

<u>INDEX TO BRIDGE DRAWINGS</u>					
SHT.NO.	DESCRIPTION		SHT.NO.	DESCRIPTION	
1	INDEX TO BRIDGE DRAWINGS & LOCATION PLAN			<u>BRIDGE NO. 3</u>	
	<u>BRIDGES NO. 1 & NO. 2</u>		1V	PLAN & PROFILE	
1J	PLAN & PROFILE - BRIDGE NO. 1		2V	FOUNDATION PLAN & ESTIMATED QUANTITIES	
2J	PLAN & PROFILE - BRIDGE NO. 2 & ESTIMATED QUANTITIES		3V	PIER ELEVATION & DETAILS	
3J	FOUNDATION PLAN		4V	PLAN & DETAILS - ABUTMENT NO. 1	
4J	PIER ELEVATION & DETAILS - BRIDGE NO. 1		5V	ELEVATION - ABUTMENT NO. 1	
5J	PIER ELEVATION & DETAILS - BRIDGE NO. 2		6V	WINGWALL NO. 1 DETAILS	
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7J	ABUTMENT NO. 1 - BRIDGE NO. 1		8V	PLAN & DETAILS - ABUTMENT NO. 2	
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11J	WINGWALL - BRIDGE NO. 1		12V	TYPICAL GIRDER ELEVATION	
12J	ABUTMENT NO. 1 - BRIDGE NO. 2		13V	TYPICAL GIRDER DETAILS	
13J	ABUTMENT NO. 1 - BRIDGE NO. 2		14V	BEAM "A" & "B" ELEVATION & DETAILS	
14J	ABUTMENT NO. 2 - BRIDGE NO. 2		15V	BORING LOG & CREEP BLOCK REINFORCING DETAIL	
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17J	RETAINING WALL NO. 2		18V	STEEL BRIDGE RAILING (TUBULAR)	
18J	FRAMING PLAN - BRIDGE NO. 1 & NO. 2		19V	STEEL BRIDGE RAILING (TUBULAR)	
19J	SLAB REINFORCEMENT AT SKEWED ABUTMENT		20V	METAL GUARD RAIL CONNECTION AT END POST	
20J	DECK SLAB REINFORCEMENT - BRIDGE NO. 1			<u>KAMOOALII STREAM BRIDGE (BRIDGE NO. 4)</u>	
21J	DECK SLAB REINFORCEMENT - BRIDGE NO. 2		1K	LAYOUT PLAN, LONGIT. SECTION, GENERAL NOTES & EST. QUANTITIES	
22J	PRESTRESSED GIRDER TYPE IV & IV-A		2K	FOUNDATION PLAN, FINISH GRADE PLAN & BORING DATA	
23J	SOIL BORING LOGS		3K	BENT #1 AND TYPICAL SECTION	
24J	SOIL BORING LOGS		4K	BENT #2 AND 12" WATER LINE DETAILS	
25J	SOIL BORING LOGS & SIGN FRAMING		5K	WINGWALLS & MISCELLANEOUS DETAILS	
26J	SIGN FRAMING PLAN & DETAILS		6K	NORMAL DECK SECTION, PIPE HANGER DETAILS & FRAMING PLAN	
27J	STEEL BRIDGE RAILING (TUBULAR)		7K	TYPICAL BEAM DETAILS	
28J	STEEL BRIDGE RAILING (TUBULAR)		8K	PRESTRESSED GIRDER & MISCELLANEOUS DETAILS	
29J	STEEL BRIDGE RAILING (TUBULAR)		9K	PRESTRESSED GIRDER	
30J	METAL GUARD RAIL CONNECTION AT END POST		10K	ALUMINUM BRIDGE RAILING	
			11K	ALUMINUM BRIDGE RAILING	
			12K	METAL GUARD RAIL CONNECTION AT END POST	
			* TD1	TYPICAL DETAILS	
			SI-SG	STANDARD DETAILS	

A hand-drawn map of the Kaneohe area. The map shows the intersection of Kamehameha Highway (top left), Route H-3 (top right), and Interstate Highway (bottom left). Key features include:

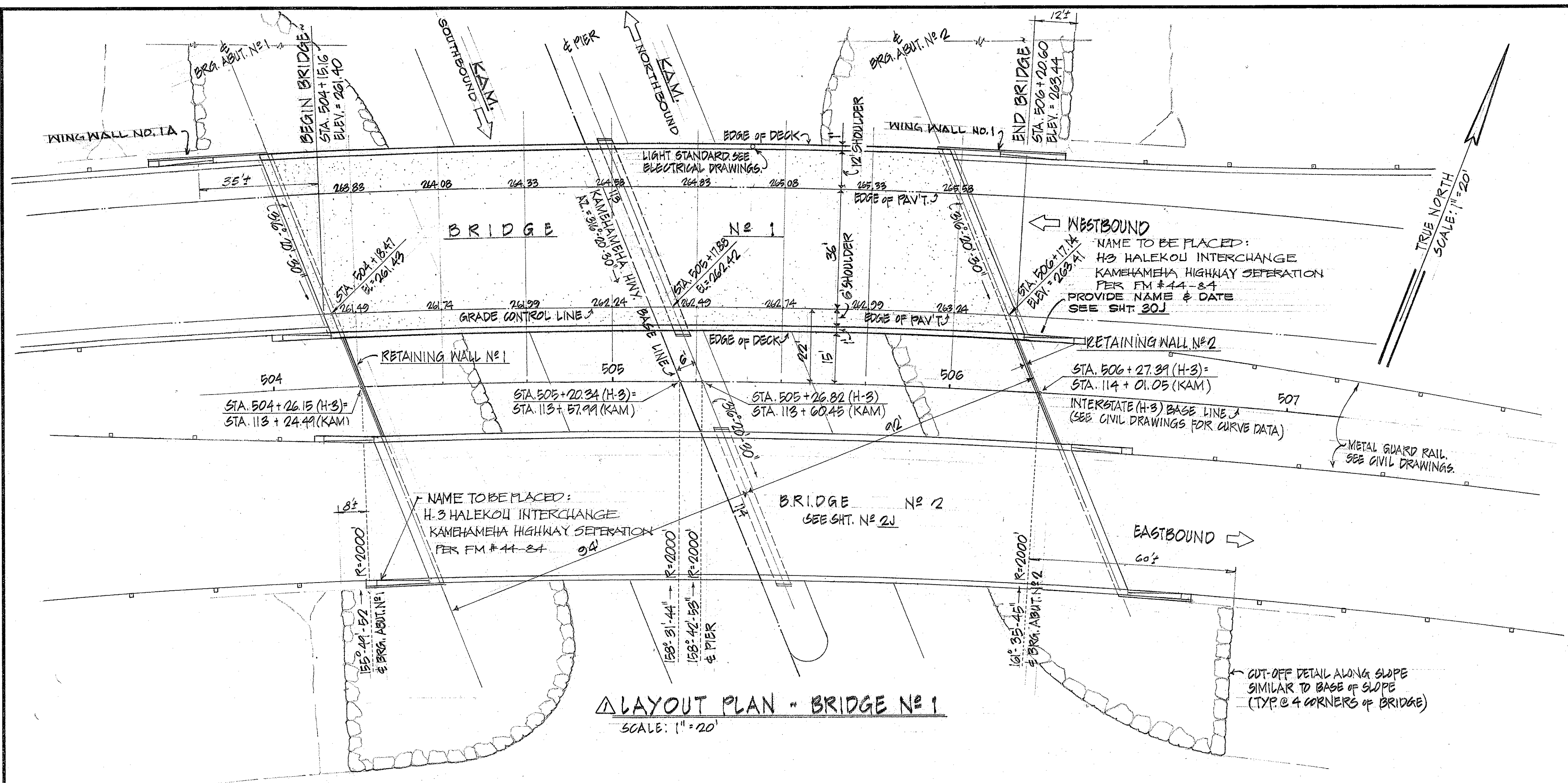
- BRIDGE NO. 1**: Located at the intersection of Kamehameha Highway and Route H-3.
- BRIDGE NO. 2**: Located at the intersection of Route H-3 and Interstate Highway.
- BRIDGE NO. 3**: Located at the intersection of Interstate Highway and Kaneohe Road.
- BRIDGE NO. 4**: Located at the intersection of Kamehameha Highway and Kaneohe Road.
- Directions**: Arrows indicate directions to Kaneohe, Kaneohe MCAS, Halawa, and Kaneohe Road.
- Compass Rose**: Located in the bottom right corner, pointing North.

	5/8/87 Revised Concrete End Post Connection on Bridge No. 1 # Bridge No. 2.	<u>INDEX TO BRIDGE DRAWINGS</u> <u>LOCATION PLAN</u> <u>HALEKOU INTERCHANGE</u> F.A.I. Proj. No. I-H3-1(24):11 Scale: As Noted Date: Sept. 1982
	DATE REVISION	SHEET No. 1 OF 1 SHEETS

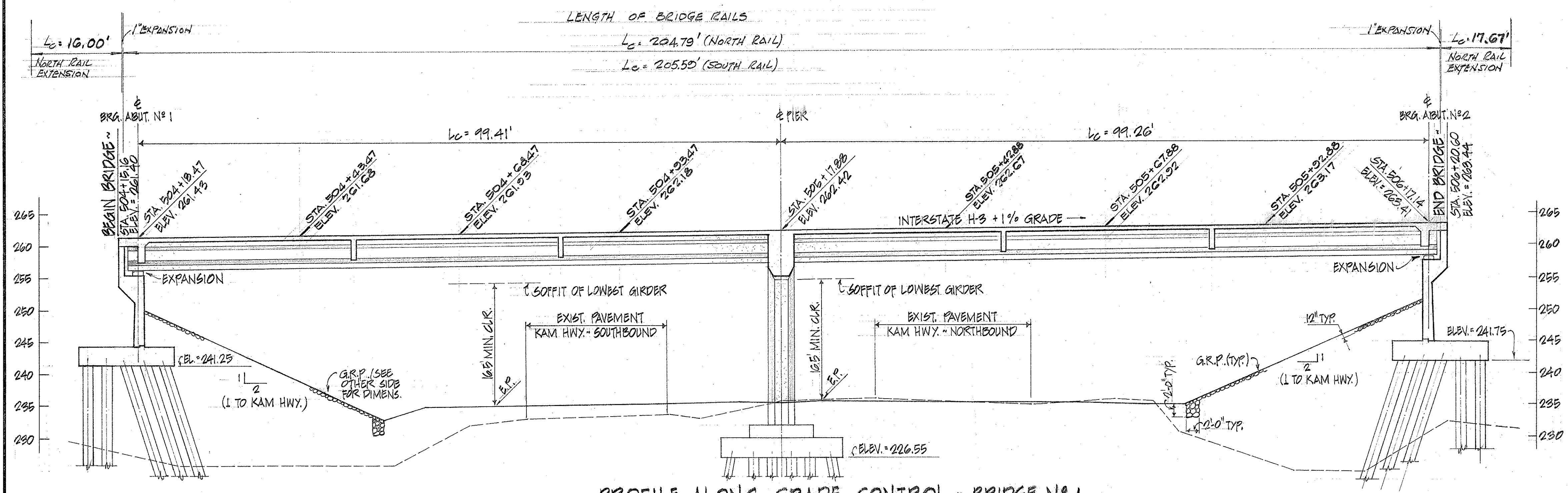
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24)-11	1983	172	328

NOTE: FOR GENERAL NOTES, SEE SHEET N^o 31 & 32

- DESIGN SPECIFICATIONS: AASHTO
 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (12TH EDITION) WITH SUBSEQUENT INTERIM SPECIFICATIONS.
 DESIGN LOADS: HS-20-44 OR INTERSTATE LOADING.
 DESIGN STRESSES:
 1a. R.C. BEAMS - SEE AASHTO SPECIFICATIONS & SPECIAL PROVISIONS EXCEPT AS OTHERWISE NOTED.
 1b. DECK SLAB - USE CLASS BD CONCRETE.
- | CLASS A | CLASS E |
|---------------------------|----------|
| $f'_c = 3000$ PSI | 4500 PSI |
| $f'_t = 1200$ PSI | 1800 PSI |
| $f_s = 10$ | 8 |
| $f_s = 20000$ PSI TENSION | |
2. PRESTRESSED GIRDERS: $f'_c = 5500$ PSI $f'_t = 4500$ PSI
 3. PRESTRESSED STRANDS: $\frac{1}{2}$ " # 270 Ksi, 7 WIRE STRESSED-RELIEVED STRANDS (ASTM A416)
 TOTAL LOSSES OTHER THAN FRICTION = 45,000 PSI.
 FORMS MUST BE REMOVED & THE BEAMS INSPECTED BEFORE THE STRANDS ARE CUT.
 4. PILE CAPACITY = 32 TONS
 5. EQUIVALENT EARTH PRESS = 45 #/SQ. FT.



LAYOUT PLAN - BRIDGE No. 1
 SCALE: 1" = 20'



PROFILE ALONG GRADE CONTROL - BRIDGE No. 1
 SCALE: 1" = 10'

9/8/87 Revise Metal Guardrail Connection at Concrete End Post.

DATE REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

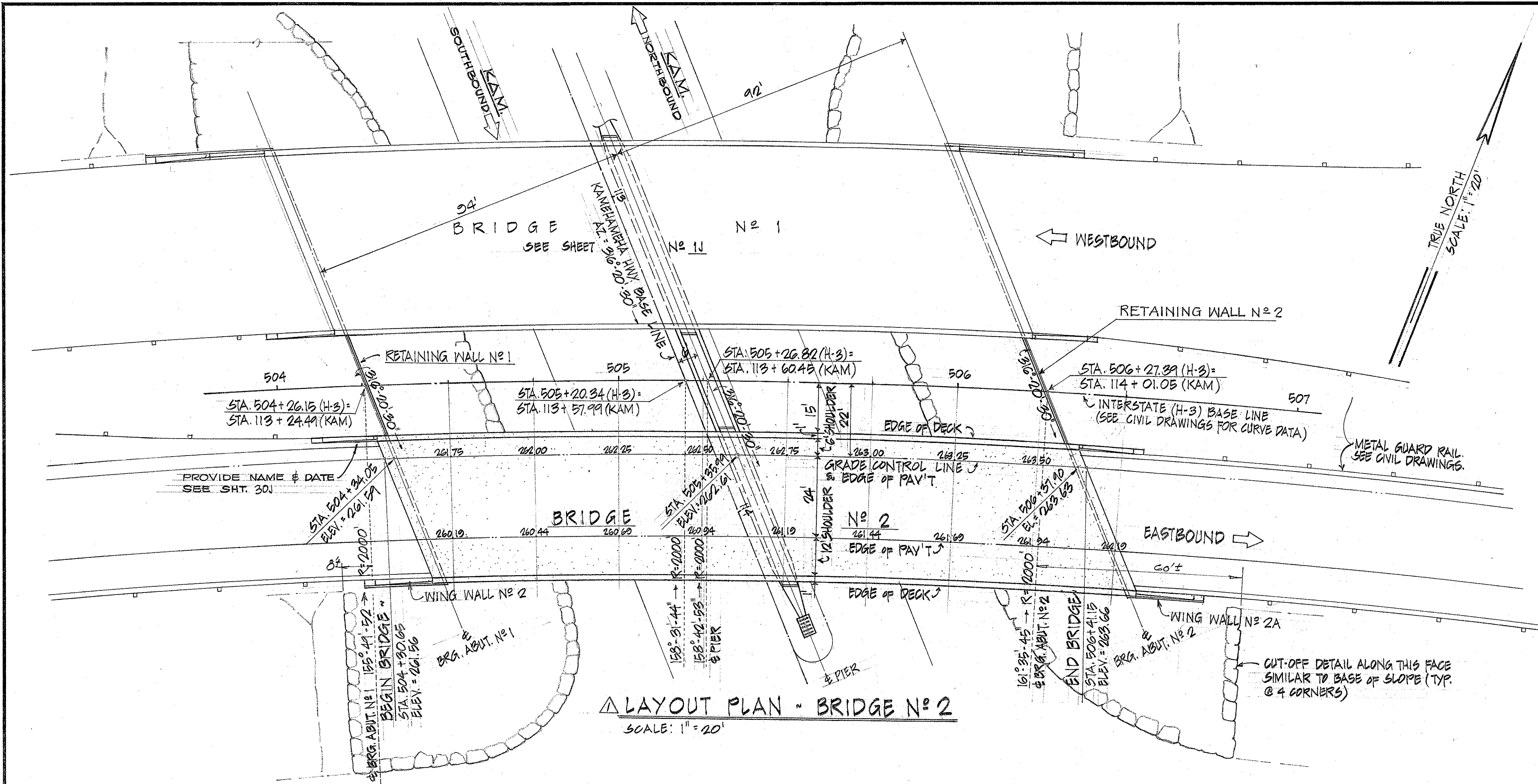
PLAN & PROFILE - BRIDGE No. 1
 HALEKOU INTERCHANGE
 F.A.I. Proj. No. I-H3-1(24)-11

Scale: As Noted Date: Sept. 1987
 SHEET No. 11 OF 30 SHEETS

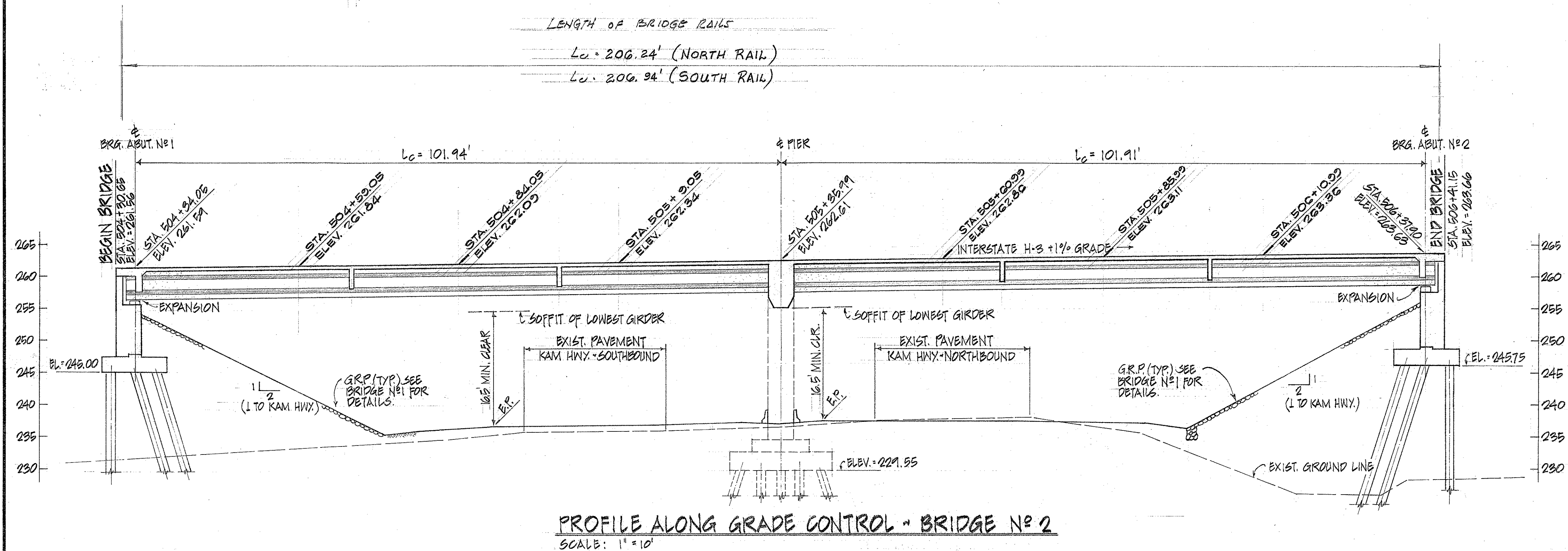
"AS BUILT"

C0172

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	173	328



ESTIMATED QUANTITIES - BRIDGE No. 1 & BRIDGE No. 2 AND RETAINING WALLS					
ITEM NO.	ITEM	UNIT	QUANTITY		
			BRIDGE No. 1	BRIDGE No. 2	
206.6000	STRUCTURAL EXCAVATION FOR BRIDGES	C.Y.	935	578	
206.7010	STRUCTURAL BACKFILL FOR BRIDGES	C.Y.	1033	414	
206.8200	FILTER MATERIAL FOR STRUCTURES	C.Y.	55	29	
503.1092	CONCRETE IN BRIDGES NO. 1 AND 2 (EXCEPT FOOTINGS IN BRIDGES 1 AND 2)	L.S.	(716 C.Y.)	(465 C.Y.)	
504.4101	TYPE IV PRESTRESSED CONCRETE GIRDERS	L.S.	(1818 L.F.)	(1421 L.F.)	
505.0410	TYPE I PRESTRESSED CONG. PILES, FURNISHED	L.F.	26,503	14,024	
505.4100	TYPE I PRESTRESSED CONG. PILES, DRIVEN	L.F.	21,402	11,539	
505.6100	DRILLED HOLES IN EMBANKMENT FOR PILES	L.F.	3,933	1,714	
507.1000	METAL BRIDGE RAILING, ONE RAIL ON PARAPET	L.F.	444	414	
507.1000	CONCRETE BRIDGE PARAPET INCLUDING END POST	L.F.	521	492	
602.0091	REINFORCING STEEL IN BRIDGES NO. 1 AND 2	L.S.	(201,000 LBS)	(153,400 LBS)	
612.0200	GROUTED RUBBLE PAVING, SLOPE PROTECTION	C.Y.	237	195	
505.9100	PILE DRIVING EQUIPMENT EXPENSE (NOT TO EXCEED \$8,000)	L.S.	-	-	
503.1096	CONCRETE IN FOOTINGS FOR BRIDGES NO. 1 AND 2	L.S.	(278 C.Y.)	(225 C.Y.)	
505.0011	PILE LOAD TEST - BRIDGE No. 1 & 2	E.A.	1	-	
505.9000	EXTENSIONS OR "BUILD-UPS" OF PILE	F.A.	-	-	
634.0100	EXPLORATORY WORK AT STRUCTURE FOOTINGS	F.A.	-	-	
505.0021	TEST PILE, DRIVEN - BRIDGE No. 1 & 2	L.F.	301	316	
621.2710	EXPRESSWAY SIGN SUPPORT - BRIDGE NO. 1	L.S.	-	-	
621.2720	EXPRESSWAY SIGN SUPPORT - BRIDGE NO. 2	L.S.	-	-	



01/8/87	Revise Rail & Parapet quantities Revise Metal Guardrail Connection at Concrete End Post.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PLAN & PROFILE - BRIDGE No. 2	
HALEKOU INTERCHANGE	
F.A.I. Proj. No. I-H3-1(24):11	
Scale: As Noted	Date: Sept. 1982
SHEET No. 21 OF 30 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24)11	1983	174	328

~ GENERAL NOTES ~

MATERIALS:

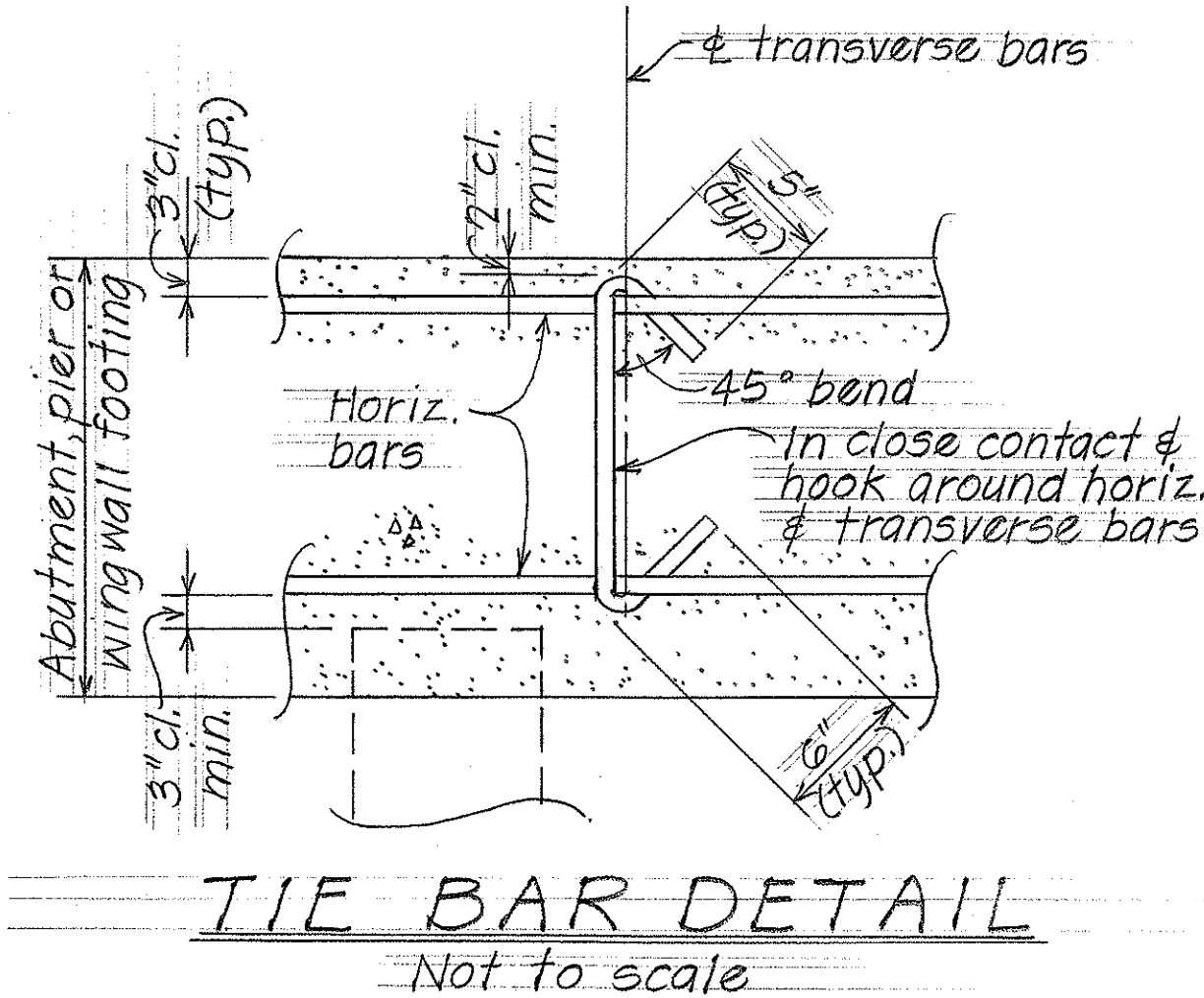
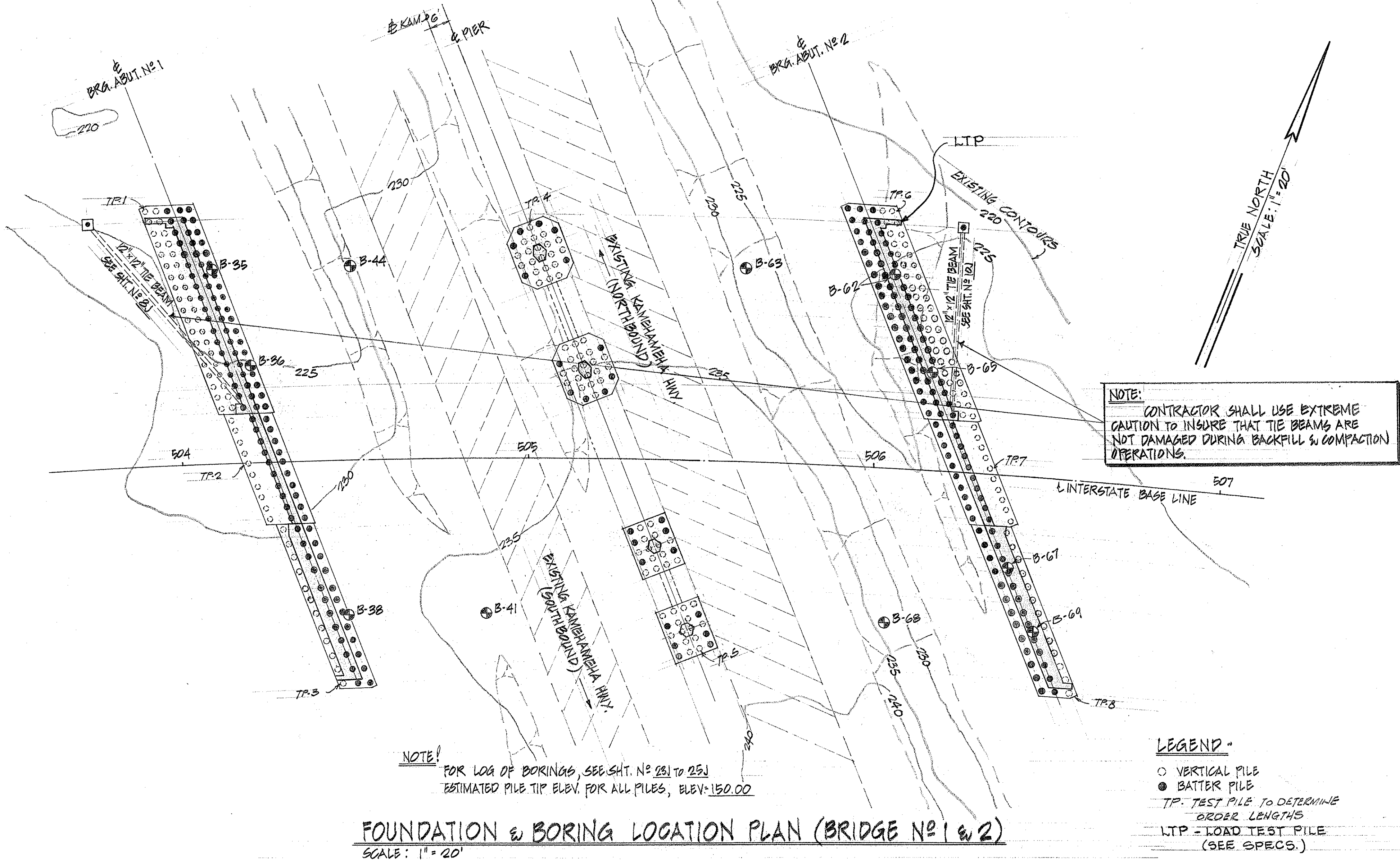
- ALL CONCRETE SHALL BE CLASS A EXCEPT AS OTHERWISE NOTED ON PLANS. CONCRETE FOR PRESTRESSED GIRDERS, SEE SPECIFICATIONS & AS NOTED UNDER DESIGN STRESSES.
- PREFORMED FABRIC BRIDGE BEARING PADS ARE INCIDENTAL TO CONCRETE & WILL NOT BE PAID FOR SEPARATELY.
- SEE SPECIFICATIONS FOR ADMIXTURE IN CONCRETE.
- ALL PILES TO BE PRESTRESSED CONCRETE PILES TYPE I, SEE STANDARD DETAIL SHT. 55 & 56
- ALL REINFORCING STEEL TO BE ASTM DESIGNATION A 615 GRADE 40 EXCEPT AS OTHERWISE NOTED.

CONSTRUCTION METHODS:

- SEE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITY LINES & NOTIFY THE RESPECTIVE OWNERS BEFORE COMMENCING WORK OF EXCAVATION OR PILE DRIVING.
- FOR CONCRETE FINISH, SEE SPECIFICATIONS. CONCRETE SEATS & CREEP BLOCKS TO BE POURED MONOLITHICALLY WITH PIER.
- IN GENERAL TOP & EDGE OF CONCRETE DECK OF SUPERSTRUCTURE SHALL BE CONSTRUCTED TO FOLLOW THE FINISH ROADWAY VERTICAL & HORIZONTAL CURVES & GRADES.
- PLACE BACKFILL BEHIND ABUTMENT AFTER GIRDERS ARE IN PLACE.

REFERENCE:

- REFER TO STANDARD DETAIL SHT. N°S 51 THRU 56 INCLUSIVE FOR DETAILS NOT COVERED BY THESE DRAWINGS.



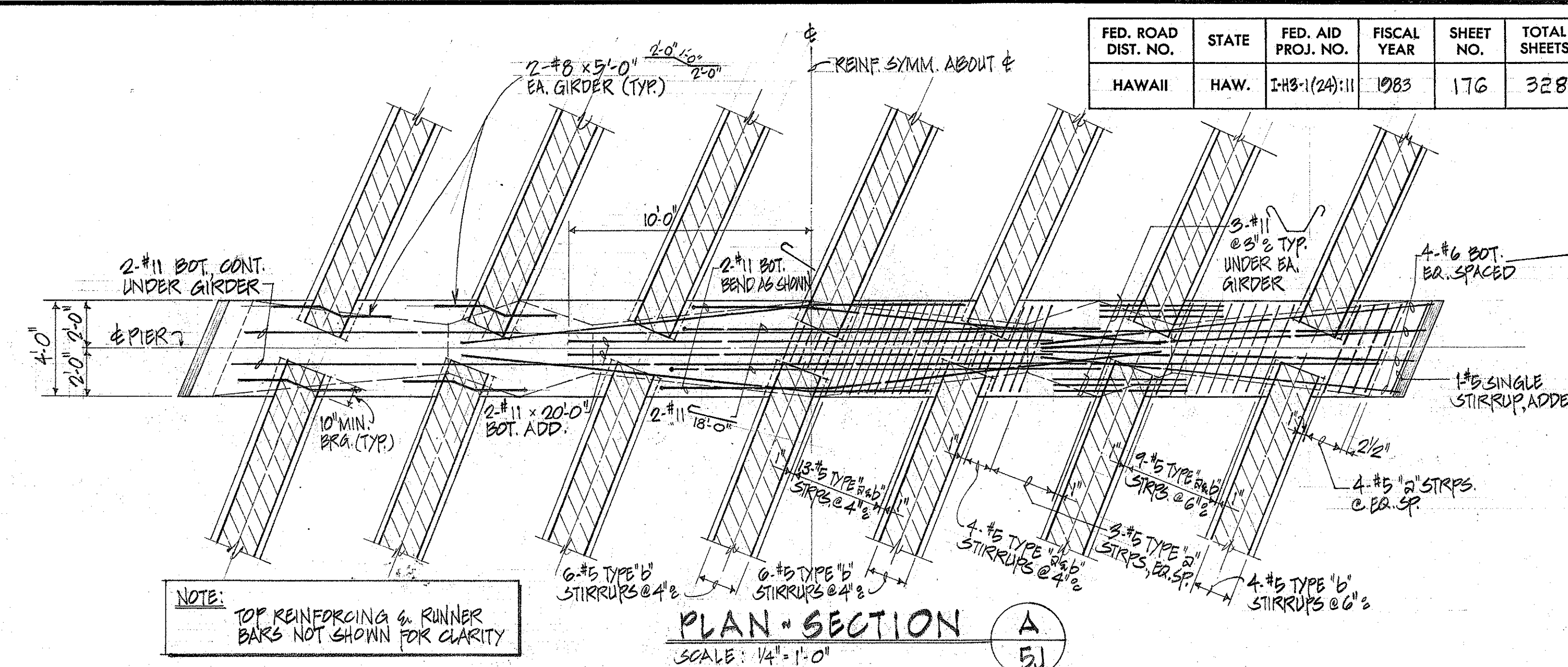
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FOUNDATION PLAN
HALEKOU INTERCHANGE
F.A.I. Proj. No. I-H3-1(24)11
Scale: As Noted
Date: SEPT. 1982

SHEET No. 31 OF 30 SHEETS
174

& PIER COL. & P.T.G.
 ADD 4 #8 x 10'-0" IN ENDS OF ALL PRESTRESSED GIRDERS - SEE (3/51)
 REIN. SYMM. ABOUT C
 12'-0" 10'-0"
 ADD 4 #8 x 10'-0" IN ENDS OF ALL PRESTRESSED GIRDERS SEE (3/51)
 2 #5 RUNNERS EA. FACE (TYPICAL BETWEEN GIRDERS)
 2 #11 x 20'-0" TOP
 4 #11 x 20'-0" TOP
 4 #11 x 20'-0" TOP
 2 #11 x 20'-0" BOT. CENTER BTWN. SUPPORTS
 2 #11 BOT.
 4 #6 BOT. BR. SPACED 255.58
 2 #11 BOT. CONT. UNDER GIRDER
 TYPICAL G.I.P. COLUMNS FOR DETAILS, SEE SHEET N° GJ
 DENOTES BOTTOM ELEV. OF GIRDER @ C GIRDER & PIER, SEE DETAIL (3/41)
 TYPICAL PIER FOOTING SEE PLAN-DETAIL (2/51)
 BOTTOM OF P.T.G. ELEV. = 229.55
 & PIER
 3'-0" 3'-0" 3'-0"
 1'-6" 1'-6"

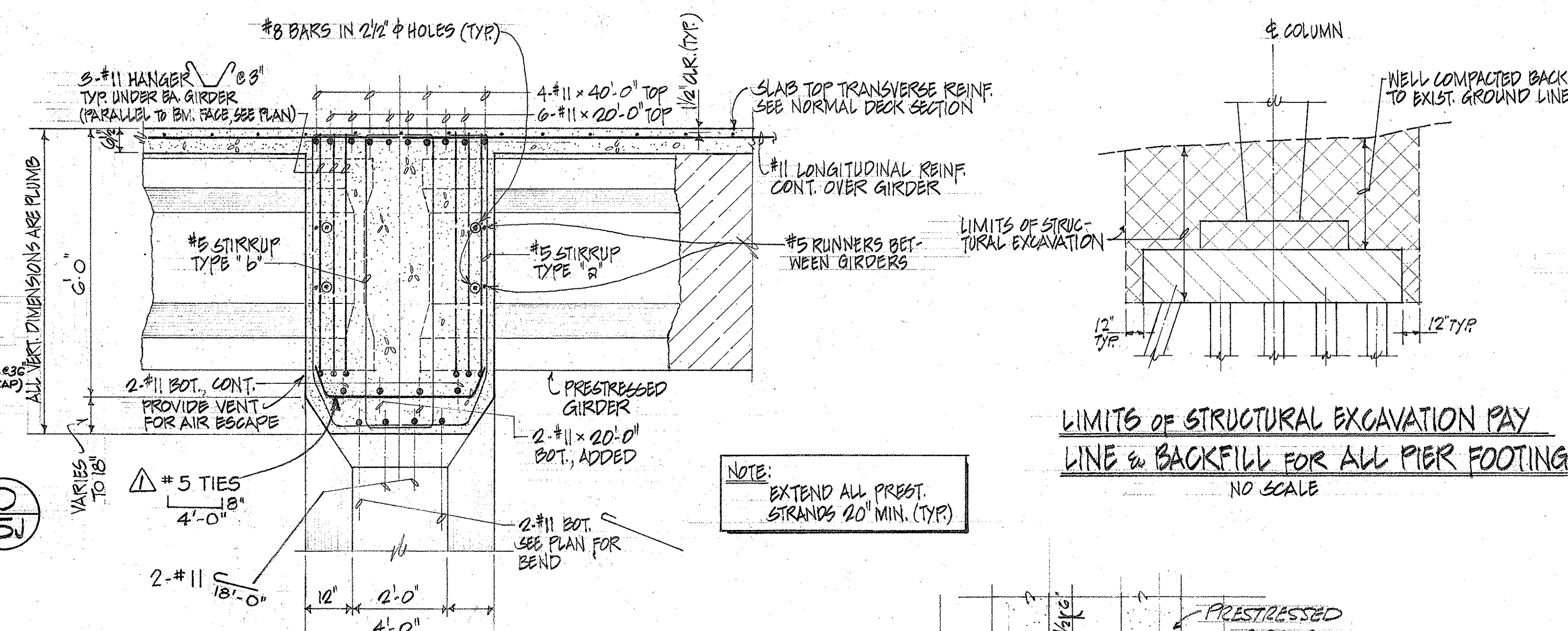
SECTION D
SCALE: $\frac{1}{2}" = 1' - 0"$ 51



PLAN - SECTION

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

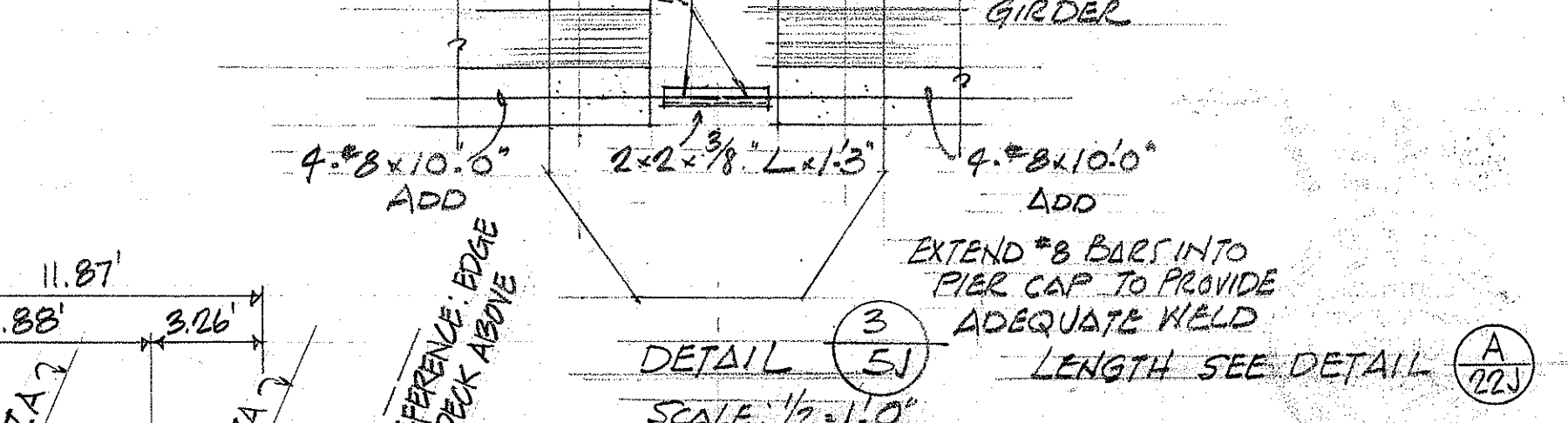
A
51



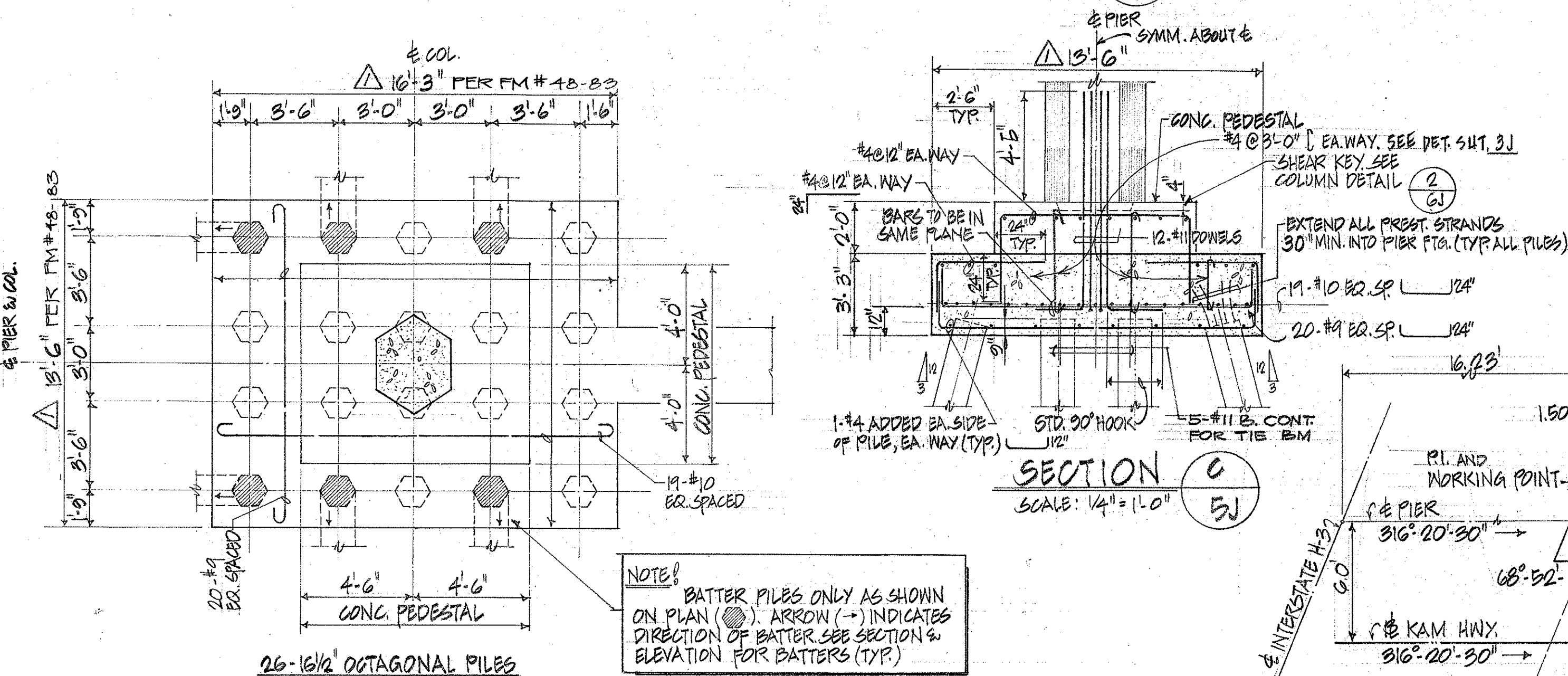
SECTION

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

B
5J



DETAIL (3) ADEQUATE WELD
51 LENGTH SEE DETAIL (A)
SCALE 1/2" = 1'-0" 22

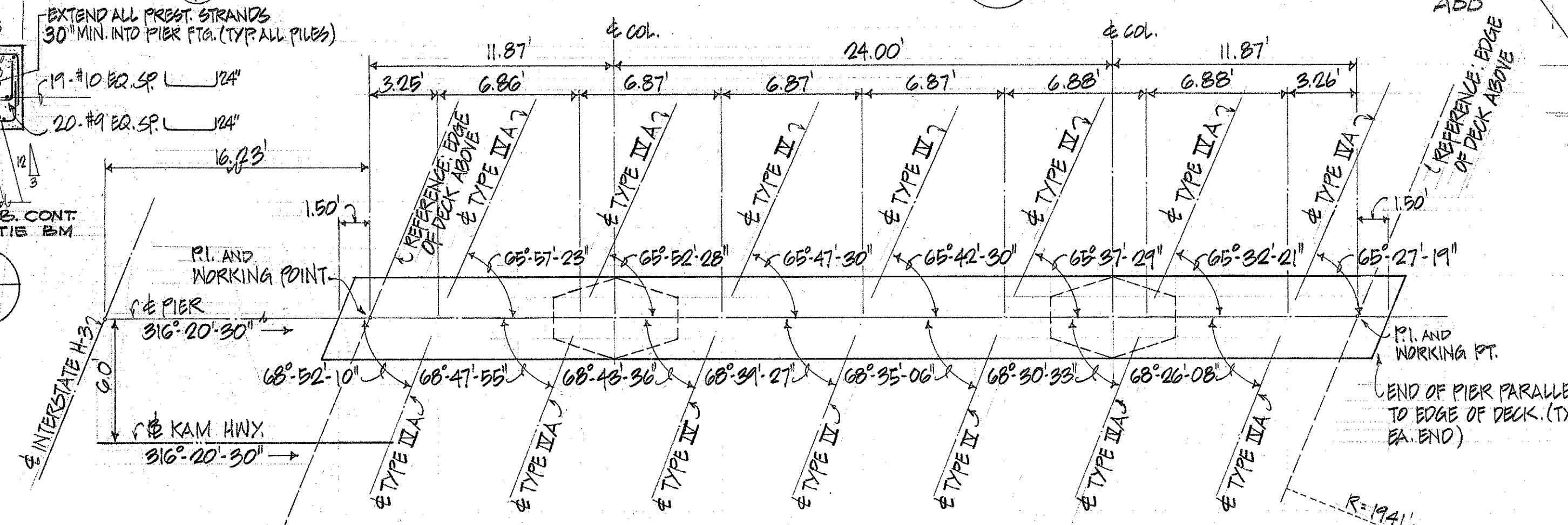


PIER FOOTING PLAN - DETAIL

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

2

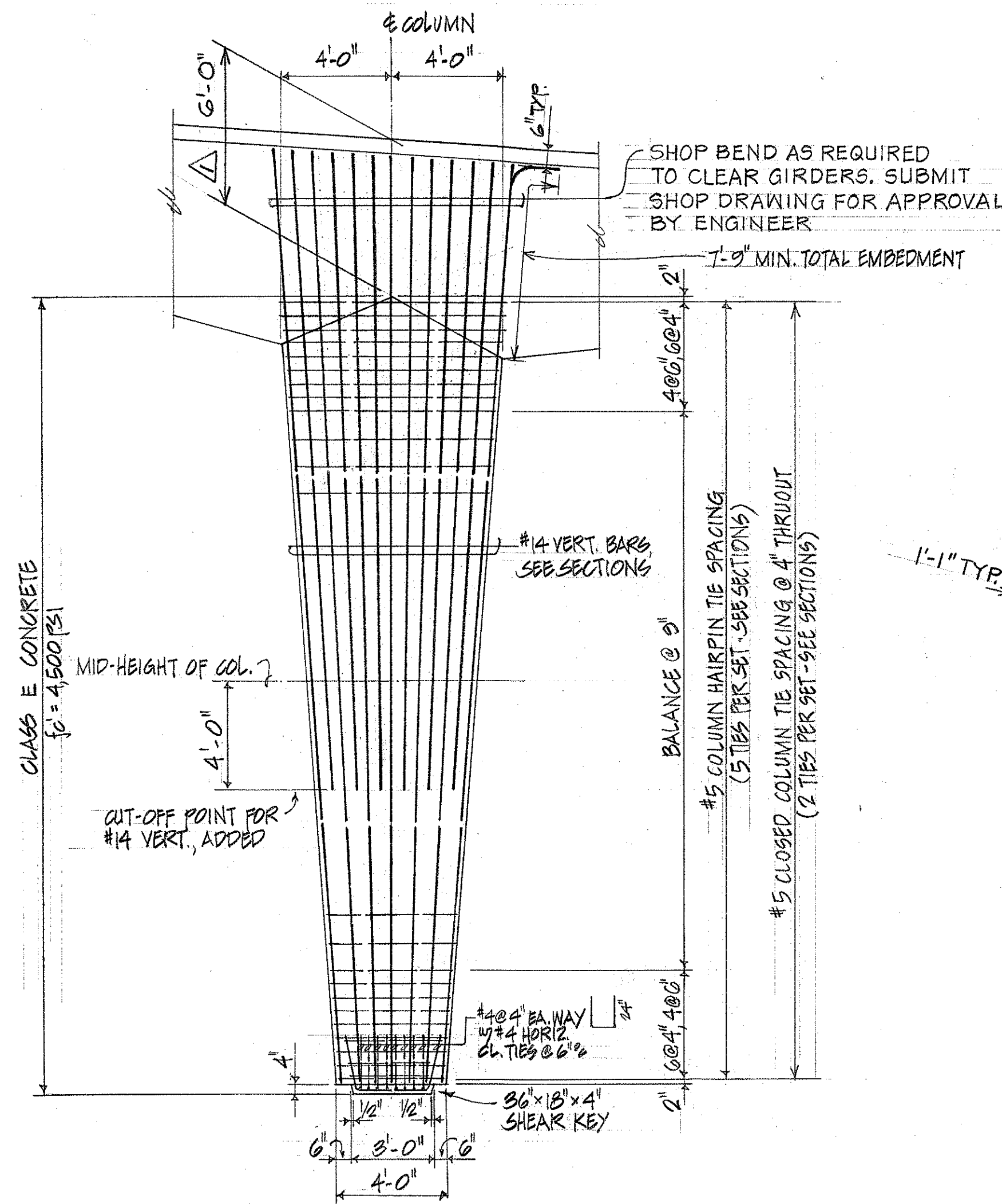
51



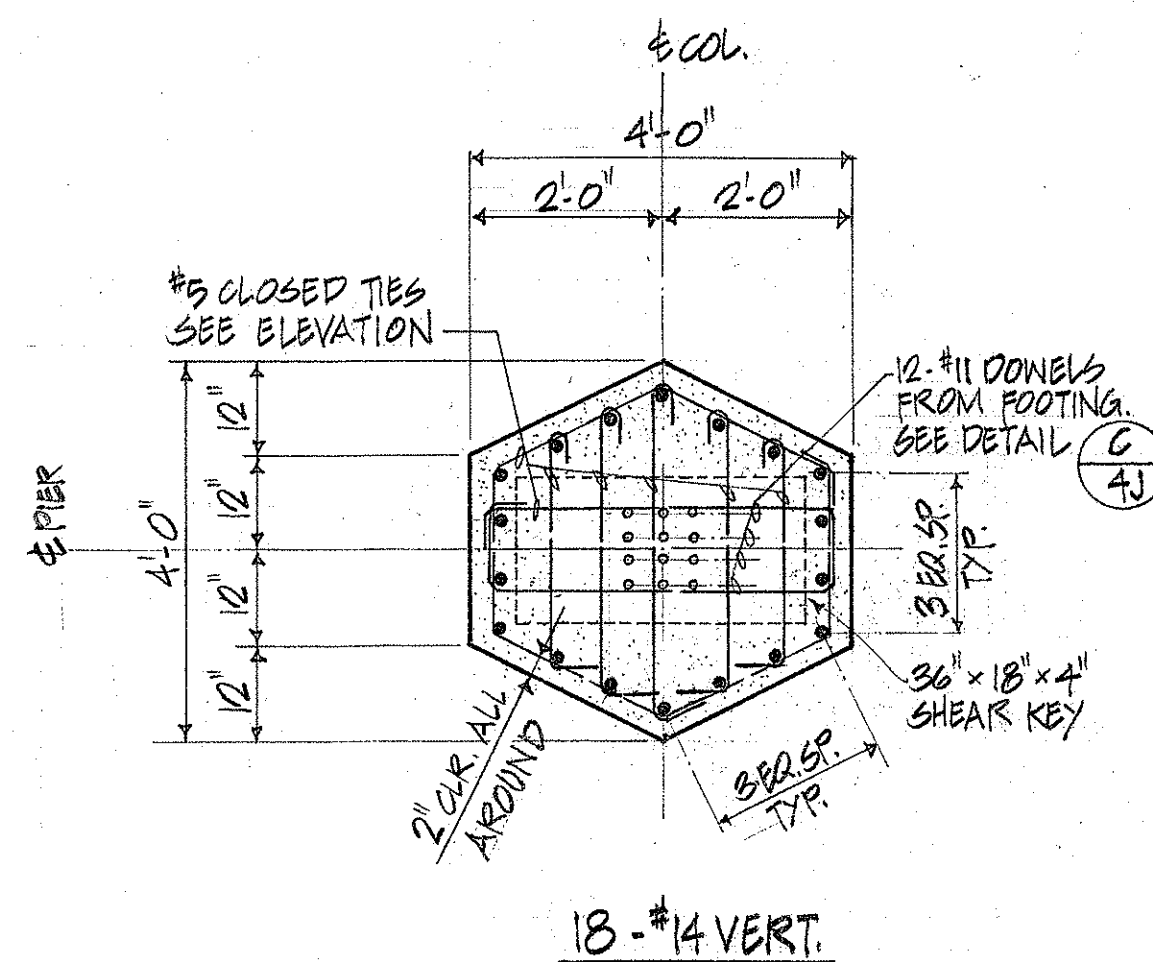
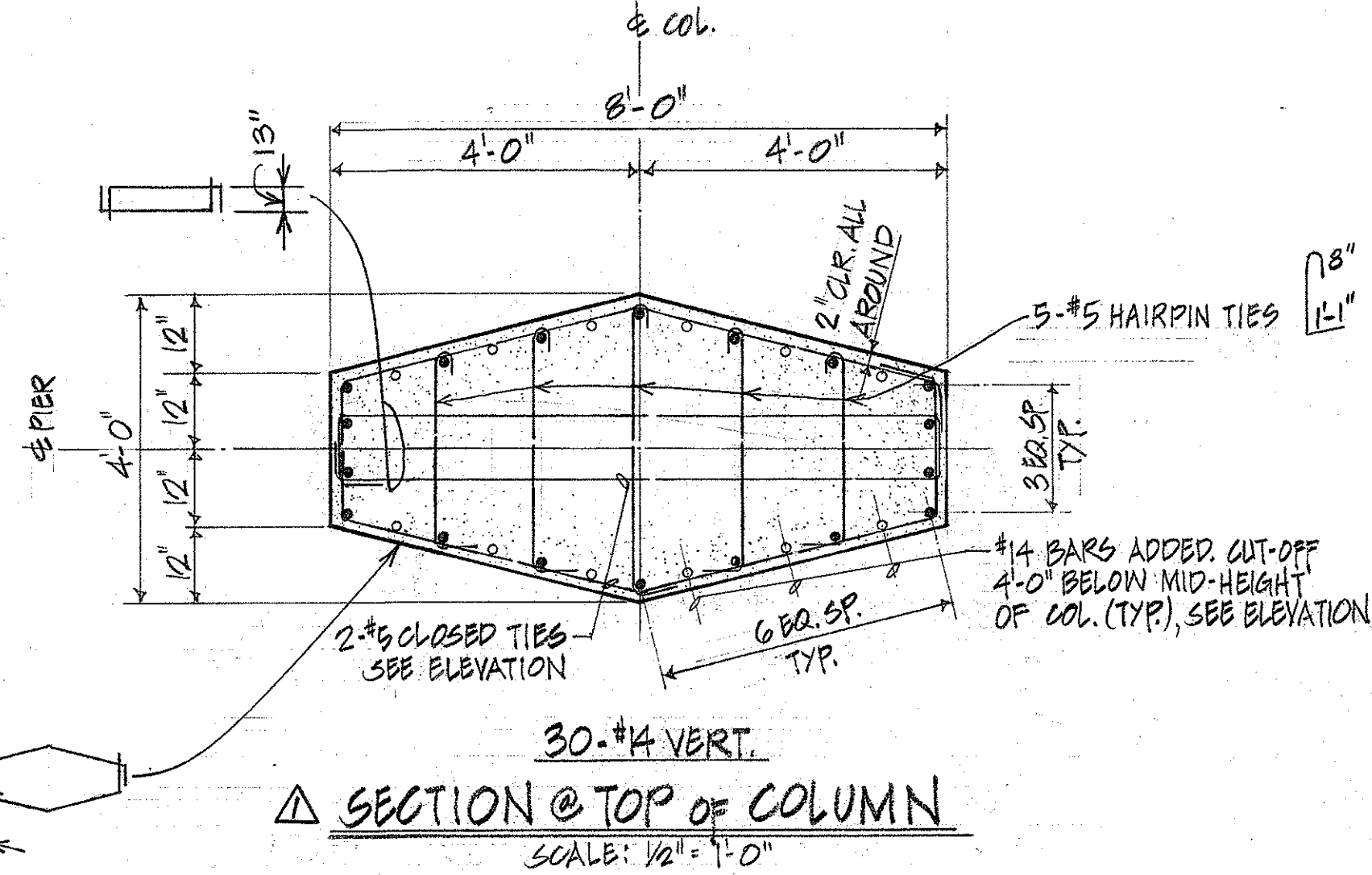
PLAN - PRESTRESSED GIRDER LAYOUT @ BRIDGE N° 2 PIER

	9/10/87	Corrections to Dimension and Add Reinforcement.
	DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>PIER ELEV. & DETAILS - BRIDGE NO. 2</u> <u>HALEKOU INTERCHANGE</u> <u>F.A.I. Proj. No. I-H3-1(24):II</u> <u>Scale: As Noted</u> <u>Date: SEPT. 1982</u>		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	177	328



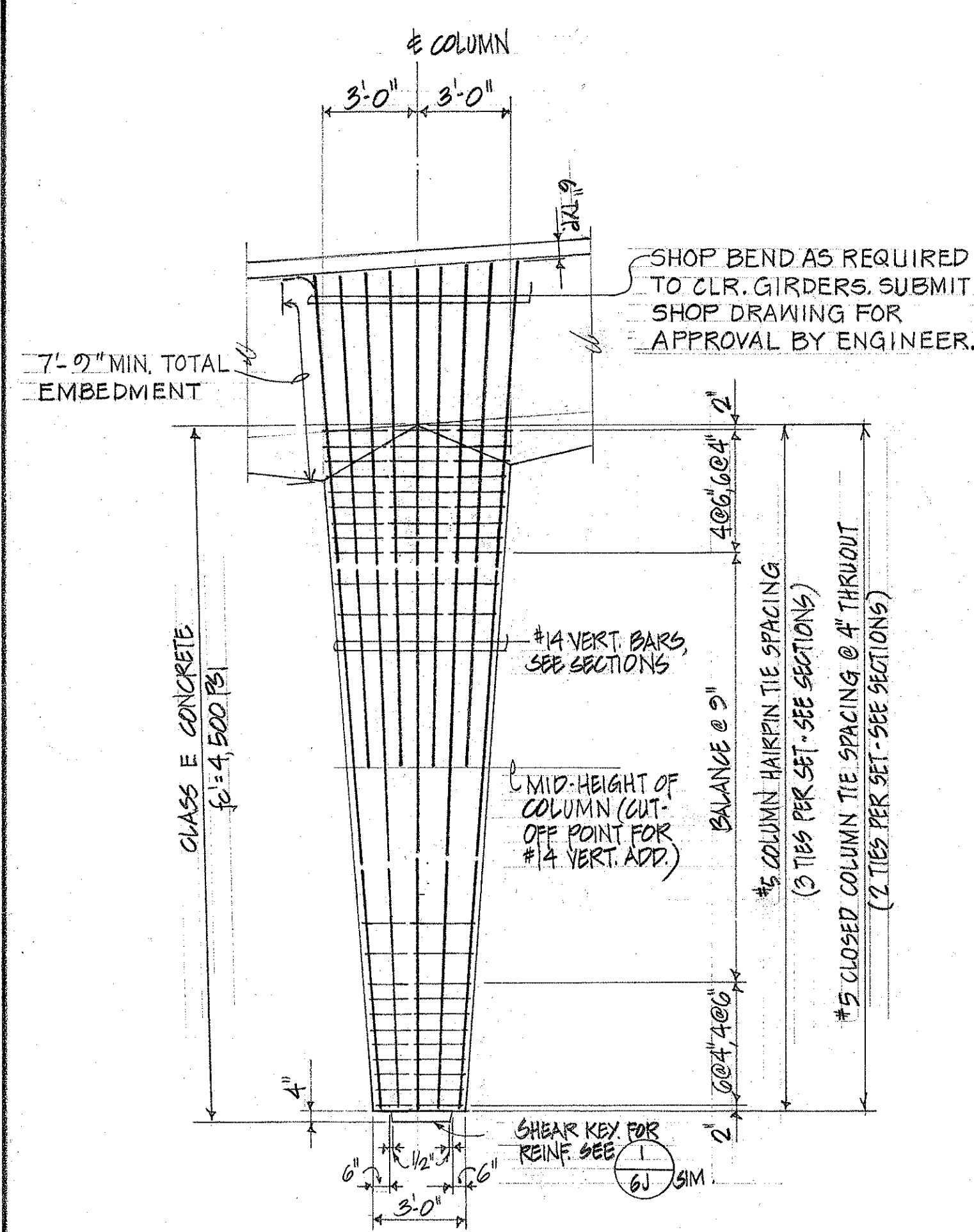
ELEVATION
SCALE: 1/4" = 1'-0"



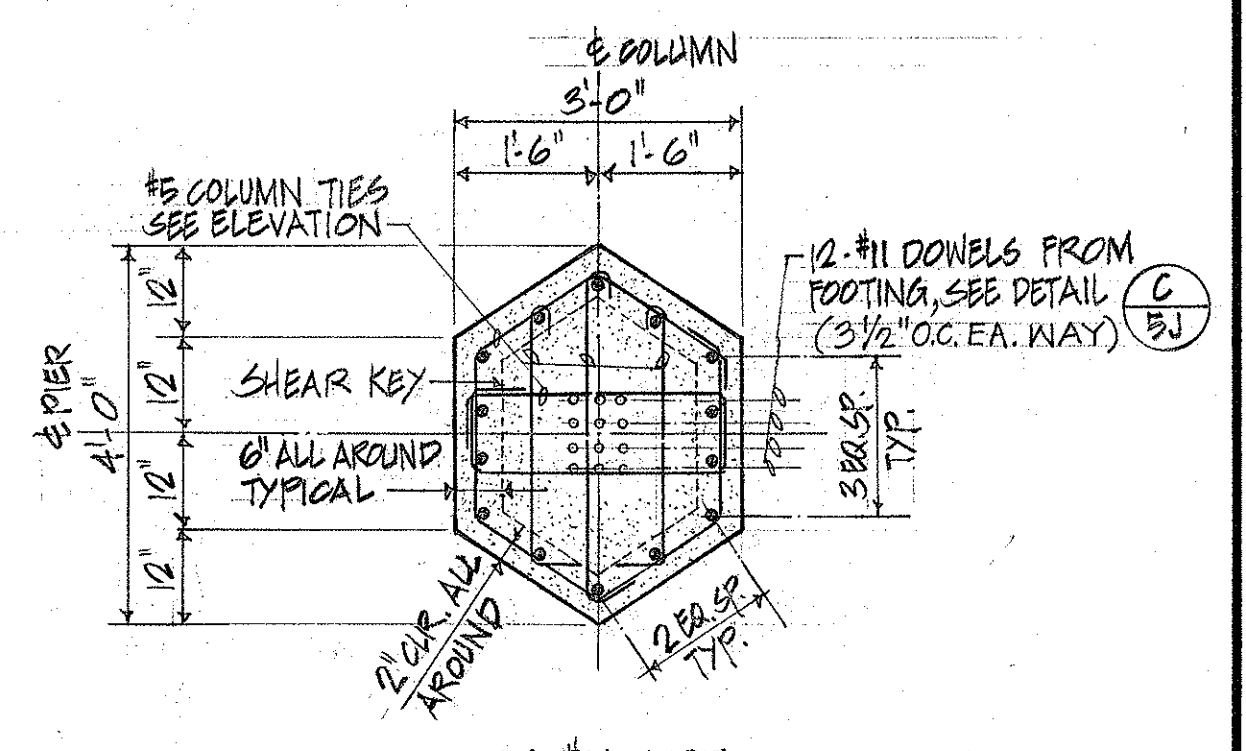
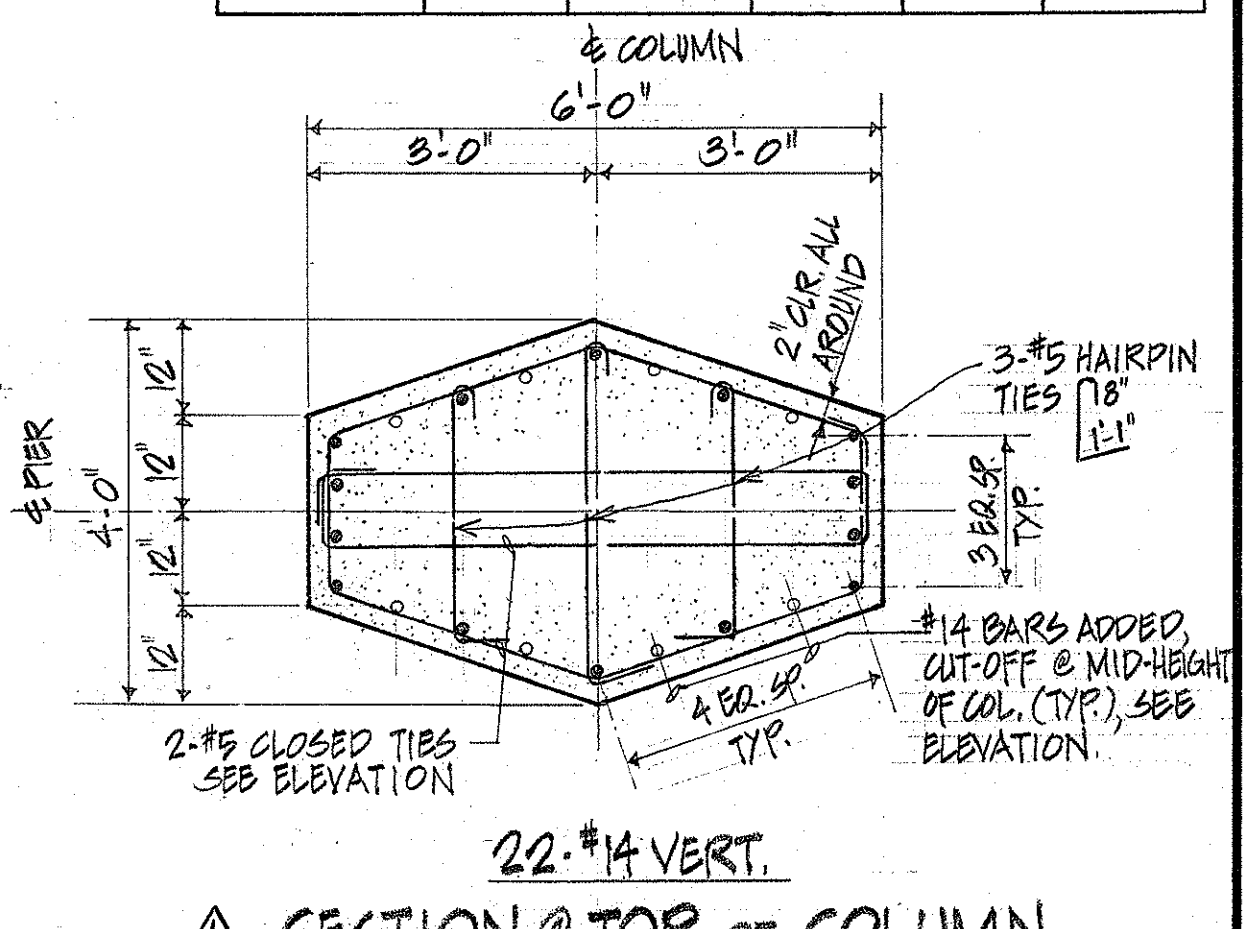
SECTION @ BOTTOM OF COLUMN
SCALE: 1/2" = 1'-0"

TYPICAL COLUMN DETAILS - BRIDGE No 1

1
GJ



ELEVATION
SCALE: 1/4" = 1'-0"



SECTION @ BOTTOM OF COLUMN
SCALE: 1/2" = 1'-0"

TYPICAL COLUMN DETAILS - BRIDGE No 2

2
GJ

NOTE:
1. SEE GENERAL NOTES ON STANDARD DETAIL SHEET No 31 FOR CHAMFER REQUIREMENTS ON EXTERIOR CONCRETE CORNERS.
2. ALL #14 VERTICAL COLUMN REINF. BARS SHALL BE HIGH TENSILE STEEL & CONFORM TO ASTM A615 GRADE 60.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL COLUMN DETAILS

HALEKOU INTERCHANGE

F.A.I. Proj. No. I-H3-1(24):11

Scale: As Noted Date: SEPT. 1982

SHEET No. GJ OF 30 SHEETS

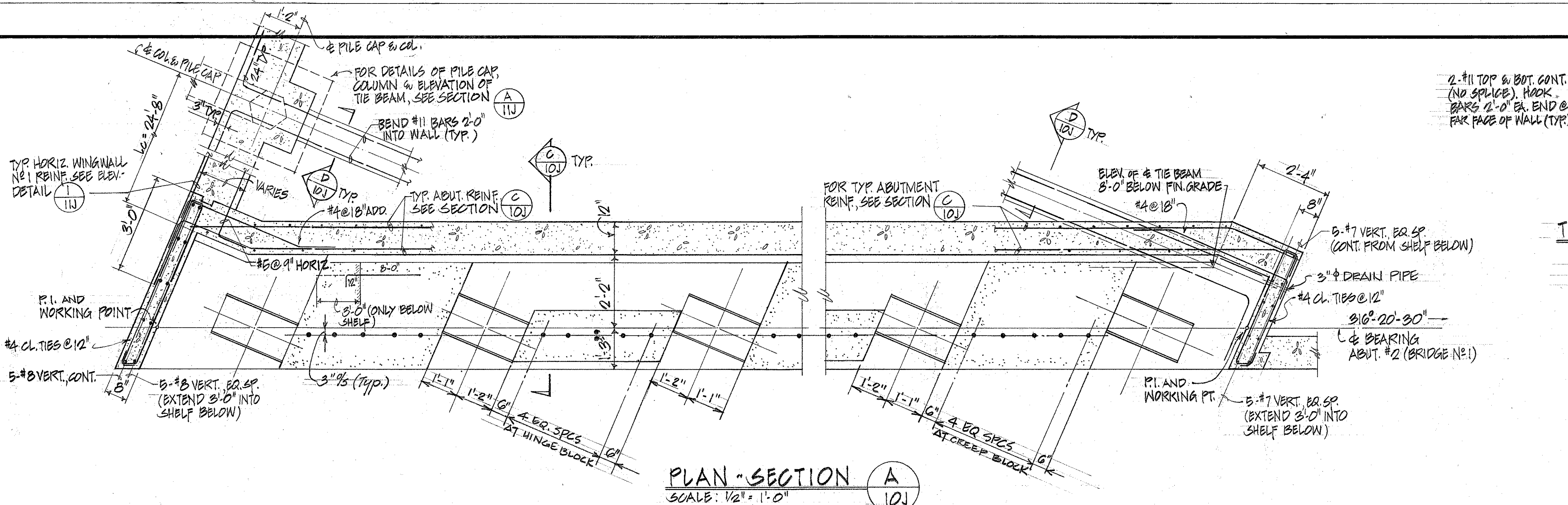
9/10/87 Add Dimension and Clarify Reinf. Detail.

DATE REVISION

C.O. 177

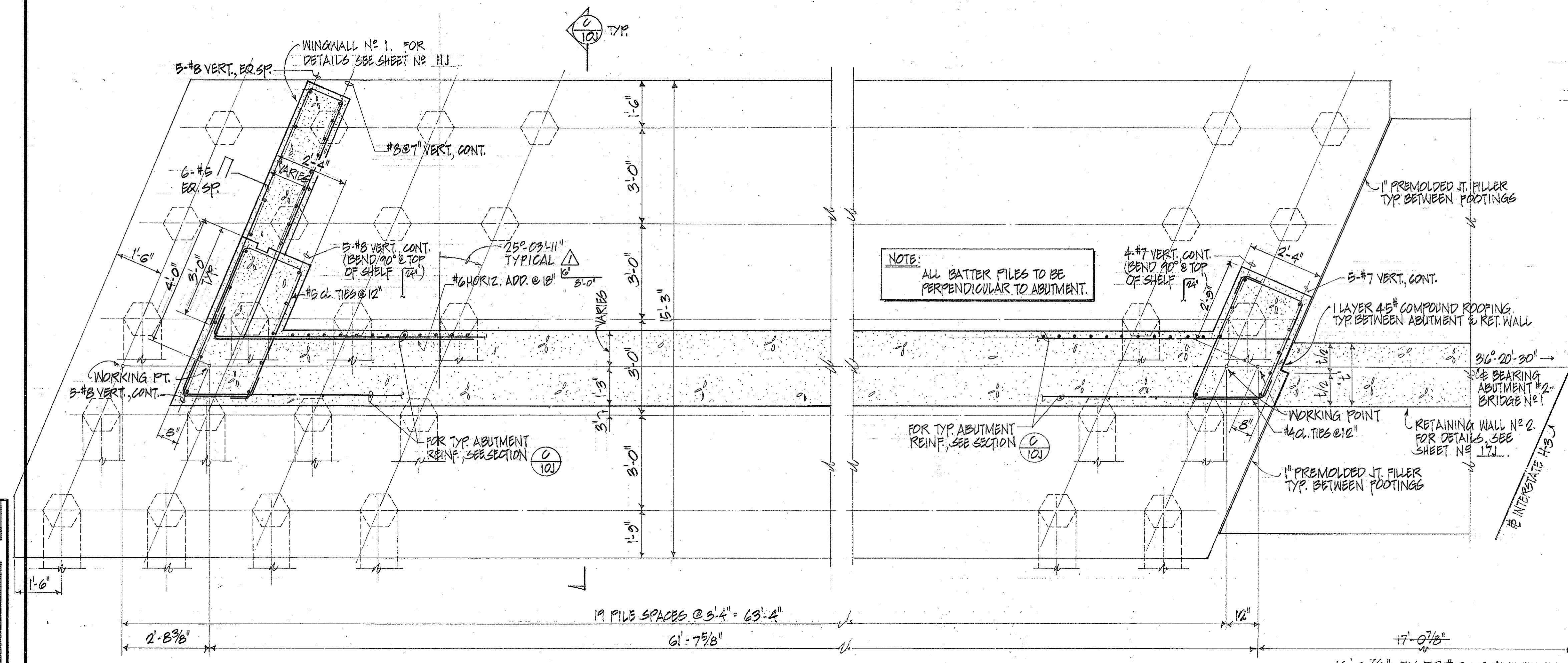
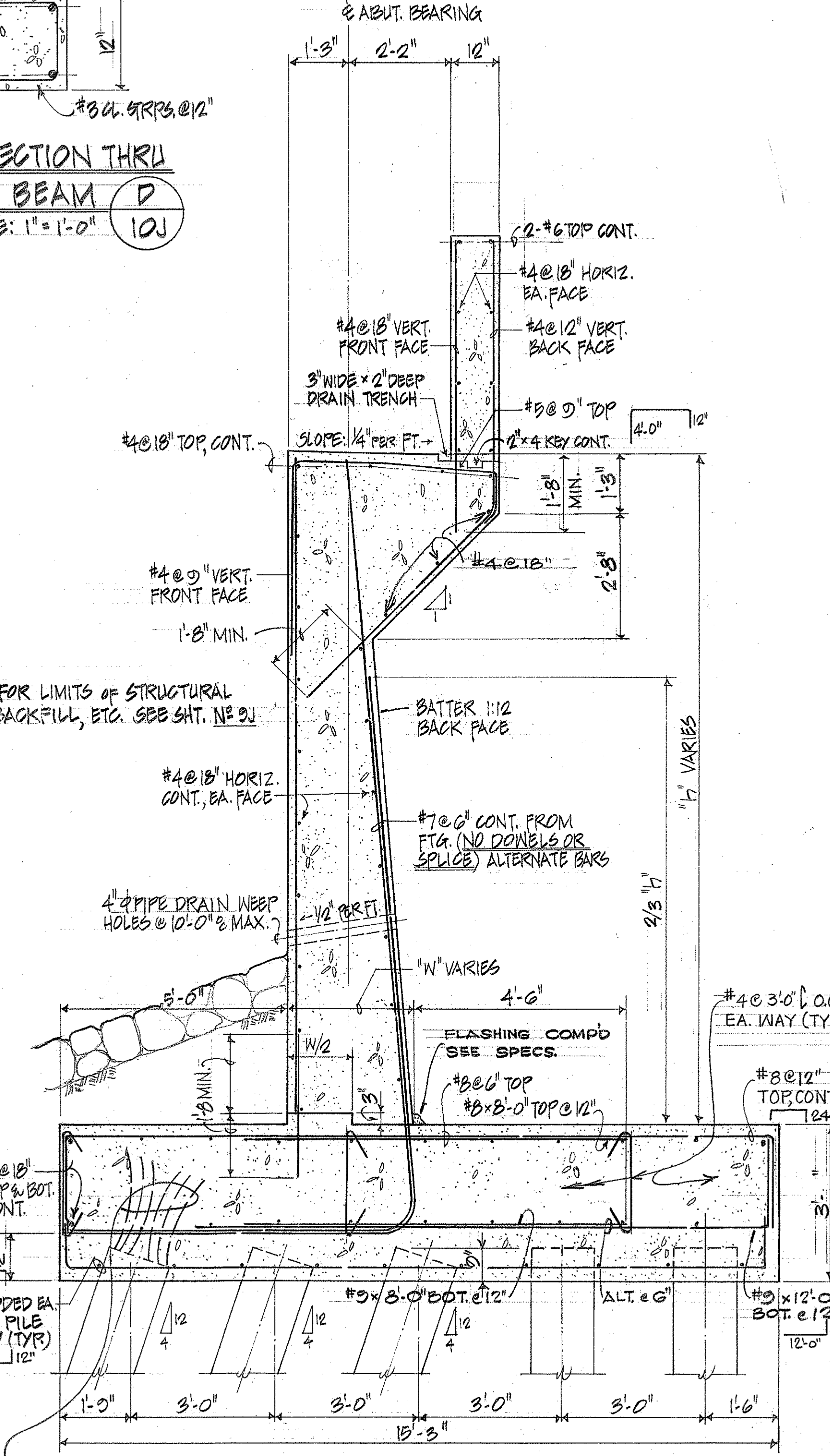
ORIGINAL PLAN	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24)-11	1983	181	328



TYP. SECTION THRU TIE BEAM D
SCALE: 1" = 1'-0"

NOTE: FOR LIMITS OF STRUCTURAL EXG., BACKFILL, ETC. SEE SHT. NO. 21



100-16 1/2" OCTAGONAL PILES
(40 VERTICAL & 60 BATTER)

PLAN - SECTION B
SCALE: 1/2" = 1'-0"

DATE	9/10/87
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
NO.	

9/10/87 correction to Concrete Pile & Angle.

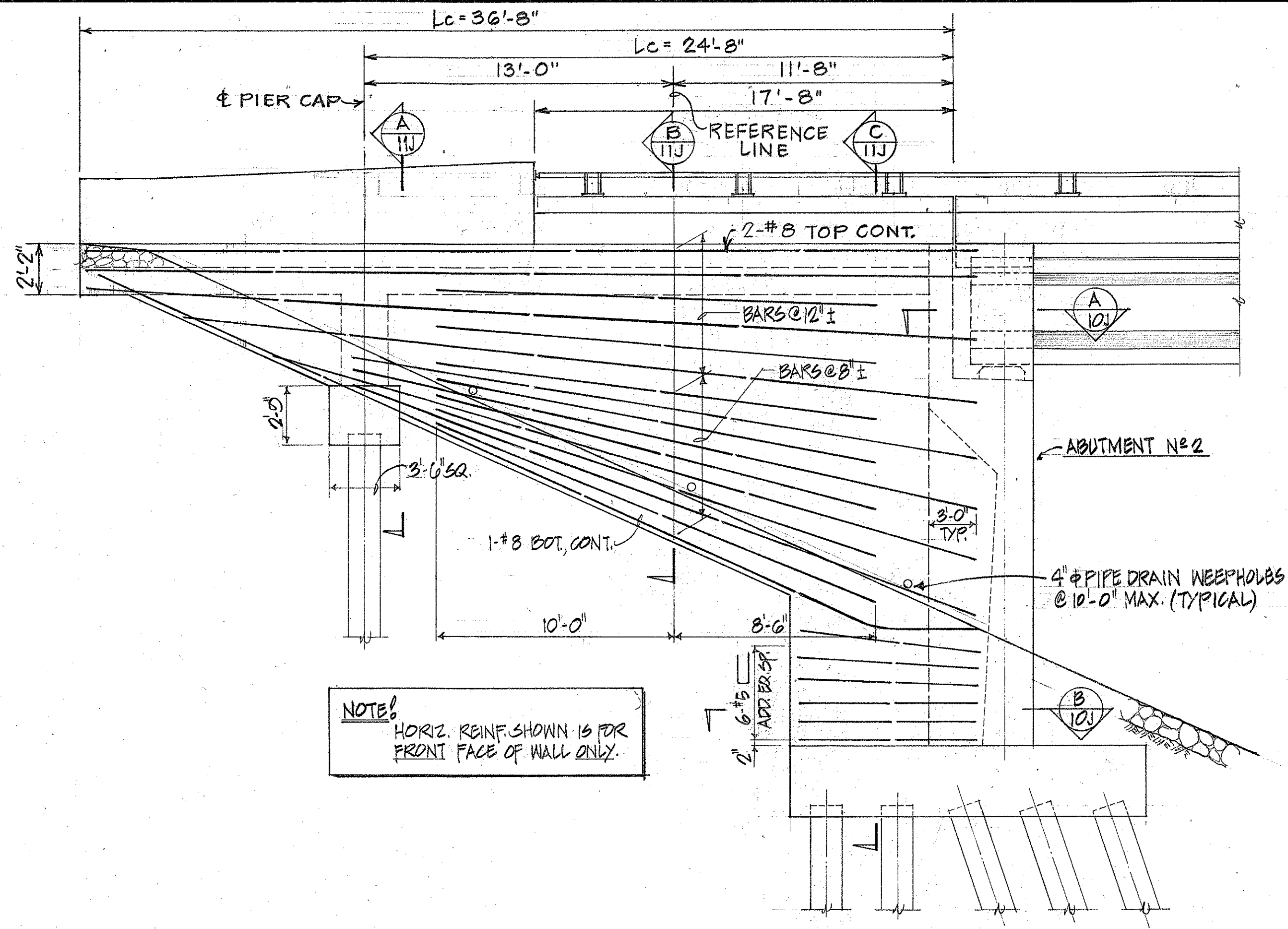
DATE REVISION SHEET No. 101 OF 30 SHEETS

"AS BUILT"

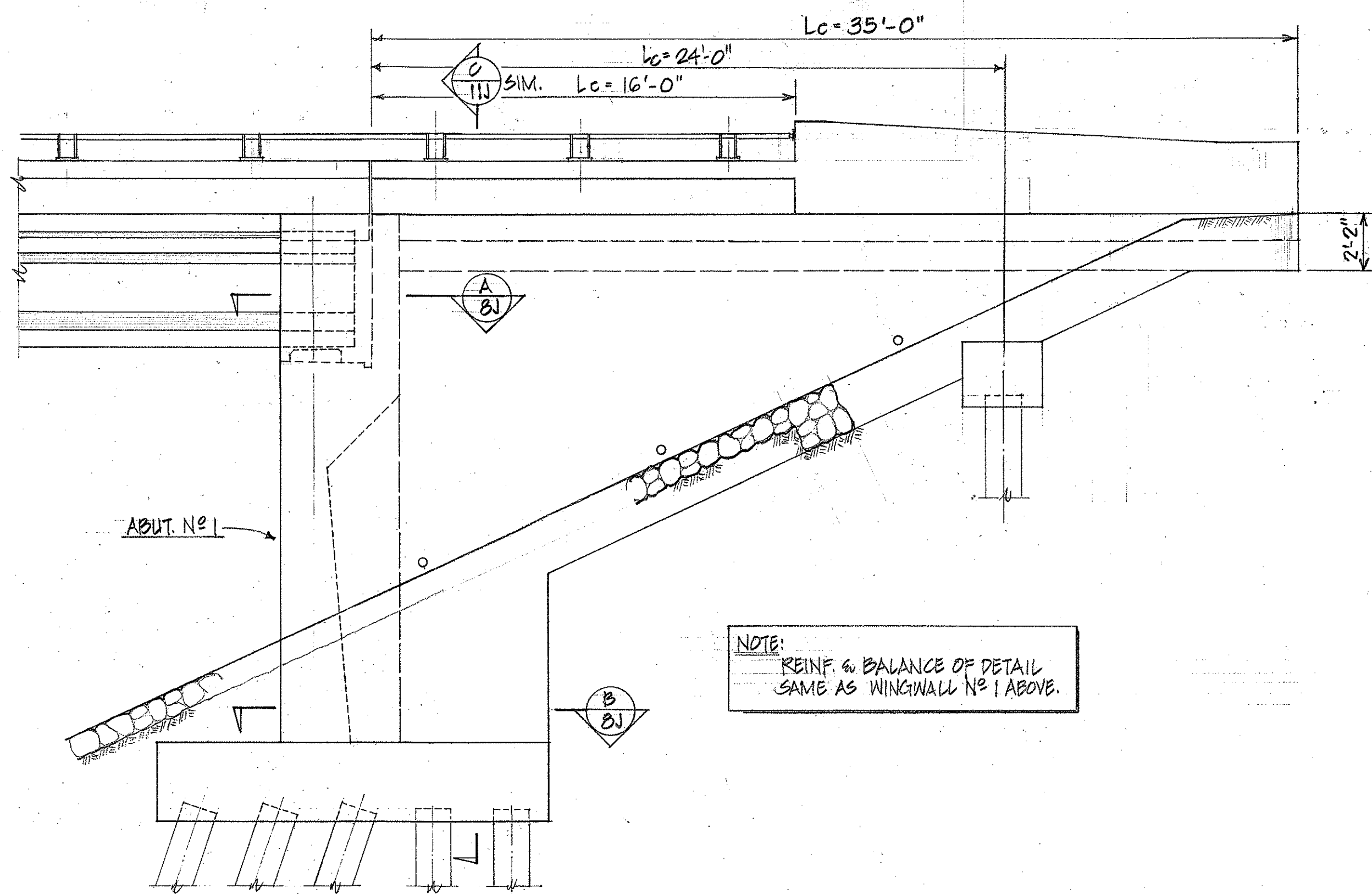
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ABUTMENT No. 2 - BRIDGE No. 1
HALEKOU INTERCHANGE
F.A.I. Proj. No. I-H3-1(24)-11
Scale: As Noted Date: SEPT. 1982

C.O. 181

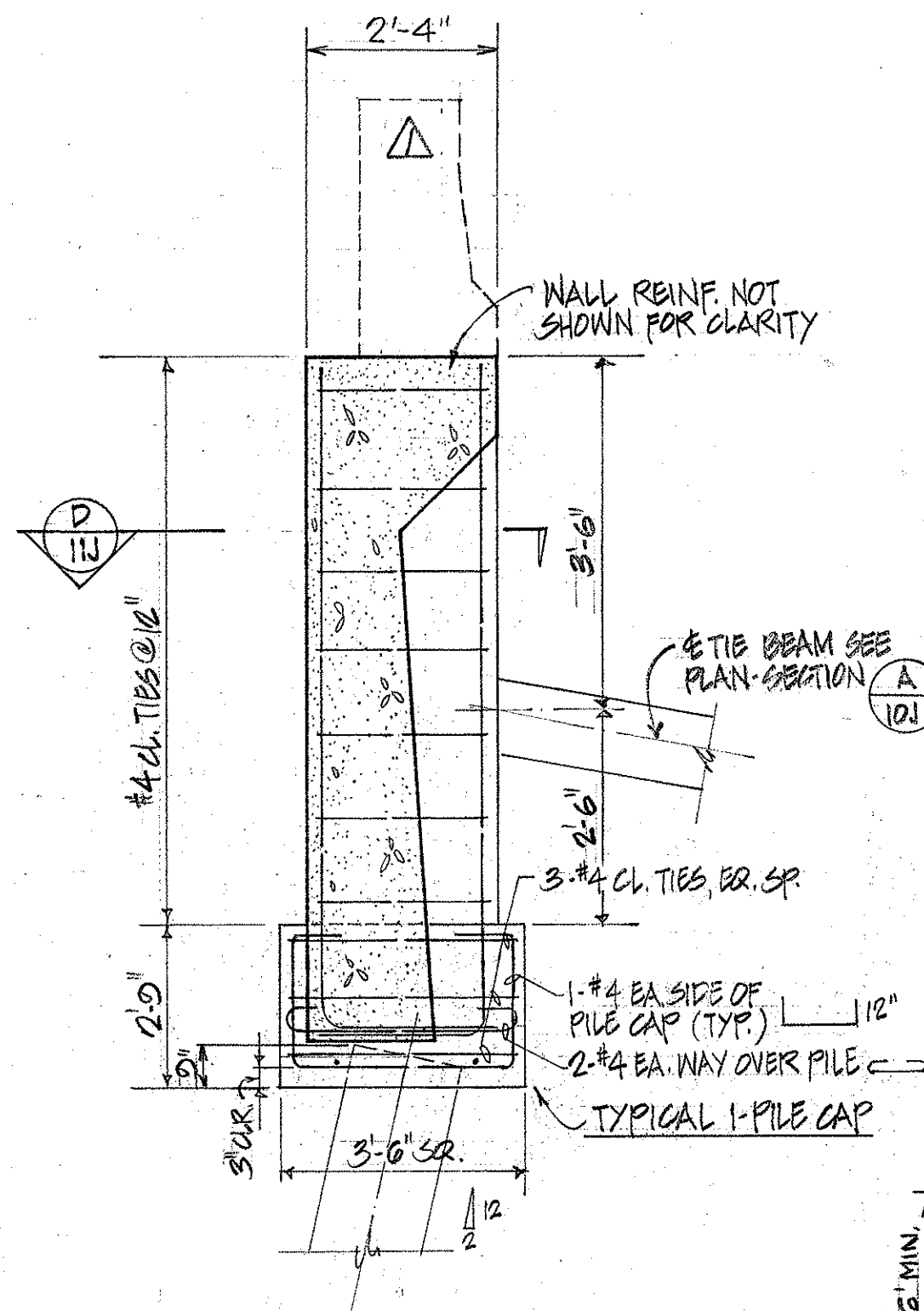
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24)-11	1983	182	328



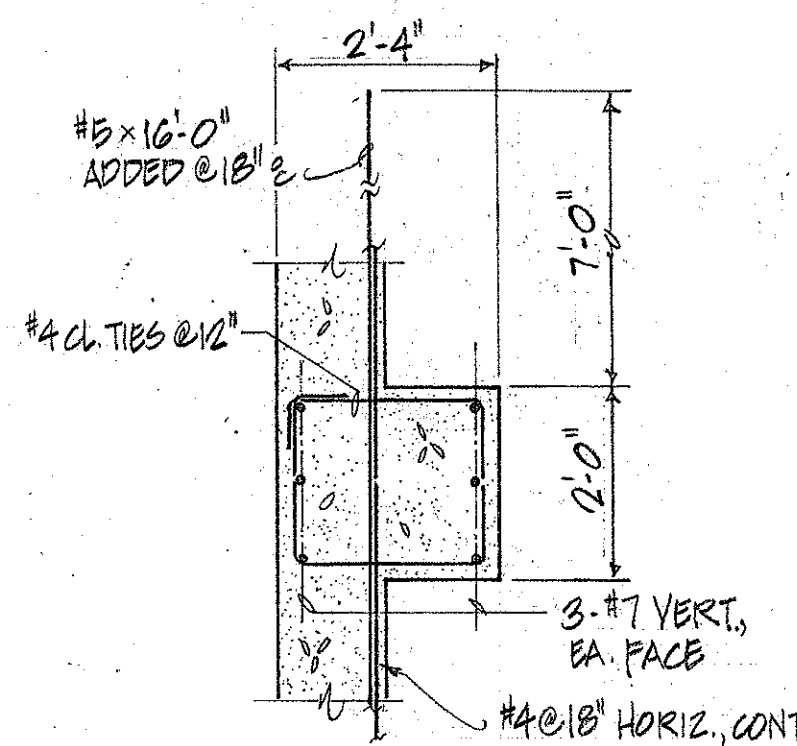
△ ELEVATION - DETAIL WINGWALL NO. 1
SCALE: 1/4" = 1'-0"



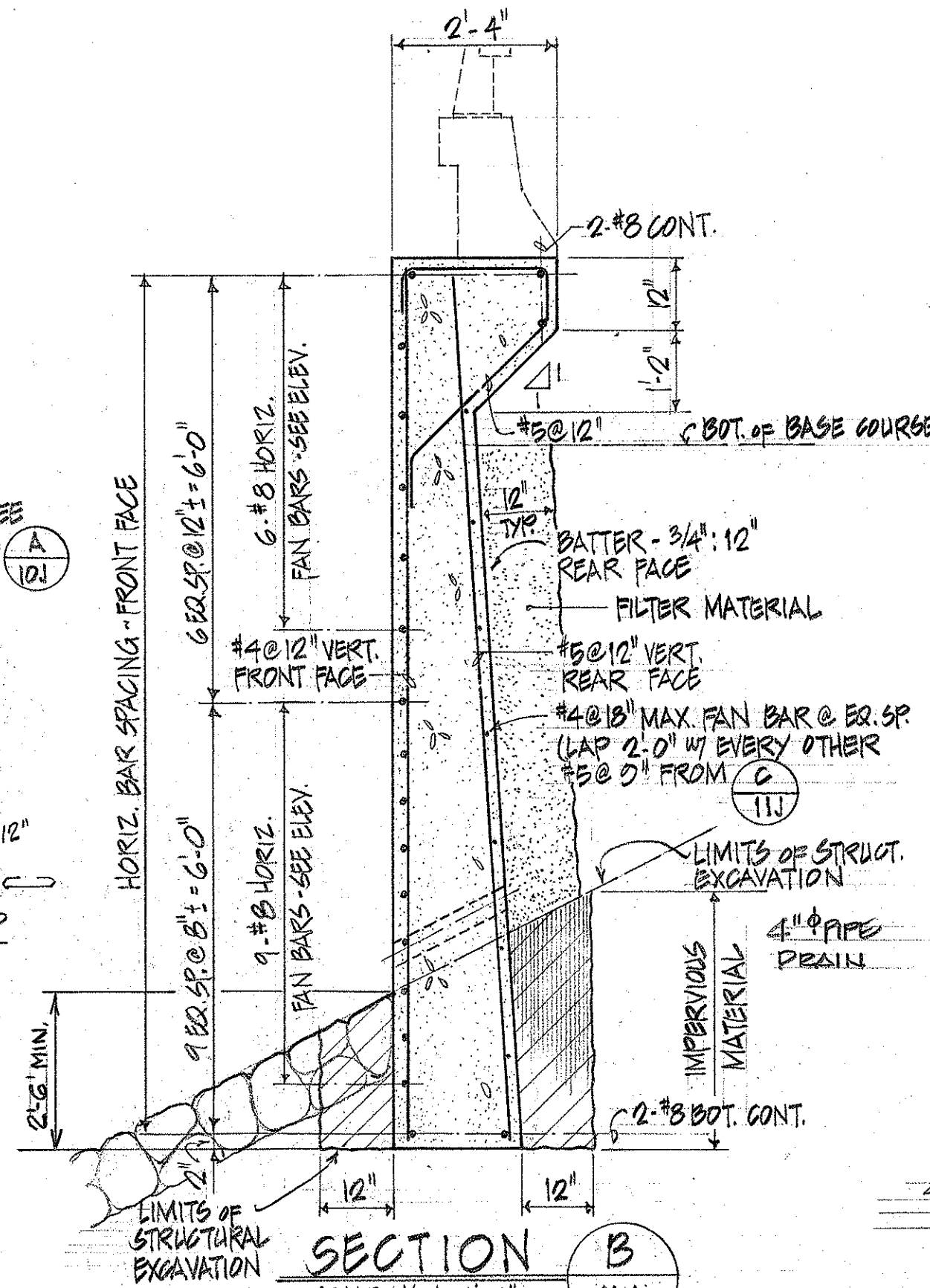
△ ELEVATION - DETAIL WINGWALL NO. 1A
SCALE: 1/4" = 1'-0"



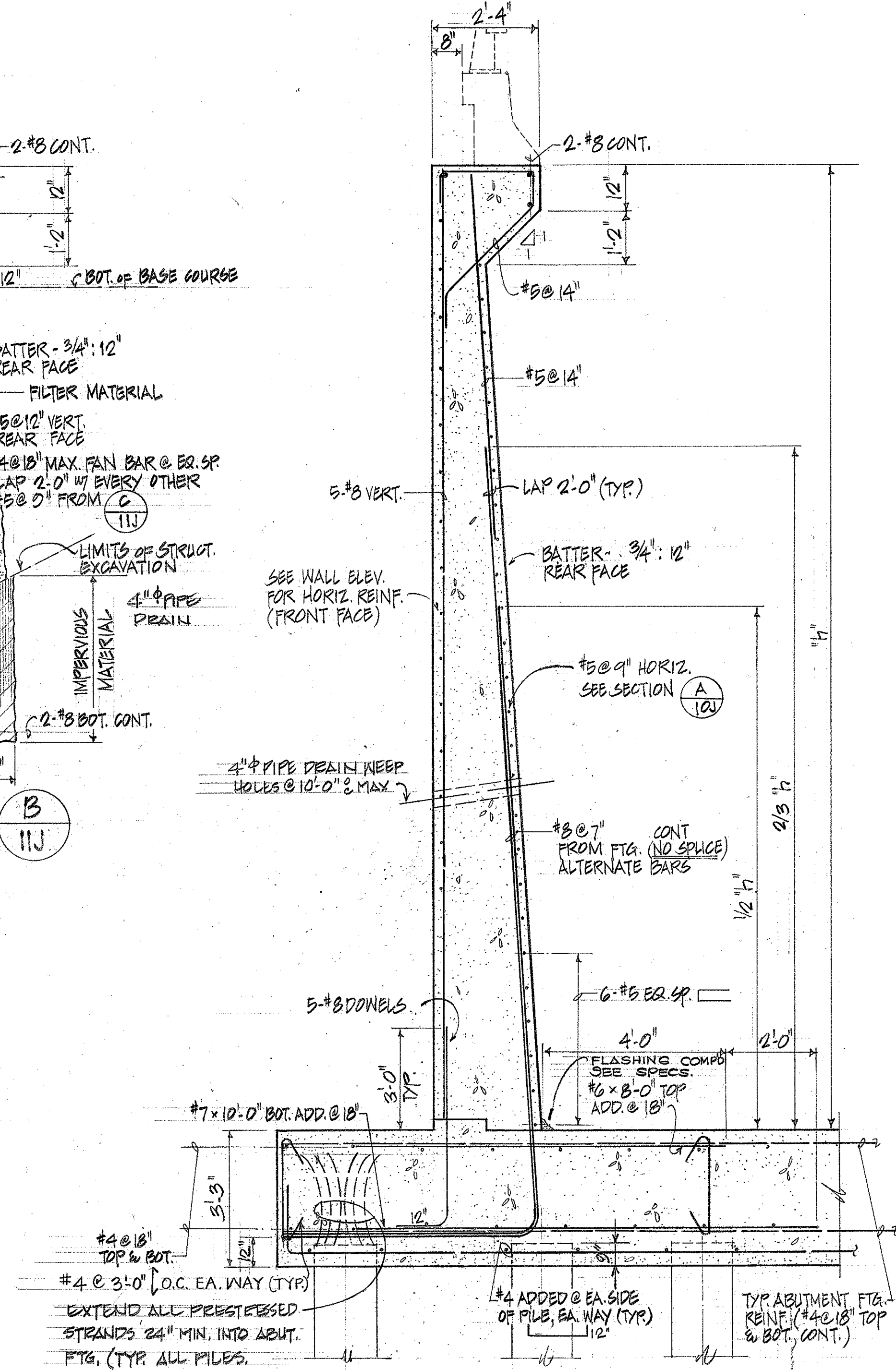
SECTION A-A
SCALE: 1/2" = 1'-0"



SECTION D-D
SCALE: 1/2" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"



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

9/8/87 Revise Metal Guardrail Connection at Concrete End Post.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WINGWALL - BRIDGE No. 1

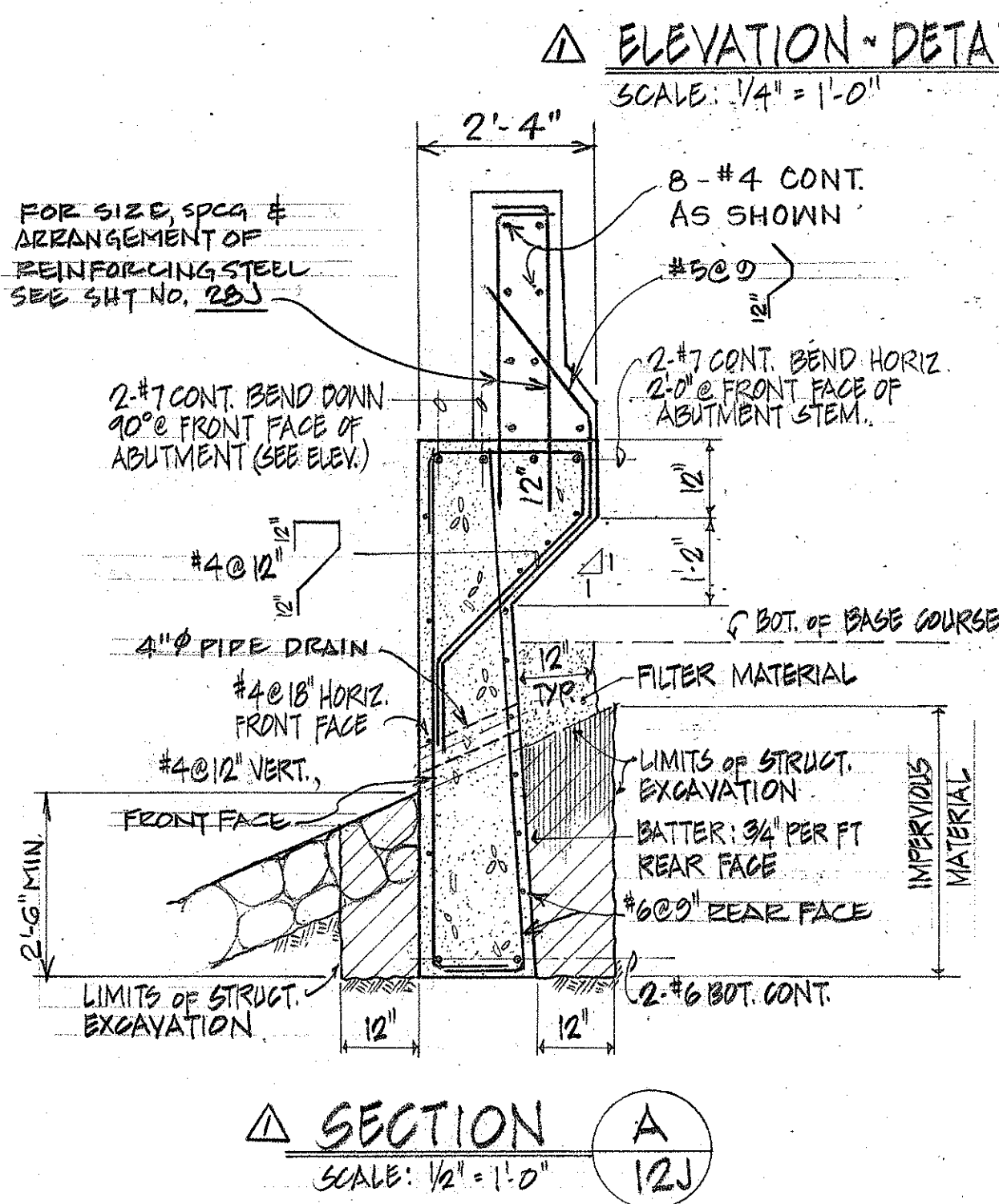
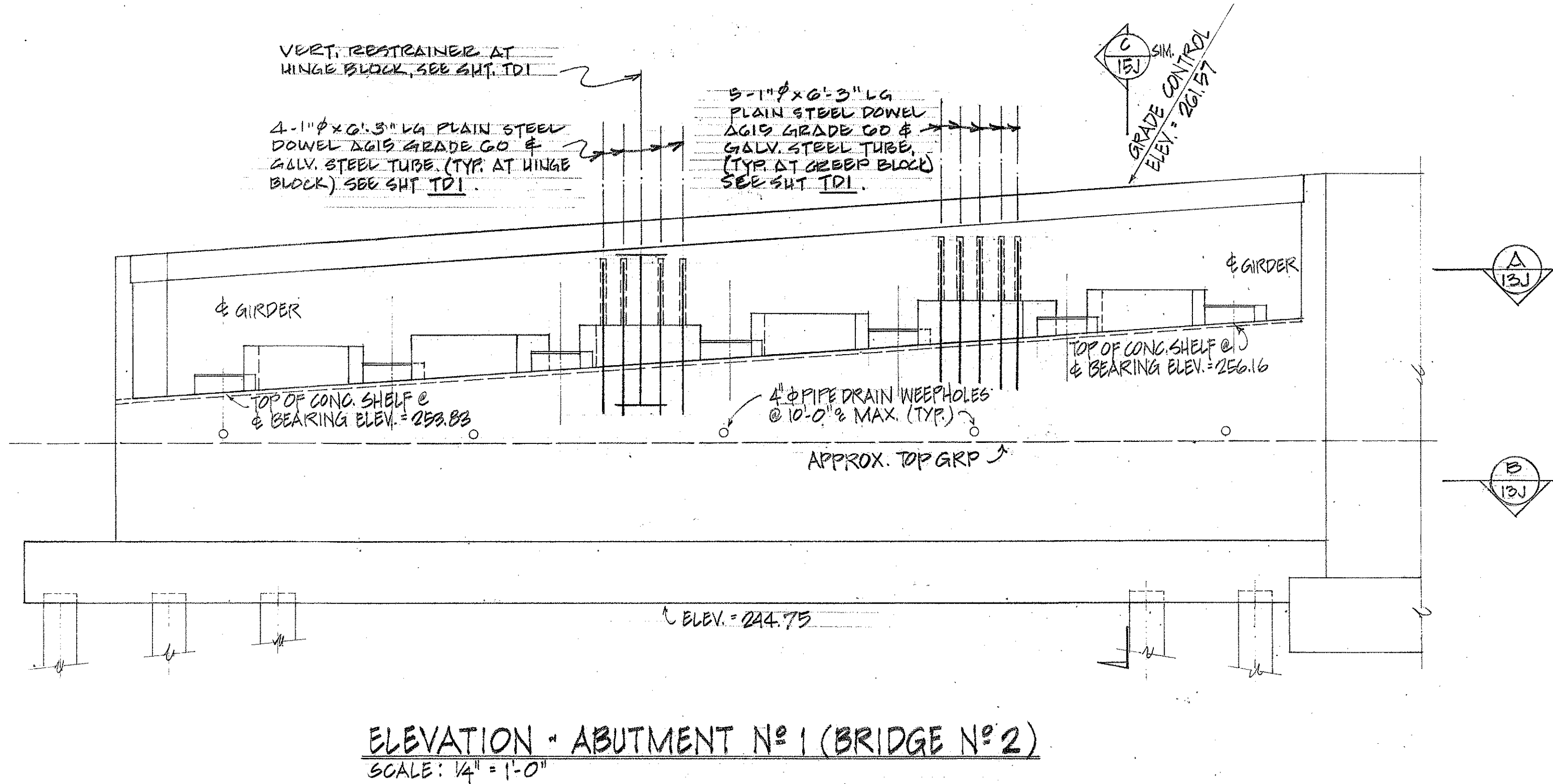
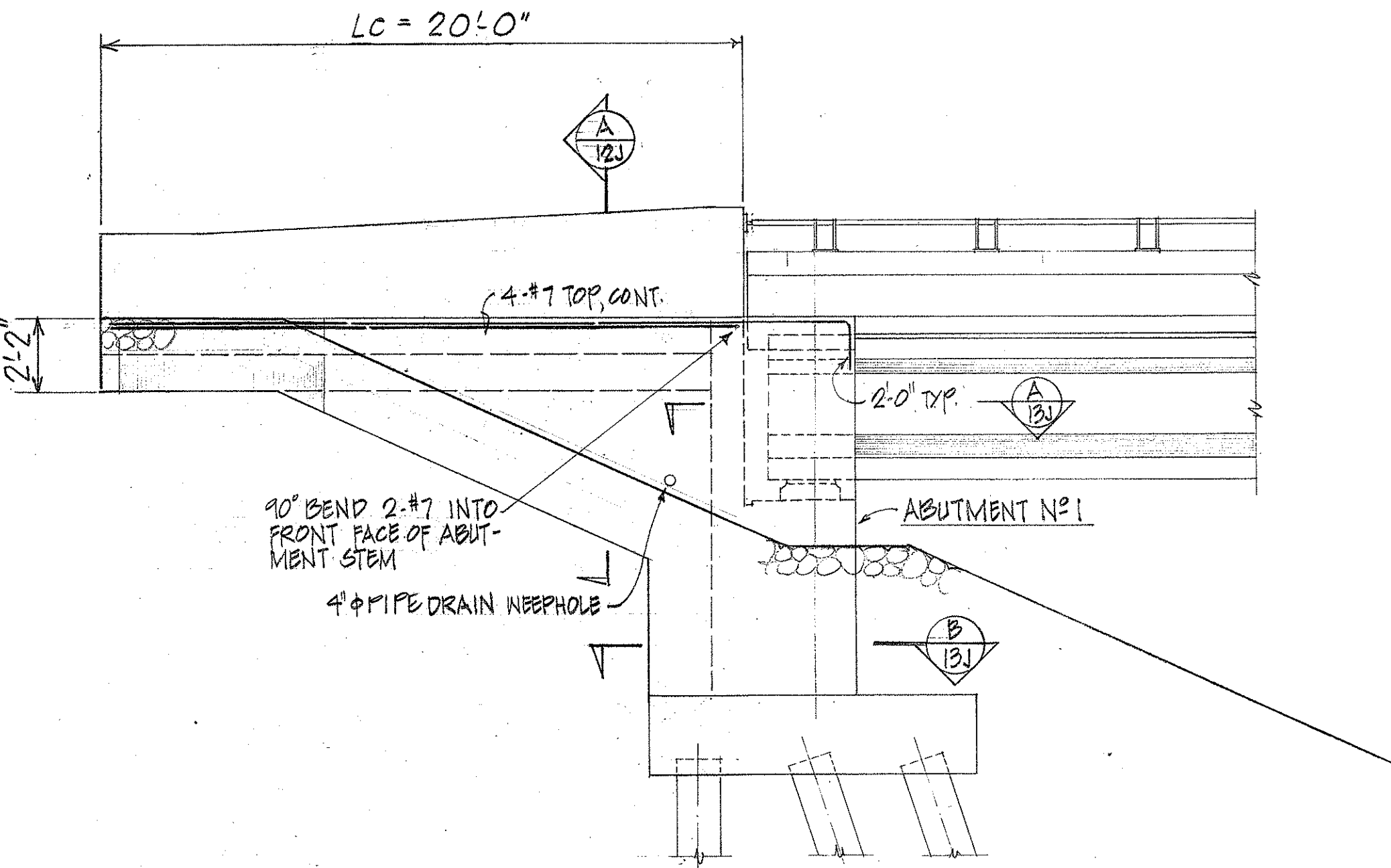
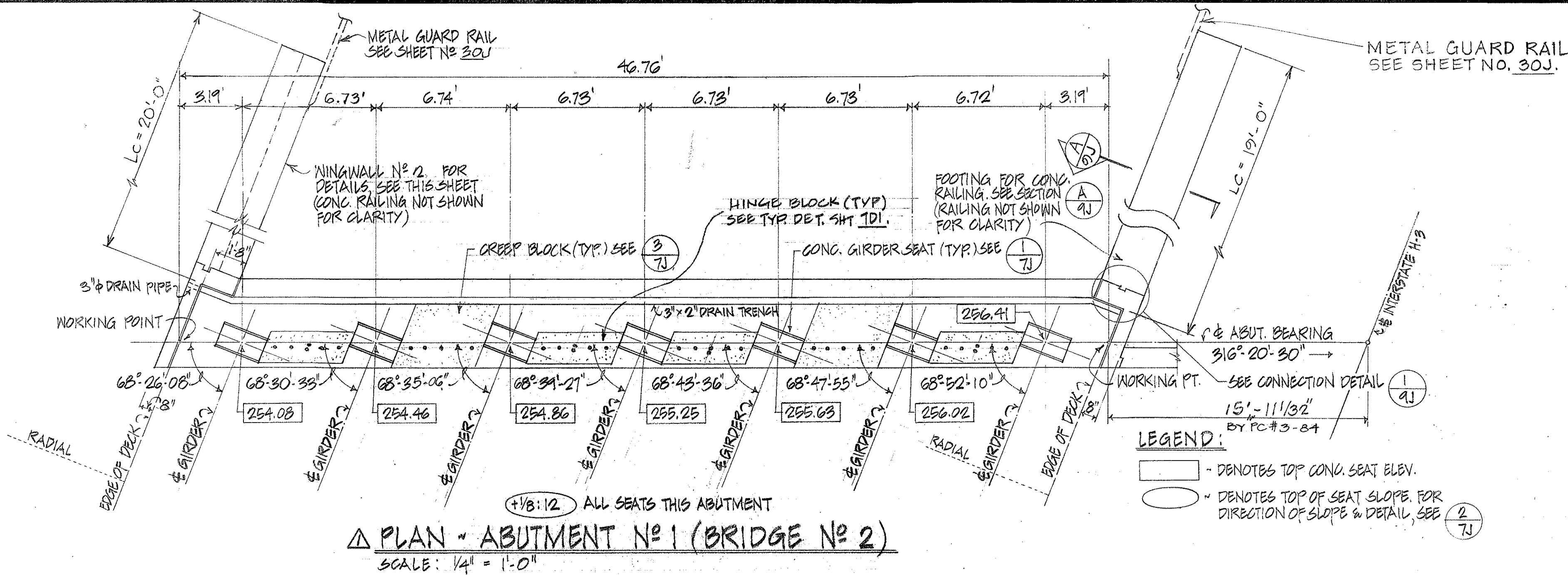
HALEKOU INTERCHANGE

F.A.I. Proj. No. I-H3-1(24)-11

Scale: As Noted Date: SEPT. 1982

SHEET No. 11J OF 30 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	183	328



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	

9/18/87 Revise Dimension From Interstate to Working Point
 Revise Metal Guardrail Connection at Concrete End Post.

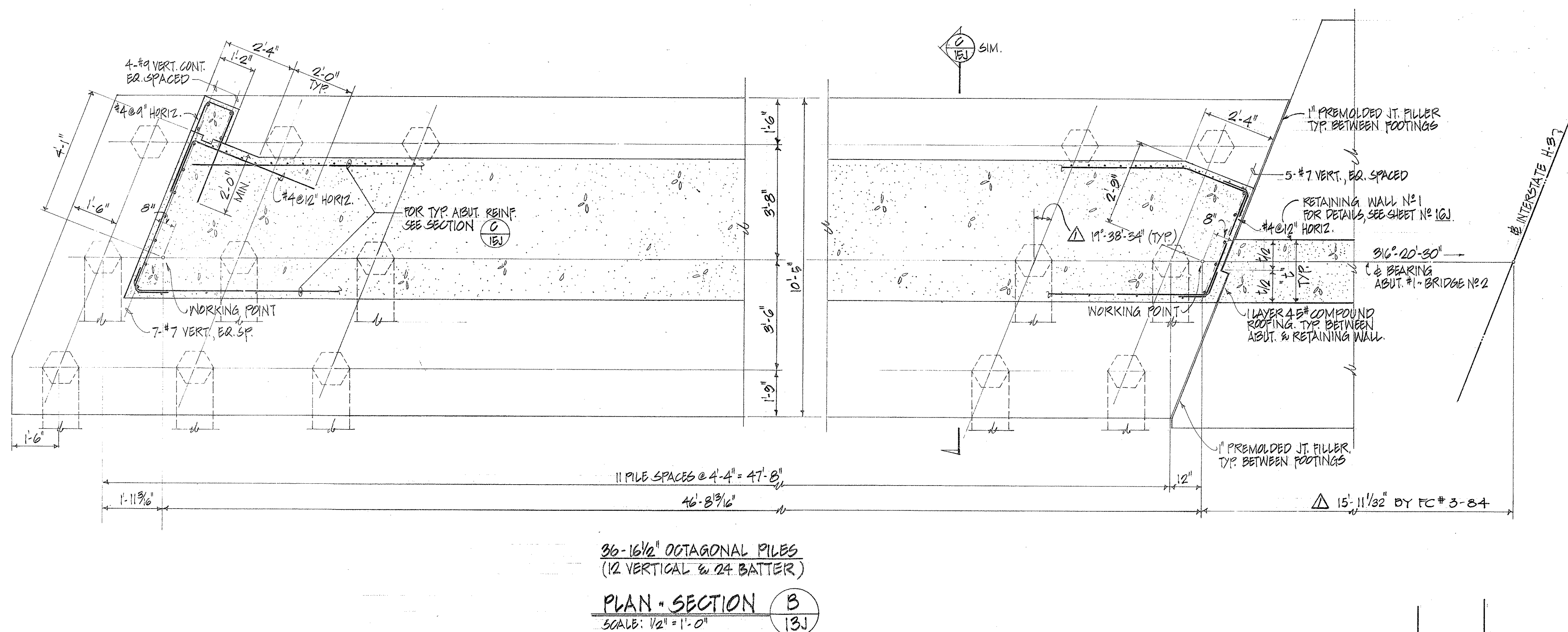
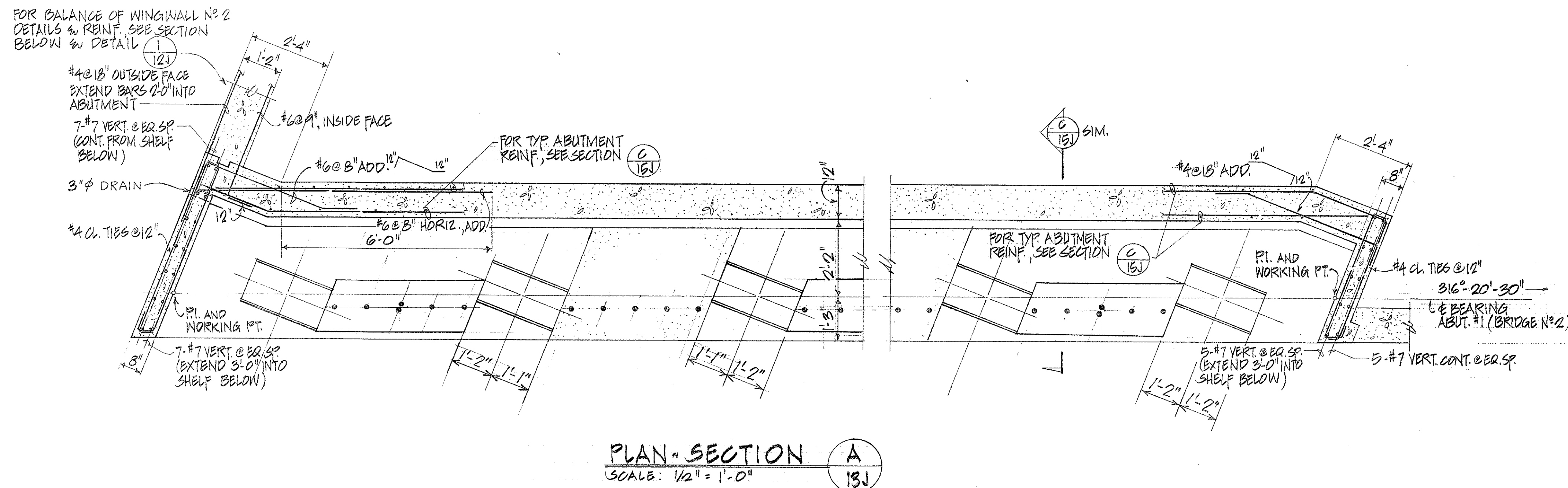
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT No. 1 - BRIDGE No. 2
HALEKOU INTERCHANGE
F.A.I. Proj. No. I-H3-1(24):11
Scale: As Noted
Date: SEPT. 1982

"AS BUILT"

C.O.183

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	184	328



36-16 1/2" OCTAGONAL PILES
 (12 VERTICAL & 24 BATTER)

△ 9/24/87 Revise Dimension From # Interstate to Working Point. Correction to Concrete Pile & Angle.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 ABUTMENT No. 1 - BRIDGE No. 2
 HALEKOU INTERCHANGE
 F.A.I. Proj. No. I-H3-1(24):11
 Scale: As Noted Date: SEPT. 1982

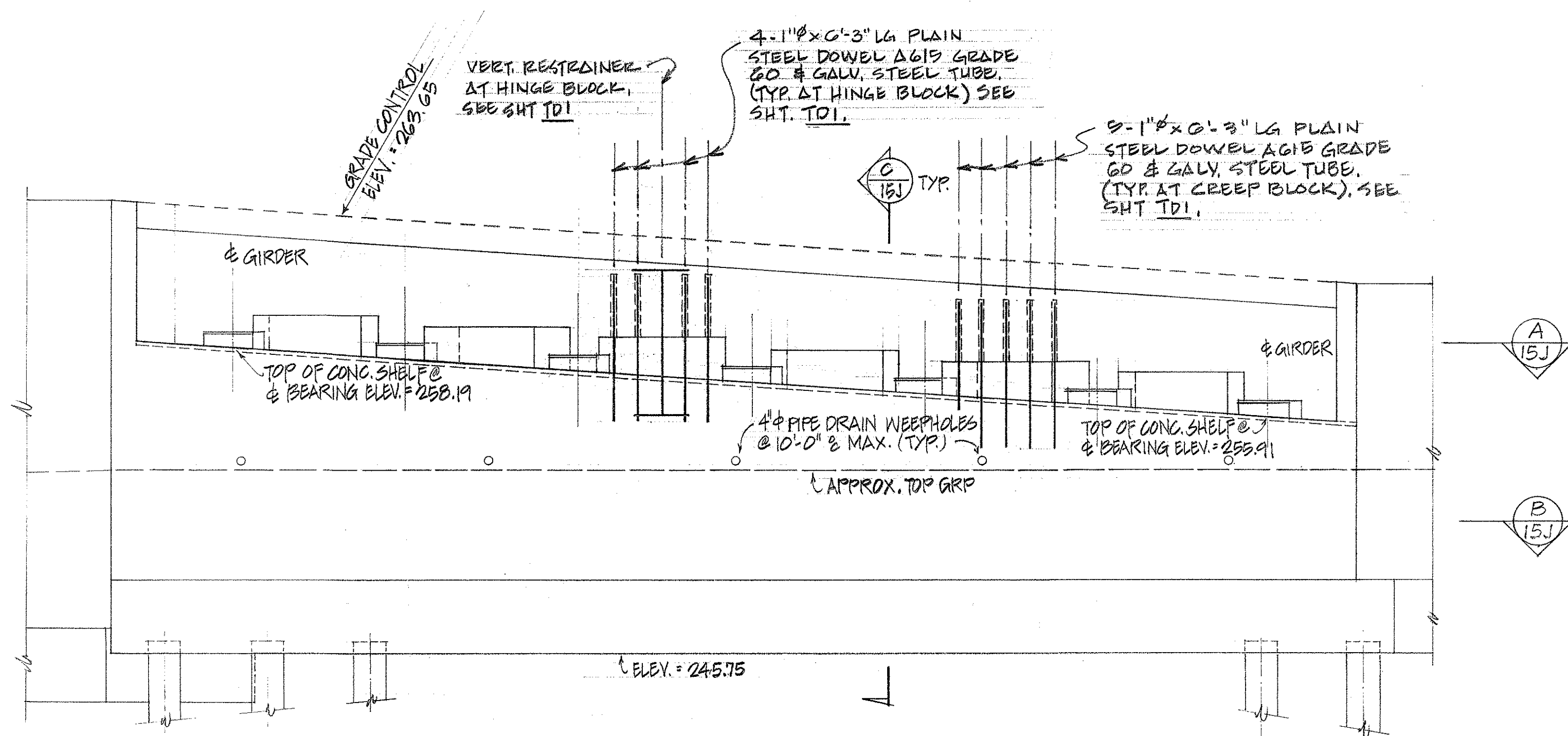
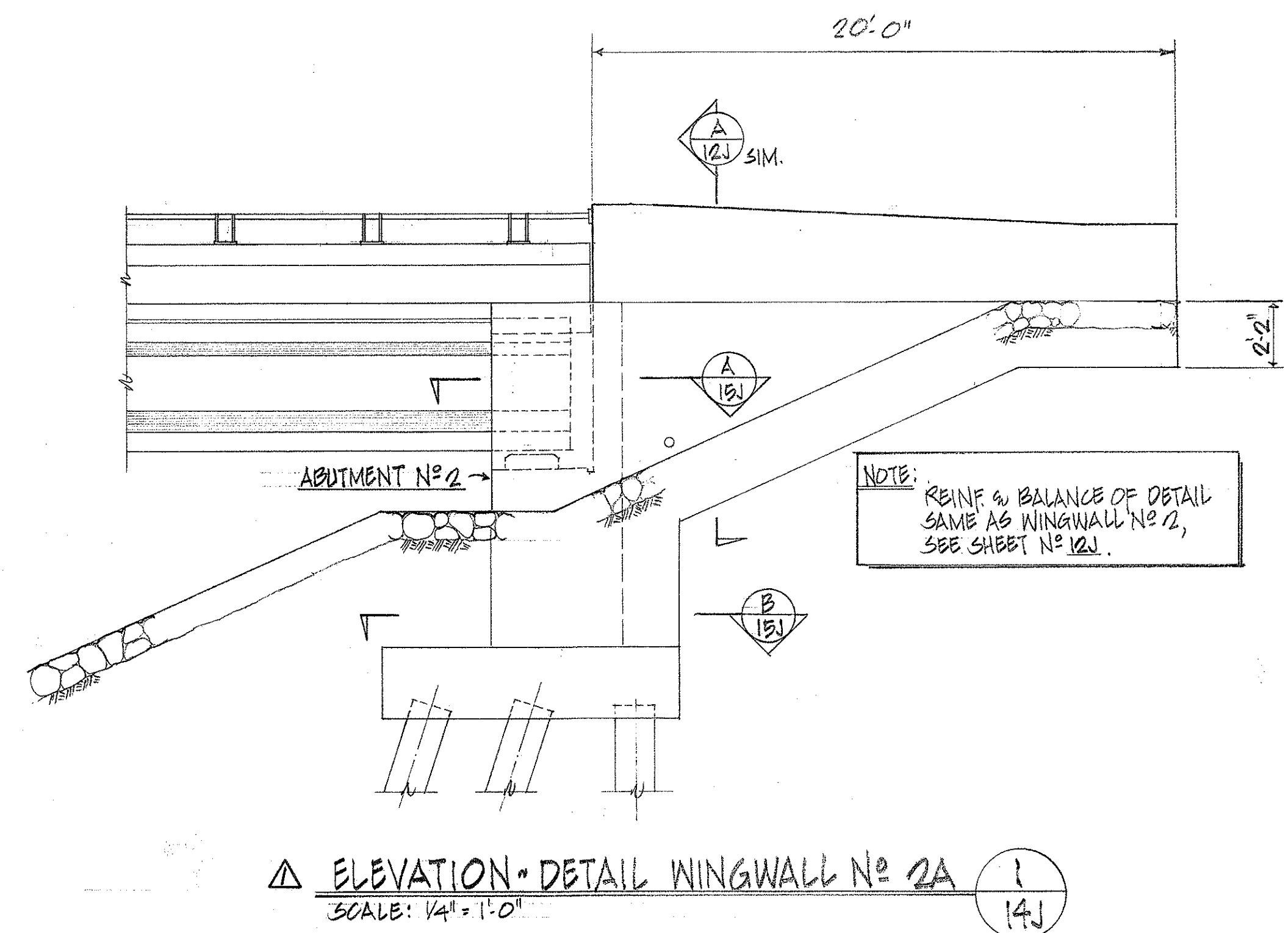
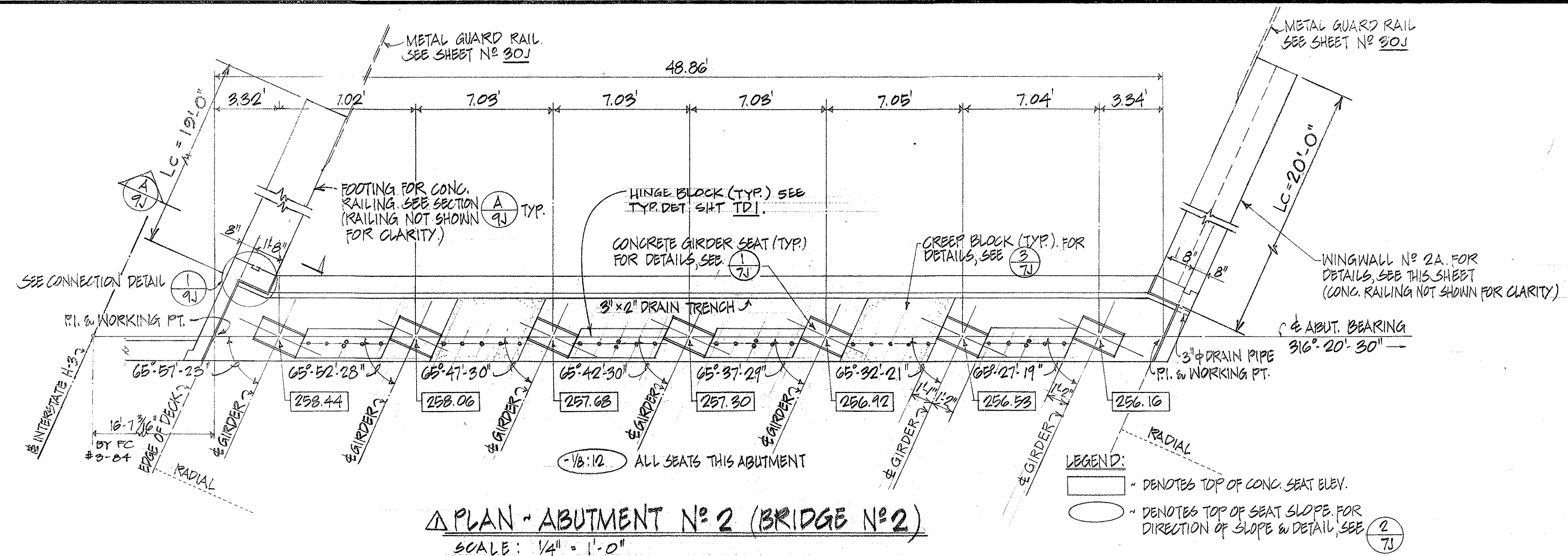
DATE REVISION SHEET No. 131 OF 30 SHEETS

"AS BUILT"

C.O. 184

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	185	328



ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

9/8/87 Revise Dimension From Interstate to Working Point.
 Revise Metal Guardrail Connection at Concrete End Post.

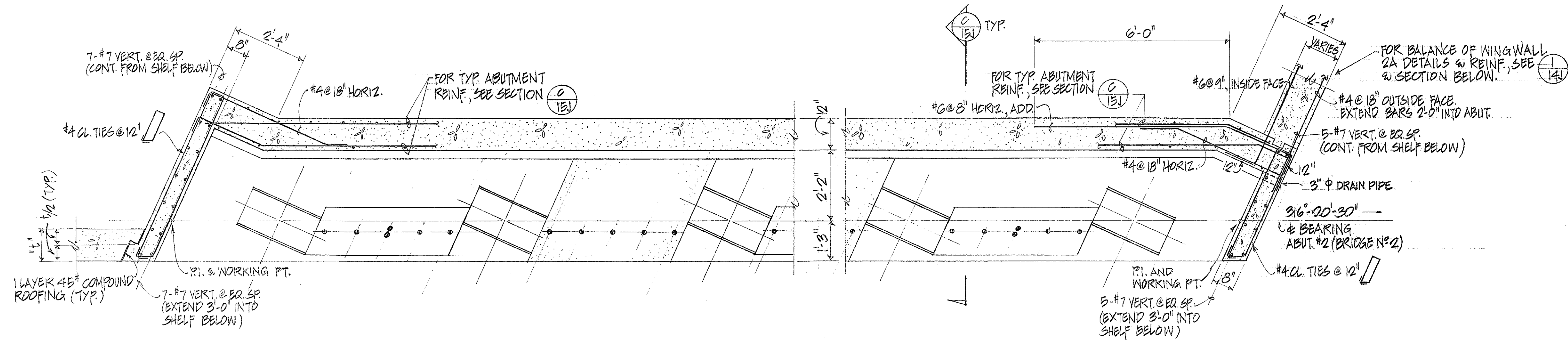
DATE REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
ABUTMENT No. 2 - BRIDGE No. 2
HALEKOU INTERCHANGE
F.A.I. Proj. No. I-H3-1(24):11
Scale: As Noted Date: SEPT. 1982
SHEET No. 14J OF 30 SHEETS

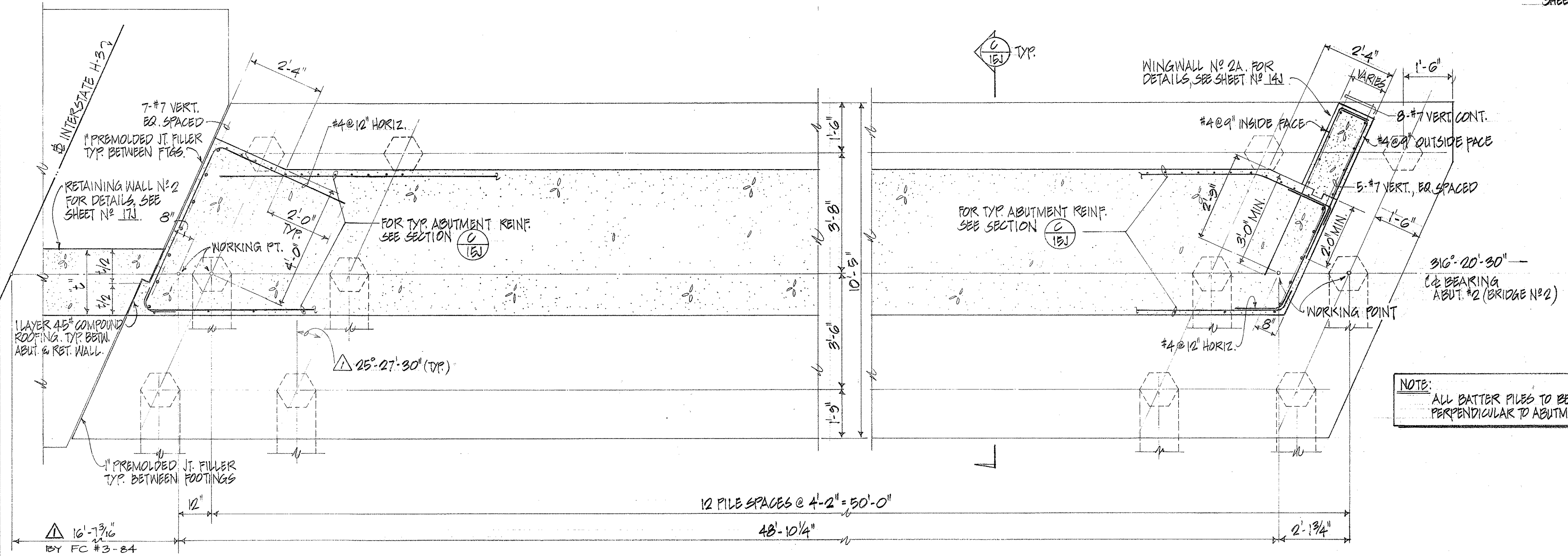
"AS BUILT"

C.O. 185

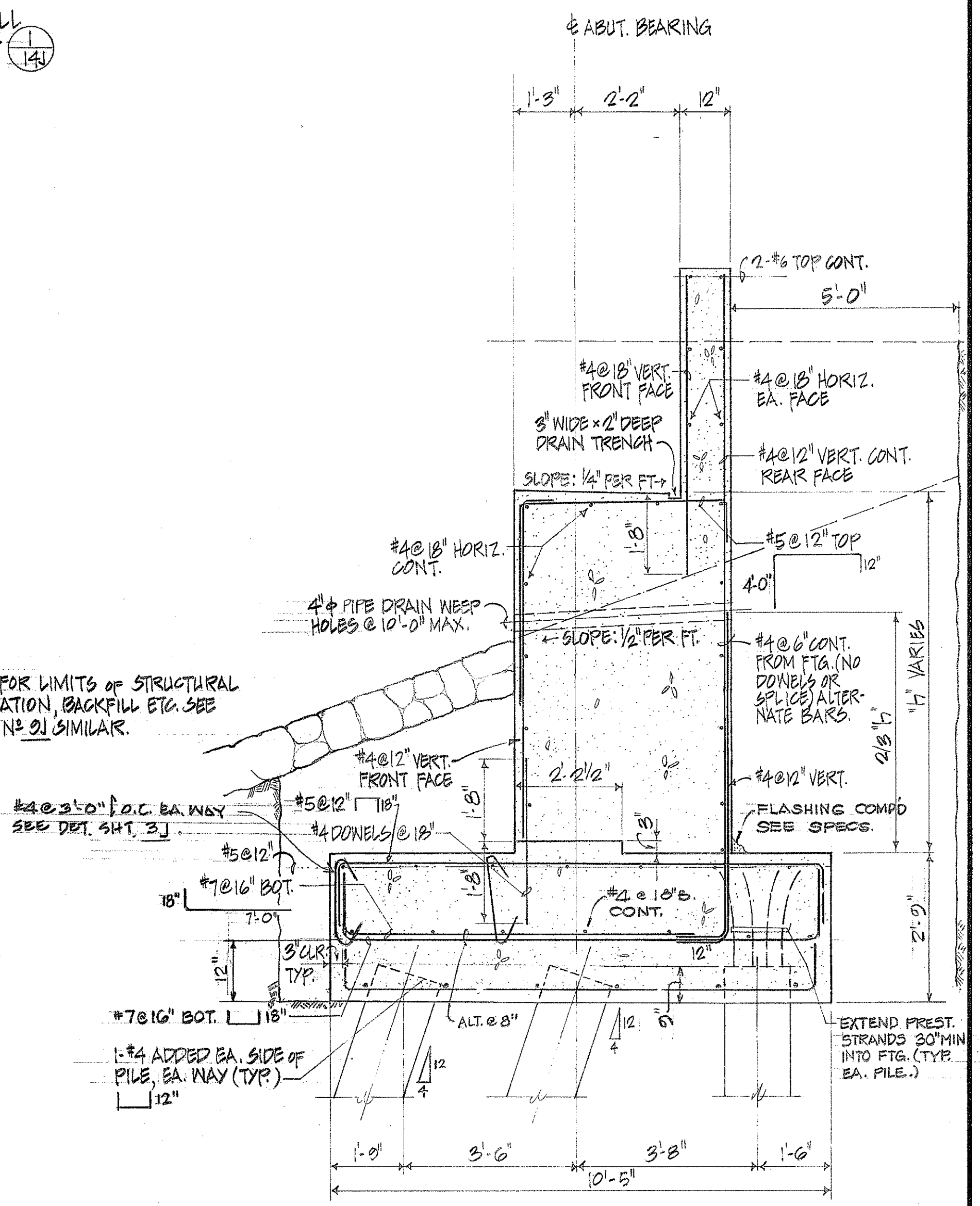
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-49-1(24):11	1983	186	328



PLAN-SECTION A
SCALE: 1/2" = 1'-0"



33-16 1/2" OCTAGONAL PILES
(13 VERTICAL & 20 BATTER)
PLAN-SECTION B
SCALE: 1/2" = 1'-0"



TYP. SECTION THRU ABUTMENT C
SCALE: 1/2" = 1'-0"

DATE	10/10/87
DESIGNED BY	W. J. B. / J. B. B.
TRACED BY	W. J. B. / J. B. B.
NOTE BOOK	W. J. B. / J. B. B.
QUANTITIES BY	W. J. B. / J. B. B.
CHECKED BY	W. J. B. / J. B. B.

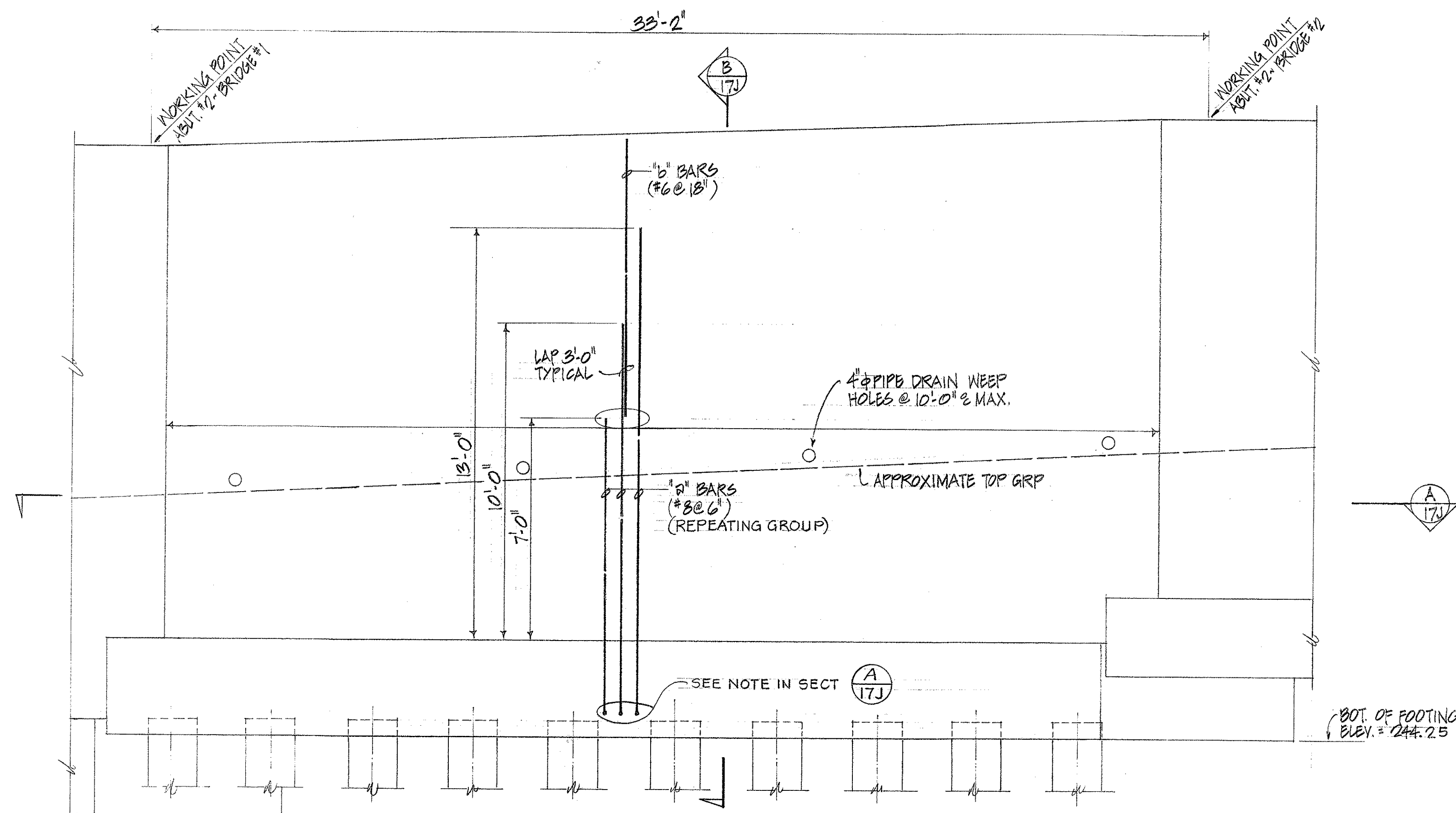
9/10/87
Revise Dimension From $\pm$ Interstate to Working Point. Correction to Concrete Pile $\pm$ Angle.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

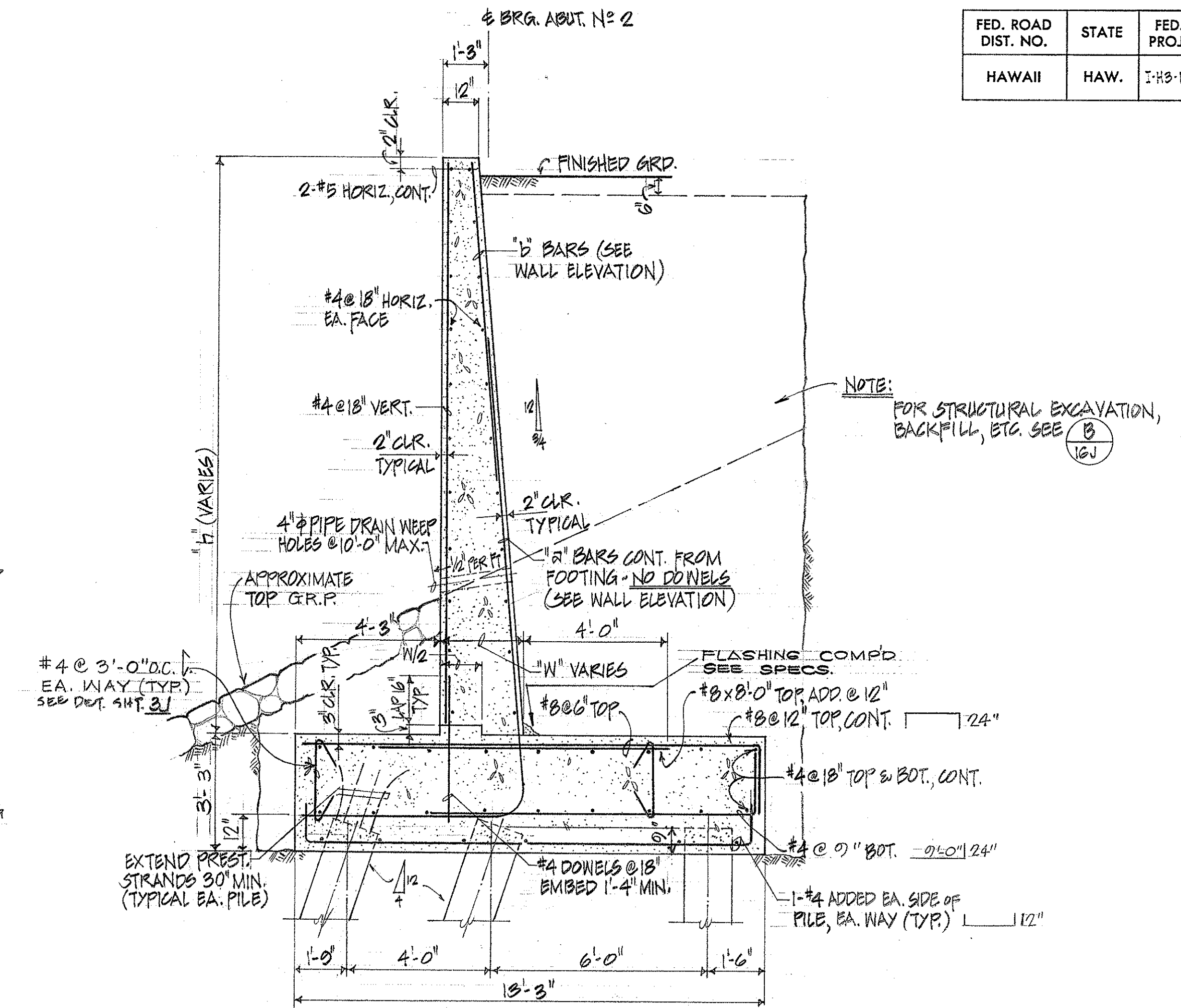
ABUTMENT NO. 2 - BRIDGE NO. 2

HALEKOU INTERCHANGE
F.A.I. Proj. No. I-49-1(24):11
Scale: As Noted
Date: SEPT. 1982

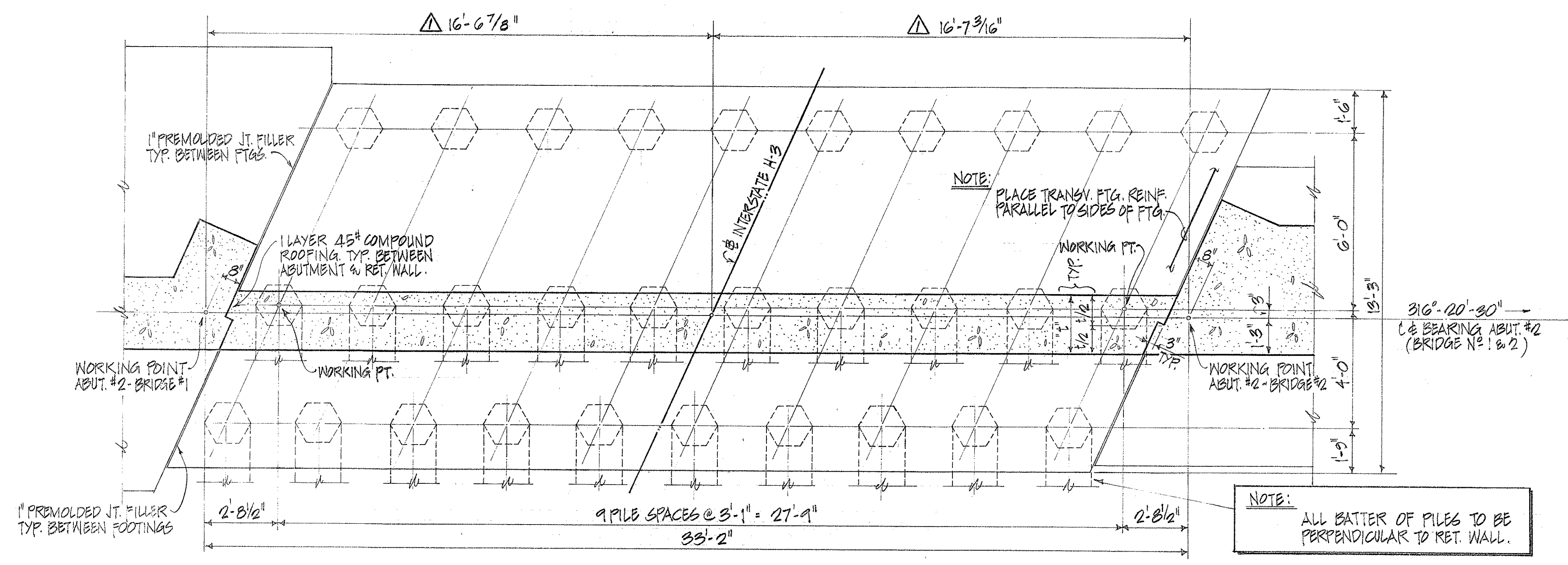
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-#3-1(24):11	1983	188	328



RETAINING WALL No. 2 ELEVATION - DETAIL 1
 SCALE: 3/8" = 1'-0"
 NOTE: QUANTITIES FOR RETAINING WALL ARE INCLUDED IN BRIDGE QUANTITIES.



SECTION B
 SCALE: 3/8" = 1'-0"



30-16 1/2" OCTAGONAL PILES
 (10 VERTICAL & 20 BATTER)
PLAN - SECTION A
 SCALE: 3/8" = 1'-0"

9/24/87 Revise Dimensions

DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

RETAINING WALL No. 2

HALEKOU INTERCHANGE

F.A.I. Proj. No. I-#3-1(24):11

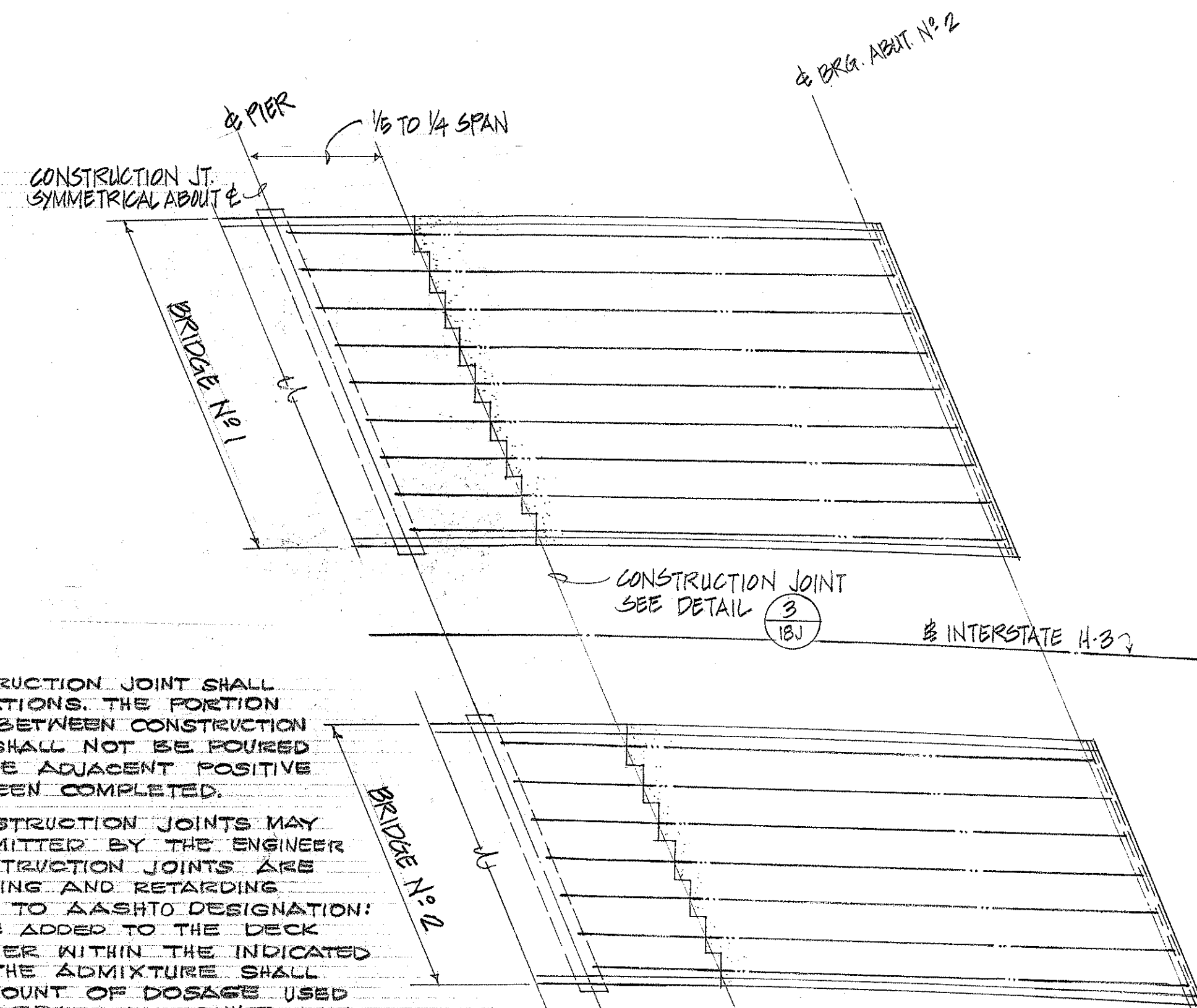
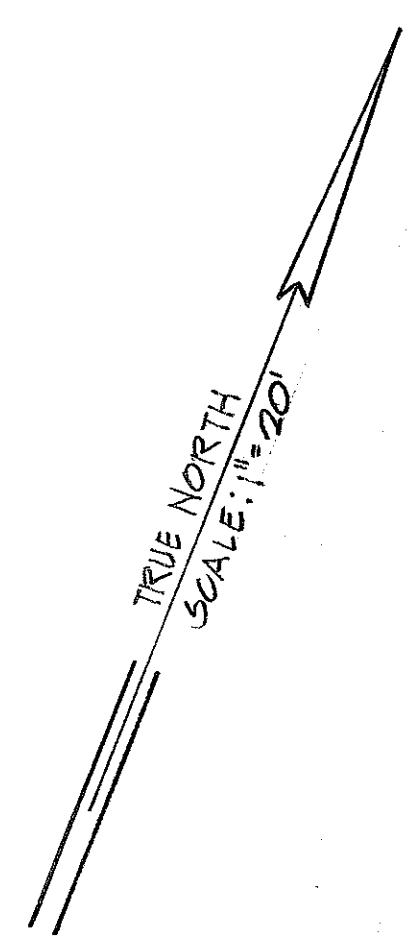
Scale: As Noted Date: SEPT. 1982

SHEET No. 17J OF 30 SHEETS

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

NOTE!

1. GIRDER DIMENSION L = HORIZONTAL MEASUREMENT BETWEEN PIER & BEARINGS EACH END OF GIRDER.
2. THE CONTRACTOR SHALL DETERMINE TOTAL LENGTH OF GIRDER.
3. SEE SHEET NO. 221 FOR FIXED & EXPANSION ENDS OF GIRDER DETAILS.
4. SEE SHEET NO. 71 FOR GIRDER CONC. SEAT LOCATION, REINF. & DETAILS.

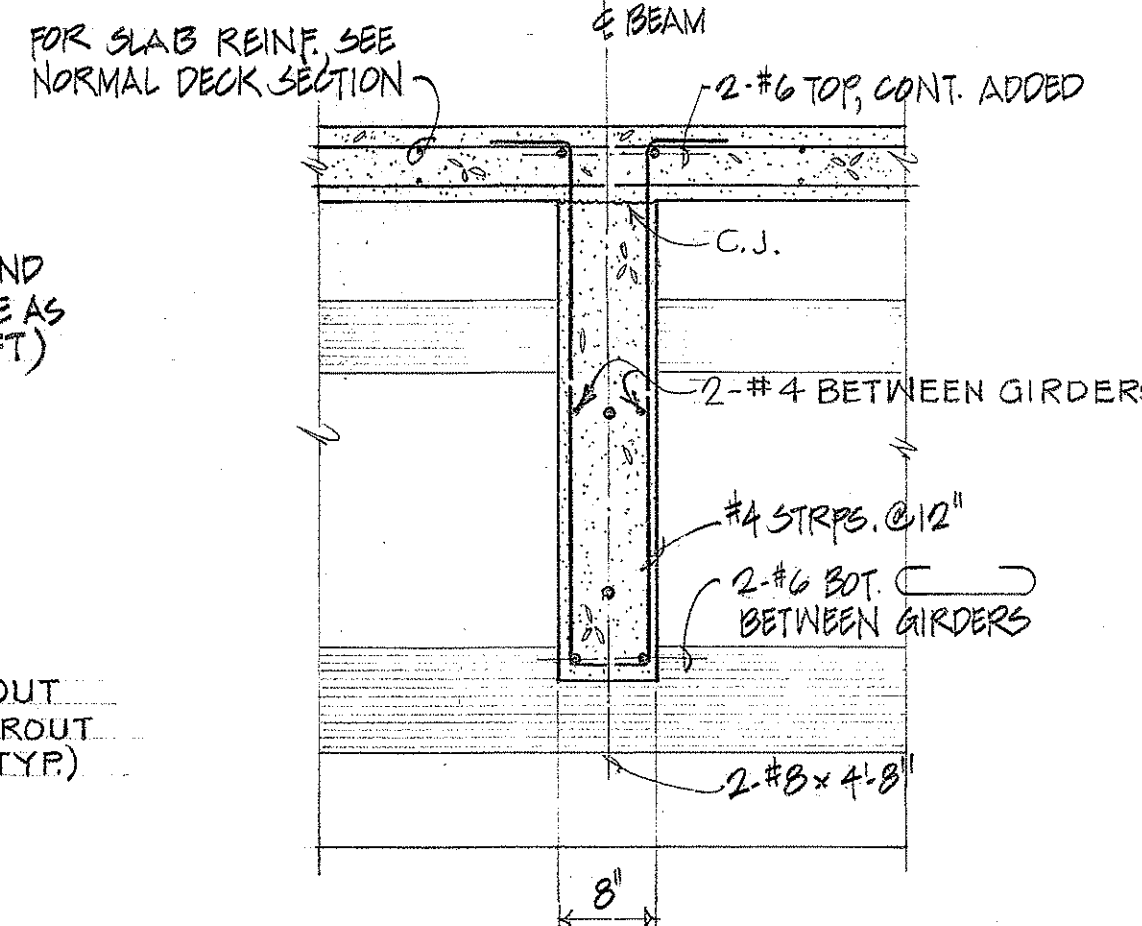


NOTE:

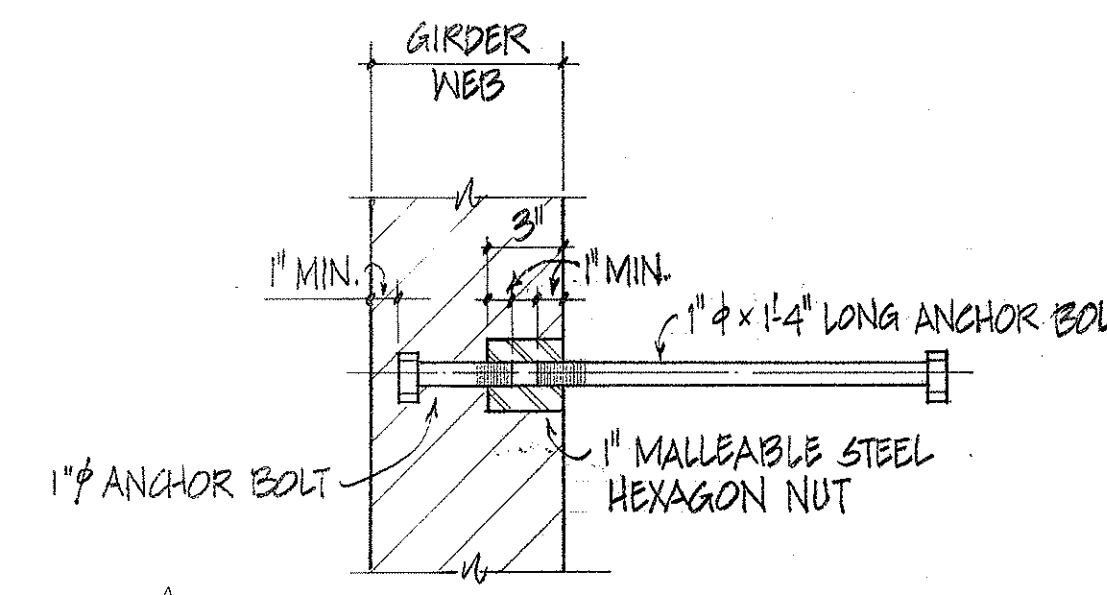
TRANSVERSE DECK CONSTRUCTION JOINT SHALL BE USED AT THESE LOCATIONS. THE PORTION OF THE FOUR INDICATED BETWEEN CONSTRUCTION JOINTS OVER THE PIER SHALL NOT BE POURED UNTIL THE JOINTS FOR THE ADJACENT POSITIVE MOMENT AREAS HAVE BEEN COMPLETED.

TRANSVERSE DECK CONSTRUCTION JOINTS MAY BE ELIMINATED IF PERMITTED BY THE ENGINEER IN WRITING. IF THE CONSTRUCTION JOINTS ARE ELIMINATED, WATER REDUCING AND RETARDING ADMIXTURE CONFORMING TO AASHTO DESIGNATION: W-105 TYPE SHALL BE ADDED TO THE DECK CONCRETE OVER THE PIER WITHIN THE INDICATED JOINTS. THE TYPE OF THE ADMIXTURE SHALL BE SUCH THAT THE AMOUNT OF DOSAGE USED WILL PRODUCE THE RETARDATION REQUIRED, THE TYPE AND DOSAGE OF THE ADMIXTURE, AND THE METHOD OF POUR SHALL BE APPROVED BY THE ENGINEER.

PARTIAL PLAN
SHOWING LOCATION OF CONSTRUCTION JOINTS
SCALE: 1" = 30'



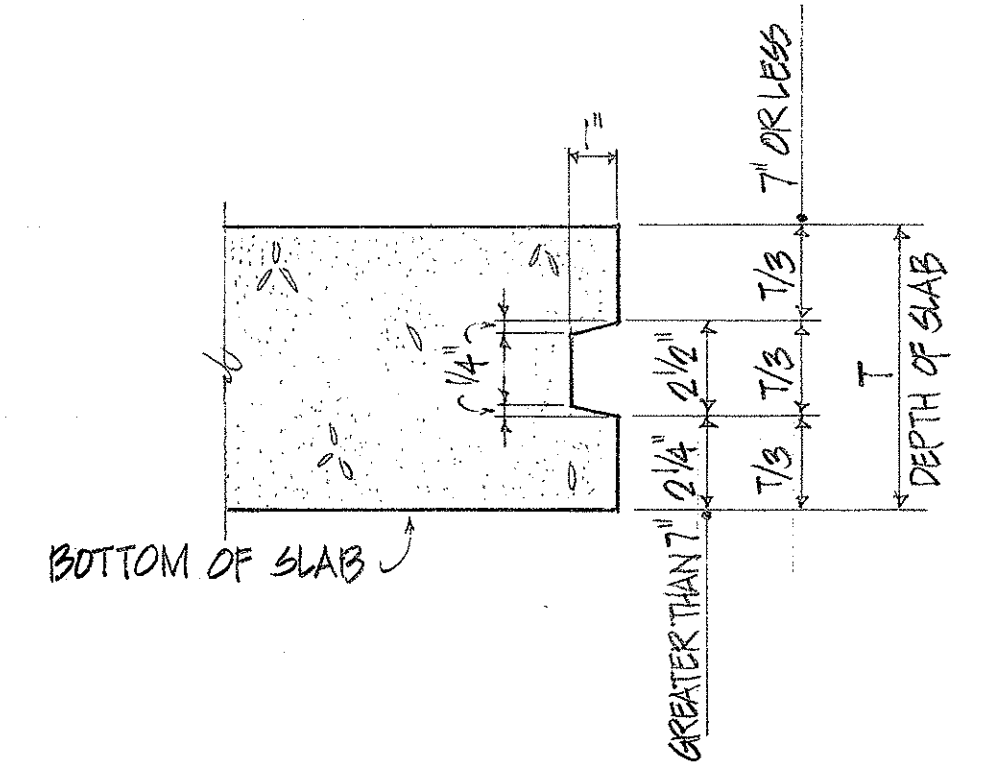
SECTION A
SCALE: $3/4" = 1'-0"$



INSERT DETAIL

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

2
18J



TYP. SLAB CONSTRUCTION JOINT DETAIL 3
NO SCALE 181

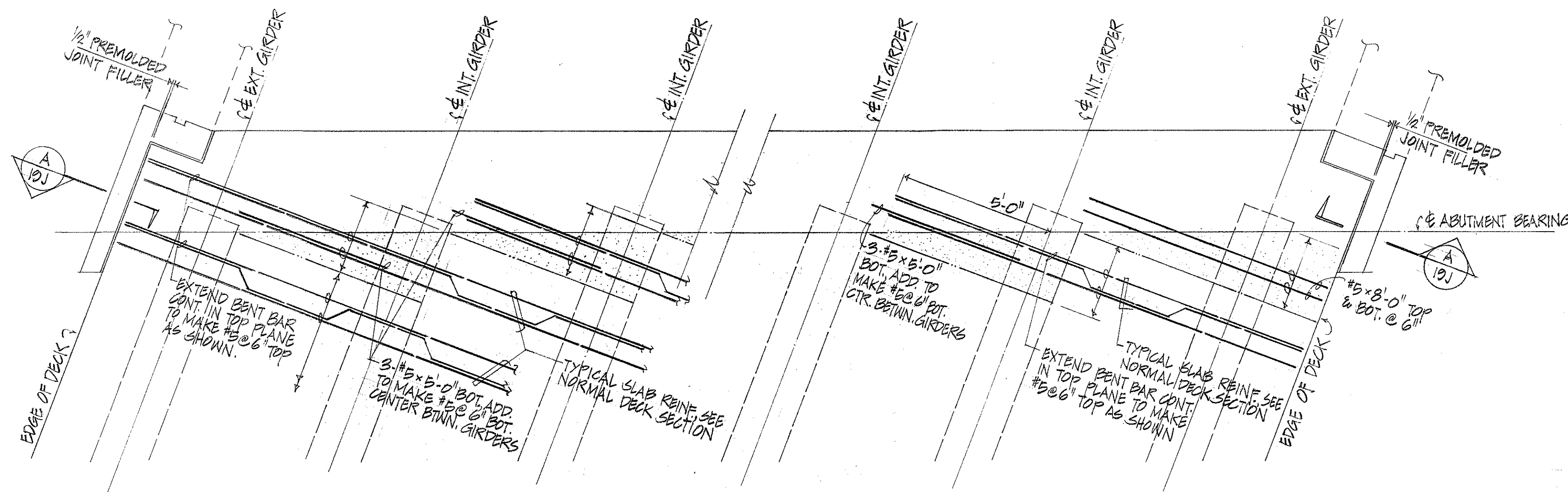
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FRAMING PLAN
BRIDGE No. 1 AND No. 2
HALEKOU INTERCHANGE
F.A.I. Proj. No. I-H3-1(24):11

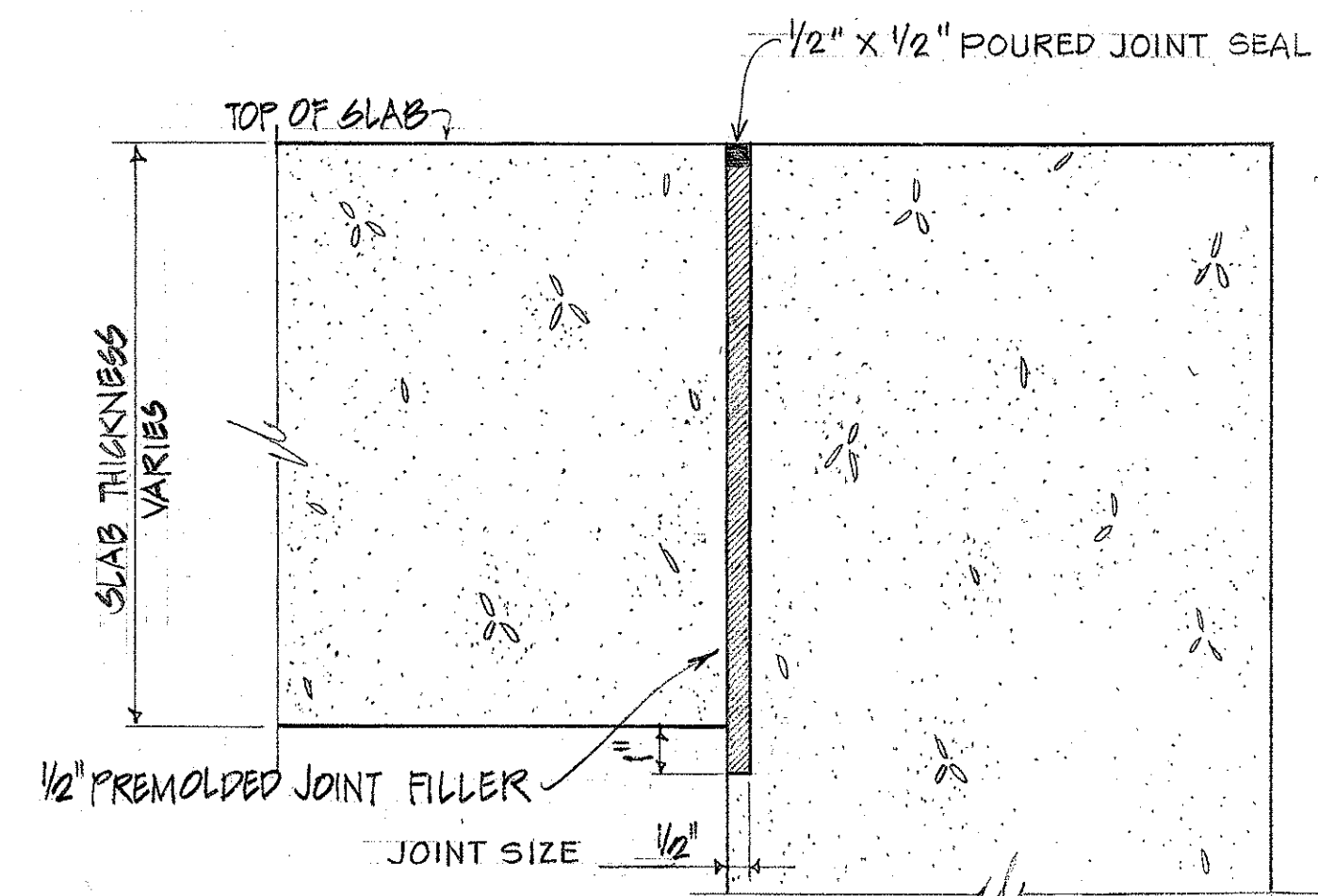
Scale: As Noted Date: SEPT. 1982

SHEET No. 18J OF 30 SHEETS

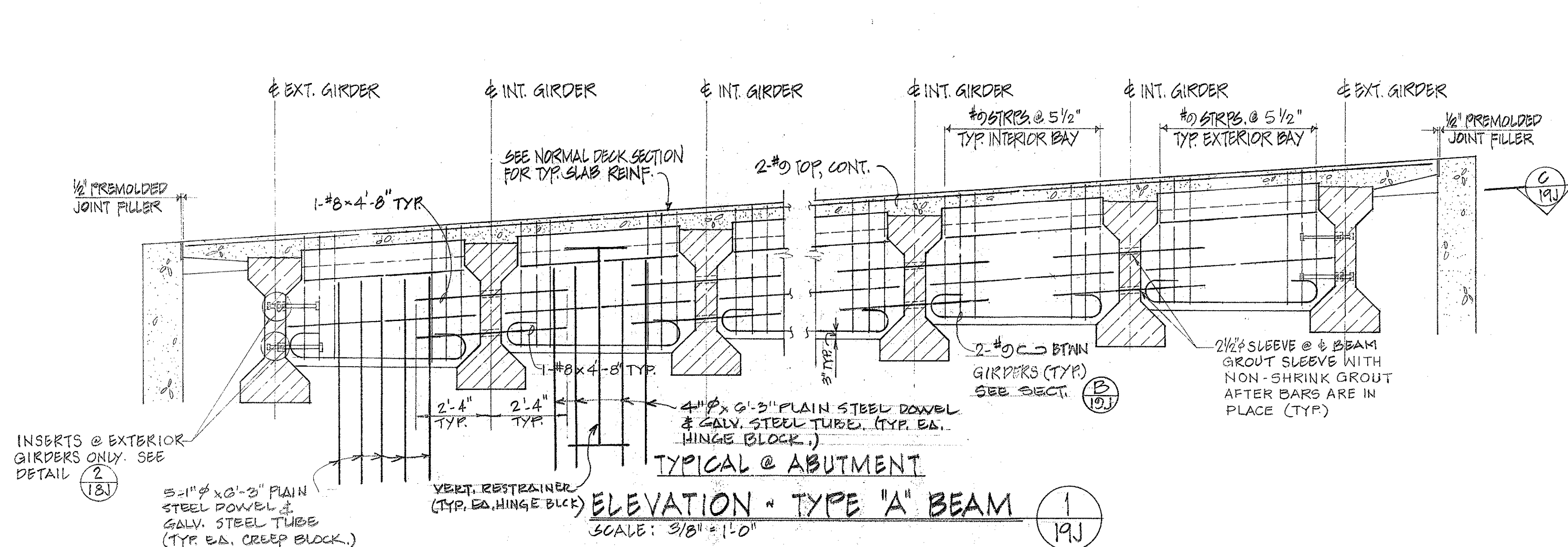
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24)-11	1983	190	328



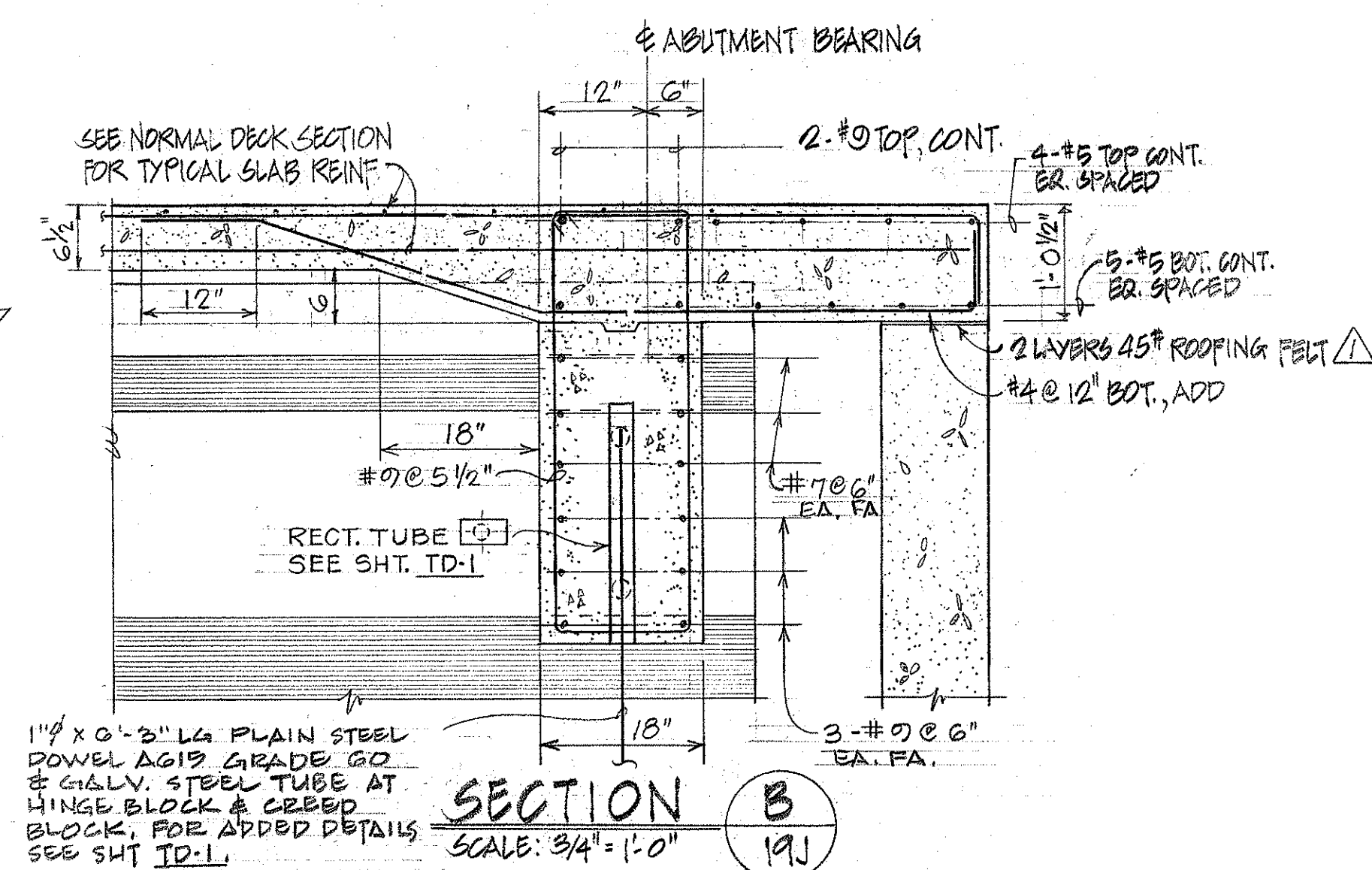
PLAN - SLAB REINFORCING AT SKEWED ABUTMENT
(SIMILAR AT SKEWED PIER)
SCALE: 3/8" = 1'-0"



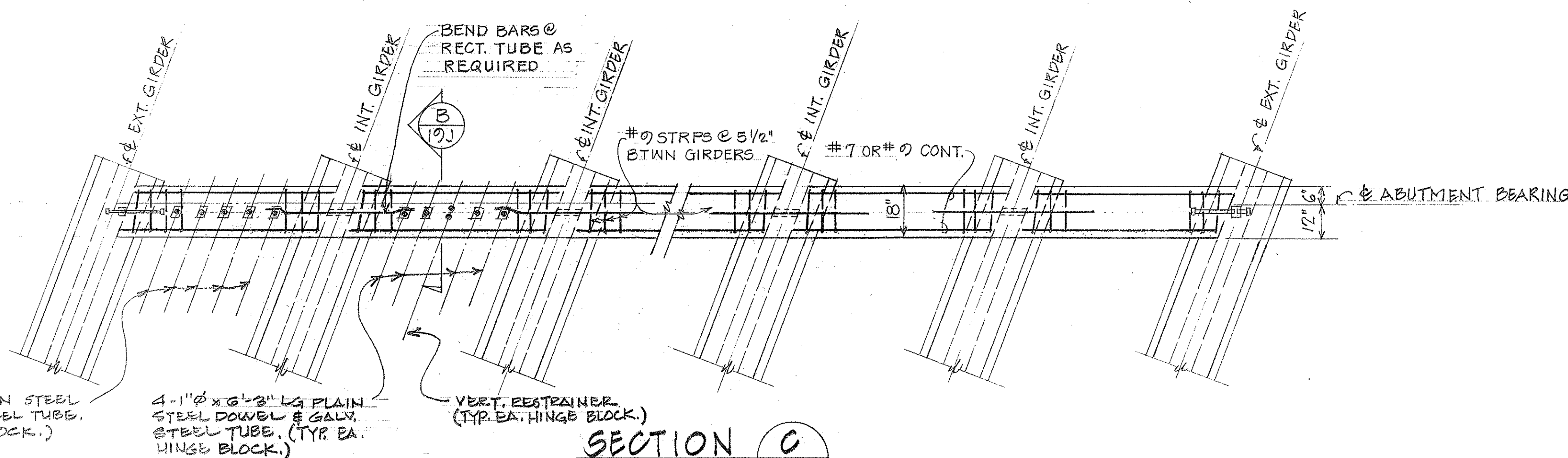
SECTION A
SCALE: 3" = 1'-0"



ELEVATION - TYPE 'A' BEAM
SCALE: 3/8" = 1'-0"



SECTION B
SCALE: 3/4" = 1'-0"



SECTION C
SCALE: 3/8" = 1'-0"

DATE	BY
DESIGNED BY	19J
CHECKED BY	
NO.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**SLAB REINFORCEMENT AT
SKEWED ABUTMENT**
HALEKOU INTERCHANGE

F.A.I. Proj. No. I-H3-1(24)-11

Scale: As Noted

Date: SEPT. 1982

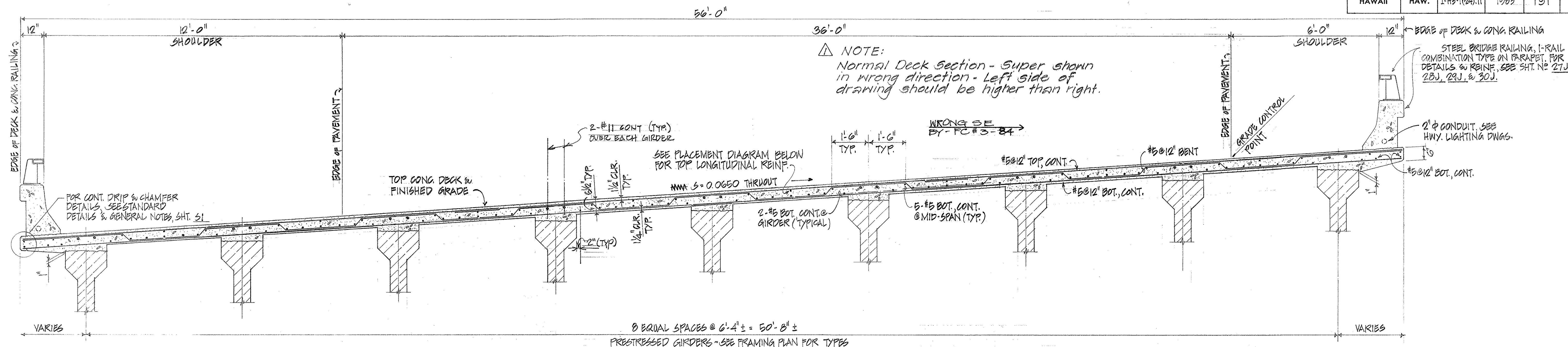
9/10/87 Correction to Detail.

DATE REVISION

SHEET No. 190 OF 30 SHEETS

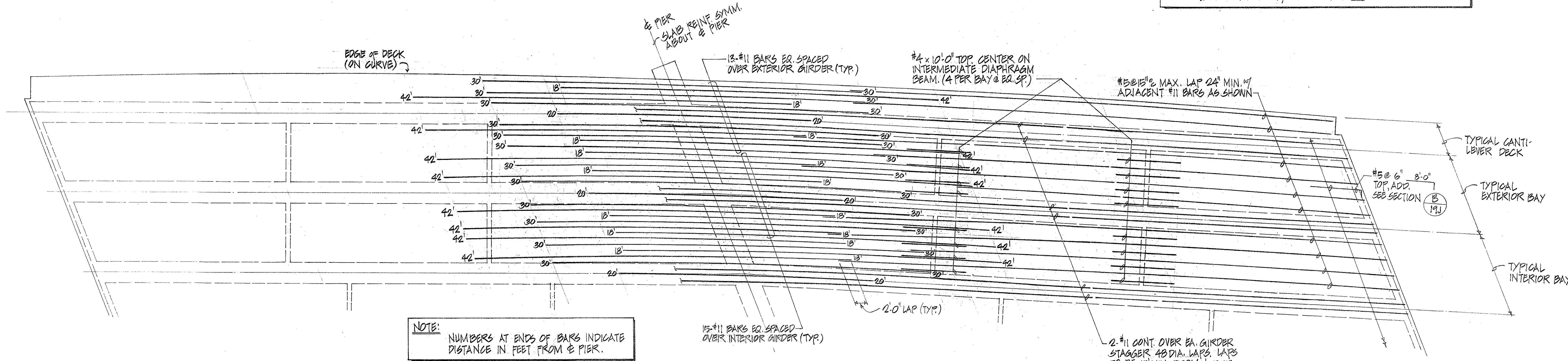
C.O. 190

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	191	328



NORMAL DECK SECTION - BRIDGE NO. 1
SCALE: 1/2" = 1'-0"

NOTE: ALL DECK TRANSVERSE BARS TO BE PLACED NORMAL TO BASE LINE. ALL VERTICAL DIMENSIONS ARE MEASURED PLUMB. FOR SPECIAL DECK TRANSVERSE REINF. DETAILS & ARRANGEMENT, SEE SHEET NO. 191.



NOTE: NUMBERS AT ENDS OF BARS INDICATE DISTANCE IN FEET FROM & PIER.

PLACEMENT DIAGRAM - TOP LONGITUDINAL DECK SLAB REINFORCEMENT
SCALE: LONGITUDINAL - 1/8" = 1'-0"
TRANSVERSE - 1/4" = 1'-0"

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

DATE	9/10/87	REVISION	Note Added to Normal Deck Section.
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK SLAB REINFORCEMENT
BRIDGE NO. 1

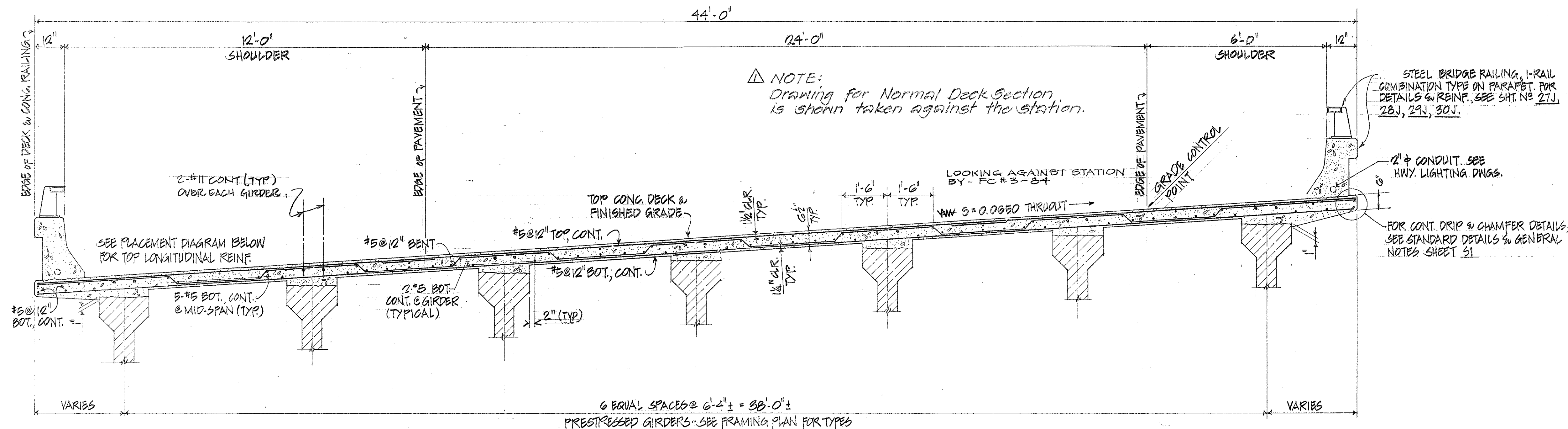
HALEKOU INTERCHANGE

F.A.I. Proj. No. I-H3-1(24):11

Source: As Noted Date: SEPT. 1982

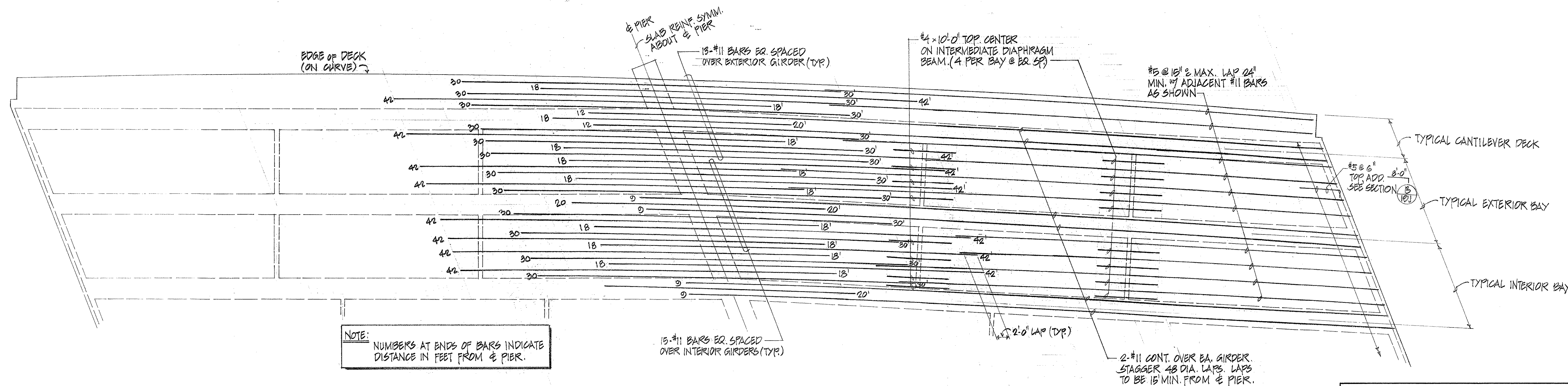
SHEET No. 20 OF 30 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-48-1(24):11	1983	132	328



NORMAL DECK SECTION - BRIDGE No. 2
SCALE: 1/2" = 1'-0"

NOTE: ALL DECK TRANSVERSE BARS TO BE PLACED NORMAL TO BASE LINE. ALL VERTICAL DIMENSIONS ARE MEASURED PLUMB. FOR SPECIAL DECK TRANSVERSE REINF. DETAILS & ARRANGEMENT, SEE SHEET No. 19J.



PLACEMENT DIAGRAM - TOP LONGITUDINAL DECK SLAB REINFORCEMENT
SCALE: LONGITUDINAL - 1/8" = 1'-0"
TRANSVERSE - 1/4" = 1'-0"

9/10/87 Note Added to Normal Deck Section.

DATE REVISION

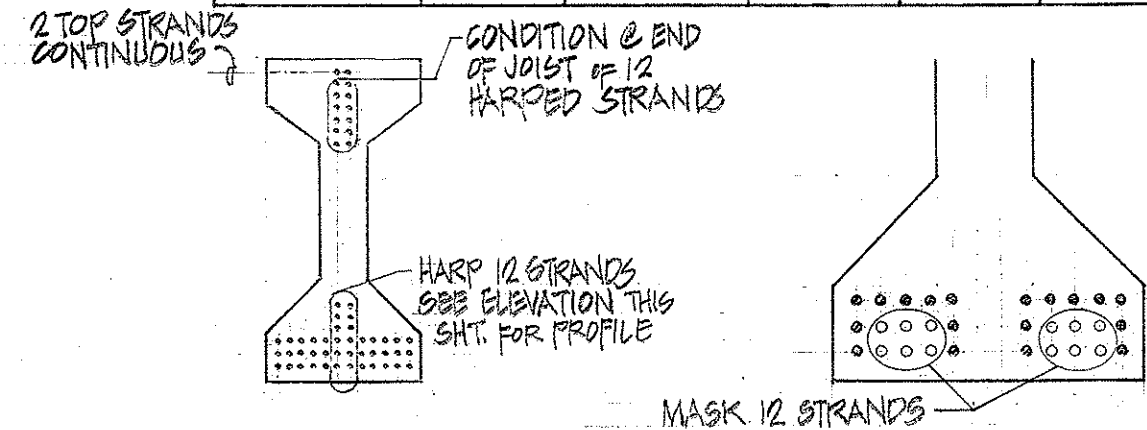
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DECK SLAB REINFORCEMENT
BRIDGE No. 2
HALEKOU INTERCHANGE
F.A.I. Proj. No. I-48-1(24):11
Scale: As Noted Date: SEPT. 1982
SHEET No. 21 OF 30 SHEETS

"AS BUILT"

C.O. 192

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	193	328



STRAND HARP LAYOUT NO SCALE
STRAND MASKING LAYOUT NO SCALE

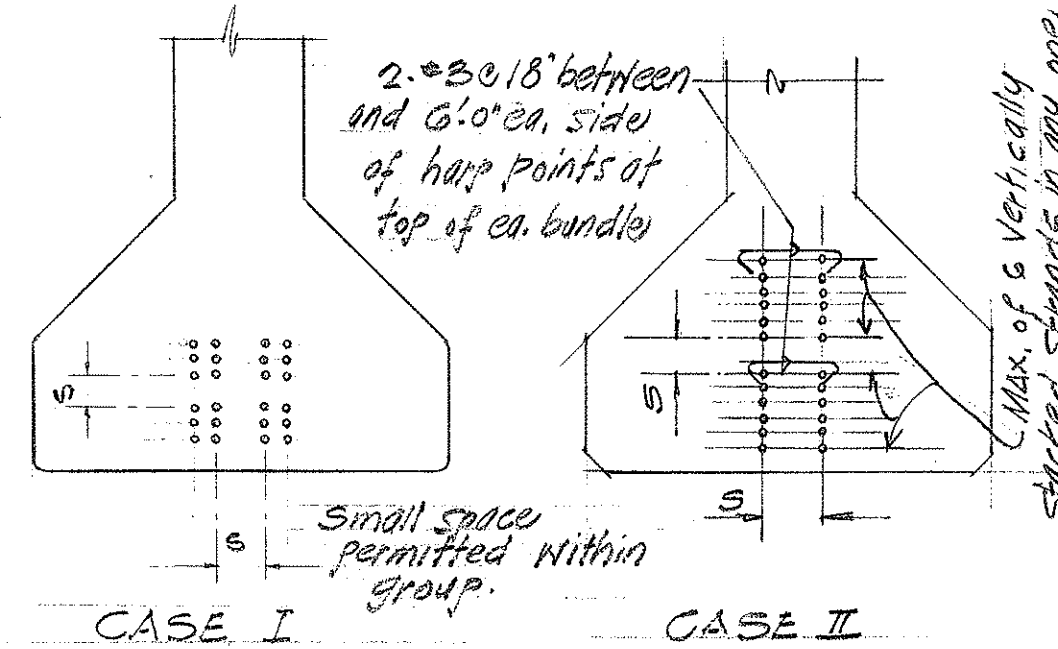
- GIRDER PRESTRESS -	
LOCATION	WORKING FORCE
EXPANSION END TO MASK POINT	970 KIPS
MASK POINT TO FIXED END	700 KIPS

BUNDLING OF PRESTRESSING REINFORCEMENT

- ARRANGEMENT AND CLEARANCE FOR POST TENSIONED UNITS
- HORIZONTAL CLEARANCE BETWEEN UNITS EQUAL 2" MIN.
 - UNITS MAY BE BUNDLED VERTICALLY IN GROUPS OF 3 MAXIMUM.
 - VERTICAL CLEARANCE BETWEEN BUNDLED UNITS EQUAL 8" MINIMUM

ARRANGEMENT AND CLEARANCE FOR PRETENSIONED STRANDS

- STRANDS MAY BE BUNDLED IN GROUPS AS SHOWN OR IN GROUPS CONSISTING OF A MAXIMUM OF 6 STRANDS, AND SEPARATE AT THE ENDS
- THE MINIMUM DISTANCE "S" BETWEEN GROUPS OR INDIVIDUAL STRANDS IS 2" FOR 1/2" STRANDS.
- "S" IS MEASURED BETWEEN CENTERS OF ADJACENT STRANDS



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

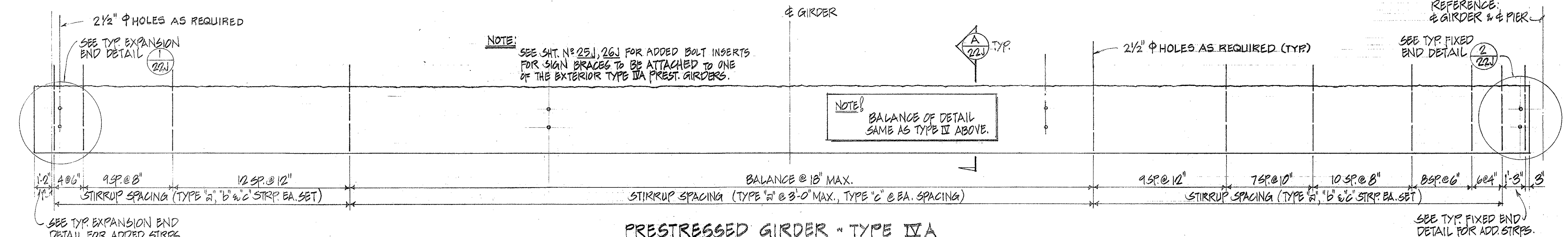
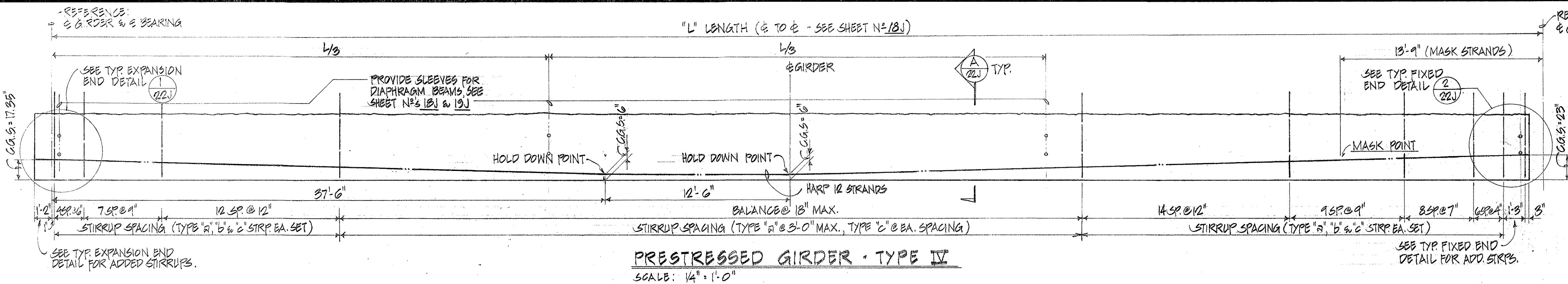
PRESTRESSED GIRDER
TYPE IV & IV-A
HALEKOU INTERCHANGE

F.A.I. Proj. No. I-H3-1(24):11

Scale: As Noted Date: SEPT. 1982

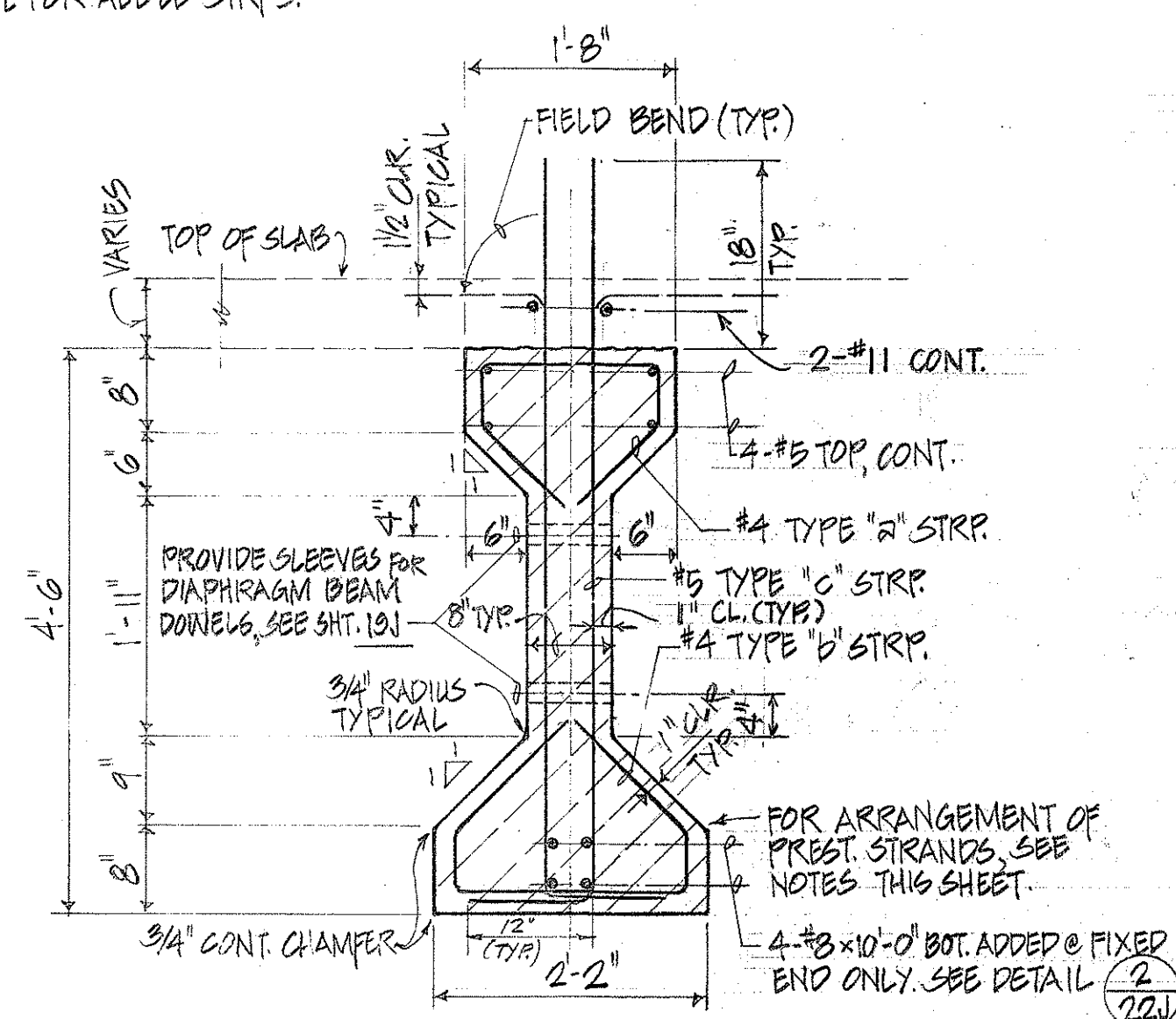
SHEET No. 22J OF 30 SHEETS

C.O.193



PRESTRESSED GIRDER - TYPE IV-A

SCALE: 1/4" = 1'-0"



△ TYP. SECTION THRU GIRDER (A)

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

PLAN - DETAIL @ EXPANSION END (1)

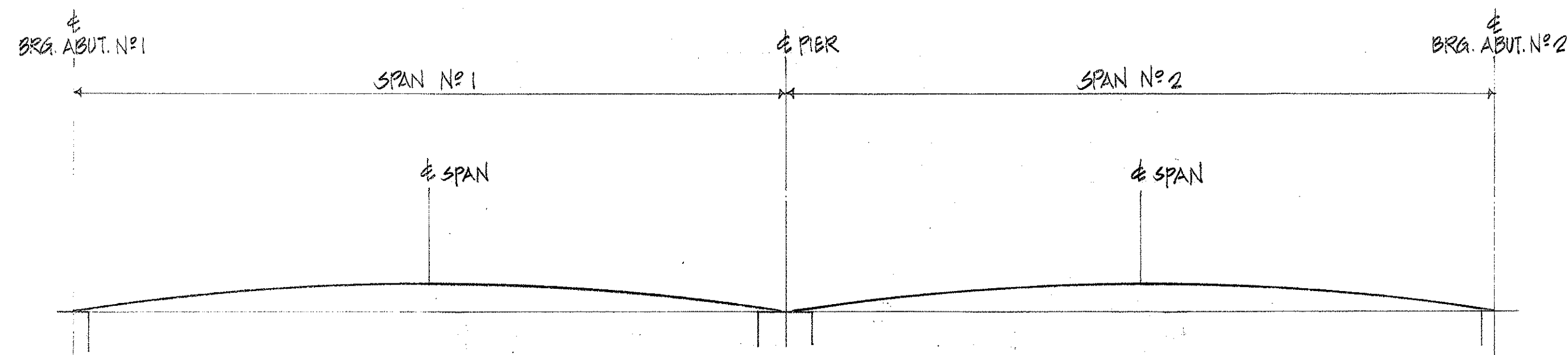
SCALE: 3/4" = 1'-0"

SECTION (B)

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

TYP. FIXED END DETAIL (2)

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



△ GIRDER CAMBER DIAGRAM

NO SCALE

PRESTRESSED GIRDER DROP PANEL DETAIL (3)

SCALE: 1" = 1'-0"

PLAN - DETAIL FIXED END @ PIER (4)

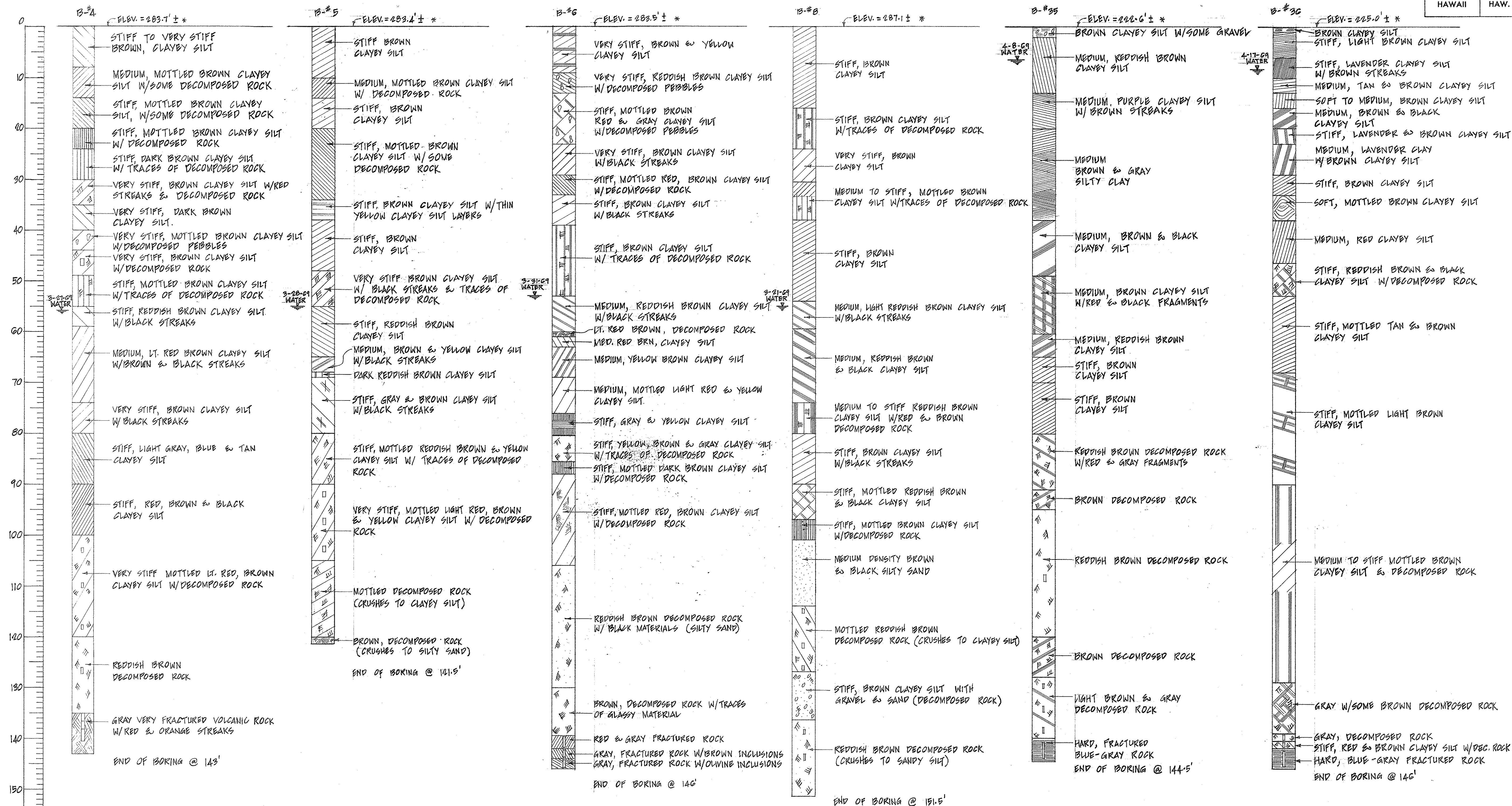
SCALE: 1/2" = 1'-0"

9/10/87 Corrections to Details.

DATE REVISION

DATE	DESIGNED BY	CHECKED BY
PLAN	TRACED BY	QUANTITIES BY
NOTE BOOK		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	194	328



NOTE:
 * 1. REFERENCE ELEVATION
 2. COMPLETE SOIL REPORT AVAILABLE AT STATE OF HAWAII DOT'S MATERIALS TESTING LAB.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

SOIL BORING LOGS
 HALEKOU INTERCHANGE
 F.A.I. Proj. No. I-H3-1(24):11

Scale: As Noted Date: SEPT. 1982
 SHEET No. 28J OF 30 SHEETS

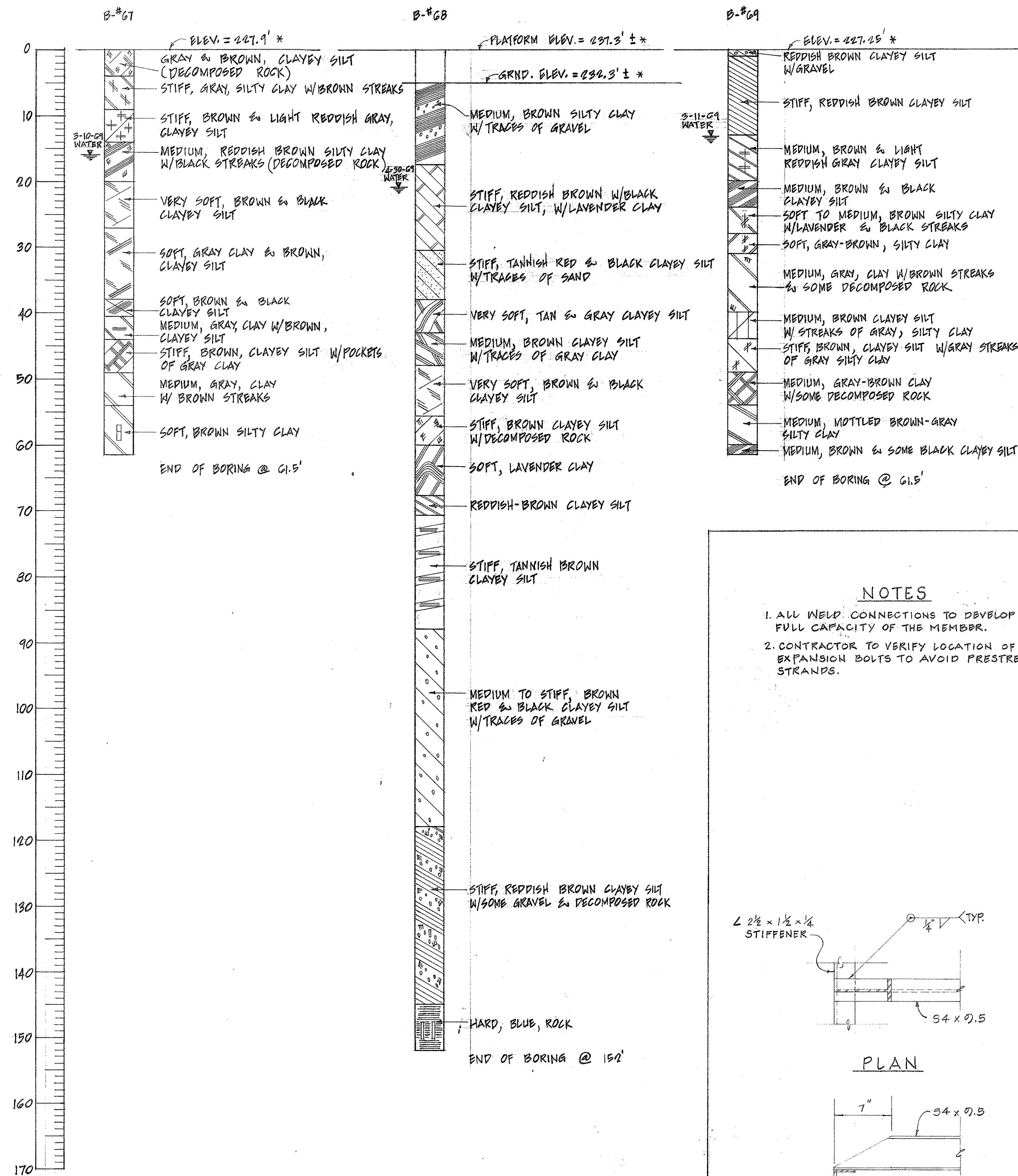
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-13-1(24):11	1983	195	328



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

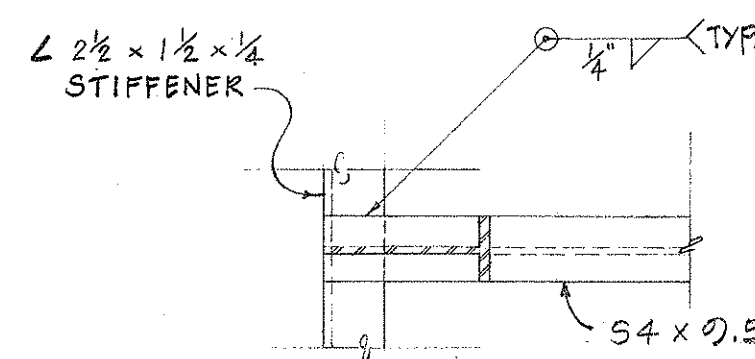
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SOIL BORING LOGS	
HALEKOU INTERCHANGE	
F.A.I. Proj. No. I-13-1(24):11	
Scale: As Noted	Date: SEPT. 1982
SHEET No. 24J OF 30 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HS-1(24):11	1983	196	328

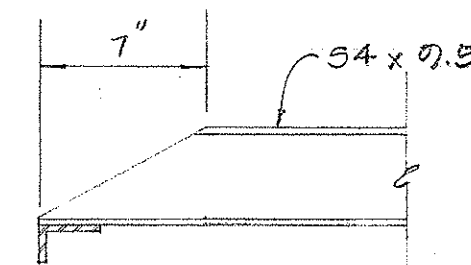


NOTES

1. ALL WELD CONNECTIONS TO DEVELOP THE FULL CAPACITY OF THE MEMBER.
2. CONTRACTOR TO VERIFY LOCATION OF EXPANSION BOLTS TO AVOID PRESTRESSING STRANDS.



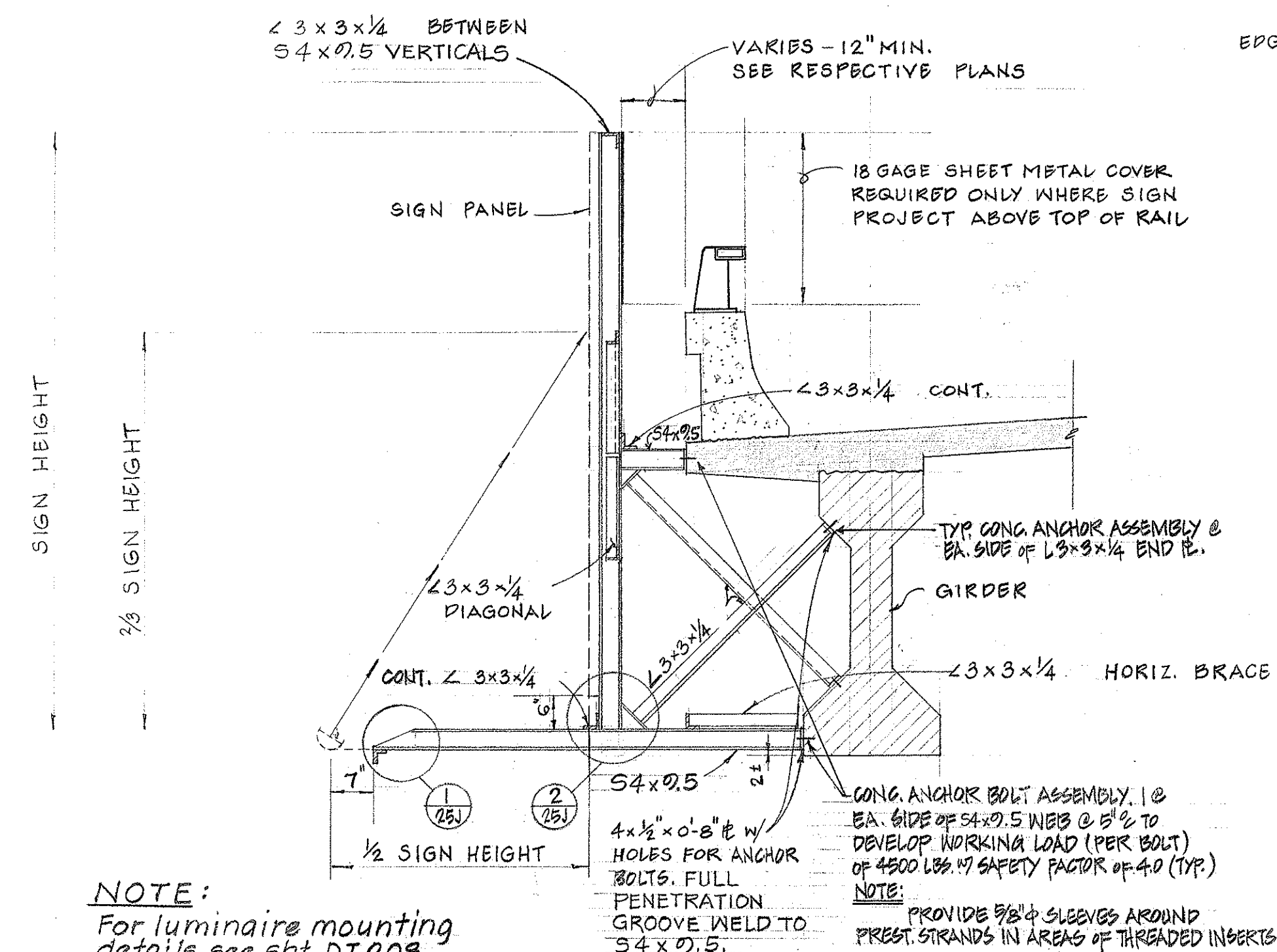
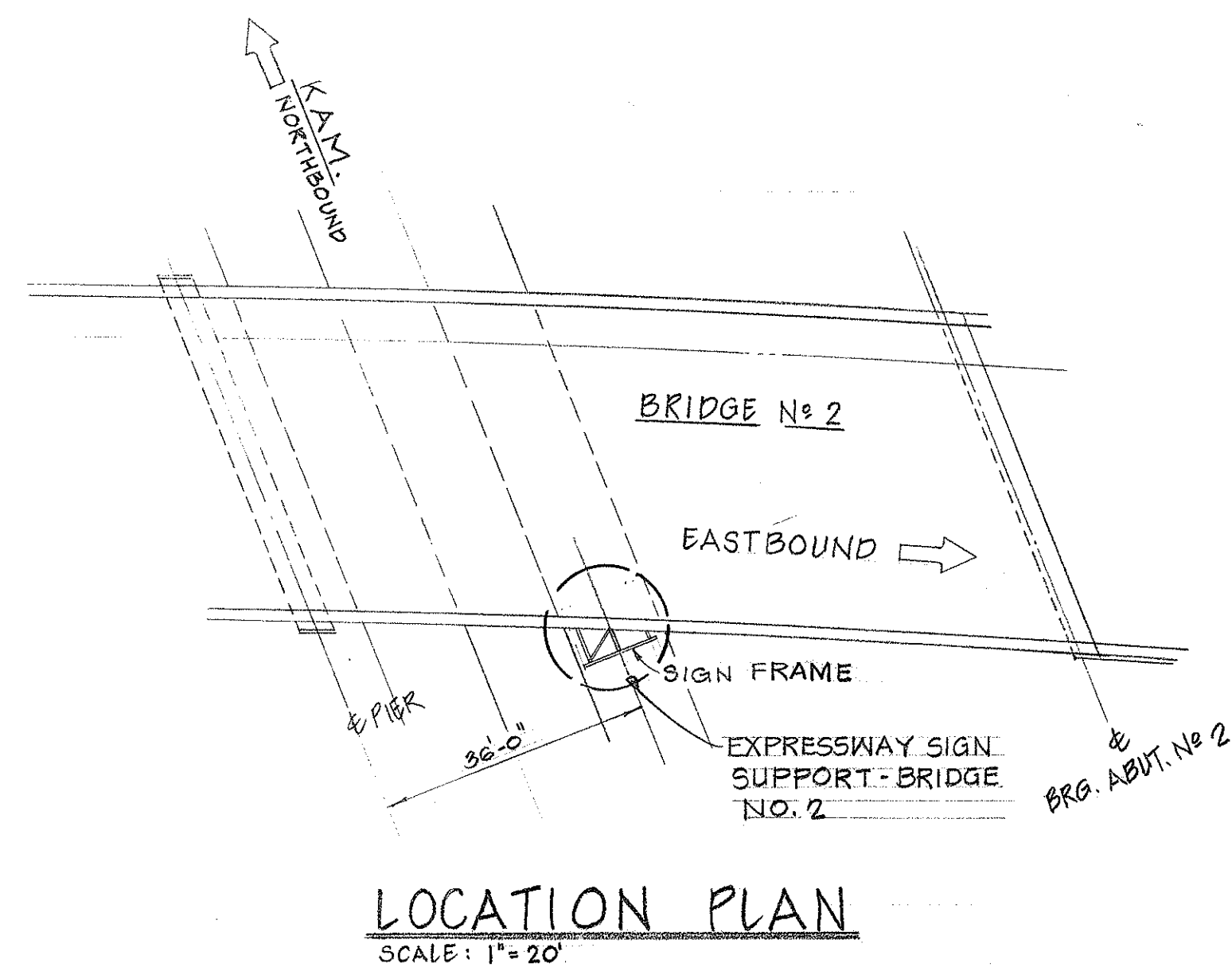
PLAN



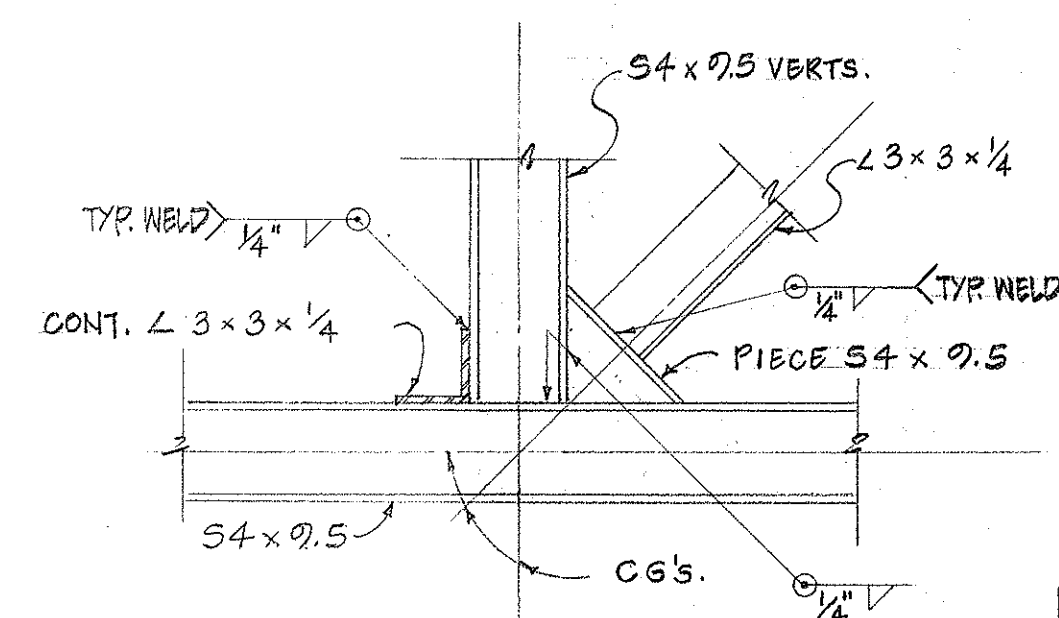
ELEVATION

DETAIL

1
251

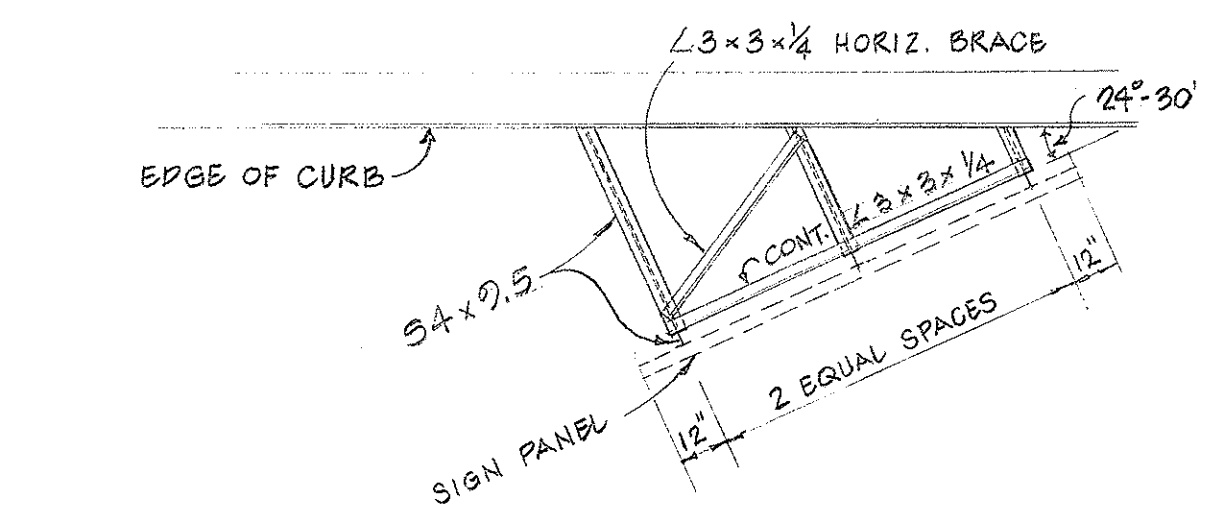


TYPICAL SECTION

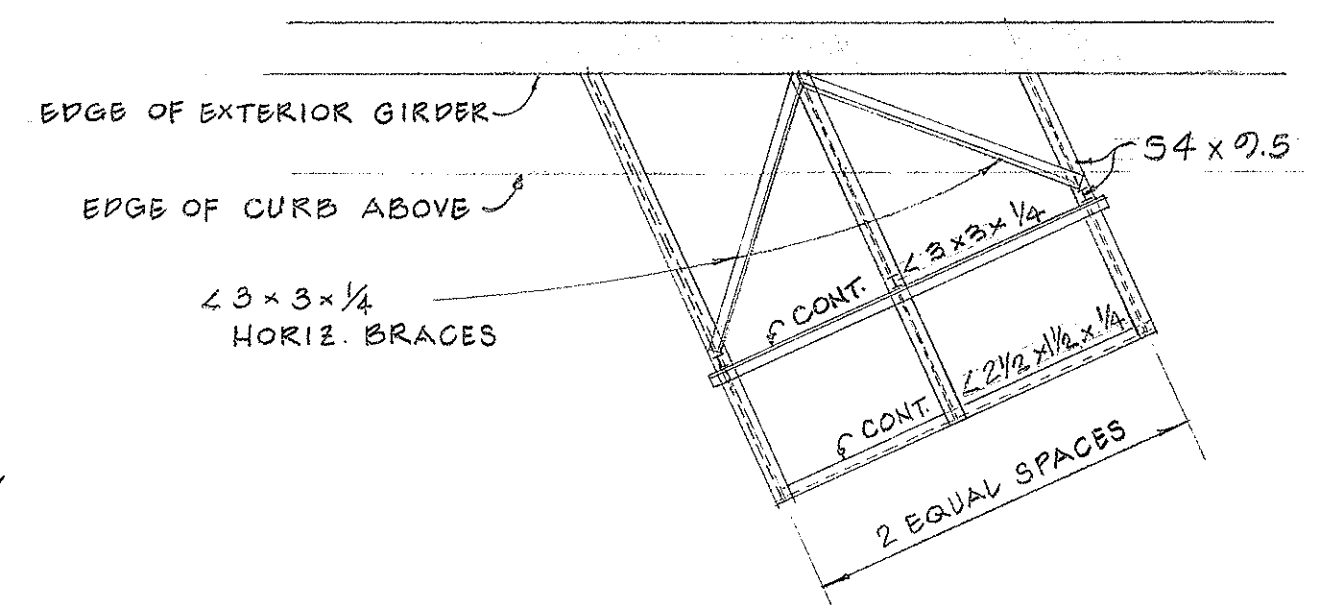


DETAIL

2
25J

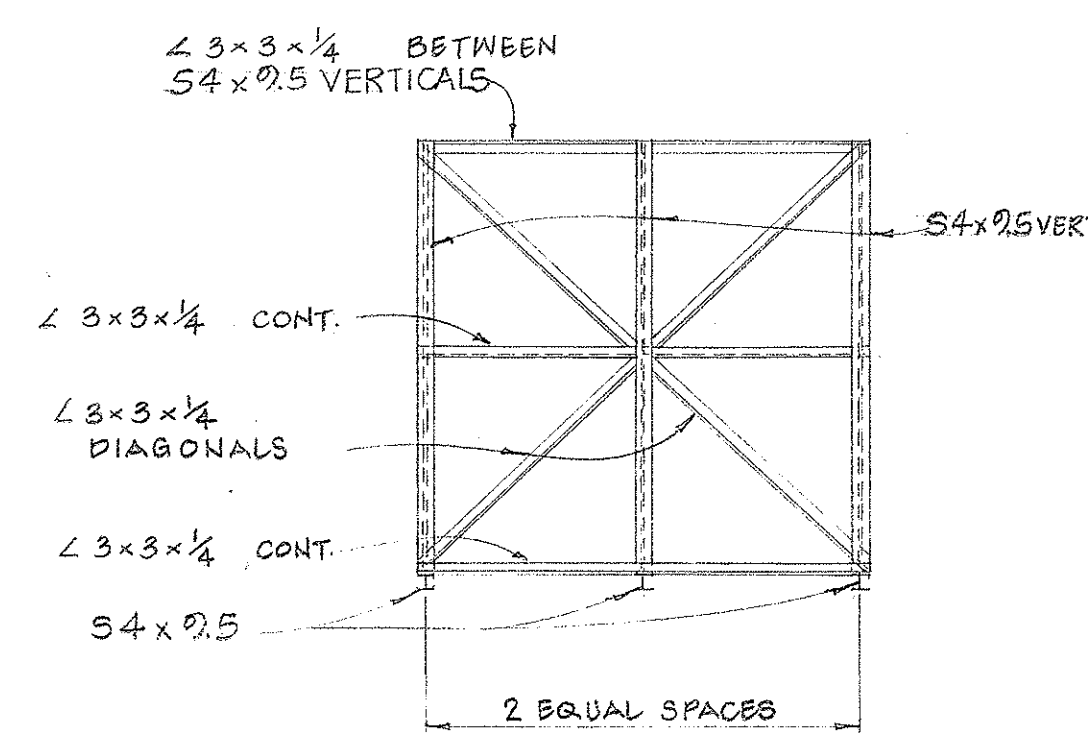


UPPER FRAMING PLAN



LOWER FRAMING PLAN

FRAMING PLANS



ELEVATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SOIL BORING LOGS

SIGN FRAMING

HALEKOU INTERCHANGE

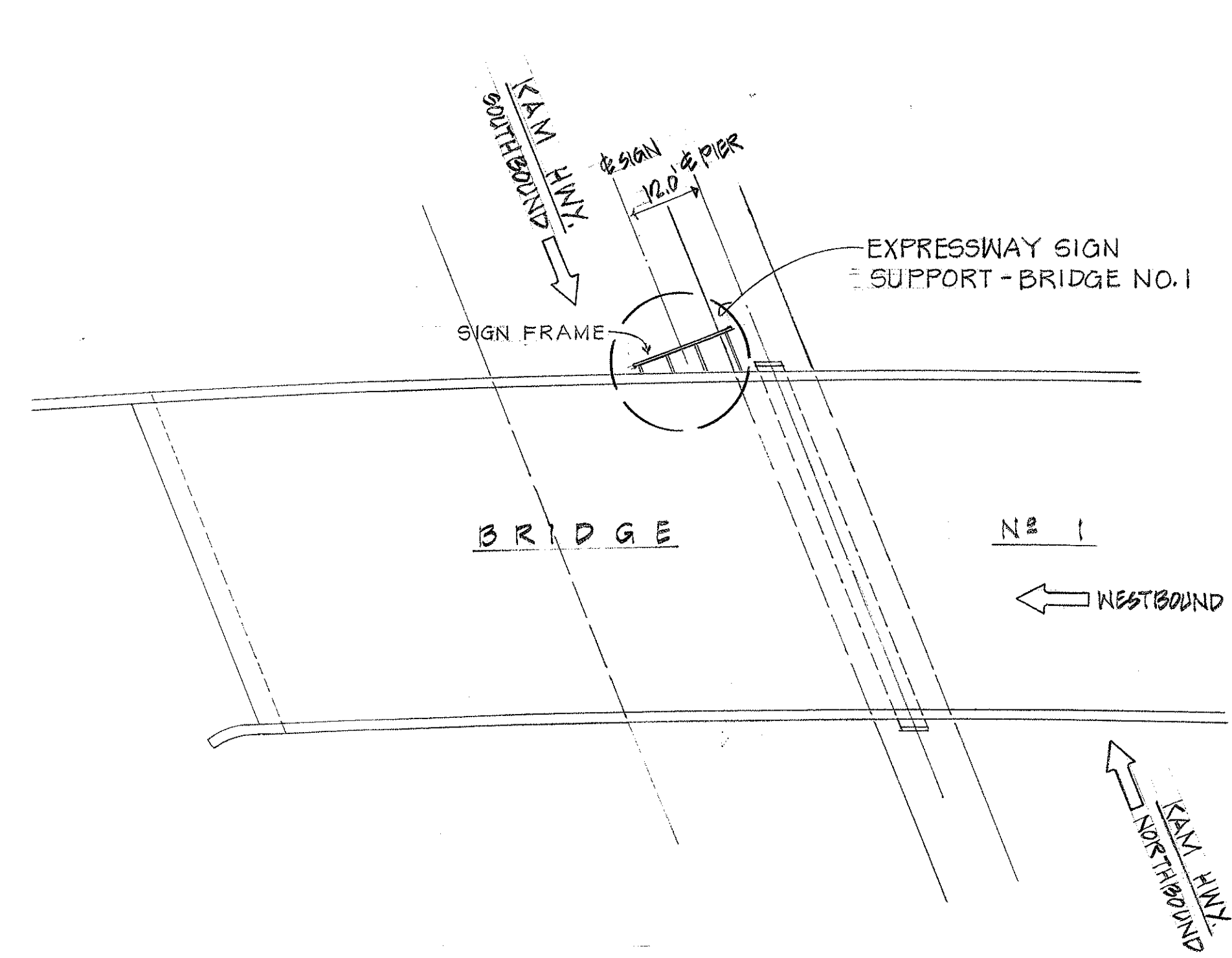
F.A.I. Proj. No. I-H3-1(24):11

Scale: As Noted

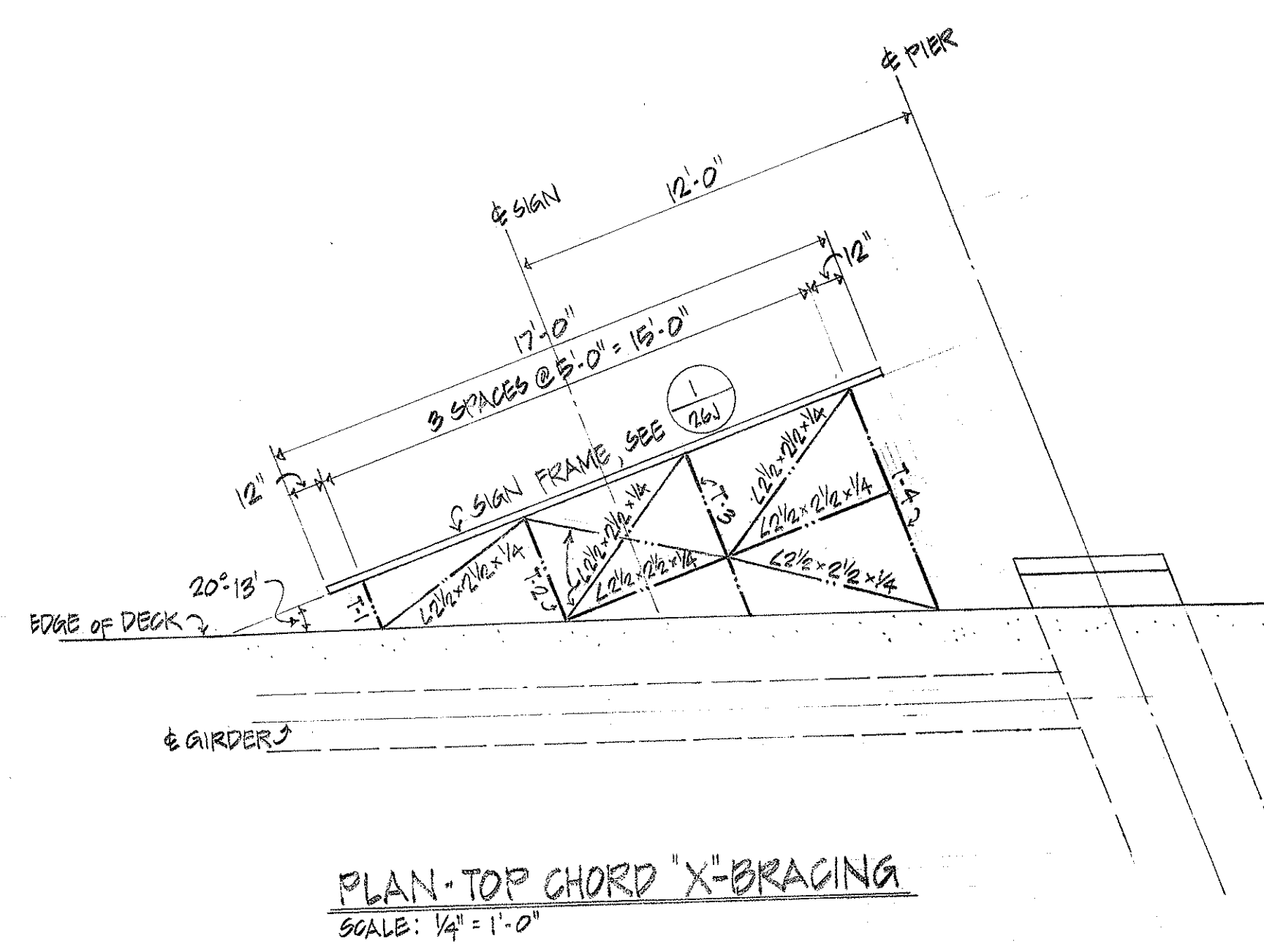
Date: SEPT. 1982

SHEET No. 25J OF 30 SHEETS

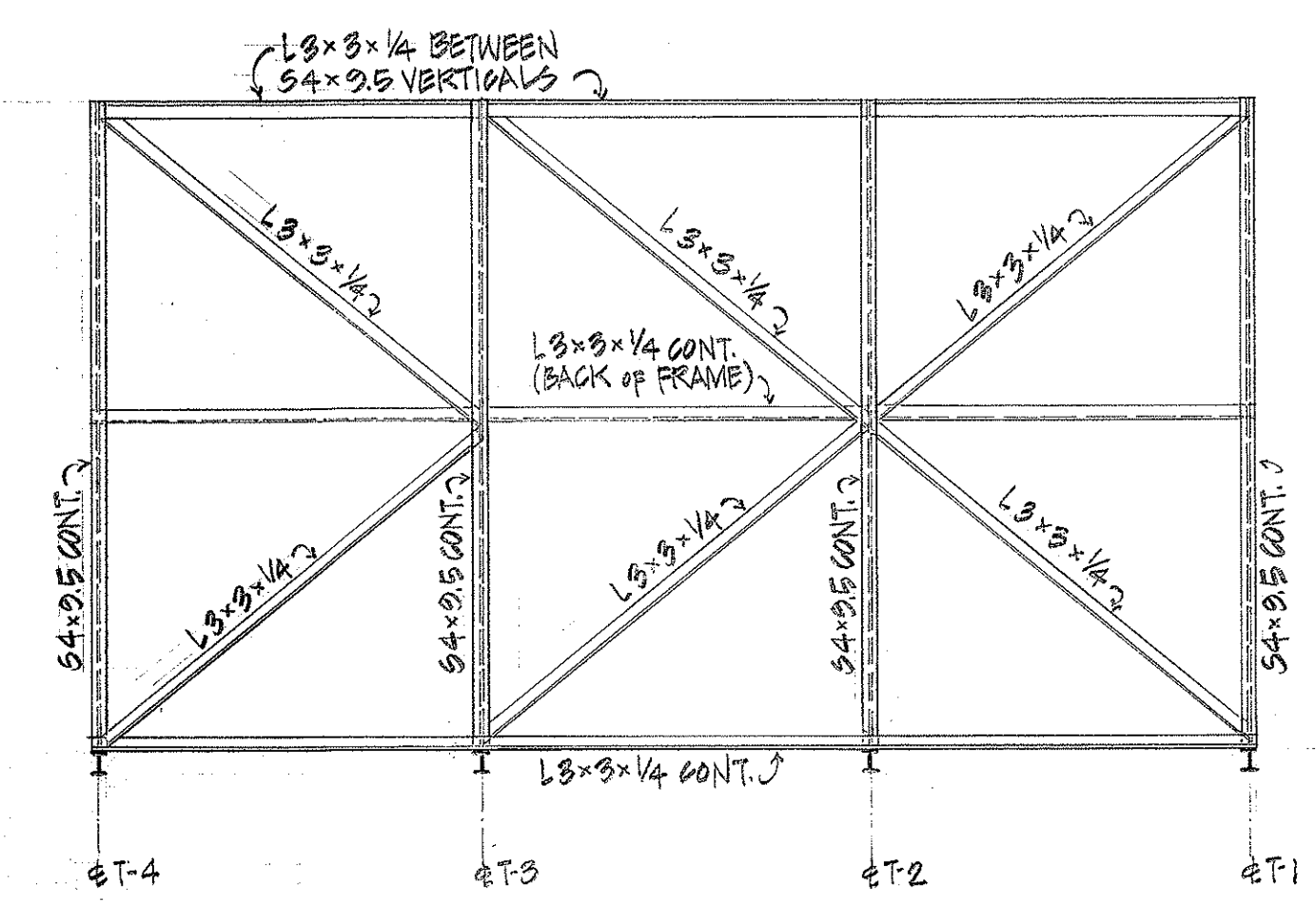
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24)11	1983	197	328



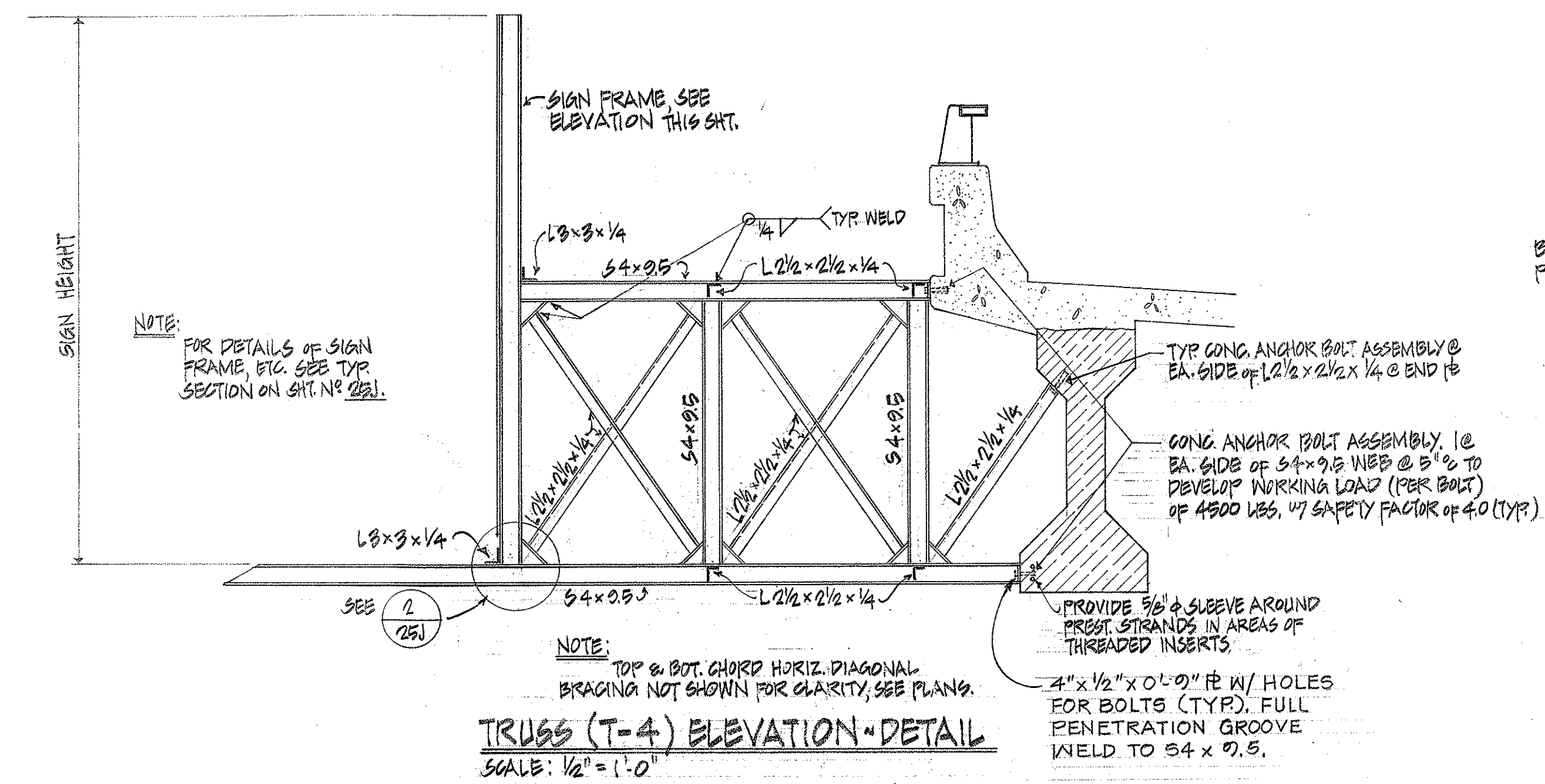
LOCATION PLAN
SCALE: 1" = 20'



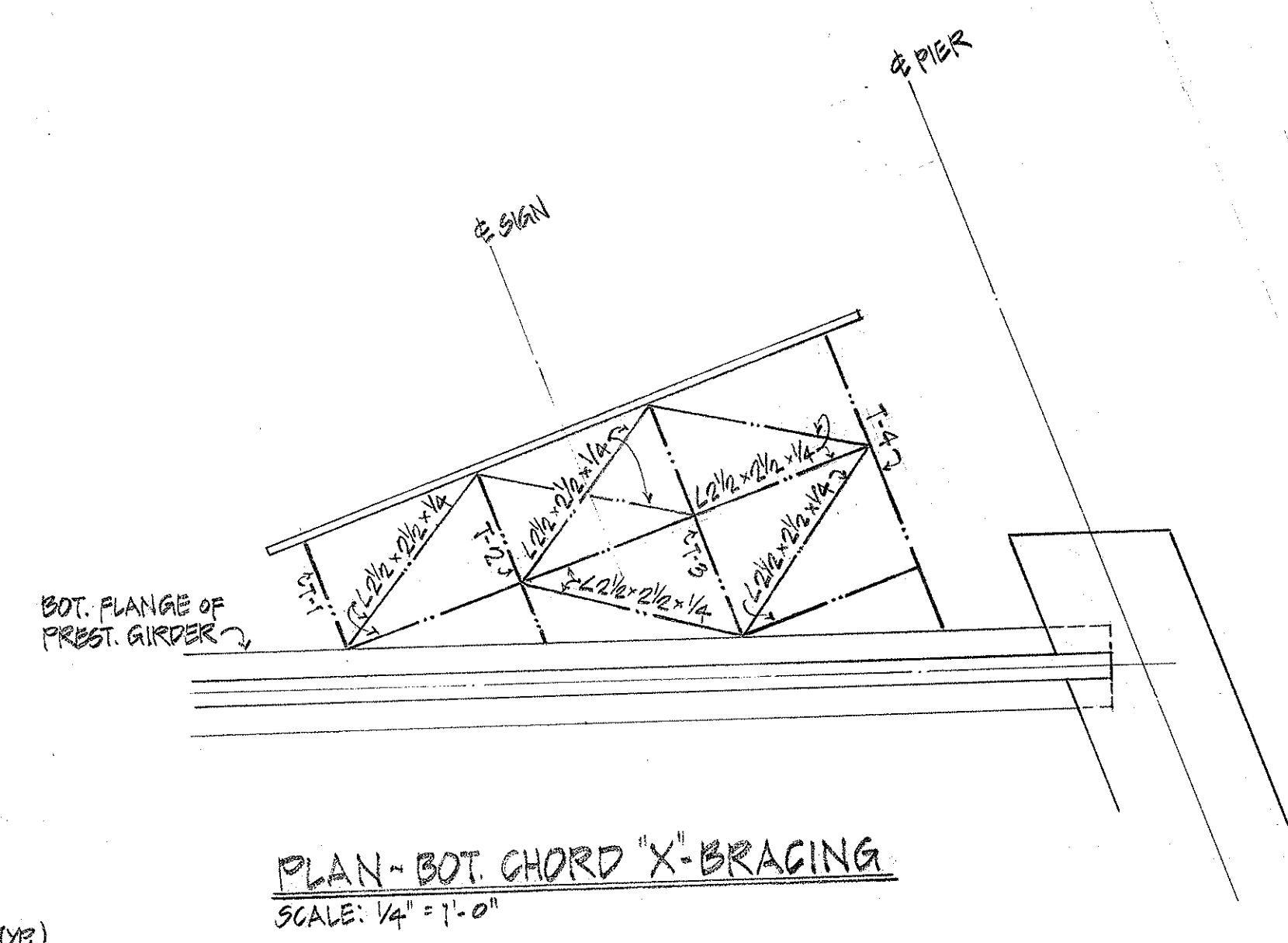
PLAN - TOP CHORD "X"-BRACING
SCALE: 1/4" = 1'-0"



SIGN FRAME FRONT ELEVATION
SCALE: 3/8" = 1'-0"

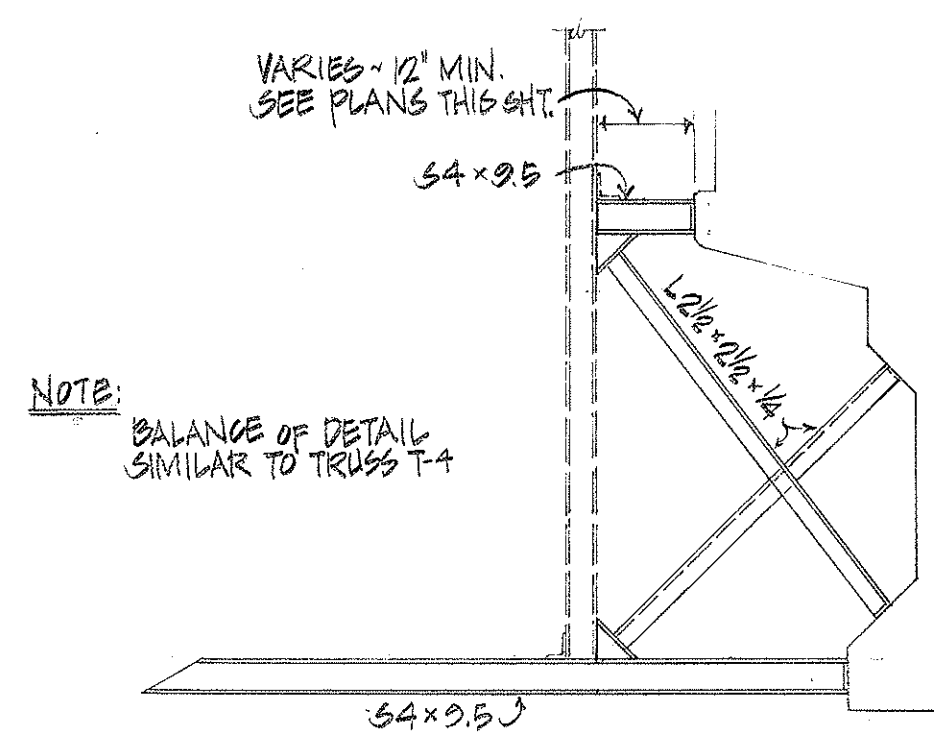


TRUSS (T-4) ELEVATION - DETAIL
SCALE: 1/2" = 1'-0"

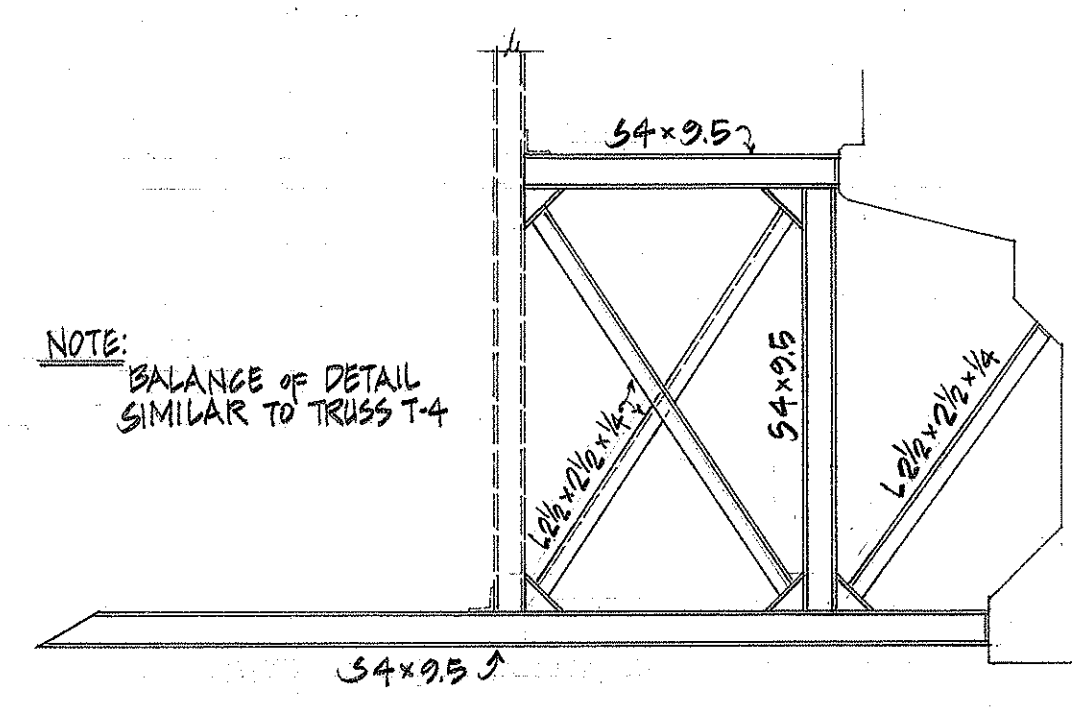


PLAN - BOT. CHORD "X"-BRACING
SCALE: 1/4" = 1'-0"

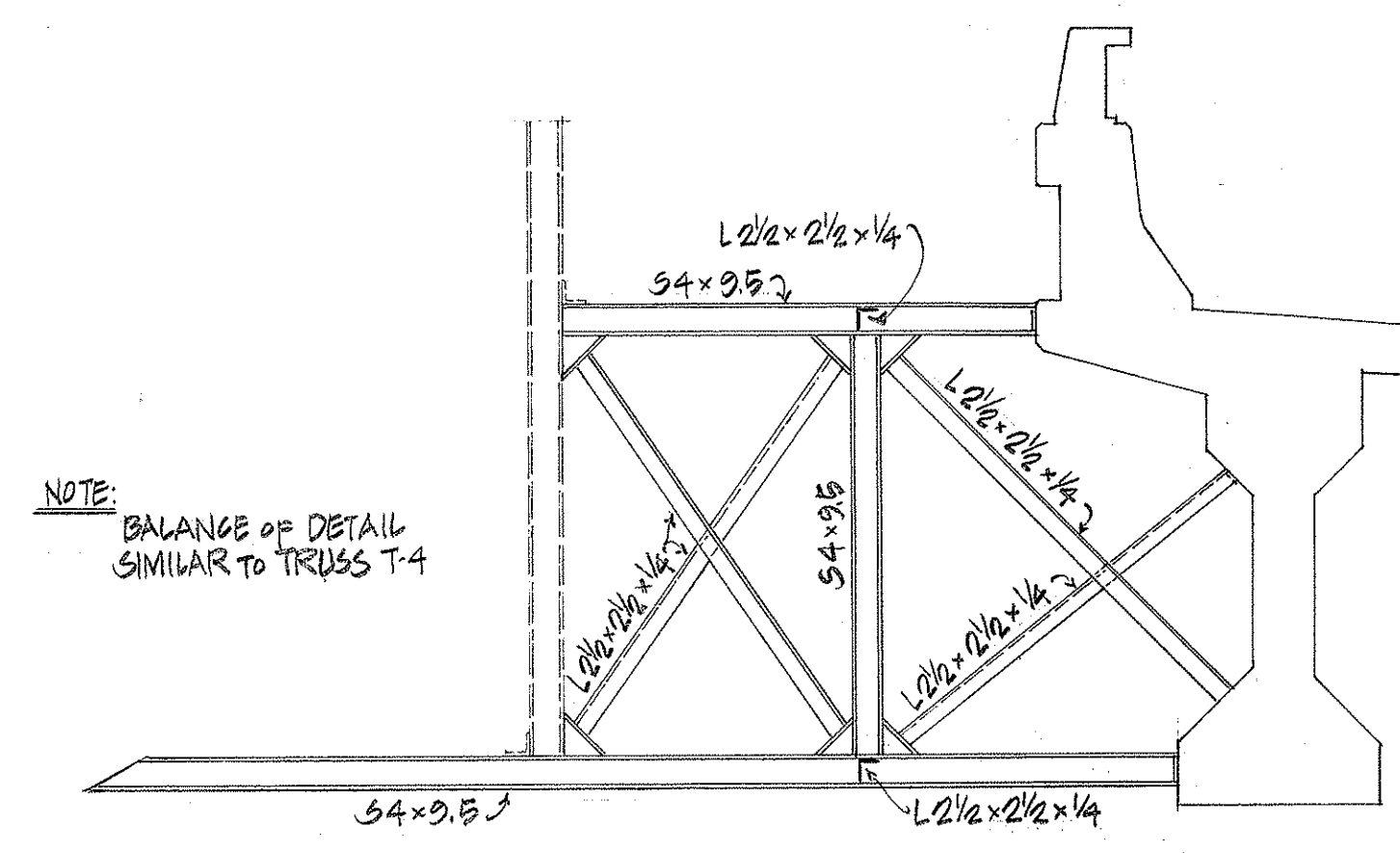
NOTE:
For luminaire mounting details
see sht. DT 208.



TRUSS (T-1) ELEVATION - DETAIL
SCALE: 1/2" = 1'-0"



TRUSS (T-2) ELEVATION - DETAIL
SCALE: 1/2" = 1'-0"



TRUSS (T-3) ELEVATION - DETAIL
SCALE: 1/2" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN FRAMING PLAN & DETAILS

HALEKOU INTERCHANGE

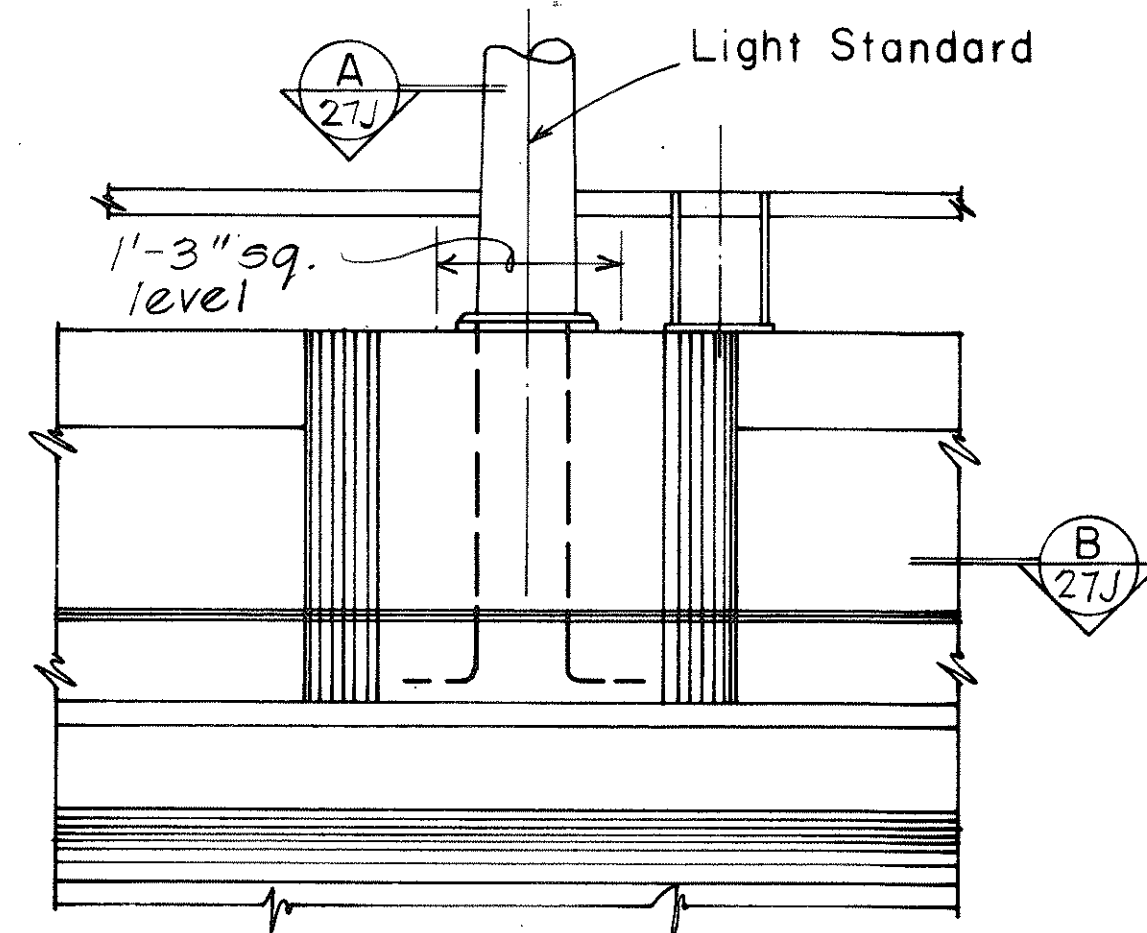
F.A.I. Proj. No. I-H3-1(24)11

Scale: As Noted Date: SEPT. 1982

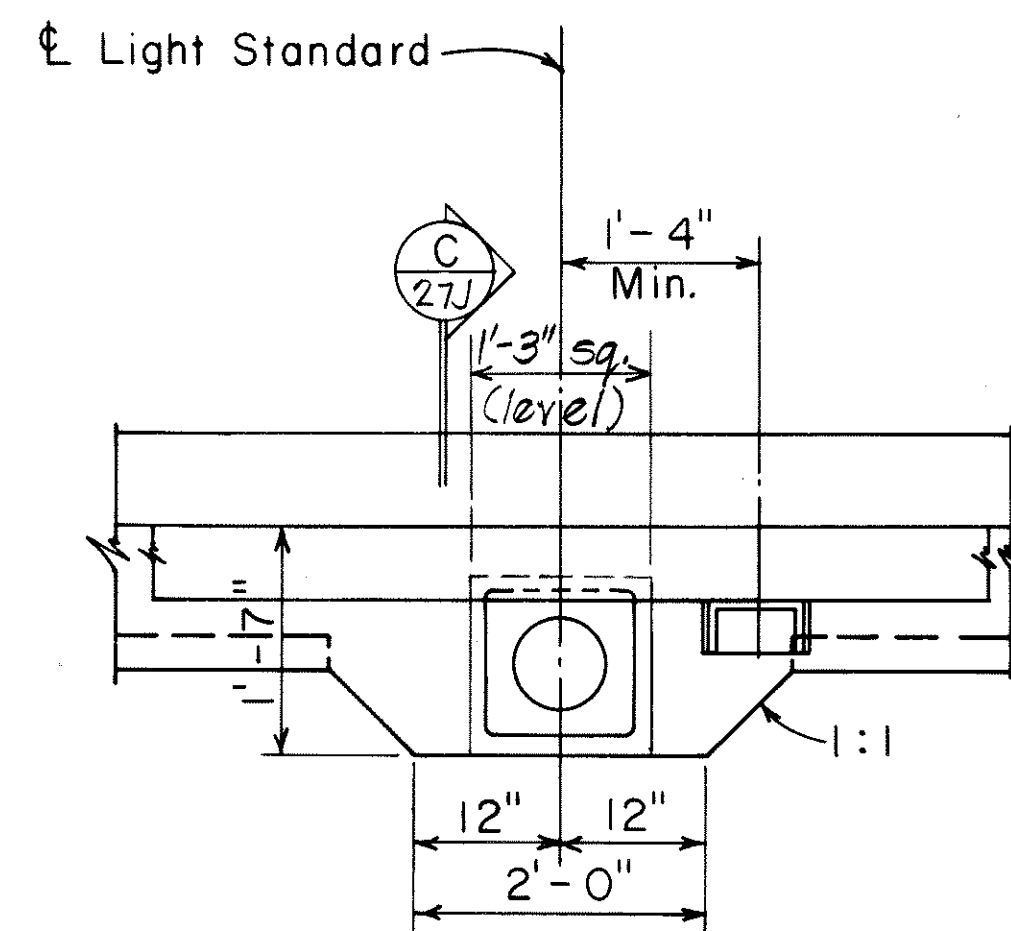
SHEET NO. 263 OF 30 SHEETS

DATE	
SURVEY PLOTTED BY	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
NO.	

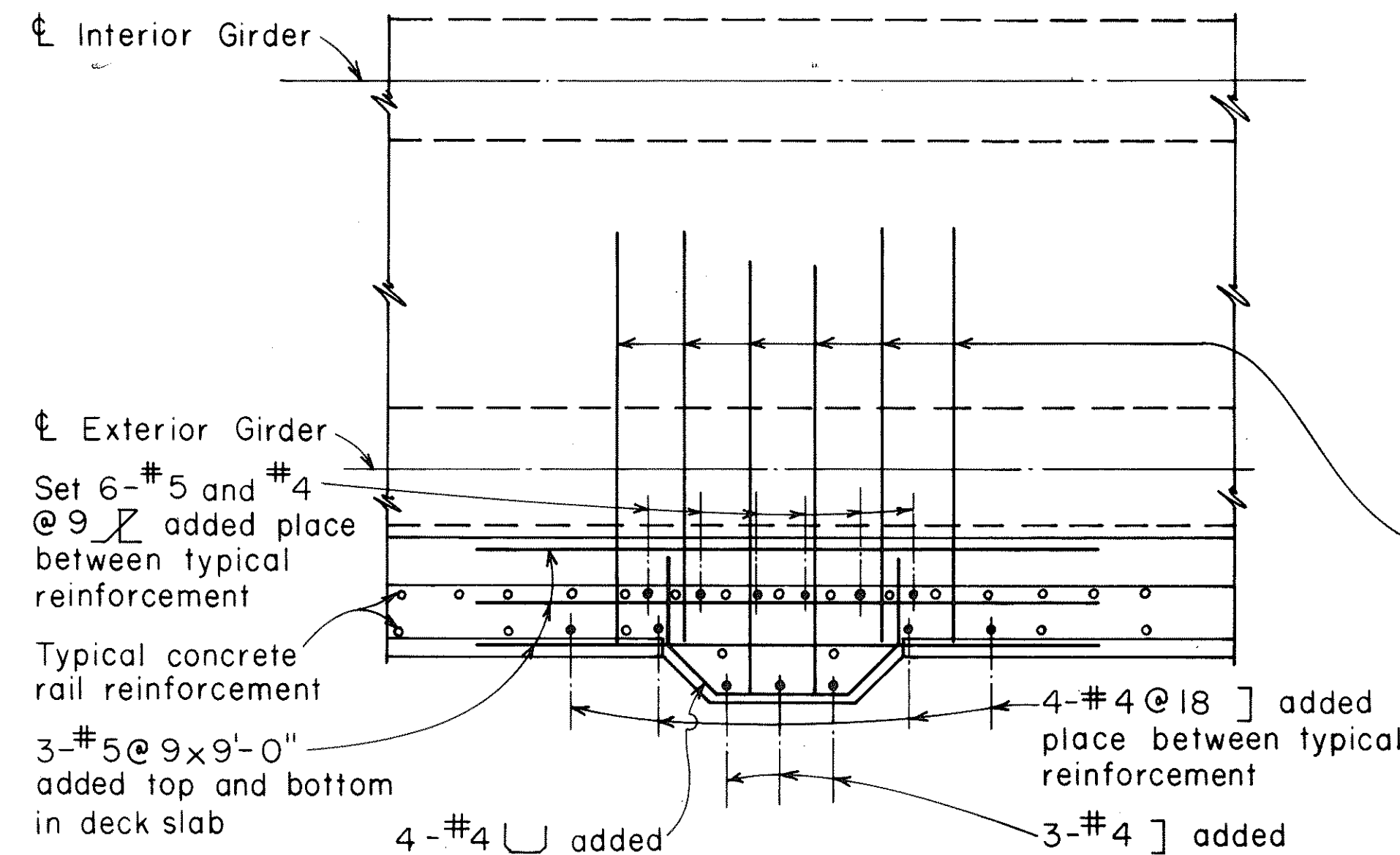
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	198	326



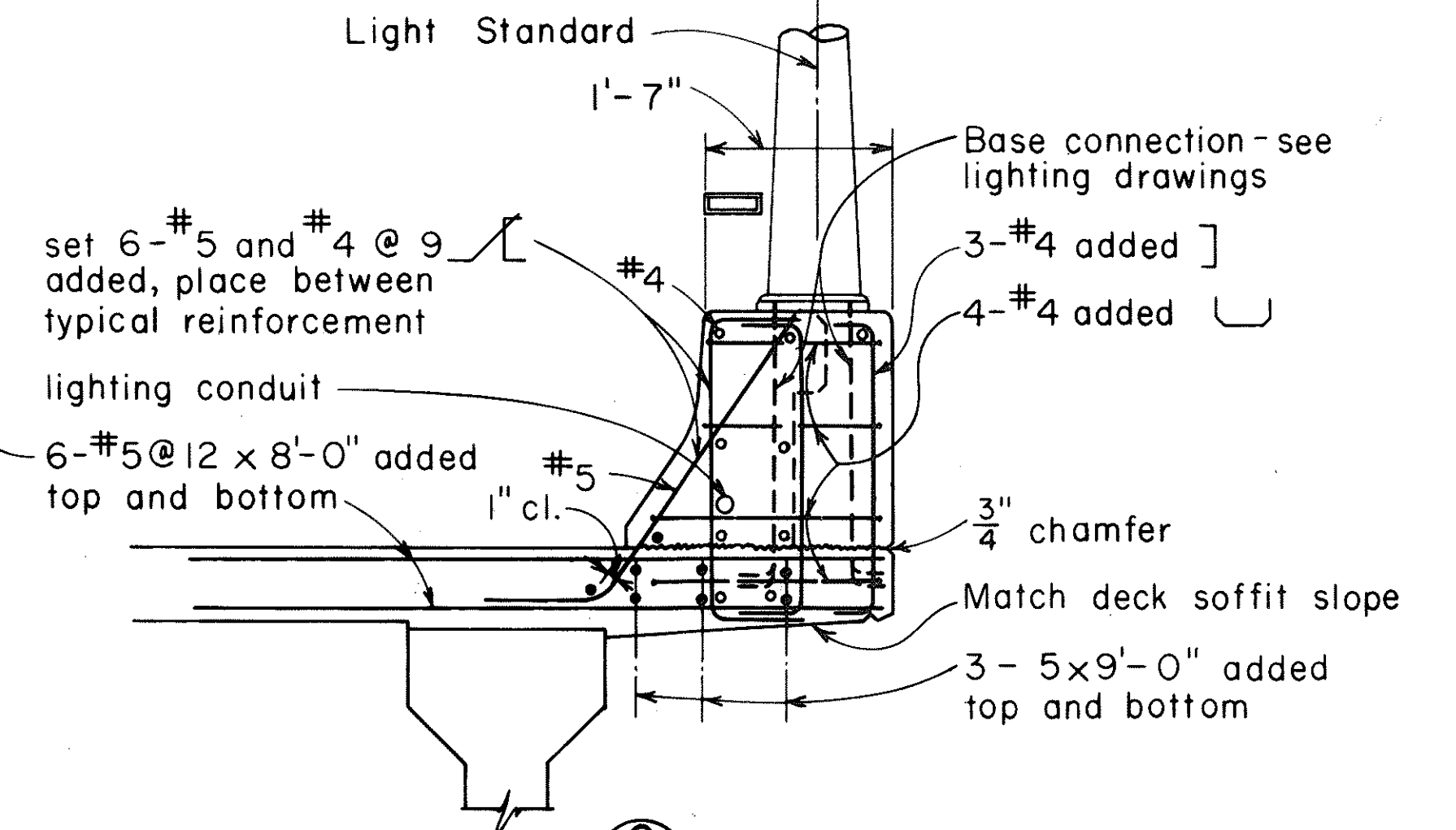
EXTERIOR ELEVATION
Scale: $\frac{3}{4}'' = 1'-0''$



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



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



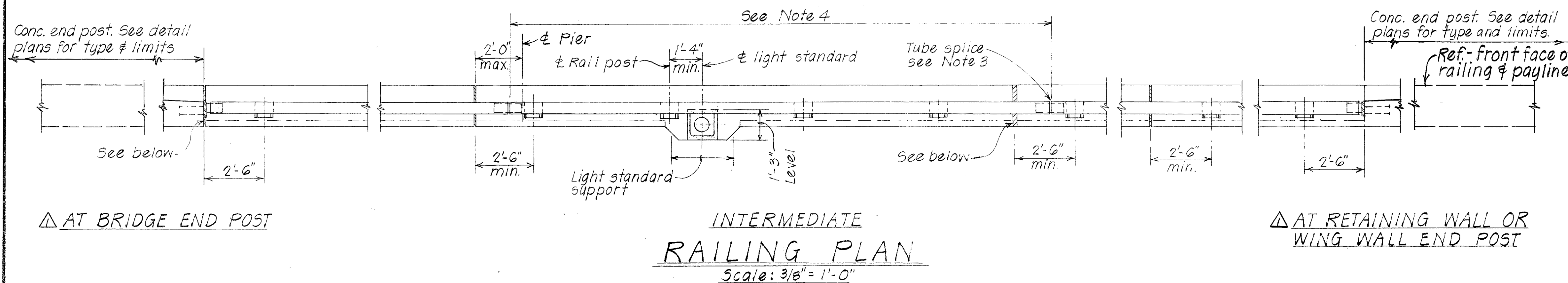
SECTION C
Scale: $\frac{3}{4}'' = 1'-0''$

DETAILS AT LIGHT STANDARD

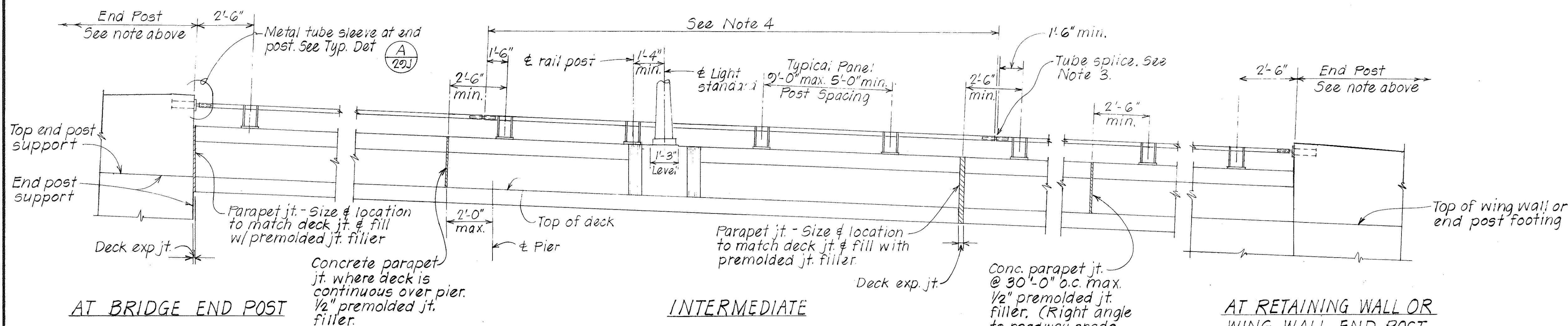
Scale: As Noted

NOTES

1. Tubing shall be shop bent to fit horizontal curve when radius is less than 250 ft.
2. Post shall be normal to grade.
3. All tubes shall be spliced in the panel spanning deck expansion joints. Increase joint width between tube to $1\frac{1}{2}''$ and increase sleeve length by 1'. (See Tube Splice Detail.)
4. Tubing shall be continuous over not less than 3 posts except as noted on plans.
5. All exposed corner of metal railing shall be ground smooth.
6. Rail assemblage shall be galvanized after fabrication.
7. All anchor bolts, bolts, nuts, plates and washers shall be galvanized.
8. Welding shall meet the requirement of Section 501 of the Standard Specifications.
9. Material shall conform to the following requirements:
 - a. Tubular steel rails ASTM A500 Grade B.
 - b. Steel posts ASTM A36.
 - c. Sleeves for tubular rails ASTM A36.
 - d. Stud bolts ASTM A108 Grades 1015 to 1020.
 - e. Anchor bolts, bolts, nuts and washers ASTM A325.
 - f. Shims commercial quality galvanized steel.
 - g. Sleeve bolts and nuts ASTM A108 Grades 1015 to 1020.



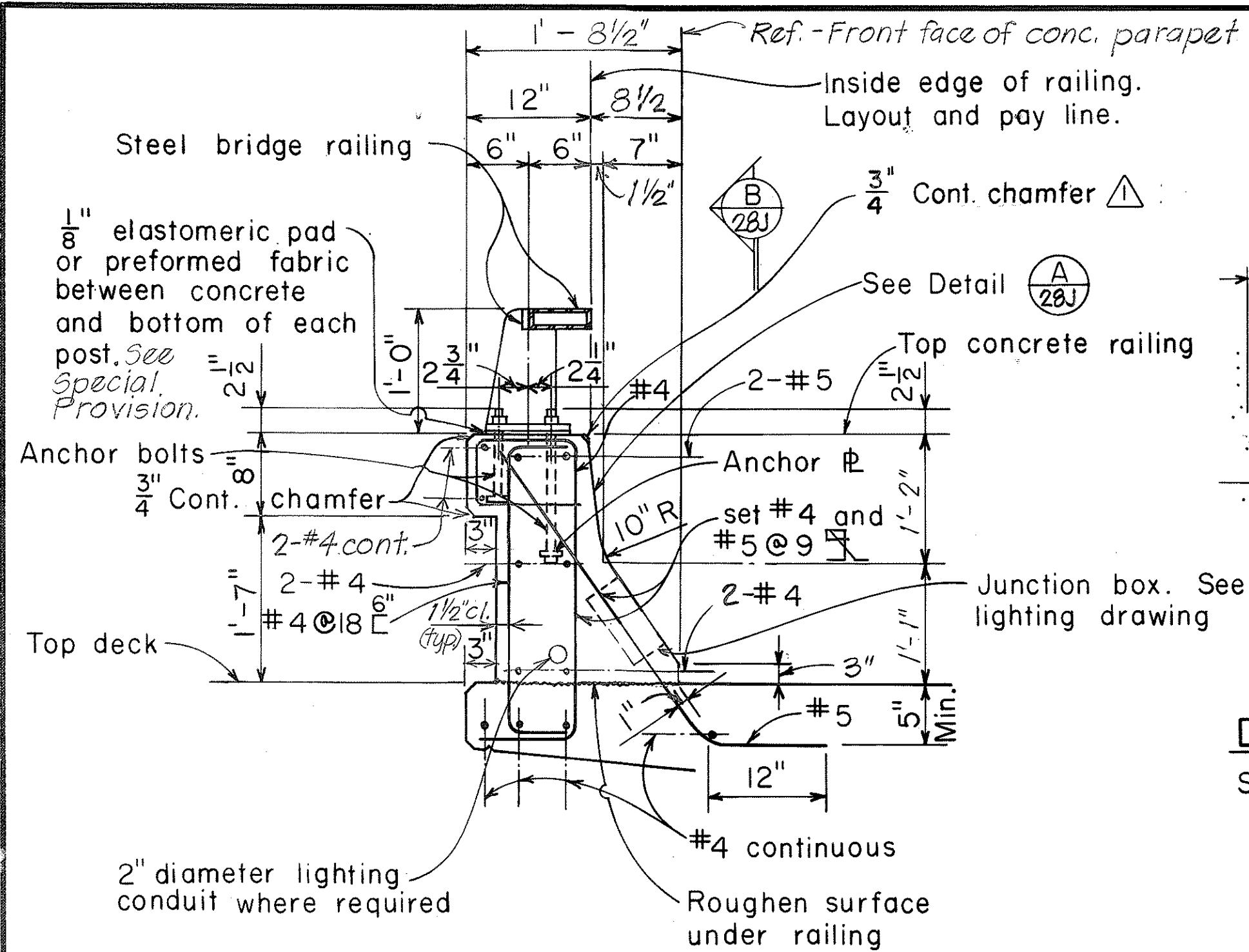
INTERMEDIATE RAILING PLAN
Scale: $\frac{3}{8}'' = 1'-0''$



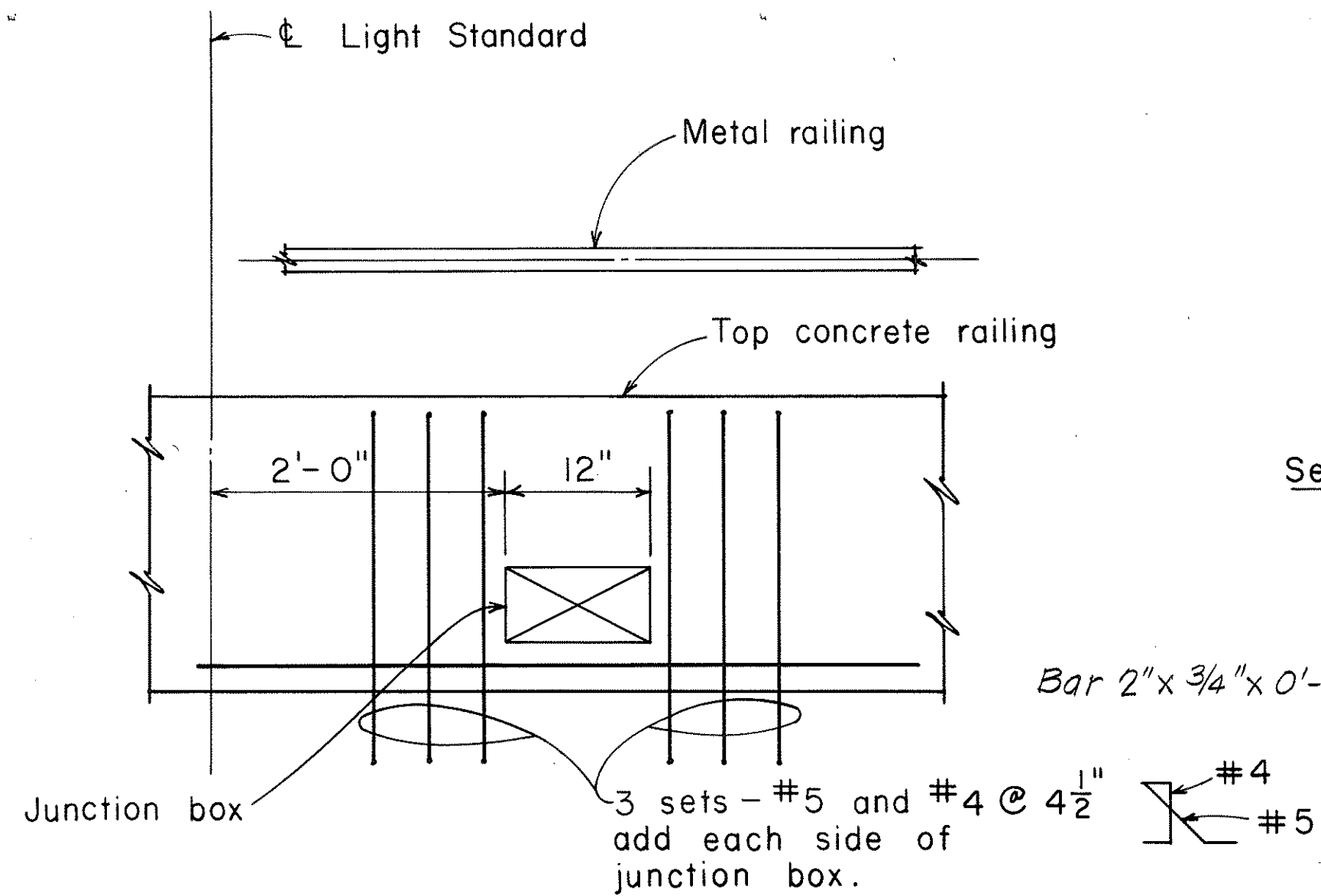
EXTERIOR RAILING ELEVATION
Scale: $\frac{3}{8}'' = 1'-0''$

DATE	REVISION
9/8/87	Revise Metal Guardrail Connection at Concrete End Post.
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STEEL BRIDGE RAILING (TUBULAR) ONE RAIL COMBINATION TYPE ON PARAPET BRIDGE NO. 1#2 HALEKOU INTERCHANGE F.A.I. Proj. No. I-H3-1(24):11 Scale: As Noted Date: Sept. 1982	
SHEET No. 27J OF 30 SHEETS	

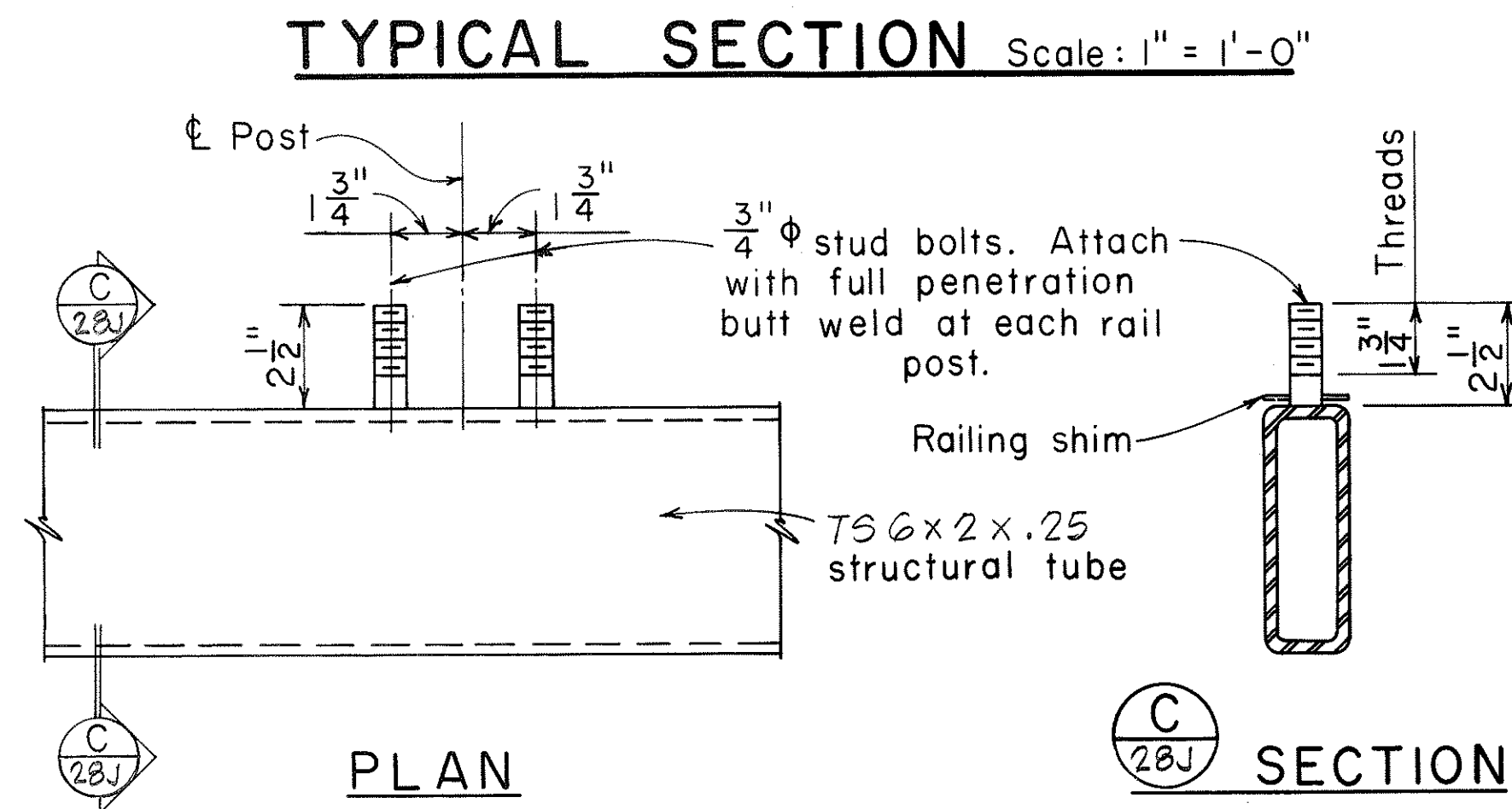
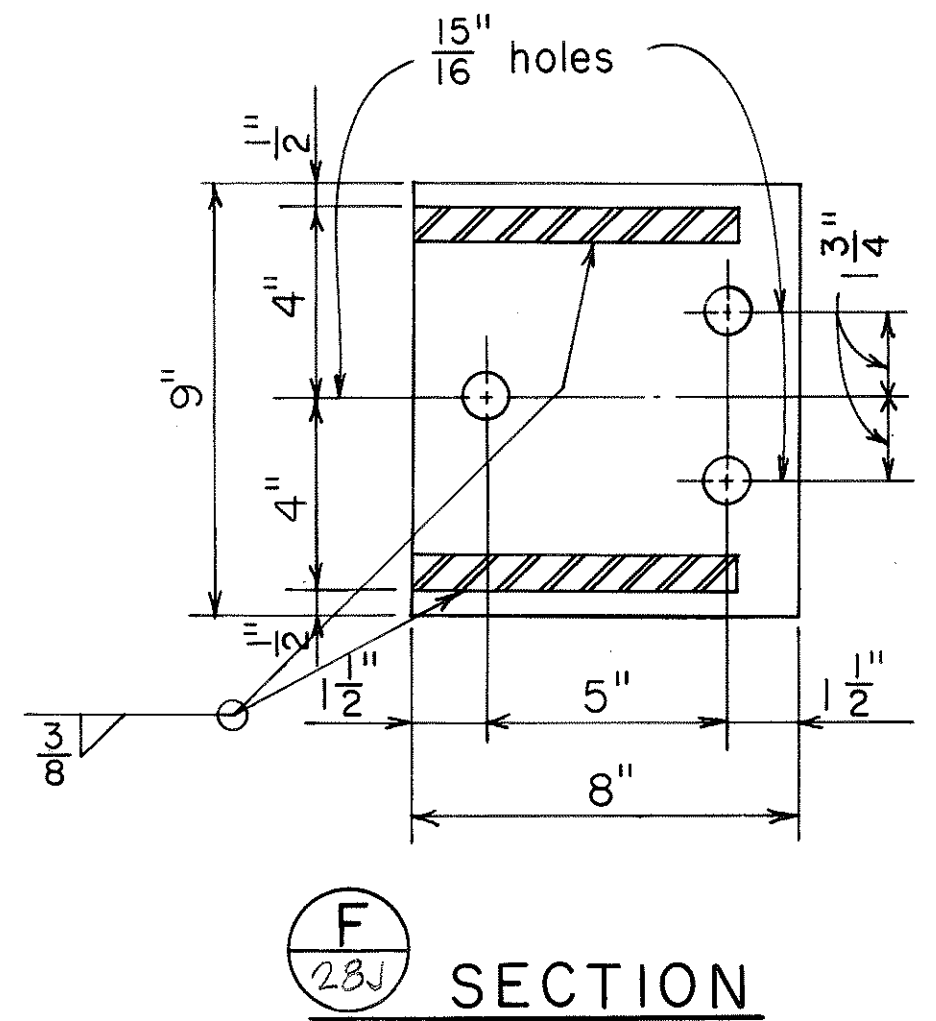
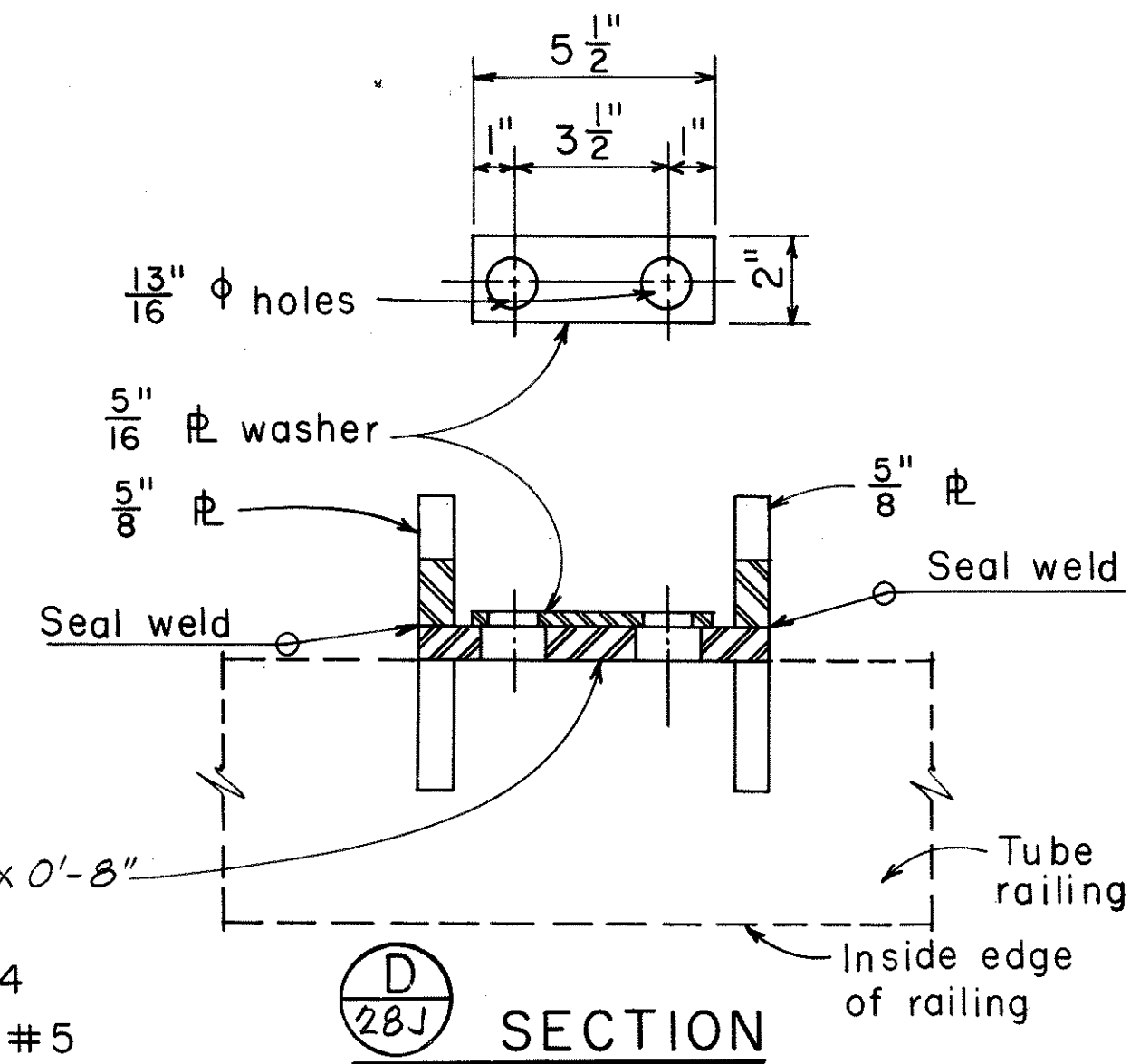
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1983	199	328



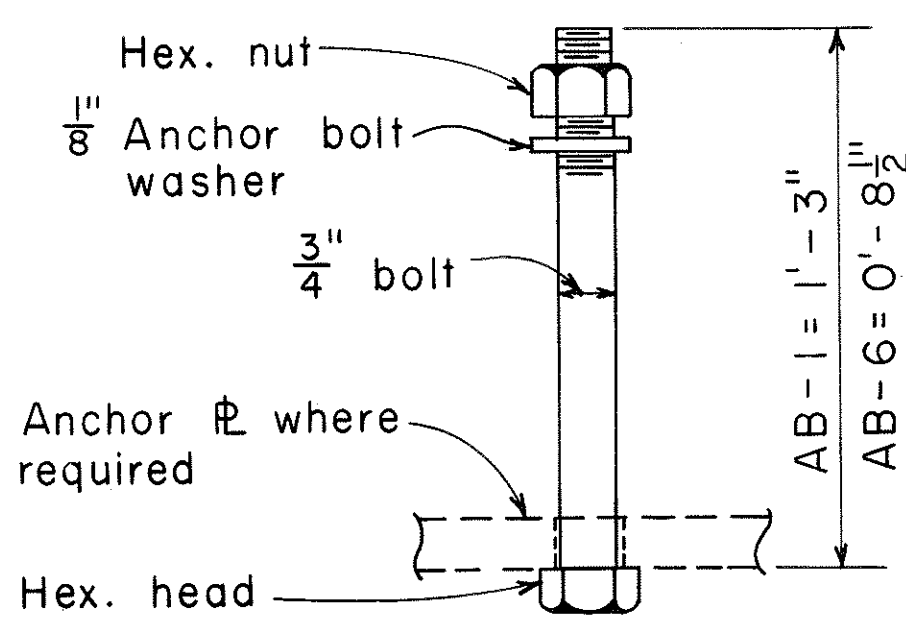
DETAIL A 28J
Scale: 3" = 1'-0"



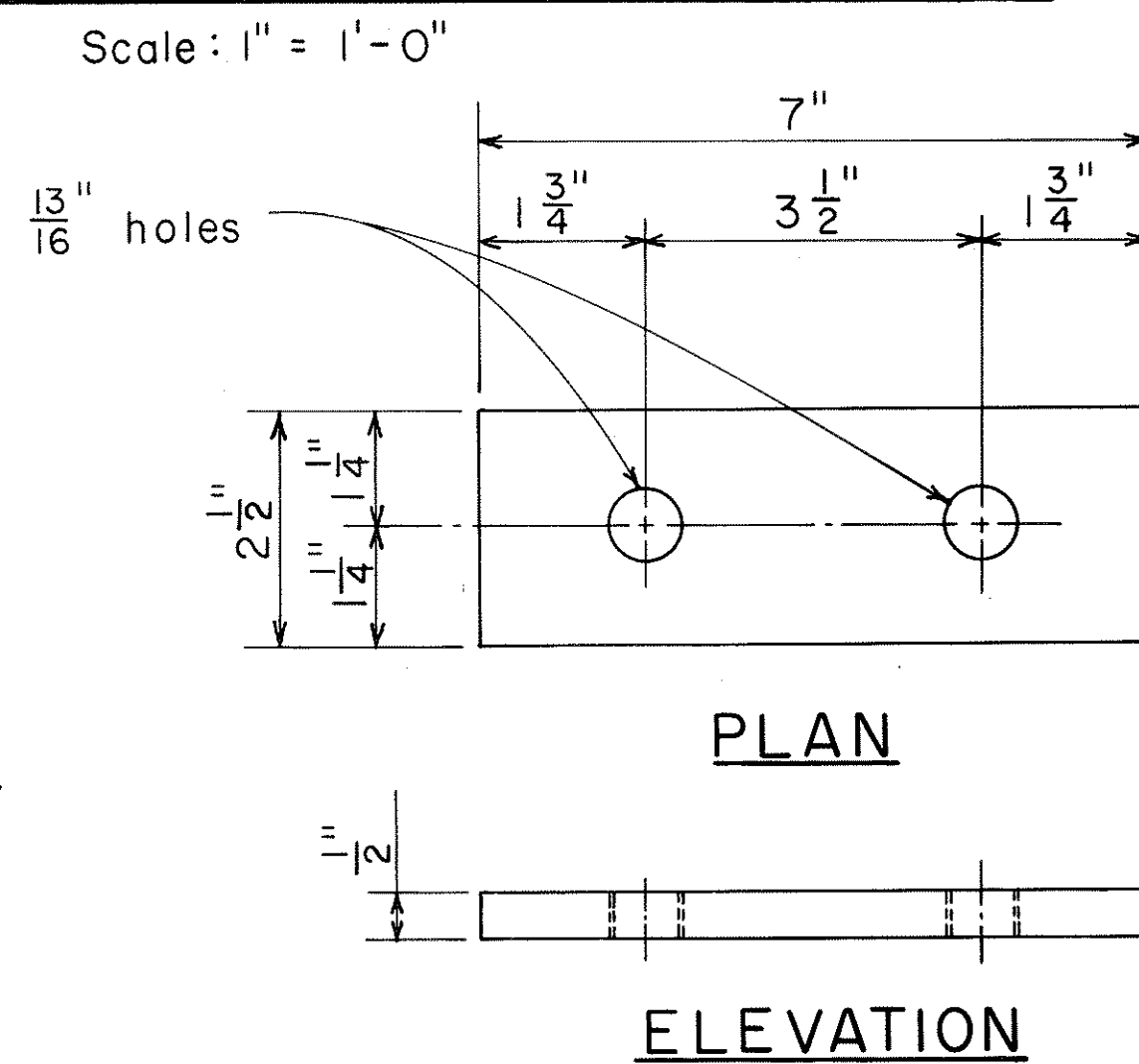
ELEVATION B 28J ADDED
REINFORCEMENT AT JUNCTION BOX
Scale: 1" = 1'-0"



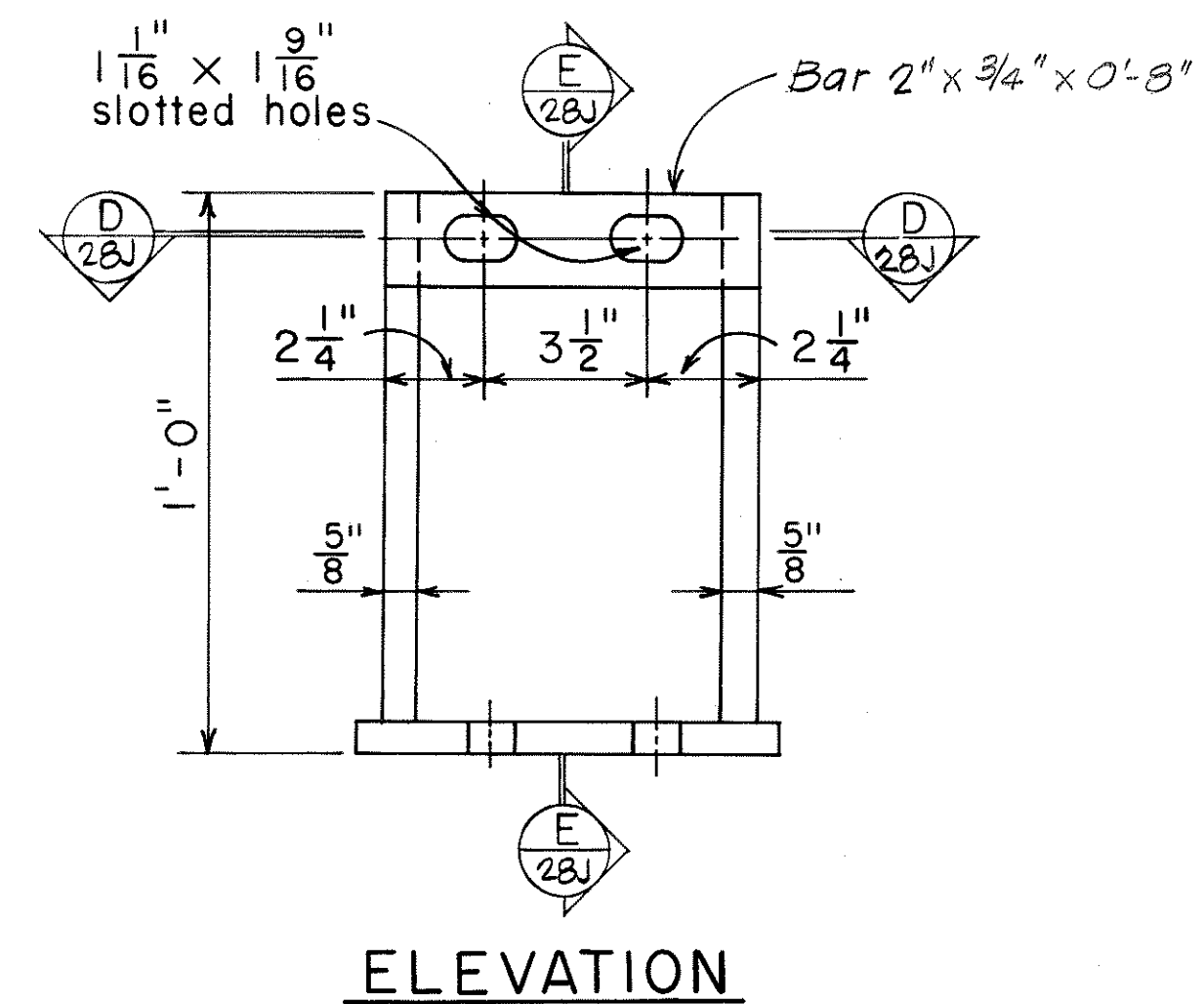
TUBE RAIL DETAILS
Scale: 3" = 1'-0"



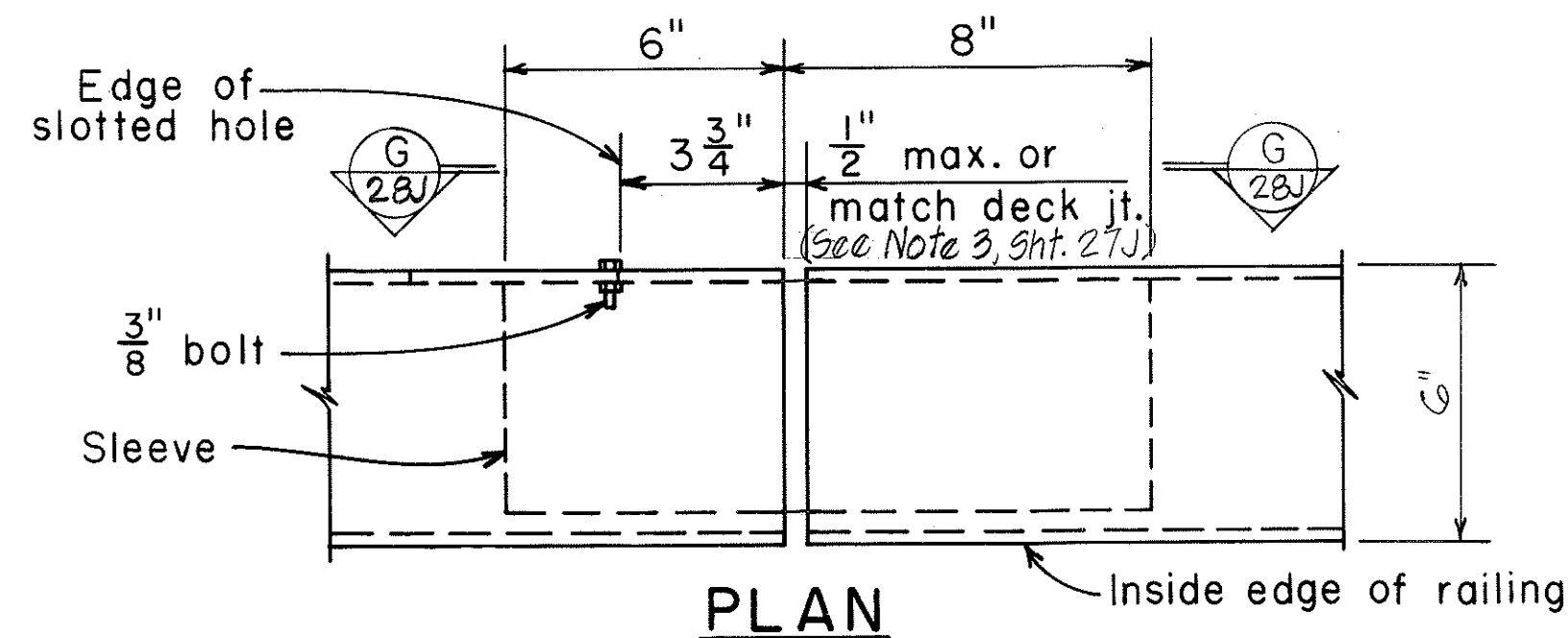
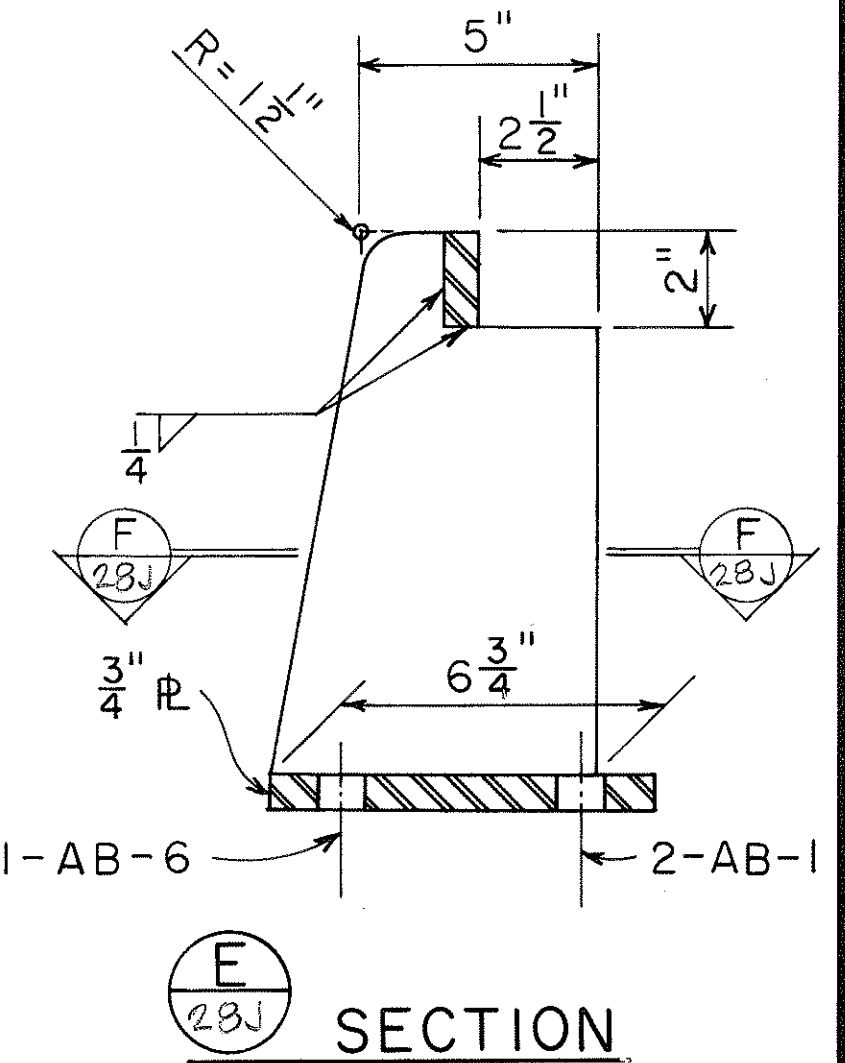
TYPICAL ANCHOR BOLT (AB) ASSEMBLY



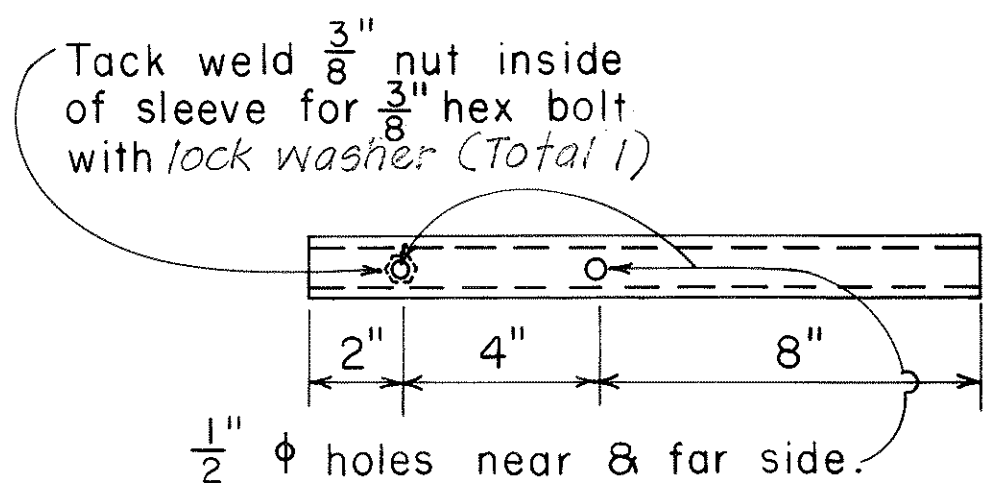
TYPICAL ANCHOR R DETAIL
Scale: Half Size



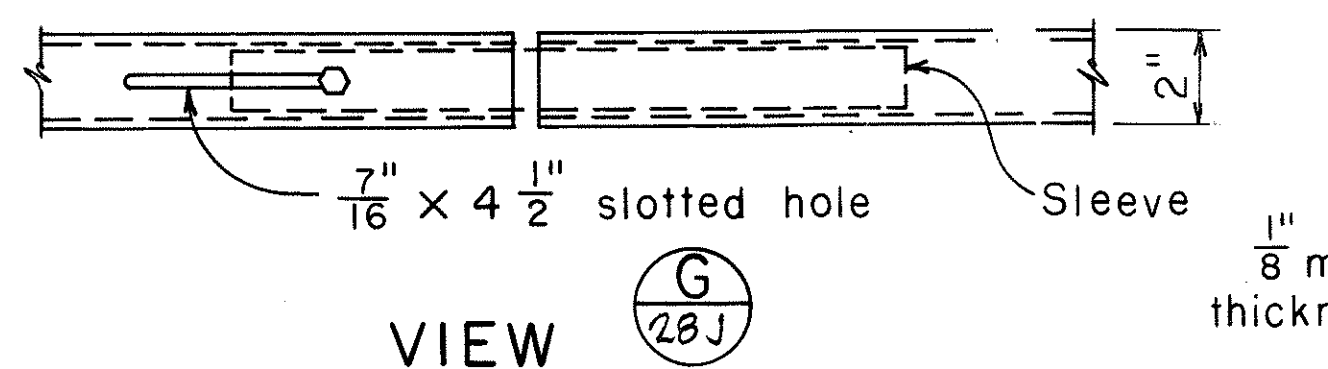
RAIL POST DETAILS
Scale: 3" = 1'-0"



TUBE SPLICE DETAIL
Scale: 3" = 1'-0"



SLEEVE

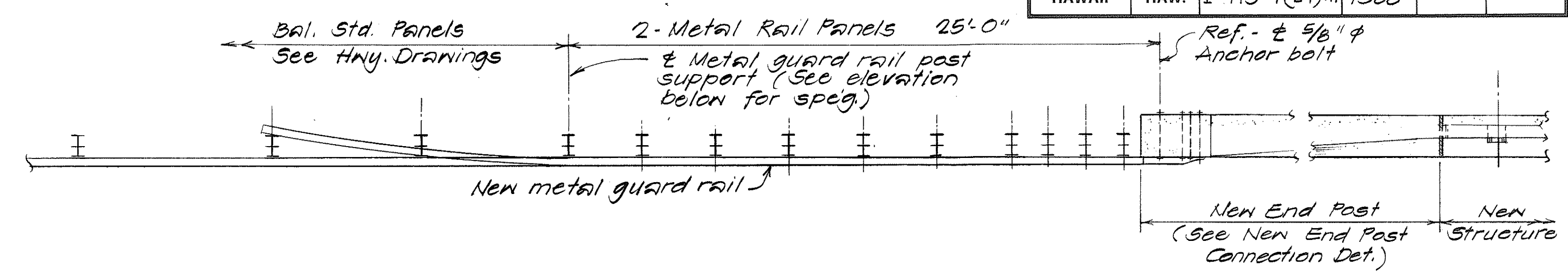
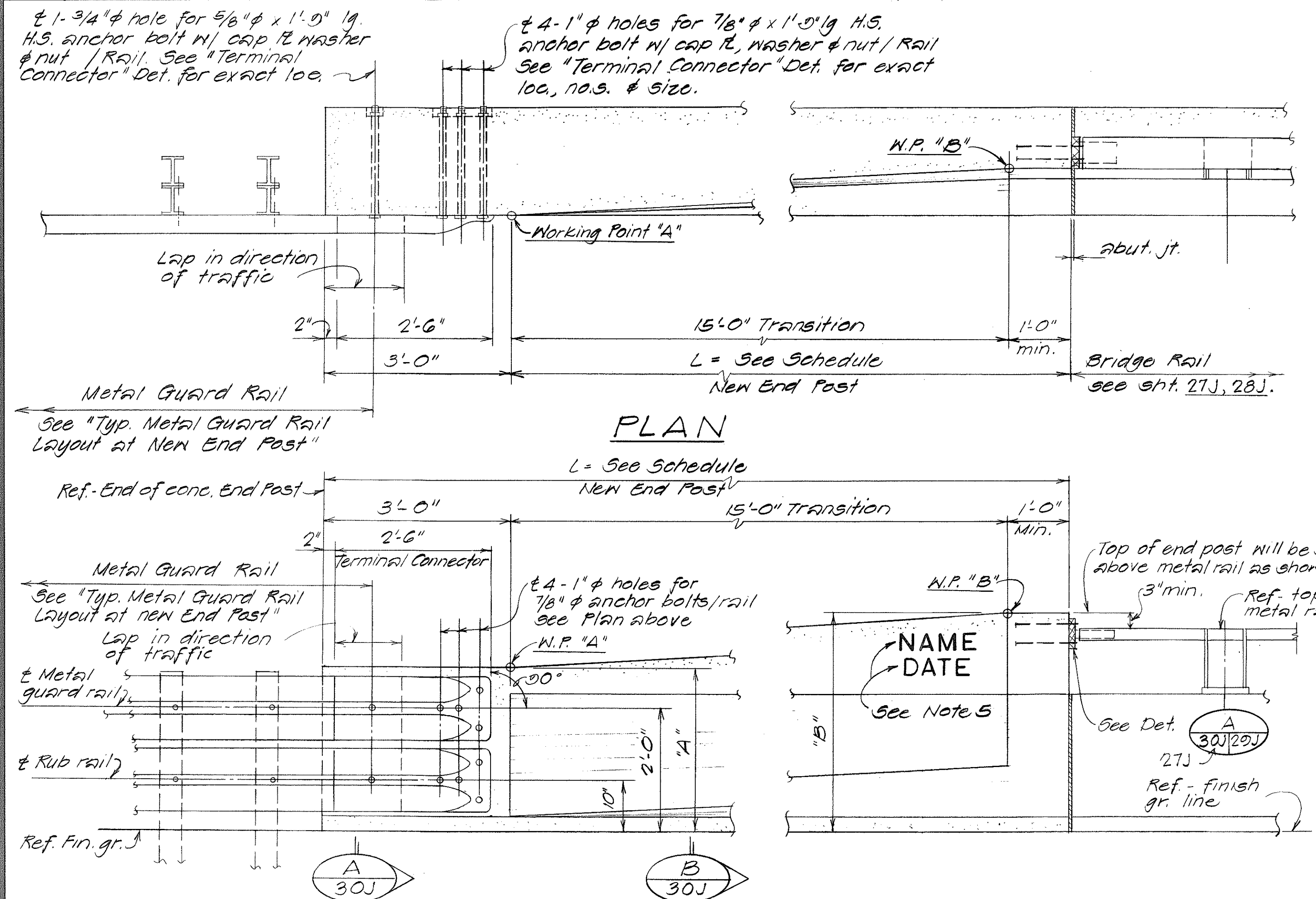


RAILING SHIM DETAIL
Scale: 3" = 1'-0"

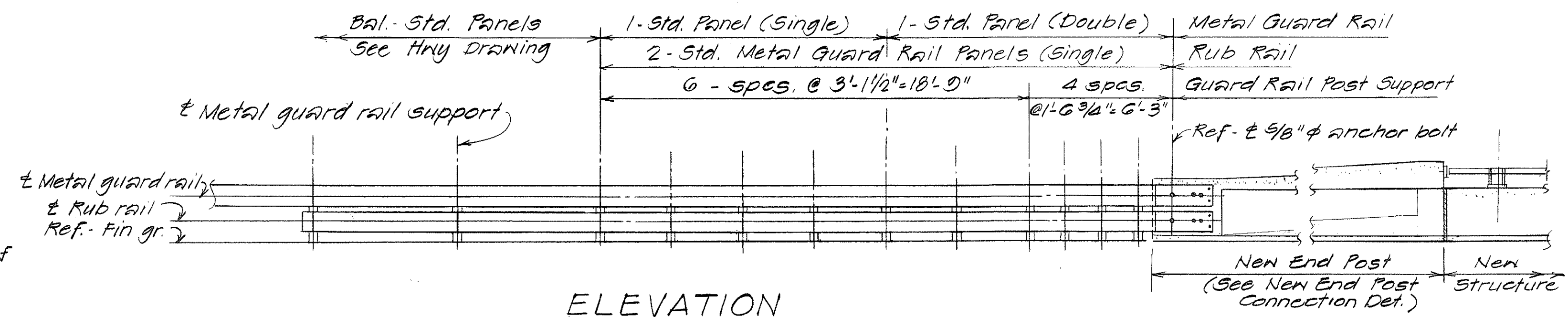
DATE	9/10/87	REVISION	Correction to wording on Typical Section.
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STEEL BRIDGE RAILING (TUBULAR) ONE RAIL COMBINATION TYPE ON PARAPET BRIDGE NO. 1 & 2 HALEKOU INTERCHANGE E.A.I. Proj. No. I-H3-1(24):11 Scale: As Noted. Date: Sept. 1982 SHEET No. 28J OF 30 SHEETS
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(24):11	1988		



PLAN



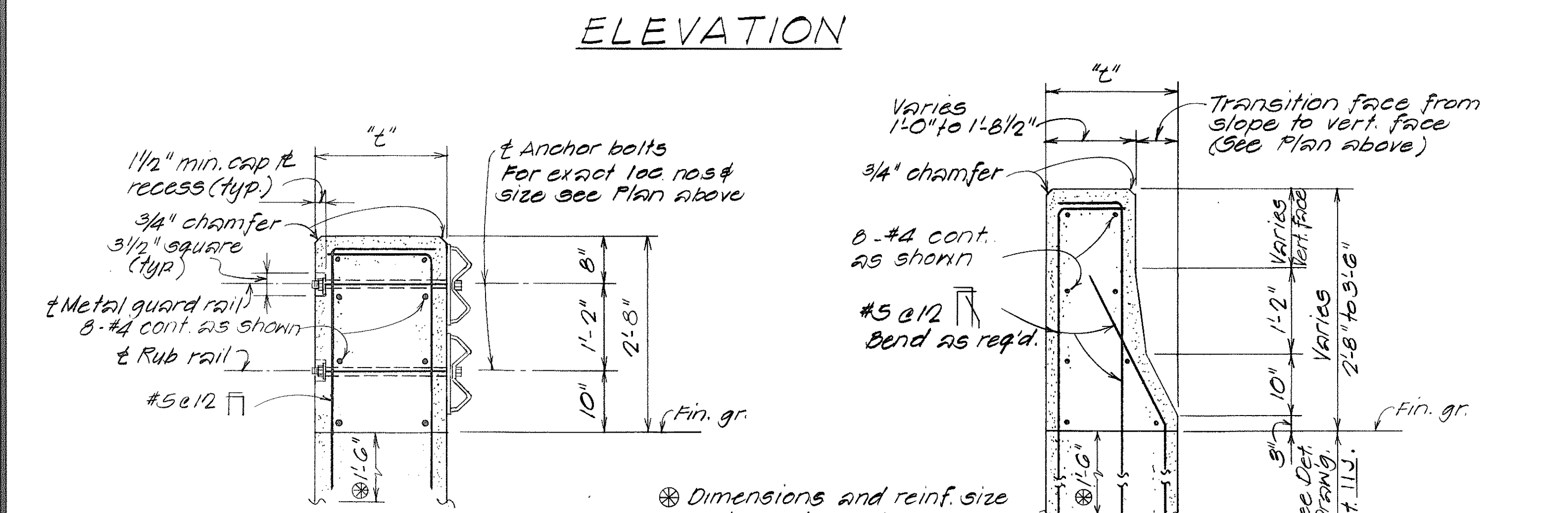
ELEVATION

TYPICAL METAL GUARD RAIL LAYOUT AT NEW END POST

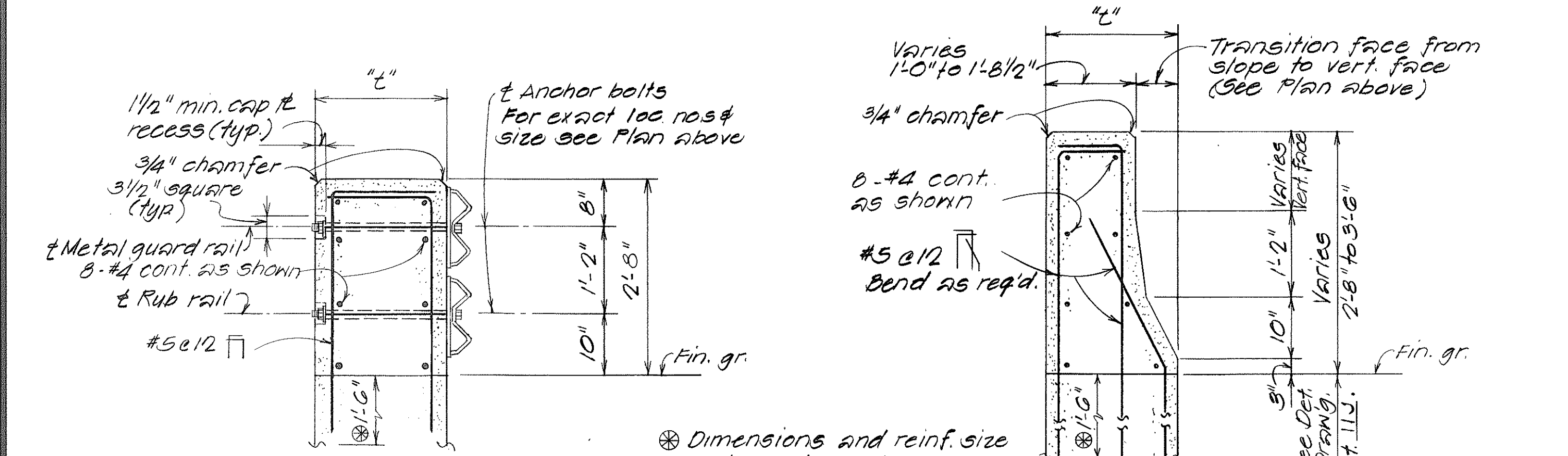
Scale: 1/4" = 1'-0"

NOTES:

1. All anchor bolts shall be high strength bolts conforming to the requirements of ASTM A325 & Galv.
2. "Terminal Connector" including anchor bolts, nuts and washers, shall be galvanized.
3. "Terminal Connector" shall be fabricated from 10 gauge steel conforming to the requirements of AASHTO M180.
4. First 25'-0" of guard rail and rub rail adjoining "Terminal Connector" shall be galvanized steel.
5. Place name & date of structure as shown. For location, see "Layout Plan" on contract drawing. Date will be year structure is completed. For letter size and detail see Standard Plans B-01.



ELEVATION



SECTION A 30J

SECTION B 30J/30J

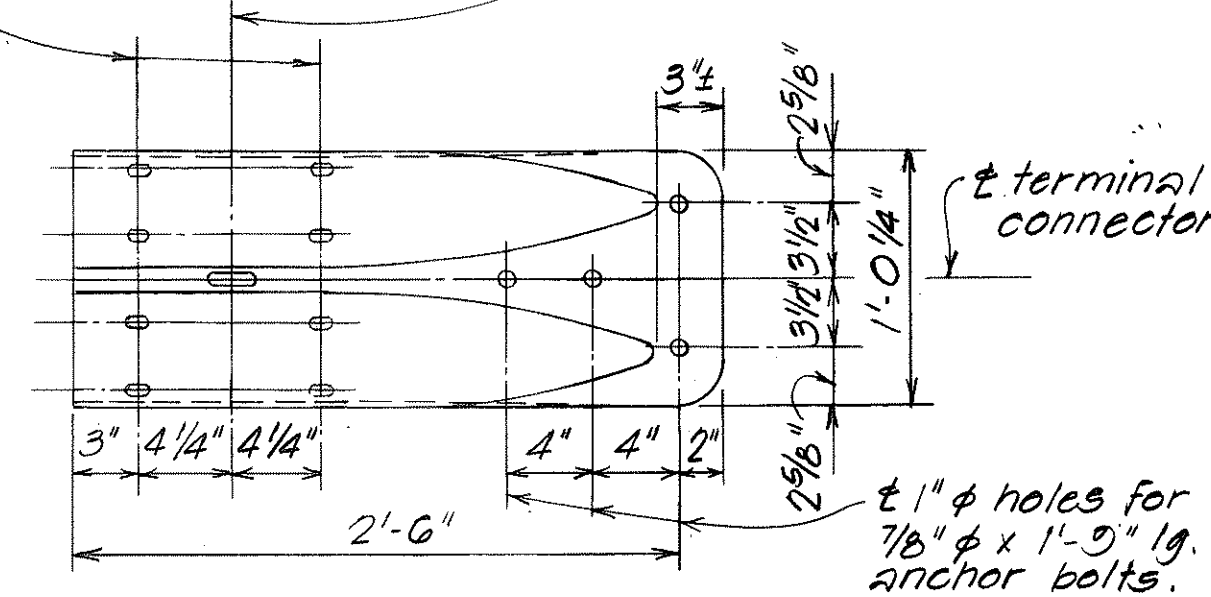
END POST DIMENSION SCHEDULE				
STRUCTURE	*L'	"t"	"A"	"B"
Bridge No. 1 & 2	10'-0"	1'-8 1/2"	2'-8"	3'-6"

TYPICAL END POST CONNECTION DETAIL

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

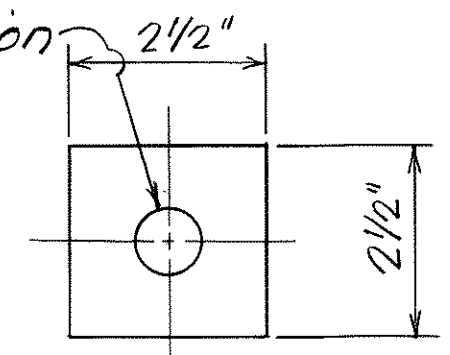
± 3/4" x 2 1/2" bolt slot for 5/8" x 1'-0" lg. anchor bolts.

± 2 1/2" x 1 1/8" slots. See "Standard Plans" TE-51 for bolt dimensions.



TERMINAL CONNECTOR DETAIL N.T.S.

1" or 3/4" hole (D + 1/8") centered in 1/2" thick steel & galvanized after fabrication



TYPICAL CAP FLANGE DETAIL N.T.S.

9/8/87 Replace Original Sheet with Revised Sheet.

DATE REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
TYPICAL DETAILS	
METAL GUARD RAIL CONNECTION AT CONCRETE END POST	
FAI PROJ. NO. I-H3-1(24):11	
Scale: As Shown	Date: Aug. 1987
SHEET No. 30J OF 30 SHEETS	