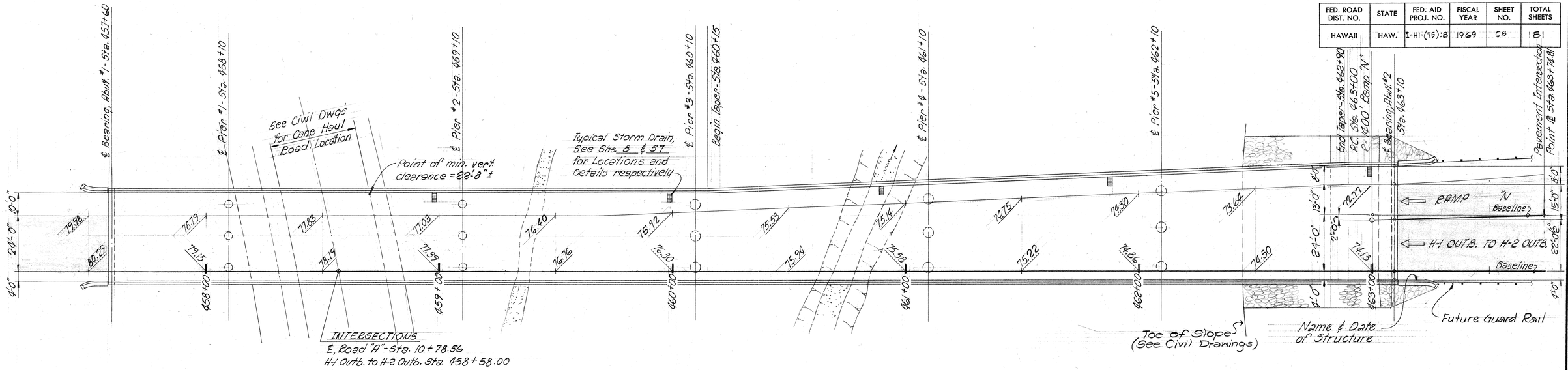
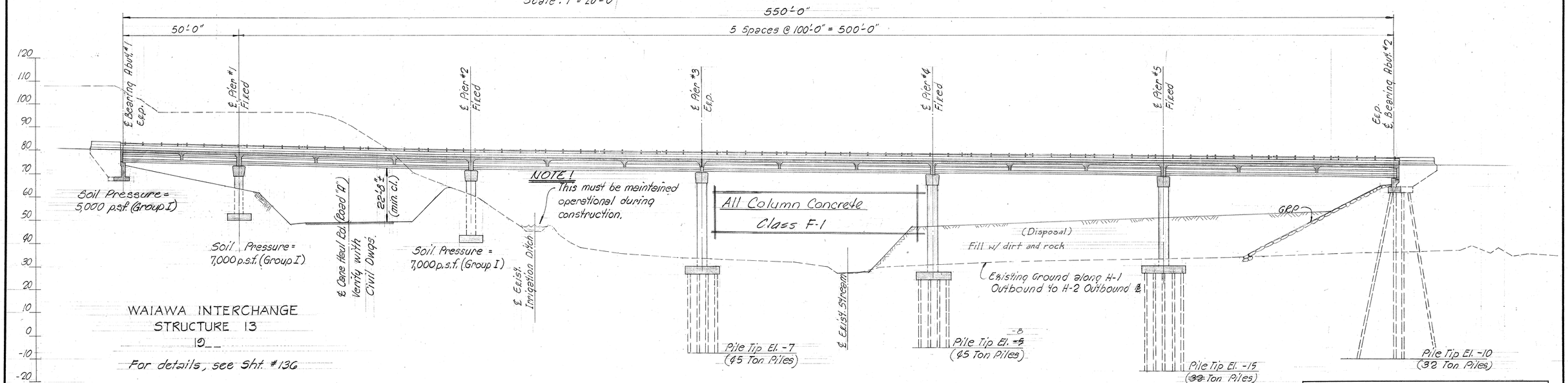
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(75):8	1969	68	181



PLAN

Scale: 1" = 20'-0"

True North



WAIAWA INTERCHANGE
STRUCTURE 13
19__

For details, see Sht. #136

NAME & DATE OF STRUCTURE
Not to Scale

LONGITUDINAL SECTION ALONG ℄ OF STRUCTURE

Scale: 1" = 20'-0"

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

PRINTED ON NO. 1000H CLEARPRINT

SHIMAZU SHIMABUKURO & FUKUDA, INC.
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

LAYOUT PLAN & LONGITUDINAL SECTION

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

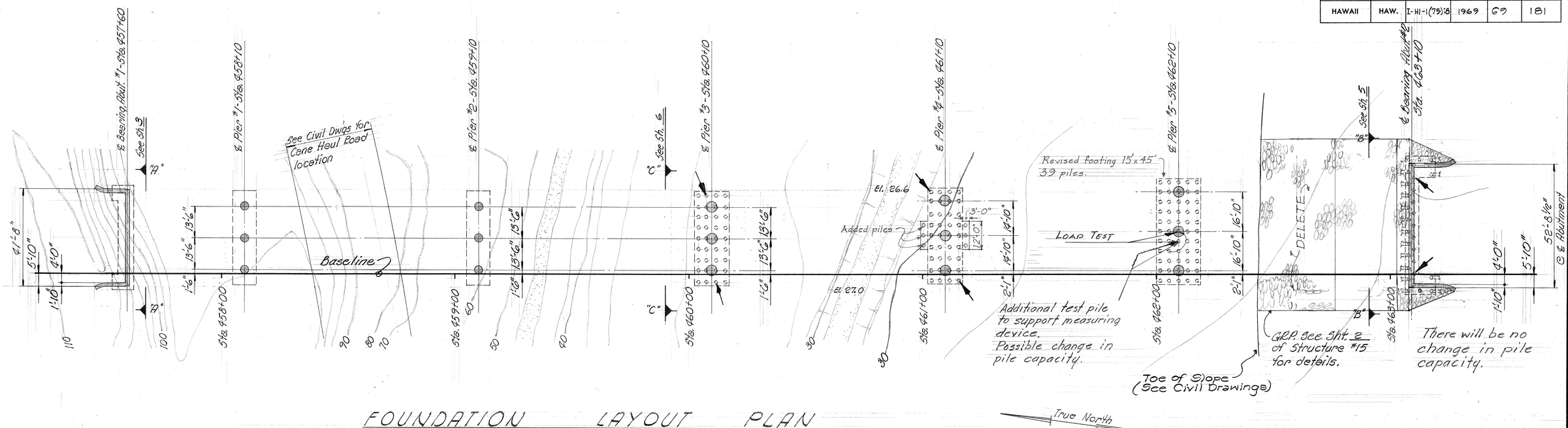
Scale: As shown Date: JUNE, 1969

SHEET No. 1 OF 12 SHEETS

68

Revision: 12-10-69

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	69	181



FOUNDATION LAYOUT PLAN

Scale: 1" = 20'-0"

STRUCTURE #13 QUANTITY ESTIMATES

ITEM#	ITEM	UNIT	QUANTITY
14.60	Structure Excavation for Bridges	C.Y.	1500
46.061	Concrete in Structure #13 (Except in footings)	L.S.	1130 C.Y.
46.062	Concrete in Footings for Structure #13	L.S.	466 C.Y.
46P.15	Type III Prestressed Concrete Girders for Structure #13	L.S.	4240 L.F.
48.61	Reinforcing Steel in Structure #13	L.S.	434,500 LBS
51.03	Pile Load Test for Structure #13	EA.	one (1)
51.92	Furnishing Conc. Piles for Structure #13	L.F.	6,826
51.93	Driving Conc. Piles for Structure #13	L.F.	5,968
52.10	Filter Material for Structures	C.Y.	131
55.10	Metal Bridge Rail	L.F.	1110
55.50	Concrete Bridge Parapet, Including End Post	L.F.	1170
65.04	Grouted Rubble Paving for Bridges	C.Y.	215
51.07	Driving Test Piles for Structure #13		338

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

SPECIAL NOTES:

1. See civil drawings for extent of area to be surcharged.
2. No work shall be permitted over surcharged area for 12 months after placement of surcharge.
3. Work permitted on 3-continuous spans adjacent to surcharged area shall not include placing deck slab during period of surcharge application.
4. Work on all other 3 continuous spans shall be permitted.

NOTES:

1. Load test one pile in Pier #5 (as directed by Engineer) for 45 ton capacity before driving balance of piles. If load test show that 45 Ton piles should be used foundation for Pier #5 will be redesigned (See Specs.).
2. Driving two test piles ea. in Pier #3, Pier #4 and in Abutment #2 (indicated by arrows ➡) for length determination.
3. Test piles for load carrying capacity and for length determination shall be driven before casting balance of piles.

DESIGN CRITERIA

A. Loads = HS20-44 or Interstate Loading.
B. Specifications = Standard Specifications for Highway Bridges, AASHO, 9th Edition.
C. Design Stresses
   1. Reinforced Concrete Beams & Slabs (See, also, AASHO Specifications & Special Provisions).
      a) f_c' = 3,000 p.s.i. Concrete unless otherwise noted.
      b) f_s = 20,000 p.s.i. reinforcing steel.
   2. Prestressed Girders, See Sh. 38
   3. Pile Capacity - See Longitudinal Section, Sh. 1.
   4. Allowable Foundation Pressure - See Longitudinal Section, Sh. 1.

REFERENCE DRAWINGS

1 - Abutment #1 Foundation -- Sh. 3
2 - Abutment #2 Foundation -- Sh. 4
3. Pier Foundations ------ Sh. 52
4. Pier Columns -------- Sh. 51
5. General Notes ------- Sh. 59

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

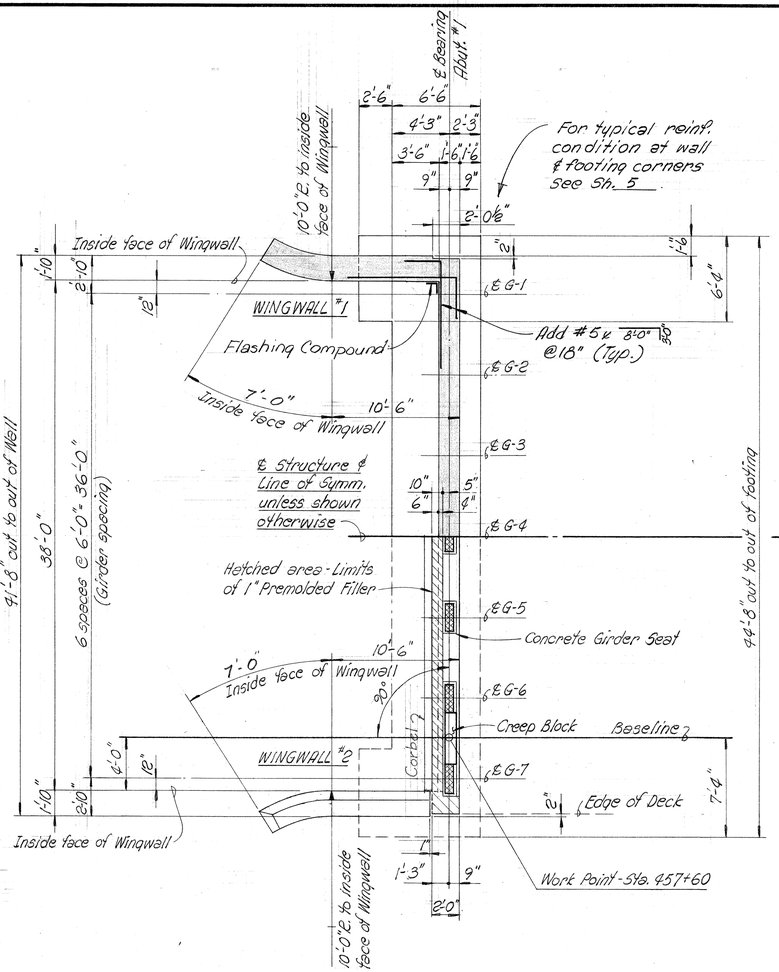
FOUNDATION LAYOUT PLAN

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

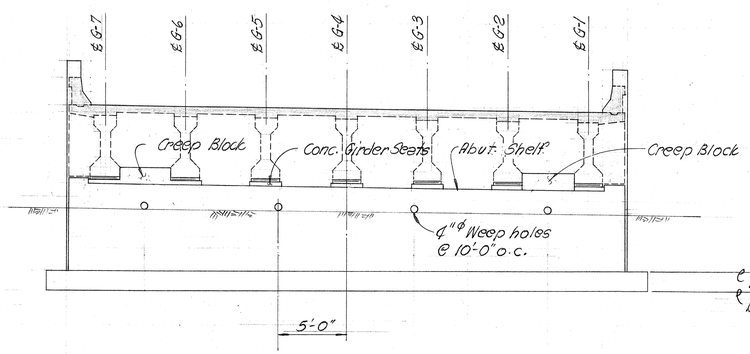
SHEET No. 2 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	70	181



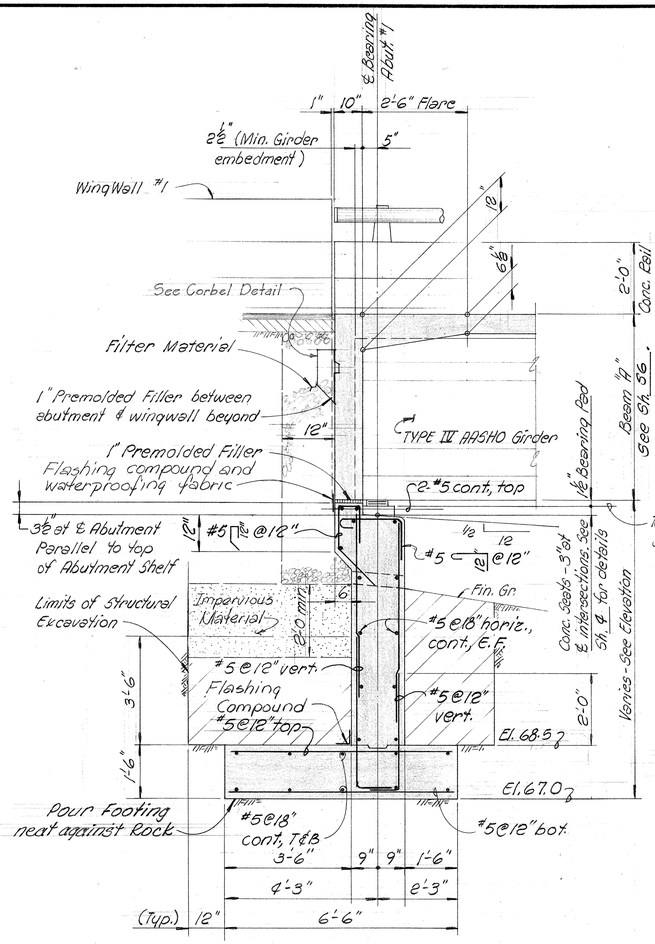
ABUTMENT #1 PLAN

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



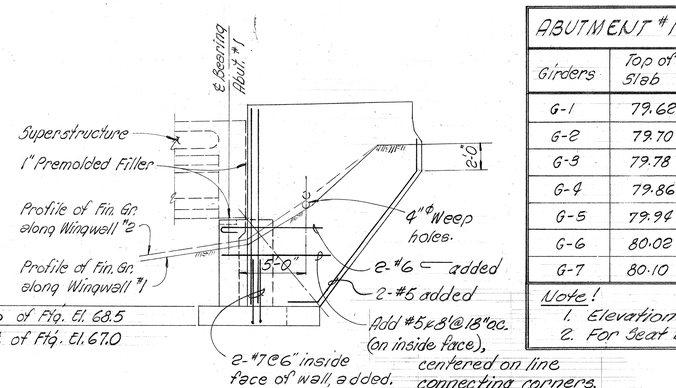
ABUTMENT #1 - ELEVATION "A"-"A"

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



ABUTMENT #1 TYPICAL SECTION

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

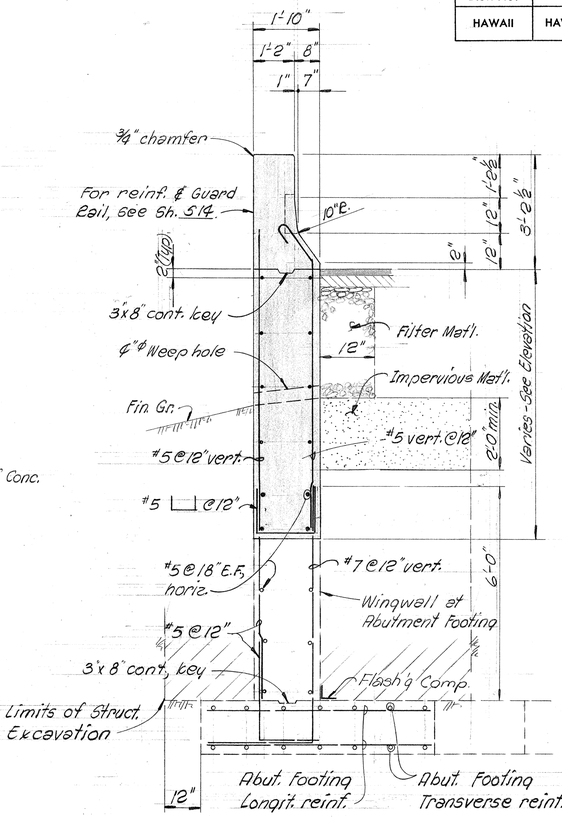


WINGWALL #1 ELEVATION

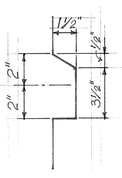
Scale: 3/16"-1'-0" (Wingwall #2 similar)

ABUTMENT #1 ELEV. & SEAT BEVELS				
Girders	Top of Slab	Bot. of Girder	Top of Seat	SEAT BEVELS
G-1	79.62	74.33	74.20	-1/4" : 12
G-2	79.70	74.41	74.28	
G-3	79.78	74.49	74.36	
G-4	79.86	74.57	74.44	
G-5	79.94	74.65	74.52	
G-6	80.02	74.73	74.60	-1/4" : 12
G-7	80.10	74.81	74.68	-7/32 : 12

Note!
1. Elevations are at ℄ intersections
2. For Seat Detail, see Sht. 4.

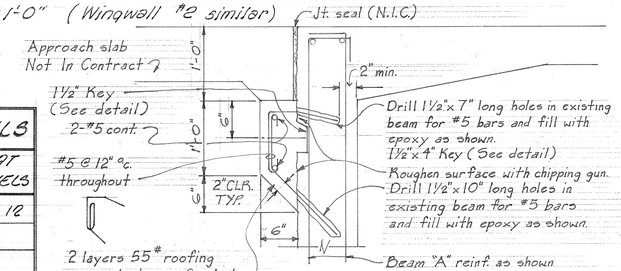


KEY DETAIL



WINGWALL #1 TYPICAL SECTION

Scale: ½" = 1'-0" (Wingwall #2 similar)



CORBEL DETAIL FOR ABUT.

Abut. No. 1 - Str. No. 13 / Abut. No. 2 - Str. No. 14

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

ABUTMENT #1 & WINGWALLS #1 & #2
PLAN & SECTION

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

SHEET No. 3 OF 12 SHEETS

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

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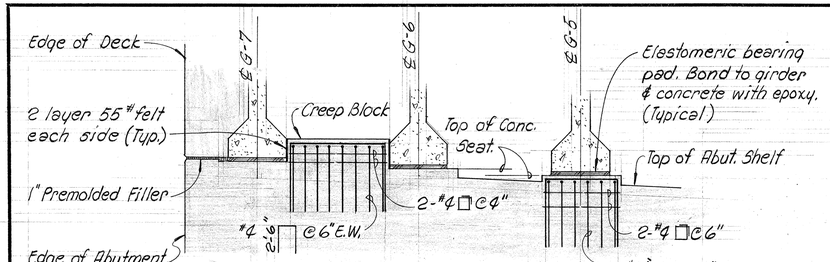
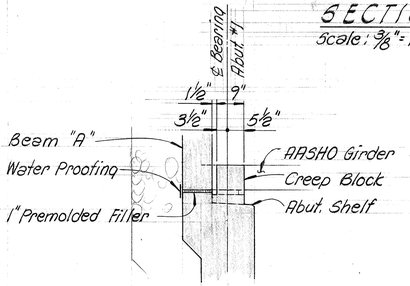
70

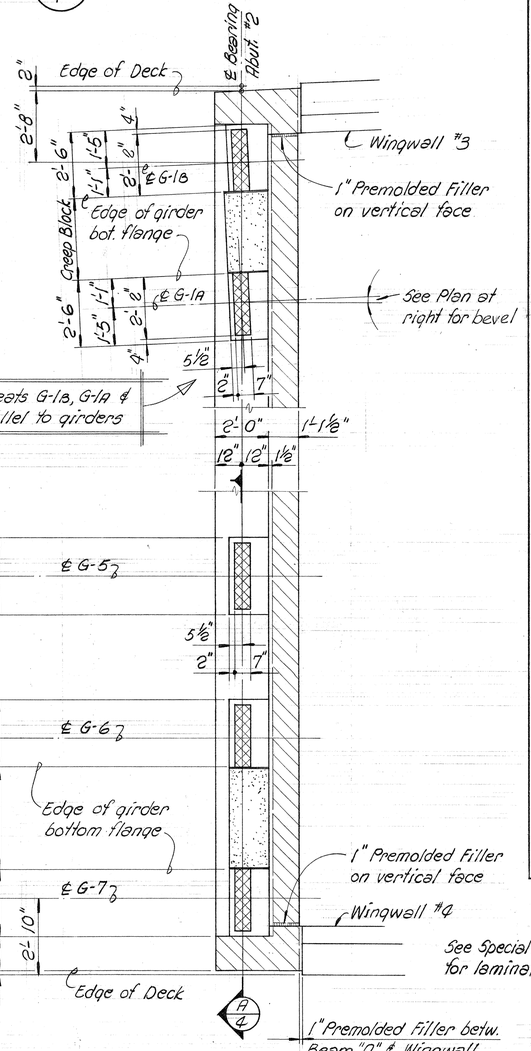
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(75):8	1969	71	181



SECTION (A/4)
Scale: 3/8" = 1'-0"

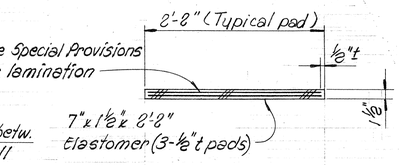


SECTION (B/4)
Scale: 1½" = 1'-0"



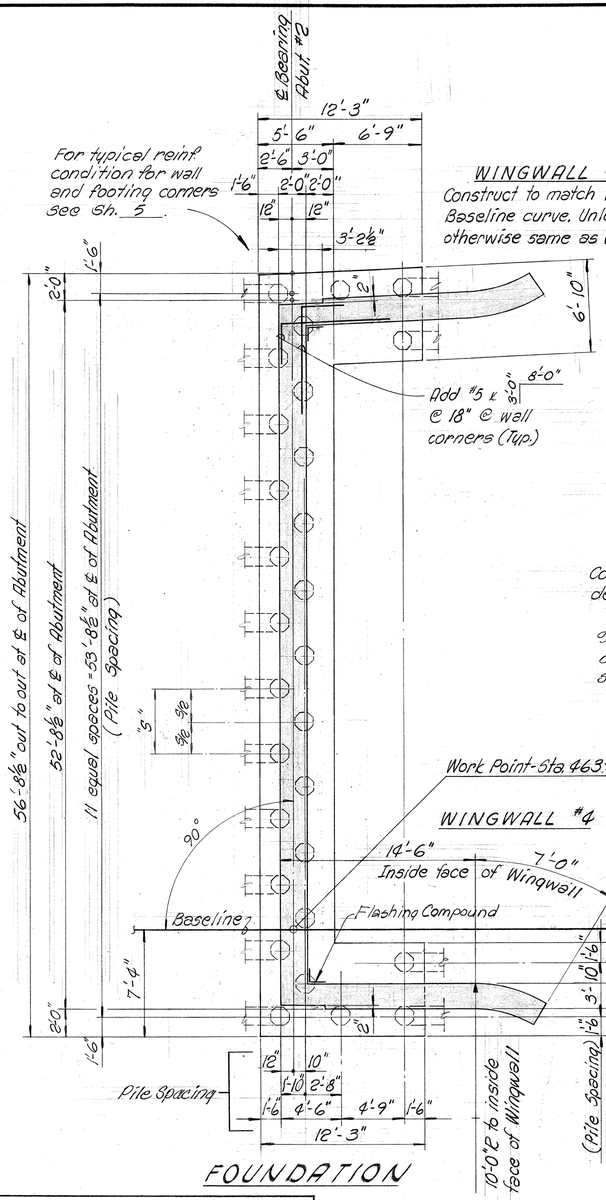
ABUTMENT #1 SHELF
Scale: 3/8" = 1'-0"

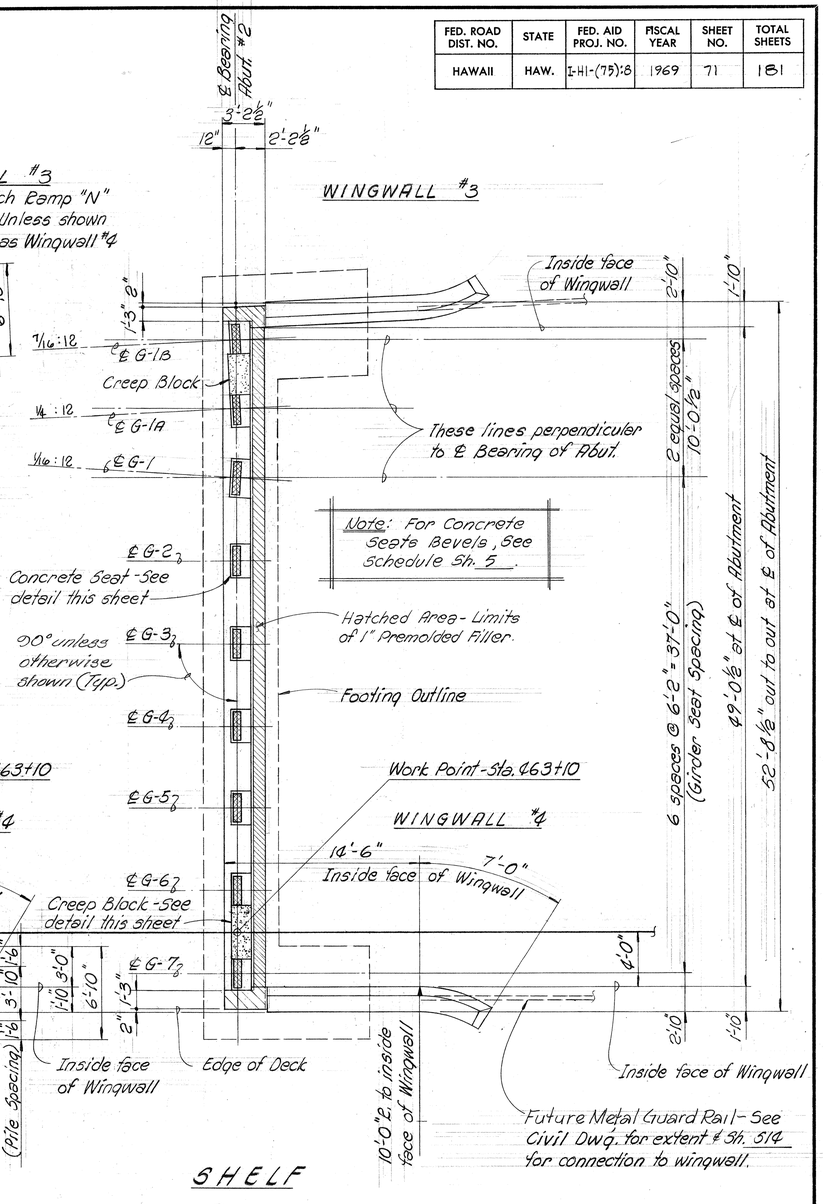
ABUTMENT #2 SHELF
Scale: 3/8" = 1'-0"



ELASTOMERIC BEARING PAD DETAIL
Scale: 1" = 1'-0"

CONCRETE SEAT & CREEP BLOCK DETAILS





PLANS - ABUTMENT #2
Scale: 3/16" = 1'-0"

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

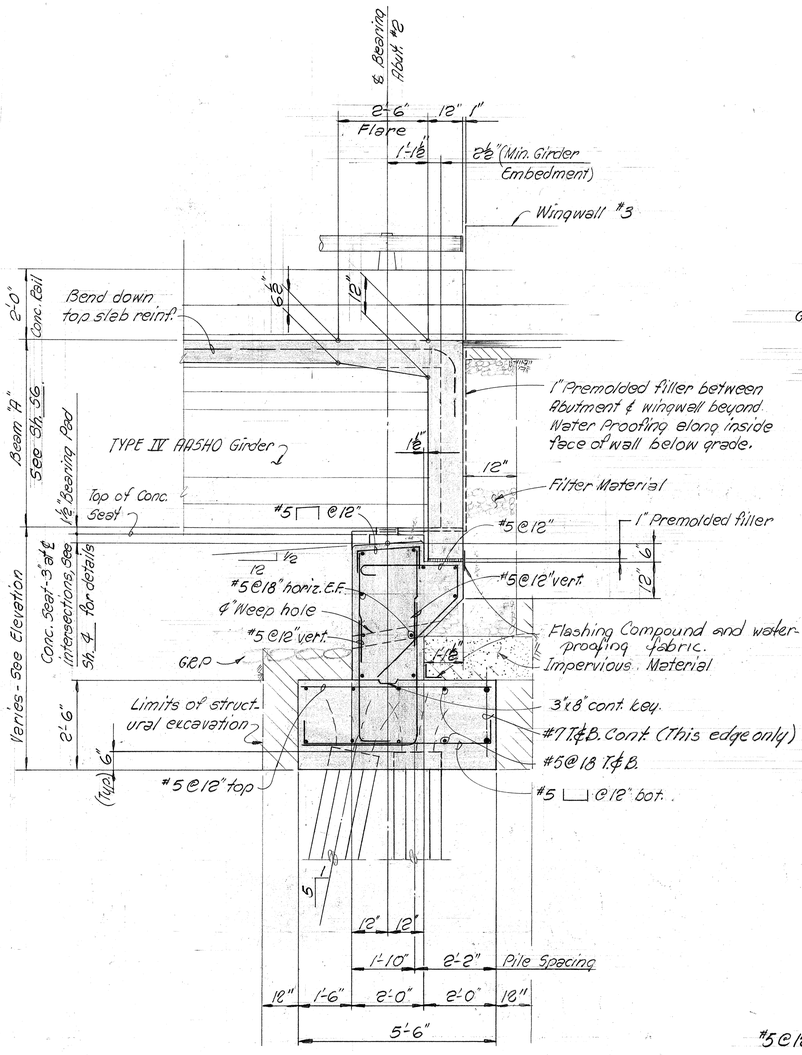
ABUTMENT #2 PLANS
CONCRETE SEAT & CREEP BLOCK DETAILS

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

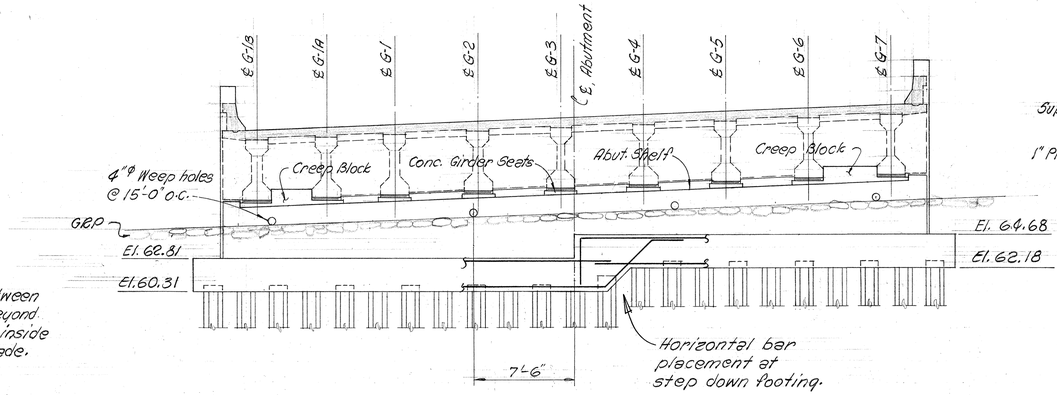
SHEET No. 4 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	72	181



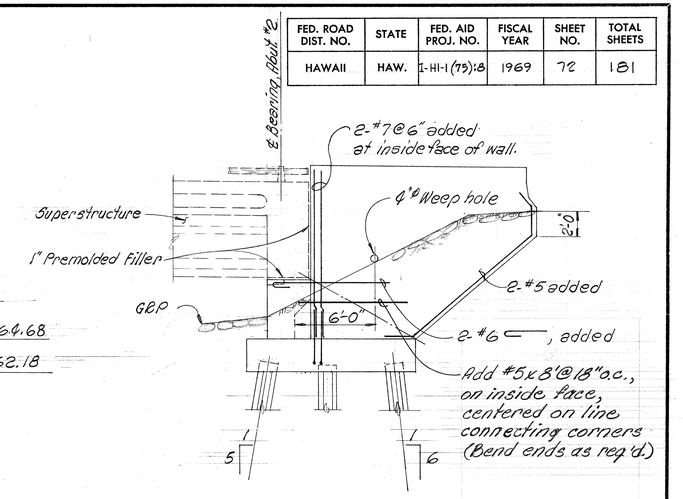
ABUTMENT #2 TYPICAL SECTION

Scale: ½" = 1'-0"



ABUTMENT #2 ~ ELEVATION "B"-"B"

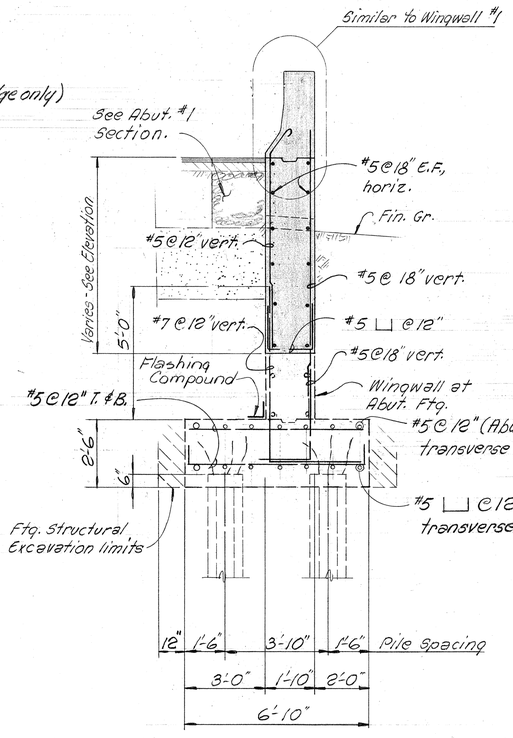
Scale: 3/16" = 1'-0"



NOTE: Wingwall section similar to Wingwall #1 Typical Section

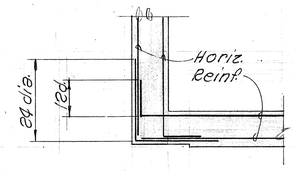
WINGWALL #4 ELEVATION

Scale: 3/16" = 1'-0" (Wingwall #3 similar)



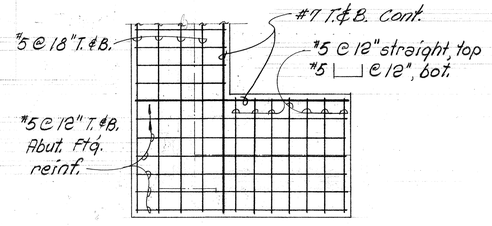
WINGWALL #4 TYPICAL SECTION

Scale: 3/8" = 1'-0" (Wingwall #3 similar)



ABUT. WALL CORNER TYPICAL REINF LAYOUT

N.T.S.



ABUT. #2 FOOTING FOOTING CORNER REINF. LAYOUT

N.T.S.

ABUTMENT #2 ELEVATIONS & SEAT BEVELS				
Girders	Top of Slab	Bot. of Girder	Top of Seat	Seat Bevel
G-1B	72.31	67.01	66.89	-1/32 : 12
G-1A	72.50	67.21	67.09	-1/32 : 12
G-1	72.70	67.41	67.29	-3/16 : 12
G-2	72.95	67.66	67.53	-3/16 : 12
G-3	73.20	67.90	67.78	-5/32 : 12
G-4	73.44	68.15	68.02	-5/32 : 12
G-5	73.69	68.39	68.27	-1/8 : 12
G-6	73.93	68.64	68.52	-1/8 : 12
G-7	74.18	68.89	68.78	-3/32 : 12

Note:
1. Elevations are at ℄ intersections.
2. For seat detail, see Sht. 4.

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

ABUTMENT #2 & WINGWALL #3 & #4 ELEVATIONS & SECTIONS

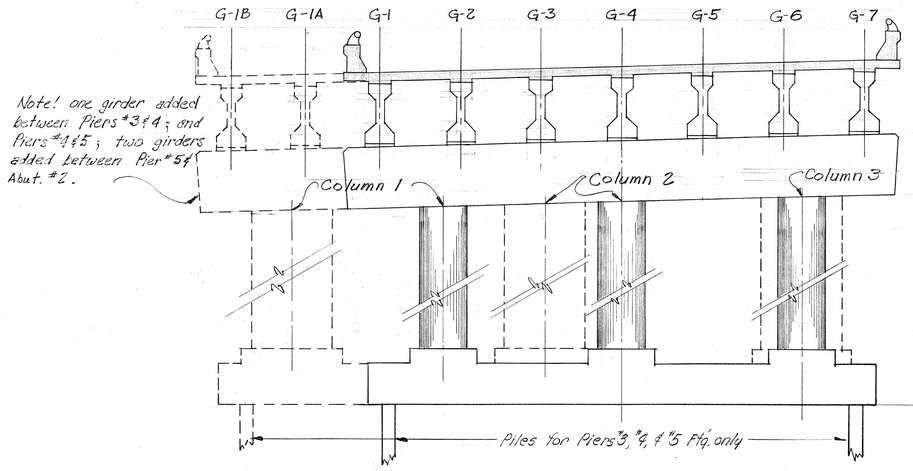
WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

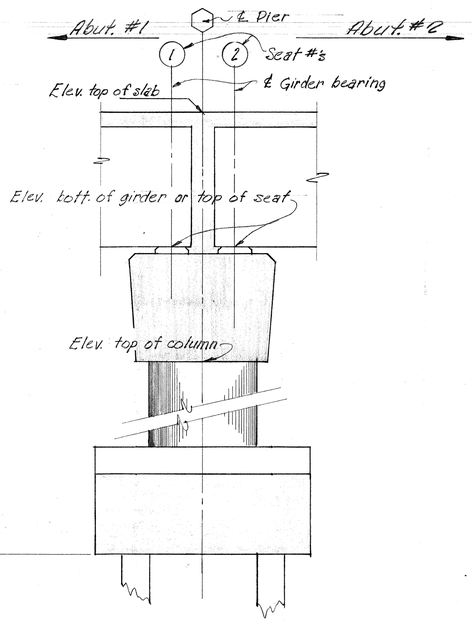
SHEET No. 5 OF 12 SHEETS

72

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	73	181



SCHEMATIC PIER ELEVATION "C"-"C"



SCHEMATIC PIER SECTION

SCHEDULE OF ELEVATIONS

PIER No	TOP OF SLAB	BOTTOM OF GIRDER														TOP OF SEAT														TOP OF COLUMN			BOTTOM OF FOOTING
	GIRDER	GIRDER & SEAT														GIRDER & SEAT														COLUMN			
	G-1B	G-1A		G-1		G-2		G-3		G-4		G-5		G-6		G-7		G-1B		G-1A		G-1		G-2		G-3		G-4		G-5		G-6		G-7		1	2	3	
				1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2				
1				13.47		13.20	13.15	13.29	13.24	13.38	13.33	13.47	13.42	13.56	13.51	13.65	13.60	13.74	13.69																	68.49	68.60	68.85	50.0
2				16.77		11.49	11.46	11.58	11.55	11.67	11.64	11.76	11.73	11.85	11.82	11.94	11.91	12.03	12.00																	66.10	66.90	67.10	40.0
3*				15.75		10.45	10.41	10.54	10.51	10.63	10.60	10.72	10.69	10.81	10.79	10.90	10.88	10.99	10.97			10.31		10.35	10.35	10.42	10.39	10.51	10.48	10.60	10.57	10.69	10.66	10.78	10.75	10.87	10.85	65.64	65.84	66.04	26.00
4	14.96			15.02		9.74	9.72	9.81	9.79	9.90	9.88	9.99	9.98	10.09	10.07	10.18	10.16	10.27	10.25																	64.90	65.12	65.44	22.6
5	14.04			14.16		8.88	8.85	9.00	8.97	9.11	9.09	9.22	9.20	9.34	9.31	9.45	9.43	9.56	9.54																	64.00	64.30	64.61	22.00

* See Top of Pier Cap Plan, Sht 1 for Top of Slab Elev. loc., Pier #3.

NOTE! Piers 1, 2, 4, & 5 are fixed supports, elevation top of conc. seat same as elevation bot. of girder at these piers. See Sht 34 for Typical Concrete Seat Details.

TYPICAL PIER SECTIONS & SCHEDULE OF ELEVATIONS FOR STRUCTURE #13

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

SHIMAZU SHIMABUKURO & FUKUDA, INC.
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

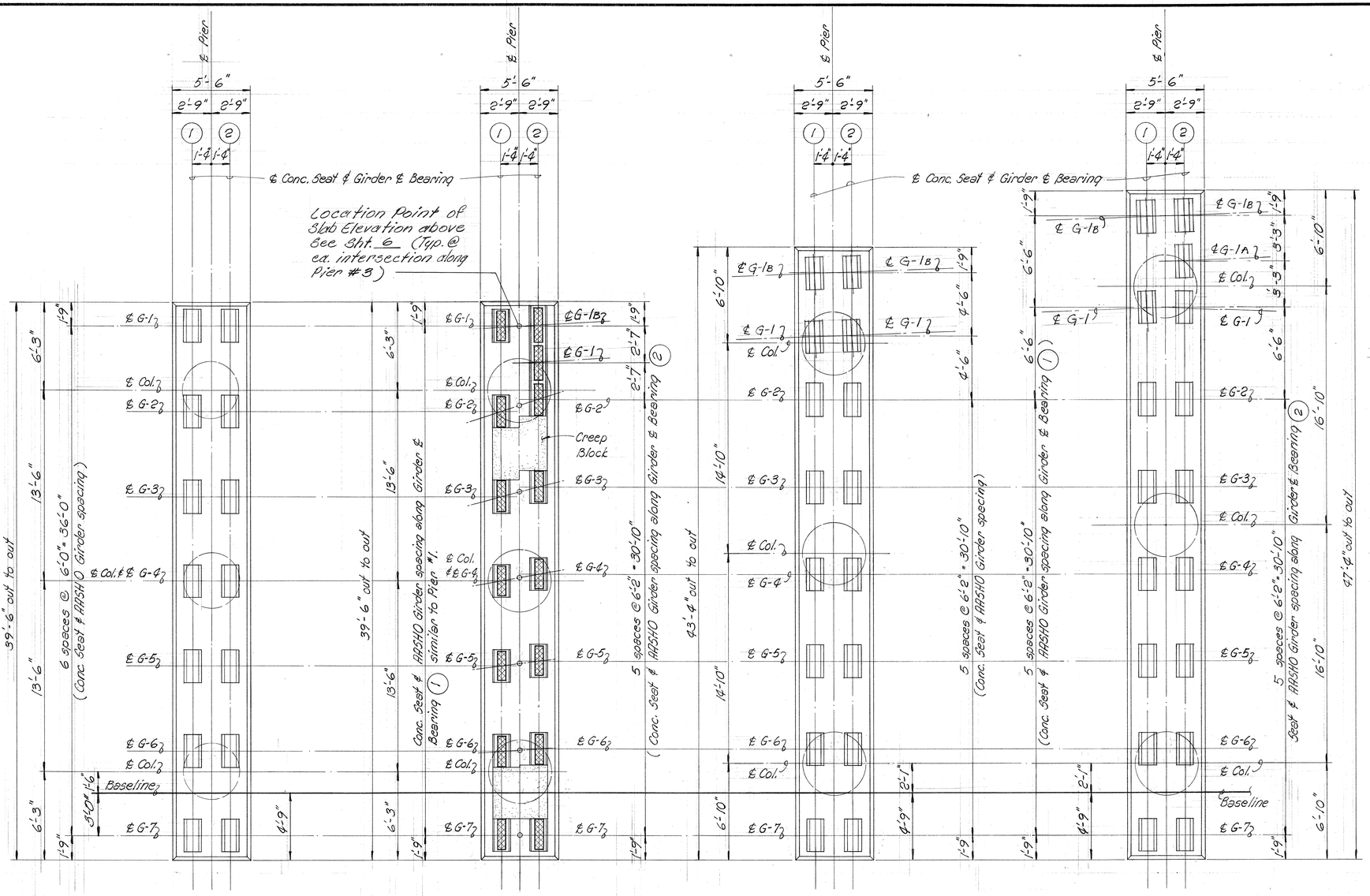
STRUCTURE No. 13
PIER ELEVATION & SECTION & SCHEDULE OF ELEVATIONS

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

SHEET No. 6 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	74	181



PIERS #1 & #2
FIXED BEARING

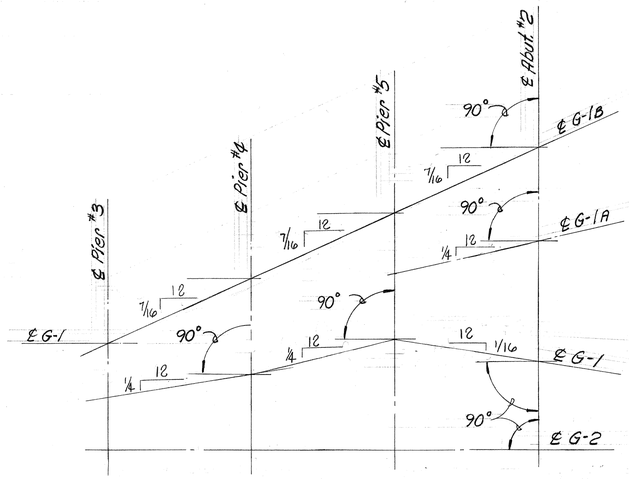
PIER #3
EXPANSION BEARING

PIER #4
FIXED BEARING

PIER #5
FIXED BEARING

TOP OF PIER CAP PLANS

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



SCHEMATIC
℄ GIRDER & SEAT SKEW DIRECTION

N.T.S.

PIER CONCRETE SEAT BEVELS

Piers / Girders	1		2		3		4		5	
	①	②	①	②	①	②	①	②	①	②
G-1B	—	—	—	—	—	-2/32 :12	-3/32 :12	-1/8 :12	-1/8 :12	-7/32 :12
G-1A	—	—	—	—	—	—	—	—	—	-1/32 :12
G-1	-1/4 :12	-7/32 :12	-7/32 :12	-1/8 :12	-1/8 :12	-1/16 :12	-1/16 :12	-3/32 :12	-3/32 :12	-3/16 :12
G-2	↓	↓	↓	↓	↓	↓	↓	↓	↓	-3/16 :12
G-3	↓	↓	↓	↓	↓	↓	↓	↓	↓	5/32 :12
G-4	↓	↓	↓	↓	↓	↓	↓	↓	↓	-5/32 :12
G-5	↓	↓	↓	↓	↓	↓	↓	↓	↓	-1/8 :12
G-6	-1/4 :12	↓	↓	↓	↓	↓	↓	↓	↓	-1/8 :12
G-7	-7/32 :12	-7/32 :12	-7/32 :12	-1/8 :12	-1/8 :12	-1/16 :12	-1/16 :12	-3/32 :12	-3/32 :12	-3/32 :12

REFERENCE DRAWINGS

1. Concrete Seats & Creep Blocks __ Sht. 54
2. Pier Caps _____ Sht. 53

Note: For all fixed-bearing Pier Caps, see Standard Details on Sht. 55 for bonding diaphragms, dowels, and keys which are not shown here.

ORIGINAL PLAN	SURVEY PLOTTED BY:	DATE
	DRAWN BY:	"
	TRACED BY:	"
NOTE BOOK	DESIGNED BY:	"
	QUANTITIES BY:	"
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

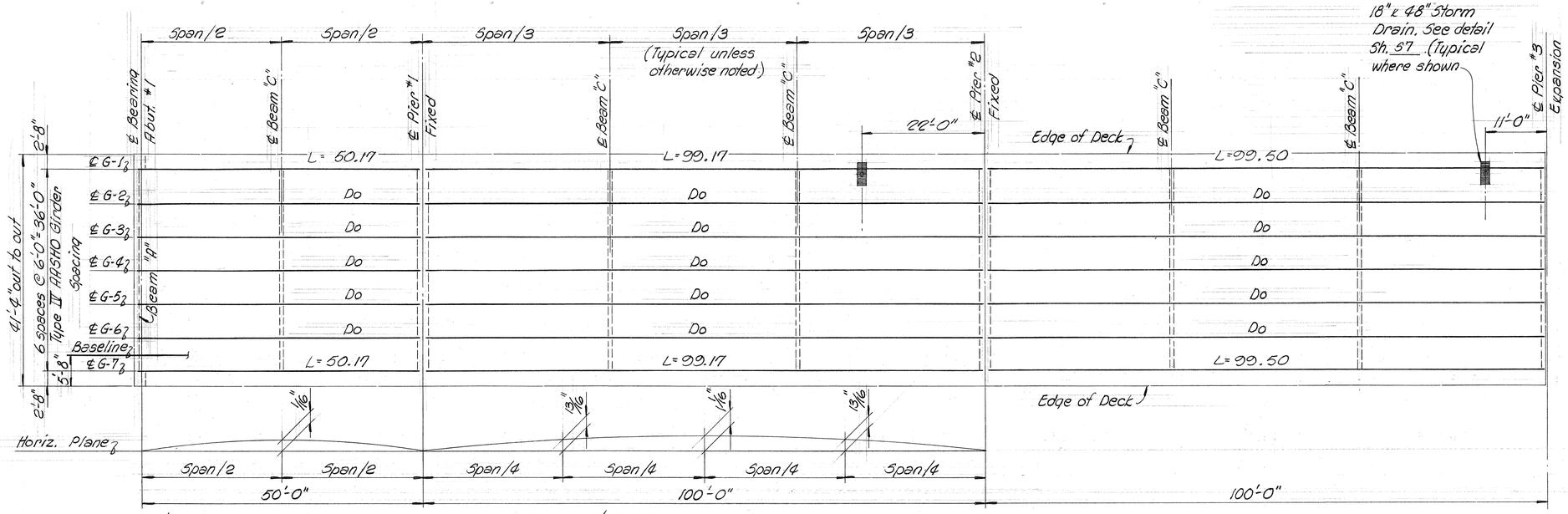
TOP OF PIER CAP & CONCRETE SEAT SPACING

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

SHEET No. 7 OF 12 SHEETS

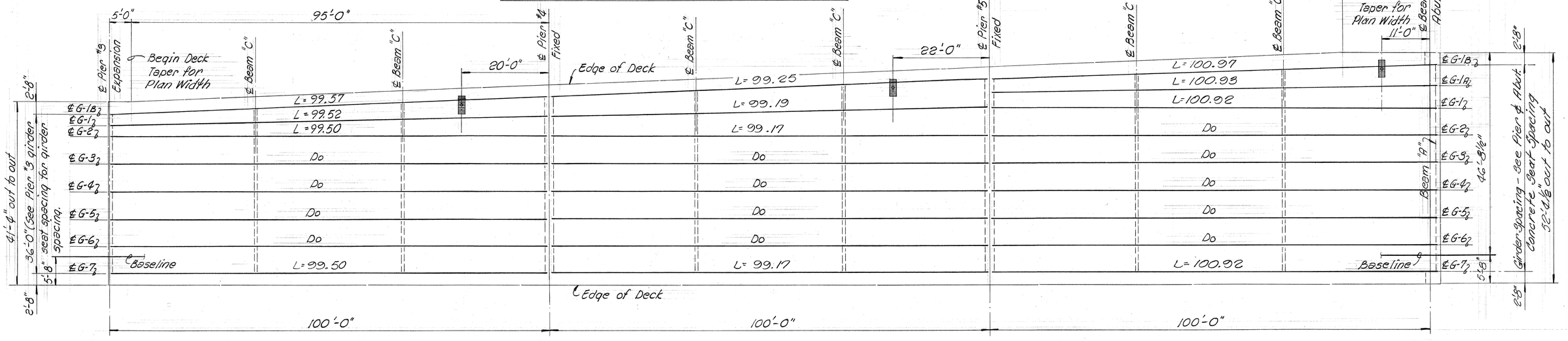
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	75	181



50' SLAB CAMBER DIAGRAM

TYPICAL 100' SLAB CAMBER DIAGRAM

ABUTMENT #1 TO PIER #3



PIER #3 TO ABUTMENT #2

DECK FRAMING PLANS

Scale: 3/32" = 1'-0"

NOTE!
Girder casting lengths given on this sheet are measured at girder ℄ and are horizontal out to out lengths.

REFERENCE DRAWINGS

1. Beam "A" ---------- Sh. 56
2. Beam "C" ---------- Sh. 56
3. Beam over Fixed & Expansion Pier Supports -- Sh. 55

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

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

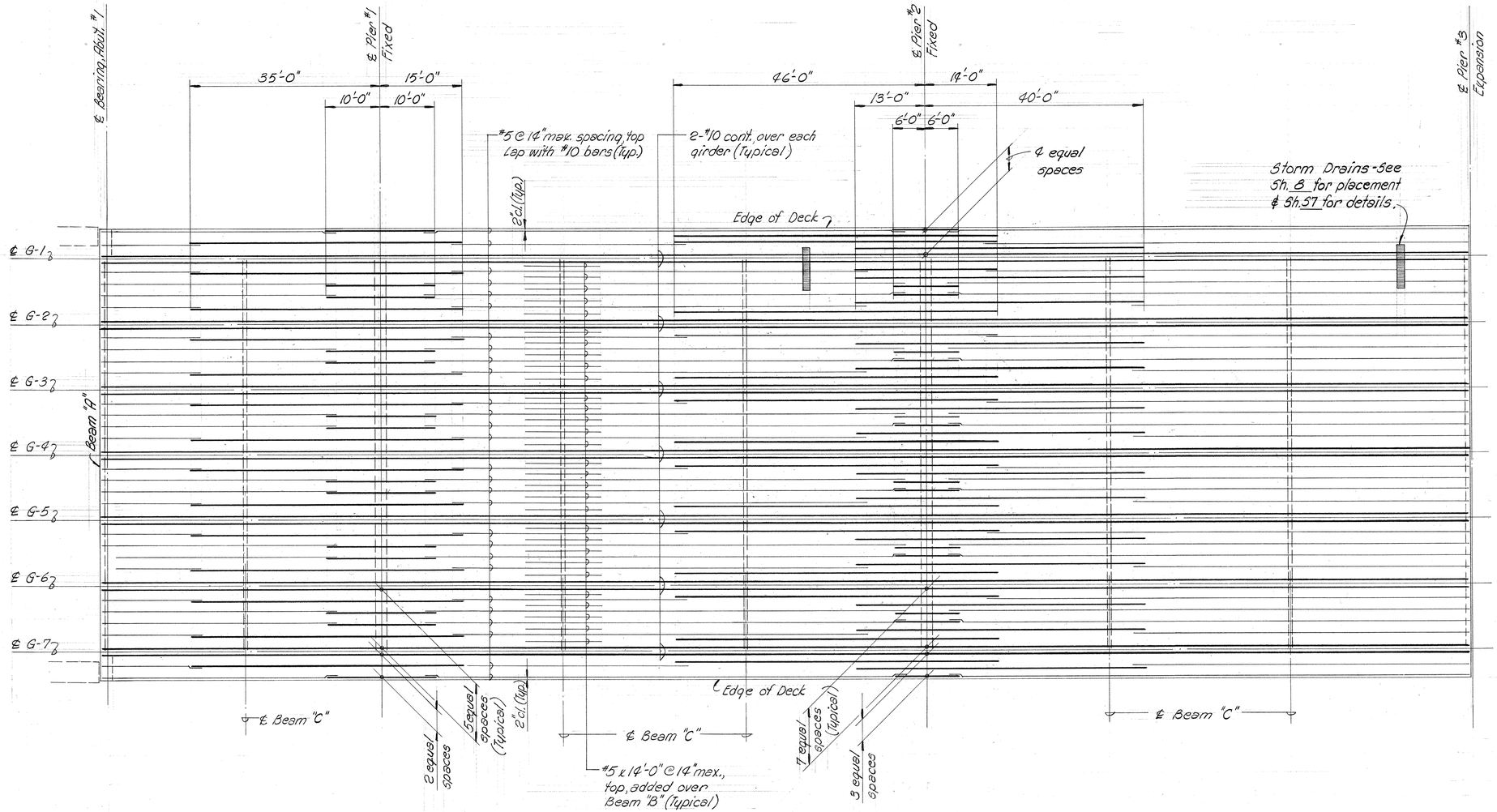
DECK FRAMING PLANS

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

SHEET No. 8 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	76	181



NOTES

1. Except as otherwise noted all slab bars to be #10 bars. (#10 Shown Dark)
2. All #5 @ 14" max. spacing shall be extended & lapped a min. of 2'-6" with adjacent #10 bars as shown. (#5 shown lightly)
3. Transverse bars not shown, See Typical Deck Section, Sh. 11
4. All vertical dimensions are measured plumb
5. Beams "A" & "C" - See Sh. 36.

PLAN BETWEEN ABUTMENT #1 & PIER #3

DECK SLAB TOP LONGITUDINAL REINFORCING PLACEMENT PLAN

Scale: Horiz., 3/32" = 1'-0"; Vert., 3/16" = 1'-0"

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

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

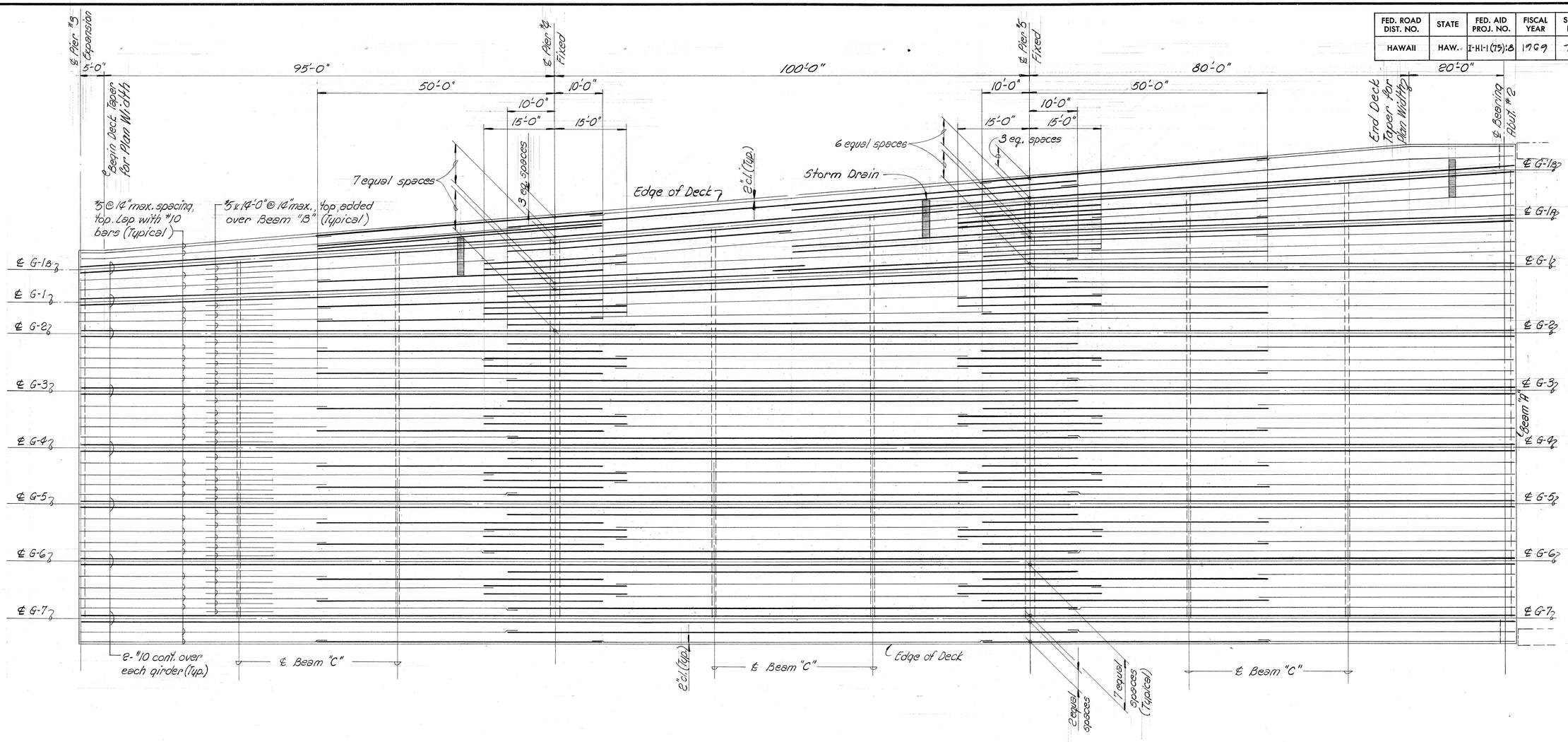
DECK SLAB TOP
LONGIT. REINF. BETWEEN ABUT. #1 & PIER #3

WAIAWA INTERCHANGE
P.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

SHEET No. 9 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	77	181



See notes Sh. 9

PLAN BETWEEN PIER #3 & ABUTMENT #2

DECK SLAB TOP LONGITUDINAL REINFORCING PLACEMENT PLAN

Scale: Horiz., 3/32" = 1'-0"; Vert., 3/16" = 1'-0"

ORIGINAL PLAN

NOTE BOOK No. ____

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HIGHWAYS DIVISION

STRUCTURE No. 13

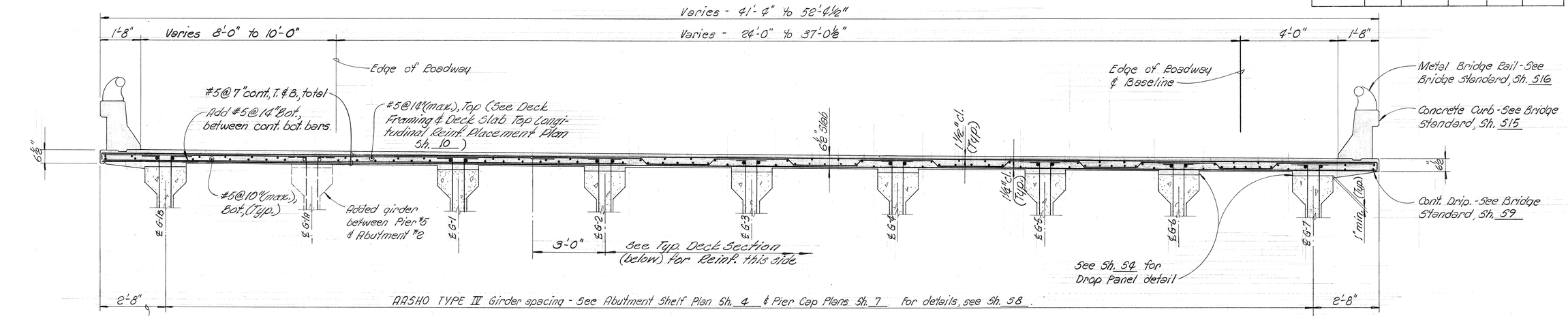
DECK SLAB TOP
LONGIT. REINF. BETWEEN PIER #3 & ABUT. #2

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

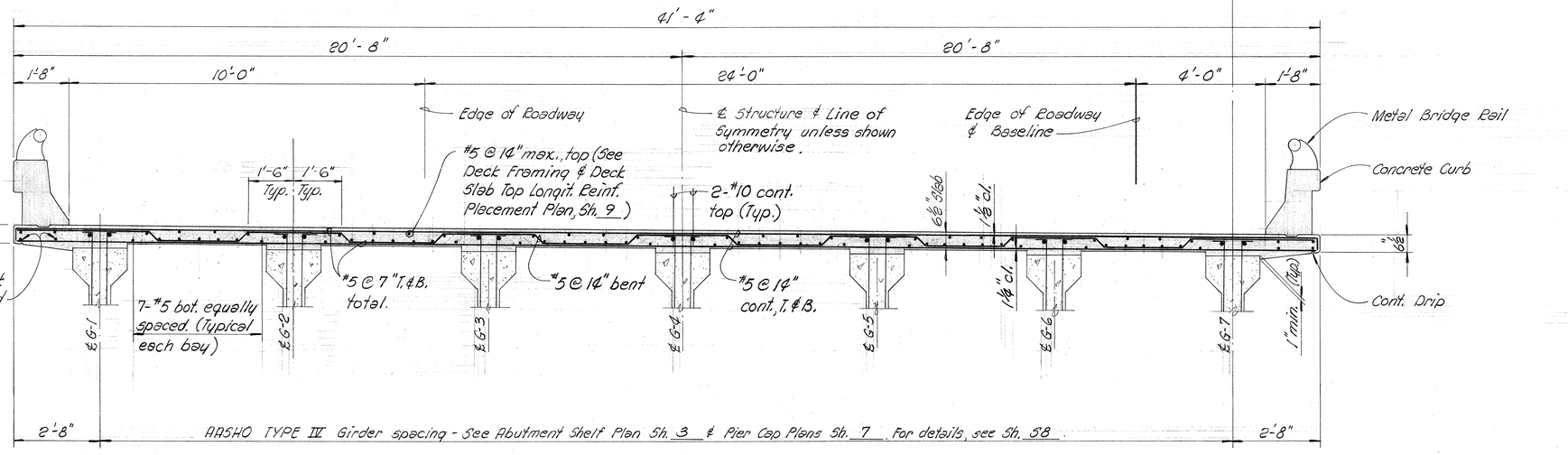
SHEET No. 10 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	78	181



DECK SECTION AT FLARE

Scale: ½" = 1'-0"



TYPICAL DECK SECTION

Scale: ½" = 1'-0"

Note! Longitudinal bars shown here are for minimum condition only. See Slab Plan for arrangement elsewhere.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	QUANTITIES BY	"
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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 13

DECK SECTIONS

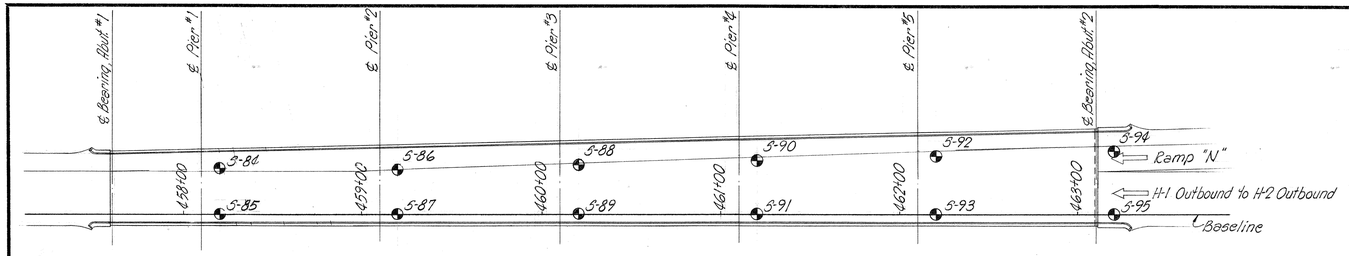
WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown Date: JUNE, 1969

SHEET No. 11 OF 12 SHEETS

78

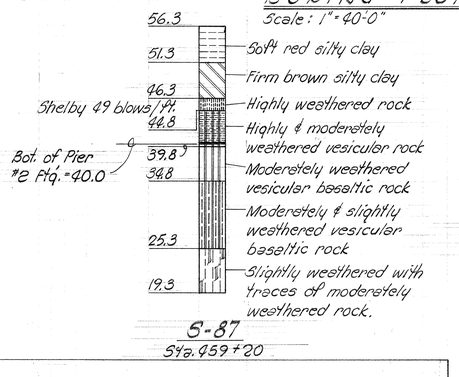
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(75):8	1969	79	181



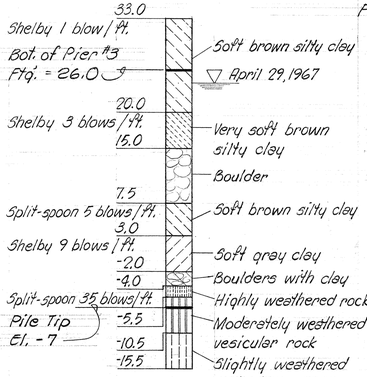
BORING PLOT PLAN

Scale: 1"=40'-0"

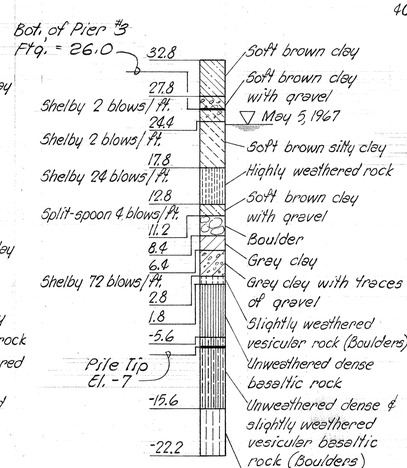
True North



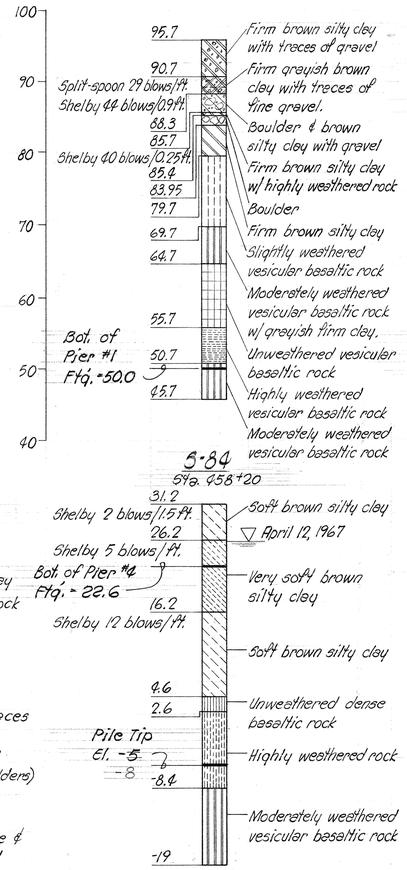
S-87
Sta. 459+20



S-88
Sta. 460+20

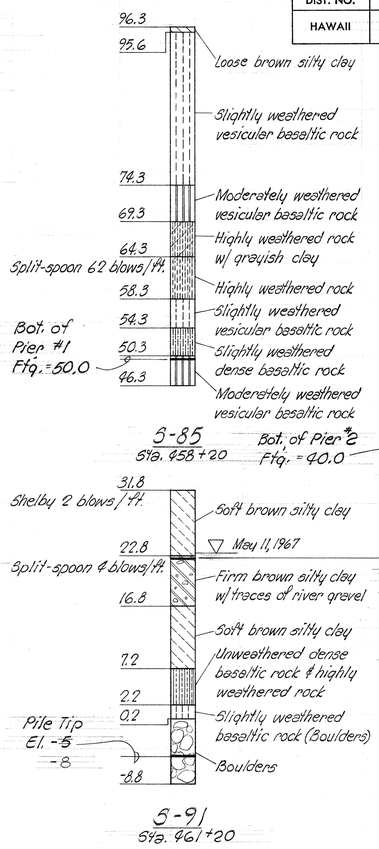


S-89
Sta. 460+20



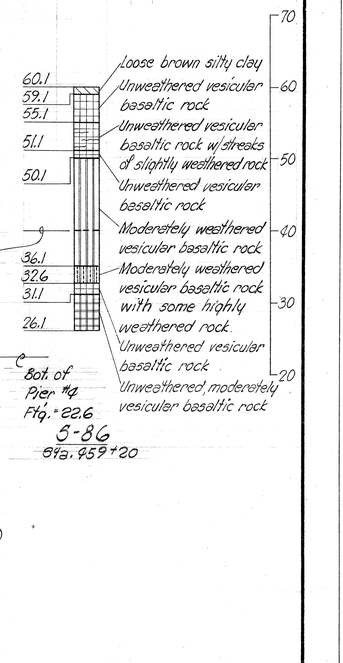
S-84
Sta. 458+20

S-90
Sta. 461+20

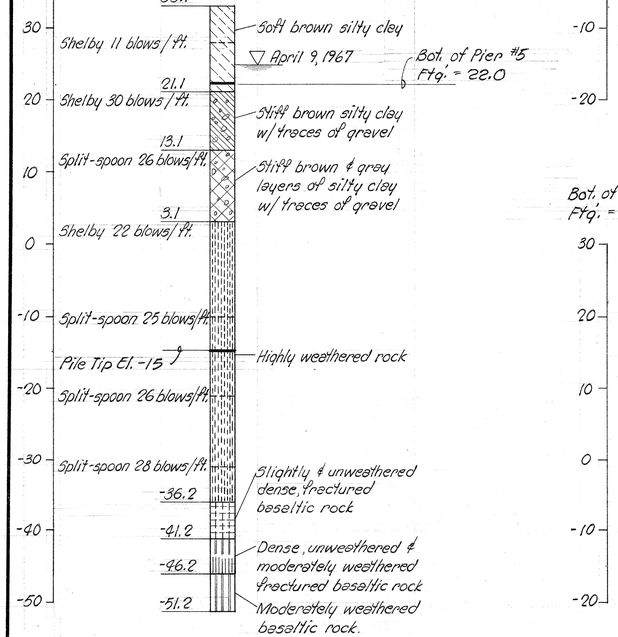


S-85
Sta. 458+20

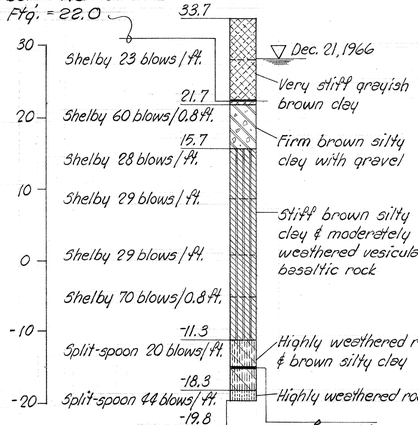
S-91
Sta. 461+20



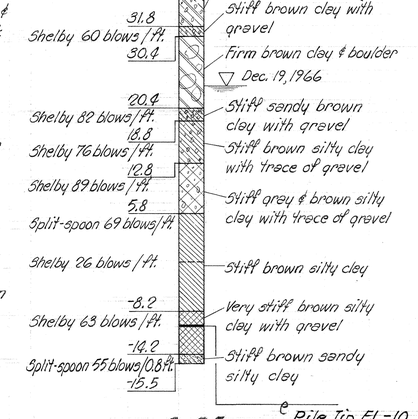
S-86
Sta. 459+20



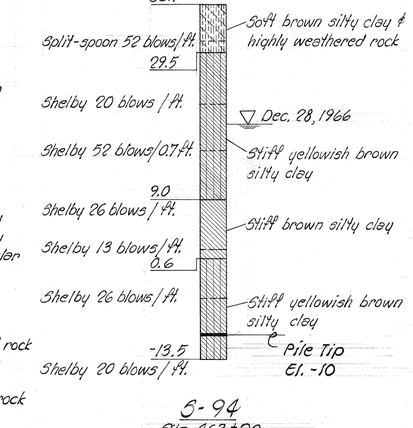
S-92
Sta. 462+20



S-93
Sta. 462+20



S-95
Sta. 463+20



S-94
Sta. 463+20

BORING LOGS FOR STRUCTURE 13

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STRUCTURE NO. 13

BORING LOGS

WAIAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(75):8

Scale: As shown. Date: JUNE, 1969

SHEET No. 12 OF 12 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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