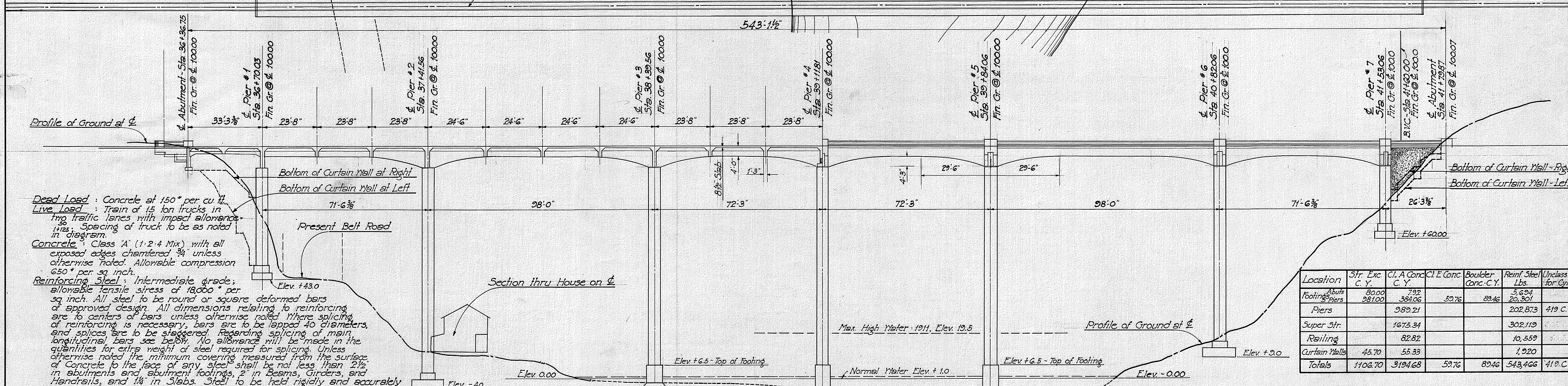
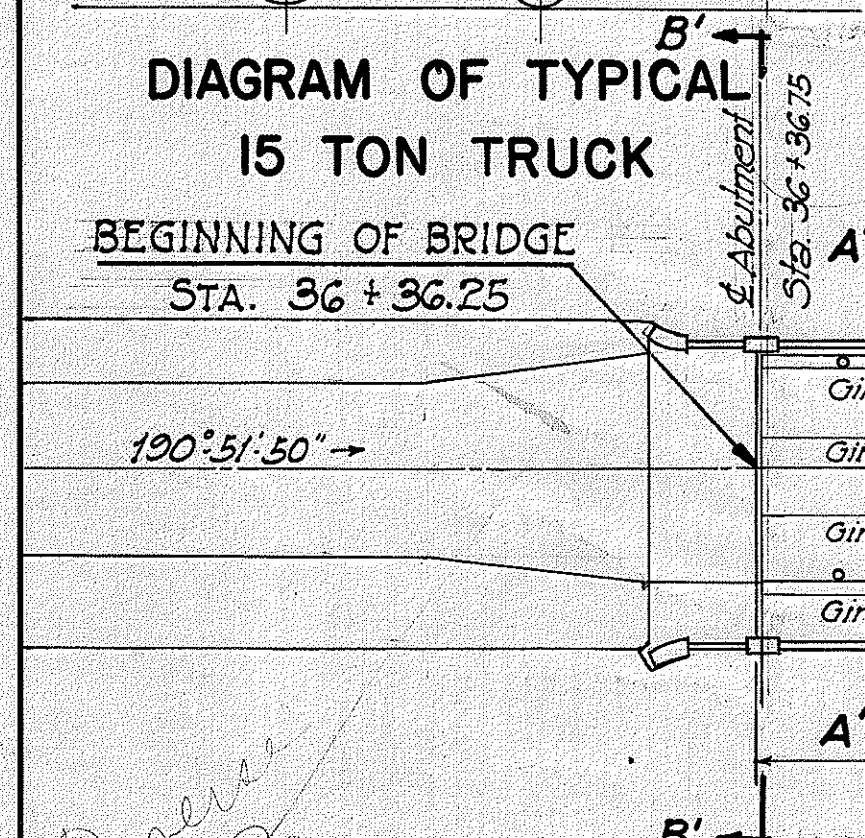
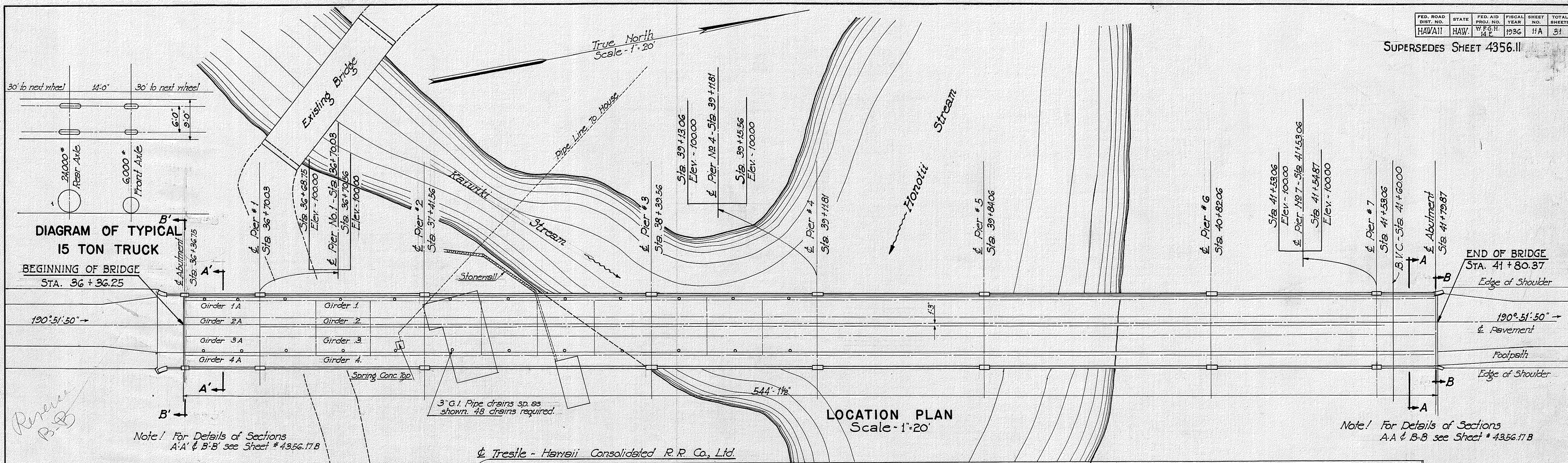


SUPERSEDES SHEET 4356.11



Location	Str. Exc. C. Y.	Cl. A Conc. C. Y.	Cl. E Conc. C. Y.	Boulder Conc. C. Y.	Reint. Steel Lbs.	Uncl. Steel for Cyl.
Footings & Piers	8000	792	38406	5276	8946	5,694
Piers	989.21					202,873
Super Str.	1675.94					302,119
Railing	82.82					10,559
Curtain Walls	45.70					1,920
Totals	1104.70	3194.68	5976	8946	543,466	419 C.Y.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

HONOLII BRIDGE

NO. 14 STA 36 36.25 TO 41 80.37

HAWAII BELT ROAD NO.W.P.G.H.14E

DEC. 1935

SHEET NO. 11 OF SHEETS

DATE:

SURVEY PLOTTED BY: H. F. O'NEILL

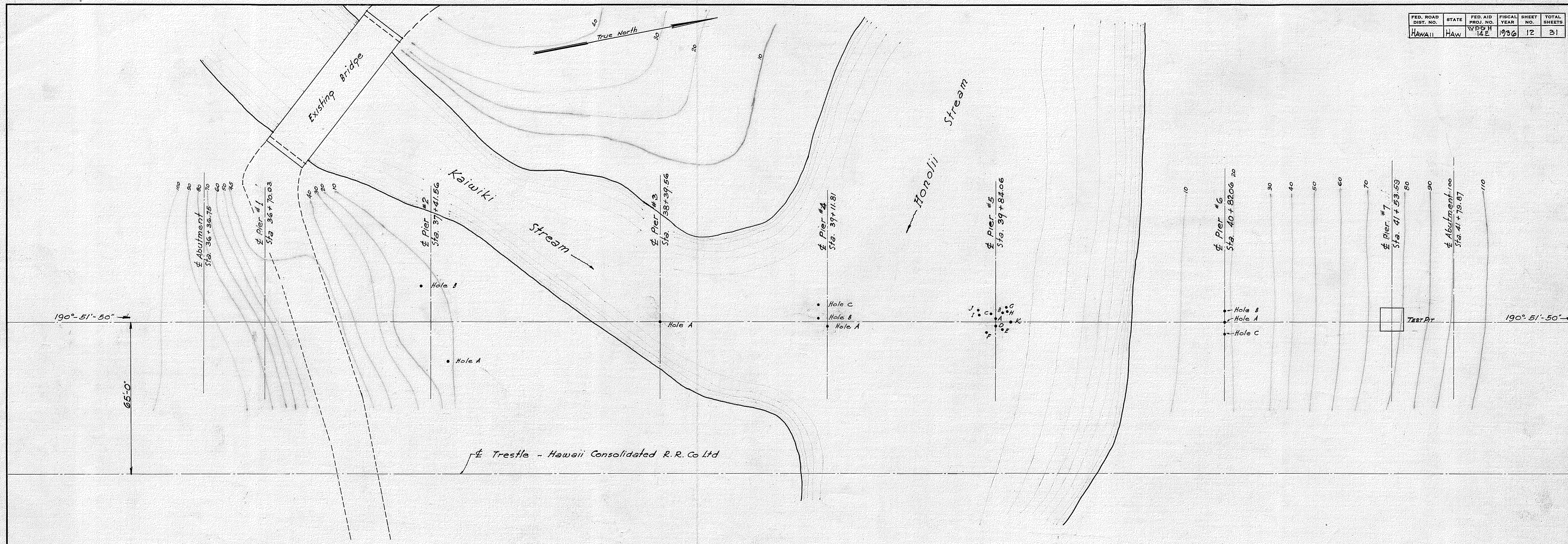
DESIGNED BY: J. O'NEILL

TRACED BY: C. K. O'NEILL

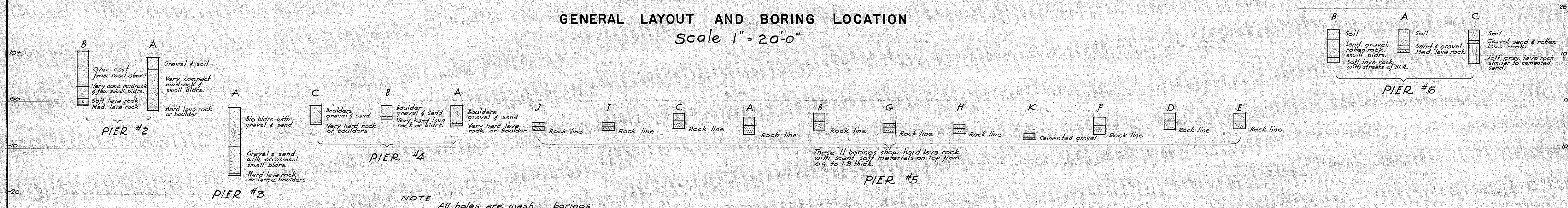
NOTE BOOK: H. F. O'NEILL

CHECKED BY: H. F. O'NEILL

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	W.P.G.H. 14 E	1936	12	31

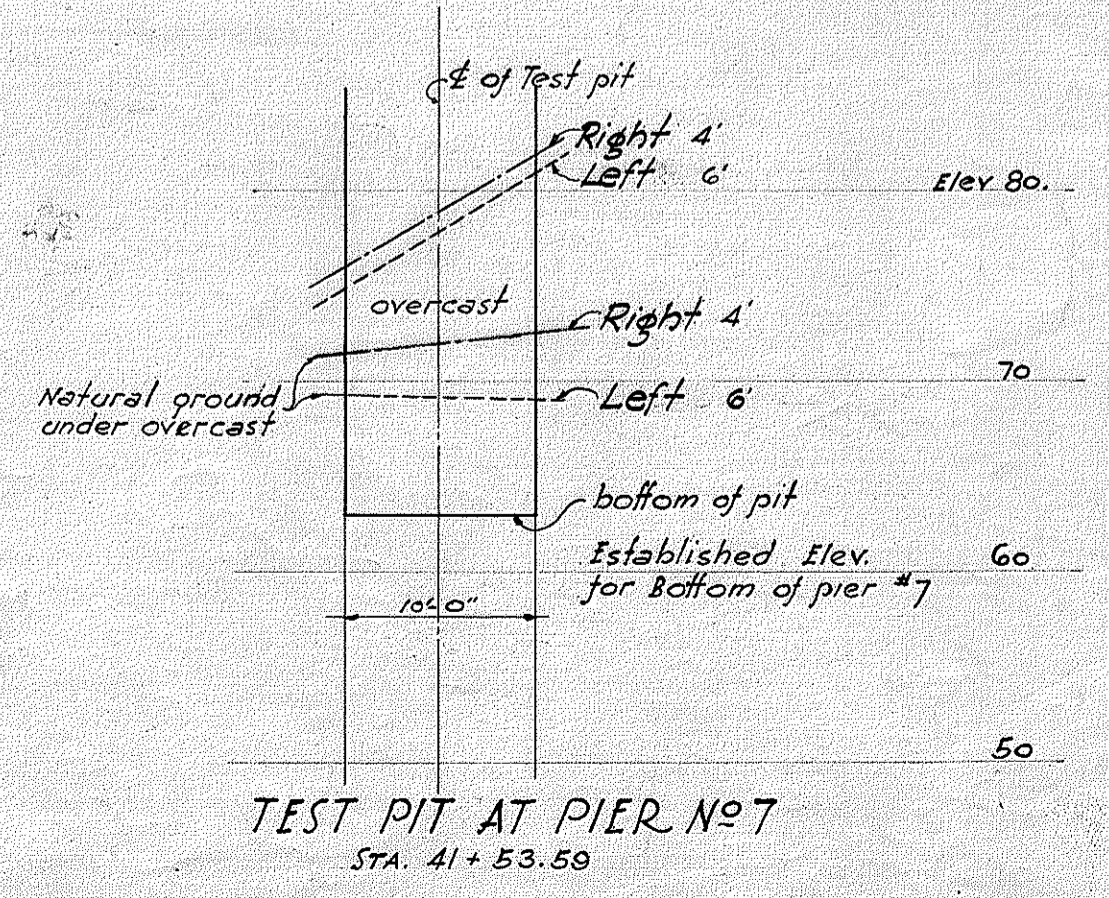


GENERAL LAYOUT AND BORING LOCATION
Scale 1" = 20'-0"



NOTE All holes are wash borings

WASH BORING DATA

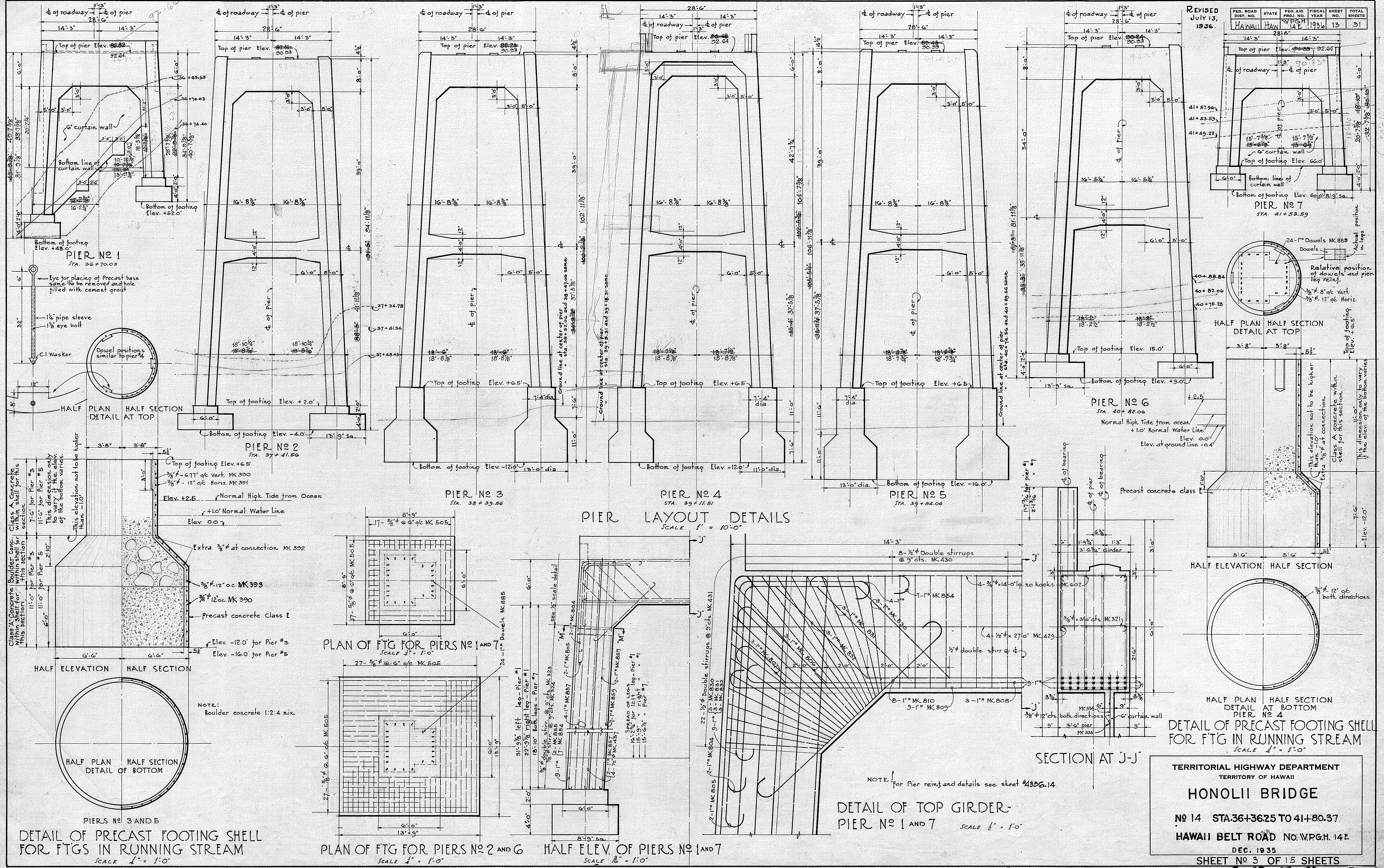


TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
HONOLII BRIDGE
No 14 STA. 36+36.25 TO 41+80.37
HAWAII BELT ROAD. NO. W.P.G.H. 14 E.
DEC. 1935

SHEET No 2 OF 15 SHEETS

4356.12

SURVEY PLOTTED BY H.F.C. DATE Dec. 35
 DESIGNED BY J.C. WICK
 DRAWN BY J.C. WICK
 NOTE BOOK QUANTITIES BY J.C. WICK
 CHECKED BY J.C. WICK
 No.



SURVEY PLOTTED BY H.F.C. DATE 12-25-35
DESIGNED BY J.O.Y.
DRAWN BY C.C.S.
CHECKED BY H.F.C. & J.O.Y.
NOTE BOOK NO. _____

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
HONOLII BRIDGE
NO 14 STA. 36+3625 TO 41+80.37
HAWAII BELT ROAD NO. W.P.G.H. 14E
DEC. 1935
SHEET NO 3 OF 15 SHEETS

PIER NO 2

PIER NO 3

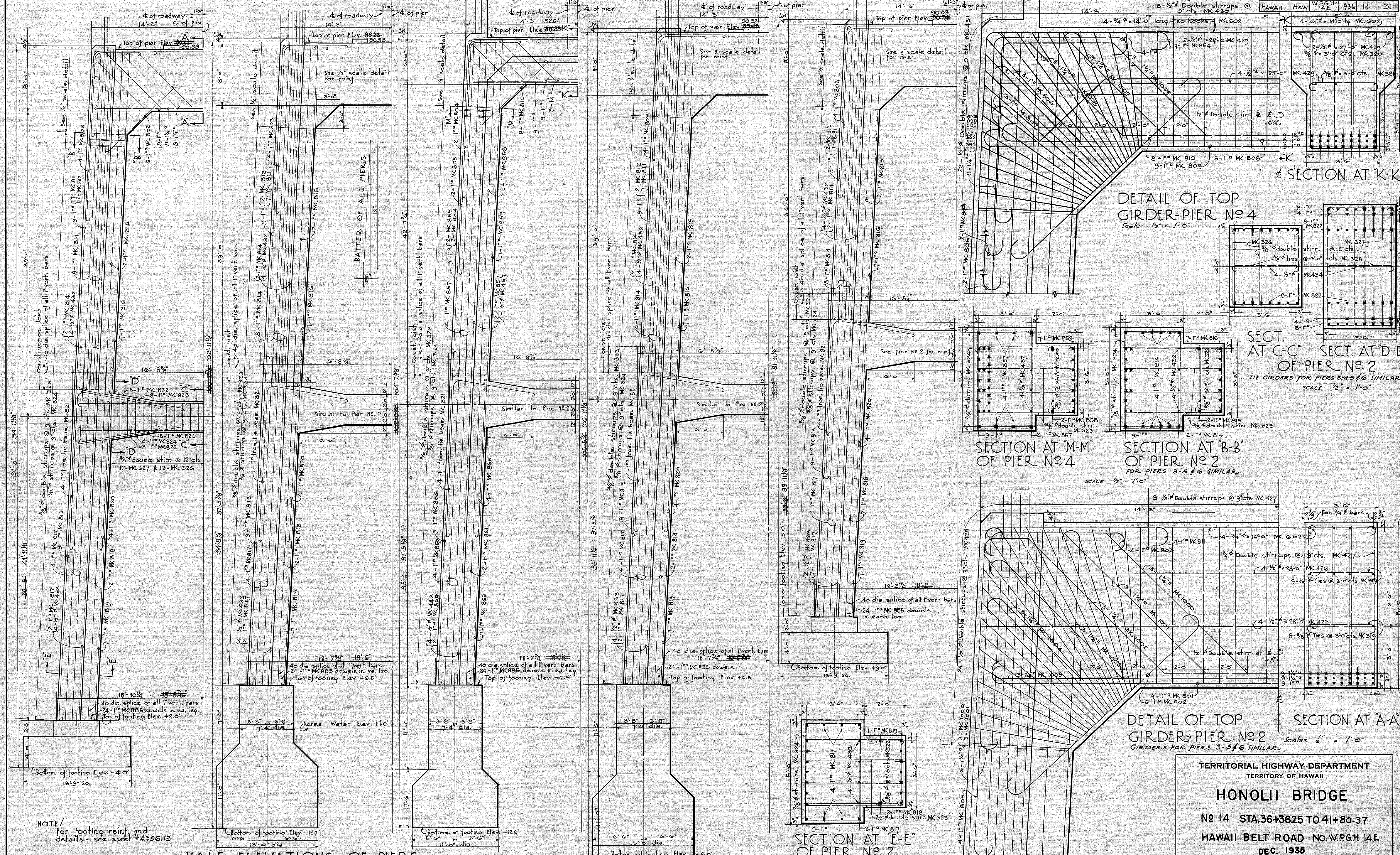
PIER NO 4

PIER NO 5

PIER NO 6

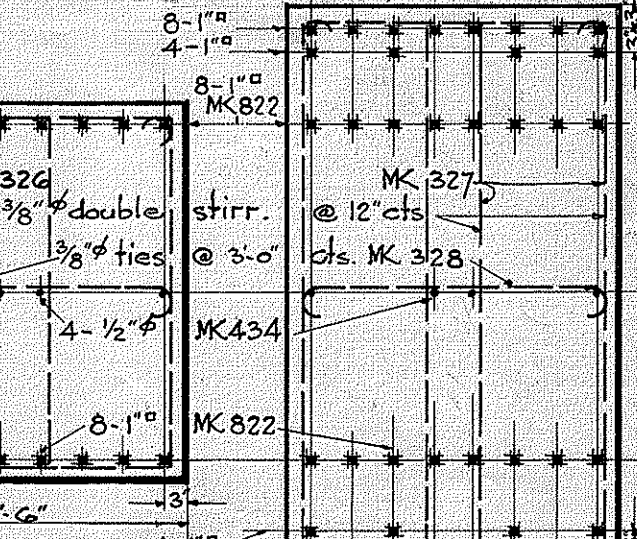
REVISED JULY 13, 1936.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	V.P.G.H. 14E	1936	14	31



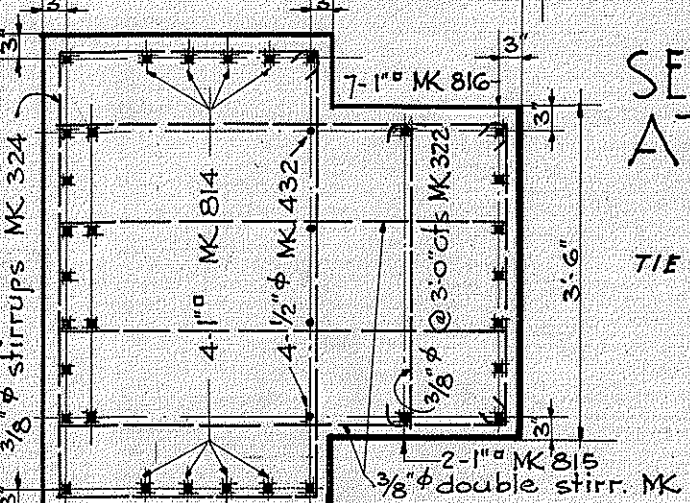
DETAIL OF TOP GIRDER-PIER NO 4

Scale 1/2" = 1'-0"



SECT. AT 'C-C' OF PIER NO 2

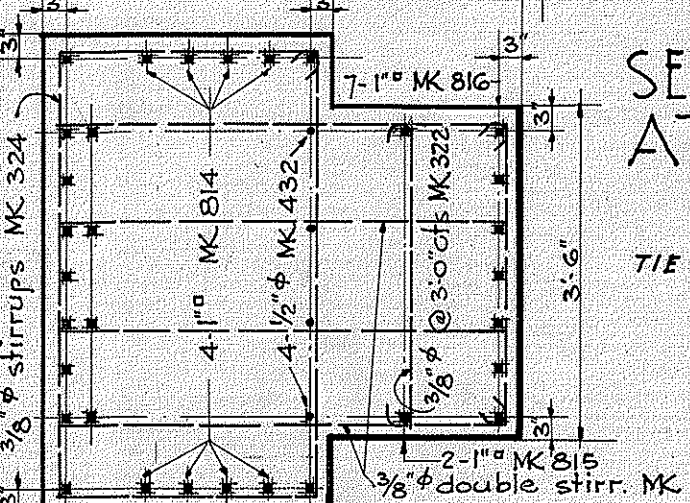
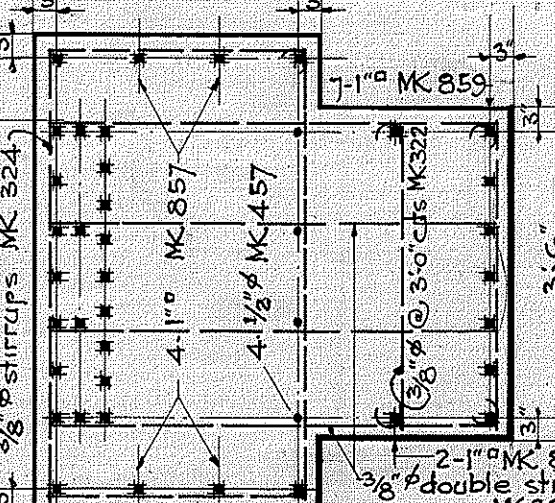
TIE GIRDERS FOR PIERS 3-5 & 6 SIMILAR. SCALE 1/2" = 1'-0"



SECTION AT 'M-M' OF PIER NO 4

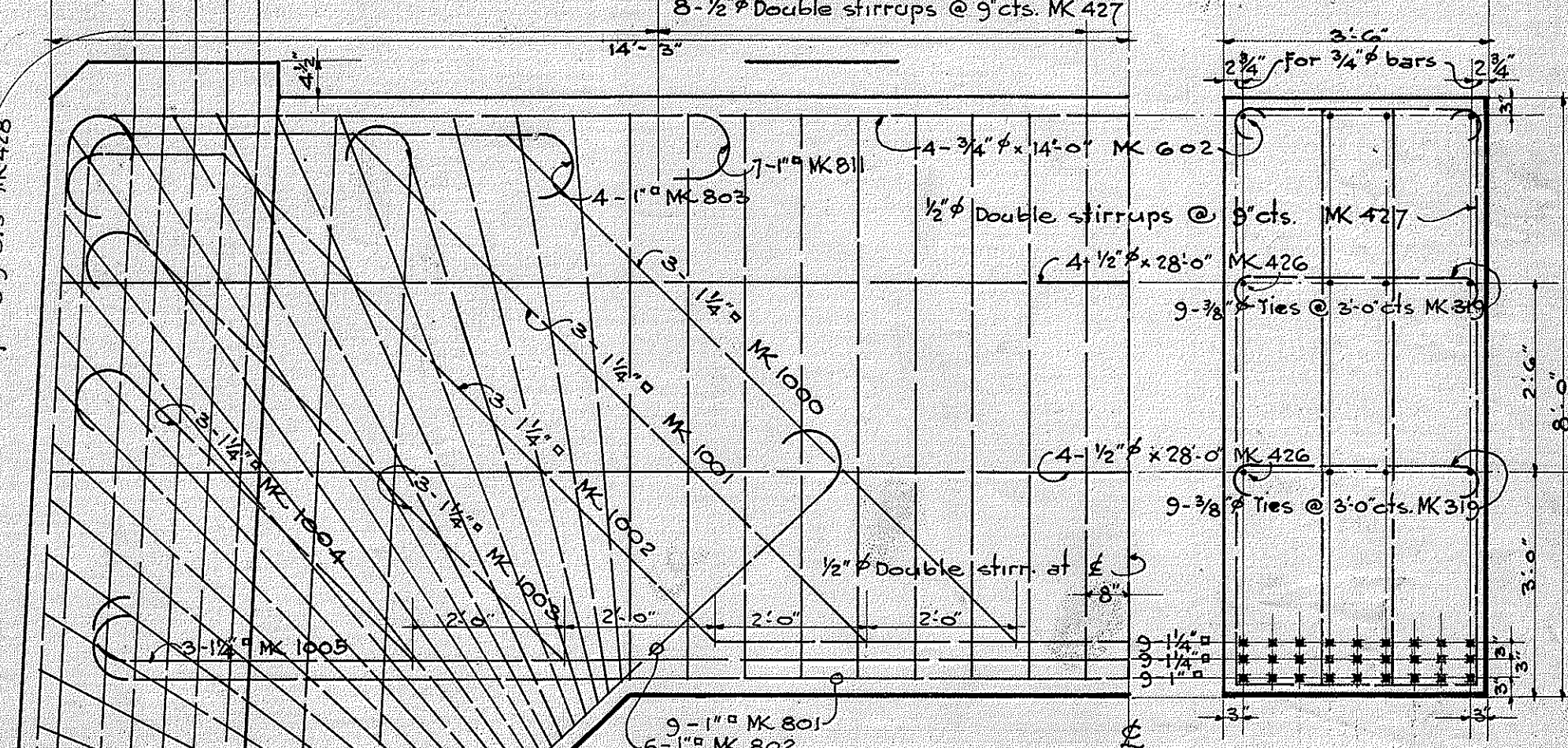
SECTION AT 'B-B' OF PIER NO 2

FOR PIERS 3-5 & 6 SIMILAR. SCALE 1/2" = 1'-0"



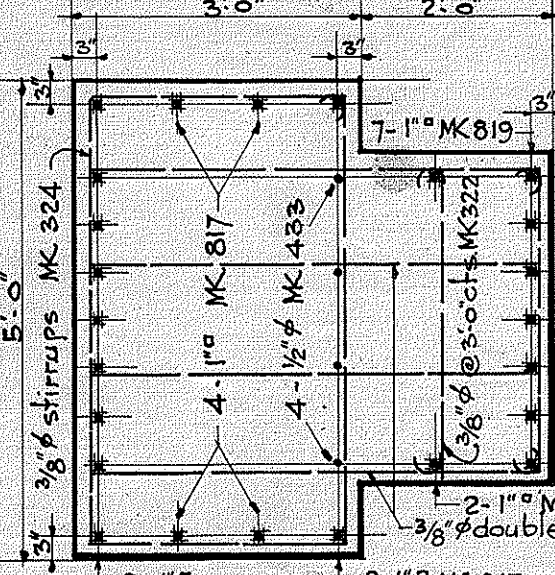
DETAIL OF TOP GIRDER-PIER NO 2

GIRDERS FOR PIERS 3-5 & 6 SIMILAR. Scales 1/2" = 1'-0"



SECTION AT 'E-E' OF PIER NO 2

FOR PIERS 3-4-5 & 6 SIMILAR



HALF ELEVATIONS OF PIERS SCALE 3/8" = 1'-0"

ORIGINAL PLAN DESIGNED BY H.F.C. SURVEY PLOTTED BY H.F.C. DATE DEC. 35
 QUANTITIES BY H.F.C. CHECKED BY J.O.Y.
 NOTE BOOK

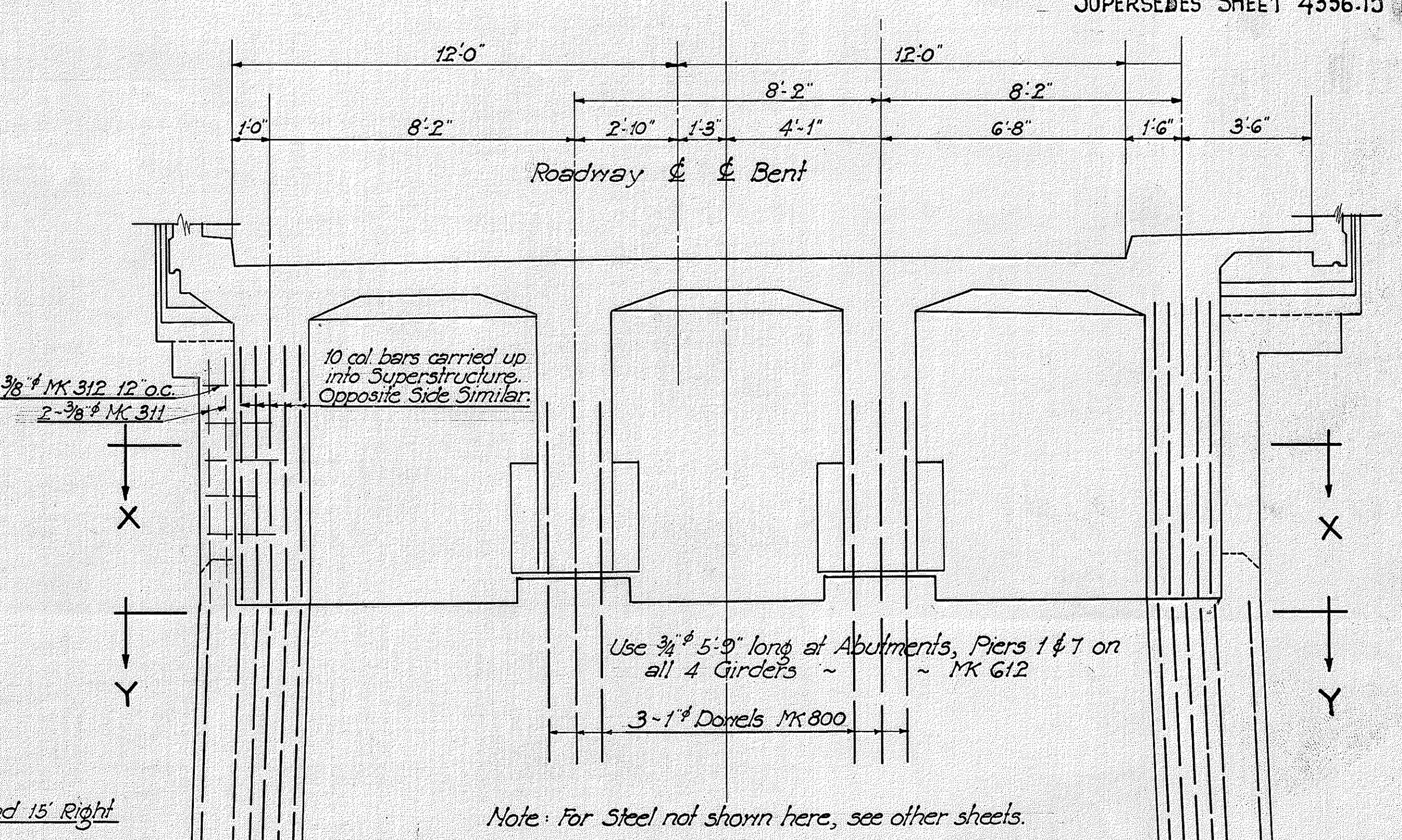
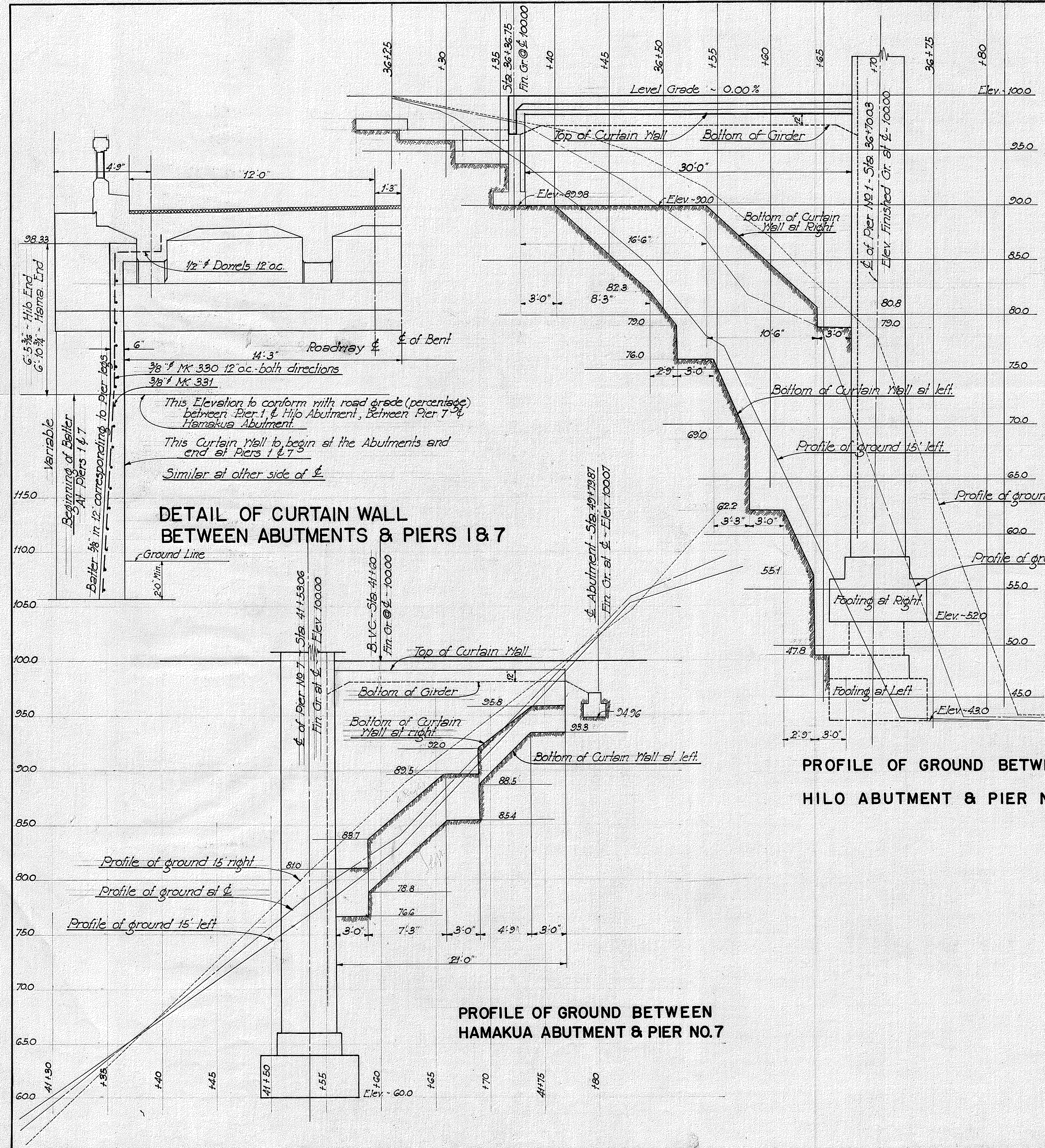
NOTE!
 For footing reinf. and details - see sheet #4356.13

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
HONOLULU BRIDGE
 NO 14 STA. 36+3625 TO 41+80.37
 HAWAII BELT ROAD NO. V.P.G.H. 14E
 DEC. 1935
 SHEET NO 4 OF 15 SHEETS

4356.14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	W.P.G.H. 14E	1936	15A	31

SUPERSEDES SHEET 4356.15



ORIGINAL PLAN	DATE DEC. 35
DESIGNED BY H.C.	
DRAWN BY J.O.Y.	
TRACED BY H.F.K.	
CHECKED BY H.C.	

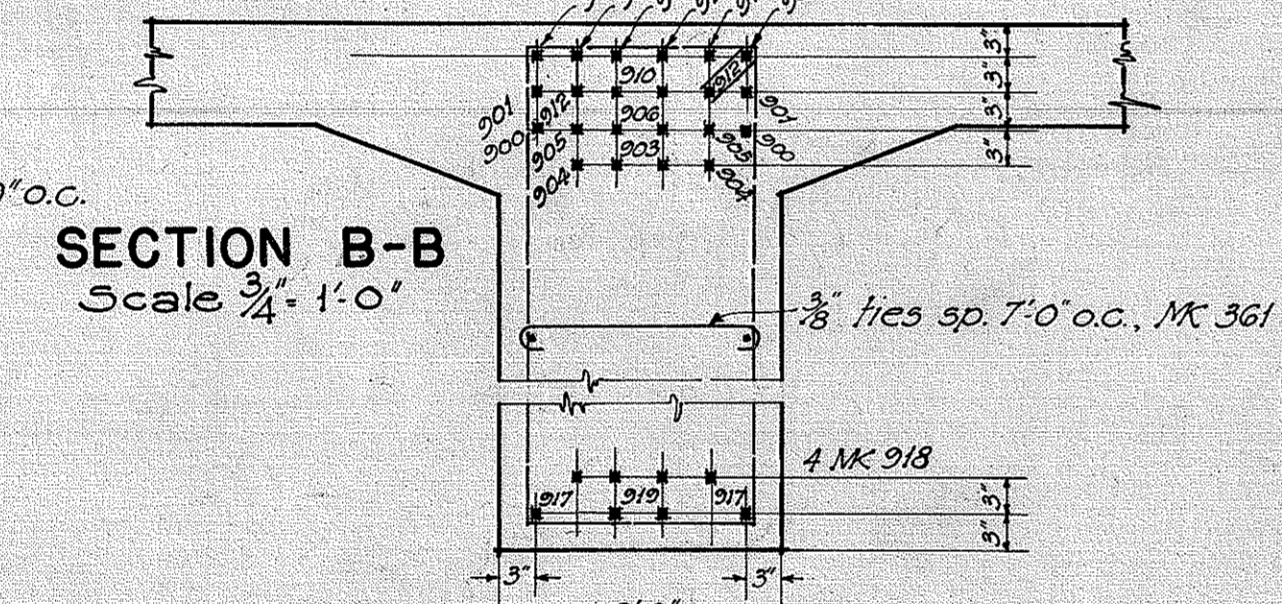
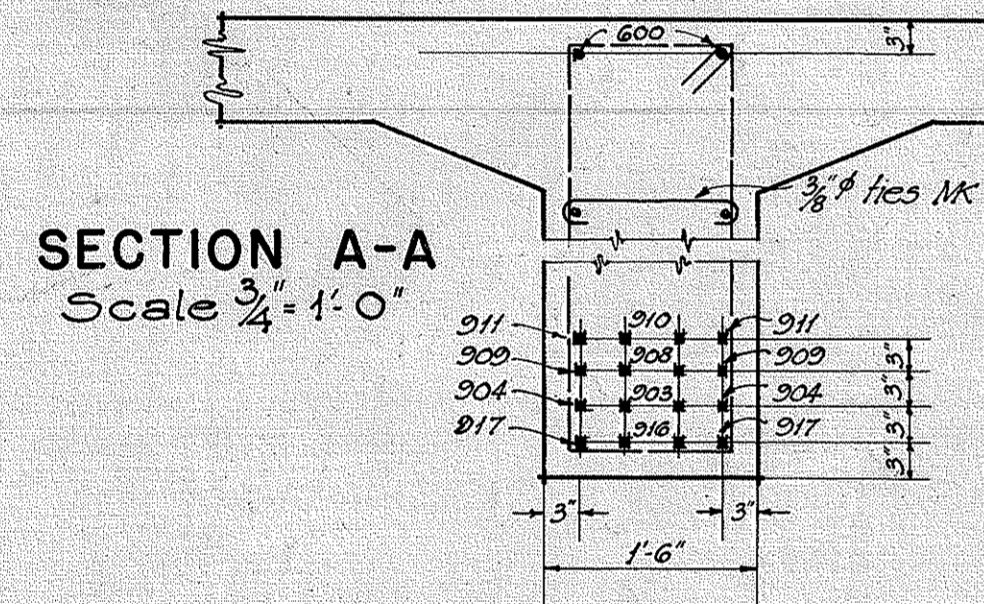
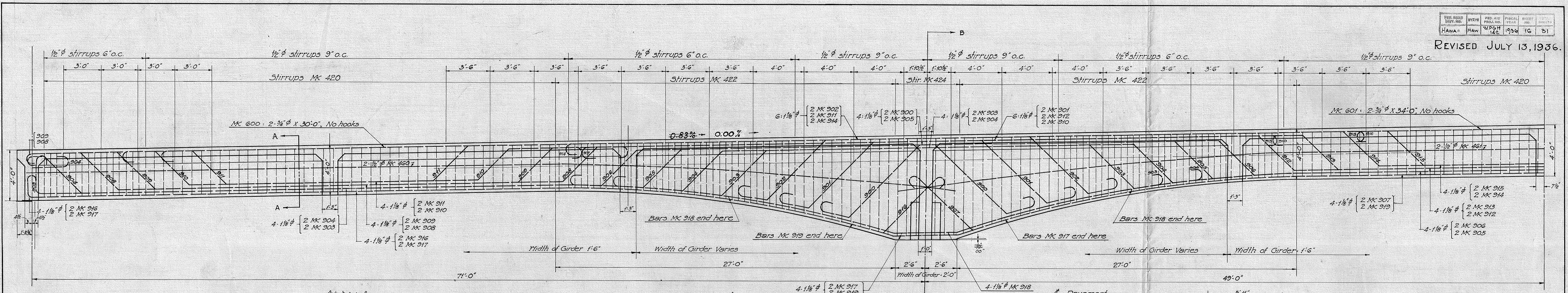
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
HONOLII BRIDGE
NO 14 STA. 36+36.25 TO 41+80.37
HAWAII BELT ROAD NO. W.P.G.H. 14E
DEC. 1935

SHEET NO. 15A OF 31 SHEETS

4356.15A

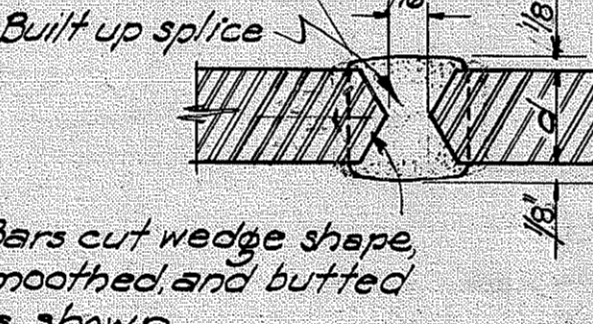
DES. NO.	DATE	REV. NO.	REV. DATE	BY	CHK.
HAWAII	HAW	1	1936	16	31

REVISED JULY 13, 1936.



DETAIL OF GIRDER 1, 2, & 3

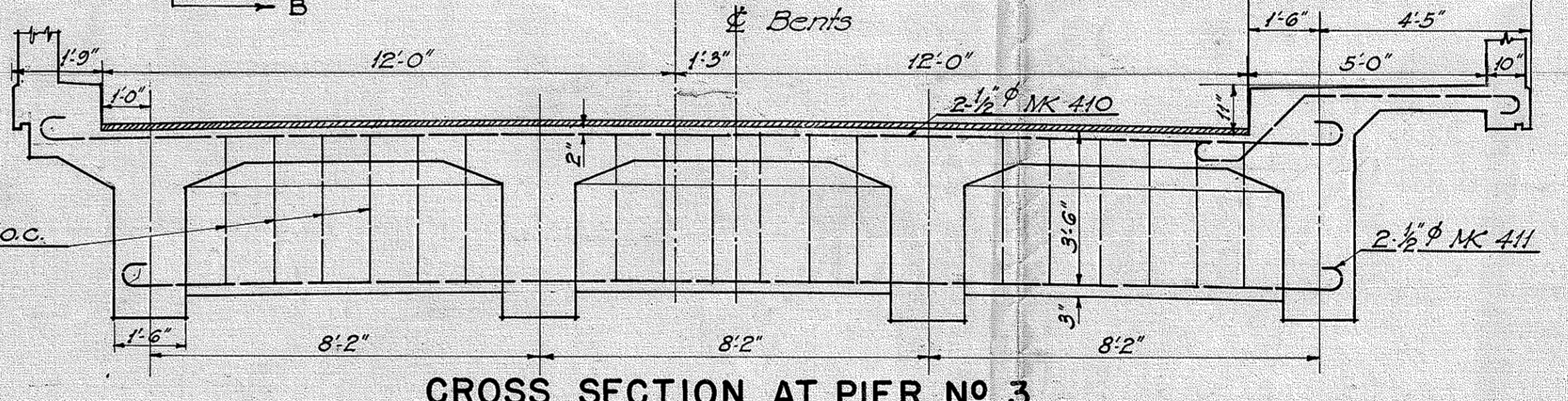
Scale 3/8" = 1'-0"



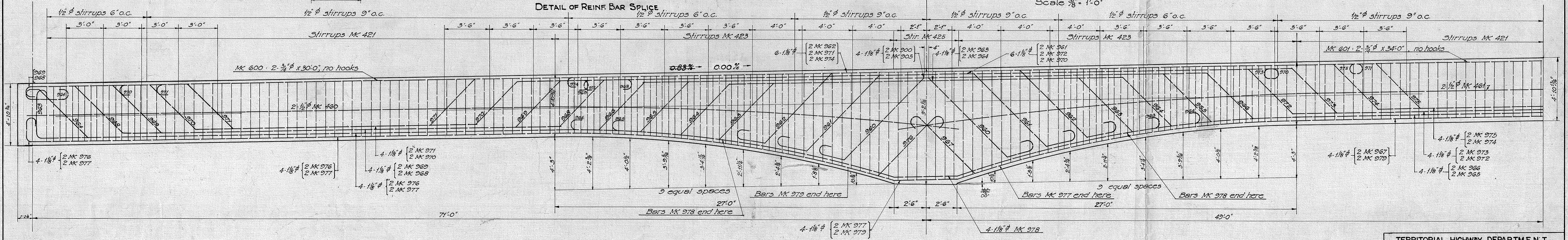
Built up splice

Electric arc weld to be done by experienced welder of proven ability.

NOTE: Splices in main girder reinf. shall be permitted only where bars exceed 80ft in length. Splices to be placed at points of minimum stress as determined by the Eng. Splices must test at least full strength.



Relative location of 914 & 915 with respect to each other. 912 & 913 to be similarly placed.



DETAIL OF GIRDER 4

Scale 3/8" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

HONOLULU BRIDGE

NO 14 - STA. 36+36.25 TO 41+80.51

HAWAII BELT ROAD NO. WPG-H. 14 E

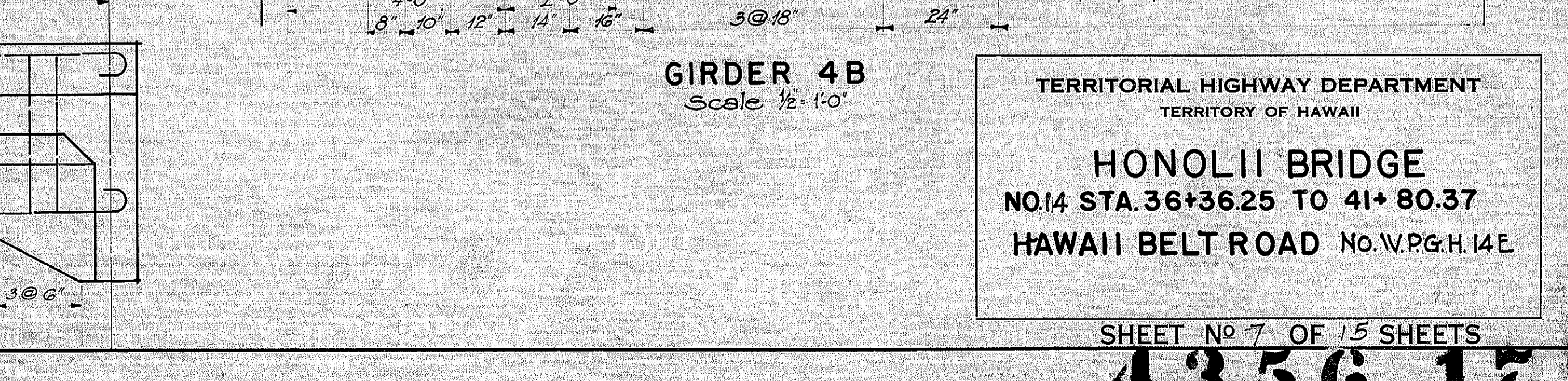
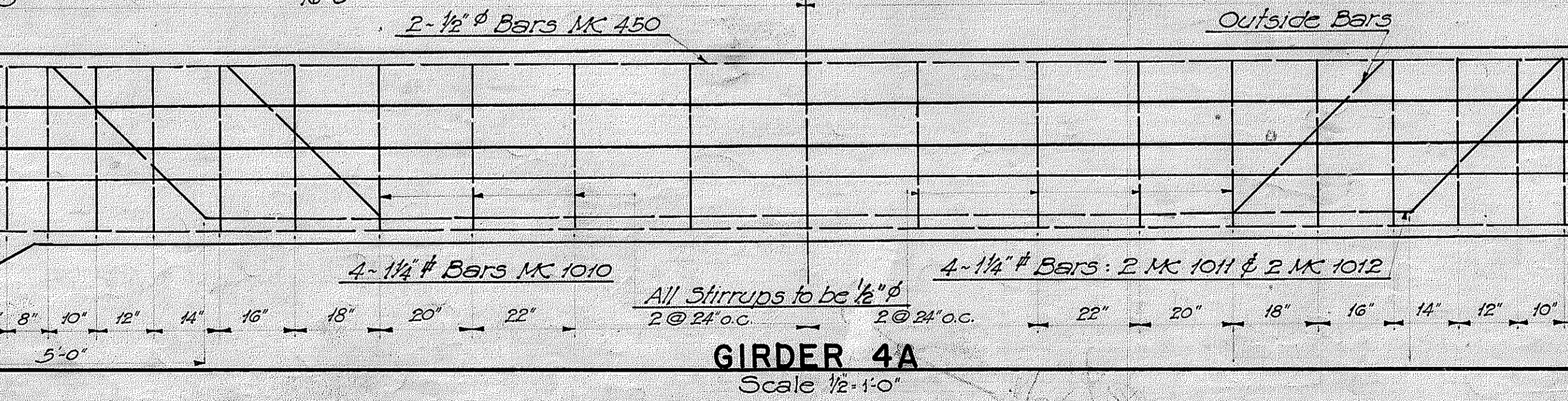
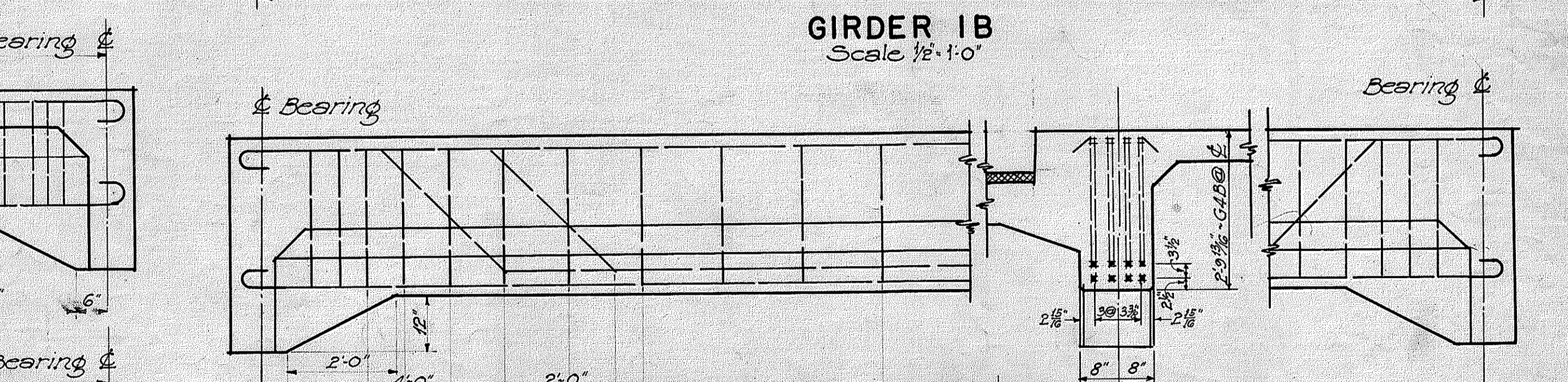
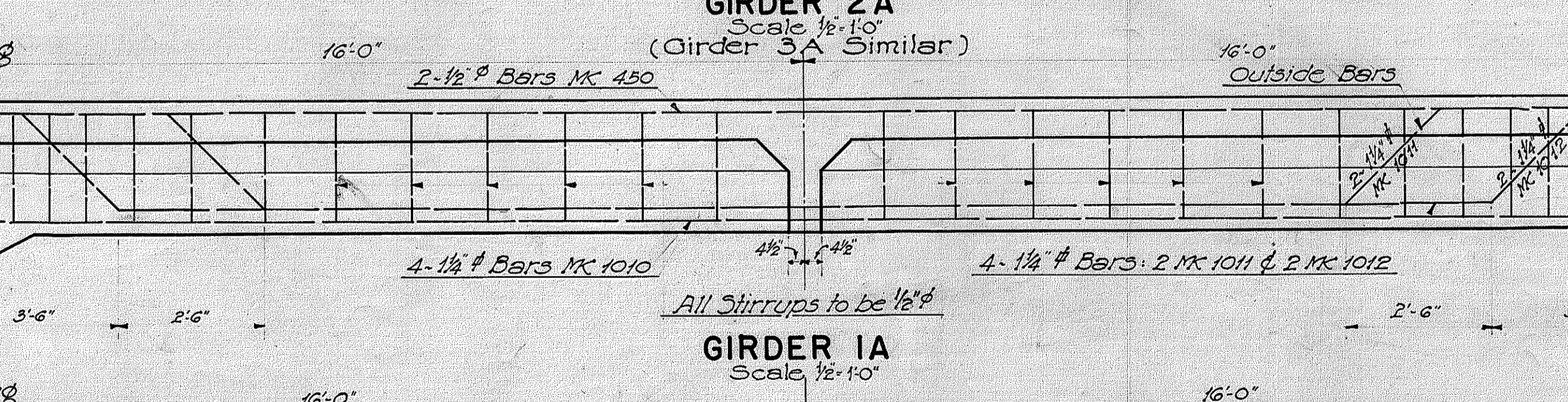
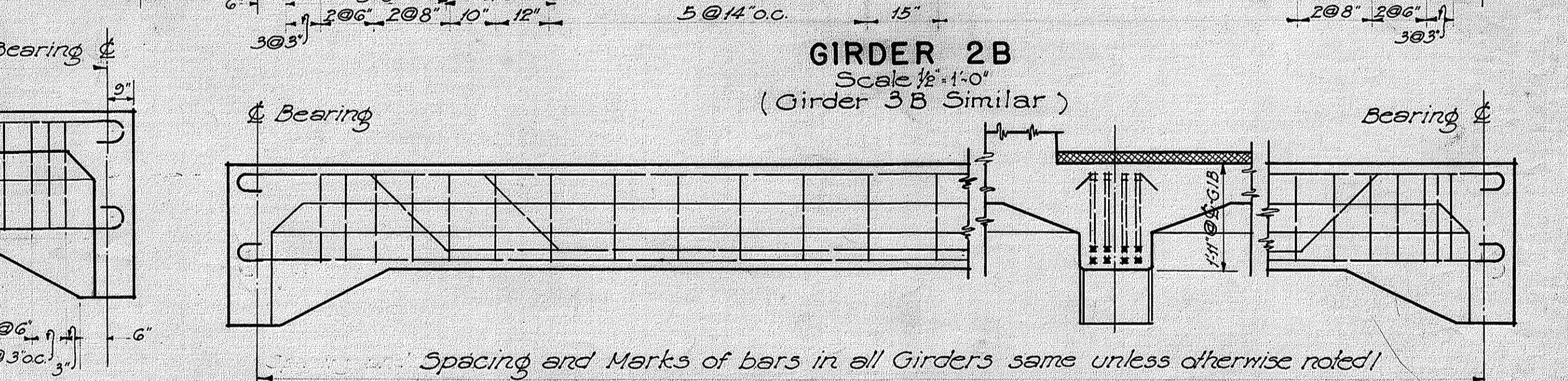
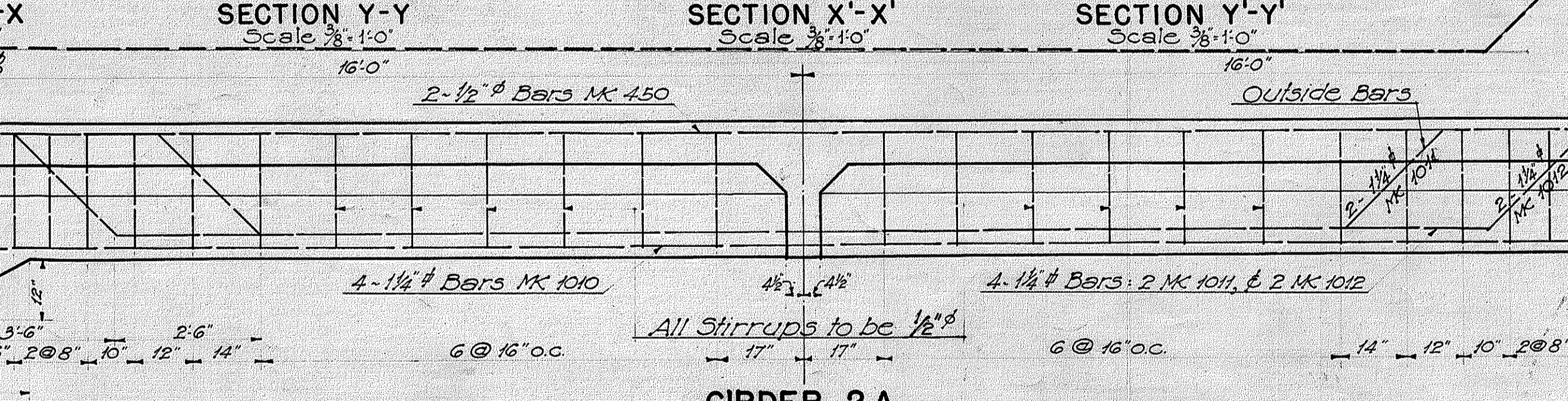
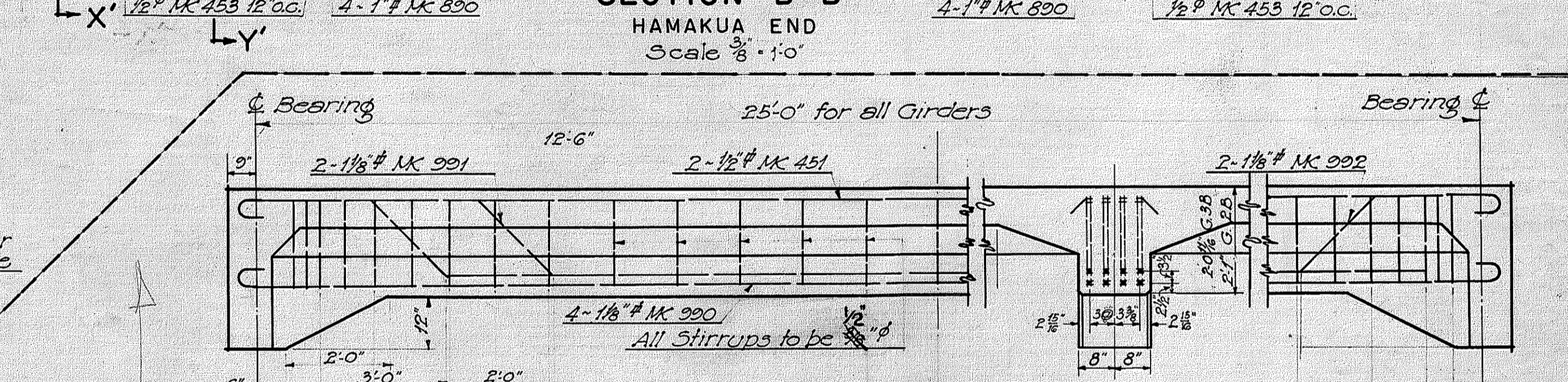
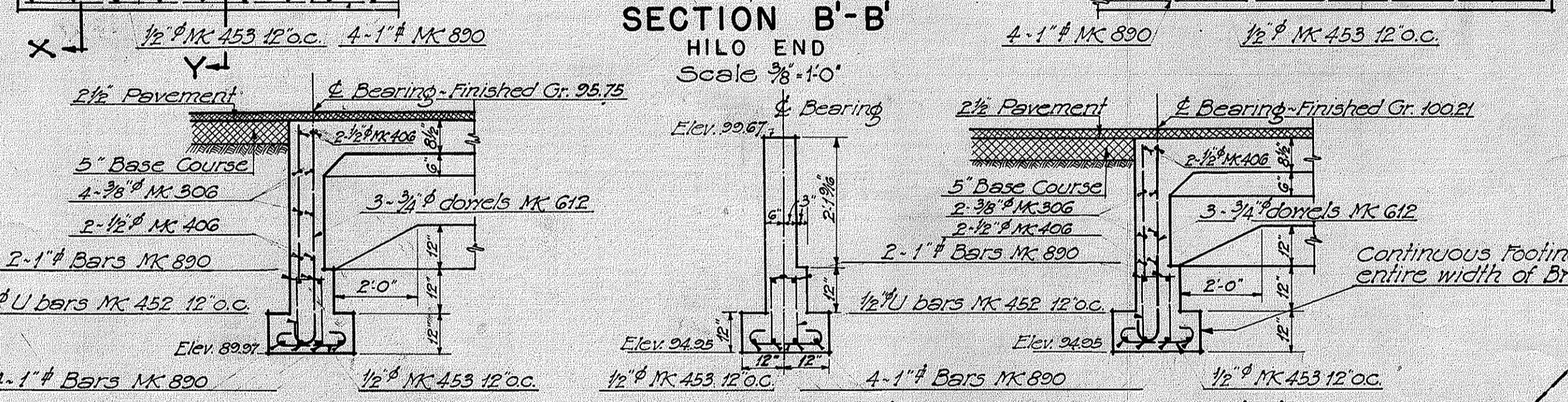
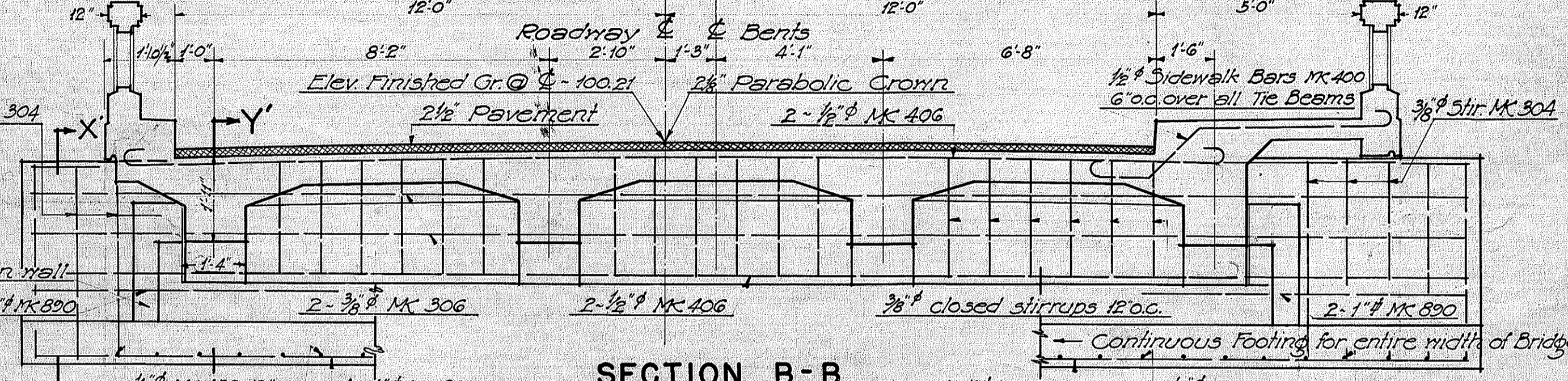
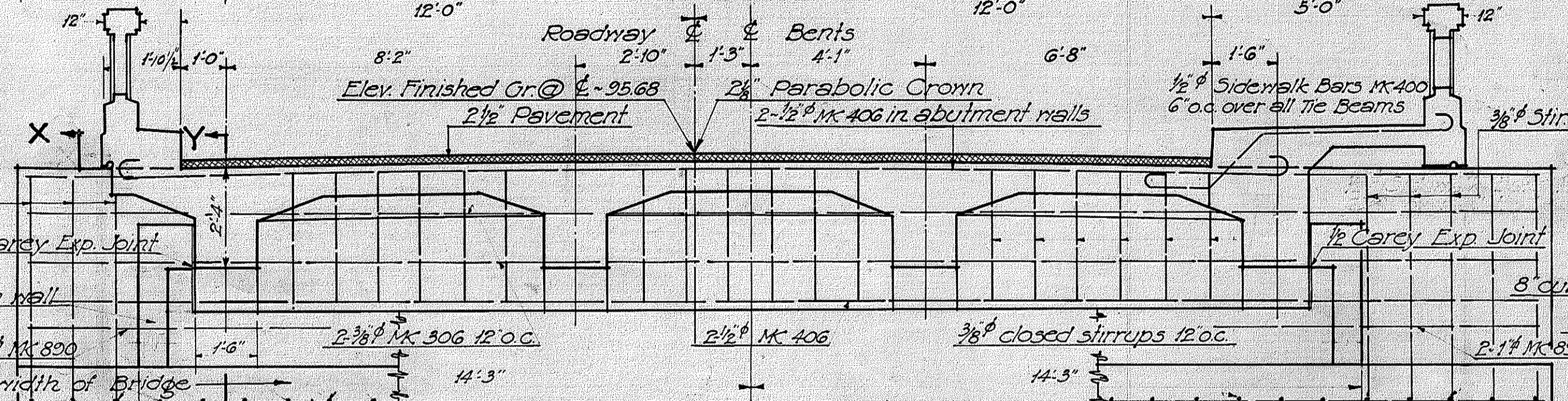
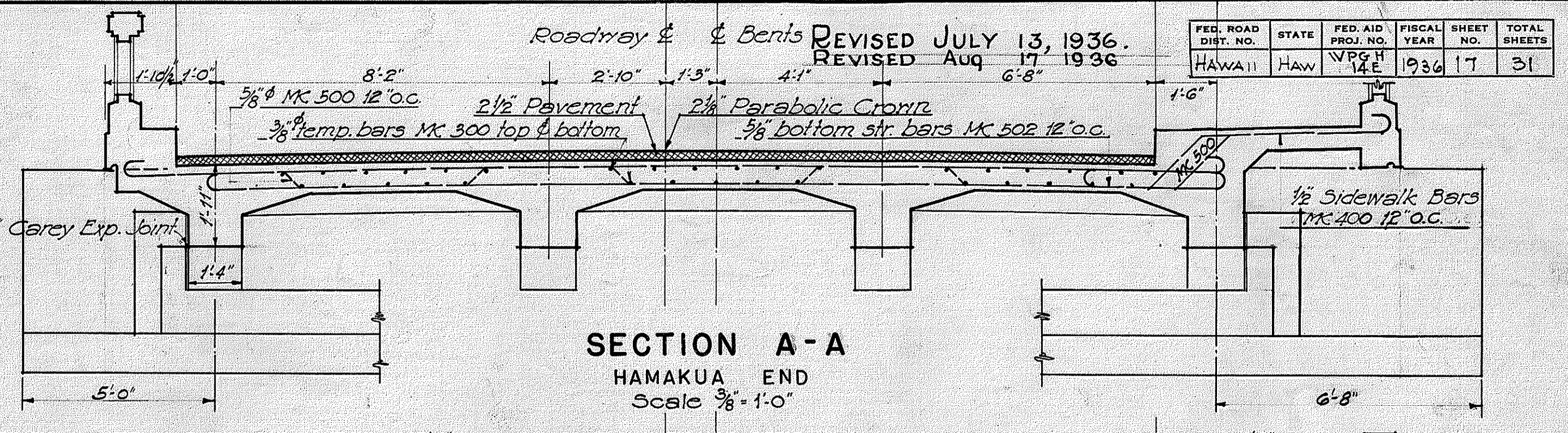
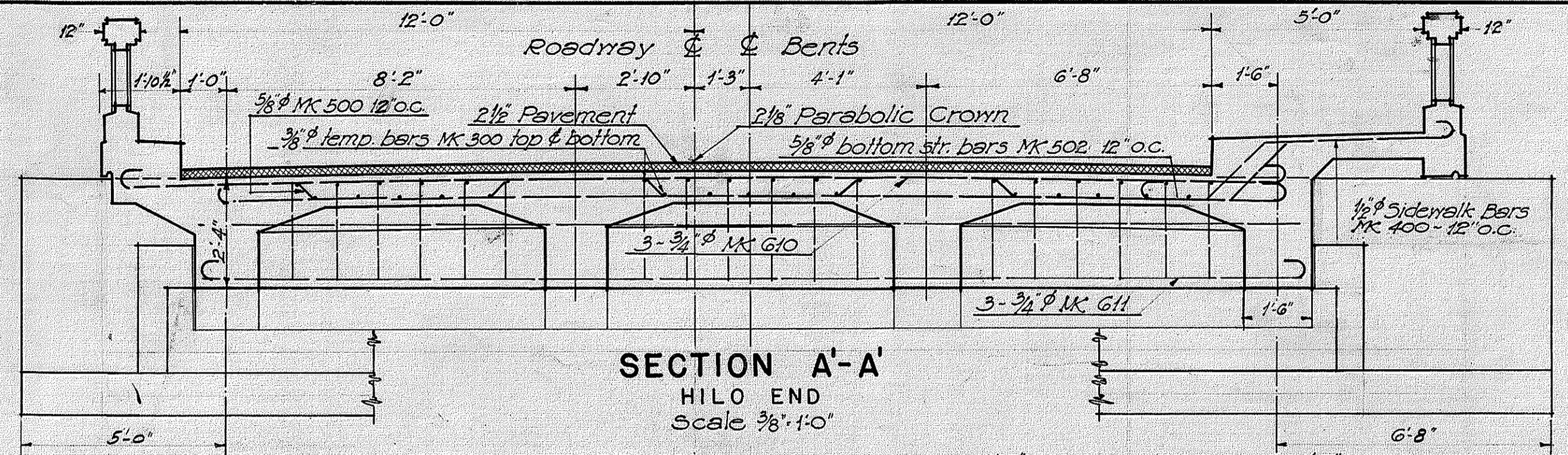
DEC. 1935 SHEET 6 OF 15

4356.16

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	W.P.G.H. 14E	1936	17	31

REVISED JULY 13, 1936.
REVISED Aug 17 1936

DETAILS AS SHOWN ARE REVISED!
SEE SHEET NO 4356.17 B



SURVEY PLOTTED BY	J.F.C.	DATE	Dec. 23, 1935
PLAN	J.O.Y.		
TRACED BY	J.O.Y.		
QUANTITIES BY	J.F.C. & J.O.Y.		
CHECKED BY	J.O.Y.		

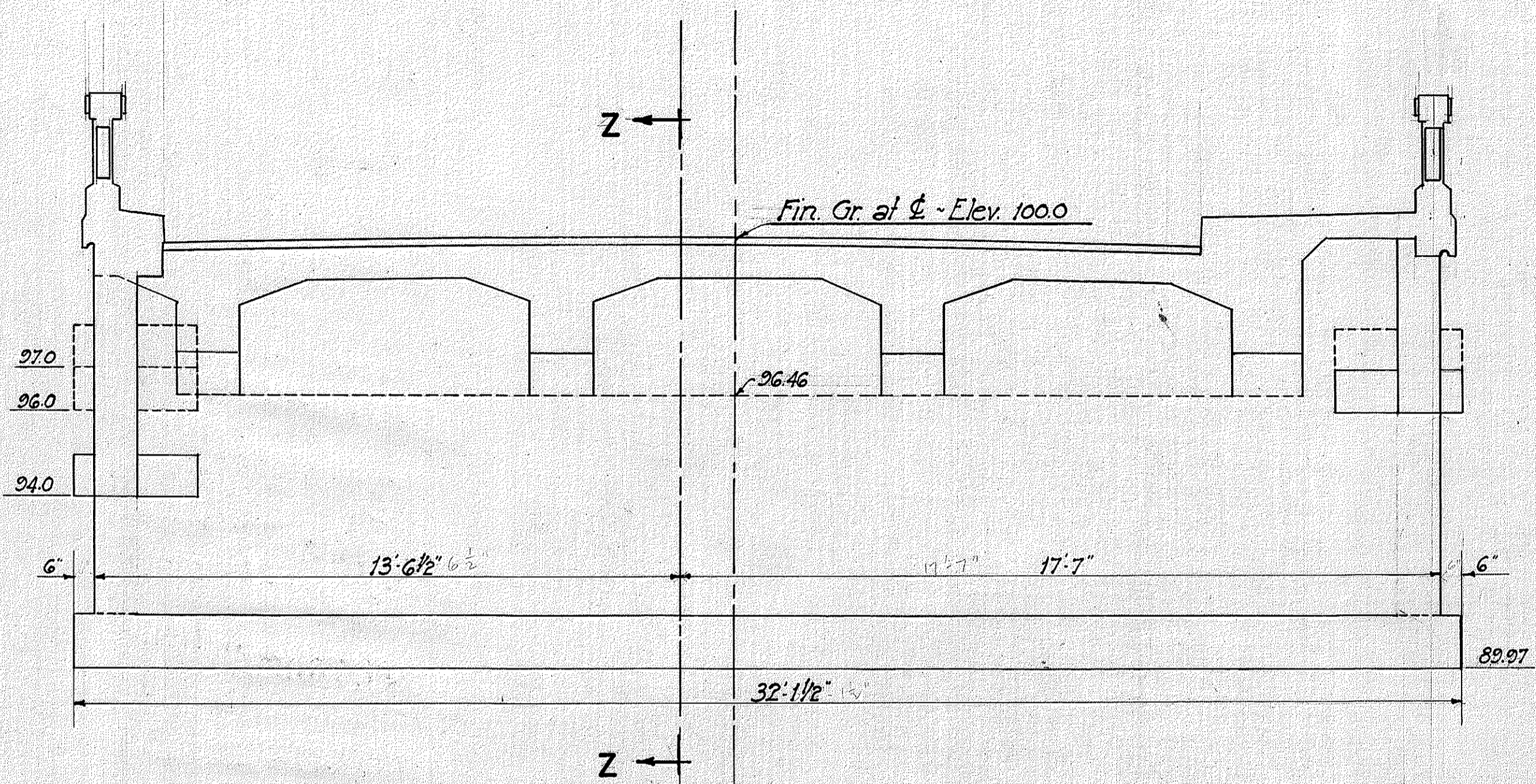
Revised as per Engineer letter of July 25, 1935 - H.M. 7/25/35 - AUG. 17, 1936

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
HONOLULU BRIDGE
NO. 14 STA. 36+36.25 TO 41+80.37
HAWAII BELT ROAD No. W.P.G.H. 14E

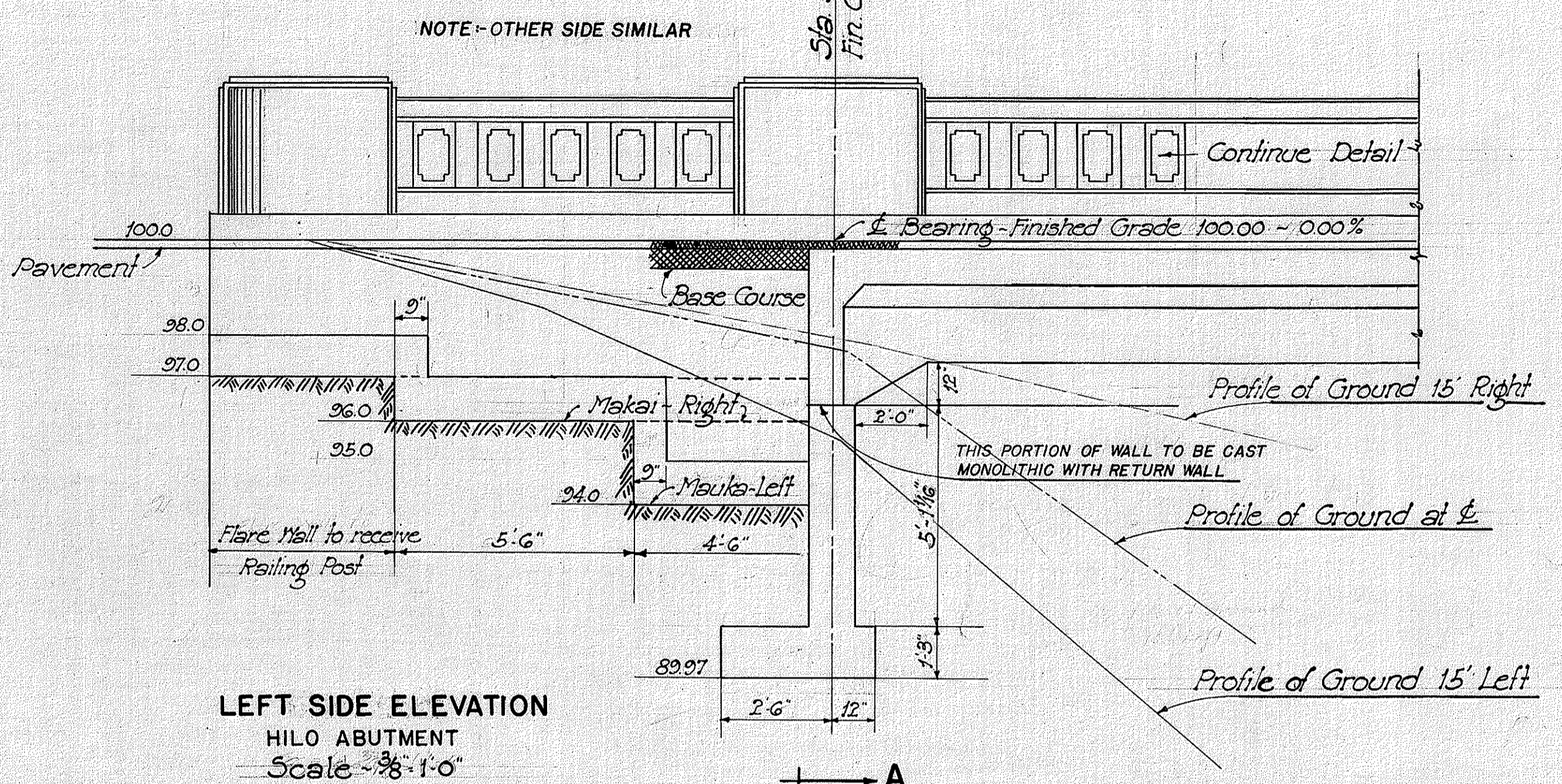
SHEET NO 7 OF 15 SHEETS

4356.17

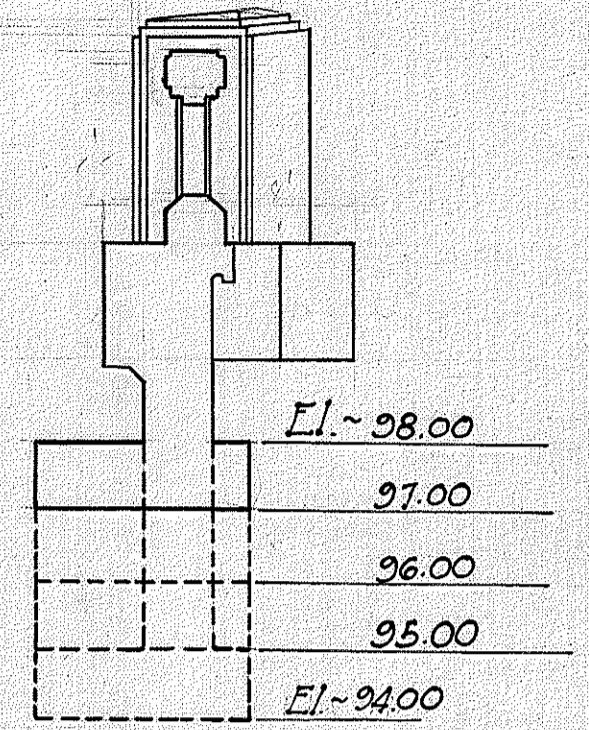
SUPERSEDES SHEET 4356.17 IN PART



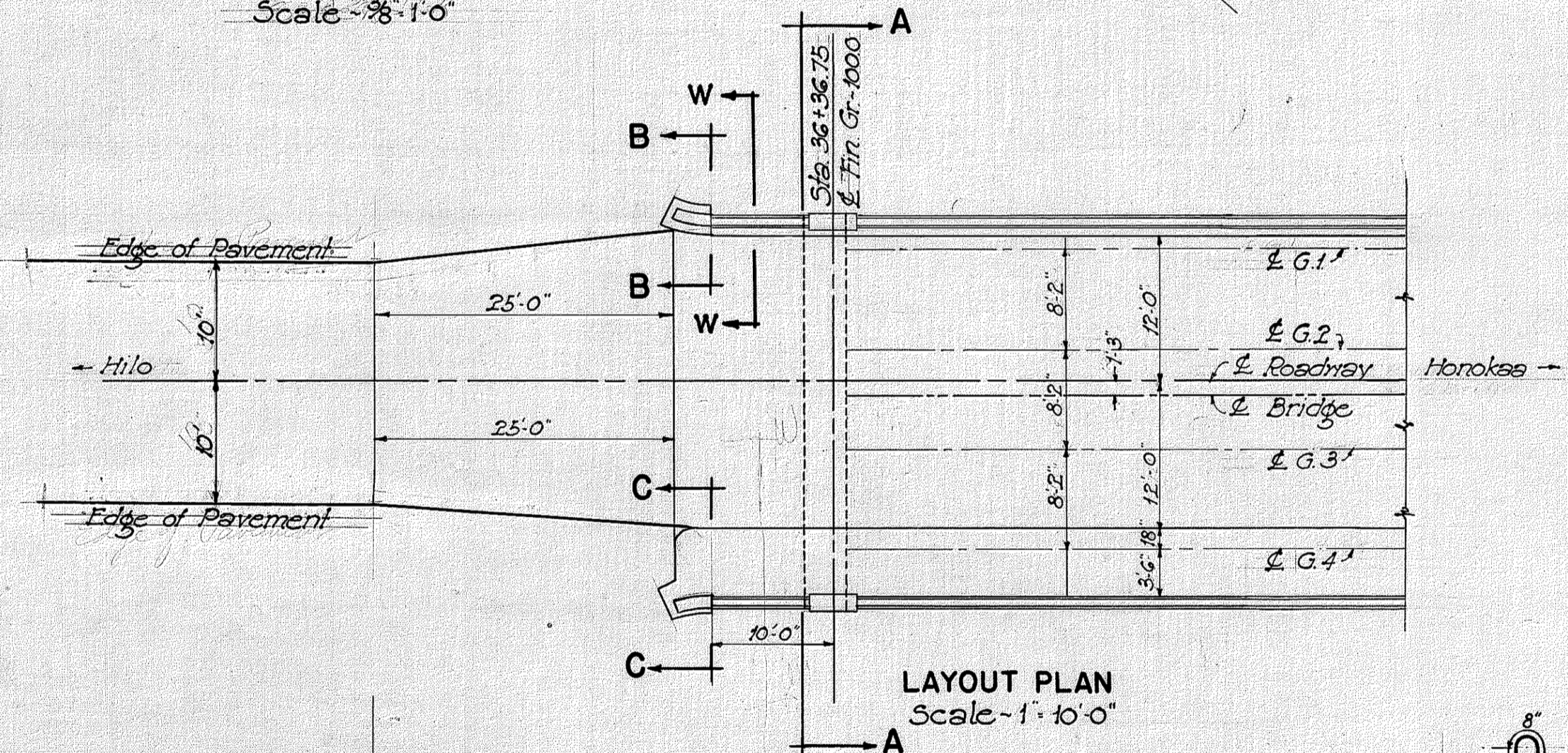
SECTION A-A
Scale - 3/8" = 1'-0"



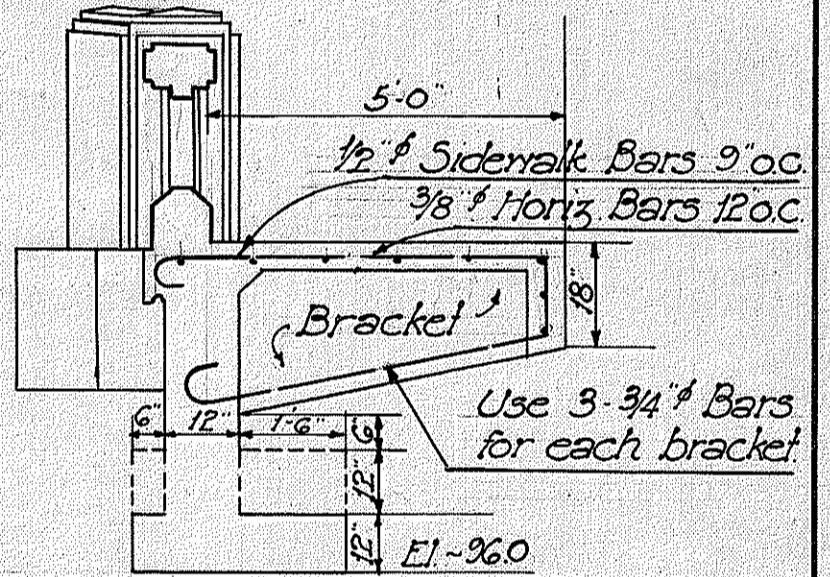
LEFT SIDE ELEVATION
HILO ABUTMENT
Scale - 3/8" = 1'-0"



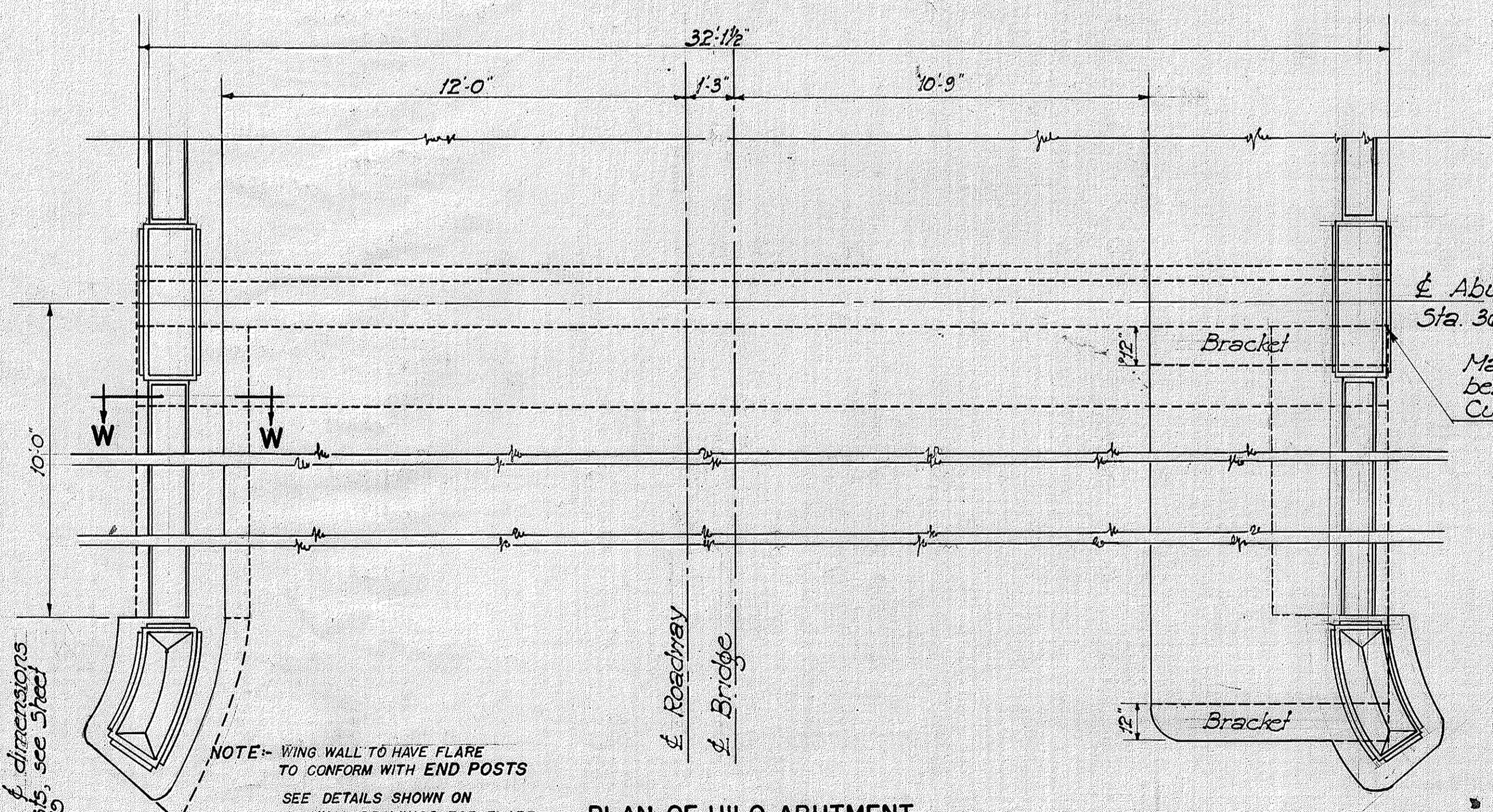
SECTION B-B
Scale - 3/8" = 1'-0"
Note: Steel Reinforcement similar to Section W-W.



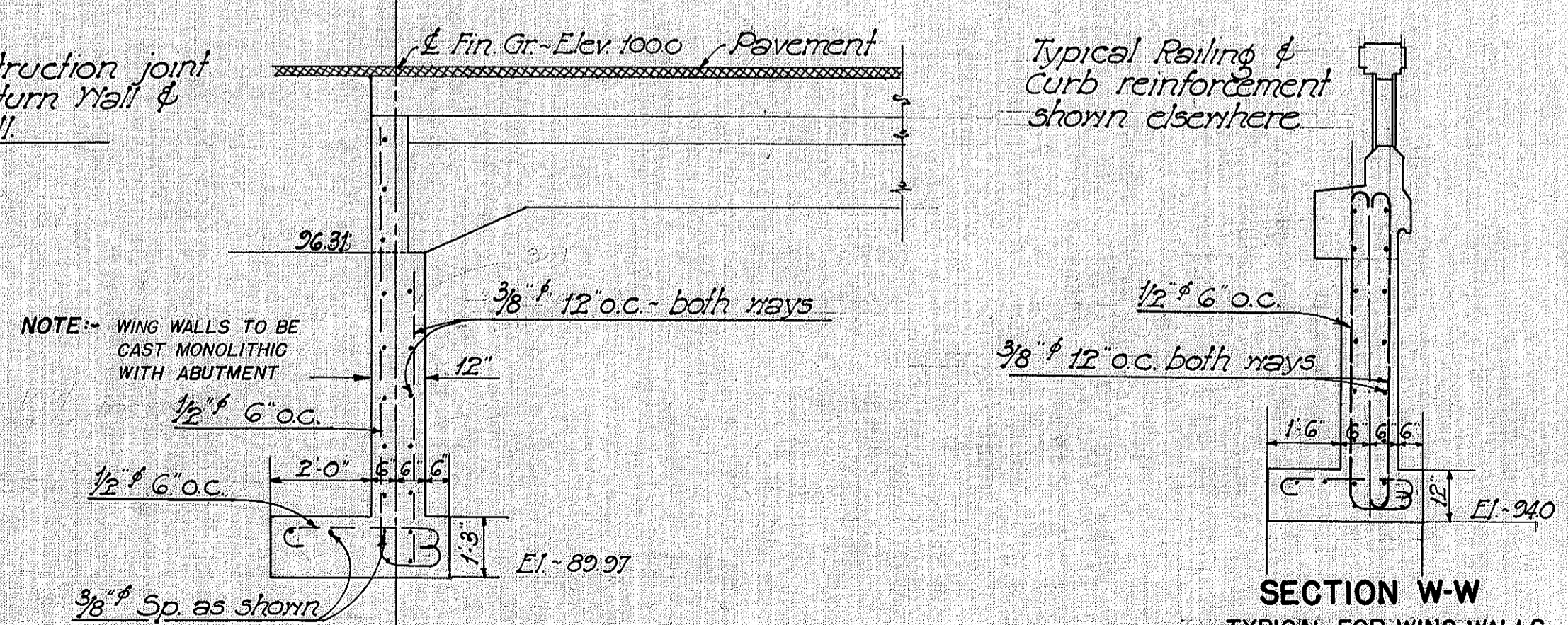
LAYOUT PLAN
Scale - 1" = 10'-0"



SECTION C-C
Scale - 3/8" = 1'-0"



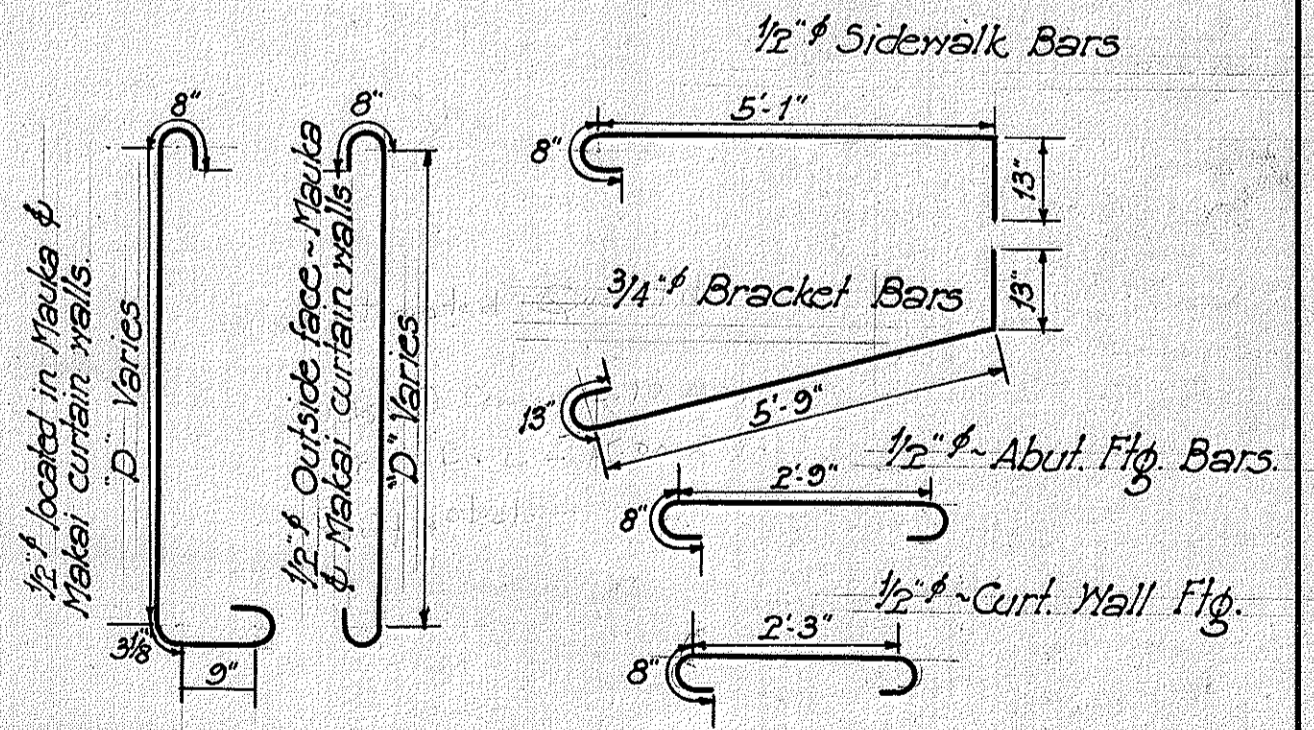
PLAN OF HILO ABUTMENT
Scale - 3/8" = 1'-0"



SECTION Z-Z
CENTER LINE OF ROADWAY
Scale - 3/8" = 1'-0"

ESTIMATED QUANTITIES
Class A Conc. 13.70 C.Y.
Structure Ex. 15.00 C.Y.
Reinf. Steel 1892 LBS.

SECTION W-W
TYPICAL FOR WING WALLS
Scale - 3/8" = 1'-0"



SURVEY PLOTTED BY	H.F.C.	DATE	
DESIGNED BY	J.O.V.		
TRACED BY	L.P.		
QUANTITIES BY	L.P. & E.C.		
CHECKED BY	C.F.L.		

Note: for Radius of dimensions of End Posts, see Sheet No. 4356.19

NOTE - WING WALL TO HAVE FLARE TO CONFORM WITH END POSTS
SEE DETAILS SHOWN ON ORIGINAL DRAWINGS FOR FLARE

Make construction joint between Return Wall & Curtain Wall.

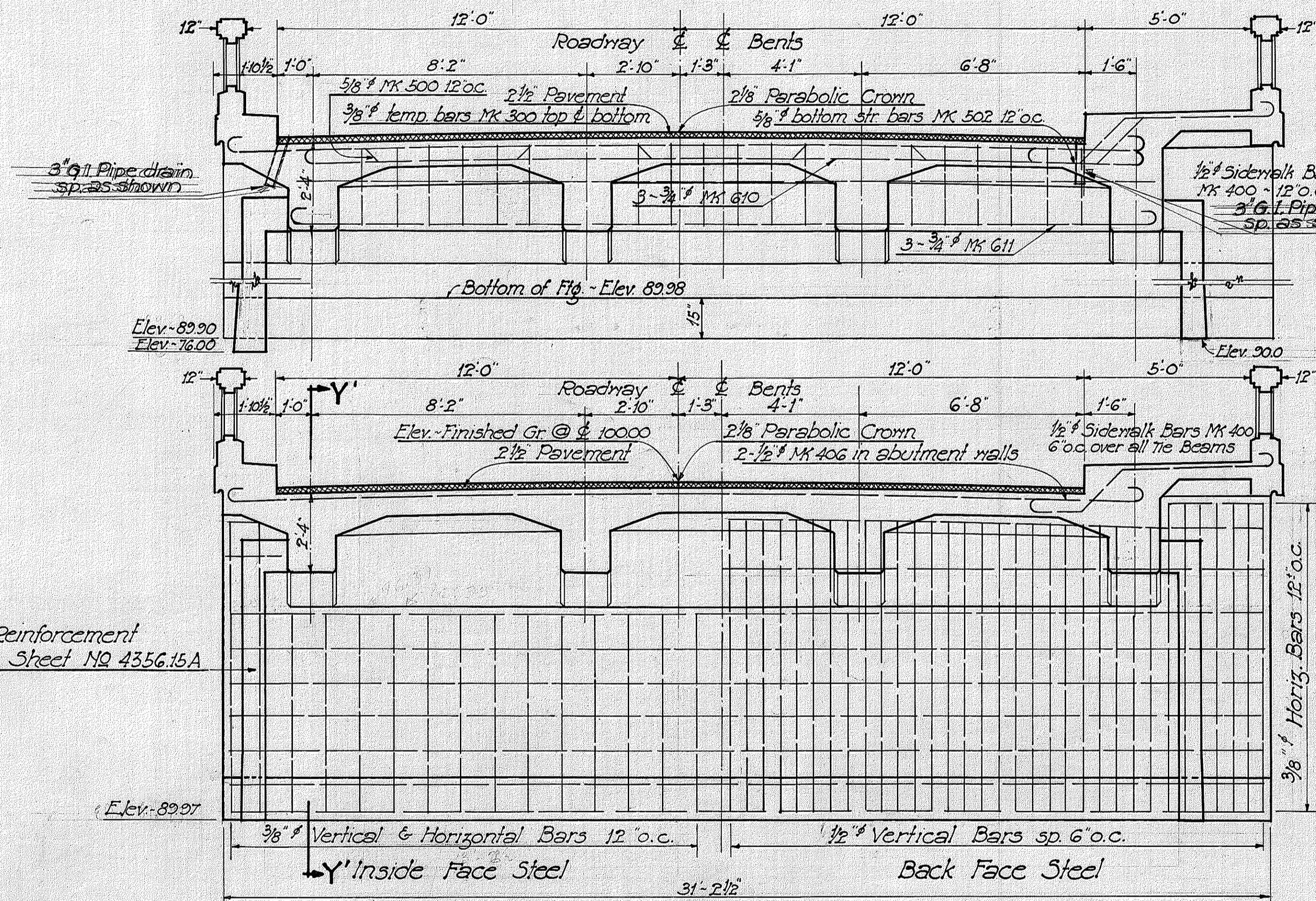
Typical Railing & Curb reinforcement shown elsewhere

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
HONOLII BRIDGE
NO 14 STA. 36+36.25 TO 41+80.37
HAWAII BELT ROAD - NO W.P.G.H. 14E
DEC. 1935

SUPERSEDES SHEET 4316.17 IN PART

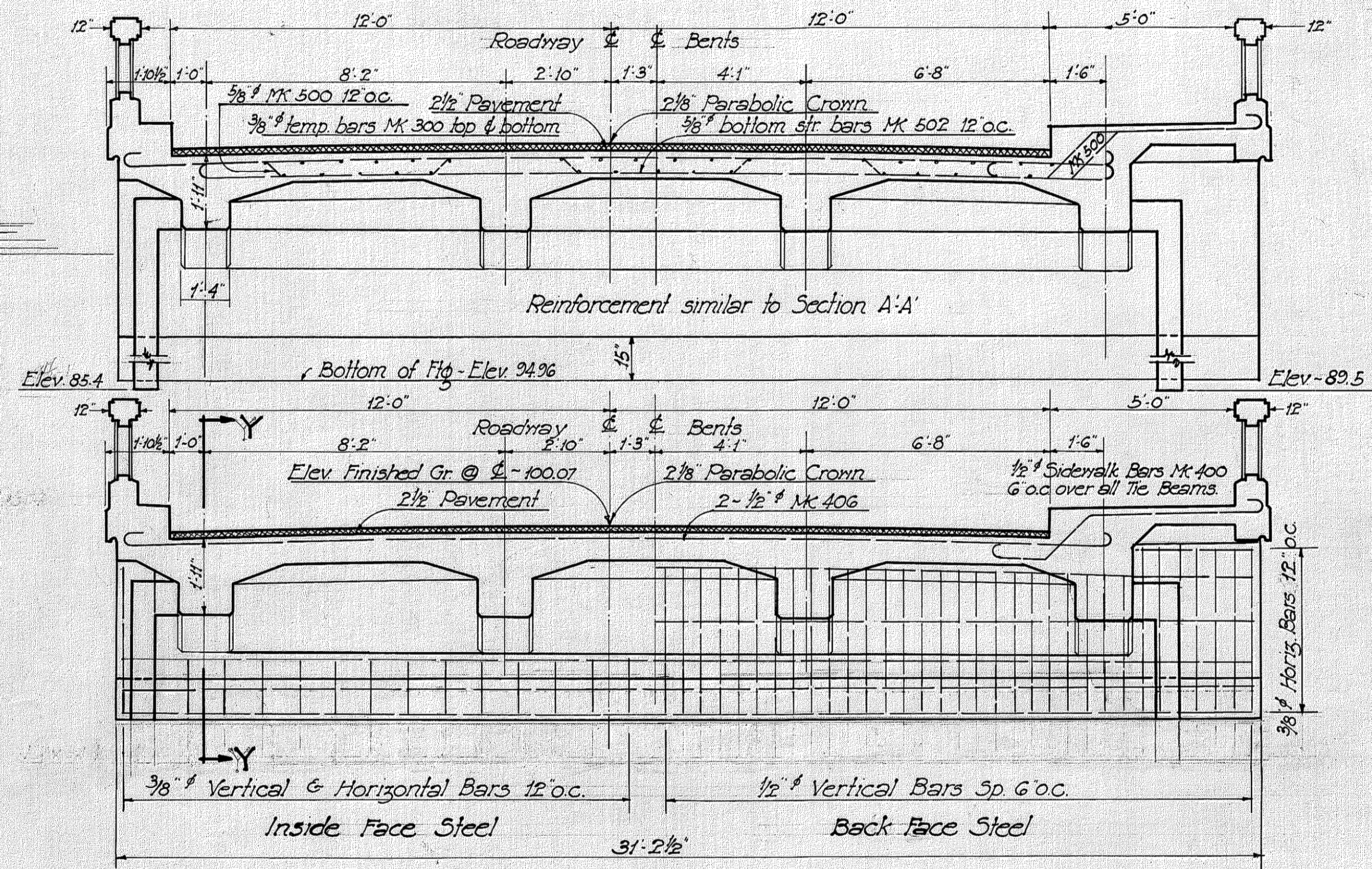
SECTION A'-A'

HILO END
Scale - 3/8" = 1'-0"



SECTION A-A

HAMAKUA END
Scale - 3/8" = 1'-0"

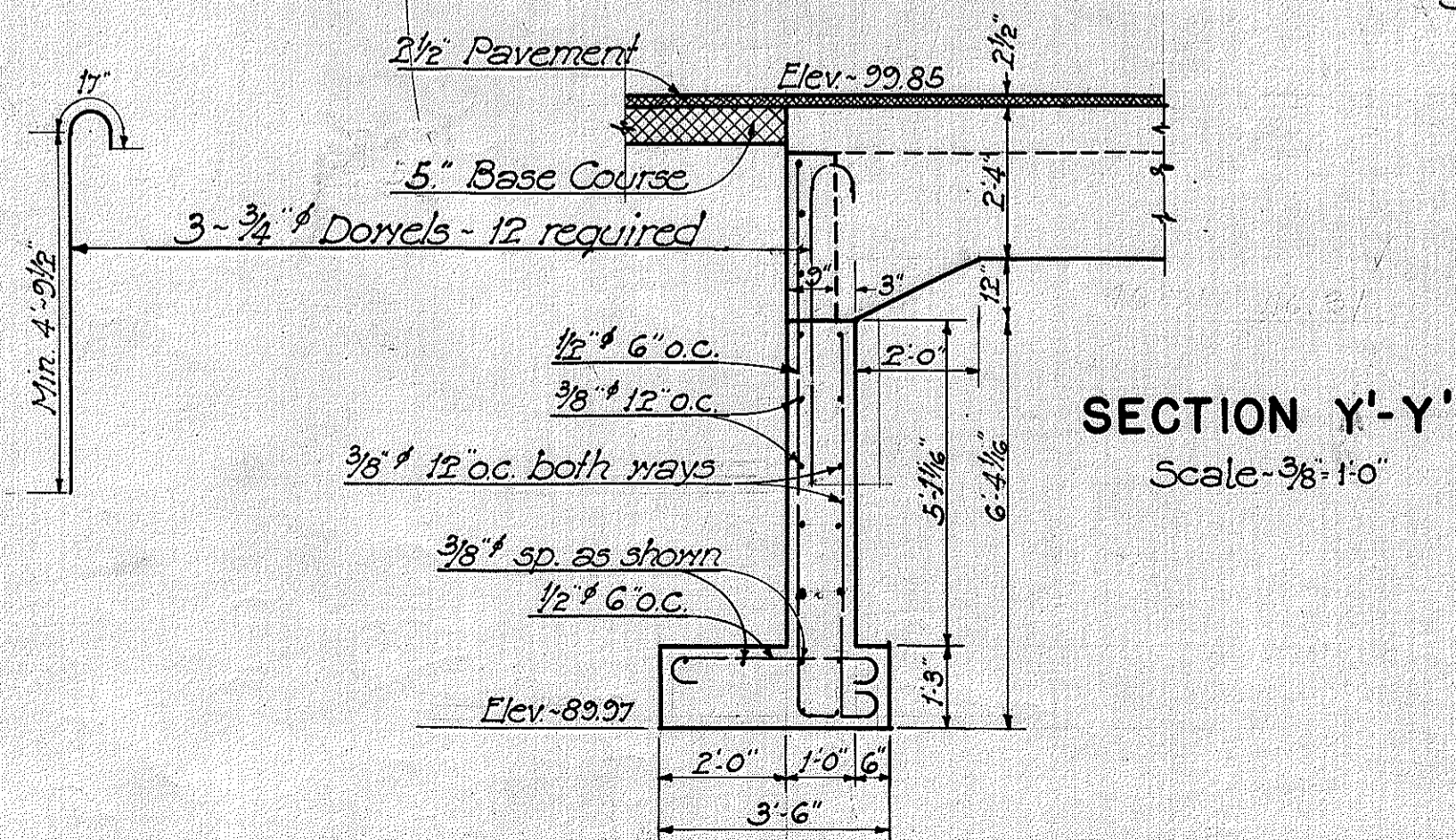


SECTION B-B

HAMAKUA END
Scale - 3/8" = 1'-0"

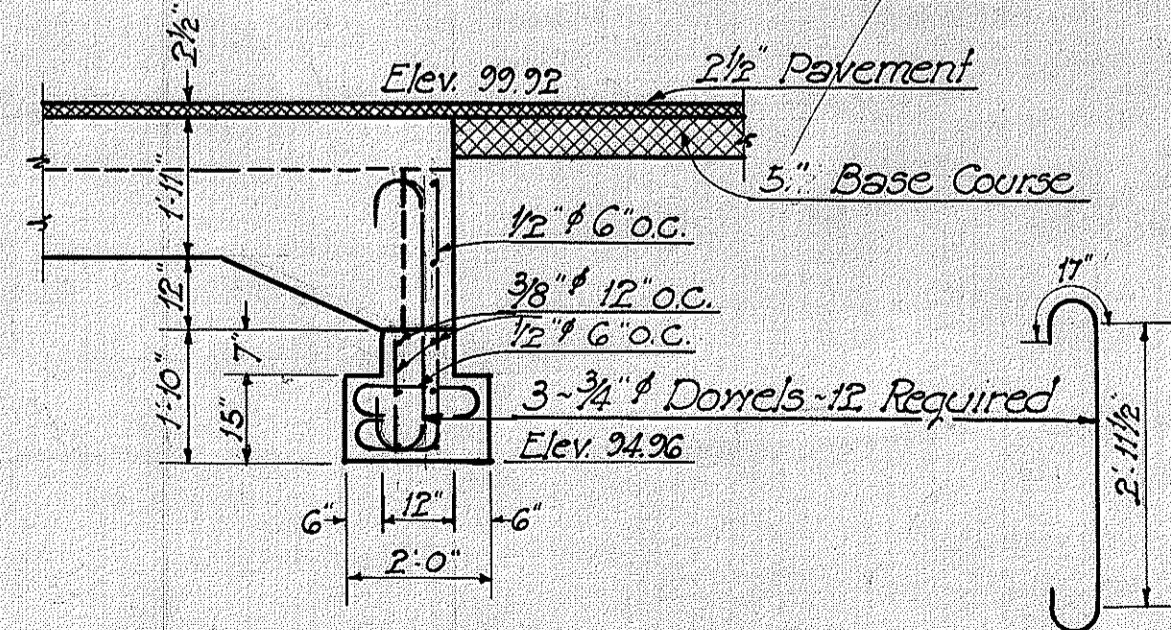
SECTION B'-B'

HILO END
Scale - 3/8" = 1'-0"



SECTION Y'-Y'

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



SECTION Y-Y

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

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
HONOLII BRIDGE
NO 14 STA. 36+36.25 TO 41+ 80.37
HAWAII BELT ROAD NO W.P.G.H. 14E

SHEET NO OF SHEETS

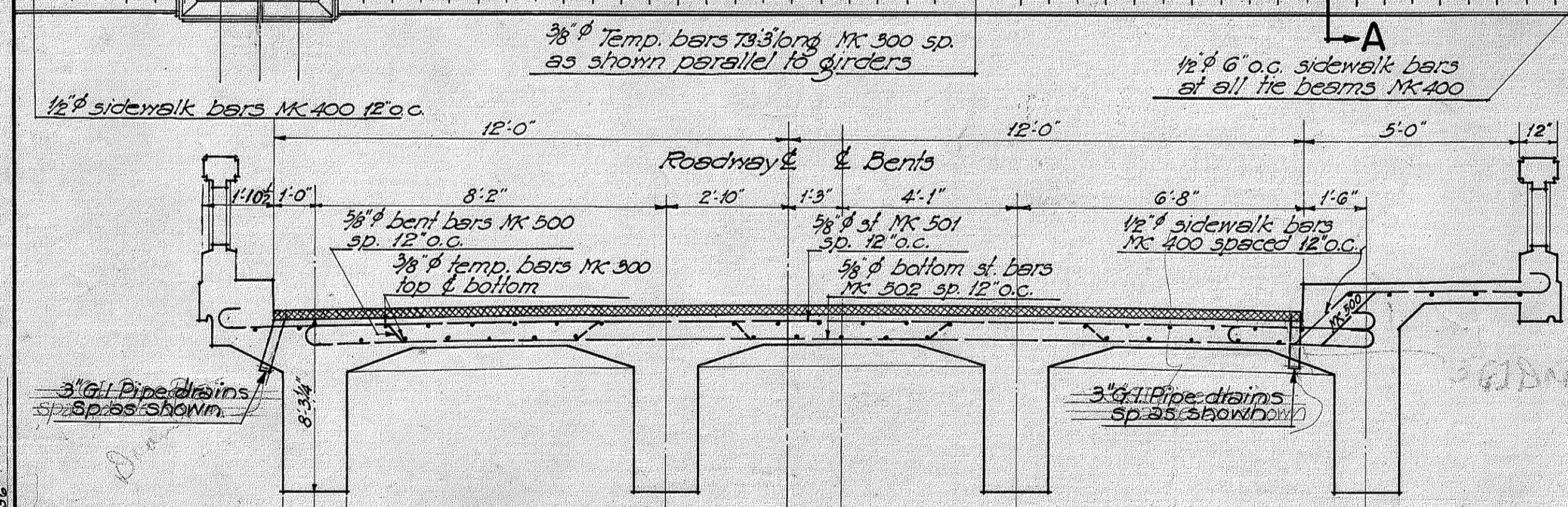
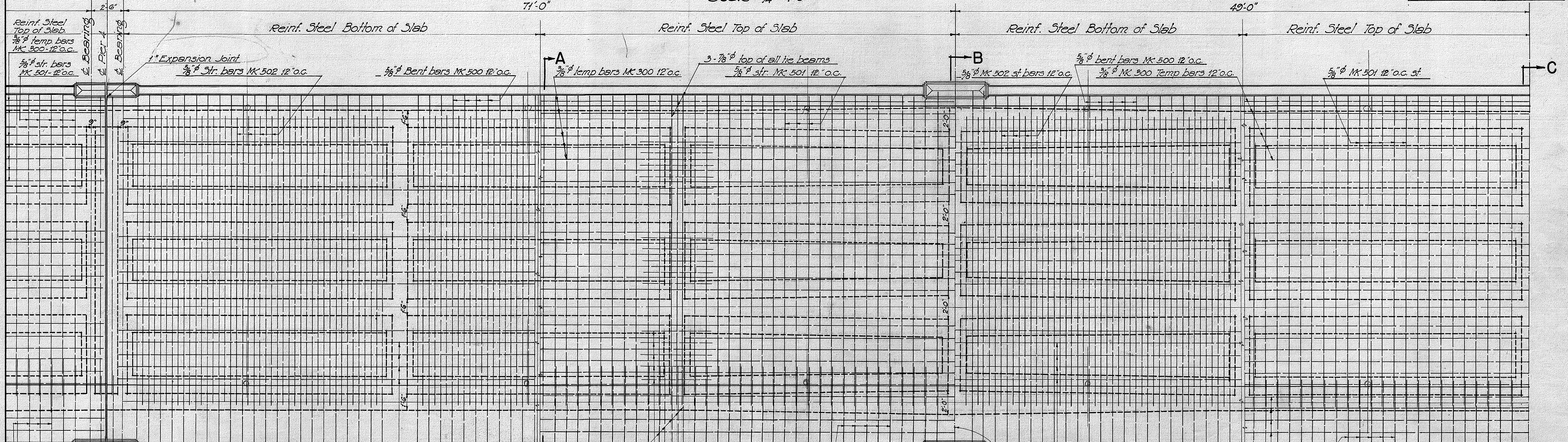
4356.17B

SURVEY PLOTTED BY H. F. C. DATE
DESIGNED BY J. O. C. : : :
CHECKED BY E. L. & H. F. C.
QUANTITIES BY C. J. L. O.
NO. : : :
Revised as per Bureau letter of July 25, 1936, J. H. M. T. 1936

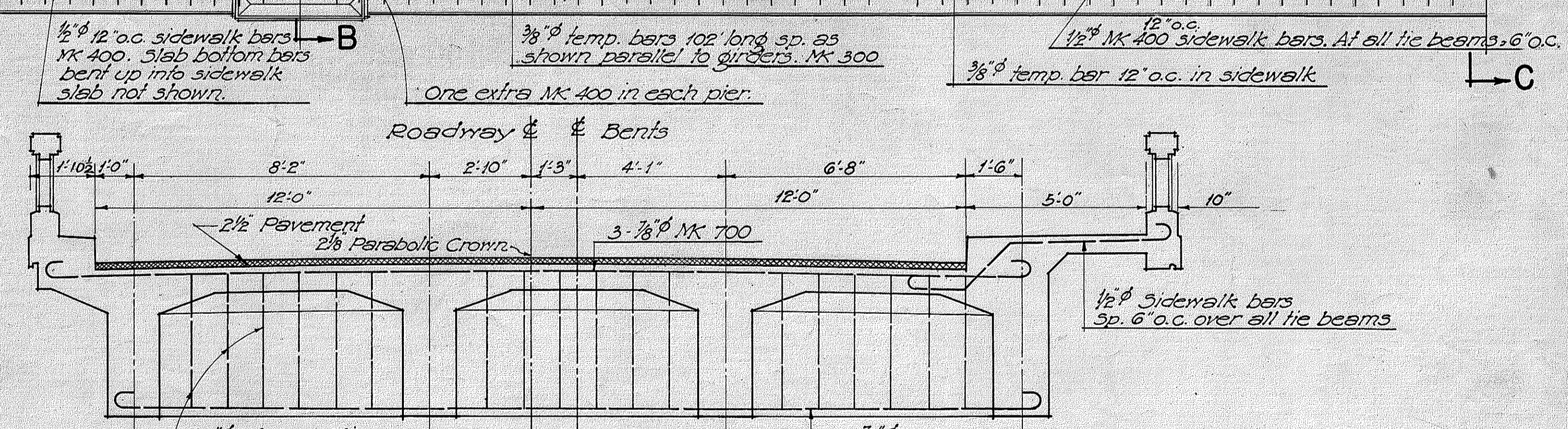
TYPICAL PLAN OF DECK REINFORCING BETWEEN STAS. 36+36.75 & 41+79.87

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

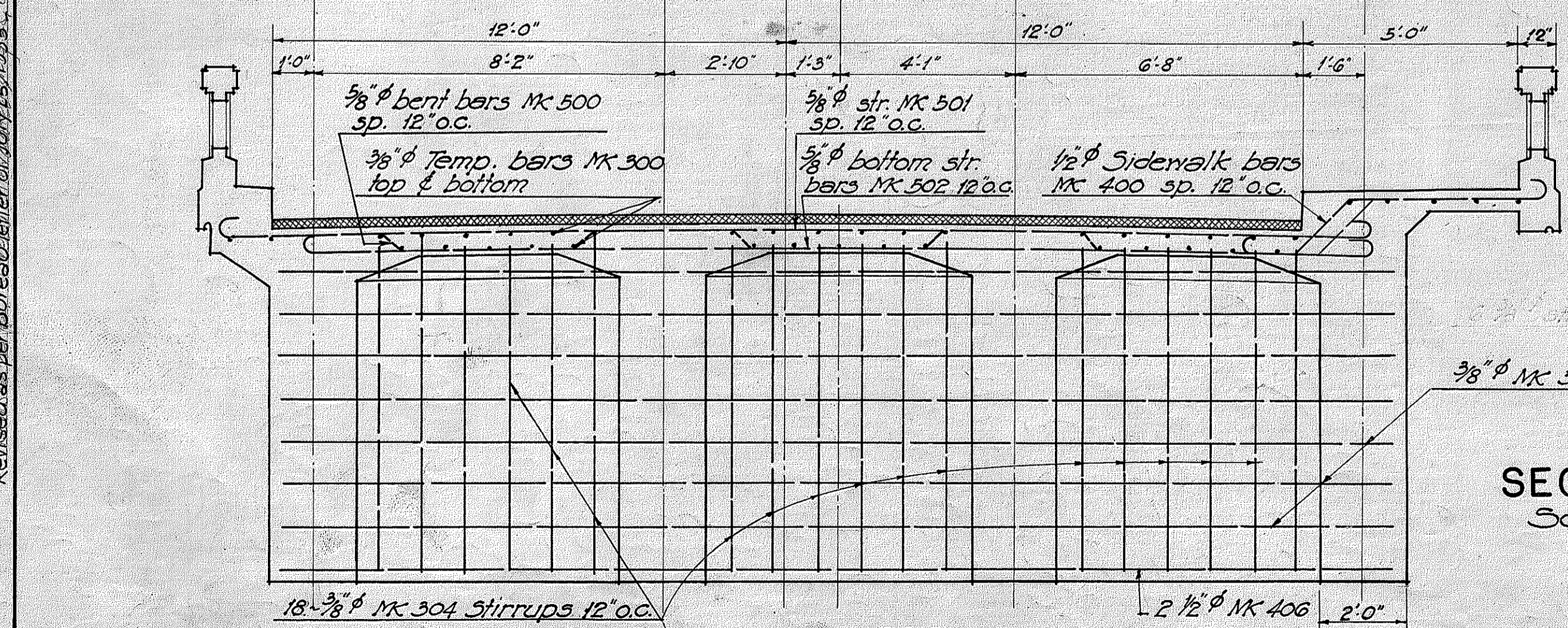
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	W.P.R.H. 14 E	1936	18	31



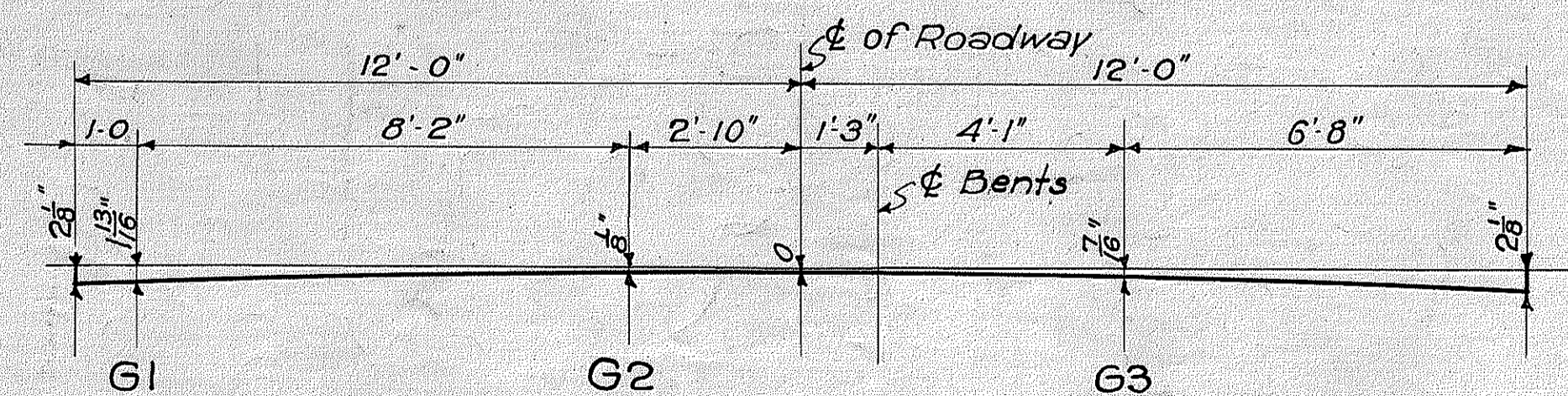
SECTION A-A
Scale: 3/8" = 1'-0"



SECTION C-C
SHOWING TIE BEAM REINFORCING
Scale: 3/8" = 1'-0"



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



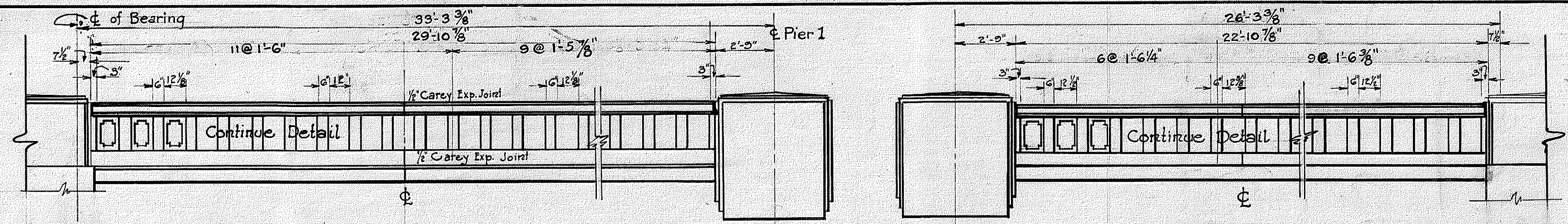
PARABOLIC CROWN ORDINATES
Scale: 3/8" = 1'-0"

SURVEY PLOTTED BY H.F.C. DATE Dec. 31
 DESIGNED BY J.O.Y.
 TRACED BY F.H.C.
 QUANTITIES BY H.F.C. & C.L.
 CHECKED BY J.O.Y.
 Revised as per Bureau letter to City of Honolulu, 1/24/36.

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
HONOLULU BRIDGE
 NO. 14 STA. 36+36.25 TO 41+80.37
 HAWAII BELT ROAD NO. W.P.R.H. 14 E
 DEC. 1935
 SHEET NO. 18 OF 31 SHEETS

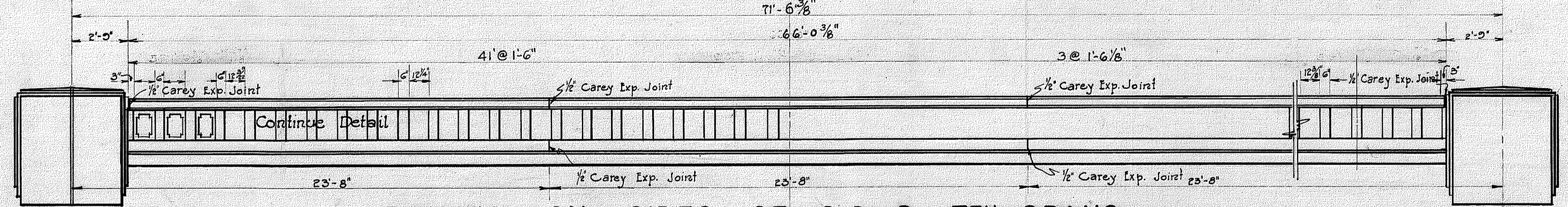
4356.18

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	W.P.C.H. 14E	1936	19	31

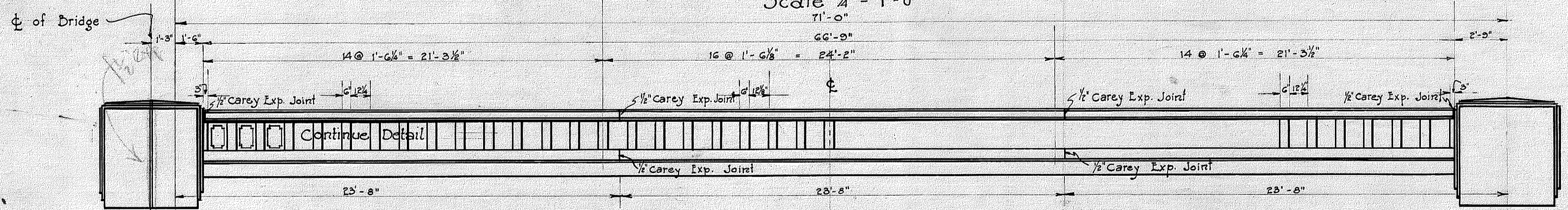


RAILING ON SIDES OF 1ST SPAN
Scale 1/4" = 1'-0"

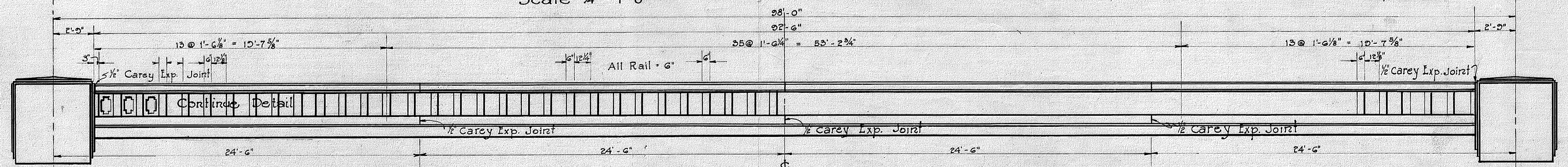
RAILING ON SIDES OF 8TH SPAN
Scale 1/4" = 1'-0"



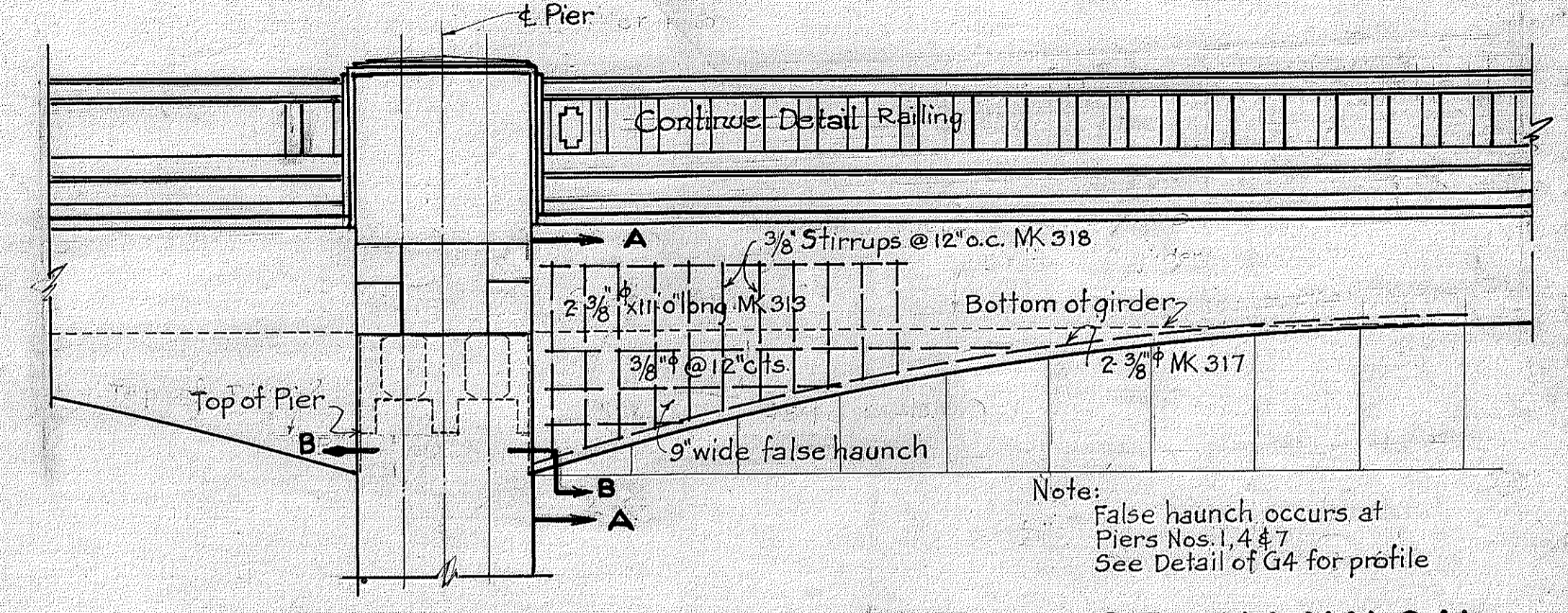
RAILING ON SIDES OF 2ND & 7TH SPANS
Scale 1/4" = 1'-0"



RAILING ON BOTH SIDES OF 4TH & 5TH SPANS
Scale 1/4" = 1'-0"

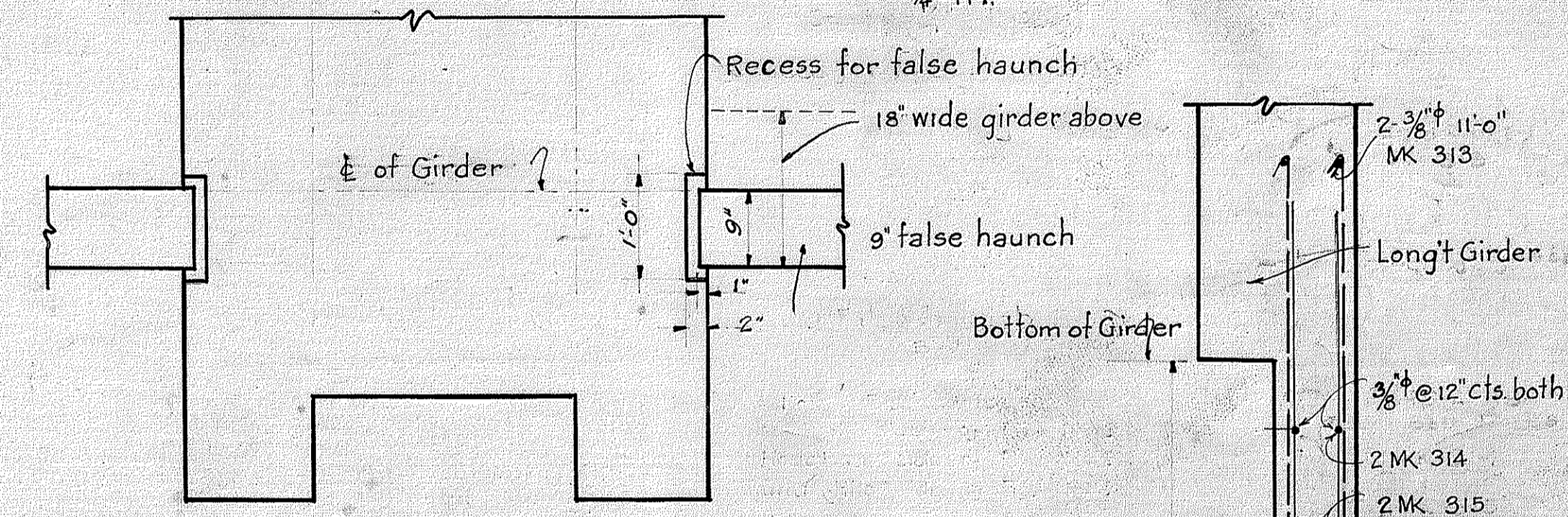


RAILING ON BOTH SIDES OF 3RD & 6TH SPANS
Scale 1/4" = 1'-0"



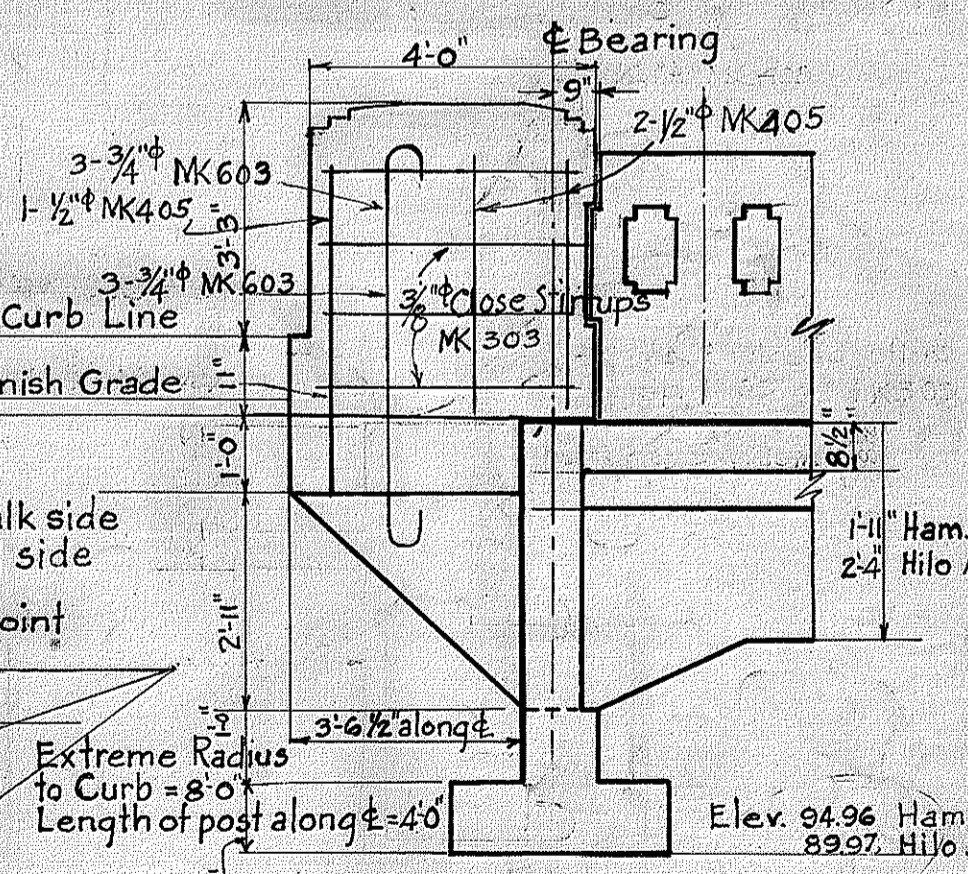
ELEVATION OF FALSE HAUNCH
1/4" = 1 Ft.

Note: False haunch occurs at Piers Nos. 1, 4 & 7 See Detail of G4 for profile

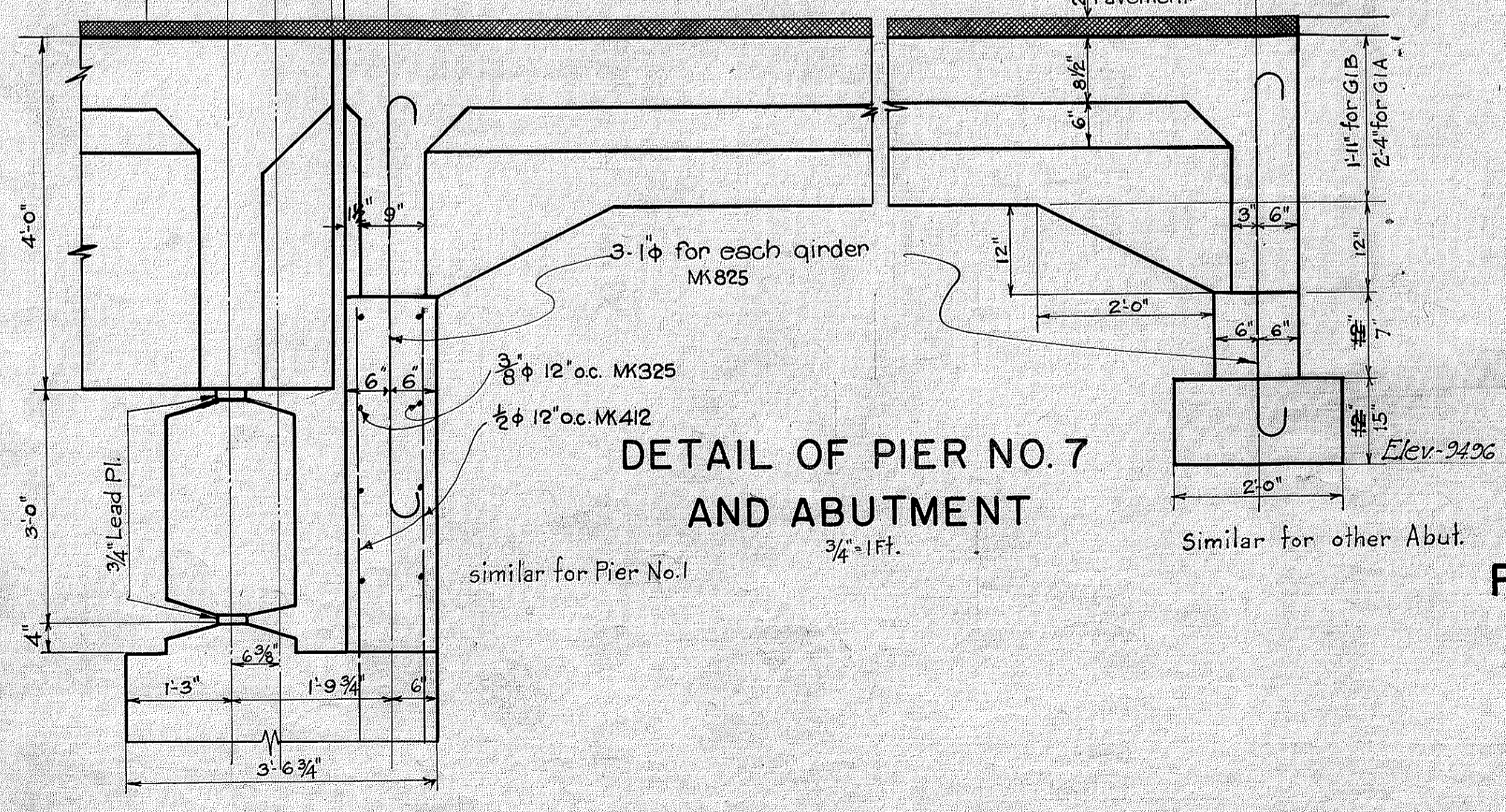


PLAN SECTION AT "B-B"
3/4" = 1 Ft.

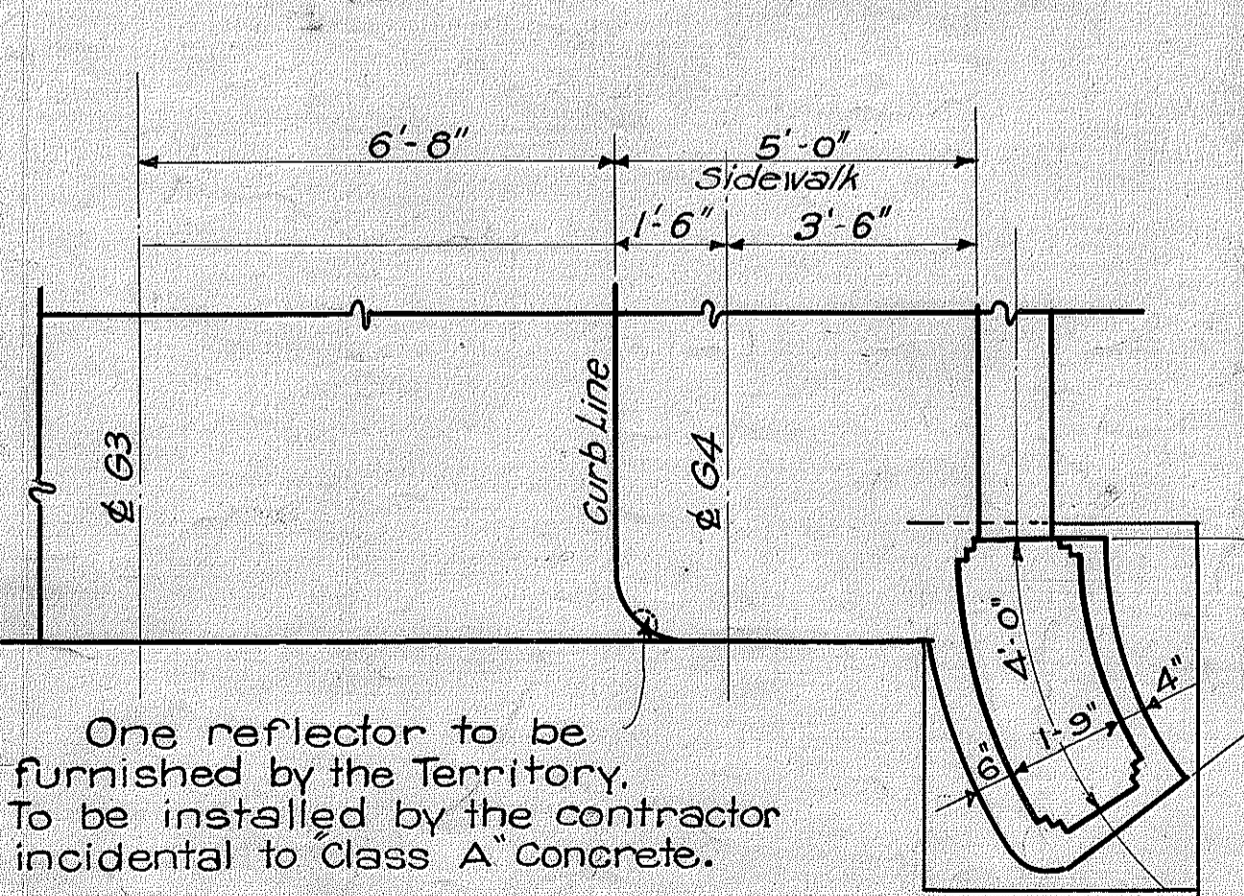
SECTION "A-A" THROUGH FALSE HAUNCH
3/4" = 1 Ft.



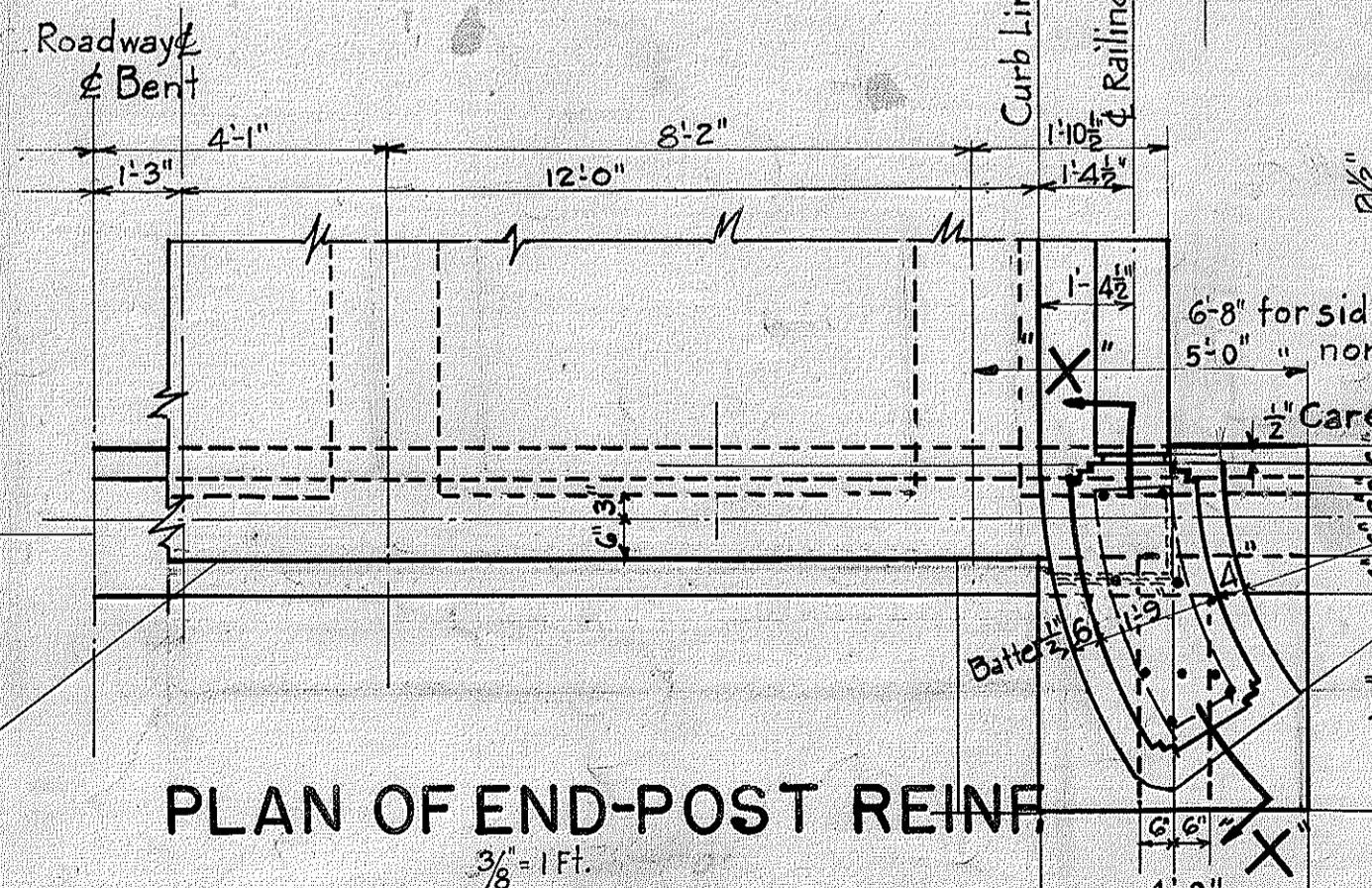
SECTION "X-X"



DETAIL OF PIER NO. 7 AND ABUTMENT
3/4" = 1 Ft.



PLAN OF END- SIDEWALK SIDE
Scale 3/8" = 1'-0"



PLAN OF END-POST REINF.
3/8" = 1 Ft.

Note: For revised details at End Posts see sheet HQ 4356.17A.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

HONOLII BRIDGE

NO 14 STA. 36+36.25 TO 41+80.37

HAWAII BELT ROAD NO. W.P.C.H. 14E

DEC. 1935

SHEET NO 9 OF 15 SHEETS

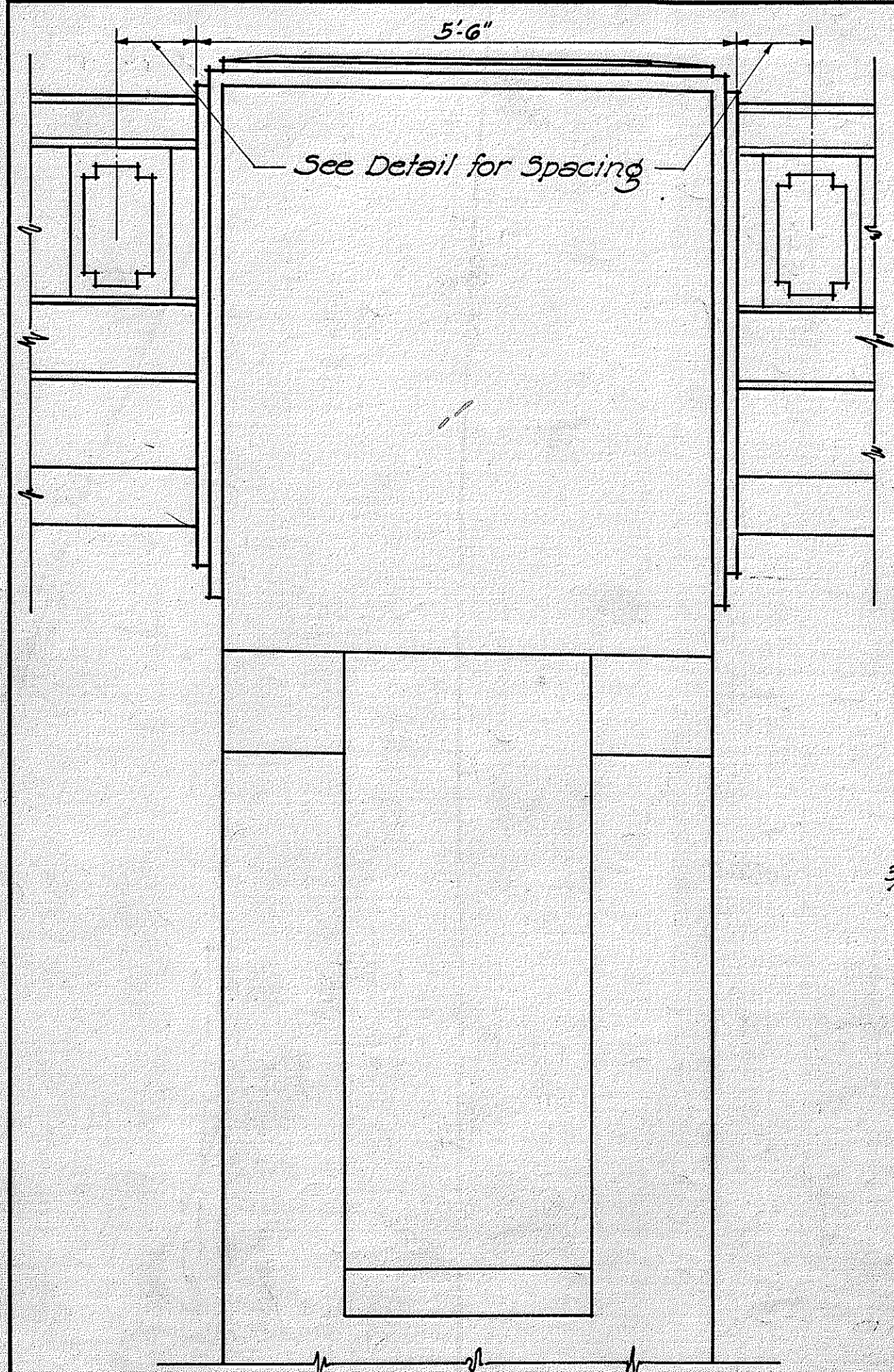
4356.19

SURVEY PLOTTED BY H.F.C. DATE Dec 25
 DESIGNED BY J.O.Y.
 DRAWN BY E.C.C.
 CHECKED BY J.O.Y.
 NOTE BOOK QUANTITIES BY H.F.C. C.L.
 No. 100

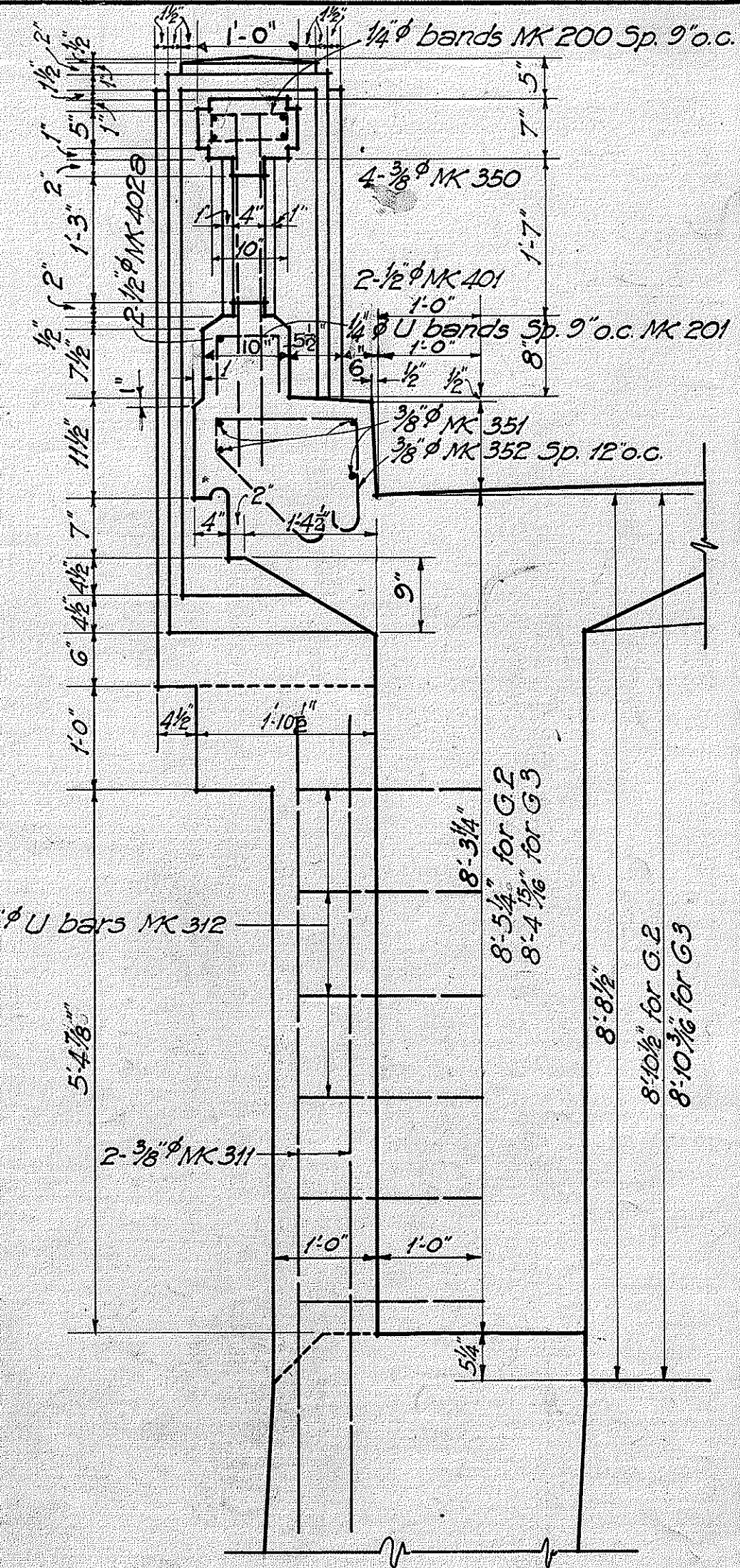
Revised as per Bureau letter of July 25, 1936. H.M.M. 7a/Ag

One reflector to be furnished by the Territory. To be installed by the contractor incidental to Class A Concrete.

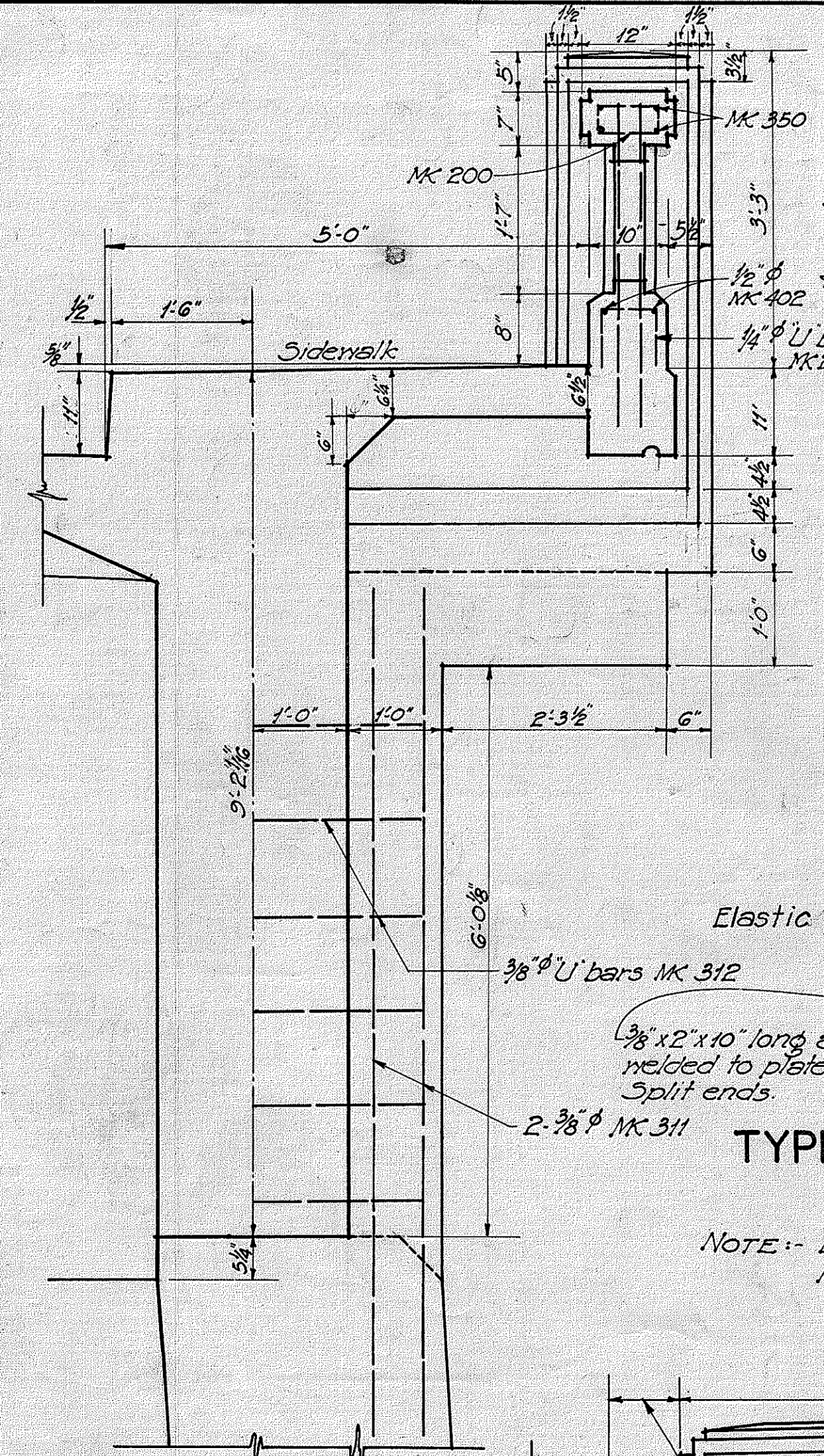
Elev. 94.96 Ham. 89.97 Hilo.



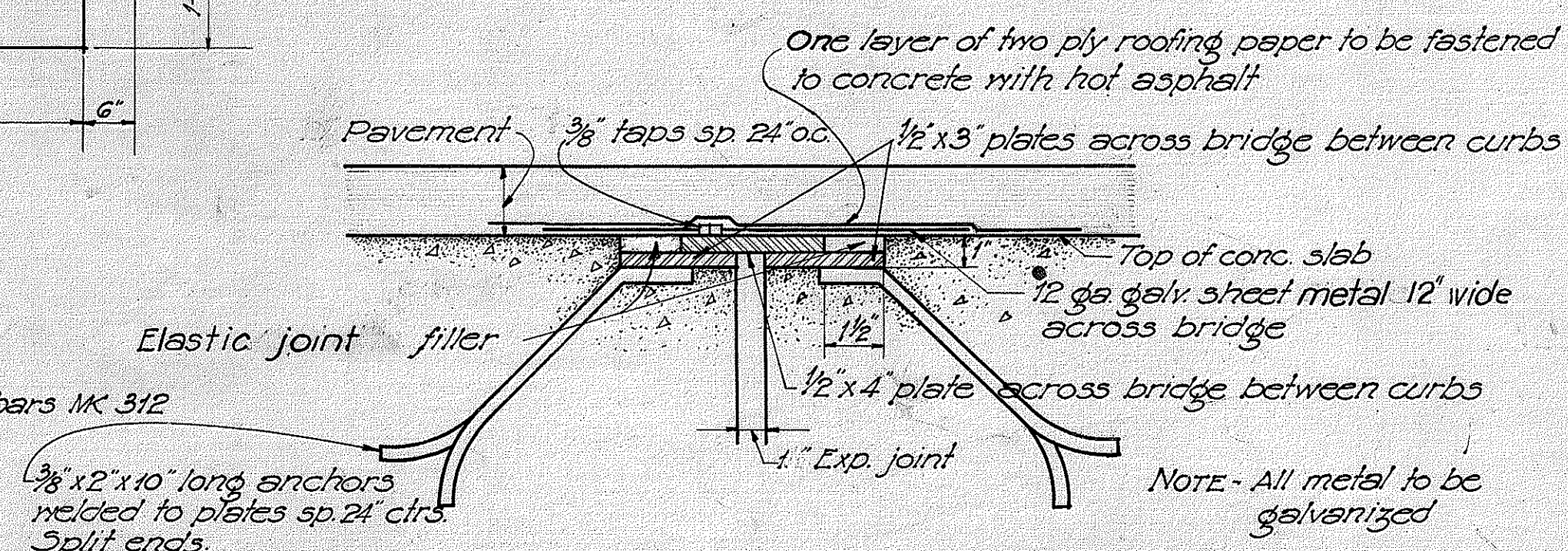
ELEV. RAIL POST ON UPSTREAM SIDE. PIERS 2,3,5 & 6.
Scale 3/4" = 1'-0"



DETAIL OF PIERS 2,3,5, & 6
Scale 3/4" = 1'-0"

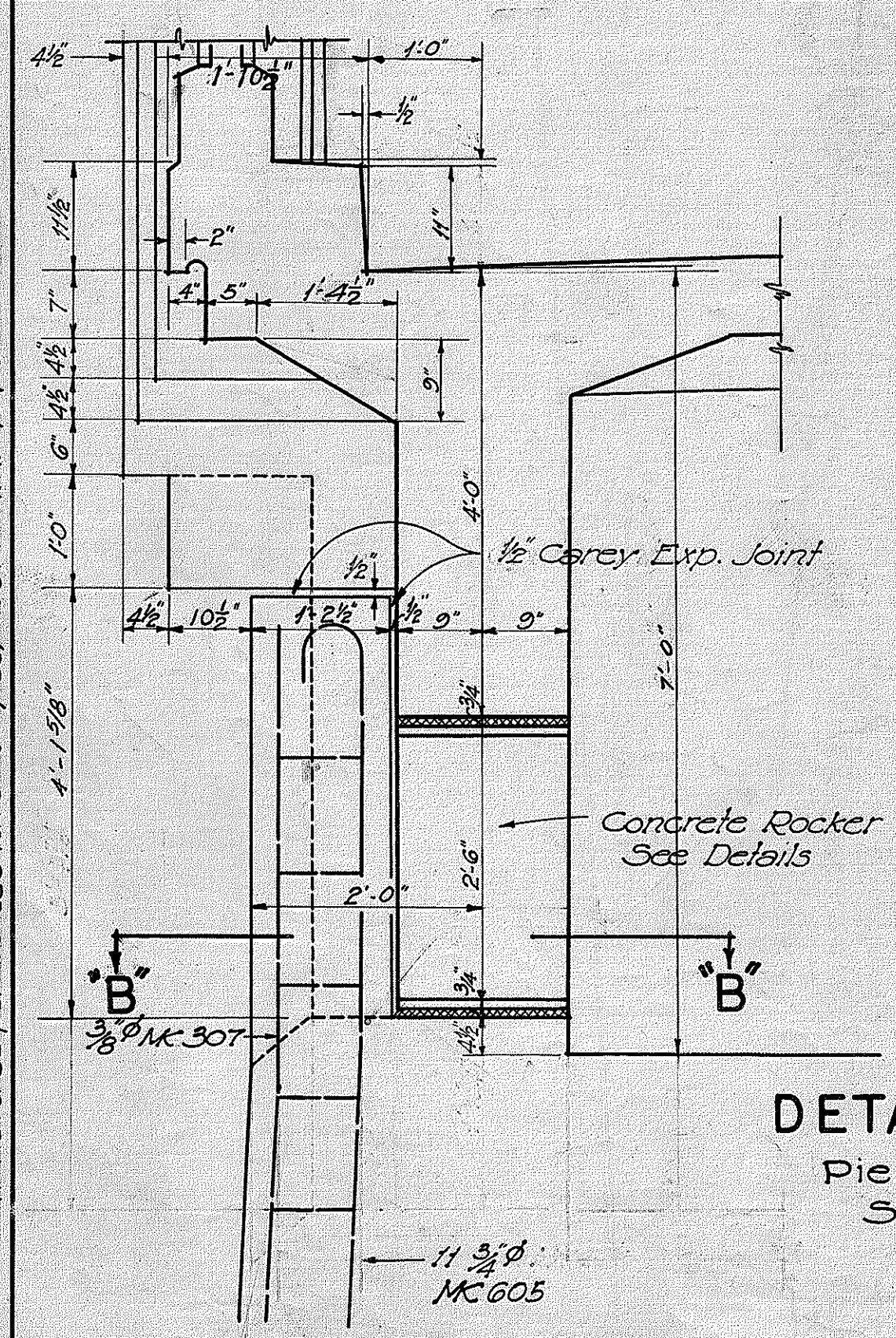


SECTION A-A SHOWING EXPANSION JOINT DETAIL
Scale 3/4" = 1'-0"

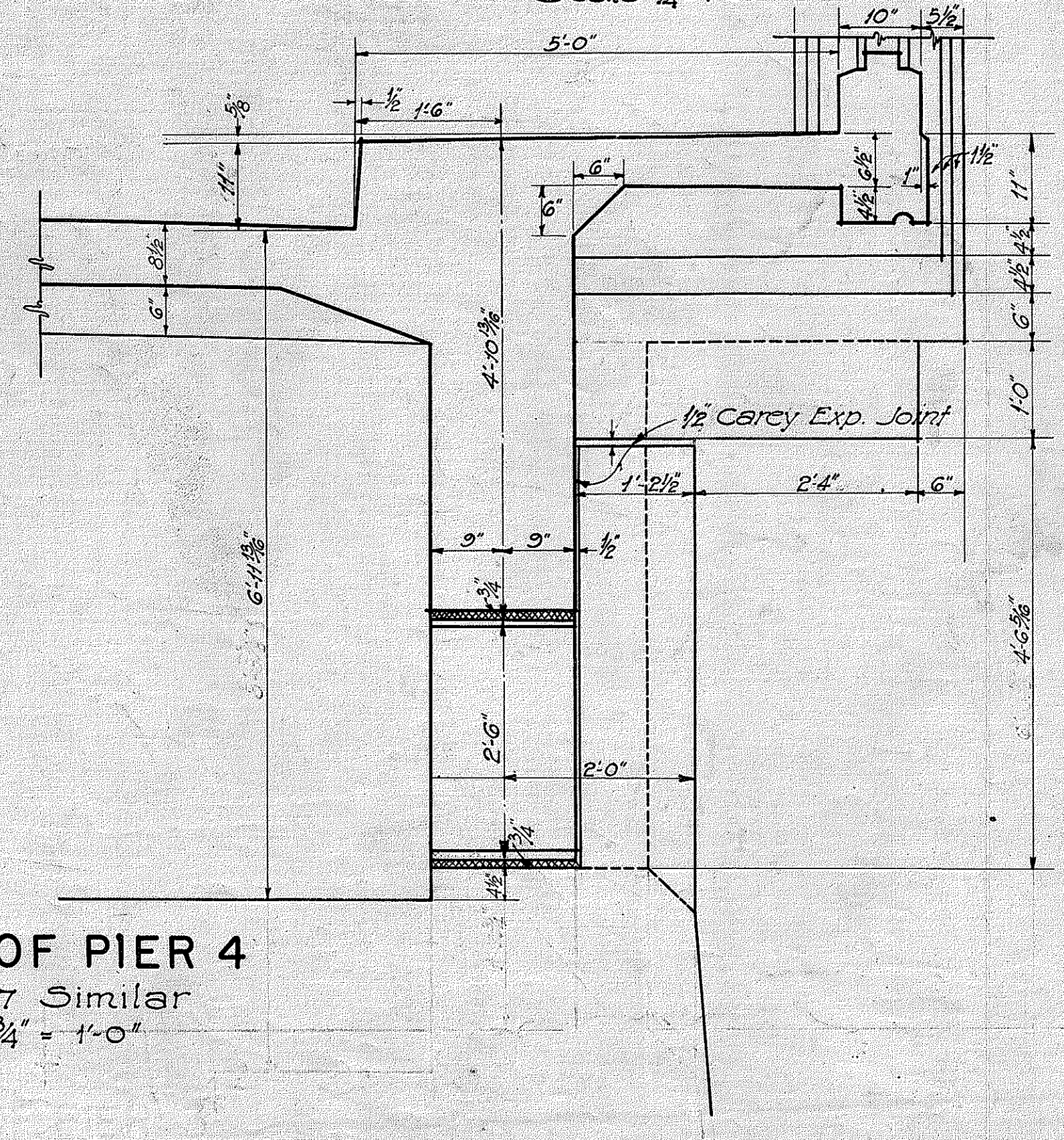


TYPICAL DETAIL FOR DECK EXPANSION JOINT
Scale 3/4" = 1'-0"

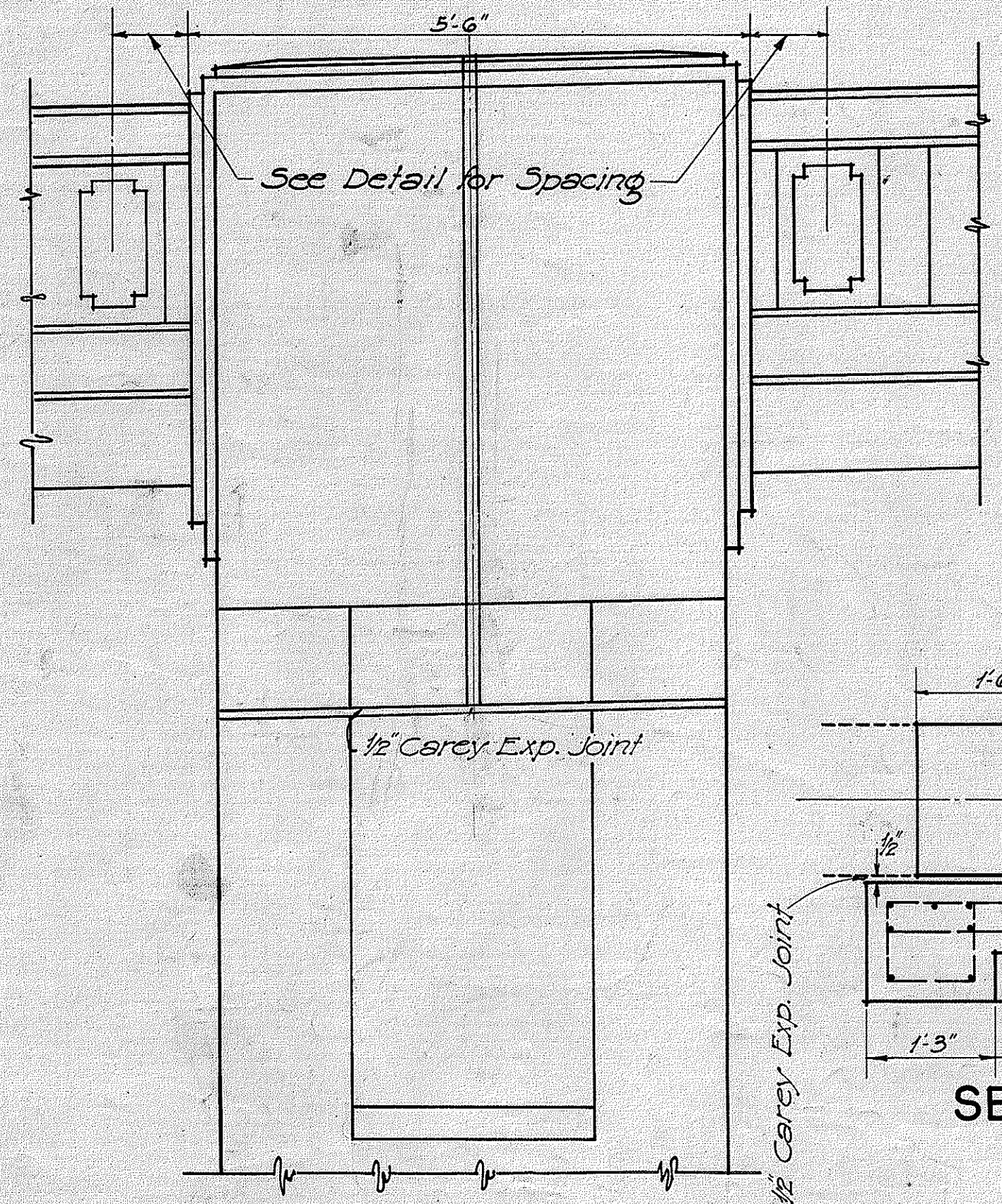
NOTE: Effective precautions must be taken by the contractor to prevent leakage of pavement binder thru expansion joint at curb.



DETAIL OF PIER 4
Piers 1 & 7 Similar
Scale 3/4" = 1'-0"

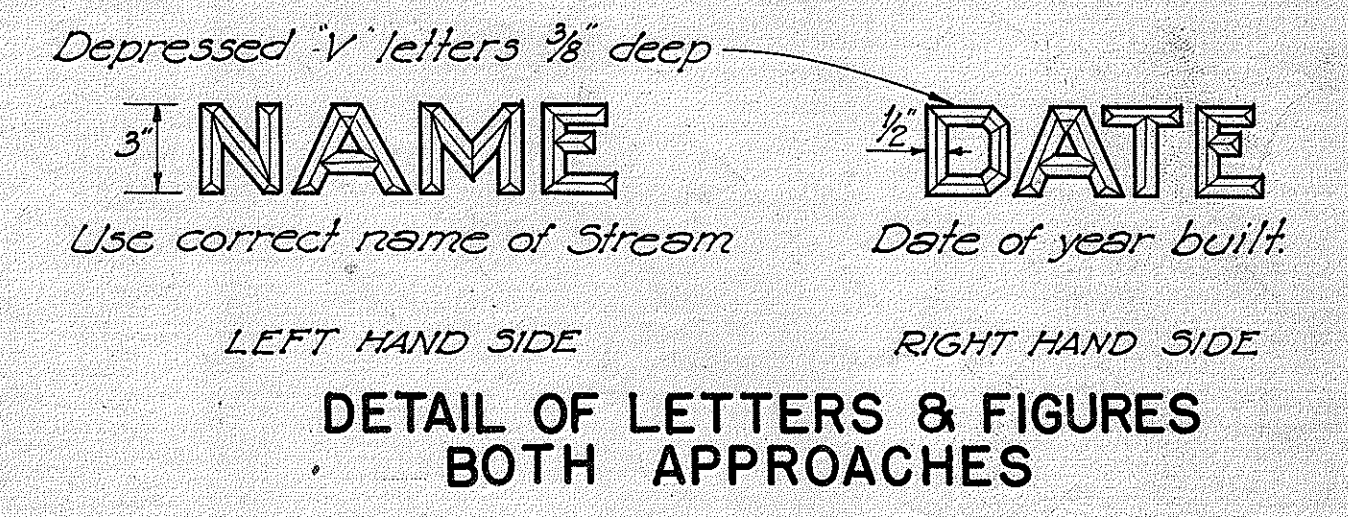


ELEV. RAIL POST DOWNSTREAM SIDE PIER 4
Piers 1 & 7 Similar
Scale 3/4" = 1'-0"



SECTION B-B
Scale 3/4" = 1'-0"

ELEV. OF RAIL POST ON DOWN-STREAM SIDE OF PIERS 2,3,5 & 6
Scale 3/4" = 1'-0"



NOTE - Name of stream to be placed in left hand post panels & date in right end post panels on entering bridge, using standard block letters 3" in height.

SURVEY PLOTTED BY	H.F.C.	DATE	Dec. 25
PLAN	BY		
DRAWN BY	E.M.C.		
NOTE BOOK	BY		
QUANTITIES BY	H.F.C. & C.L.		
CHECKED BY	J.O.C.		

Revised as per Bureau letter July 25, 1936 - H.X.M. 7/21/36

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
HONOLII BRIDGE
NO 14 STA. 36+36.25 TO 41+80.37
HAWAII BELT ROAD NO. W.P.G.H. 14E
DEC. 1935
SHEET NO 10 OF 15 SHEETS

STEEL SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	W.P.G.H. 14-E	1936	23	31

MK	DESCRIPTION	LOCATION	SIZE	LENGTH	Nº OF BARS IN EA UNIT	Nº OF UNITS	TOTAL Nº OF BARS	TOTAL LENGTH	WT. PER FT.	TOTAL WEIGHT	MK	DESCRIPTION	LOCATION	SIZE	LENGTH	Nº OF BARS IN EA UNIT	Nº OF UNITS	TOTAL Nº OF BARS	TOTAL LENGTH	WT. PER FT.	TOTAL WEIGHT	MK	DESCRIPTION	LOCATION	SIZE	LENGTH	Nº OF BARS IN EA UNIT	Nº OF UNITS	TOTAL Nº OF BARS	TOTAL LENGTH	WT. PER FT.	TOTAL WEIGHT
501		SLAB top Str.	5/8" φ	26'-6 1/2"	67	4	452	12044.3	1.06	13615.0	900		Girders G1, G2, G3	1 1/8"	24'-0"	2	12	24	576	4.35	2506	969		Girder G-4 ONLY	1 1/8"	50'-6"	2	4	8	404	4.35	1757
501		" 32' Sp. top 25' Sp.	"	26'-6 1/2"	31	1	31	880.9	"	934.0	901		"	"	30'-0"	2	12	24	720	"	3132	970		"	"	97'-7"	2	4	8	781	"	3396
502		" bottom Str.	"	26'-4"	62	4	432	11376.0	"	12020.0	902		"	"	36'-3"	2	12	24	870	"	3785	971		"	"	101'-5"	2	4	8	811	"	3529
502		" 32' Sp. bottom 25' "	"	26'-4"	31	1	31	816.3	"	865.0	903		Girders G1, G2, G3	"	97'-6"	2	12	24	2340	"	10119	972		"	"	103'-11"	2	2	4	416	"	1808
500		" 71' Sp. Str. 98' "	"	33'-8"	66	4	264	8888.0	"	9421.0	904		"	"	103'-8"	2	12	24	2488	"	10823	973		"	"	103'-11"	2	2	4	416	"	1808
500		" 32' Sp. bottom 25' Sp.	"	"	30	1	30	1010.0	"	1071.0	905		"	"	155'-4"	2	6	12	1864	"	8108	974		"	"	98'-3"	2	2	4	393	"	1710
400		Sidewalk 32' Sp. bars 25' Sp.	1/2" φ	9'-0"	518	1	518	4662.0	0.68	3170.0	906		"	"	161'-8"	2	6	12	1940	"	8439	975		"	"	98'-3"	2	2	4	393	"	1710
301		Stule bars Over Cross Girder 32' Span Only	3/8" φ	7'-9"	15	18	270	2092.5	0.38	795.0	907		G1, G2, G3, G4	"	106'-6"	2	8	16	1704	"	7412	976		"	"	79'-5"	2	4	8	635	"	2763
300		Temp. bars 71' Sp. 98' Sp.	"	73'-3"	40	4	160	11720.0	"	4454.0	908		G1, G2, G3	"	53'-0"	2	12	24	1272	"	5533	977		"	"	81'-4"	2	4	8	651	"	2831
300		" 32' Sp. 25' Sp.	"	34'-3"	40	1	40	1370.0	"	521.0	909		"	"	49'-6"	2	12	24	1188	"	5168	978		"	"	110'-2"	2	2	4	441	"	1917
403		RAILING Interior posts	1/2" φ	4'-6"	10	14	140	3600	0.68	428.0	910		"	"	96'-4"	2	12	24	2312	"	10057	979		"	"	110'-2"	2	2	4	441	"	1917
302		" "	3/8" φ	11'-9"	4	14	56	658.0	0.38	250.0	911		"	"	100'-2"	2	12	24	2404	"	10457	420		LONG T GIRDER STIRRUPS	Girders 1 1/2" φ	10'-3"	346	3	1038	10640	.68	7228
603		End Post	3/4" φ	6'-7"	3	2	6	395.0	1.52	600.0	912		"	"	102'-8"	2	6	12	1232	"	5359	421		Girder 4	"	12'-0"	346	1	346	4152	"	2817
303		End Posts both sides	3/8" φ	9'-0"	4	2	8	126.0	0.38	48.0	913		"	"	102'-8"	2	6	12	1232	"	5359	422		Girders 1 (Haunches) 2	"	15'-3"	384	3	1152	17568	"	11939
306		CROSS GIRDER (Over Piers Hor. bars)	26'-2"	26'-2"	4	2	8	209.3	"	80.0	914		"	"	97'-2"	2	6	12	1166	"	5072	423		Girder 4 (Haunches)	"	16'-11"	384	1	384	6496	"	4417
304		Over Piers	"	15'-7"	18	4	72	1122.0	"	426.0	915		"	"	97'-2"	2	6	12	1166	"	5072	424		Girders 1-2 φ 3	"	19'-9"	24	3	72	1422	"	967
304		Stirrups	"	4'-7"	26	2	52	165.0	"	63.0	916		"	"	78'-9"	2	12	24	1890	"	8222	425		Girder 4	"	21'-6"	24	1	24	516	"	351
406		Bottom Bars	1/2" φ	35'-4"	4	2	8	282.6	0.68	193.0	917		"	"	80'-8"	2	12	24	1936	"	8422	360		Superstr. Girder Ties	3/8" φ	98' span 71' span	10	8	80	384	0.38	145
700		Int. Cross G. Top bars	7/8" φ	28'-11"	3	14	42	1214.5	2.07	2514.0	918		Girders G1, G2, G3, G4	"	33'-0"	4	16	64	2112	"	9187	361		"	"	Varies 2'-3" Av.	9	16	144	324	"	123
701		Bottom Bars	"	27'-6"	3	14	42	1155.0	"	2391.0	919		Girders G1, G2, G3	"	110'-2"	2	6	12	1322	"	5751	460		"	"	72'-3"	2	16	32	2312	0.68	1572
305		Stirrups	3/8" φ	9'-11"	18	14	252	2499.0	0.38	978.0	600		Girders G1, G2, G3, G4 Top Str. bars	3/4" φ	30'-0"	2	16	32	960	1.52	1459	461		"	"	100'-0"	2	8	16	1600	"	1088
610		Int. Cross G. 32' Sp. Top Horiz.	3/4" φ	28'-7"	2	1	2	57.12	1.52	87.0	601		"	"	34'-0"	2	8	16	544	"	827	410		Cross Girder At Pier 4, 7	"	28'-3"	2	4	8	226	"	154
611		Int. Cross G. 32' Span Bottom Horiz.	3/4" φ	27'-2"	2	1	2	54.33	"	83.0	960		G4 Only	1 1/8"	25'-8"	2	4	8	205	4.35	893	411		"	"	26'-7"	2	4	8	213	"	144
407		RAILING End Post Sidewalk	1/2" φ	4'-3"	1	2	2	8.5	0.68	6.0	961		"	"	31'-7"	2	4	8	253	"	1099	310		Pier 1, 4, 7	3/8" φ	7'-8"	18	4	72	552	0.38	210
408		"	"	2'-9"	4	2	8	22.0	"	15.0	962		"	"	37'-10"	2	4	8	303	"	1317	391		Piers 3	"	22'-9"	14	2	28	637	"	242
404		"	"	4'-9"	1	2	2	9.5	"	6.0	963		"	"	100'-0"	2	4	8	800	"	3480	392		Piers 4	"	31'-8"	5	4	20	633	"	241
405		"	"	3'-6"	4	2	8	28.0	"	19.0	964		"	"	105'-2"	2	4	8	841	"	3660	393		Piers 5	"	27'-6"	3	2	6	165	"	63
401		"	"	3'-6"	2	658	1316	4606.1	"	3132.0	965		"	"	157'-8"	2	2	4	631	"	2744	966		"	"	164'-0"	2	2	4	656	"	2854
											968		"	"	54'-0"	2	4	8	432	"	1879											

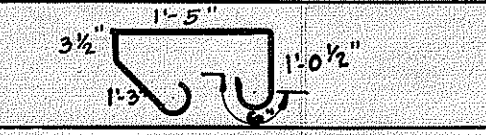

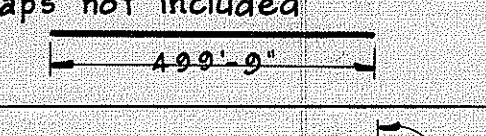
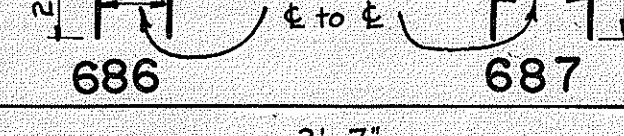
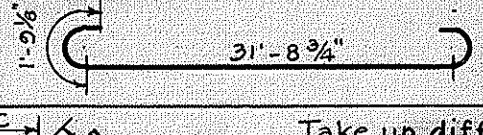
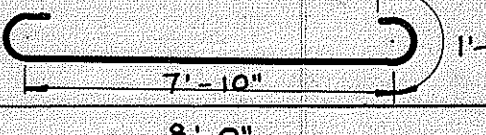
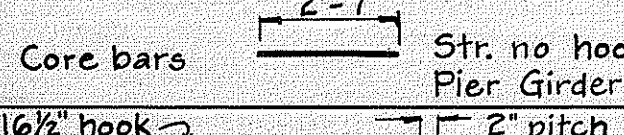

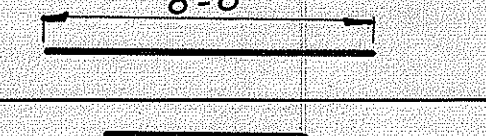
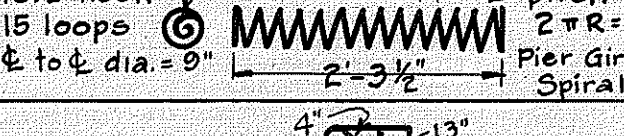
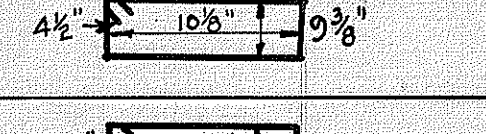
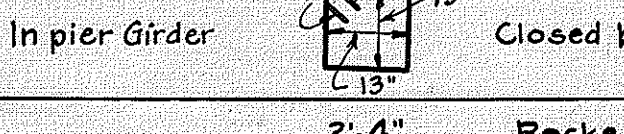
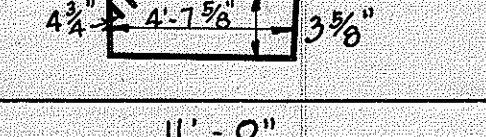
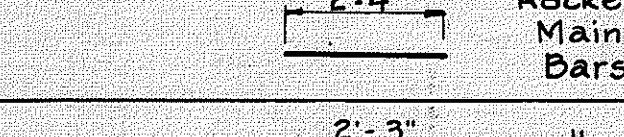
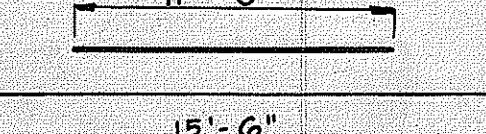
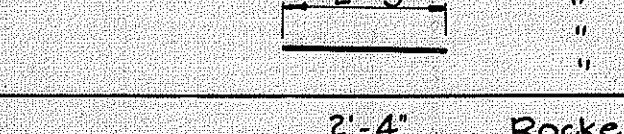
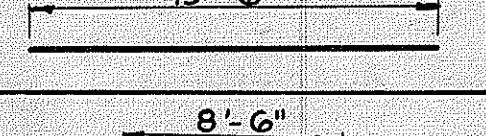

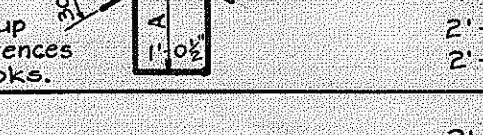
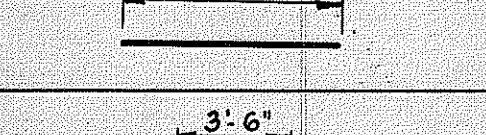

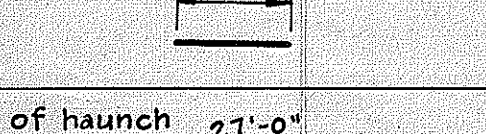

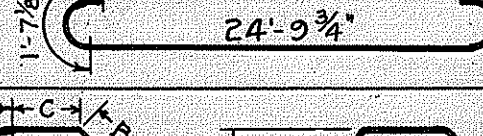
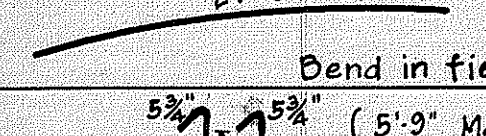

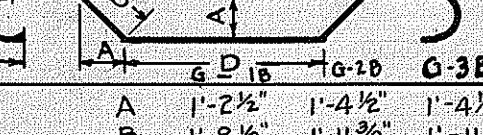
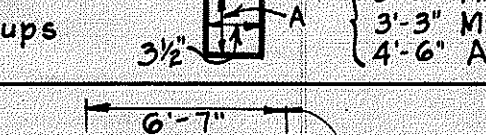
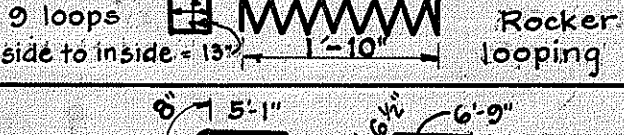



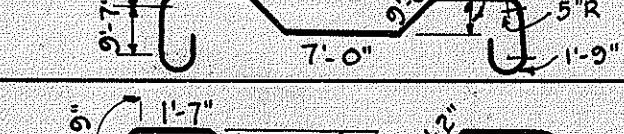

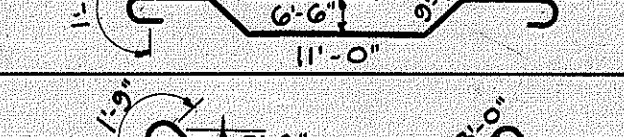
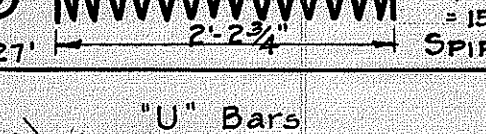
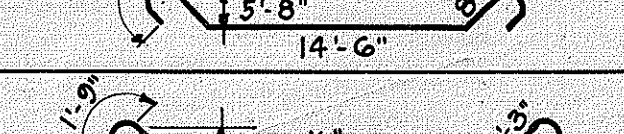

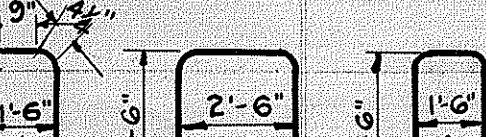
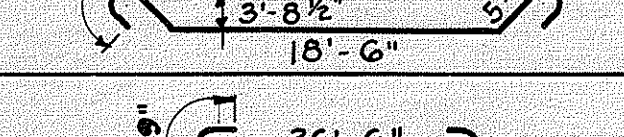
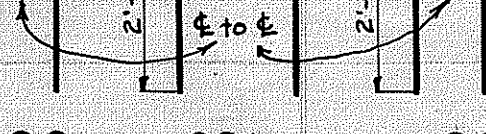
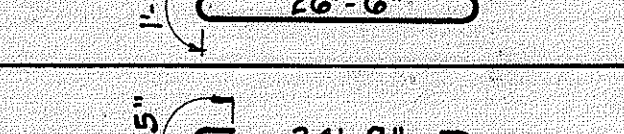

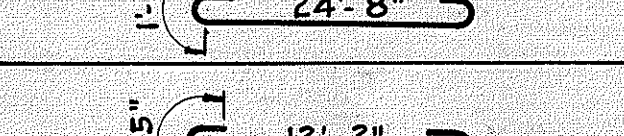
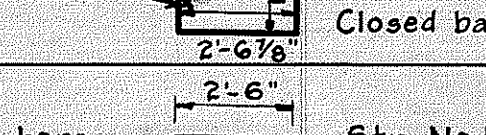
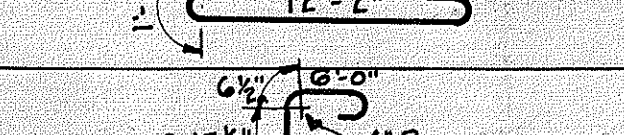
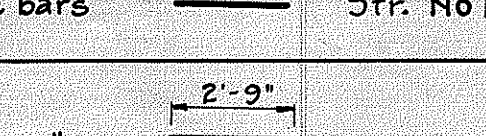
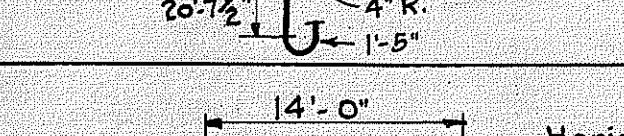
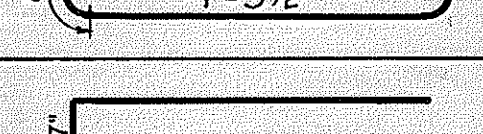

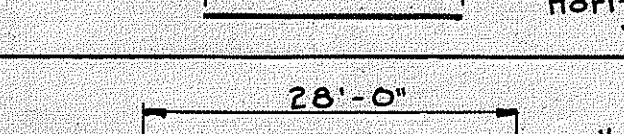
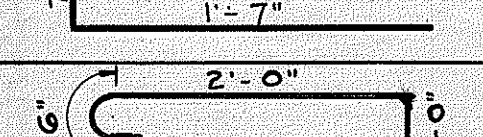
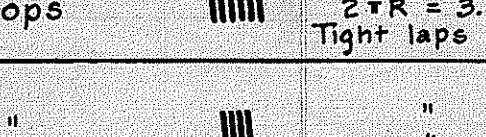
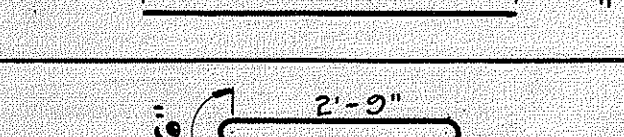
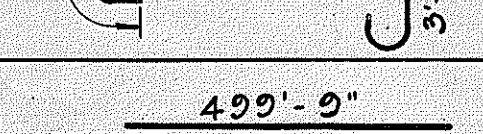

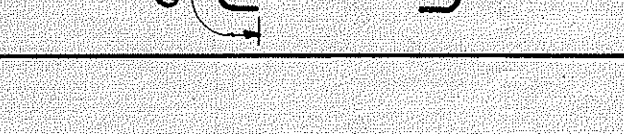
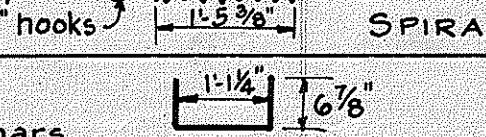
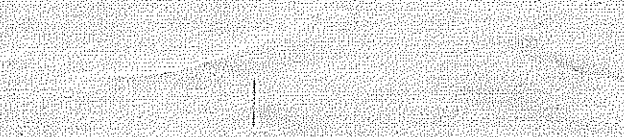
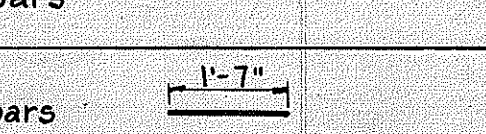
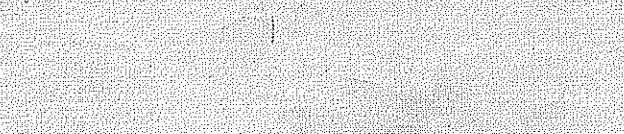
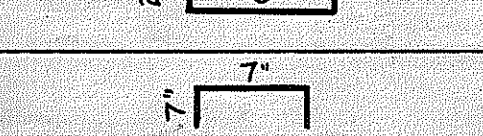
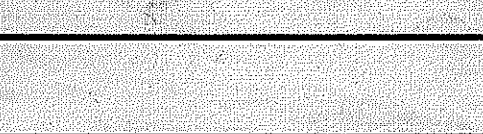
SURVEY PLOTTED BY DATE: 11-1-36
 DESIGNED BY: G.D.K.
 TRACED BY: C.T.L.
 QUANTITIES BY: C.T.L.
 CHECKED BY:

All sheets of this steel schedule are subordinate to details shown on plans. In case of discrepancy between steel list and detail drawings the latter shall govern. The Territorial Highway Dept. does not assume responsibility for any errors that occur in the steel schedule. Contractor shall check steel schedule before placing order. All stirrup dimensions are to inside of stirrups all other dimensions are figured on 1/2" of bar.

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
HONOLULU BRIDGE
 No 14 STA 36+36.25 TO 41+80.37
 HAWAII BELT ROAD No. W.P.G.H. 14-E
 DEC. 1935
 SHEET No 13 OF 15 SHEETS

STEEL SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	WPGH 14E	1936	25	31

MK	DESCRIPTION	LOCATION	SIZE	LENGTH	Nº OF BARS IN EA UNIT	Nº OF UNITS	TOTAL Nº OF BARS	TOTAL LENGTH	WT. PER FT.	TOTAL WEIGHT	MK	DESCRIPTION	LOCATION	SIZE	LENGTH	Nº OF BARS IN EA UNIT	Nº OF UNITS	TOTAL Nº OF BARS	TOTAL LENGTH	WT. PER FT.	TOTAL WEIGHT	MK	DESCRIPTION	LOCATION	SIZE	LENGTH	Nº OF BARS IN EA UNIT	Nº OF UNITS	TOTAL Nº OF BARS	TOTAL LENGTH	WT. PER FT.	TOTAL WEIGHT			
325	28'-0"	Pier #17 & Abut #2	3/8"	28'-0"	8	2	16	448	0.88	170.0	354		RAILING	3/8"	5'-0"	500	1	500	2500	0.38	950	686		GIRDER BEARING Exp. joint bearings	3/8"	5'-9"	4	16	64	368	1.52	559			
412	7'-0"	"	1/2"	7'-0"	58	2	116	819	0.68	557.0	355	Laps not included 	Horiz.	"	499'-9"	4	1	4	1999.0	"	760	687		"	"	6'-0"	4	16	64	384	"	584			
1010		Girders G1A, G-2A, G-3A, G-4A 32' Span	1/4"	35'-2"	4	4	16	140.67	5.37	755.0	605		Bracket Pier 4	3/8"	10'-0"	22	3	66	660.0	1.52	1003	584	Core bars 	Str. no hooks Pier Girder	"	5/8"	2'-7"	4	16	64	165	1.06	175		
1011		Girders 32' Span	"	"	"	"	"	"	"	"	307		"	3/8"	8'-0"	20	3	60	440.0	0.38	182	385		"	"	38'-0"	2	16	32	1216	0.38	462			
1011	"	G-1A G-2A G-3A G-4A	"	36'-7" 36'-9" 36'-8" 37'-4"	2 2 2 2	1 1 1 1	2 2 2 2	73.17 73.50 73.33 74.67	" " " "	393.0 395.0 394.0 401.0	308		"	"	4'-0"	20	3	60	240.0	"	91	386	In pier girder 	Closed bands	"	"	5'-0"	8	16	128	640	"	243		
1012	"	G-1A G-2A	"	36'-7" 36'-9"	2 2	1 1	2 2	73.17 73.50	" "	393.0 395.0	309		"	"	10'-8"	10	3	30	320.0	"	122	882A		Rocker Main Bars	"	1"	2'-4"	2	16	32	75	2.70	202		
1012	"	G-3A G-4A Tension Reinf.	"	36'-8" 37'-4"	2 2	1 1	2 2	73.33 74.67	" "	394.0 401.0	313		FALSE HAUNCHES	3/8"	11'-0"	2	8	16	176.0	"	67	883A		Rocker Core Bars	"	5/8"	2'-4"	4	16	64	149	1.06	158		
450	Varies	Girders Top Horiz. Ties: G-1A, G-2A, G-3A, G-4A	1/2"	24'-6" 22'-0"	2 2	3 1	6 2	49.00 44.00	0.68 "	33.0 30.0	314		"	"	15'-6"	2	8	16	248.0	"	94	585		Rocker Core Bars	"	5/8"	2'-4"	4	16	64	149	1.06	158		
350		Girders 32' Span G-1A G-2A	3/8"	5'-11" 6'-3"	32 32	1 1	32 32	189.33 200.00	0.67 0.38	21.0 12.0	350		"	"	3'-6"	2	8	16	56.0	"	21	688		"	3/8"	2'-8"	8	16	128	342	1.52	520			
350	"	G-3A G-4A	"	6'-2" 7'-8"	32 25	1 1	32 25	197.33 191.67	" "	132.0 115.0	316		"	"	3'-6"	2	8	16	56.0	"	21	689		"	"	2'-10"	8	16	128	362	"	551			
990		Girders 25' Span G-1B, G-2B G-3B & G-4B	1/8"	28'-0"	4	4	16	448.0	4.35	1949.0	317	Bottom of haunch 	"	"	27'-0"	2	8	16	432.0	"	164	387		"	3/8"	33'-0"	1	16	16	528	0.38	201			
991		Girders 25' Span Tension Reinf.	"	"	"	"	"	"	"	"	318	Stirrups 	"	"	Average 10'-3" Length	11	8	88	902.0	"	343	388		Rocker looping	"	"	42'-0"	1	16	16	672	"	255		
991	"	G-1B G-2B G-3B G-4B	"	29'-2" 29'-4" 29'-4" 29'-11"	2 2 2 2	1 1 1 1	2 2 2 2	58.33 58.67 58.67 59.83	" " " "	254.0 225.0 225.0 260.0	800		1 1/2" Dowels	"	"	Bearing Ties Piers 2, 3, 5 & 6	1"	8'-0"	3	8	24	192.0	2.70	519	1000		TOP GIRDER Piers 2, 3, 5 & 6	1 1/4"	56'-3"	3	4	12	675	5.37	3625
992	"	G-1B G-2B	"	29'-2" 29'-4"	2 2	1 1	2 2	58.33 58.67	" "	254.0 225.0	311		BRACKET Pier 2, 3, 5 & 6	3/8"	8'-0"	16	4	64	512.0	0.38	195	1001		"	"	56'-3"	3	4	12	675	"	3625			
992	"	G-3B G-4B	"	29'-4" 29'-11"	2 2	1 1	2 2	58.67 59.83	" "	225.0 260.0	312		"	"	3'-3"	24	4	96	312.0	"	119	1002		"	"	36'-0"	3	4	12	432	"	2320			
451	18'-9"	Girders G1B, G2B, G3B & G4B Top horiz. ties	1/2"	18'-9"	2	4	8	150.00	0.68	102.0	380		GIRDER BEARINGS Piers 2, 3, 5 & 6	"	61'-9"	4	16	64	3952.0	"	1502	1003		"	"	34'-0"	3	4	12	408	"	2191			
351		Girders-25 Sp. G-1B Stirrups G-2B	1/2"	5'-0" 5'-4"	29 29	1 1	29 29	145.00 154.67	0.67 "	97.0 104.059-0	680		"	3/8"	6'-5"	8	16	128	822.0	1.52	1247	1004		"	"	32'-6"	3	4	12	390	"	2094			
351	"	G-3B G-4B	"	5'-3" 6'-9"	29 22	1 1	29 22	152.25 148.50	" "	102.0 99.0	681		"	"	7'-6"	8	16	128	960.0	"	1459	1005		"	"	30'-0"	3	4	12	360	"	1933			
612	4'-8"	Dowels at Abutments	3/4"	5'-9"	3	16	48	276.00	1.52	420.0	682		680 681 682	"	"	6'-6"	8	16	128	832.0	"	1265	801		"	"	27'-6"	9	4	36	990	3.44	3406		
890	"	Abut. Footings 32' Span	1"	33'-5"	6	4	24	802.0	3.44	2759.0	381		Closed bands	3/8"	9'-3"	16	16	256	2368.0	0.38	900	802		"	"	15'-0"	12	4	48	720	"	2477			
891	"	25' Span	1"	"	6	4	24	802.0	2.70	2165.0	580	Core bars 	Str. No hooks	"	2'-6"	12	16	192	480.0	1.06	509	803		"	"	30'-0"	8	4	32	960	"	3302			
453		32' Span & 25'	1/2"	2'-7 1/2"	34	2	68	178.5	0.68	121.0	581		"	"	2'-9"	12	16	192	528.0	"	560	602		Horiz.	"	3/4"	14'-0"	4	4	16	224	1.52	341		
452		Stirrups Both Abutments	1/2"	3'-9"	34	2	68	255.0	"	174.0	280		Interlocking coils 9 hoops	"	23'-7"	2	16	32	755.0	0.17	128	426		"	"	1/2"	28'-0"	8	4	32	896	0.68	609		
343		Post Bracket	3/8"	6'-0"	6	4	24	144.0	0.38	55.0	281		4 Loops	"	15'-8"	2	16	32	501.0	"	85	319		"	"	3/8"	3'-9"	18	4	72	270	0.38	103		
402	499'-9"	RAILING Horiz. Laps not included	1/2"	499'-9"	2	2	4	1999.0	0.68	1359.0	382		"	3/8"	16'-0"	2	16	32	512.0	0.38	195	685		"	3/8"	2'-3"	2	16	32	72.0	1.52	109			
353	499'-9"	"	3/8"	"	4	2	8	3998.0	0.38	1519.0	582		Core bars	"	1'-7"	8	16	128	202.0	1.06	214	899		Vertical dowels	1"	10'-9"	2	16	32	344.0	2.70	929			
200		Stirrups	1/2"	2'-3"	666	2	1332	2997.0	0.17	509.0																									
201		U bars	"	1'-9"	666	2	1332	2331.0	"	396.0																									

SURVEY PLOTTED BY DATE
 DESIGNED BY
 PLAN DRAWN BY
 QUANTITIES BY G.D.K.
 CHECKED BY
 Revised 55 per Bureau letter of July 25, 1936 - H.A.M. 76/26 of Aug. 17, 1936

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
HONOLULU BRIDGE
 NO 14 STA. 36+36.25 TO 41+80.37
 HAWAII BELT ROAD No. W.P.G.H. 14E
 DEC. 1935
 SHEET NO 15 OF 15 SHEETS

4356.25