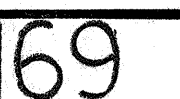


REFER TO STANDARD DETAIL DRAWINGS SHEET 5-1 THRU 5-10.



FOUNDATION NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-2-1(11)	1973	170	274

ALLOWABLE FOUNDATION PRESSURE:

PIER = 6,500 P.S.F.

PILE DATA:

- ALL PILES TO BE PRESTRESSED PILES TYPE I - SEE STANDARD DETAIL SHT. 5-54S-6
- PILE SIZE = 16" OCTAGONAL
- PILE CAPACITY = 45 TONS

SEQUENCE OF CONSTRUCTION FOR PILE DRIVING:

- CONSTRUCT ABUTMENT EMBANKMENTS TO BOTTOM OF PILE CAP.
- PRE-DRILL THROUGH EMBANKMENT DOWN TO EXISTING GRADE (HOLE SHALL BE 6" LARGER THAN DIAMETER OF PILE)
- DRIVE PILES DOWN TO FOLLOWING MINIMUM ELEVATIONS:
 - ABUTMENT No 1 = +855.00
 - ABUTMENT No 2 = +855.00
- CAST TEST PILES 7'-6" LONGER THAN AS REQUIRED BY ABOVE MINIMUM ELEVATIONS.
- FILL VOID AROUND PILES WITH LOOSE DRY SAND MEETING THE GRADING REQUIREMENTS OF 703.01 FINE AGGREGATE (SEE SPECS.)

ESTIMATED QUANTITIES - BRIDGE No 1 & 2 & RET. WALL No 1 & 2

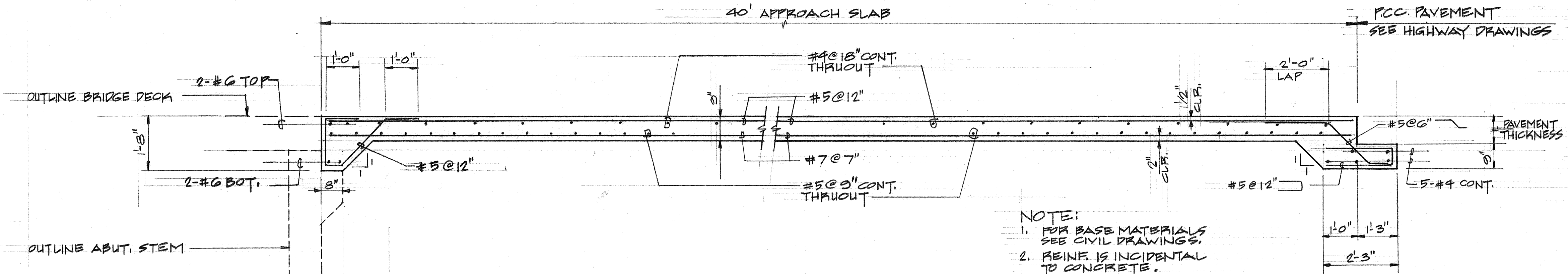
ITEM NO	ITEM	UNIT	APPROX. QUANTITY
206.60	STRUCTURAL EXCAVATION FOR BRIDGES No 1 & No 2 AND RETAINING WALLS No 1 & No 2	C.Y.	1634
206.71	STRUCTURAL BACKFILL FOR BRIDGES No 1 & No 2 AND RETAINING WALLS No 1 & No 2	C.Y.	705
206.81	FILTER MATERIAL FOR BRIDGES No 1 & No 2 AND RETAINING WALLS No 1 & No 2	C.Y.	111
503.071	CONCRETE IN BRIDGES No 1 & No 2 AND RETAINING WALLS No 1 & No 2 (EXCEPT FOOTINGS)	C.Y.	2,135
503.072	CONCRETE IN FOOTING FOR BRIDGES No 1 & No 2 & RETAINING WALLS No 1 & No 2	C.Y.	533
505.001	PILE TEST LOAD		
505.040	PRECAST-PRESTRESSED CONCRETE PILE FURNISHED	L.F.	2,977
505.400	PRECAST-PRESTRESSED CONCRETE PILE DRIVEN	L.F.	2,647
505.600	EXTENSION OR "BUILD-UPS" OF PILES		F.A.
505.700	DRILLED HOLES IN EMBANKMENT FOR PILES	L.F.	1,137
507.70	CONC. BRIDGE PARAPET, INCLUDING END POST	L.F.	933
602.011	REINFORCING STEEL IN BRIDGES No 1 & No 2 AND RETAINING WALLS No 1 & No 2	LBS	789,200
612.01	GROUTED RUBBLE PAVING	CY	642
634.01	EXPLORATORY WORK AT STRUCTURE FOOTINGS		F.A.
411.15	CONCRETE IN APPROACH APRON SLAB FOR BRIDGES No 1 & No 2	S.Y.	1075

LEGEND

- VERTICAL PILE
- BATTER PILE
- TP TEST PILE (TO DETERMINE ORDER LENGTHS)
- B-1 BORING No 1. FOR LOG OF BORINGS SEE SHT. No 22.

FOUNDATION PLAN - BRIDGE No's 1 & 2

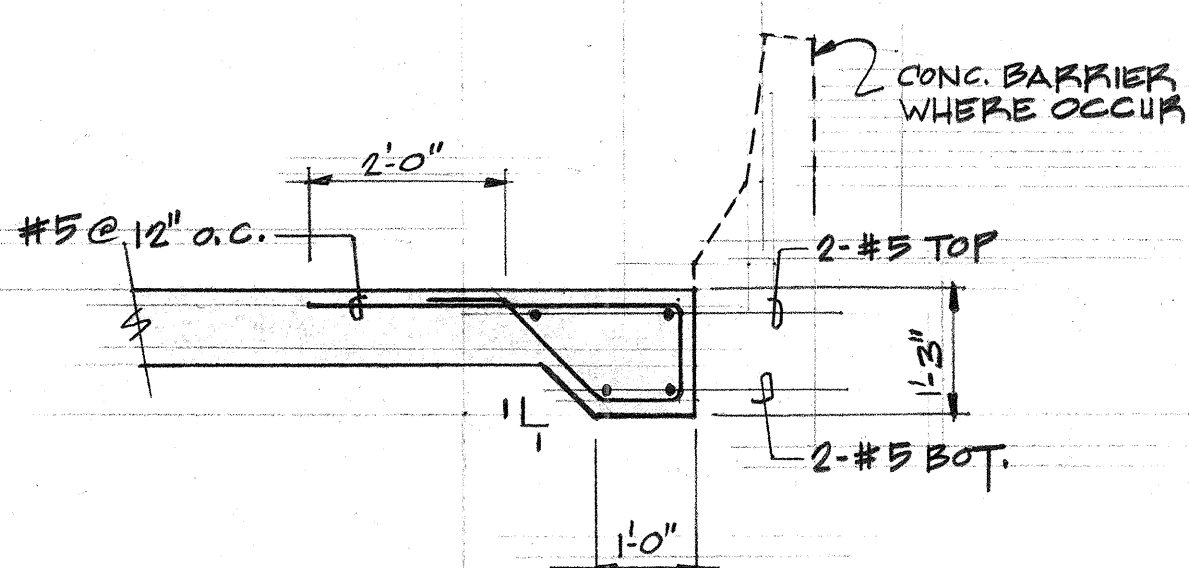
SCALE: 1" = 20'



- NOTE:
- FOR BASE MATERIALS SEE CIVIL DRAWINGS.
 - REINF. IS INCIDENTAL TO CONCRETE.

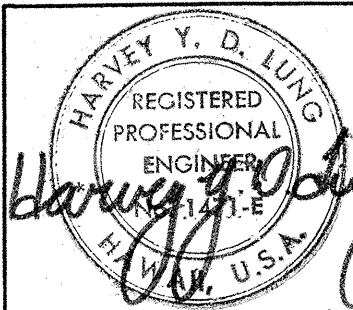
1 TYPICAL ROADWAY APPROACH SLAB

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



2 SECTION

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



AUSTIN, YEE & PARK
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745 FORT STREET HONOLULU, HAWAII

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FOUNDATION PLAN
BRIDGE No's 1 & 2

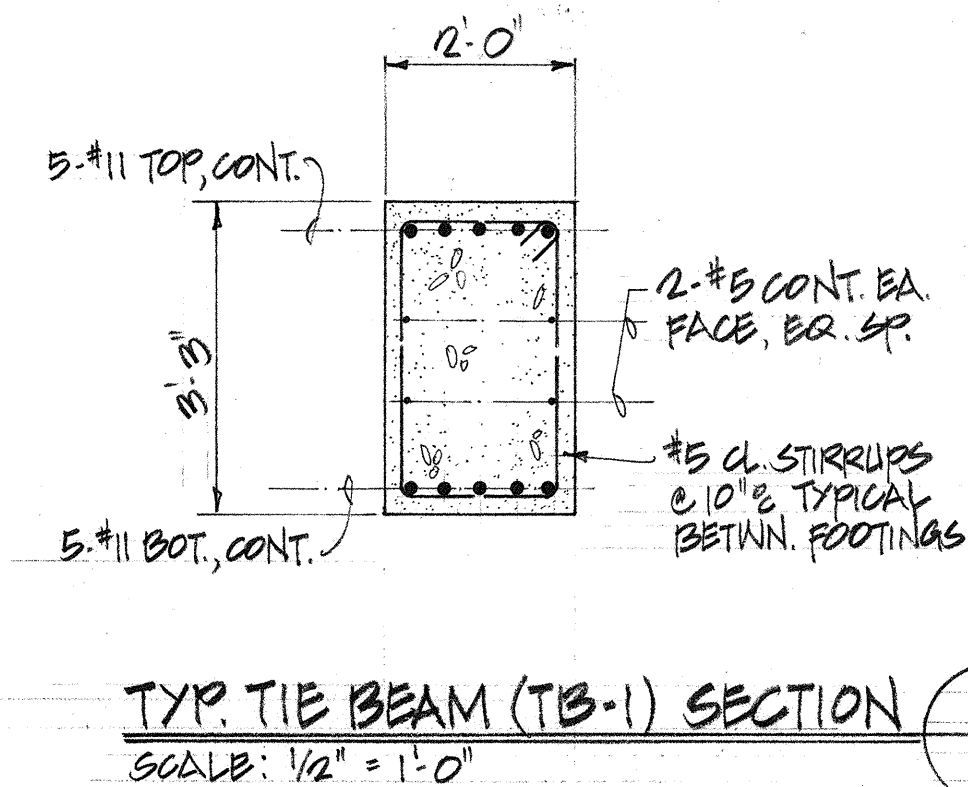
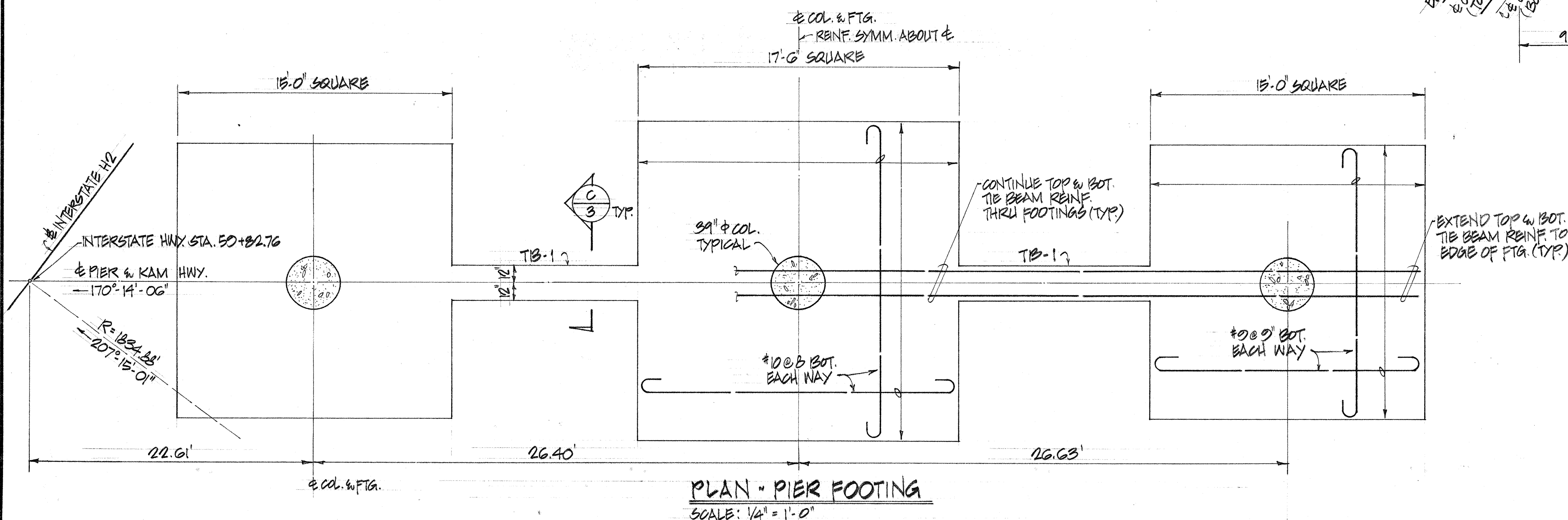
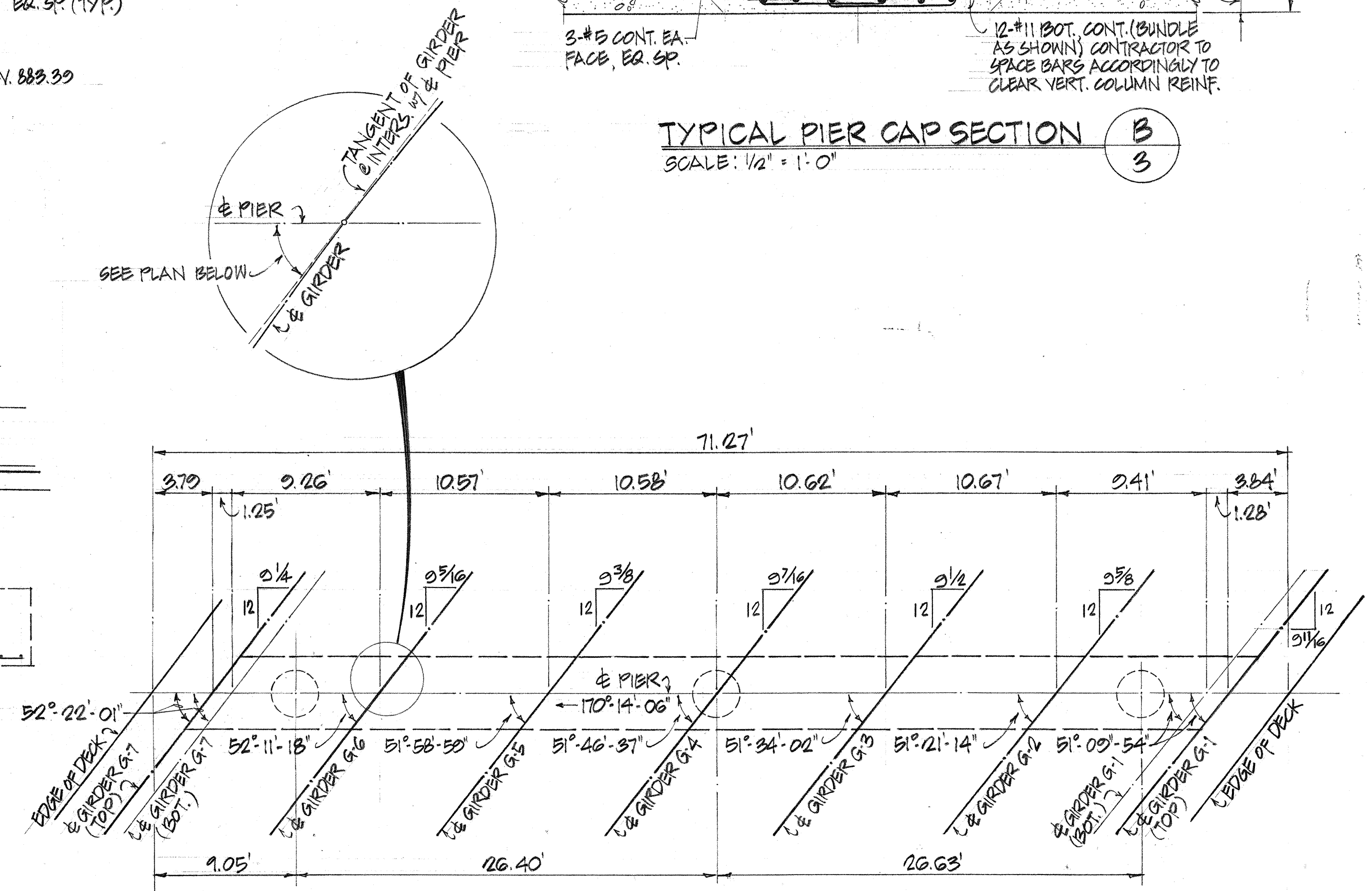
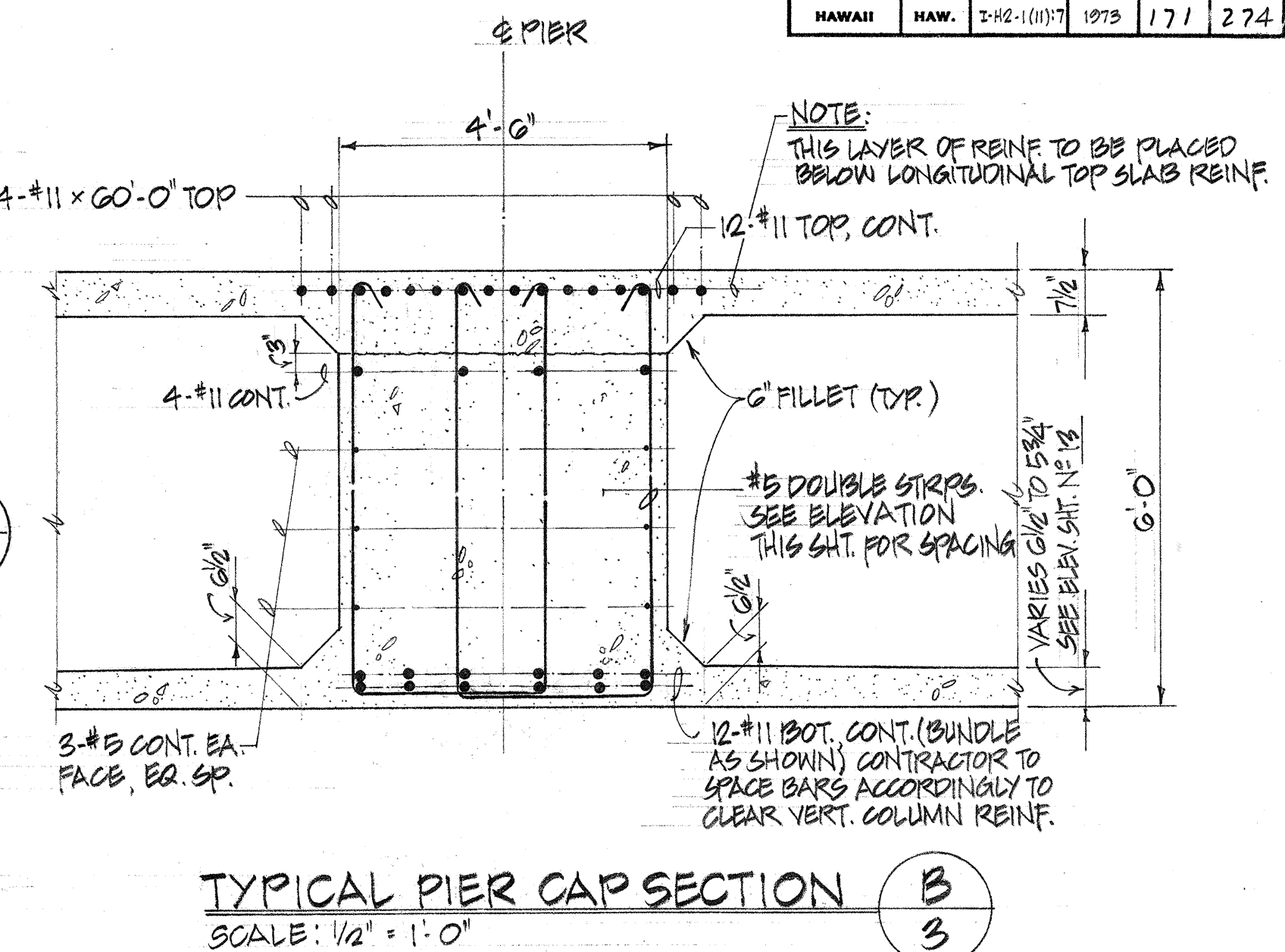
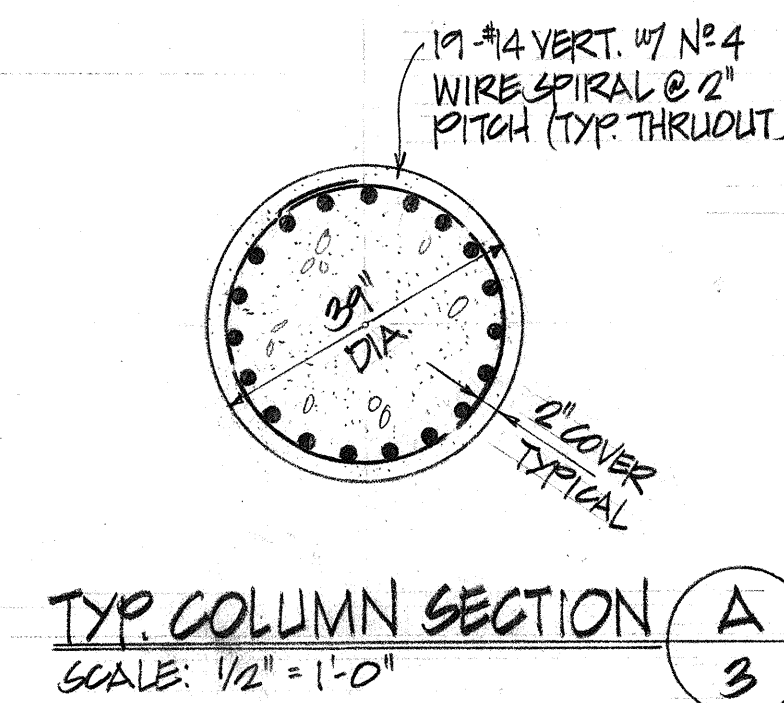
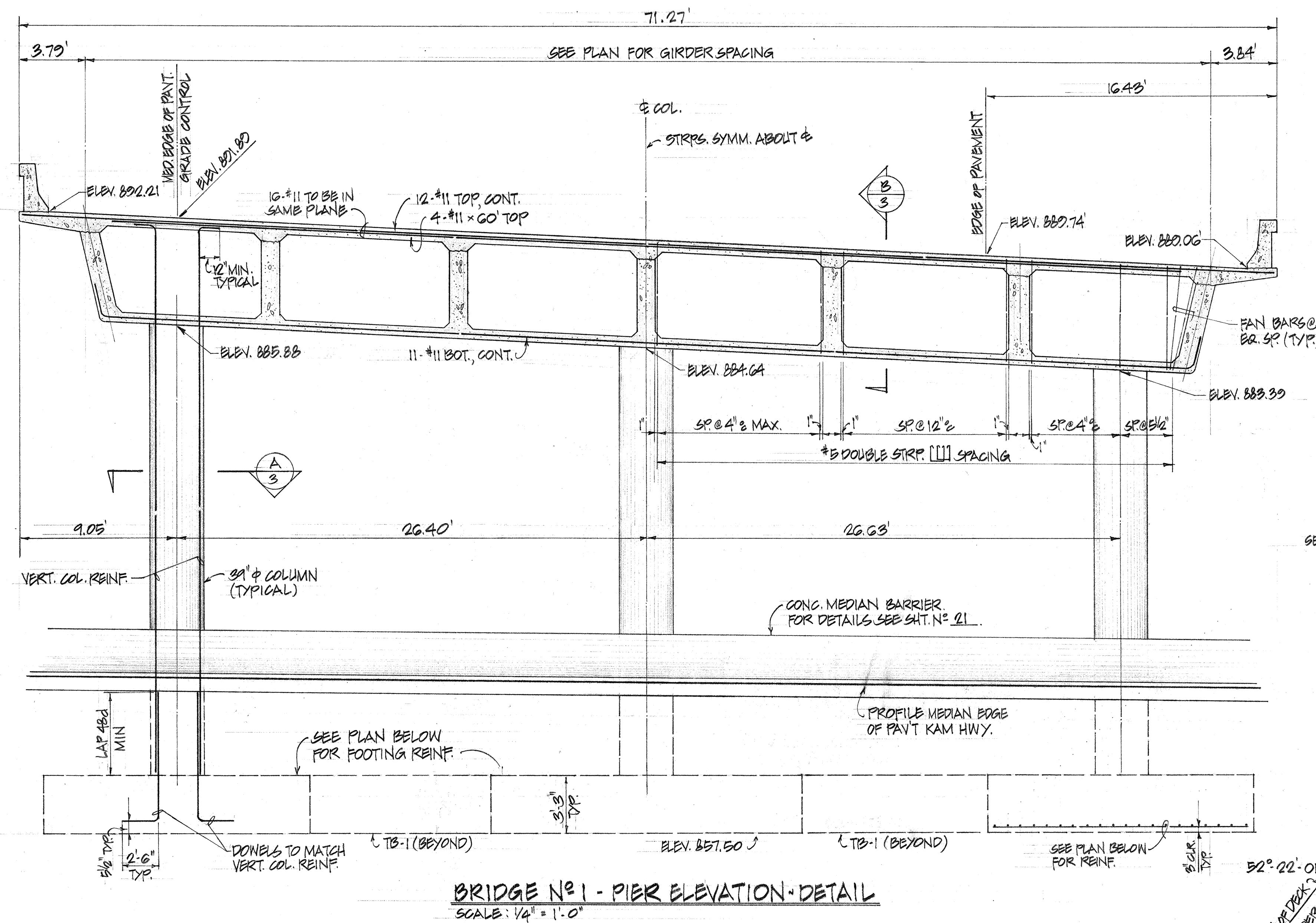
WAIHAWA INTERCHANGE
F.A.I. Project No. I-H-2-1(11):7

Scale: As noted

Date: 4-25-73

SHEET No. 2 OF 42 SHEETS

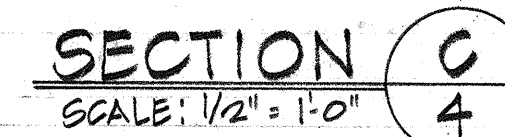
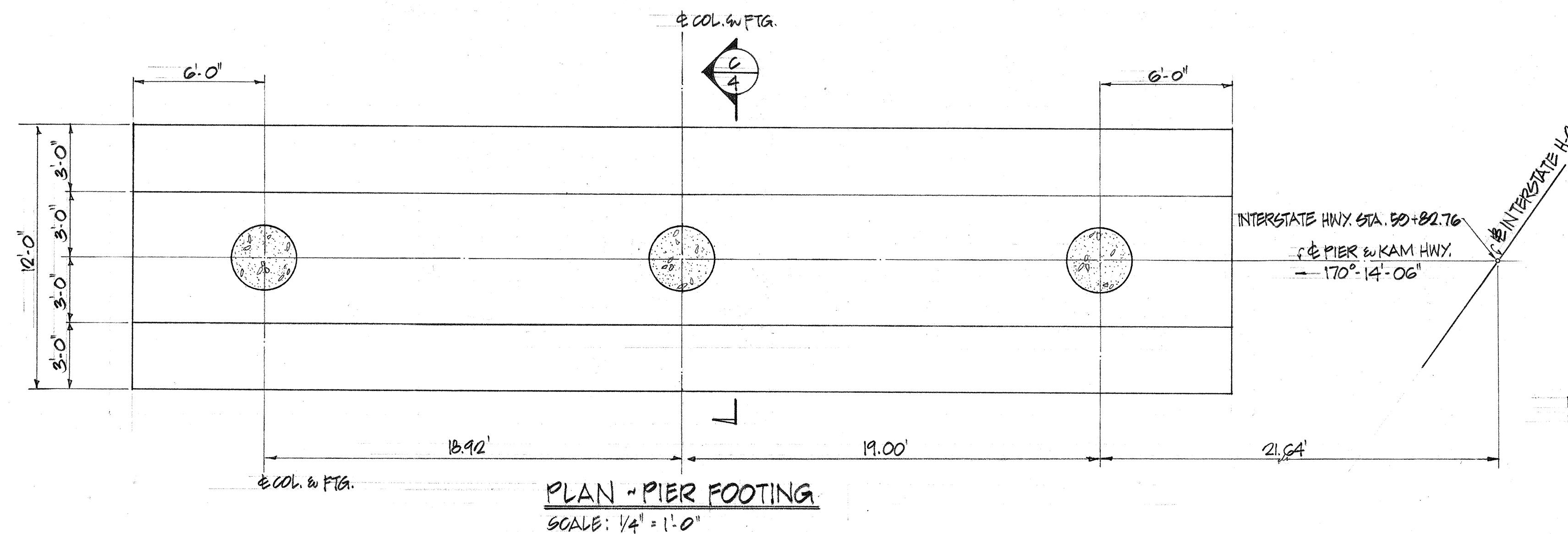
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)7	1973	171	274



		AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII	
DES. H.L.	DR. W.L.	CHK. H.L.	
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APPROVED FOR JOINT VENTURE			
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
PIER ELEVATION & DETAILS BRIDGE No 1			
WAHIAWA INTERCHANGE F.A.I. Project No. I-42-1(11)7			
Scale: As noted		Date: 4-25-73	
SHEET No. 3 OF 42 SHEETS			

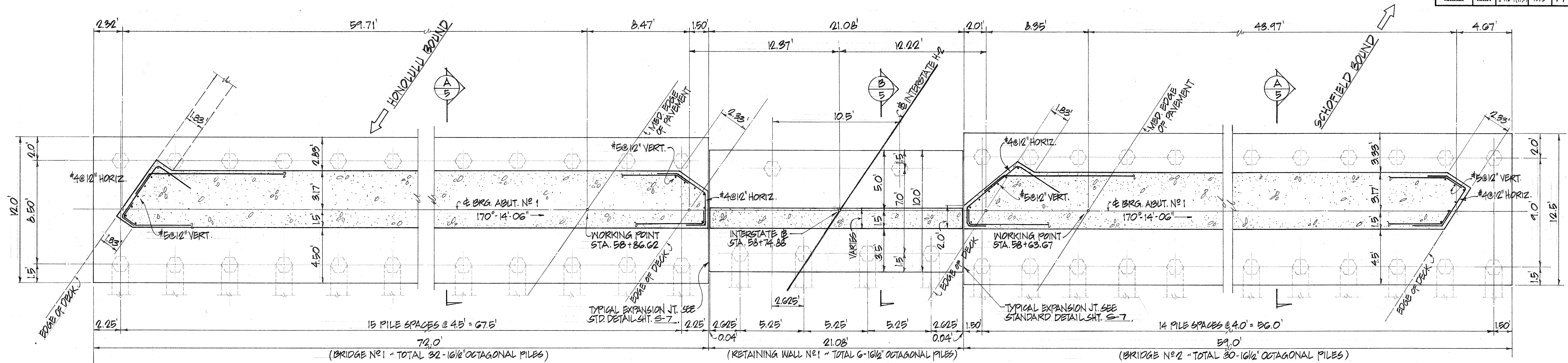
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
CHECKED BY	_____
DESIGNED BY	_____
NOTED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
CHECKED BY	_____
No.	_____

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

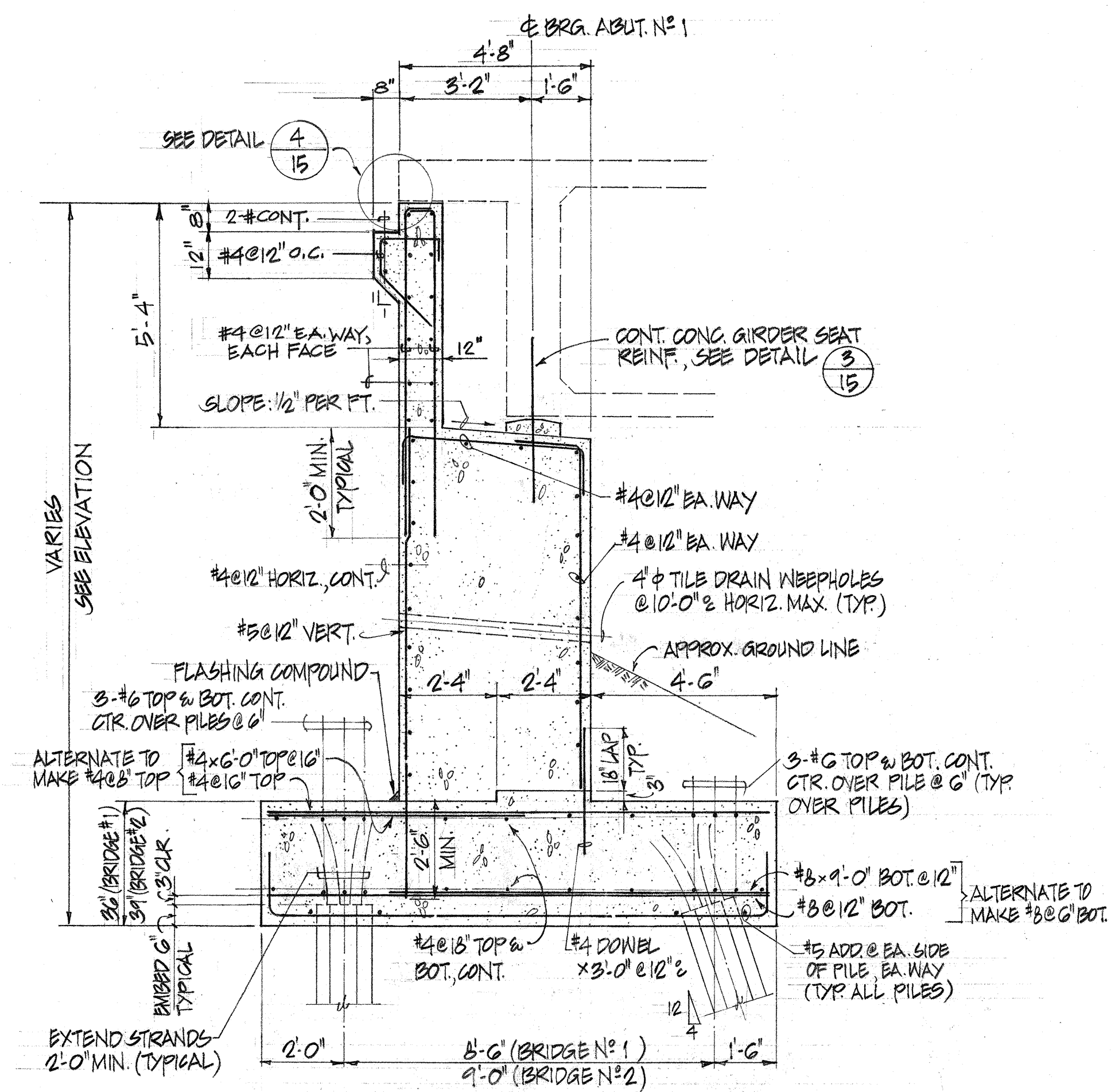


SHEET No. 4 OF 42 SHEETS

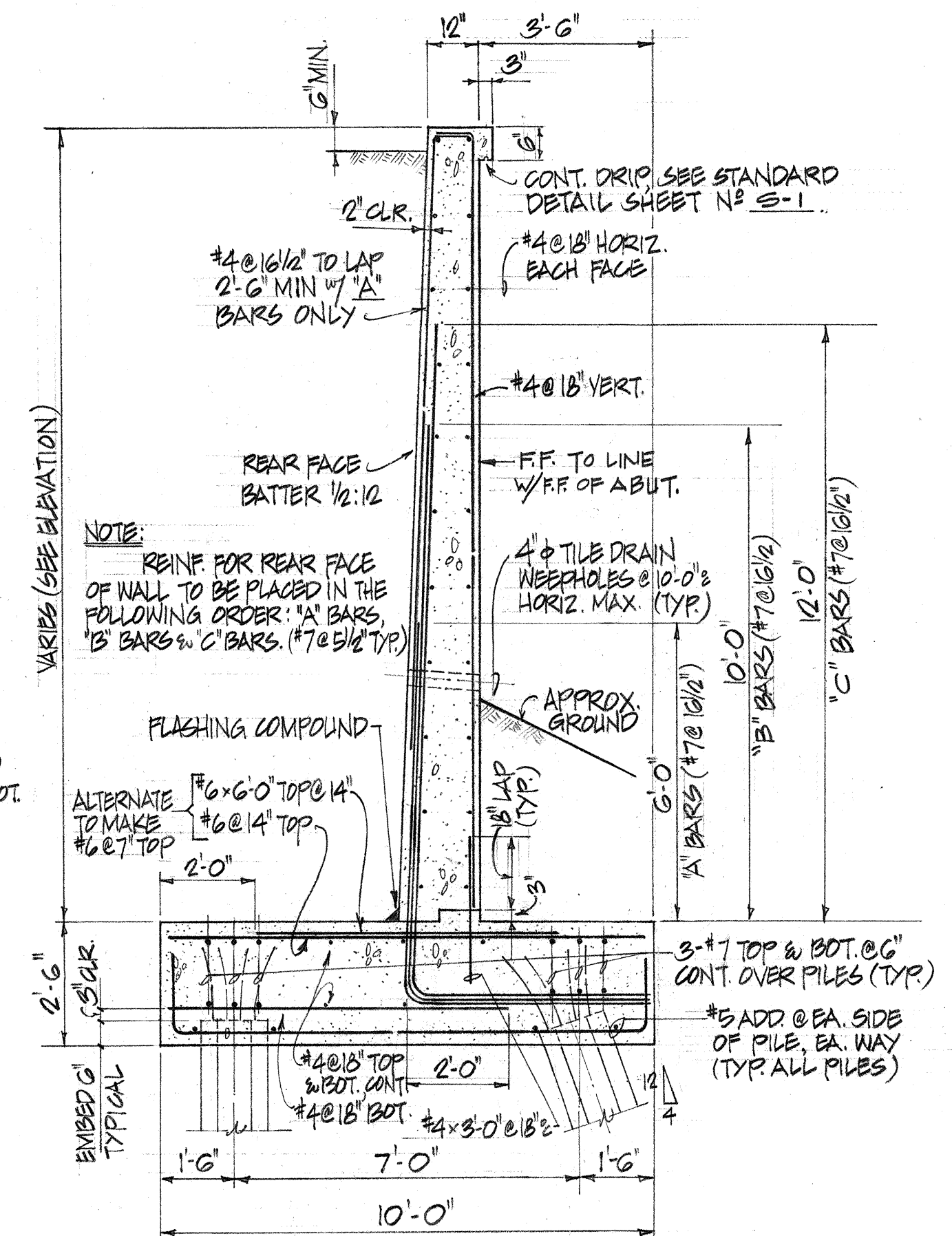
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-102-1(11)	1973	173	274



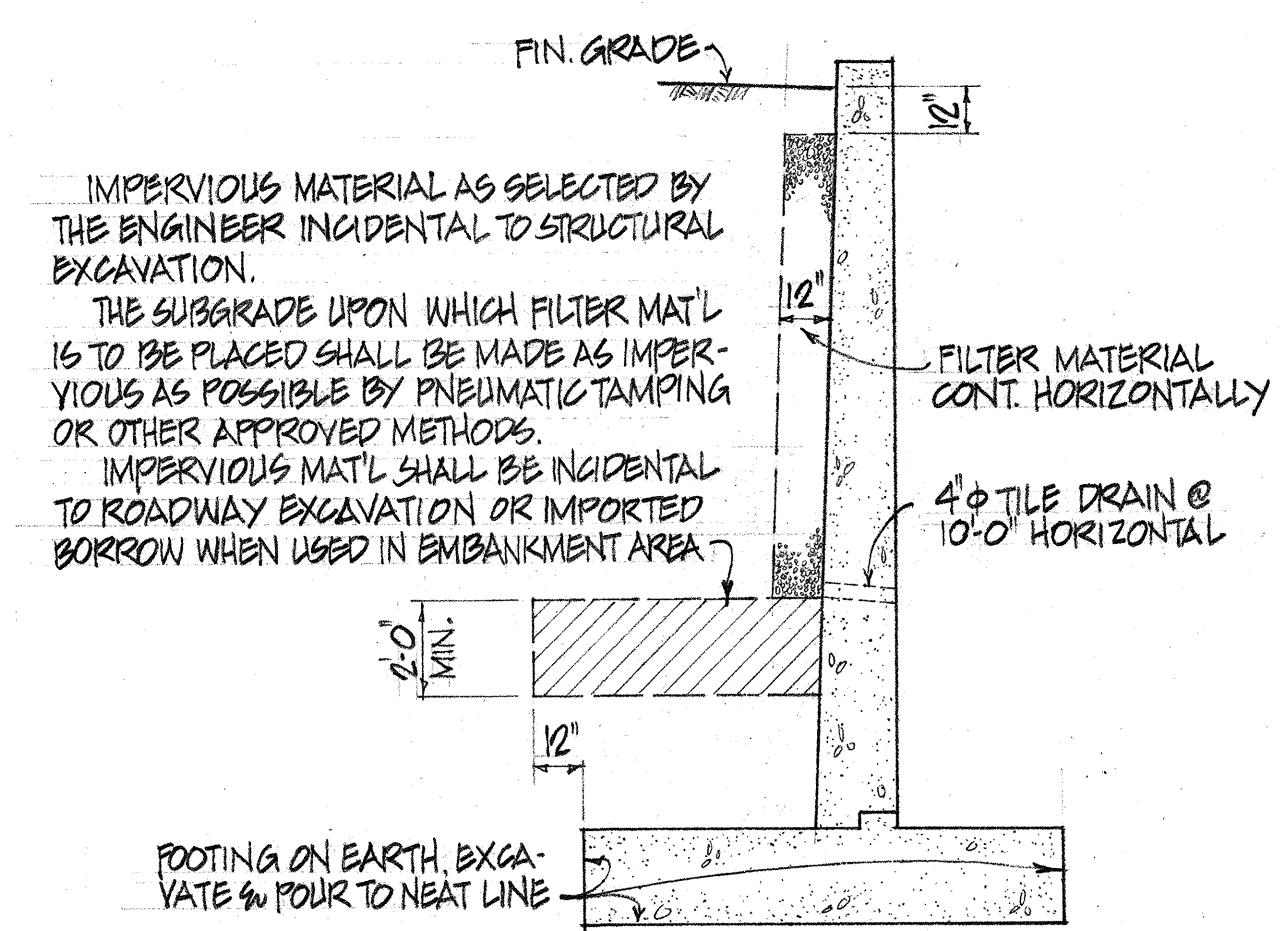
ABUTMENT NO. 1 FOUNDATION PLAN
SCALE: 1" = 4'



TYPICAL ABUTMENT SECTION A
SCALE: 3/8" = 1'-0"

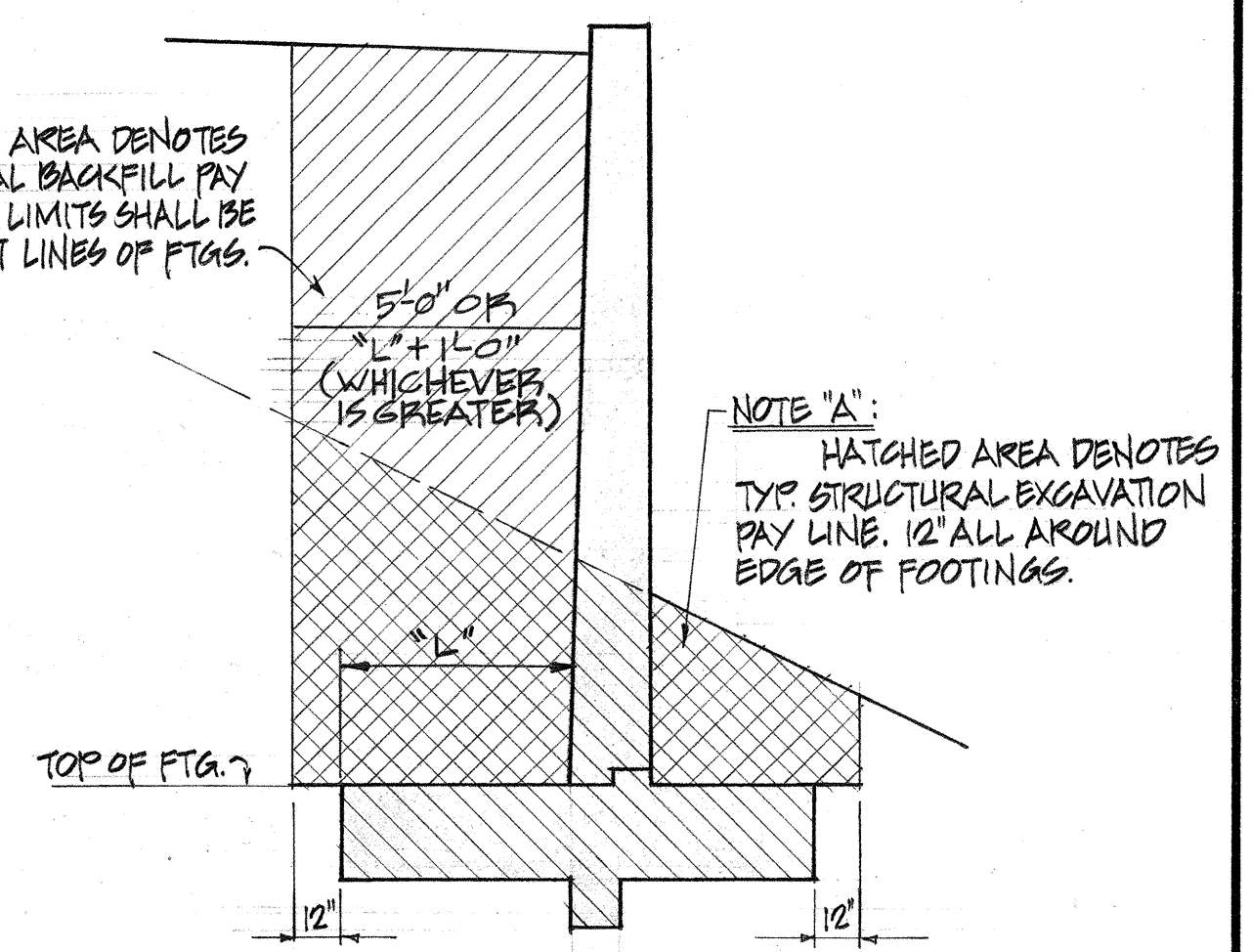


TYP. RETAINING WALL NO. 1 SECTION B
SCALE: 3/8" = 1'-0"



TYP. RETAINING WALL DRAINAGE DETAIL (ABUTMENT SIMILAR)

NOTE "B":
HATCHED AREA DENOTES
TYP. STRUCTURAL BACKFILL PAY
LINE. LATERAL LIMITS SHALL BE
12' OUTSIDE NEAT LINES OF FTGS.

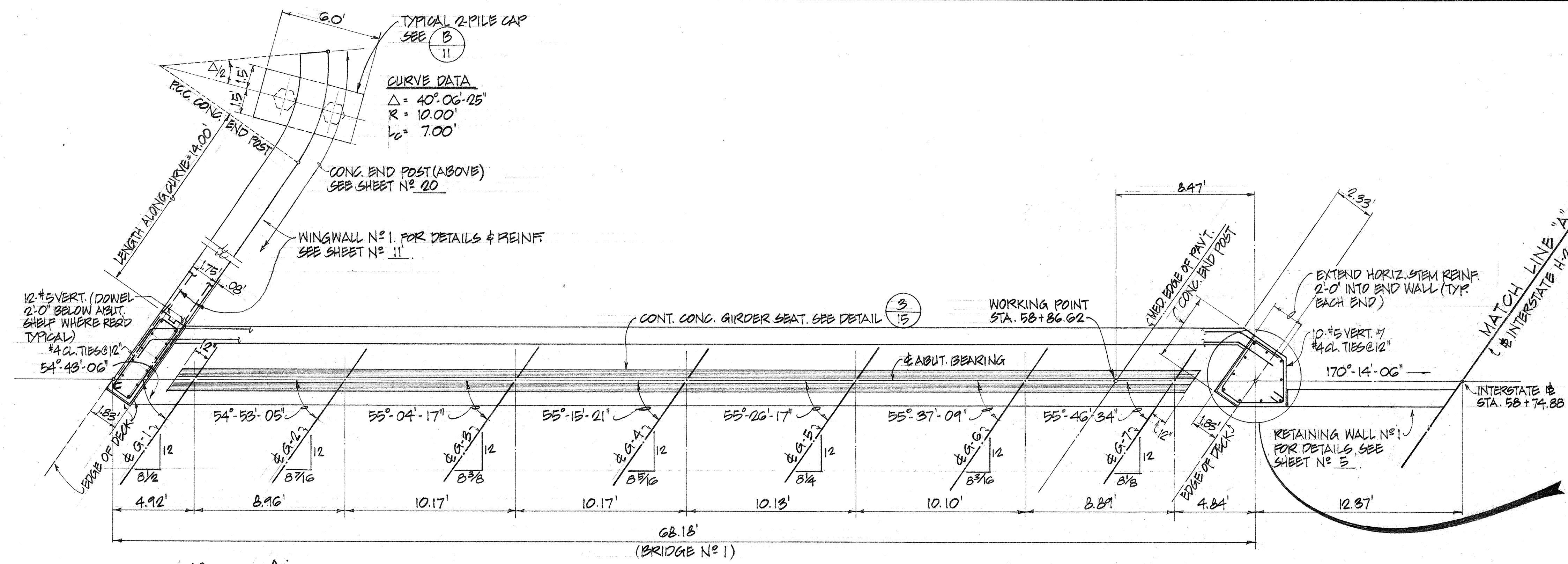


TYP. STRUCTURAL EXCAVATION & BACKFILL PAY LINE LIMITS FOR RETAINING WALLS

HARVEY Y. D. JUNG REGISTERED PROFESSIONAL ENGINEER HAWAII		AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII	
DES. H.L. DR. W.L. CHK. H.L. <i>Harvey Y. D. Jung</i>		DES. H.L. DR. W.L. CHK. H.L. <i>Donald Yee</i>	
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION			
APPROVED FOR JOINT VENTURE			
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
ABUTMENT NO. 1 - PLAN & DETAILS BRIDGE NOS. 1 & 2			
WAHIAWA INTERCHANGE F.A.I. Project No. I-102-1(11)7			
Scale: As noted		Date: 4-25-73	
SHEET No. 5 OF 42 SHEETS			

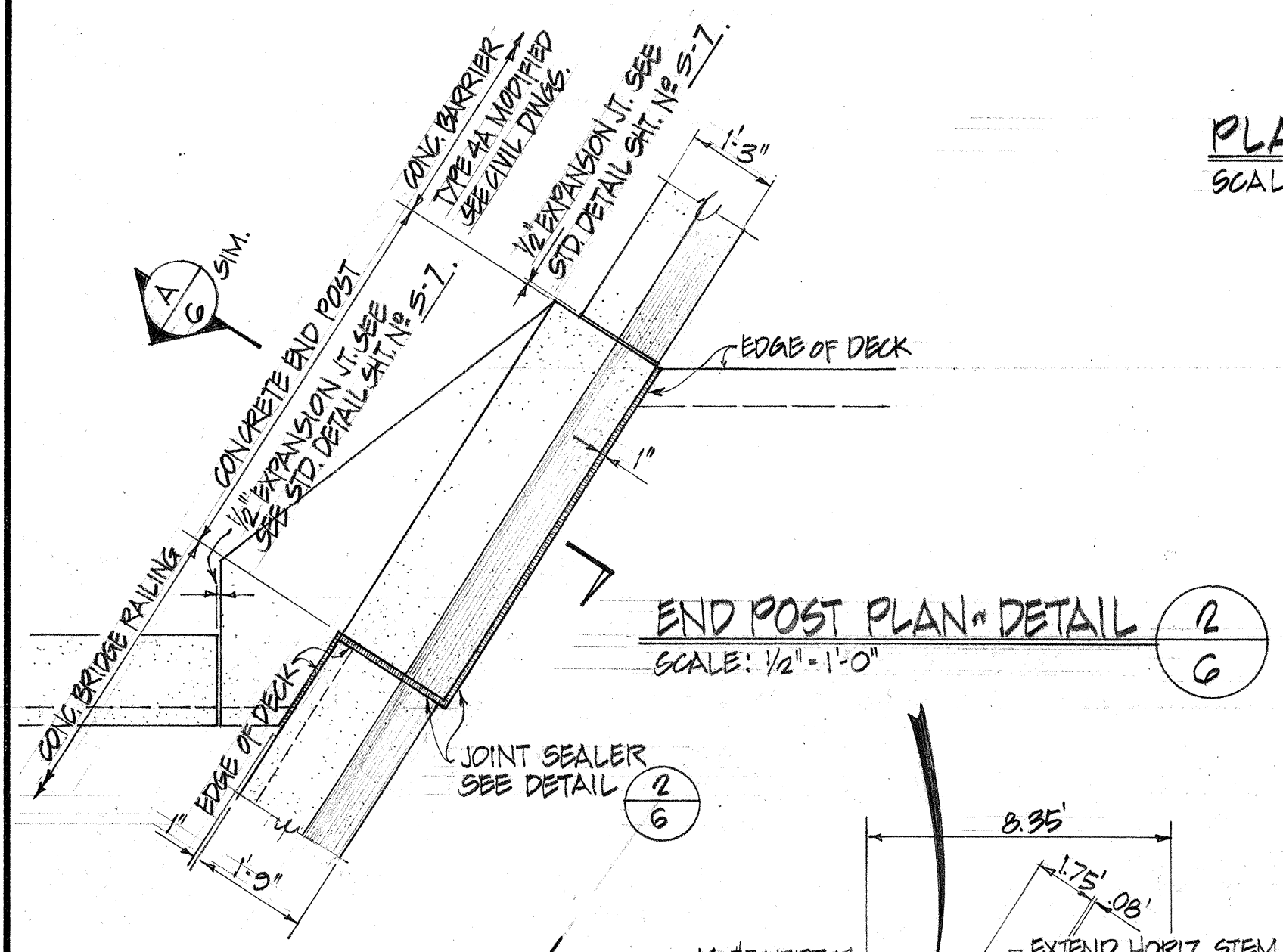
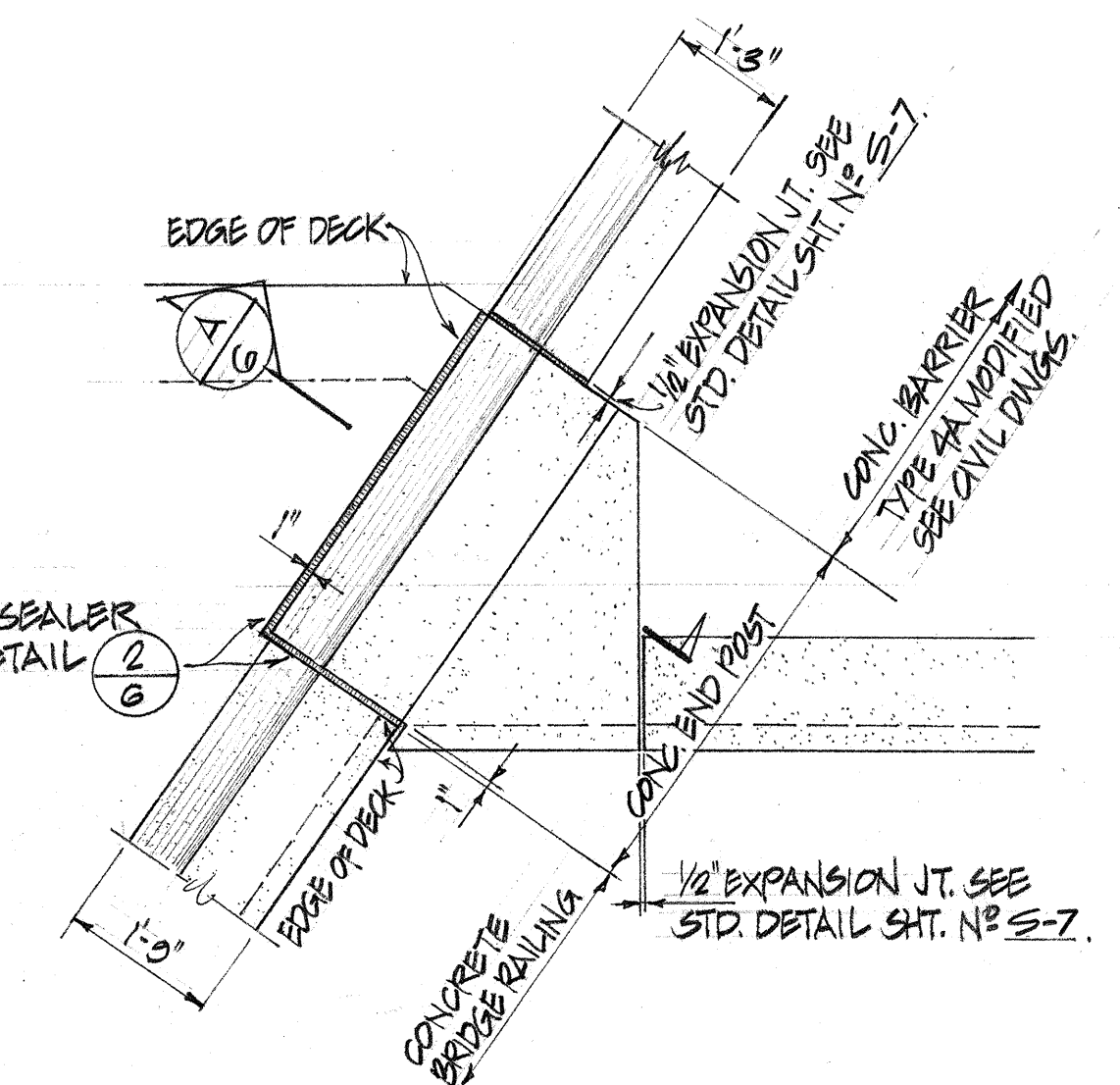
DATE	11-1-73
ORIGINAL PLAN	11-1-73
DRAWN BY	11-1-73
DESIGNED BY	11-1-73
NOTED BY	11-1-73
CHECKED BY	11-1-73
NO.	11-1-73

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)7	1973	174	274

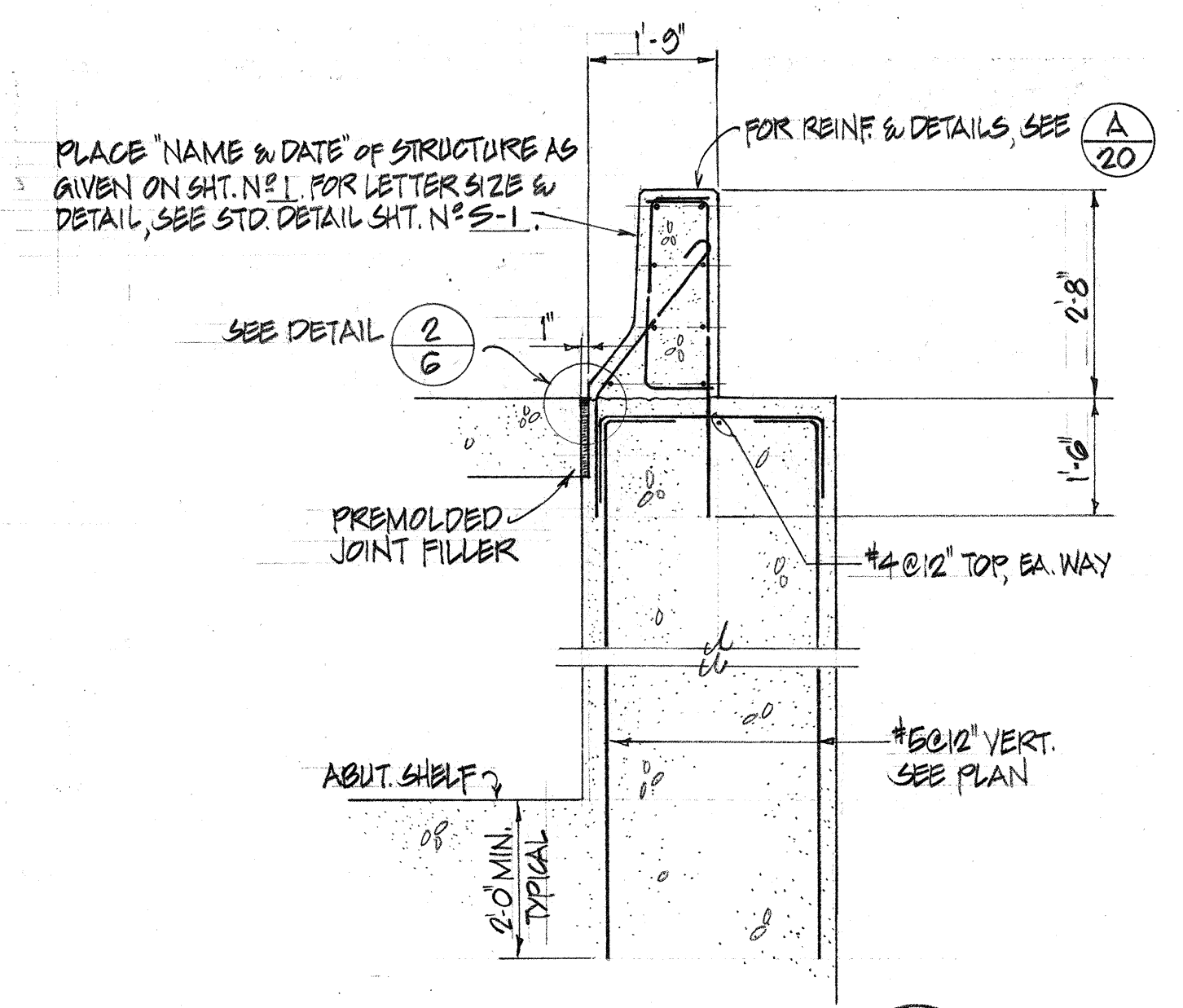


PLAN - ABUTMENT NO. 1 (BRIDGE NO. 1)
SCALE: 1" = 4'

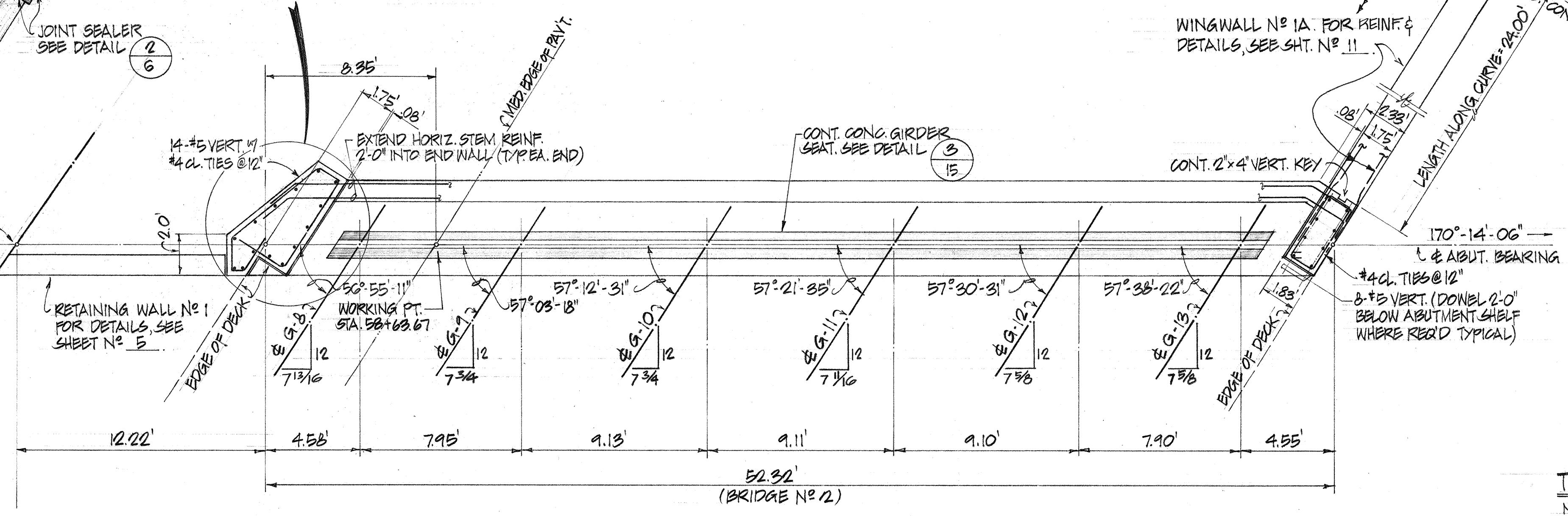
END POST PLAN - DETAIL 1
SCALE: 1/2" = 1'-0"



END POST PLAN - DETAIL 2
SCALE: 1/2" = 1'-0"

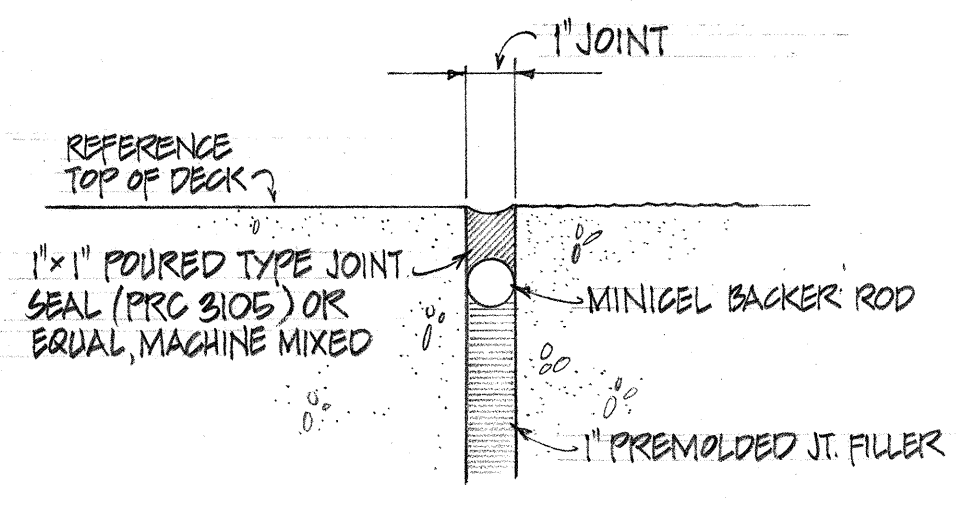


SECTION A-G
SCALE: 1/2" = 1'-0"



PLAN - ABUTMENT NO. 1 (BRIDGE NO. 2)
SCALE: 1" = 4'

TYPICAL JOINT SEALER DETAIL 2
NOT TO SCALE



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HAWAII, U.S.A.

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DES. H.L. DR. W.L. CHK. H.L.

APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN - ABUTMENT NO. 1
BRIDGE NOS. 1 & 2

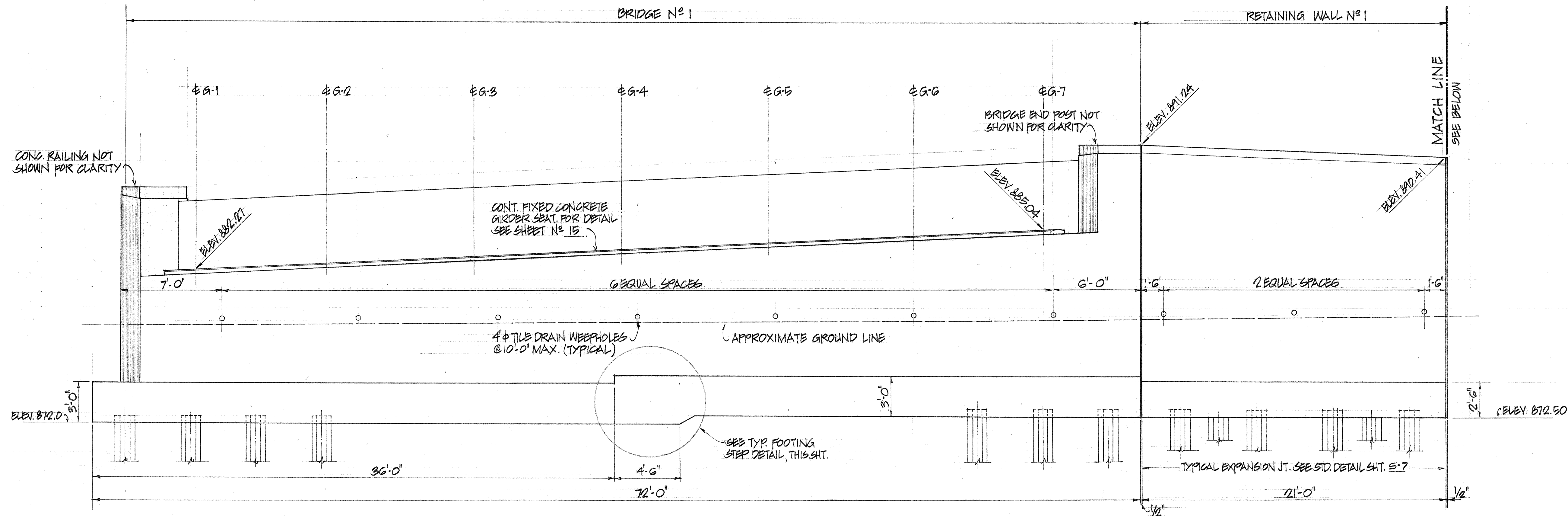
WAHIAWA INTERCHANGE
F.A.I. Project No. I-42-1(11)7

Scale: As noted Date: 4-25-73

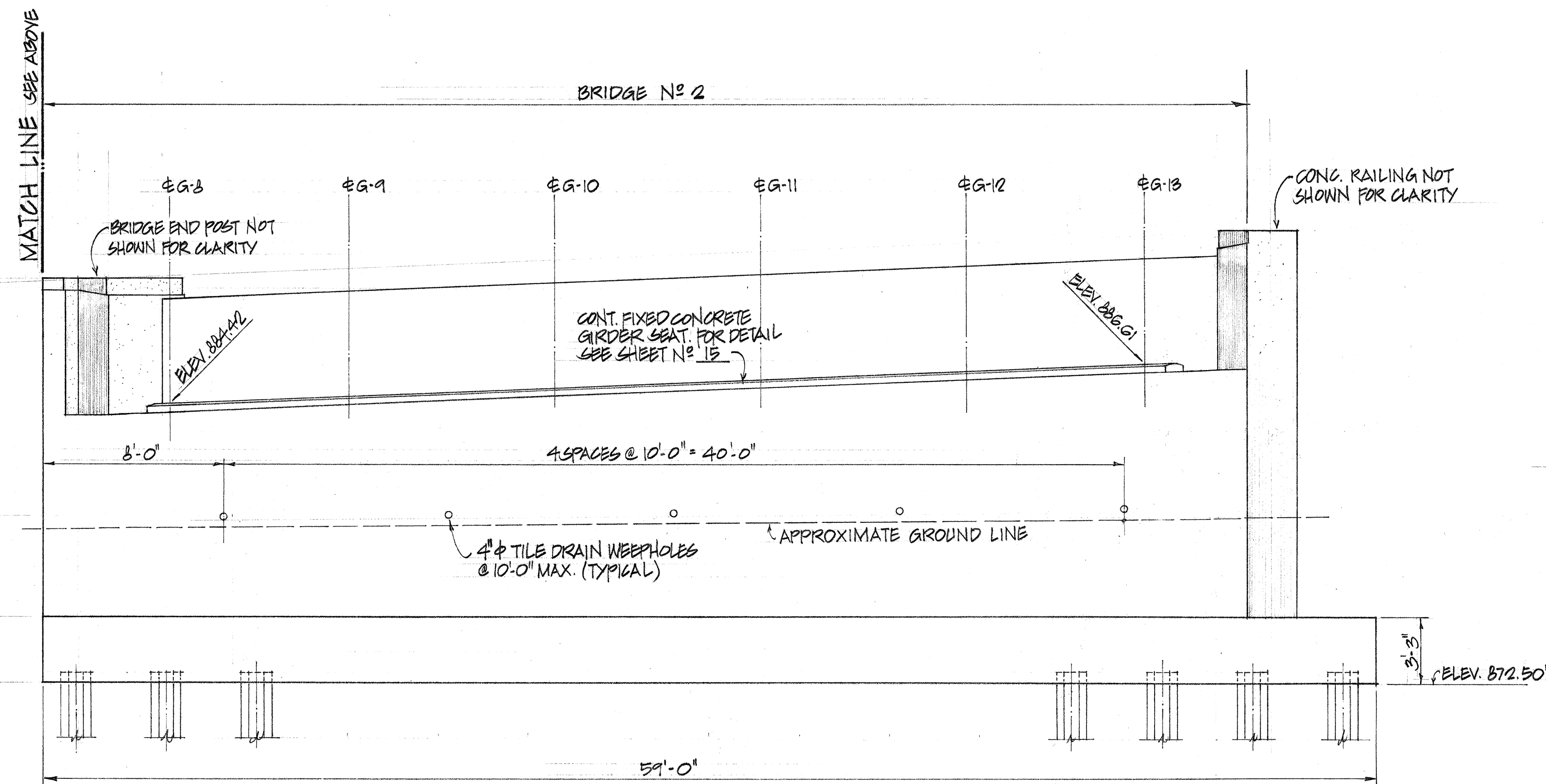
SHEET NO. 6 OF 42 SHEETS

DATE	11/1/73
SURVEY PLOTTED BY	...
DRAWN BY	...
TRACED BY	...
QUANTITIES BY	...
CHECKED BY	...
ORIGINAL PLAN	...
NOTE BOOK	...
No.	...

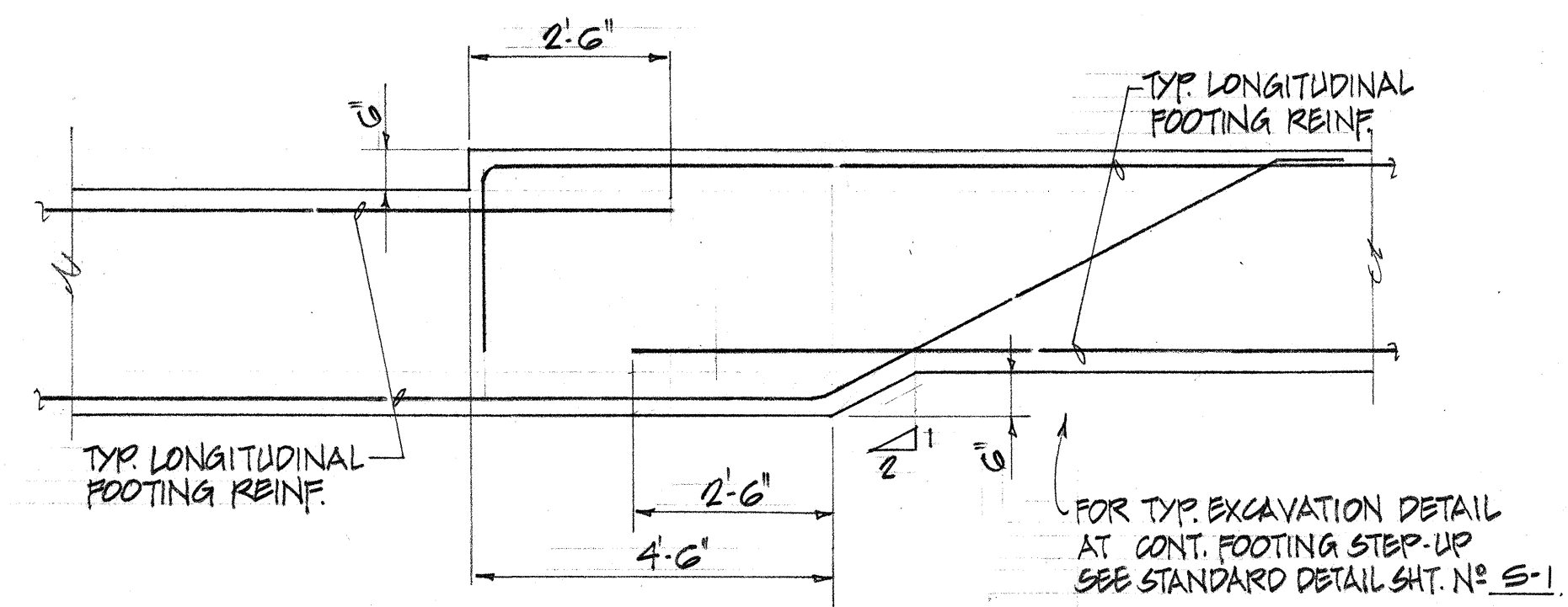
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11):7	1973	175	274



ELEVATION - ABUTMENT NO. 1
SCALE: 1/4" = 1'-0"



ELEVATION - ABUTMENT NO. 1 (CONT.)
SCALE: 1" = 4'

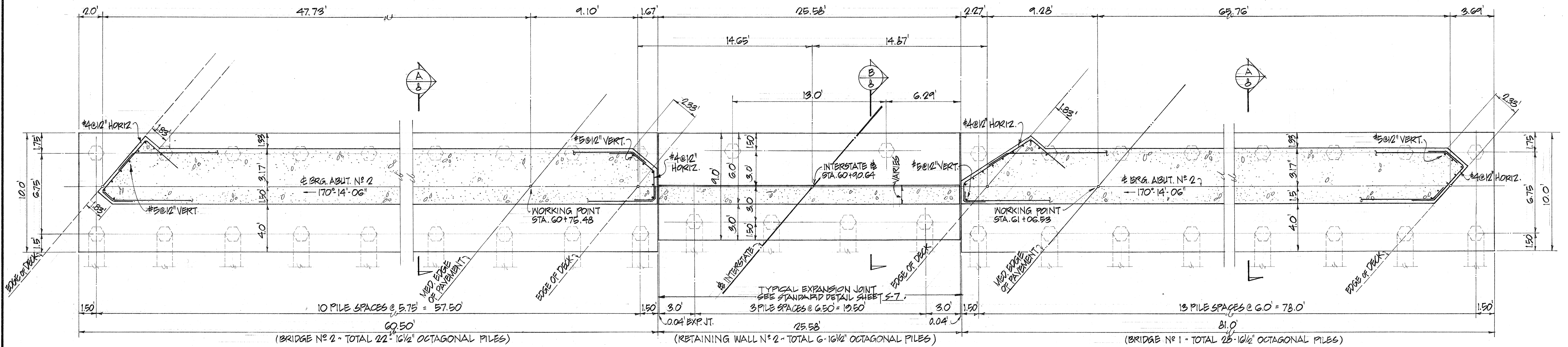


TYPICAL FOOTING STEP DETAIL
SCALE: 1/2" = 1'-0"

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

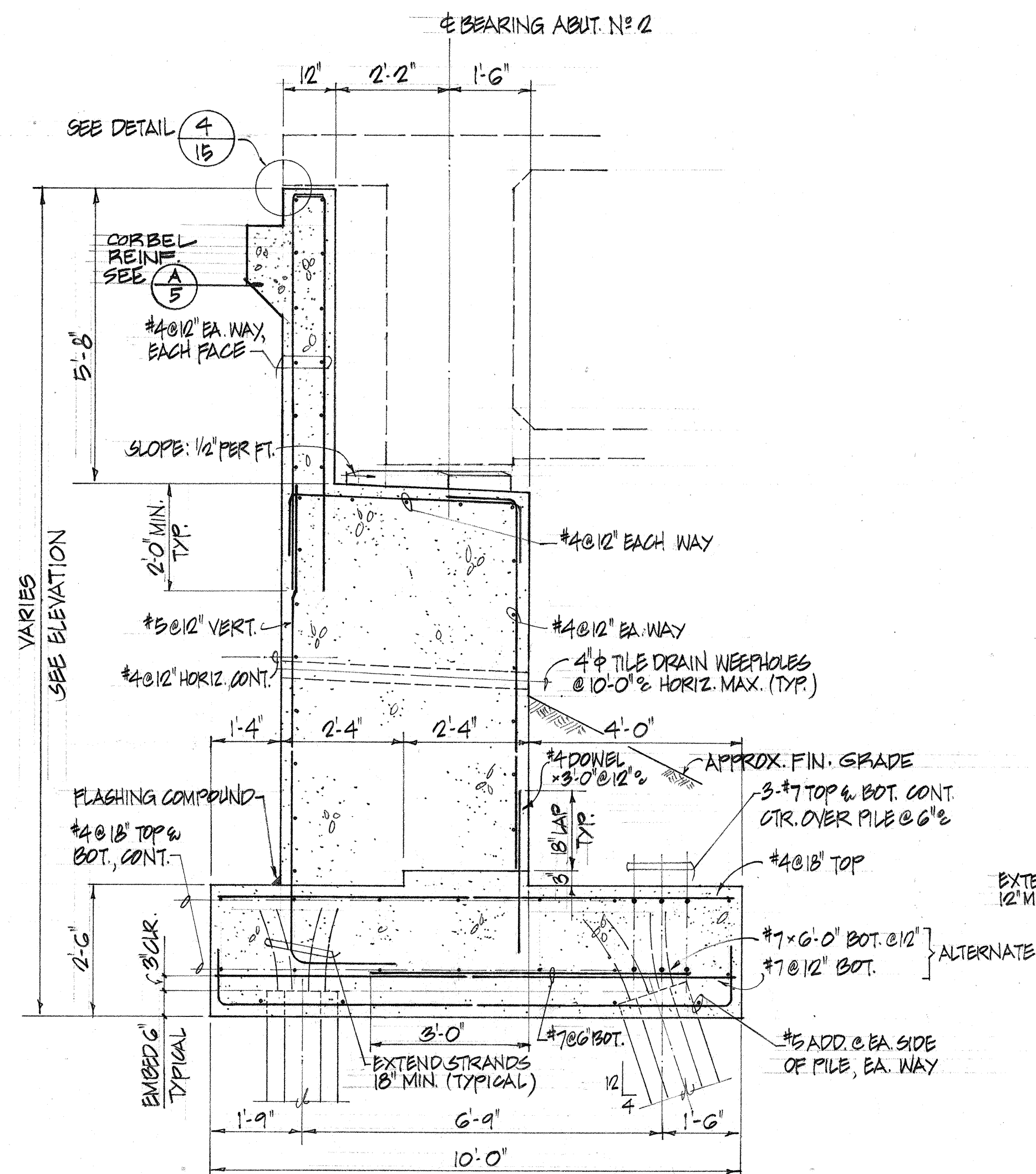
	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.I.	CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION 			
APPROVED FOR JOINT VENTURE 			
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
ELEVATION - ABUTMENT NO. 1 BRIDGE NOS. 1 & 2			
WAHIAWA INTERCHANGE F.A.I. Project No. I-42-1(11):7			
Scale: As noted		Date: 4-25-73	
SHEET No. 7 OF 42 SHEETS			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)	1973	176	274



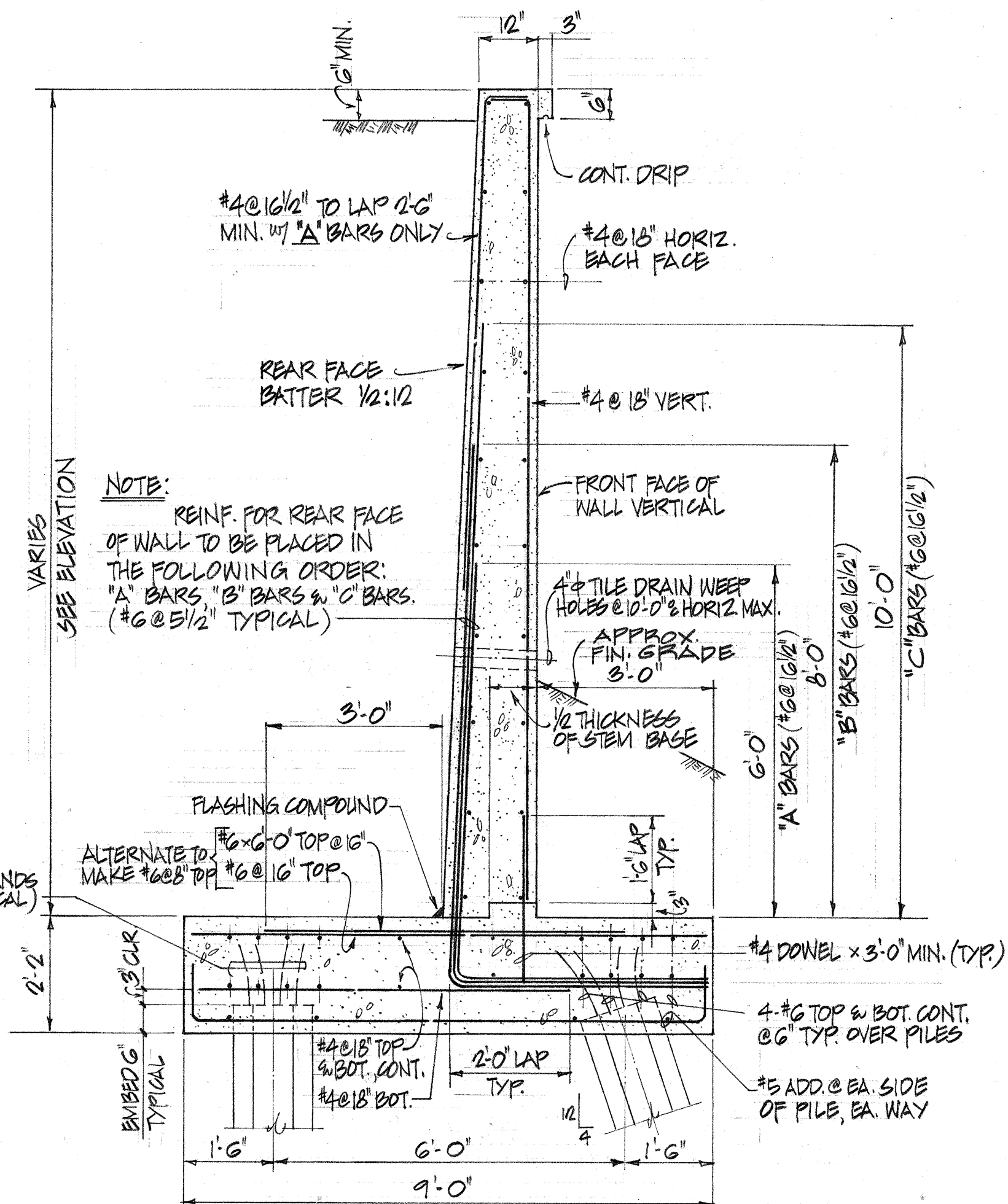
ABUTMENT No 2 FOUNDATION PLAN

SCALE: 1" = 4'



TYPICAL ABUTMENT No 2 SECTION

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



TYPICAL RETAINING WALL No 2 SECTION

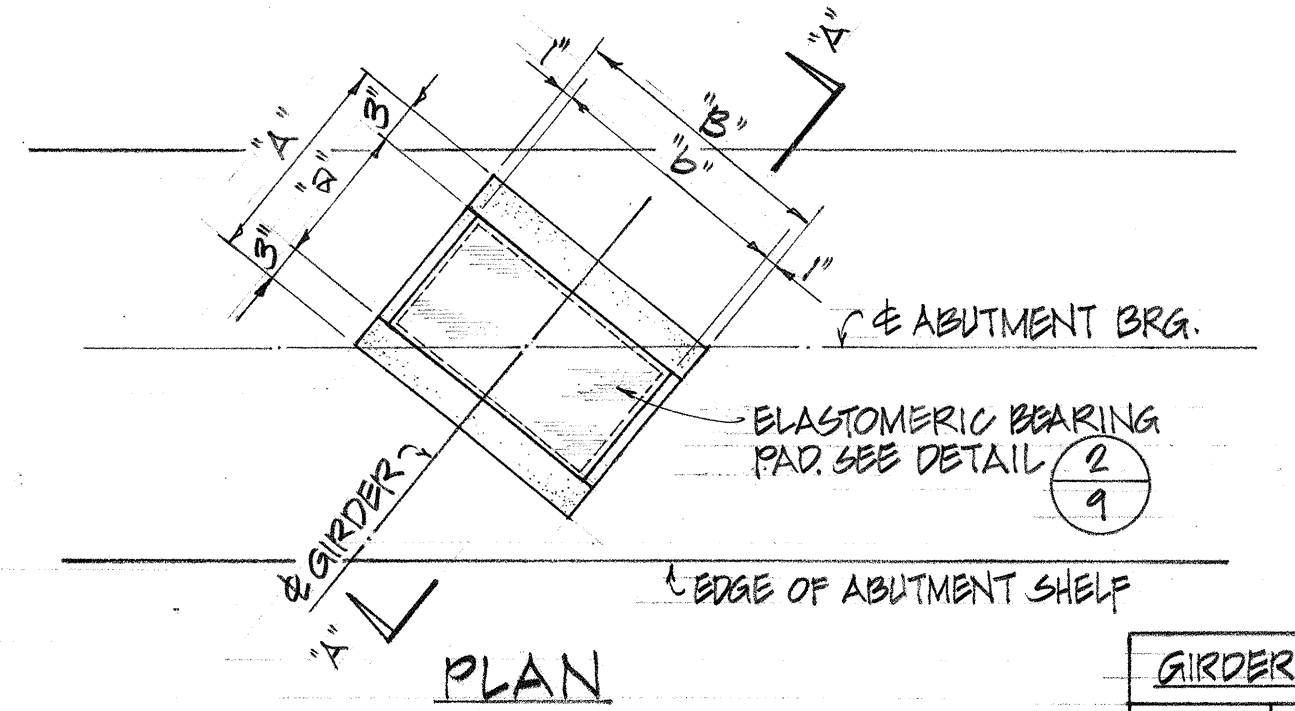
SCALE: 1/2" = 1'-0"

NOTE:
FOR TYPICAL RETAINING WALL &
ABUTMENT DRAINAGE DETAIL, SEE
SHEET No 5.

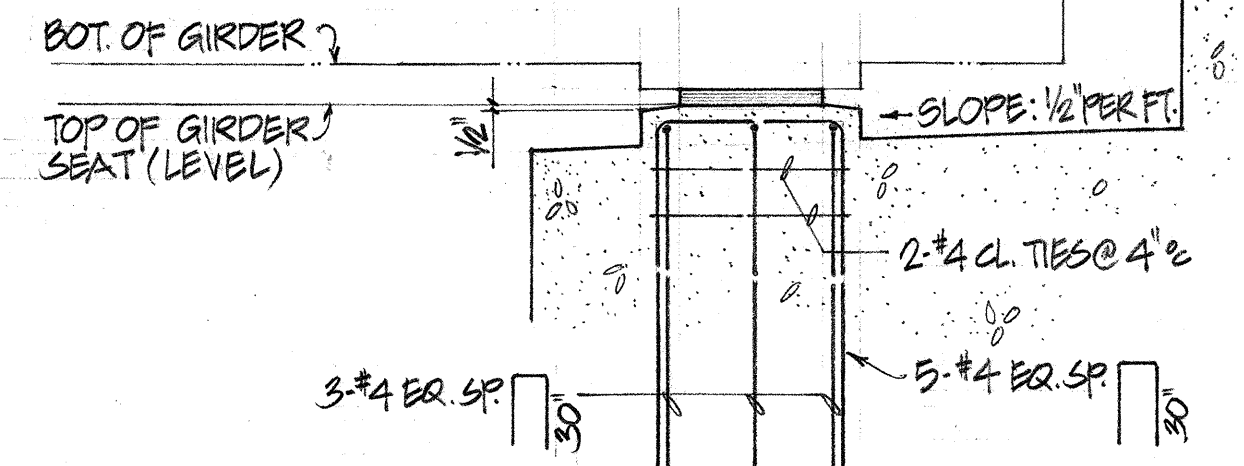
	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.I.	CHK. H.L.
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ABUTMENT No 2 - PLAN & DETAILS BRIDGE No 1 & 2			
WAHIAWA INTERCHANGE F.A.I. Project No. I-42-1(11)7			
Scale: As noted		Date: 4-25-73	
SHEET No. 8 OF 42 SHEETS			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H2-1(11)	1973	177	274

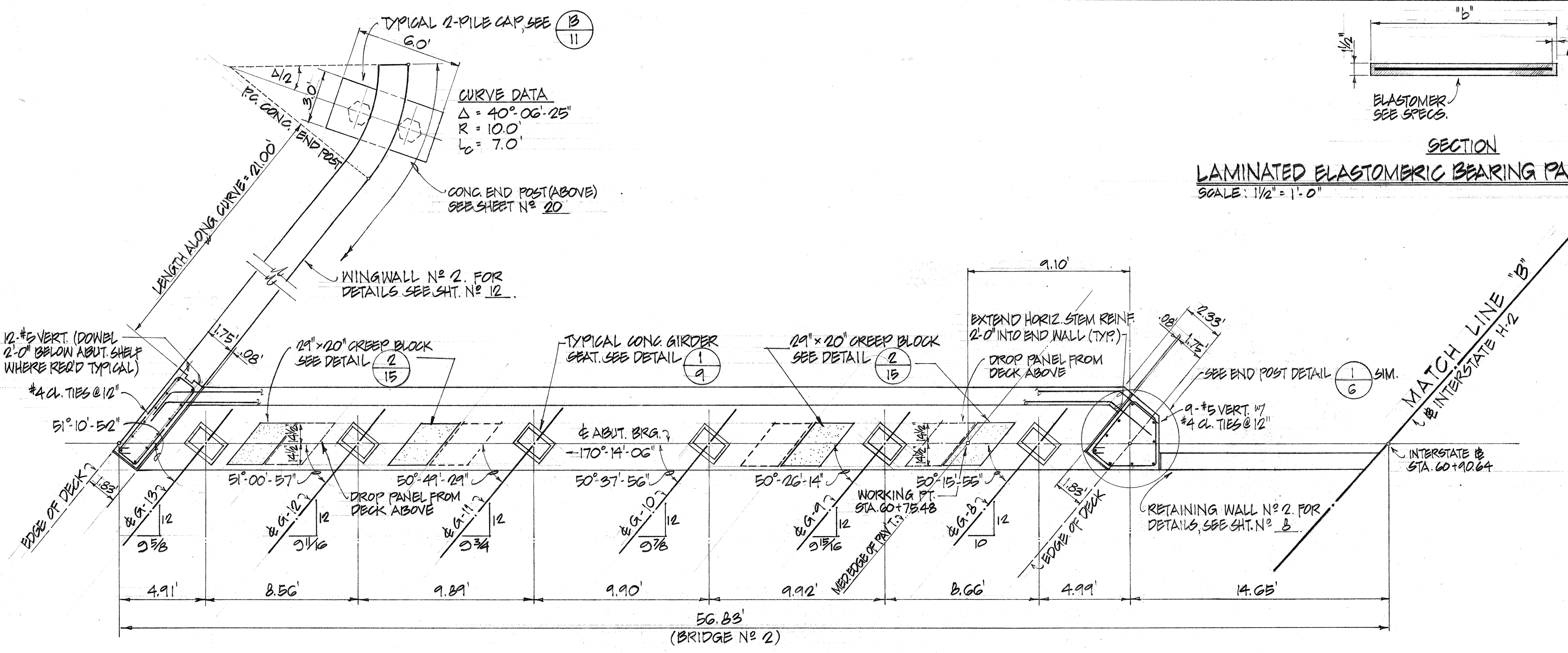
SECTION LAMINATED ELASTOMERIC BEARING PAD DETAIL SCALE: 1/2" = 1'-0"



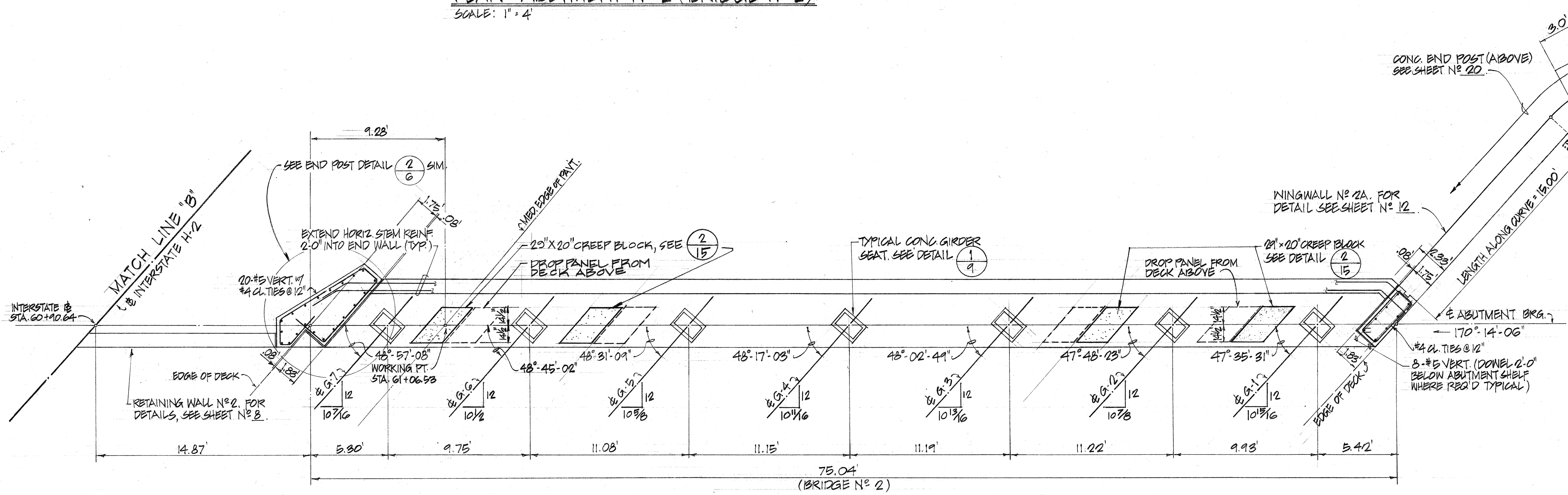
GIRDER SEAT SCHEDULE		
	BRIDGE NO. 1 & 2	BRIDGE NO. 3 & 4
"a"	12"	13"
"A"	18"	19"
"b"	21"	24"
"B"	23"	26"



SECTION "A-A" TYPICAL CONCRETE GIRDER SEAT DETAIL SCALE: 3/4" = 1'-0"



PLAN - ABUTMENT NO. 2 (BRIDGE NO. 2) SCALE: 1" = 4'



PLAN - ABUTMENT NO. 2 (BRIDGE NO. 1) SCALE: 1" = 4'

HARVEY Y. D. LUNG
REGISTERED PROFESSIONAL ENGINEER
NO. 10000
HAWAII, U.S.A.

AUSTIN, YEE & PARK
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745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. CHK. H.L.
Donald H. Yee
APPROVED FOR JOINT VENTURE

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN - ABUTMENT NO. 2
BRIDGE NO. 1 & 2

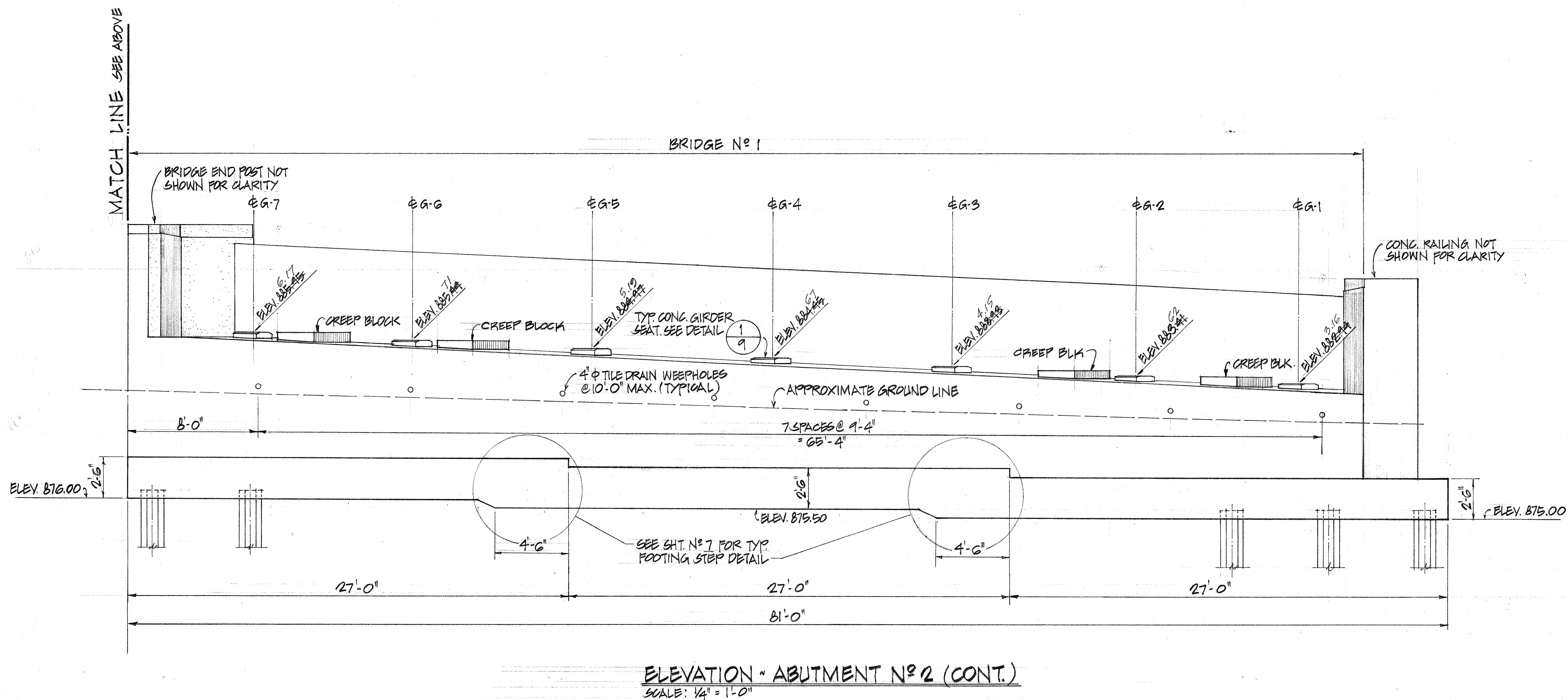
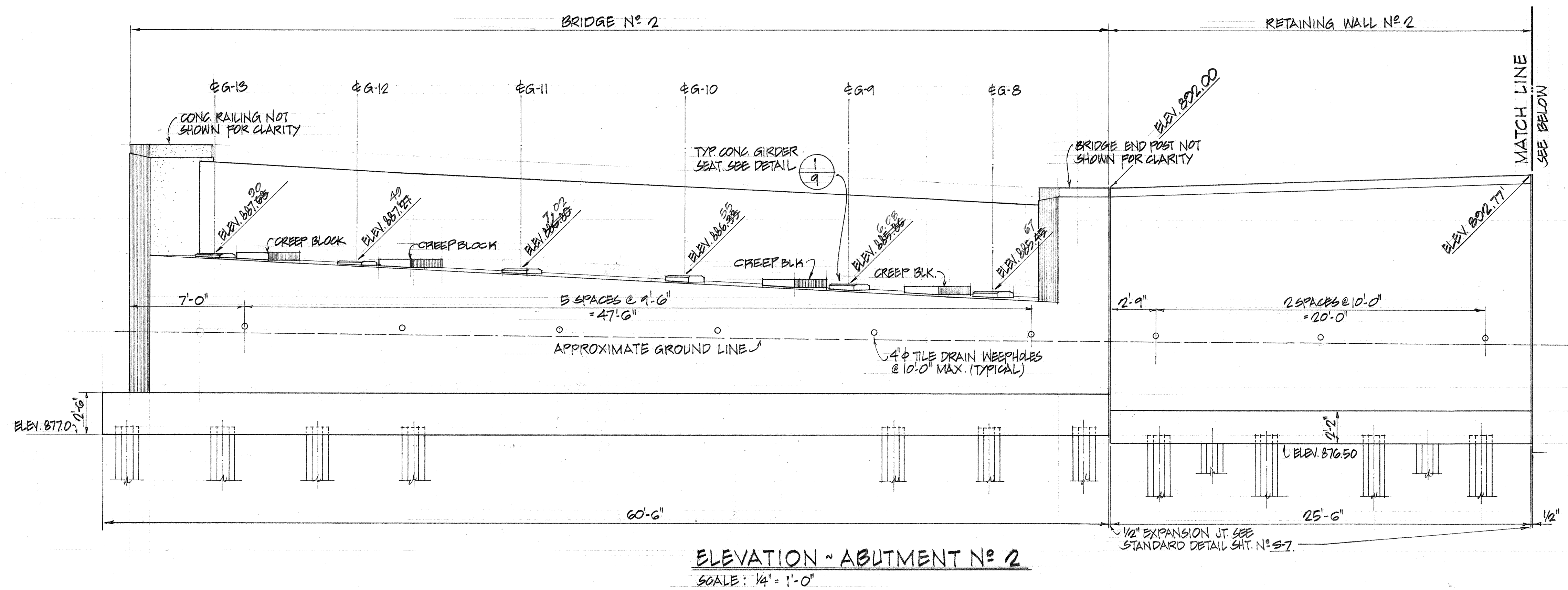
WAIHAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11)

Scale: As noted Date: 4-25-73

SHEET No. 9 OF 42 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H2-1(11):7	1973	178	274



AUSTIN, YEE & PARK
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745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. CHK. H.L.
Harvey Y. D. Lung
Donald H. Park

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELEVATION - ABUTMENT NO. 2
BRIDGE NO. 1 & 2

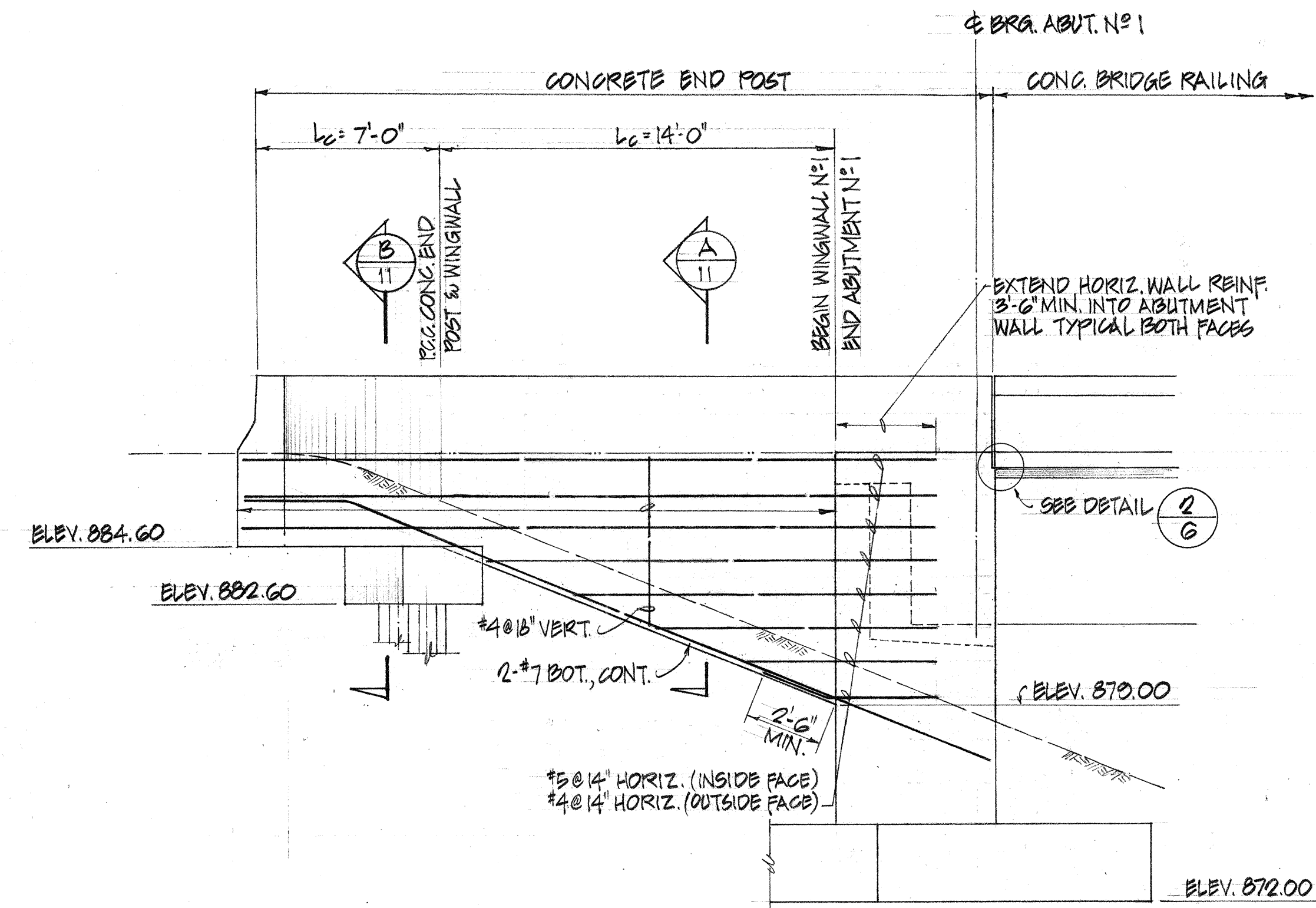
WAHIAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11):7

Scale: As noted Date: 4-25-73

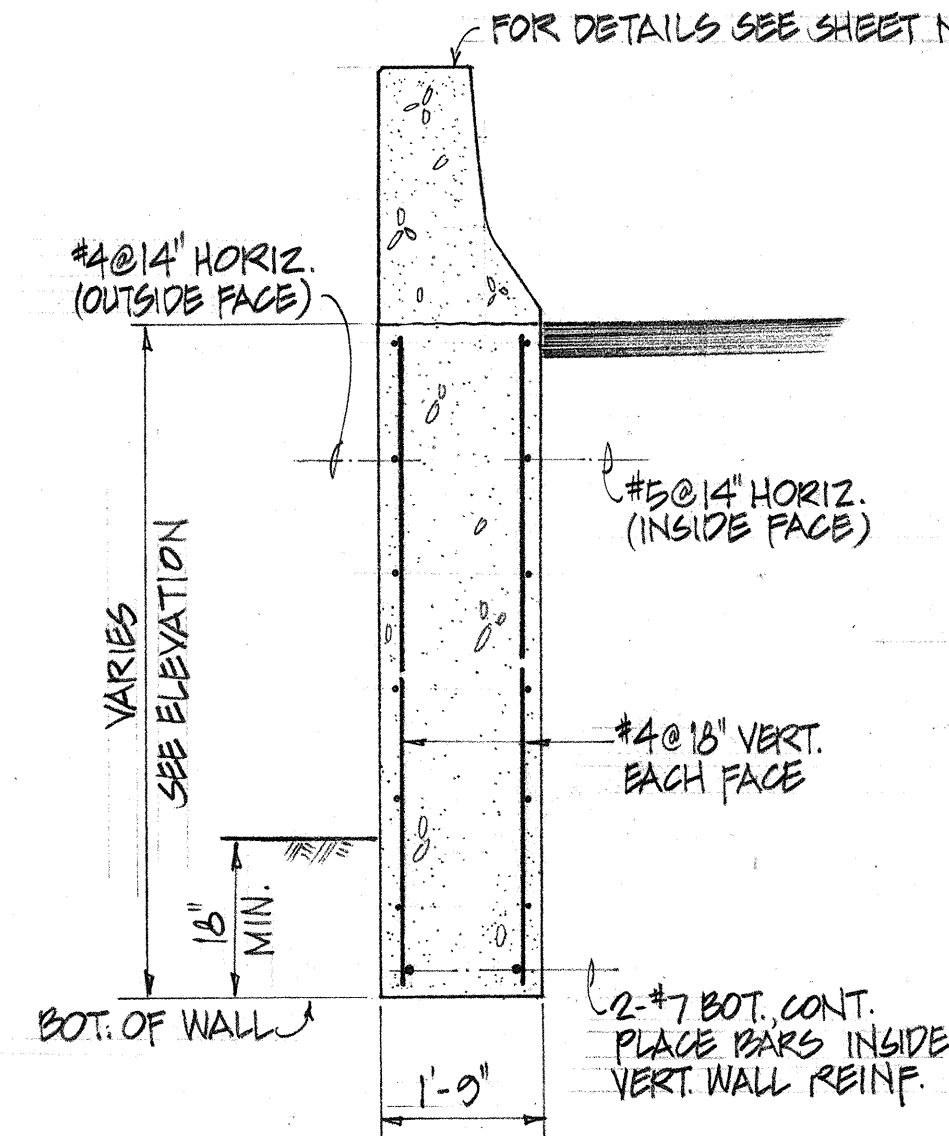
SHEET No. 10 OF 42 SHEETS

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

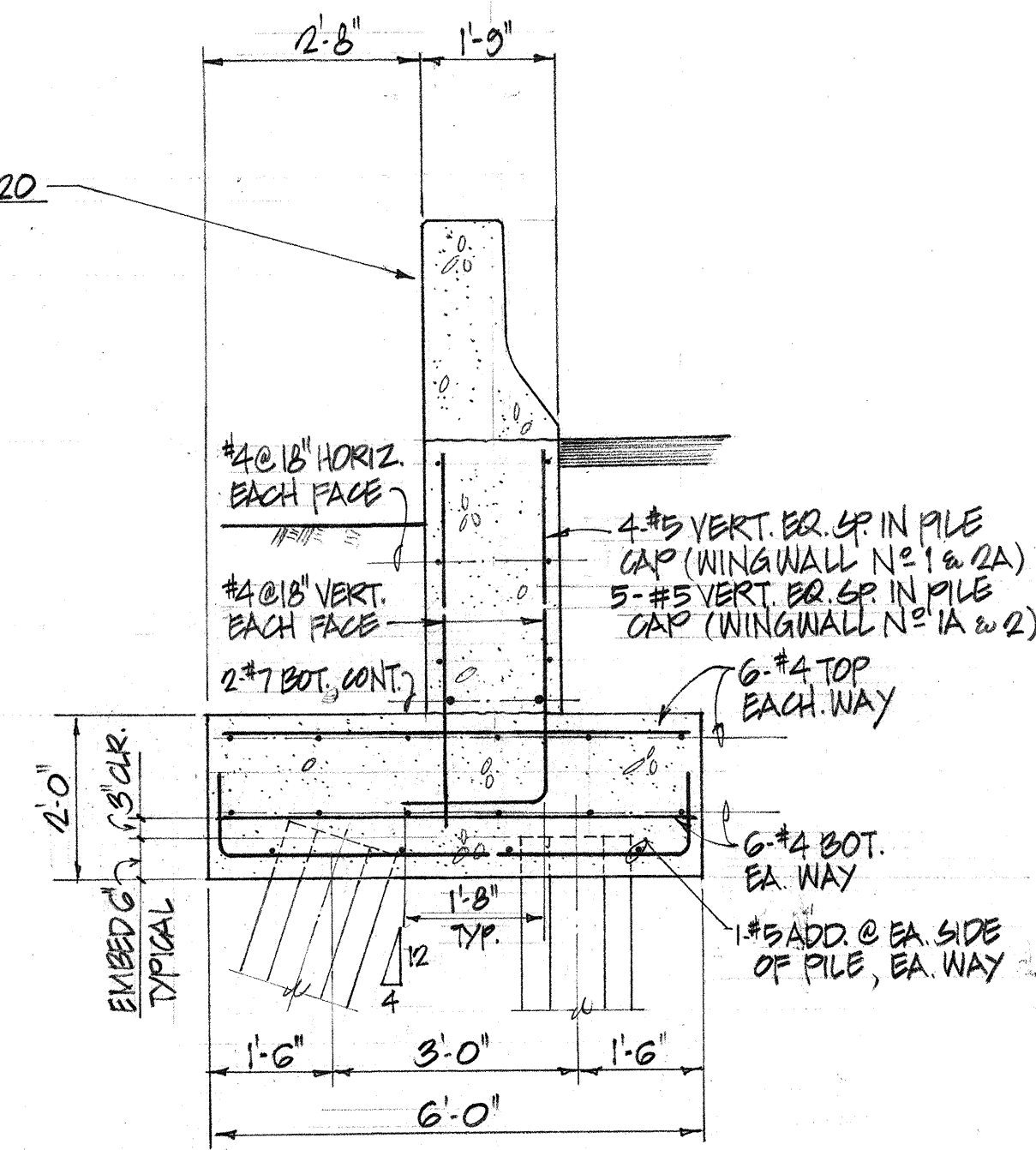
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-102-1(11)	1973	179	274



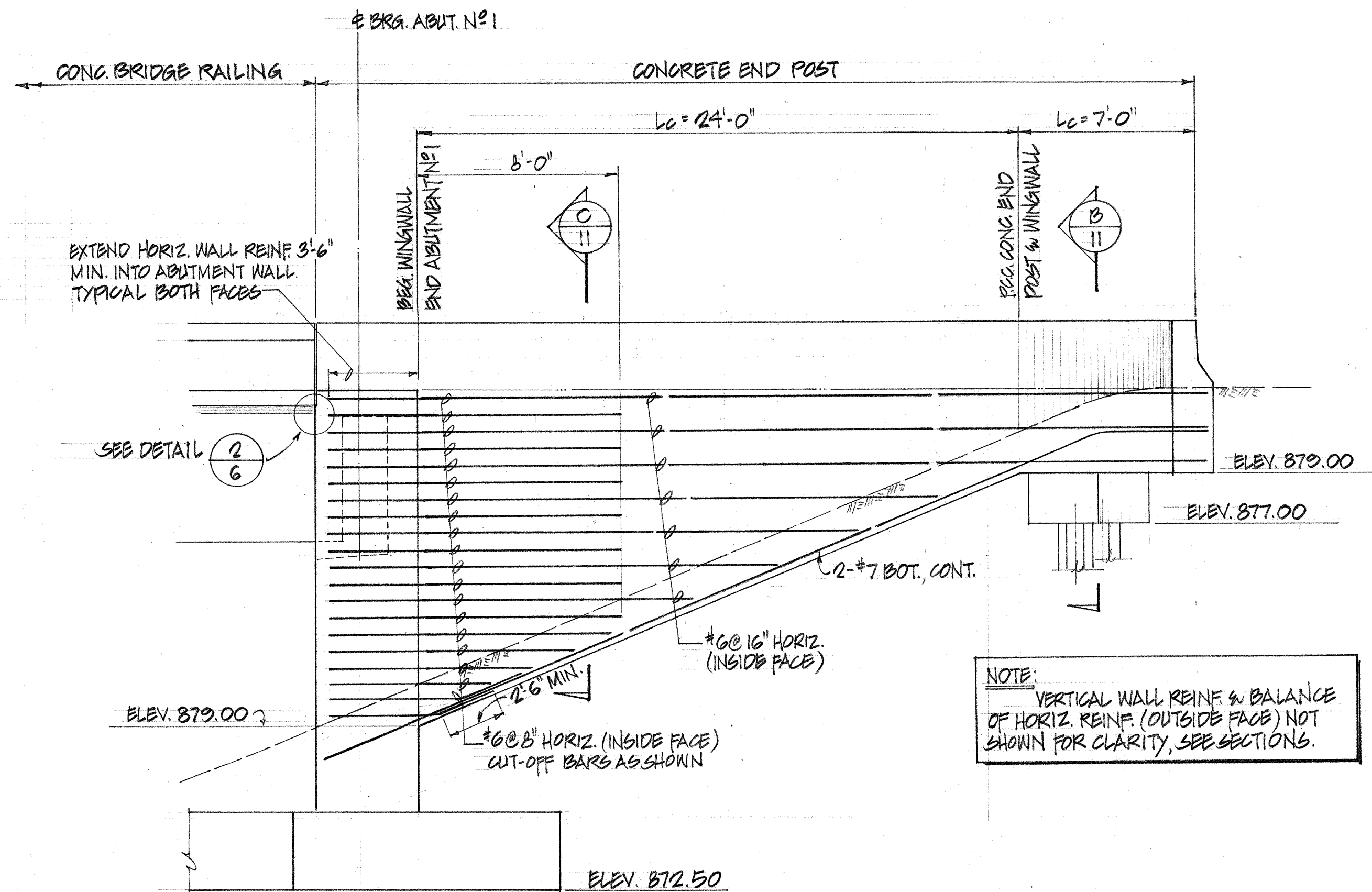
ELEVATION - DETAIL WINGWALL N° 1
SCALE: 1/4" = 1'-0"



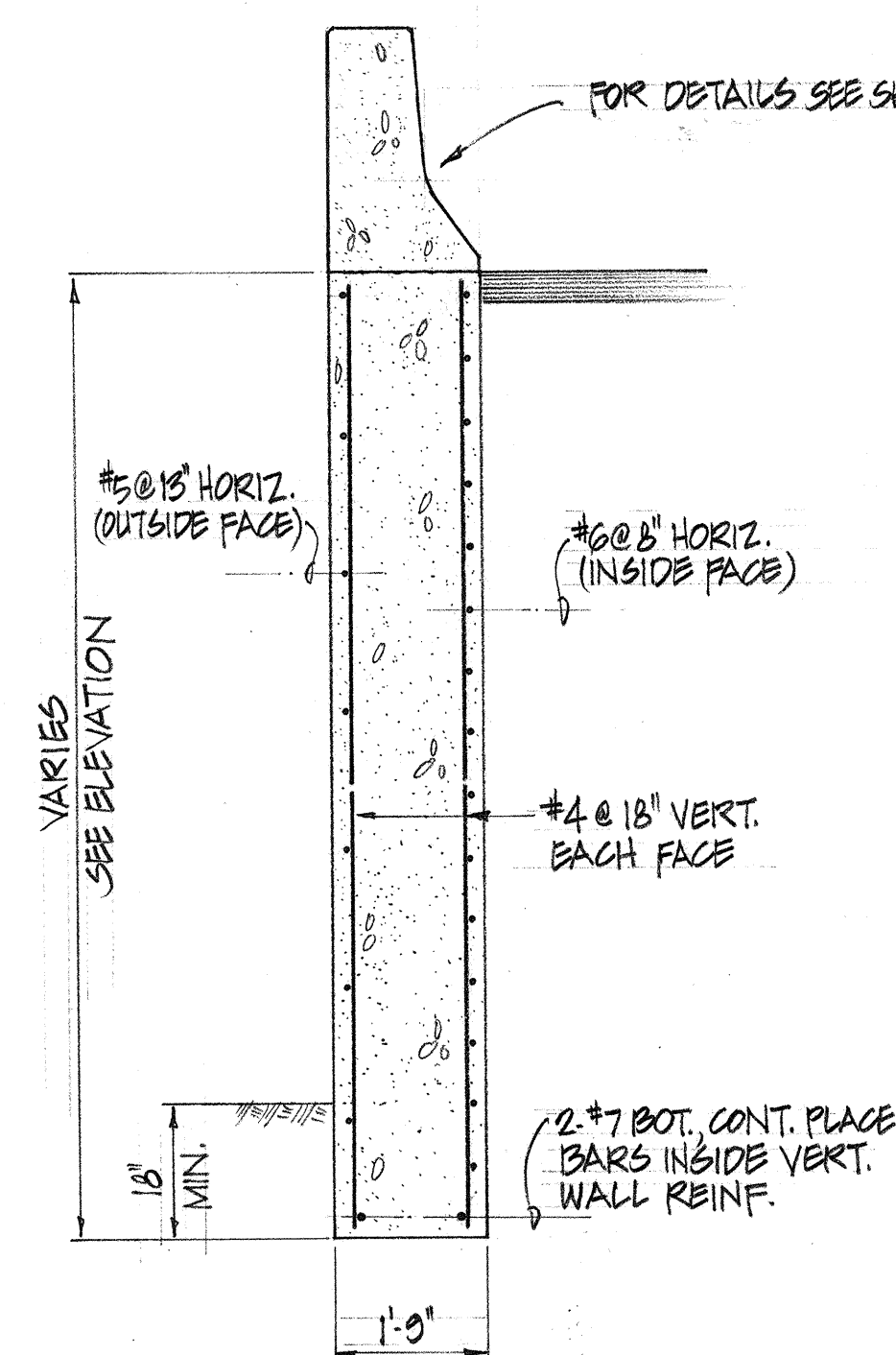
SECTION A
SCALE: 1/2" = 1'-0"



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



ELEVATION - DETAIL WINGWALL N° 1A
SCALE: 1/4" = 1'-0"



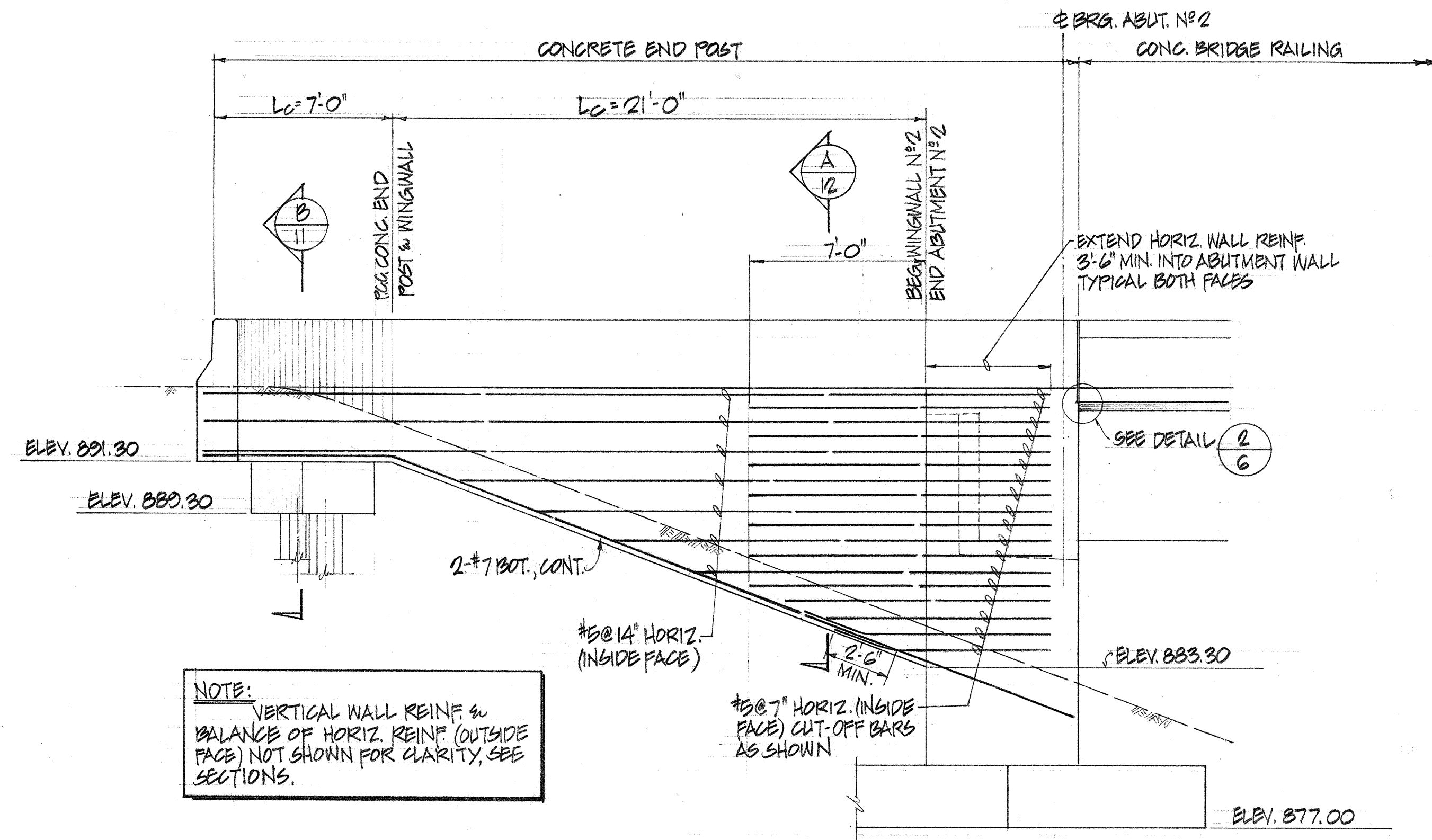
SECTION C
SCALE: 1/2" = 1'-0"

NOTE:
VERTICAL WALL REINF. & BALANCE OF HORIZ. REINF. (OUTSIDE FACE) NOT SHOWN FOR CLARITY, SEE SECTIONS.

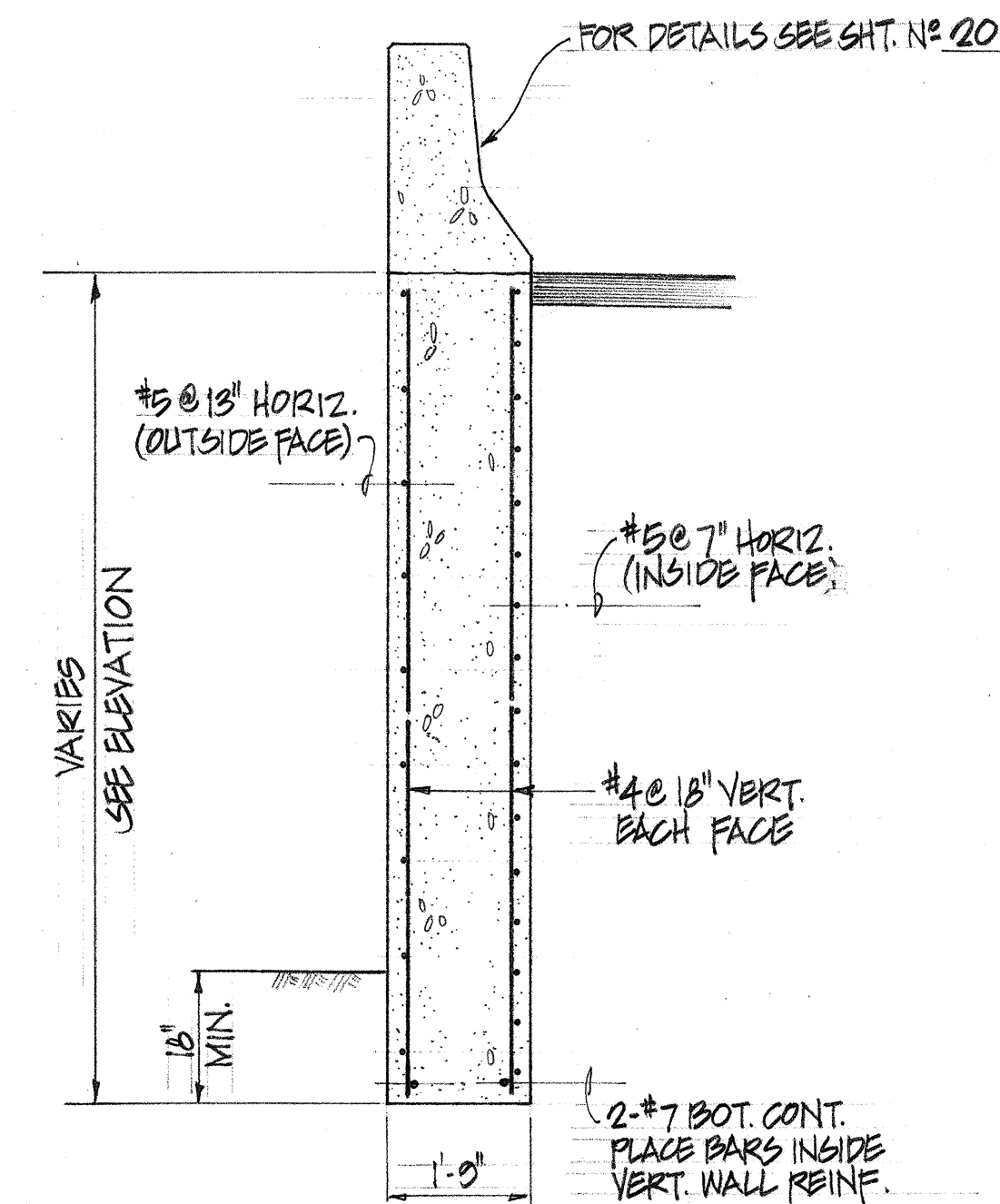
	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.I.	CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION			
APPROVED FOR JOINT VENTURE			
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
WINGWALL DETAILS BRIDGE N°s 1 & 2			
WAIHANA INTERCHANGE F.A.I. Project No. I-102-1(11):7			
Scale: As noted		Date: 4.25.73	
SHEET No. 11 OF 42 SHEETS			

DATE	
SURVEY PLOTTED BY	
DESIGNED BY	
NOTE BOOK	
CHECKED BY	
ORIGINAL PLAN	
NO.	

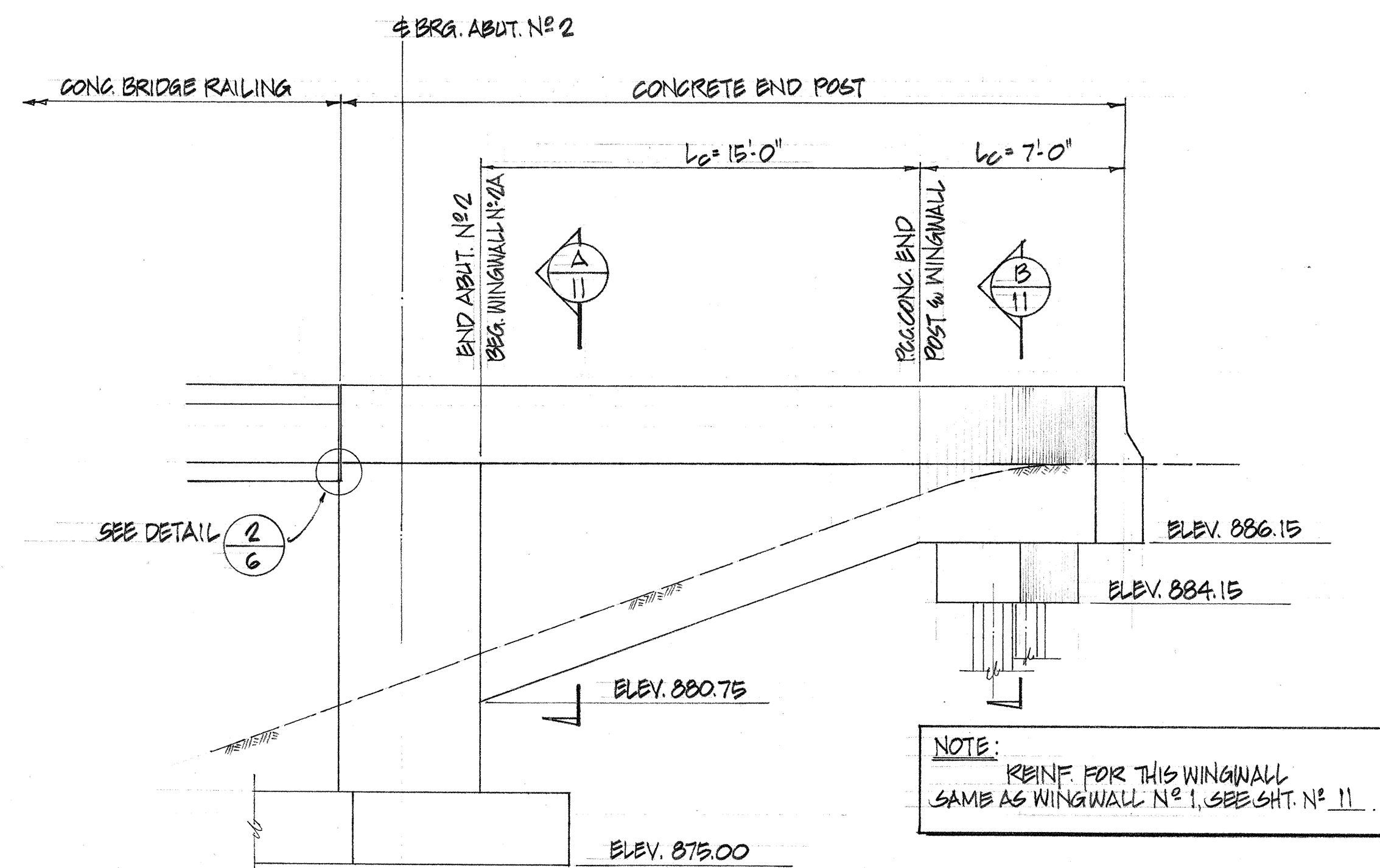
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H2-1(11):7	1973	180	274



ELEVATION - DETAIL WINGWALL NO. 2
SCALE: 1/4" = 1'-0"



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

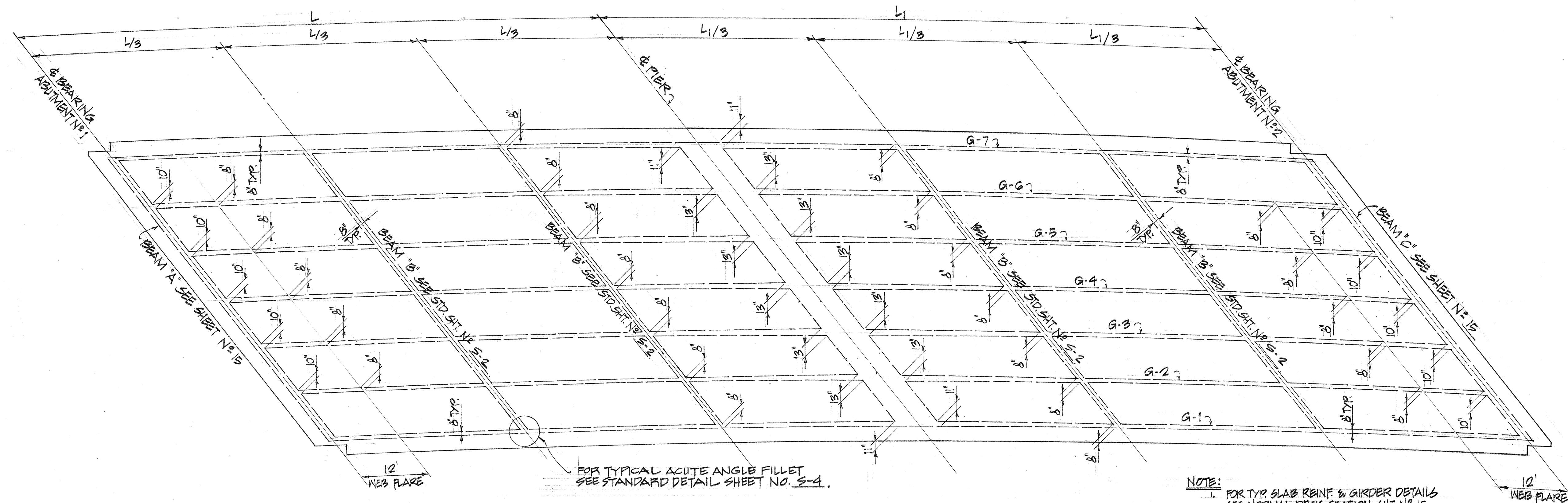


ELEVATION - DETAIL WINGWALL NO. 2A
SCALE: 1/4" = 1'-0"

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

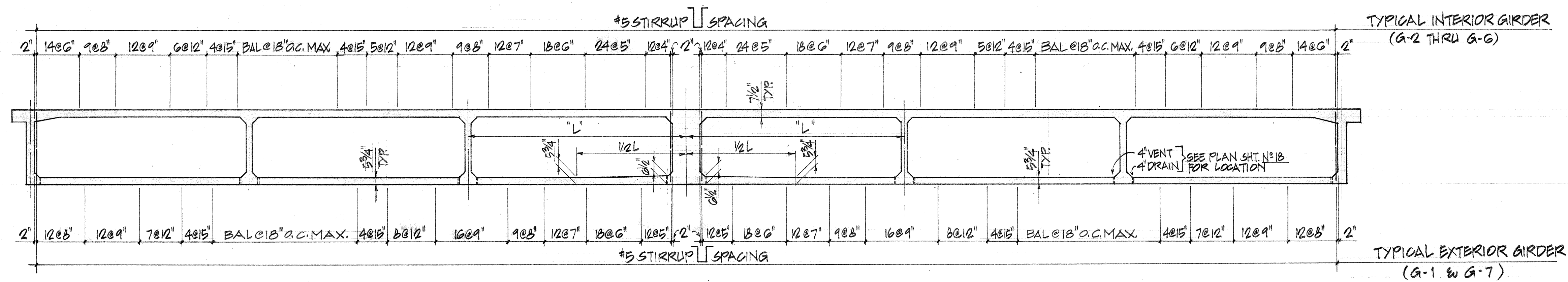
	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII
	DES. H.L. DR. W.L. CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION APPROVED FOR JOINT VENTURE	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
WINGWALL DETAILS BRIDGE NO'S 1 & 2	
WAIHANA INTERCHANGE F.A.I. Project No. I-H2-1(11):7	
Scale: As noted	Date: 4-25-73
SHEET No. 12 OF 42 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H2-1(11):7	1973	181	274



FRAMING PLAN - BRIDGE NO. 1
SCALE: 3/32" = 1'-0"

- NOTE:
1. FOR TYP. SLAB REINF. & GIRDER DETAILS SEE NORMAL DECK SECTION, SHT. NO. 16.
 2. FOR BOT. SLAB VENT & DRAIN HOLES SEE SHEET 18.

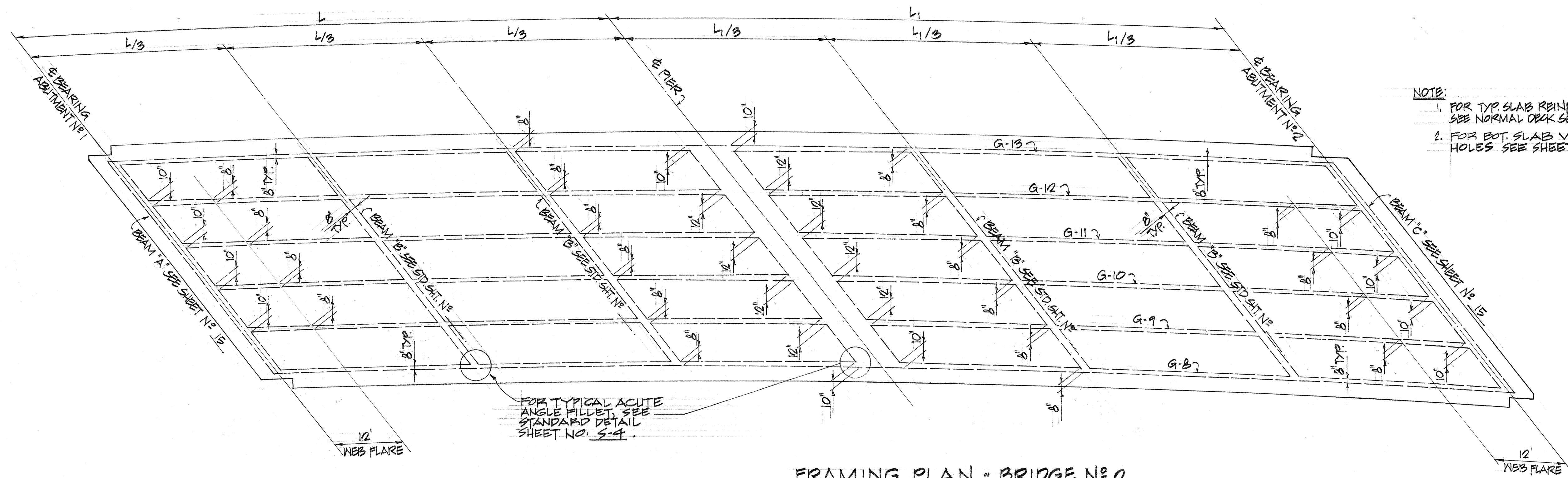


TYPICAL GIRDER STIRRUP SPACING ELEVATION - DETAIL
SCALES: HORIZ. 3/32" = 1'-0"
VERT. 3/16" = 1'-0"

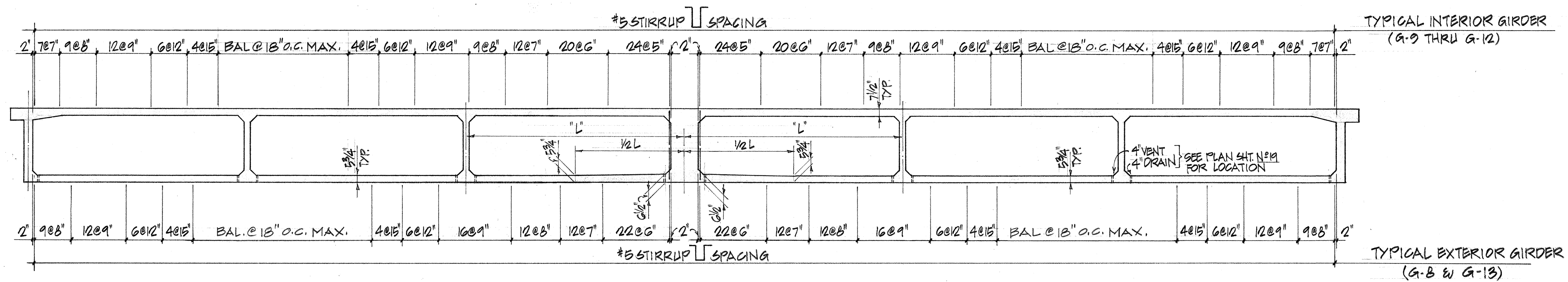
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.I.	CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION			
APPROVED FOR JOINT VENTURE			
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
FRAMING PLAN BRIDGE NO. 1			
WAHIAWA INTERCHANGE F.A.I. Project No. I-H2-1(11):7			
Scale: As noted Date: 4-25-73			
SHEET No. 13 OF 42 SHEETS			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H2-1(11)	1973	182	274



FRAMING PLAN - BRIDGE No. 2
SCALE: 3/32" = 1'-0"

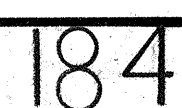


TYPICAL GIRDER STIRRUP SPACING ELEVATION - DETAIL
SCALE: HORIZ. 3/32" = 1'-0"
VERT. 3/16" = 1'-0"

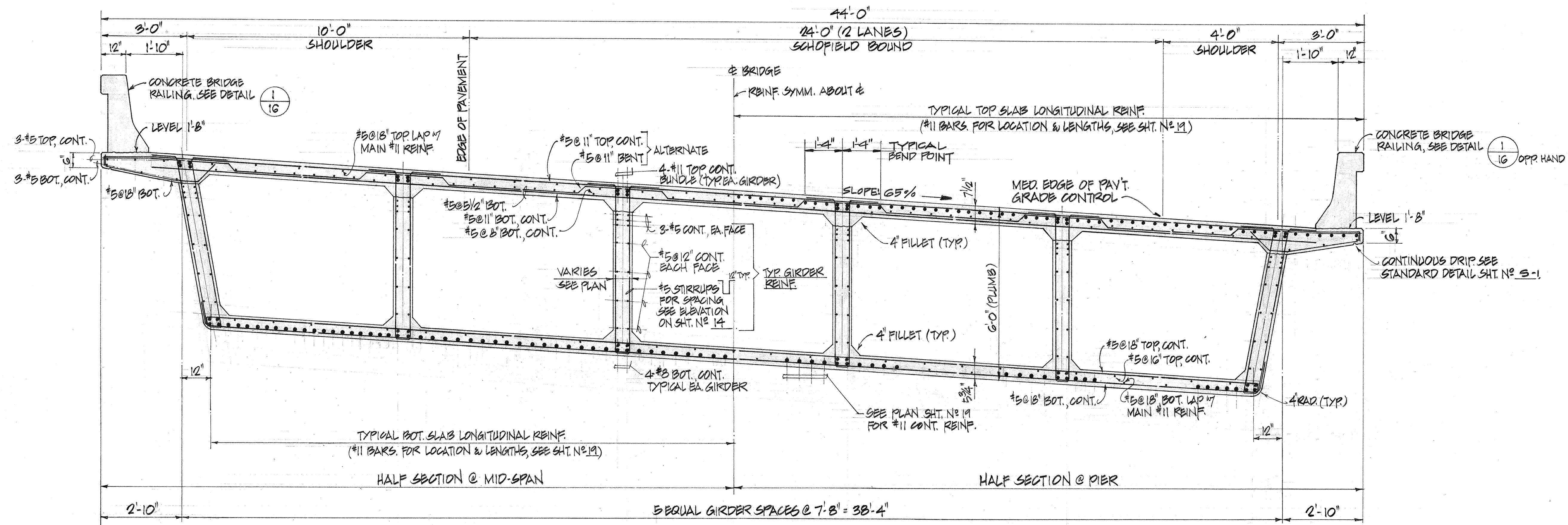
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII
	DES. H.L. DR. W.L. CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
FRAMING PLAN BRIDGE No. 2	
WAIHAWA INTERCHANGE F.A.I. Project No. I-H2-1(11)17	
Scale: As noted	Date: 4-25-73
SHEET No. 14 OF 12 SHEETS	

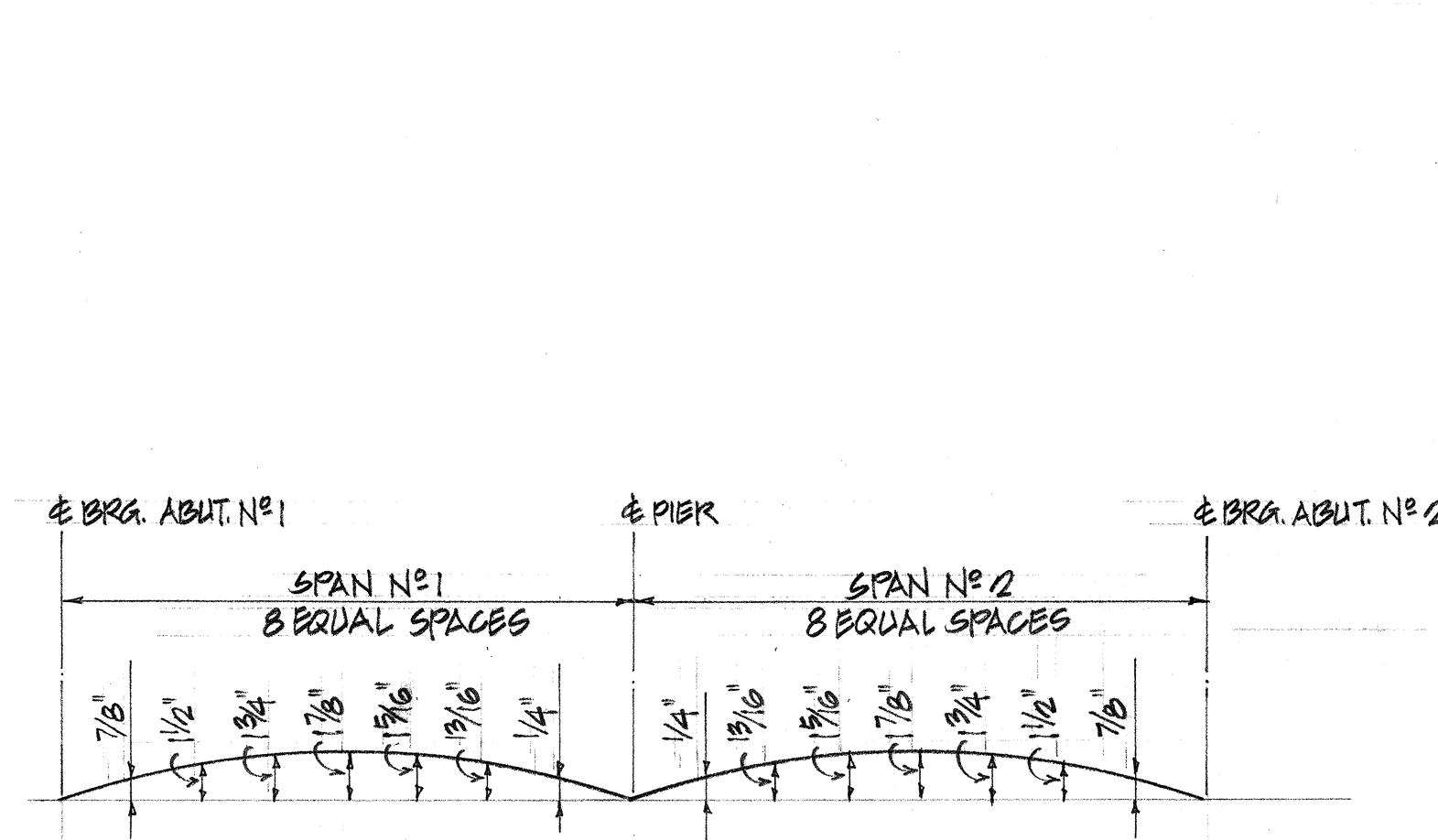
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
No. _____		



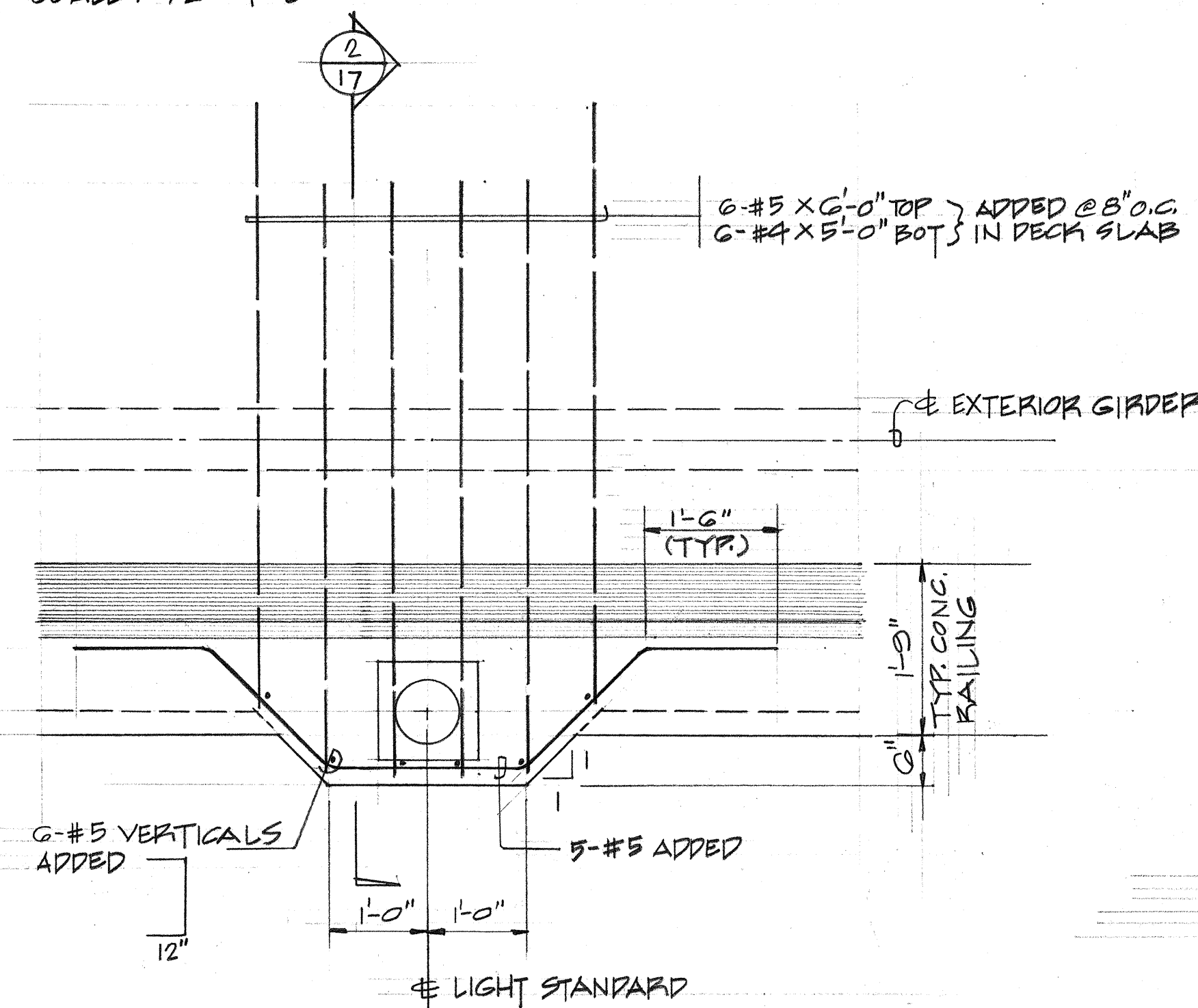
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)	1973	185	274



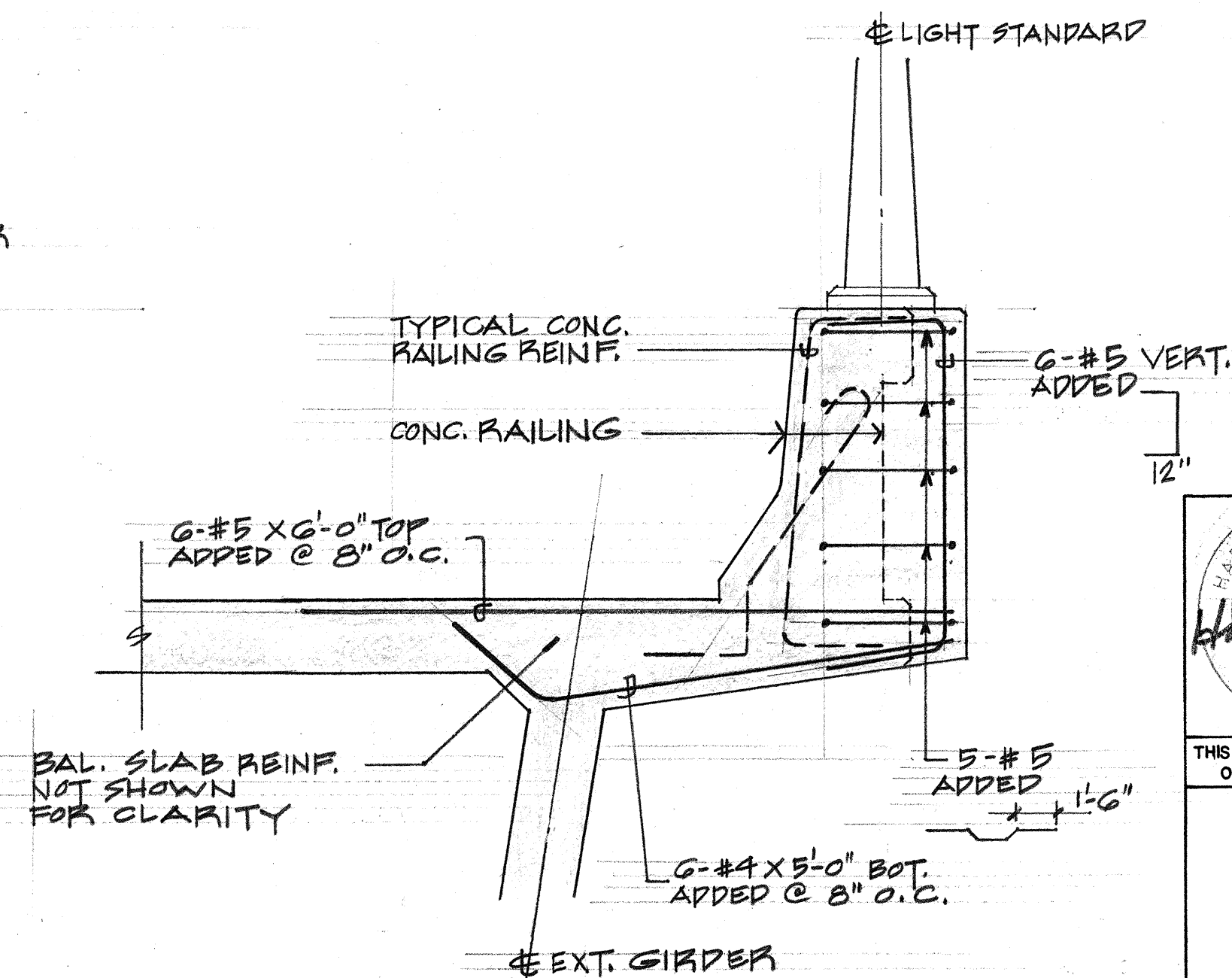
NORMAL DECK SECTION ~ BRIDGE No 2
SCALE: 1/2" = 1'-0"



GAMBER DIAGRAM ~ BRIDGE No 2



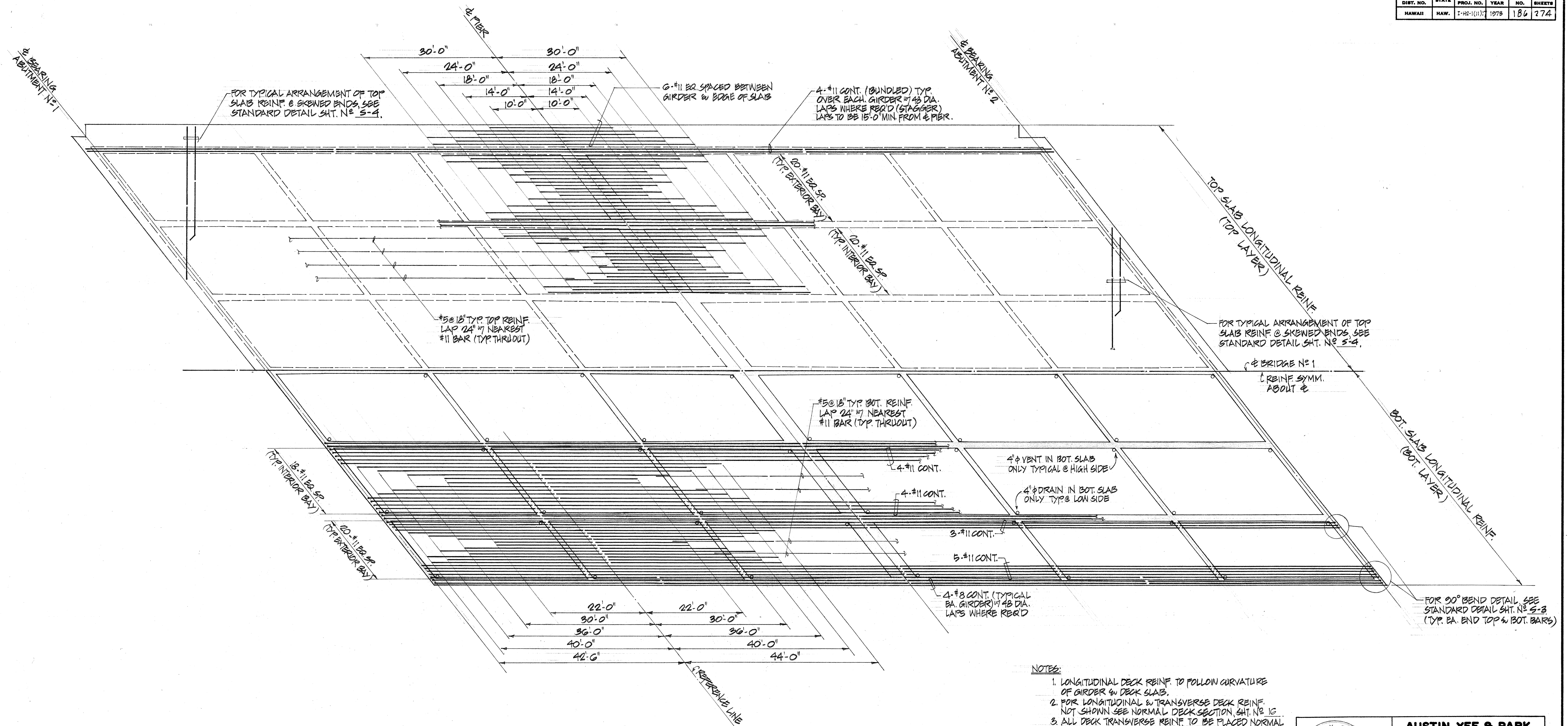
TYPICAL PLAN DETAIL OF LIGHT STANDARD AT CONC. RAILING
SCALE: 3/4" = 1'-0"



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

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.I.	CHK. H.L.
	THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION APPROVED FOR JOINT VENTURE		
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
NORMAL DECK SECTION BRIDGE No 2			
WAHIAWA INTERCHANGE F.A.I. Project No. I-42-1(11):7			
Scale: As noted		Date: 4-25-73	
SHEET No. 17 OF SHEETS			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11):7	1973	186	274



BRIDGE No. 1 PLACEMENT DIAGRAM - TOP SLAB, TOP LAYER LONGITUDINAL REINF.
 SCALES - LONGITUDINAL: $\frac{3}{32}" = 1'-0"$
 TRANSVERSE: $\frac{3}{16}" = 1'-0"$
 BOT. SLAB, BOT. LAYER LONGITUDINAL REINF.

- NOTES:
1. LONGITUDINAL DECK REINF. TO FOLLOW CURVATURE OF GIRDER & DECK SLABS.
 2. FOR LONGITUDINAL & TRANSVERSE DECK REINF. NOT SHOWN SEE NORMAL DECK SECTION, SH. NO. 10
 3. ALL DECK TRANSVERSE REINF. TO BE PLACED NORMAL TO BRIDGE CENTERLINE.

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII DES. <u>H.L.</u> DR. <u>W.L.</u> CHK. <u>H.L.</u> <i>[Signature]</i> APPROVED FOR JOINT VENTURE
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

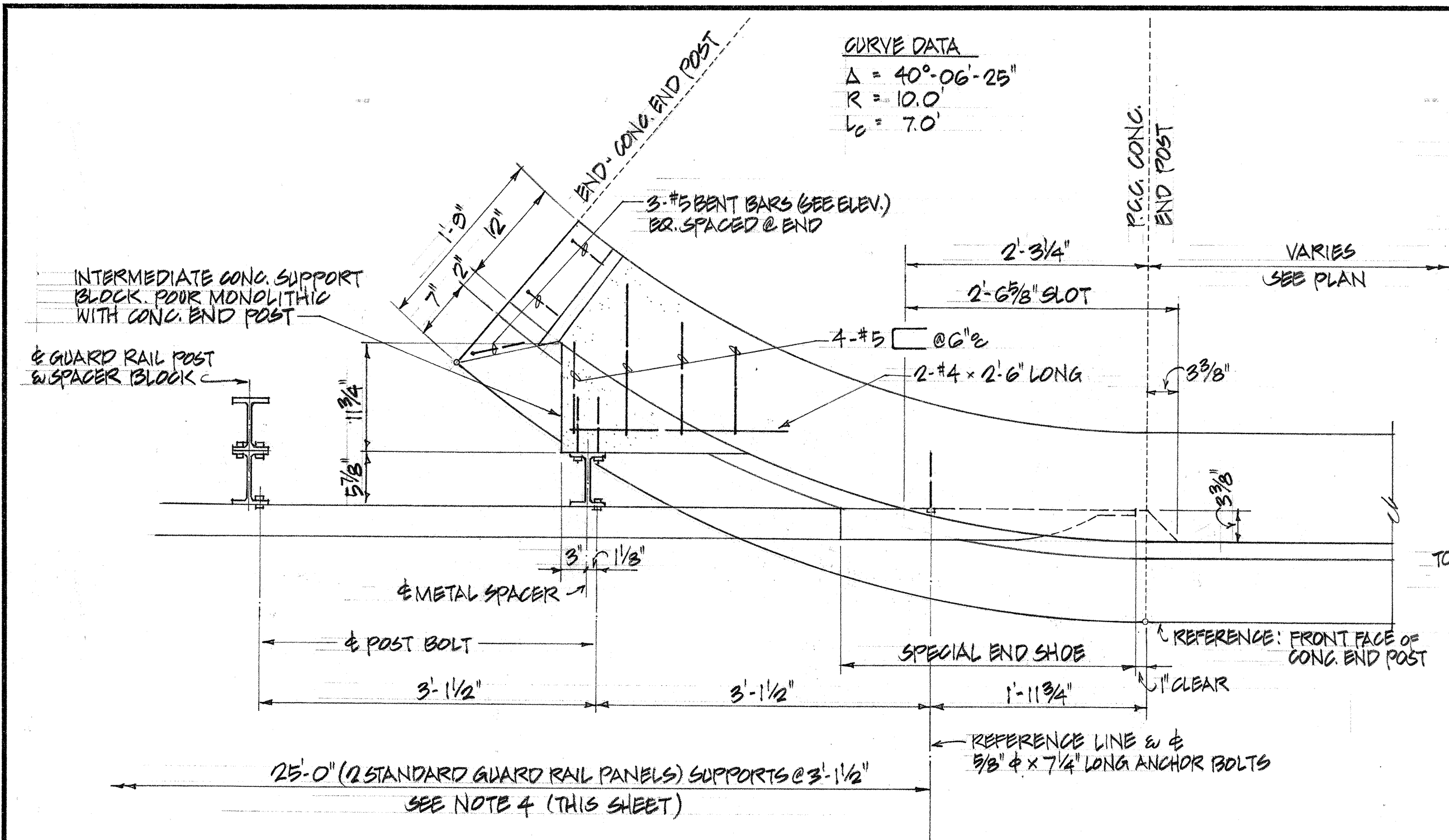
DECK SLAB REINFORCEMENT
BRIDGE NO 1

WAHIAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11):7

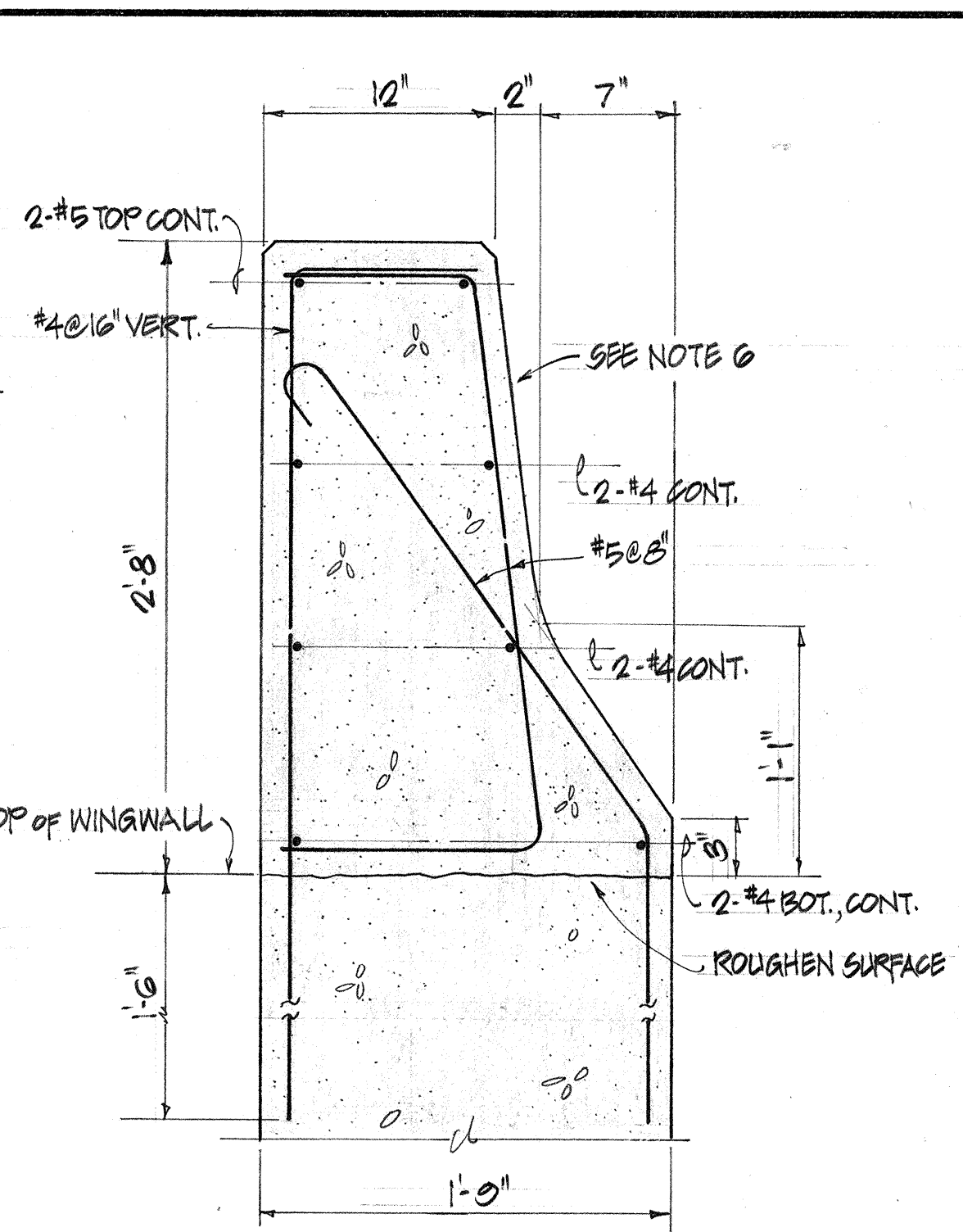
Scale: As noted Date: 4-25-73

SHEET No. 1b OF 42 SHEETS

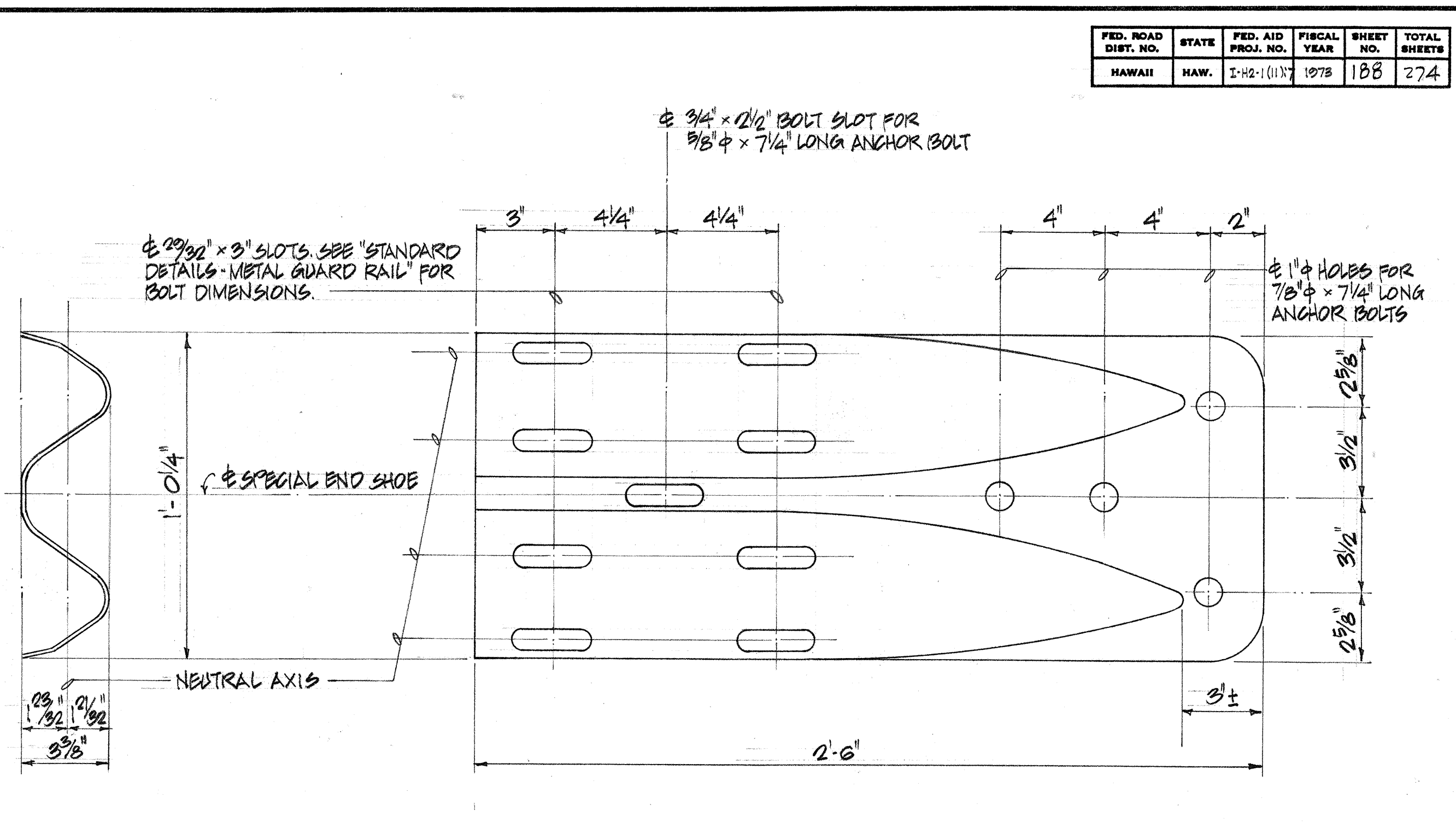
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)	1975	188	274



CONCRETE END POST PLAN - DETAIL
SCALE: 1" = 1'-0"



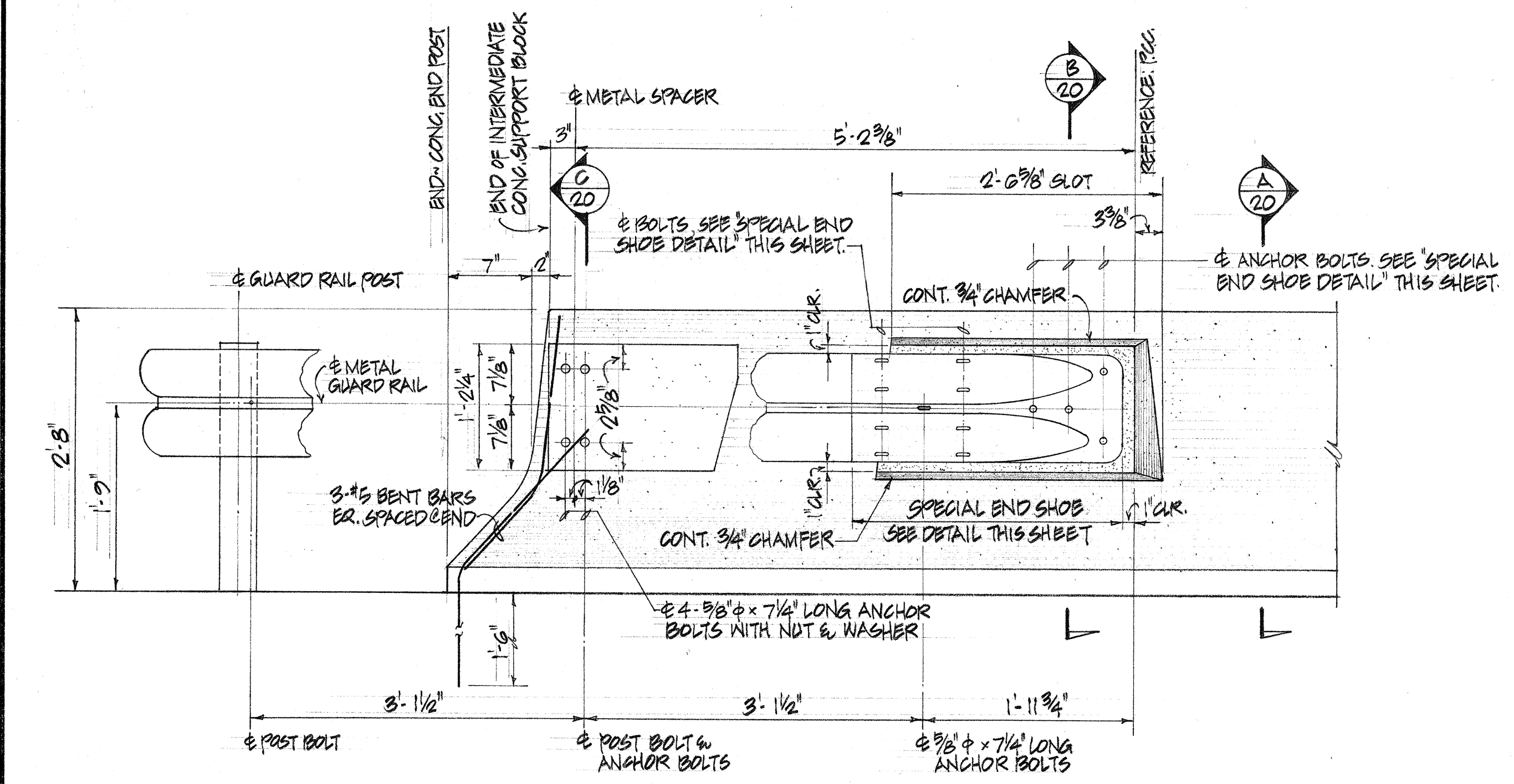
SECTION A
SCALE: 1 1/2" = 1'-0"



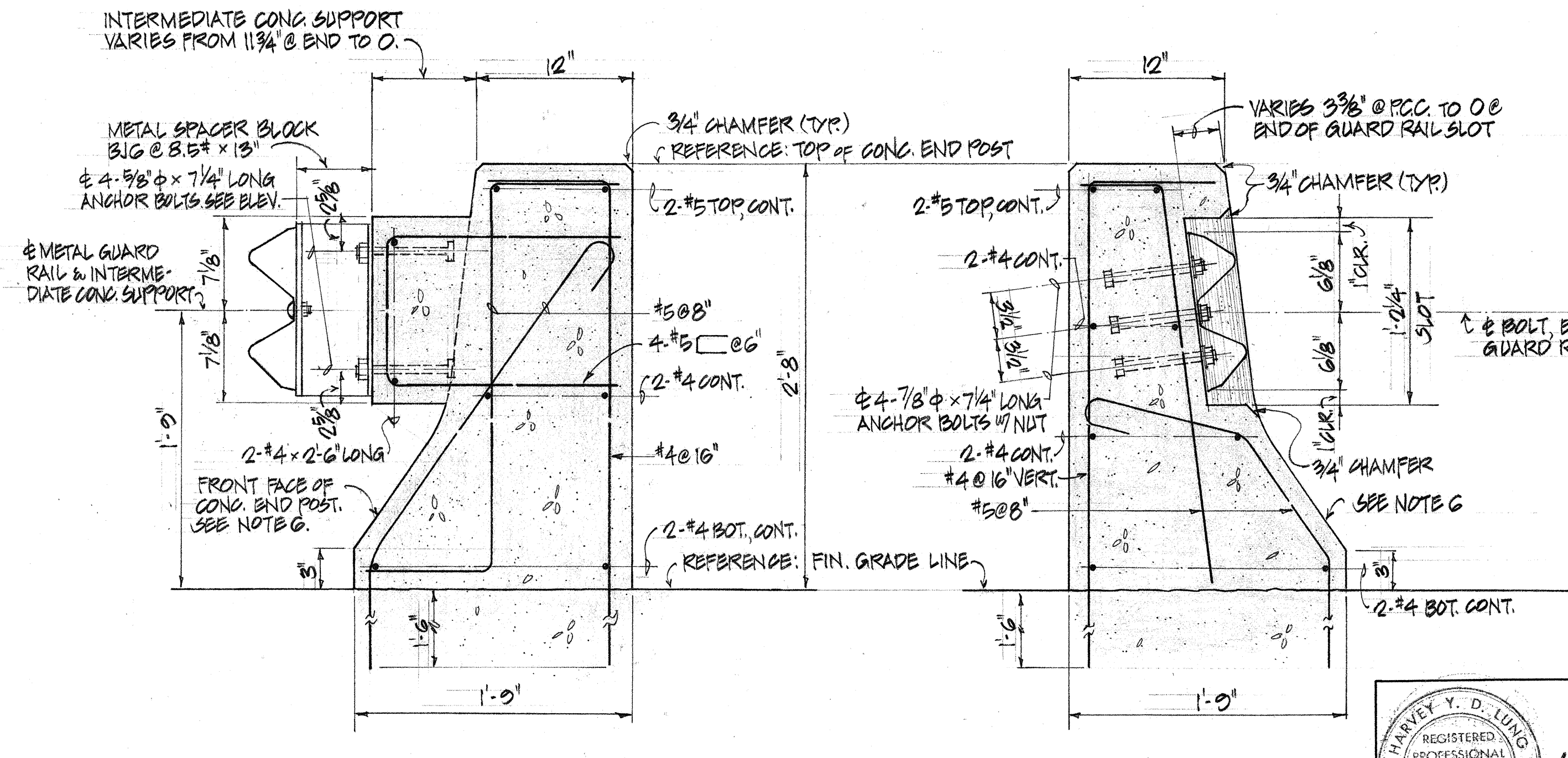
TYPICAL SECTION

ELEVATION

SPECIAL END SHOE DETAILS
SCALE: 3" = 1'-0"



CONCRETE END POST ELEVATION - DETAIL
SCALE: 1" = 1'-0"



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

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

- NOTES:**
1. ALL ANCHOR BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO THE REQUIREMENTS OF ASTM A325.
 2. ALL SHOE ASSEMBLY, INCLUDING ANCHOR BOLTS, NUTS & WASHERS SHALL BE GALVANIZED.
 3. SPECIAL END SHOE SHALL BE FABRICATED FROM 10 GAGE STEEL CONFORMING TO THE REQ'TS. OF AASHTO 180.
 4. FIRST 25'-0" OF GUARD RAIL ADJOINING "SPECIAL END SHOE" SHALL BE GALVANIZED STEEL.
 5. ANCHOR BOLT LENGTH GIVEN FROM UNDER BOLT HEAD.
 6. FRONT FACE OF END POST TO MATCH FRONT FACE OF TYPICAL CONC. BRIDGE RAILING, SEE SHT. NO. 16.

HARVEY Y. D. LUNG
REGISTERED PROFESSIONAL ENGINEER
No. 11111
HAWAII

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. CHK. H.L.
[Signature]

APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONCRETE END POST DETAILS
BRIDGE No. 1 & 2

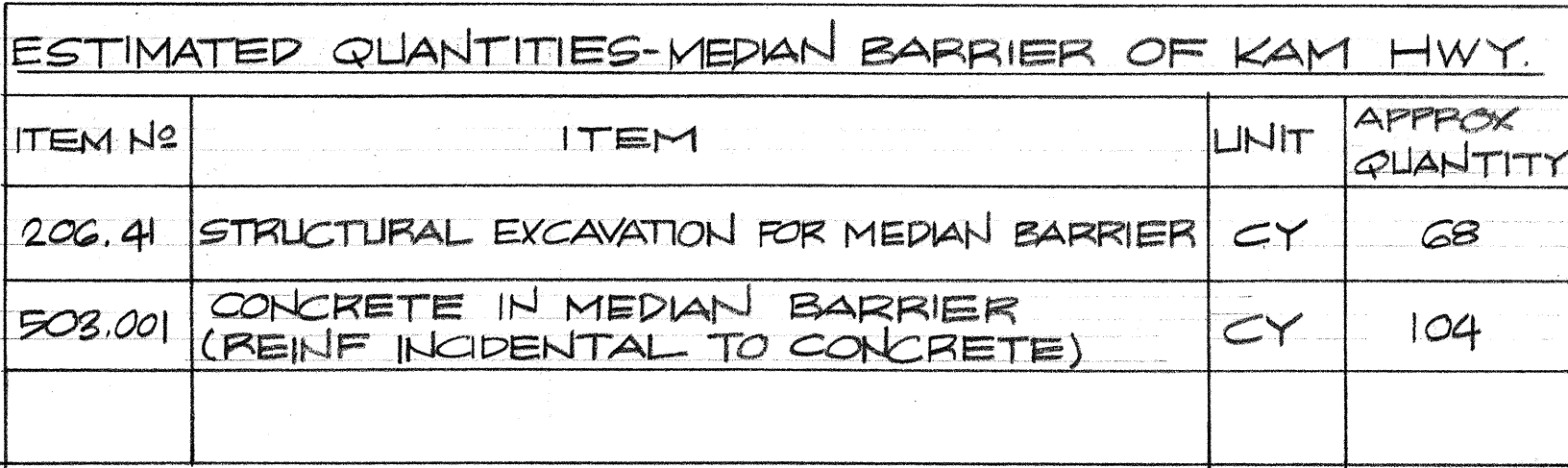
WAHIAWA INTERCHANGE
F.A.I. Project No. I-42-1(11):7

Scale: As noted Date: 4-25-73

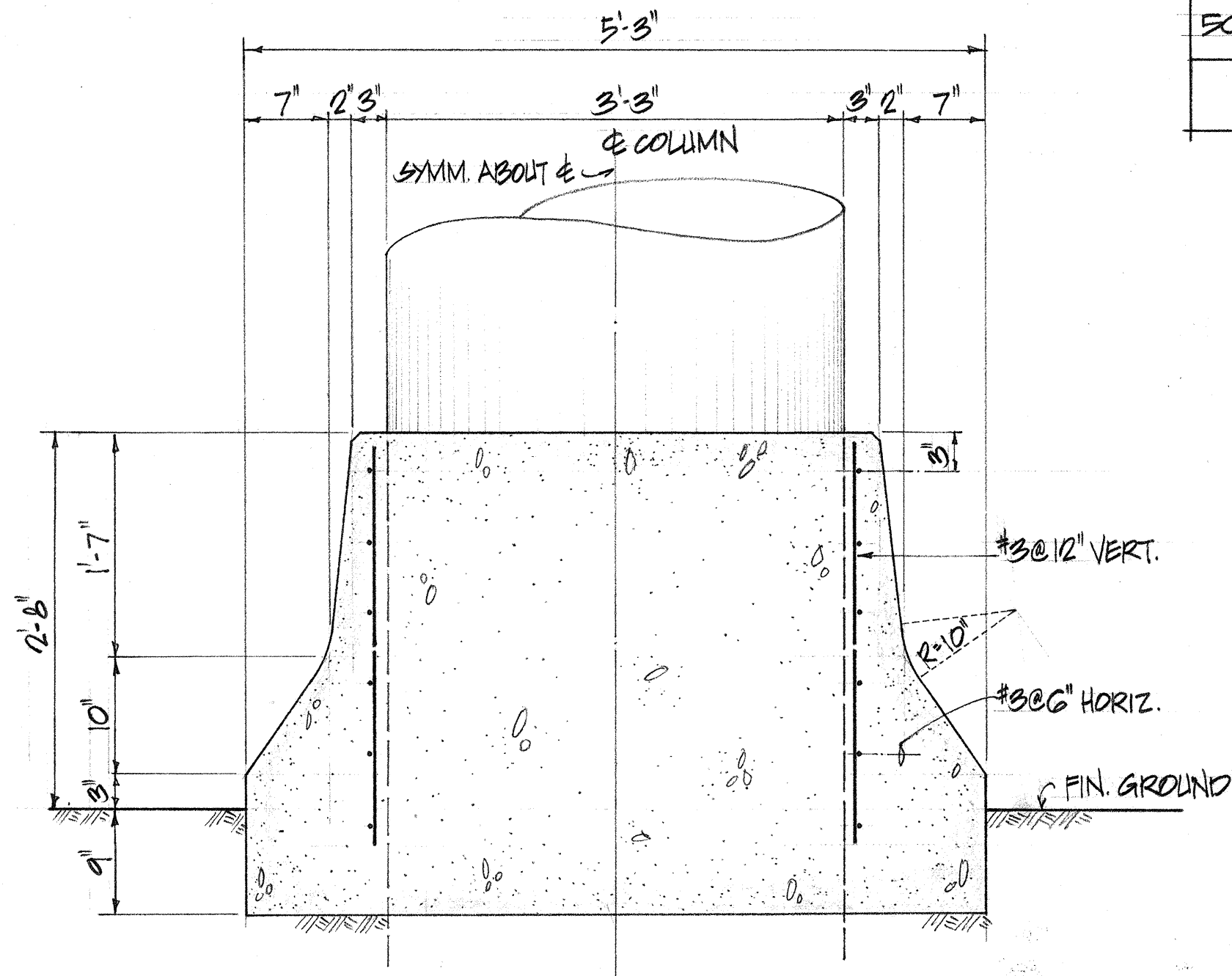
SHEET No. 20 OF 1/2 SHEETS

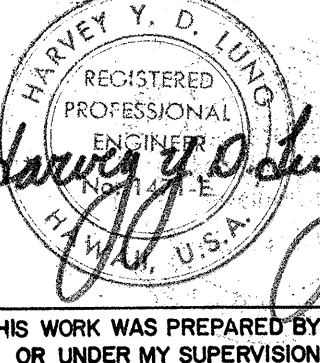
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
CHECKED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
NOTE BOOK	_____
CHECKED BY	_____
No.	_____

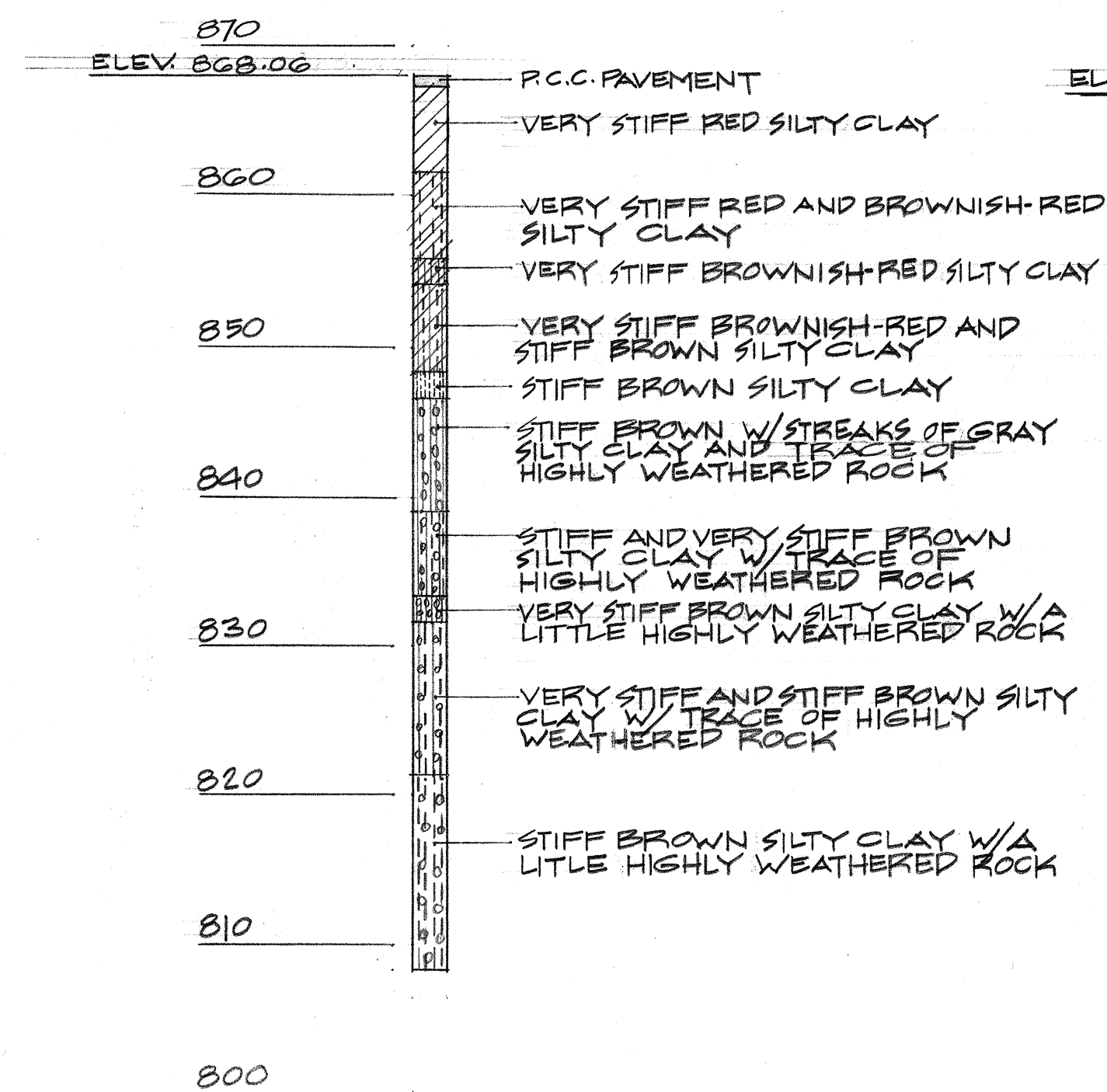
ESTIMATED QUANTITIES-MEDIAN BARRIER OF KAM HWY.			
ITEM N2	ITEM	UNIT	APPROX QUANTITY
206.41	STRUCTURAL EXCAVATION FOR MEDIAN BARRIER	CY	68
503.001	CONCRETE IN MEDIAN BARRIER (REINF INCIDENTAL TO CONCRETE)	CY	104



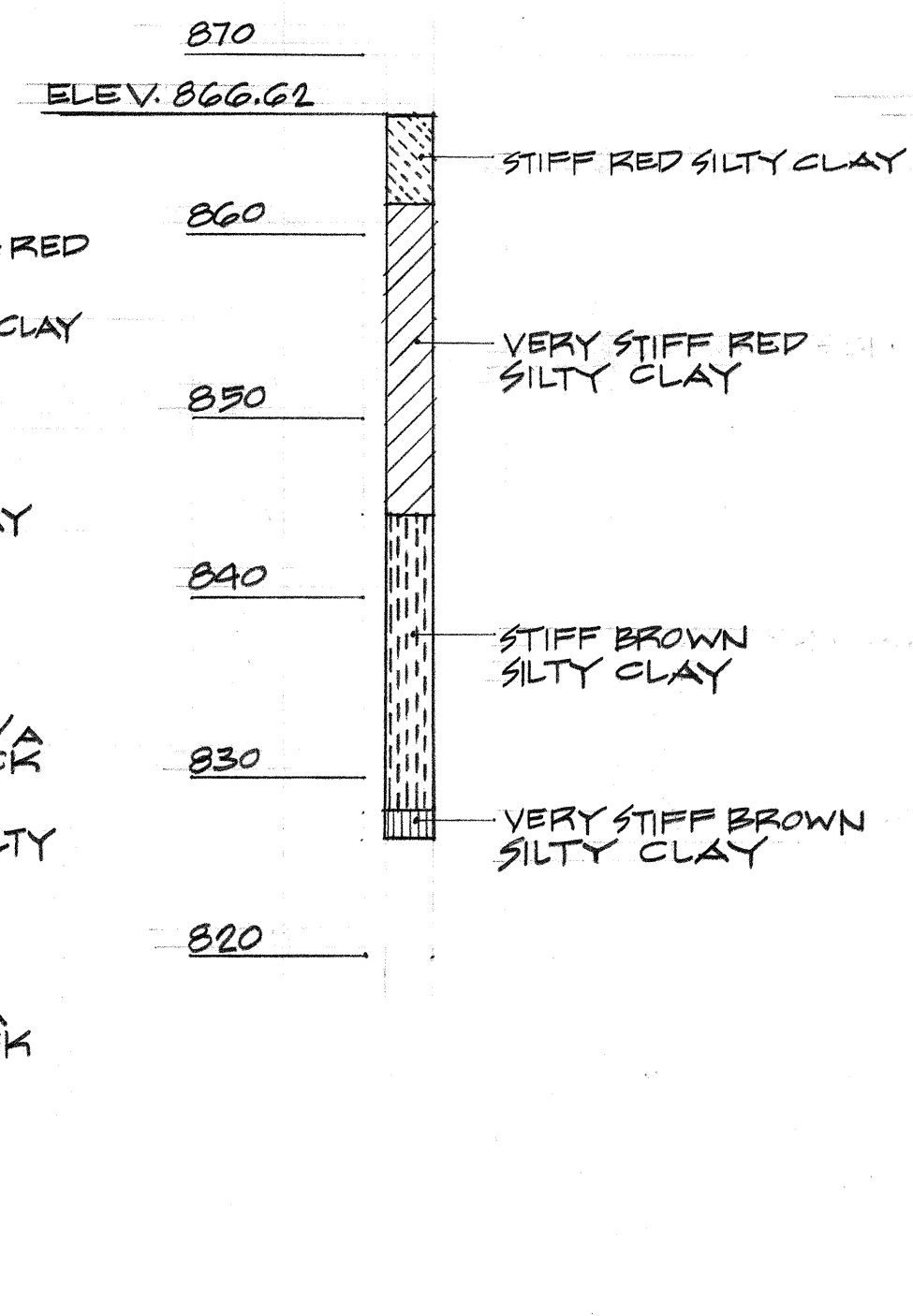
ESTIMATED QUANTITIES-MEDIAN BARRIER OF KAM HWY.			
ITEM N2	ITEM	UNIT	APPROX QUANTITY
206.41	STRUCTURAL EXCAVATION FOR MEDIAN BARRIER	CY	68
503.001	CONCRETE IN MEDIAN BARRIER (REINF INCIDENTAL TO CONCRETE)	CY	104

[illegible]

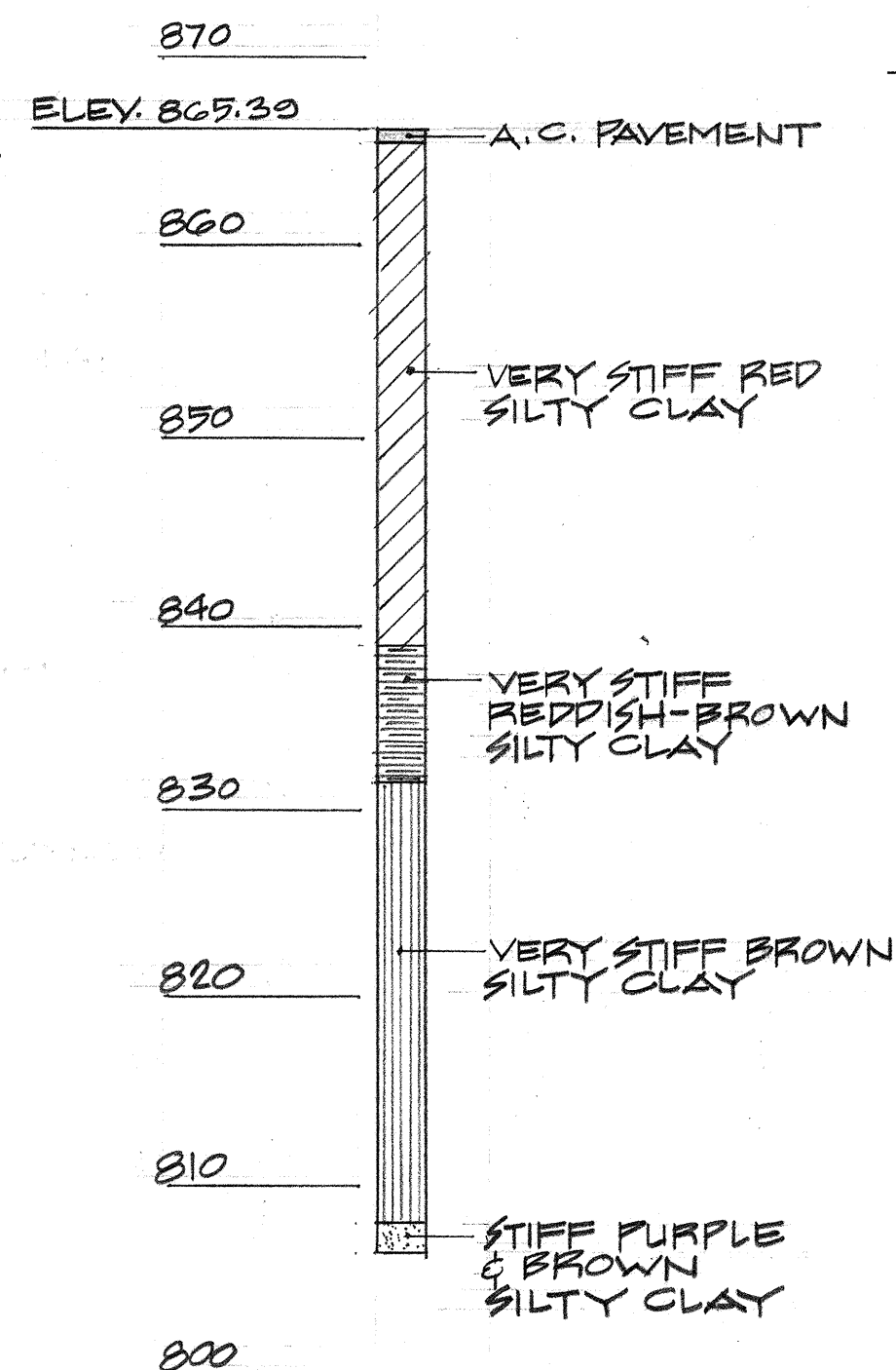
 Harvey Y. D. Lung REGISTERED PROFESSIONAL ENGINEER No. 10001 STATE OF HAWAII	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII DES. <u>W.L.</u> DR. <u>W.L.</u> CH. <u>H.L.</u> <i>Donald W. Park</i> APPROVED FOR JOINT VENTURE
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>CONC. BARRIER - PLAN & DETAILS</u> <u>BRIDGE NO'S 1 & 2</u> <u>WAHIAWA INTERCHANGE</u> <u>F.A.I. Project No. I-H2-1(II):7</u> Scale: As noted Date: 4-25-73 SHEET NO. 21 OF 42 SHEETS	



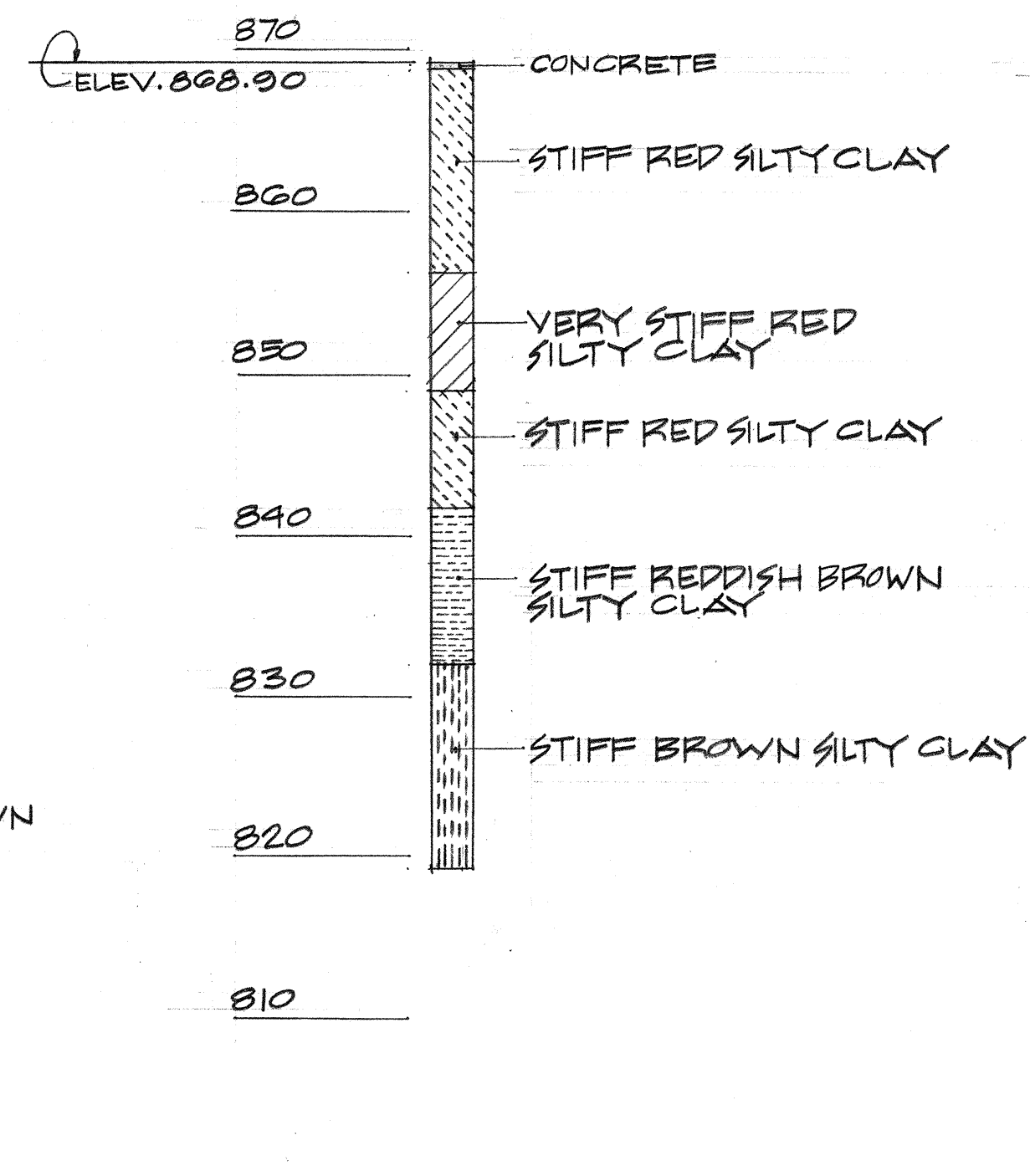
BORING NO. 1



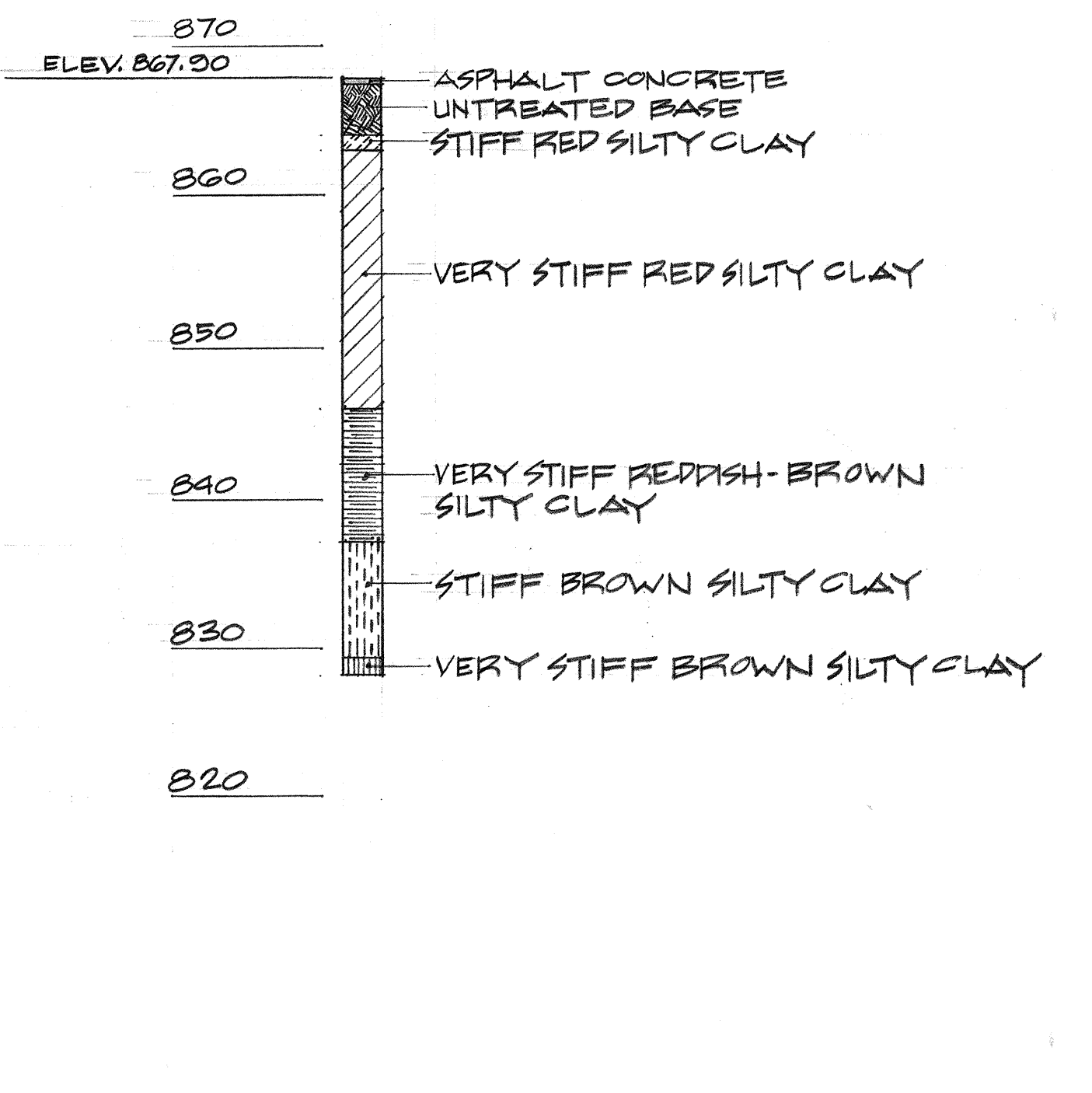
BORING NO. 2



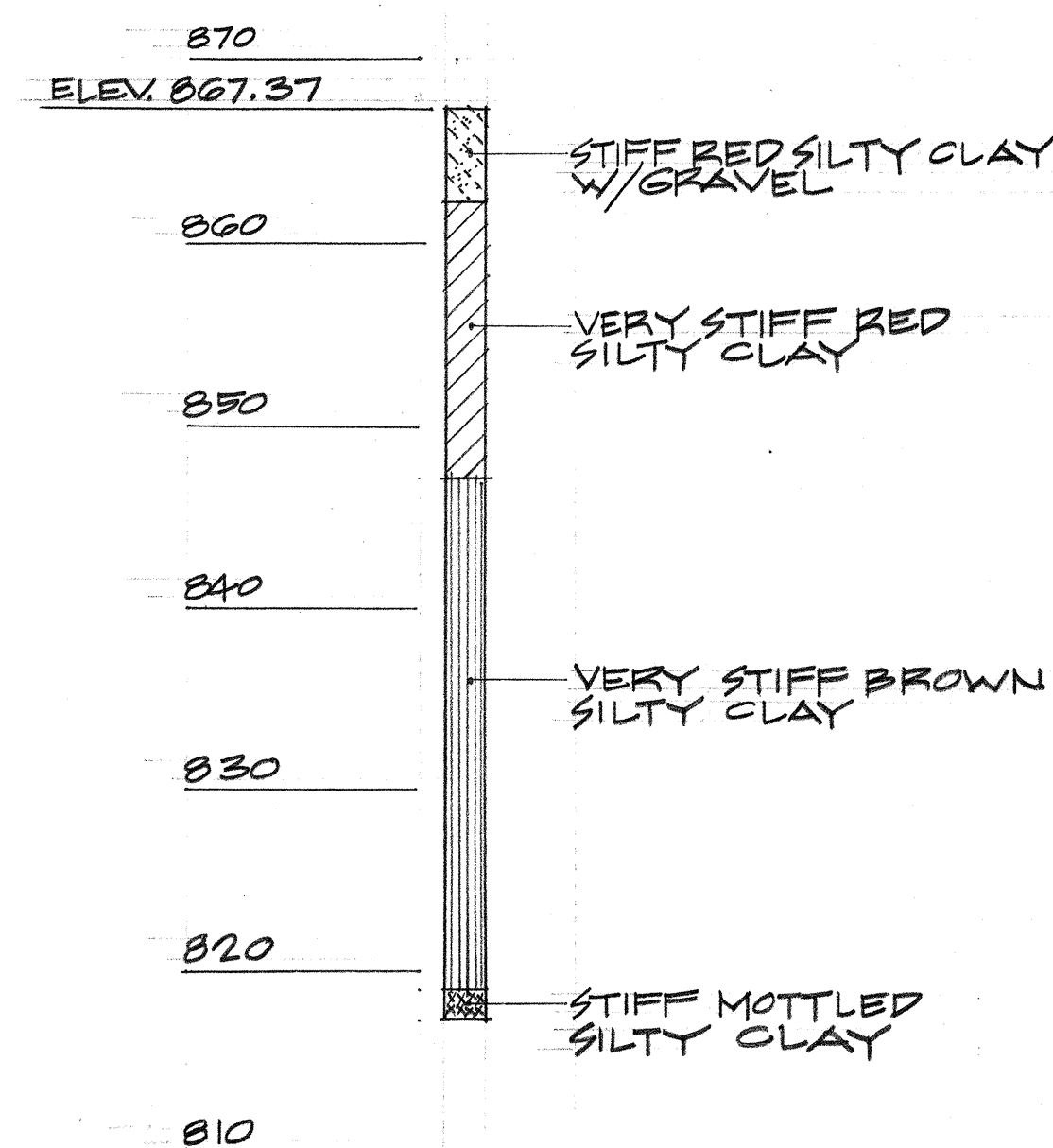
BORING NO. 3



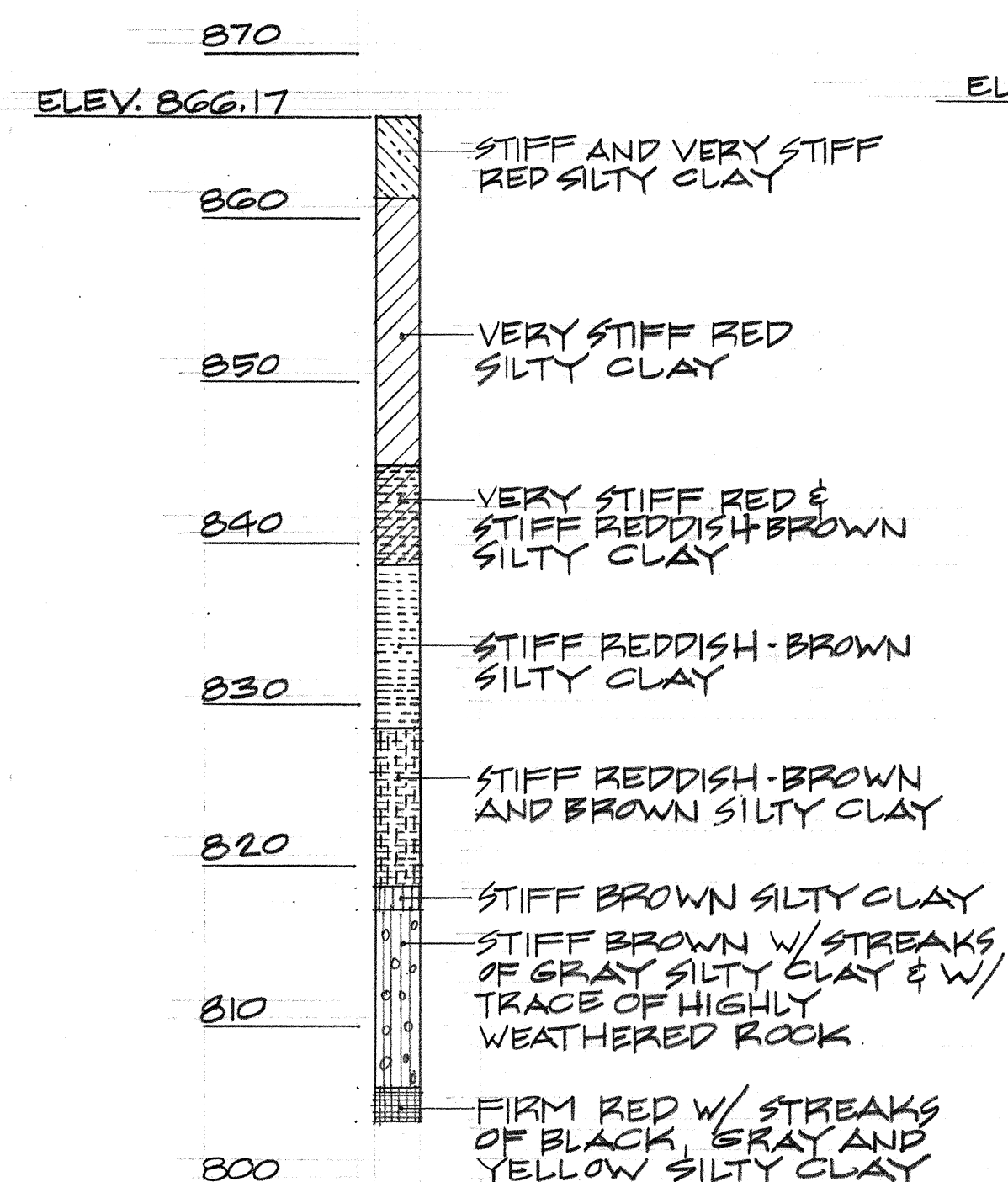
BORING NO. 4



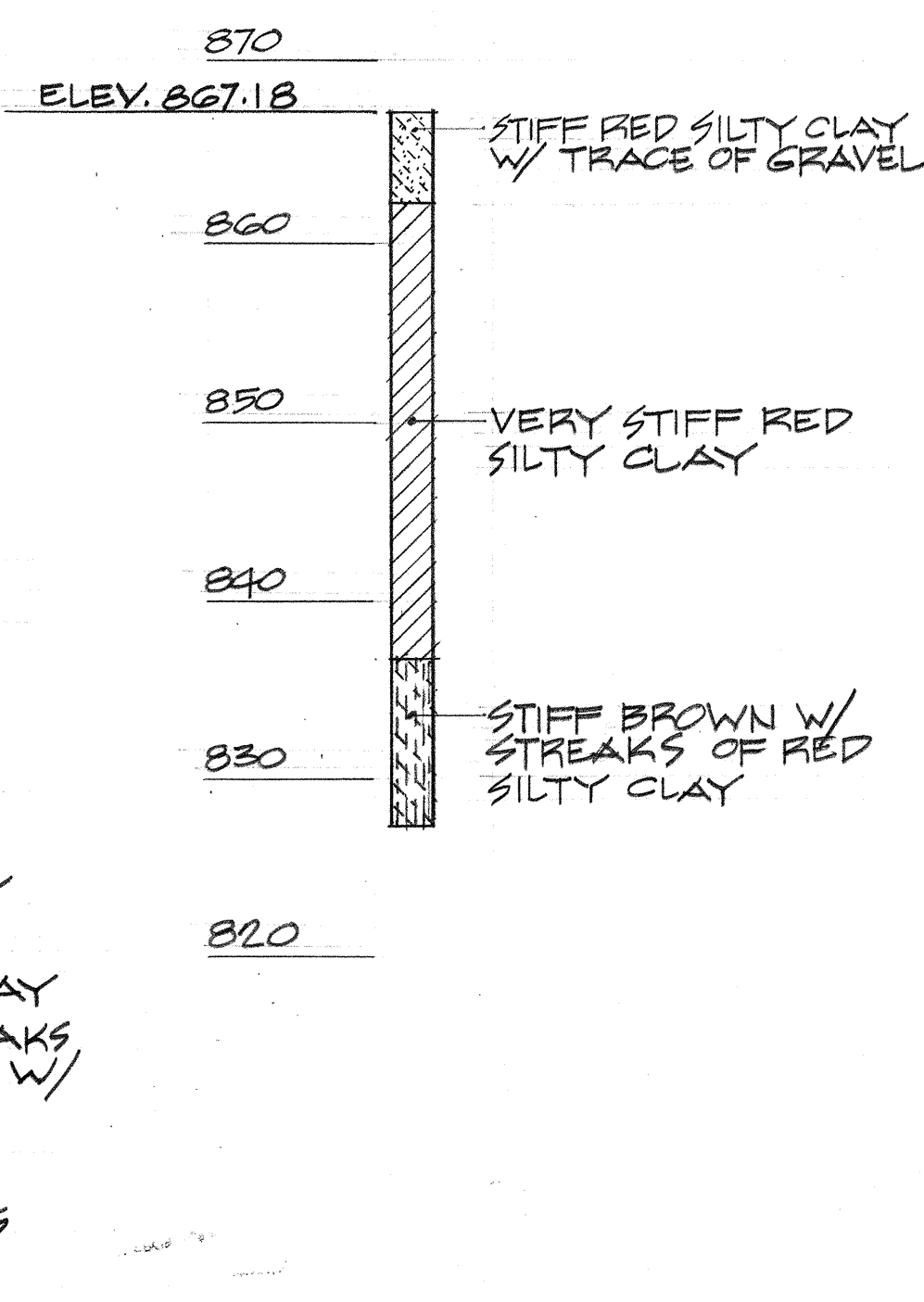
BORING NO. 5



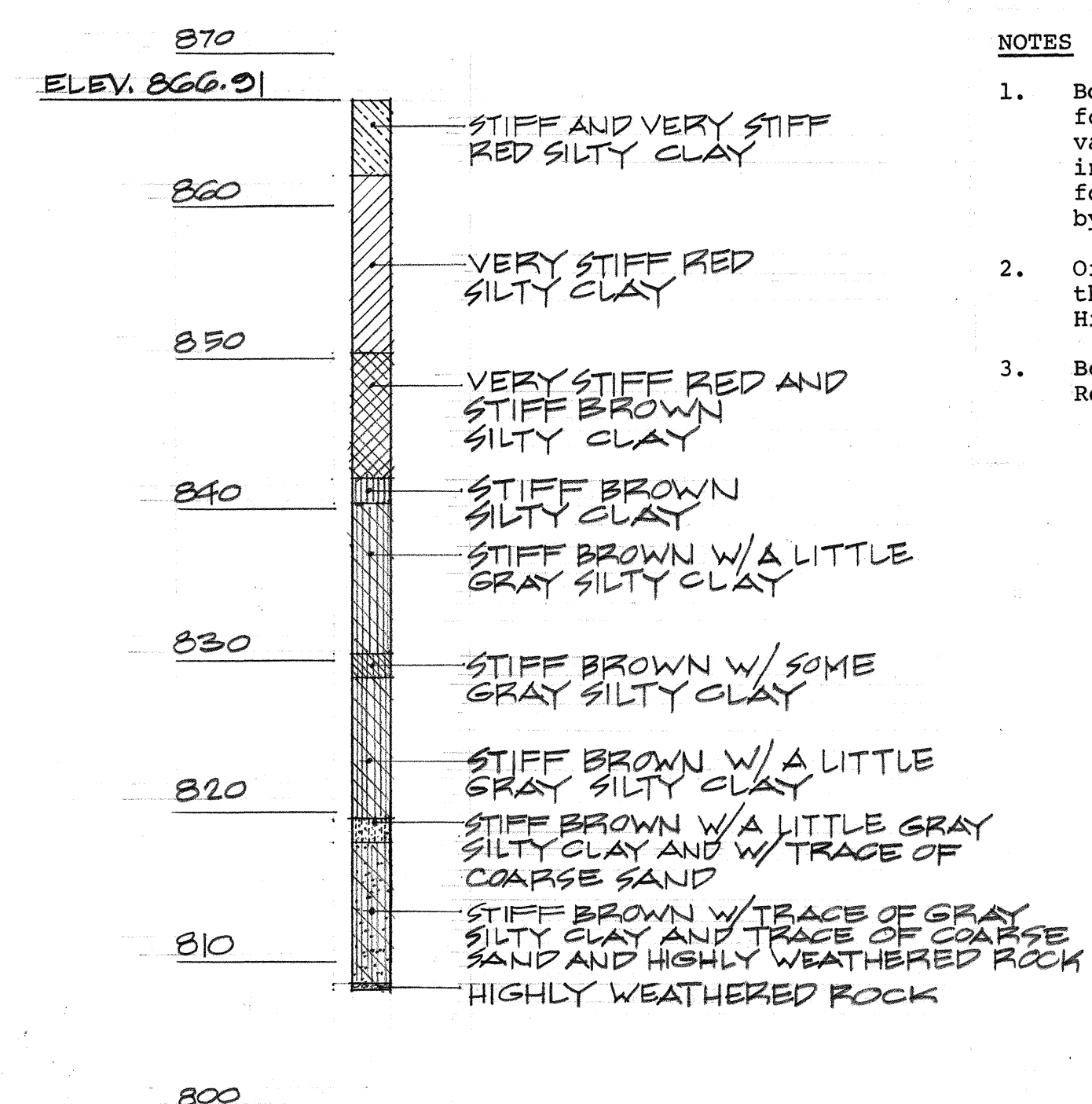
BORING NO. 6



BORING NO. 7



BORING NO. 8



BORING NO. 9

NOTES

- Boring data indicated are only represented as accurate for the location where the borings were made since variations in ground conditions may be expected to occur in adjacent areas. The State will not be responsible for any deductions, assumptions, or interpretations made by the Contractor of these borings.
- Original boring logs may be reviewed by the Contractor at the Highway Division Material Laboratory, 2530 Likie Highway, Honolulu, Hawaii 96819.
- Boring data taken from report by Material Testing & Research Branch, Department of Transportation.

AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. A.C. CHK. H.L.
Ronald J. Yee
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG
BRIDGES 1 & 2

WAHIANA INTERCHANGE
F.A.I. Project No. I-42-1(11):7

Scale: As noted Date: 4-25-73

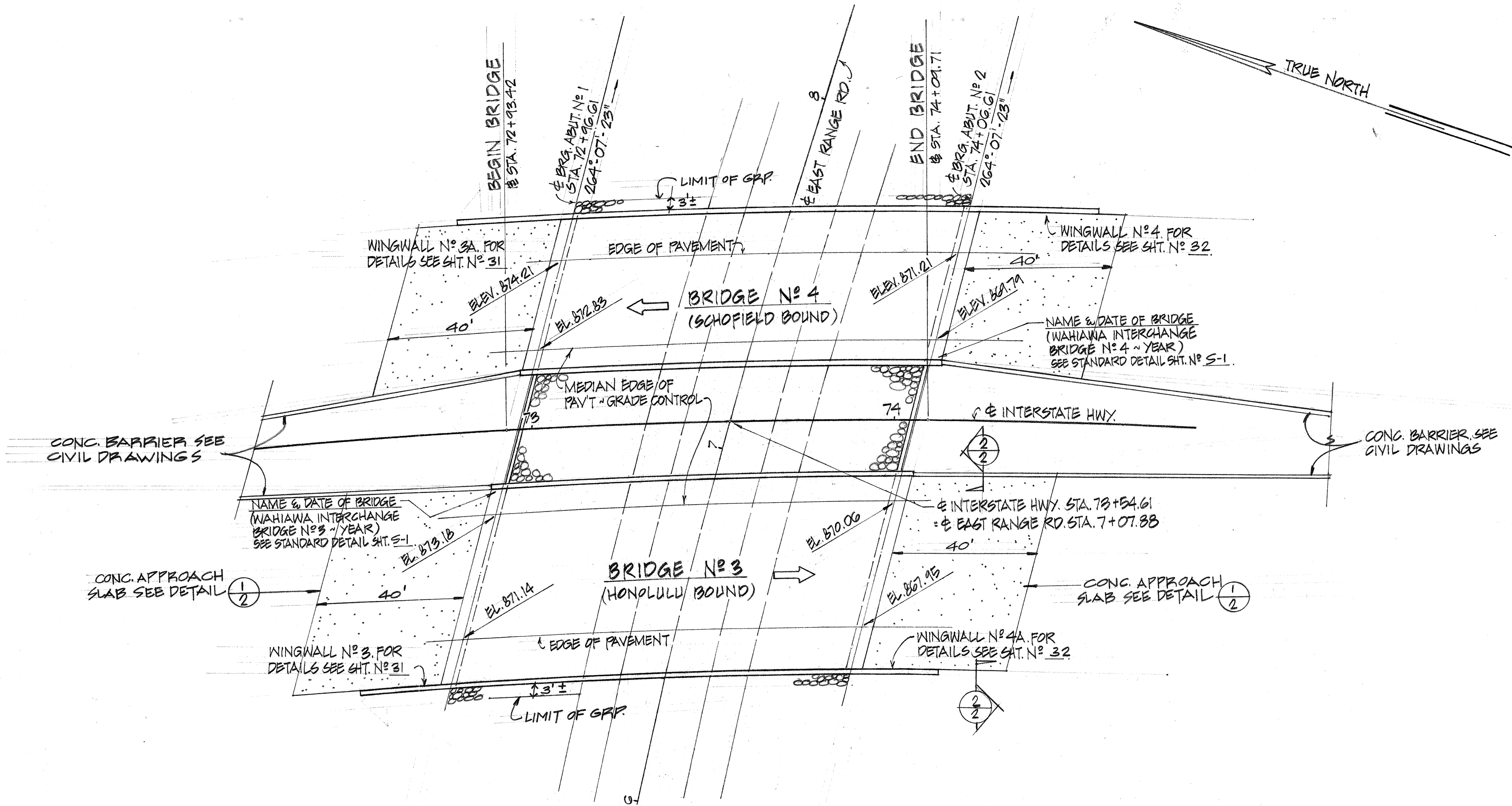
SHEET No. 22 OF 42 SHEETS

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____
DESIGNED BY: _____
QUANTITIES BY: _____
NOTE BOOK: _____
No. _____

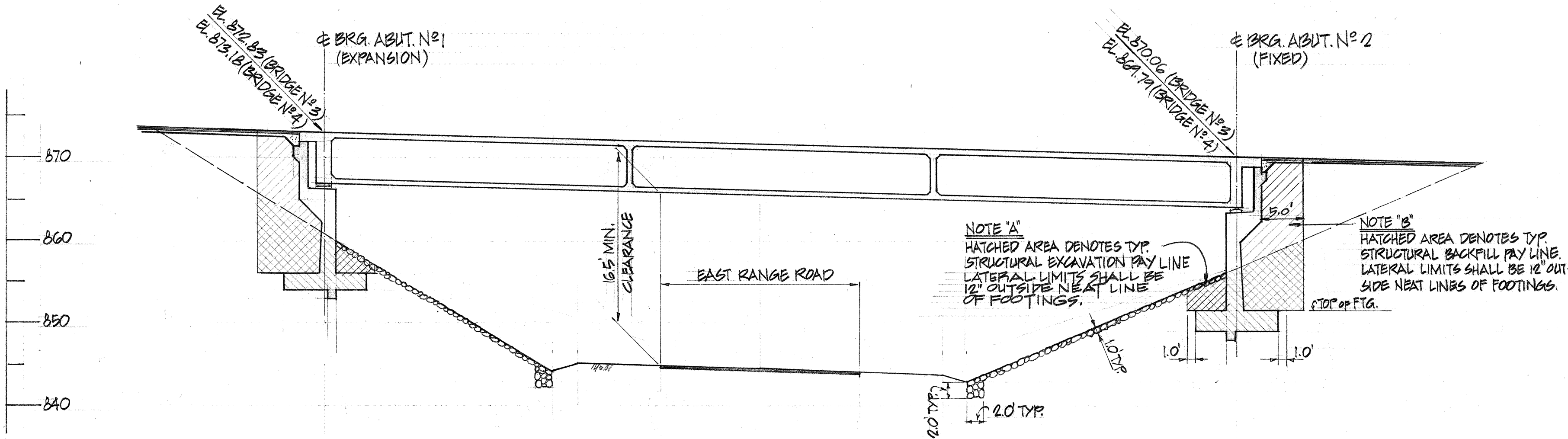
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2-H2-1(11)	1973	101	274

ESTIMATED QUANTITIES BRIDGE NO 3&4 & RET WALL NO 3&4

ITEM NO	ITEM	UNIT	APPROX. QUANTITY
206.60	STRUCTURAL EXCAVATION FOR BRIDGES NO 3 & NO 4 AND RETAINING WALLS NO 3 & NO 4	CY.	1,071
206.71	STRUCTURAL BACKFILL FOR BRIDGES NO 3 & NO 4 AND RETAINING WALLS NO 3 & NO 4	CY.	969
206.81	FILTER MATERIAL FOR BRIDGES NO 3 & NO 4 AND RETAINING WALLS NO 3 & NO 4	CY.	123
503.071	CONCRETE IN BRIDGES NO 3 & NO 4 AND RETAINING WALLS NO 3 & NO 4 (EXCEPT FOOTINGS)	CY.	1,148
503.072	CONCRETE IN FOOTING FOR BRIDGES NO 3 & NO 4 & RETAINING WALLS NO 3 & NO 4	CY.	265
507.71	CONC. BRIDGE PARAPET, INCLUDING END POST	L.F.	514
602.011	REINFORCING STEEL IN BRIDGES NO 3 & NO 4 AND RETAINING WALLS NO 3 & NO 4	LBS	498,440
612.01	GROUTED RUBBLE PAVING	CY	340
411.15	CONCRETE IN APPROACH APRON SLAB FOR BRIDGES NO 3 & NO 4	S.Y.	891



LAYOUT PLAN - BRIDGE NO 3 & 4
SCALE: 1" = 20'



PROFILE ALONG MEDIAN EDGE OF PAVEMENT - BRIDGE NO 3 (BRIDGE NO 4 SIMILAR)
SCALE: 1" = 10'

REGISTERED PROFESSIONAL ENGINEER
HAWAII

AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. CHK. H.L.
Ronald Winters
APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN & PROFILE
BRIDGE NO 3 & 4

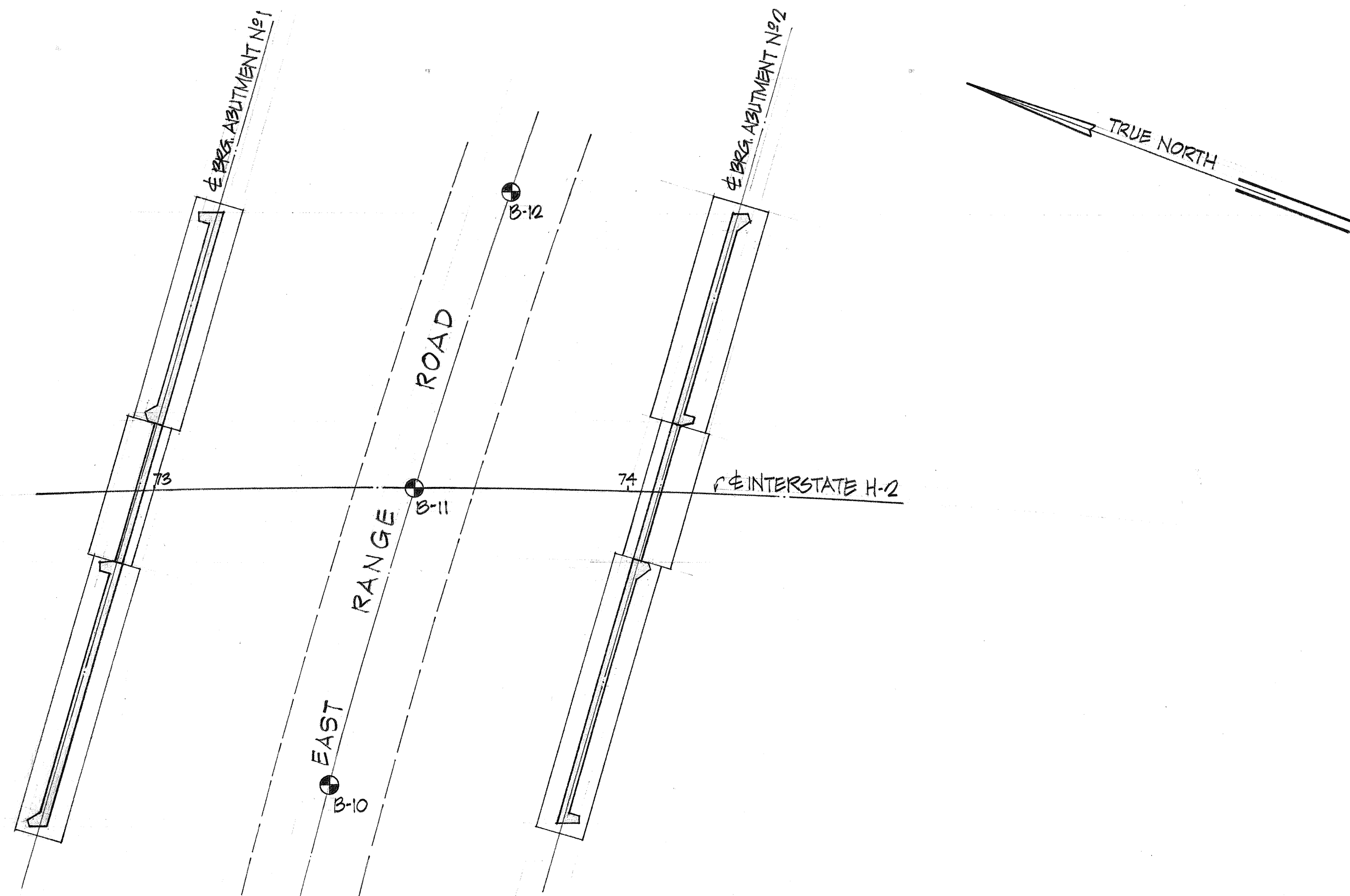
WAIHAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11):7

Scale: As noted Date: 4-25-73

SHEET No. 23 OF 42 SHEETS

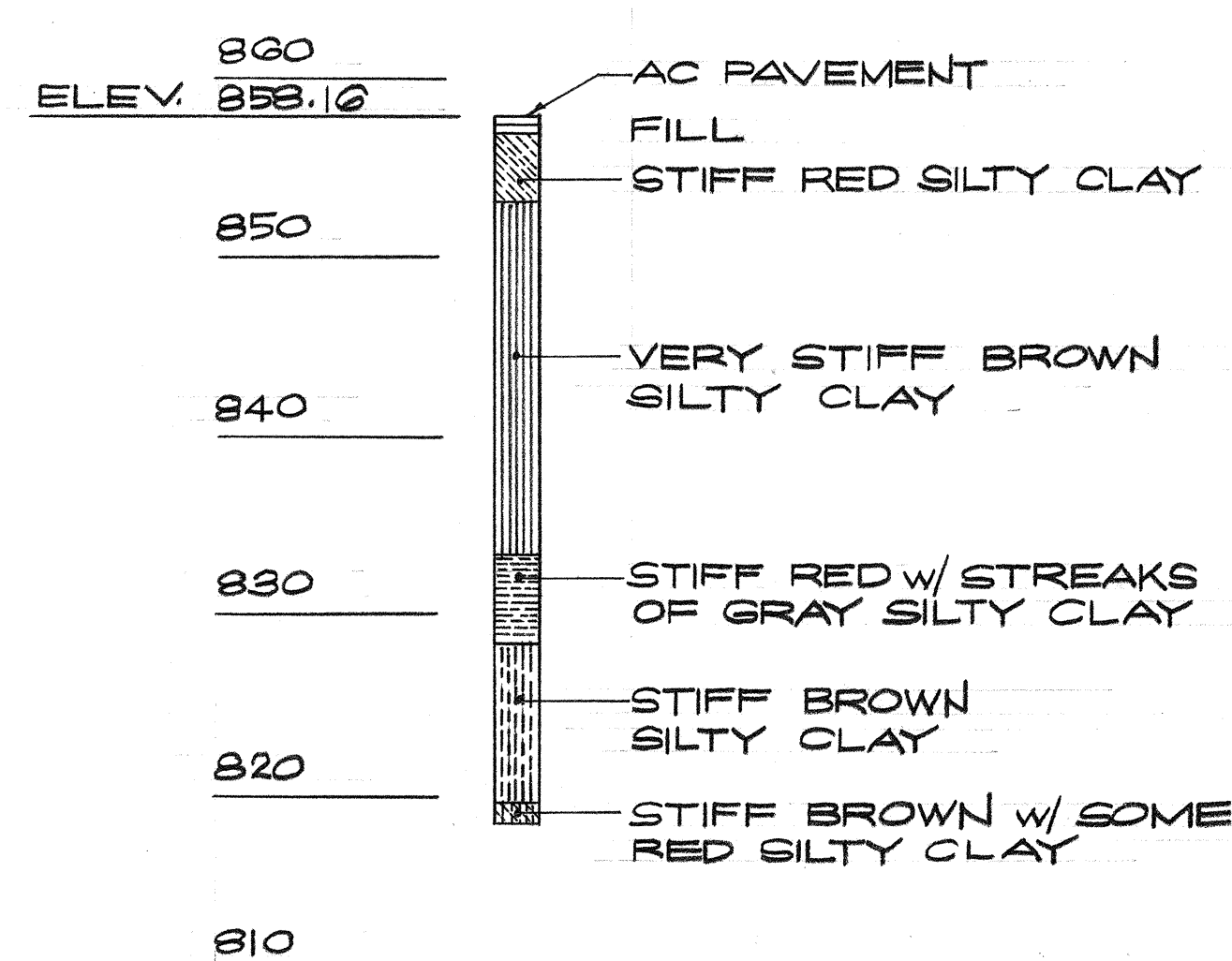
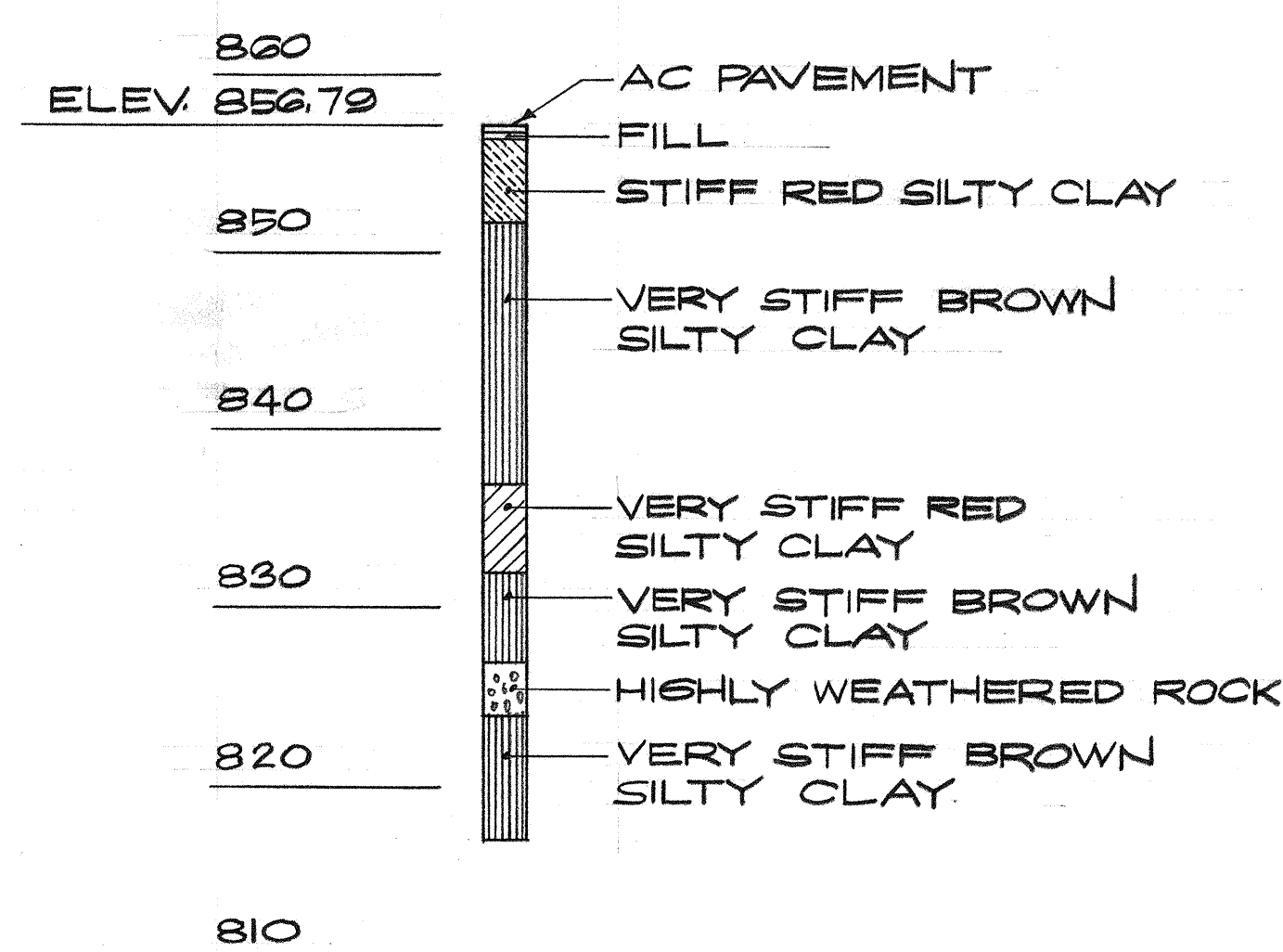
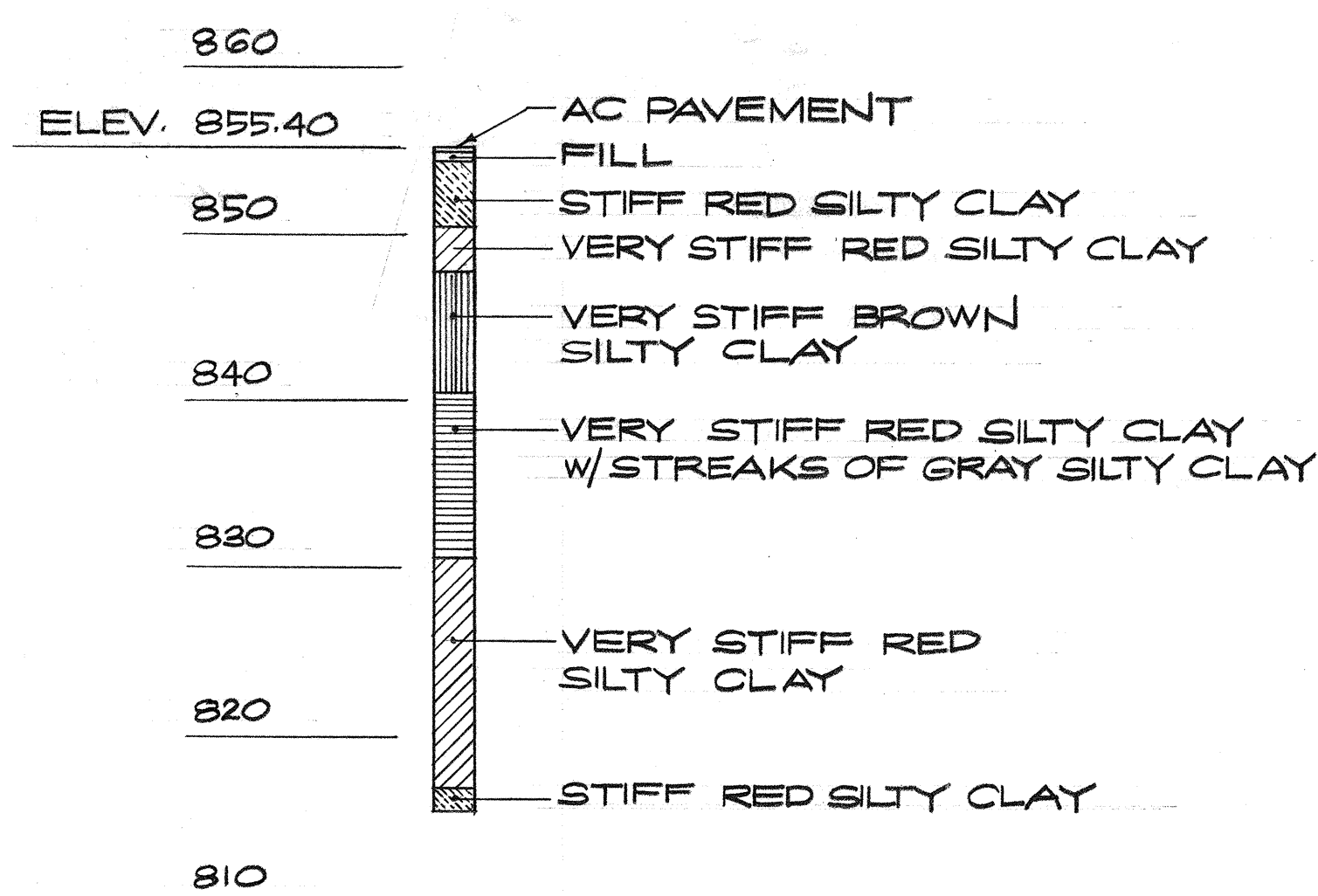
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
CHECKED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
NOTES BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)	1973	192	274



NOTE: ALLOWABLE FOUNDATION PRESSURE = 6,500 P.S.I.

FOUNDATION PLAN - BRIDGE Nos. 3 & 4
SCALE: 1" = 20'



NOTE
BORING DATA TAKEN FROM REPORT BY MATERIAL TESTING & RESEARCH BRANCH, DEPT. OF TRANSPORTATION.

- NOTES
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 - Original boring logs may be reviewed by the Contractor at the Highway Division Material Laboratory, 2530 Likelike Highway, Honolulu, Hawaii 96819.
 - Boring data taken from report by Material Testing & Research Branch, Department of Transportation.

REGISTERED PROFESSIONAL ENGINEER
HAWAII, U.S.A.

AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. I.E. CHK. H.L.

APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FOUNDATION PLAN & BORING LOG
BRIDGE Nos. 3 & 4

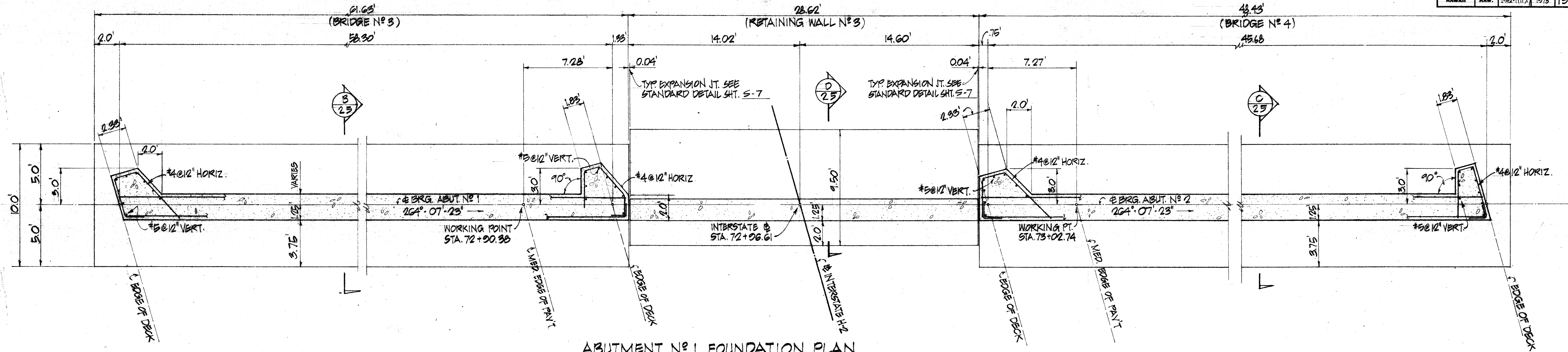
WAIHANA INTERCHANGE
F.A.I. Project No. I-42-1(11):7

Scale: As noted Date: 4-25-73

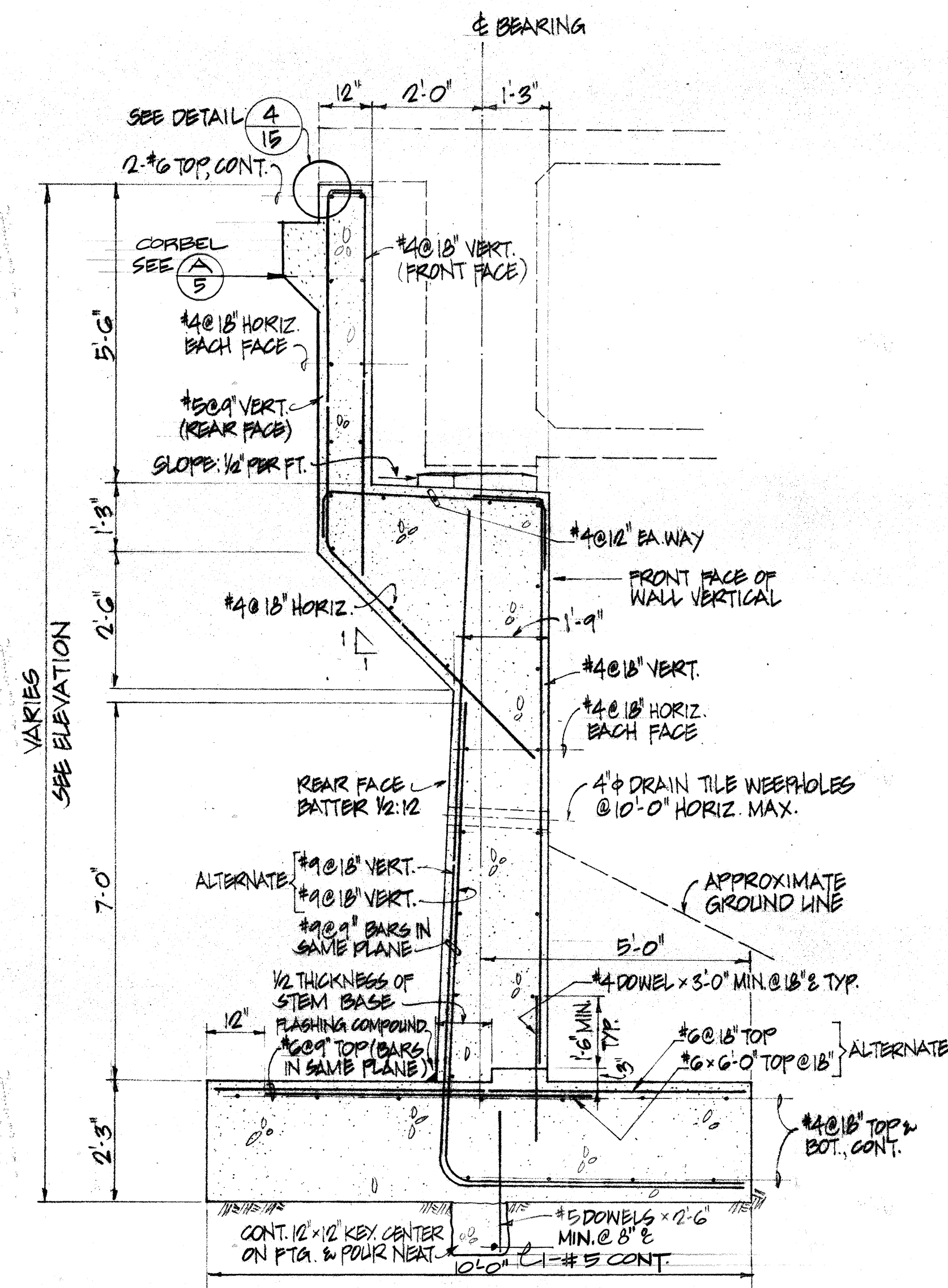
SHEET No. 24 OF 42 SHEETS

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

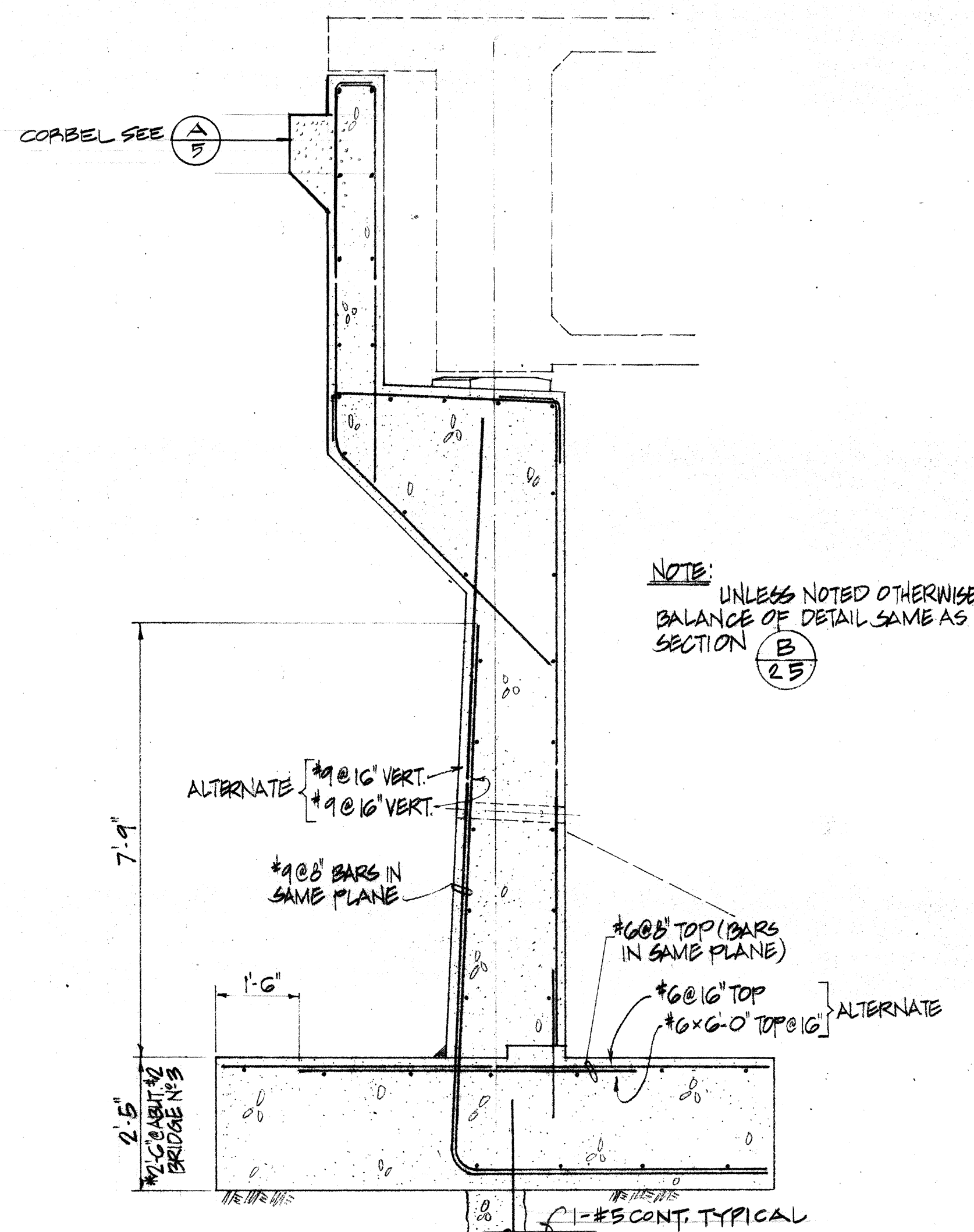
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H2-1(11)	1973	193	274



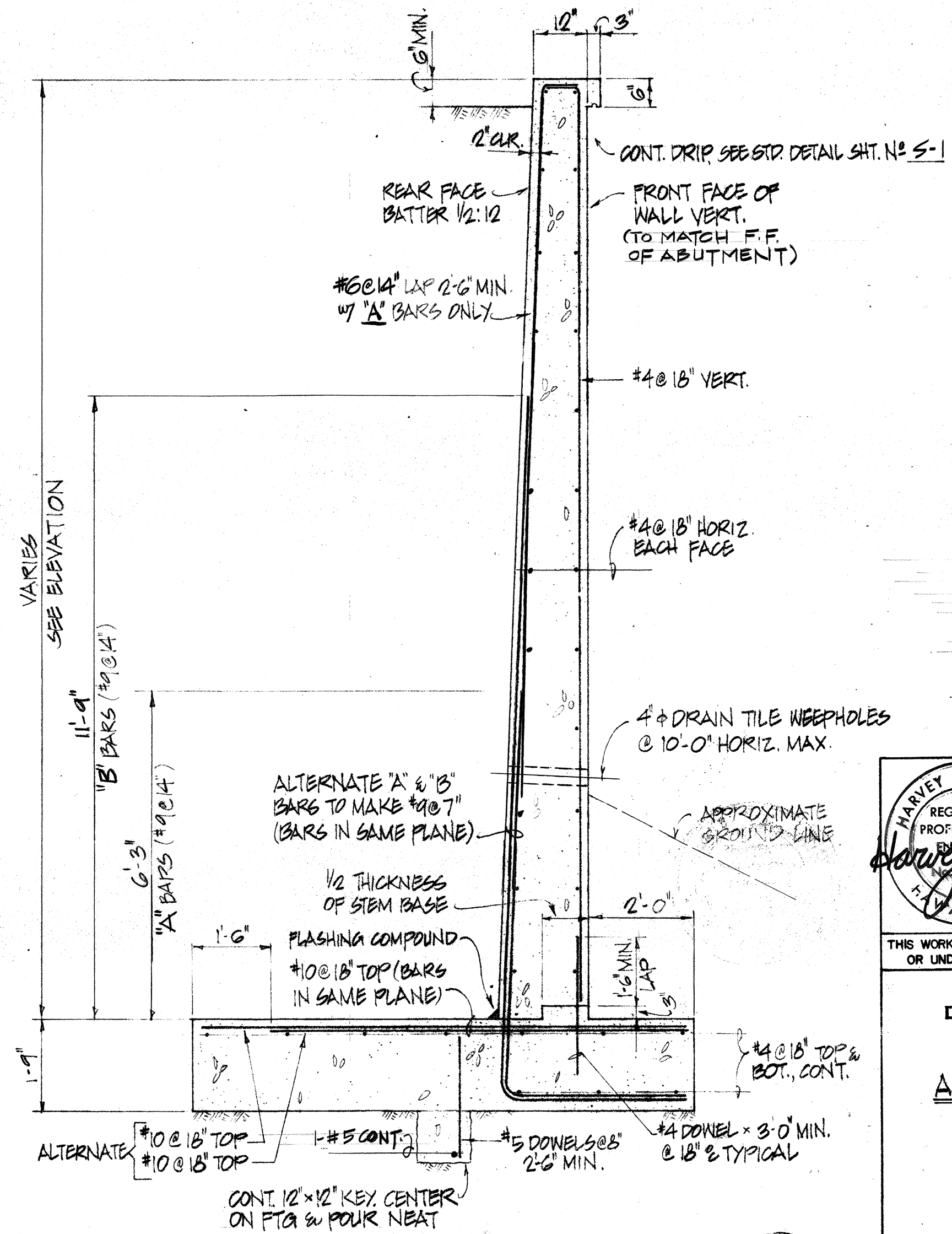
ABUTMENT NO 1 FOUNDATION PLAN
SCALE: 1"=4'



TYP. ABUTMENT NO 1 (BRIDGE NO 3) SECTION B
SCALE: 1/2"=1'-0"



TYP. ABUTMENT NO 2 (BRIDGE NO 3) SIMILAR C
SCALE: 1/2"=1'-0"



TYPICAL RETAINING WALL NO 3 SECTION D
SCALE: 1/2"=1'-0"

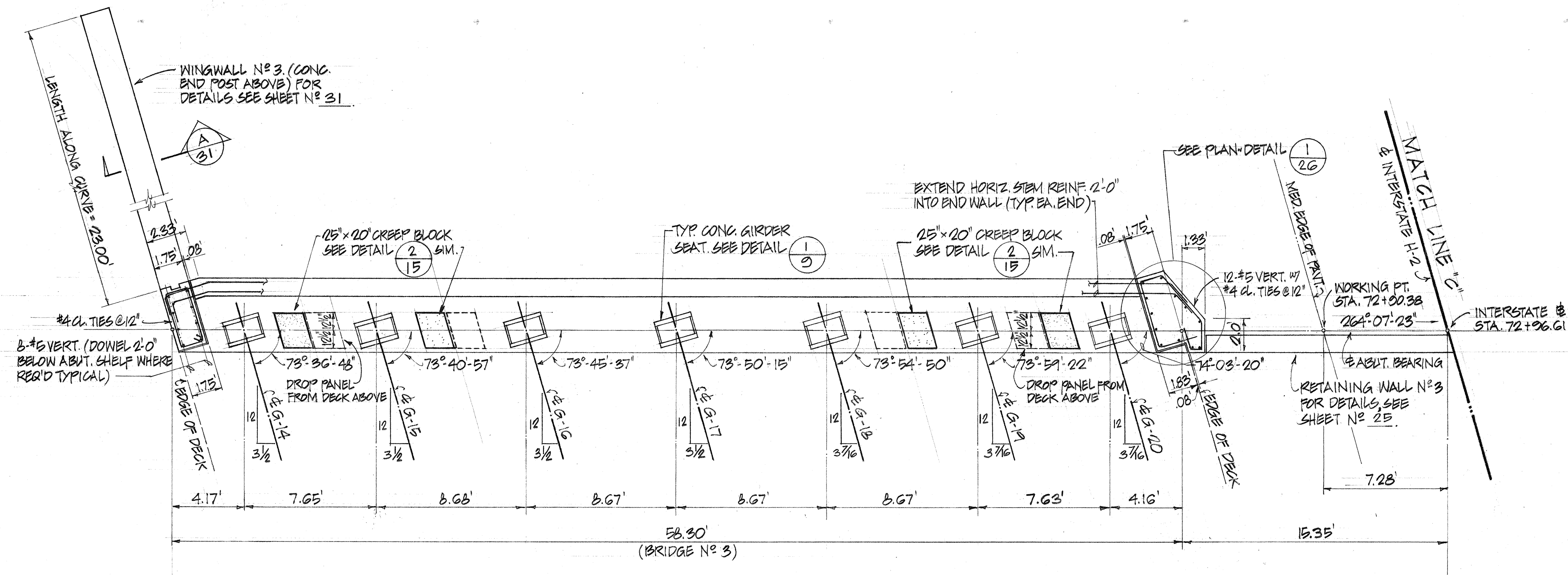
NOTE:
FOR TYPICAL DRAINAGE DETAILS
& TYPICAL STRUCTURAL EXCAVATION
& BACKFILL PAY LINE LIMITS
SEE SHEET 5

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.L.	CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION 			

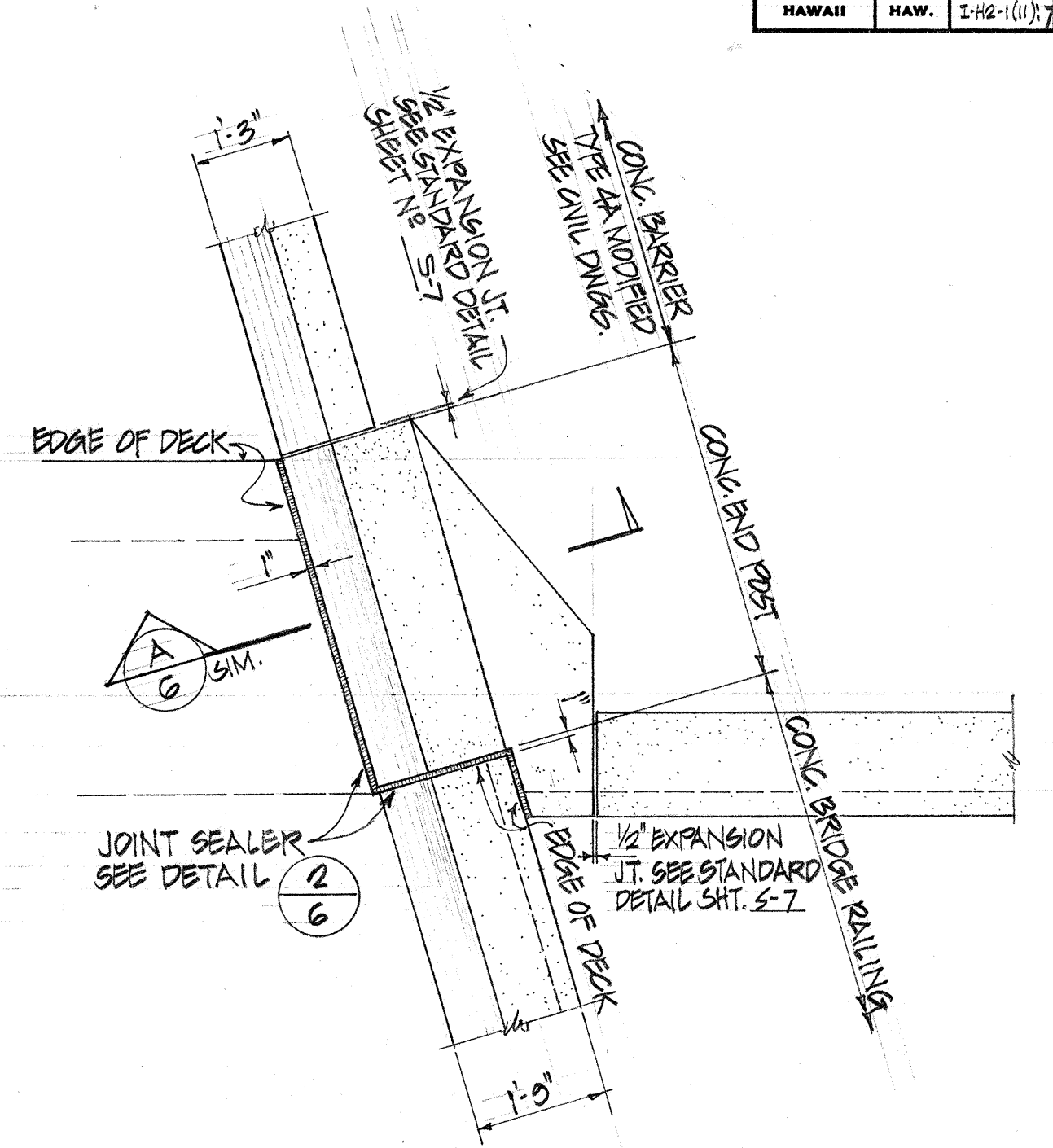
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ABUTMENT NO 1 - PLAN & DETAILS BRIDGE NO 3 & 4	
WAHIANA INTERCHANGE P.A.I. Project No. I-H2-1(11):7	
Scale: As noted	Date: 4-25-73
SHEET No. 25 OF 42 SHEETS	

DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
TRACED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

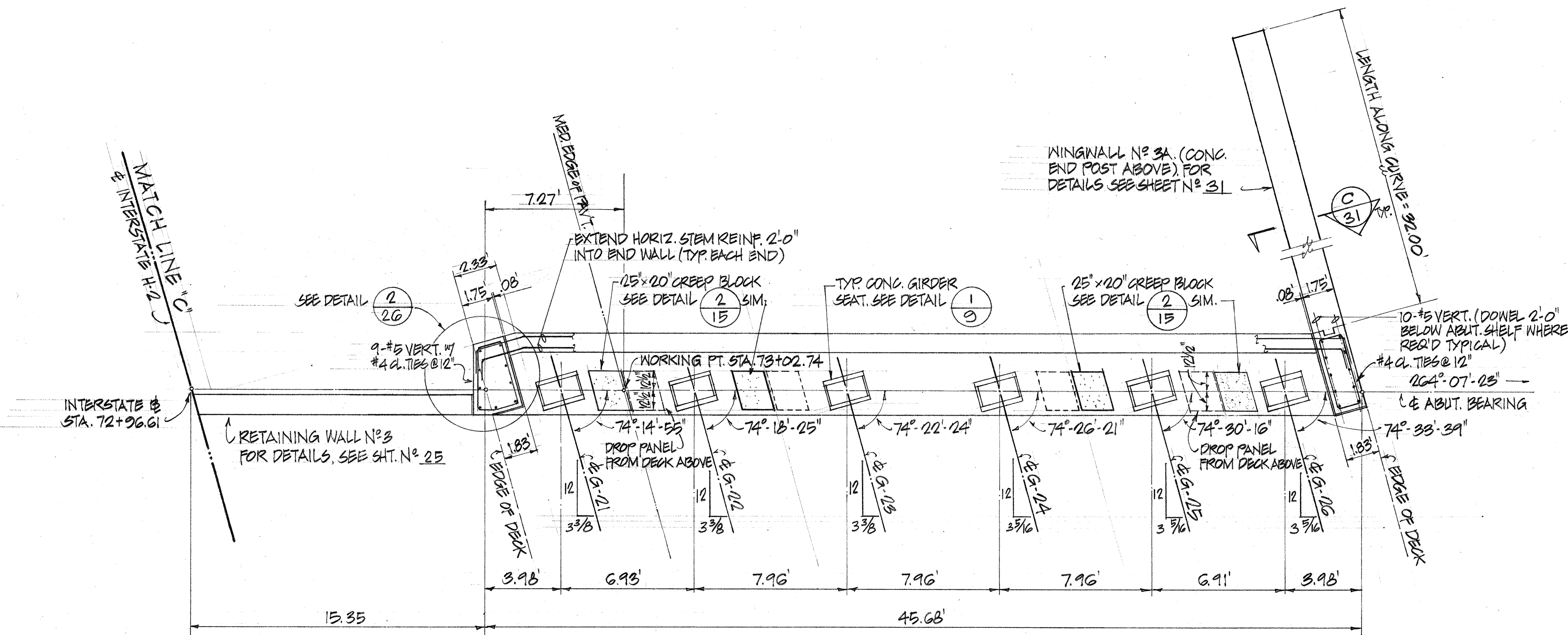
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H2-1(11)	1973	104	274



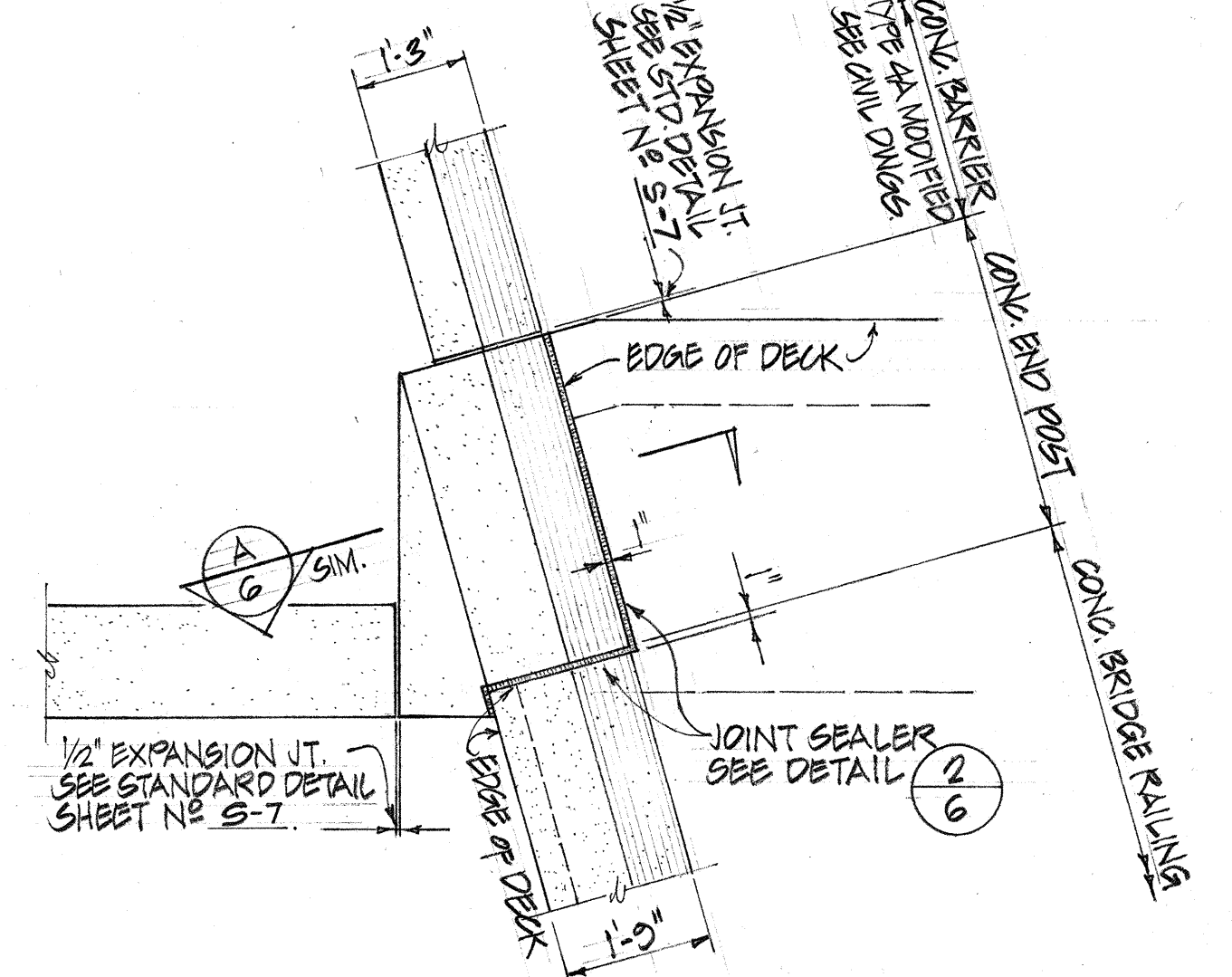
PLAN - ABUTMENT NO. 1 (BRIDGE NO. 3)
SCALE: 1" = 4'



END POST PLAN - DETAIL 1
SCALE: 1/2" = 1'-0"



PLAN - ABUTMENT NO. 1 (BRIDGE NO. 4)
SCALE: 1" = 4'

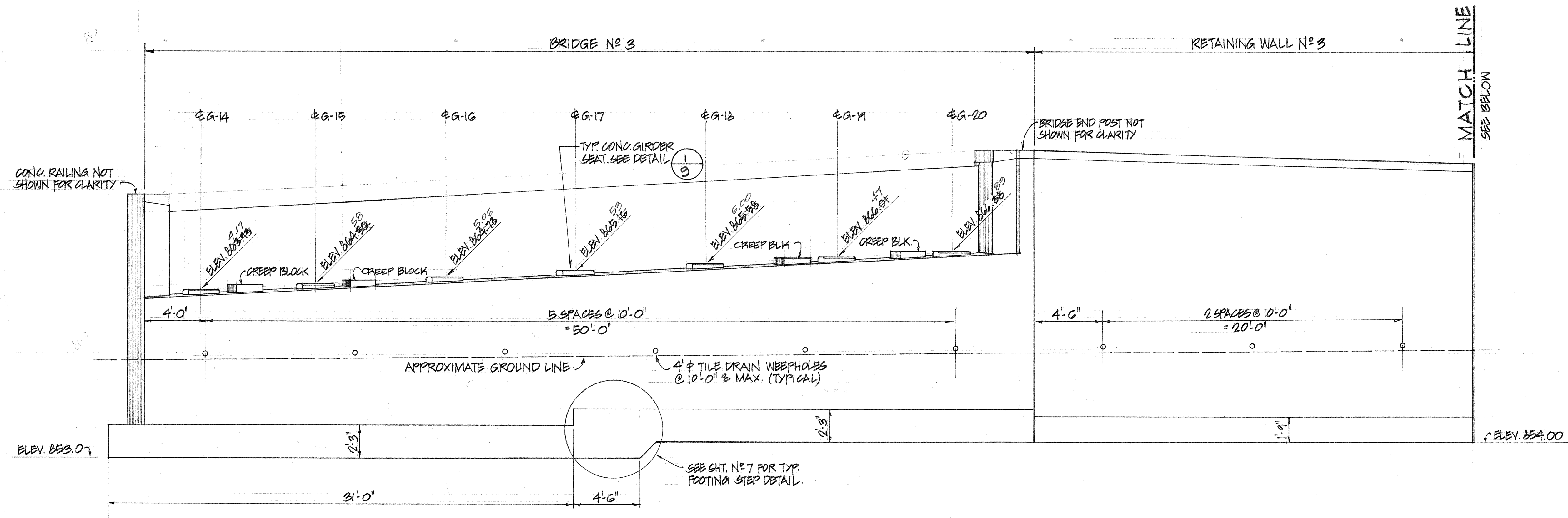


END POST PLAN - DETAIL 2
SCALE: 1/2" = 1'-0"

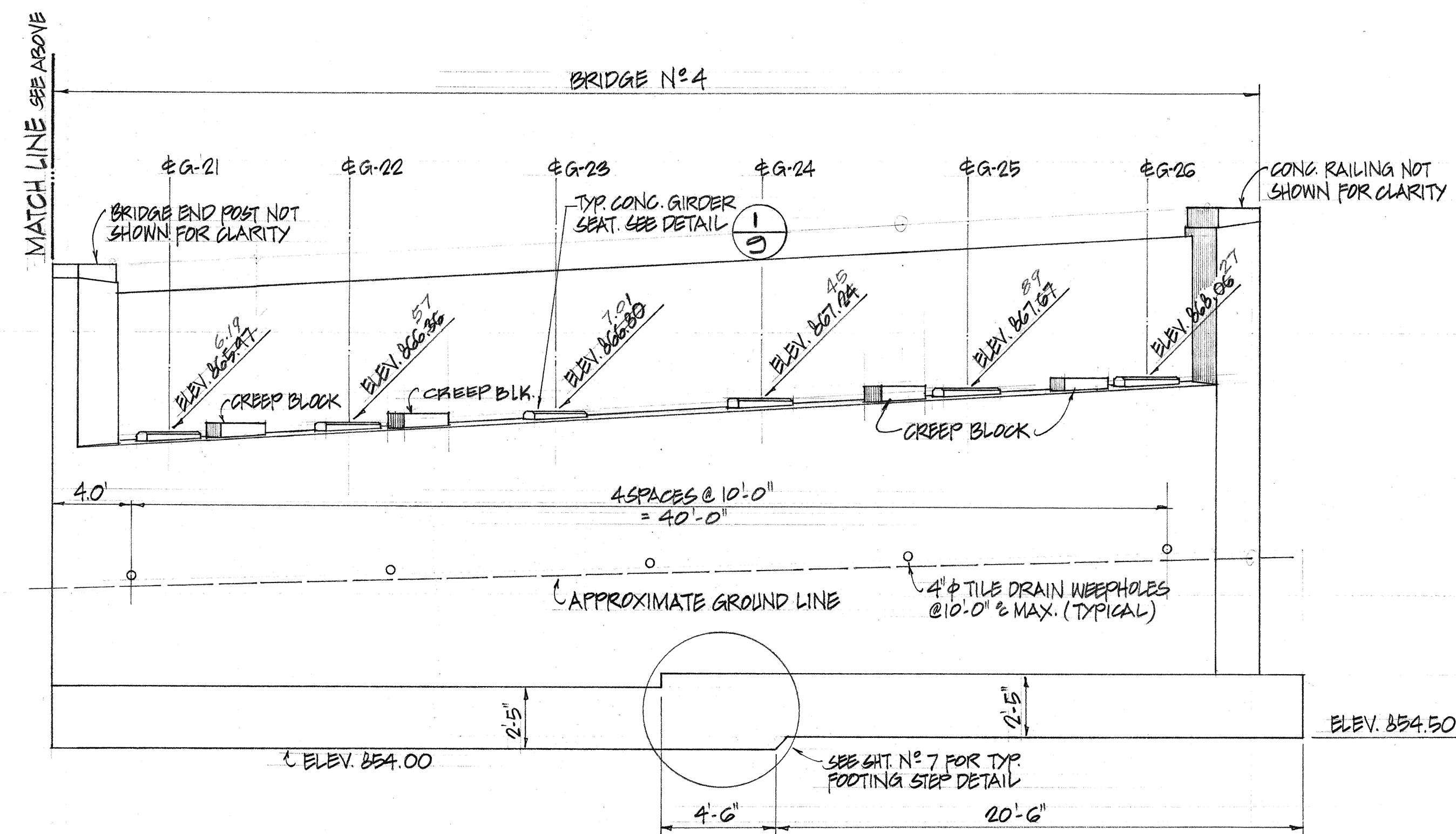
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII
	DES. H. DR. W.J. CHK. H.L.
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APPROVED FOR JOINT VENTURE	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PLAN - ABUTMENT NO. 1 BRIDGE NO. 3 & 4	
WAIHAWA INTERCHANGE F.A.I. Project No. I-H2-1(11):7	
Scale: As noted	Date: 4-25-73
SHEET No. 26 OF 41 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2-102-1(11):7	1973	105	274



ELEVATION - ABUTMENT N° 1
SCALE: 1/4" = 1'-0"



ELEVATION - ABUTMENT N° 1 (CONT.)
SCALE: 1/4" = 1'-0"

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

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AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. CHK. H.L.

APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

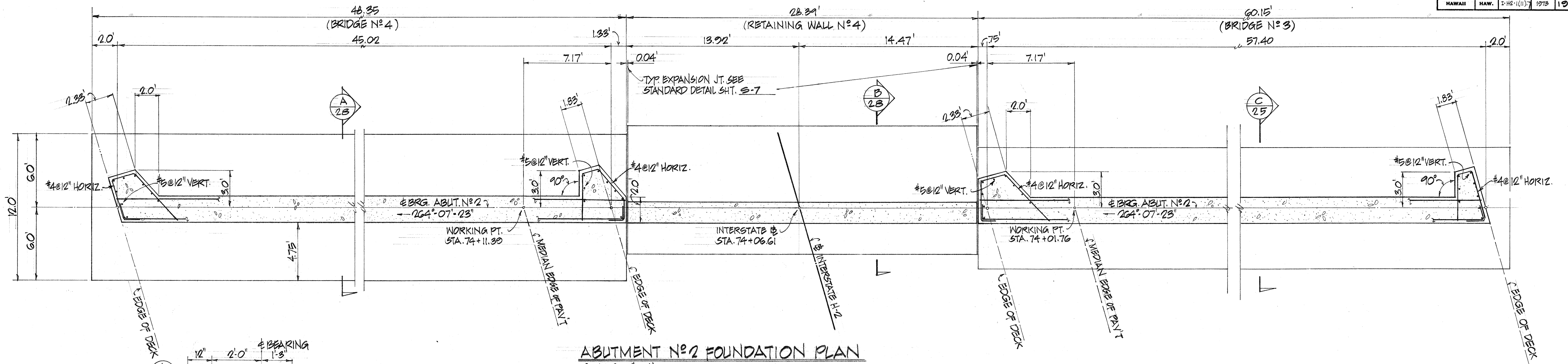
ELEVATION - ABUTMENT N° 1
BRIDGE N°s 3 & 4

WAIHANA INTERCHANGE
F.A.I. Project No. I-H2-1(11):7

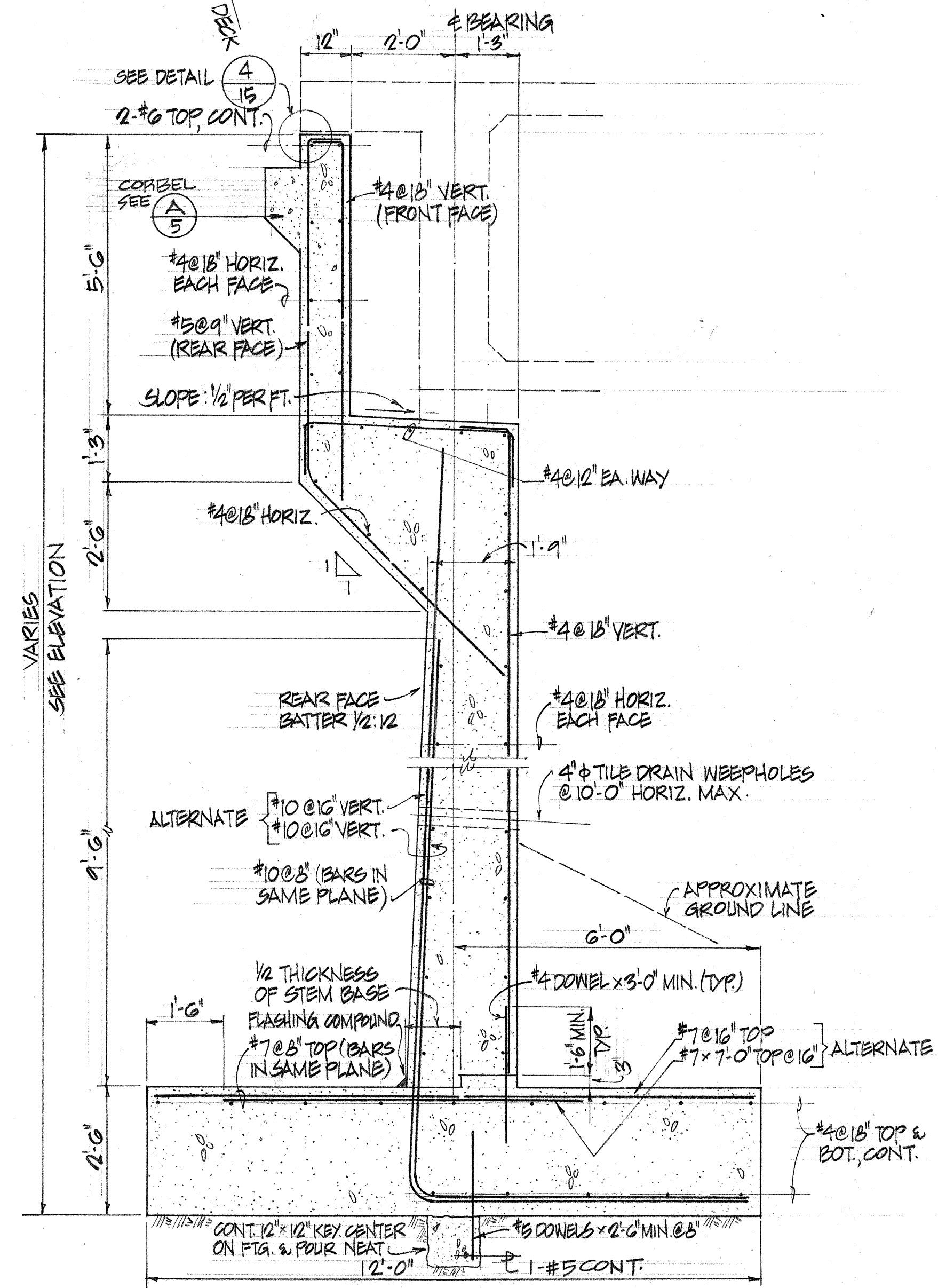
Scale: As noted Date: 4-25-73

SHEET No. 27 OF 42 SHEETS

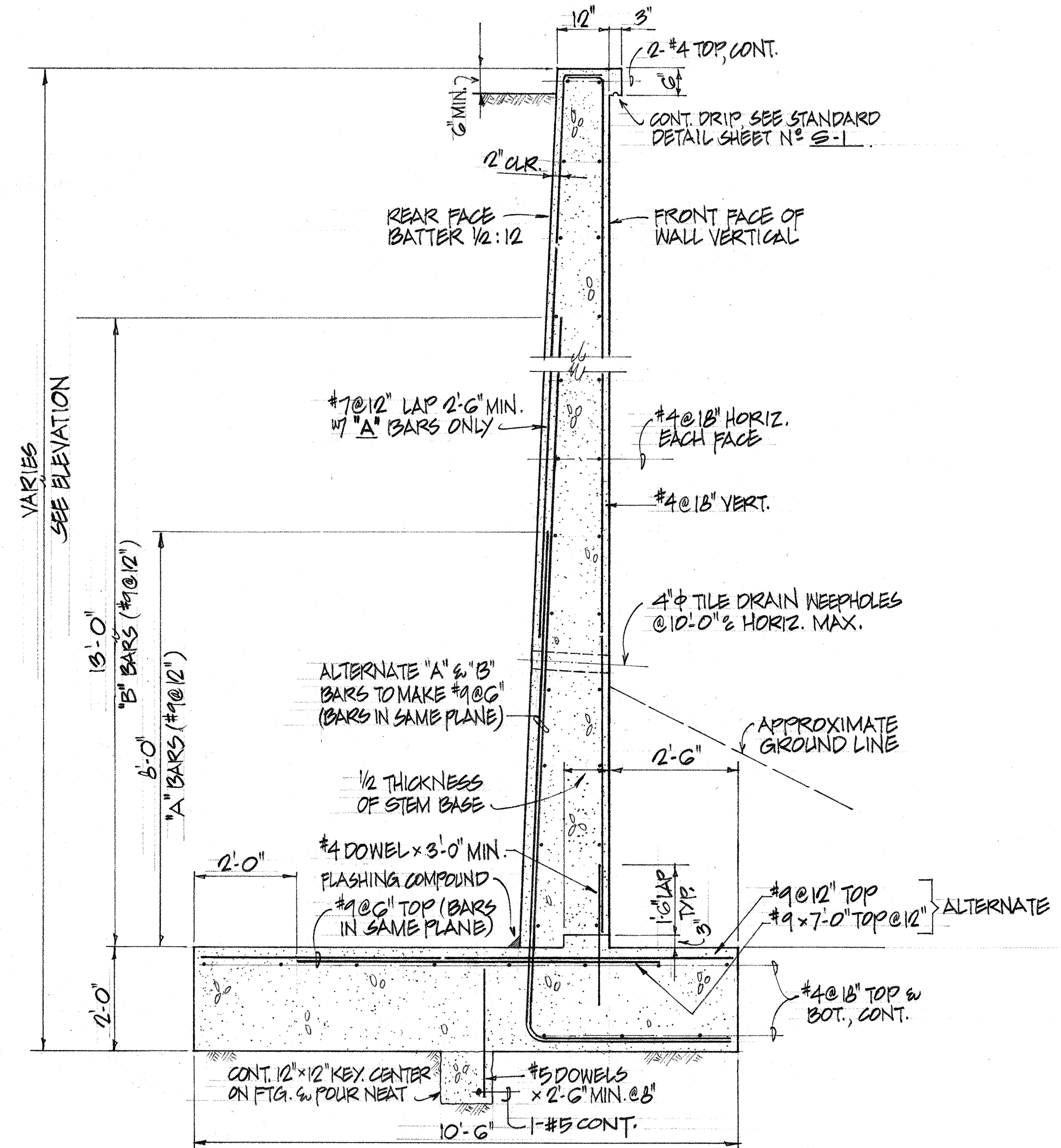
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2-H2-(11)	1973	196	274



ABUTMENT No 2 FOUNDATION PLAN
SCALE: 1" = 4'



TYP. ABUTMENT No 2 (BRIDGE No 4) SECTION A
SCALE: 1/2" = 1'-0"



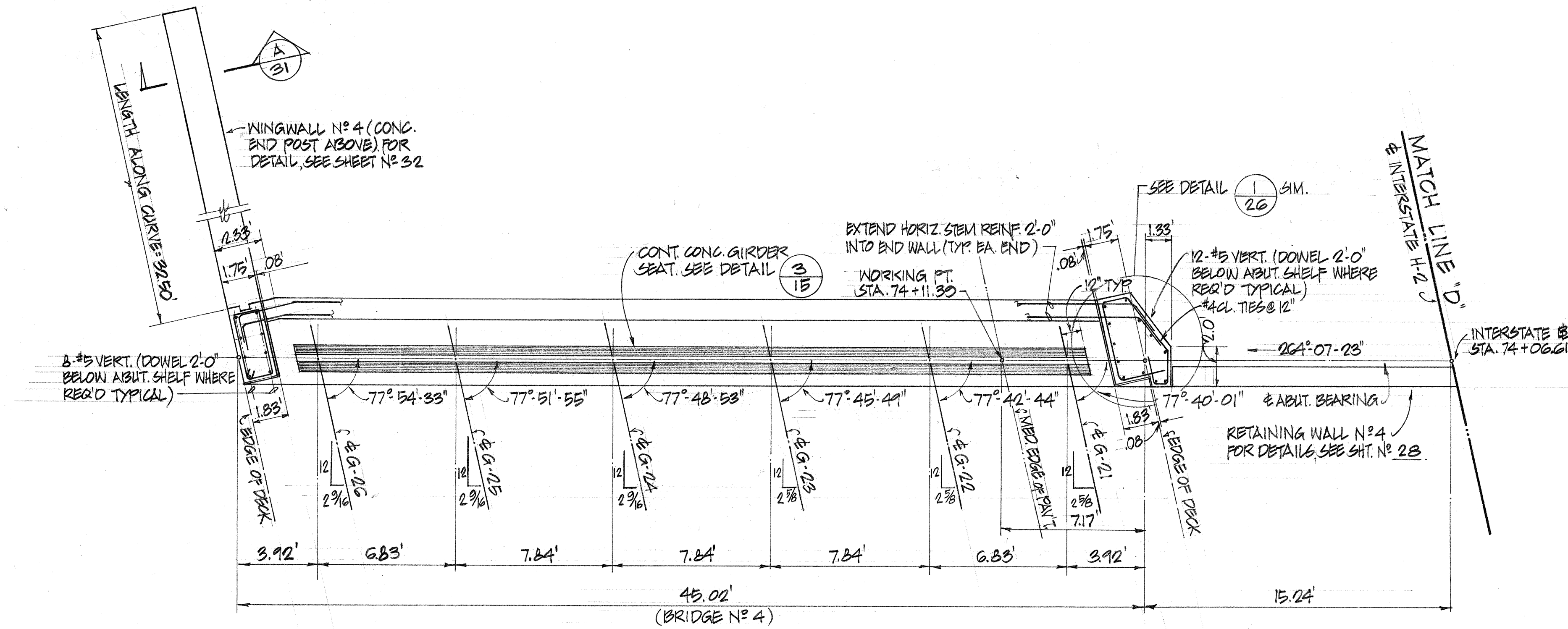
TYPICAL RETAINING WALL No 4 SECTION B
SCALE: 1/2" = 1'-0"

NOTE:
REFER TO SHEET 5 FOR TYPICAL
DRAINAGE DETAIL AND
STRUCTURAL EXCAVATION
AND BACKFILL DETAILS.

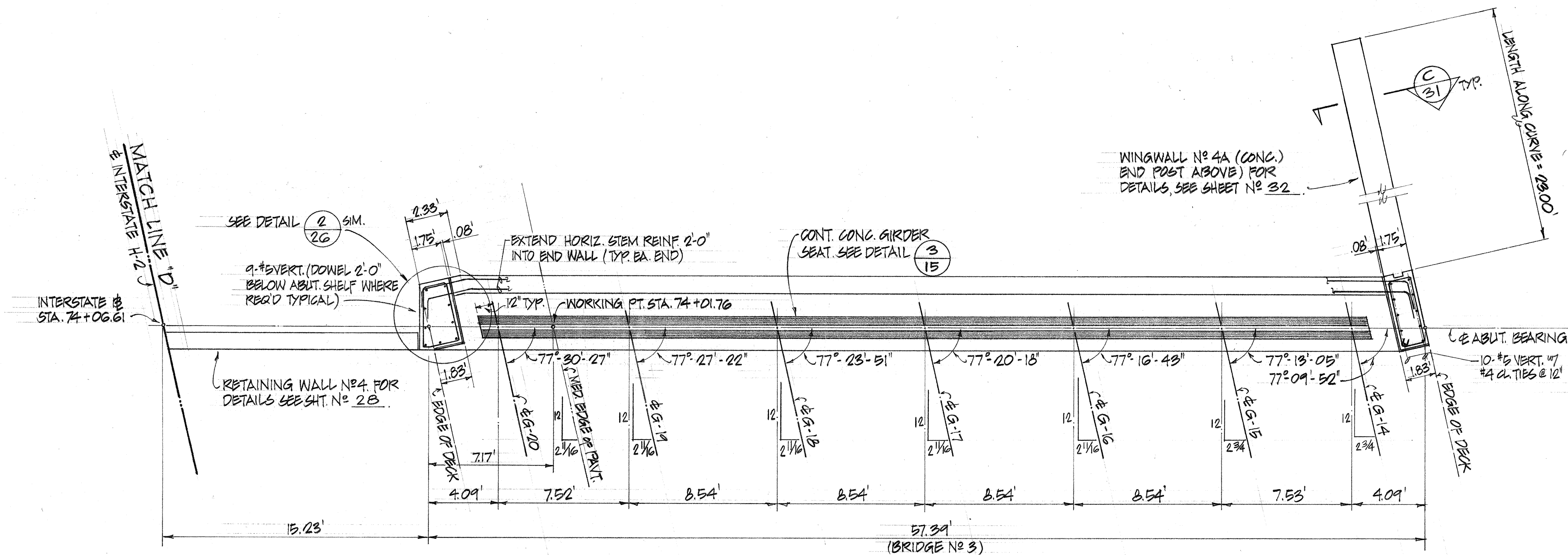
	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII	
	DES. H.L.	DR. W.L. CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION		
APPROVED FOR JOINT VENTURE		
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
ABUTMENT No 2 - PLAN & DETAILS BRIDGE No 3 & 4		
WAHIAWA INTERCHANGE F.A.I. Project No. I-H2-(11):7		
Scale: As noted		Date: 4-25-73
SHEET No. 28 OF 42 SHEETS		

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED 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-H2-1(11)	1973	107	274



PLAN - ABUTMENT NO. 2 (BRIDGE NO. 4)
SCALE: 1" = 4'



PLAN - ABUTMENT NO. 2 (BRIDGE NO. 3)
SCALE: 1" = 4'

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

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AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.Y. DR. W.L. CHK. H.L.

APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

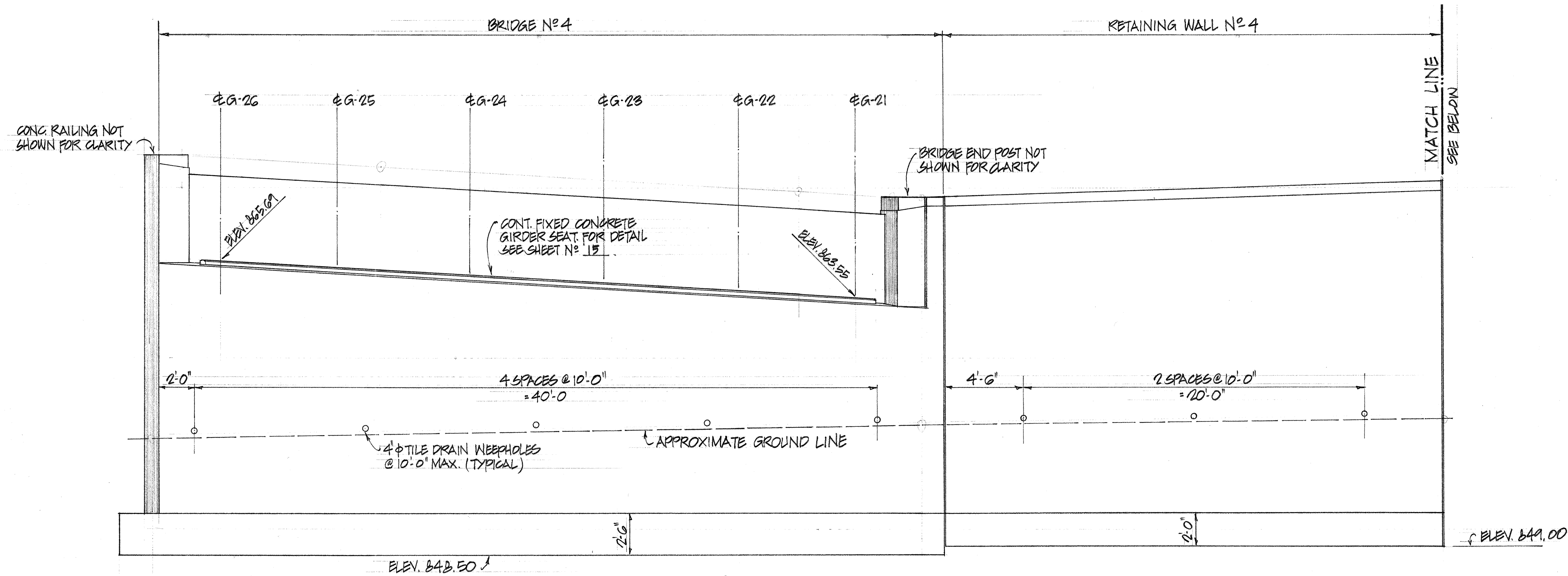
PLAN - ABUTMENT NO. 2
BRIDGE NOS. 3 & 4

WAHIANA INTERCHANGE
F.A.I. Project No. I-H2-1(11)17

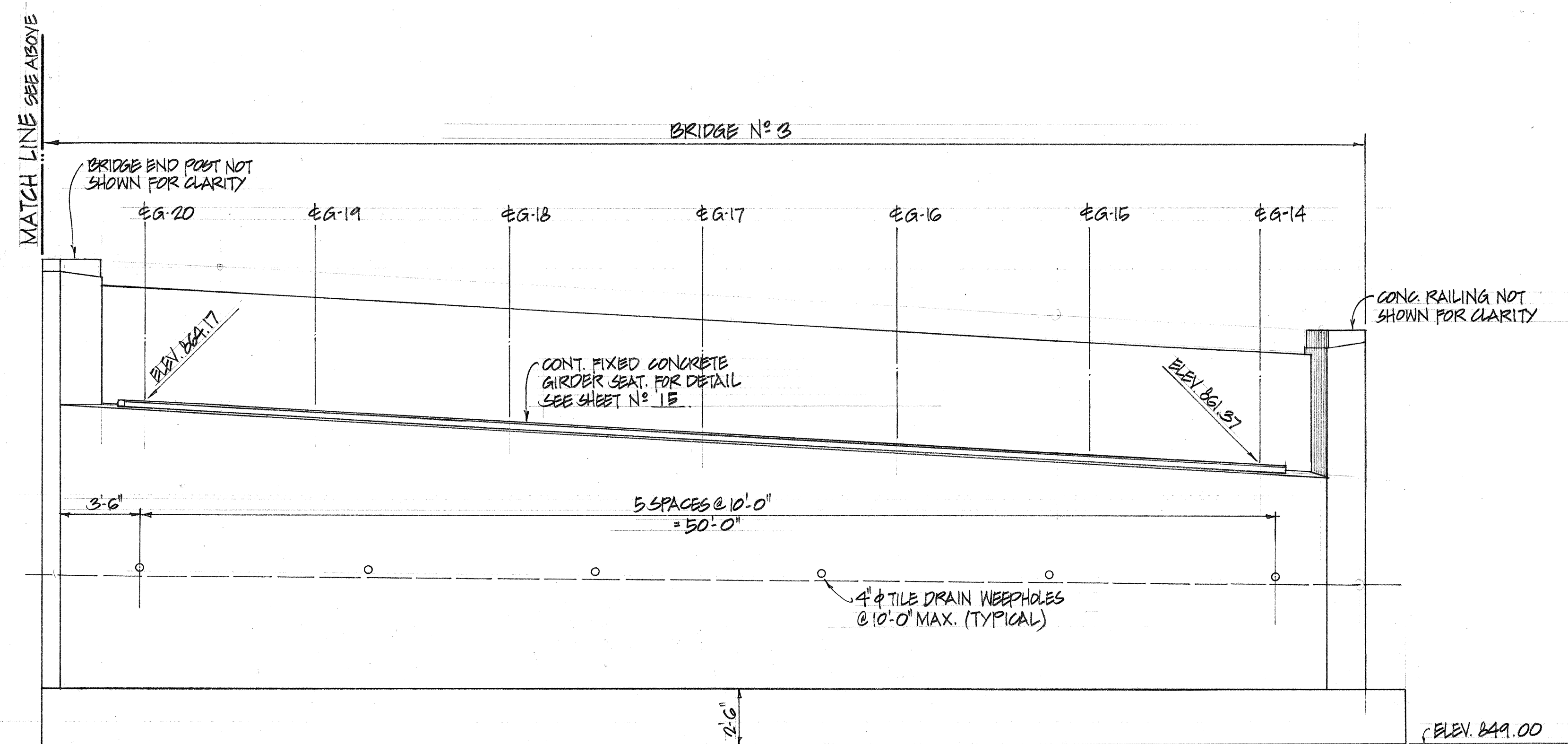
Scale: As noted Date: 4-25-73

SHEET No. 23 OF 42 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H2-1(11):7	1973	198	274



ELEVATION - ABUTMENT No. 2
SCALE: 1/4" = 1'-0"

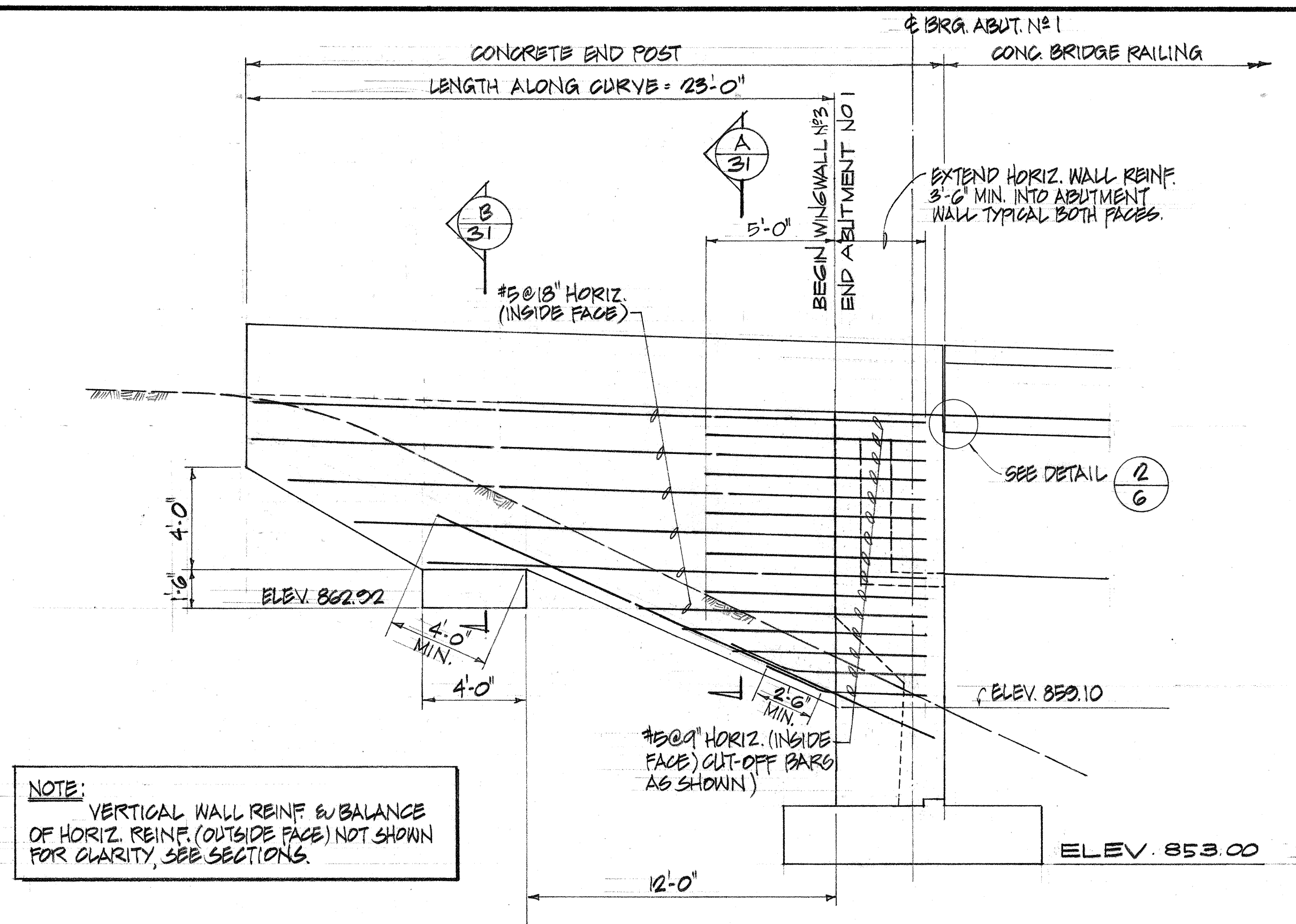


ELEVATION - ABUTMENT No. 2 (CONT.)
SCALE: 1/4" = 1'-0"

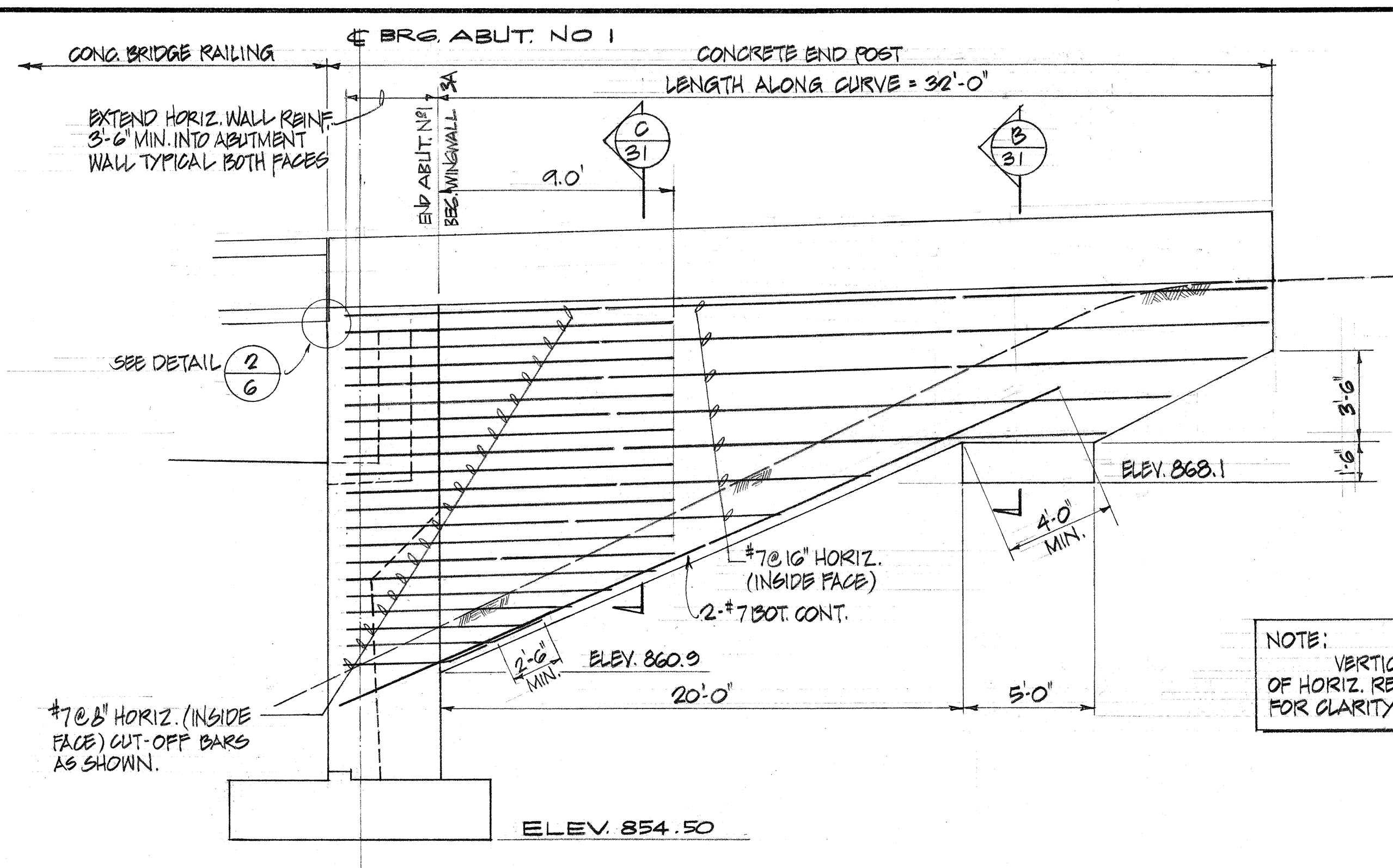
DATE	DESIGNED BY	CHECKED BY
PLANNED BY	DRAWN BY	ORIGINAL PLAN
NOTED BY	QUANTITIES BY	NOTE BOOK
CHECKED BY		No.

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.J.	CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION		APPROVED FOR JOINT VENTURE	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
ELEVATION - ABUTMENT No. 2 BRIDGE No. 3 & 4			
WAHIAWA INTERCHANGE F.A.I. Project No. I-H2-1(11):7			
Scale: As noted		Date: 4-25-73	
SHEET No. 30 OF 42 SHEETS			

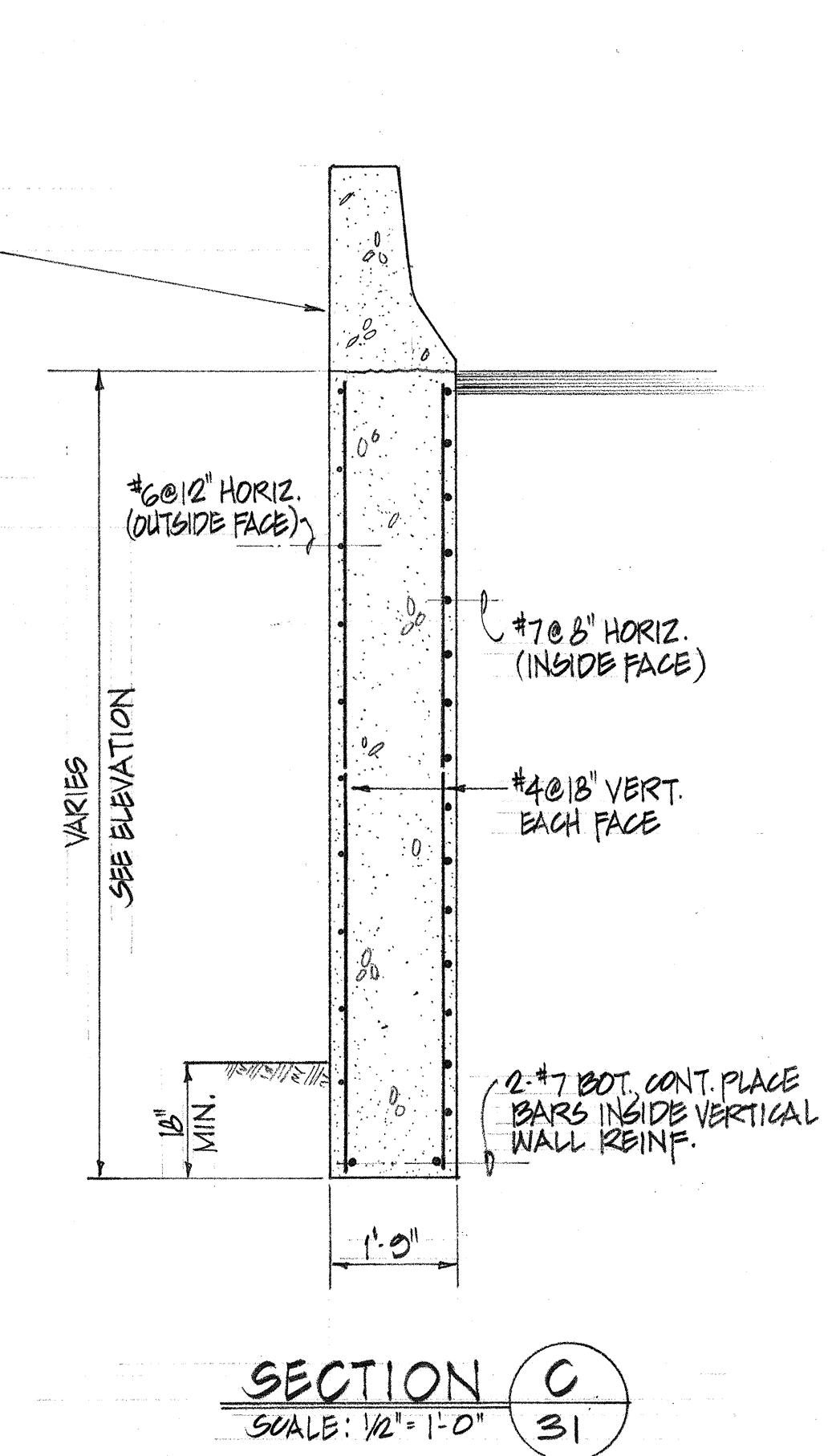
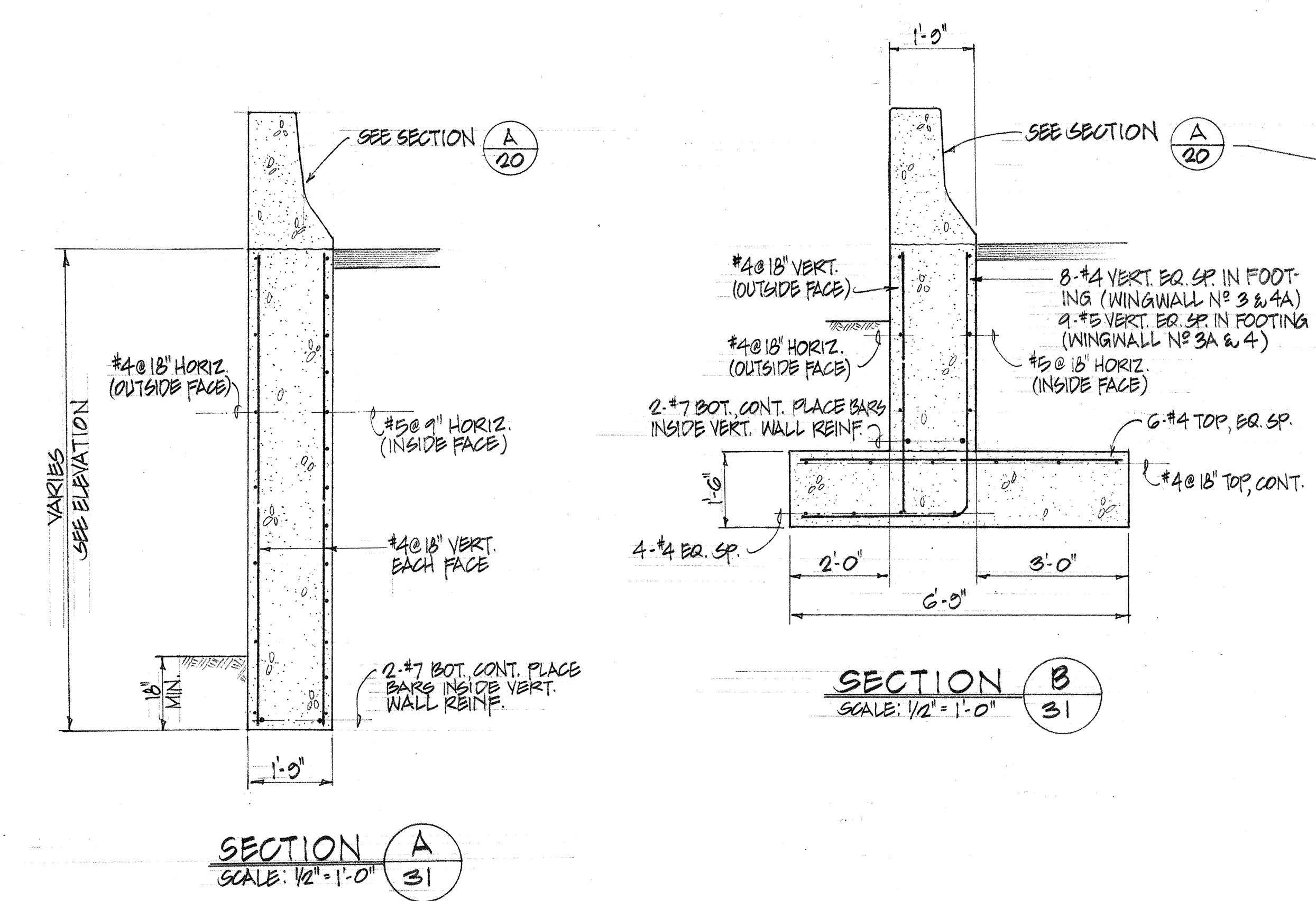
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H2-1(11)	1973	199	274



ELEVATION-WINGWALL No 3
SCALE 1/4" = 1'-0"



ELEVATION-WINGWALL No 3A
SCALE 1/4" = 1'-0"



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AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. G.W. DR. W.L.I.E. CHK. H.L.
Donald H. Luno
APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WINGWALL DETAILS
BRIDGE Nos 3 & 4

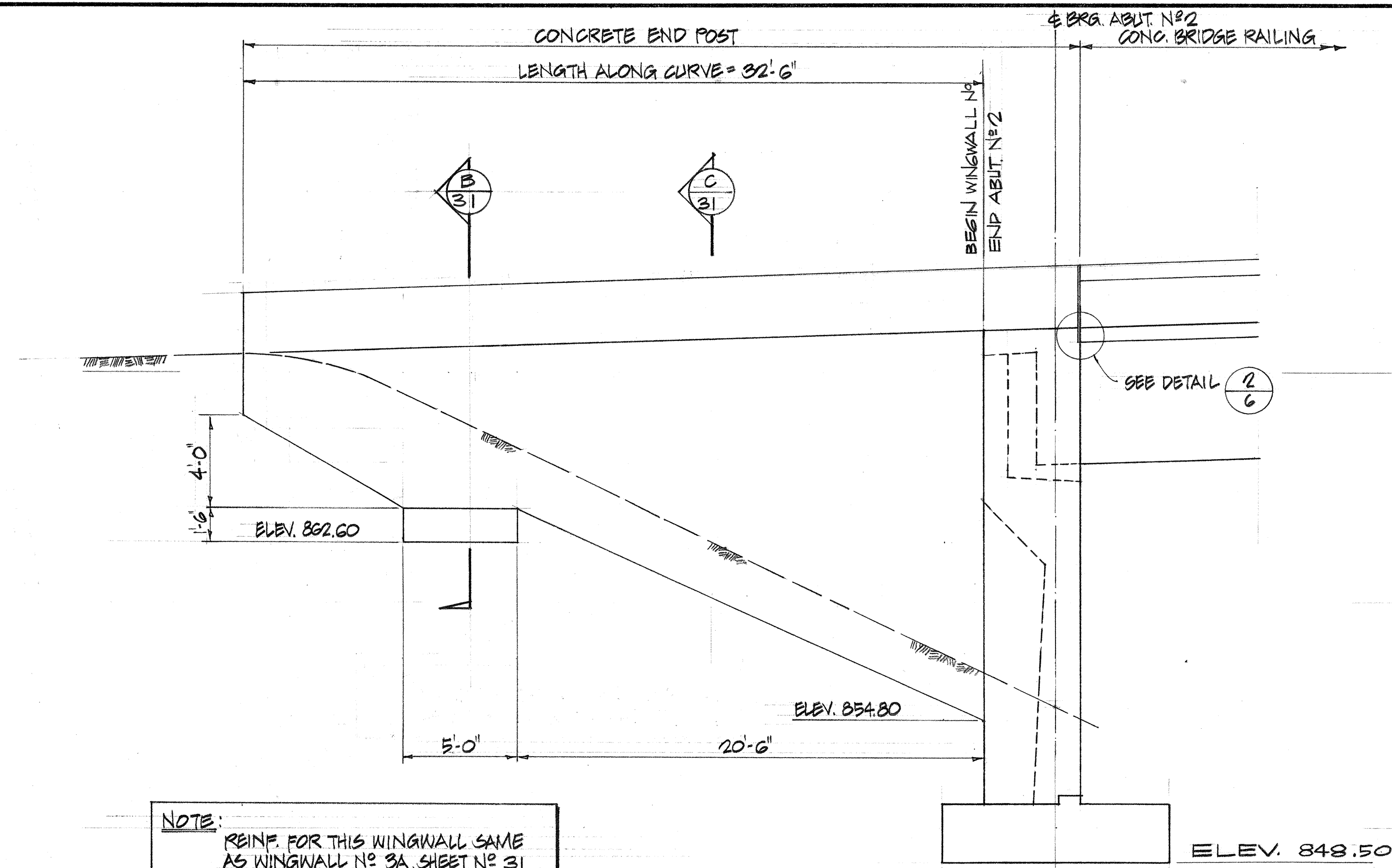
WAHIAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11):7

Scale: As noted Date: 4-25-73

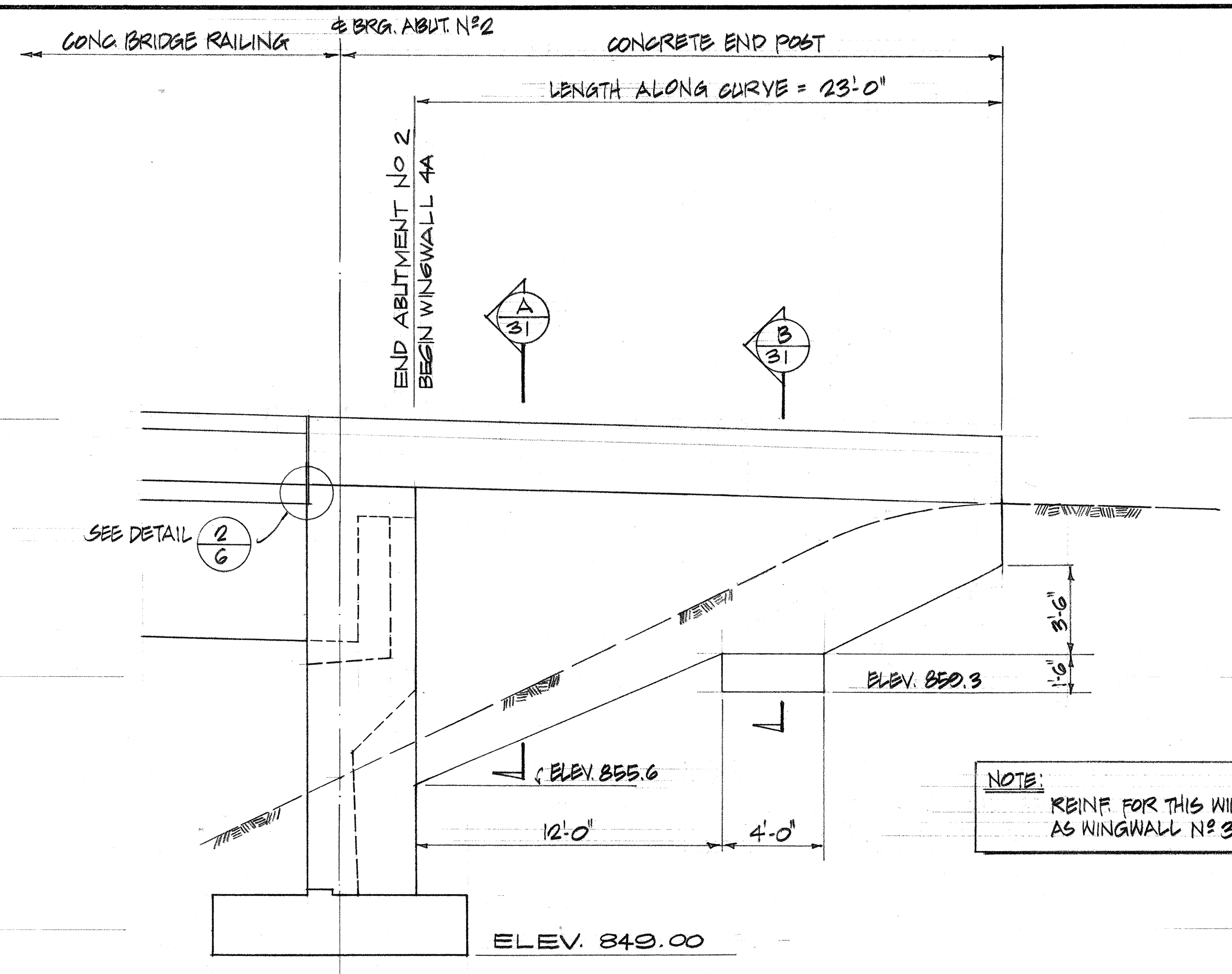
SHEET No. 31 OF 42 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED 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-H2-1(11)7	1975	200	274

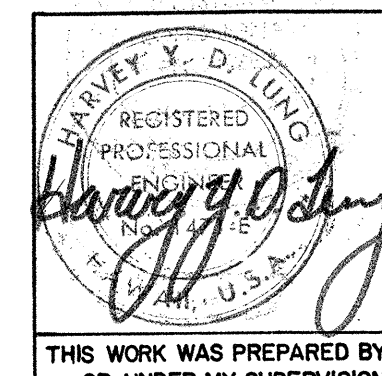


ELEVATION - WINGWALL NO 4
SCALE 1/4" = 1'-0"



ELEVATION - WINGWALL NO 4A
SCALE 1/4" = 1'-0"

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



AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. C.W. DR. I.B. CHK. M.L.
Ronald M. Park
APPROVED FOR JOINT VENTURE

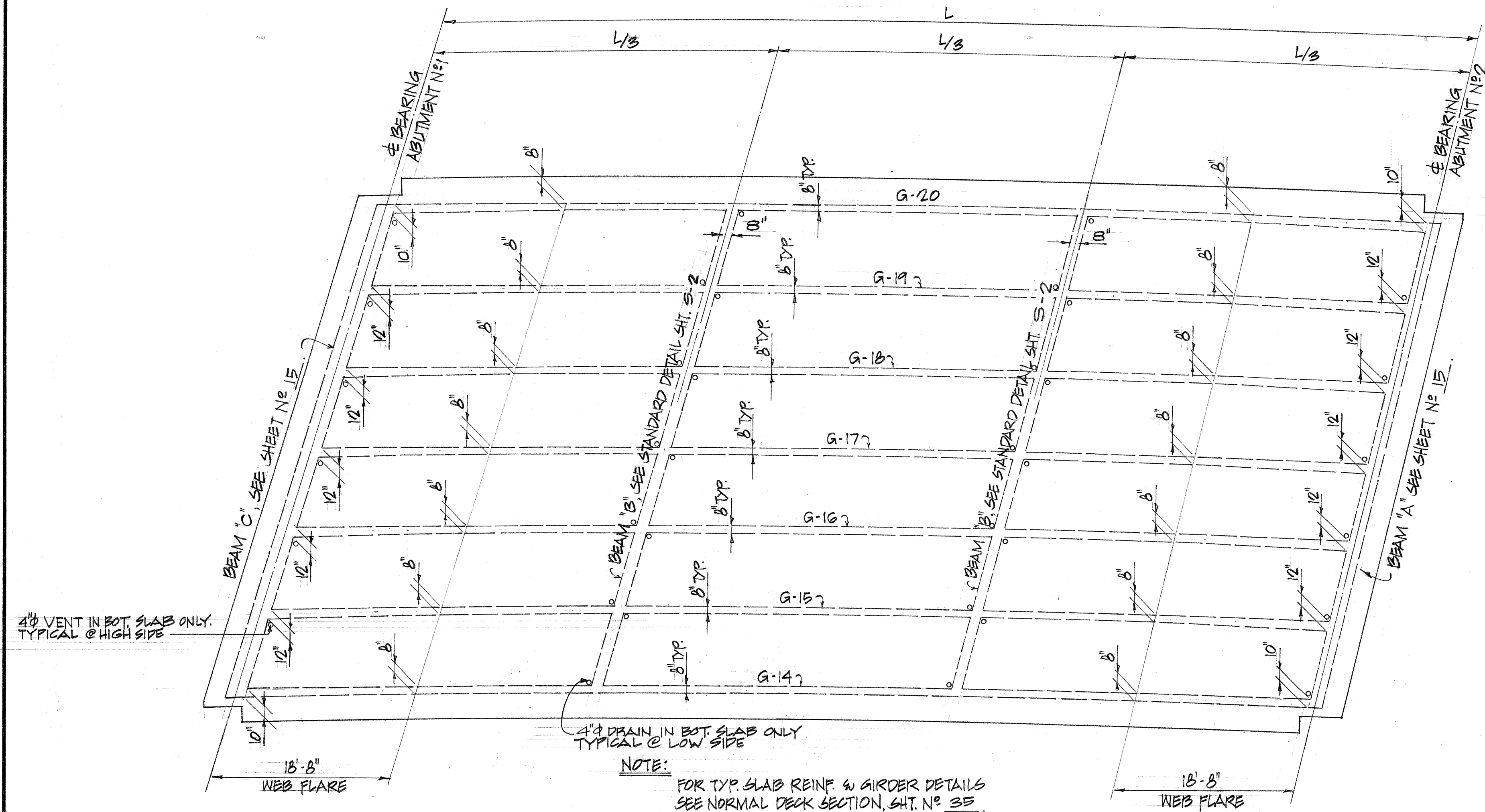
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WINGWALL DETAILS
BRIDGE No 3 & 4

WAHIAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11)7

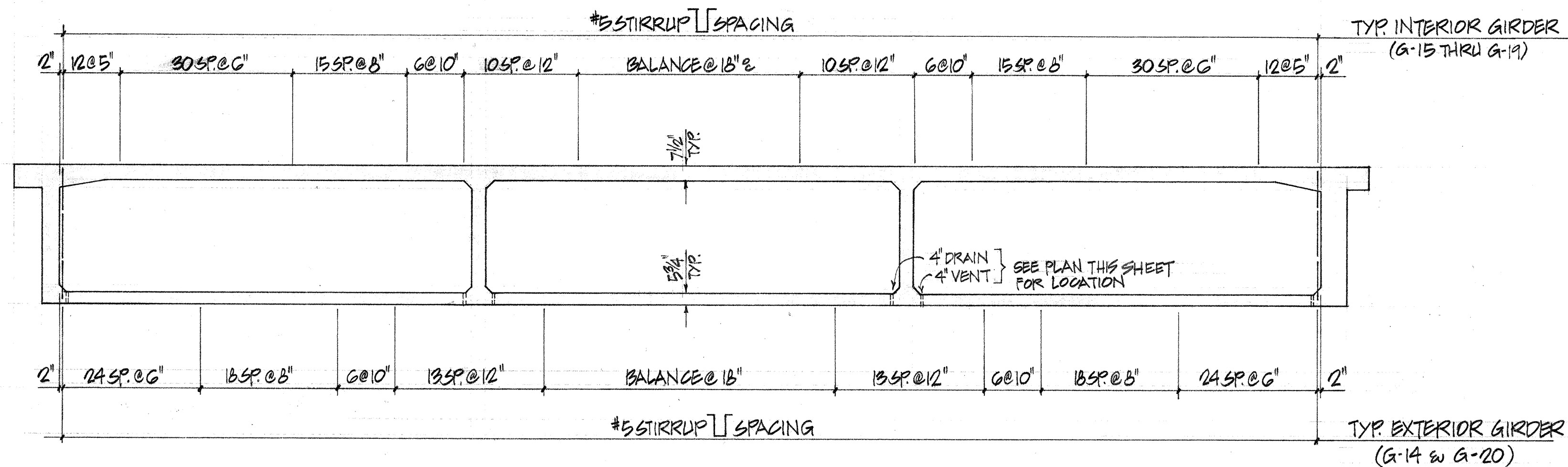
Scale: As noted Date: 4-25-74
SHEET No. 32 OF 42 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-142-1(11)	1973	201	274



FRAMING PLAN - BRIDGE NO. 3

SCALE: 1/8" = 1'-0"



TYPICAL GIRDER STIRRUP SPACING ELEVATION - DETAIL

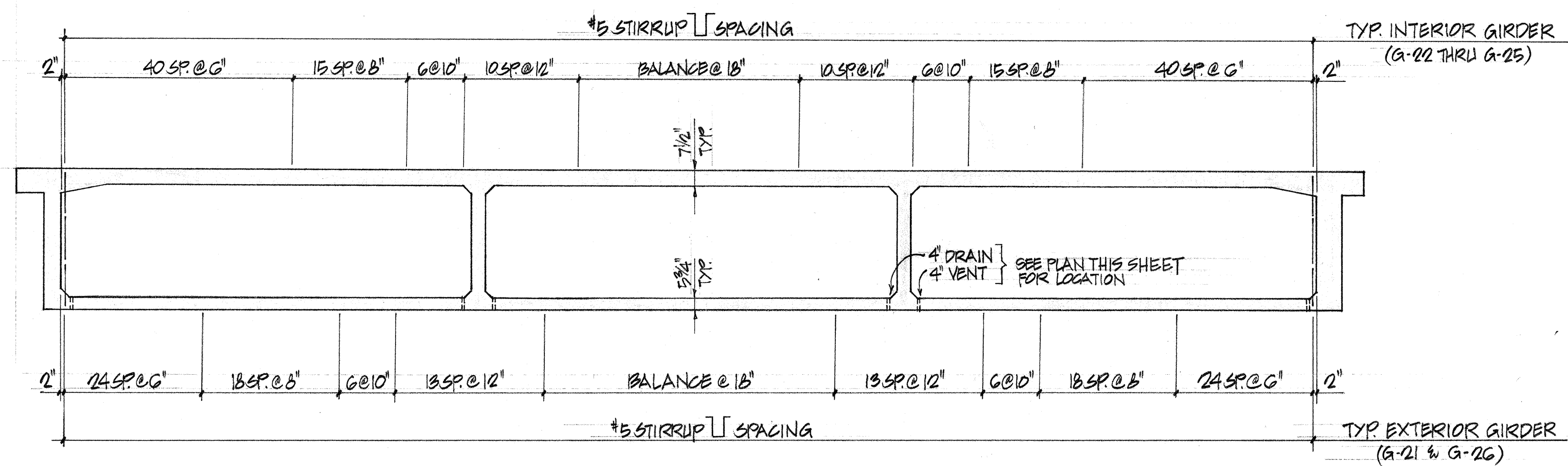
SCALES: HORIZ. 1/8" = 1'-0"
VERT. 1/4" = 1'-0"

1
33

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII		
	DES. H.L.	DR. W.L.	CHK. H.L.
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
FRAMING PLAN BRIDGE NO. 3			
WAHIAWA INTERCHANGE F.A.I. Project No. I-142-1(11):7			
Scale: As noted		Date: 4-25-73	
SHEET No. 33 OF 42 SHEETS			

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

FRAMING PLAN ~ BRIDGE N° 4
SCALE: $\frac{1}{8}" = 1'-0"$



TYPICAL GIRDER STIRRUP SPACING ELEVATION~DETAIL

SCALES: HORIZ. $\frac{1}{8}" = 1'-0"$
VERT. $\frac{1}{4}" = 1'-0"$

1
34

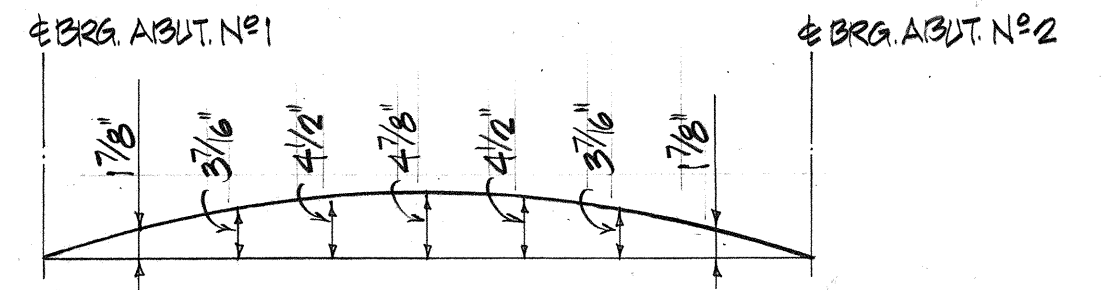
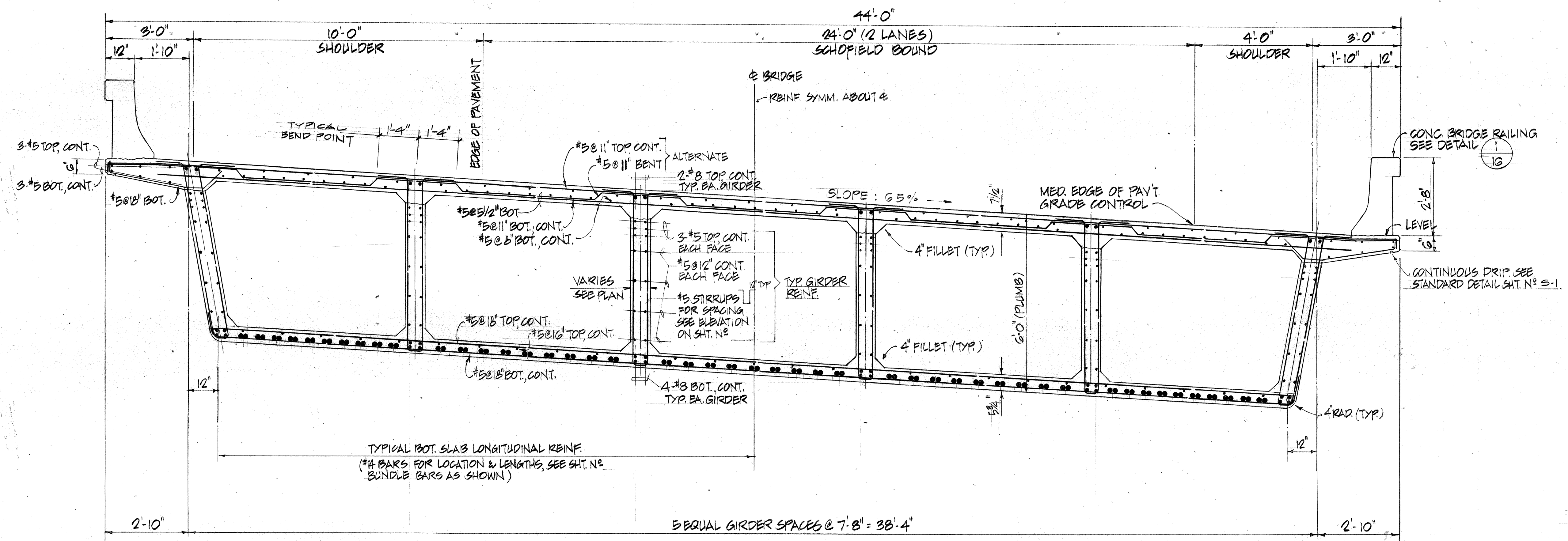
[illegible]

Diagram of a parabolic curve with 6 equal horizontal segments of $3\frac{1}{4}$ inches each. The vertical offsets from the chord to the curve at each segment end are $\frac{3}{4}$, $3\frac{1}{4}$, $4\frac{3}{16}$, $4\frac{1}{2}$, $4\frac{3}{16}$, $3\frac{1}{4}$, and $\frac{3}{4}$ inches.

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

PRINTED ON NO. 1000H CLEARPRIN

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-(11):7	1973	204	274

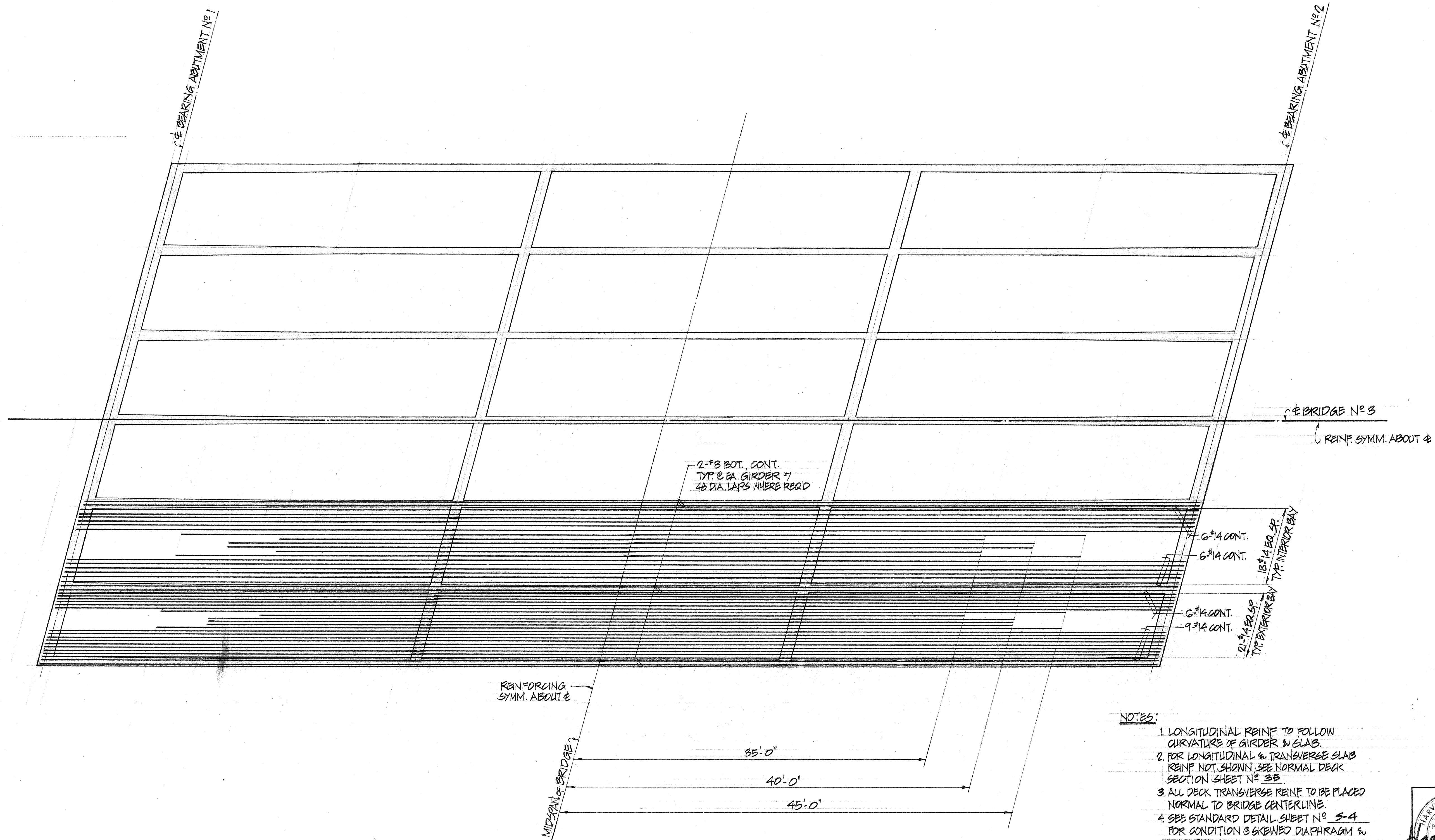


NORMAL DECK SECTION - BRIDGE NO. 4
SCALE: 1/2" = 1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII	
	DES. H.L.	CHK. H.L.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION		
APPROVED FOR JOINT VENTURE		
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
NORMAL DECK SECTION BRIDGE NO. 4		
WAHIAWA INTERCHANGE F.A.I. Project No. I-42-(11):7		
Scale: As noted		Date: 4-25-73
SHEET No. 36 OF 42 SHEETS		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H2-1(11)	1973	205	274



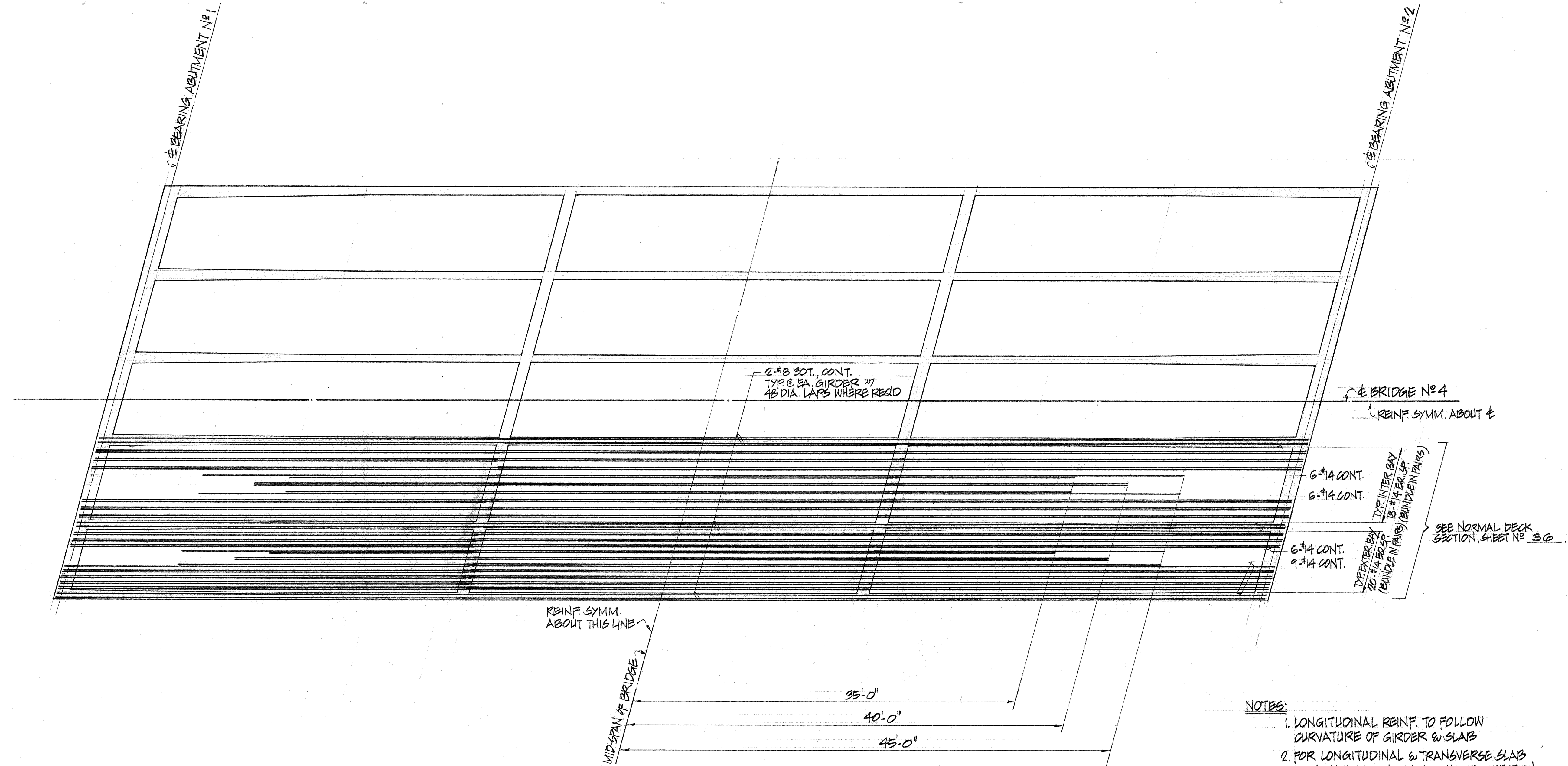
BRIDGE No. 3 PLACEMENT DIAGRAM - BOT. SLAB, BOT. LAYER LONGITUDINAL REINF.
SCALE: 3/16" = 1'-0"

NOTES:

1. LONGITUDINAL REIN. TO FOLLOW CURVATURE OF GIRDER & SLAB.
2. FOR LONGITUDINAL & TRANSVERSE SLAB REIN. NOT SHOWN SEE NORMAL DECK SECTION SHEET No. 35.
3. ALL DECK TRANSVERSE REIN. TO BE PLACED NORMAL TO BRIDGE CENTERLINE.
4. SEE STANDARD DETAIL SHEET No. S-4 FOR CONDITION @ SKEWED DIAPHRAGM & END BEAMS.
5. SEE STANDARD DETAIL SHEET No. S-3 FOR TYPICAL 90° BEND DETAIL @ EACH END OF TOP & BOT. BARS.

	AUSTIN, YEE & PARK (A JOINT VENTURE) 745 FORT STREET HONOLULU, HAWAII			
	DES. H.L.	DR. W.L.	CHK. H.L.	
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APPROVED FOR JOINT VENTURE				
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION				
DECK SLAB REINFORCEMENT BRIDGE No. 3				
WAHIAWA INTERCHANGE F.A.I. Project No. I-H2-1(11):7				
Scale: As noted Date: 4-25-73				
SHEET No. 37 OF 42 SHEETS				

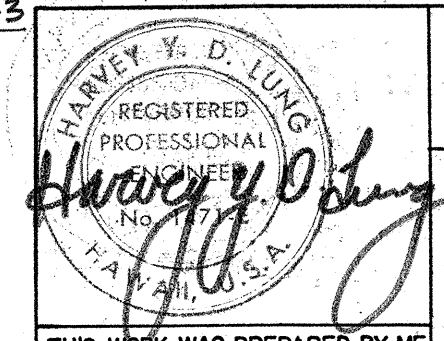
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)	1973	206	274



BRIDGE No. 4 PLACEMENT DIAGRAM - BOT. SLAB, BOT. LAYER LONGITUDINAL REIN.
SCALE: 3/16" = 1'-0"

NOTES:

1. LONGITUDINAL REIN. TO FOLLOW CURVATURE OF GIRDER & SLAB
2. FOR LONGITUDINAL & TRANSVERSE SLAB REIN. NOT SHOWN, SEE NORMAL DECK SECTION SHEET No. 36.
3. ALL DECK TRANSVERSE REIN. TO BE PLACED NORMAL TO BRIDGE CENTERLINE.
4. SEE STANDARD DETAIL SHEET No. S-4 FOR CONDITION @ SKEWED DIAPHRAGM & END BEAMS.
5. SEE STANDARD DETAIL SHEET No. S-3 FOR TYPICAL 90° BEND DETAIL @ EACH END.



AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. CHK. H.L.

APPROVED FOR JOINT VENTURE

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK SLAB REINFORCEMENT
BRIDGE No. 4

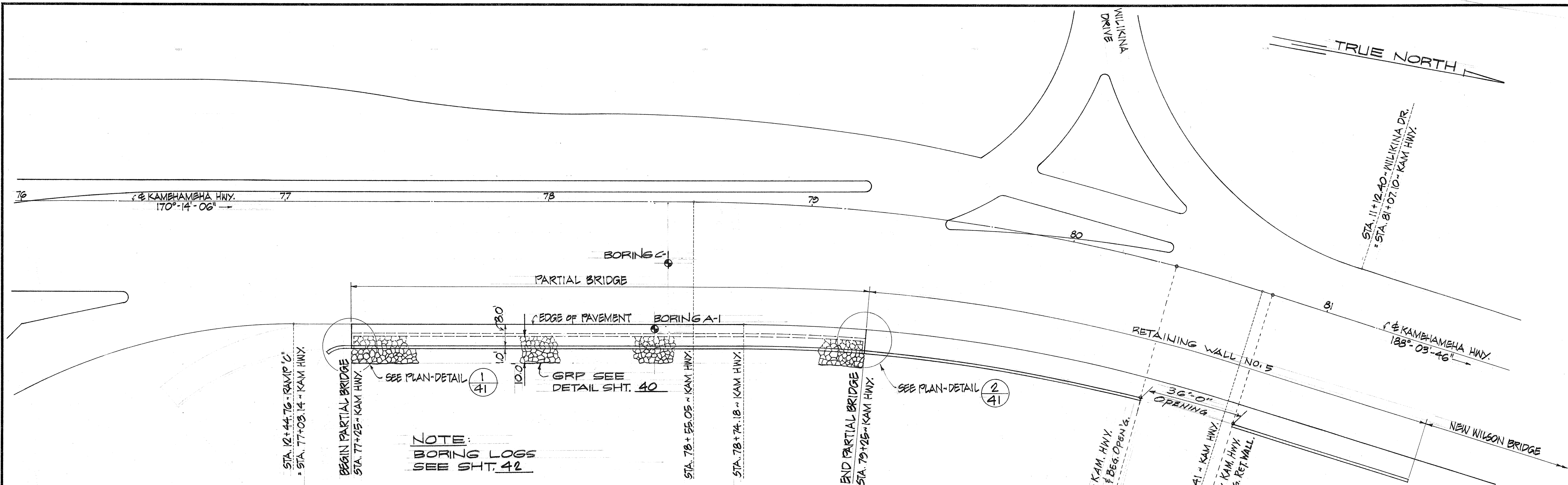
WAHIAWA INTERCHANGE
F.A.I. Project No. I-42-1(11)-7

Scale: As noted

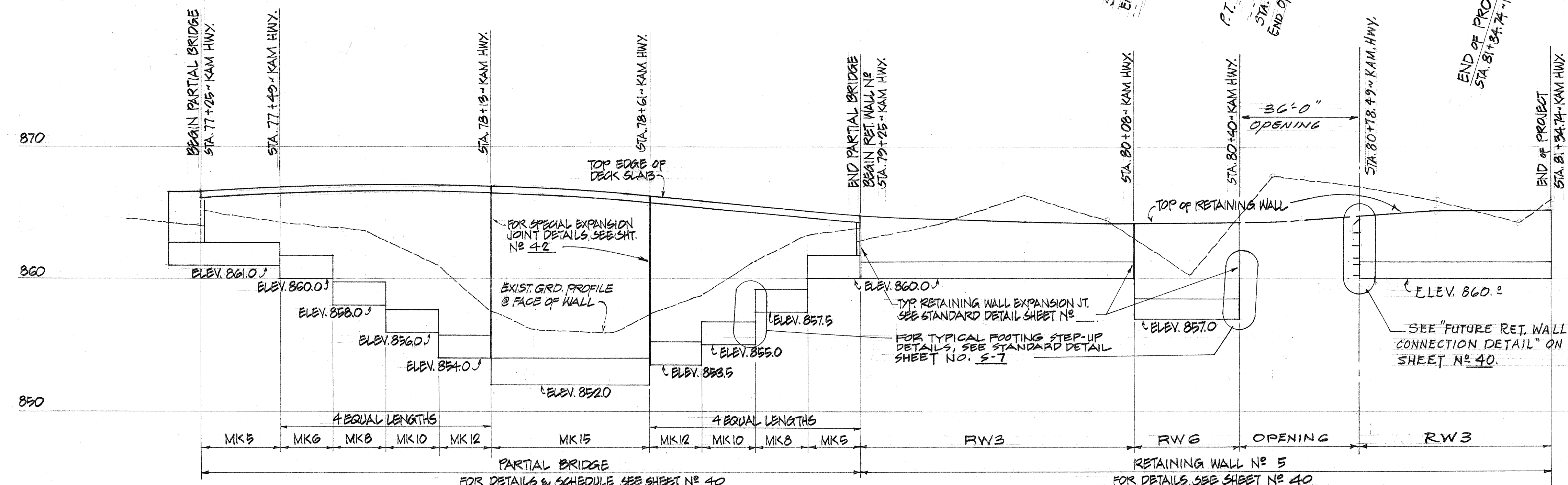
Date: 4-25-73

SHEET No. 38 OF 42 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	



PLAN - PARTIAL BRIDGE & RETAINING WALL NO. 5
SCALE: 1" = 20'



ELEVATION - PARTIAL BRIDGE & RETAINING WALL NO. 5
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

NOTE:
CONC. PARAPET & 2-RAIL TUBULAR STEEL RAILING NOT SHOWN FOR CLARITY.

DATE	11-14-74
SURVEY PLOTTED BY	W. L. CHK.
DRAWN BY	H. L. DES.
DESIGNED BY	H. L. DES.
QUANTITIES BY	H. L. DES.
CHECKED BY	H. L. DES.
ORIGINAL PLAN	NO. 1
NOTE BOOK	NO. 1
NO.	1

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.L. CHK. H.L.

[Signature]

APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

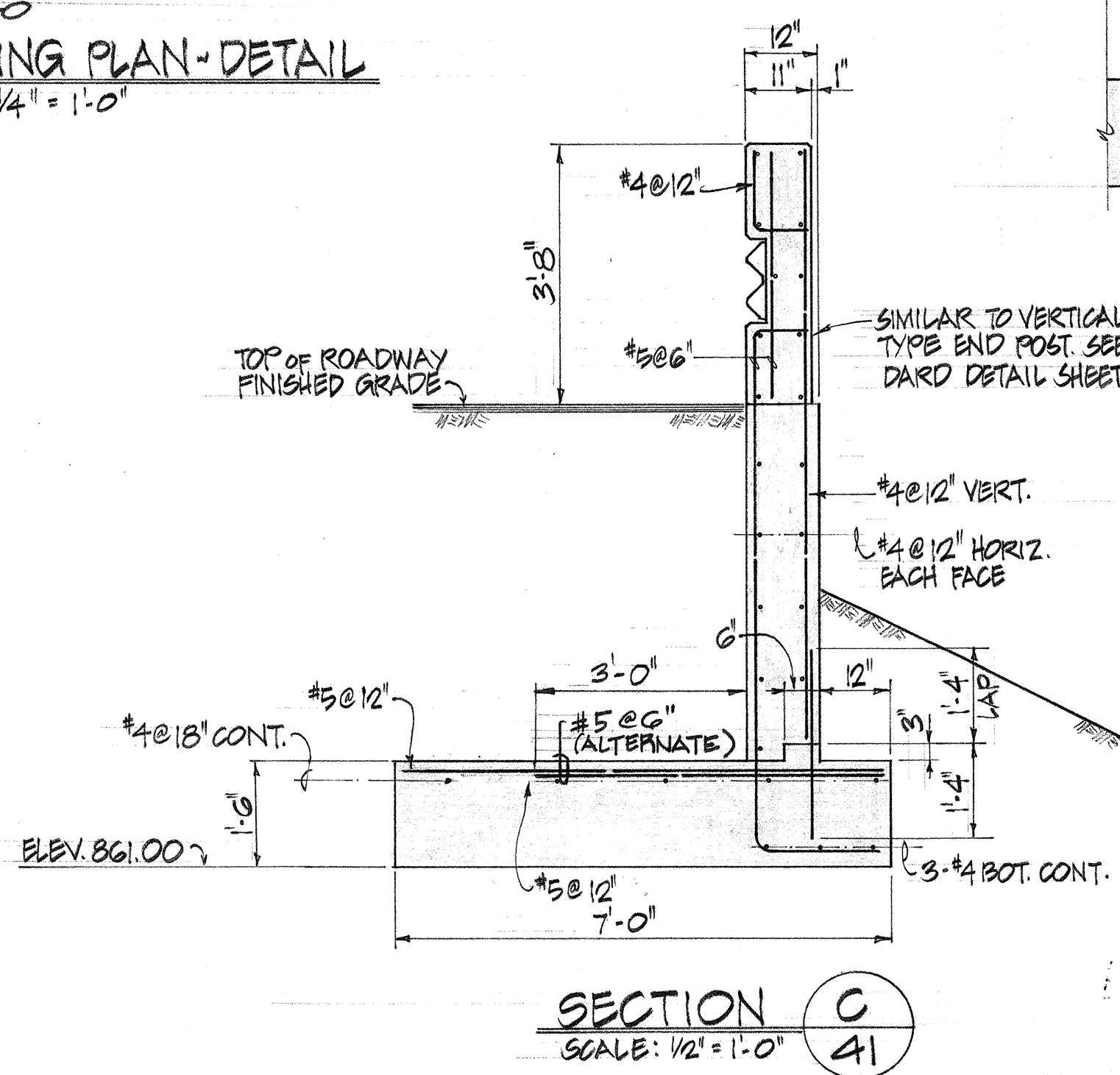
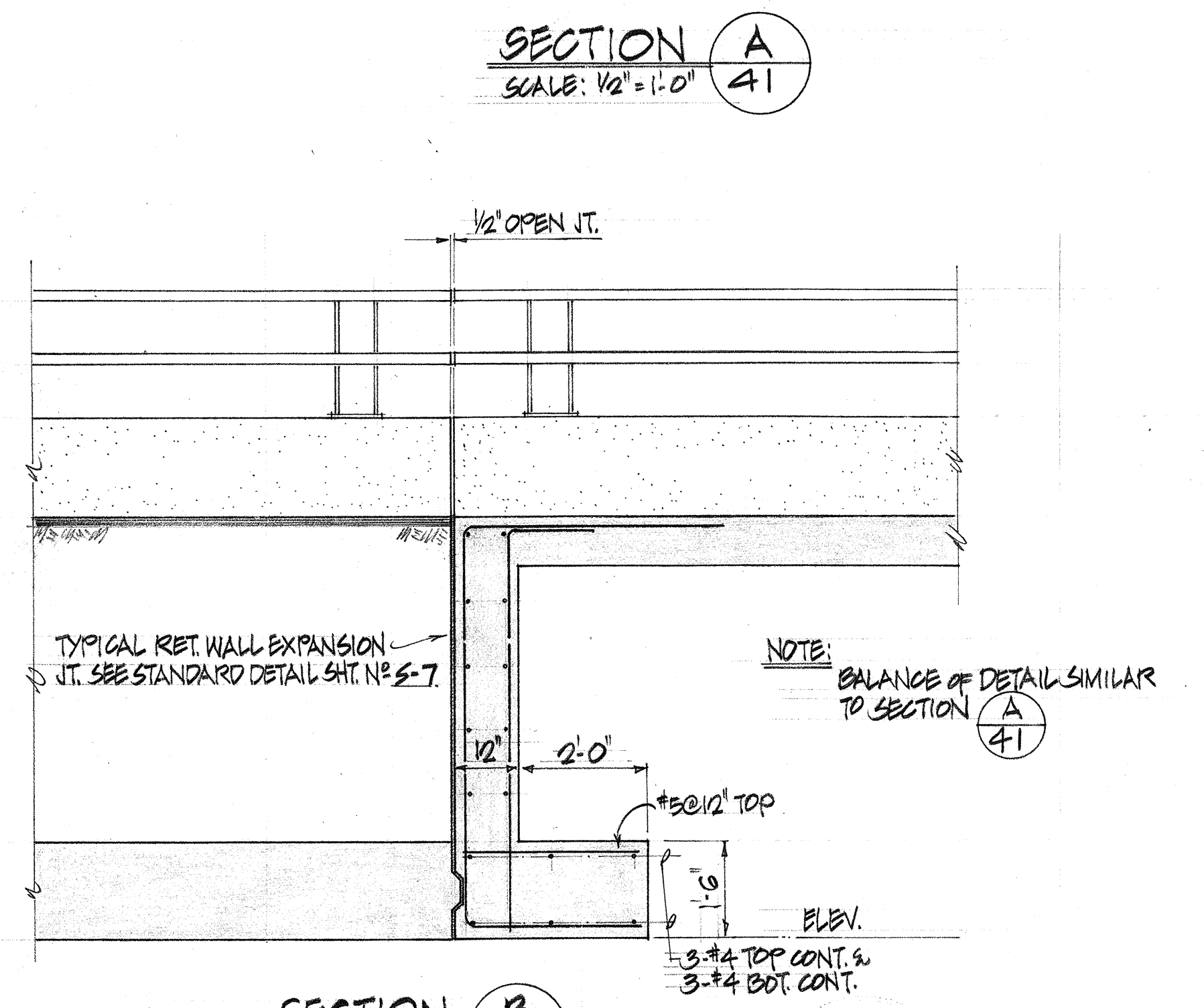
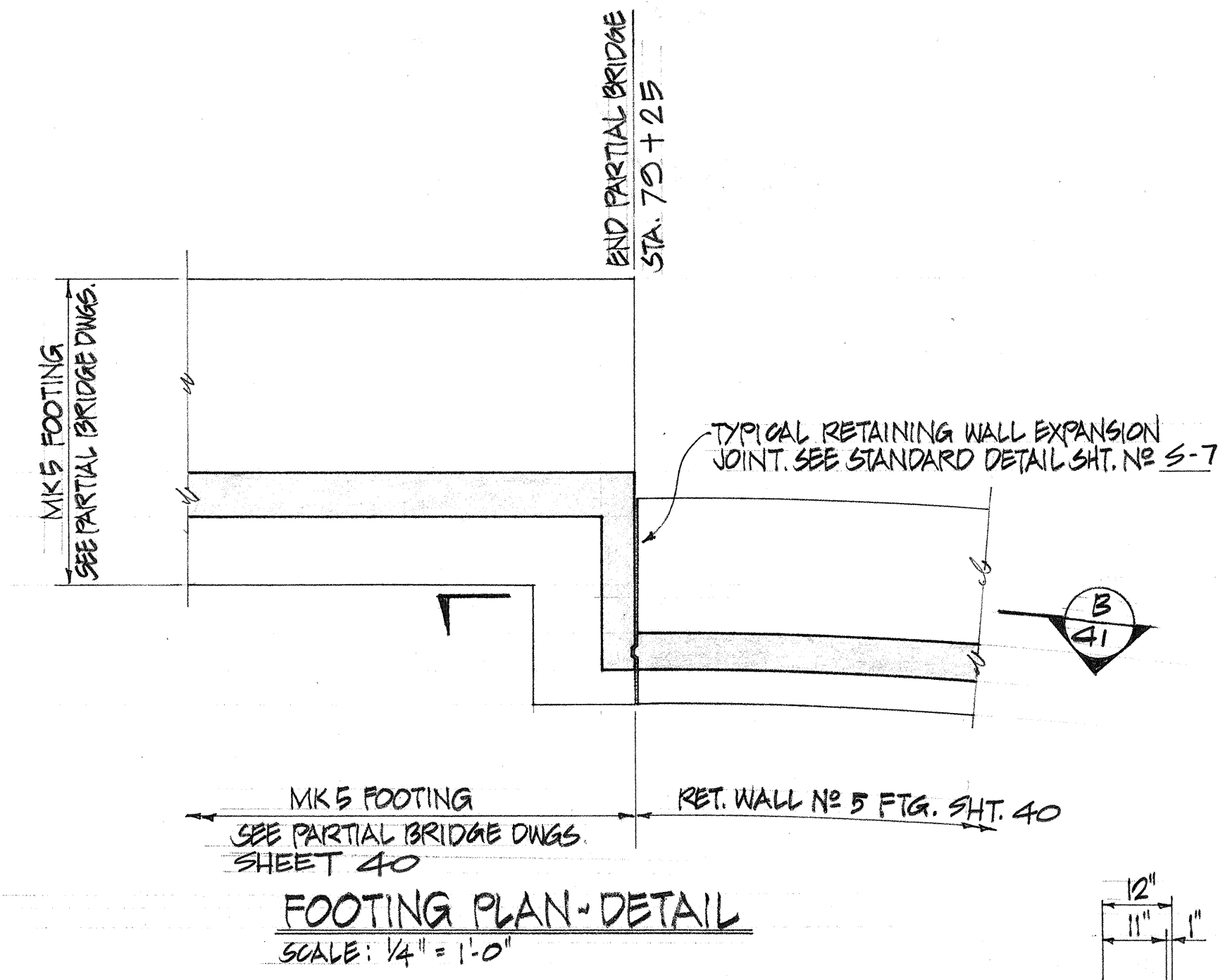
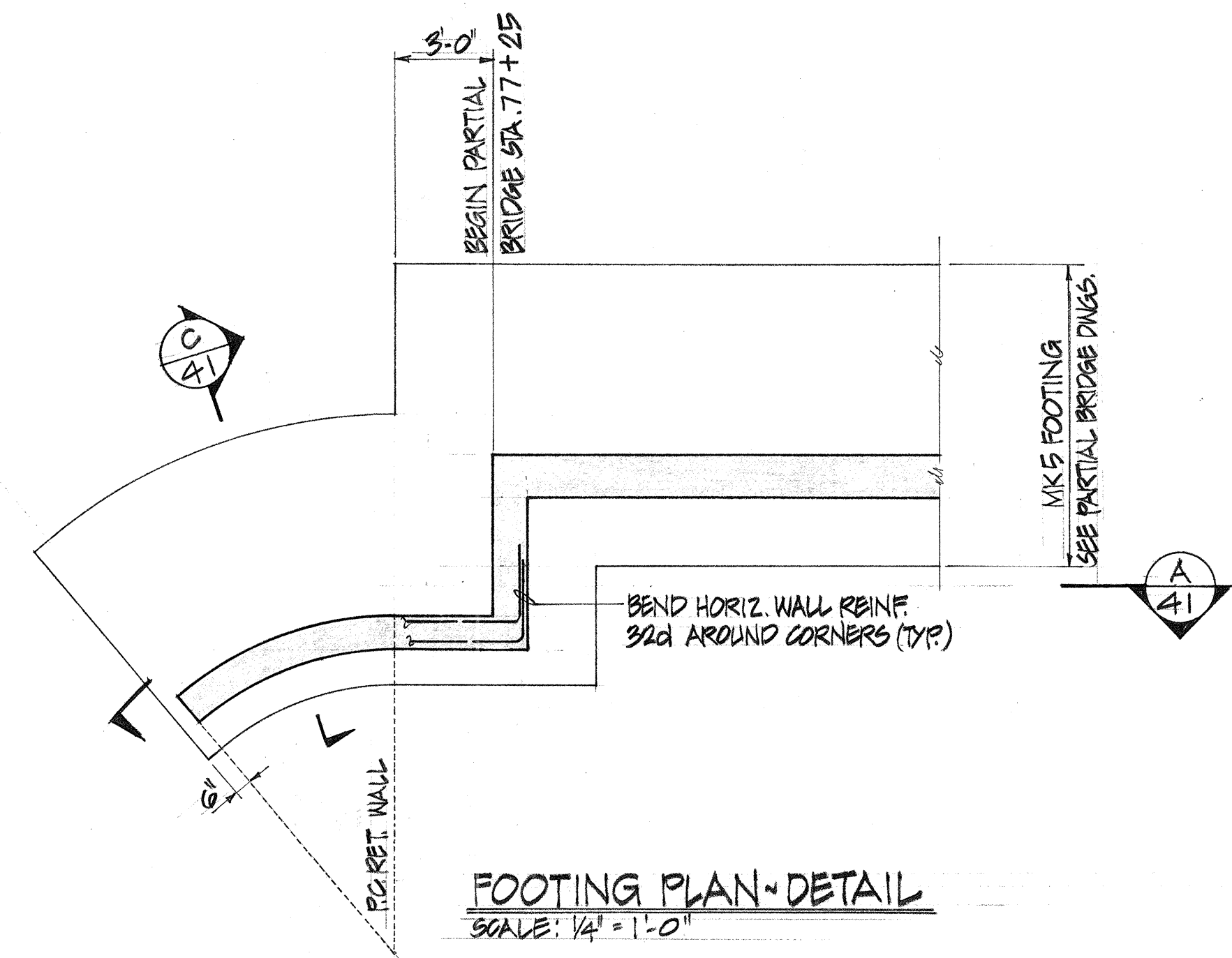
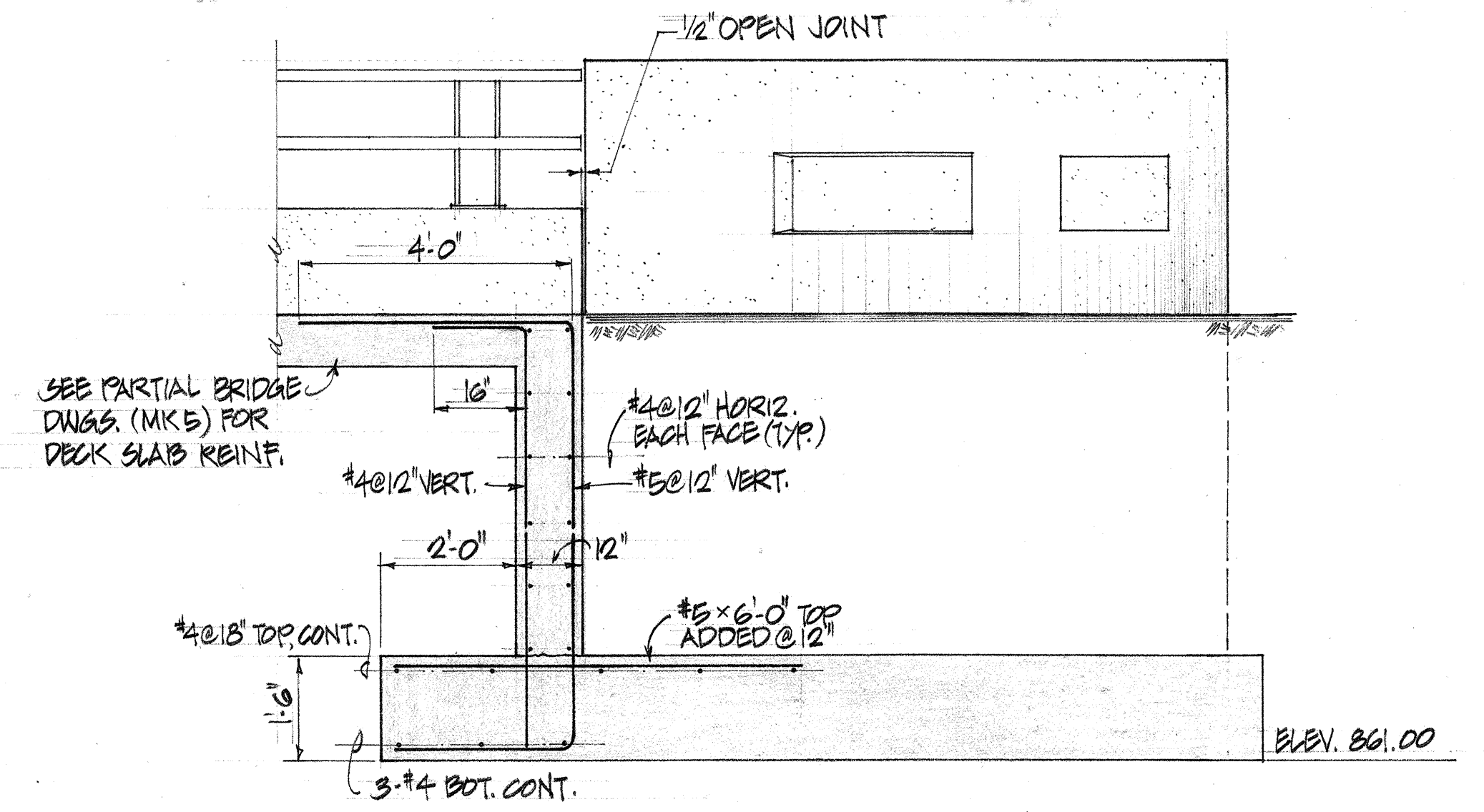
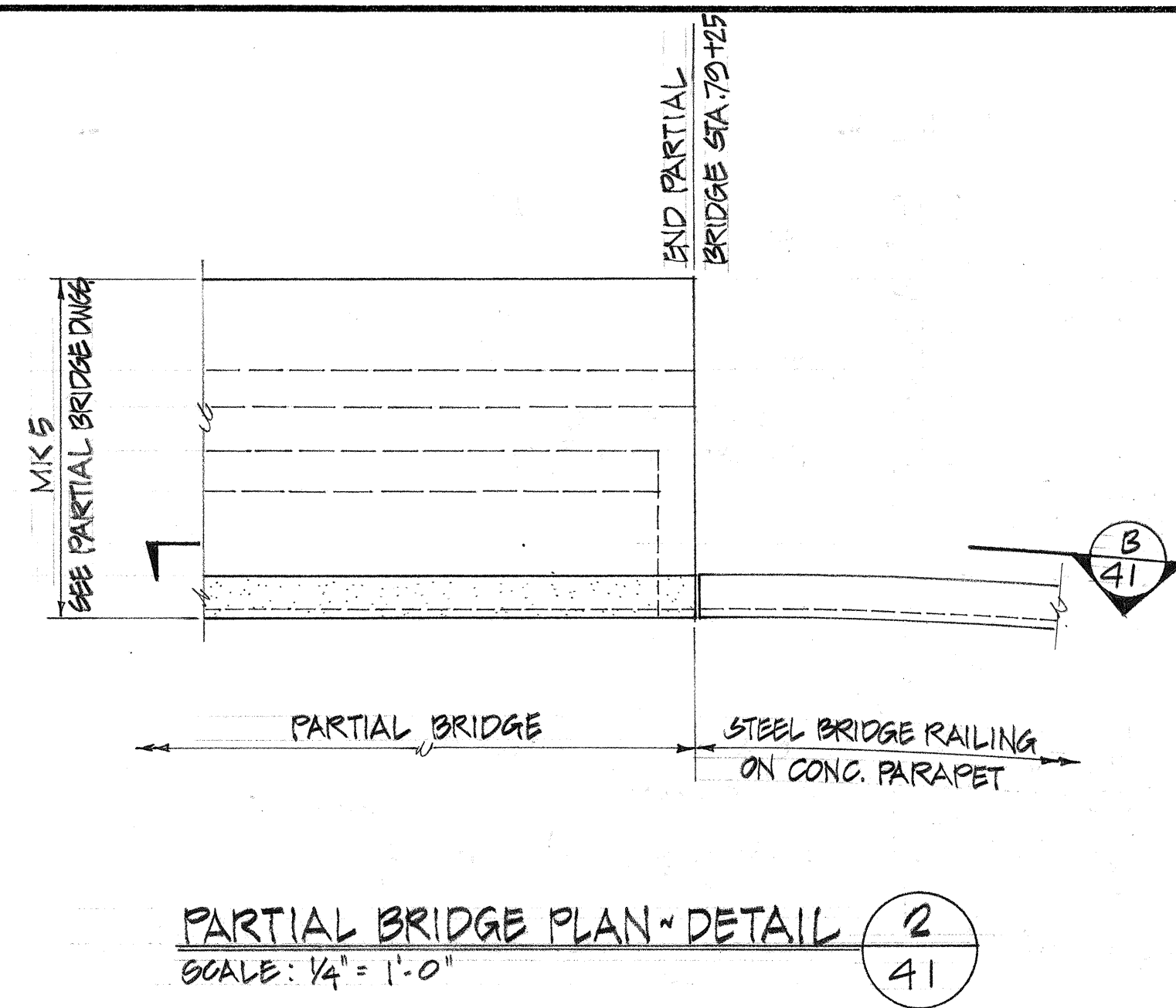
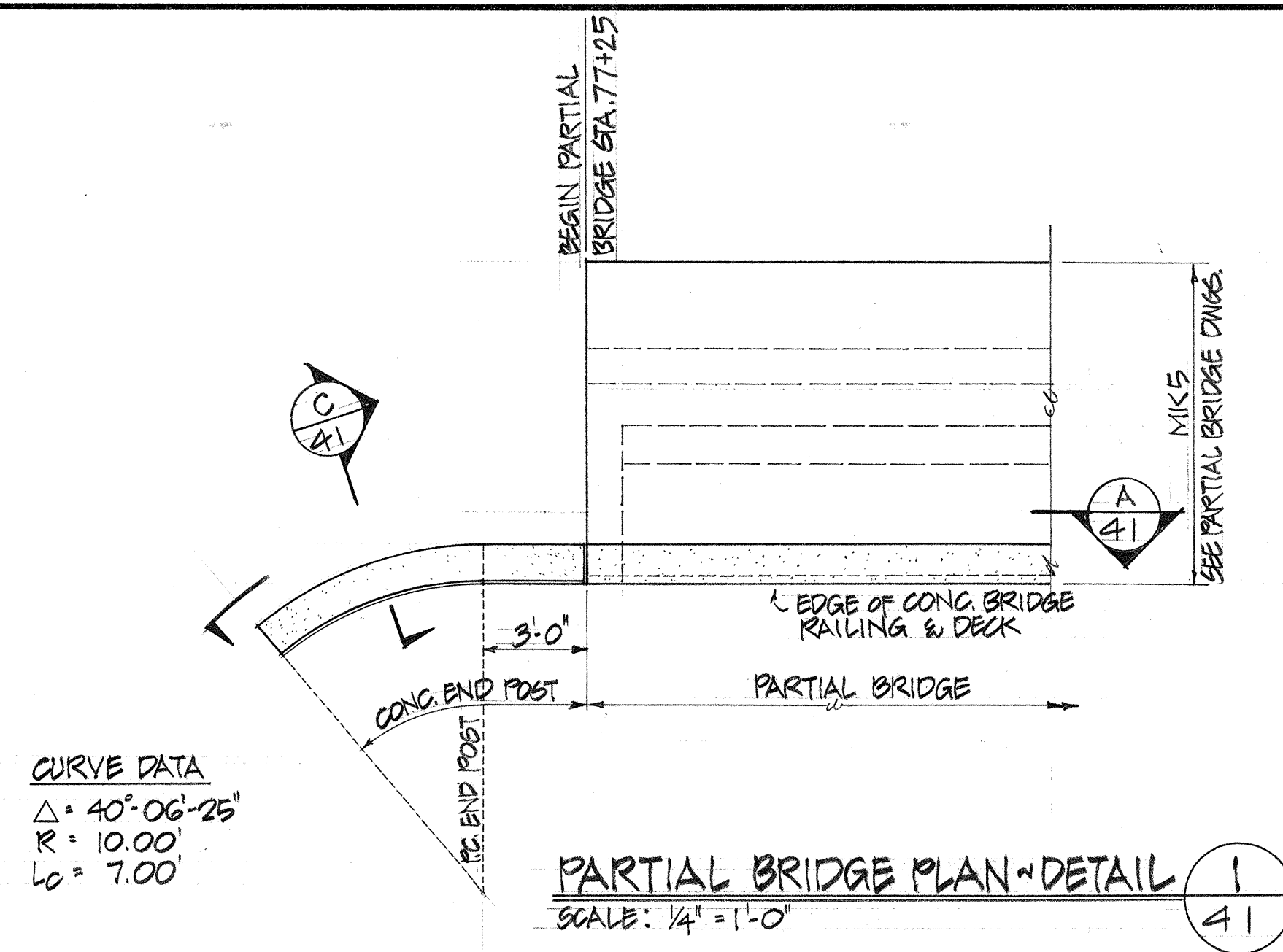
**PLAN & PROFILE
PARTIAL BRIDGE AND
RETAINING WALL NO. 5**

WAHIAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11)-7

8-13-74	PARTIAL OMISSION OF RET. WALL NO. 5, KAM. STA. 80+40 TO 80+78.49
DATE	REVISION

Scale: As noted Date: 4-26-73
SHEET No. 39 OF 42 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)7	1973	203	274



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

AUSTIN, YEE & PARK
 (A JOINT VENTURE)
 745 FORT STREET HONOLULU, HAWAII

DES. H.Y.D. DR. W.L.P. CHK. H.L.P.
Harvey Y. D. Lung
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Donald W. Park
 APPROVED FOR JOINT VENTURE

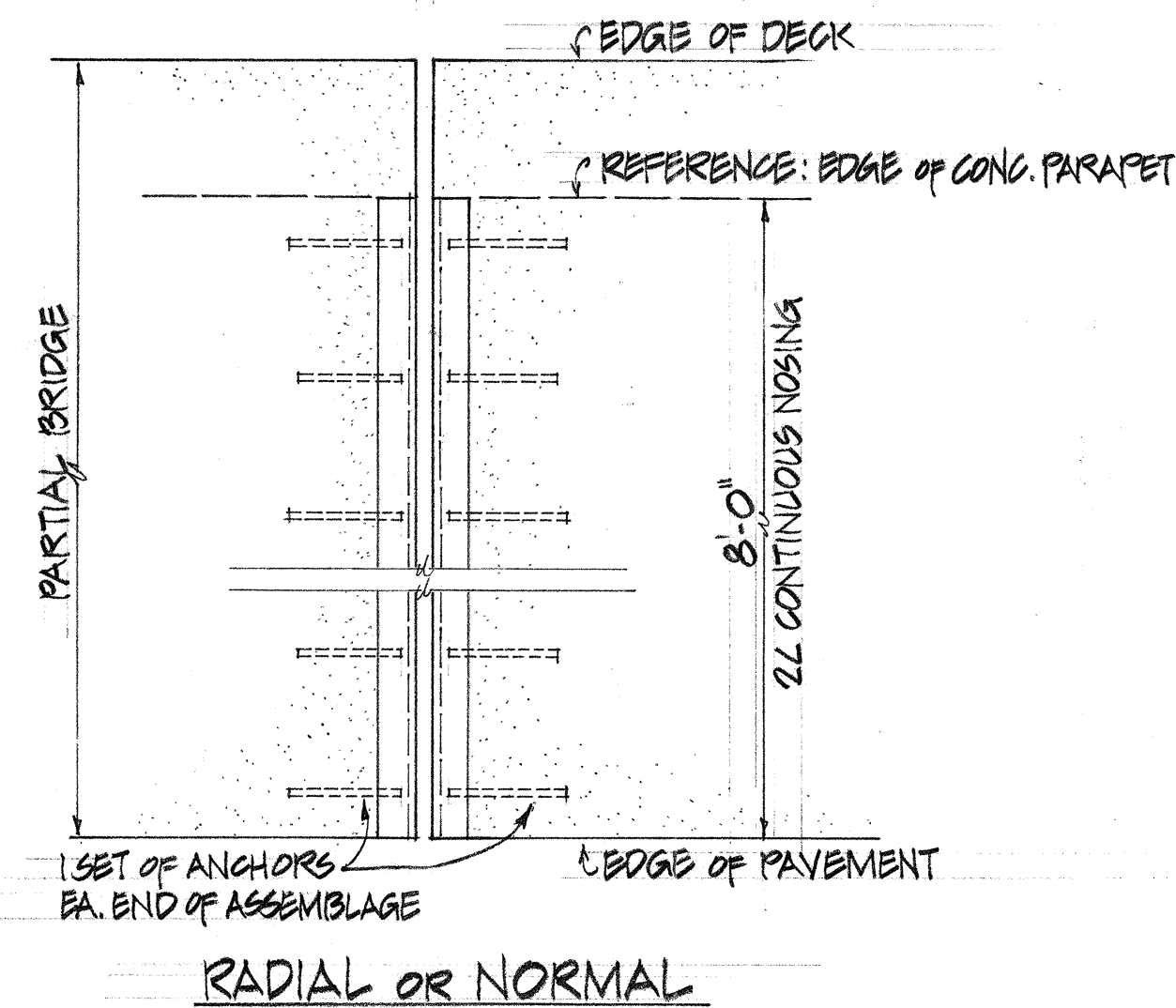
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**FOOTING & WALL DETAILS
 PARTIAL BRIDGE AND
 RETAINING WALL NO. 5**

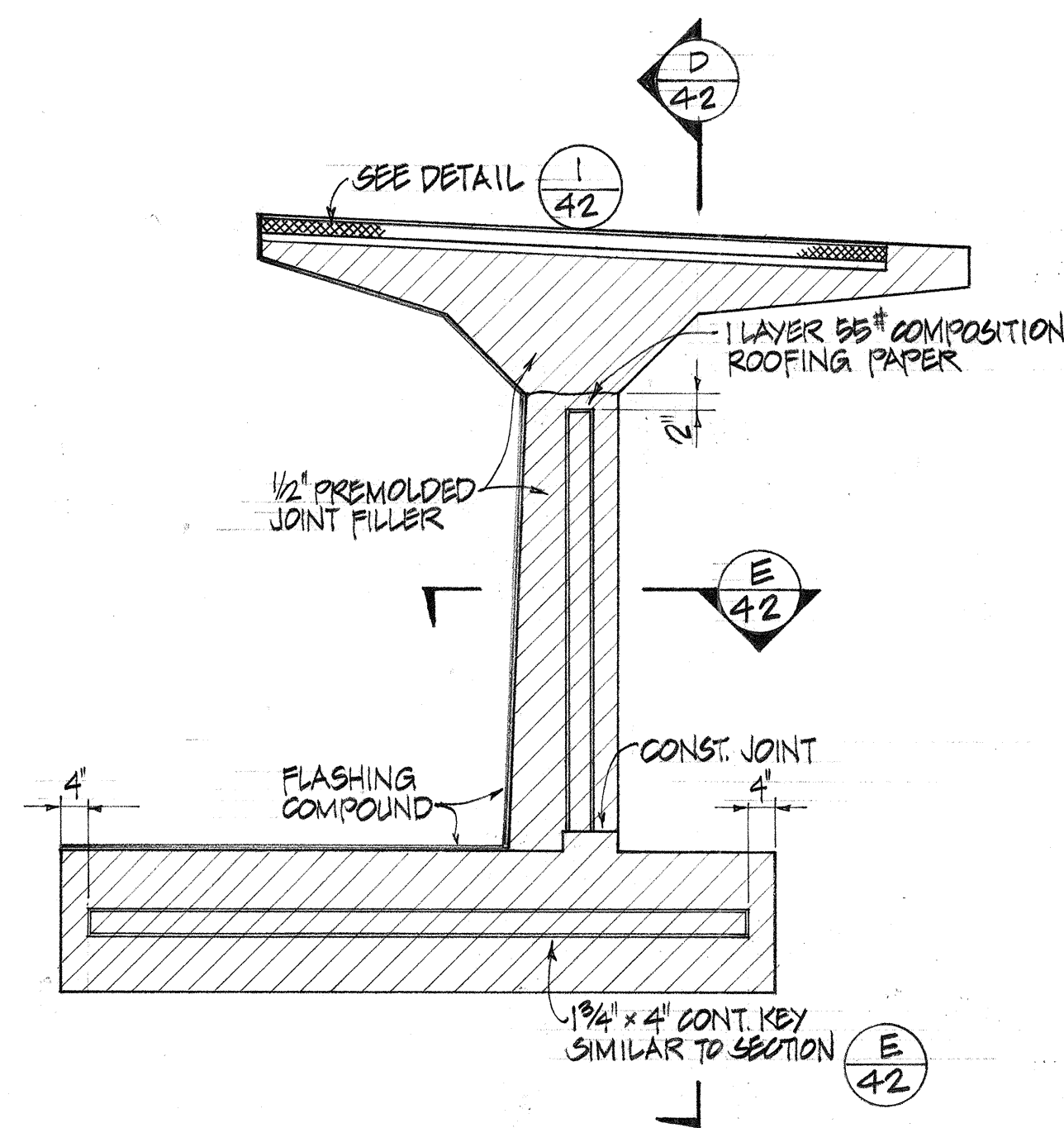
WAHIAWA INTERCHANGE
 F.A.I. Project No. I-42-1(11)7

Scale: As noted Date: 4-25-73
SHEET No. 41 OF 42 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H2-1(11)	1973	210	274

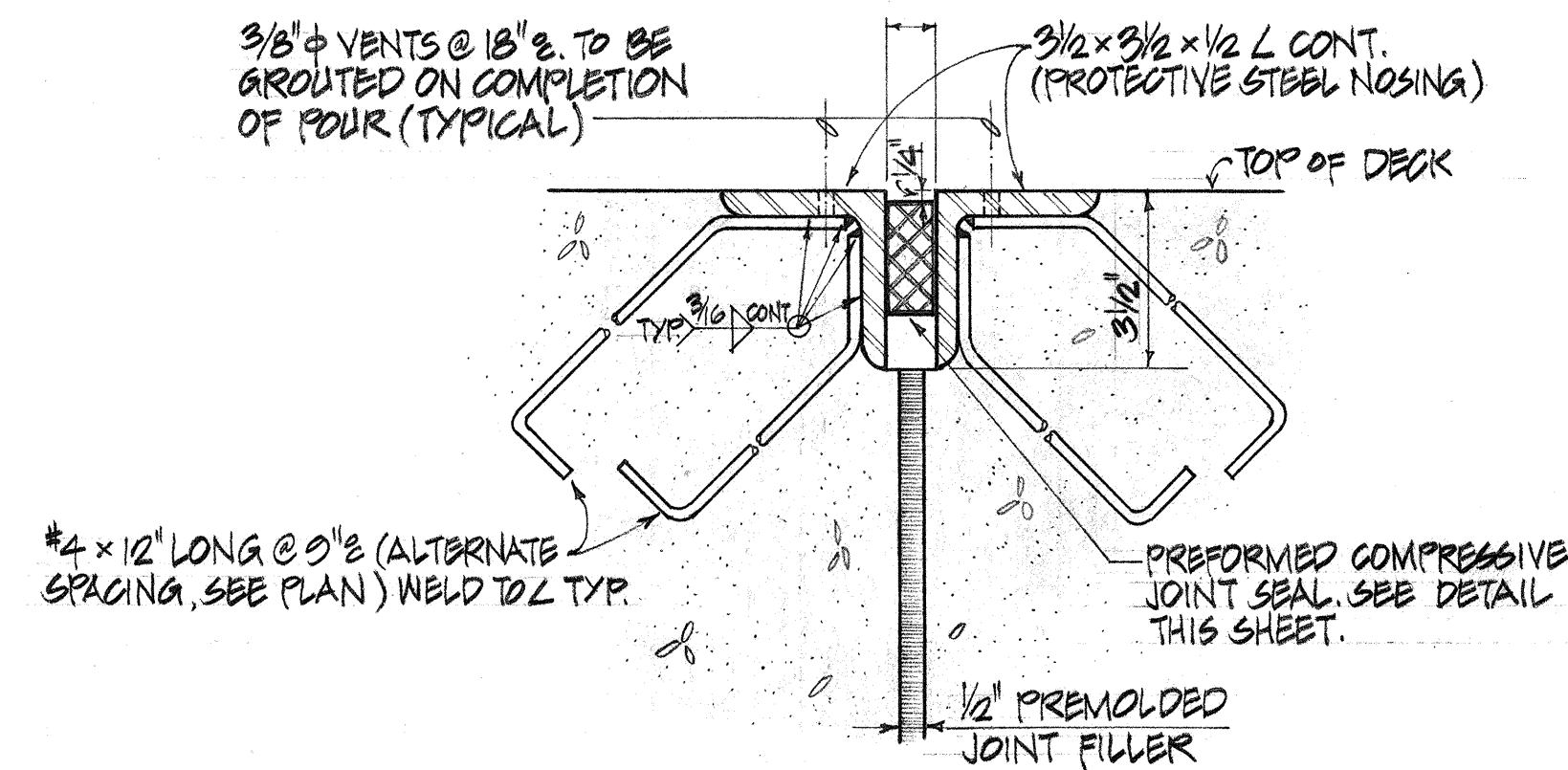


PLAN-DETAIL TRANSVERSE DECK EXPANSION JOINT 1
SCALE: 3/4" = 1'-0" 42

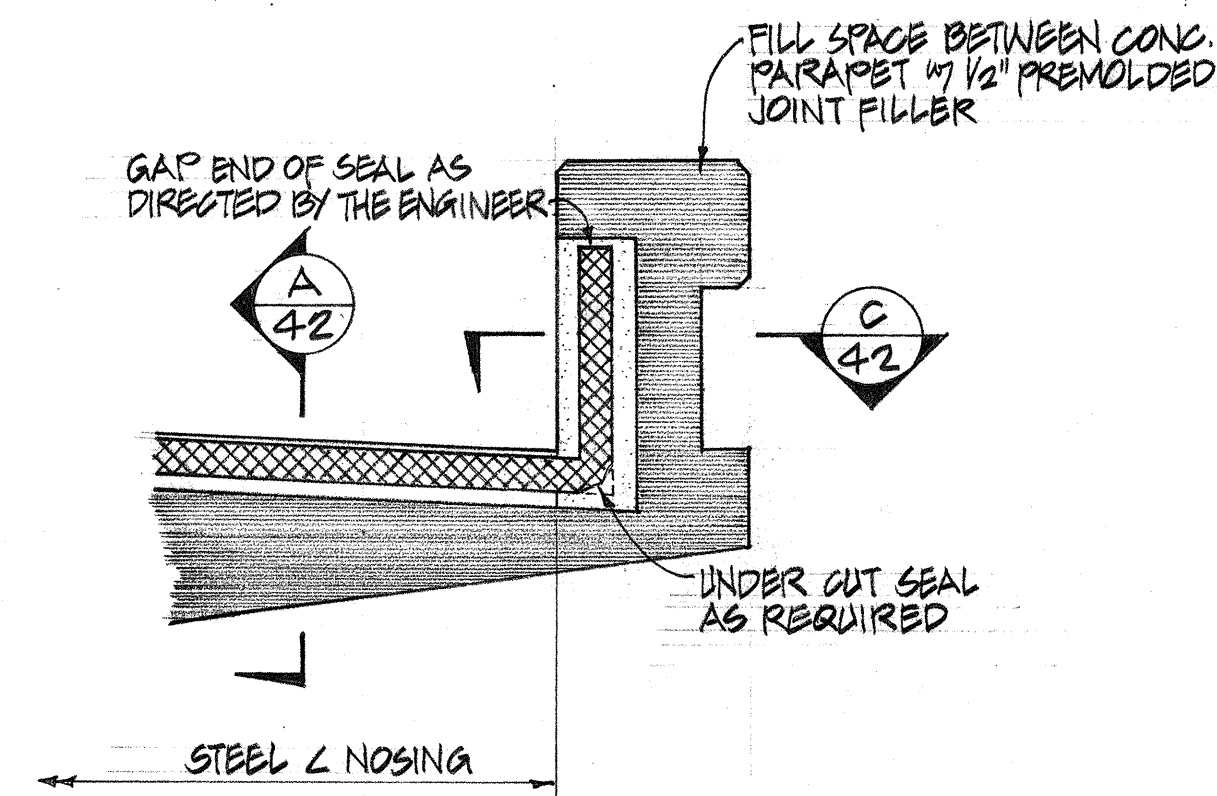


EXPANSION JOINT DETAIL @
RETAINING WALL & FOOTING
SCALE: 1/2" = 1'-0"

NOTE: 1. STEEL L PROTECTIVE NOSING ASSEMBLY TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.
2. STEEL L PROTECTIVE NOSING ASSEMBLY & JOINT SEALER INCIDENTAL TO CONCRETE & WILL NOT BE PAID FOR SEPARATELY.

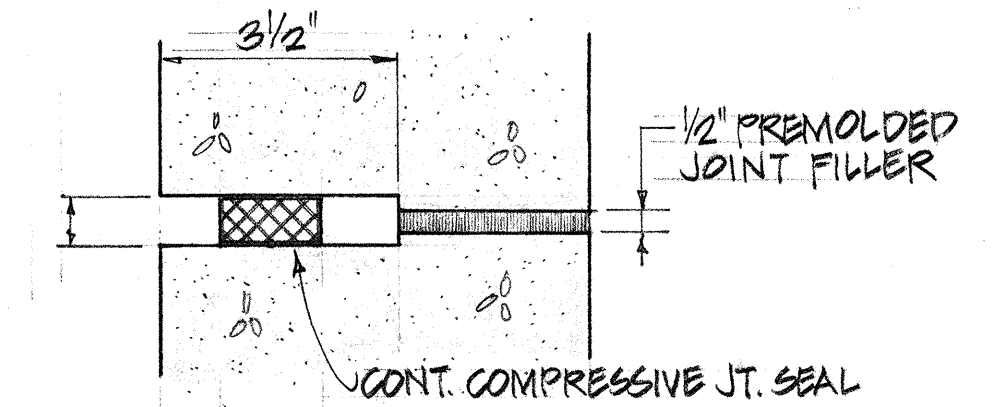


SECTION A
SCALE: 3" = 1'-0" 42

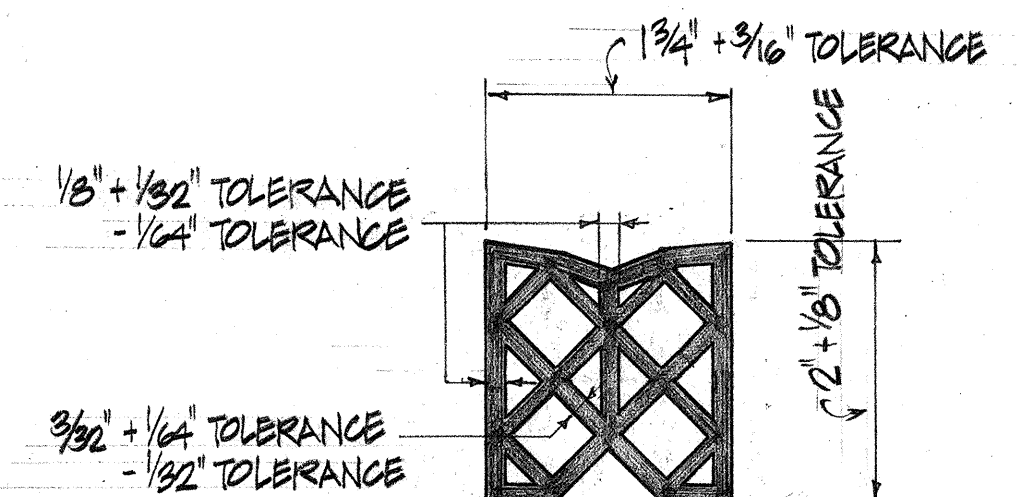


EXP. JOINT @ CONC. PARAPET

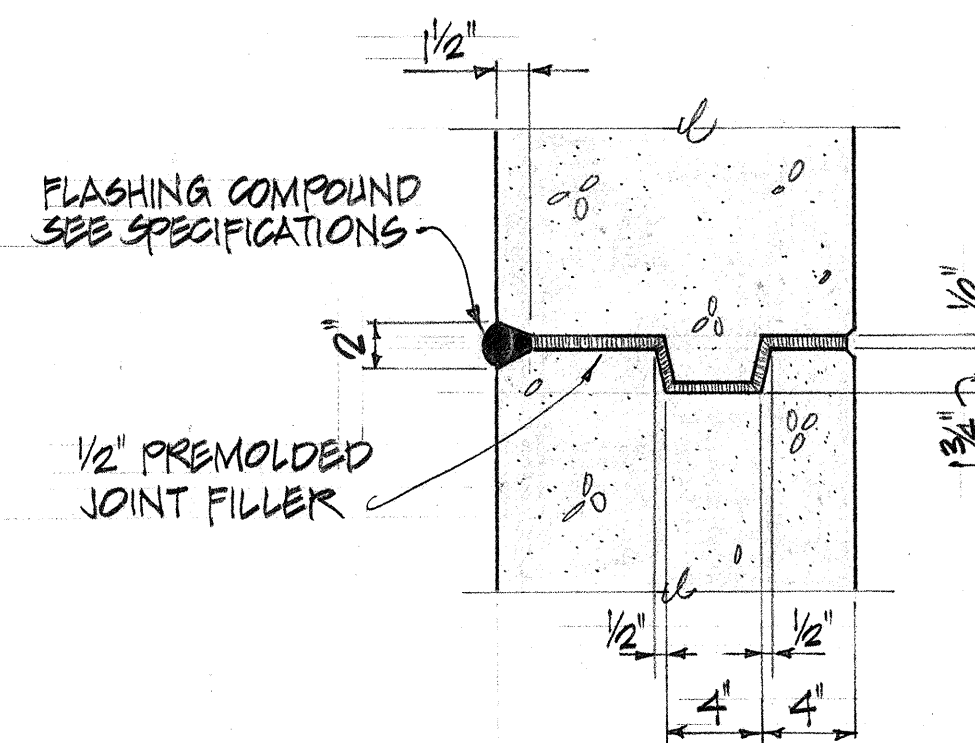
SECTION B
SCALE: 1" = 1'-0" 42



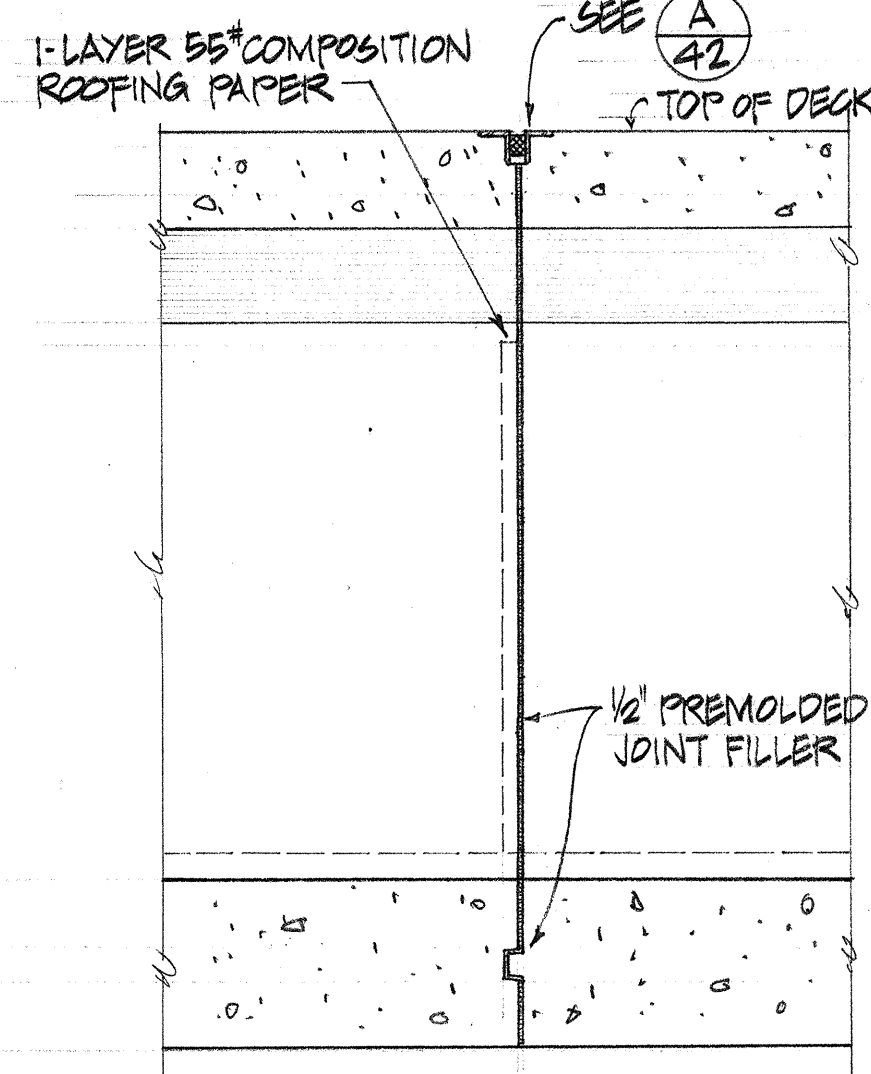
SECTION C
SCALE: 3" = 1'-0" 42



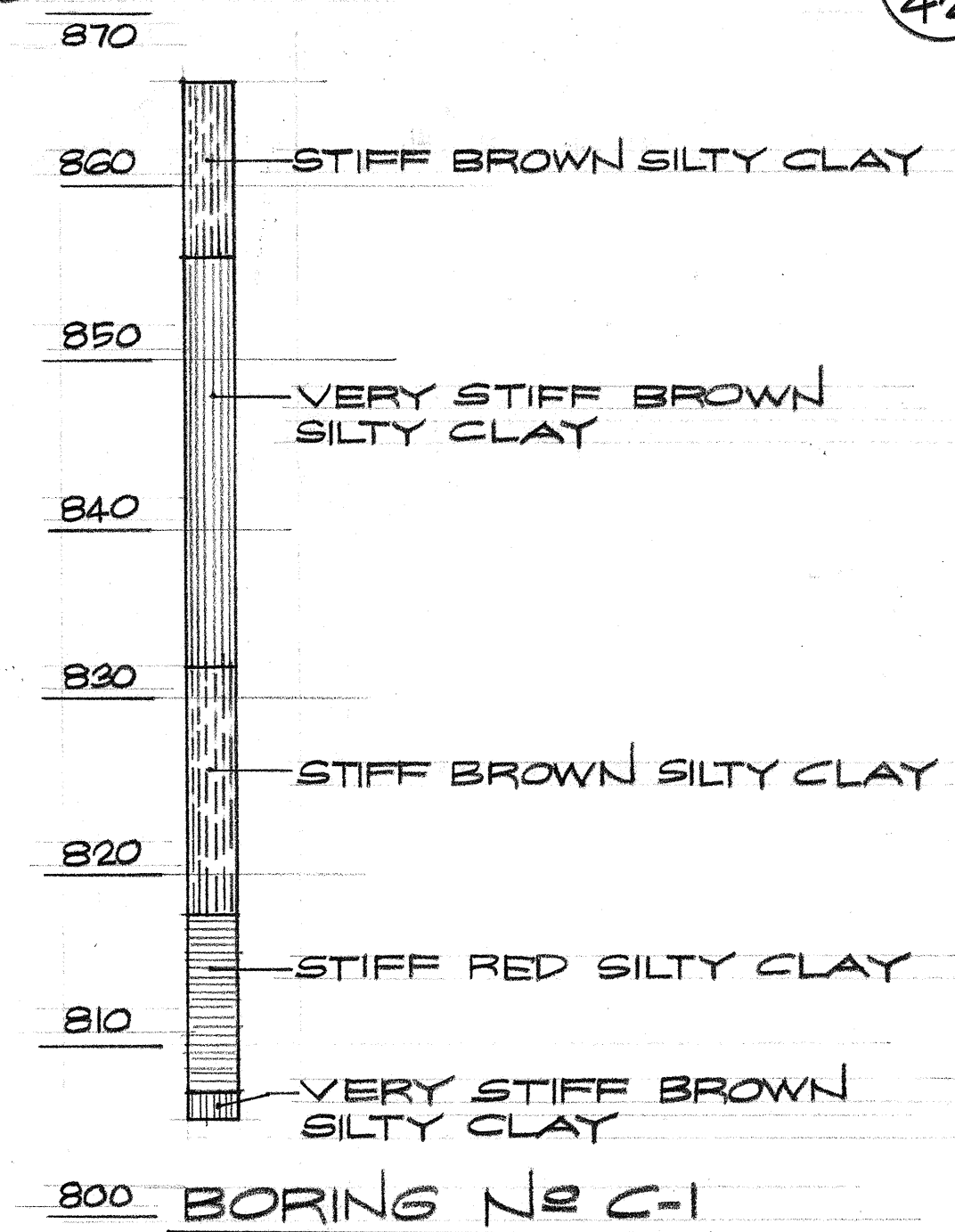
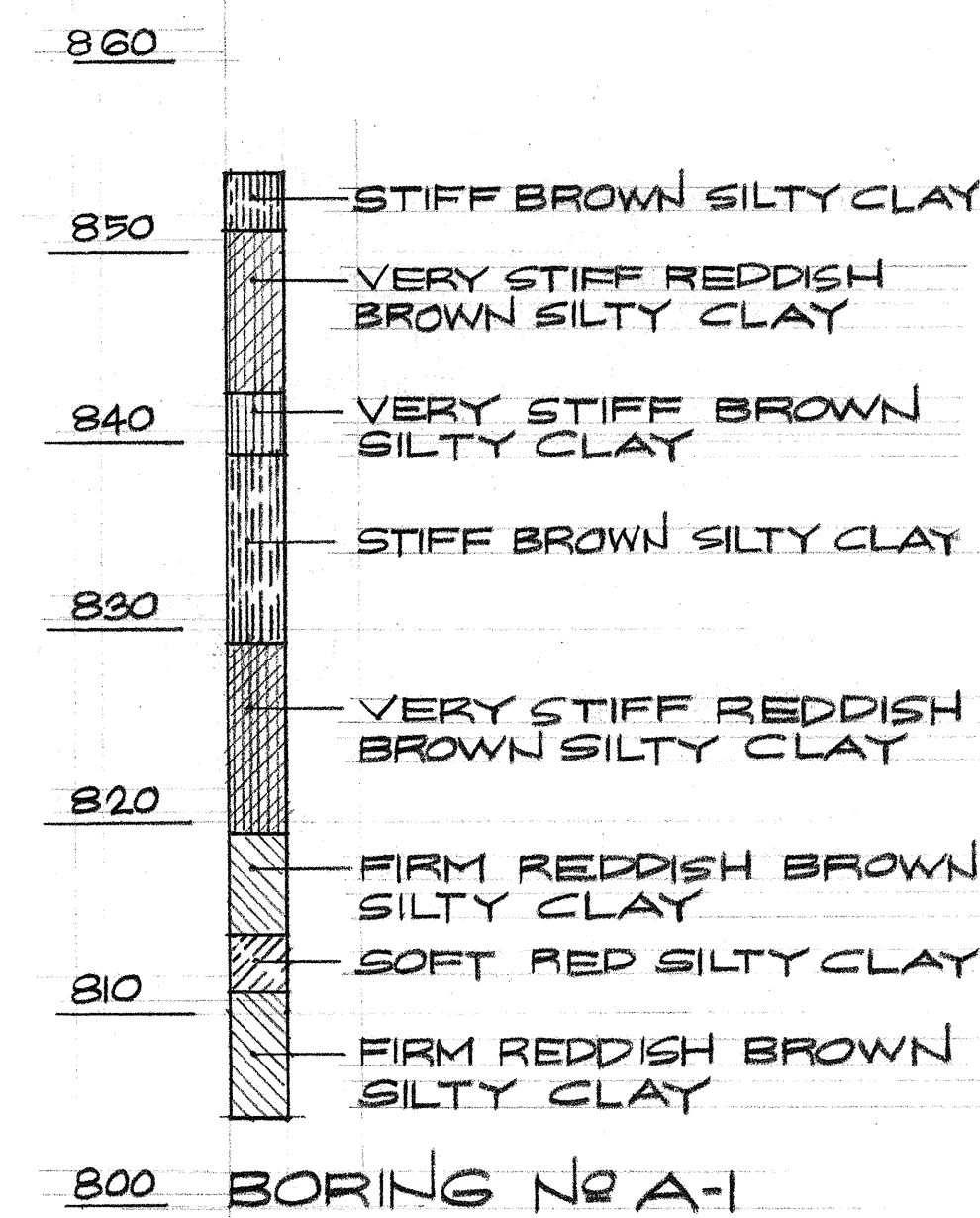
PREFORMED COMPRESSIVE JOINT SEALER DETAIL 1
NO SCALE 42



SECTION E
SCALE: 1 1/2" = 1'-0" 42



SECTION D
SCALE: 1/2" = 1'-0" 42



NOTES

- Boring data indicated are only represented as accurate for the location where the borings were made since variations in ground conditions may be expected to occur in adjacent areas. The State will not be responsible for any deductions, assumptions, or interpretations made by the Contractor of these borings.
- Original boring logs may be reviewed by the Contractor at the Highway Division Material Laboratory, 2530 Likelihi Highway, Honolulu, Hawaii 96819.
- Boring data taken from report by Material Testing & Research Branch, Department of Transportation.

HARVEY Y. D. LUNG
REGISTERED PROFESSIONAL ENGINEER
NO. 12345
HAWAII, U.S.A.

AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

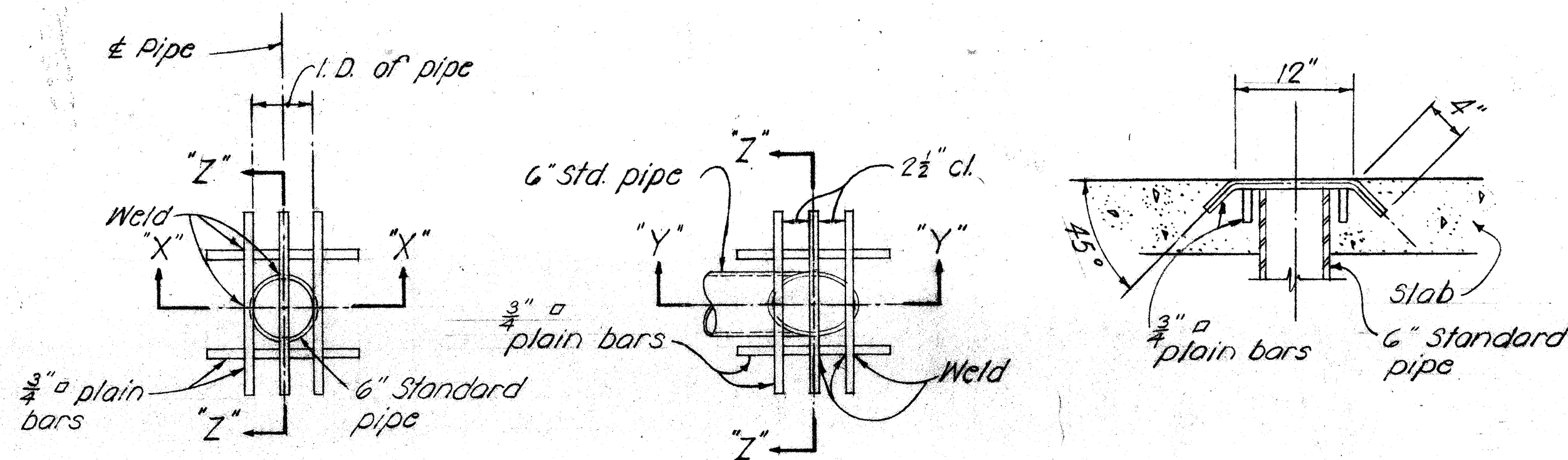
DES. H.L. DR. W.L. CHK. H.L.
APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
EXPANSION JOINT DETAILS
AND BORING LOGS
PARTIAL BRIDGE AND
RETAINING WALL NO. 3
WAHIAWA INTERCHANGE
F.A.I. Project No. I-H2-1(11)7

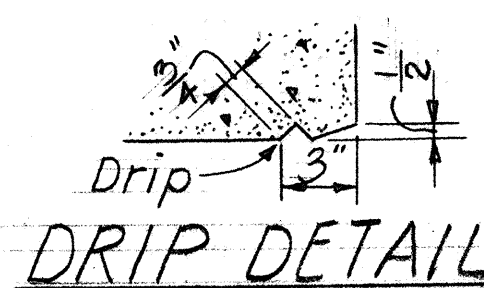
Scale: As noted Date: 4-25-73
SHEET No. 42 OF 42 SHEETS

GENERAL NOTES

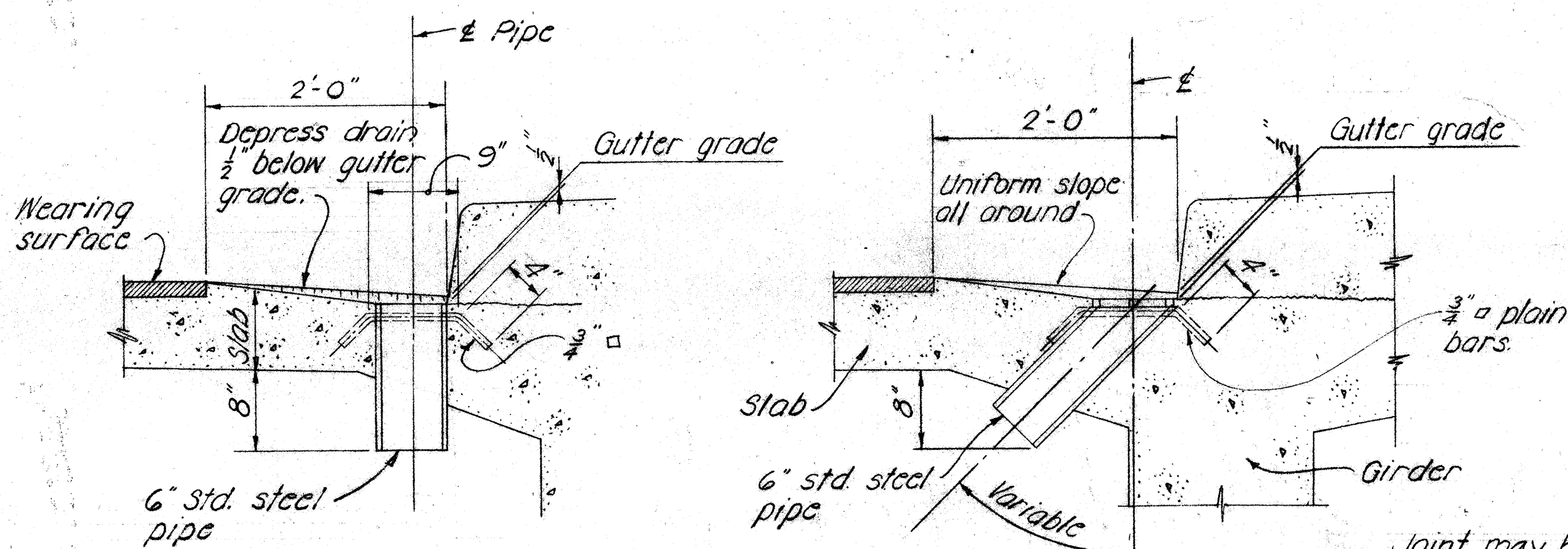
- All concrete shall be Class A unless otherwise noted.
- Reinforcing shall be detailed in accordance with A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Highway Structures unless otherwise noted.
- Clearance for reinforcing bars shall be as follows, unless otherwise noted:
 - $1\frac{1}{2}$ " for stirrups of beams & pier caps.
 - 2" for ties of columns.
 - 2" for formed walls.
 - 3" for footings.
- Minimum spacing between parallel bars shall be $2\frac{1}{2}$ times the diameter of bars, but in no case shall the clear distance between the bars be less than $1\frac{1}{2}$ times the maximum size of the coarse aggregate.
- All dimensions relating to reinforcing are to centers of bars unless otherwise noted.
- Reinforcing bars shall be securely tied at all intersections & lap splices & shall be held in place during pouring to maintain their proper locations as shown on plans.
- Vertical column bars shall be arranged in such a manner as to miss pier cap bars above as directed by the Engineer.
- Except as otherwise noted on drawings, all exterior corners & re-entrant angles in concrete work shall be chamfered $\frac{3}{4} \times \frac{3}{4}$ ".
- Concrete seats receiving steel plates, lead plates or neoprene pads shall be poured monolithically with supporting structures & top of concrete seats shall be finished with a steel trowel to a smooth level surface at the elevation shown on the plans.
- Elastomeric Pads: Bottom of bridge bearing pads shall be secured against displacement with adhesives approved by the Engineer. Pads shall be incidental to concrete and will not be paid for separately.
- Forms for all exposed surfaces of separation structures and surfaces of retaining walls visible from a traveled way or from a populated area shall be plywood except that metal forms may be permitted provided a surface finish satisfactory to the Engineer can be obtained and the use of such forms is approved in writing by the Engineer. Forms for round columns shall be made of materials that will give a smooth finish and true dimensions as given in the plans. Forms for prestressed concrete members shall be either metal or plywood.
- Gothic letters and figures approximating dimensions shown will be acceptable if approved by the Engineer.
- The contractor shall verify the location of all existing utility lines and notify the respective owners before commencing work of excavation or driving of piles.
- Standard Detail Drawings refer to all structures in general, except for modifications as may be required for special conditions. For such modifications refer to the corresponding detailed drawings.



TYPICAL CONCRETE GROOVE DETAIL

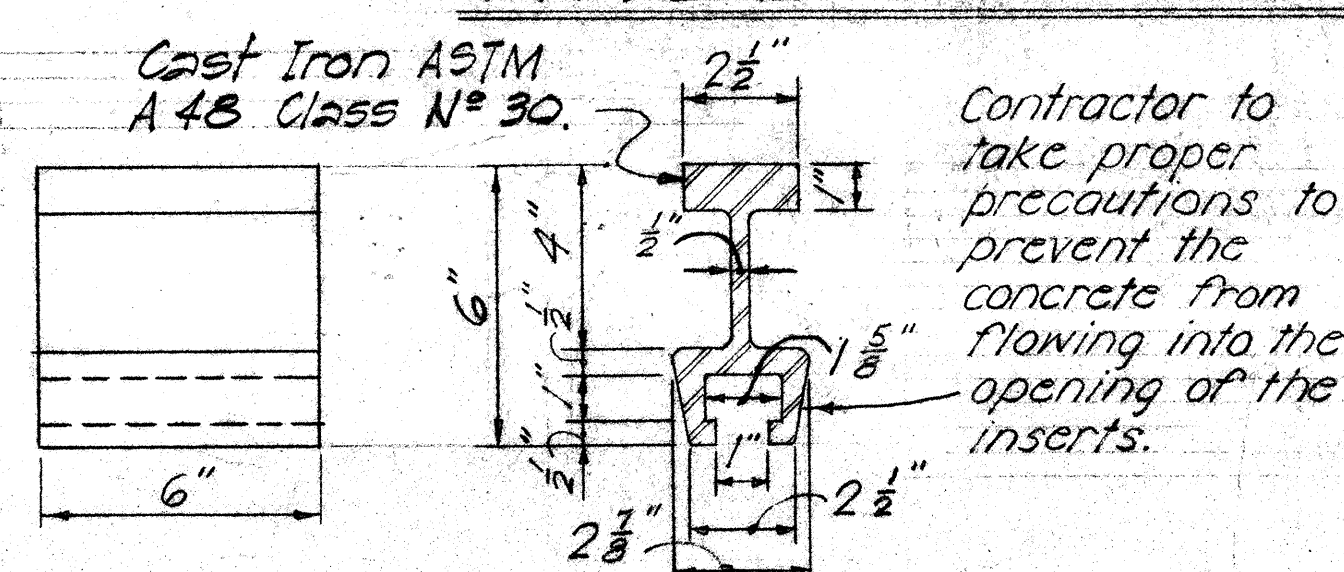


DRIP DETAIL

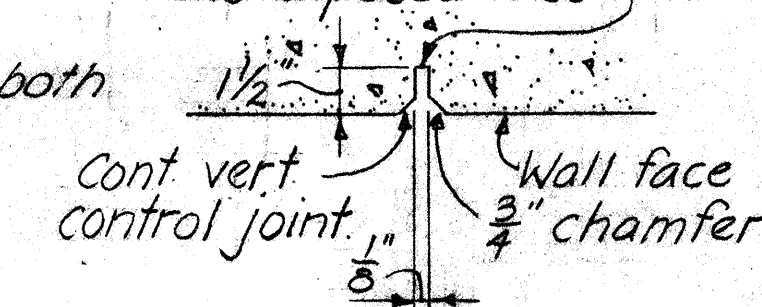


NOTE: Metal drains shall be considered incidental to Class A Concrete in both concrete and steel bridges and will not be paid for separately. Assemblage of grillage and pipe shall be hot-dip galvanized after all welding is completed.

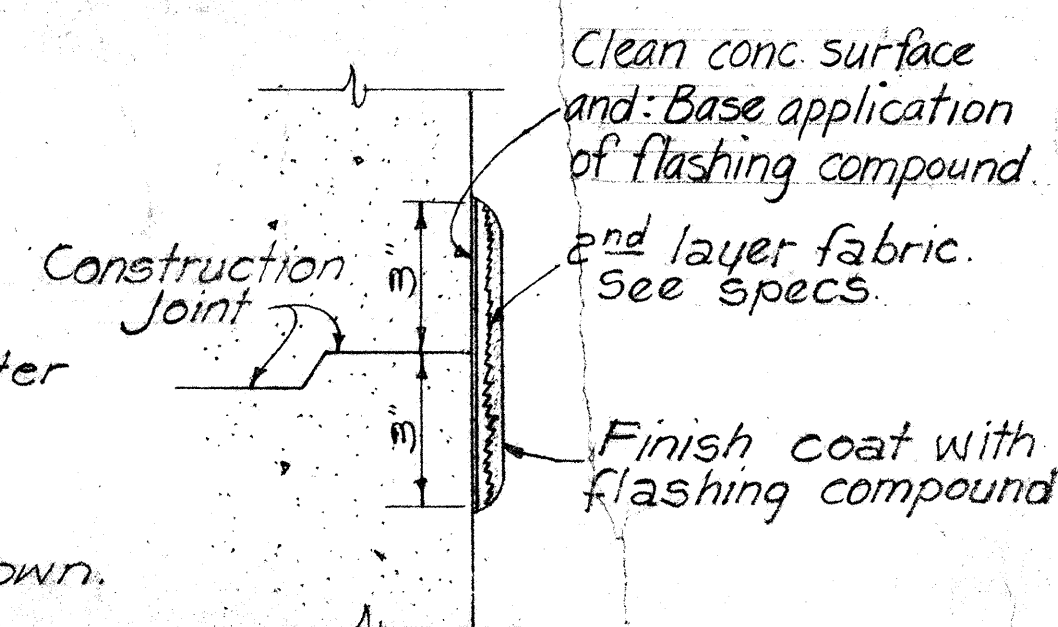
TYPICAL DRAINAGE DETAILS



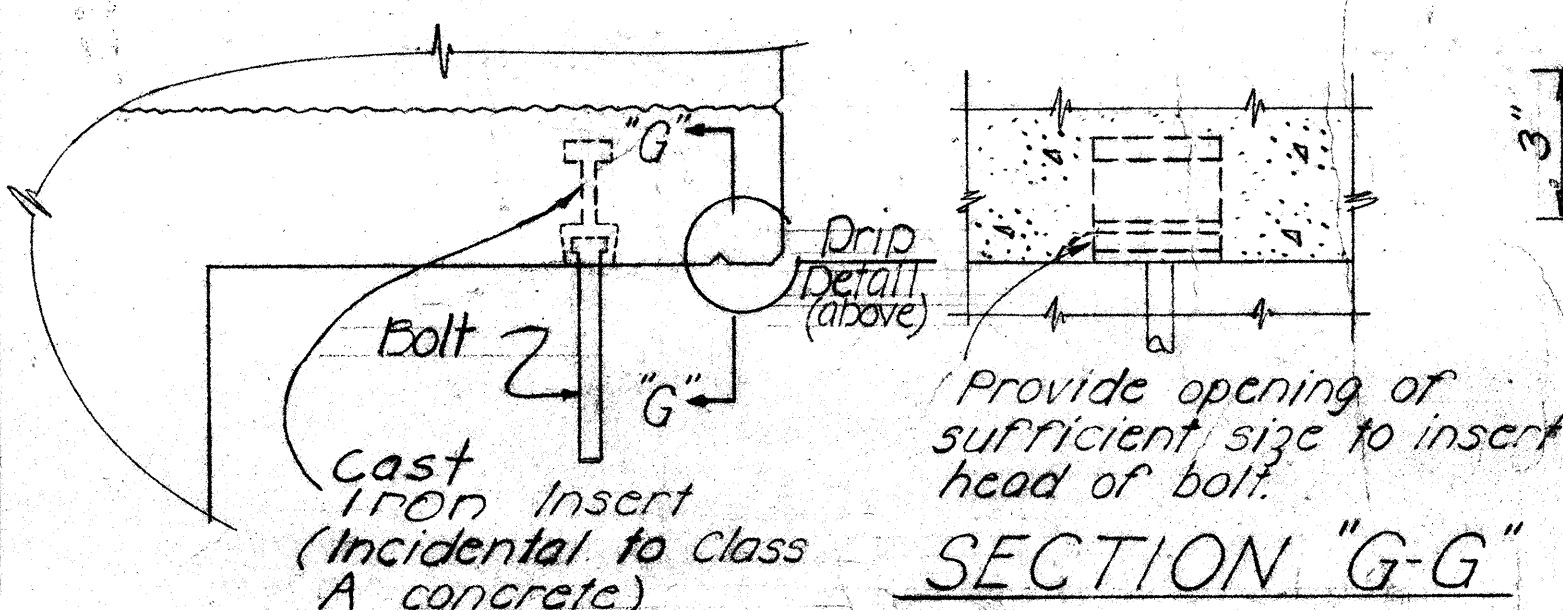
Contractor to take proper precautions to prevent the concrete from flowing into the opening of the inserts.



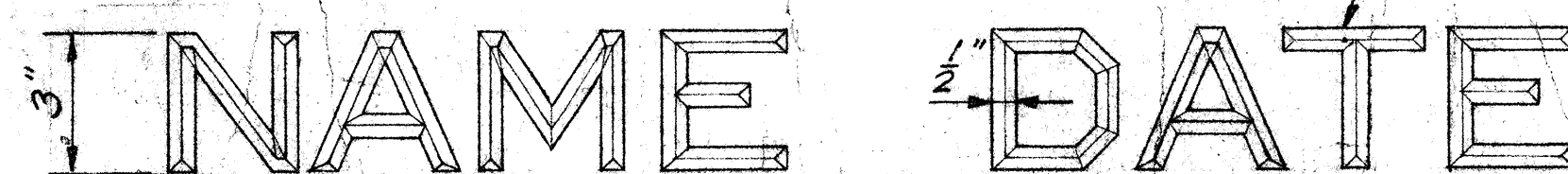
CONTROL JOINT DETAILS



TYP. FLASHING COMPOUND WATERPROOFING DETAIL

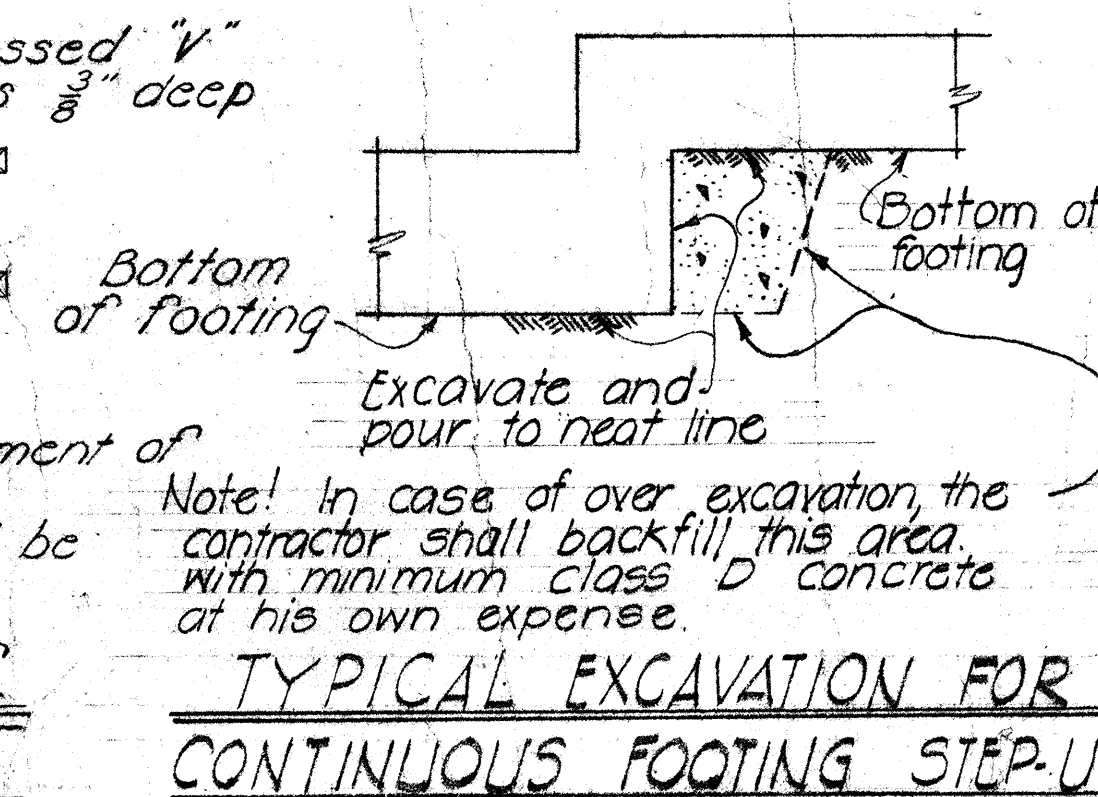


DETAIL OF PIPE HANGERS & INSERTS



Use correct name of bridge Date of Year built

NOTE: Refer to corresponding detail drawings for placement of such names & dates at end post. Exact details & spacing of letters & figures shall be as directed by the Engineer. See Note #12



Note! In case of over excavation, the contractor shall backfill this area with minimum class D concrete at his own expense.

APPROVAL RECOMMENDED:
Paul T. Yamashita
BRIDGE DESIGN ENGINEER 1-23-70
DATE

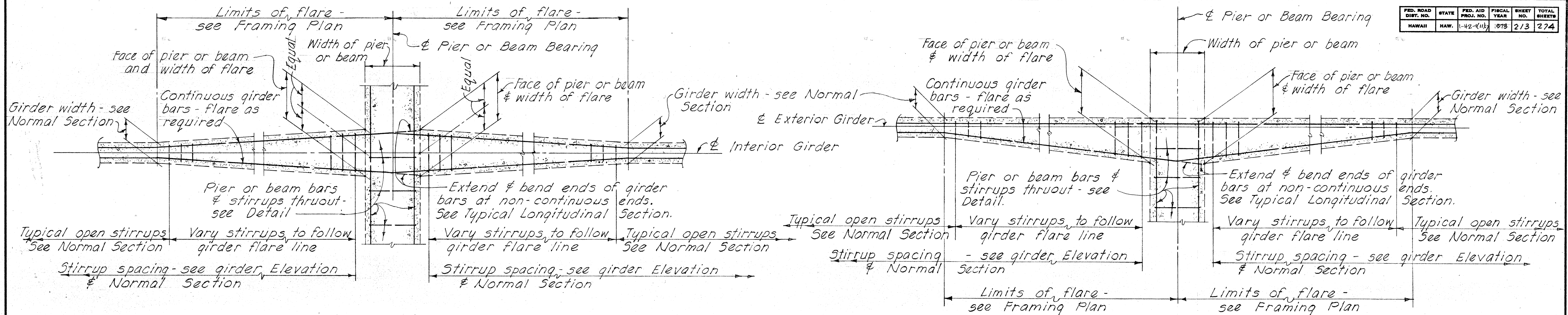
APPROVED
Paul T. Yamashita
FOR ASSISTANT CHIEF, ENGINEERING 1-28-70
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
NOTES AND MISCELLANEOUS
DETAILS

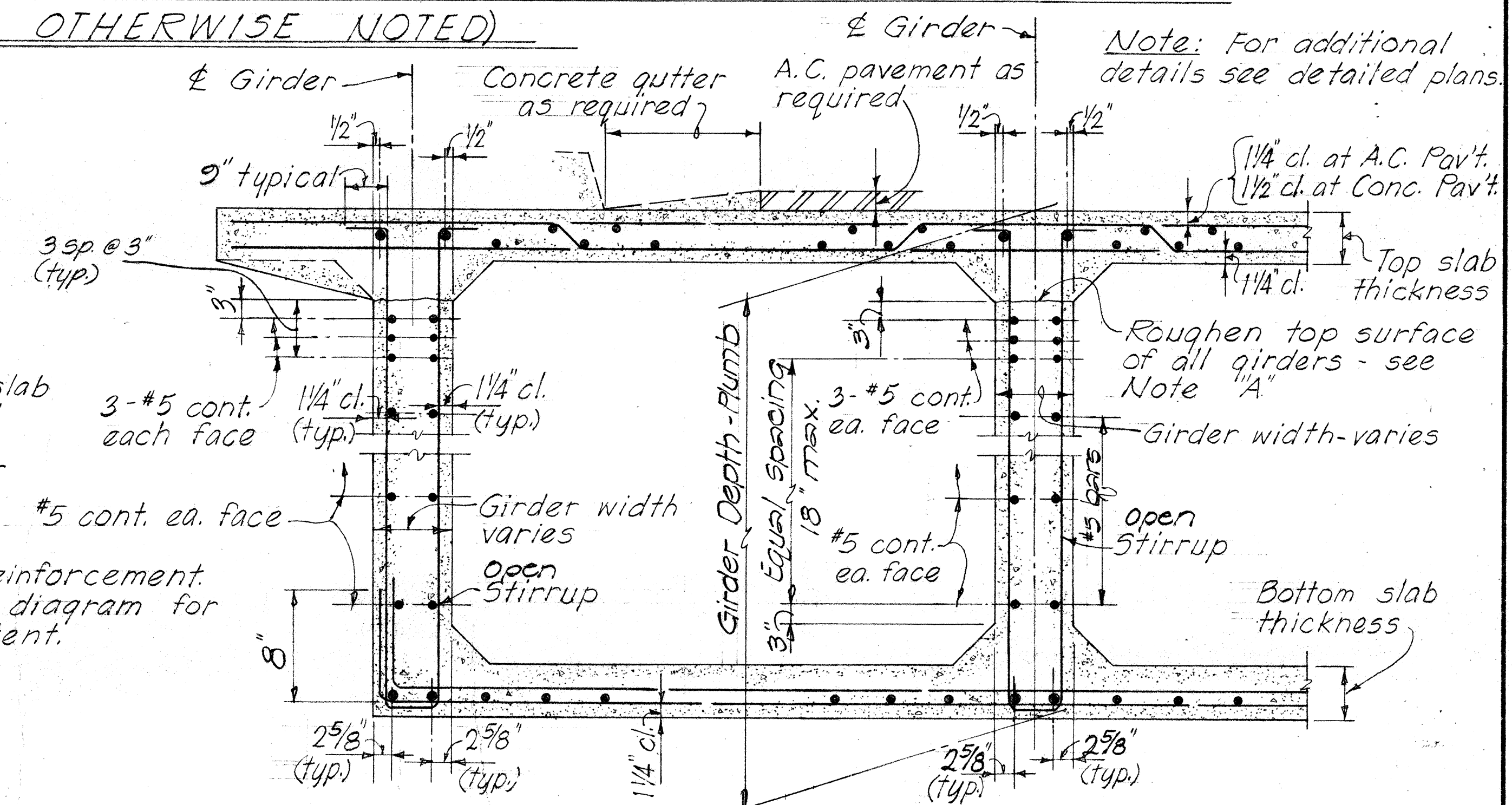
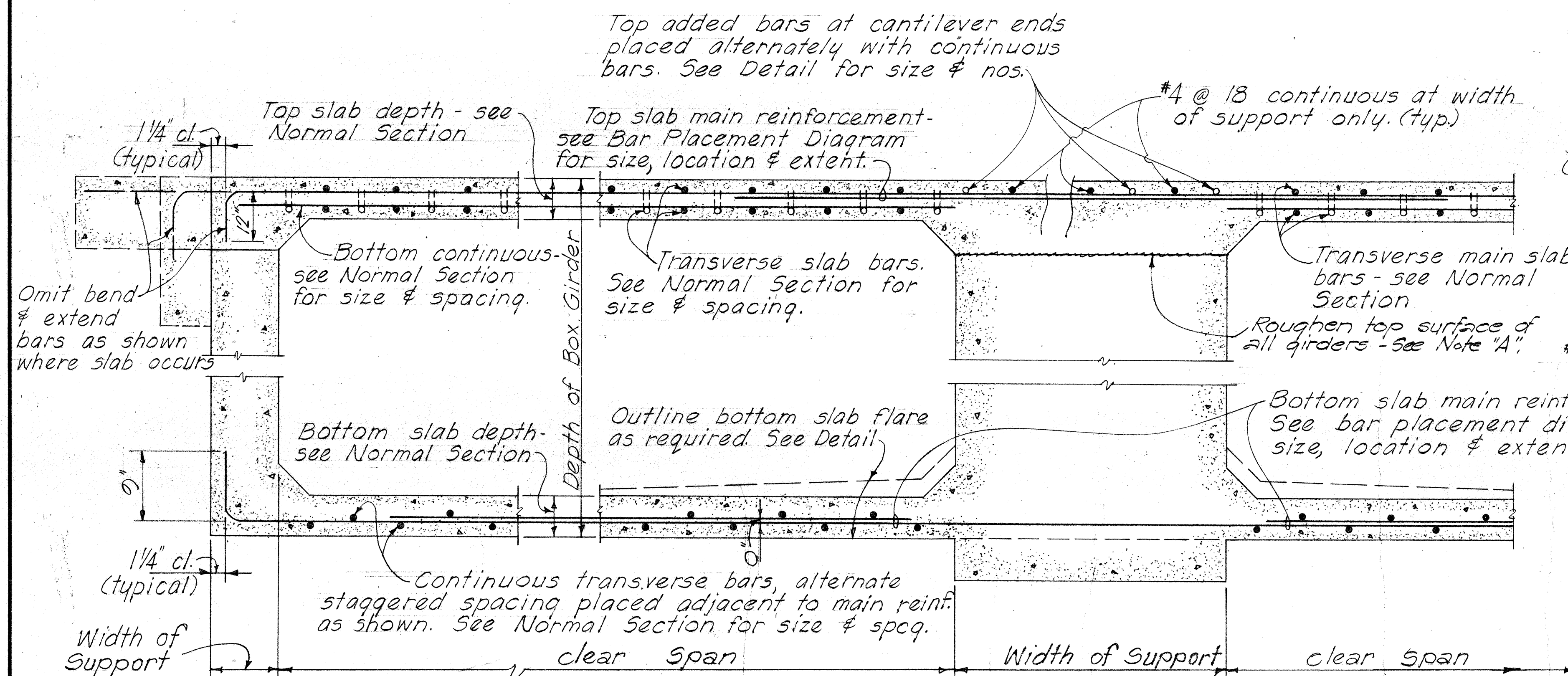
Date: 4-25-73



INTERIOR GIRDER

EXTERIOR GIRDER

TYPICAL DETAILS OF GIRDER FLARE AT NORMAL OR RADIAL SUPPORTS - CONTINUOUS ENDS AS SHOWN (NON-CONTINUOUS ENDS SIMILAR EXCEPT AS OTHERWISE NOTED)



EXTERIOR GIRDER

INTERIOR GIRDER

TYPICAL NORMAL BOX GIRDER SECTION

AT NON-CONTINUOUS END

AT CONTINUOUS SUPPORT

TYPICAL LONGITUDINAL DECK SECTION ALONG GIRDER AT NORMAL OR RADIAL SUPPORTS

Note "A" The entire surface of the joint shall be thoroughly cleaned of surface laitance, curing compound, and other material foreign to the concrete, and clean aggregate be exposed by abrasive blast cleaning after the curing period or immediately before placing concrete at the joint.

NO.	REVISION	APPROVED BY	DATE

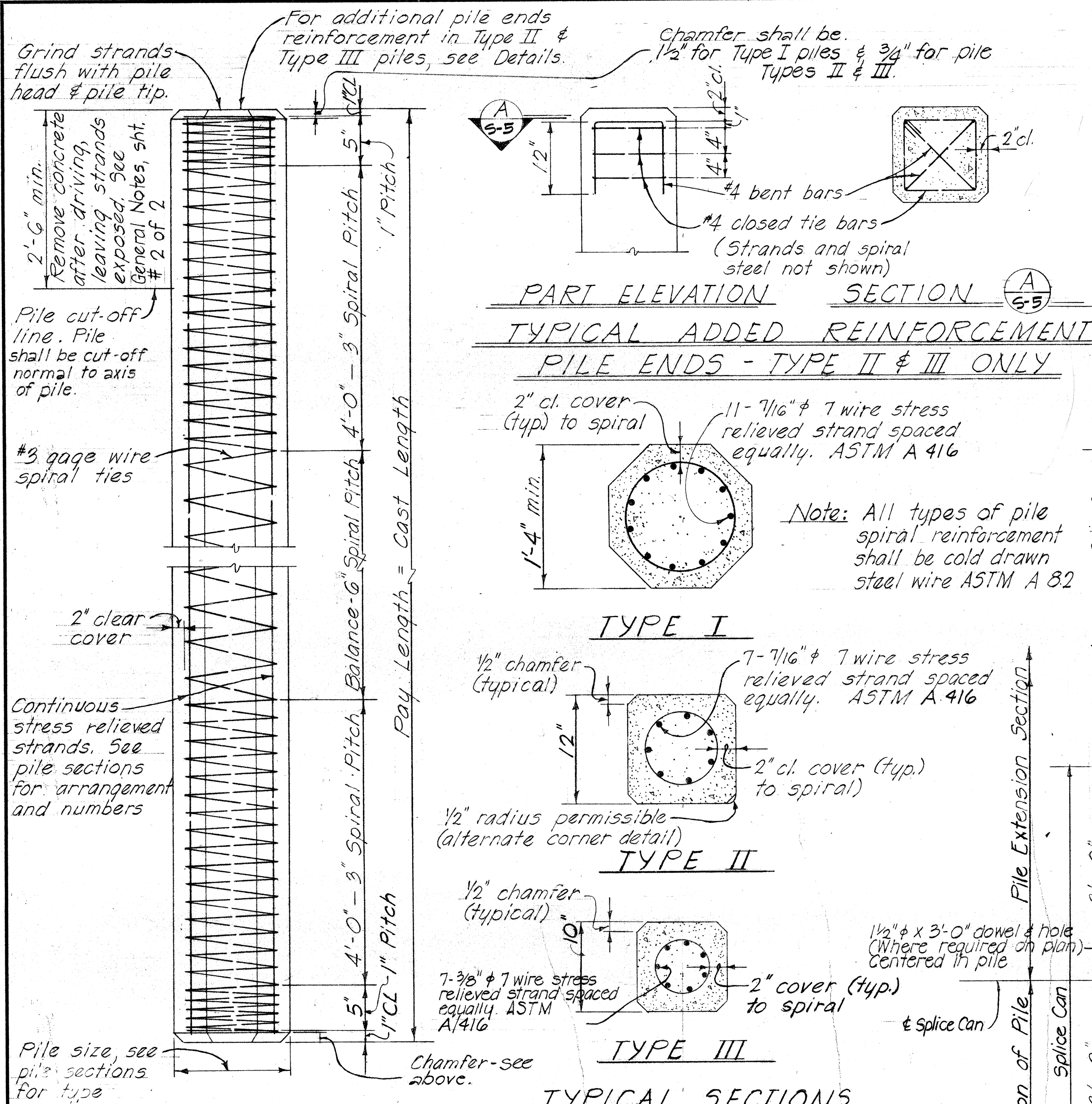
APPROVAL RECOMMENDED
Paul T. Yamashita
BRIDGE DESIGN ENGINEER

1-23-70
DATE

APPROVED
Paul T. Yamashita
FOR ASSISTANT CHIEF, ENGINEERING

1-28-70
DATE

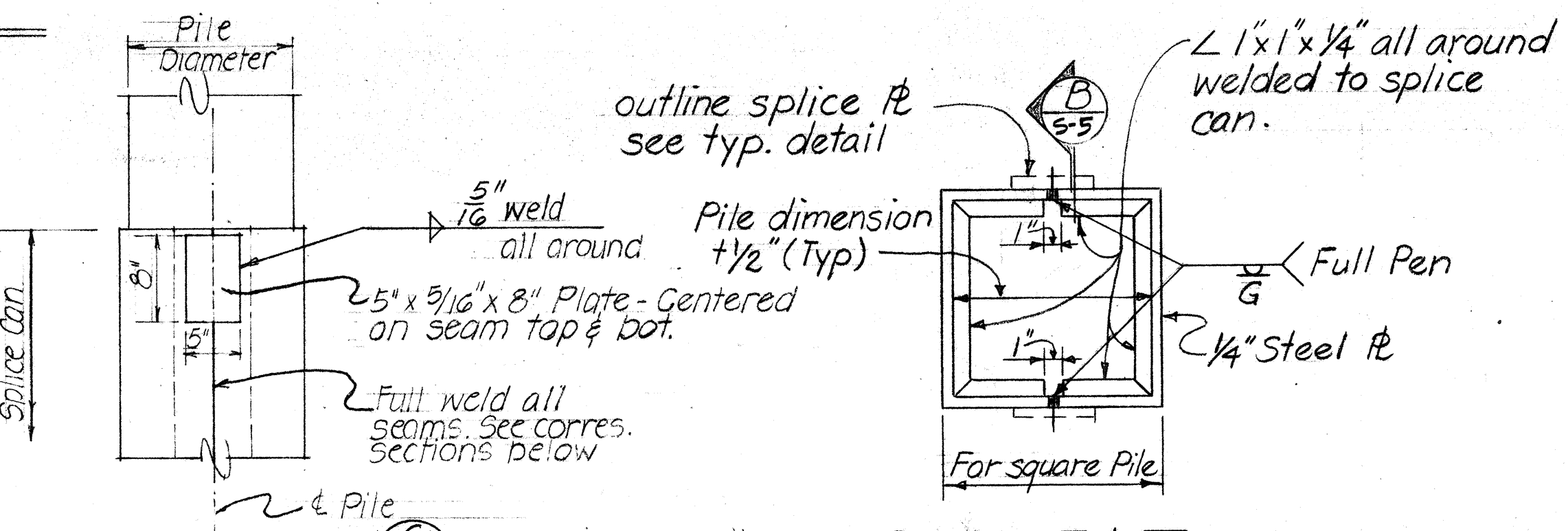
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STANDARD DETAILS CONCRETE BOX GIRDER Date 4-25-73 SHEET No. 53 OF 10 SHEETS DB-101-2



PART ELEVATION SECTION A 5-5

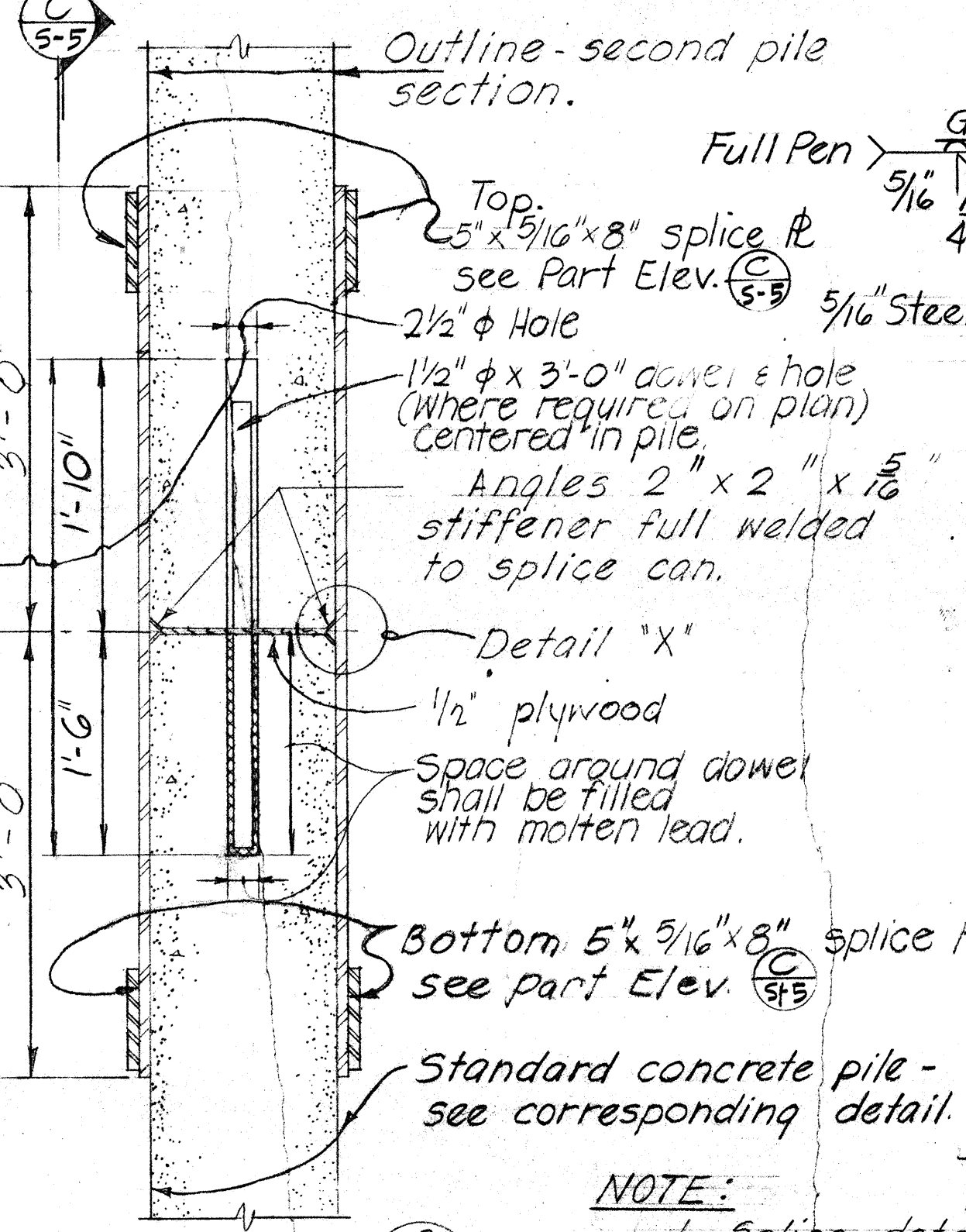
TYPICAL ADDED REINFORCEMENT PILE ENDS - TYPE II & III ONLY

NOTE:
Concrete in pile build-ups without driving shall be Class A Concrete. Concrete in pile build-ups with driving shall have a minimum compressive cylinder strength f'_c of 5000 p.s.i. at 28 days. Build-ups may be driven if the specimen of concrete from which the piles were poured develops a strength of at least 3500 p.s.i. but not earlier than 7 days.

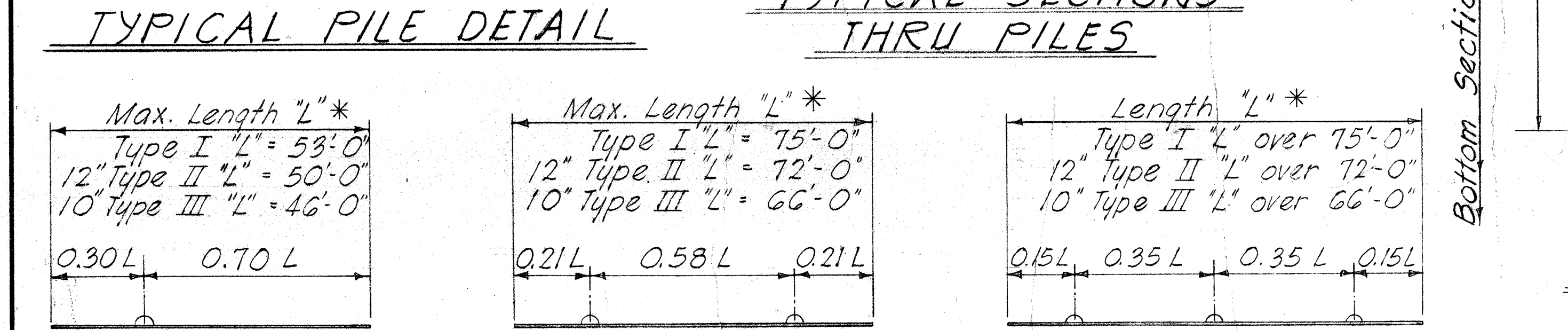
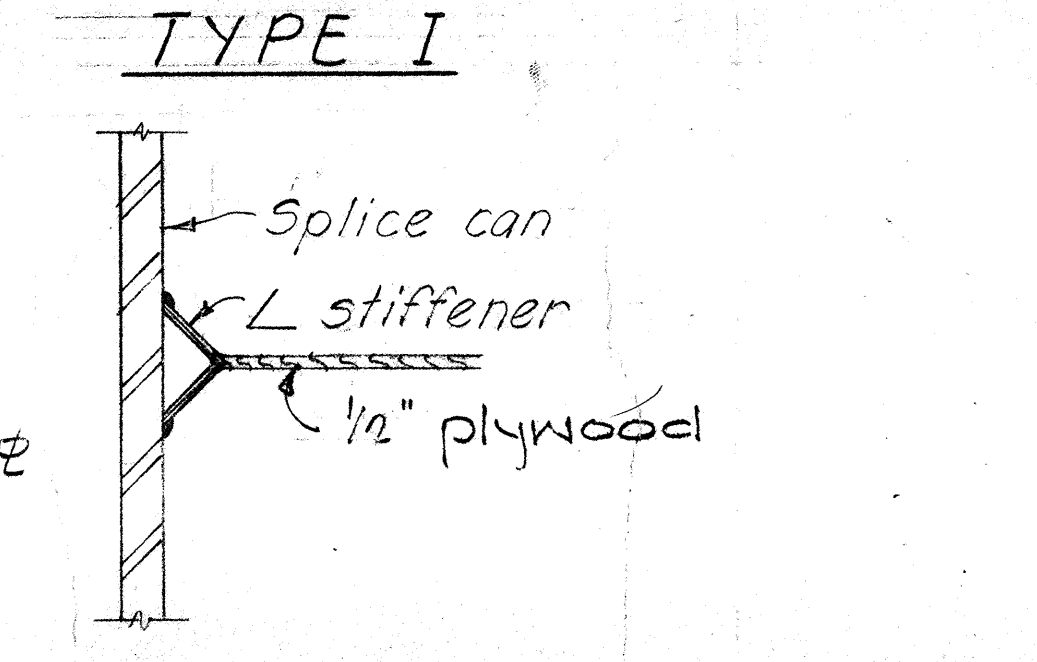
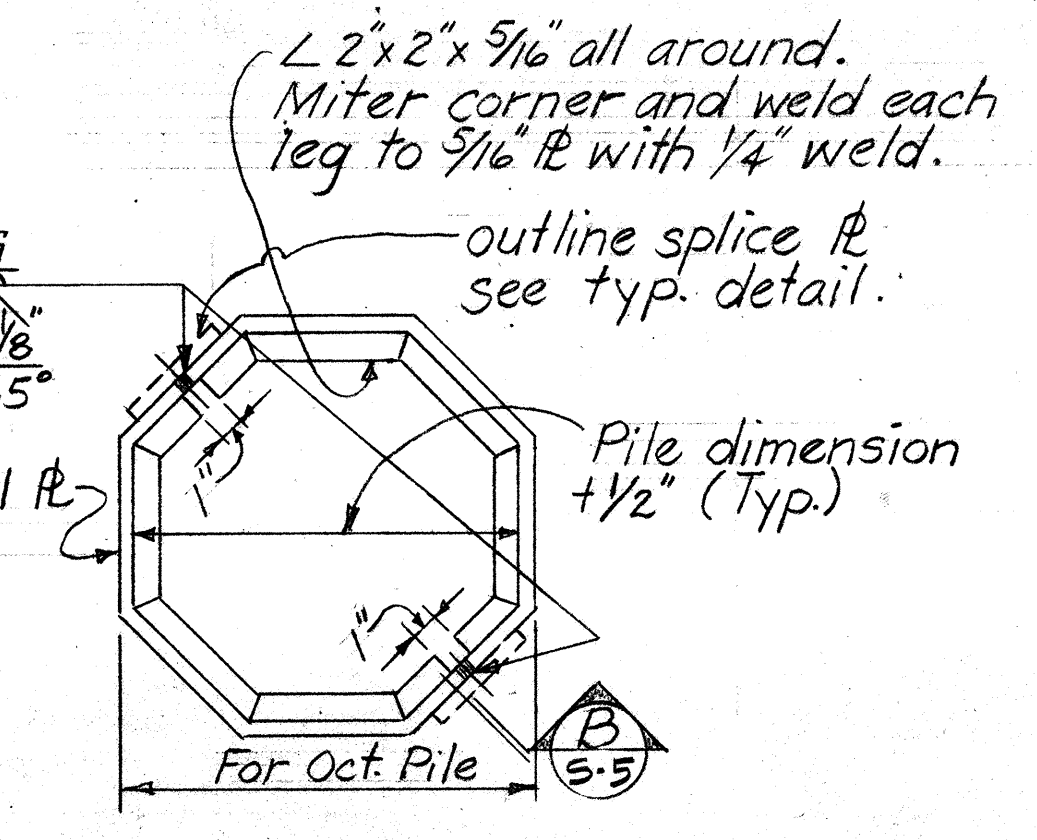


PART ELEV. C 5-5

(TYP CAN SPICE &)



TYPE II & III



*The length "L" is the distance end to end of pile.

1 POINT PICK-UP **2 POINT PICK-UP** **3 POINT PICK-UP**

NOTE: Unless special lifting devices are attached for pick-up points, pick-up points shall be plainly marked on all piles after removal of the forms and all lifting shall be done at these points. The use of special embedded or attached lifting devices, the employment of other pick-up points or any other method of pick-up shall be subject to approval by the Engineer.

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Paul T. Yamashita
BRIDGE DESIGN ENGINEER
1-23-70
DATE

APPROVED
Paul T. Yamashita
ASSISTANT CHIEF, ENGINEERING
4-28-70
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

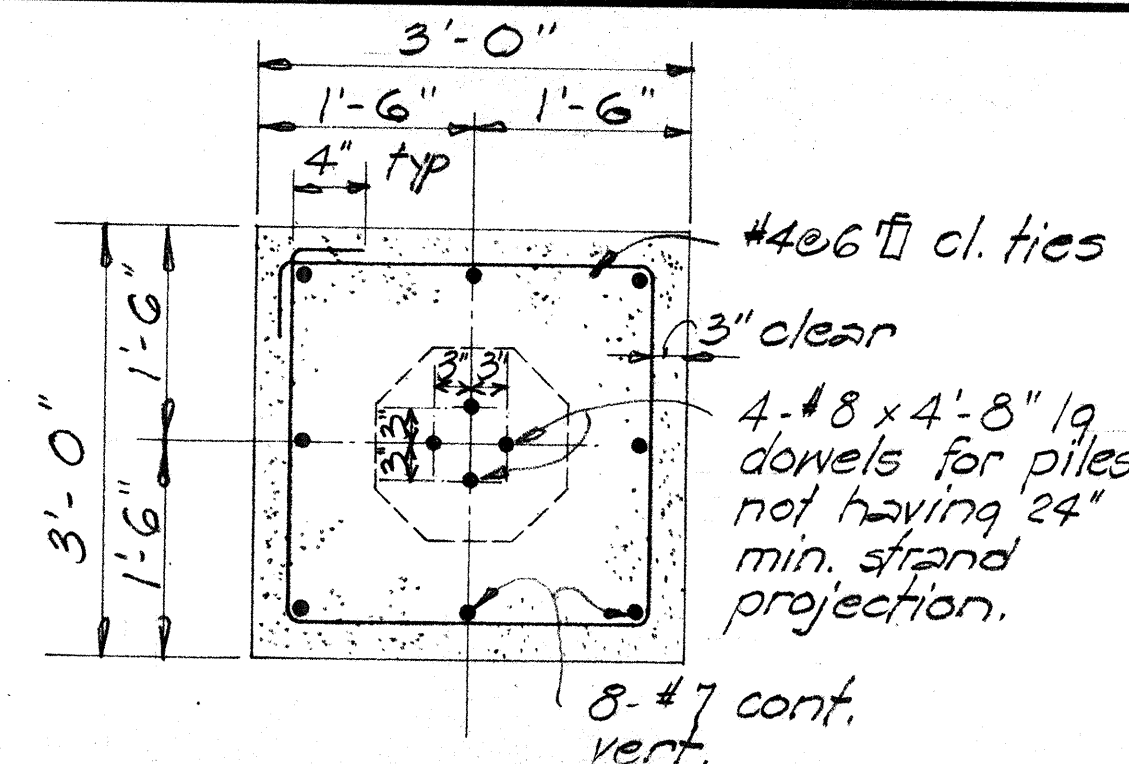
STANDARD DETAILS
PRESTRESSED CONCRETE PILES

Date 4-25-73

SHEET No. 5-5 OF 10 SHEETS DB-300-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-42-1(11)17	1973	216	274

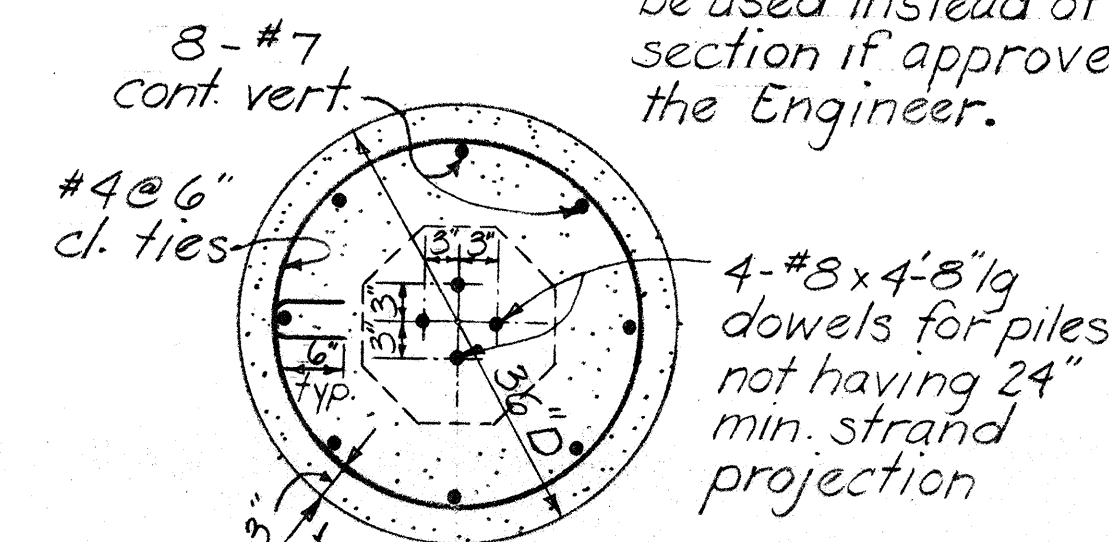
2'-6" min. unless otherwise directed by the Engineer.
Remove concrete after driving, leaving reinf. exposed.
Chamfer - See Typical Pile Detail.



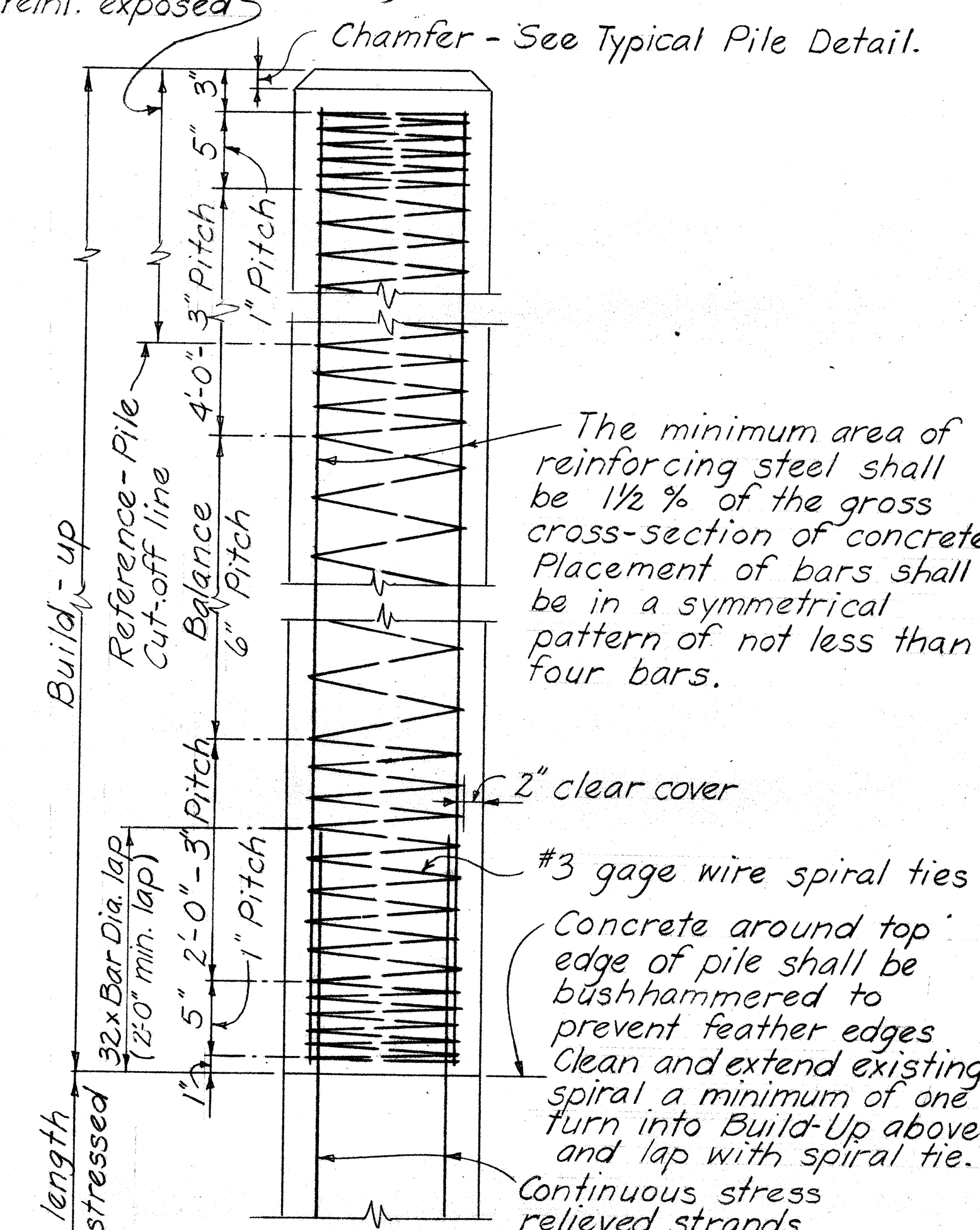
SQUARE BUILD-UP

Note:

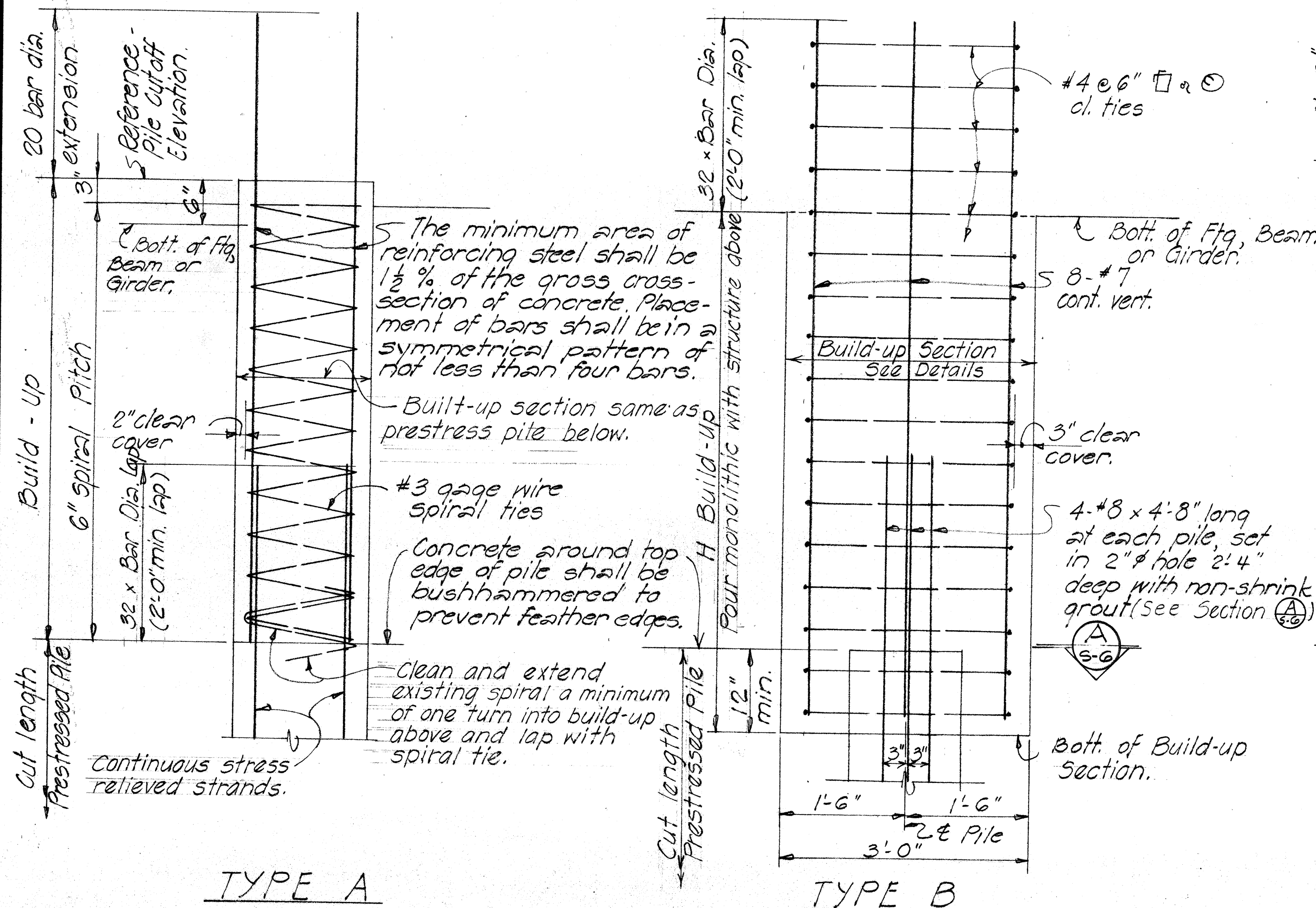
Circular section may be used instead of square section if approved by the Engineer.



CIRCULAR BUILD-UP SECTION



TYPICAL PILE BUILD-UP DETAIL WITH DRIVING



TYPE A

Notes:

Selection of pile build-up type without driving to be determined by the Engineer.
When height of depressed portion of footing (H) exceeds 4', the depressed section shall be poured separately from the main body of the footing.

Depressed portion of footing may be omitted for pile heads embedded at least 4" into footing provided at least 90% of the piles in each footing have the minimum embedment into footing as shown in contract plans.

WITHOUT DRIVING

TYPICAL PILE BUILD-UP DETAILS

GENERAL NOTES

1. Work of cutting off prestressed conc. piles or concrete build-ups shall be performed in such a manner as to avoid spalling or damaging the pile below cut-off. In case of such damage, the pile shall be replaced or repaired by the Contractor at his expense as directed by the Engineer.

2. Portion of pile embedded into footing shall be of sound concrete. Damaged portions shall be removed and pile cut-off elevation lowered as required by the Engineer.

APPROVAL RECOMMENDED:
Paul T. Yamashita
BRIDGE DESIGN ENGINEER
1-23-70
DATE

APPROVED
Paul T. Yamashita
For ASSISTANT CHIEF, ENGINEERING
1-28-70
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS PRESTRESSED CONCRETE PILES
Date 4-25-73

SHEET No. 56 OF 10 SHEETS DB-300-2

NOTE:
Spacing of joints
Expansion = 26'-0" max.
Contraction = 32'-0" max.

For alternate contraction joint and control joint details - See Standard Details Sht. #DB-100

JOINT ELEVATION

- 1-layer 55# composition roofing paper
- Key
- Flashing compound see specifications
- Const. joint 4"
- 1/2" premoulded joint Filler
- 1 1/2" x 4" cont. key similar as Sect. "A-A"

SECTION A-A

- 1/2" chamfer
- 1/2" premoulded joint Filler
- 1-layer 55# composition roofing paper (exp. or contr.)
- Top of wall
- 1/2" premoulded joint Filler (exp. jt.)
- 1-layer 55# comp. roofing paper (contr. jt.)

SECTION B-B

- 1 layer 55# composition roofing paper
- Top of wall
- Flashing compound (exp. jt.)
- Premoulded Filler & key in footing at expansion joint only.

SECTION C-C

- 1 layer 55# composition roofing paper
- Top of wall
- Flashing compound (exp. jt.)
- Bars in same plane
- *5 @ 12" added each face
- Typical Ret. Wall reinf.

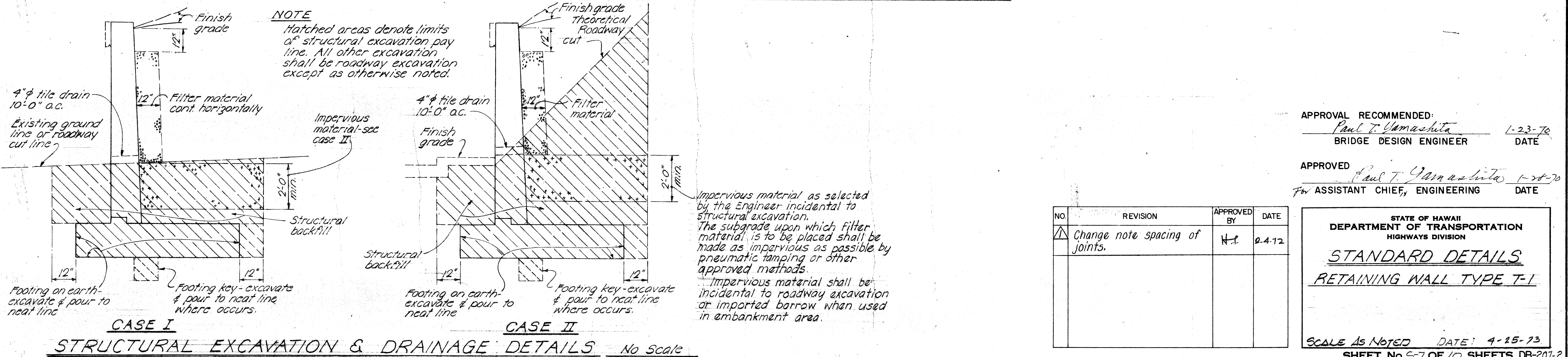
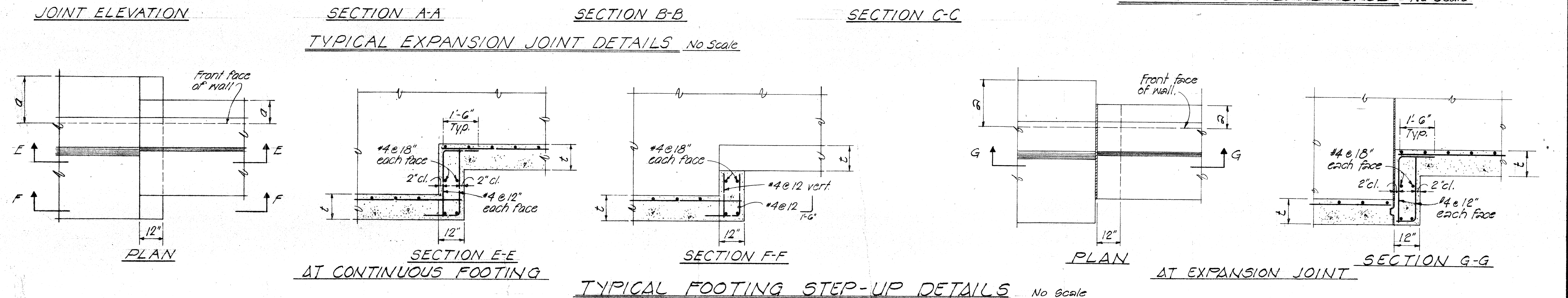
SECTION D-D

- Top of wall
- 2-*4 added each face
- *5 @ 12" added each face
- Typical Ret. Wall reinf.

ELEVATION

- Light Standard
- 3'-0"
- D
- *5 @ 12" x 6'-0" lg. added each face at Light Standard
- Typical Ret. Wall reinf.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H.R.-1(1)	1973	217	274



NO.	REVISION	APPROVED By	DATE
1	Change note spacing of joints.	H.F.	2-4-7

APPROVED Paul T. Yamashita 1-28-77
For ASSISTANT CHIEF, ENGINEERING DATE

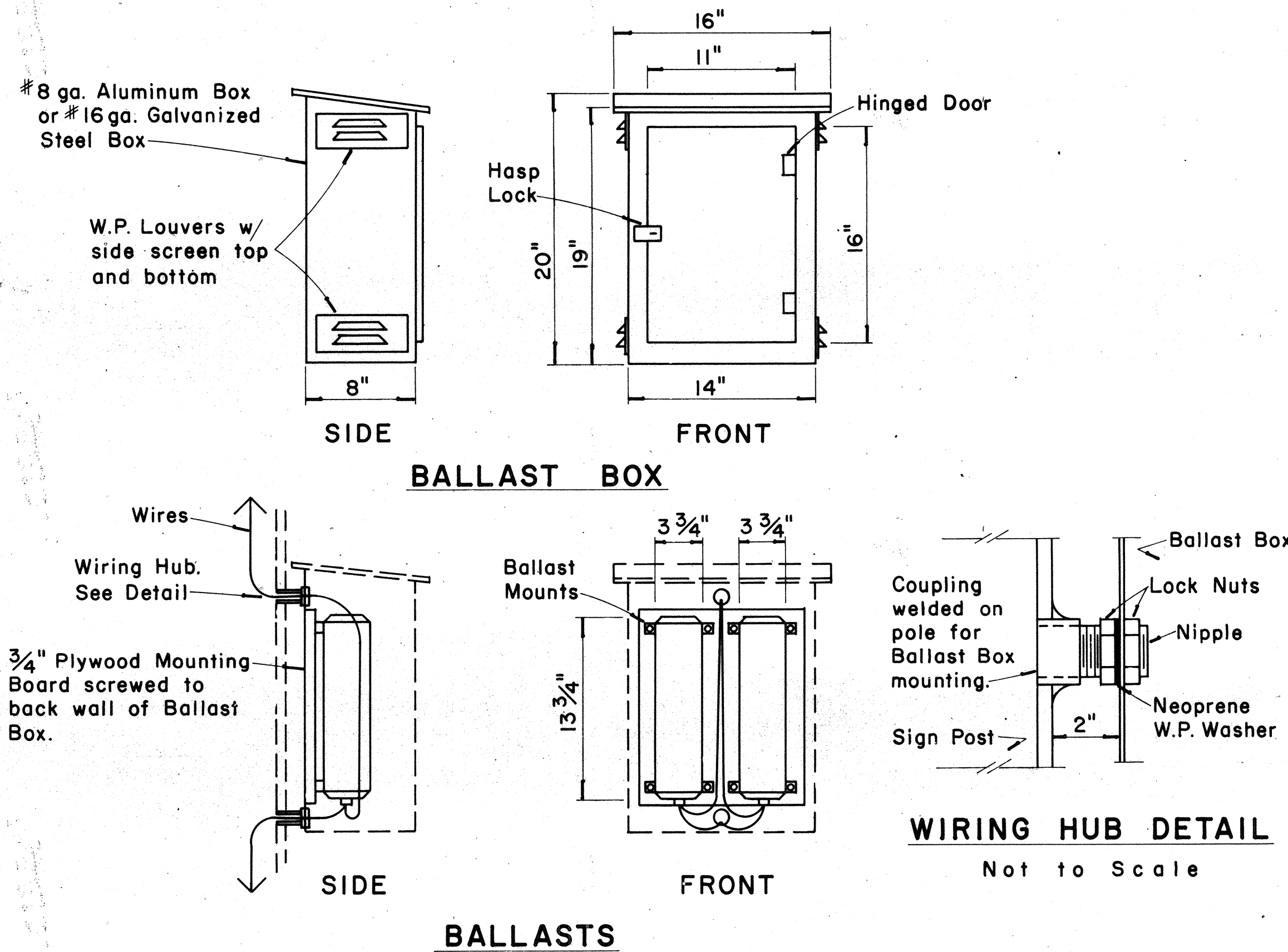
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RETAINING WALL TYPE T-1

SCALE AS NOTED DATE: 4-25-73

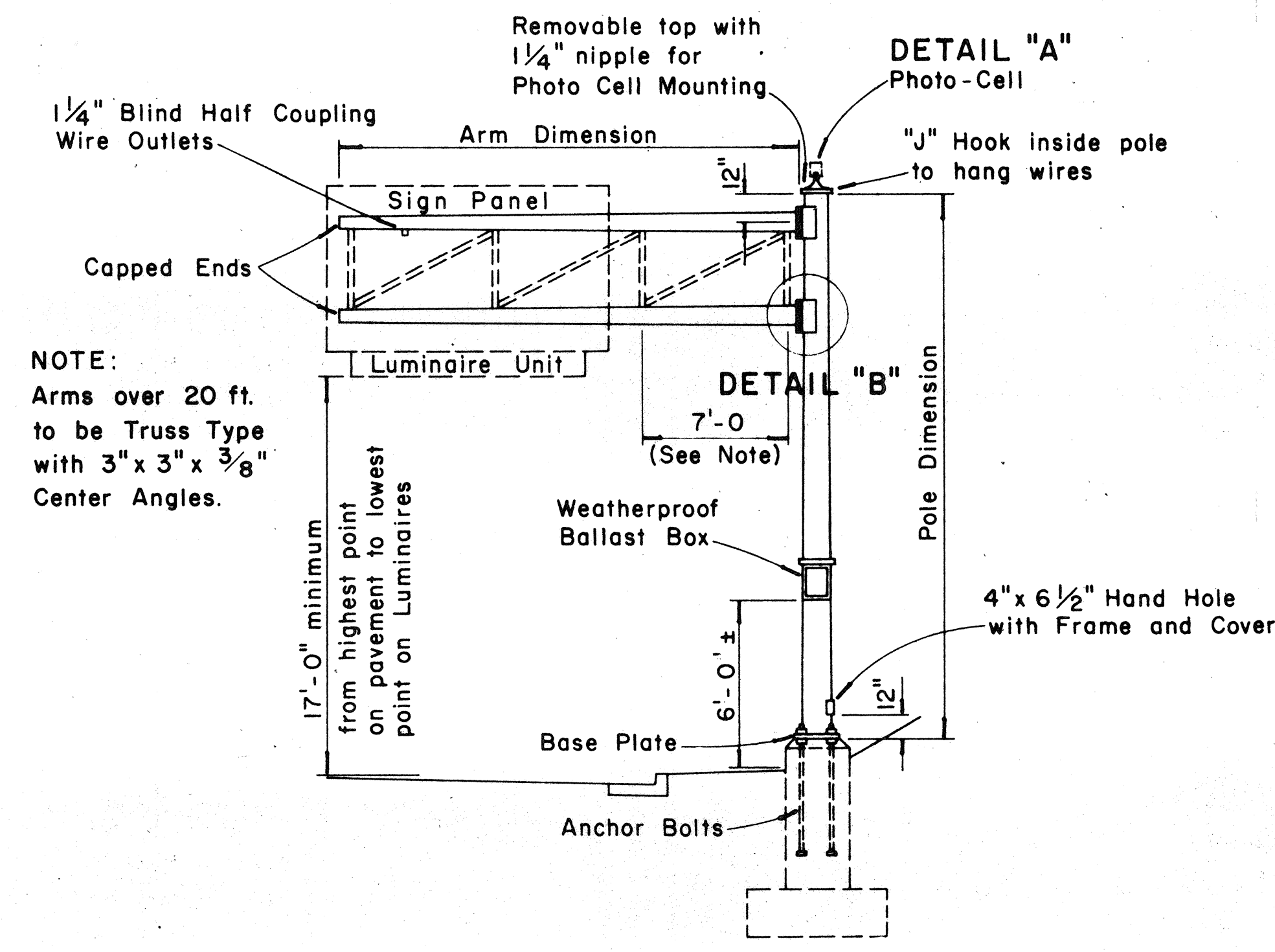
SHEET No. 5-7 OF 10 SHEETS DB-207-

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1(11)	1973	218	274



WEATHERPROOF BALLAST BOX

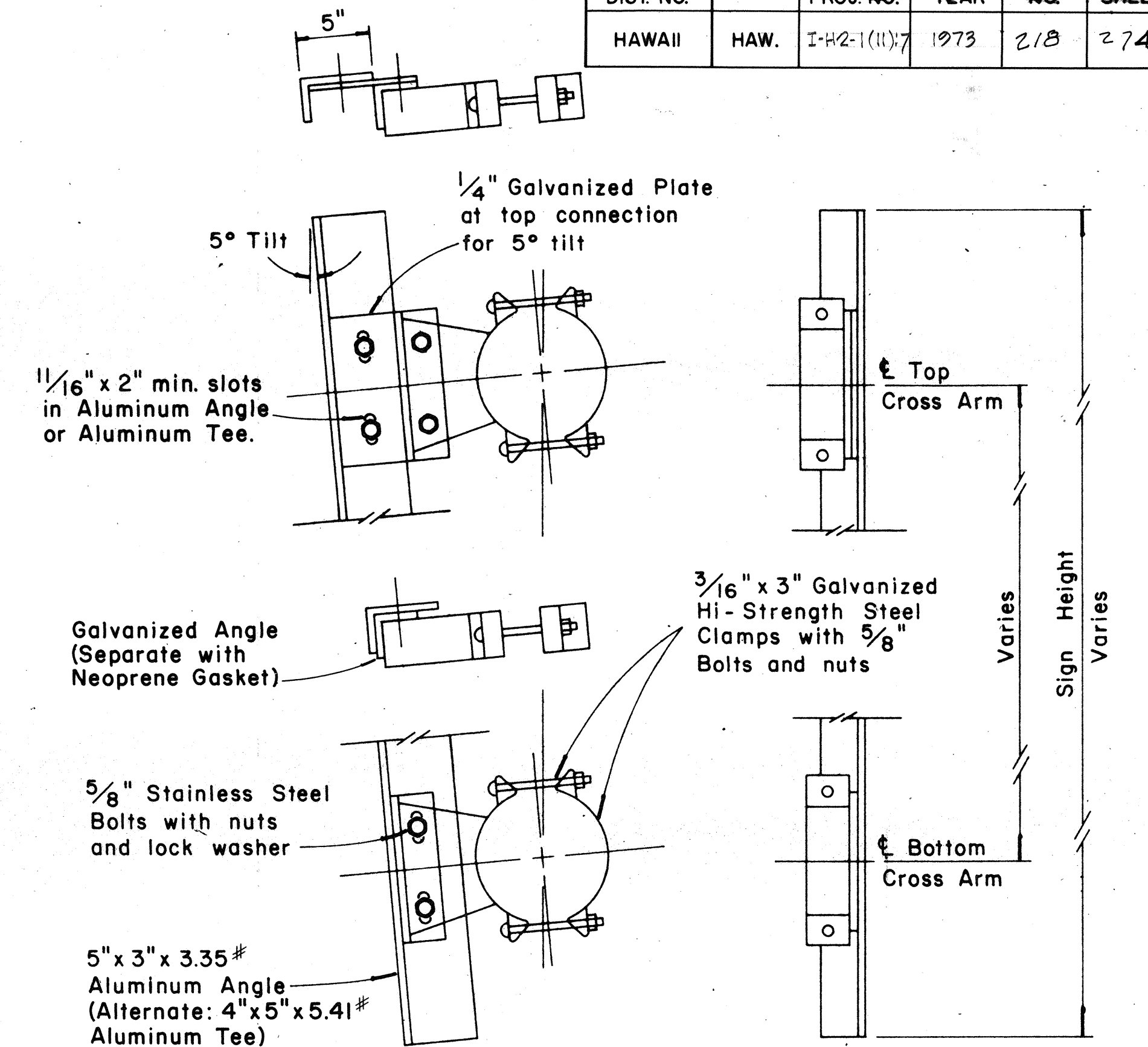
Scale: 1 1/2" = 1'-0"



TYPE "C"

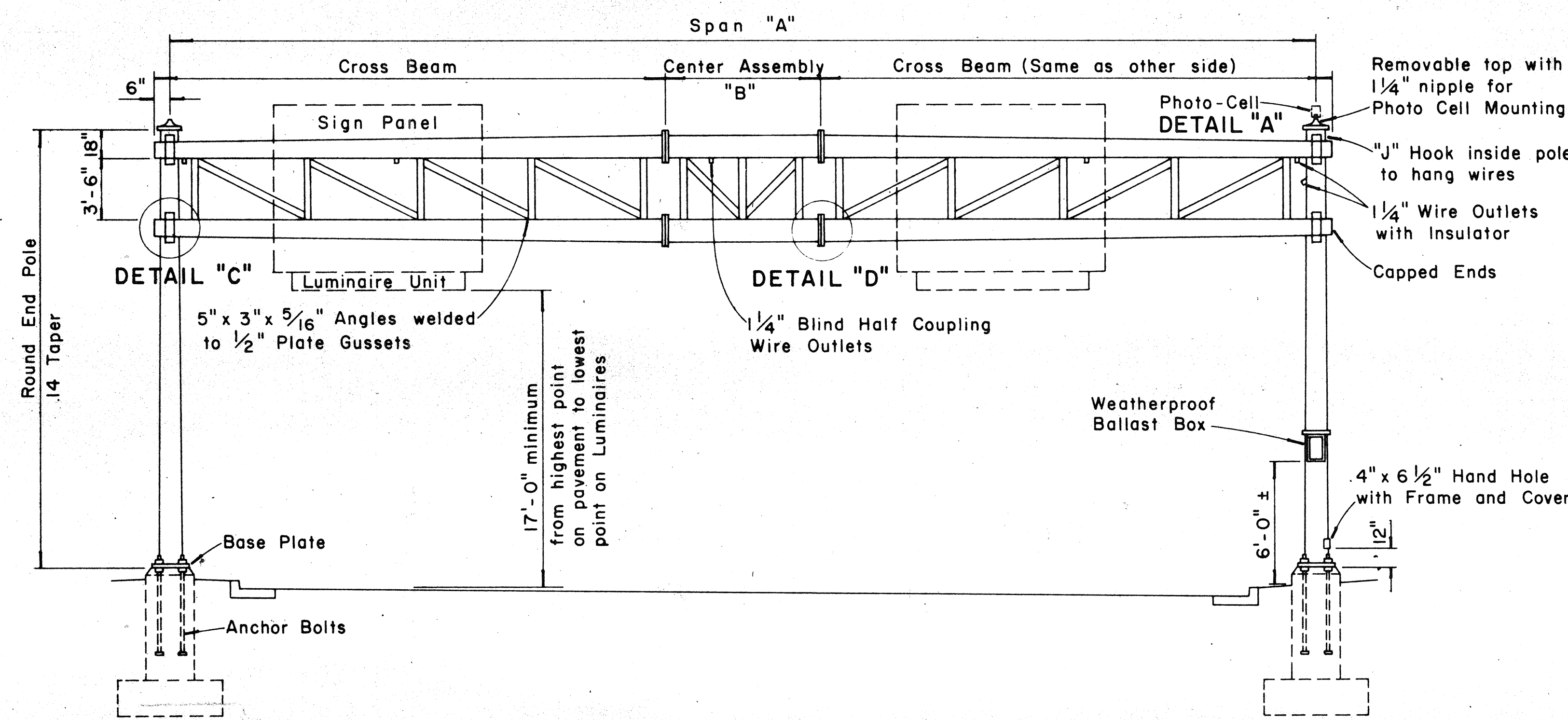
SINGLE SIGN POST — CANTILEVER TYPE

Scale: 3/16" = 1'-0"



SIGN BRACKET ASSEMBLY

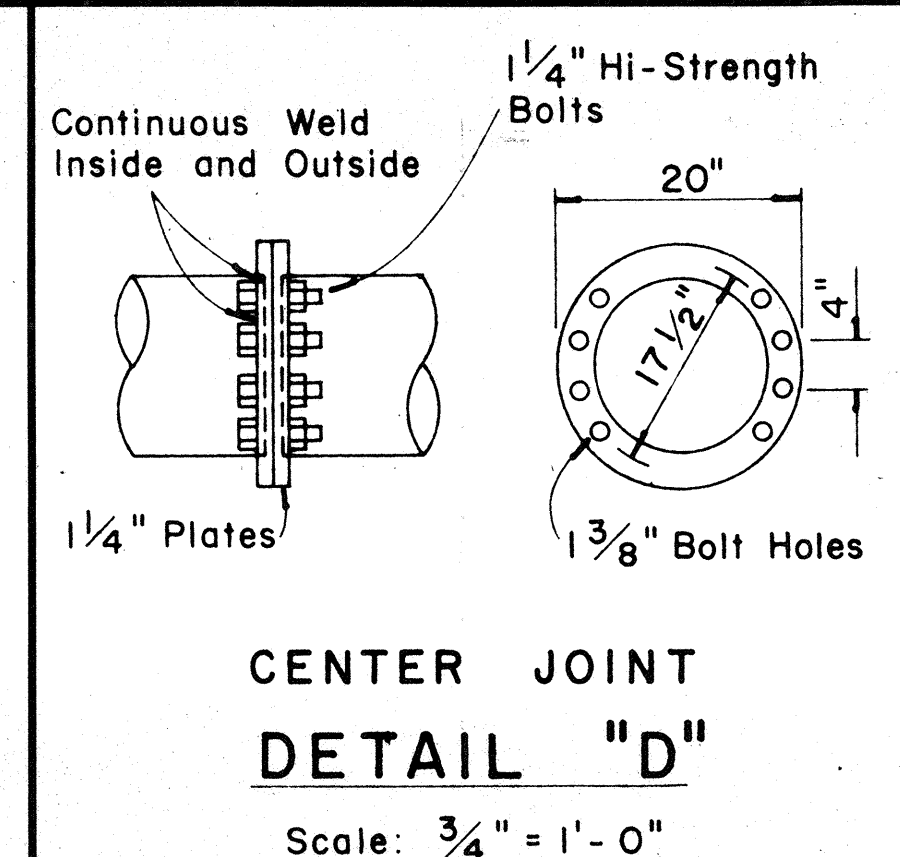
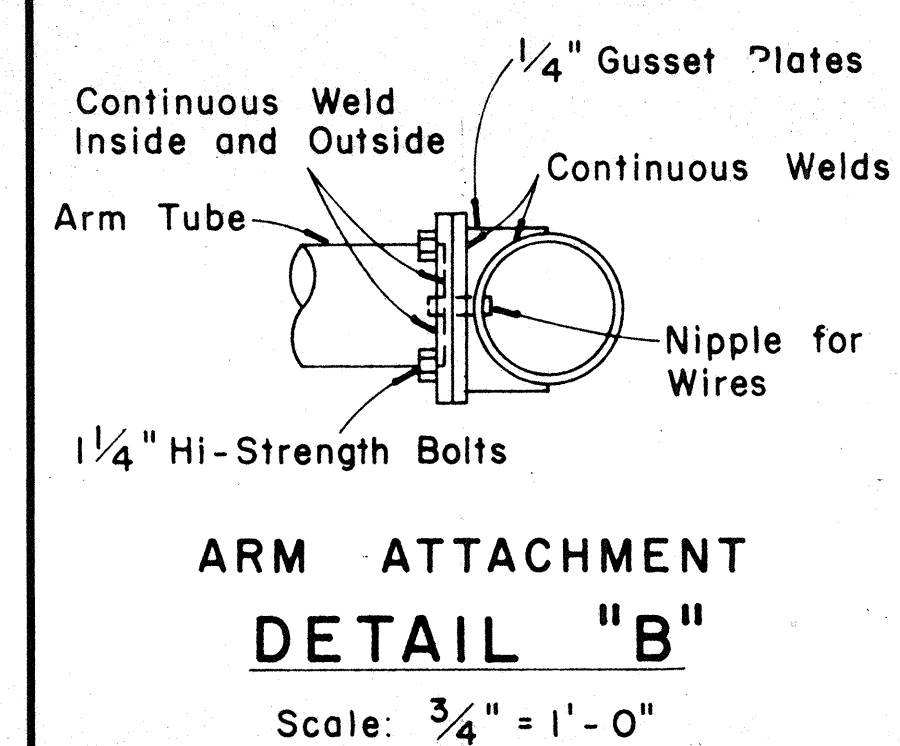
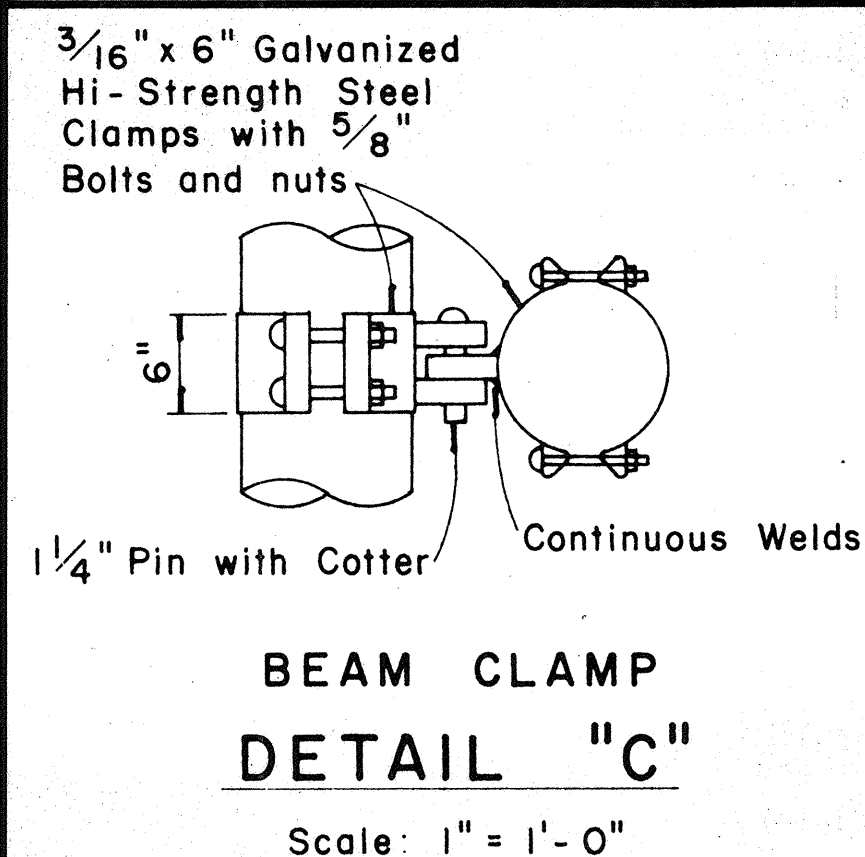
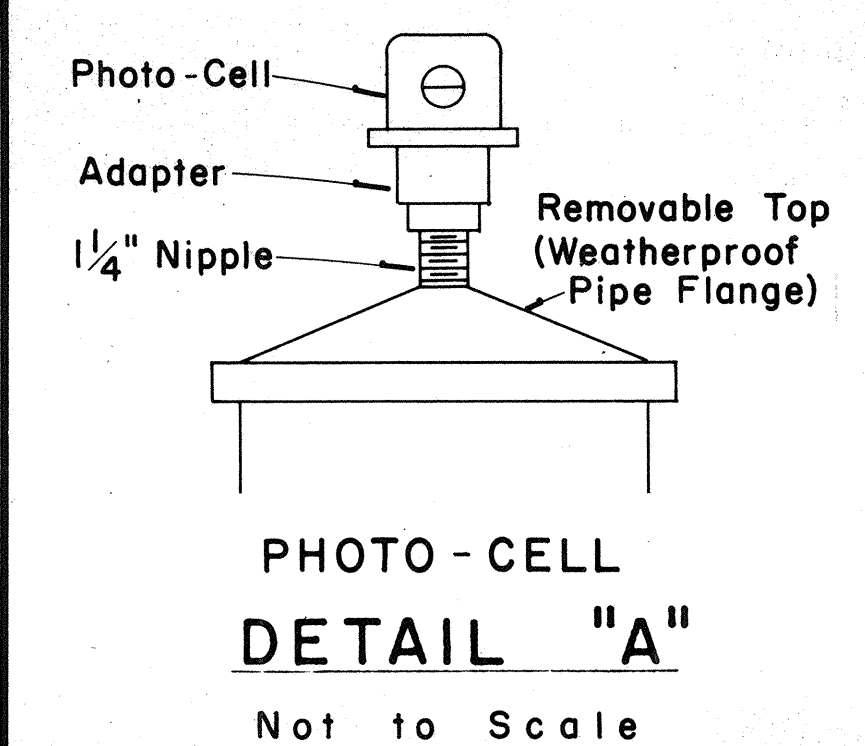
Scale: 1 1/2" = 1'-0"



TYPE "D"

TWO - TUBE TRUSS — SPAN TYPE

Scale: 3/16" = 1'-0"



APPROVAL RECOMMENDED: *Erich Tanaka* 12/29/69 DATE

TRAFFIC ENGINEER

APPROVED: *John J. Zelen* 12-30-69 DATE

ASSISTANT CHIEF, ENGINEERING

NO.	REVISION	APPROVED BY	DATE

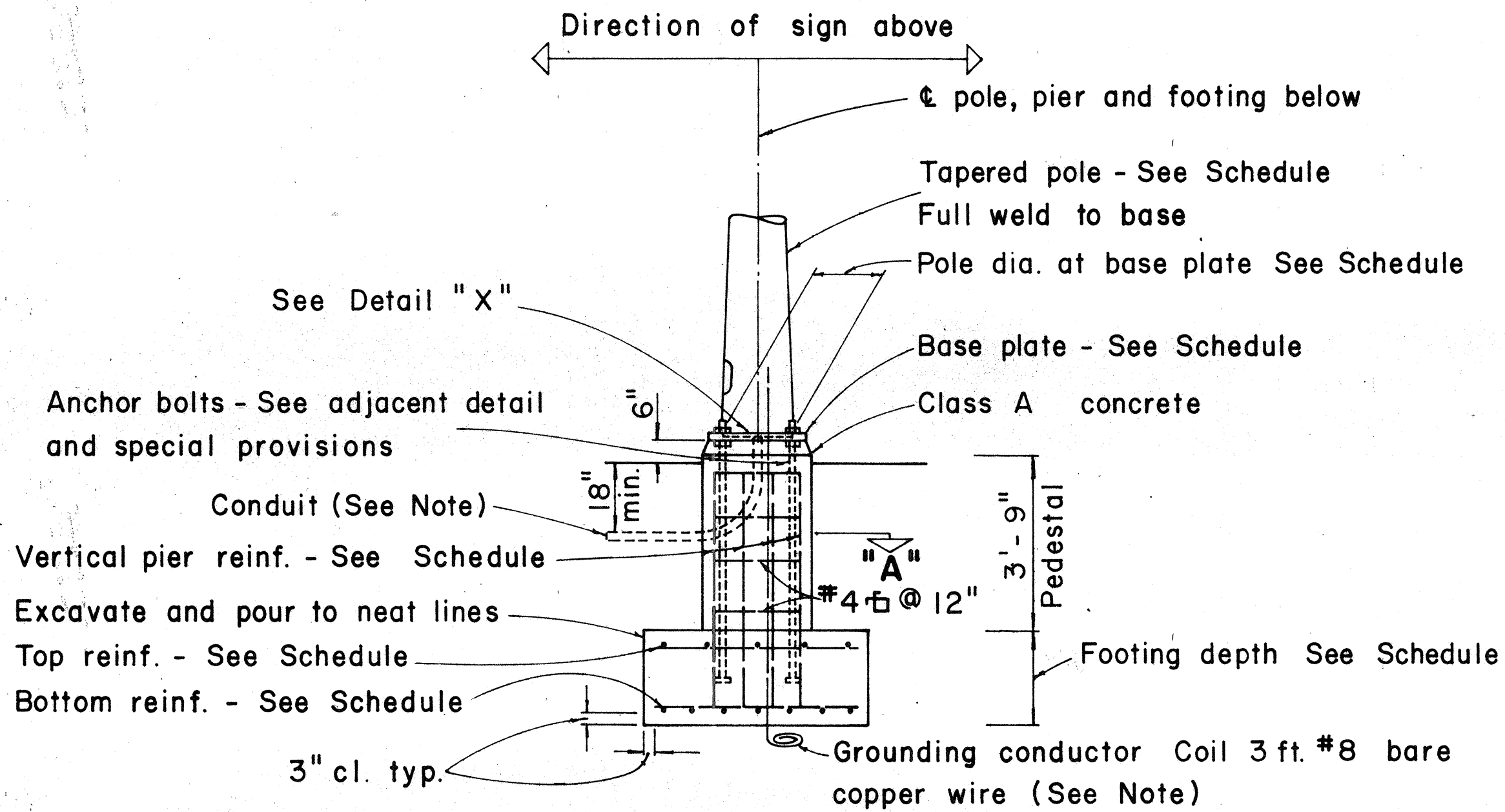
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

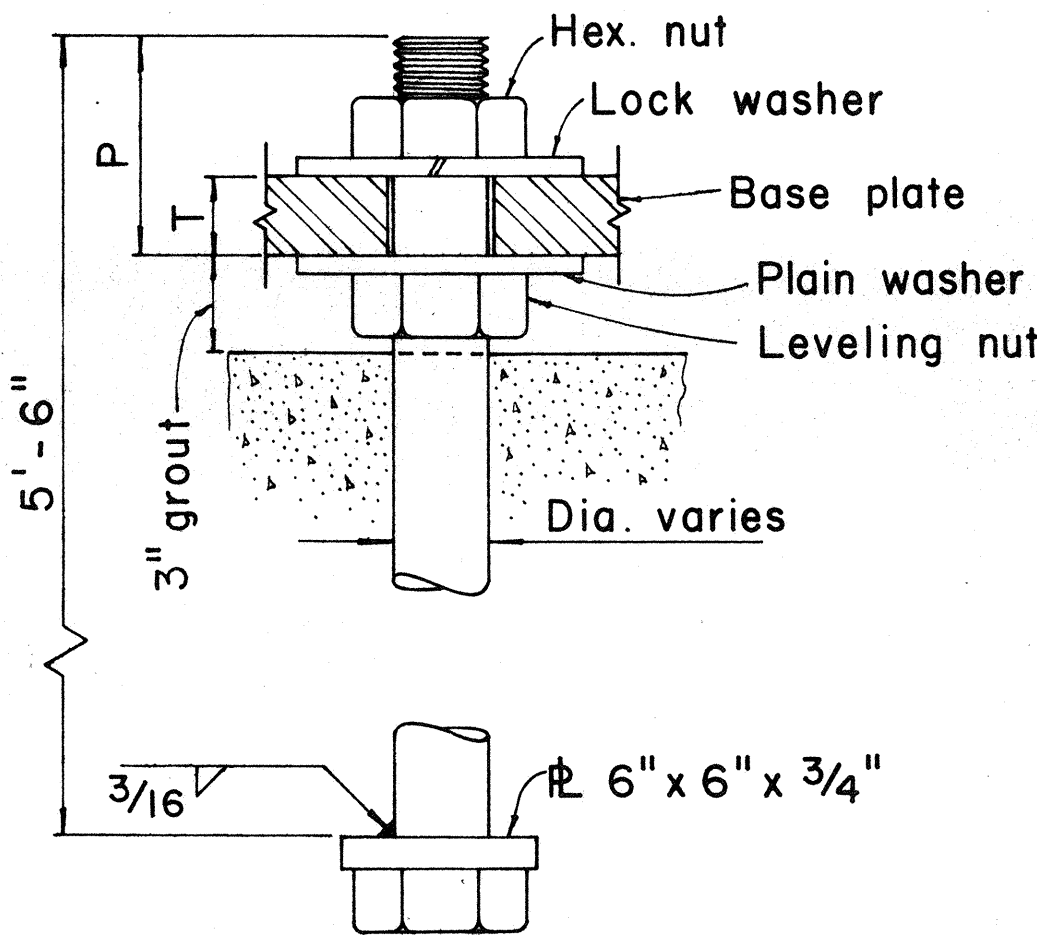
OVERHEAD SIGN SUPPORTS

Scale: As Shown

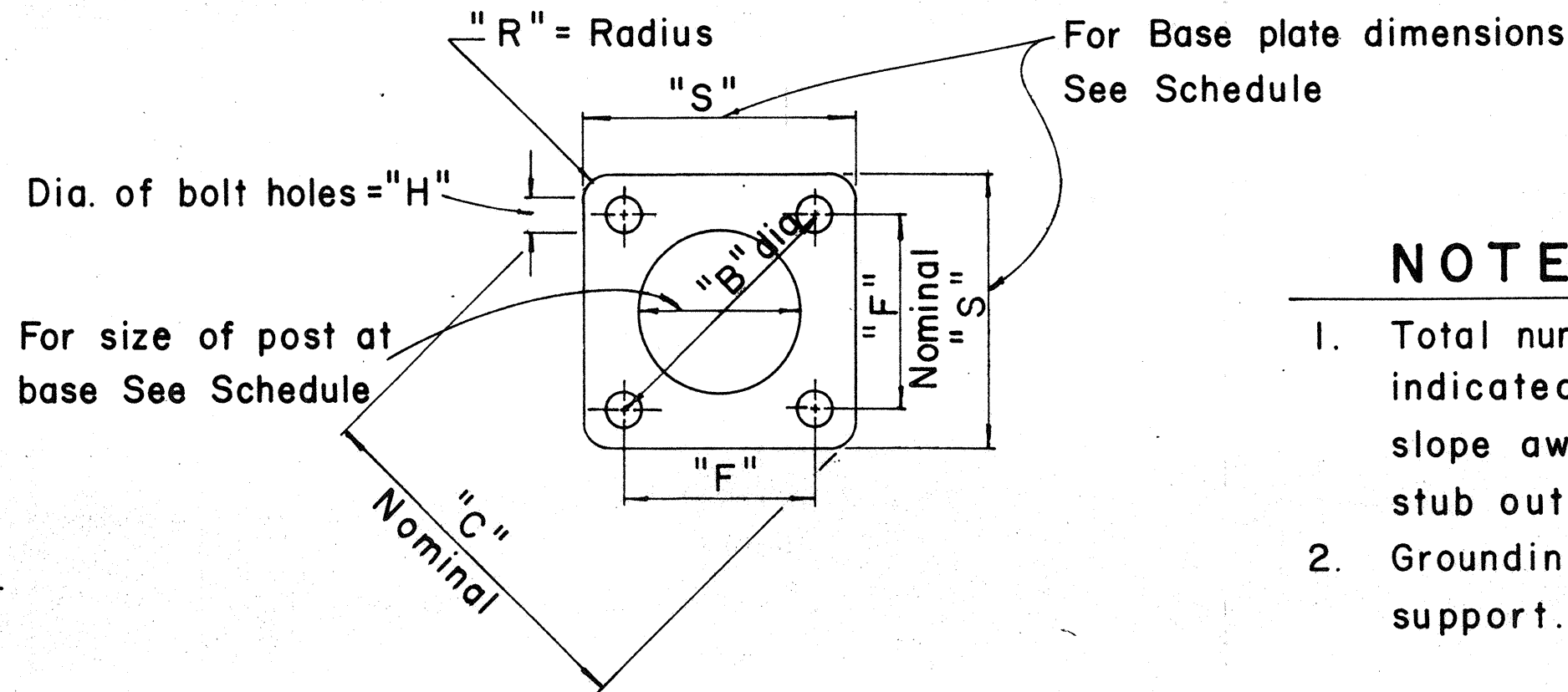
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-1 (11)	1973	219	274



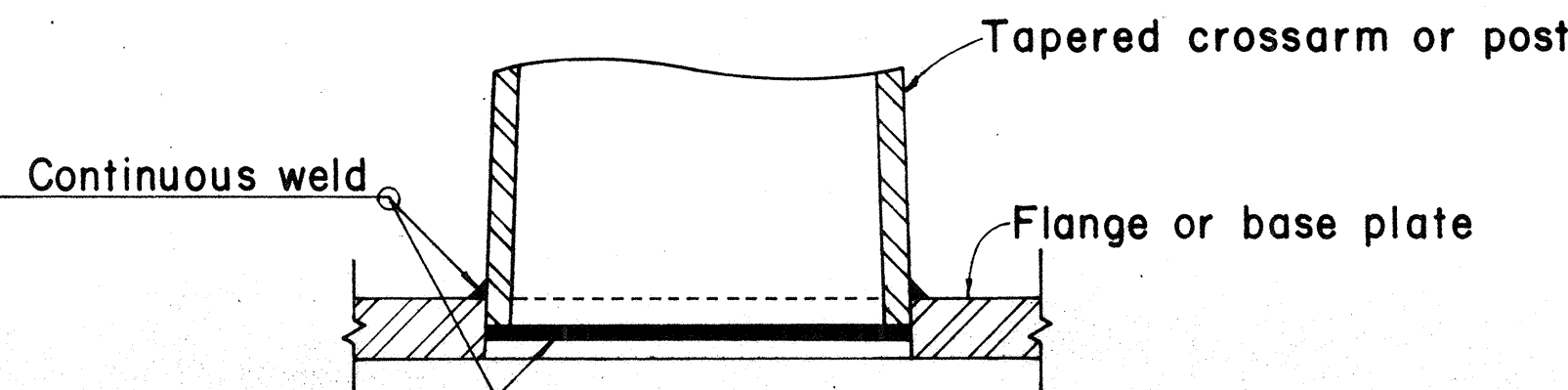
TYPICAL POLE
FOUNDATION DETAIL



TYPICAL ANCHOR BOLT
4 REQ'D

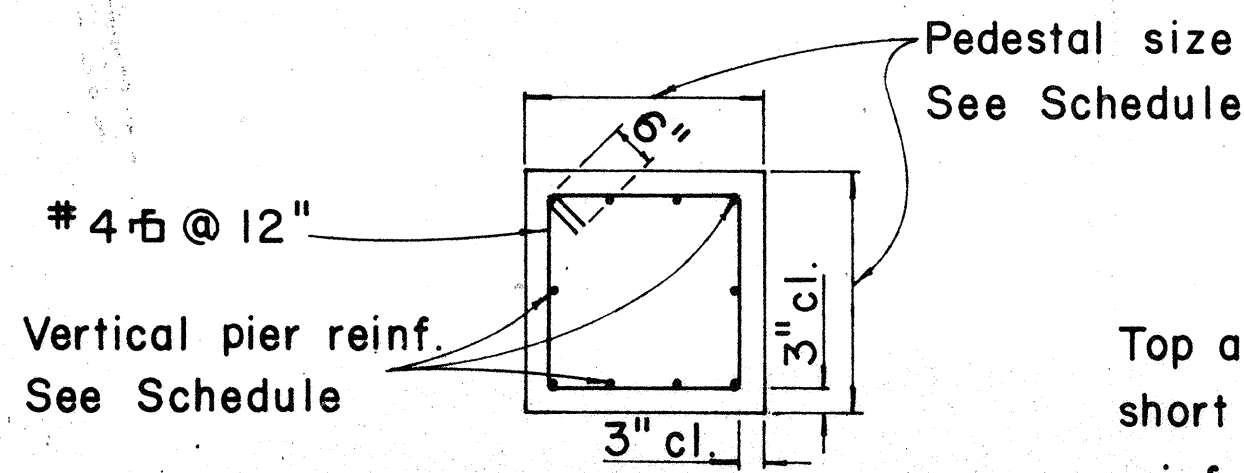


TYPICAL BASE PLATE

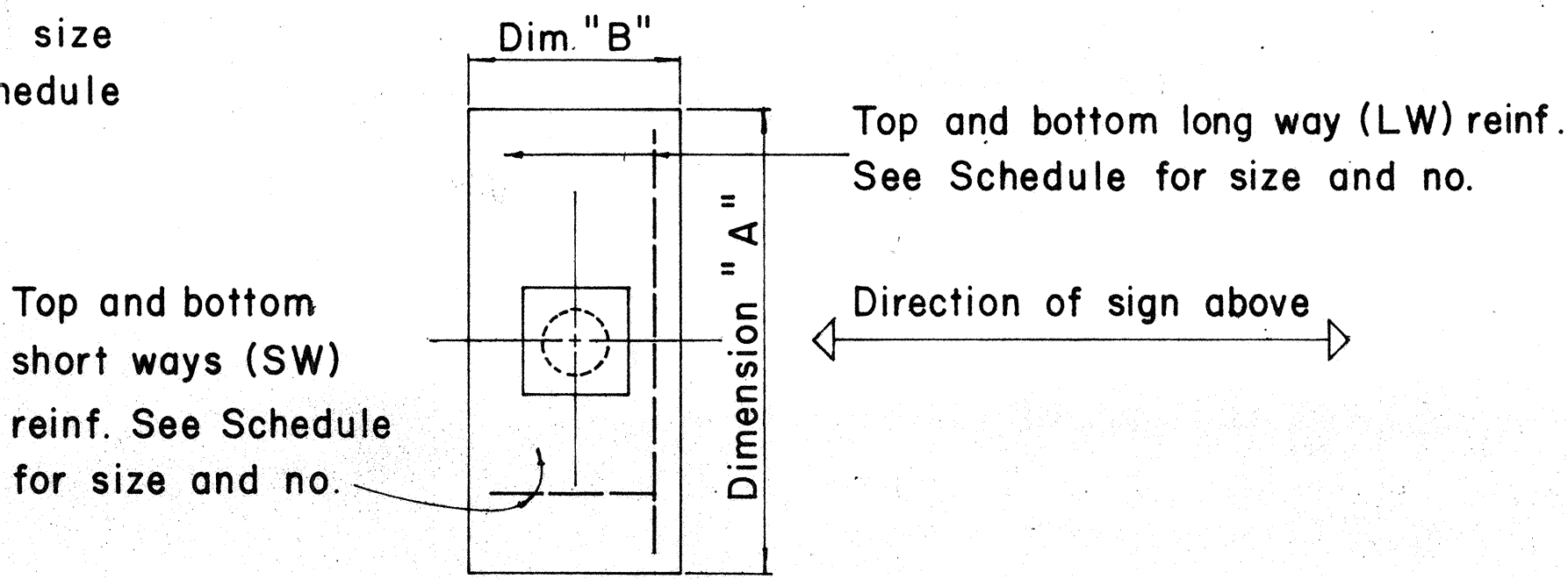


DETAIL "X"

- NOTE:**
1. Total number of conduits into pole foundation as indicated on Lighting plans. Conduits shall slope away from pole foundation. Conduit shall stub out 5'-0" min. for direct burial entry.
 2. Grounding conductor shall be bonded to sign support.



SECTION "A"



TYPICAL FOOTING DETAIL

FOUNDATION SCHEDULE									
Type	Dimension		Depth	Bot Reinf.		Top Reinf.		Pedestal	
	A	B		L. W.	S. W.	L. W.	S. W.	Size	Vert. Reinf.
I	7'-0"	3'-0"	2'-0"	3-#6	8-#4	#4 @ 12 each way		1'-11"	10-#5
II	9'-0"	4'-6"	2'-0"	6-#6	10-#4	Do.		2'-6"	10-#7
III	10'-0"	5'-0"	2'-0"	5-#8	11-#4	Do.		2'-6"	10-#8
IV	12'-0"	6'-0"	2'-0"	7-#9	13-#4	Do.		2'-9"	10-#10
V	14'-0"	7'-0"	2'-0"	8-#11	19-#4	Do.		2'-9"	10-#11

APPROVAL RECOMMENDED:
Eiichi Tanaka 12/29/69
 TRAFFIC ENGINEER DATE

APPROVED:
[Signature] 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Foundation Schedule	R.C.	8/14/70

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAILS & SCHEDULES

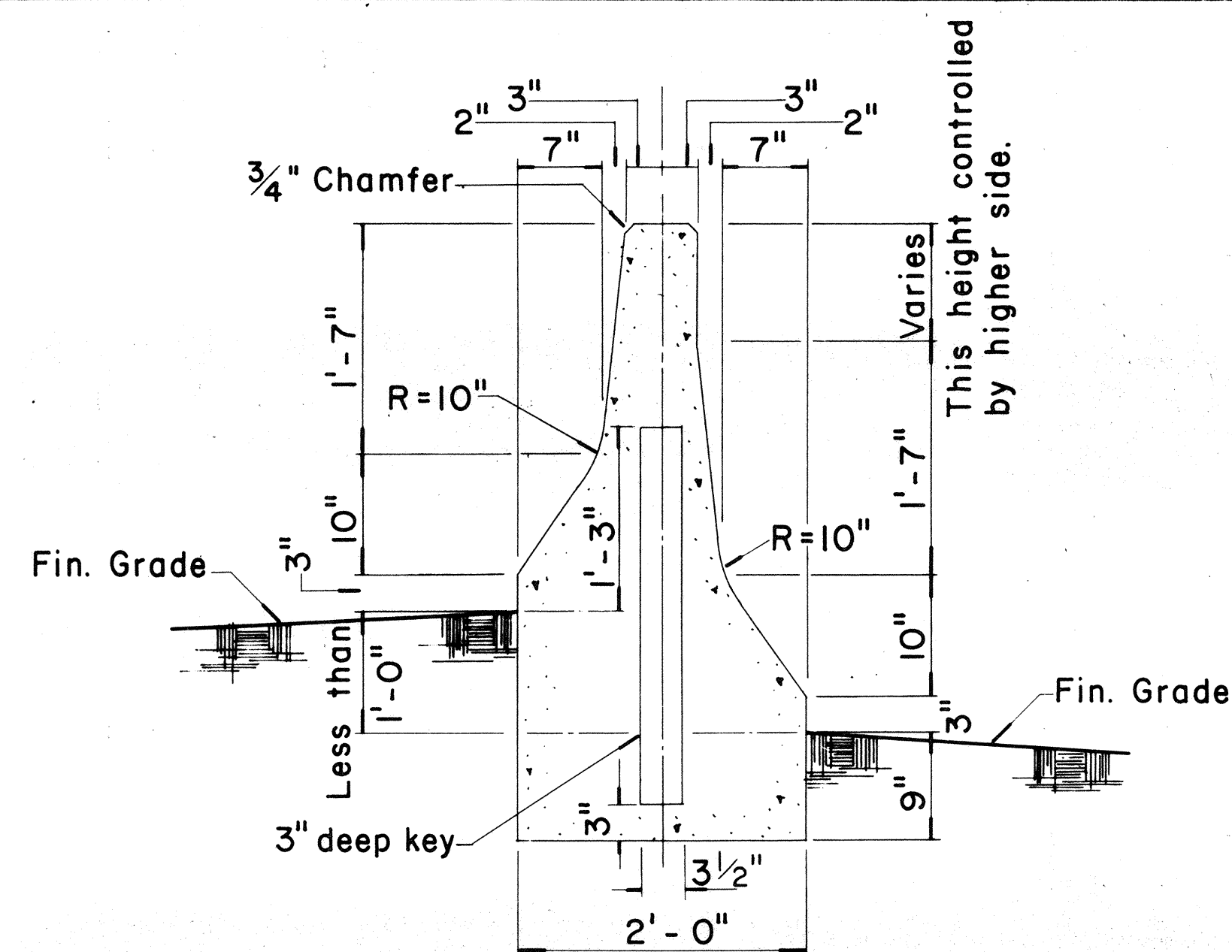
NOT TO SCALE
SHEET No. 59 OF 10 SHEETS DT 202

DATE	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

Technical drawing of a bridge pier cross-section. The drawing shows a central pier with a central opening. Key dimensions and features include:

- Overall Width:** 2' - 0"
- Overall Height:** 2' - 7"
- Central Opening Width:** 3"
- Central Opening Height:** 1' - 9"
- Side Wall Thickness:** 2"
- Top Flange Thickness:** 3"
- Chamfer:** 3/4" Chamfer
- Radius:** R = 10"
- Key:** 3" deep key
- Fin. Grade:** Finished grade lines on both sides.
- Barrier:** A barrier is shown at the top of the pier.
- Other Dimensions:** 9", 3", 10", 7", 3 1/2", 2' - 0"

Scale: 1" = 1'-0"



Scale: 1" = 1'-0"

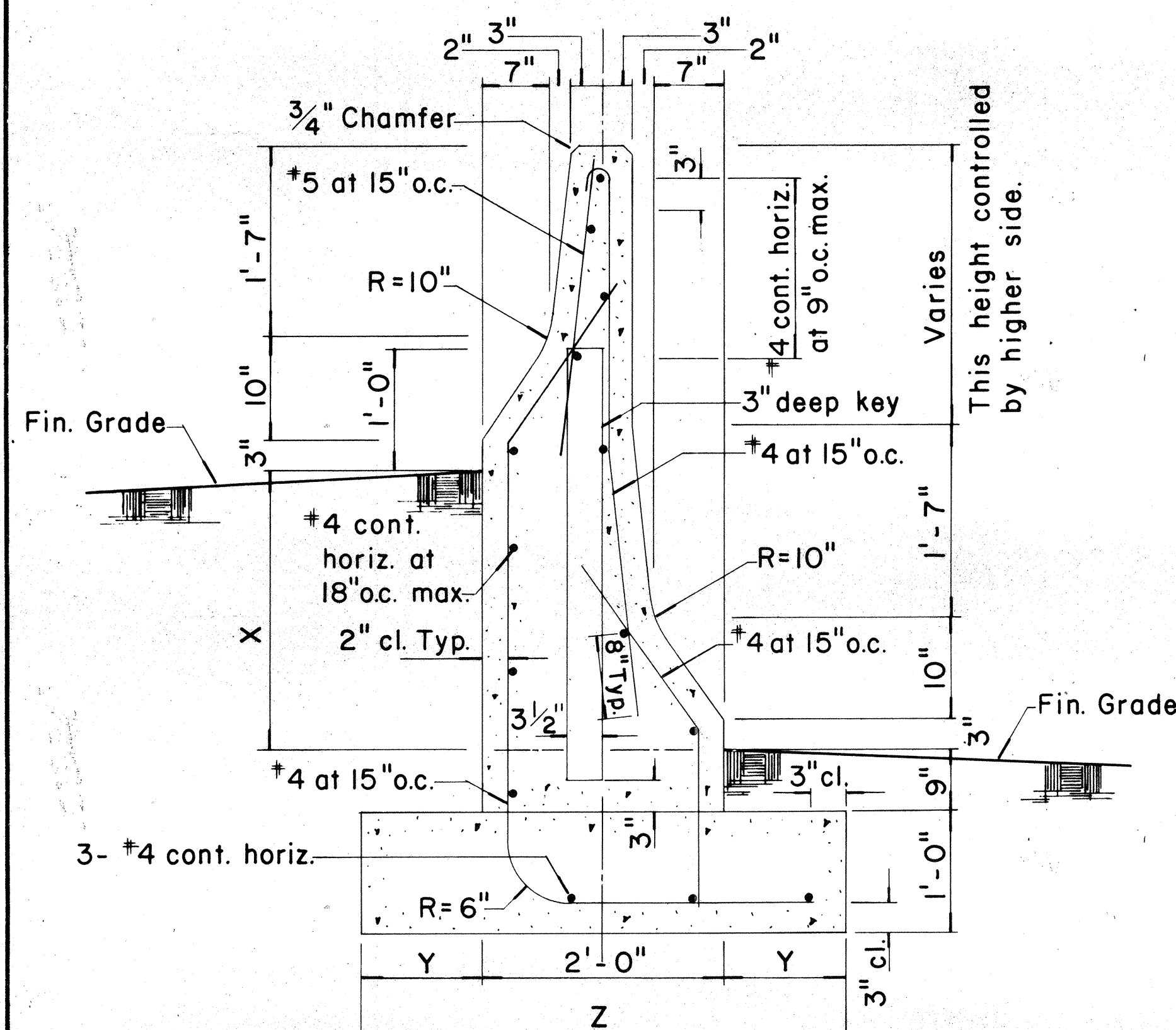


Scale: $\frac{1}{2}" = 1' - 0"$

Diagram illustrating the dimensions and materials for a T-joint:

- Vertical member width: $\frac{1}{2}$ "
- Horizontal member total width: 4"
- Horizontal member height: 5"
- Joint filler: $\frac{1}{2}$ " Premolded Joint Filler
- Horizontal member base width: 3"
- Horizontal member top width: $\frac{1}{2}$ "
- Label: Varies

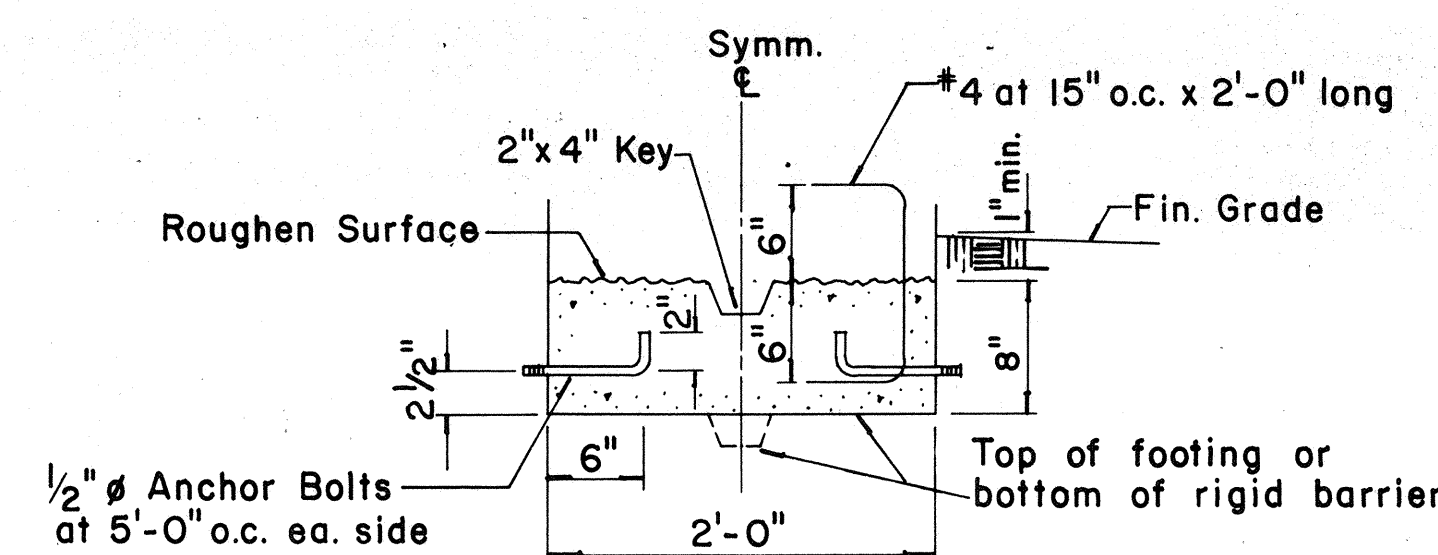
Scale: $1\frac{1}{2}" = 1' - 0"$



Scale: 1" = 1' - 0"

NOTE:

Except where noted all dimensions shall be the same for Type 4C and Type 4D.



Scale: 1" = 1'-0"

The intent of the optional construction joint details for the Type 4 Rigid Barrier Guard Rail is to provide a method of securing the forms and preventing uplift so that the barrier will have a uniform and presentable appearance.

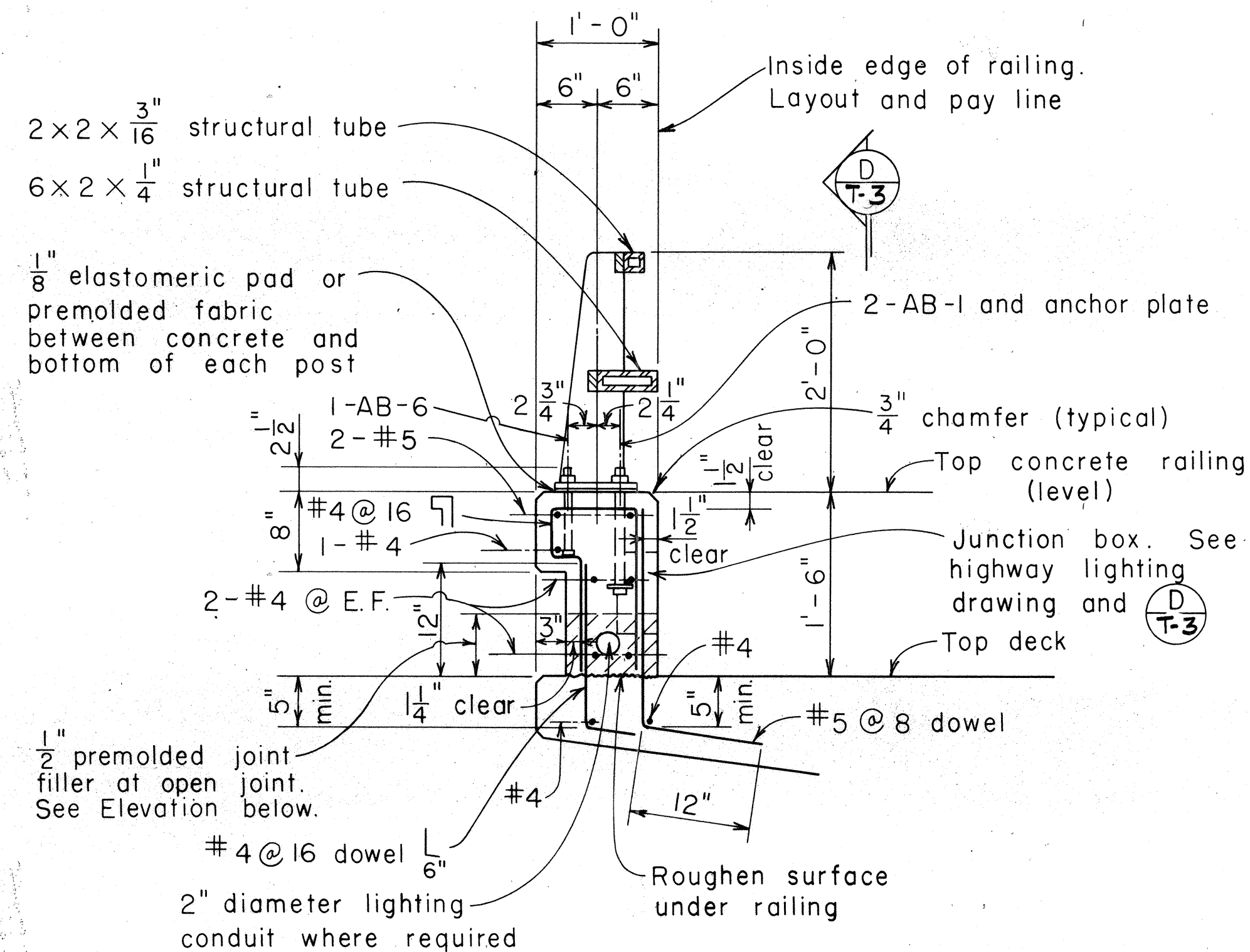
The contractor may submit an alternate method of constructing the barrier for the approval of the Engineer and for use on a trial basis. Any unsatisfactory work shall be removed or corrected as directed by the Engineer and at the Contractor's expense.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

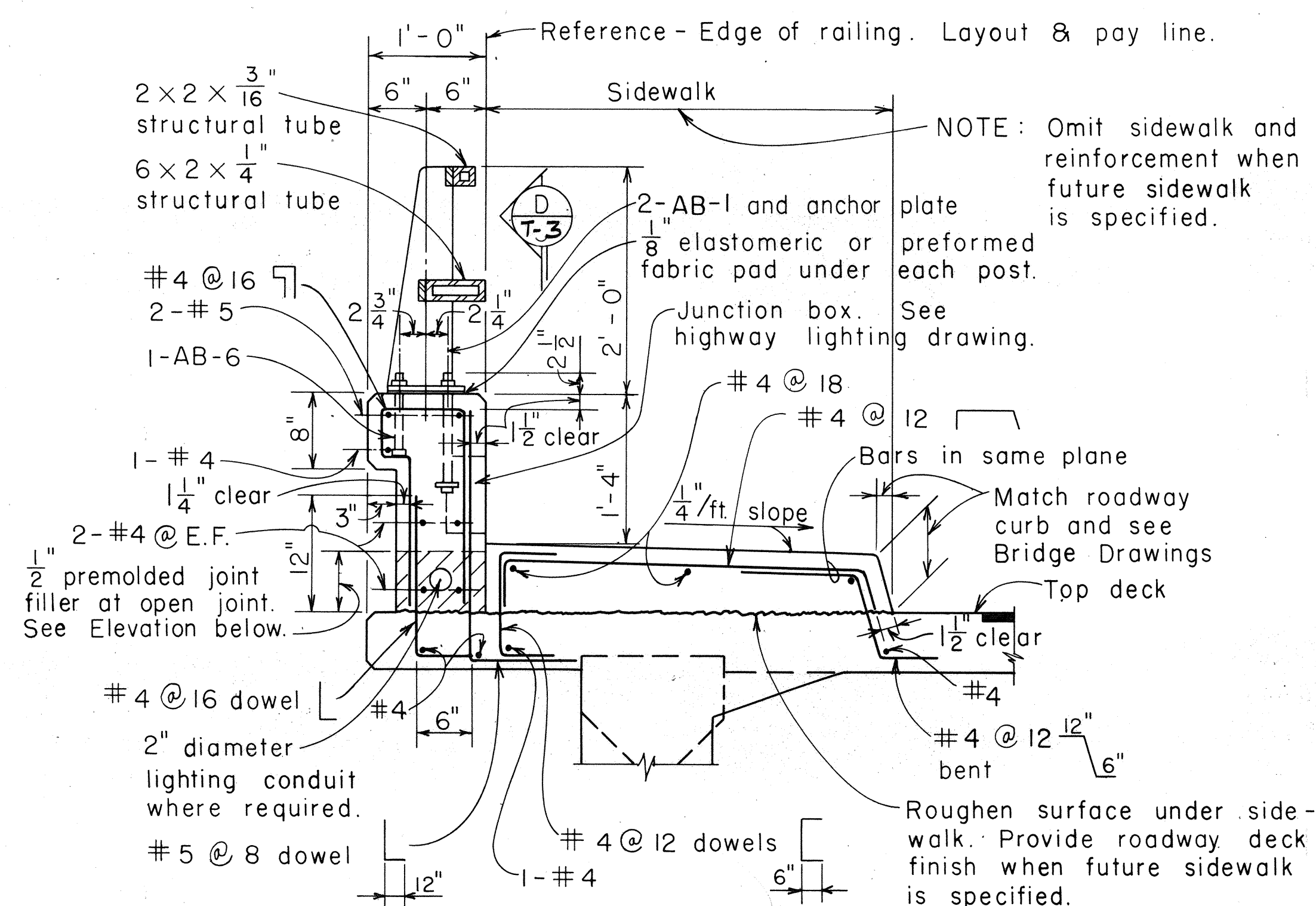
Scale: As Shown

SHEET No. <i>S-100F 10</i> SHEETS		DT 521
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-12-1(11)	1973	221	274



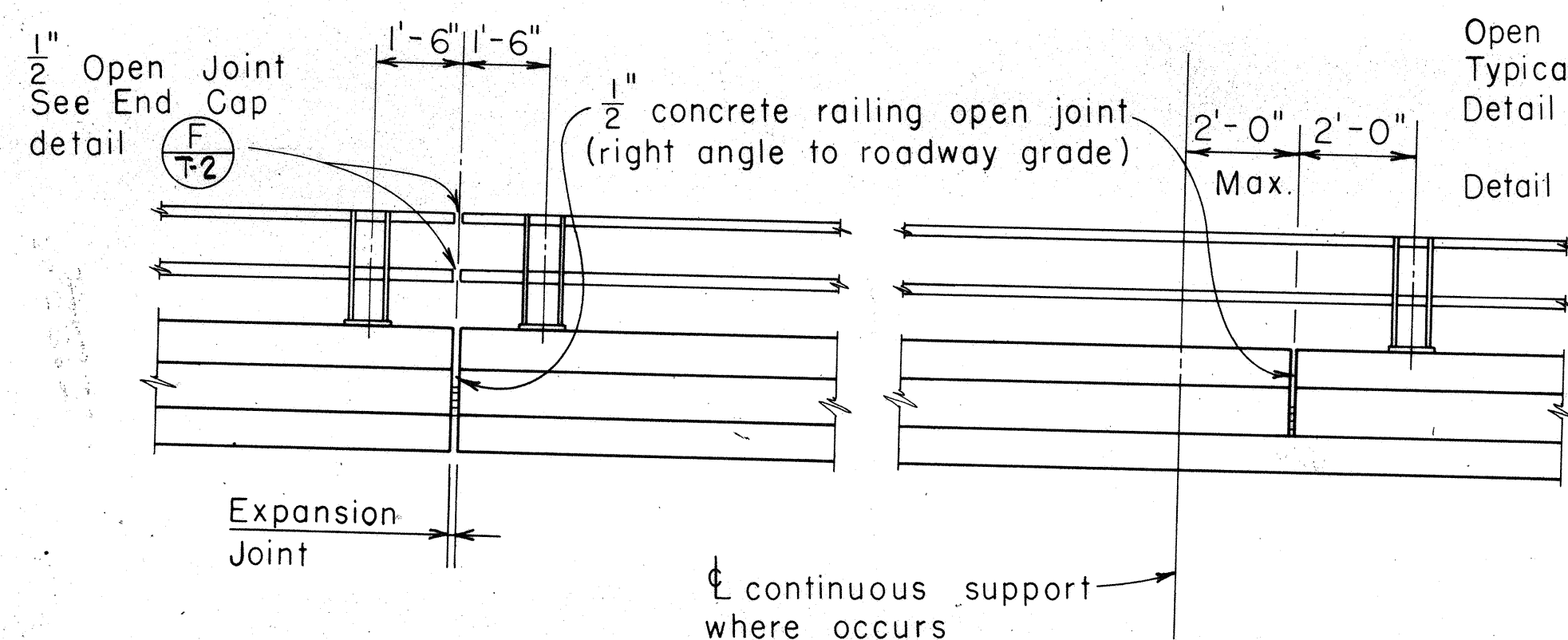
WITHOUT SIDEWALK



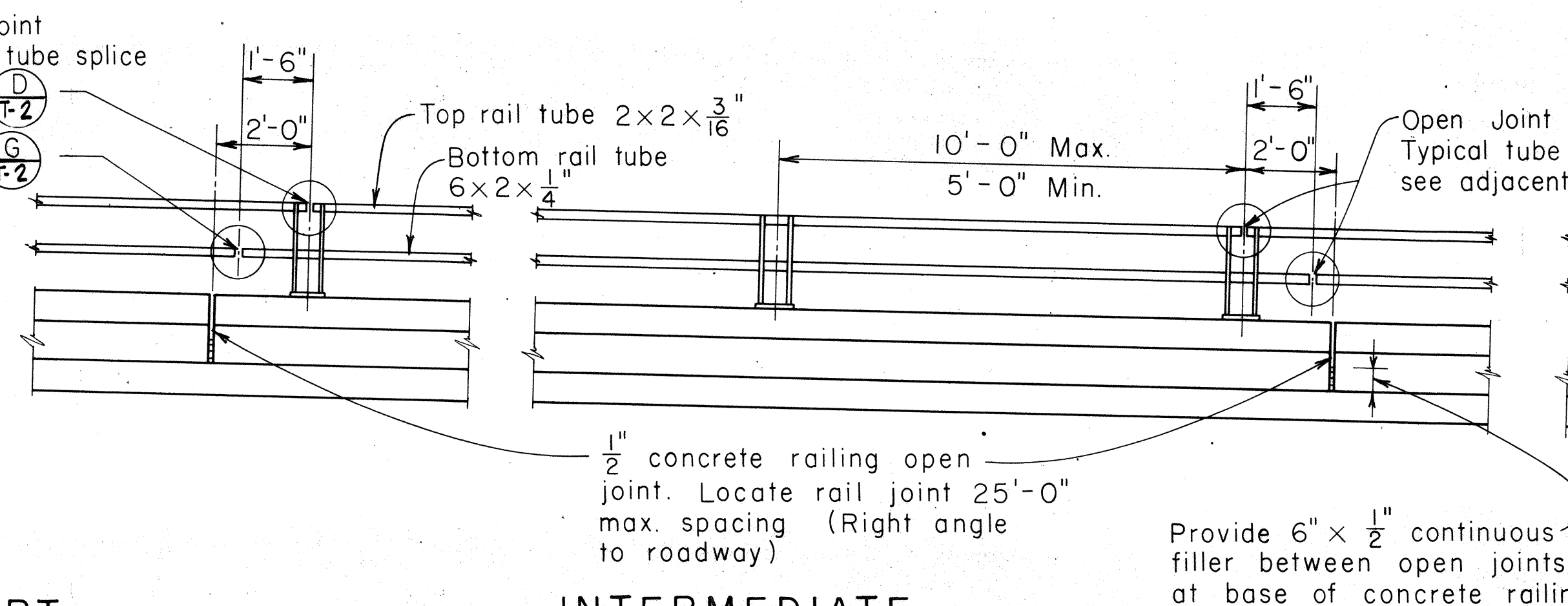
WITH SIDEWALK OR FUTURE SIDEWALK

TYPICAL SECTION

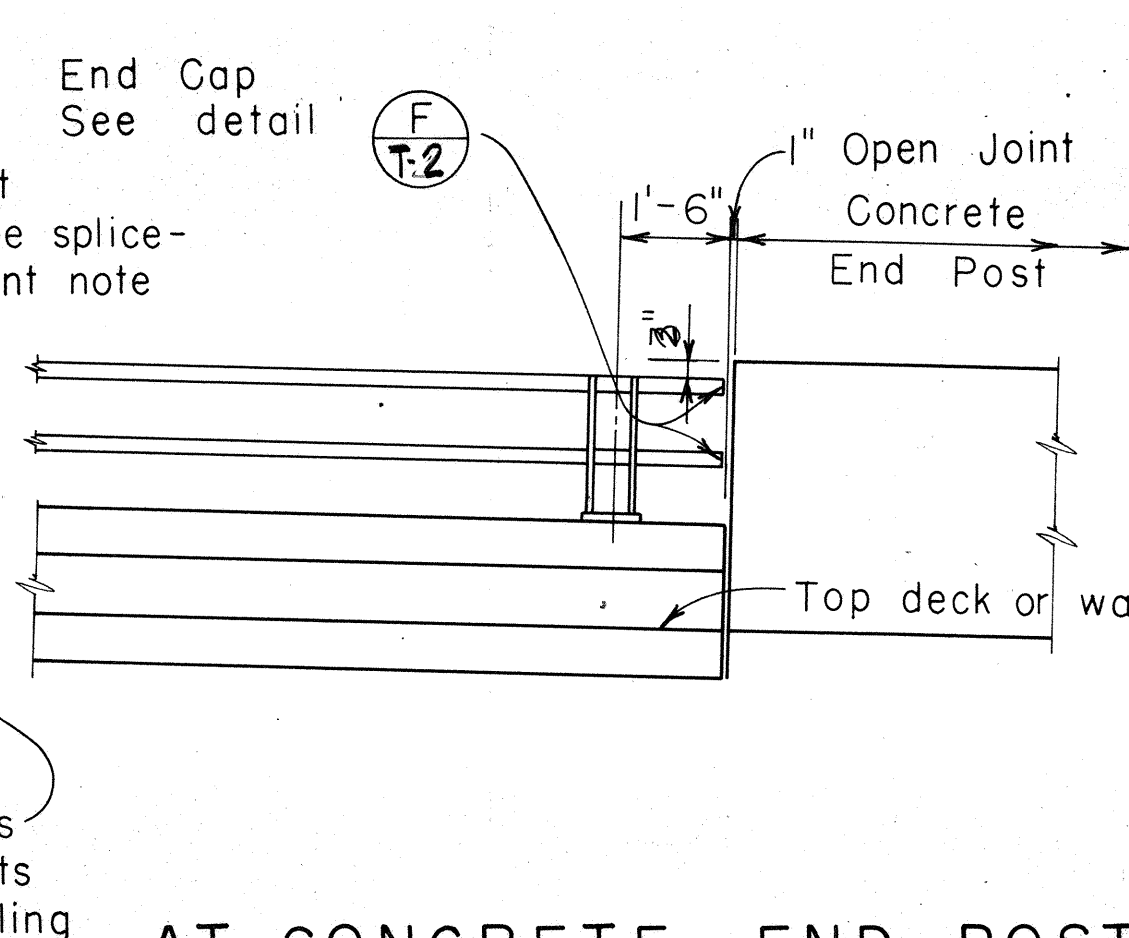
Scale: 1" = 1'-0"



AT EXPANSION JOINT

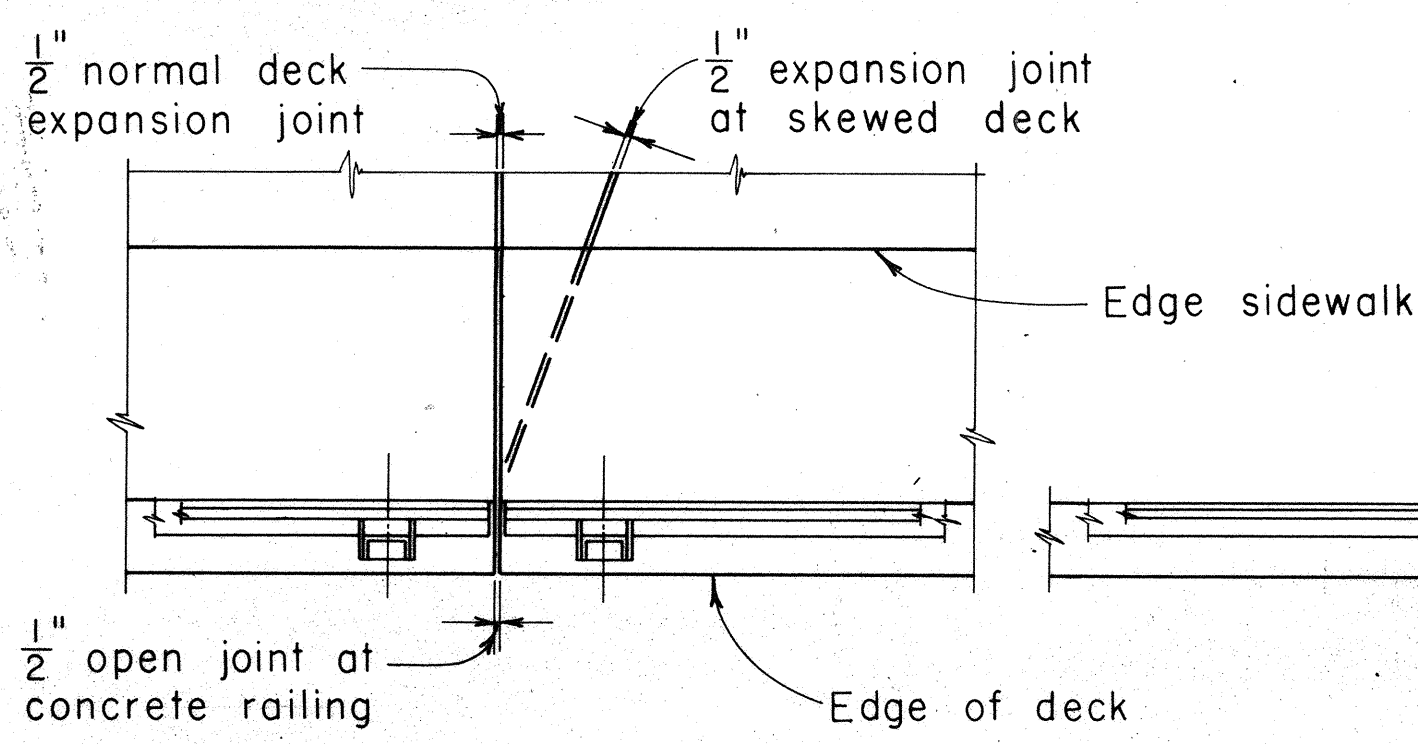


AT CONTINUOUS SUPPORT

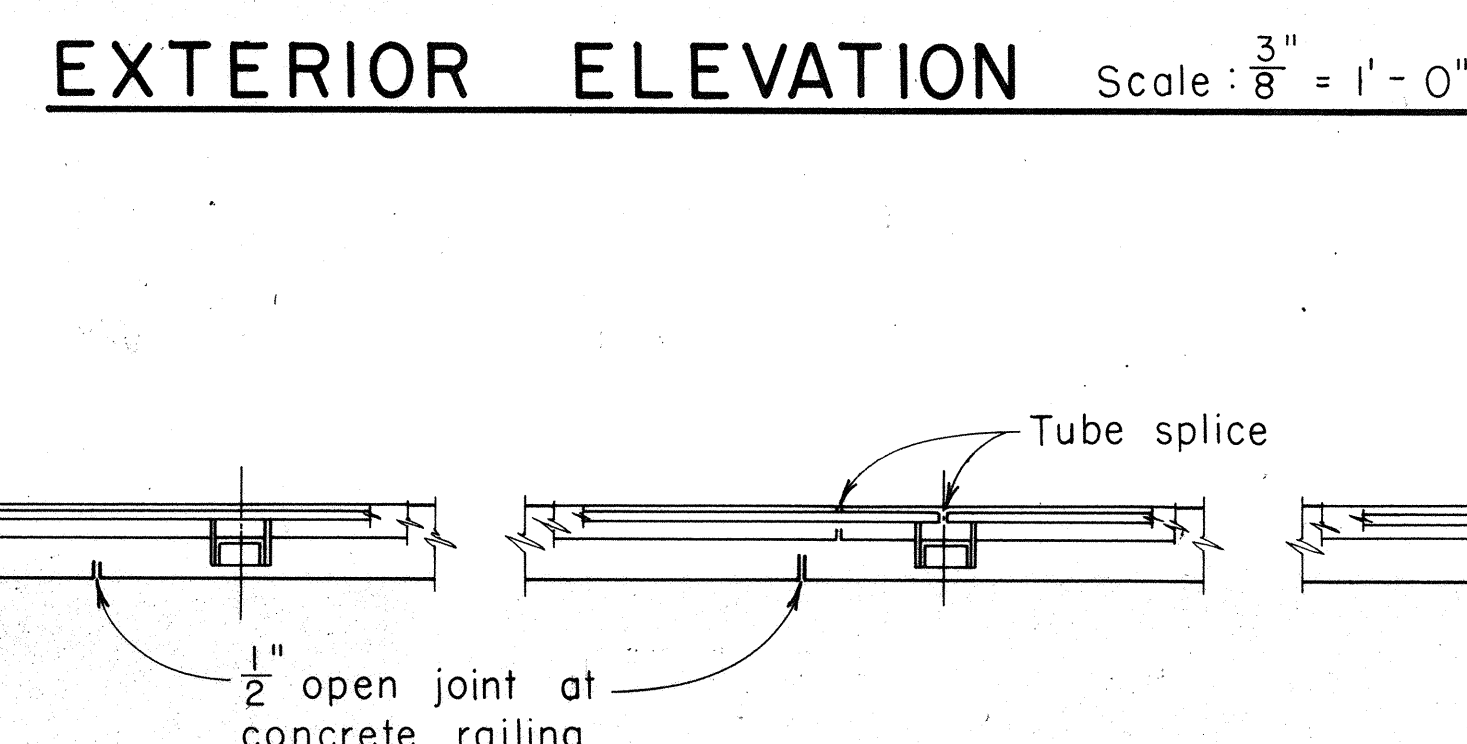


INTERMEDIATE

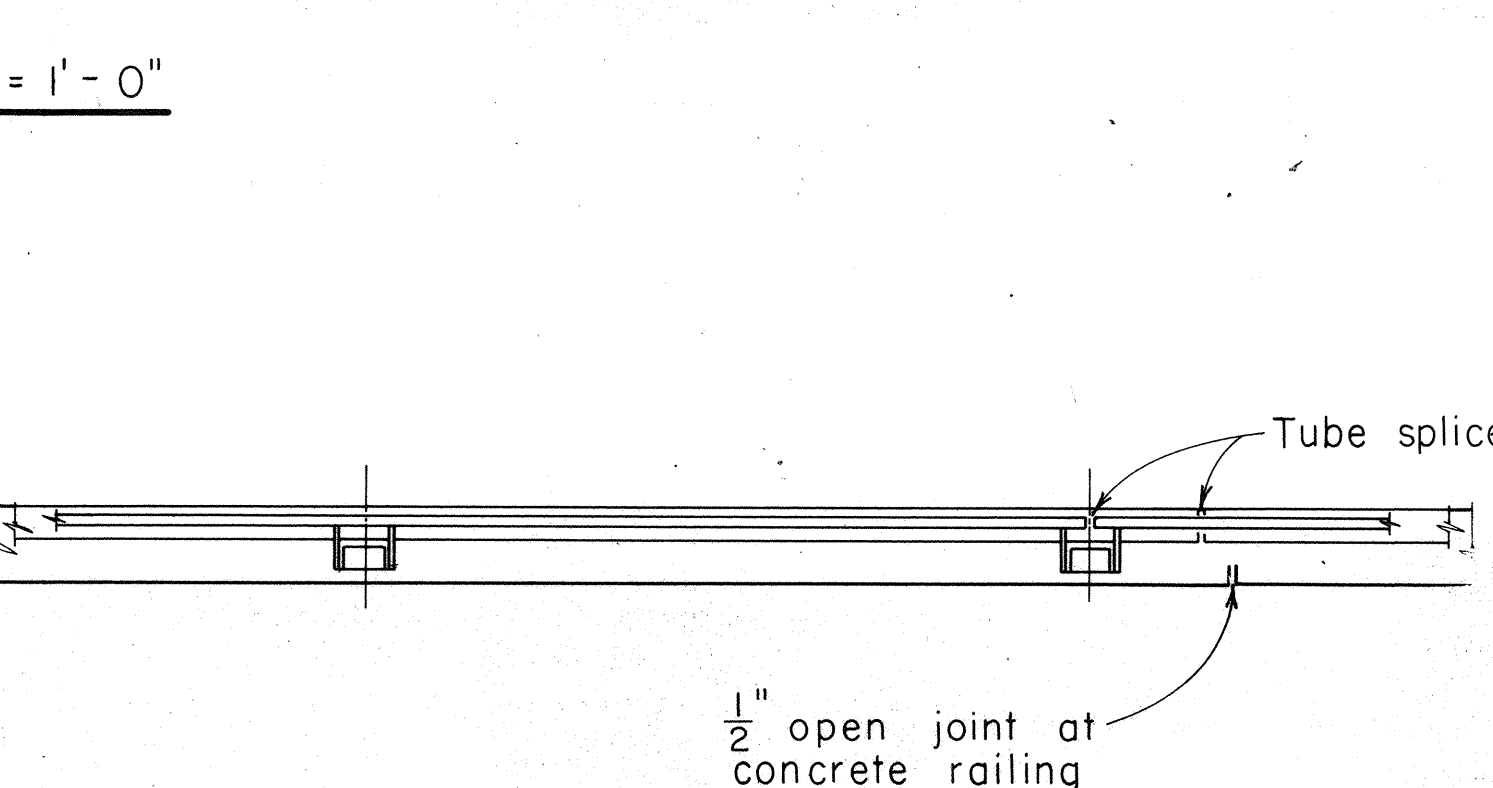
AT CONCRETE END POST



AT EXPANSION JOINT



AT CONTINUOUS SUPPORT



INTERMEDIATE

AT EXPANSION JOINT

AT CONTINUOUS SUPPORT

PLAN

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

NOTES

- Tubing shall be shop bent to fit horizontal curve when radius is less than 950 ft.
- Post shall be normal to grade.
- Concrete railing and metal rail joints shall be located at all deck joints.
- Tubing shall be continuous over not less than 3 posts except as noted on plans.
- All exposed corner of metal railing shall be ground smooth.
- Rail assemblage shall be galvanized after fabrication.
- All anchor bolts, bolts, nuts and washers shall be galvanized.
- Welding shall meet the requirement of Section 501 of the Standard Specifications.

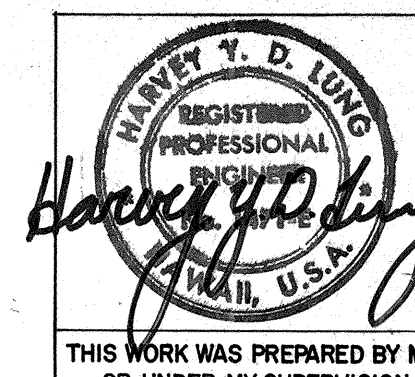
Material shall conform to the following requirements:

1. Tubular steel rails ASTM A500 Grade B
2. Steel posts ASTM A36.
3. Sleeves for tubular rails ASTM A36.
4. Stud bolts ASTM A108 Grades 1015 to 1020.
5. Anchor bolts, bolts, nuts and washers ASTM A325.
6. Shims commercial quality galvanized steel.
7. Sleeve bolts and nuts ASTM A108 Grades 1015 to 1020.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
STEEL BRIDGE RAILING (TUBULAR)
TWO RAIL COMBINATION TYPE
ON PARAPET

NAHANA INTERCHANGE
F.A.I. PROJECT No. I-12-1(11):7
Scale: As Noted

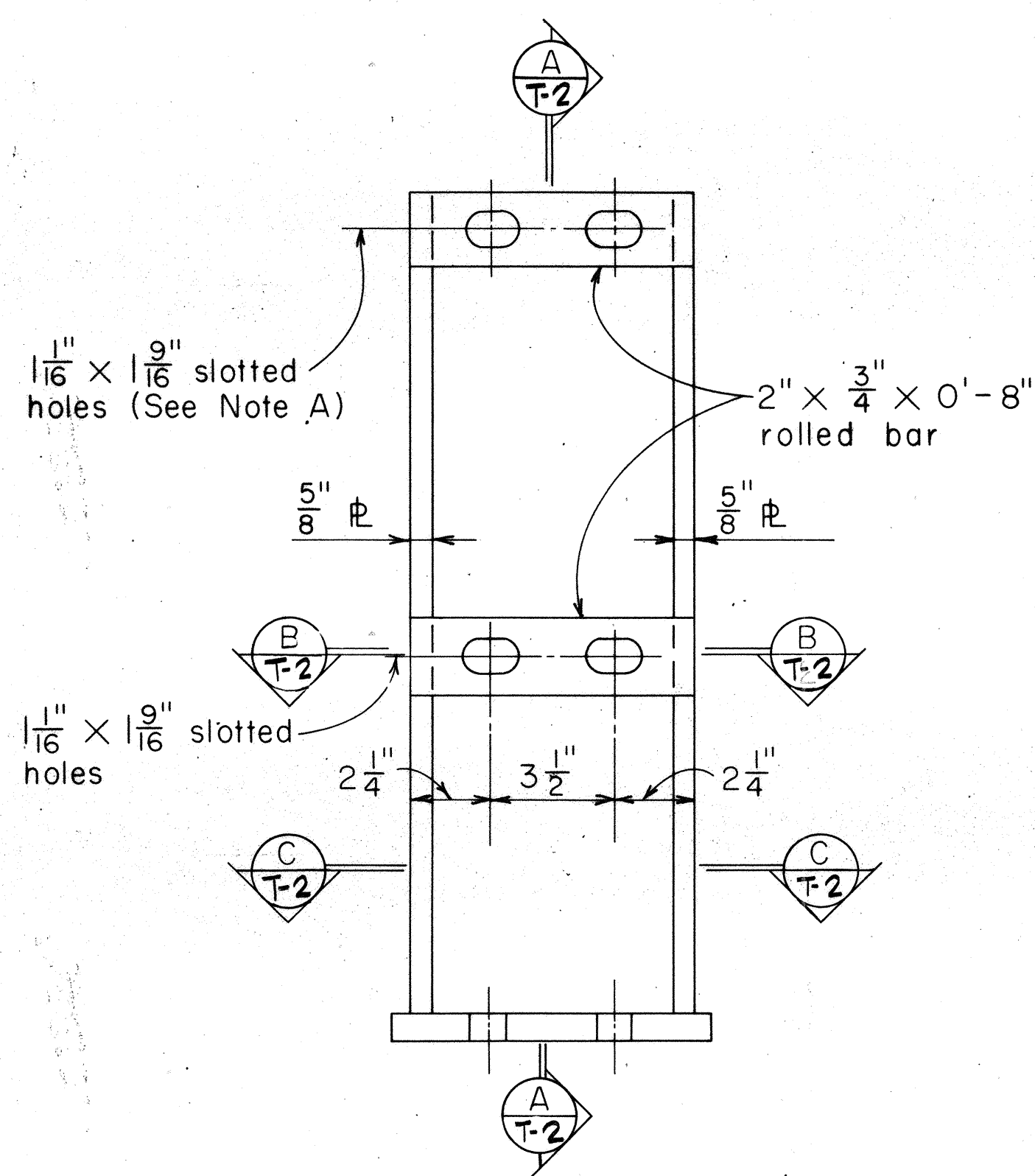


AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

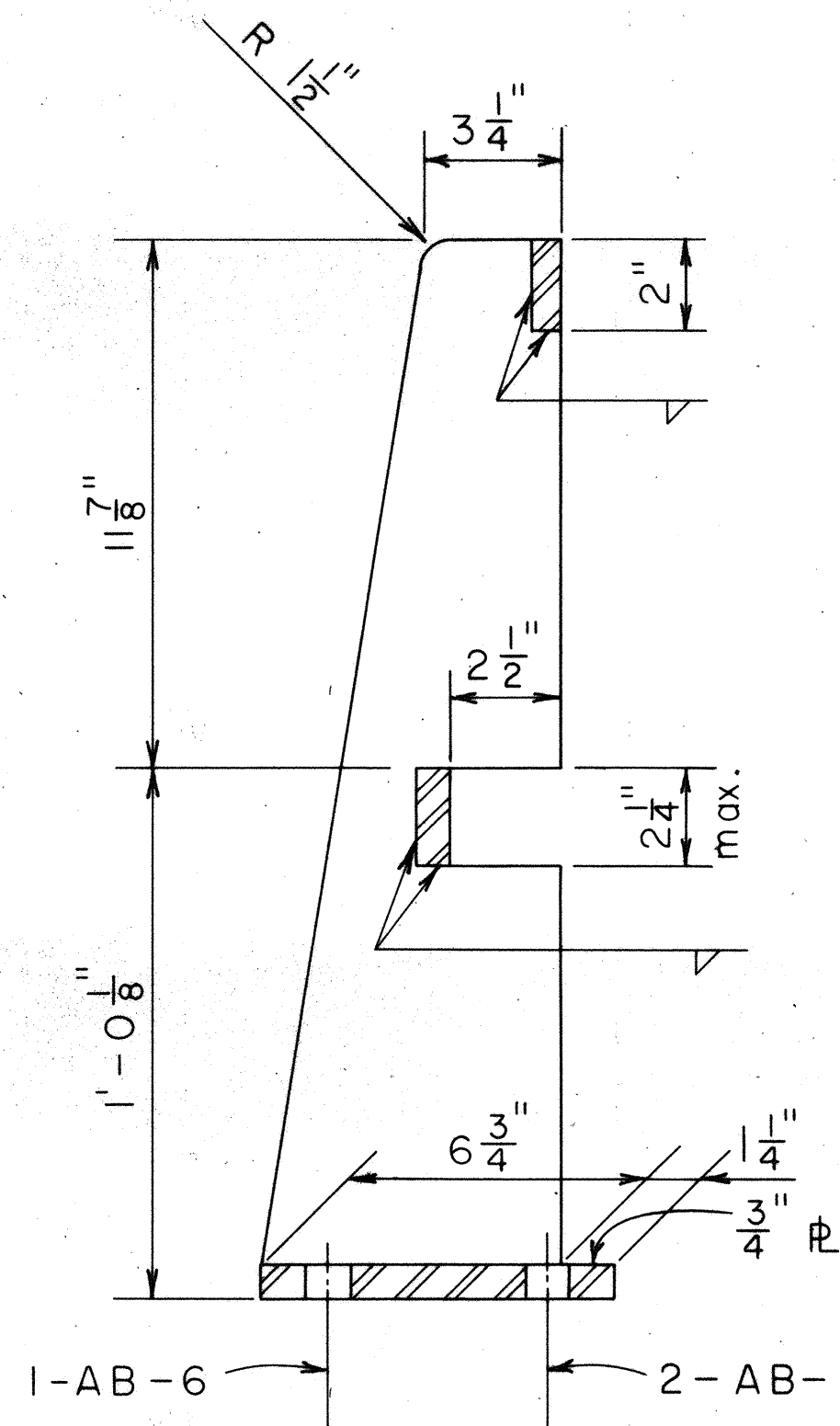
DES. H.L. DR. W.L. CHK. H.L.
Ronald M. Austin
APPROVED FOR JOINT VENTURE

SHEET No. 7-1 OF 4 SHEETS

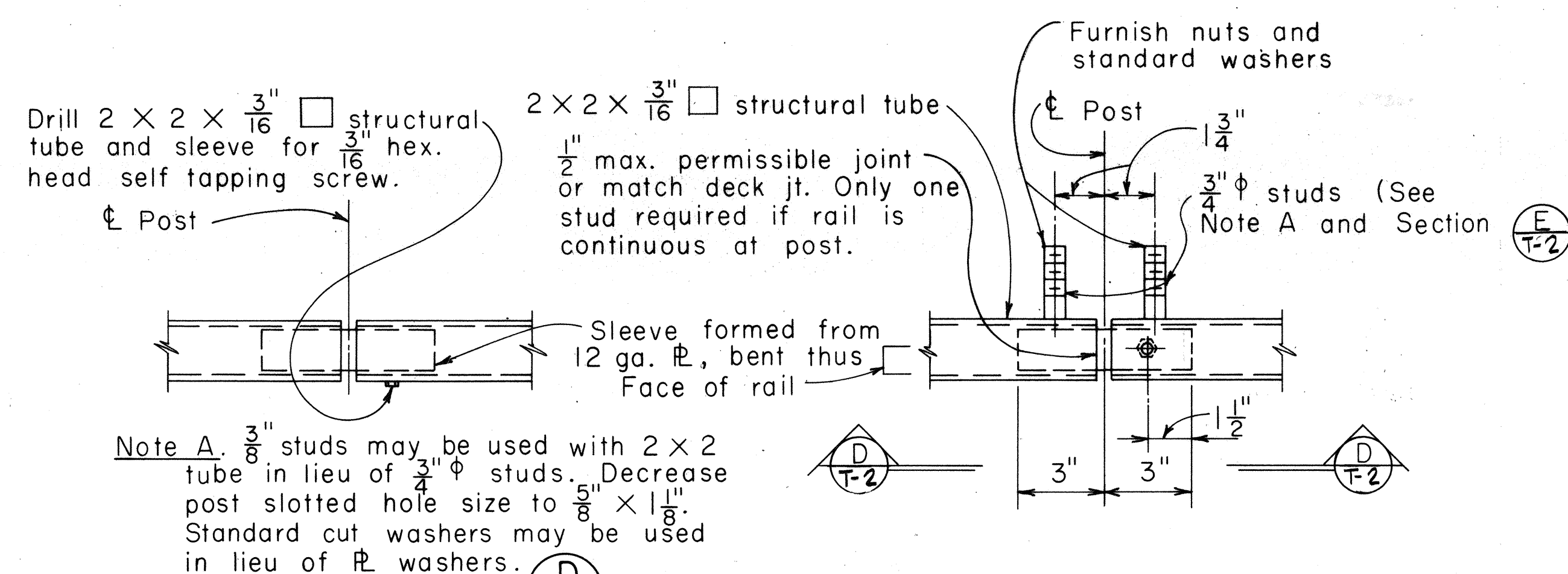
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H2-1(11)	1973	222	274



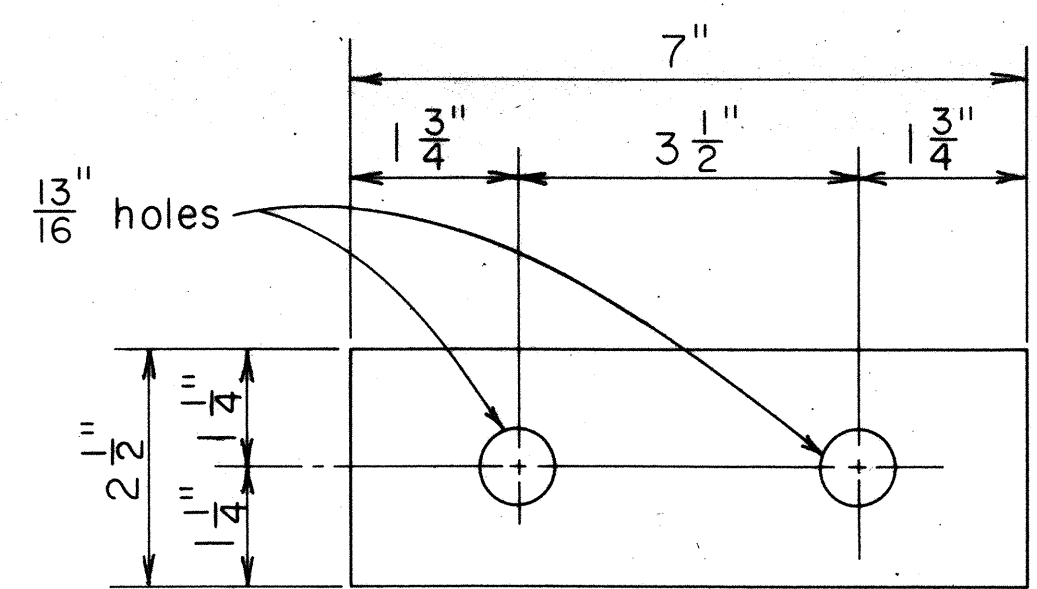
ELEVATION



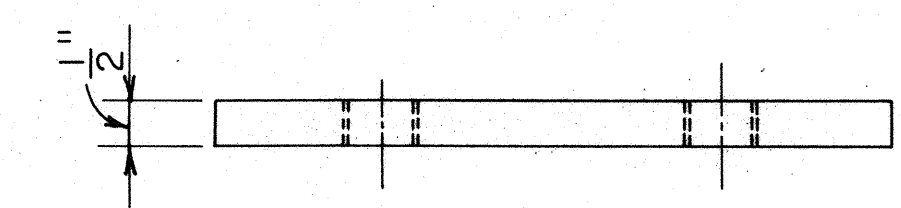
SECTION A-T-2



VIEW PLAN
2x2 TUBE SPLICE DETAILS
Scale: 3" = 1'-0"



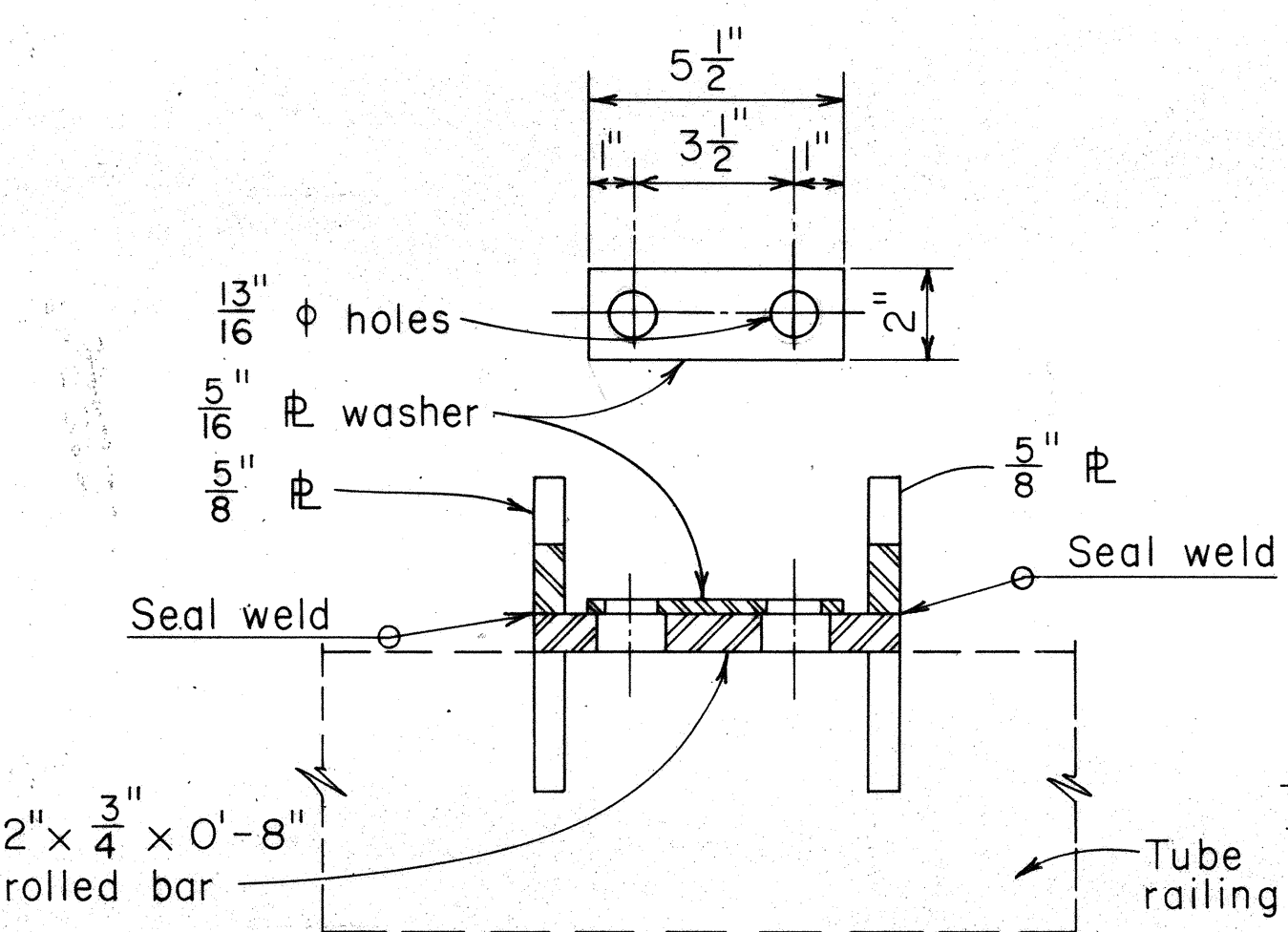
PLAN



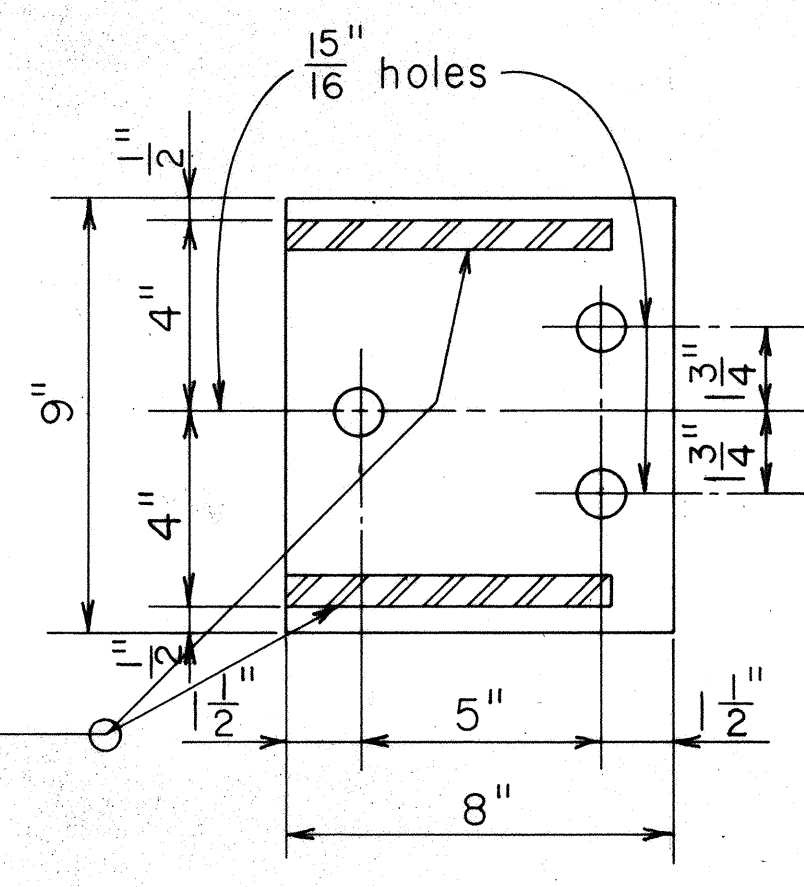
ELEVATION

TYPICAL ANCHOR R DETAIL

Scale: Half Size

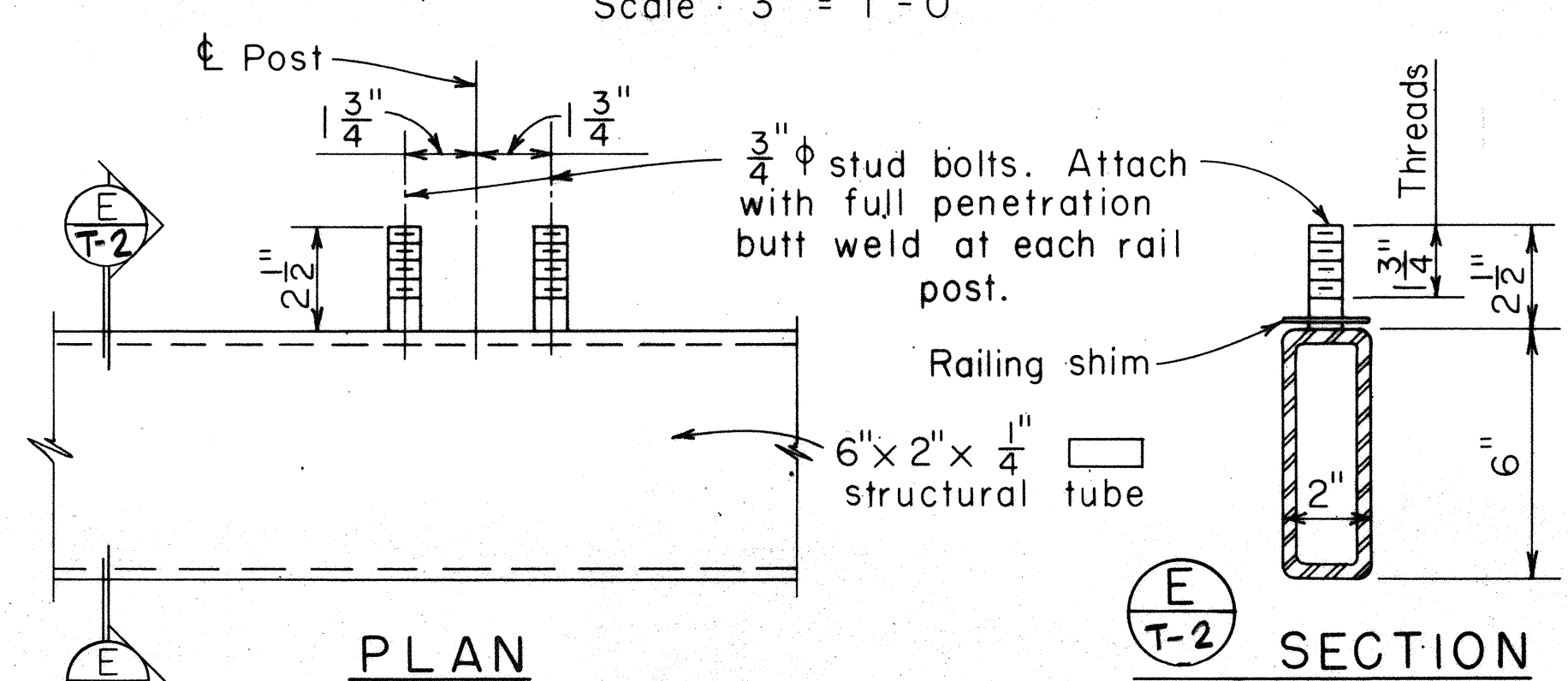


SECTION B-T-2

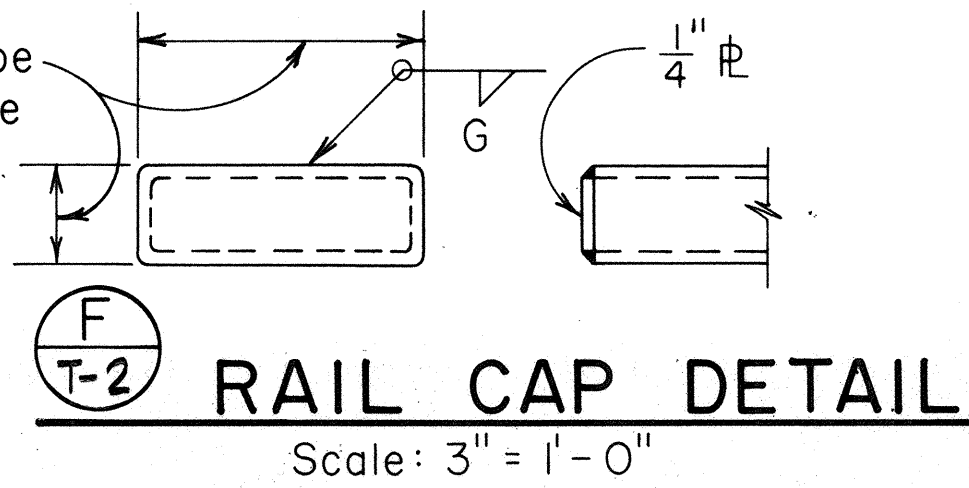


SECTION C-T-2

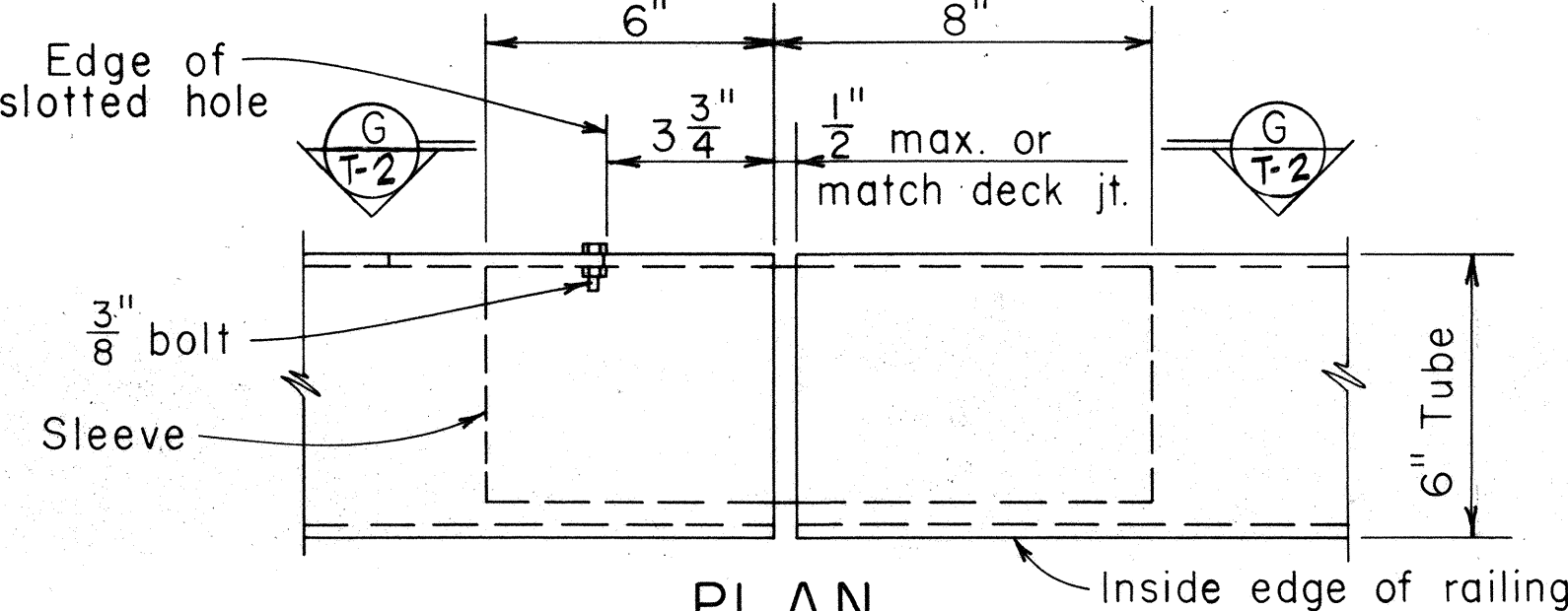
RAIL POST DETAILS Scale: 3" = 1'-0"



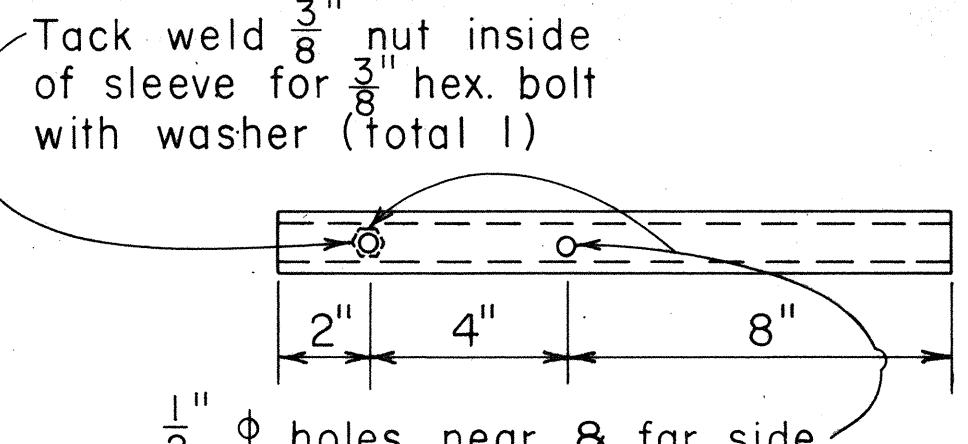
PLAN SECTION
6x2 TUBE RAIL DETAILS
(2x2 TUBE RAIL SIMILAR) Scale: 3" = 1'-0"



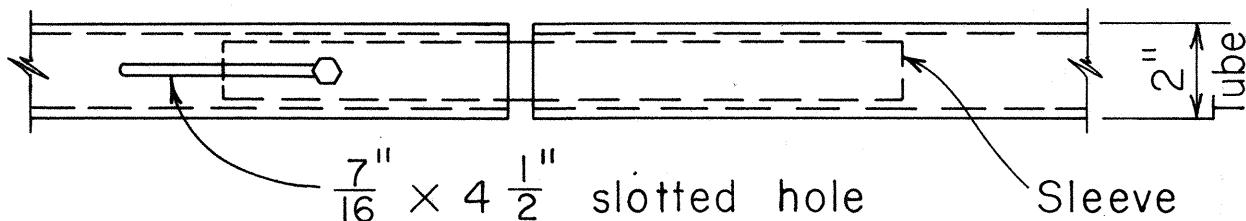
RAIL CAP DETAIL
Scale: 3" = 1'-0"



PLAN



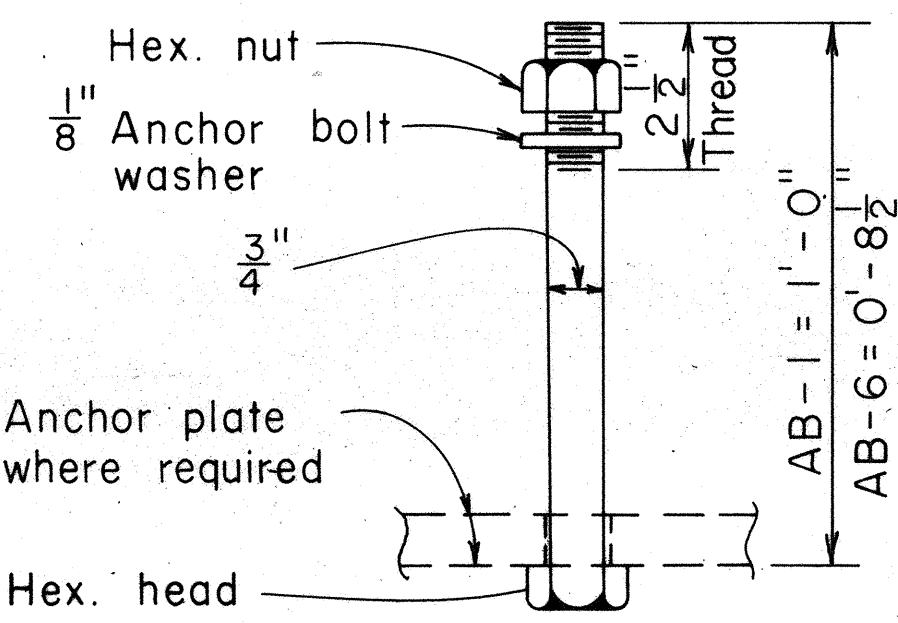
SLEEVE



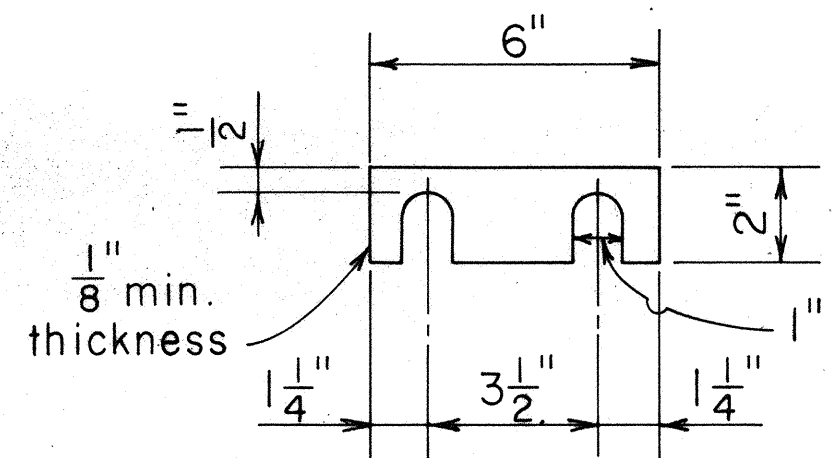
VIEW G-T-2

6x2 TUBE SPLICE DETAILS

Scale: 3" = 1'-0"

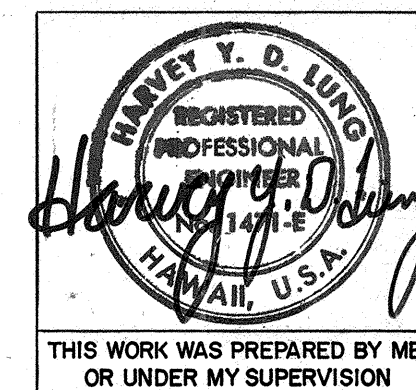


TYPICAL ANCHOR BOLT
(AB) ASSEMBLY



RAILING SHIM DETAIL

Scale: 3" = 1'-0"

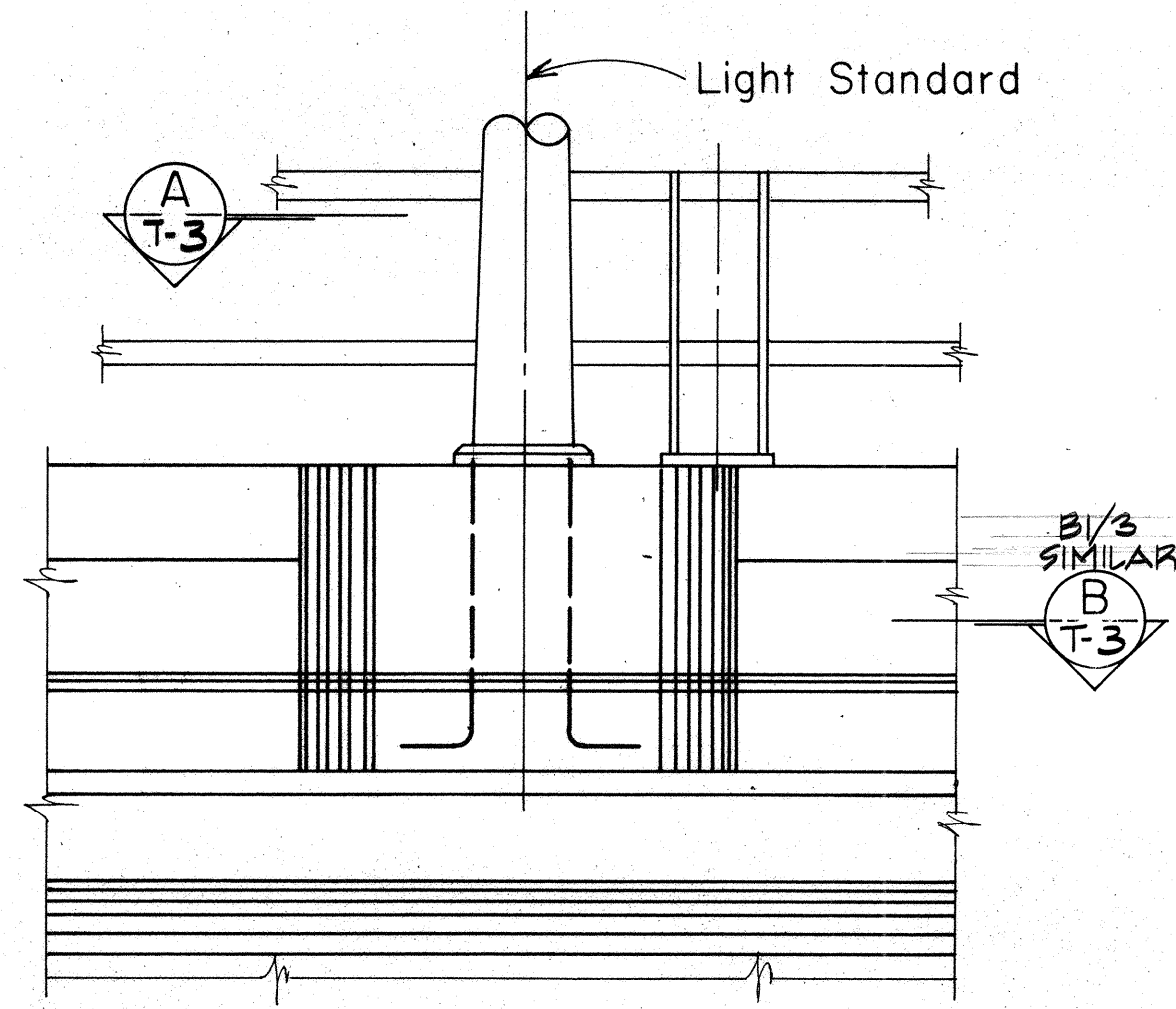


AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII
DES. BY DR. W. I. CHU, H. L.
APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DETAILS
STEEL BRIDGE RAILING (TUBULAR)
TWO RAIL COMBINATION TYPE
ON PARAPET
HAWAII-INTERCHANGE
FAY PROJECT No. I-H2-1(11)-7
Scale: As Note

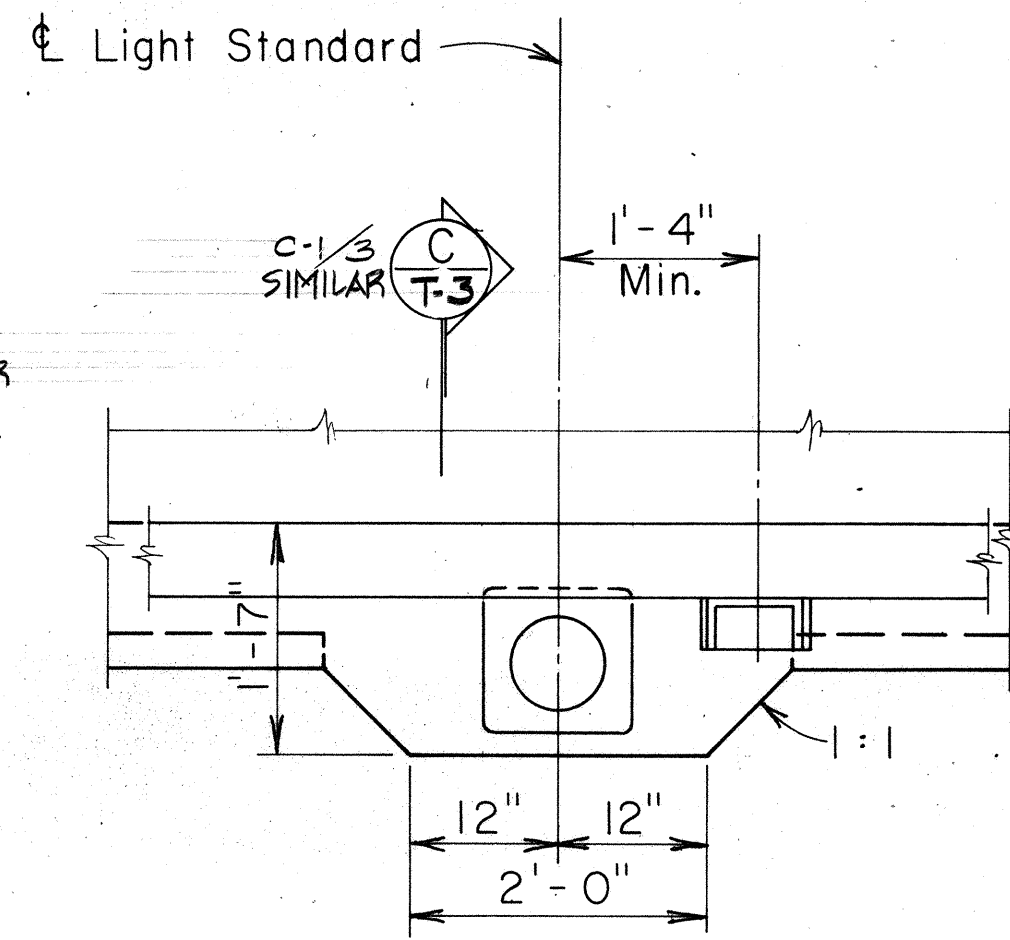
SHEET No. 7-2 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-42-(11):7	1978	223	274



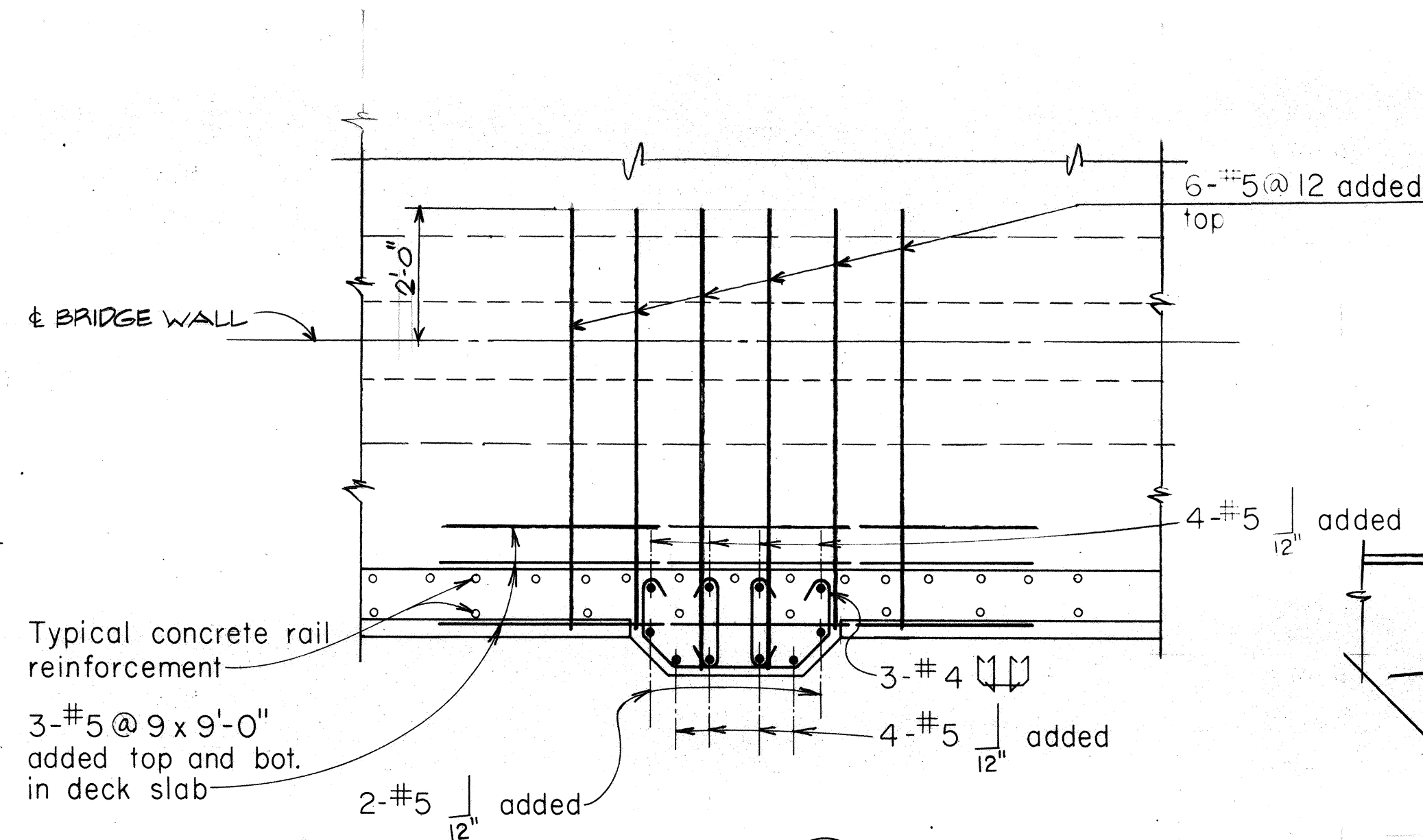
EXTERIOR ELEVATION

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



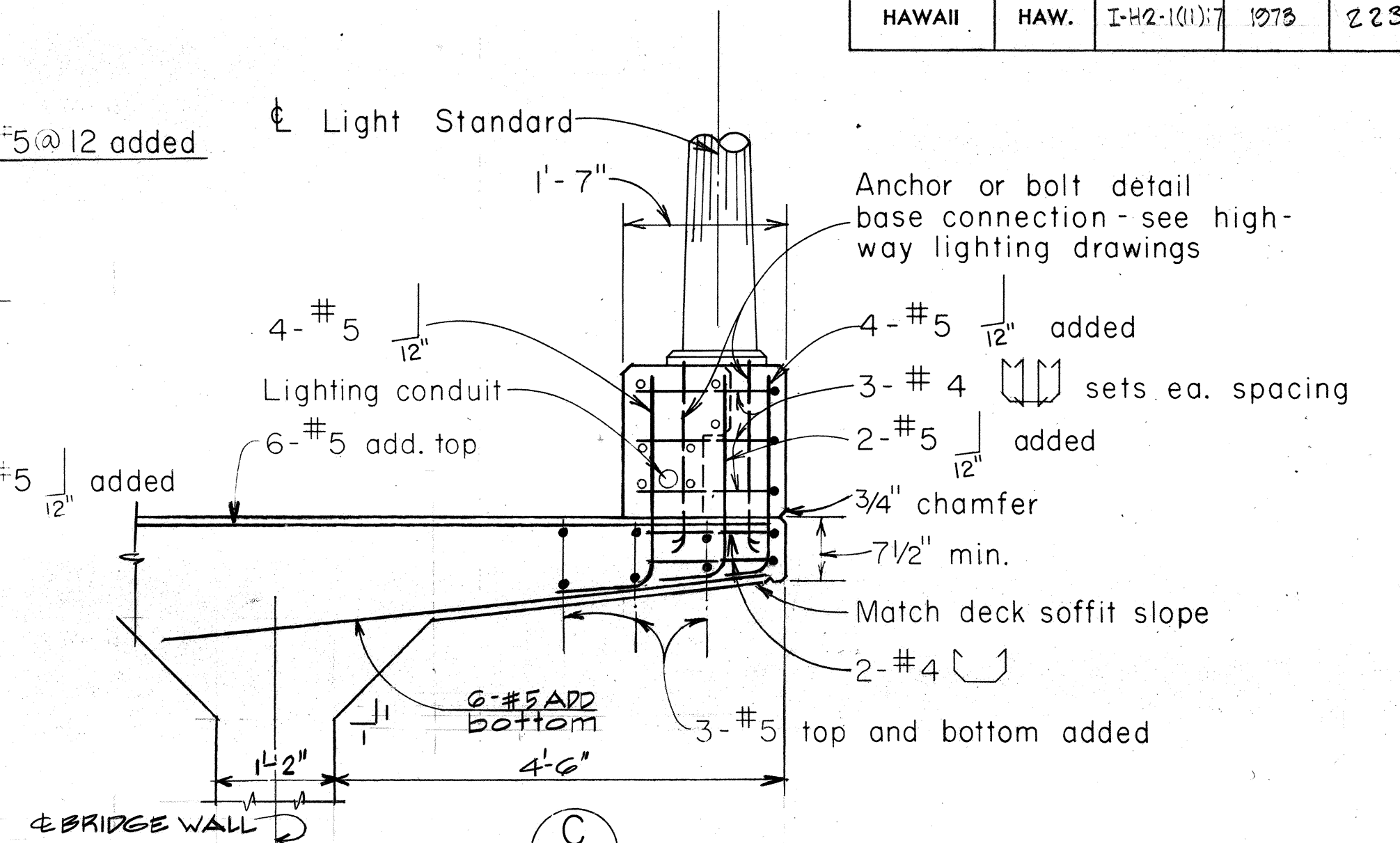
PLAN

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



SECTION B-B FOR PARTIAL BRIDGE

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

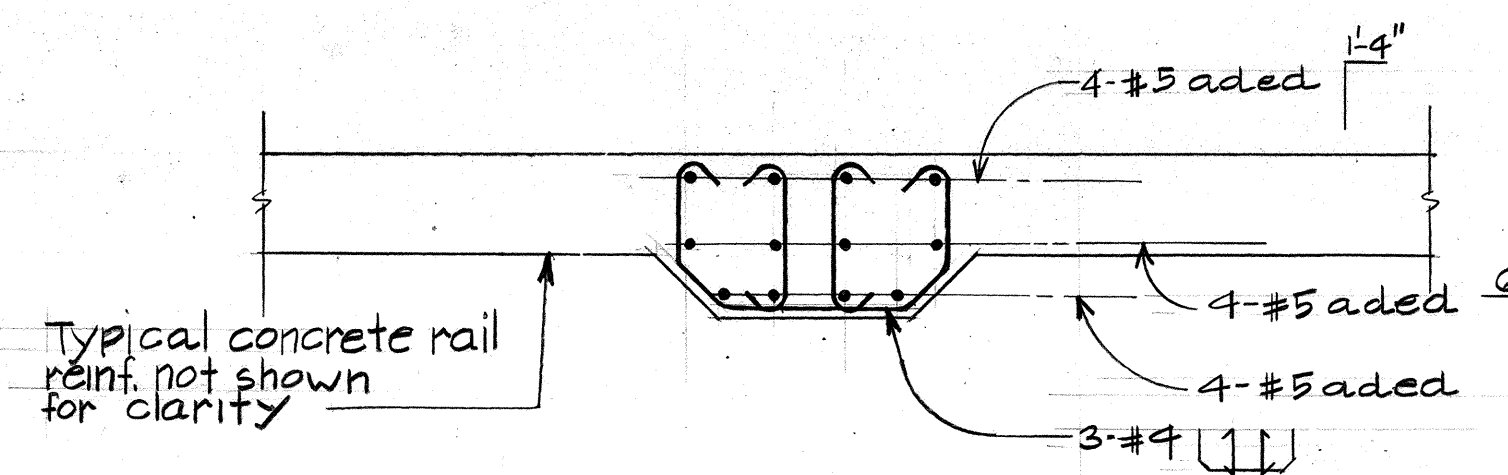


SECTION C-C FOR PARTIAL BRIDGE

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

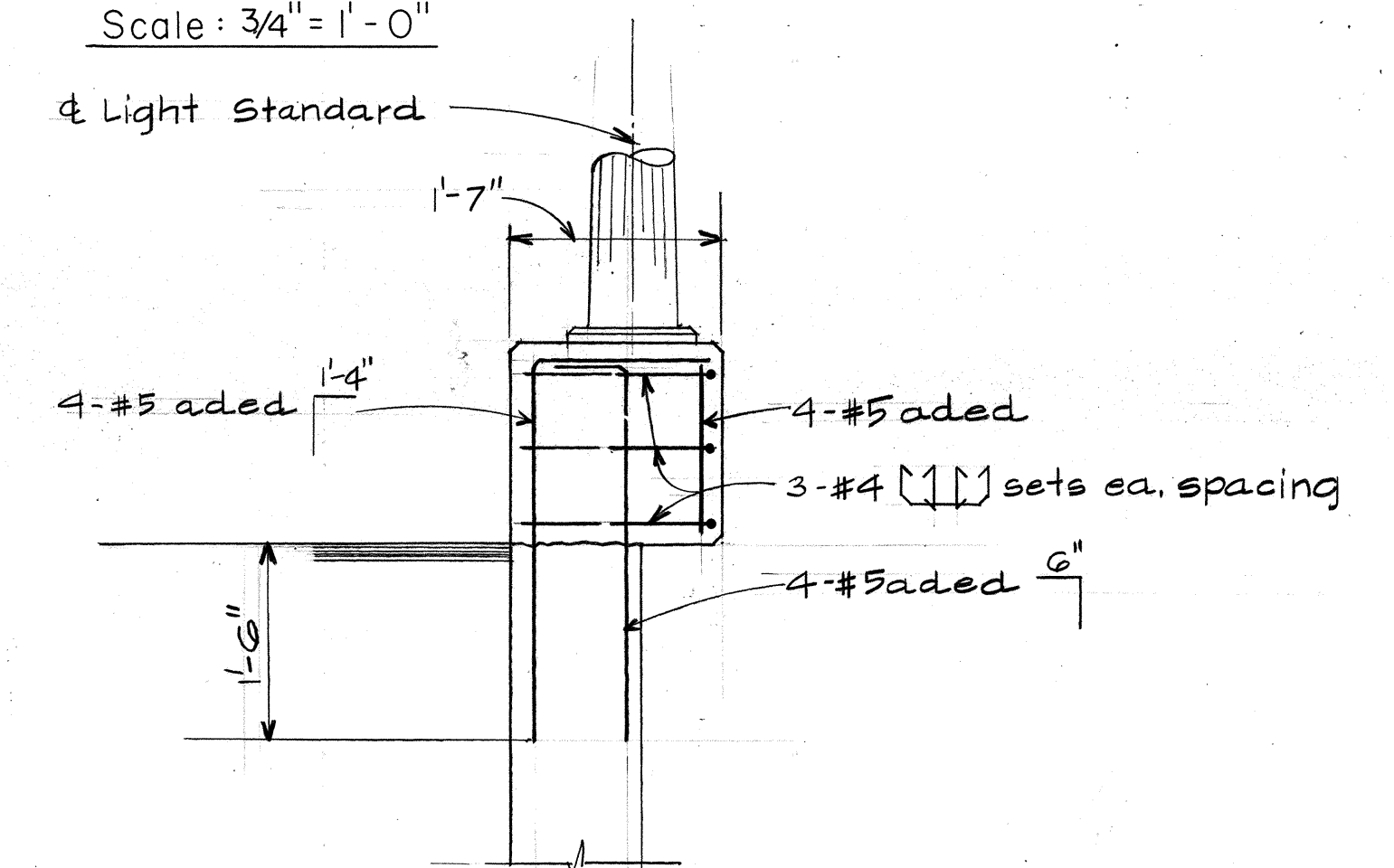
DETAILS AT LIGHT STANDARD

Scale : As Noted



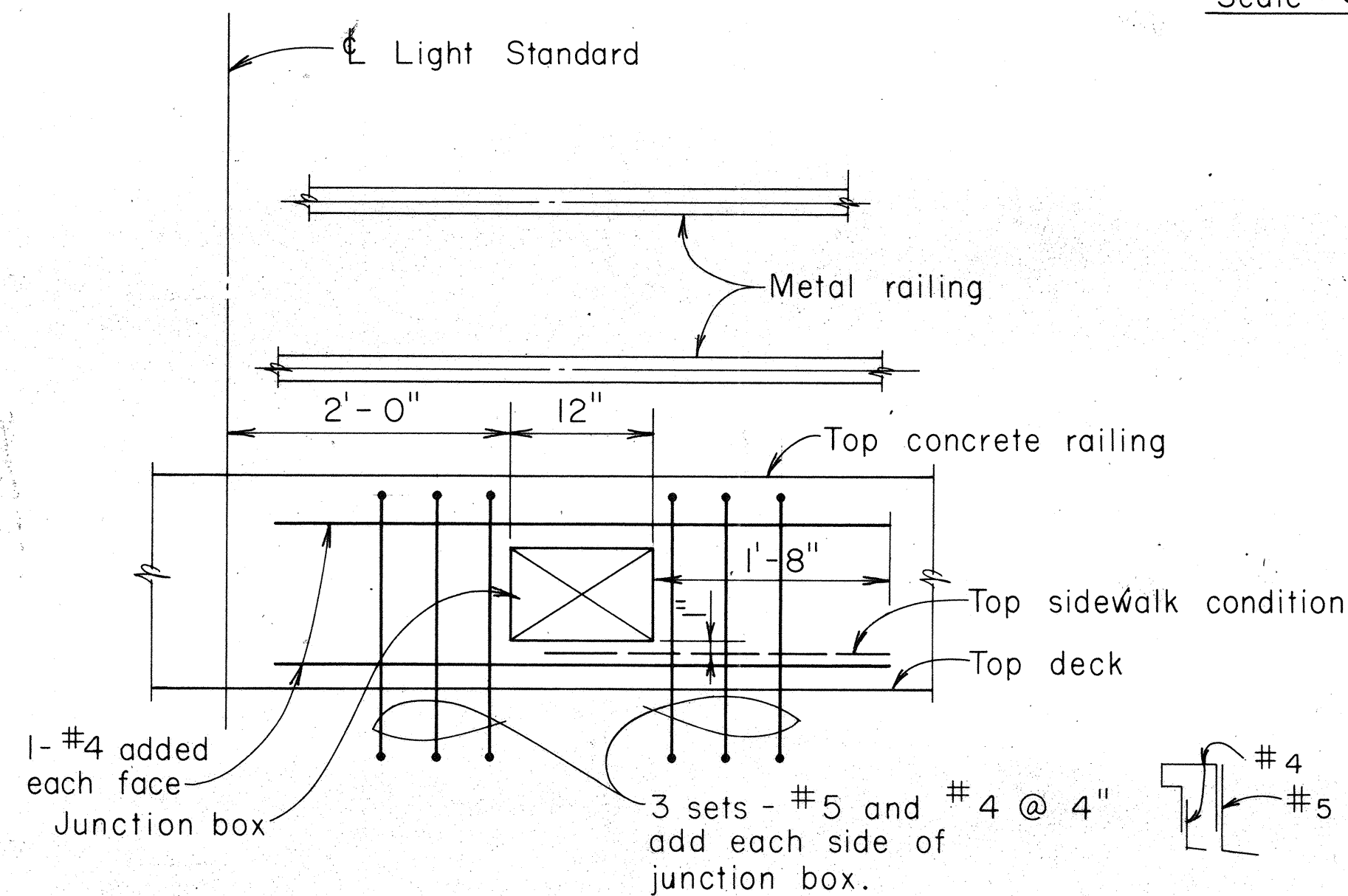
SECTION B1-B1 FOR RETAINING WALL NO. 5

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



SECTION C1-C1 FOR RETAINING WALL NO. 5

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

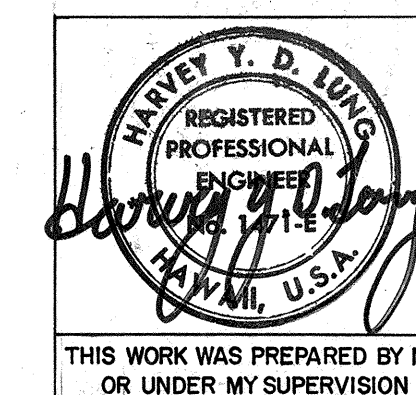


ELEVATION D-D ADDED

REINFORCEMENT AT JUNCTION BOX

Scale : 1" = 1' - 0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
NO.	



AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H. DR. W. L. CHK. H. L.
APPROVED FOR JOINT VENTURE

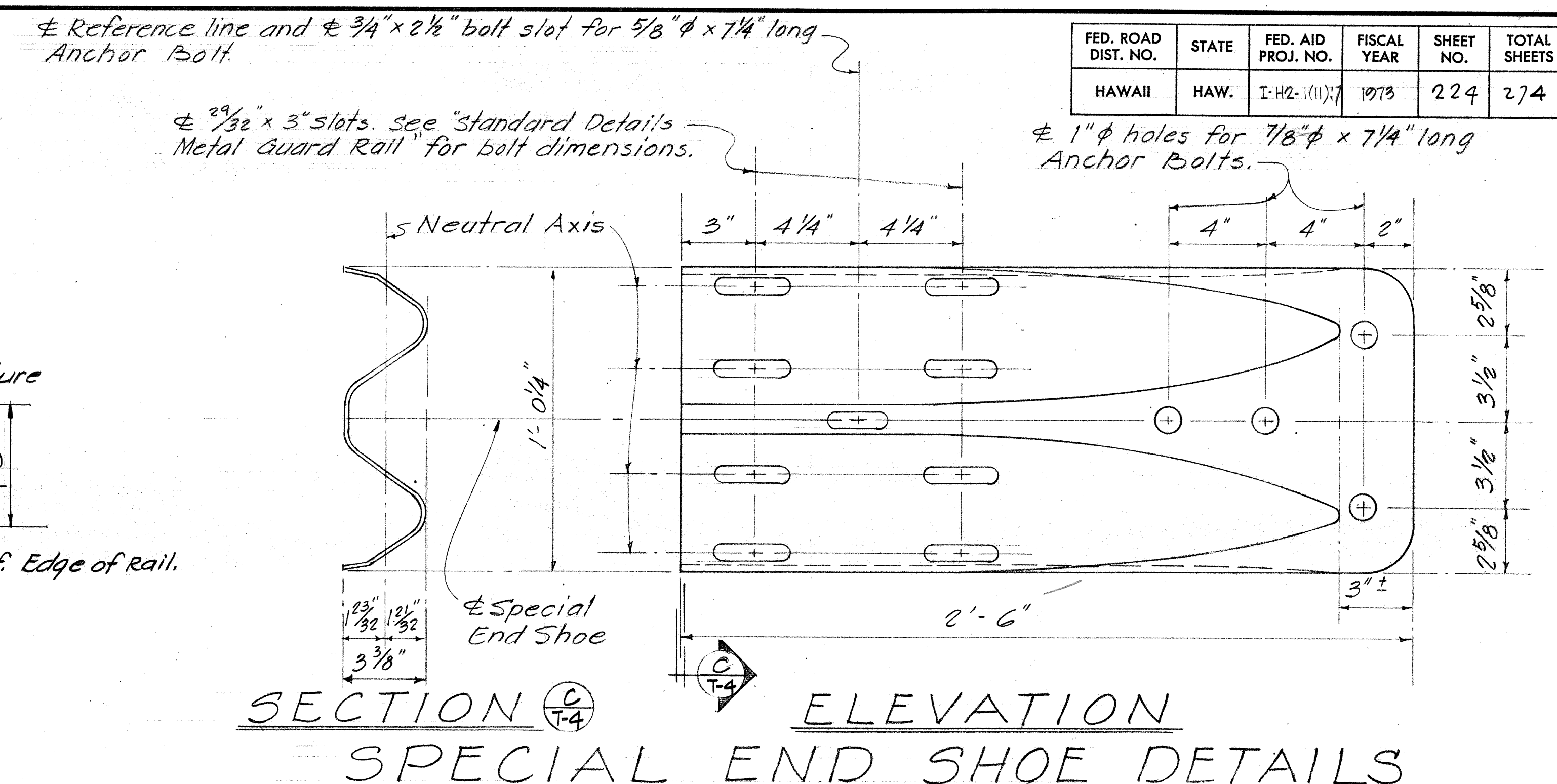
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
STEEL BRIDGE RAILING (TUBULAR)
TWO RAIL COMBINATION TYPE
ON PARAPET
WAIHANA INTERCHANGE
FA - PROJECT NO. I-42-(11):7

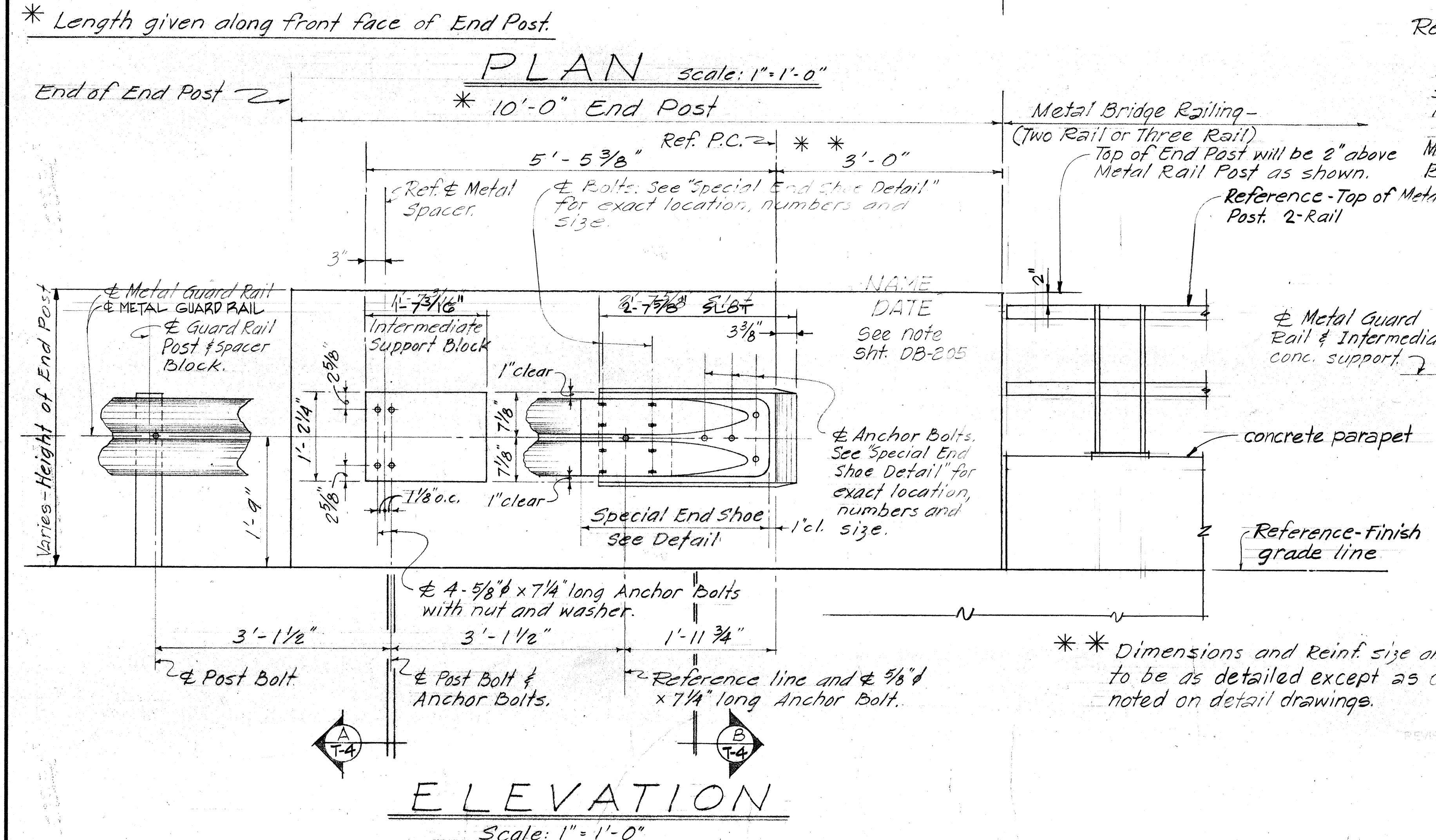
Scale : As Noted

SHEET No. 73 OF 4 SHEETS

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

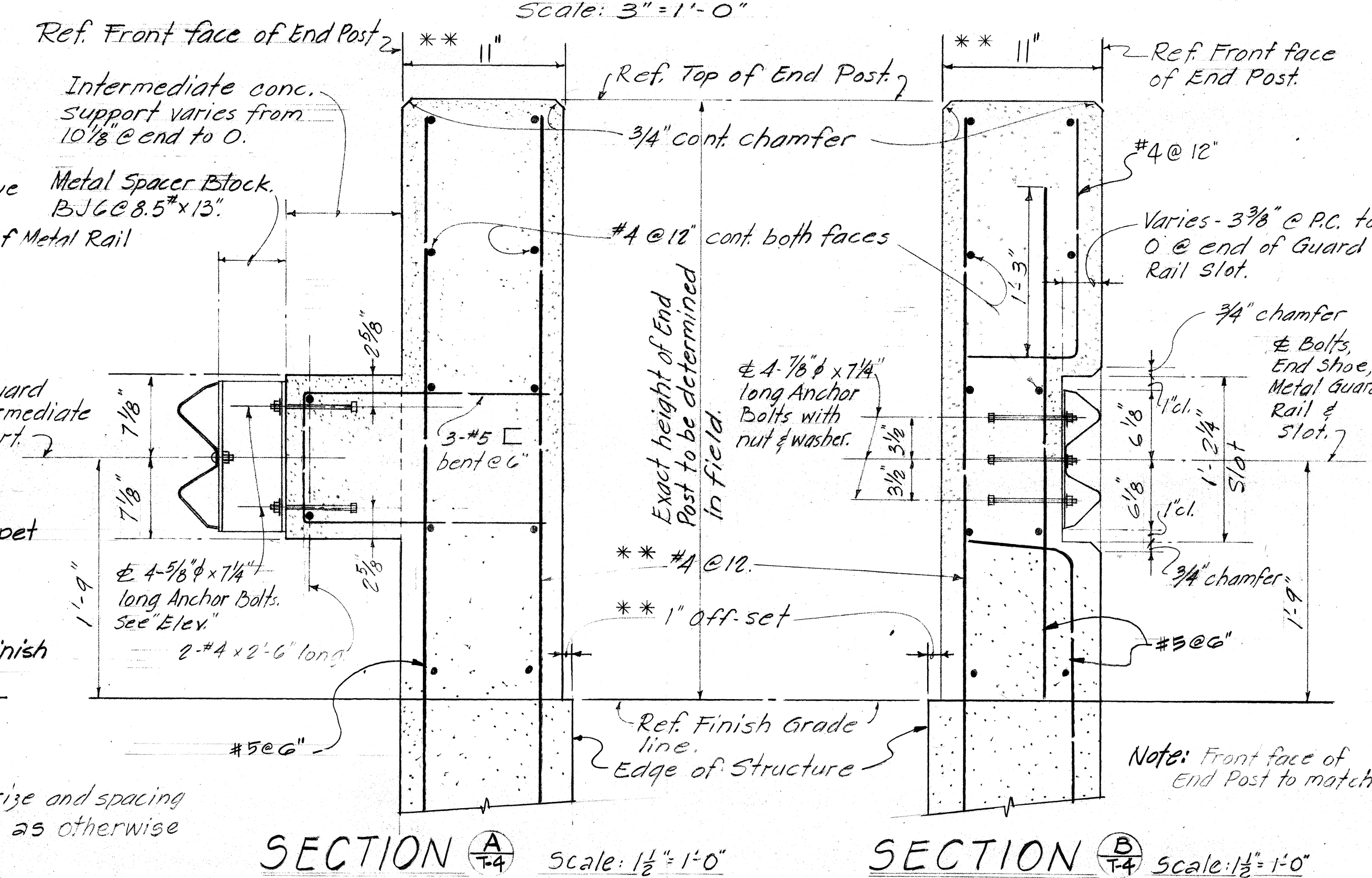


SECTION ELEVATION
SPECIAL END SHOE DETAILS
Scale: 3" = 1'-0"



ELEVATION

Scale: 1" = 1'-0"



SECTION A $\frac{A}{F4}$ Scale: $1\frac{1}{2}" = 1'-0"$ SECTION B $\frac{B}{F4}$ Scale: $1\frac{1}{2}" = 1'-0"$

- Scale: 1" = 1'-0"
- NOTES:
1. All Anchor Bolts shall be High Strength bolts conforming to the requirements of ASTM A-325.
 2. All shoe assembly, including anchor bolts, nuts and washers, shall be galvanized.
 3. Special End shoe shall be Fabricated from 10 gage steel conforming to the requirements of AASHTO 180.
 4. First Guard Rail Panel adjoining Special End Shoe shall be of galvanized steel. See specifications for requirements.
 5. Anchor Bolt length given under bolt head.
 6. These details are applicable for Connections to Retaining walls also.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

AUSTIN, YEE & PARK
(A JOINT VENTURE)
745 FORT STREET HONOLULU, HAWAII

DES. H.L. DR. W.I. CHK. H.L.

Donald W. Yee

APPROVED FOR JOINT VENTURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS

METAL GUARD RAIL CONNECTION
AT VERTICAL FACE TYPE END POST

WAHIAWA - INTERCHANGE
FA 1 - PROJECT NO. 1-42-1(11) - 7

Scale: As Noted