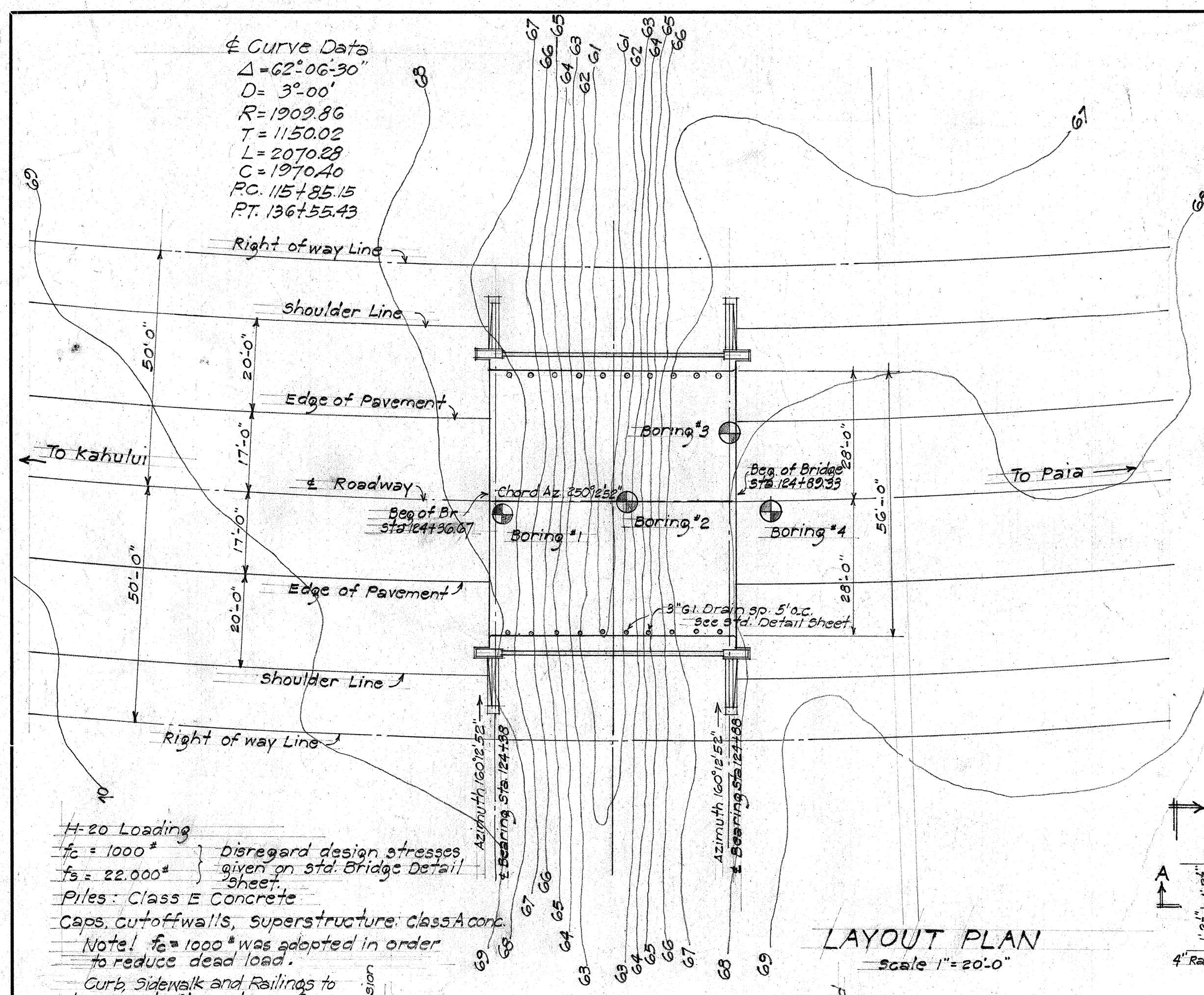


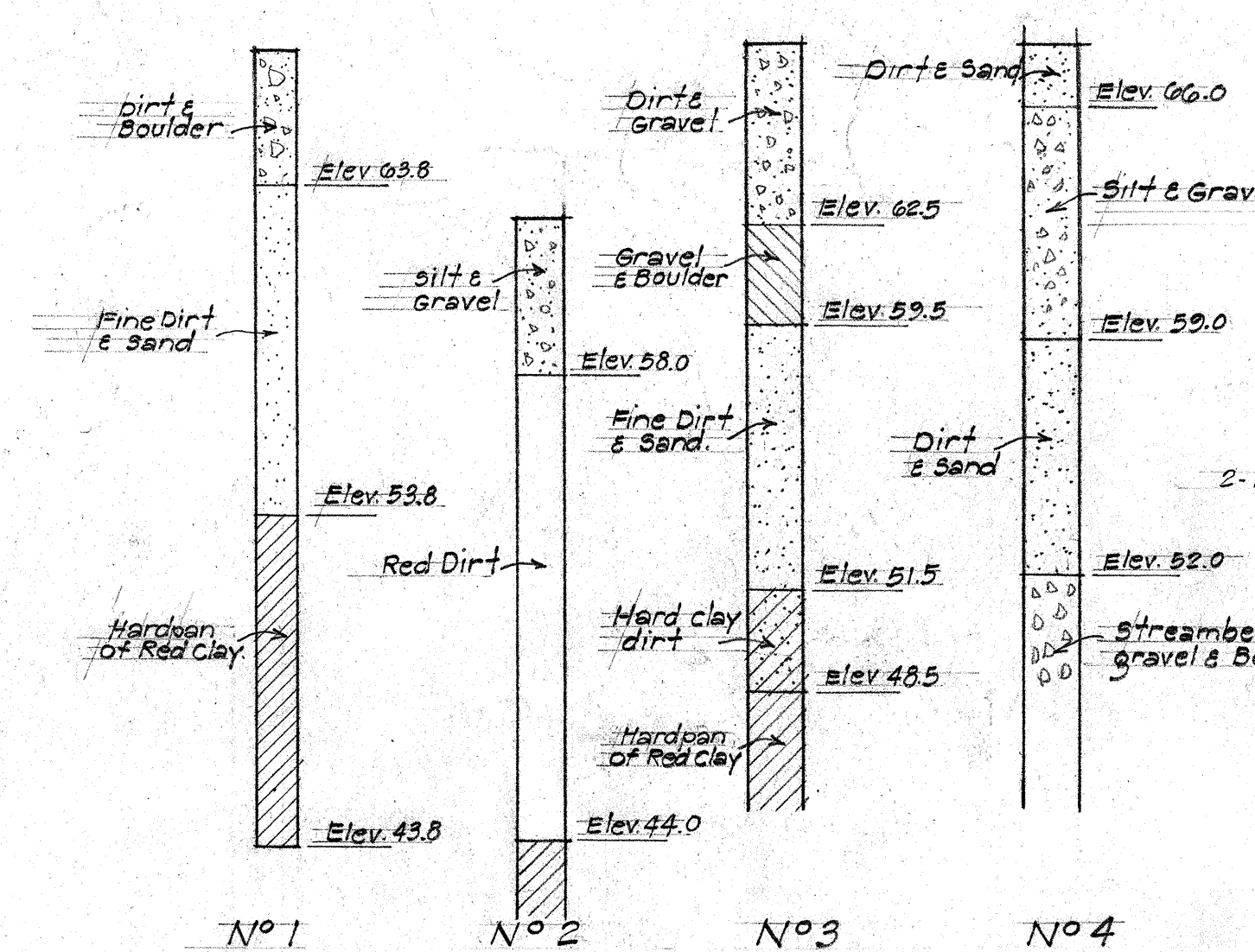
REVISED - Oct. 3, 1943

Curve Data
 $\Delta = 62^{\circ}06'30''$
 $D = 3^{\circ}00'$
 $R = 1909.86$
 $T = 1150.02$
 $L = 2070.28$
 $C = 1970.40$
 $PC = 115+85.15$
 $PT = 136+55.43$

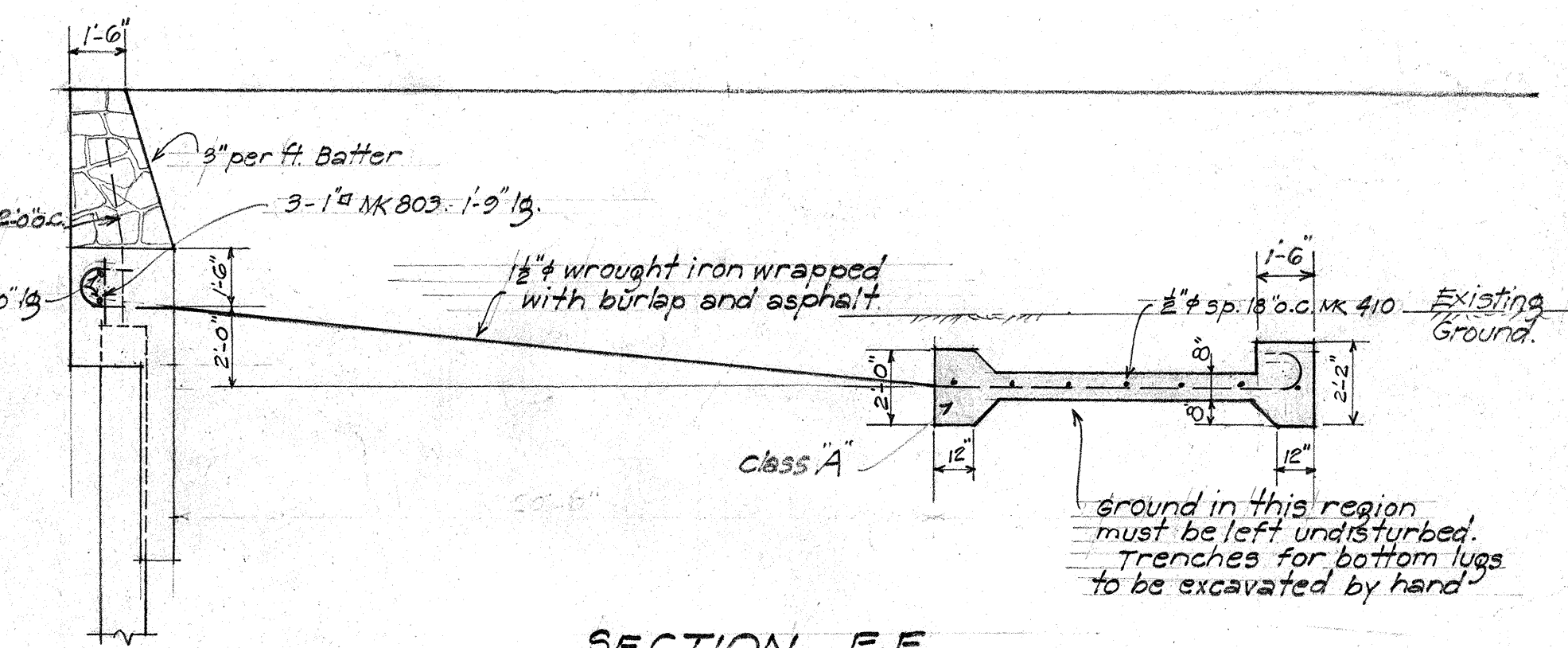


LAYOUT PLAN
 Scale 1" = 20'-0"

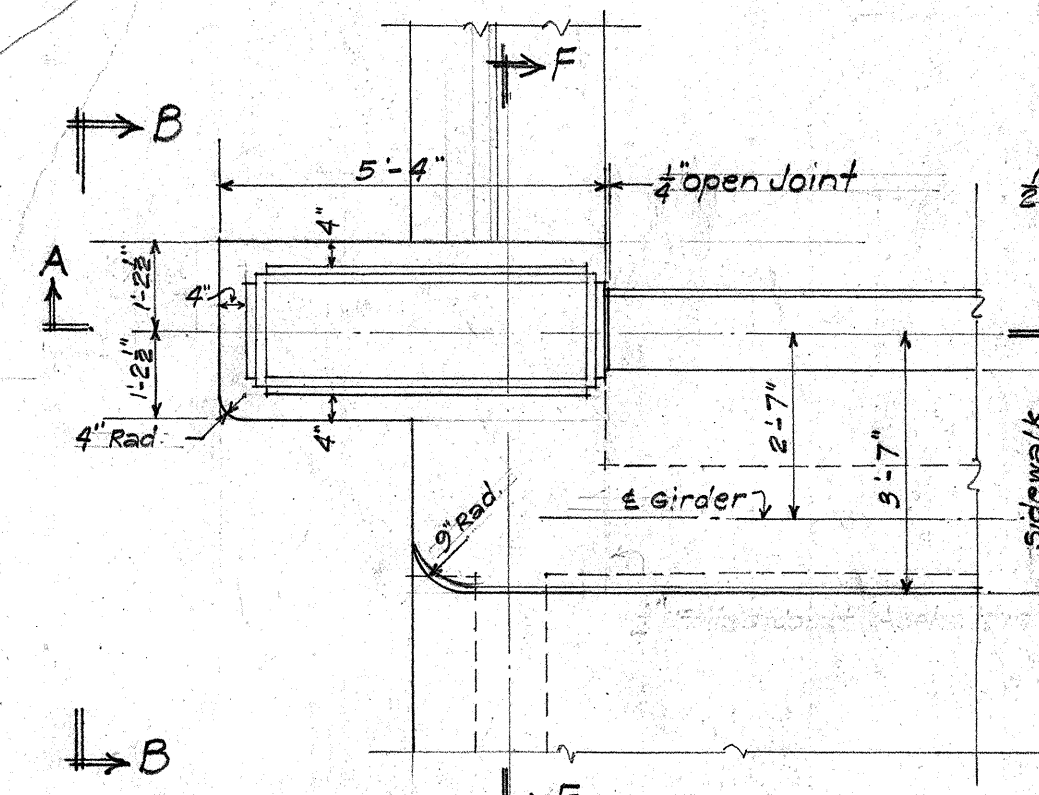
H-20 Loading
 $f_c = 1000$ } disregard design stresses
 $f_s = 22,000$ } given on Std. Bridge Detail Sheet
 Piles: Class E Concrete
 Caps, cutoff walls, Superstructure: Class A Conc.
 Note: $f_c = 1000$ was adopted in order to reduce dead load.
 Curb, sidewalk and Railings to be poured after release of falsework.



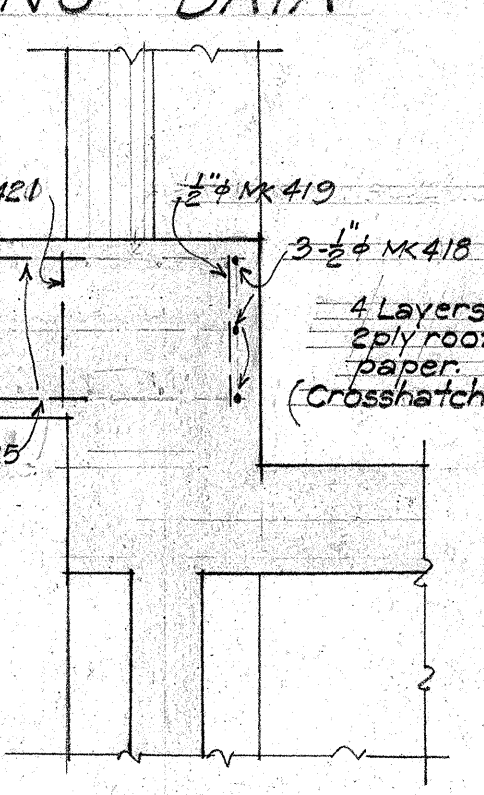
BORING DATA



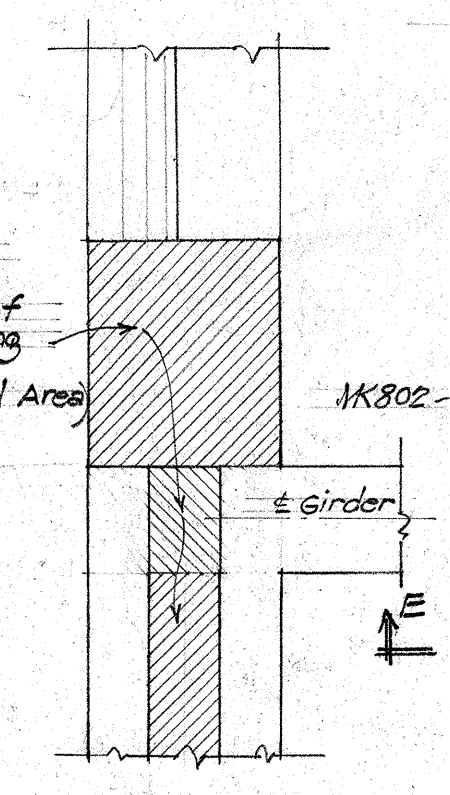
SECTION E-E
 Scale 1/4" = 1'-0"



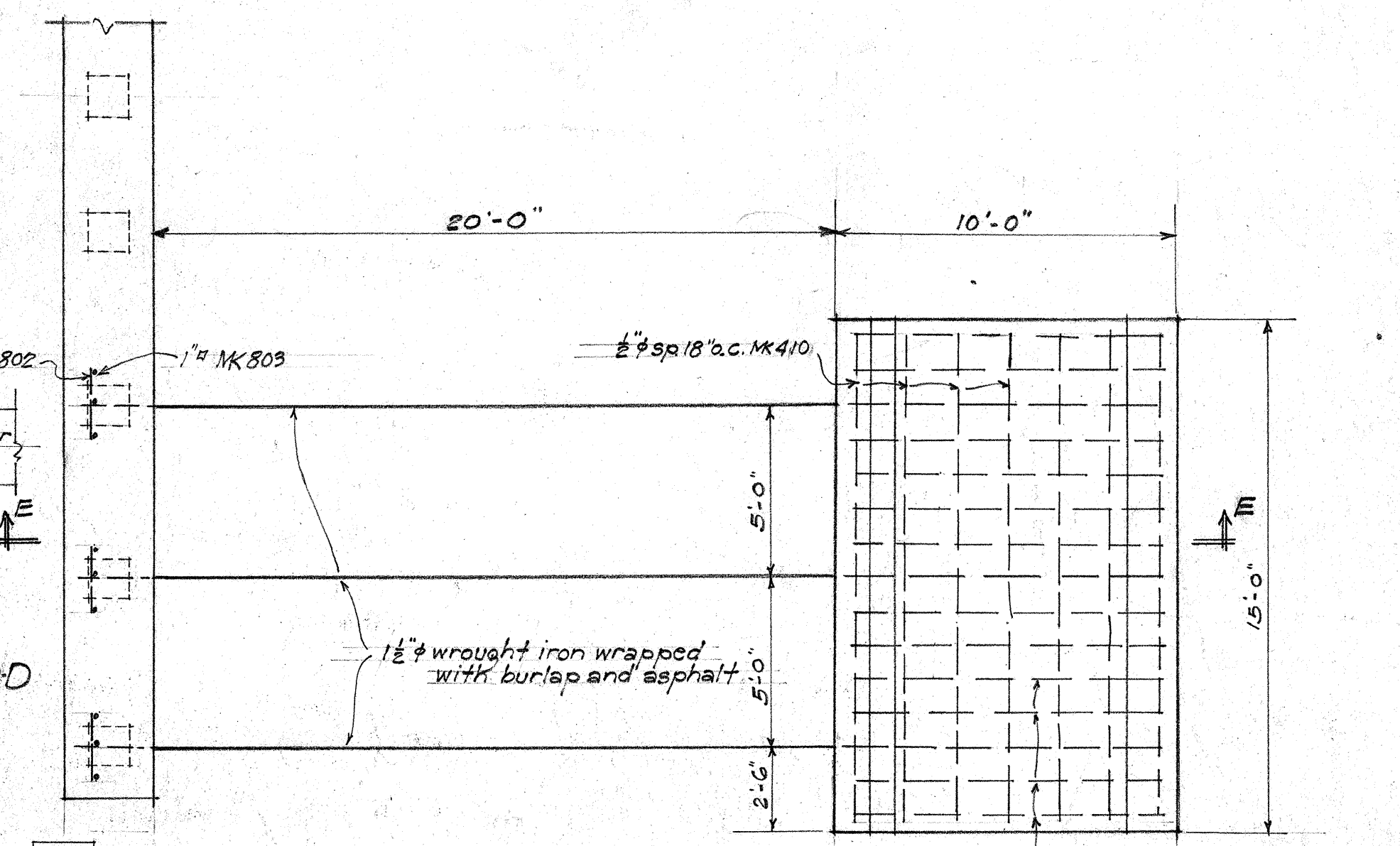
TYPICAL END POST PLAN
 Scale 3/8" = 1'-0"



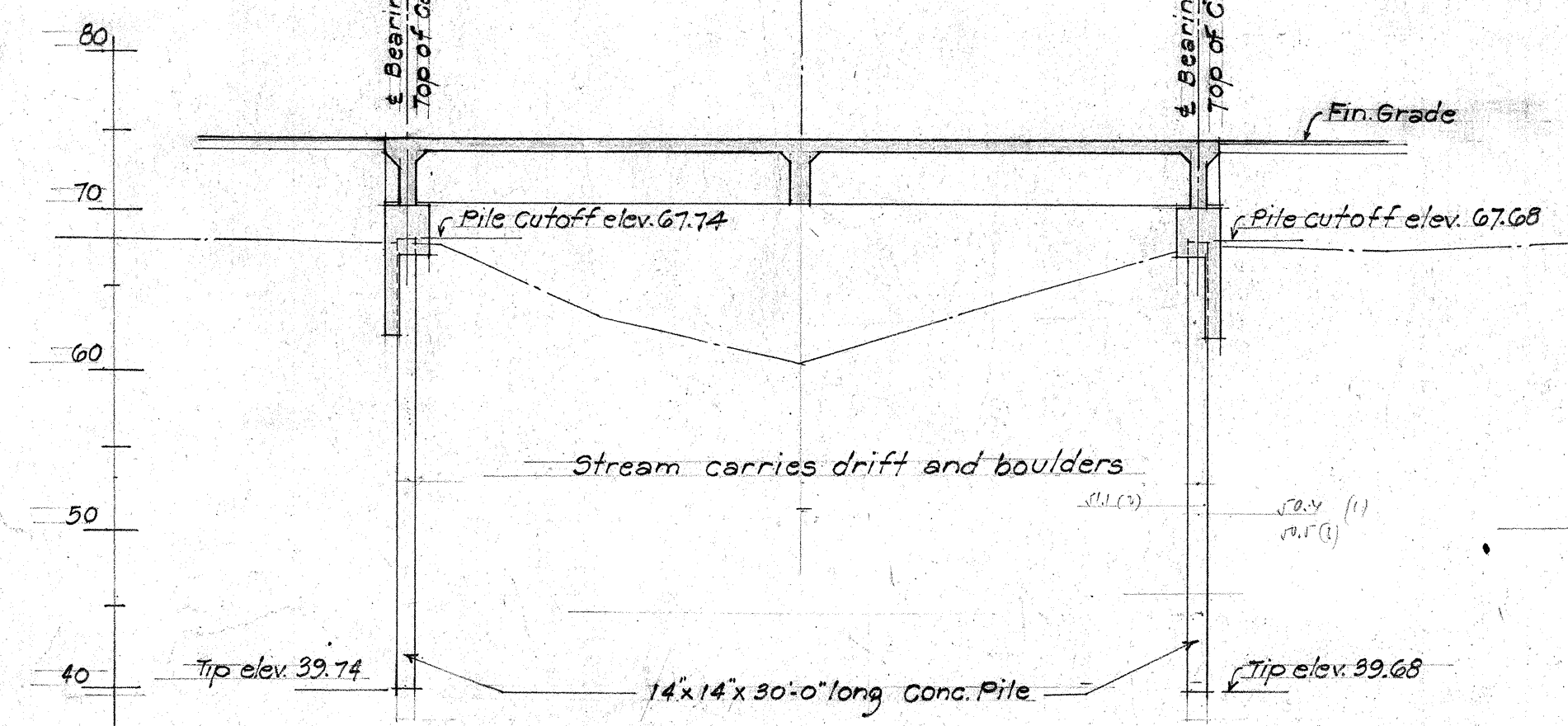
SECTION C-C
 Scale 3/8" = 1'-0"



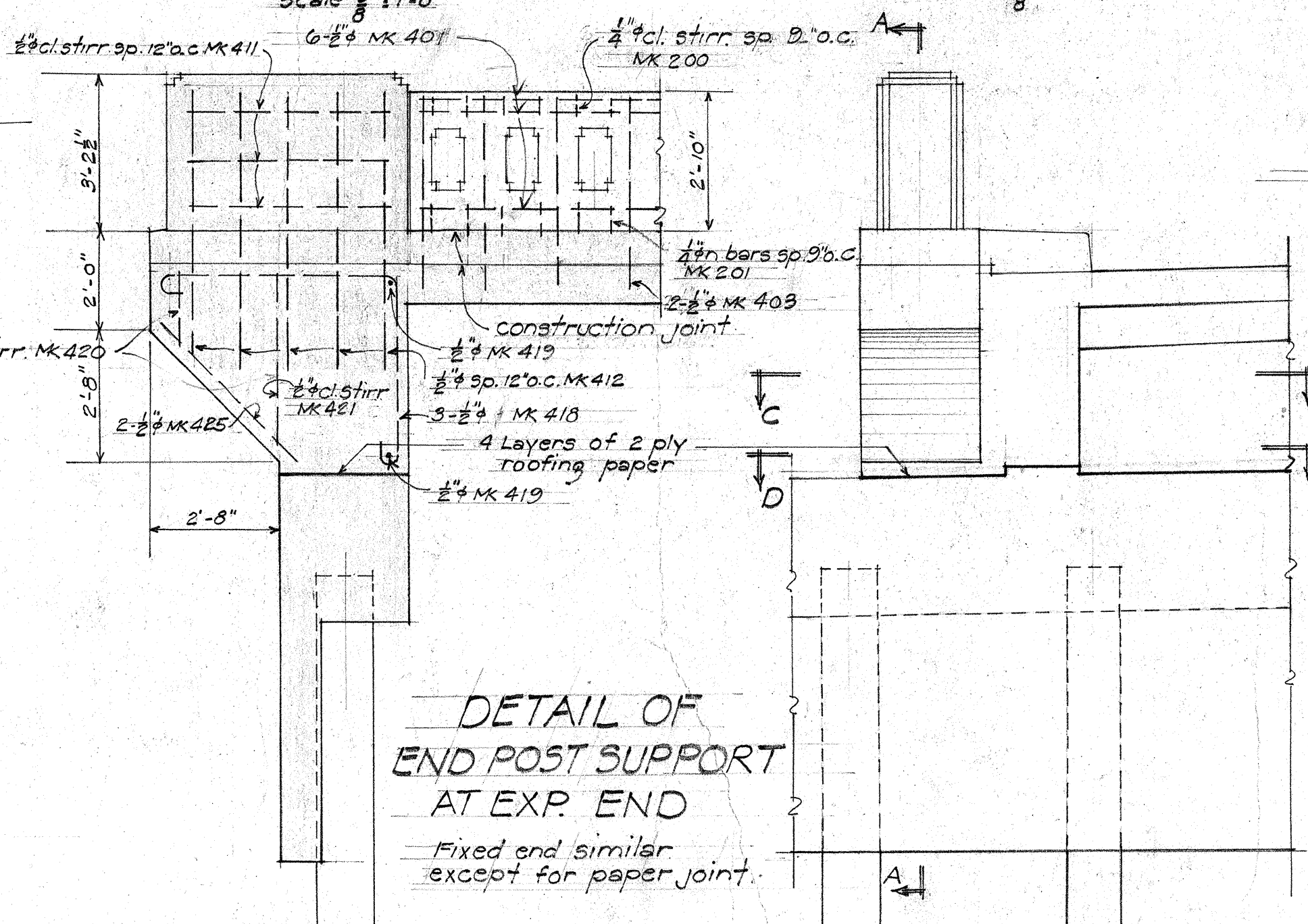
SECTION D-D
 Scale 3/8" = 1'-0"



PLAN
 DETAIL OF WINGWALL ANCHOR
 Scale 1/4" = 1'-0"



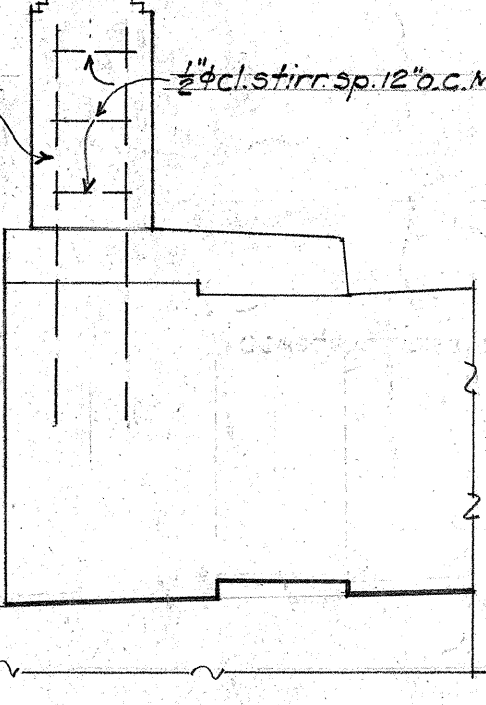
SECTION ALONG BRIDGE
 Scale 1" = 10'-0"



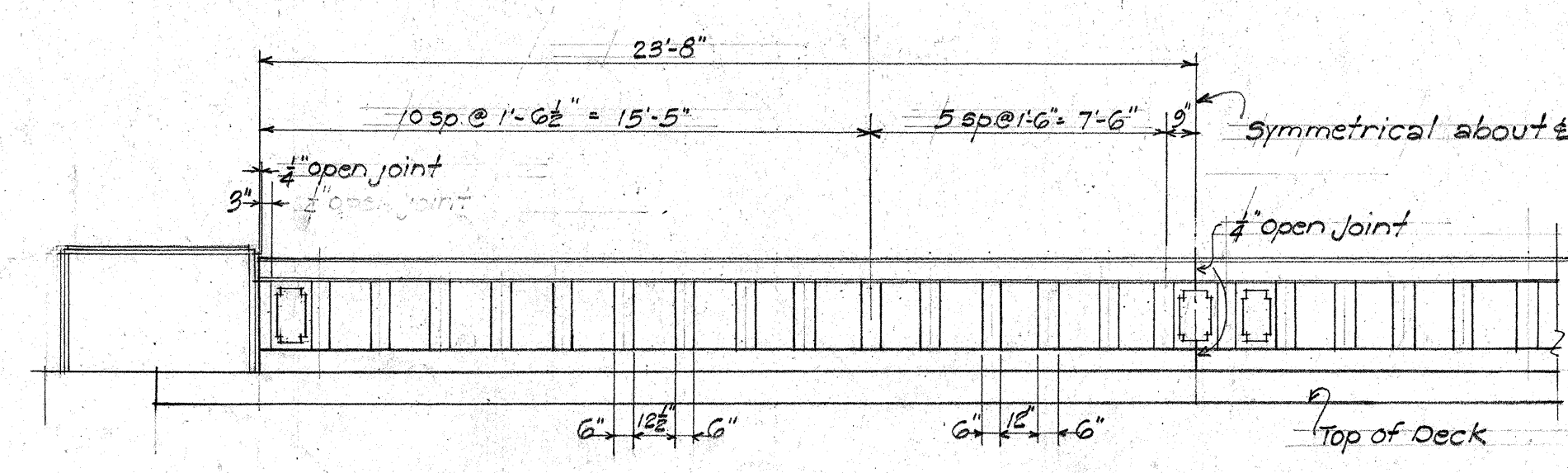
DETAIL OF
 END POST SUPPORT
 AT EXP. END
 Fixed end similar
 except for paper joint.

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

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



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



DETAIL OF RAILING
 Scale 1/2" = 1'-0"

ESTIMATED QUANTITIES

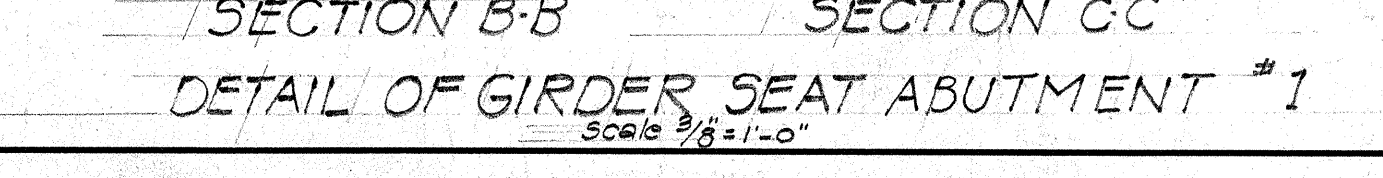
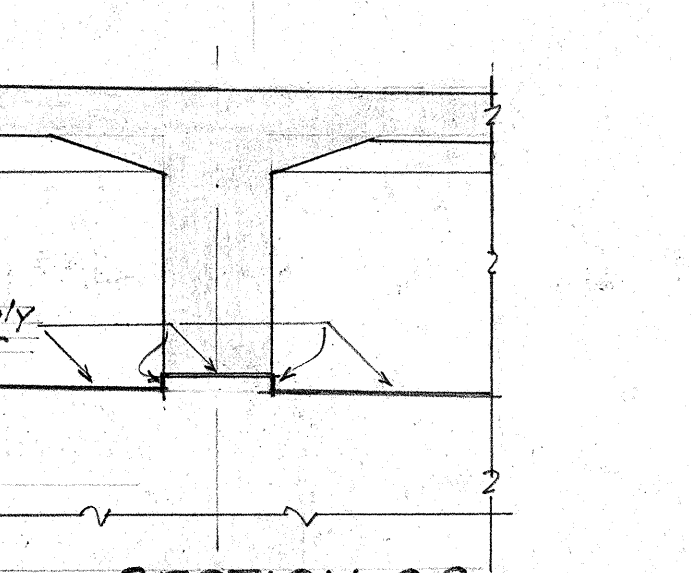
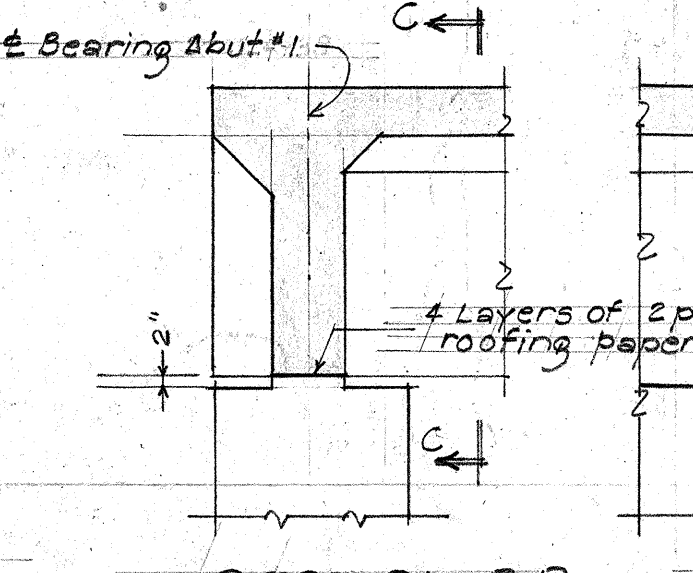
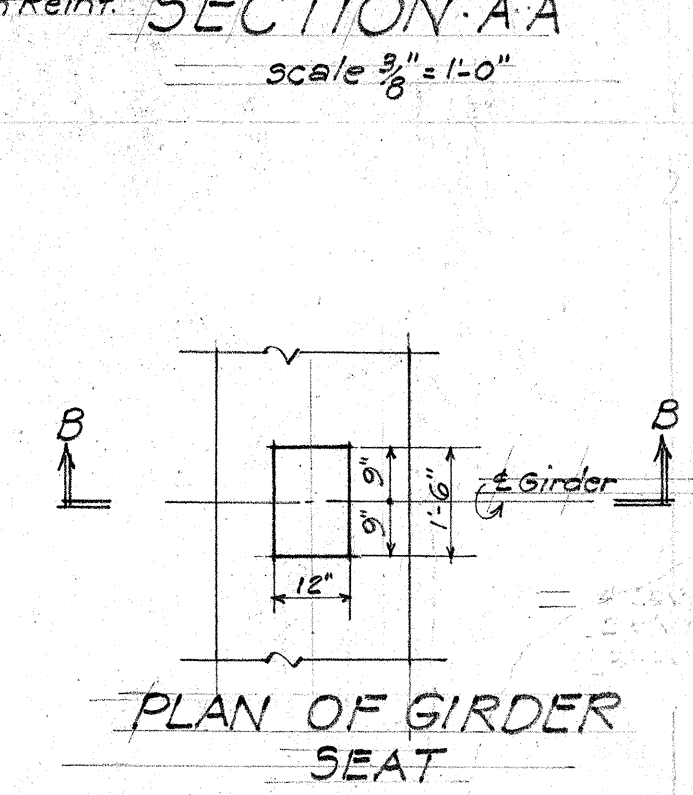
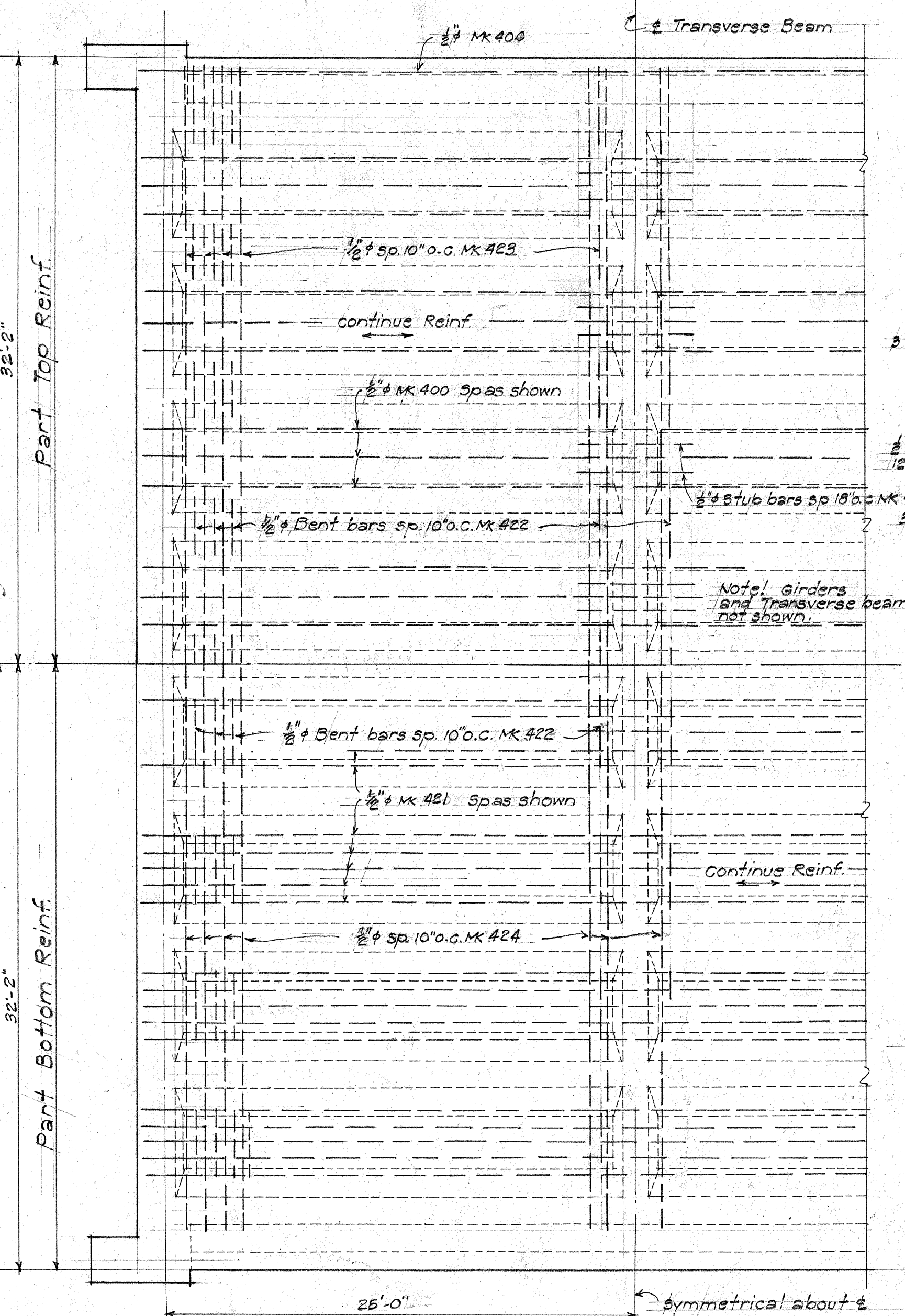
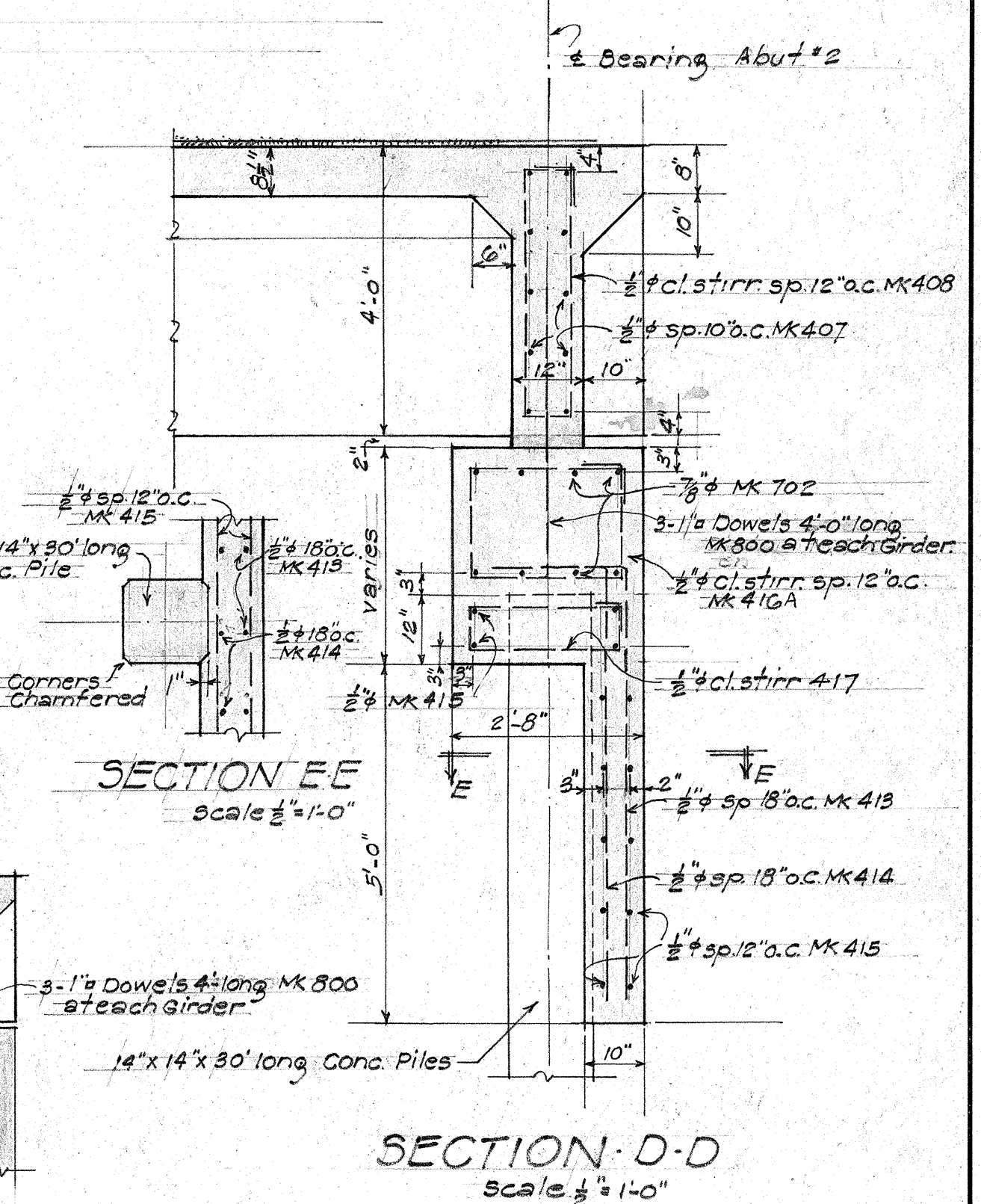
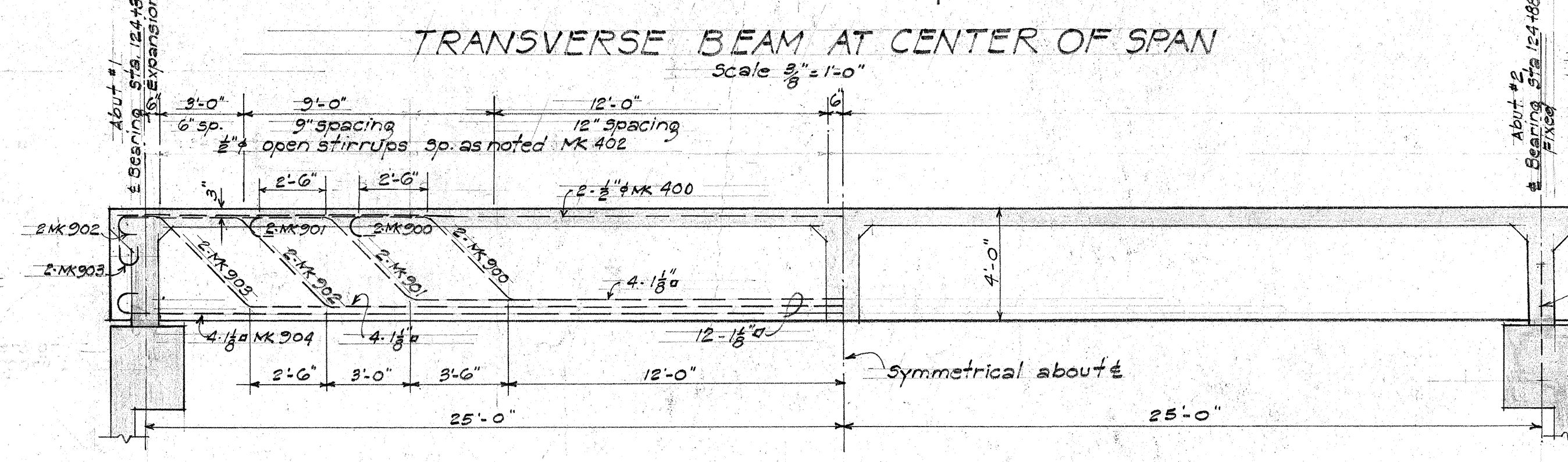
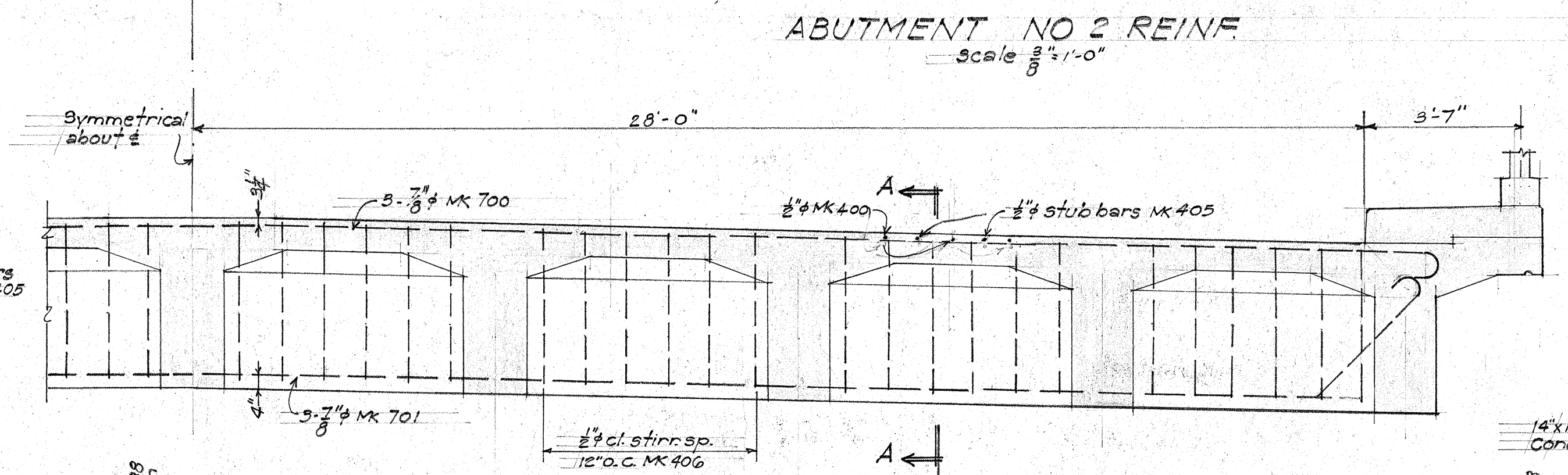
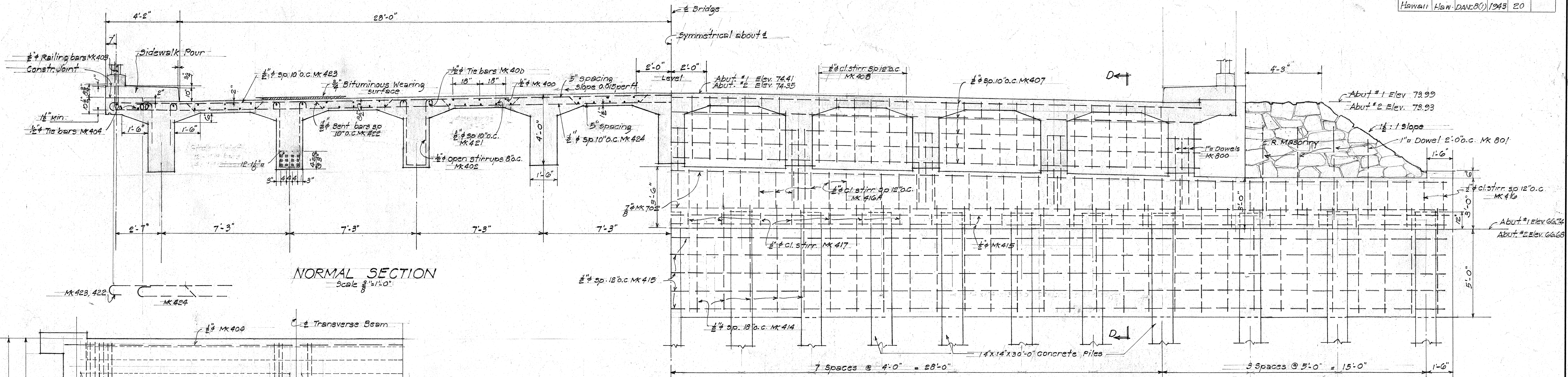
Item	Superstr.	Abut.	Railroad End Post	Anchor	Total
Class A Conc.	228.40 CY	81.01 CY	9.74 CY	23.60 CY	342.75 CY
Reinf. Steel	41,179 lbs	7,836 lbs	1,372 lbs	578 lbs	50,959 lbs
Str. Exc.		111.9 CY		70.4 CY	182.3 CY
G.R.M.			9.4 CY		9.4 CY
3/4" Bituminous Wear Surface	13.83 Tons				13.83 Tons
14" x 14" x 30'-0" Concrete Piles		42 PC.			42 PC.
1/2" Wrought Iron Anchor				2,532 lbs	2,532 lbs

Note! The above Reinf. Steel Quantity does not include steel in concrete Piles. Total Reinf. Steel in Conc. Piles = 28,100 lbs.

Note! 1/2" Wrought Iron Anchor to be considered incidental to Class A Concrete

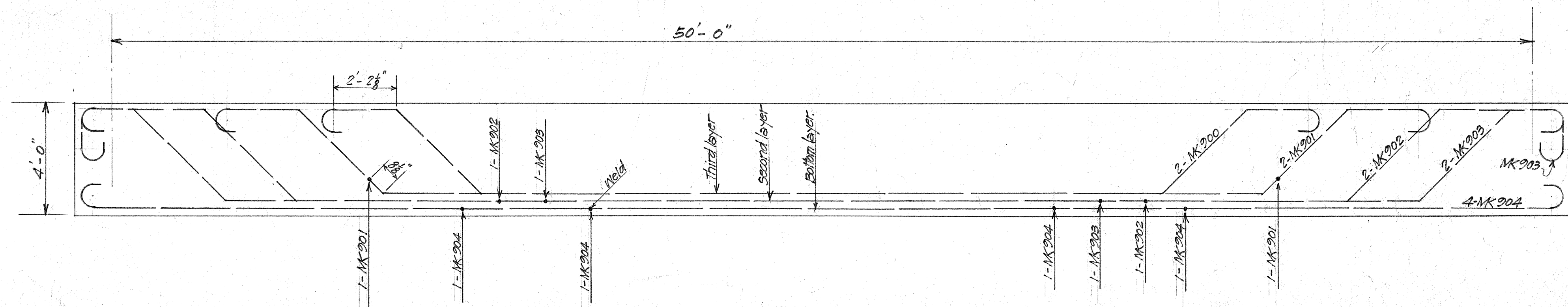
TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
KALIALINUI BRIDGE
 Sta 124+36.67 to Sta 124+89.33
HALEAKALA RD DANC 801
 Sept, 1943

SURVEY PLOTTED BY: DATE: 10/10/43
 ORIGINAL PLAN: 10/10/43
 DRAWN BY: D. V. 10/10/43
 TRACED BY: D. V. 10/10/43
 QUANTITIES CHECKED BY: F. V. 10/10/43
 CHECKED BY: F. V. 10/10/43
 No.



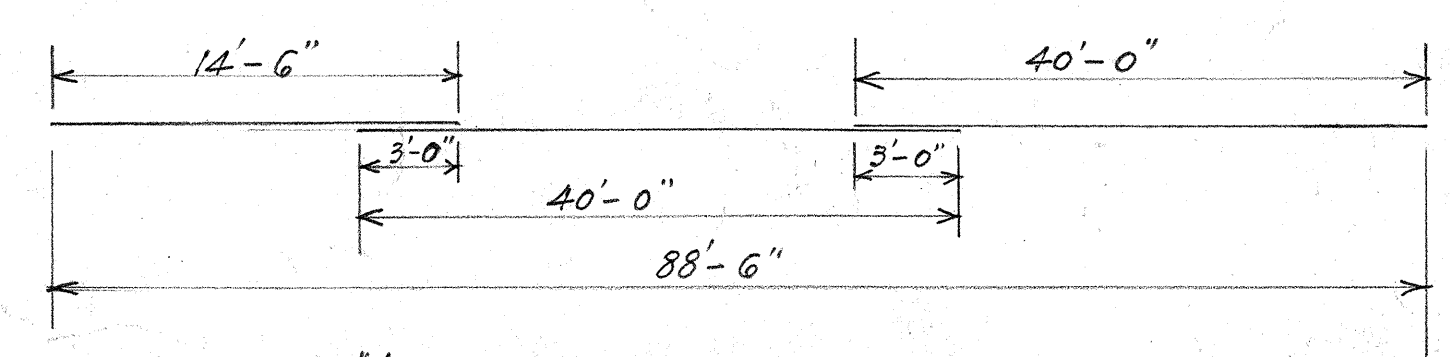
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
KALIALINUI BRIDGE
Sta 124+36.67 TO Sta 124+89.83
HALEAKALA RD. DANC 8(1)
Sept. 1943

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



SPICE LOCATIONS OF MAIN GIRDER REINFORCING.
Scale 3/8" = 1'-0"

LAP DETAIL OF CAP LONGITUDINAL REINF.

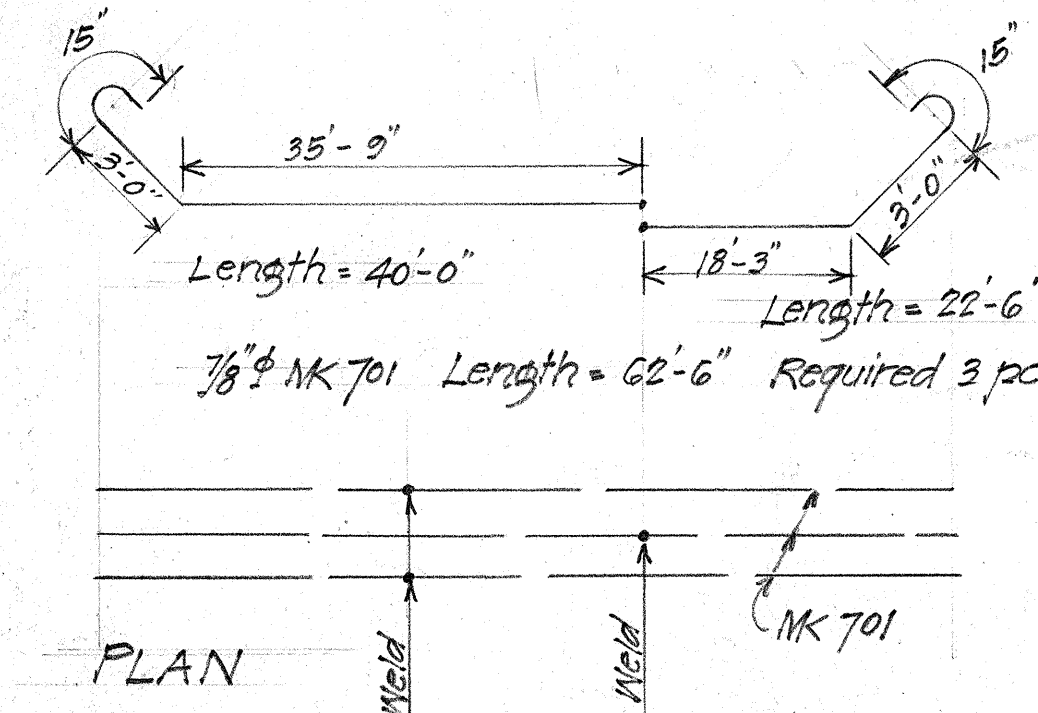
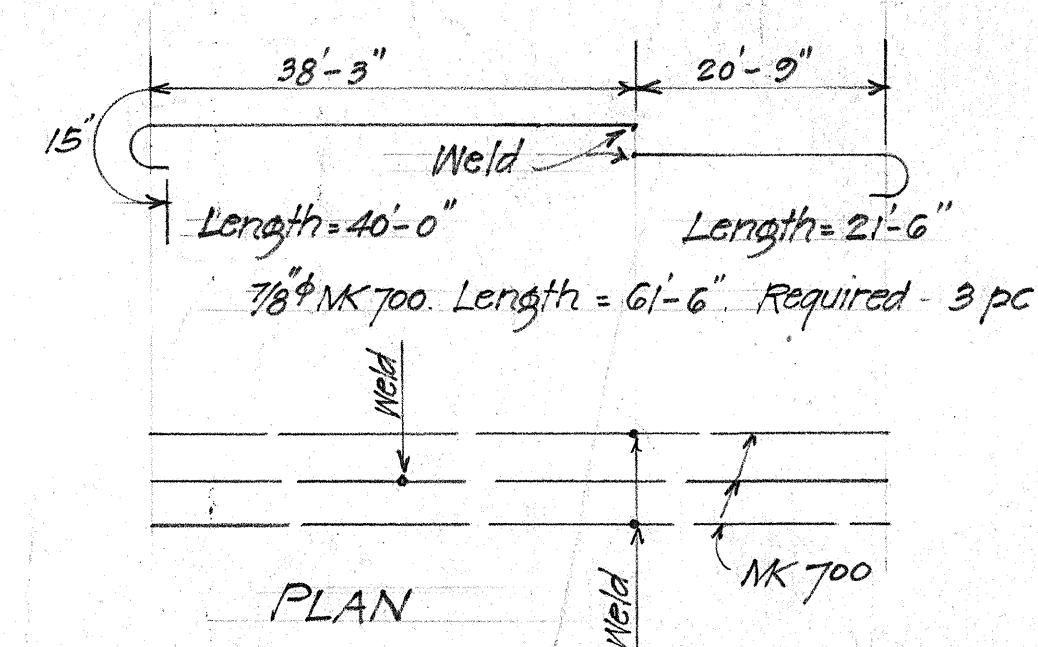


7/8" MK 702. Required 16 pc.
Note! Reinf. to be placed in such a way that only 1/2 of the lapped joints occur at one section.

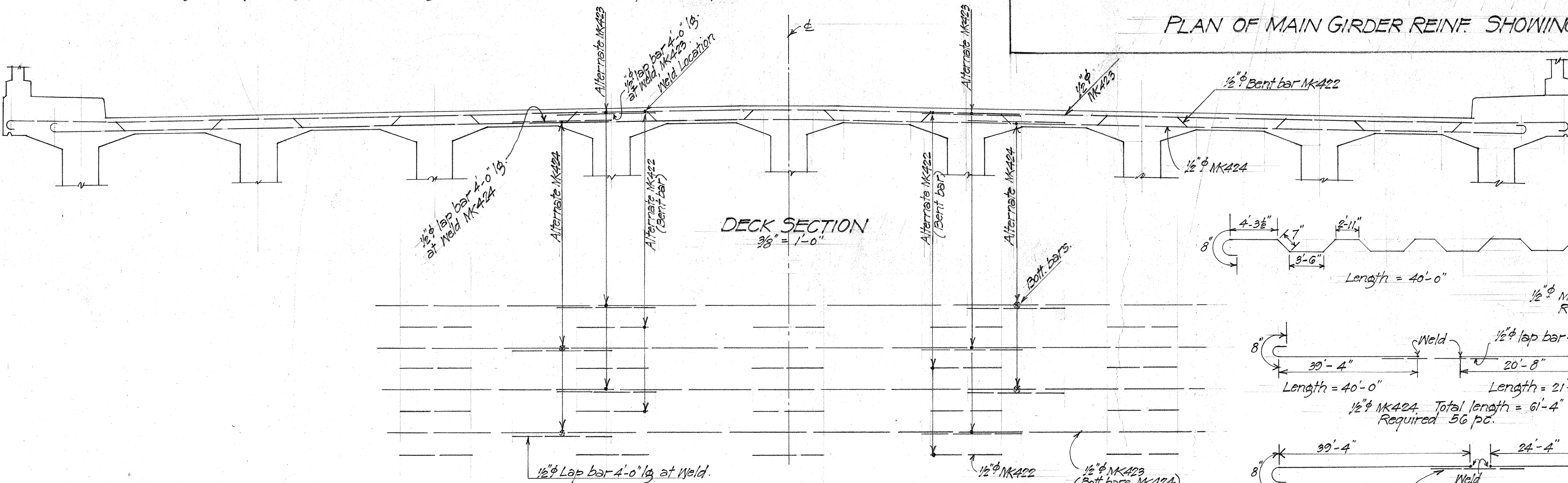
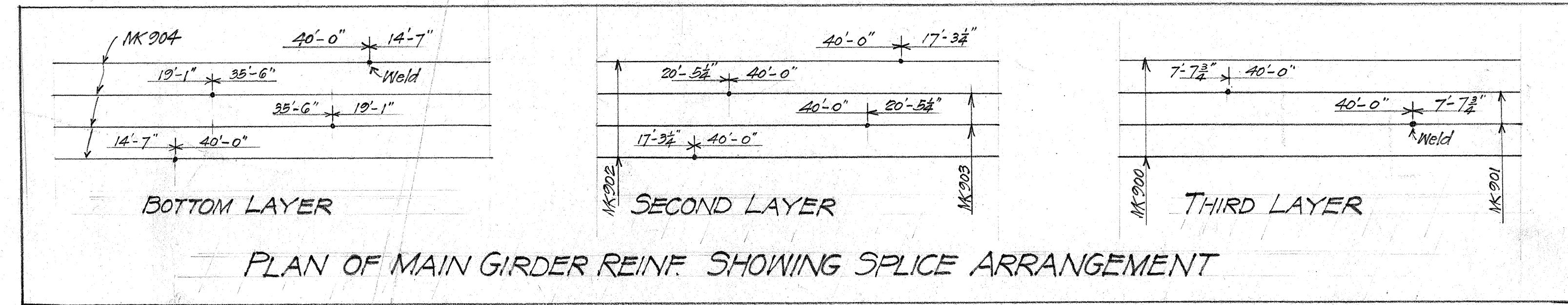
SCHEDULE OF SPICES OF GIRDER REINF.
Stock Length = 40'-0"

MK.	Total No. of Bars	Total No. of Splices	Length per bar	Splice Lengths	Surplus length per bar	Bending Detail	Remarks
900	18	0	40'-0"				The Bending Detail shown here supersedes the Steel Schedule. Change made to avoid welding.
901	18	18	47'-7 3/4"	40'-0" + 7'-7 3/4"			L = 7'-7 3/4" to be cut from stock at 5 pc. per stock.
902	18	18	57'-3 1/2"	40'-0" + 17'-3 1/2"	22'-8 3/4"		Obtain L = 20'-5 1/4" from surplus length of MK 902
903	18	18	60'-5 1/2"	40'-0" + 20'-5 1/2"			
904	18	18	54'-7"	40'-0" + 14'-7"	25'-5"		
904	18	18	54'-7"	35'-6" + 19'-1"			L = 35'-6" from stock. L = 19'-1" from surplus of 25'-5" of MK 904 above.

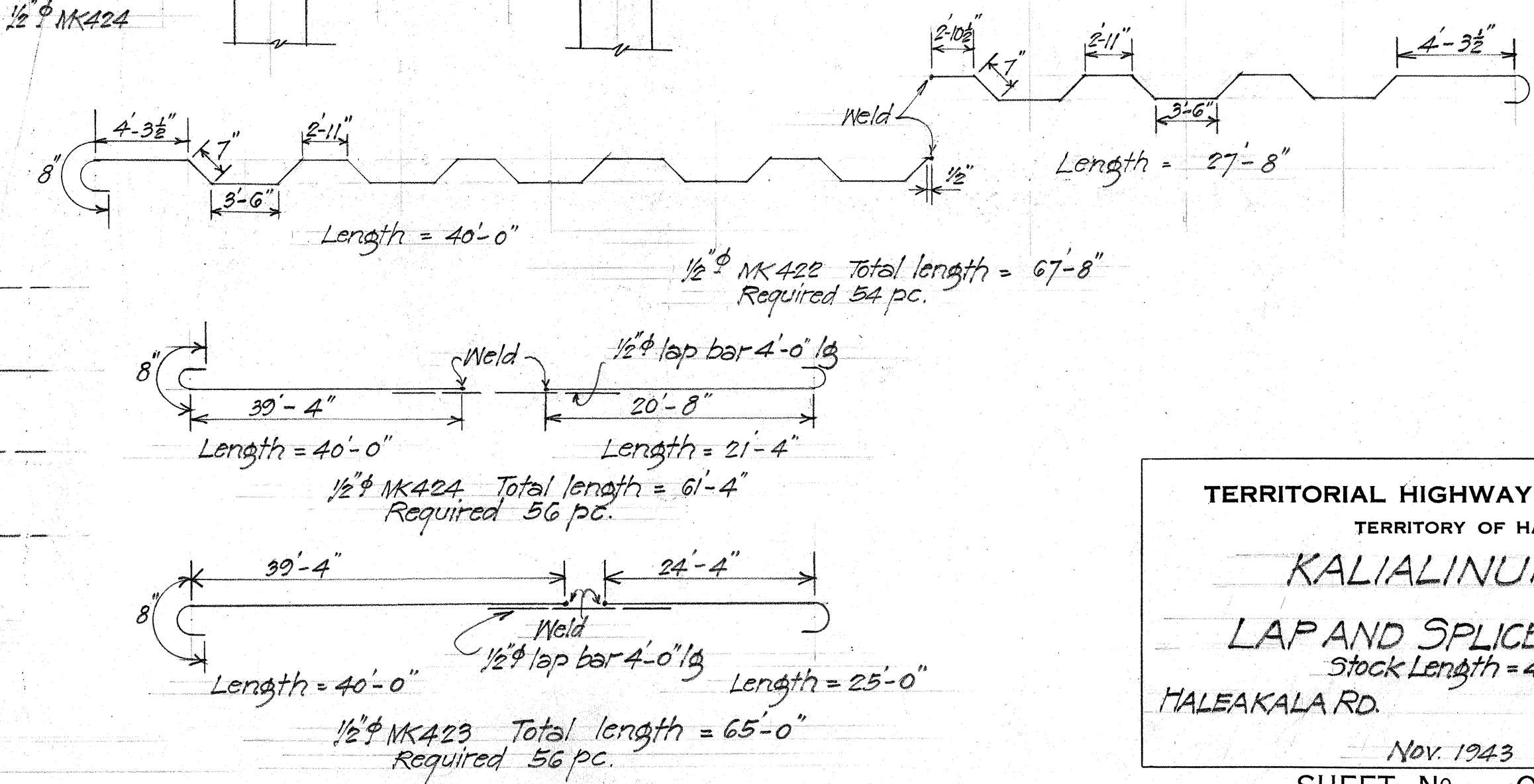
Note! Required for Girder Reinf. Total of 148 pc. 1 1/8" @ 40'-0"
All splices to be made in accordance to the splice detail shown on the Std. Br. Details sheet.
Before commencing with any welding, the welder must be given a Std. Test and approved by the Terr. Hy. Dept.



SPICE DETAIL — TRANSVERSE BEAM REINF.



PLAN DECK TOP TRANSVERSE REINF.
SPICE ARRANGEMENT OF DECK TRANSVERSE REINF.

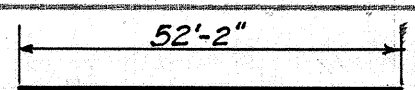
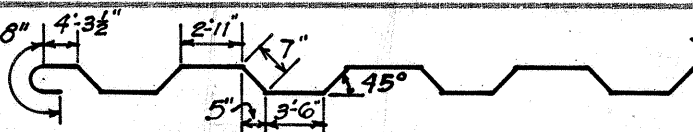
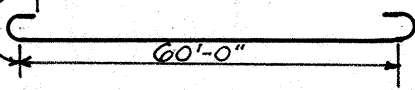
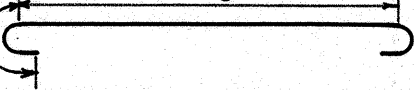
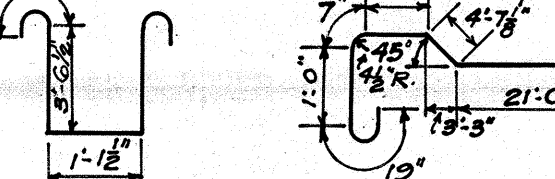
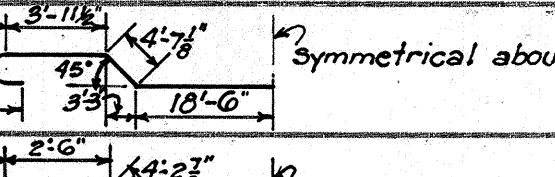
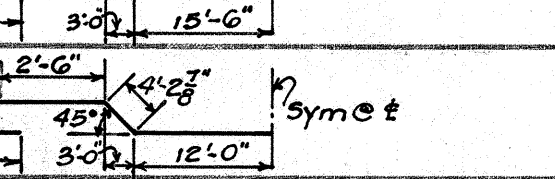
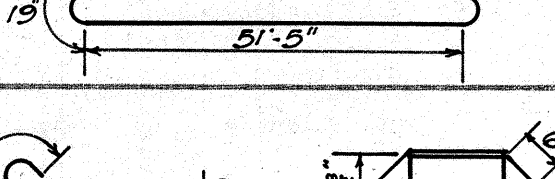
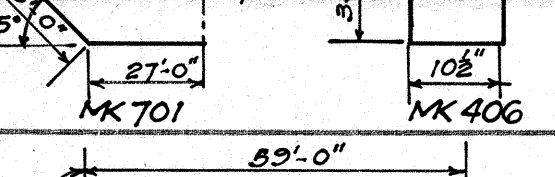
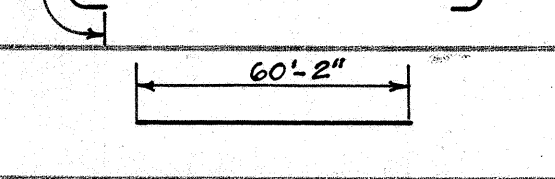
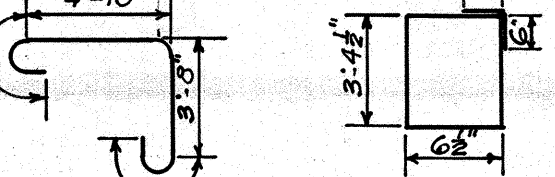
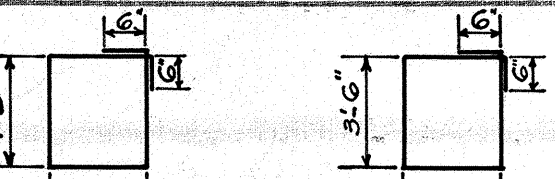
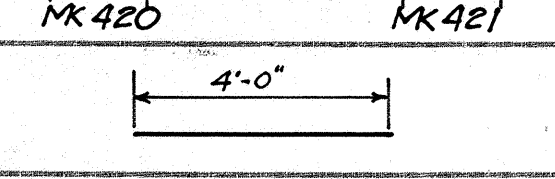
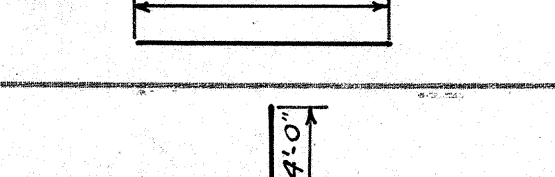
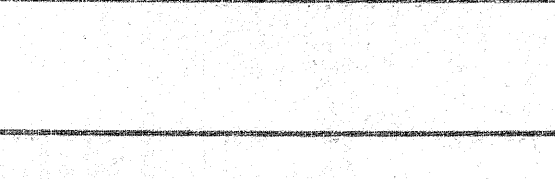
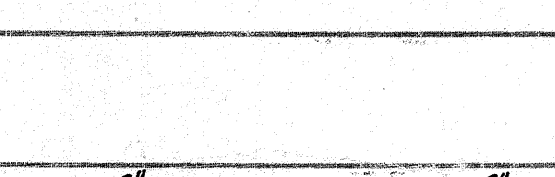
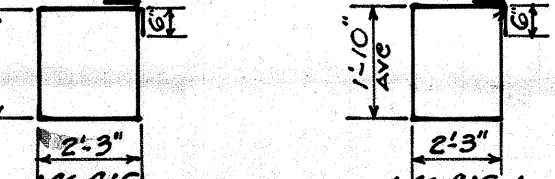
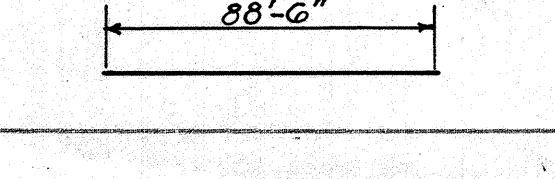
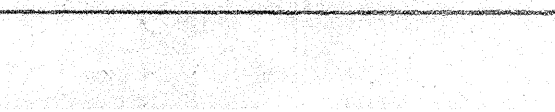


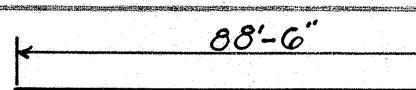
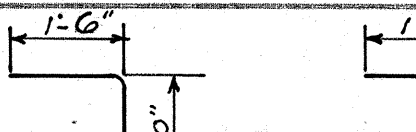
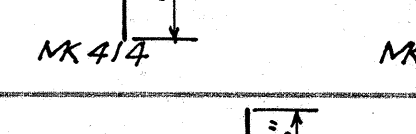
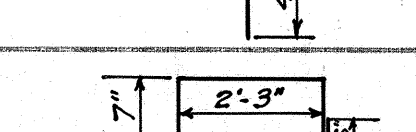
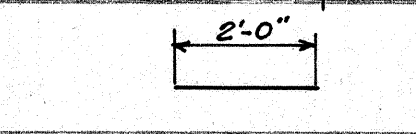
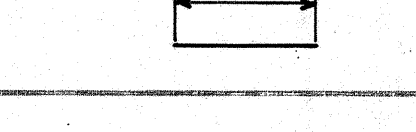
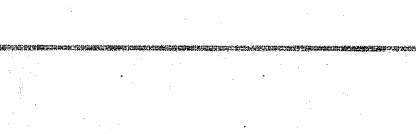
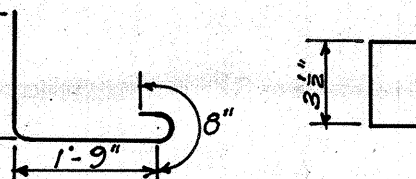
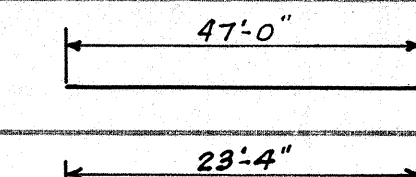
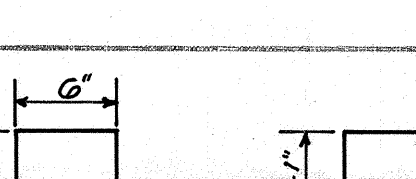
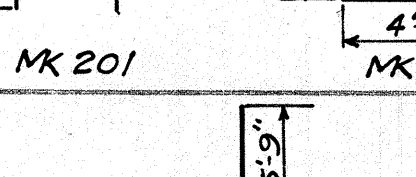
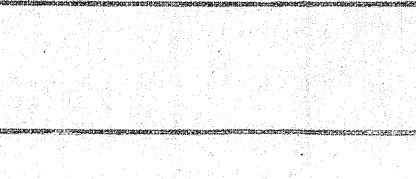
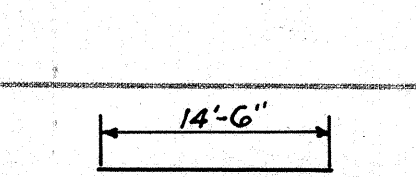
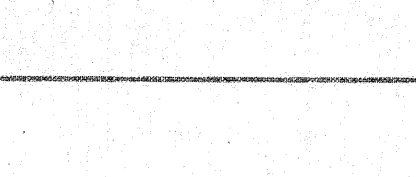
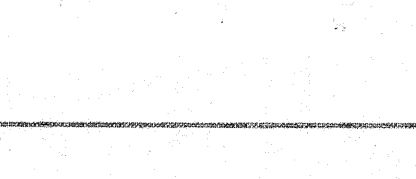
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
KALIALINUI BRIDGE
LAP AND SPICE DETAILS
Stock Length = 40'-0"
HALEAKALA RD. DANC-8 (1)
Nov. 1943
SHEET NO. OF SHEETS

ORIGINAL PLAN
DESIGNED BY
DRAWN BY
CHECKED BY
NOTE BOOK
QUANTITIES CHECKED BY
CHECKED BY

STEEL SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DA-NC-80	1943	20 B	

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
400		Superstructure Deck	1/2"	52'-2"	84	1	84	4382'	.67	2936
422		"	1/2"	67'-8"	27	2	54	3654'	.67	2448
424		"	1/2"	60'-6"	28	2	56	3434'	.67	2301
423		"	1/2"	63'-8"	28	2	56	3640'	.67	2439
405		"	1/2"	7'-10"	2	8	16	125'	.67	84
402		Girder	1/2"	9'-6 1/2"	62	9	558	5323'	.67	3567
903		"	1/8"	60'-5 1/4"	2	9	18	1087'	4.30	4678
902		"	1/8"	57'-3 1/4"	2	9	18	1030'	4.30	4433
901		"	1/8"	47'-7 3/4"	2	9	18	857'	4.30	3688
900		"	1/8"	40'-7 3/4"	2	9	18	731'	4.30	3146
904		"	1/8"	54'-7"	4	9	36	1964'	4.30	8449
701		"	7/8"	62'-6"	3	1	3	187'	2.04	383
406		"	1/2"	10'-7"	6	8	48	507'	.67	340
700		"	7/8"	61'-6"	3	1	3	184'	2.04	376
407		"	1/2"	60'-2"	10	2	20	1203'	.67	806
418		End Post	1/2"	9'-10"	3	4	12	118'	.67	79
408		"	1/2"	8'-10"	6	10	96	847'	.67	568
420		"	1/2"	7'-10"	1	4	4	31'	.67	21
421		"	1/2"	12'-0"	1	4	4	48'	.67	32
425		"	1/2"	4'-0"	2	4	8	32'	.67	21
419		"	1/2"	2'-0"	2	4	8	16'	.67	11
800		Dowel	1"	4'-0"	3	9	27	108'	3.40	367
SUPERSTRUCTURE - TOTAL 41,173 lbs										
416		Abutment	1/2"	8'-8"	12	4	48	416'	.67	279
416A		"	1/2"	9'-2"	65	2	130	1192'	.67	799
702		"	7/8"	88'-6"	8	2	16	1416'	2.04	2889

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
415		Abutment	1/2"	88'-6"	14	2	28	2478'	.67	1660
414		"	1/2"	7'-6"	59	2	118	885'	.67	593
413		"	1/2"	7'-10"	59	2	118	923'	.67	619
801		"	1"	4'-6"	4	4	16	72'	3.40	245
417		"	1/2"	6'-8"	42	2	84	560'	.67	375
802		"	1"	2'-0"	6	4	24	48'	3.40	163
803		"	1"	1'-9"	9	4	36	63'	3.40	214
ABUTMENT & WINGWALL - TOTAL 7,836 lbs										
403		Railing	1/2"	6'-5 1/2"	128	1	128	826'	.67	554
200		"	1/4"	1'-11"	62	2	124	238'	.17	40
404		"	1/2"	47'-0"	2	2	4	188'	.67	126
401		"	1/2"	23'-4"	6	4	24	559'	.67	375
201		"	1/4"	1'-6"	62	2	124	186'	.17	32
411		End Post	1/2"	11'-4"	3	4	12	136'	.67	91
412		"	1/2"	5'-9"	10	4	40	230'	.67	154
RAILING & END POST - TOTAL 1,372 lbs										
410		Wingwall Anchor	1/2"	14'-6"	7	4	28	406'	.67	272
409		"	1/2"	9'-6"	12	4	48	456'	.67	306
WINGWALL ANCHOR - TOTAL 578 lbs										
GRAND TOTAL 50,959 lbs										

CONTRACTOR'S NOTE

This steel schedule is subordinate to details shown on the 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 may occur in the steel schedule. Contractor shall check steel before placing order.

All stirrup dimensions are to inside of stirrups; all other dimensions are figured to center line of bars.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

KALIALINUI BRIDGE
Sta. 124 + 36.67 to Sta. 124 + 99.33

HALEAKALA RD. DANG-8(1)
Sept. 1943