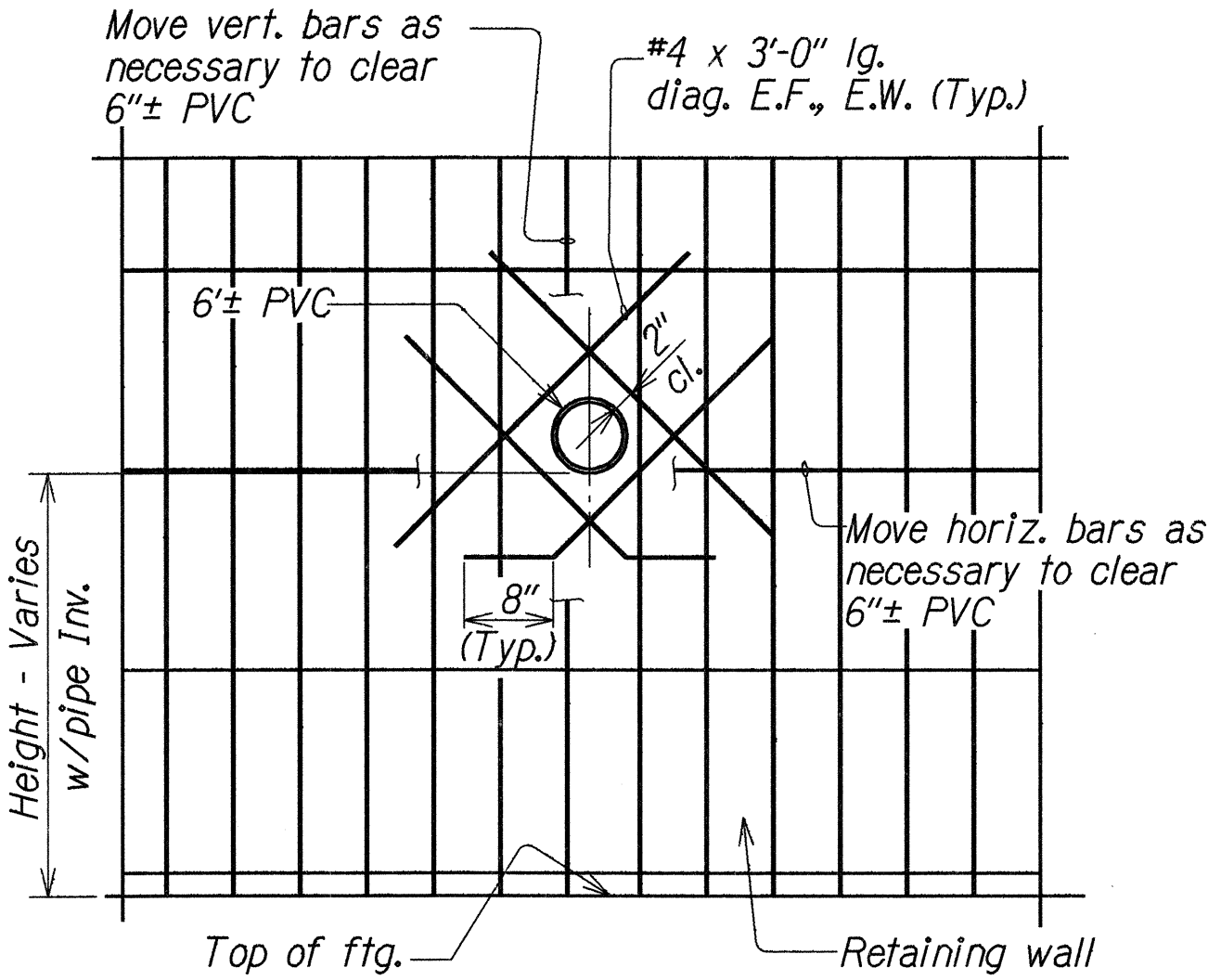
Note:

Dimension of "a" bars & short "a" bars given in table is at base of stem with repeating placement pattern as indicated.



VERTICAL REINFORCING STEEL
ARRANGEMENT AT FILL SIDE

N.T.S.



TYPICAL DETAIL
AT 6"Ø NON-PERFORATED
PVC PIPE DRAIN

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

SURVEY PLOTTED BY	DATE
DESIGNED BY	SEPT 1991
CHECKED BY	SEPT 1991
QUANTITIES BY	SEPT 1991
DESIGN FILE	SEPT 1991
ORIGINAL PLAN	SEPT 1991

8/11/92

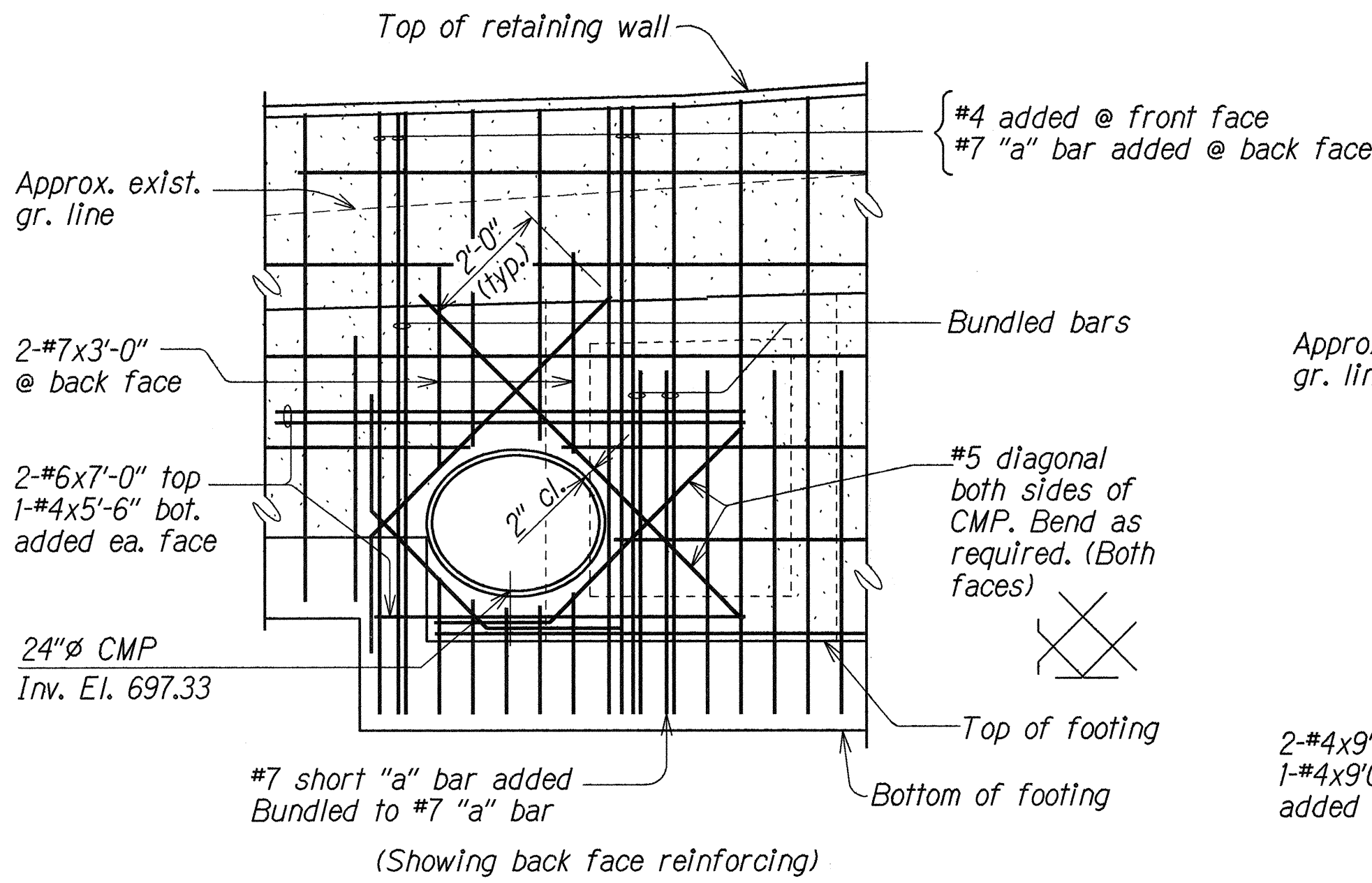
Changed "h" to top of ret. wall.
Revised reinforcing spacing.
Added Typ. Det. At 6"Ø Non-perforated
PVC Pipe Drain.

DATE

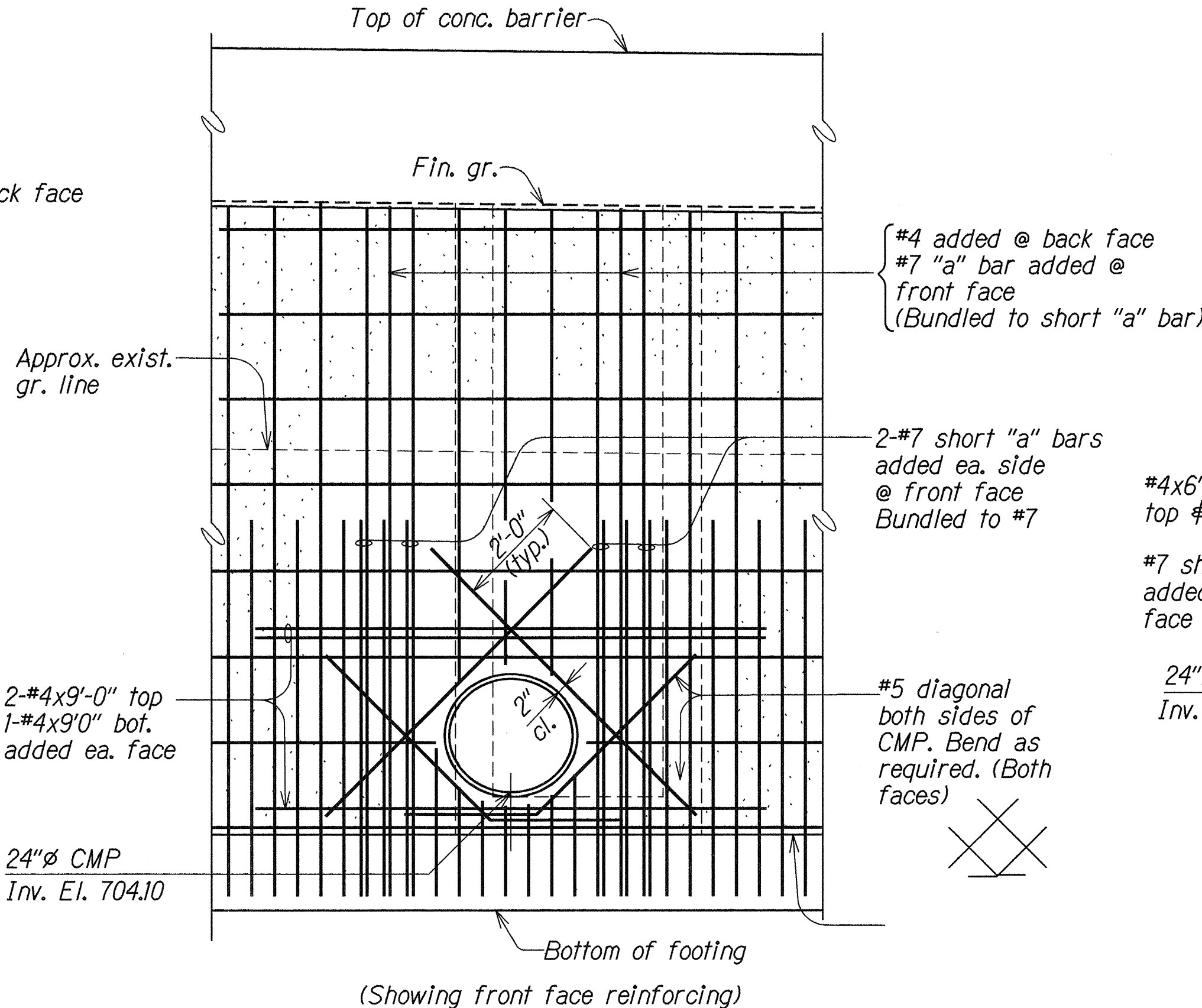
REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
RETAINING WALL SECTIONS AND SCHEDULES INTERSTATE ROUTE H-2 HOV LANES, PHASE II MILILANI INTERCHANGE TO WAIPIO INTERCHANGE Project No. IR-H2-K27	
Scale: As Noted	Date: Apr. 1992
SHEET No. R20 OF 28 SHEETS	

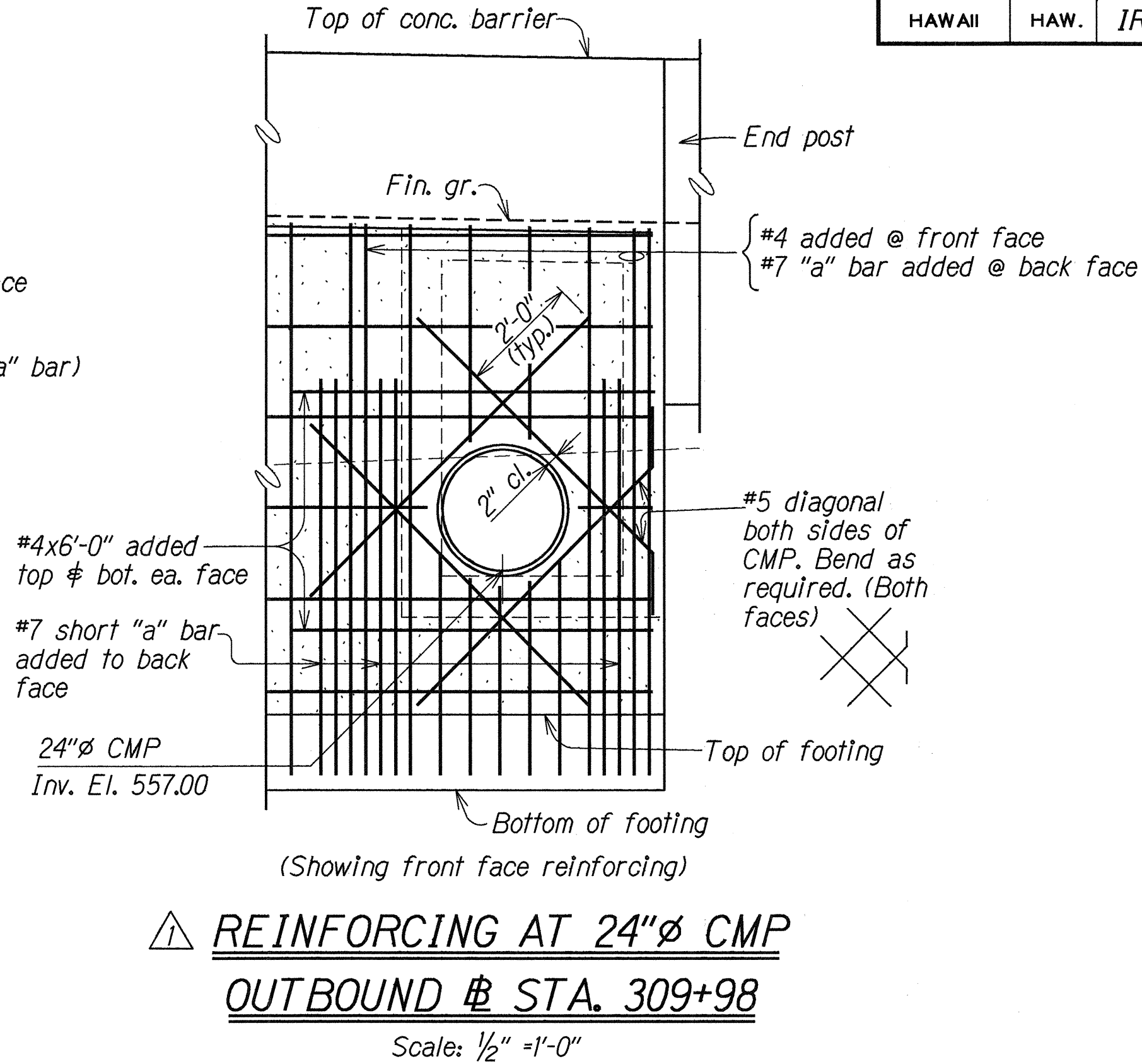
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1991	ADD. 83S-1	223



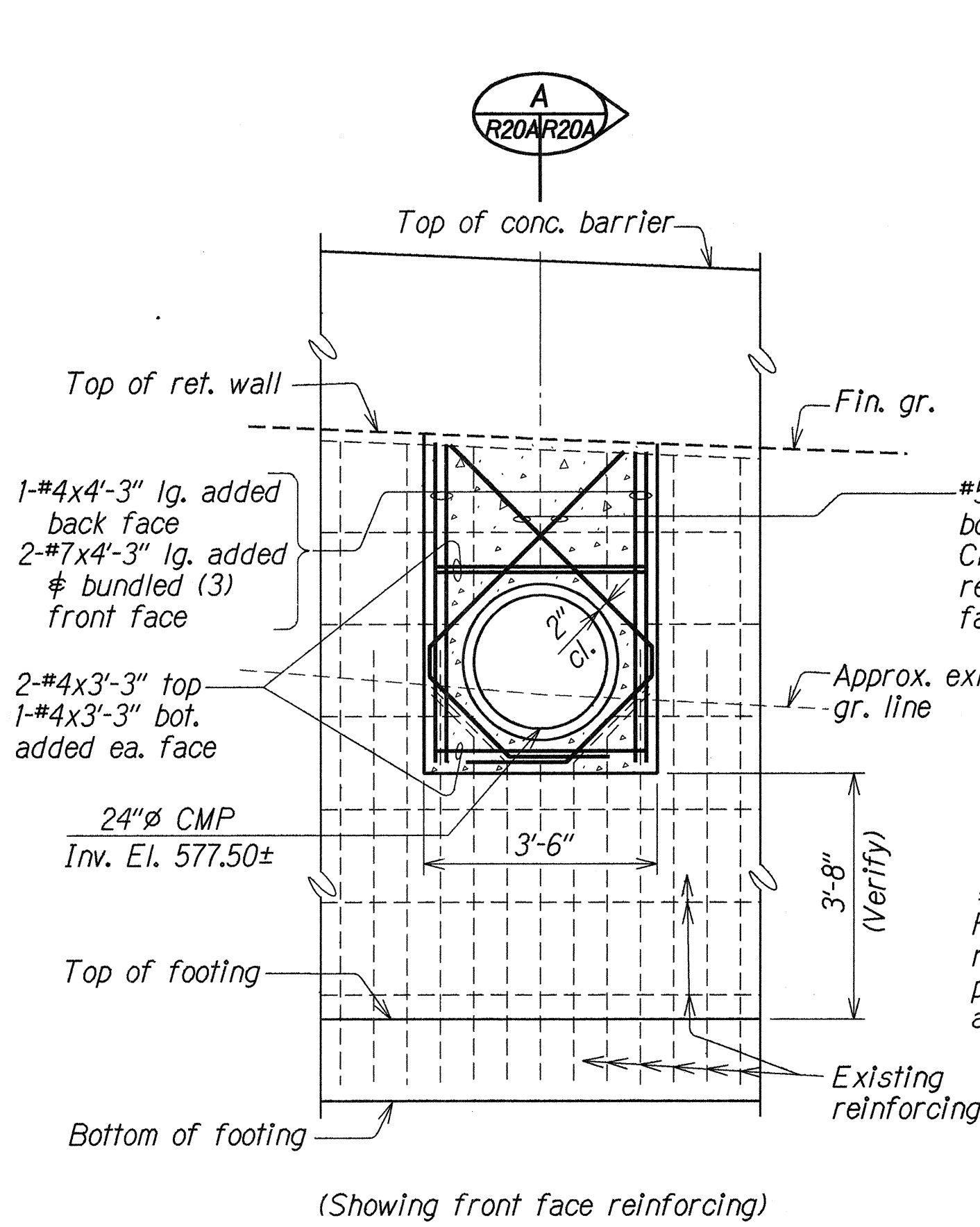
△ **REINFORCING AT 24"Ø CMP**
OUTBOUND @ STA. 259+25
 Scale: 1/2" = 1'-0"



△ **REINFORCING AT 24"Ø CMP**
OUTBOUND @ STA. 272+96
 Scale: 1/2" = 1'-0"

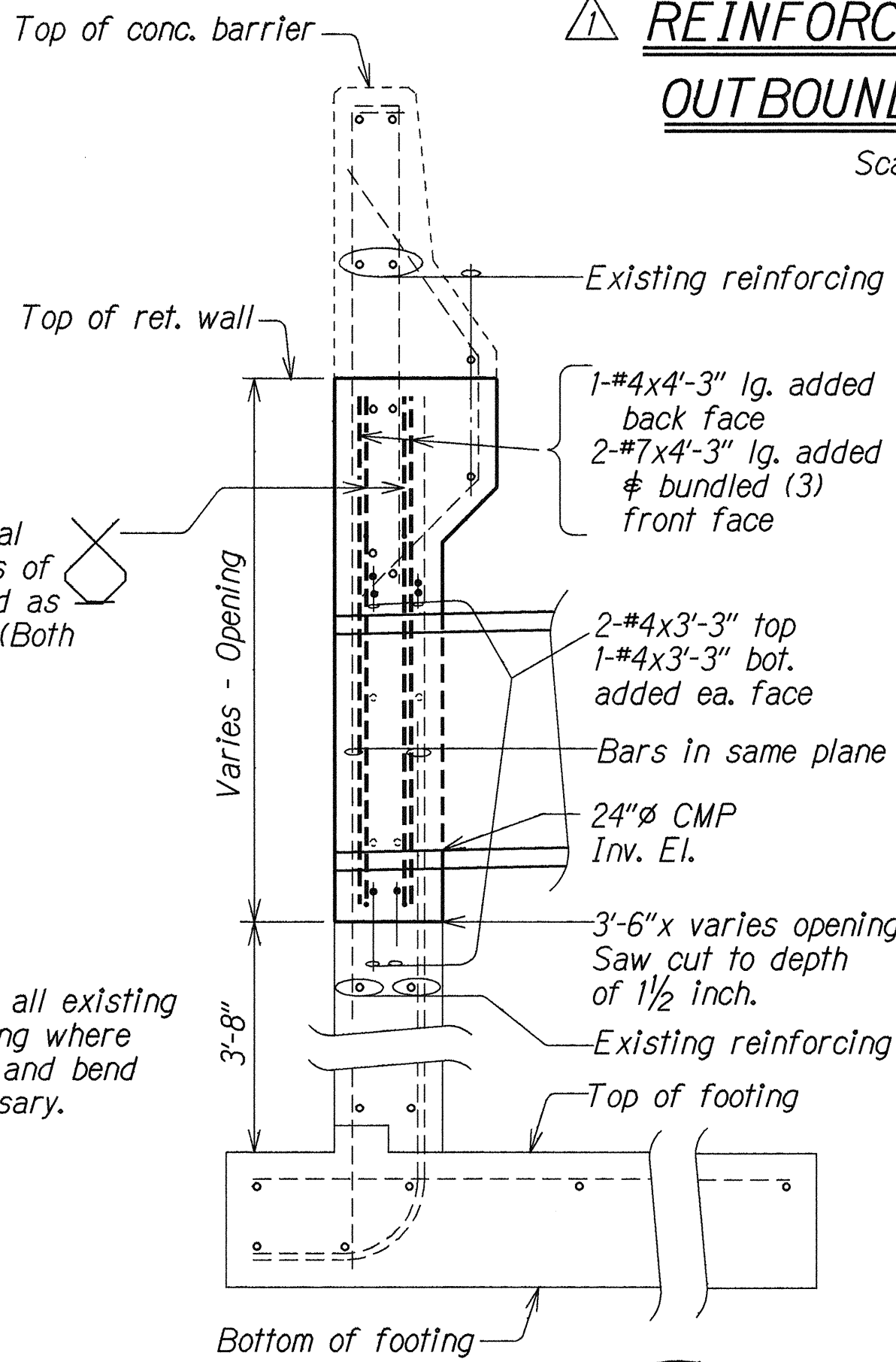


△ **REINFORCING AT 24"Ø CMP**
OUTBOUND @ STA. 309+98
 Scale: 1/2" = 1'-0"



△ **REINFORCING AT 24"Ø CMP**
OUTBOUND @ STA. 303+00
 Scale: 1/2" = 1'-0"

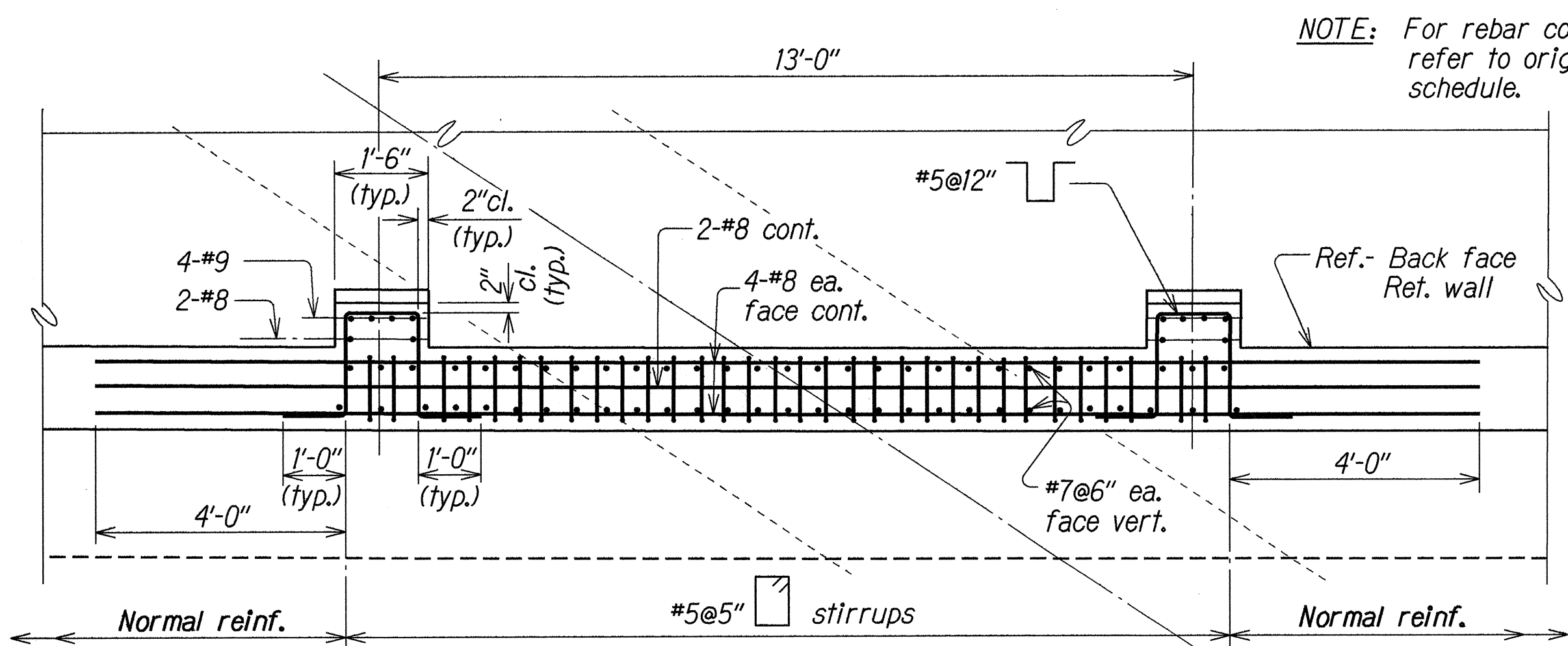
NOTE:
 Preserve all existing
 reinforcing where
 possible, and bend
 as necessary.



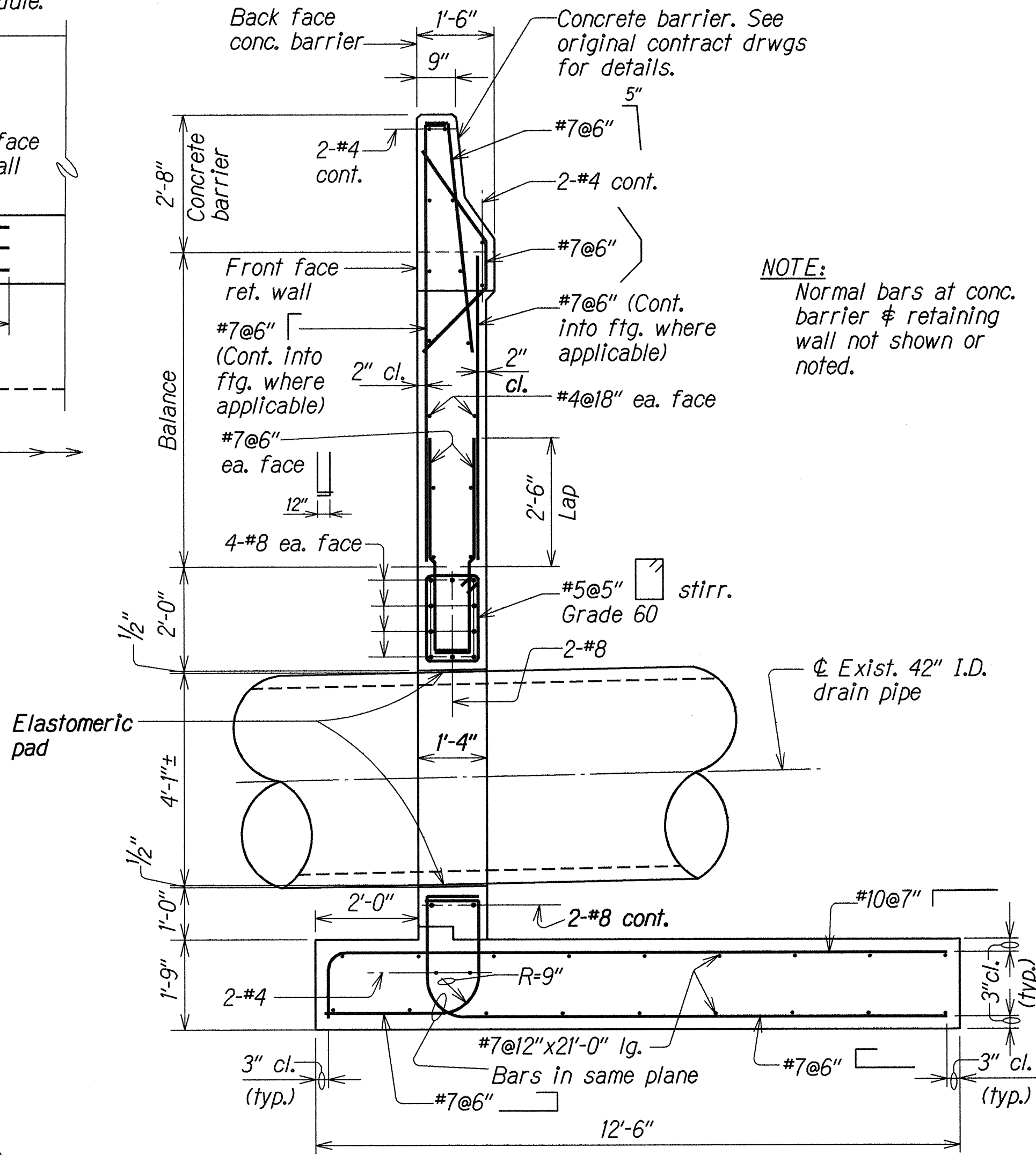
△ **SECTION**
 Scale: 3/4" = 1'-0"

12/7/93	Added details for opening at O.B. @ Sta. 303+00± for 24"Ø CMP.
8/11/92	Added ADD. 83S-1 to contract plans.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION REINFORCING AT 24"Ø CMP O.B. @ STA. 259+25, O.B. @ STA. 272+96 O.B. @ STA. 272+96 INTERSTATE ROUTE H-2 HOV LANES, PHASE II MILILANI INTERCHANGE TO WAIPIO INTERCHANGE Project No. 1R-H2-1(27) Scale: As Noted Date: Aug. 1992	
SHEET No. R20A OF 28 SHEETS	

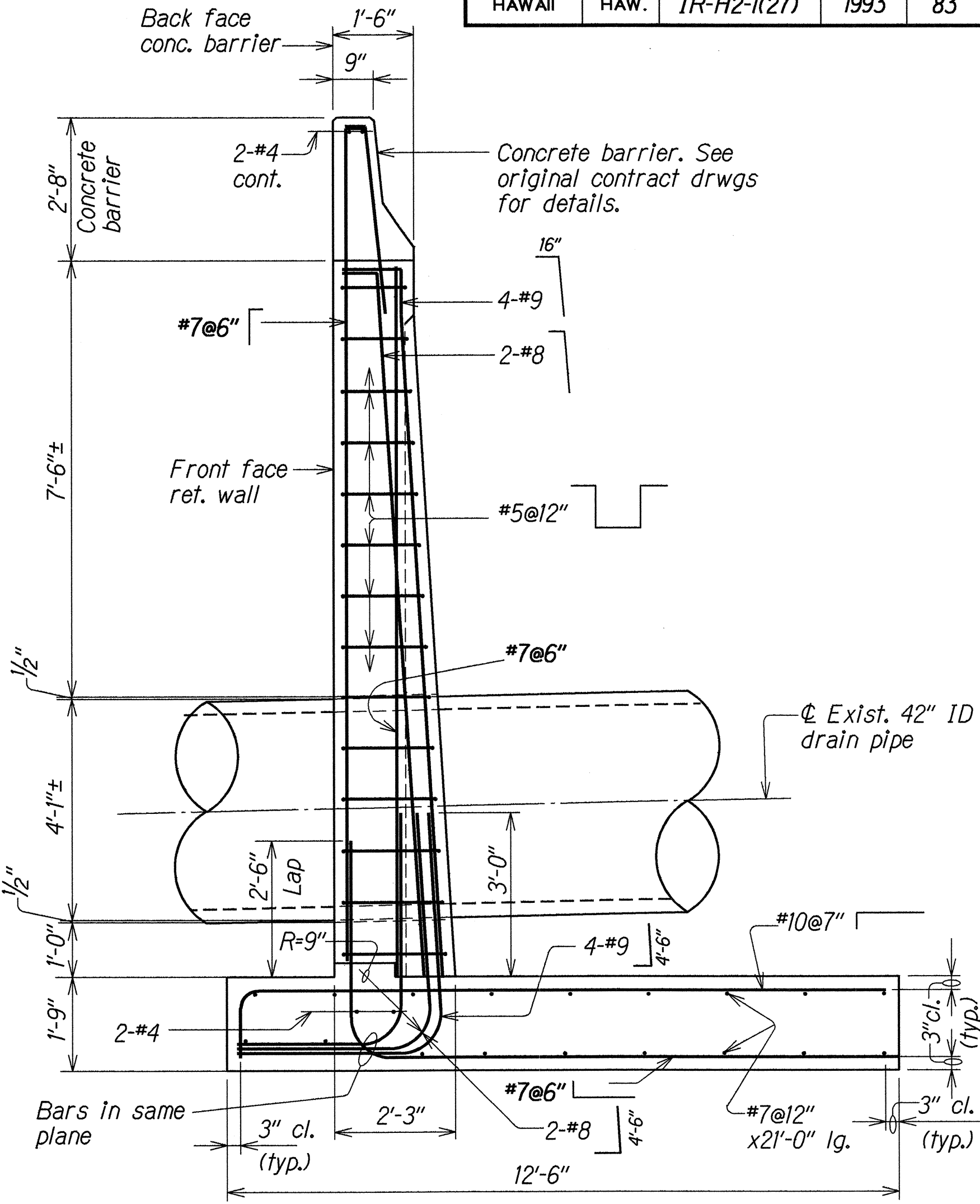
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1993	83	223



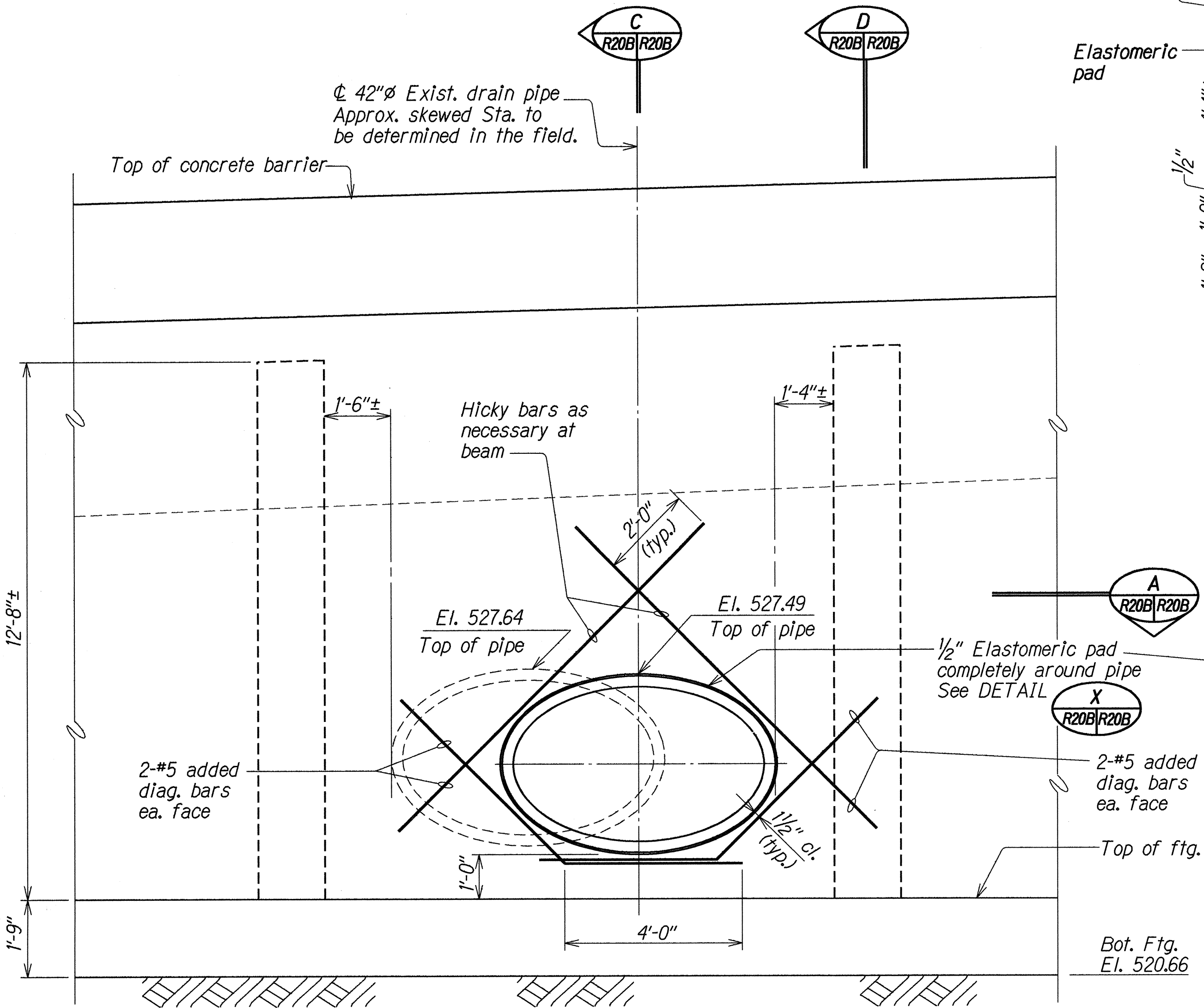
SECTION A
Scale: 1/2" = 1'-0"



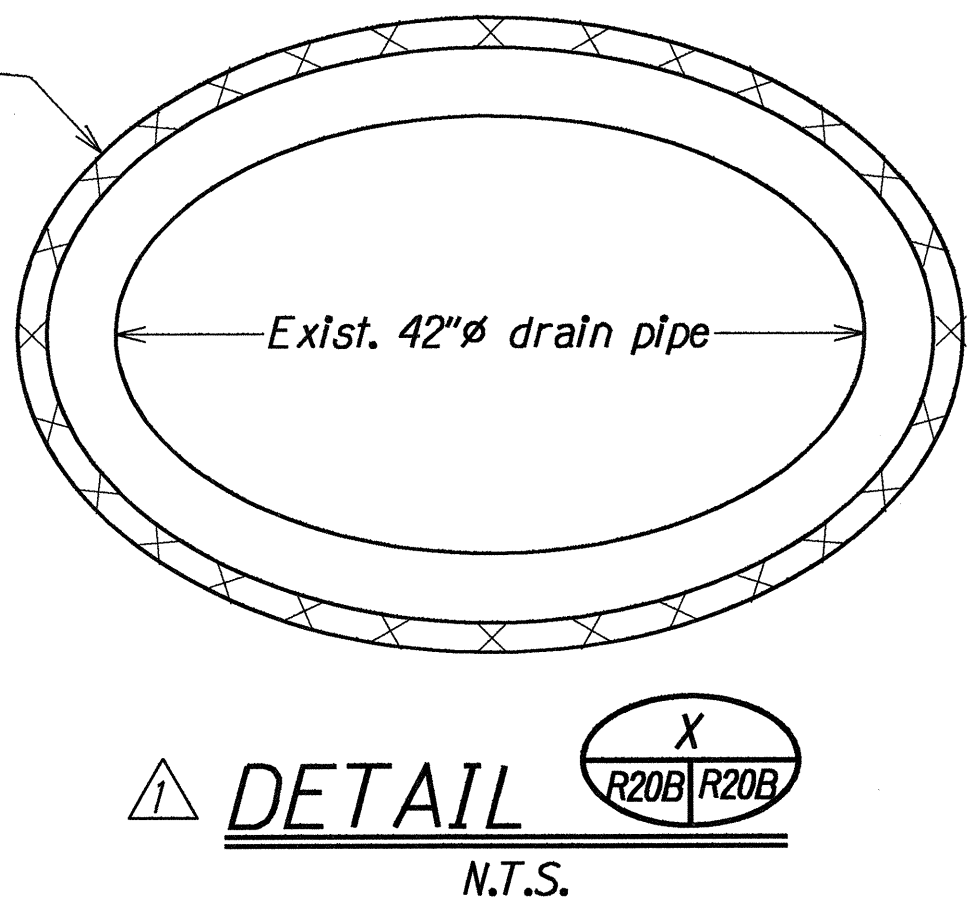
(AT 42" ID DRAIN PIPE)
SECTION C
Scale: 1/2" = 1'-0"



(AT COUNTERFORT)
SECTION D
Scale: 1/2" = 1'-0"



(FRONT FACE OF RETAINING WALL)
DETAIL B
Scale: 1/2" = 1'-0"



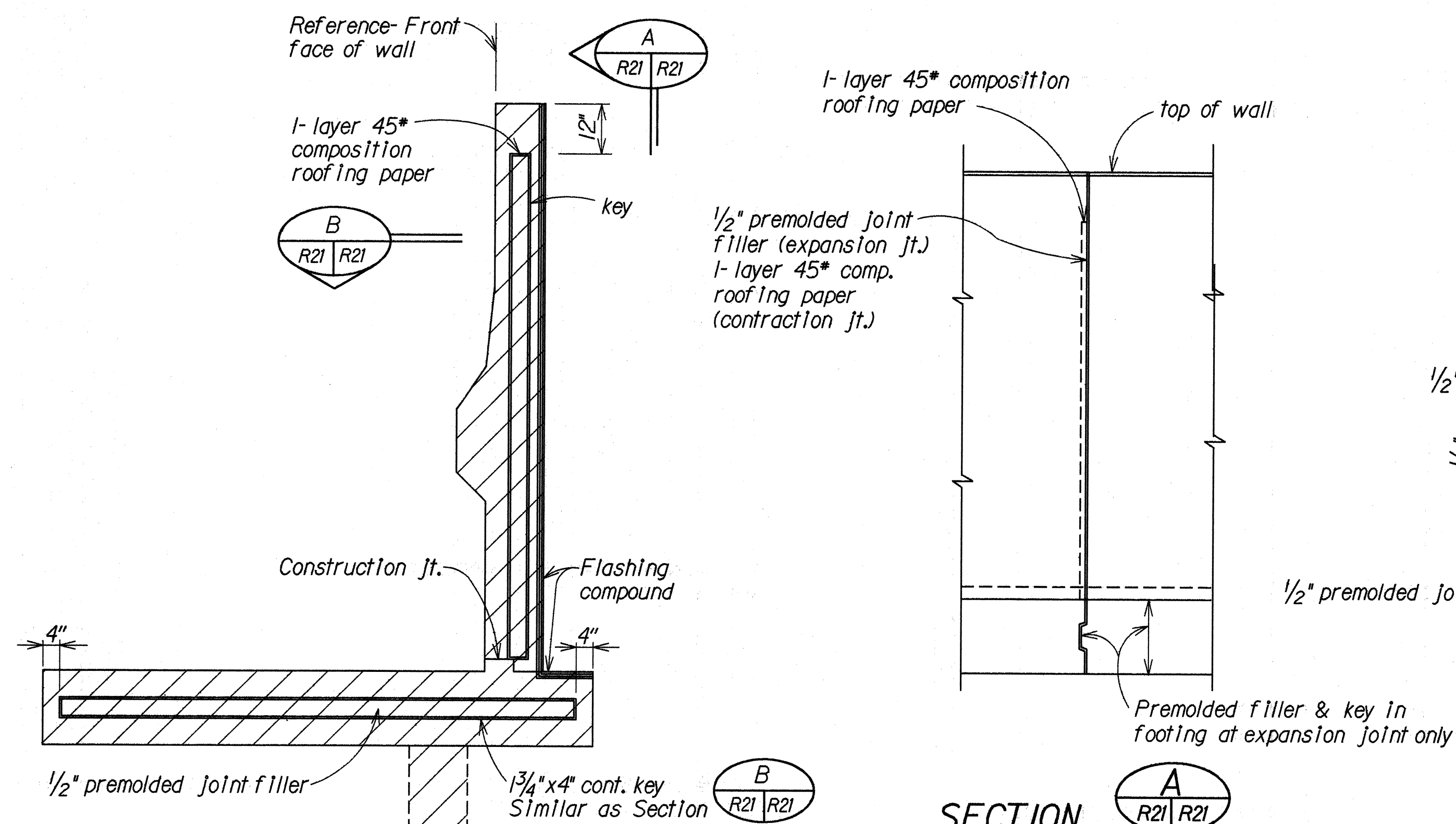
DETAIL X
N.T.S.

SURVEY PLOTTED BY	XXX	DATE	XXX 93
DRAWN BY	XXX	DESIGNED BY	XXX 93
CHECKED BY	XXX	QUANTITIES BY	XXX 93
ORIGINAL FILE	XXX	DESIGNED BY	XXX 93
DESIGNED BY	XXX	QUANTITIES BY	XXX 93
CHECKED BY	XXX	QUANTITIES BY	XXX 93

5/17/93	Sheet added to Contract Plan set for additional details required on shft. no. ADD. 83S-1
DATE	REVISION

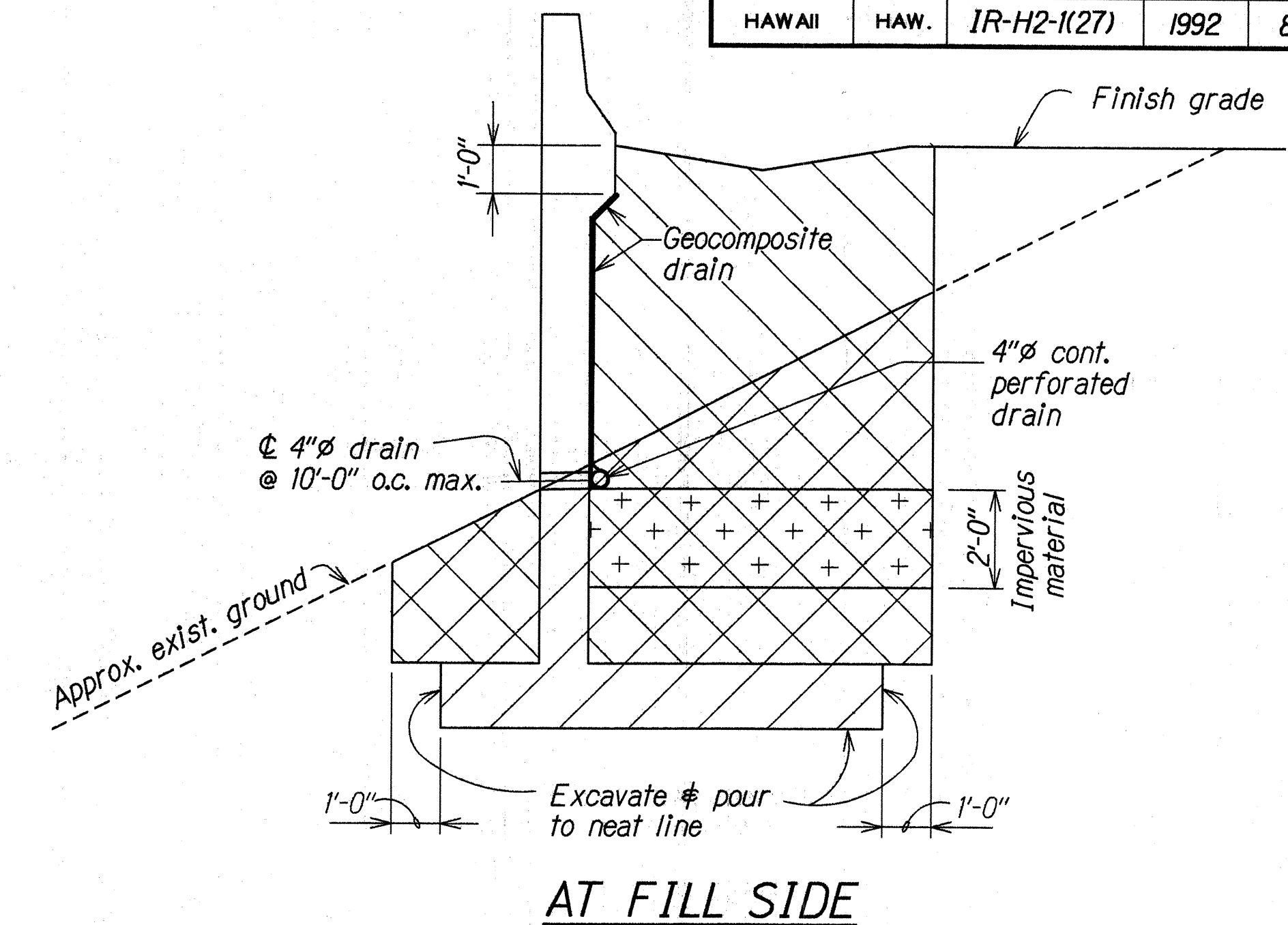
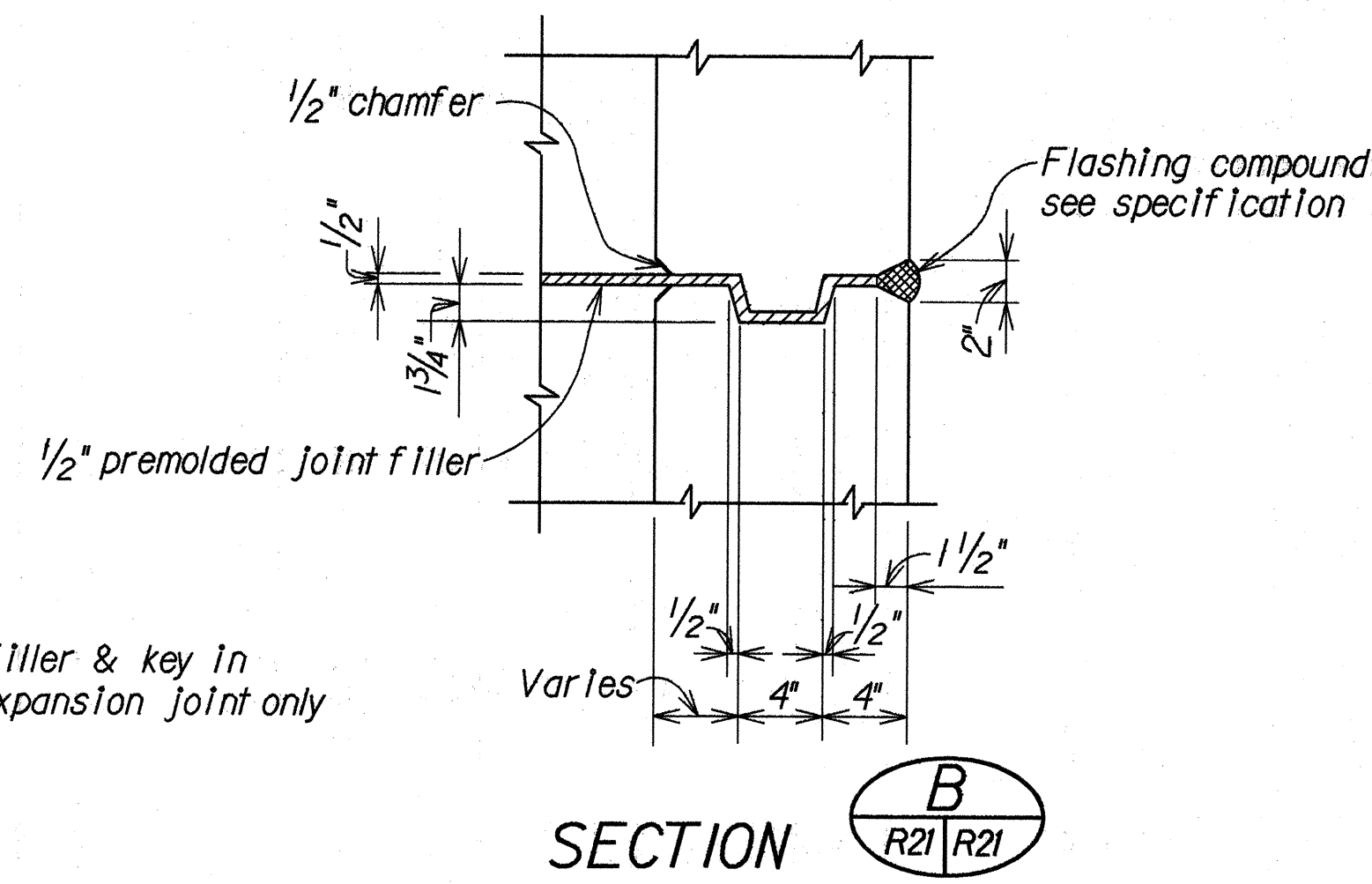
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	REINFORCING AT 42" ID DRAIN PIPE O.B. @ STA. 322+43.75 INTERSTATE ROUTE H-2 HOV LANES, PHASE II MILLAN INTERCHANGE TO WAIPIO INTERCHANGE Project No. IR-H2-1(27)
Scale: As Noted	Date: May, 1993
SHEET No. R20B OF 28 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-1(27)	1992	84	223



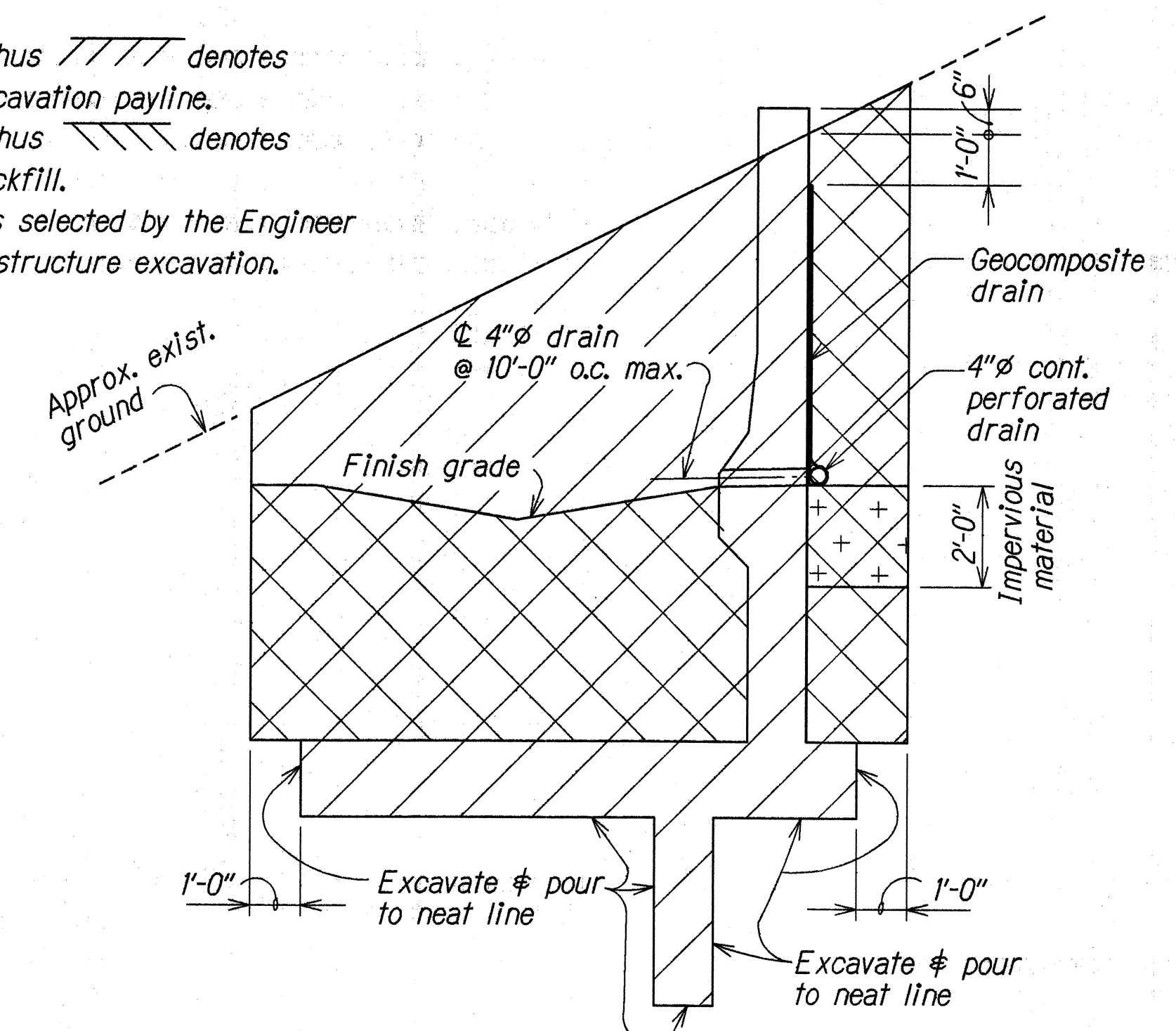
NOTE

1. Spacing of joints
Expansion = 96'-0" max.
Contraction = 32'-0" max.
2. For alternate contraction joint and control joint details - See Standard Details sht.* B-01.
3. Expansion joint material shall be incidental to concrete.



Note:

1. Hatched area shown thus denotes limits of structure excavation payline.
2. Hatched area shown thus denotes limits of structure backfill.
3. Impervious material as selected by the Engineer shall be incidental to structure excavation.



TYP. EXCAVATION & BACKFILL PAY LIMITS

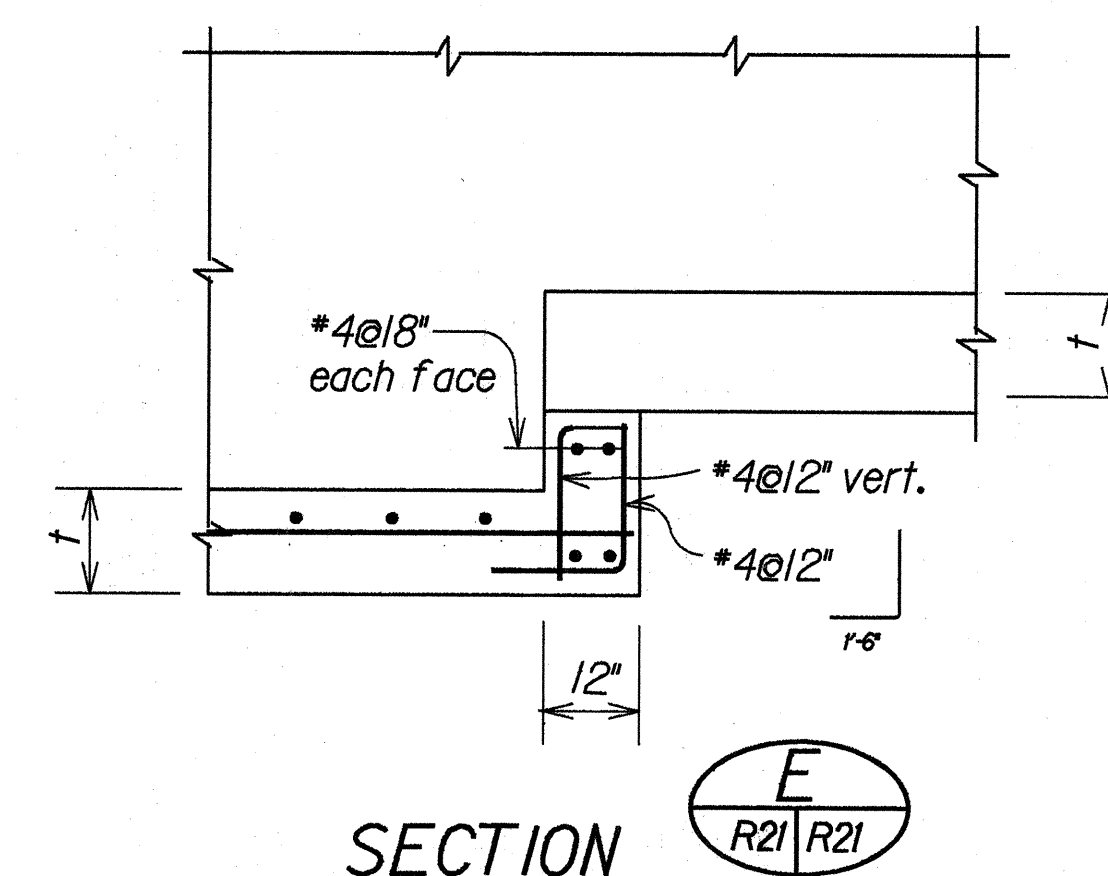
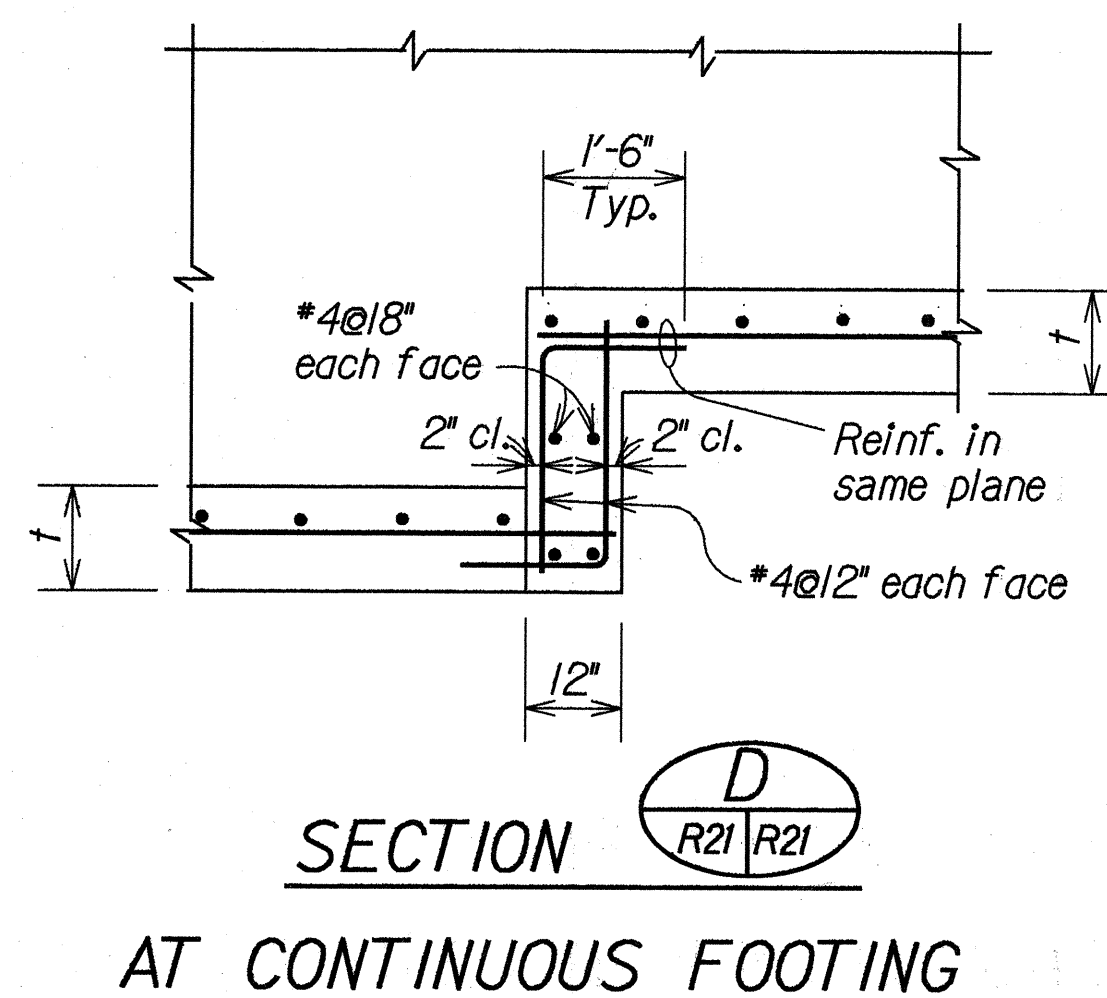
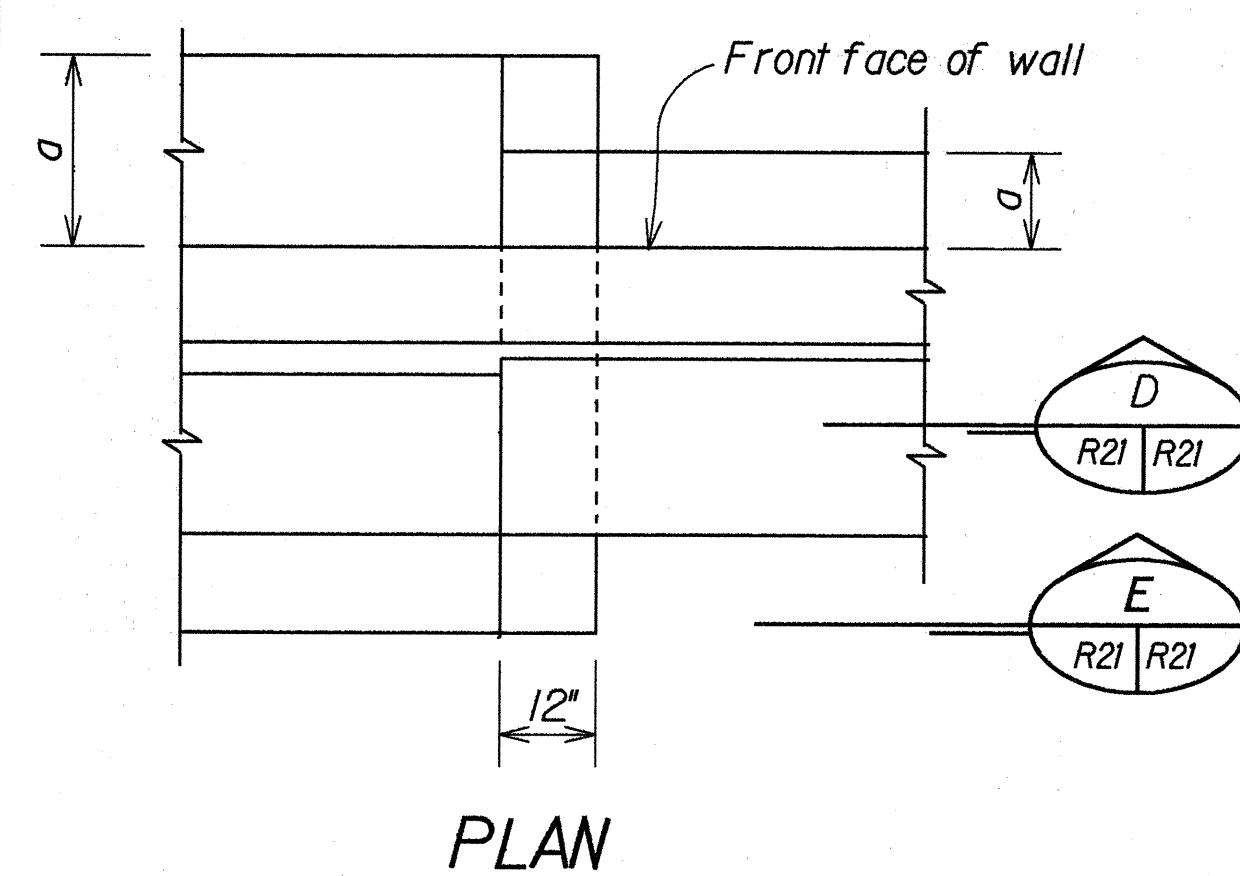
Scale: 3/8"=1'-0"

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
RETAINING WALL	
EXPANSION JOINT, FOOTING STEP-UP DETAILS, TYPICAL EXCAVATION AND BACKFILL PAY LIMITS	
INTERSTATE ROUTE H-2 HOV LANES, PHASE II MILILANI INTERCHANGE TO WAIPIO INTERCHANGE Project No. 1R-H2-1(27)	
Scale: As Noted	Date: Apr. 1992

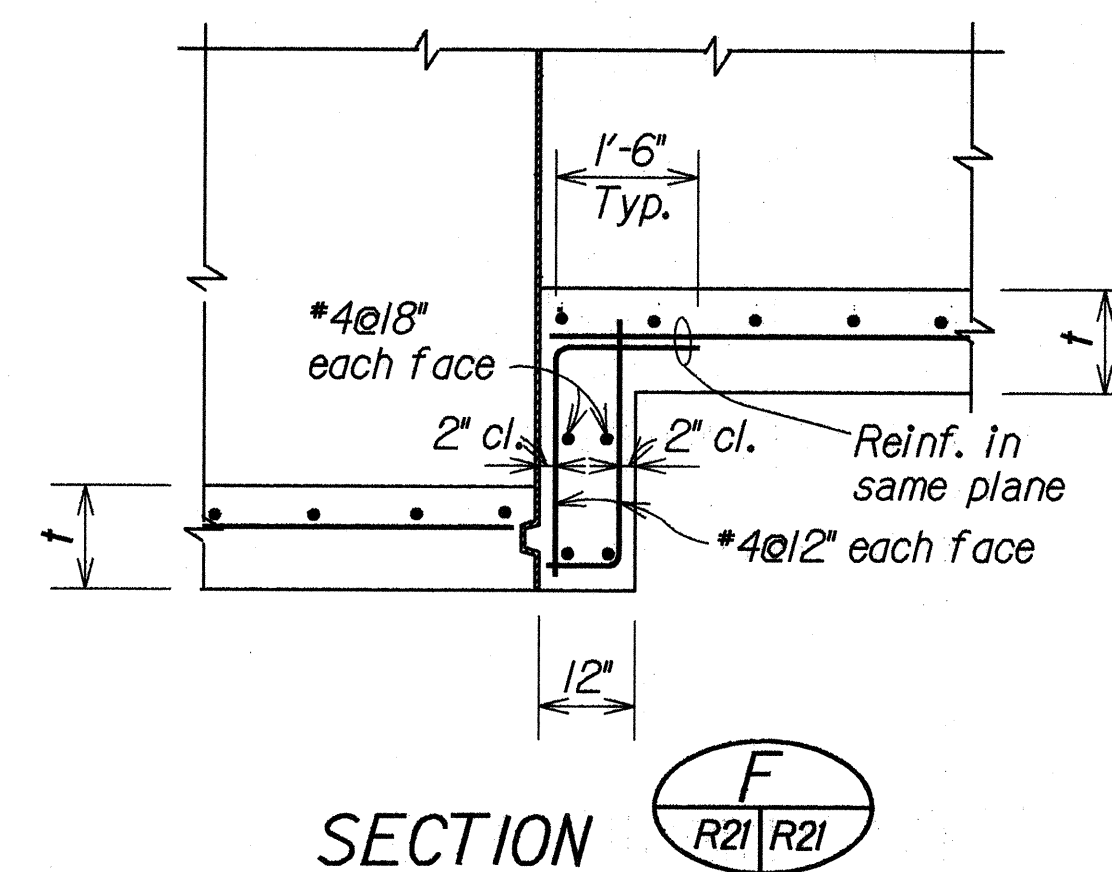
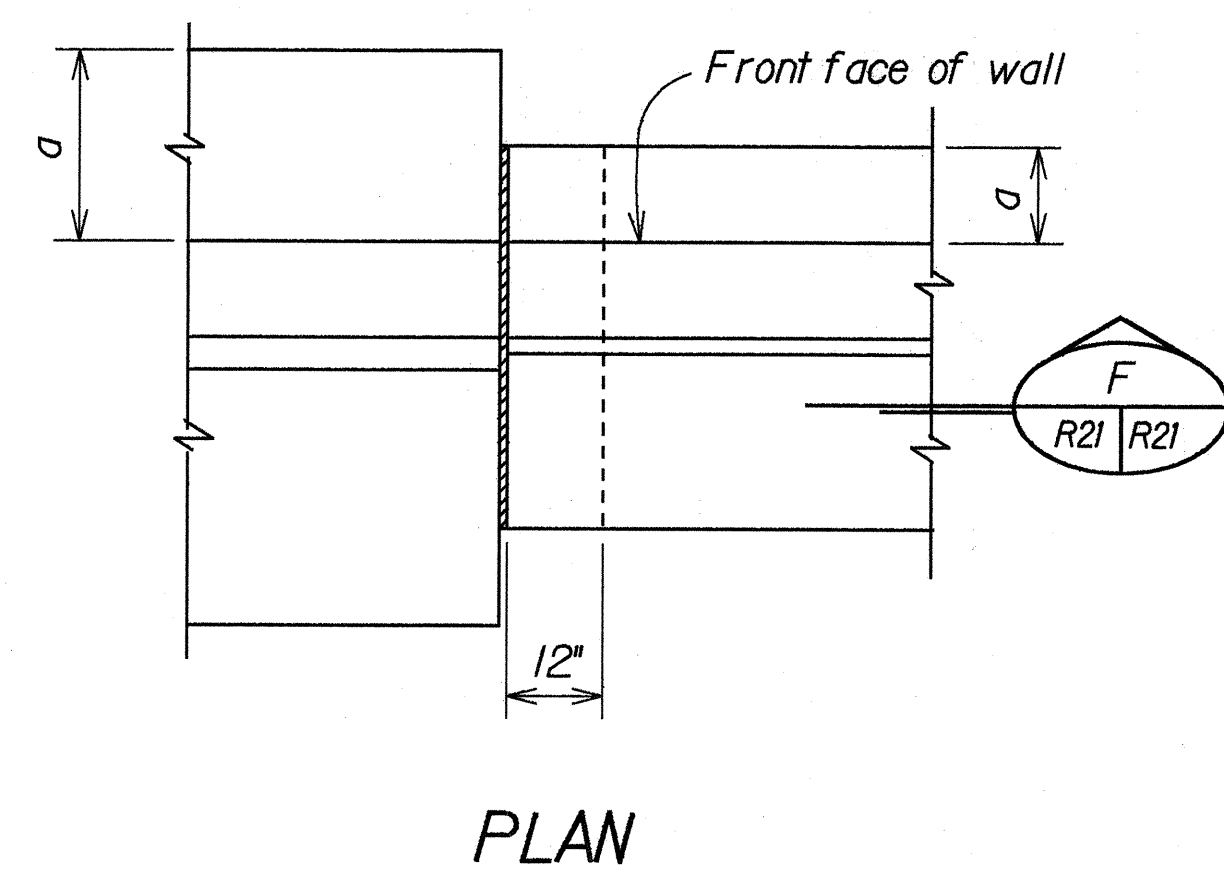
SHEET No. R21 OF 28 SHEETS

TYPICAL EXPANSION JOINT DETAILS

Not to Scale



AT CONTINUOUS FOOTING



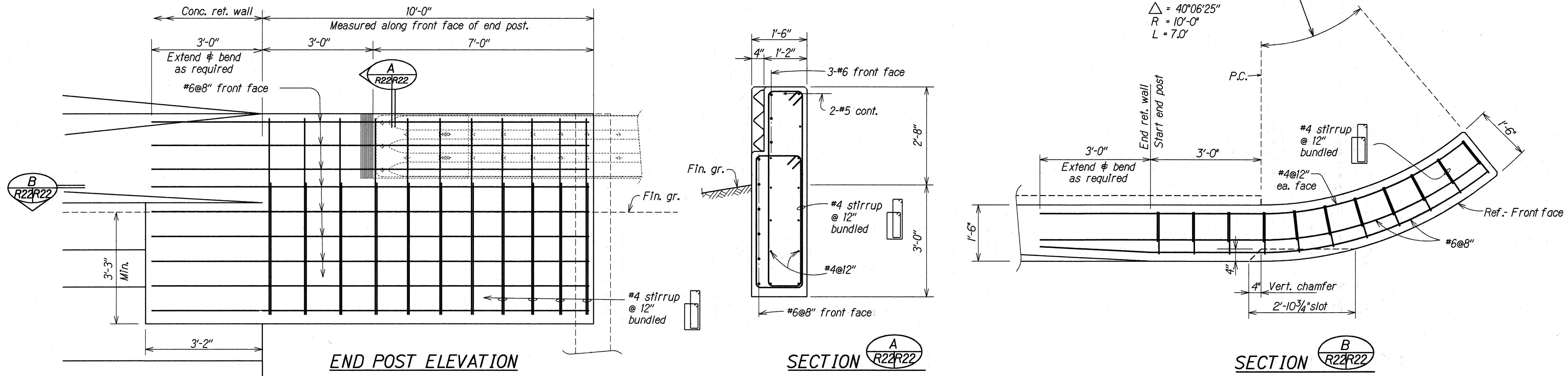
AT EXPANSION JOINT

TYPICAL FOOTING STEP-UP DETAILS

Not to Scale

SURVEY PLOTTED BY	DATE
DRAWN BY	DESIGNED BY
CHECKED BY	APPROVED BY
NO. 10/20/86	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	85	223



END POST AND RETAINING WALL AT TRANSITION DETAILS

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

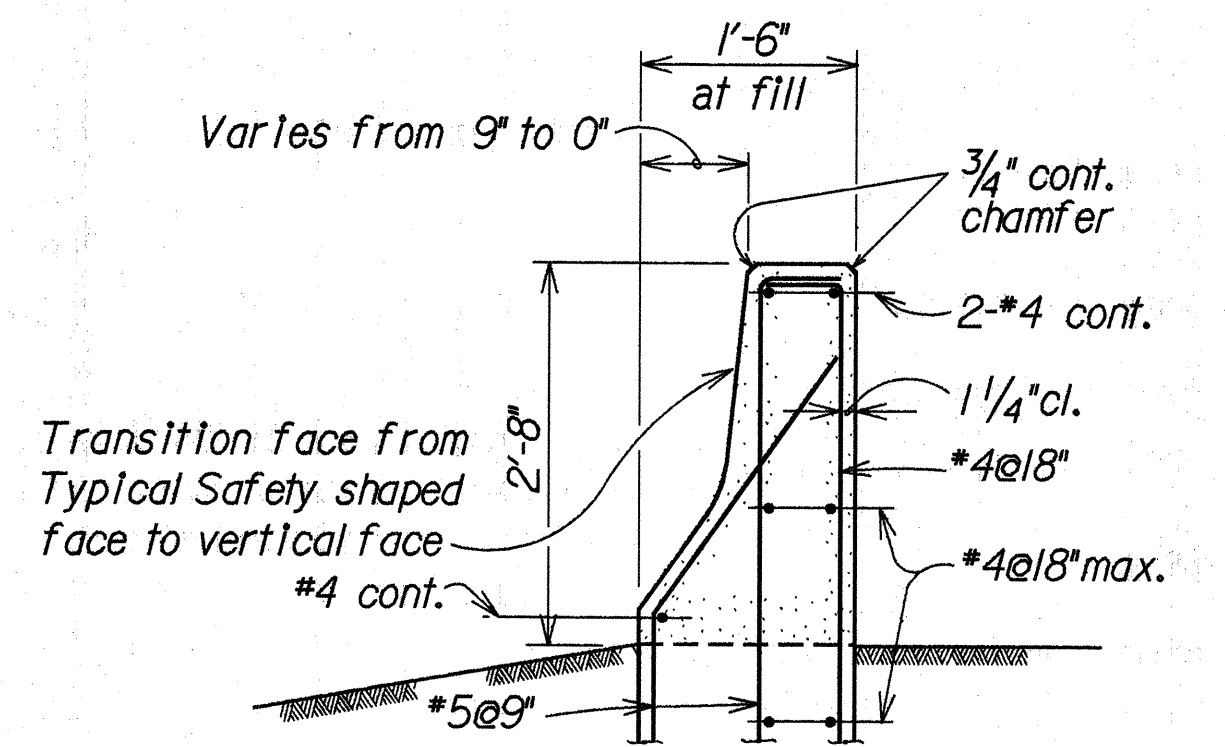
ORIGINAL FILE	DESIGN FILE	QUANTITIES BY	CHECKED BY	DATE
h2p2s7	h2p2s7	h2p2s7	h2p2s7	SEPT 1992

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

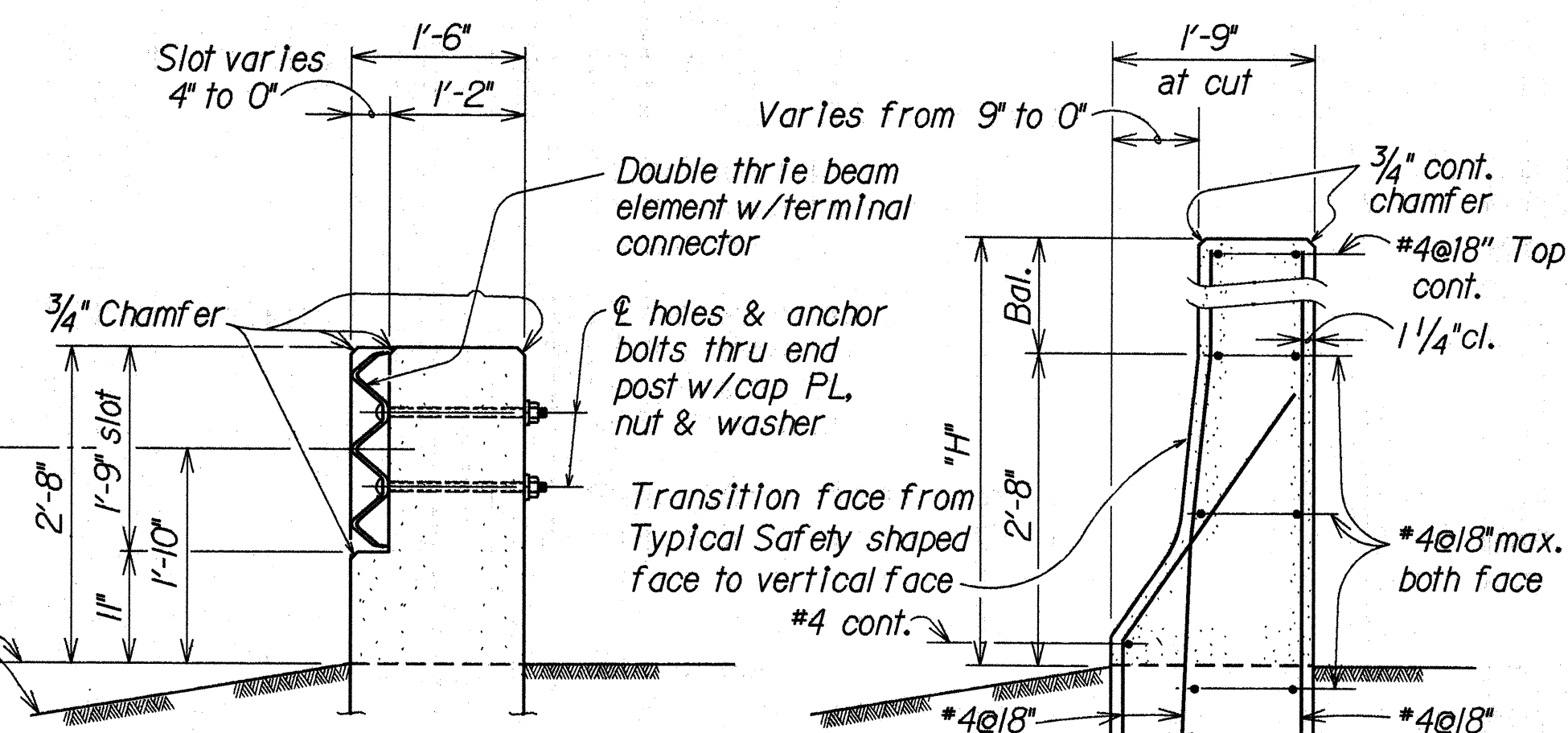
CONCRETE CURVED END POST
ELEVATION AND SECTIONS
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. IR-H2-1(27)

Scale: As Noted
Date: Apr. 1992

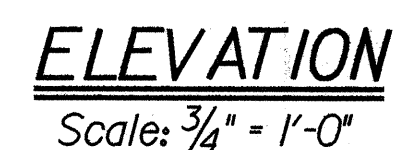
1. Cap PL and tapered box spacer block shall be fabricated from ASTM A 36 steel and hot-dip galvanized after fabrication.
2. Cap PL(s), tapered box spacer block, anchor bolts including nuts and washers and other appurtenances shall be incidental to beam type guardrail and will not be paid for separately.



CURVE DATA (Front Face)
 $\Delta = 40^{\circ}06'25''$
 $R = 10'-0''$
 $L = 7.0'$

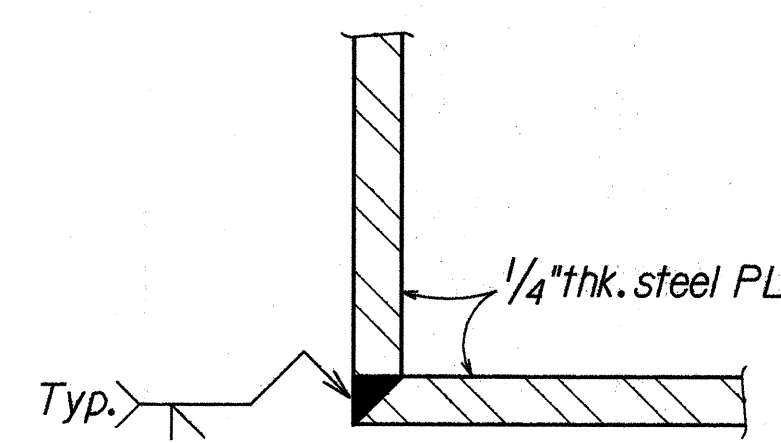


SECTION  AT CUT
Scale: $\frac{3}{4}" = 1'-0"$ SIDE



ELEVATION

Scale: $\frac{3}{4}" = 1'-0"$



SECTION 

N.T.S.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

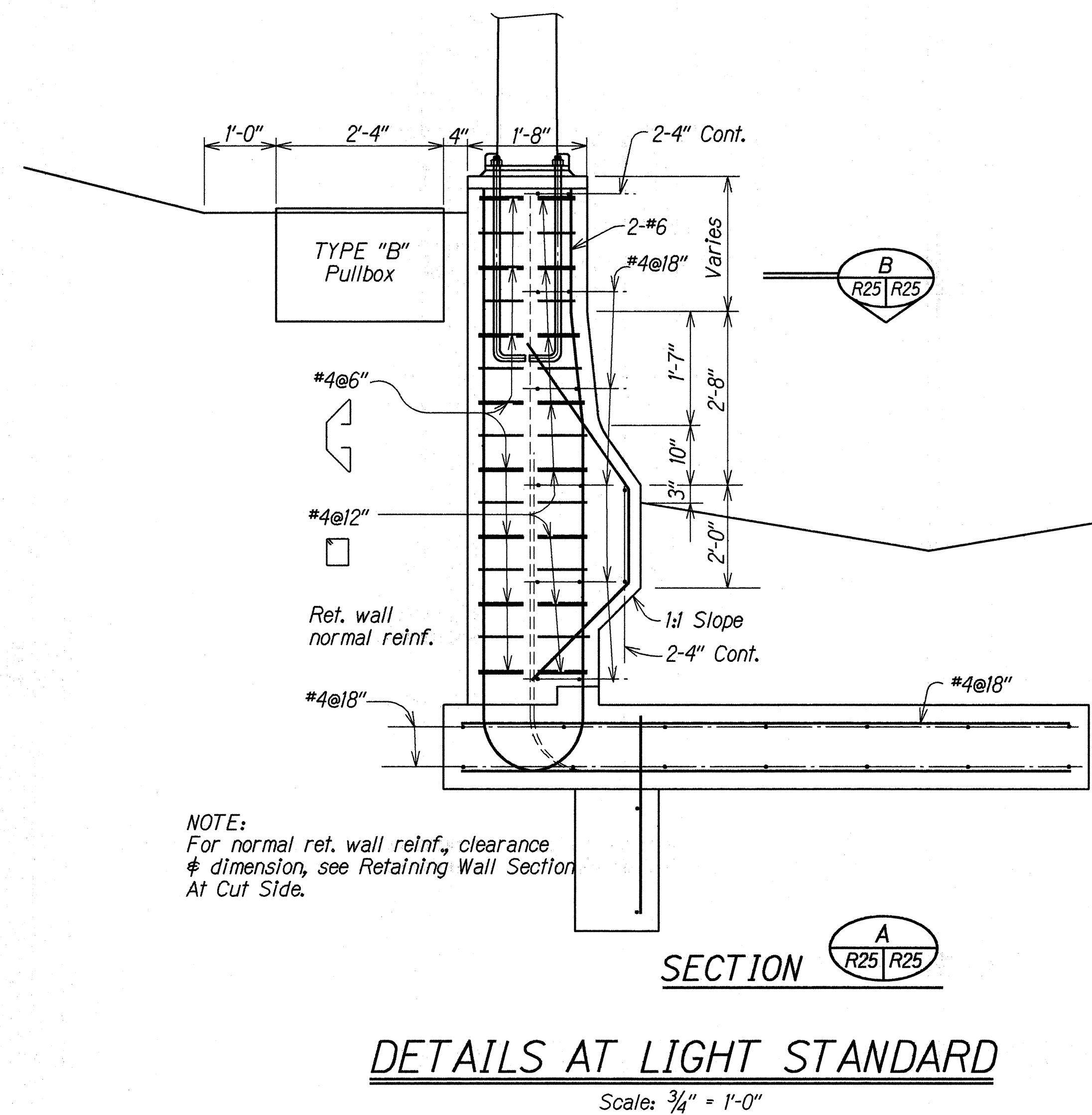
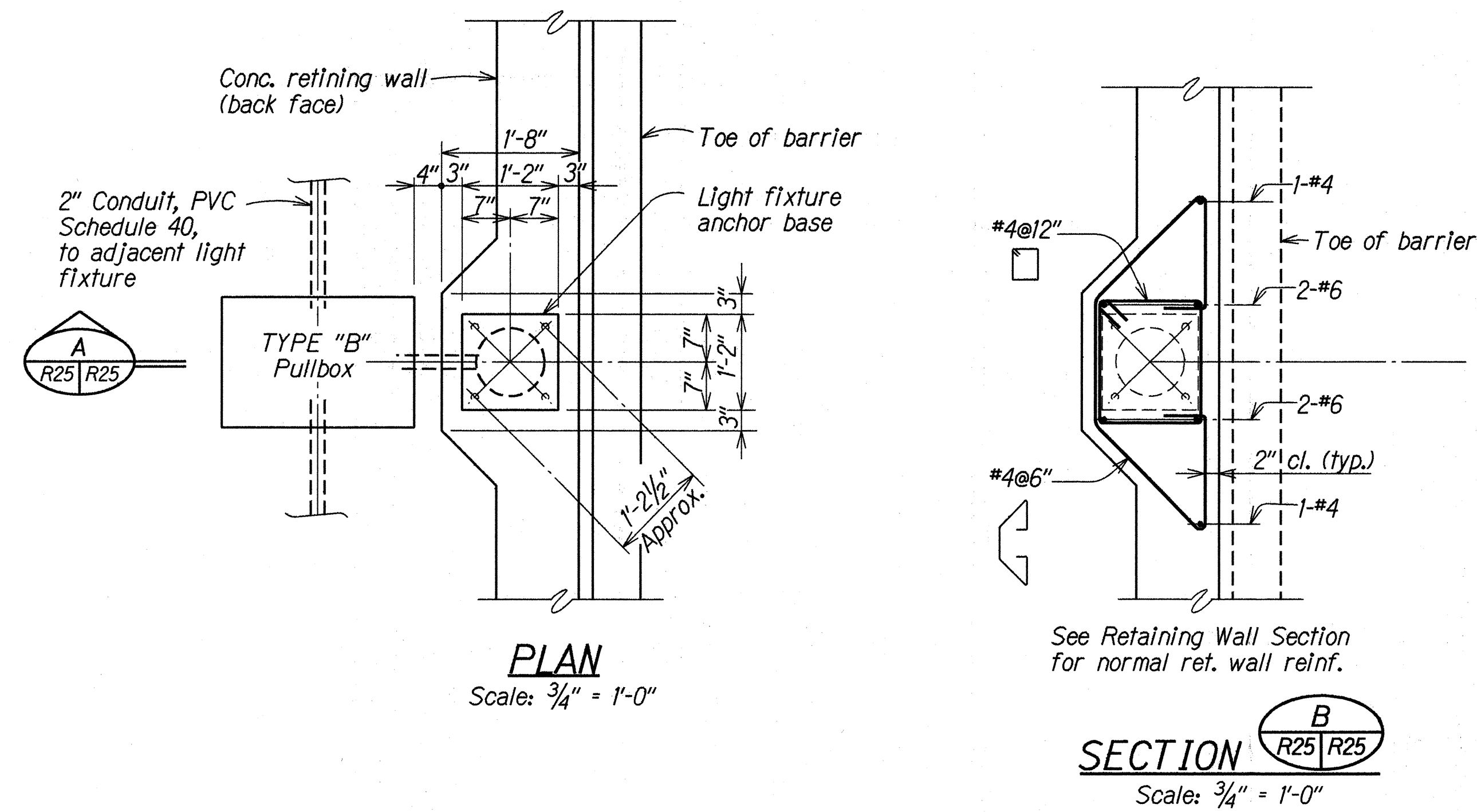
CONCRETE WALL TRANSITION WITH
CURVED END POST AND GUARDRAIL CONNECTION DETAILS

INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. 1R-H2-1(27)

Scale: As Noted

Date: Apr, 1992

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	88	223



ORIGINAL PLAN	SURVEY PLOTTED BY <u>LMA</u>		DATE <u>XXX 1991</u>
DESIGN FILE	DRAWN BY _____		*
	TRACED BY _____		*
	DESIGNED BY <u>DKT</u>		<u>XXX 1991</u>
	QUANTITIES BY <u>XXX</u>		<u>XXX 1991</u>
	CHECKED BY <u>XXX</u>		<u>XXX 1991</u>
NO. <u>h2isd</u>			*

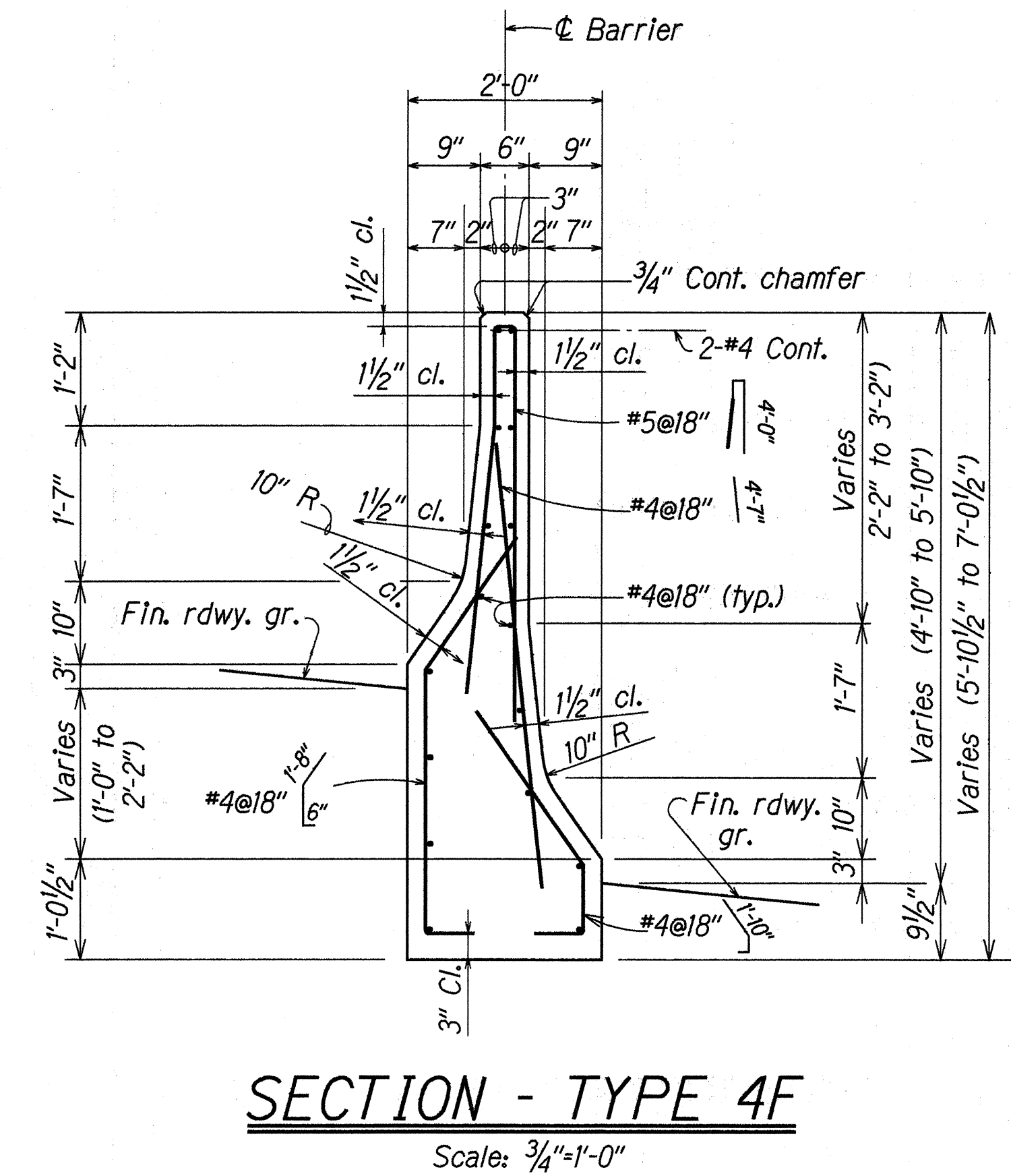
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIGHT STANDARD DETAILS
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. 1R-H2 (I27)

Scale: As Noted Date: Apr, 1992

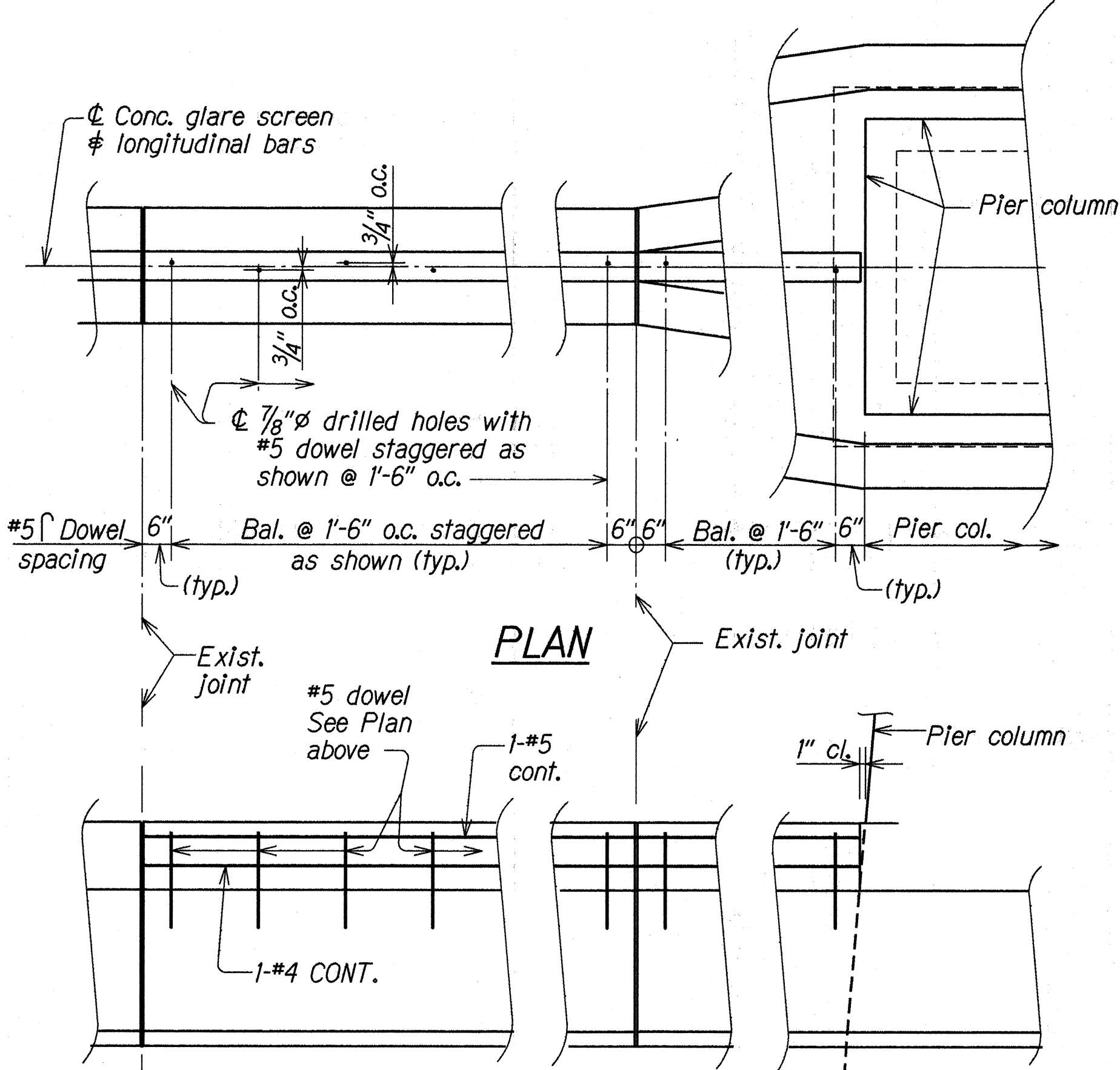
SHEET No. R25 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	89	223



SECTION - TYPE 4F

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

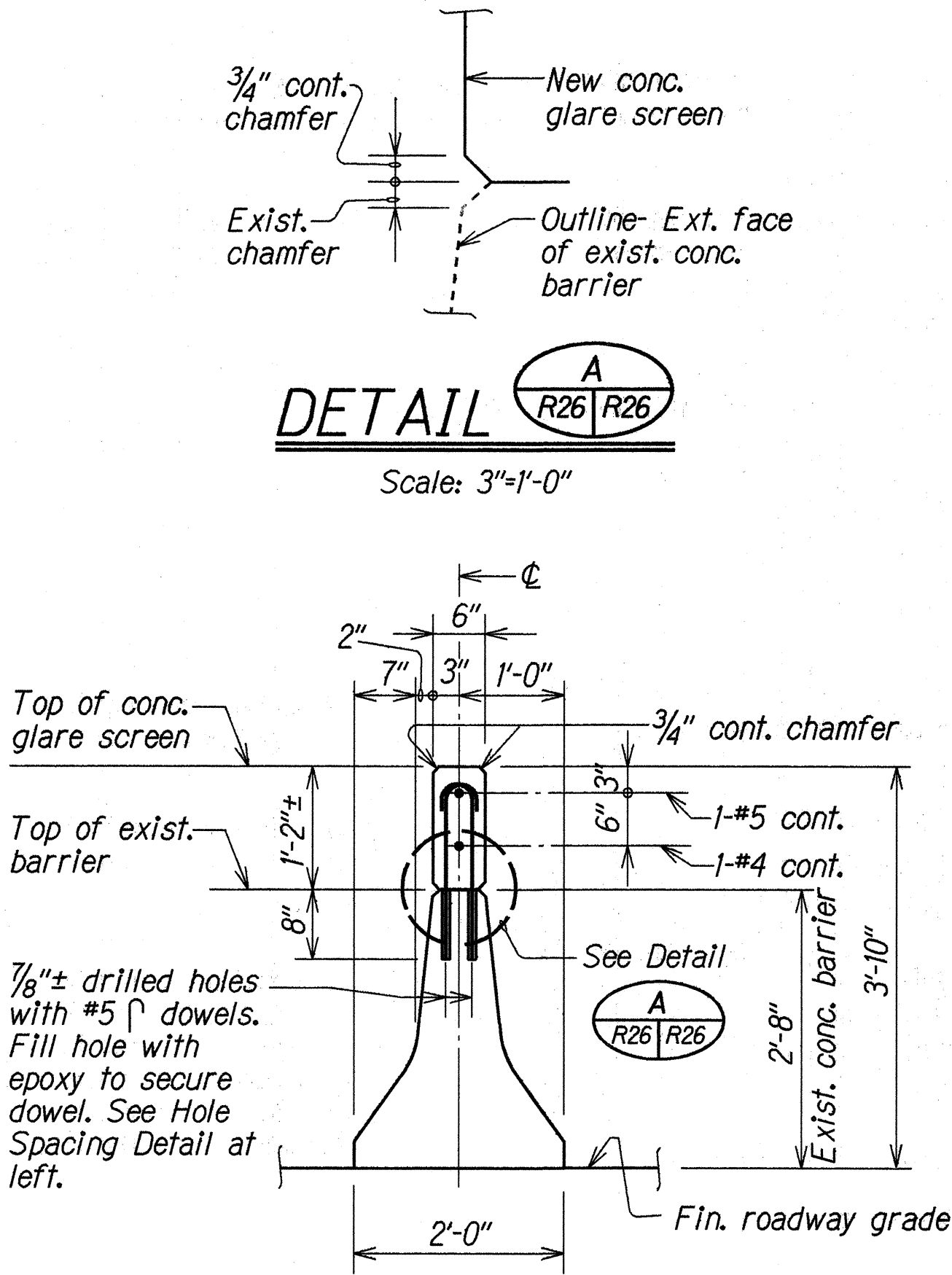


PLAN

ELEVATION

HOLE SPACING DETAILS

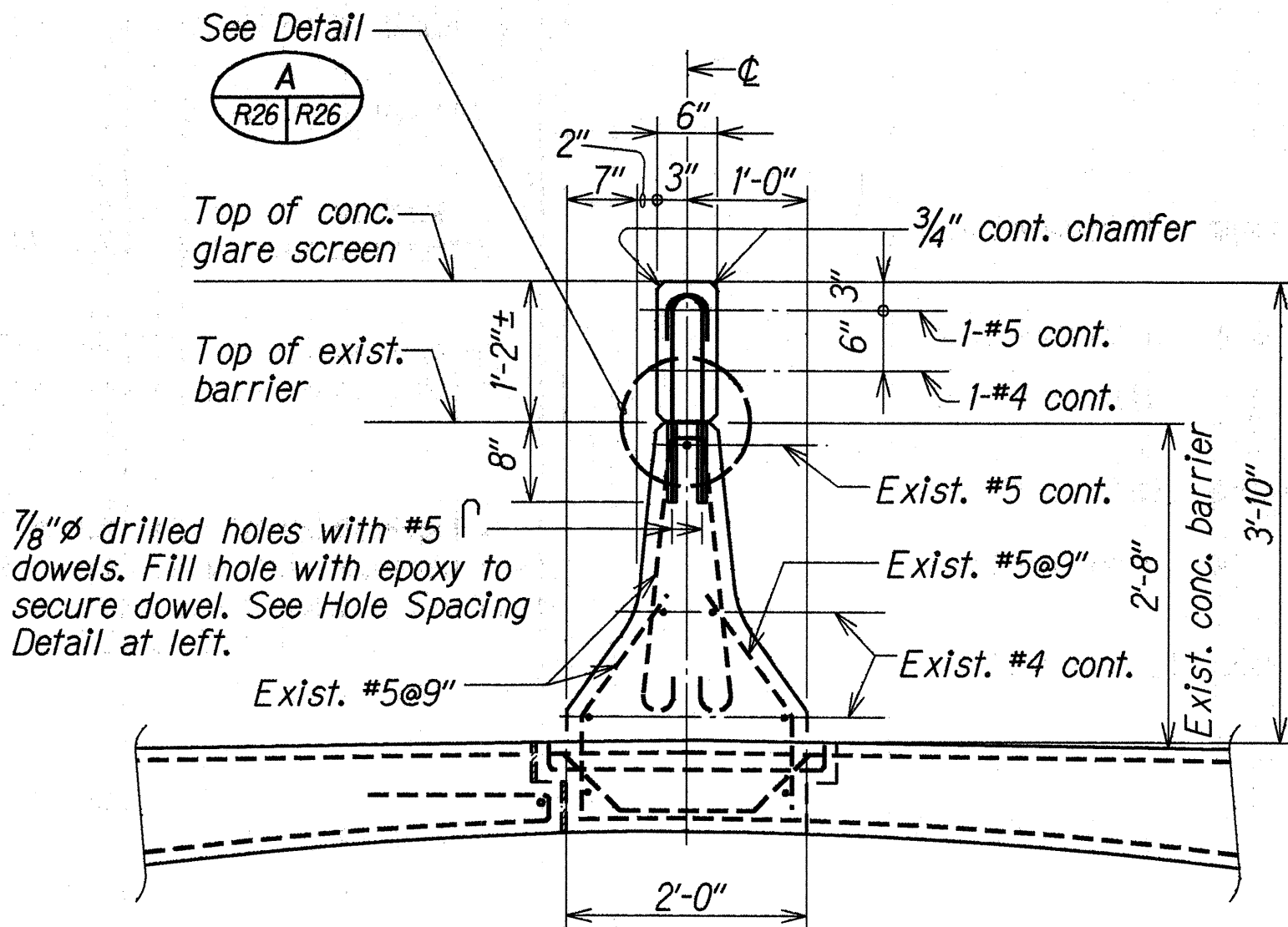
N.T.S.



TYPICAL SECTION

(ON EARTH)

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

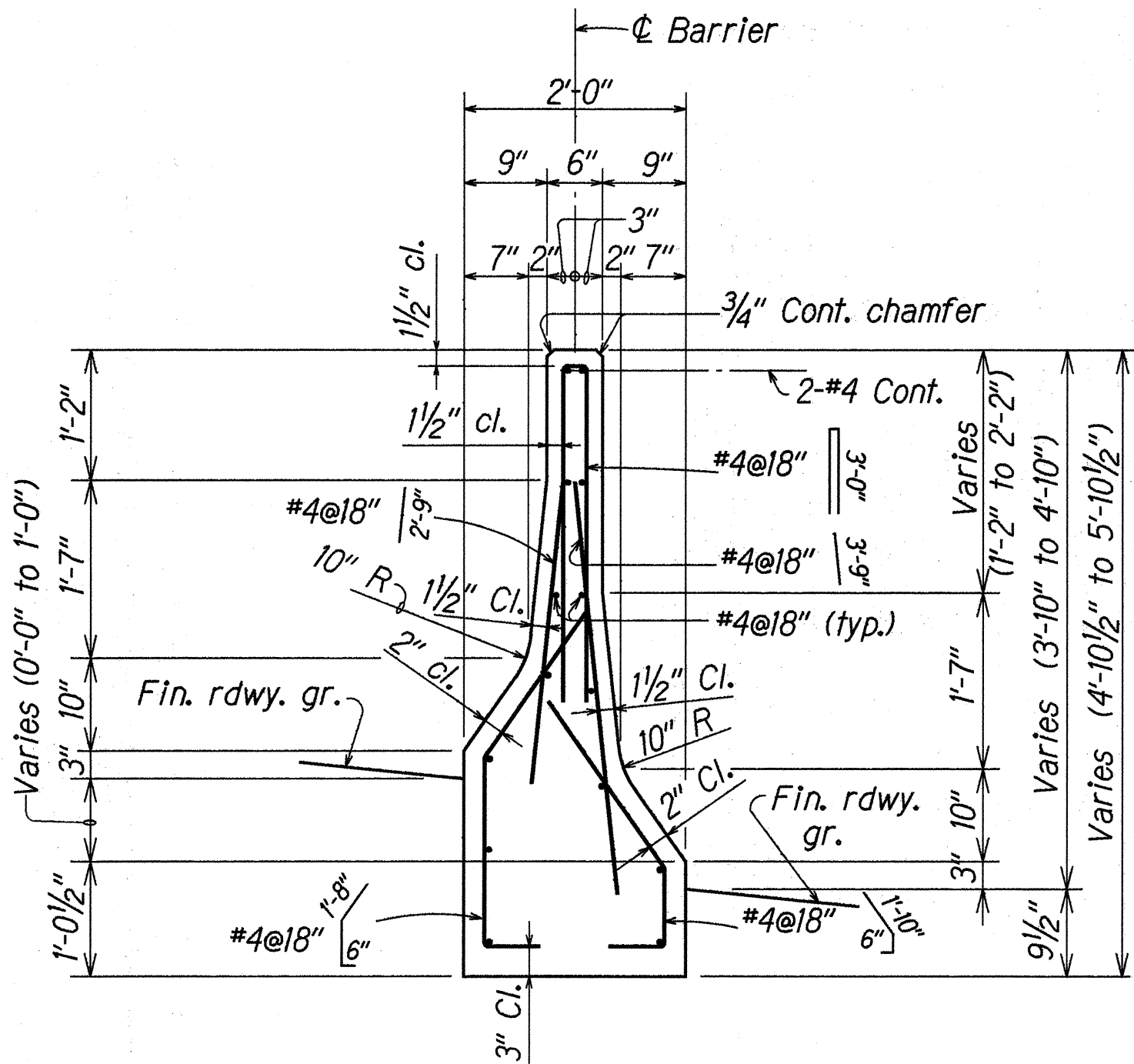


TYPICAL SECTION

(ON BRIDGE)

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

CONCRETE GLARE SCREEN ON EXISTING CONCRETE MEDIAN BARRIER



SECTION - TYPE 4E

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

SURVEY PLOTTED BY	DATE	XXX 1991
DRAWN BY	XXX 1991	XXX 1991
DESIGNED BY	XXX 1991	XXX 1991
QUANTITIES BY	XXX 1991	XXX 1991
CHECKED BY	XXX 1991	XXX 1991

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

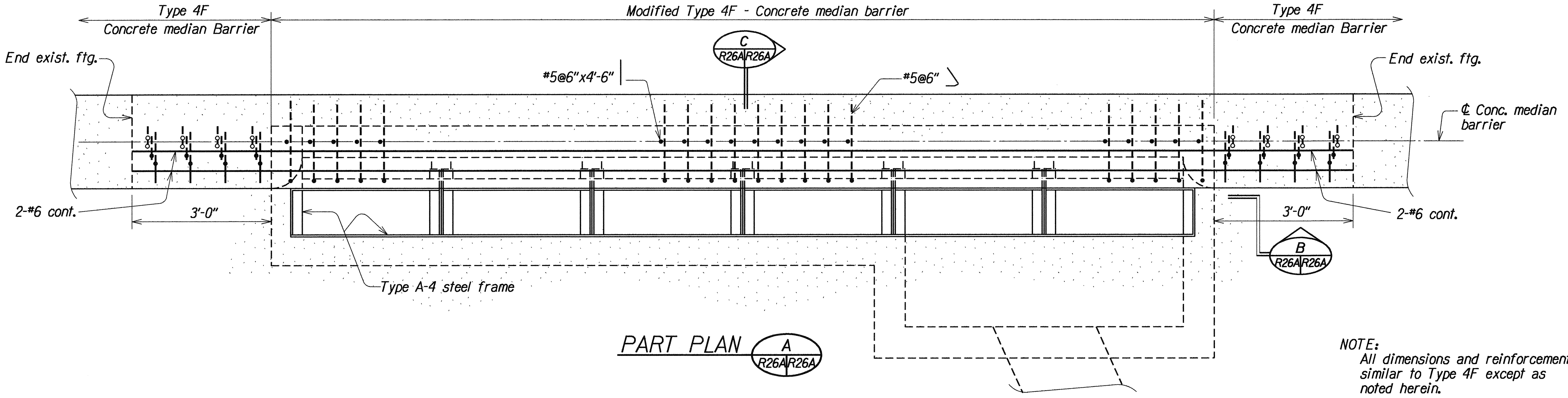
MEDIAN BARRIER DETAILS

CONC. GLARE SCREEN ON EXIST. MEDIAN BARRIER

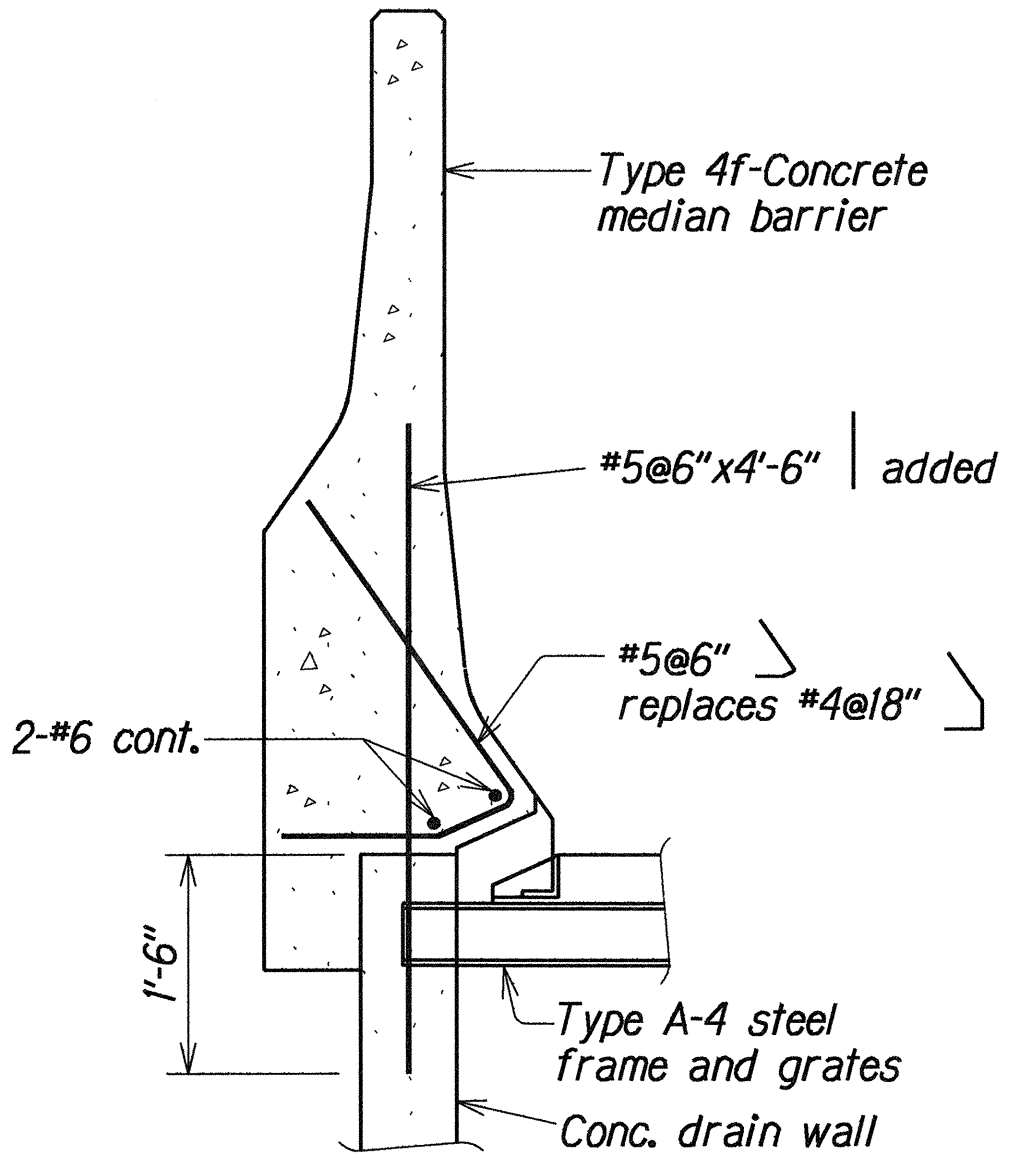
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
WILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. IR-H2-1(27)

Scale: As Noted Date: Apr. 1992

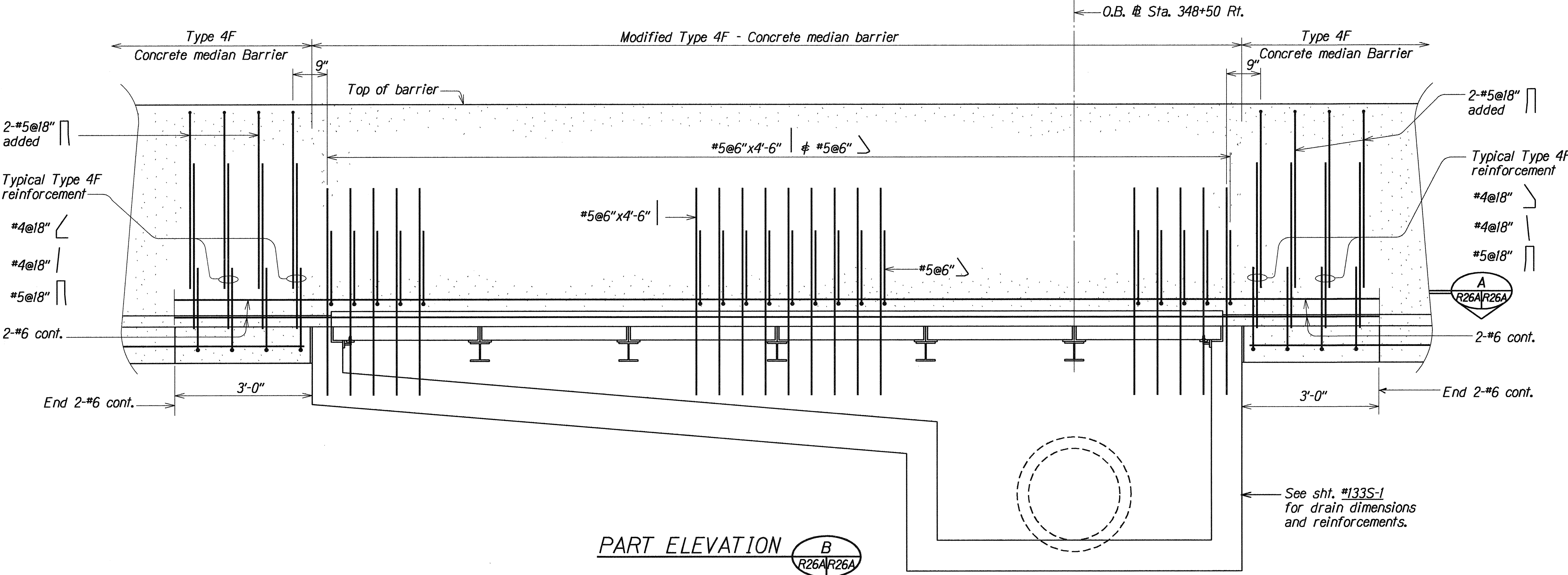
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1995	C.O. 89S-1	223



NOTE:
All dimensions and reinforcement
similar to Type 4F except as
noted herein.



SECTION **C**
MODIFIED TYPE 4F
Scale: 3/4"=1'-0"



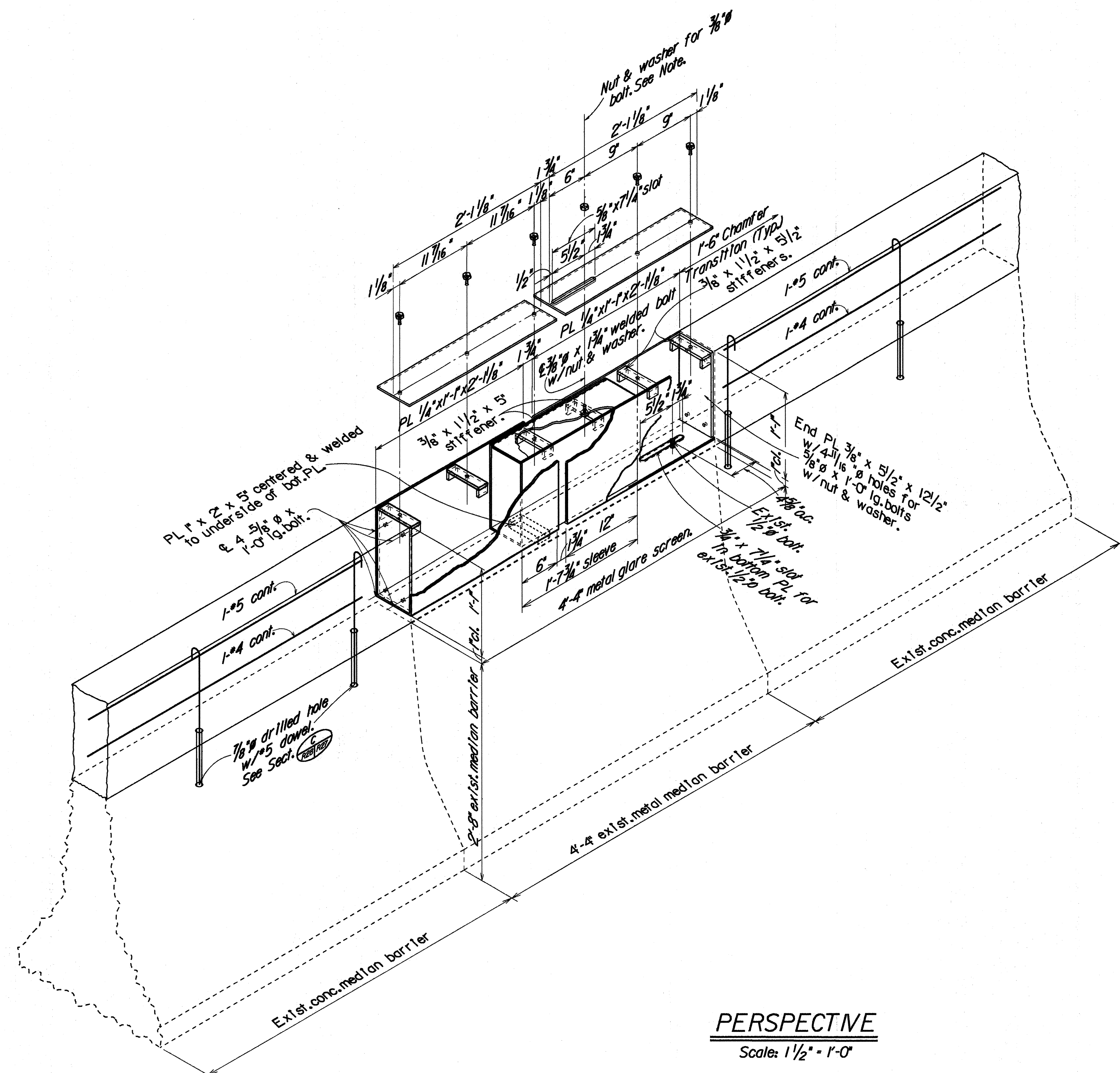
MODIFIED TYPE 4F - CONCRETE MEDIAN BARRIER DETAILS
Scale: 3/4"=1'-0"

ORIGINAL PLAN	DATE
DESIGNED BY	DATE
CHECKED BY	DATE
IN CHARGE	DATE
PROJECT NO.	DATE
PROJECT NAME	DATE
PROJECT LOCATION	DATE
PROJECT DESCRIPTION	DATE
PROJECT STATUS	DATE
PROJECT COMMENTS	DATE

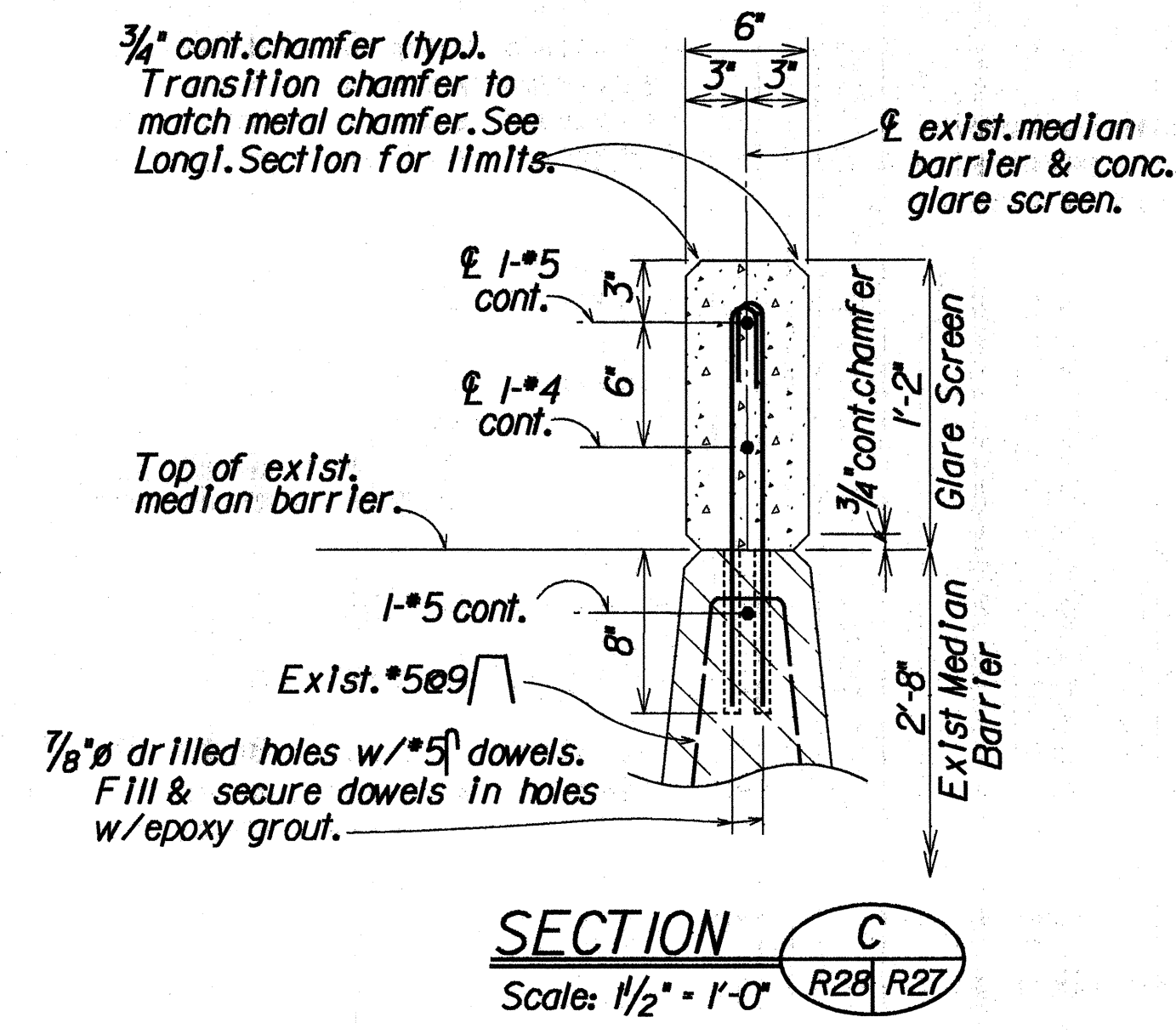
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED TYPE 4F
CONCRETE MEDIAN BARRIER DETAILS
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE
Project No. IR-H2-1(27)
Scale: As Noted Date: Jul, 1994

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H2-11271	1992	90	223



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



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

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**METAL (AT VARIOUS LOCATIONS)
AND CONCRETE GLARE SCREEN DETAILS**

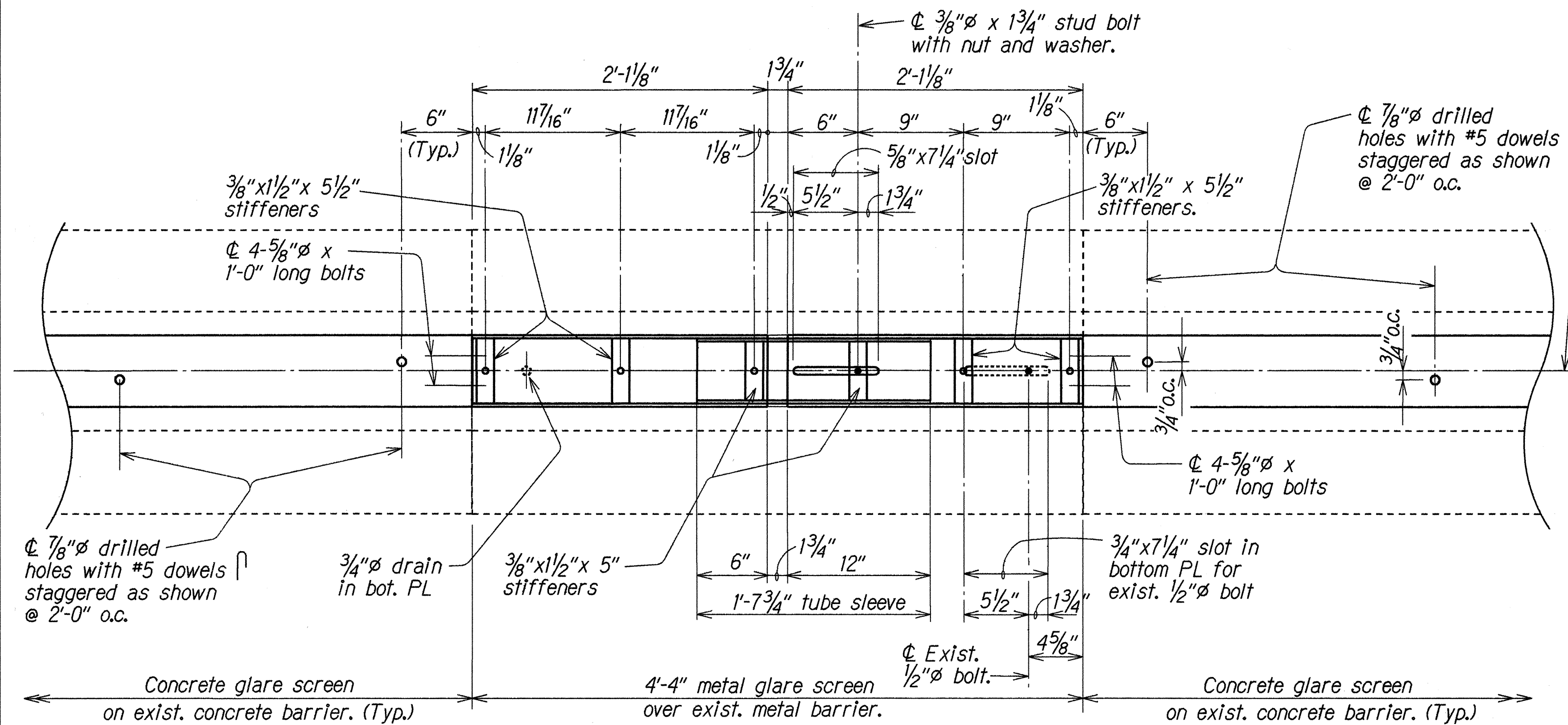
INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILILANI INTERCHANGE TO WAIPIO INTERCHANGE

Proj. No. 1R-H2-11271

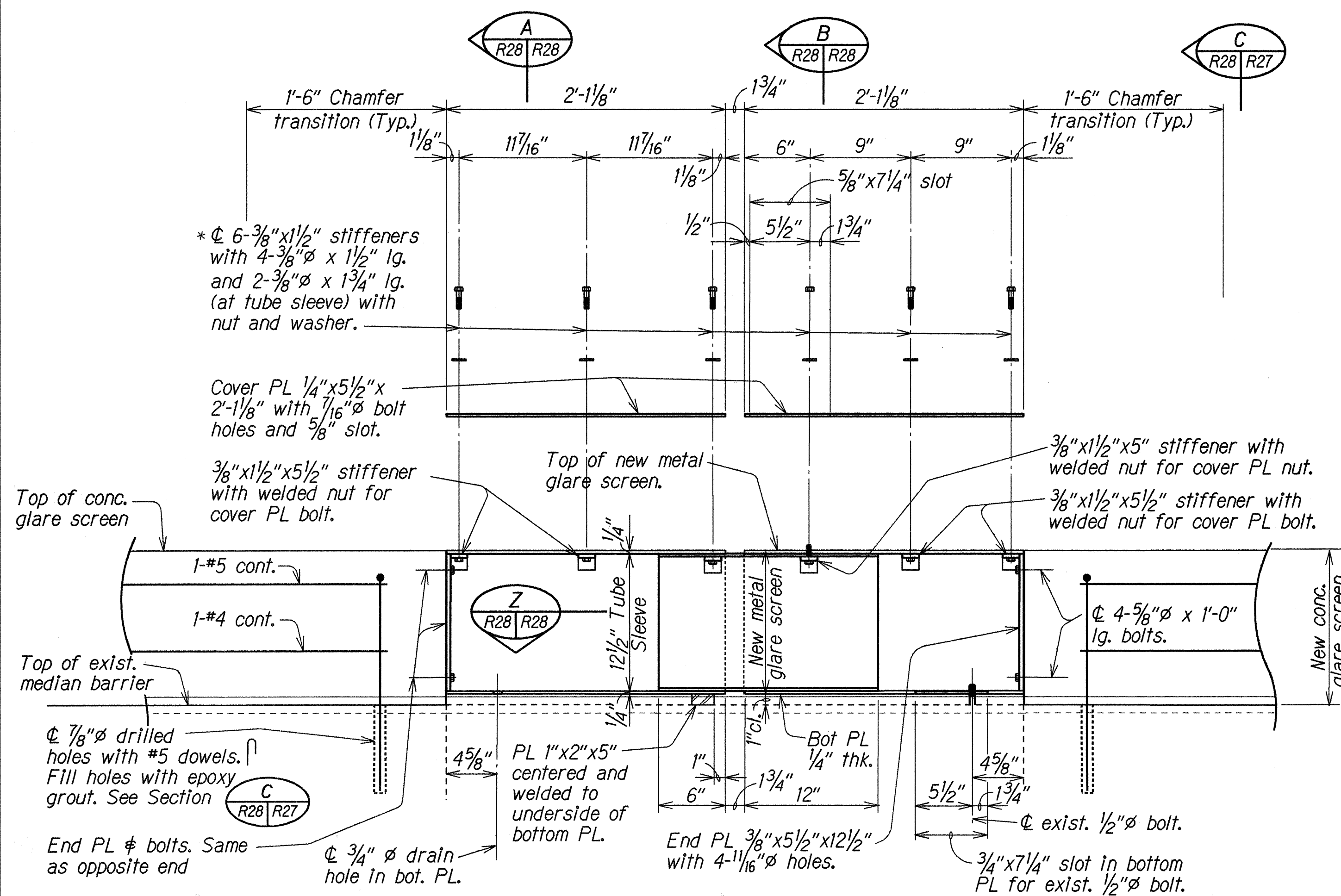
Scale: As Noted Date: Apr. 1992

SHEET No. R27 OF 28 SHEETS

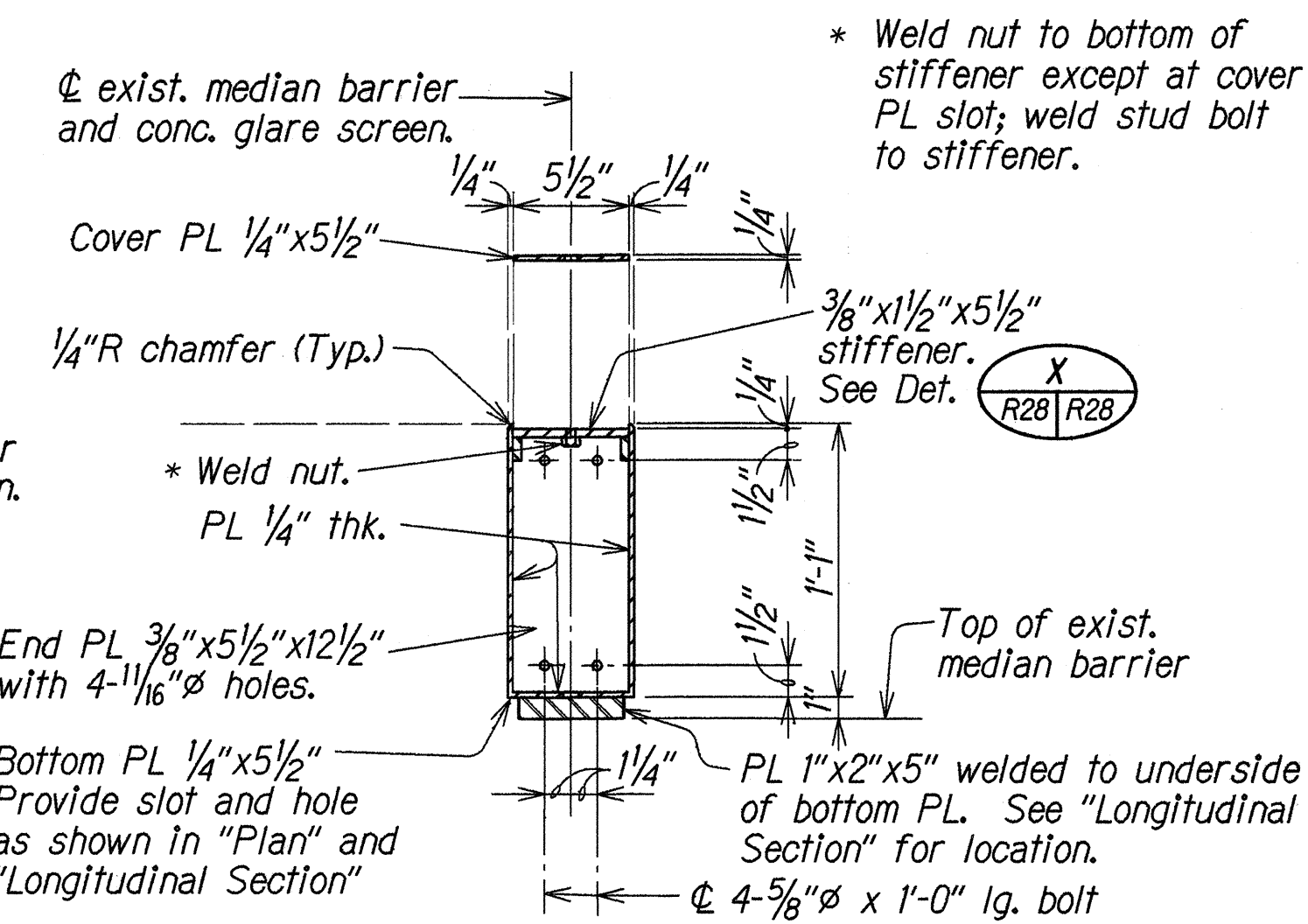
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H2-1(27)	1992	91	223



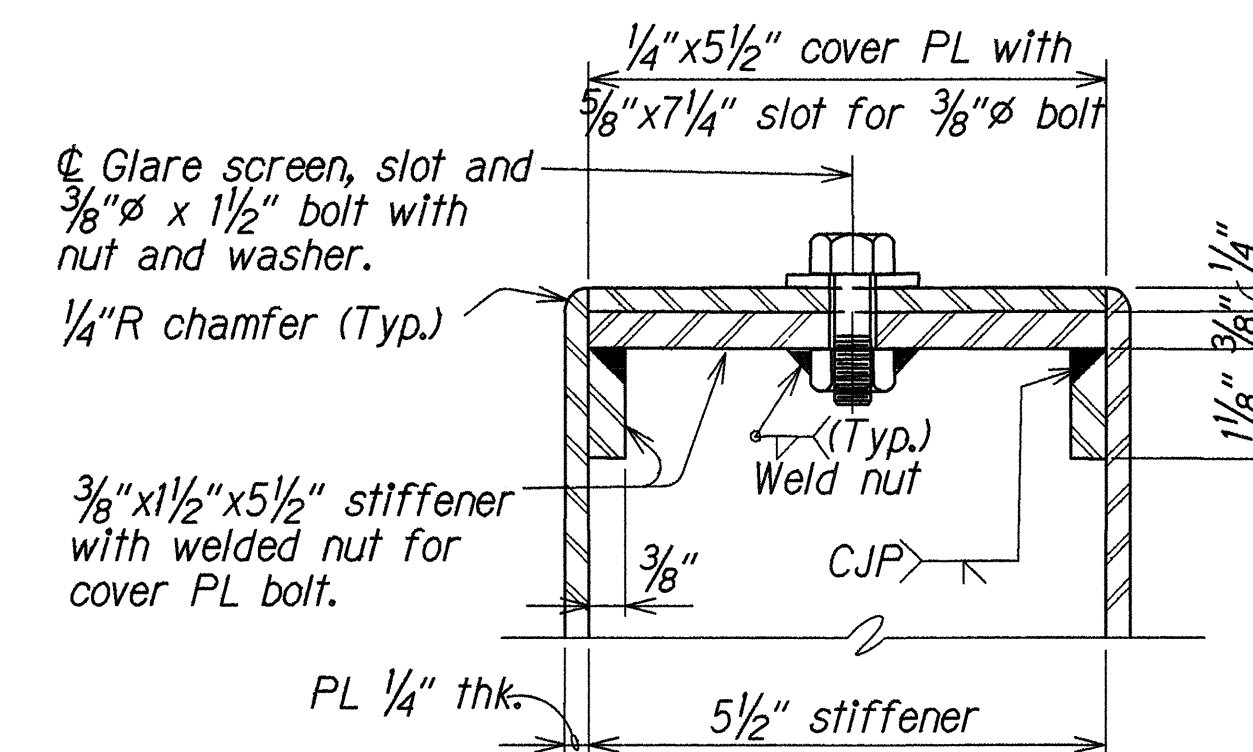
PLAN
Scale: $1\frac{1}{2}'' = 1'-0''$



LONGITUDINAL SECTION ALONG C GLARE SCREEN
Scale: $1\frac{1}{2}'' = 1'-0''$



SECTION A
Scale: $1\frac{1}{2}" = 1'-0"$ R28 | R28

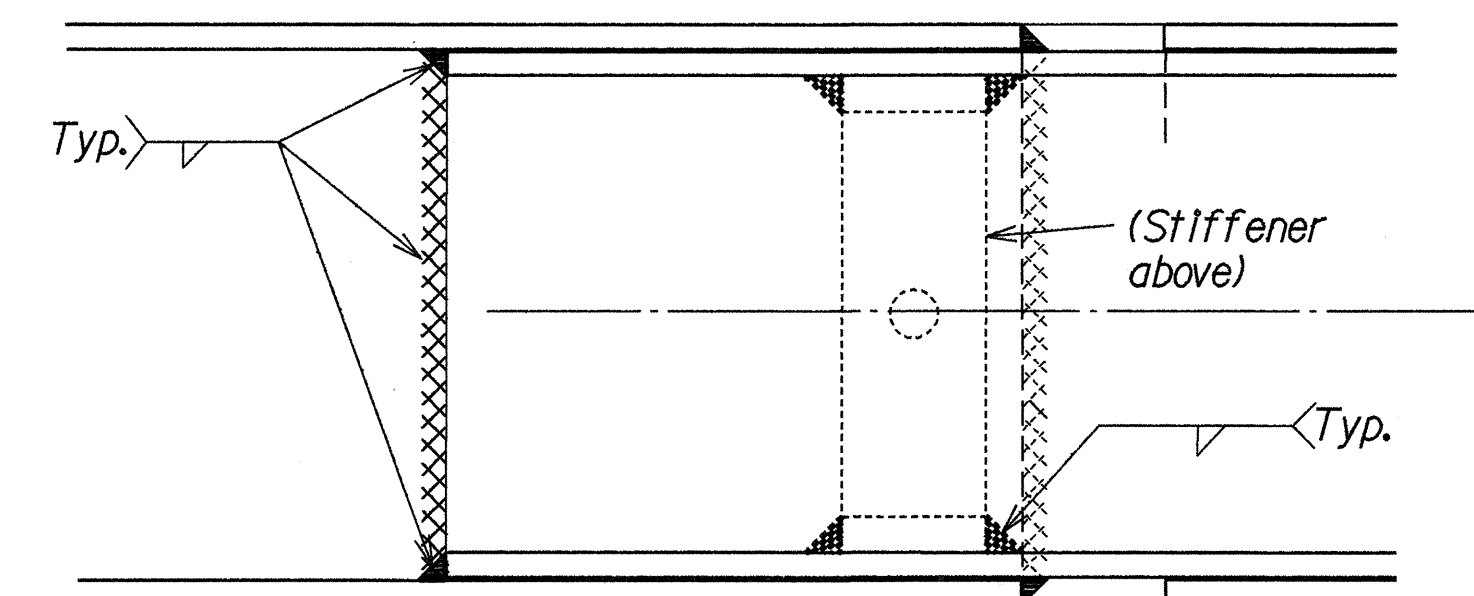


DETAIL

Scale: 6" = 1'-0"

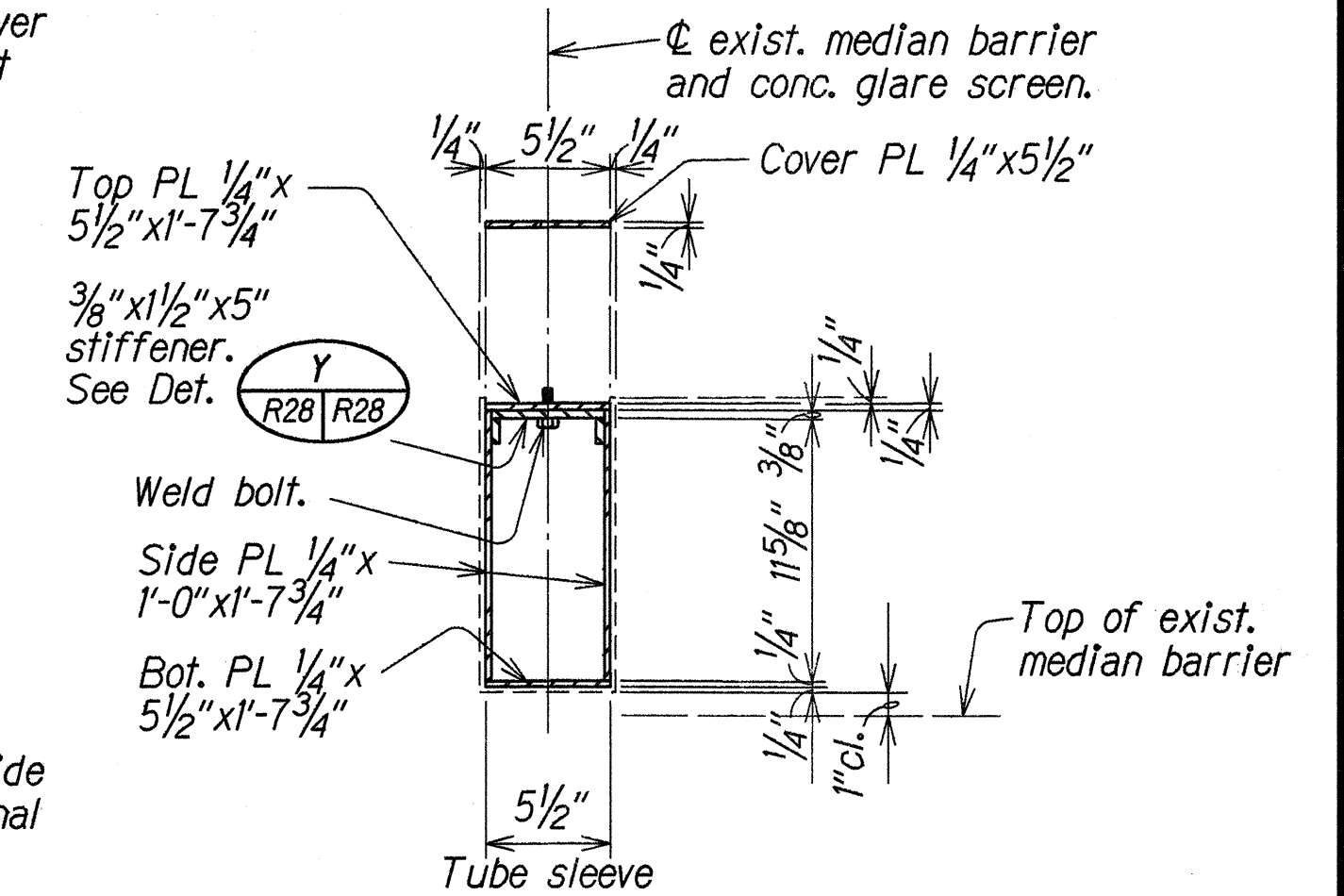
X

R28 | R28



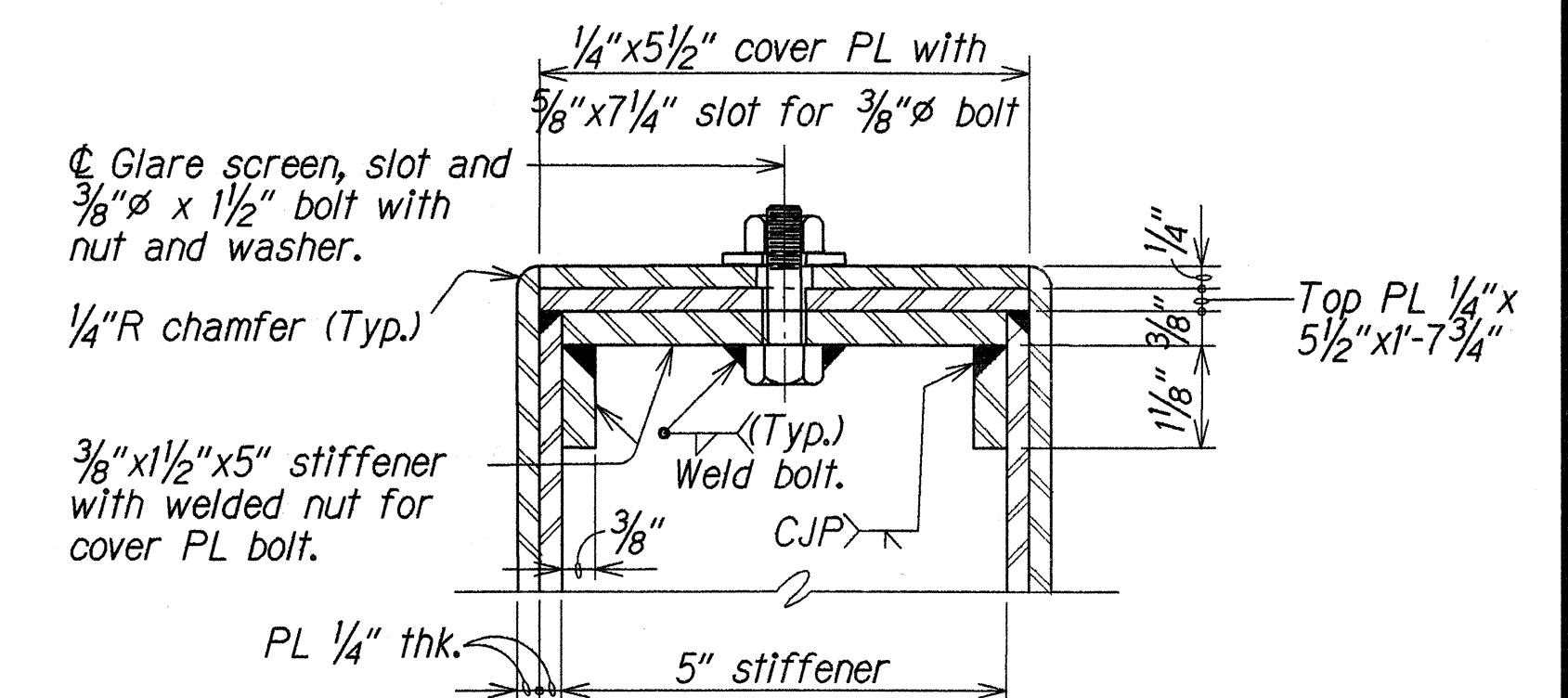
PARTIAL PLAN Z
Scale: 6" = 1'-0" R28 | R28

METAL GLARE SCREEN DETAILS



SECTION 

Scale: $1\frac{1}{2}'' = 1'-0''$



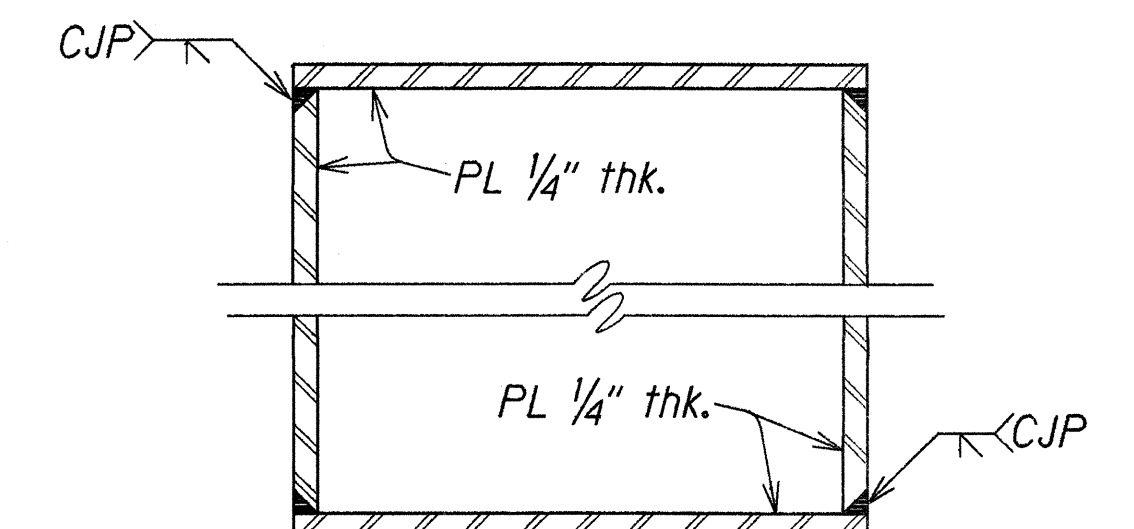
DETAIL

Scale: 6" = 1'-0"



Y

R28 R28



OPTIONAL WELDED OR BENT
CORNER DETAIL (TYP.)
Scale: 6" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

METAL (AT VARIOUS LOCATIONS)
AND CONCRETE GLARE SCREEN DETAILS

INTERSTATE ROUTE H-2, HOV LANES, PHASE II
MILLANI INTERCHANGE TO WAIPIO INTERCHANGE

Proj. No. IR-H2-1127)

Scale: As Noted Date: Apr. 1992

SHEET No. R28 OF 28 SHEETS