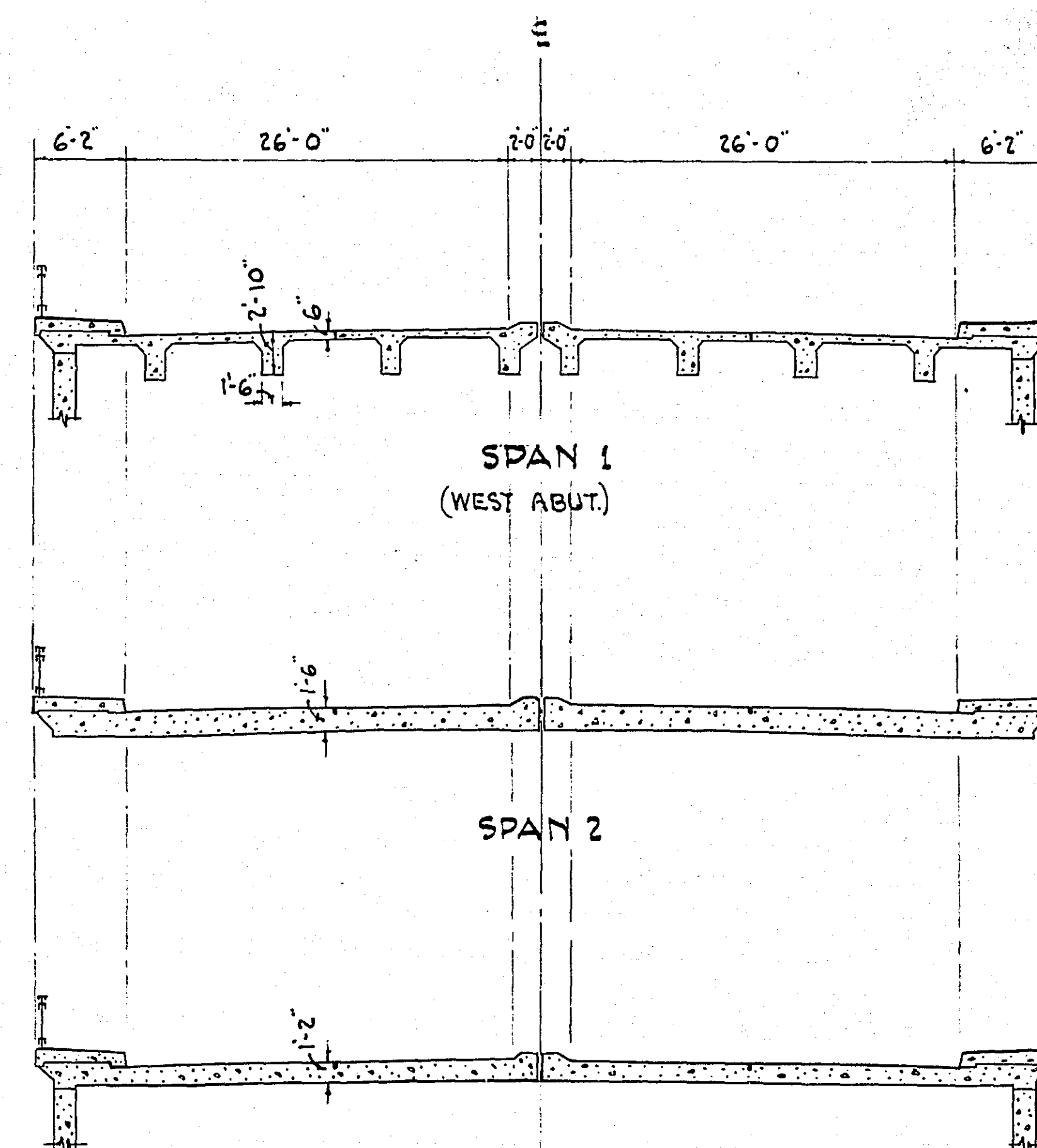


DESIGN DATA
1953 A.A.S.H.O. DESIGN SPECIFICATION
H20-S16 LOADING WITH IMPACT
f_c=20,000 f_c=1350 n=10

CONSTRUCTION NOTES:
THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION DATED JULY 1, 1947 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON OCT. 15, 1947, AND SUPPLEMENT NO. 1, EFFECTIVE APR. 15, 1953 SHALL GOVERN.

LISTING OF JOINT FILLER MATERIALS IS INTENDED TO BE COMPLETE. ANY ADDITIONAL FILLER MATERIALS REQUIRED TO COVER JOINT AREAS AS DETAILED IN THE PLANS ARE TO BE FURNISHED BY THE CONTRACTOR AT NO EXTRA COST.

ALL REINFORCEMENT BARS SHALL BE INTERMEDIATE GRADE DEFORMED BARS AS PER A.S.T.M. SPECIE A 305



SUPERSTRUCTURE CROSS-SECTIONS
NORMAL TO C OF ROADWAY & BRIDGE

LIST OF SHEETS	
SH. NO.	TITLE
1	GENERAL PLAN & ELEVATION
2	WEST ABUTMENT FRAMING DETAILS
3	WEST ABUTMENT REINFORCEMENT
4	EAST ABUTMENT FRAMING DETAILS
5	EAST ABUTMENT REINFORCEMENT
6	BRG. PL. DETAILS & ABUT. REINF. SCHEDULE
7	PLAN OF SUPERSTRUCTURE
8	SUPERSTRUCTURE CROSS-SECTIONS
9	DECK REINFORCEMENT
10	DETAILS & DECK REINF. SCHEDULE
11	RAILING DETAILS
12	DETAILS OF RAIL POSTS & SOCKETS
13	SURVEY SHEET

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NO. 6630
LARPEN TEUR AVE. OVER MINN. TRANSFER R. R. TRACKS
RAMSEY COUNTY MINNESOTA

31'-4" SLAB SPAN- U ABUTMENTS
2-26' ROADWAYS, 1'-4" CTR. ISLAND, 2'-5" SIDEWALKS
GENERAL PLAN & ELEVATION

TOLTZ, KING & DAY, INC.
ENGINEERS AND ARCHITECTS
ST. PAUL, MINNESOTA

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NO. 6630

APPROVED JAN. 19, 1954 MICROFILMED
RAMSEY CO. ENGR.

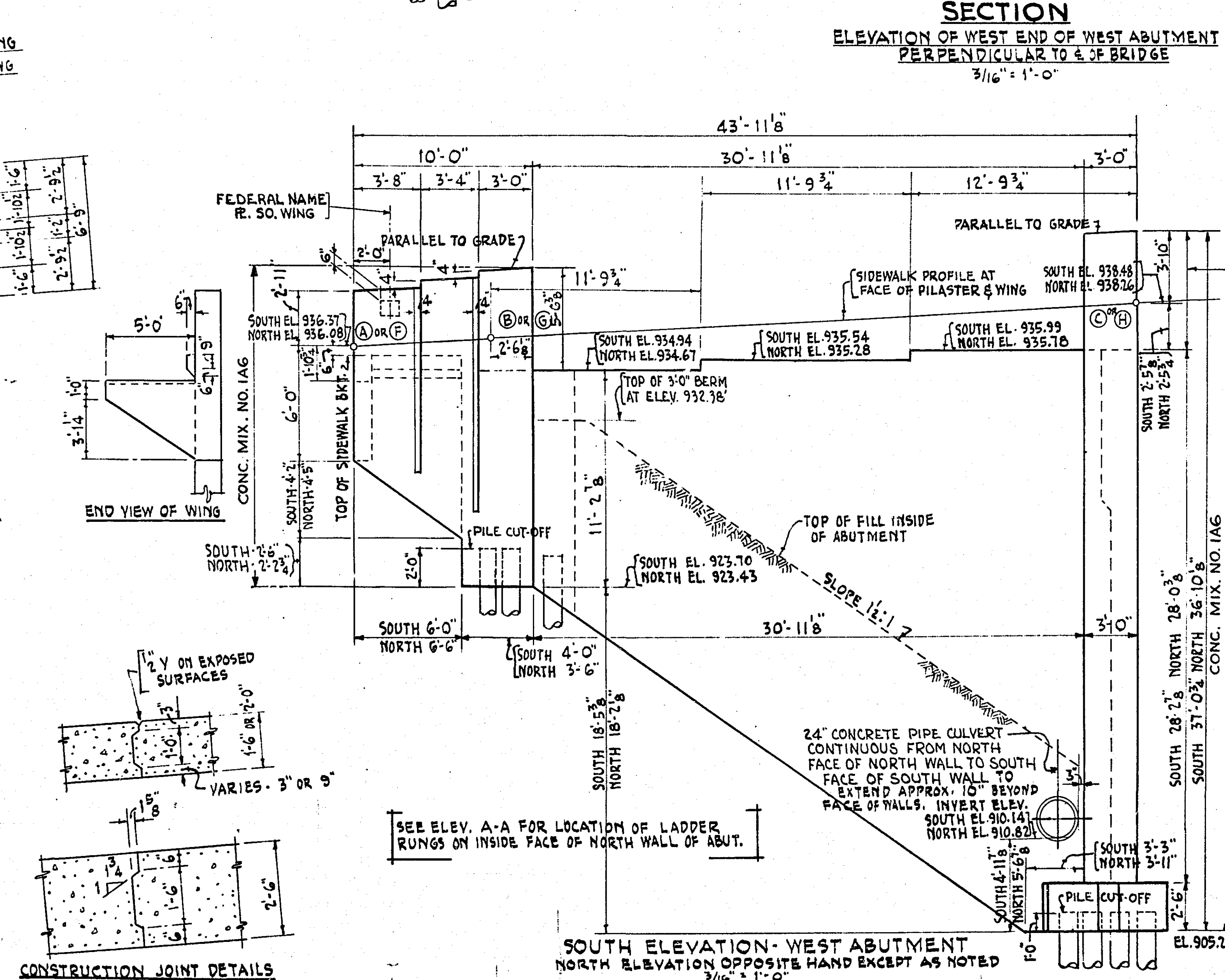
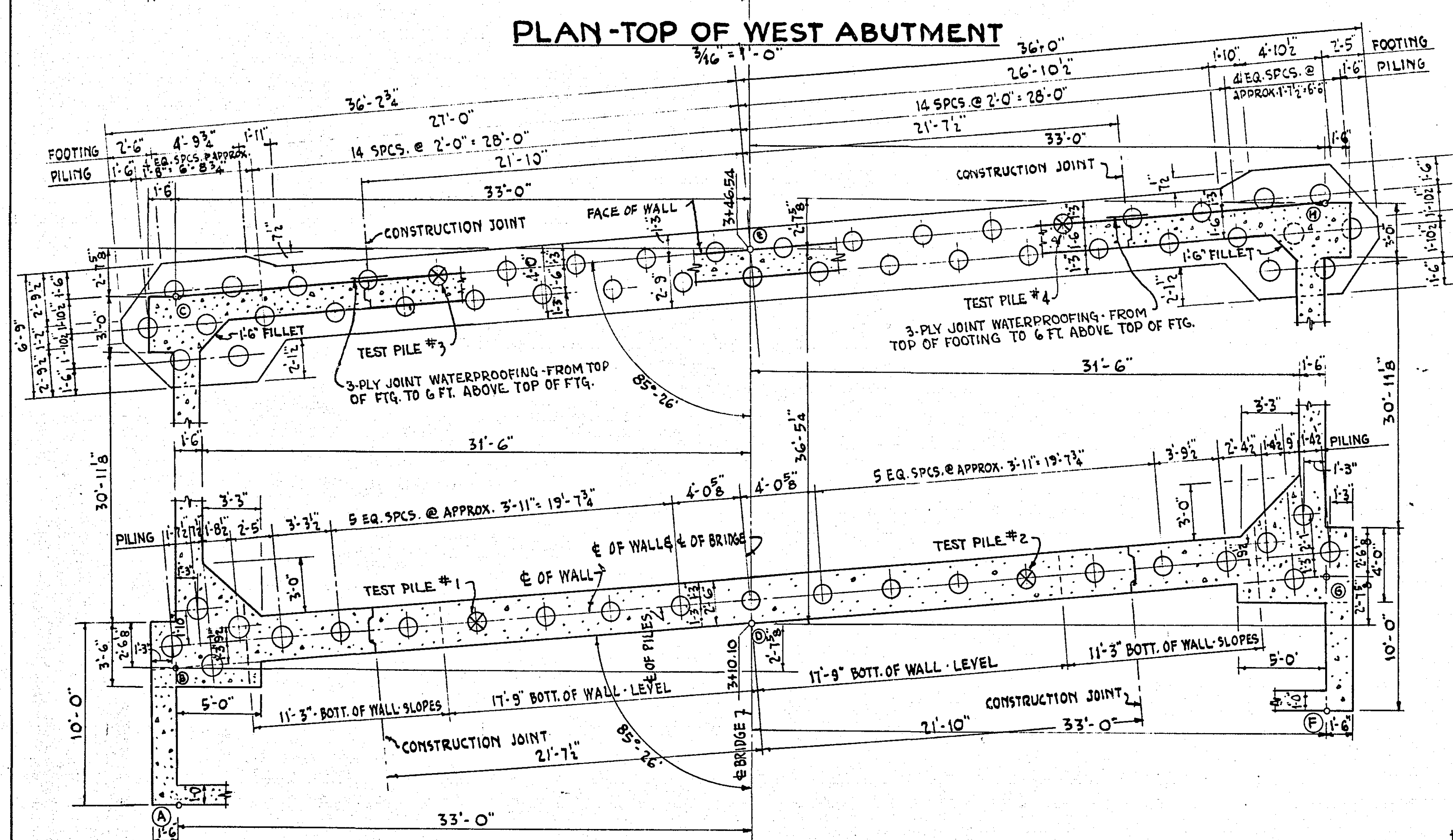
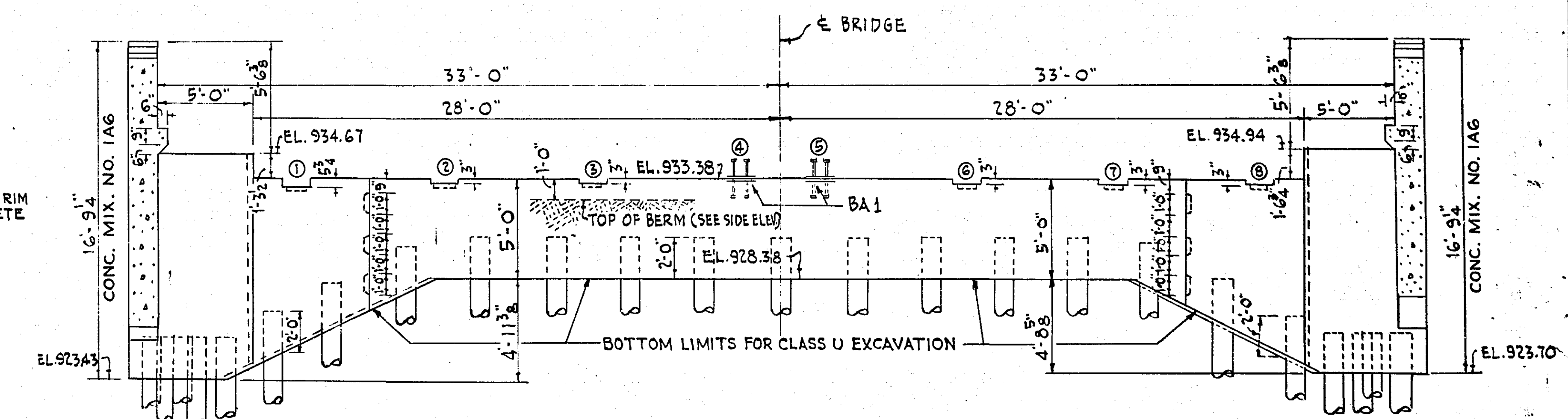
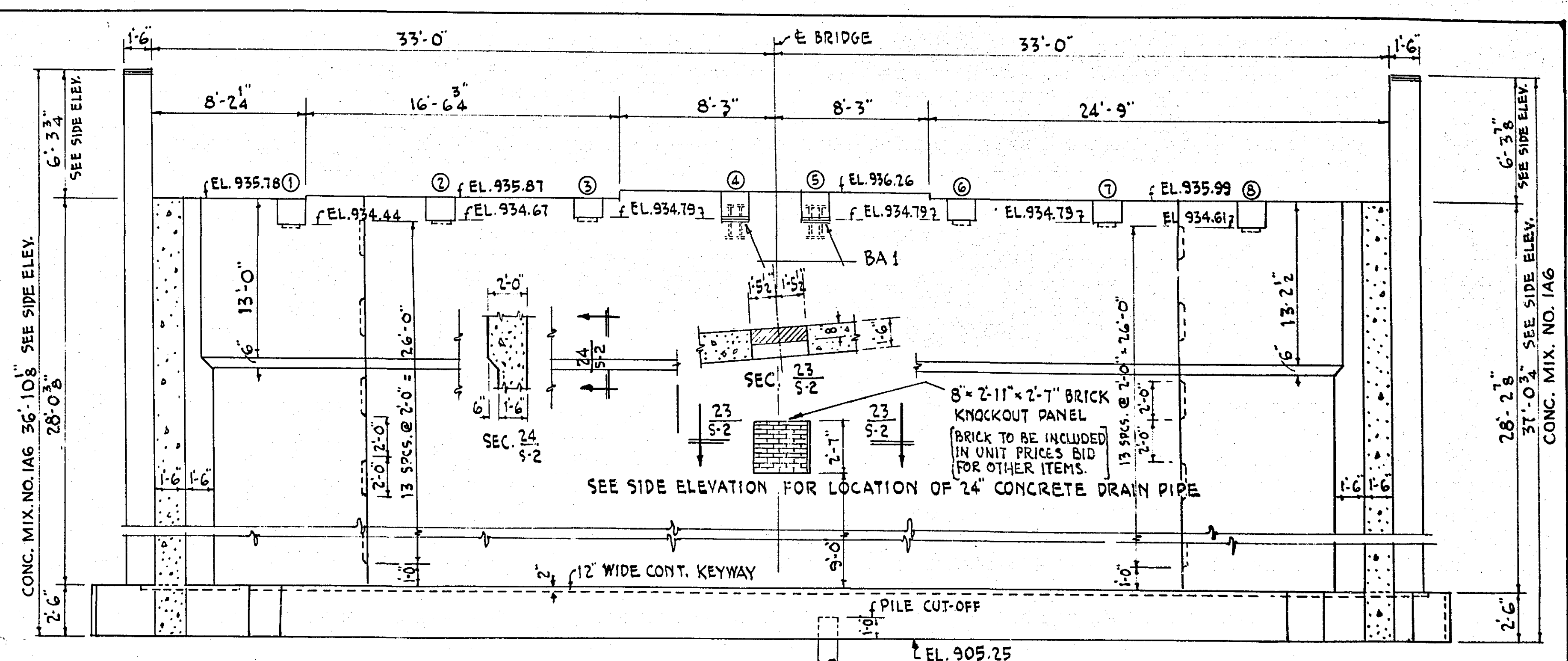
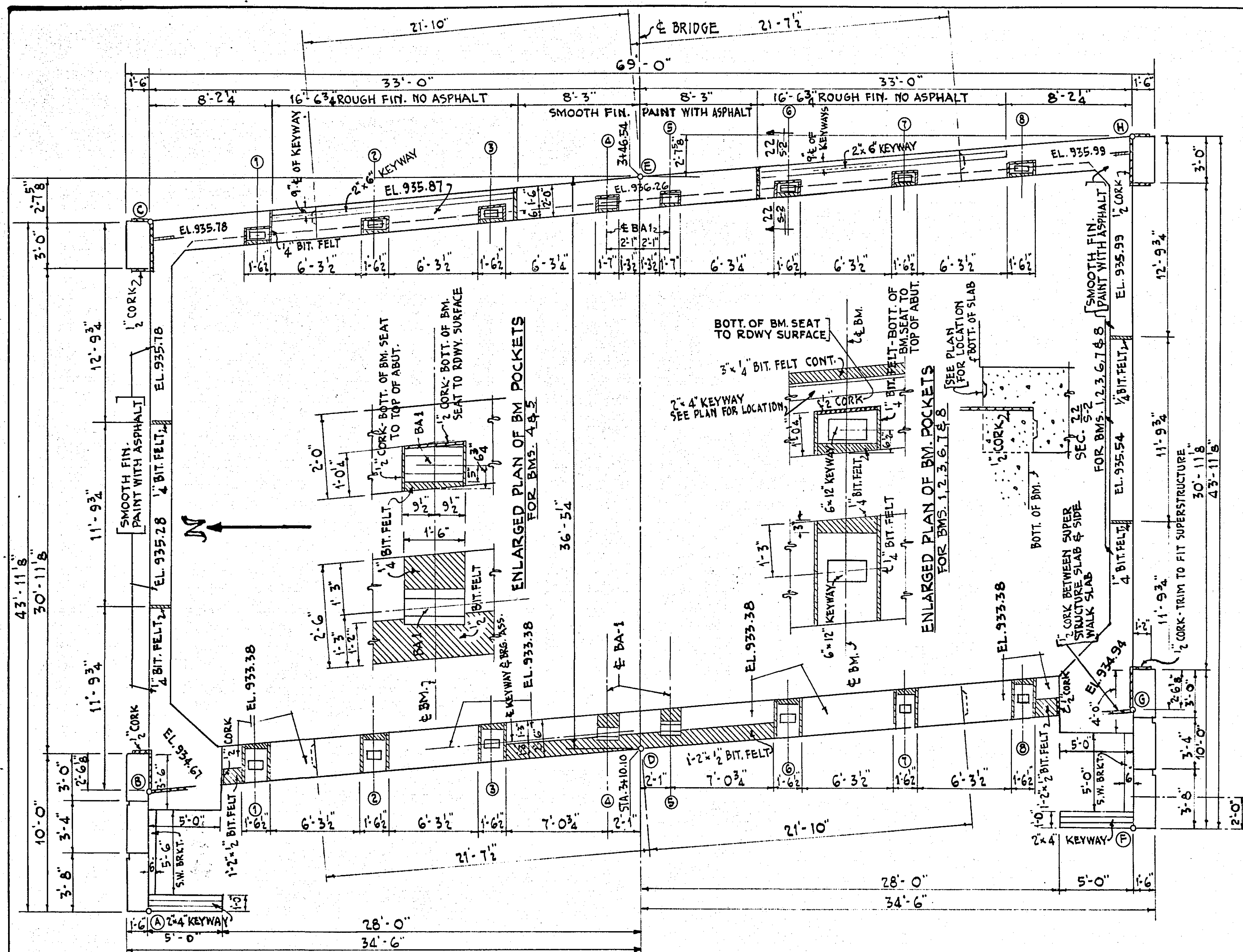
ASST. BRIDGE ENGR. CHIEF ENGR.

DESIGNED A.G.H. DRAWN S.J.K. CHECKED O.A.D. I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DATE 15 JAN. 1954 REG. NO. 1366 COMM. 3412 DRG. 1

SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE													
ITEM NO.	2401.525	2401.501	2401.501	2402.521	2401.541	2402.585	2402.507	2492.503	2492.504	2481.501	2402.505	2402.577	2401.542
ITEM	CLASS U EXCAVATION	CONCRETE MIX N11AG	CONCRETE MIX N13YG	STRUCTURAL STEEL	REINFORCEMENT BARS	ORNAMENTAL METAL RAILING	SHEET COPPER	TREATED TIMBER PILING DELIVERED	TREATED TIMBER PILING DRIVEN	3-PLY JOINT WATER PROOFING	WROUGHT BRONZE	STANDARD NAME PLATES	STEEL FABRIC
UNIT	CU. YD.	CU. YD.	CU. YD.	LB.	LB.	LIN. FT.	LB.	LIN. FT.	LIN. FT.	LIN. FT.	LB.	UNIT	LB.
QUANTITY	980	618	360	470	104710	172.00	110	3395	3141	32	58	2	495
													68
													ONE

S.P. NO 6241-03 (T.H.280=280) MINN. PROJ. U-UG 701(1)

SHEET 1 OF 13 SHEETS 15-139 6630 2



PILE NOTES

PILES UNDER FOOTING AT ELEV. 905.25 TO BE DRIVEN FIRST.

39 PILES READ: EST. LENGTH 20 FT. B'G AT GL 905.25
12 TOE READ: 25 FT LONG. (PILE 15) 905.7008

21 PILES READ: EST. LENGTH 30 FT. B'G AT GL 923.43

2 TEST PILES READ: -35 FT LONG. 928.308 & 723.70

64 PILES READ FOR WEST ABUTMENT (DL / PILE 14A)

MINIMUM BEARING 20 TONS PER PILE.

ALL PILES TO BE CREOSOTED AS PER M.H.D. 3491.

ESTIMATED PENETRATION 2 FT. LESS THAN LENGTH GIVEN

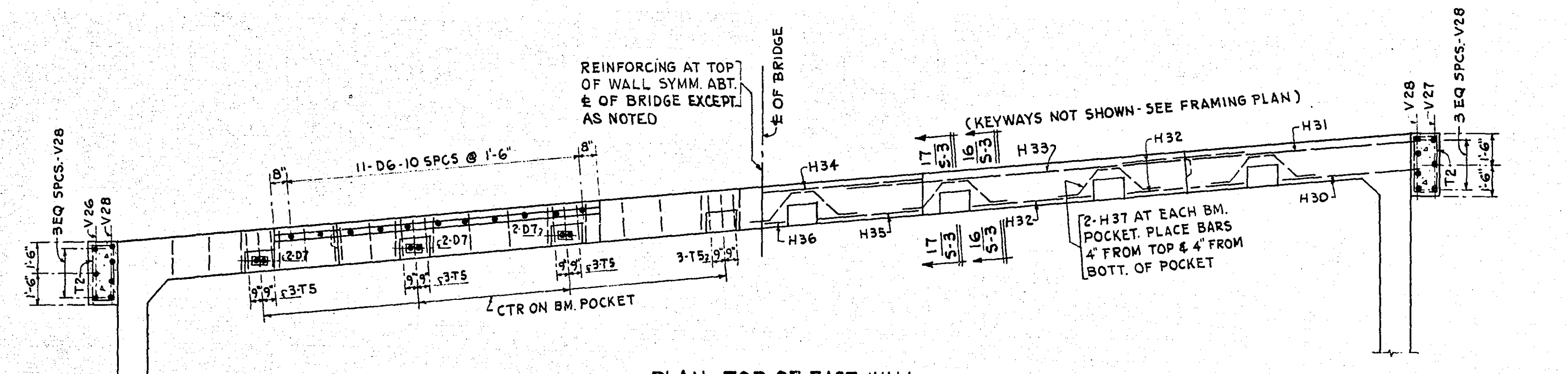
NOTE: FOR SUMMARY OF QUANTITIES SEE SHEET #10

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NO. 6630
LARPENTEUR AVE. OVER MINN. TRANSFER R.R. TRACKS
RAMSEY COUNTY MINNESOTA

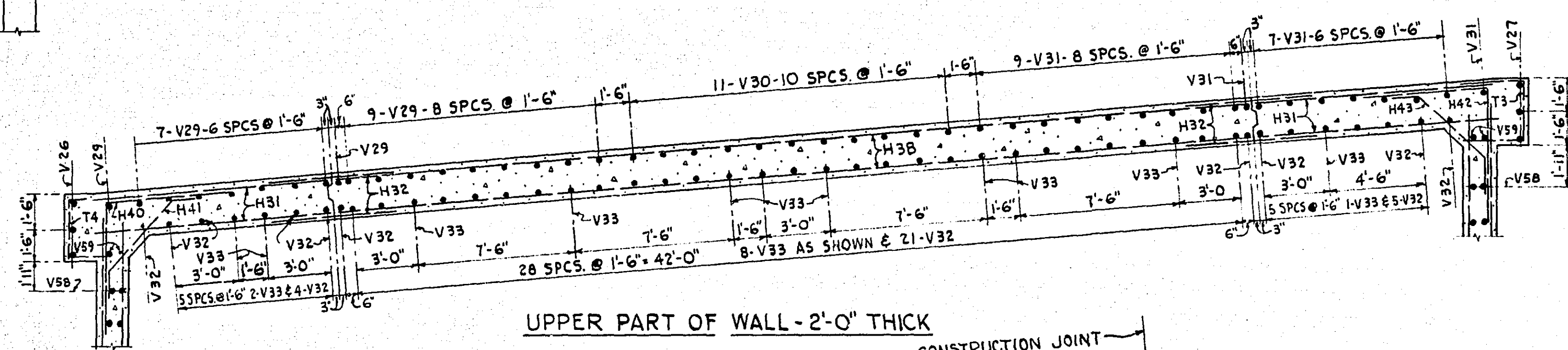
31'-4" SLAB SPAN- U ABUTMENTS
2-26' ROADWAYS, 1 4'-0" CTR. ISLAND, 2 5'-0" SIDEWALKS
WEST ABUTMENT FRAMING DETAILS

TOLTZ, KING & DAY, INC. MICROFILMED
ENGINEERS AND ARCHITECTS
ST. PAUL, MINNESOTA
RAMSEY CO. ENGR.

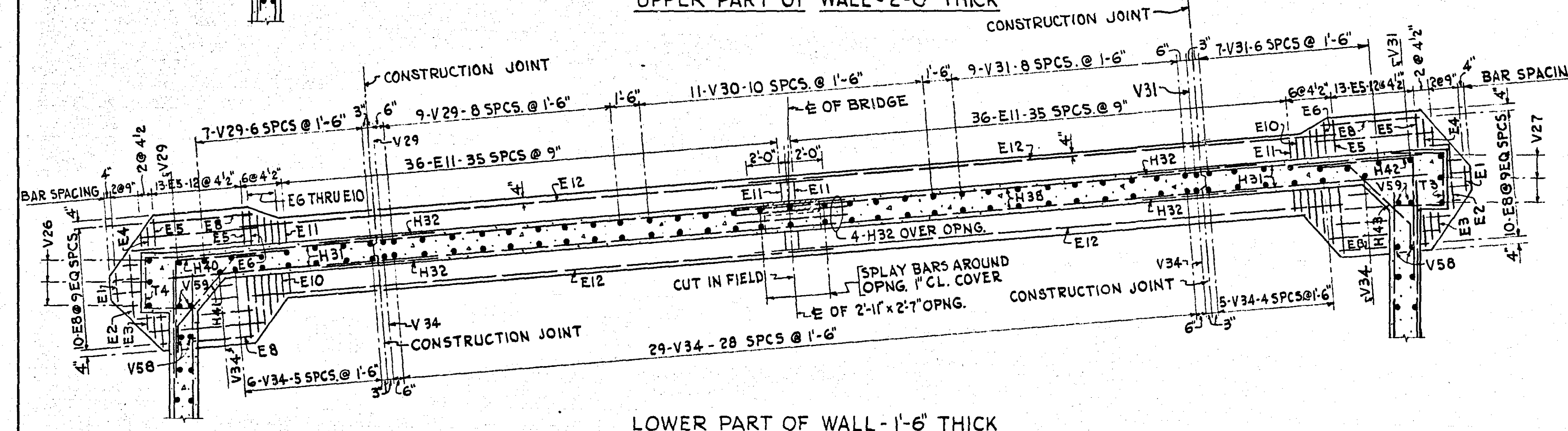
DESIGNED A.G.H. DRAWN S.J.K. CHECKED D.A.O.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	COMM. 3412 DRG. 2
	DATE <u>15 JAN. 1954</u> REG. NO. <u>1366</u>	
APPROVED M.H.D.	<u>Robert E. Remick</u> ASST. BRIDGE ENGINEER	JAN. 18 1954 DATE



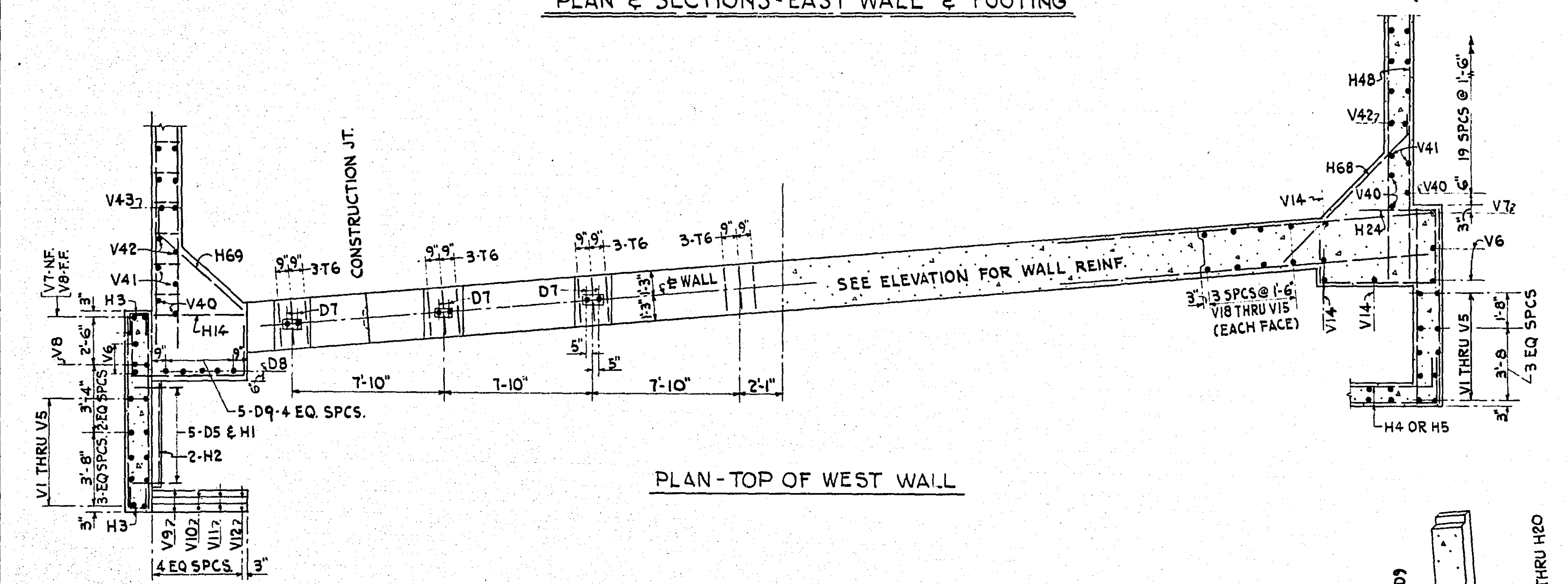
PLAN - TOP OF EAST WALL



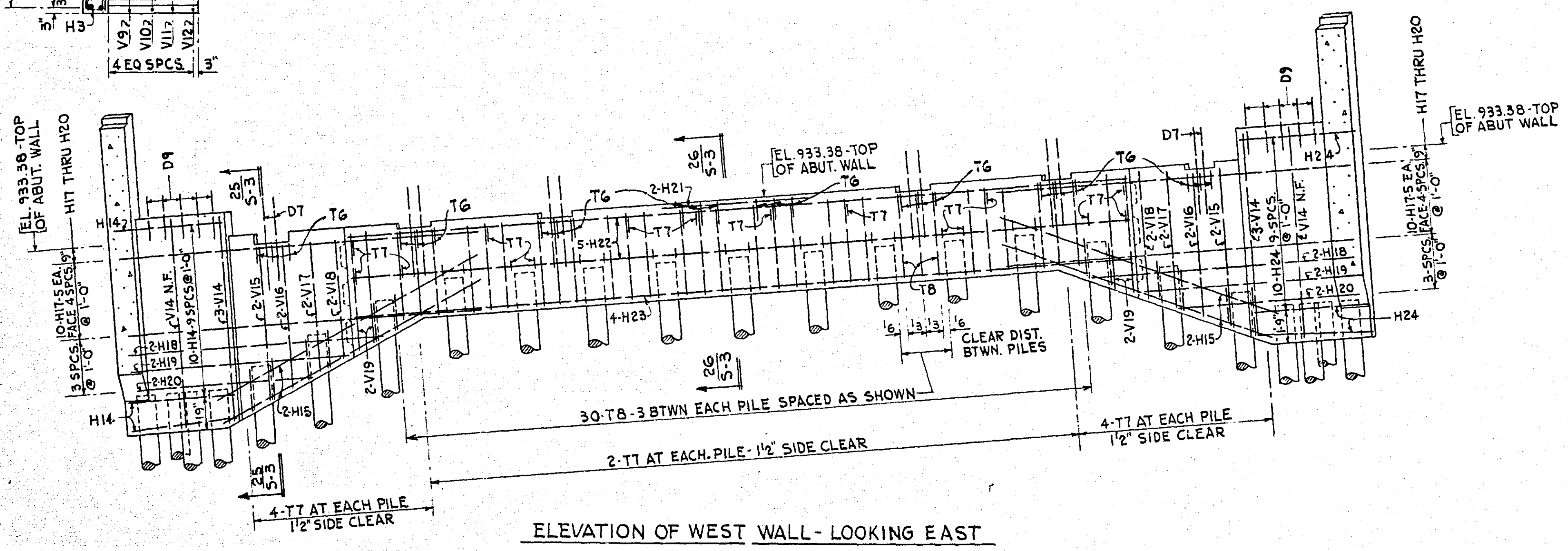
UPPER PART OF WALL - 2'-0" THICK



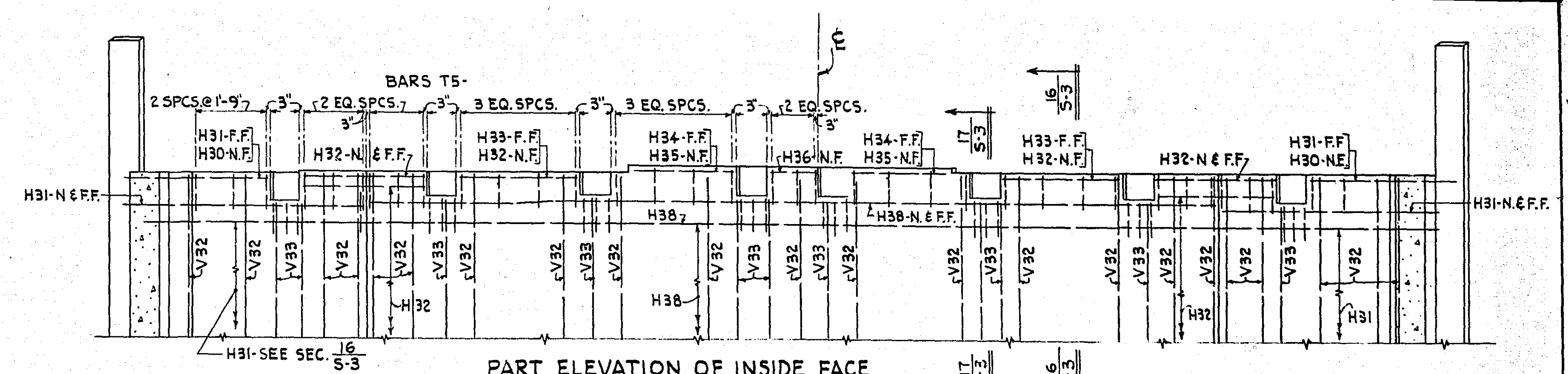
LOWER PART OF WALL - 1'-6" THICK
PLAN & SECTIONS - EAST WALL & FOOTING



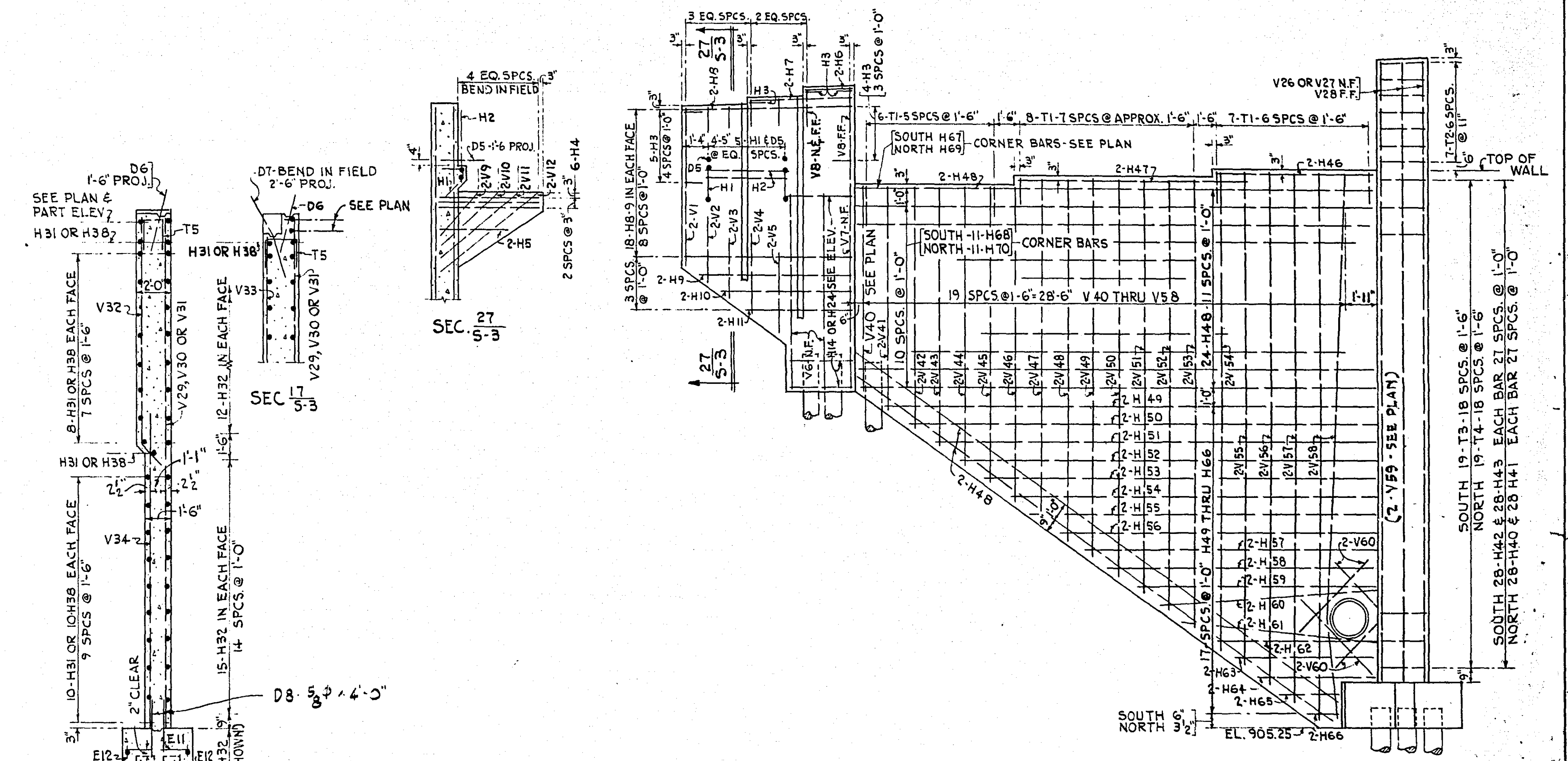
PLAN - TOP OF WEST WALL



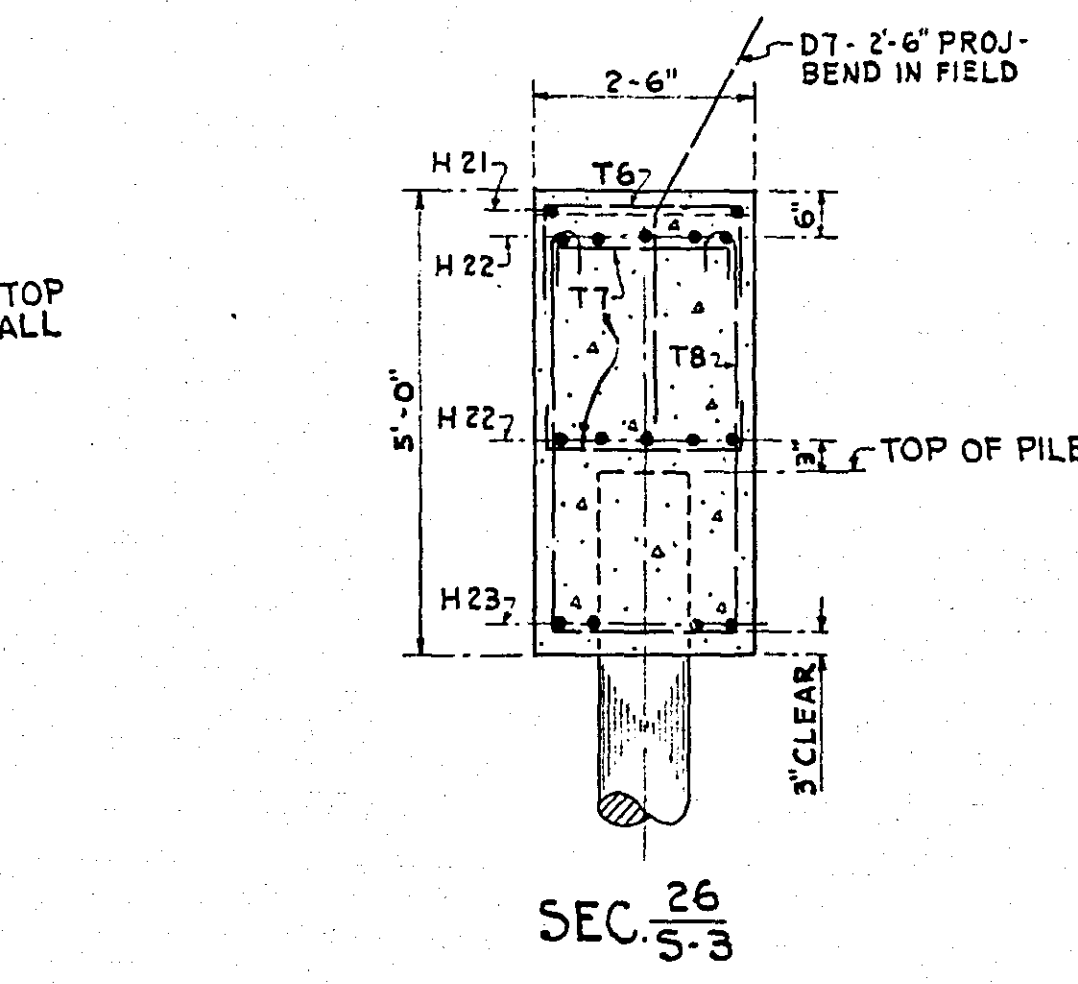
ELEVATION OF WEST WALL - LOOKING EAST



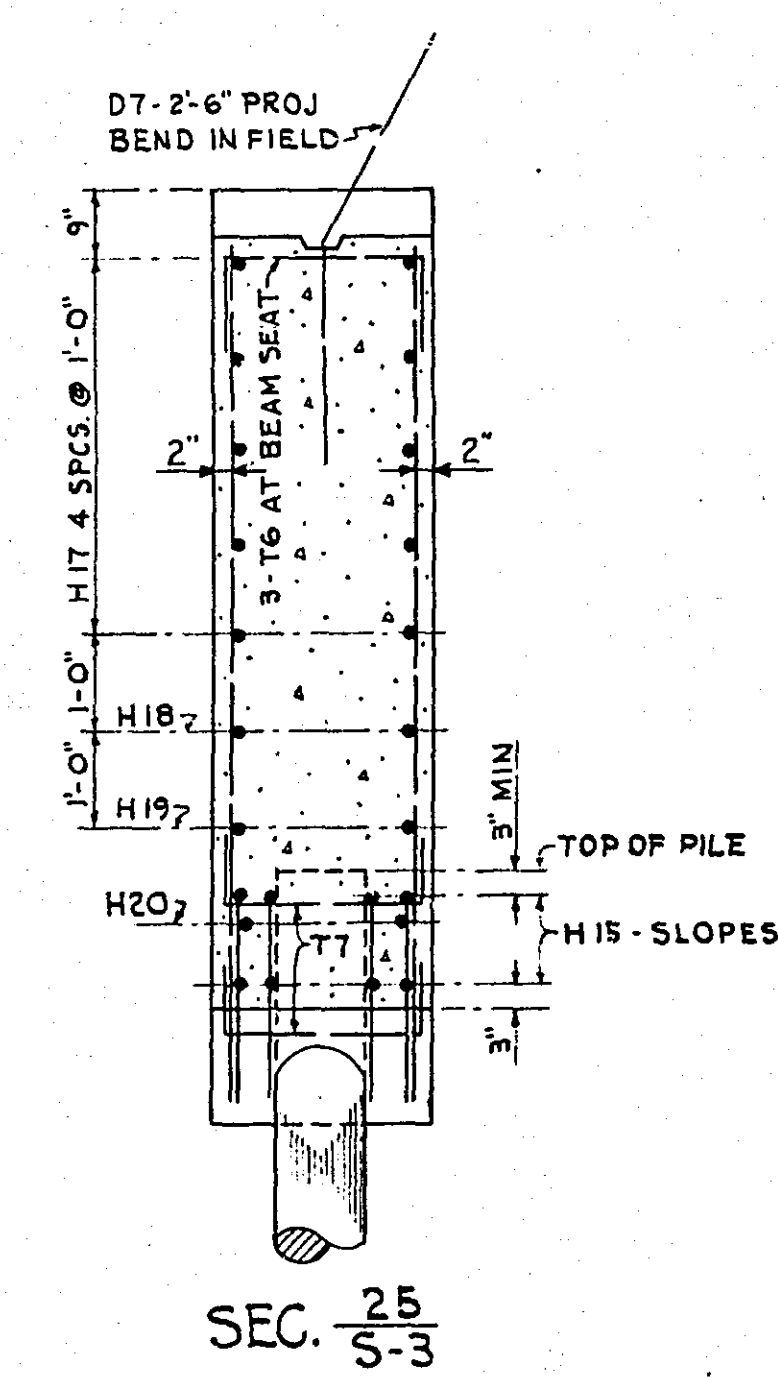
PART ELEVATION OF INSIDE FACE OF EAST WALL - WEST ABUTMENT
(SEE PLAN - TOP OF EAST WALL FOR DOWELS D6 & D7)



ELEVATION - NORTH & SOUTH SIDEWALLS



SEC 26 S-3

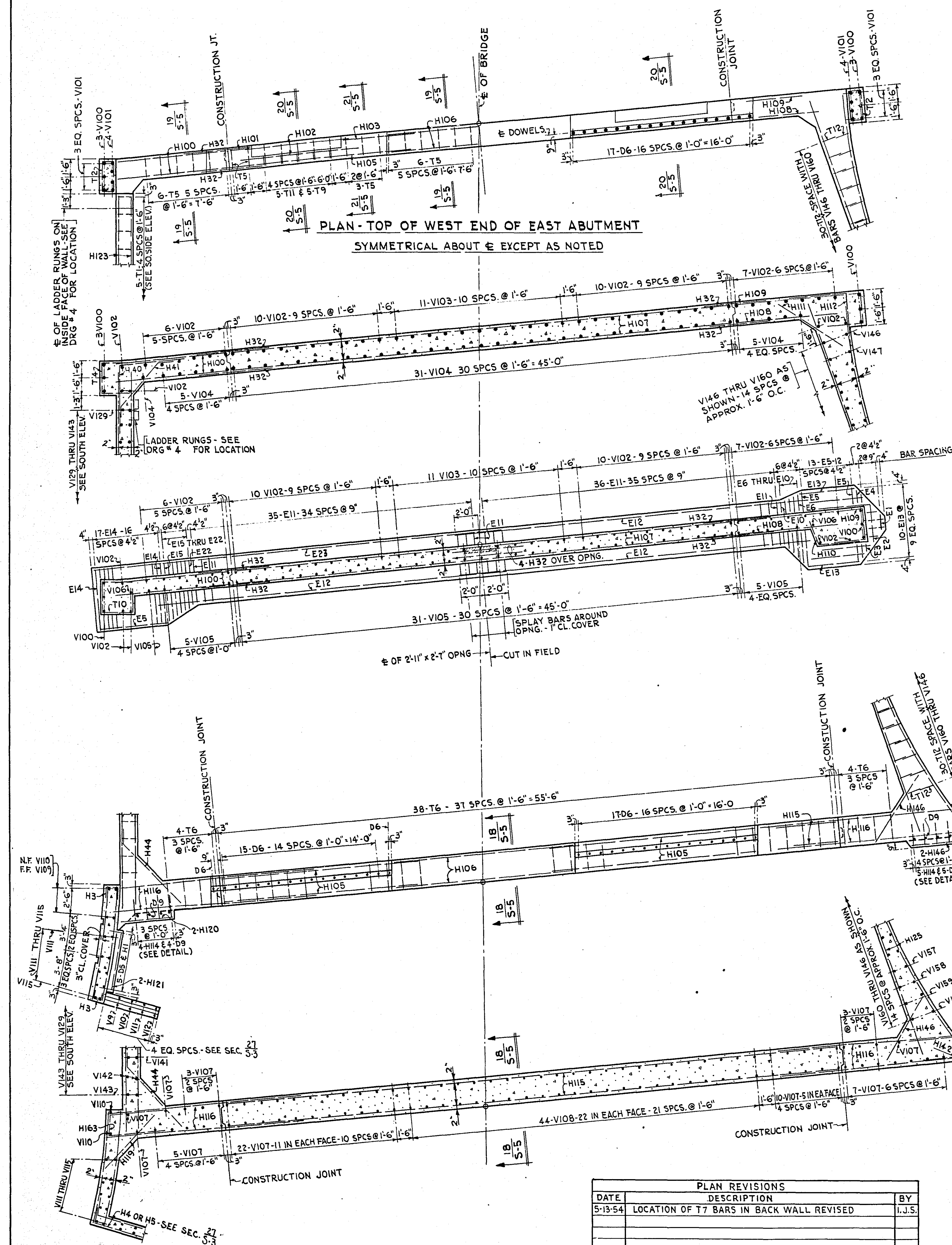


SEC 25 S-3

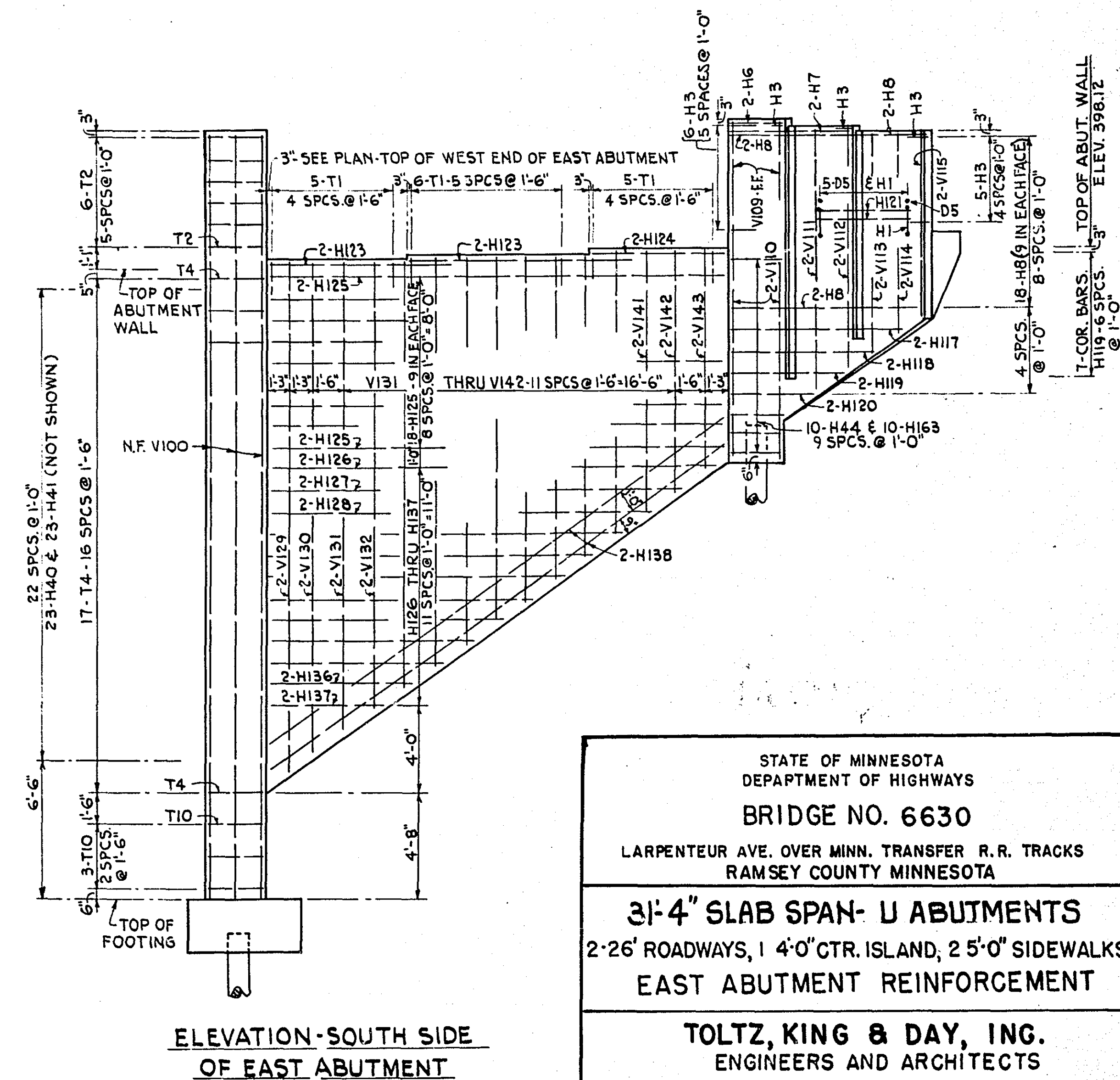
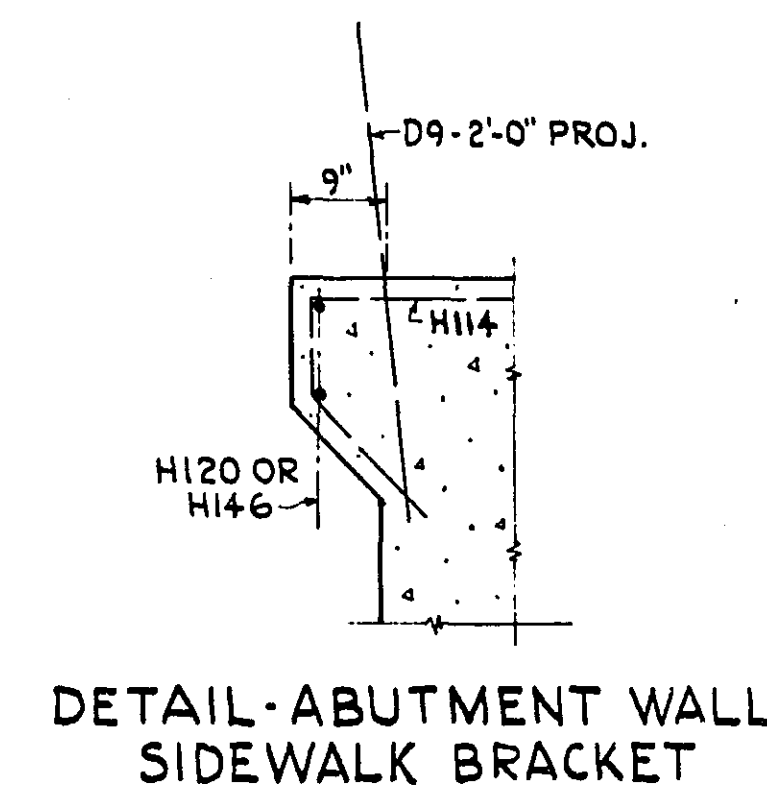
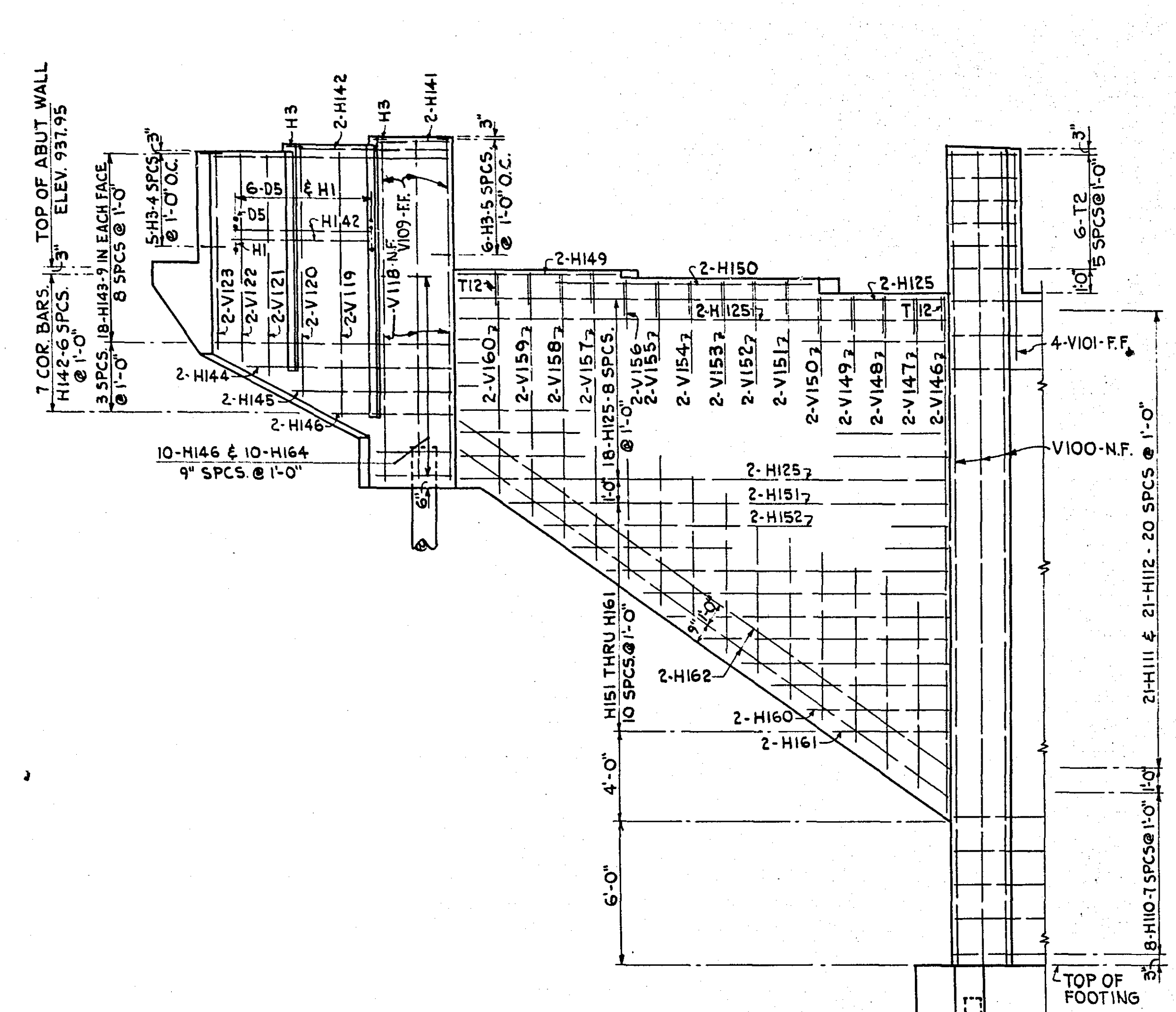
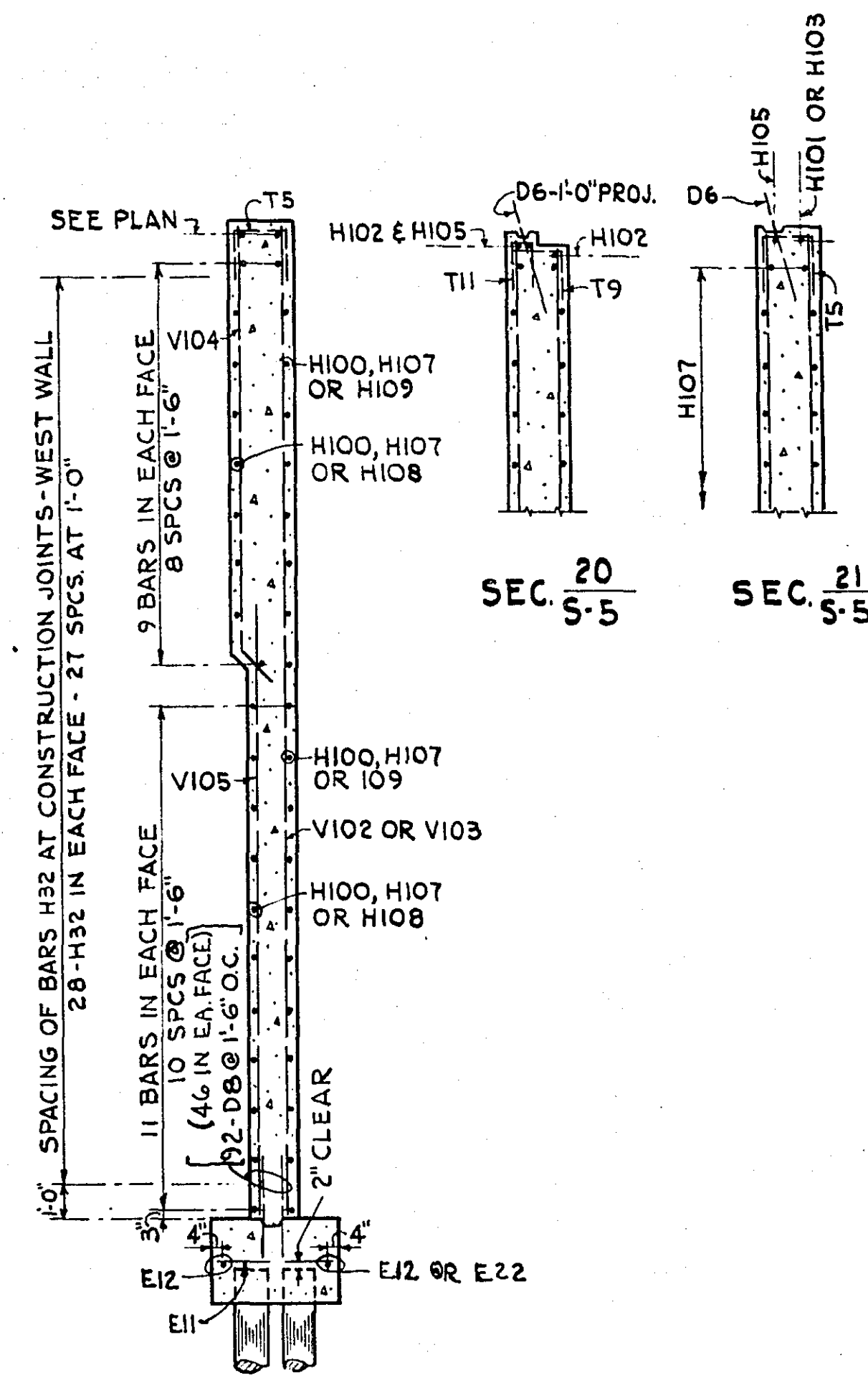
NOTE:
UNLESS OTHERWISE NOTED, MINIMUM CLEAR COVER FOR REINF. STEEL TO BE 2"
N.F. - NEAR FACE
F.F. - FAR FACE
FOR SUMMARY OF QUANTITIES SEE SHEET #10

STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS BRIDGE NO. 6630 LARPENAUER AVE. OVER MINN. TRANSFER R.R. TRACKS RAMSEY COUNTY MINNESOTA		
31'-4" SLAB SPAN - U ABUTMENTS 2'-26" ROADWAYS, 1'-4" CTR. ISLAND, 2'-5" SIDEWALKS WEST ABUTMENT REINFORCEMENT		
TOLTZ, KING & DAY, INC. ENGINEERS AND ARCHITECTS ST. PAUL, MINNESOTA		
DESIGNED A.G.H.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	COMM. 3412
DRAWN K.K.	CHECKED O.A.O.	DRG. 3
DATE 15 JAN. 1954	REG. NO. 1366	
APPROVED M.H.D. ASST. BRIDGE ENGINEER	DATE JAN. 19 1954	

MICROFILMED
RAMSEY CO. ENGR.



PLAN REVISIONS		
DATE	DESCRIPTION	BY
5-13-54	LOCATION OF T7 BARS IN BACK WALL REVISED	L.J.S.



NOTE:
UNLESS OTHERWISE NOTED, MINIMUM CLEAR
FOR REINF. STEEL TO BE 2"
N.F. = NEAR FACE
F.F. = FAR FACE
FOR SUMMARY OF QUANTITIES SEE SHEET # 10

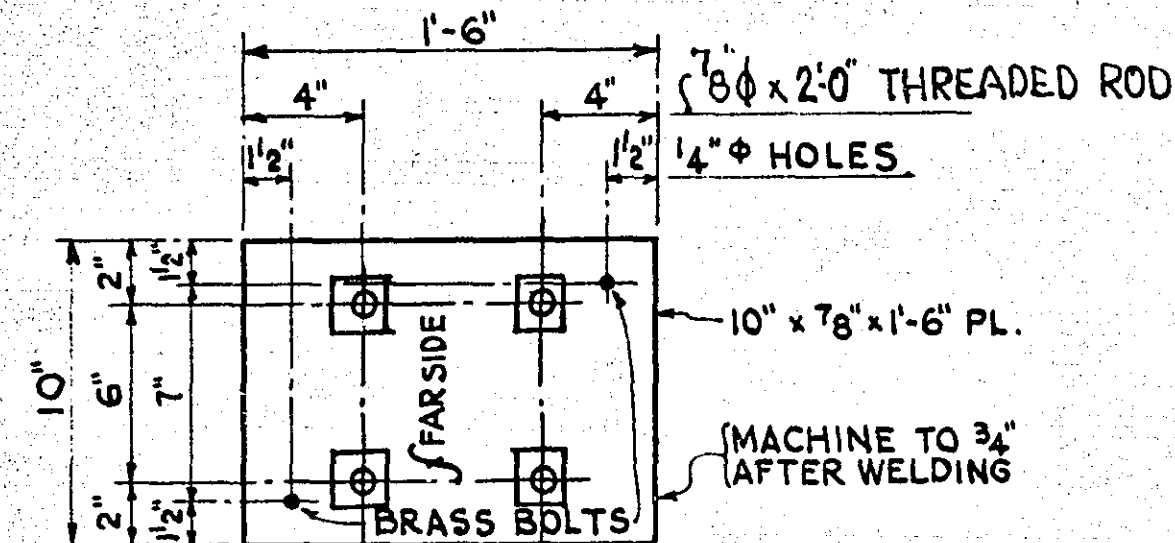
STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NO. 6630
LARPELLEUR AVE. OVER MINN. TRANSFER R.R. TRACKS
RAMSEY COUNTY MINNESOTA

3'-4" SLAB SPAN- U ABUTMENTS
2'-26" ROADWAYS, 1 4'-0" CTR. ISLAND, 2 5'-0" SIDEWALKS
EAST ABUTMENT REINFORCEMENT

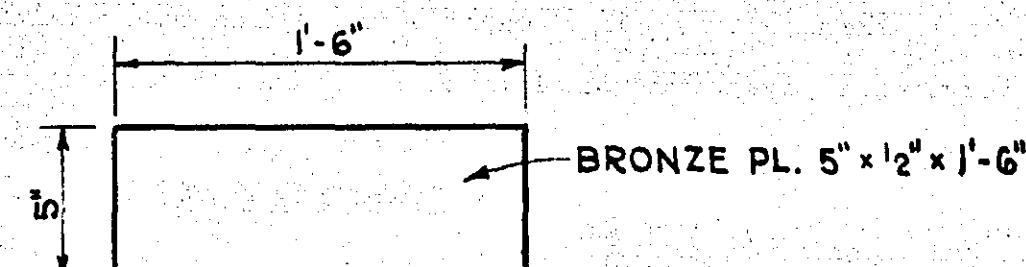
TOLTZ, KING & DAY, INC.
ENGINEERS AND ARCHITECTS
ST. PAUL, MINNESOTA

DESIGNED A.G.H. BROWN K.K.	CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>John Skogsholm</i>	COMM. 3412 DRG. 5
CHECKED O.A.O.	DATE: 12 JAN. 1954 REG. NO. 1366	
APPROVED O.A.S. ENGINEER	<i>A. C. McPent</i> JAN 19 1954 0155	

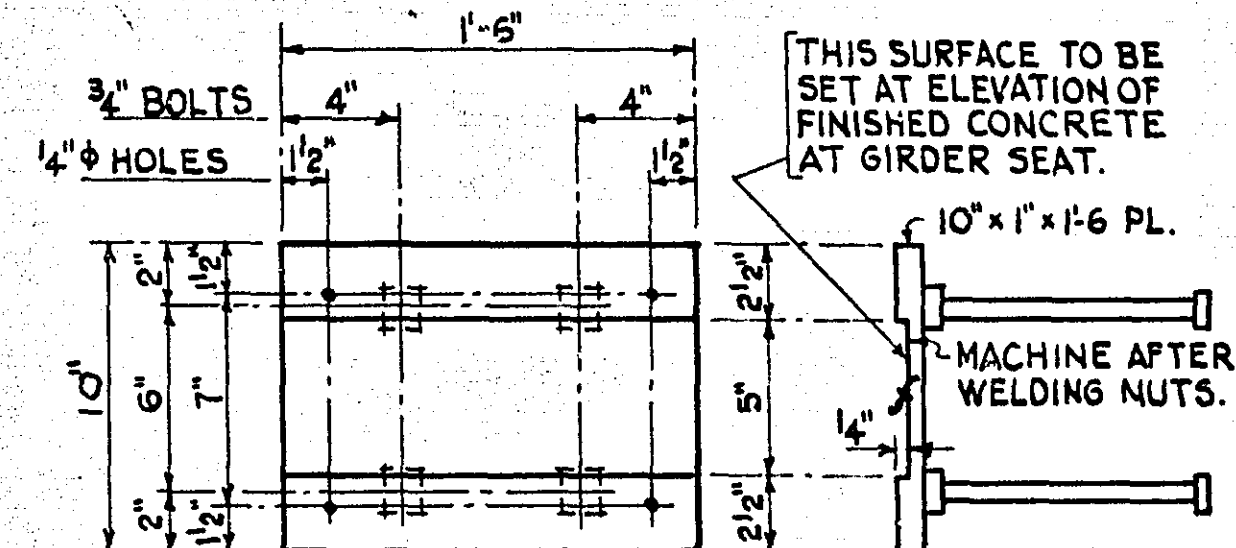
CAST BRONZE AS PER M.H.D. 3328 MAY
BE SUBSTITUTED FOR WROUGHT BRONZE



TOP PLATE TP
MAKE 4



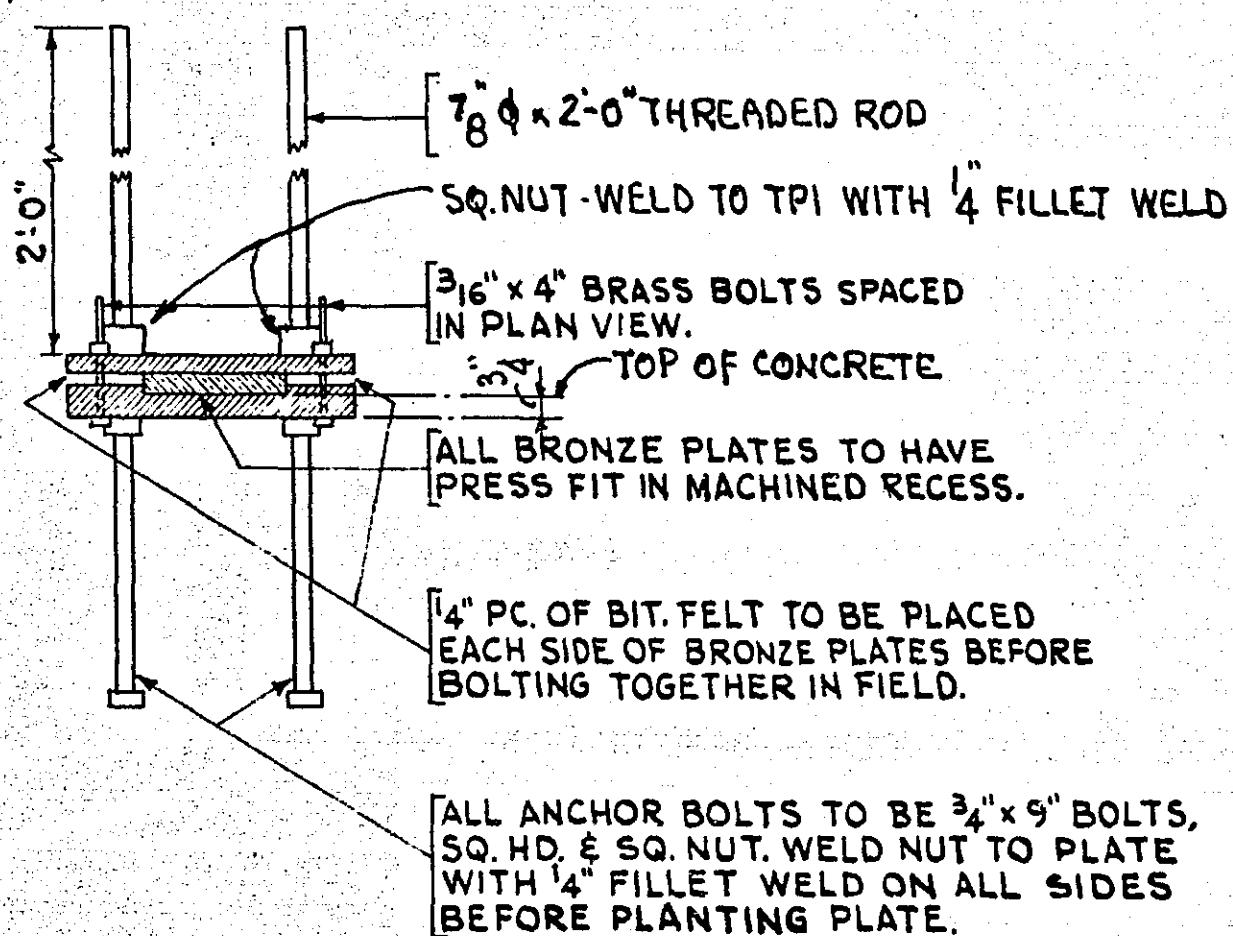
BRONZE PLATE B1
MAKE 4



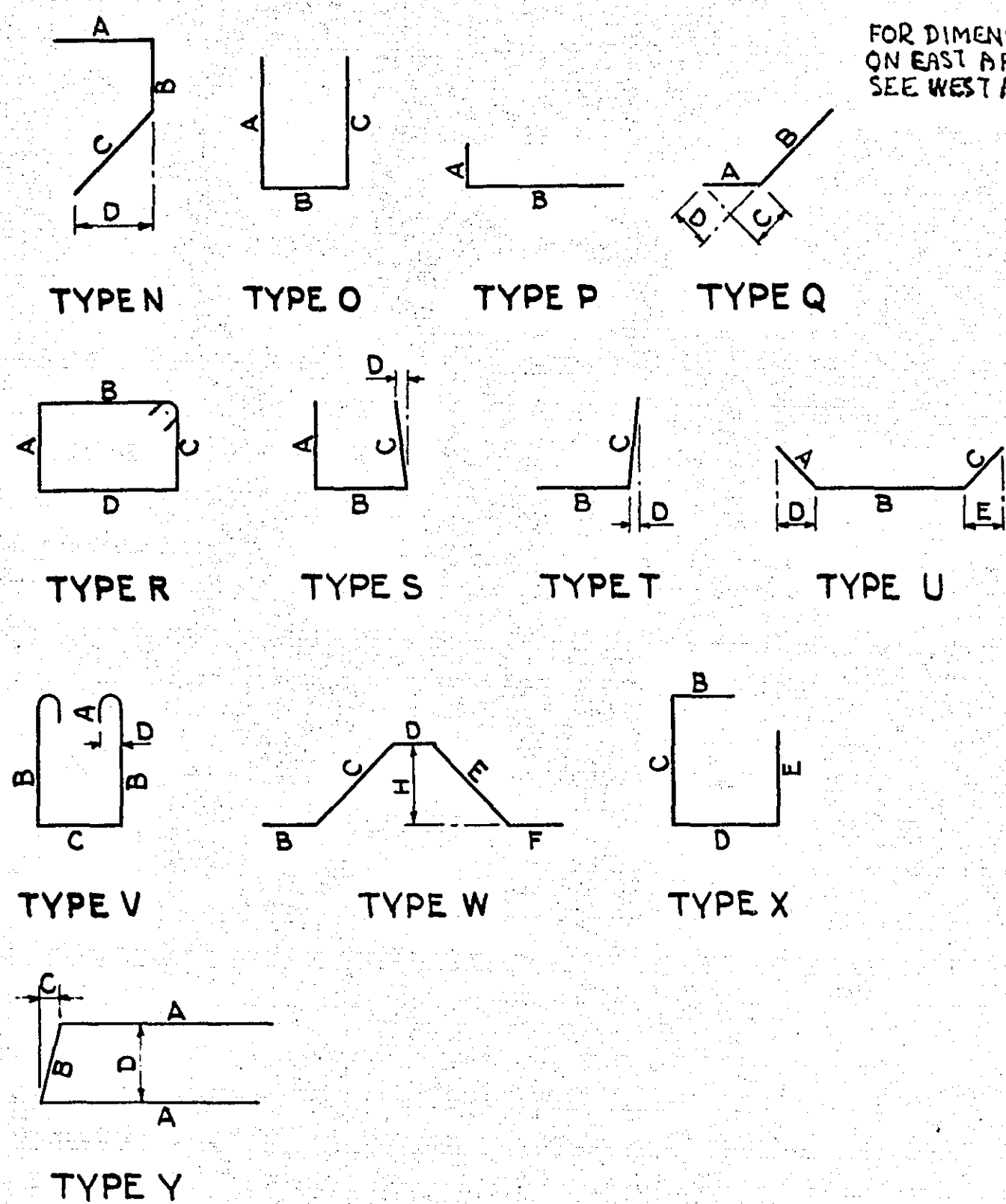
BOTTOM PLATE BP I
MAKE 4

BEARING ASSEMBLY BA 1

4-BAL ASSEMBLIES REQ'D. EACH BAL ASSEMBLY CONSISTS OF 1-TPI, 1-BI & 1-BPI.



BAI
BEARING ASSEMBLIES



NOTE: ALL DIMENSIONS ARE OUT TO OUT

[illegible]

FOOTING REINF. FOR TWO ABUTMENTS								
MARK	NO.	SIZE	LENGTH		MARK	NO.	SIZE	LENGTH
E1	3	1/2"	1'-6"		E13	10	1/2"	4'-9"
E2	3	1/2"	3'-0"		E14	17	1/2"	5'-8"
E3	3	1/2"	4'-10"		E15	1	1/2"	5'-0"
E4	3	1/2"	5'-9"		E16	1	1/2"	4'-10"
E5	40	1/2"	6'-5"		E17	1	1/2"	4'-7"
E6	3	1/2"	6'-0"		E18	1	1/2"	4'-5"
E7	3	1/2"	5'-6"		E19	1	1/2"	4'-3"
E8	23	1/2"	5'-0"		E20	1	1/2"	4'-0"
E9	3	1/2"	4'-6"		E21	1	1/2"	3'-10"
E10	3	1/2"	3'-9"		E22	1	1/2"	3'-9"
E11	143	1/2"	3'-8"		E23	1	1/2"	3'-0"
E12	7	1/2"	31'-0"					
				</				

EAST									
MARK	NO.	SIDE	LENGTH	SKETCH	TYPE	A	B	C	D
H1	11	12'	2'-7"		N	W.W.	S.W.	BRACKET	
H3	26	12'	3'-8"		O	W.W.	TIES		
H4	12	56'	7'-7"		P				
H5	4	56'	5'-9"		P				
H6	2	56'	2'-8"						
H7	2	56'	6'-0"			SOUTH WING			
H8	18	56'	9'-8"						
H32	116	56'	6'-0"			WEST WALL			
H40	23	56'	12'-0"		T	SOUTH PILASTER			
H41	23	56'	7'-8"		U				
H44	10	56'	9'-6"		Q	1'-6"	8'-0"		1'-0"
H100	42	56'	10'-6"						
H101	2	56'	1'-9"						
H102	4	56'	10'-0"						
H103	2	56'	7'-0"			WEST WALL			
H105	6	56'	17'-0"			EAST & WEST WALL			
H106	4	56'	16'-3"						
H107	40	56'	45'-2"			WEST WALL			
H108	20	56'	8'-0"						
H109	20	56'	17'-3"		O	3'-0"	2'-8"	11'-7"	
H110	8	56'	5'-6"		T		3'-6"	2'-0"	
H111	21	56'	7'-6"						
H112	21	56'	12'-0"		P	6'-0"	6'-0"		
H114	9	12'	3'-0"		N	1'-8"	10"	1'-4"	11'-2"
H115	16	56'	55'-8"			EAST WALL			
H116	32	56'	19'-0"			"	"		
H117	2	56'	9'-0"						
H118	2	56'	7'-6"						
H119	9	56'	6'-0"			SOUTH WING			
H120	4	56'	4'-6"			S.W. BRKT.-WEST WALL			
H121	2	56'	5'-2"			S.W. BRKT.			
H123	4	56'	12'-0"			SOUTH SIDEWALL			
H124	2	56'	9'-3"						
H125	36	56'	28'-4"			N. & S. SIDEWALL			
H126	2	56'	25'-6"						
H127	2	56'	24'-0"						
H128	2	56'	22'-6"						
H129	2	56'	21'-0"						
H130	2	56'	19'-6"						
H131	2	56'	18'-0"						
H132	2	56'	16'-6"			SOUTH SIDEWALL			
H133	2	56'	15'-0"						
H134	2	56'	13'-6"						
H135	2	56'	12'-0"						
H136	2	56'	10'-6"						
H137	2	56'	9'-0"						
H138	4	56'	33'-0"						
H141	2	56'	3'-3"						
H142	11	56'	7'-2"			S.W. BRKT.-			
H143	18	56'	11'-5"			NORTH WING			
H144	2	56'	10'-6"						
H145	2	56'	8'-6"						
H146	14	56'	6'-0"						
H149	2	56'	9'-6"						
H150	2	56'	11'-0"						
H151	2	56'	25'-4"						
H152	2	56'	23'-11"						
H153	2	56'	22'-2"						
H154	2	56'	20'-8"						
H155	2	56'	19'-1"						
H156	2	56'	17'-4"			NORTH SIDEWALL			
H157	2	56'	15'-9"						
H158	2	56'	14'-2"						
H159	2	56'	12'-8"						
H160	2	56'	10'-11"						
H161	2	56'	9'-4"						
H162	4	56'	32'-0"						
H163	10	56'	13'-2"		Y	5'-6"	2'-2 1/4"	4"	2'-2"
H164	10	56'	13'-7"		Y	5'-6"	2'-7 1/2"	1'-6"	2'-2"

ABUTMENT									
MARK	NO.	SIZE	LENGTH	SKETCH	TYPE	A	B	C	D
V9	4	1/2"	4'-9"	---					
V10	4	1/2"	6'-0"	---		SW BRACKET			
V11	4	1/2"	7'-3"	---		BEND IN FIELD			
V12	4	1/2"	8'-9"	---					
V100	6	5/8"	35'-5"	---		PLASTERS			
V101	8	5/8"	9'-0"	---					
V102	38	5/8"	28'-10"	---		WEST WALL			
V103	11	5/8"	29'-6"	---					
V104	42	5/8"	13'-10'	---	Q	1'-6"	12'-4"	1'-0 1/2"	
V105	42	5/8"	18'-0"	---					
V106	2	5/8"	7'-6"	---		PLASTER			
V107	54	5/8"	9'-9"	---		EAST WALL			
V108	44	5/8"	10'-4"	---					
V109	5	1/2"	8'-0"	---		BOTH WAYS			
V110	2	1/2"	15'-10'	---					
V111	2	1/2"	12'-8"	---					
V112	2	1/2"	11'-6"	---		SOUTH WING			
V113	2	1/2"	10'-4"	---					
V114	2	1/2"	9'-4"	---					
V115	2	1/2"	8'-8"	---					
V118	3	1/2"	15'-5"	---					
V119	2	1/2"	12'-3"	---					
V120	2	1/2"	11'-3"	---		NORTH WING			
V121	2	1/2"	10'-2"	---					
V122	2	1/2"	9'-4"	---					
V123	2	1/2"	8'-8"	---					
V129	2	5/8"	24'-0"	---					
V130	2	5/8"	23'-2"	---					
V131	2	5/8"	22'-2"	---					
V132	2	5/8"	21'-2"	---					
V133	2	5/8"	20'-2"	---					
V134	2	5/8"	19'-6"	---					
V135	2	5/8"	18'-6"	---					
V136	2	5/8"	17'-6"	---		SOUTH SIDEWALL			
V137	2	5/8"	16'-6"	---					
V138	2	5/8"	15'-6"	---					
V139	2	5/8"	14'-6"	---					
V140	2	5/8"	13'-10'	---					
V141	2	5/8"	12'-9"	---					
V142	2	5/8"	11'-9"	---					
V143	2	5/8"	10'-9"	---					
V146	2	5/8"	22'-11"	---					
V147	2	5/8"	21'-5"	---					
V148	2	5/8"	20'-5"	---					
V149	2	5/8"	19'-6"	---					
V150	2	5/8"	18'-8"	---					
V151	2	5/8"	18'-4"	---					
V152	2	5/8"	17'-5"	---					
V153	2	5/8"	16'-5"	---		NORTH SIDEWALL			
V154	2	5/8"	15'-6"	---					
V155	2	5/8"	14'-7"	---					
V156	2	5/8"	13'-8"	---					
V157	2	5/8"	13'-0"	---					
V158	2	5/8"	12'-1'	---					
V159	2	5/8"	11'-1'	---					
V160	2	5/8"	10'-2"	---					

WEST										ABUT			
MARK	NO.	SIZE	LENGTH	SKETCH	TYPE	A	B	C	D	E	F	G	H
H1	10	2"	2'-7"		N	1'-0"	T	1'-0"	8 1/2"	W.W.	SW	BRKT.	
H2	4	1/2"	4'-8"										
H3	24	1/2"	3'-8"		O	1'-3"	1'-2"	1'-3"		W.W.	TIES		
H4	12	5/8"	7'-7"		P	1'-6"	6'-1"			W.W.	BRKT.		
H5	4	5/8"	5'-9"		P	1'-6"	4'-3"						
H6	4	5/8"	2'-8"										
H7	4	5/8"	6'-0"										
H8	36	5/8"	9'-8"			WING WALL HORIZ.							
H9	4	5/8"	9'-2"										
H10	4	5/8"	7'-8"										
H11	4	5/8"	6'-2"										
H14	11	5/8"	15'-2"		X		2'-6"	6'-0"	3'-2"	6'-0"	NORTH	W.W.	COR.
H15	8	5/8"	16'-0"			BOT. OF WEST WALL							
H17	20	5/8"	20'-0"										
H18	4	5/8"	13'-7"								WEST WALL ADJ.		
H19	4	5/8"	11'-4"								TO W.W.		
H20	4	5/8"	9'-0"										
H21	2	5/8"	6'-0"										
H22	10	3/4"	4'-3 1/2"			WEST WALL							
H23	4	5/8"	4'-3 1/2"										
H24	11	5/8"	13'-8"		X		2'-0"	6'-0"	3'-8"	4'-0"	SOUTH	W.W.	COR.
H30	2	5/8"	7'-3"										
H31	.80	5/8"	11'-0"										
H32	118	5/8"	6'-0"										
H33	2	5/8"	17'-6"			EAST WALL							
H34	1	5/8"	16'-2"										
H35	2	5/8"	5'-0"										
H36	1	5/8"	2'-3"										
H37	16	5/8"	7'-10"		W		1'-3"	2'-5"	6"	2'-5"	1'-3"		1'-
H38	39	5/8"	4'-3 1/2"			EAST WALL							
H40	28	5/8"	12'-0"		T		6'-0"	6'-0"	6"		NORTH	COR.	TIE
H41	28	5/8"	7'-8"		U	1'-0"	5'-8"	1'-0"	8 1/2"	9"			
H42	28	5/8"	12'-0"		S		6'-0"	6'-0"	6"		SOUTH	COR.	TIE
H43	28	5/8"	7'-2"		U	1'-0"	5'-2"	1'-0"	8 1/2"	8"			
H46	4	5/8"	11'-6"			SIDE WALL							
H47	4	5/8"	14'-0"										
H48	56	5/8"	36'-0"										
H49	4	5/8"	31'-6"										
H50	4	5/8"	30'-0"										
H51	4	5/8"	28'-6"										
H52	4	5/8"	27'-0"										
H53	4	5/8"	25'-6"										
H54	4	5/8"	24'-0"										
H55	4	5/8"	22'-6"										
H56	4	5/8"	21'-0"										
H57	4	5/8"	19'-6"										
H58	4	5/8"	18'-0"										
H59	4	5/8"	16'-6"										
H60	4	5/8"	15'-0"										
H61	4	5/8"	13'-6"										
H62	4	5/8"	12'-0"										
H63	4	5/8"	10'-6"										
H64	4	5/8"	9'-0"										
H65	4	5/8"	3'-3"										
H66	4	5/8"	1'-6"										
H67	1	5/8"	7'-7"		Q	1'-0"	6'-7"	8"					
H68	11	5/8"	10'-6"		Q	1'-0"	9'-6"	8"					
H69	1	5/8"	7'-0"		Q	1'-0"	6'-0"	7"					
H70	11	5/8"	9'-6"		Q	1'-0"	8'-6"	7"					

MENT									
MARK	NO.	SIZE	LENGTH	SKETCH	TYPE	A	B	C	D
V1	4	1/2"	8'-7"	---					
V2	4	1/2"	9'-6"	---					
V3	4	1/2"	10'-6"	---					
V4	4	1/2"	11'-9"	---			WINGWALL		
V5	4	1/2"	13'-0"	---					
V6	4	1/2"	12'-0"	---					
V7	2	1/2"	16'-5"	---					
V8	6	1/2"	7'-0"	---					
V9	4	1/2"	4'-9"	---					
V10	4	1/2"	6'-0"	---			S.W. BRACKET-BEND		
V11	4	1/2"	7'-3"	---			IN FIELD		
V12	4	1/2"	8'-9"	---					
V14	8	5/8"	11'-0"	---					
V15	4	5/8"	8'-3"	---					
V16	4	5/8"	7'-7"	---			WEST WALL		
V17	4	5/8"	7'-0"	---					
V18	4	5/8"	6'-6"	---					
V19	8	5/8"	6'-0"	---					
V26	3	5/8"	34'-1"	---			NORTH PILASTER		
V27	3	5/8"	34'-4"	---			SOUTH PILASTER		
V28	8	5/8"	9'-0"	---			PILASTERS		
V29	18	5/8"	27'-10"	---					
V30	11	5/8"	28'-4"	---					
V31	10	5/8"	28'-1"	---					
V32	34	5/8"	14'-4"	---		Q	1'-6"	12'-10"	1'-0 1/2"
V33	11	5/8"	13'-4"	---		Q	1'-6"	11'-10"	1'-0 1/2"
V34	44	5/8"	18'-0"	---					
V40	5	5/8"	11'-3"	---					
V41	4	5/8"	12'-3"	---					
V42	4	5/8"	13'-3"	---					
V43	4	5/8"	14'-3"	---					
V44	4	5/8"	15'-3"	---					
V45	4	5/8"	16'-3"	---					
V46	4	5/8"	17'-3"	---					
V47	4	5/8"	18'-9"	---					
V48	4	5/8"	19'-9"	---					
V49	4	5/8"	20'-9"	---			SIDEWALL		
V50	4	5/8"	21'-9"	---					
V51	4	5/8"	22'-9"	---					
V52	4	5/8"	23'-9"	---					
V53	4	5/8"	24'-9"	---					
V54	4	5/8"	26'-3"	---					
V55	4	5/8"	27'-3"	---					
V56	4	5/8"	28'-3"	---					
V57	4	5/8"	29'-3"	---					
V58	8	5/8"	30'-3"	---					
V59	4	5/8"	27'-8"	---			SIDEWALL AT PILASTER		
V60	16	5/8"	6'-0"	---			SIDEWALL AROUND PIPE		

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

BRIDGE NO. 6670

BRIDGE NO. 6630

LARPEN TEUR AVE. OVER MINN. TRANSFER R.R. TRACKS
RAMSEY COUNTY MINNESOTA

31'-4" SLAB SPAN- U ABUTMENTS
2-26' ROADWAYS, 1-4'-0" CTR. ISLAND, 2 5'-0" SIDEWALKS
BRG. PLATE DETAILS & ABUT. REINF. SCHEDULE

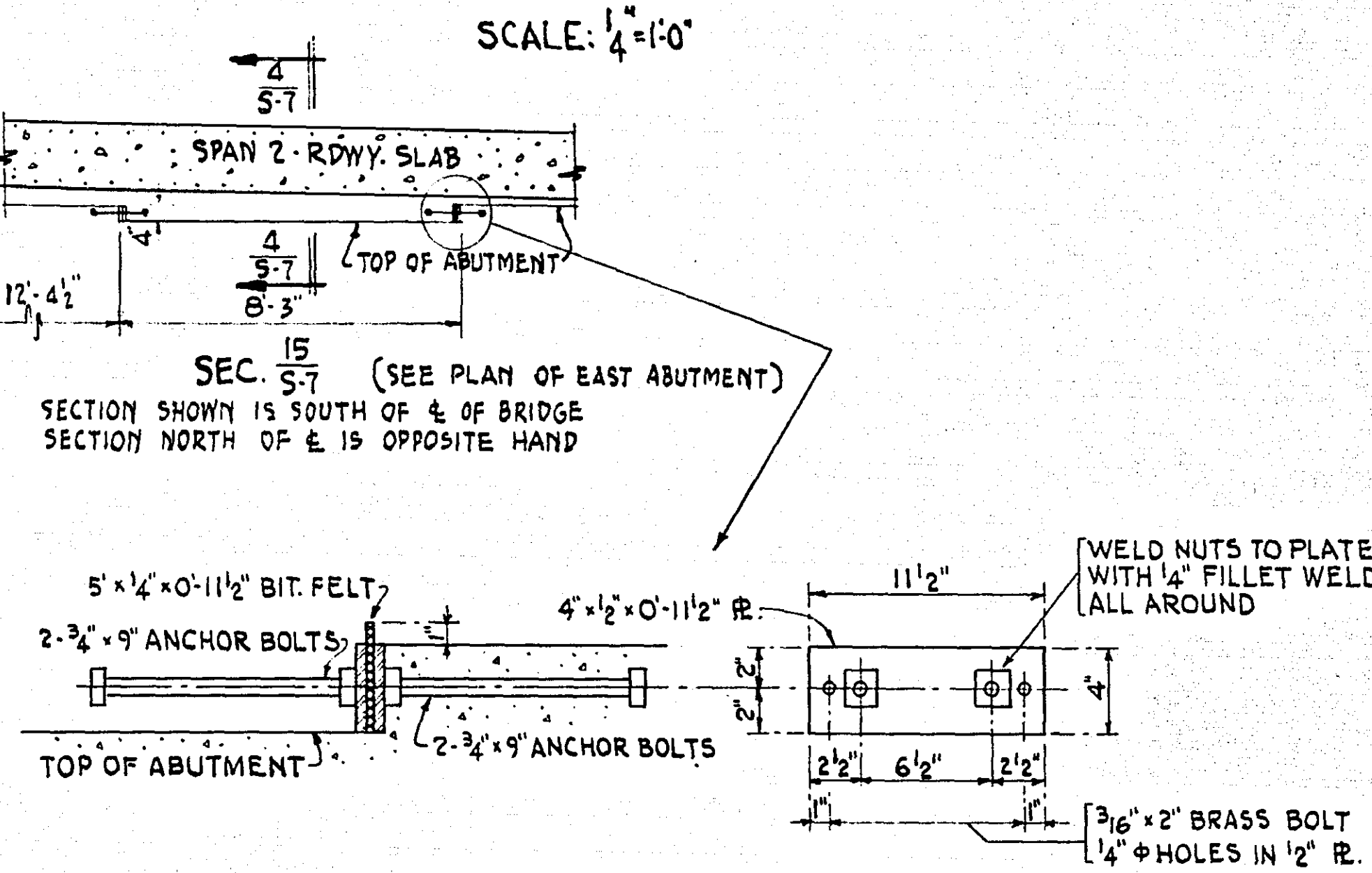
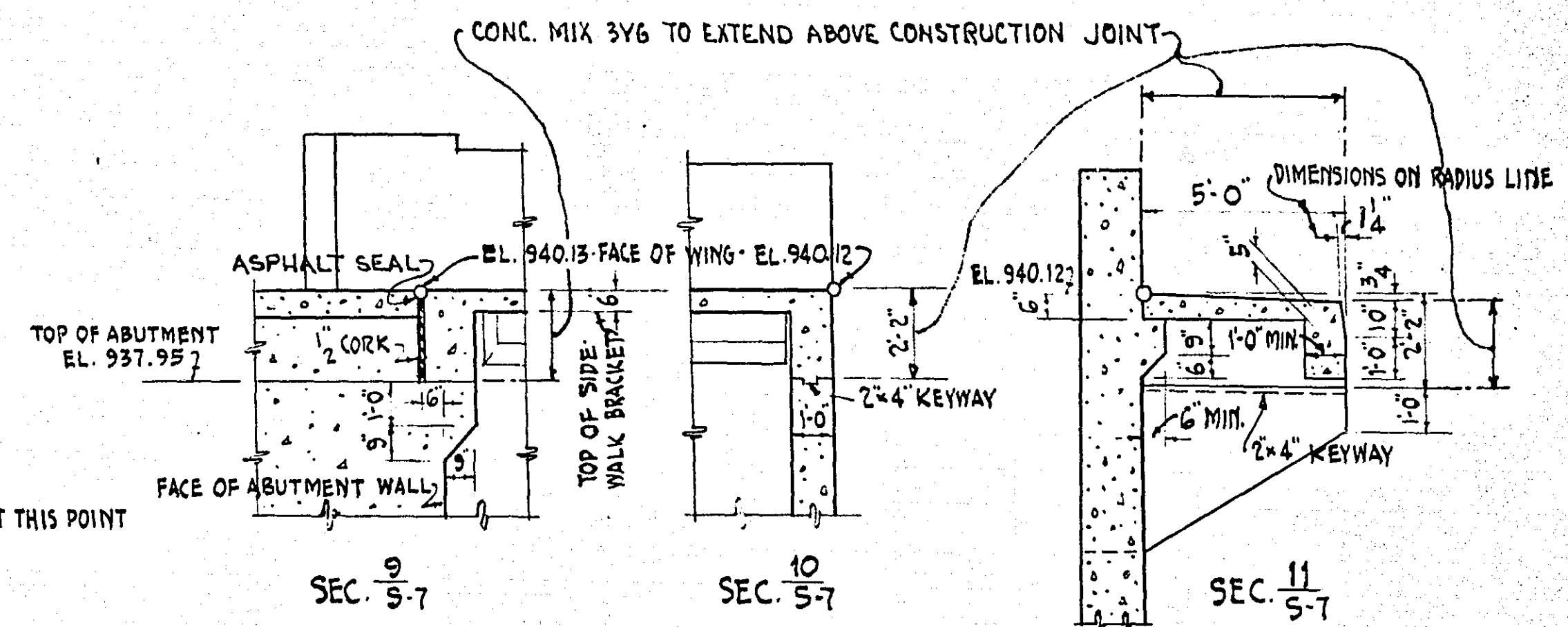
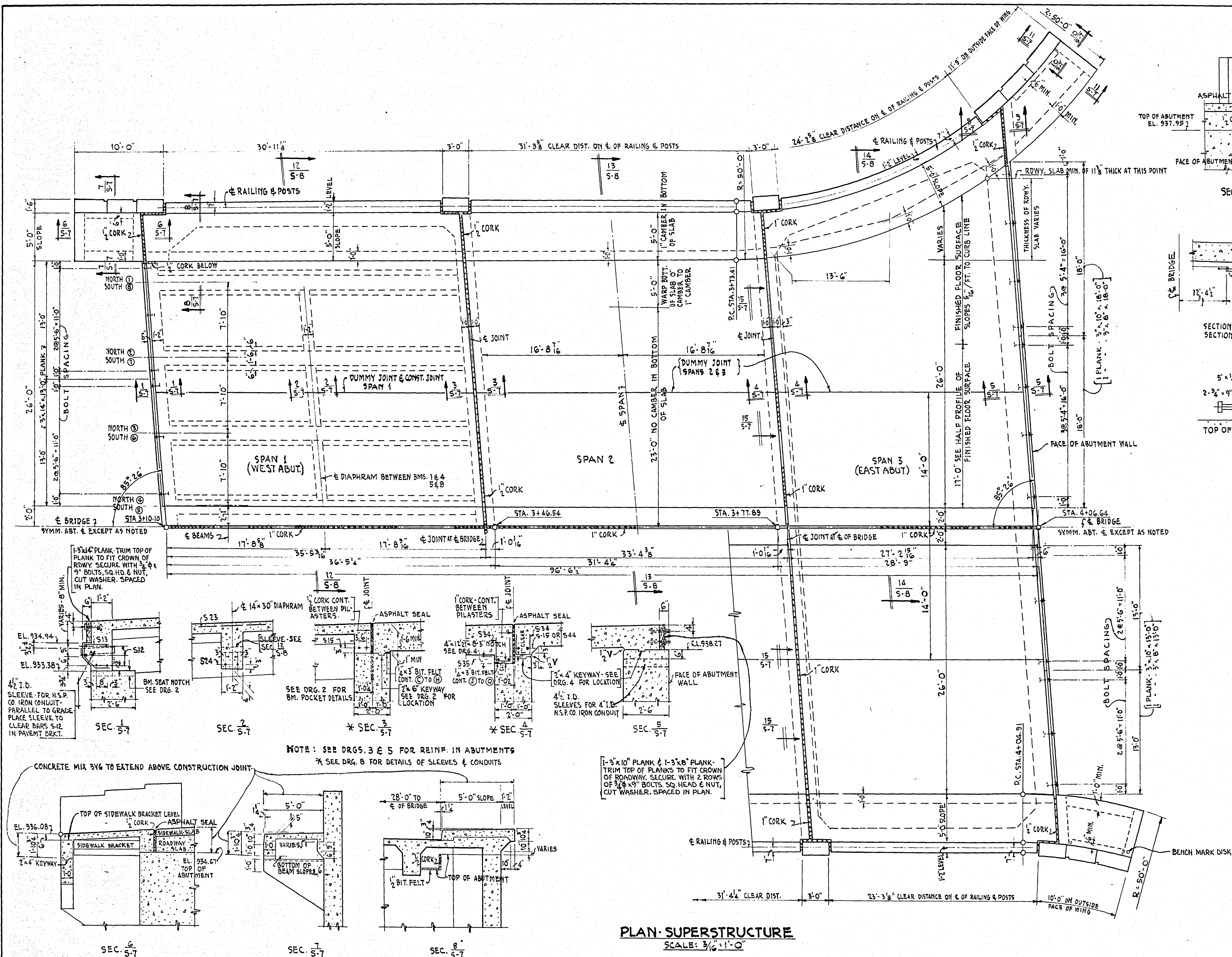
TOLTZ, KING & DAY, INC.
ENGINEERS AND ARCHITECTS
ST. PAUL, MINNESOTA

DESIGNED A.G.H.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT
DRAWN K.K.	I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

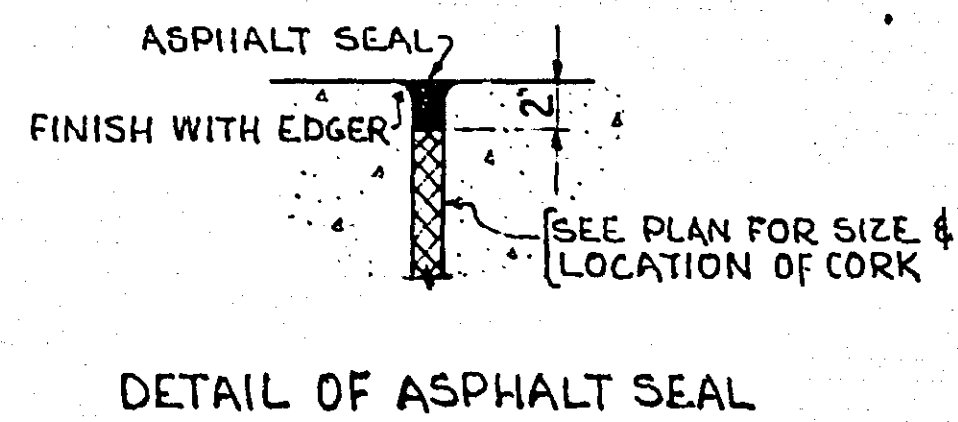
CHECKED *R. L. Wick*
O.A.O. DATE 15 JAN. 1954 REG. NO. 1366

APPROVED A. C. La Bonte JAN. 19, 195
M.H.D. ASST. BRIDGE ENGINEER DATE

SHEET 6 OF 13 SHEETS 15-139



DETAILS OF EXPANSION ASSEMBLY NO. 1
4 REQUIRED



NOTE:
UNLESS OTHERWISE NOTED, MINIMUM CLEAR
COVER FOR REINF. STEEL TO BE 2"

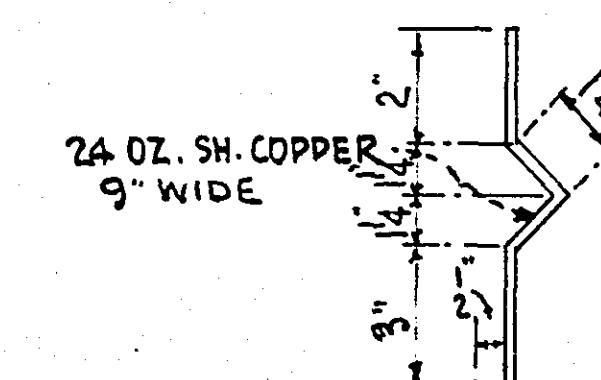
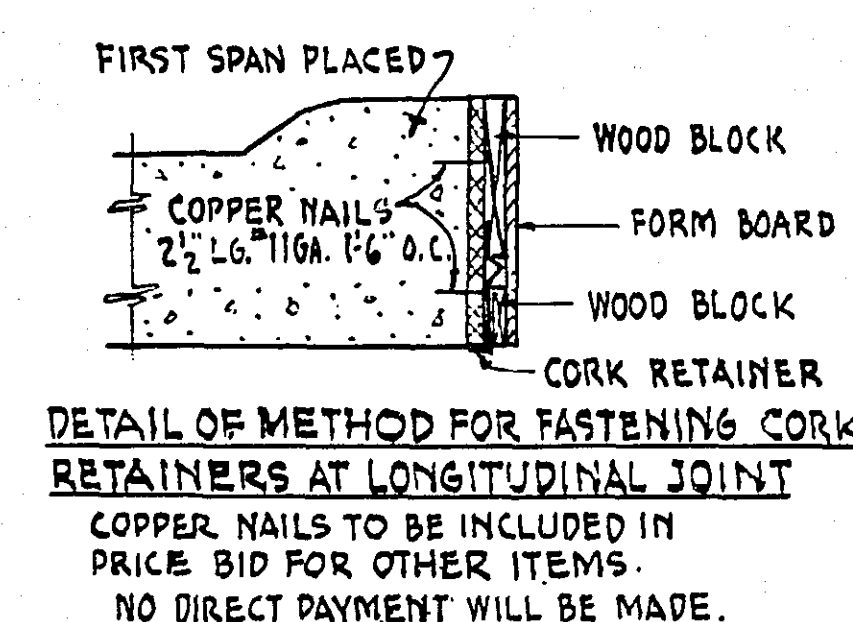
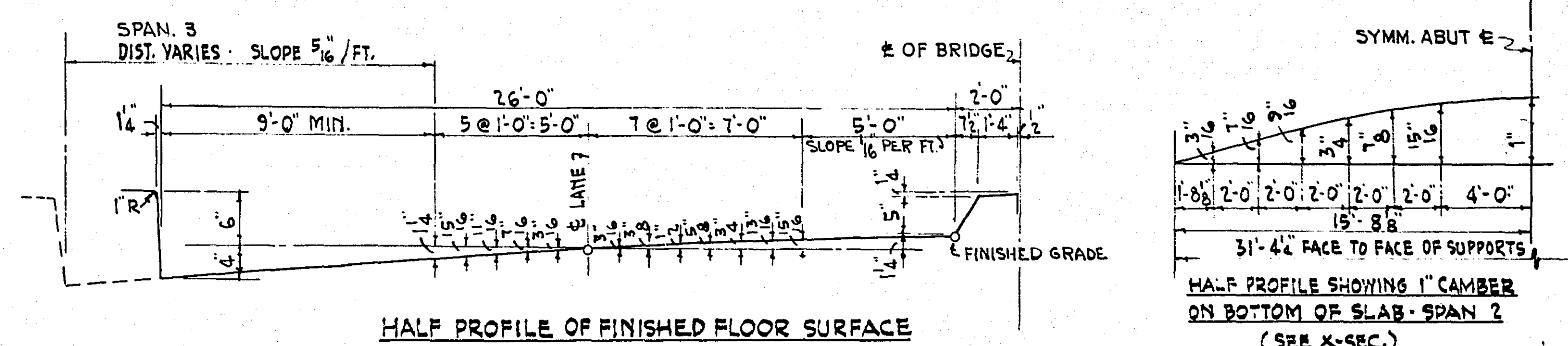
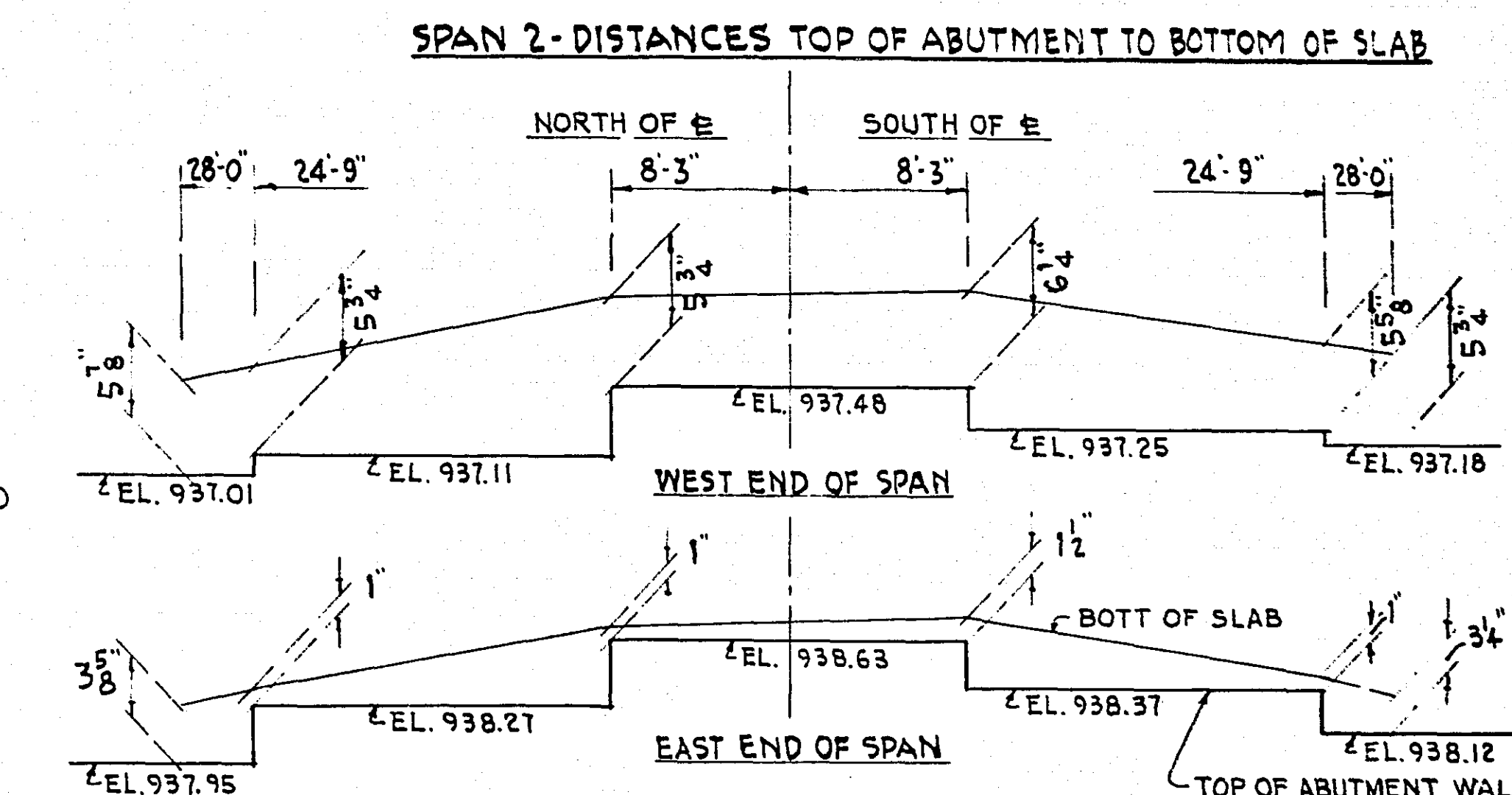
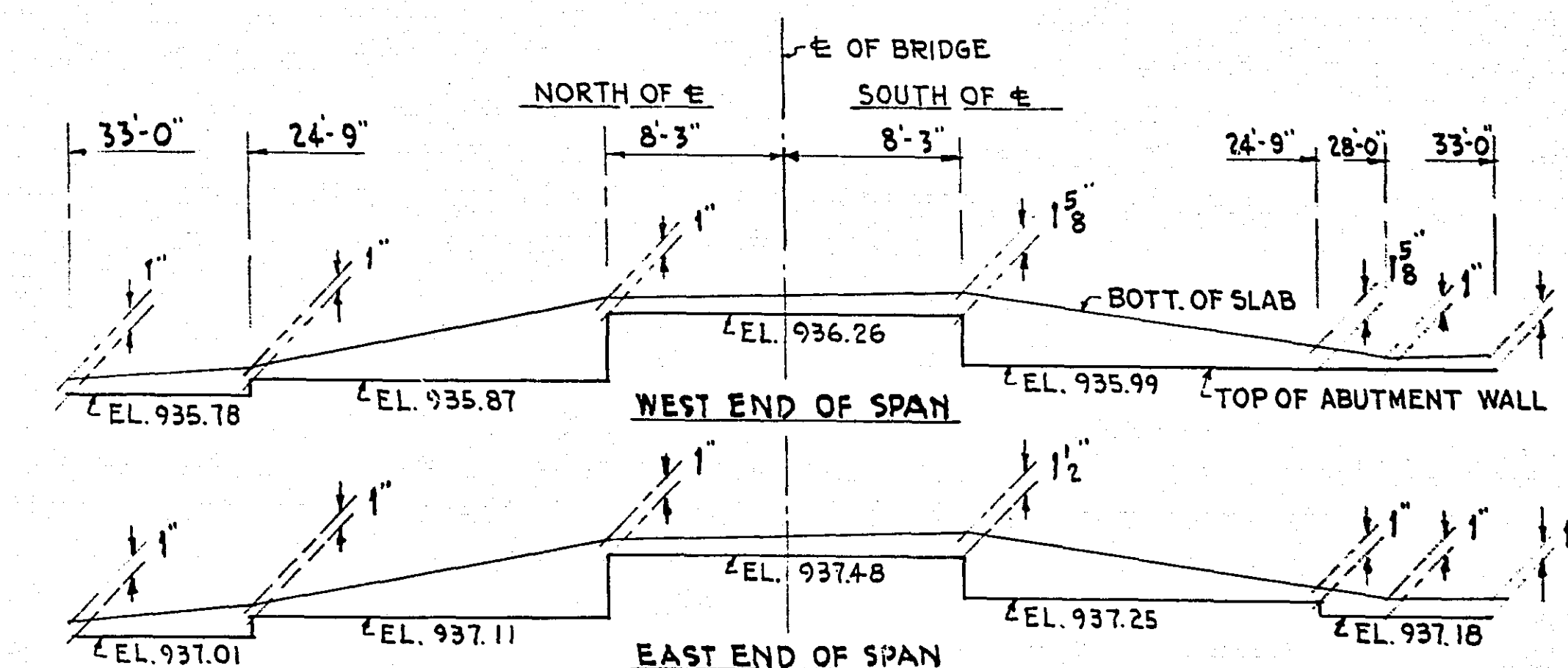
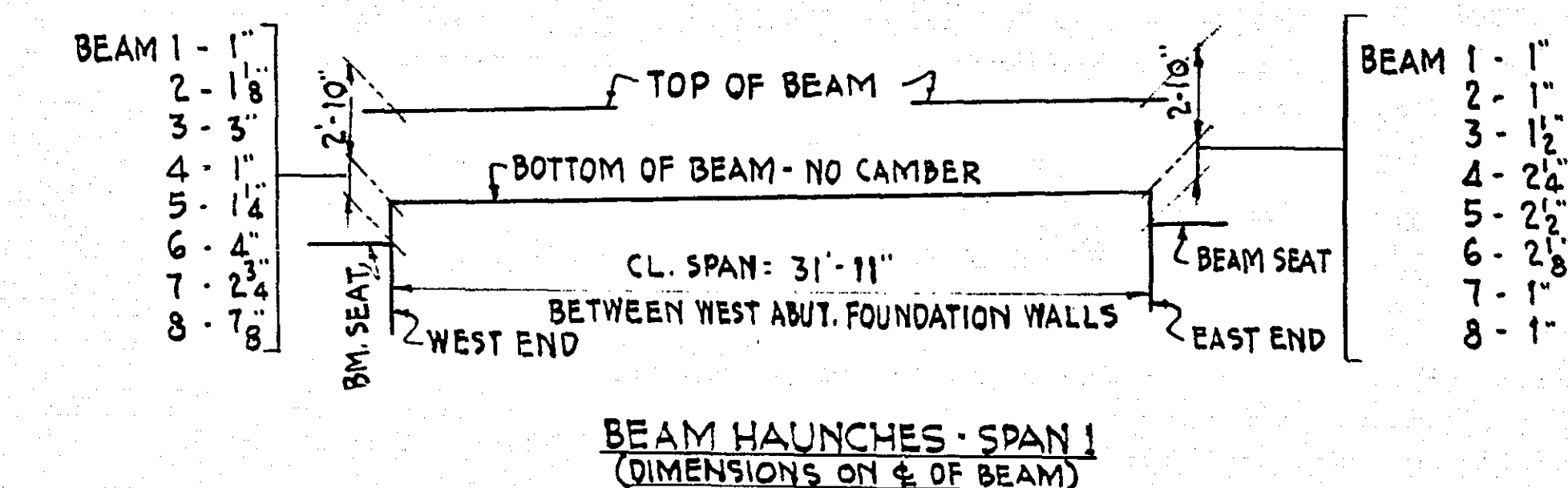
PLAN - SUPERSTRUCTURE
SCALE: 3/16" = 1'-0"

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NO. 6630
LARPENUE AVE. OVER MINN. TRANSFER R.R. TRACKS
RAMSEY COUNTY MINNESOTA

31'-4" SLAB SPAN - U ABUTMENTS
2'-26" ROADWAYS, 1'-4" CTR. ISLAND, 2'-5" SIDEWALKS
PLAN OF SUPERSTRUCTURE

TOLTZ, KING & DAY, INC.
ENGINEERS AND ARCHITECTS
ST. PAUL, MINNESOTA

DESIGNED A.G.H.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	COMM. 3412 DRG. 7
DRAWN S.J.K.		
CHECKED O.A.O.		
APPROVED M.H.D.		
DATE 15 JAN. 1954	REG. NO. 1366	DATE JAN. 19, 1954



NOTE:
UNLESS OTHERWISE NOTED, MINIMUM CLEAR
COVER FOR REINF. STEEL TO BE 2"

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NO. 6630
LARPEUTEUR AVE. OVER MINN. TRANSFER R. R. TRACKS
RAMSEY COUNTY MINNESOTA

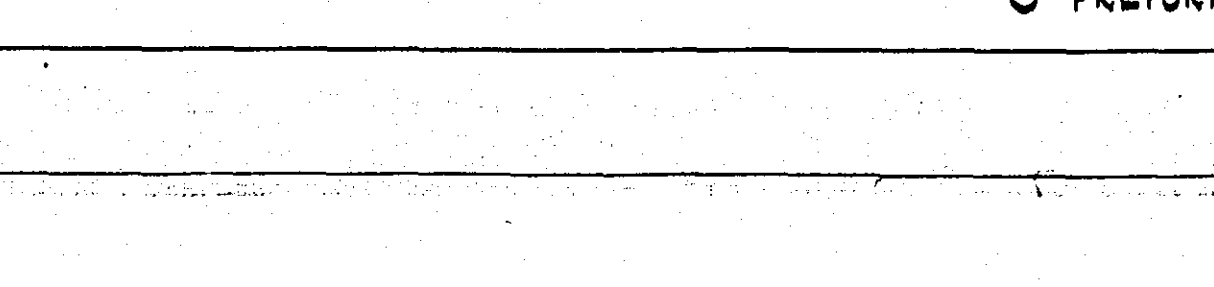
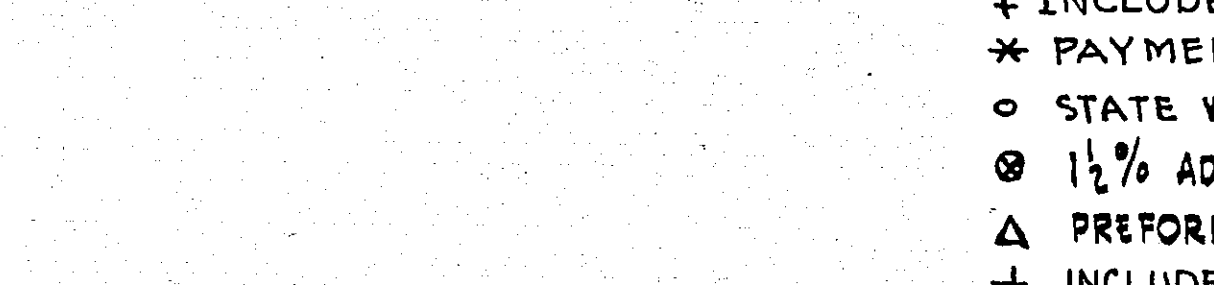
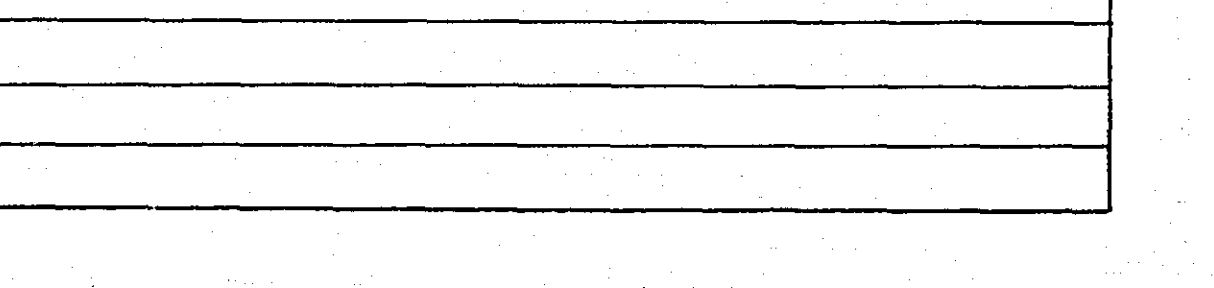
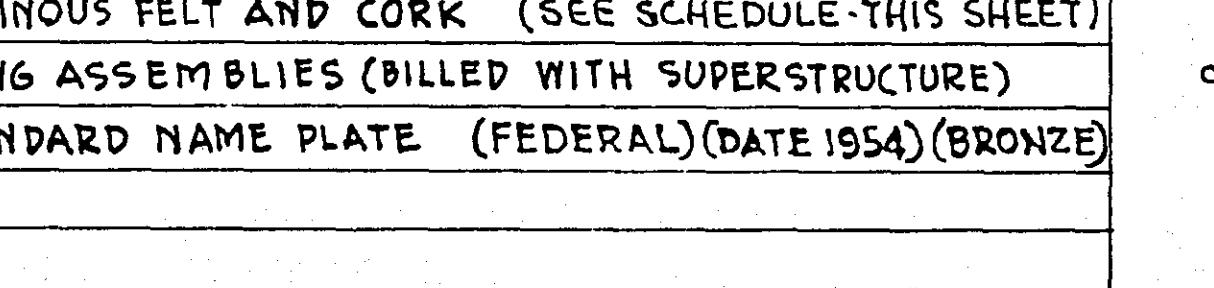
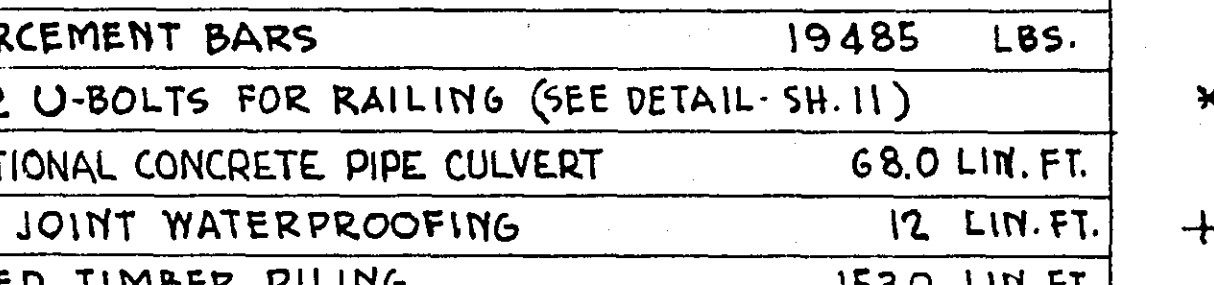
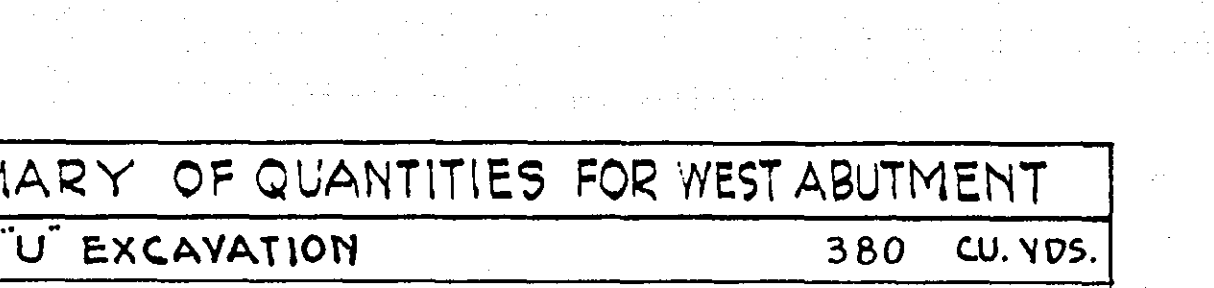
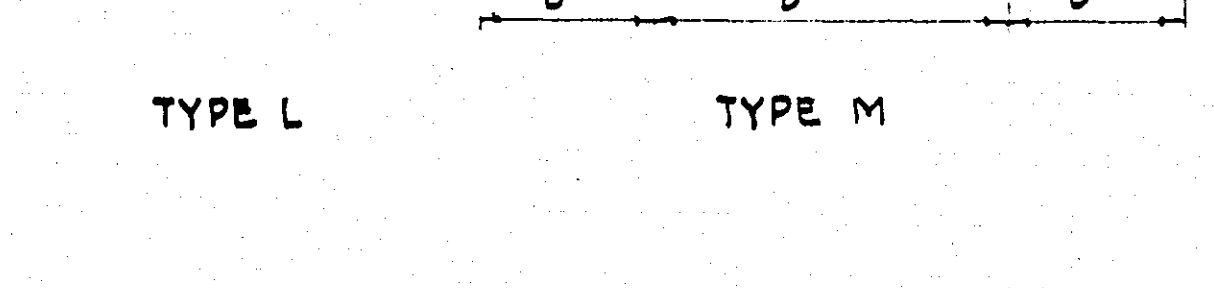
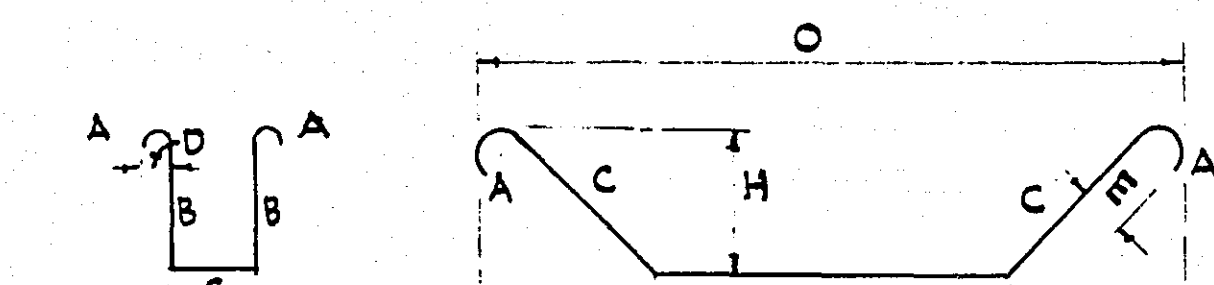
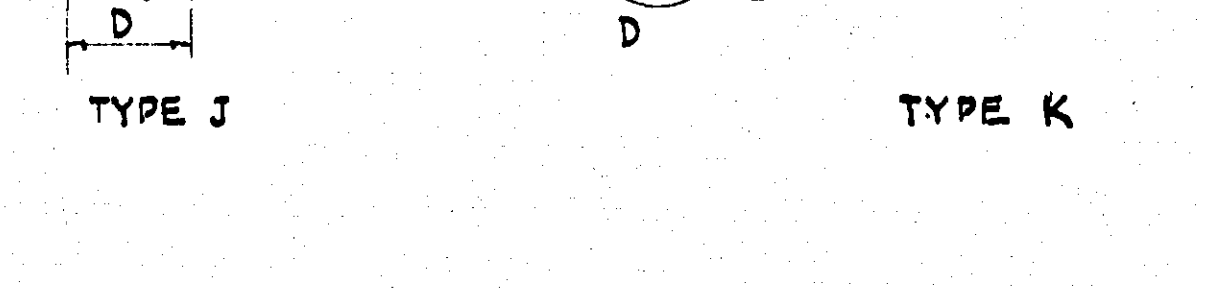
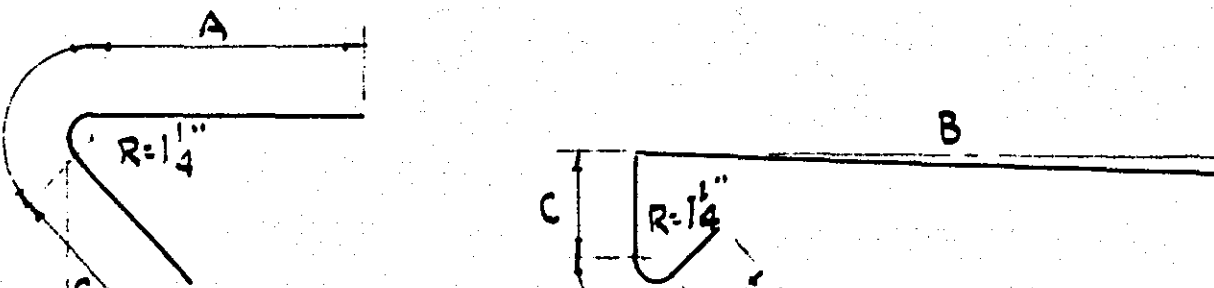
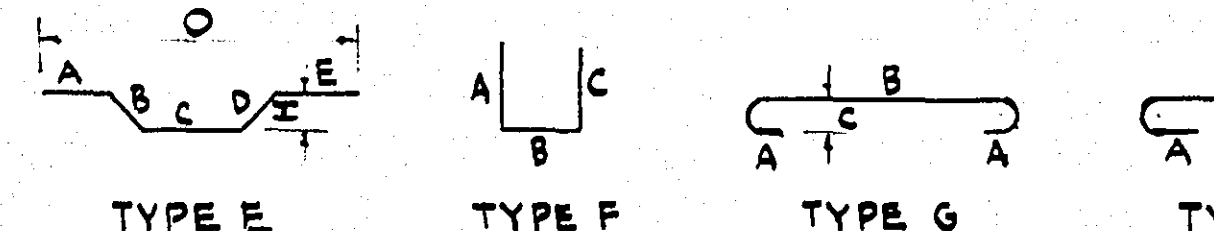
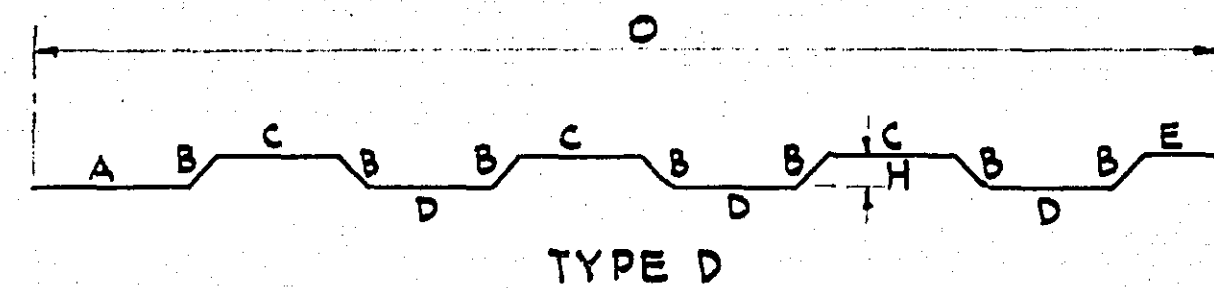
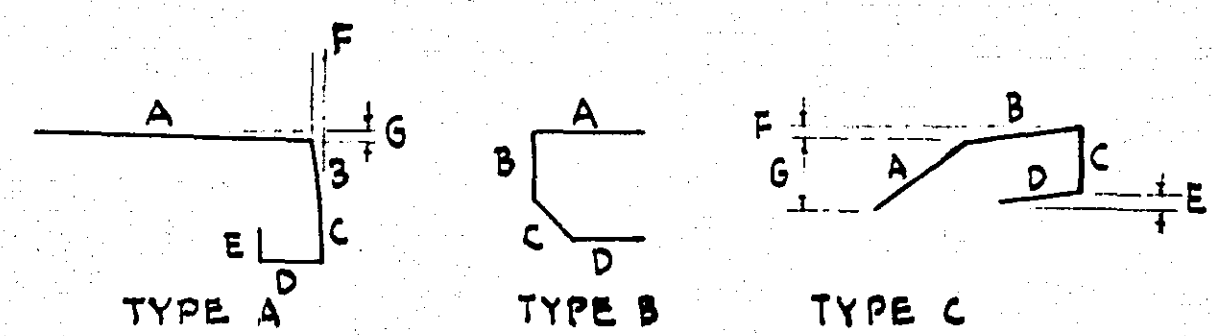
31'-4" SLAB SPAN - U ABUTMENTS
2'-26" ROADWAYS, 1'-4-0" CTR. ISLAND, 2'-5'-0" SIDE WALKS
SUPERSTRUCTURE-CROSS SECTIONS

TOLTZ, KING & DAY, INC.
ENGINEERS AND ARCHITECTS
ST. PAUL, MINNESOTA

DESIGNED A.G.H.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DRAWN S.J.K.	
CHECKED	

APPROVED A. C. La Bonte JAN. 19, 1954

SHEET 8 OF 13 SHEETS 15-139 6630



MARK NO.	SIZE	LENGTH	SKETCH	TYPE	A	B	C	D	E	F	G	H	O	
U1	262	2	7-3 1/2	L	0-6	2-6 1/2	1-2	4						BM. STIRRUPS - SPAN 1
G1	32	16	37-1	G	1-1	34-11	10							
G2	16	1	38-3	M	1-1	2-9 1/2	3-4 1/2	29-4	10			2-2 1/2	34-11	
G3	16	1	34-11	M	1-1	2-9 1/2	3-4 1/2	26-0	10			2-2 1/2	31-7	BM. REINF. SPAN 1
G4	16	1	31-4	M	1-1	2-6 1/2	3-0	23-2	10			1-11 1/2	28-3	
G5	16	1	28-0	M	1-1	2-6 1/2	3-0	19-10	10			1-11 1/2	24-11	
G6	24	8	4-1	N	1-6	0-7	2-0							E. END GIRDERS - SPAN 1
S-1	5	1	7-2											
S-2	1	2	7-3 1/2											WINGWALL S.W. - LONGIT. - WEST ABUT.
S-3	2	1	7-5											
S-4	1	2	7-6 1/2											
S-5	24	2	7-7		A	4-7	B	10 1/2	9	G	1 1/2	3 1/4		WINGWALL S.W. - TRANS.
S-6	71	1	4-6											WINGWALL S.W. - TRANS.
S-7	4	3 1/2	7-5											S.W. SLAB - NORTH WING - WEST ABUTMENT - LONGIT.
S-8	107	1	2-10		F	10	1-2	10						RDWY. SLAB OVER SIDEWALLS - SPANS 1 & 3
S-9	2	1	6-11											
S-10	1	2	6-9 1/2											WINGWALL S.W. - WEST ABUT.
S-11	4	3 1/2	6-10											
S-12	10	1	27-8											END W.B. & PAVEMENT BRKT. - TRANS. - WEST ABUT.
S-13	58	1	3-4		B	1-4	G	8	10					PAVEMENT BRKT. - WEST ABUT.
S-14	80	2	35-1											SPAN 1 - LONGIT.
S-15	185	5	32-8											SPANS 1 & 3 TRANS.
S-16	68	2	33-8											
S-17	72	5	4-11 1/2		C	1-8	1-1 1/2	8	1-6	6 1/2	1 1/2	11		SPAN 1 - CTR. ISLAND
S-18	107	2	3-5		J	2-0	3	1-2	10					RDWY. SLAB OVER SIDEWALLS - SPAN 1 & 3
S-19	118	1	6-6 1/2		K	8	5-9 1/2	6	3	6	1 1/2	3 1/4		S.W. SPANS 1, 2 & 3
S-20	48	1	3-0		H	6	2-6	4						S.W. SLAB AT ANCHOR BOLT ASSEMBLIES
S-21	8	1	30-6											S.W. SLAB SPAN 1
S-22	13	1	5-3		K	8	4-7				1 1/2	3 1/4		S.W. SPANS 1, 2 & 3
S-23	30	1	7-6											TOP LONGIT. BARS OVER DIAPHRAM SPAN 1
S-24	4	1	24-0											TRANS. DIAPHRAM - SPAN 1
S-25	12	1	11-6											RDWY. SLAB OVER SIDEWALL - SPAN 1
S-26	58	1	33-0											SPAN 2 LONGIT.
S-27	56	1	34-0		E	4-2	1-10	22-0	1-10	4-2			1-3 1/2	32-11 SPAN 2 - LONGIT.
S-28	100	5	32-8 1/2											SPAN 2 TRANS.
S-29	46	5	5-4 1/2		C	1-8	1-1 1/2	1-7	1-0	0	1 1/2	11		SPAN 2 CTR. ISLAND
S-30	12	1	33-0											SPAN 2 LONGIT.
S-31	42	1	3-11		J	2-0	3	1-8	1-2 1/2					SPAN 2 - COPING TIES
S-32	8	1	30-10											SPAN 2 LONGIT.
S-33														NO BAR 5-33
S-34	80	1	3-2 1/2		F	1-3	B 1/2	1-3						EAST END OF SPAN 2 - BRKT. TIES.
S-35	4	1	7-9											
S-36	38	1	5-1 1/2		C	1-8	1-1 1/2	1-4	1-0	0	1 1/2	11		SPAN 3 - CTR. ISLAND
S-37	68	1	26-11											WEST END OF SPAN 3-37 - SPAN 3 - LONGIT.
S-38	62	1	27-9		E	3-3	1-5	17-4	1-5	4-4			1-0	26-11 SPAN 3 - LONGIT.
S-39	1	1	9-4											BEND IN FIELD
S-40	2	1	9-0											
S-41	1	1	8-6											S.W. SOUTH WING - EAST ABUT.
S-42	2	1	7-8											BEND IN FIELD
S-43	4	3	9-1											
S-44	10	5	32-10											SPAN 3 TRANS.
S-45	4	5	34-0											
S-46	3	5	34-10											

MARK NO.	SIZE	LENGTH	SKETCH	TYPE	A	B	C	D	E	F	G	H	O	
S-47	3	5	35-7											
S-48	2	5	36-6											SPAN 3 - TRANS.
S-49	3	5	37-2											
S-50	3	5	38-2											
S-51	3	5	39-3											
S-52	4	5	40-9											
S-53	2	5	42-9											
S-54	2	1	18-9											
S-55	1	1	16-9											
S-56	1	1	13-0											
S-57	1	1	10-0											SPAN 3 LONGIT.
S-58	1	1	8-0											
S-59	1	1	6-6											
S-60	1	1	4-6											
S-61	1	1	3-3											
S-62	4	1	22-11											SPAN 3 LONGIT.
S-63	3	1	26-11											S.W. SLAB LONGIT. - SPAN 3
S-64	4	1	23-10											BEND IN FIELD
S-65	6	1	8-6											BEND IN FIELD SPAN 3 - NORTH S.W. & RDWY. SLAB
S-66	3	1	28-6											BEND IN FIELD
S-67	1	1	5-9 1/2		A	3-0	8	10 1/2	9	G	1 1/2	3 1/4		S.W. - NORTH WING - EAST ABUT. TRANS.
S-68	1	1	6-2		K	8	5-6				1 1/2	3 1/4		
S-69	2	1	9-4											BEND IN FIELD
S-70	1	1	10-10											
S-71	2	1	12-5											S.W. LONGIT. - NORTH WING - EAST ABUT.
S-72	1	1	14-0											BEND IN FIELD
S-73	4	3	13-0											
S-74	6	1	8-10											SPAN 3 RDWY. SLAB OVER SIDEWALL
S-75	1	1	5-11		K	8	5-3				1 1/2	3 1/4		SPAN 3 S.W.
D1	189	1	2-0		H	6	1-6	4						S.W. DOWELS - SPANS 2 & 3
D2	24	1	2-9		H	6	2-3	4						DOWELS AT RAIL POSTS SPAN 2 & 3
D3	12	1	2-9		G	6	1-9	4						DOWELS AT RAIL POSTS SPAN 1
D4	108	1	2-2		G	6	1-2	4						S.W. DOWELS - SPAN 1

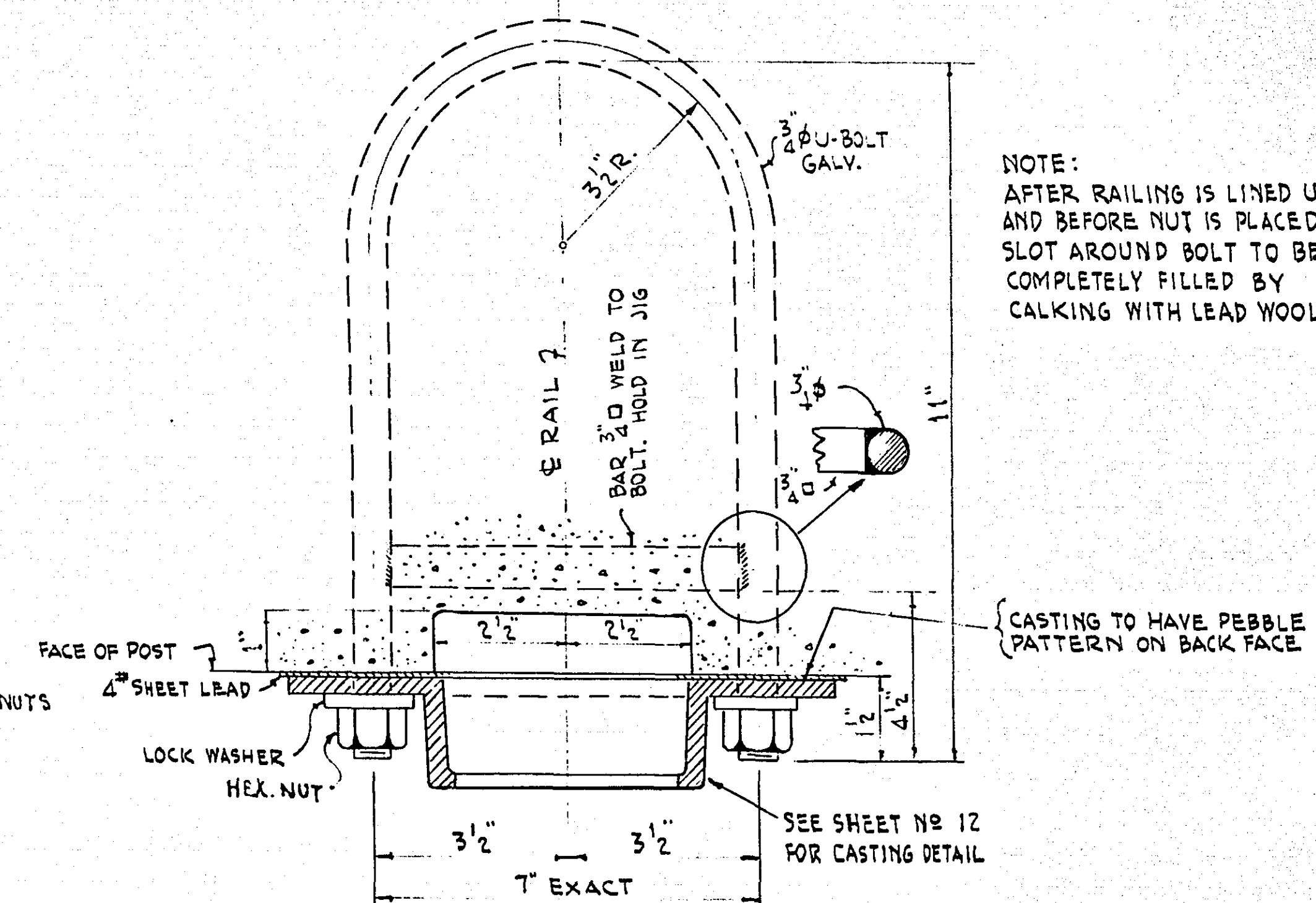
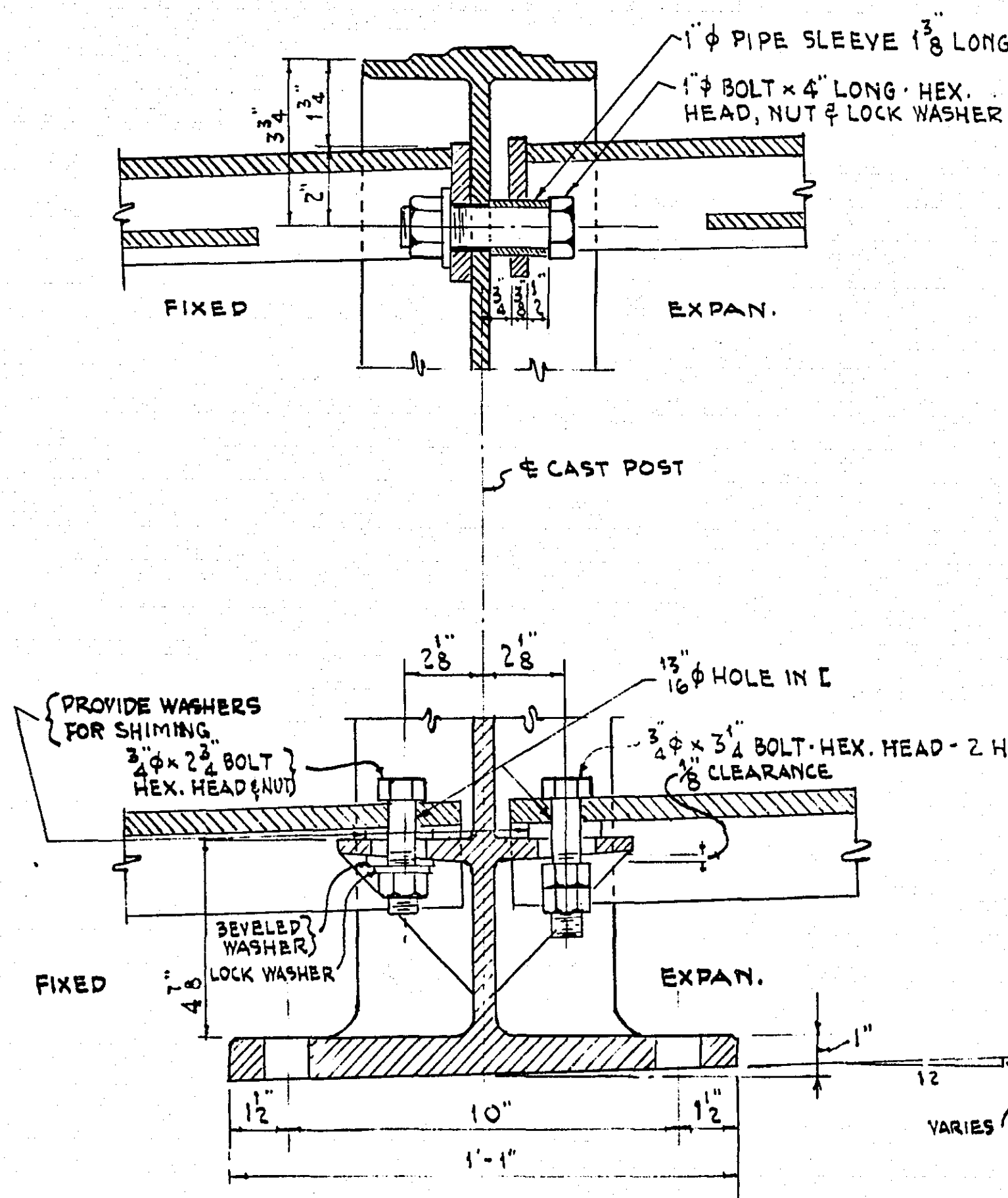
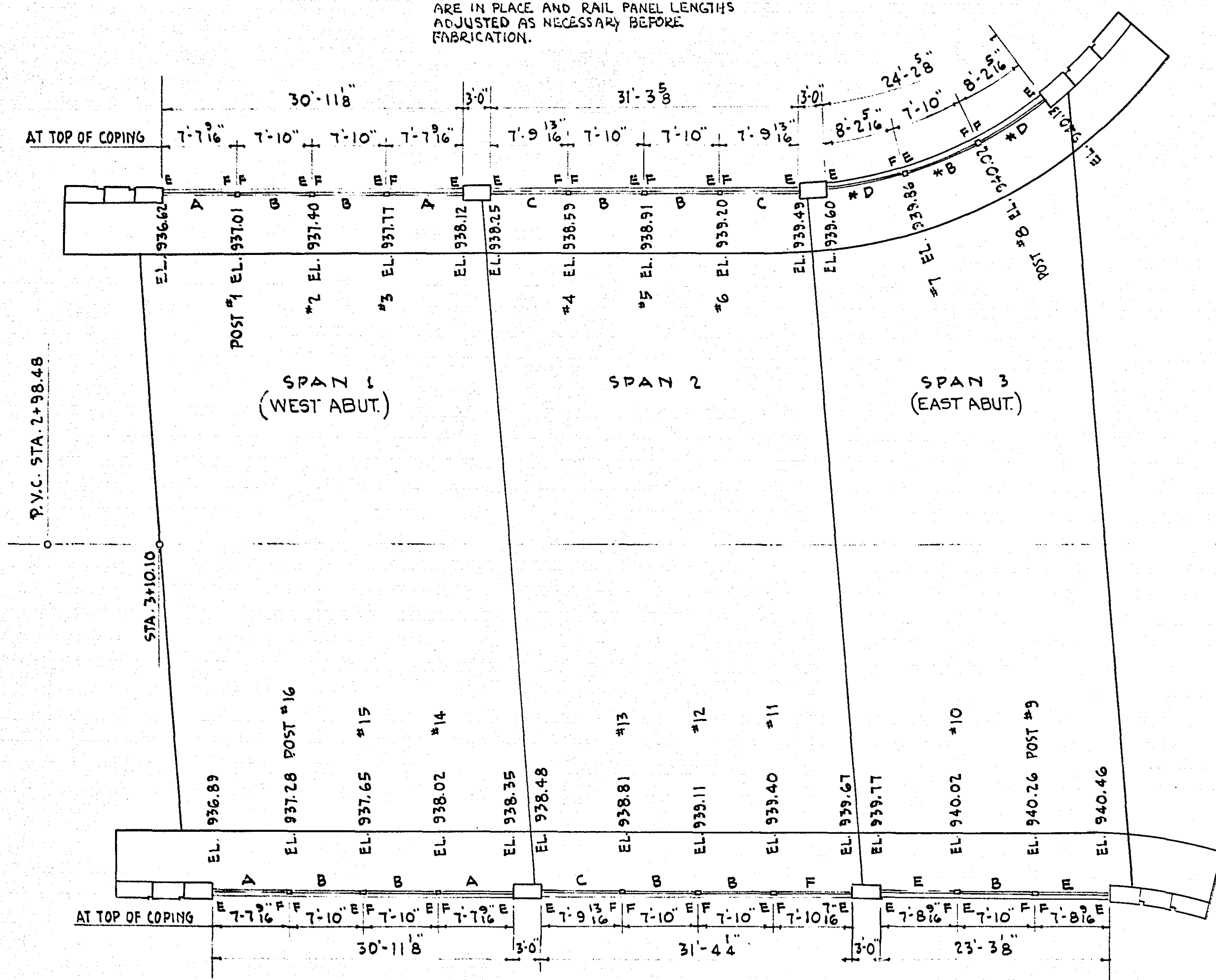
NO.	DIMENSIONS	LOCATION
1	1/2" x 14" x 22'-0"	TOP OF WEST WALL - WEST ABUT.
6	1/4" x 5" x 1'-6"	BM. POCKETS - W. WALL - WEST ABUT.
2	1/4" x 12" x 1'-6"	BM. #4 & 5
10	1/4" x 3" x 2'-6"	BM. POCKETS - " "
2	1/4" x 5 1/2" x 2'-6"	BM. #1
8	1/4" x 3" x 1'-6"	BM. POCKETS - E. WALL - WEST ABUT.
1	1/4" x 9" x 2'-0"	FACE OF STEPS - E. WALL - WEST ABUT.
1	1/4" x 12 1/2" x 15'-5"	BM. POCKETS - E. WALL - W. ABUT.
1	1/4" x 18" x 2'-3"	TOP OF SIDEWALLS - W. ABUT.
1	1/4" x 3" x 6'-3"	E. WALL - W. ABUT.
1	1/4" x 10" x 2'-0"	E. WALL - E. ABUT.
1	1/4" x 22" x 2'-0"	SIDEWALL - E. ABUT.
1	1/4" x 15" x 2'-6"	STEPS - E. WALL - W. ABUT.
1	1/4" x 3" x 6'-3"	W. WALL - E. ABUT.

NO.	DIMENSIONS	LOCATION
6	1/2" x 18 1/2" x 3'-0"	BM. POCKETS - BMS. 1, 2, 3, 6, 7 & 8
2	1/2" x 19" x 3'-5"	BM. POCKETS - BMS. 4 & 5
4	1/2" x 12" x 1'-6"	" " " "
1	1/2" x 22" x 4'-10"	TRANS. BTWN. SPANS 1 & 2
1	1" x 22" x 5'-6"	" " " " 2 & 3
2	1/2" x 20" x 5'-0"	BETWN. SIDEWALK & DECK (W. END OF BRIDGE)
8	1/2" x 14" x 1'-9"	AROUND PILASTERS & ENDS OF WINGS
6	1/2" x 30" x 3'-0"	LONGIT. ON BR. & SPAN 1
1	1" x 12" x 3'-5"	" " " " 2
1	1" x 24" x 3'-6"	" " " " 3
1	1" x 21" x 2'-1 1/2"	" " " " 3
1	1/2" x 2'-6" x 5'-0"	BTWN. S.W. & DECK - E. END OF BR.
1	1/2" x 2'-6" x 6'-0"	" " " " "
2	1" x 2'-6" x 5'-0"	TRANS. AT SW. BTWN. SPANS 2 & 3
2	1/2" x 2'-6" x 5'-0"	" " " " 1 & 2
4	1" x 1'-9" x 1'-2"	AROUND PILASTERS - SPAN 2 & 3
2	1" x 2'-6" x 3'-0"	" " " " "
2	1/2" x 1'-6" x 1'-2"	W. END OF W. ABUT. - SEE SEC. 5-7

SUMMARY OF QUANTITIES FOR WEST ABUTMENT	
CLASS "U" EXCAVATION	380 CU. YDS.
CONCRETE MIX NO. 1A6	297.5 CU. YDS.
REINFORCEMENT BARS	19,485 LBS.
12 U-BOLTS FOR RAILING (SEE DETAIL SH. 11)	
24" SECTIONAL CONCRETE PIPE CULVERT	68.0 LIN. FT.
3-PLY JOINT WATERPROOFING	12 LIN. FT.
TREATED TIMBER PILING	153.0 LIN. FT.
BITUMINOUS FELT AND CORK (SEE SCHEDULE - THIS SHEET)	
1- STANDARD NAME PLATE (FEDERAL) (DATE 1954) (BRONZE)	

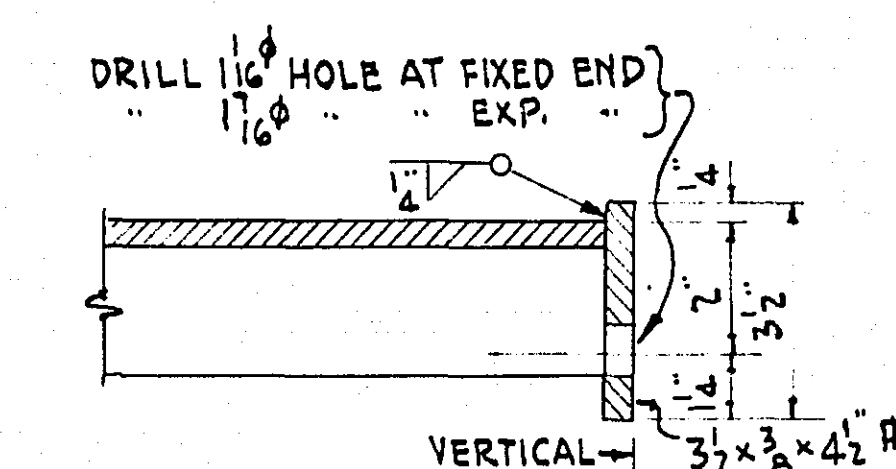
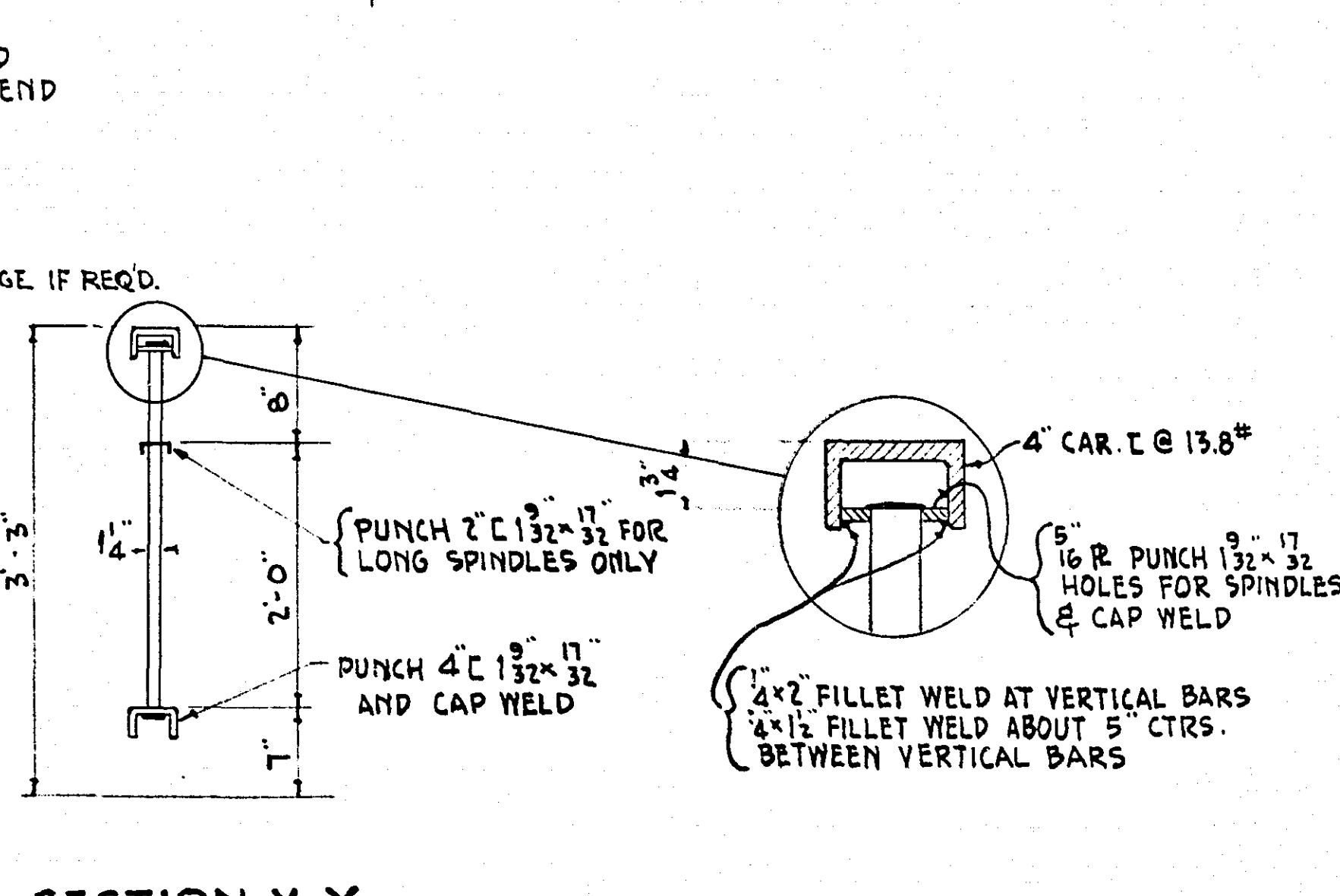
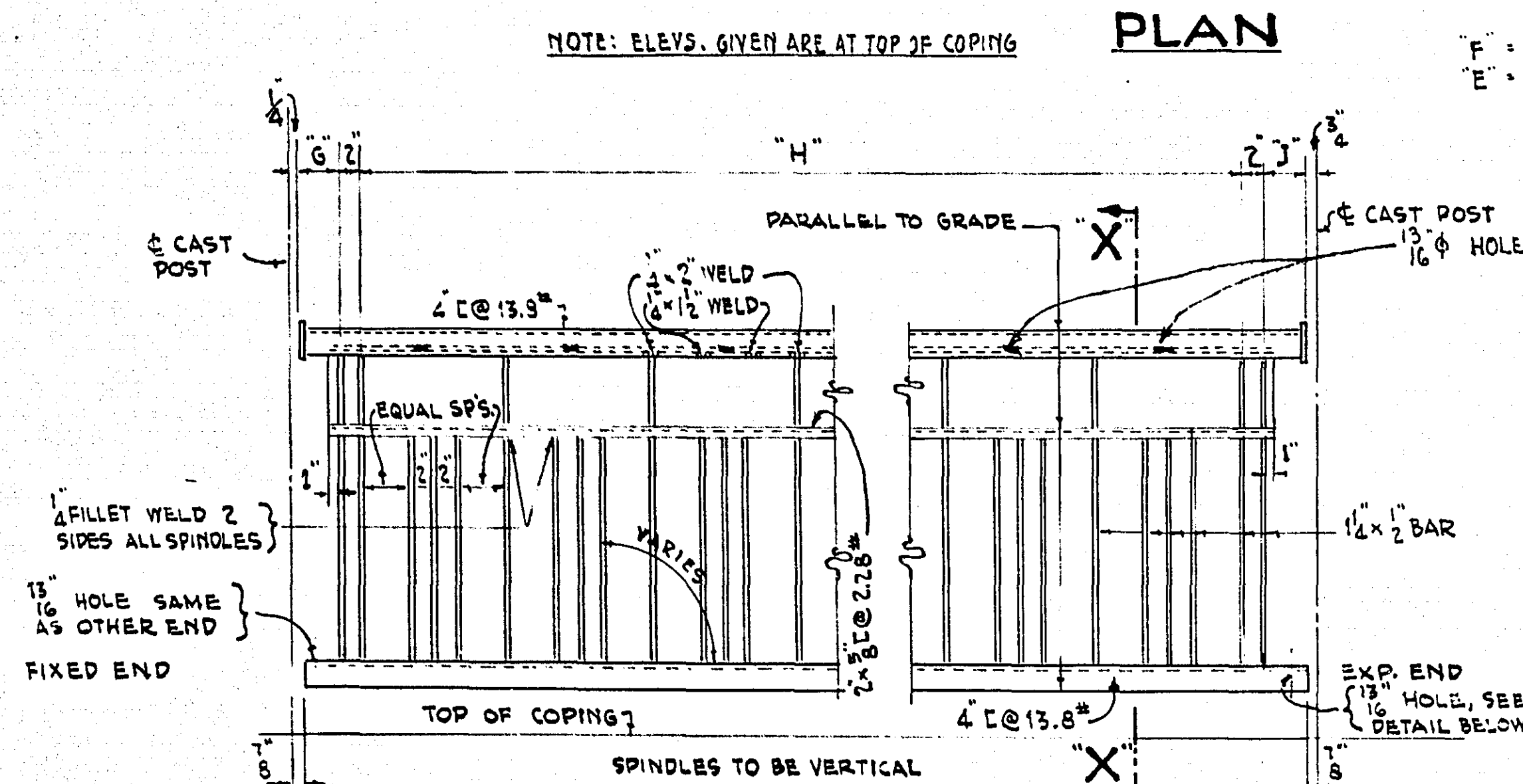
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NOTE:
DIMENSIONS FACE TO FACE OF PILASTERS
TO BE VERIFIED IN FIELD AFTER ABUTS
ARE IN PLACE AND RAIL PANEL LENGTHS
ADJUSTED AS NECESSARY BEFORE
FABRICATION.



SECTION THRU POSTS

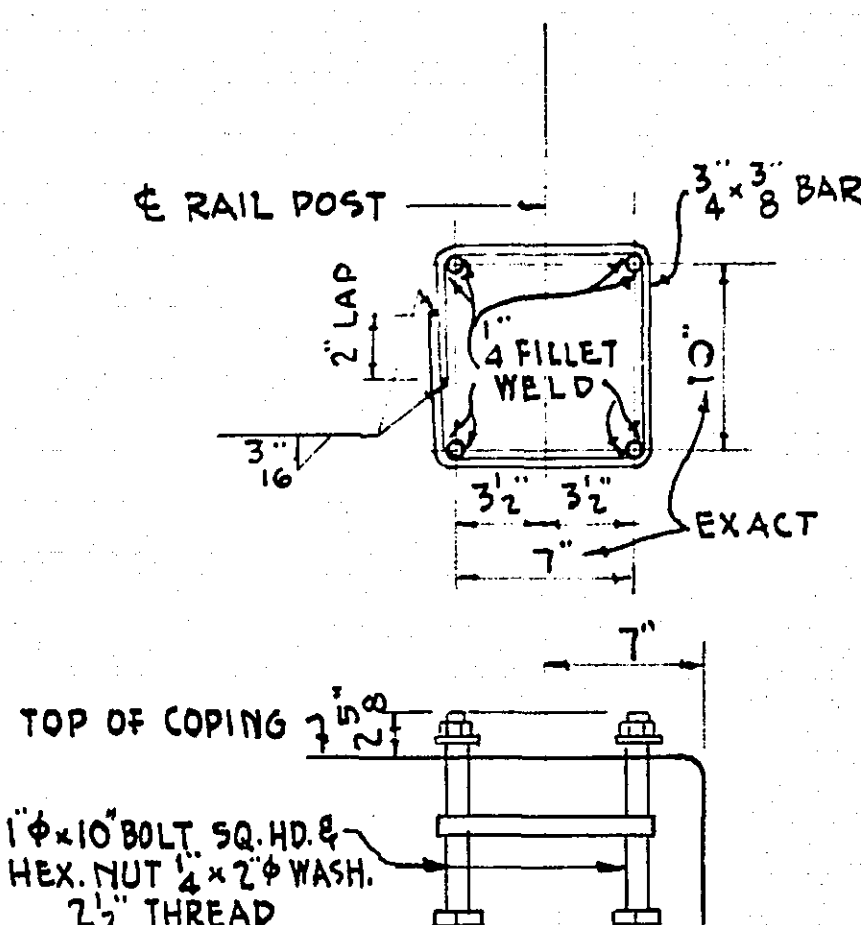
PLAN OF RAIL CONNECTION AT CONCRETE POSTS
(24 U-BOLTS REQ'D. THUS GALV.)



DETAIL OF END PLATE
TOP RAIL ONLY AT CAST POSTS

PANEL	Nº.	"H"	"G"	"J"
A	4	5 SPS. @ 1'-2 1/8" = 6'-1 1/8"	5' 3"	8"
* B	10	5 SPS. @ 1'-3" = 6'-3"	7' 4"	6 3/4"
C	3	5 SPS. @ 1'-3" = 6'-3"	6' 1/8"	8"
* D	2	5 SPS. @ 1'-4 1/8" = 6'-8 1/8"	5' 4"	8"
E	2	5 SPS. @ 1'-2 1/8" = 6'-2 1/8"	5' 1/8"	8"
F	1	5 SPS. @ 1'-3" = 6'-3"	7' 1/8"	7 1/4"

* BEND TO 44'-5" RADIUS IN SPAN 3 ON NORTH SIDE

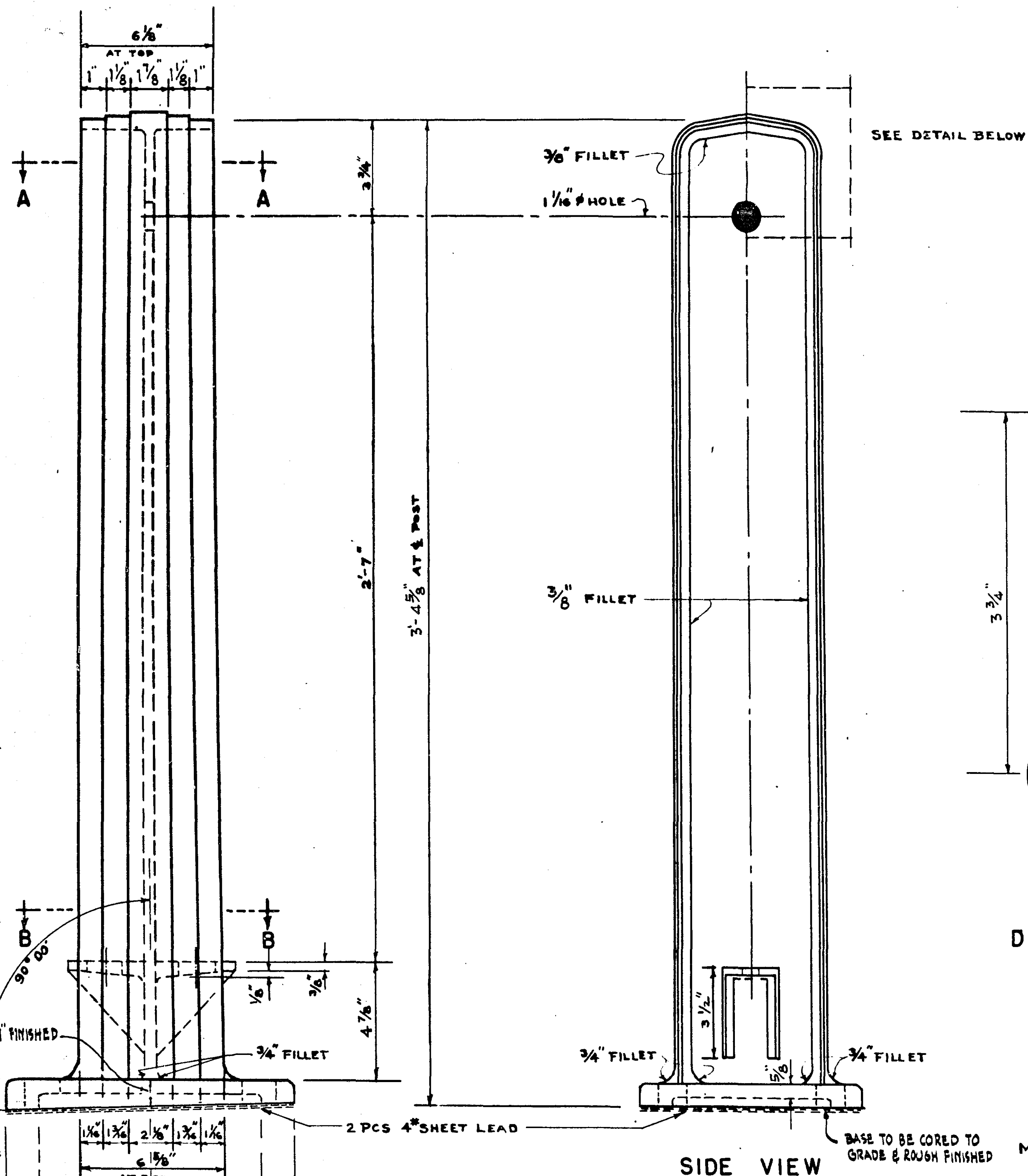


ANCHOR BOLT ASSEMBLY
16 REQ'D. THUS (GALV.)

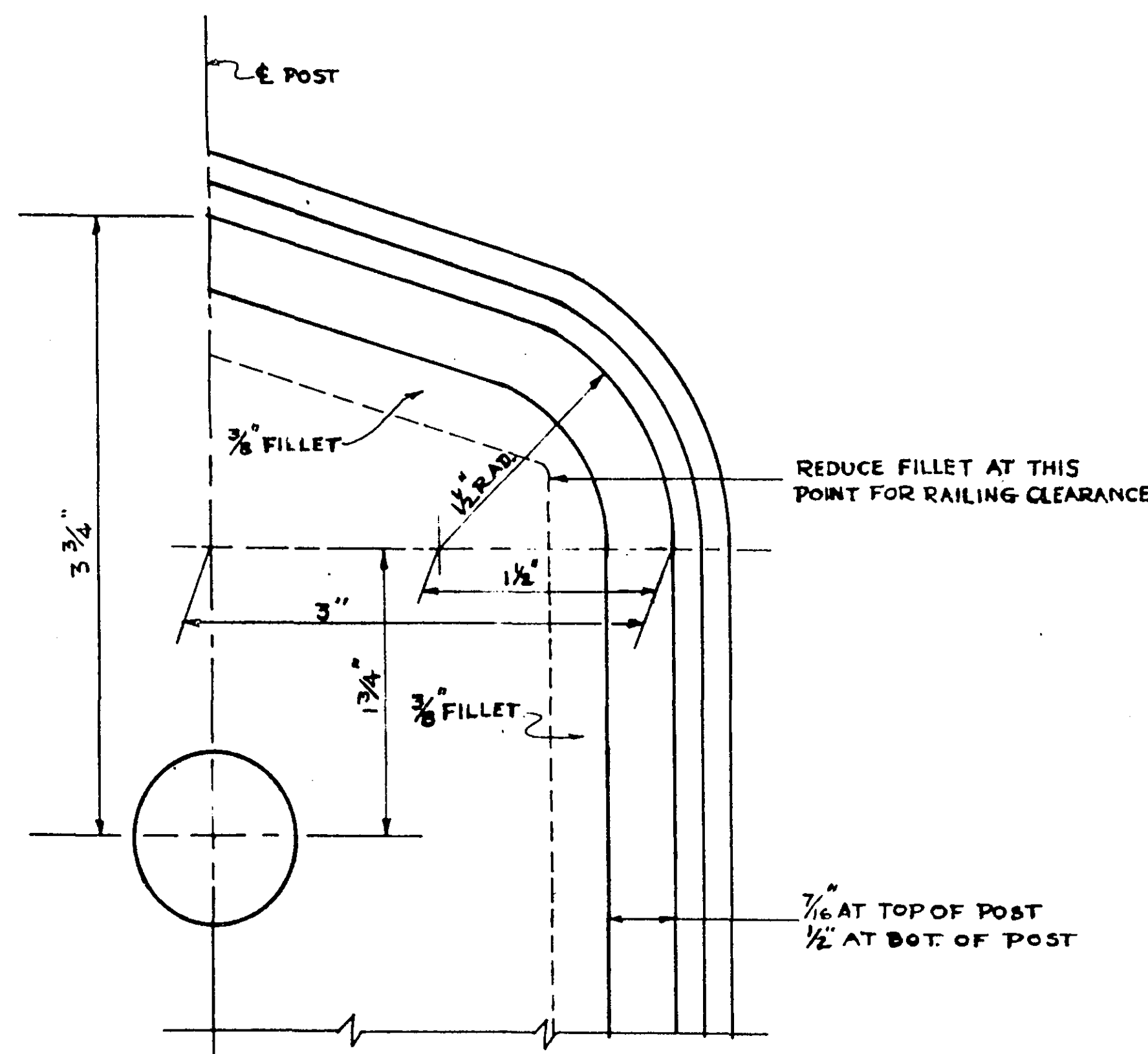
NOTE:
ALL RAIL PANELS, CONNECTIONS AND FITTINGS TO BE GALVANIZED AFTER FABRICATION AS PER M.H.D. 3394. NO PAINT REQUIRED.
LENGTH OF RAILING FOR PAYMENT WILL BE MEASURED FACE TO FACE OF CONCRETE AT TOP OF CONCRETE POSTS.
ALL RAIL PANELS, MALLEABLE CAST IRON POSTS, SOCKETS, ANCHOR BOLT ASSEMBLIES, RAIL CONNECTIONS, BOLTS & SHEET LEAD TO BE INCLUDED IN PRICE BID FOR ORNAMENTAL METAL RAILING.
ALL RAILING PANELS TO BE SAND BLASTED AFTER FABRICATION AND BEFORE GALVANIZING.
LENGTH OF RAILING FOR ENTIRE BRIDGE 172.00 LIN. FT.

STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS BRIDGE NO. 6630 LARPENUE AVE. OVER MINN. TRANSFER R.R. TRACKS RAMSEY COUNTY MINNESOTA		
31'-4" SLAB SPAN- U ABUTMENTS 2'-26" ROADWAYS, 1'-4" CTR. ISLAND, 2'-5" SIDEWALKS RAILING DETAILS		
TOLTZ, KING & DAY, INC. ENGINEERS AND ARCHITECTS ST. PAUL, MINNESOTA		
DESIGNED S.J.K.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	COMM. 3412
DRAWN S.J.K.		DRG. 11
CHECKED O.A.O.	DATE 15 JAN 1954 REG. NO. 1366	
APPROVED M.H.D. 1954 BRIDGE ENGINEER	JAN. 19 1954	

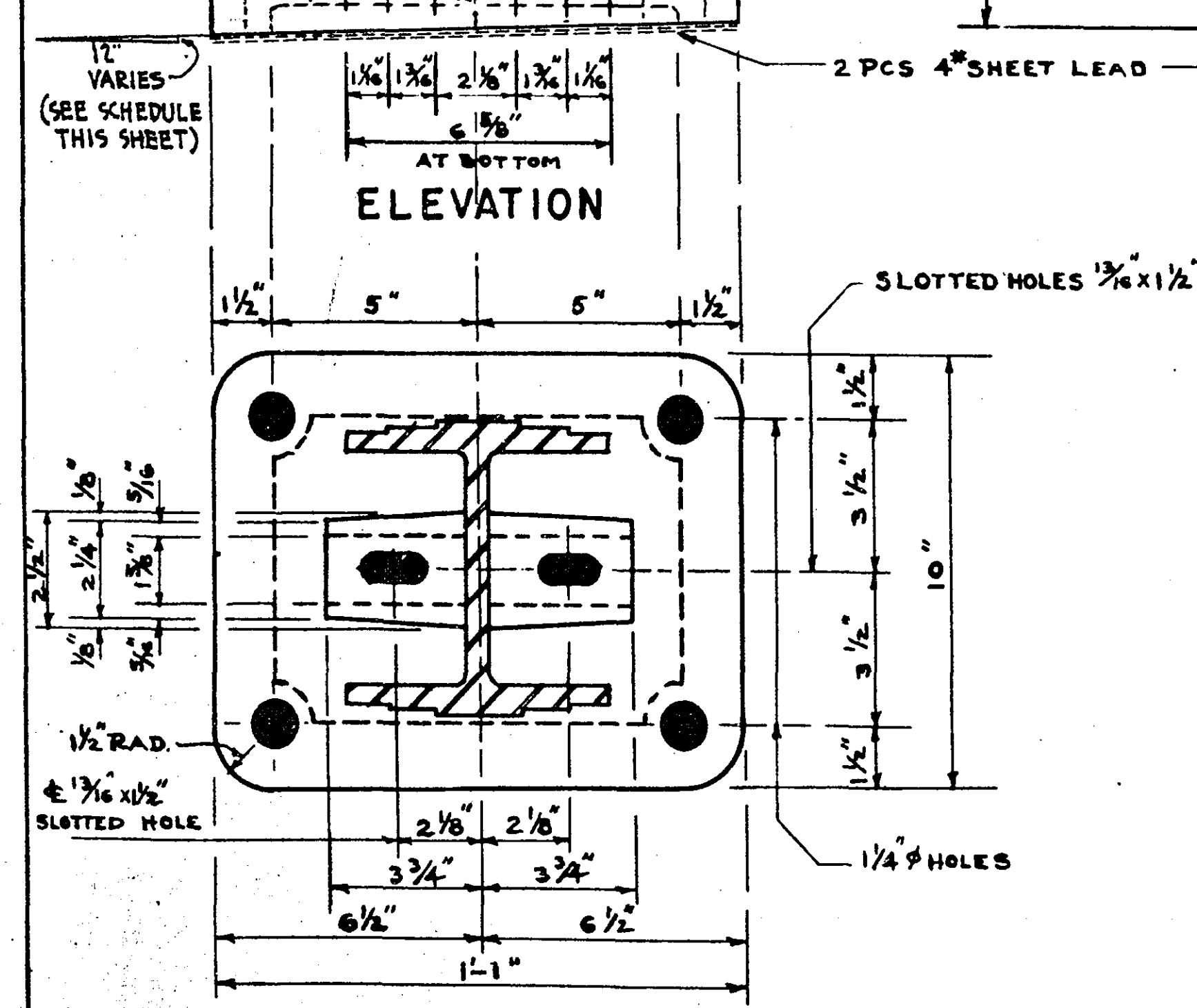
SECTION A-A



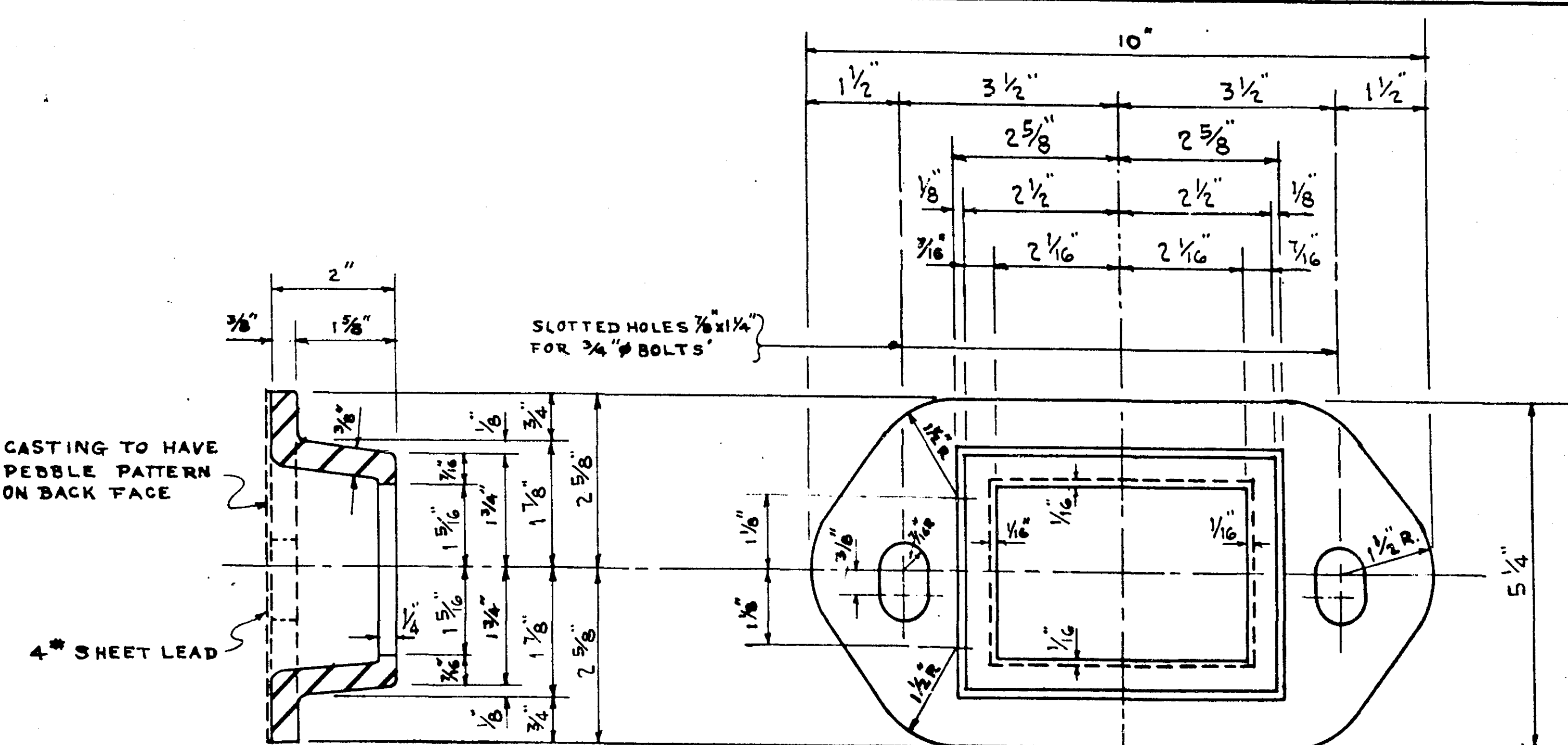
SIDE VIEW



DETAIL AT TOP OF POST



SECTION B → B



SECTION

ELEVATION

RAIL SOCKETS
24 REQUIRED

MATERIAL FOR RAIL SOCKETS:
MALLEABLE IRON CASTING, GRADE N^o 35018
A.S.T.M. N^o A-47, AS PER M.H.D. N^o 3324
AFTER GALVANIZING.

BEVELS AT BASE OF POSTS

*POST №	"X"	POST №	"X"
1	5 $\frac{1}{8}$ "	9	3 $\frac{1}{8}$ "
2	5 $\frac{1}{8}$ "	10	1 $\frac{1}{2}$ "
3	5 $\frac{1}{8}$ "	11	1 $\frac{1}{2}$ "
4	1 $\frac{1}{2}$ "	12	1 $\frac{1}{2}$ "
5	1 $\frac{1}{2}$ "	13	1 $\frac{1}{2}$ "
6	1 $\frac{1}{2}$ "	14	5 $\frac{1}{8}$ "
7	3 $\frac{1}{8}$ "	15	5 $\frac{1}{8}$ "
8	1 $\frac{1}{2}$ "	16	5 $\frac{1}{8}$ "

* SEE SHEET 11 FOR LOCATION OF POSTS

MATERIAL FOR RAIL POSTS:
MALLEABLE CAST IRON, GRADE N2 35018
A.S.T.M. N2 A47, AS PER M.H.D. N2 3324
AFTER GALVANIZING

4 * SHEET LEAD REQUIRED.
32 PCS. 10"x1'1" PUNCHED TO MATCH RAIL POST BASE
24 PCS. 5 1/4"x10" WITH HOLES PUNCHED TO MATCH SOCKETS

NOTE:
FOR DETAIL OF RAIL POST ANCHOR BOLT
ASSEMBLY & RAIL SOCKET ANCHOR BOLTS
SHEET NO. 11

ALL RAIL POSTS AND RAIL SOCKETS TO BE
SAND BLASTED BEFORE GALVANIZING.

ALL RAIL POSTS AND SOCKETS TO BE
GALVANIZED AS PER M.H.D. 3392

USE LEAD WOOL FOR PLUMBING & ALIGNING POSTS
WHERE NECESSARY.

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NO. 6630
LARPENTEUR AVE. OVER MINN. TRANSFER R.R. TRACKS
RAMSEY COUNTY MINNESOTA

31'-4" SLAB SPAN- U ABUTMENTS
2'-26" ROADWAYS, 14'-0" CTR. ISLAND, 2'-5" SIDEWALKS
DETAILS OF RAIL POSTS & SOCKETS

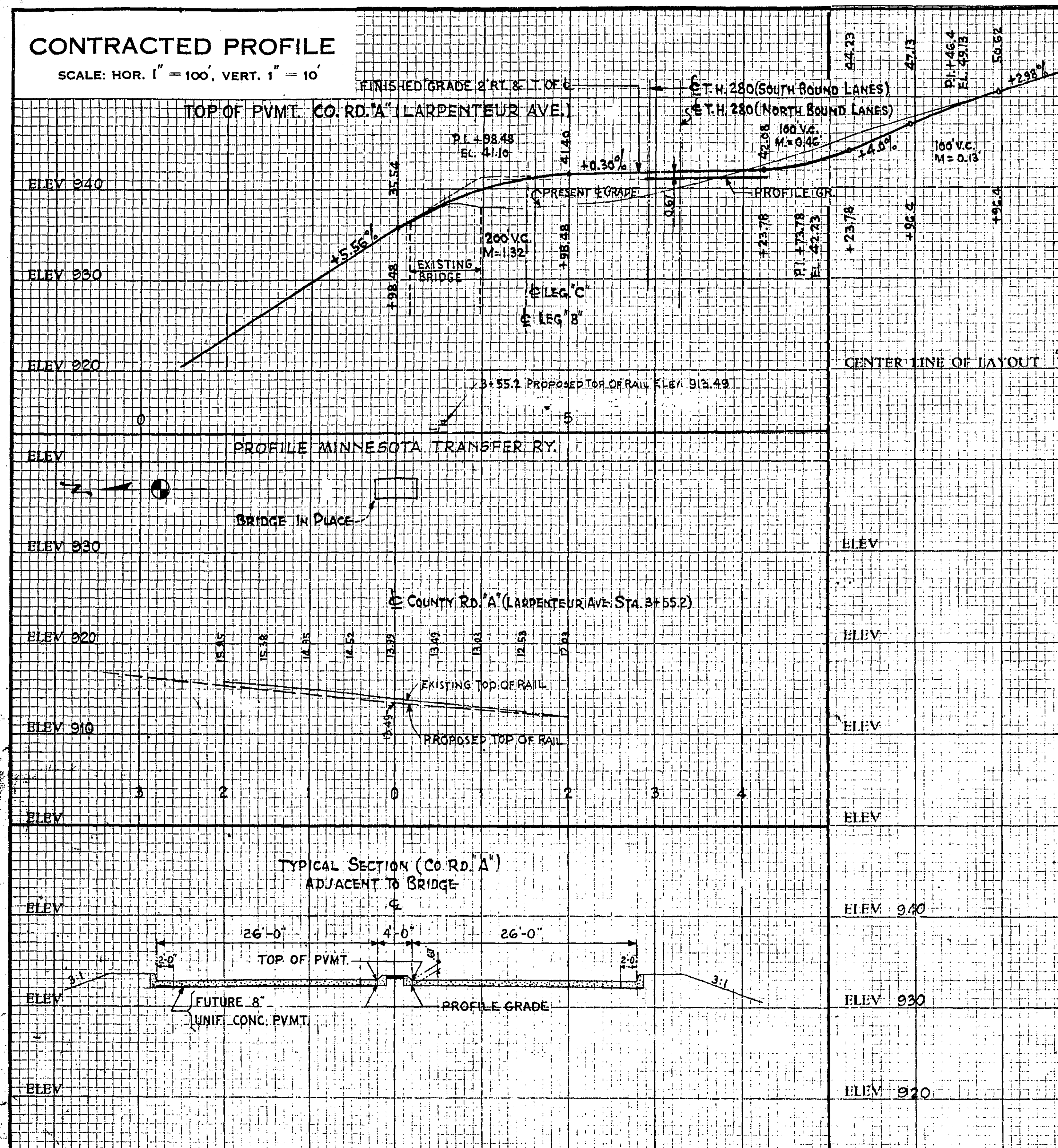
TOLTZ, KING & DAY, INC.
ENGINEERS AND ARCHITECTS
ST. PAUL, MINNESOTA

DESIGNED S. J. K.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>W. G. LeBeau</i>	COMM. 3412
DRAWN S. J. K.		DRG. 12
CHECKED O. A. O.		DATE 15 JAN 1954 REG. NO. 1366
APPROVED M. H. D. ASST. BRIDGE ENGINEER		<i>W. G. LeBeau</i> JAN. 19. 1954 DATE

SHEET 12 OF 13 SHEETS 15-139 6630

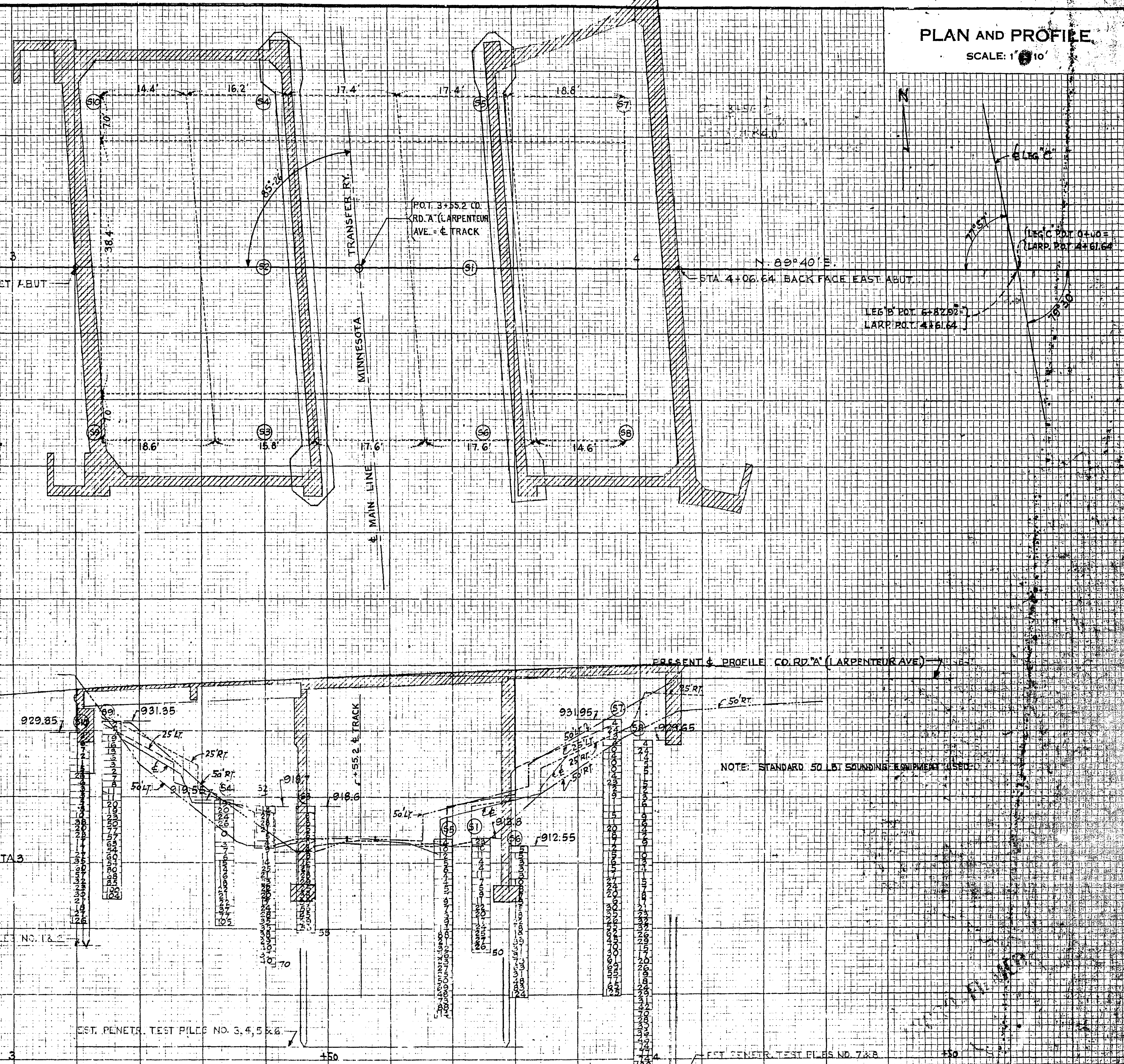
CONTRACTED PROFILE

SCALE: HOR. 1" = 100', VERT. 1" = 10'



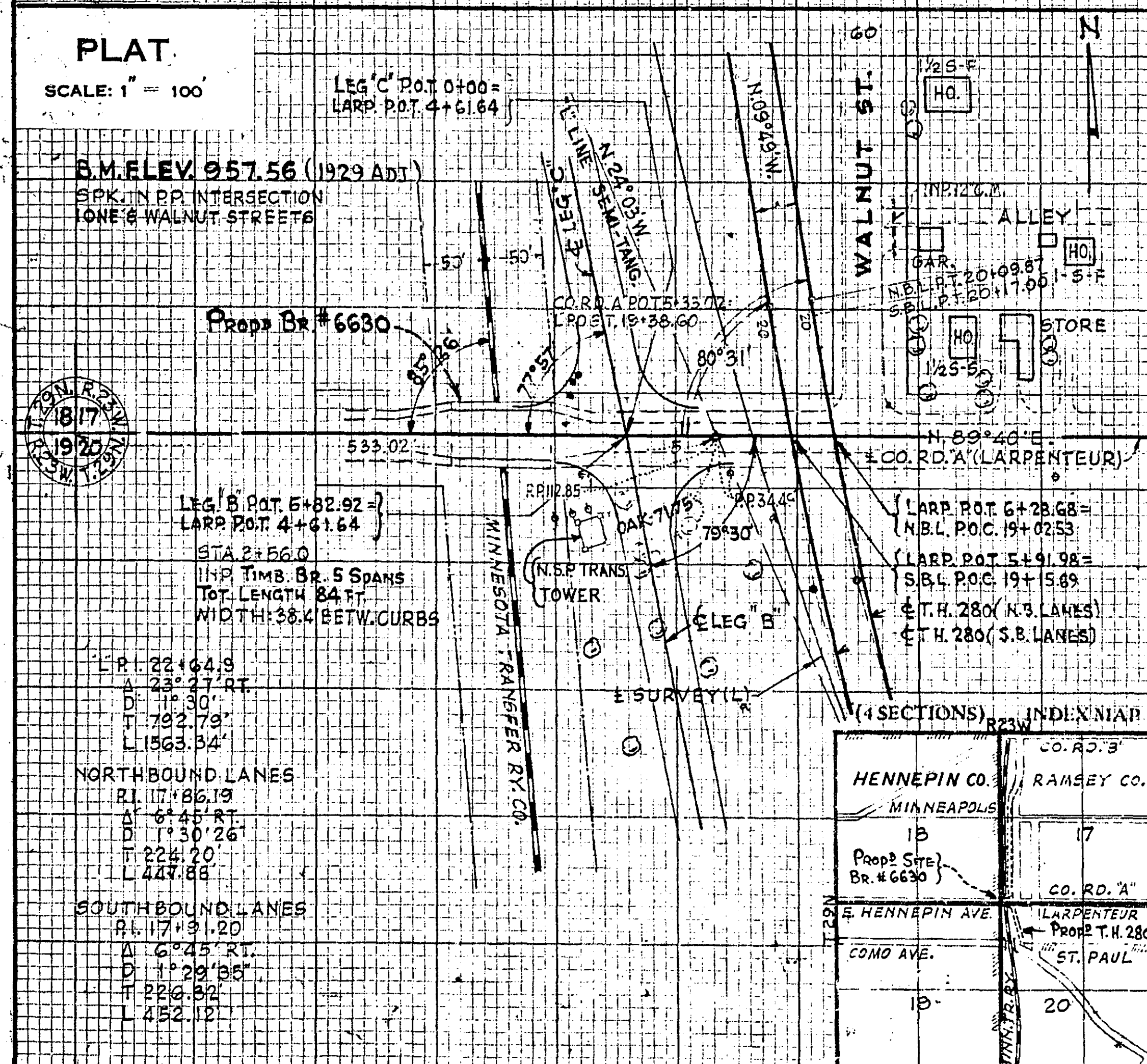
PLAN AND PROFILE

SCALE: 1" = 10'



PLAT

SCALE: 1" = 100'



FOLLOW SEPARATE "INSTRUCTIONS FOR PREPARATION OF BRIDGE SURVEYS" WHEN MAKING BRIDGE SURVEYS.

DATA

- Preliminary recommendations of Engineer:
 - Net Span Length and Type of Bridge. 31'-4" SLAB SPAN - U ABUTMENTS
 - Width of Roadway on Bridge. 2-26' ROADWAYS, 4'-0" CTR. ISLAND
 - Number and width of Sidewalks, if any. 2-5' SIDEWALKS
 - Locate center of Bridge at Station STA. 3+58.37
 - If a skew bridge is recommended, the angle of skew should be 4°-34'
 - Is piling required? YES
- Special features: Waterfalls, dams, exceptional floods, ice, driftwood, sliding banks, logging, etc.
- Changes: In height or length from that of old bridge, and reasons why

DATA (Contd.)

- Other bridges in vicinity:
 - Over same stream (particularly structures which carry high water without overflow of roadway): give location, length, height above water, net cross-sectional area at high water stage and estimated age.
 - Over or under same highway or railroad: give location, length, horizontal and vertical clearances and estimated age.
 - Reasons why these bridges are, or are not, fair indications of what length the proposed bridge should be?
- If structure is over a drainage ditch, is ditch gradient liable to be altered?
- State navigation or boating clearances required, if any?
- Information and evidence in regard to high water stages was obtained as follows.
- Must contractor provide for traffic during construction of proposed bridge? NO
If so, by what means?

MATERIAL

Proposed Bridge is AT NO. CITY LIMITS OF ST. PAUL.

Railroad shipping point.

*(Give name of town, station or siding)

Date

7-3-53

Date

Project or County Engineer

L. J. McCubey

District Engineer

Bridge Engineer

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

BRIDGE SURVEY

COUNTY ROAD "A" (LARPENTEUR AVE.)

(Designate County Aid - State Aid or Trunk Highway Number)

17 & 20 TWP. 29 N. R. 23 W.

ROSE TOWNSHIP

RAMSEY COUNTY

SURVEY MADE DURING MONTH OF APRIL 1952

SURVEY MADE BY G. L. MARTZ

BRIDGE NO. 6630

SURVEY SHEET MADE IN CENTRAL OFFICE FROM MARTZ'S SURVEY BY L. V. PEARSON