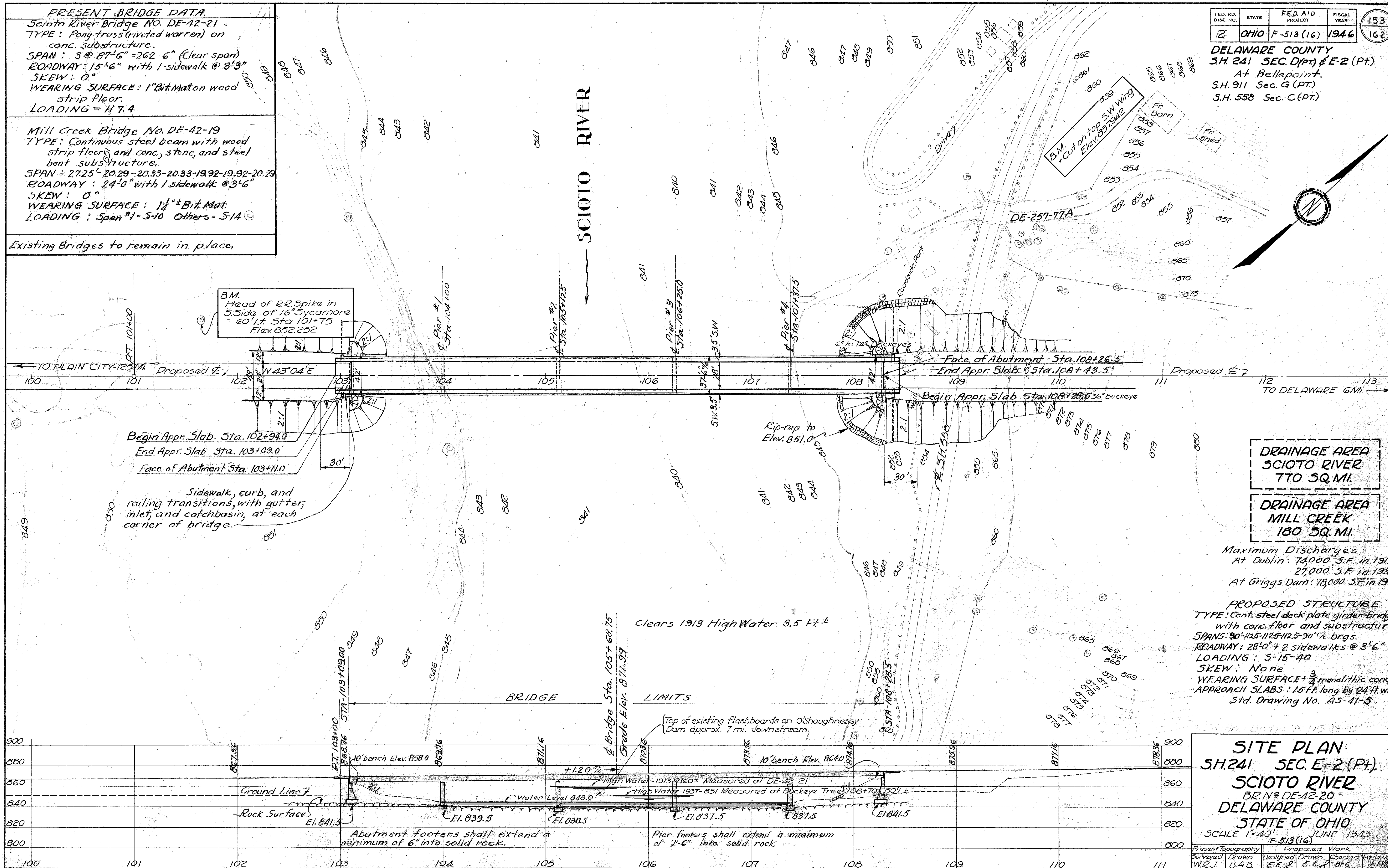


PRESENT BRIDGE DATA. Scioto River Bridge NO. DE-42-21 TYPE: Pony truss (riveted warren) on conc. substructure. SPAN: 3 @ 87'-6" = 262'-6" (Clear span) ROADWAY: 15'-6" with 1 sidewalk @ 3'-3" SKEW: 0° WEARING SURFACE: 1" Bit. Mat. on wood strip floor. LOADING = H 7.4	
Mill Creek Bridge No. DE-42-19 TYPE: Continuous steel beam with wood strip floor and conc. stone, and steel bent substructure. SPAN: 27.25'-20.29'-20.33'-20.33'-19.92'-19.92'-20.29' ROADWAY: 24'-0" with 1 sidewalk @ 3'-6" SKEW: 0° WEARING SURFACE: 1 1/4" Bit. Mat. LOADING: Span #1 = 5-10 Others = 5-14	
Existing Bridges to remain in place.	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	153
2	OHIO	F-513 (16)	1946	162

DELAWARE COUNTY
S.H. 241 SEC. D (PT) & E-2 (PT.)
At Bellepoint.
S.H. 911 Sec. G (PT.)
S.H. 558 Sec. C (PT.)



DRAINAGE AREA
SCIOTO RIVER
770 SQ. MI.

DRAINAGE AREA
MILL CREEK
180 SQ. MI.

Maximum Discharges:
At Dublin: 74,000 S.F. in 1913
27,000 S.F. in 1937
At Griggs Dam: 78,000 S.F. in 1913

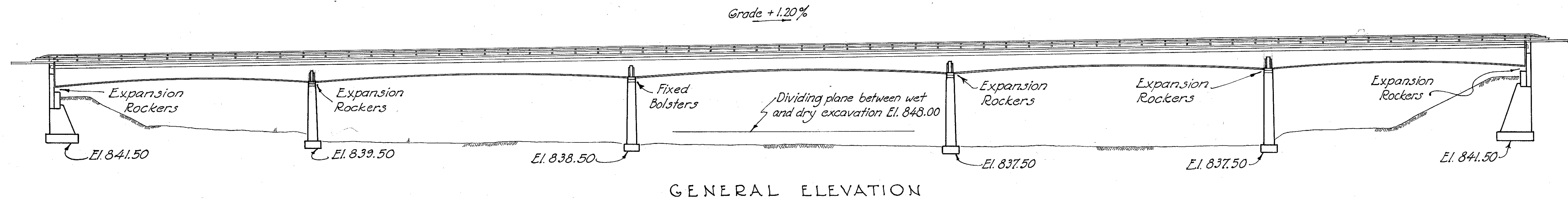
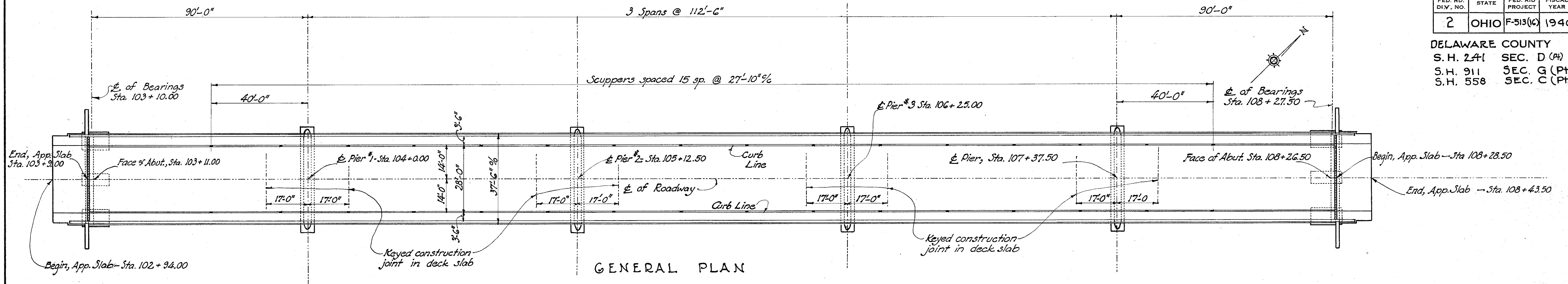
PROPOSED STRUCTURE
TYPE: Cont. steel deck plate girder bridge with conc. floor and substructure.
SPANS: 90'-112.5'-112.5'-90' c/brgs.
ROADWAY: 28'-0" + 2 sidewalks @ 3'-6"
LOADING: 5-15-40
SKEW: None
WEARING SURFACE: 3/4" monolithic conc.
APPROACH SLABS: 15 ft. long by 24 ft. wide
Std. Drawing No. A5-41-S

SITE PLAN
S.H. 241 SEC. E-2 (PT.)
SCIOTO RIVER
BR N# DE-42-20
DELAWARE COUNTY
STATE OF OHIO
SCALE 1"=40' JUNE 1943
F-513 (16)

Present Topography	Proposed Work
Surveyed W.R.J.	Designed E.E.B.
Drawn B.A.B.	Checked C.E.B.
	Reviewed B.F.G.
	Approved J.J.J.

Revised 2-20-46 6-3-46 W.H.E.

DELAWARE COUNTY
S.H. 241 SEC. D (Pt) & E-2 (Pt)
S.H. 911 SEC. G (Pt)
S.H. 558 SEC. C (Pt)



ESTIMATED QUANTITIES										
As Built	Item	Description	West Abut.	East Abut.	Pier No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Super-structure	General
	E-2	Cofferdams and pumping								Lump
264	C5+44	E-2 Excavation for structures, wet	65	75	30			50		220
162	C5-8	E-2 Excavation for structures, dry	75	95						170
130	C5+15	E-2 Excavation for structures, rock	9	9	24	23	25	25		115
	S-1	Class "C" concrete, superstructure							637	637
640.2	C5-118	S-1 Class "E" concrete, walls	86	106	98	111	125	132		658
141.7	C5-13	S-1 Class "E" concrete, footings	23	28	23	23	23	23		143
	S-3	Type "B" waterproofing	20	20						40
	S-4	Reinforcing steel	6743	7654	1780	1957	2129	2279	108,020	130,666
696,566	C3+1666	S-7 Structural steel							679,900	679,900
681,800	C3+19600	S-8 Field painting of structural steel							662,200	662,200
	S-14	Bridge railing (steel)							1,039	1,039
	I-10	Riprap (15" Type A grouted)		200						200

GENERAL NOTES

STANDARD DRAWINGS:—For details not shown on these drawings, reference shall be made to Std. Dwg. No. AS-41-S (dated 3-31-41)

WELDING:—All welding shall be Class "A"

PAINTING:—Shop paint for structural steel and railing shall meet the requirements of Sec. M-93, M-920, or M-921. Field paint for structural steel and railing shall be two coats of aluminum paint as per Sec. M-912.

UNIT STRESSES:—Maximum unit design stresses for concrete in this structure are as follows:—
for Class "C" concrete, $f_c = 1200$ lb. per sq. in., $n = 8$;
for Class "E" concrete, $f_c = 300$ lb. per sq. in., $n = 10$;
 $f_s = 18000$ lb. per sq. in.

REINFORCEMENT:—Reinforcing bars shall be placed with 2" minimum clearance from surface of concrete unless otherwise shown.

END FINISH shall be copper-bearing steel.

STEEL GUTTER AND SCUPPERS shall be galvanized; bolts for gutters and scuppers need not be galvanized.

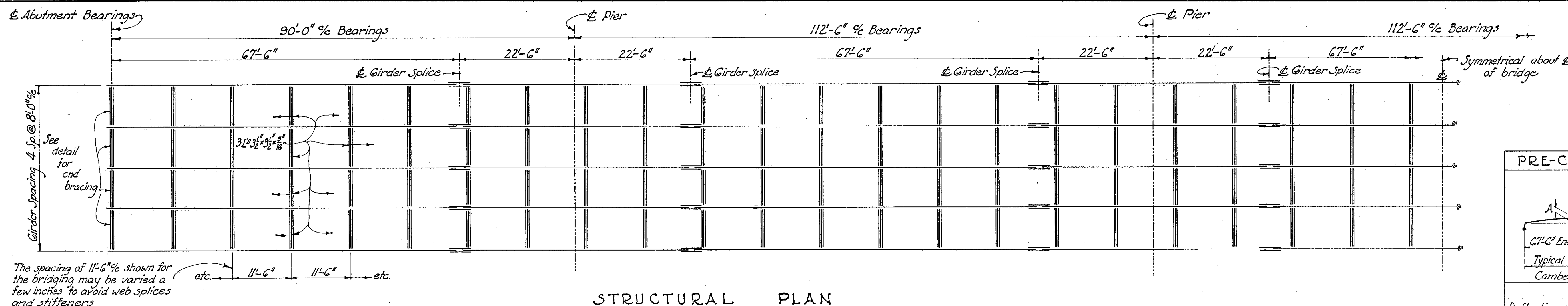
PEDESTAL ABUTMENTS: After pedestals are placed, all backfill shall be made full height of earth bench, and then the excavation made for the abutment crossbeam. If bottom forms are used for the crossbeam, they shall be left in place.

EXCAVATION:—Excavation quantity includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.

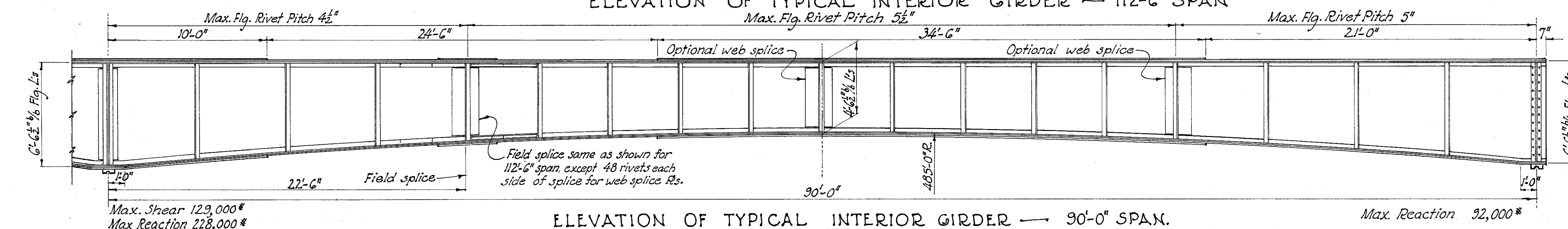
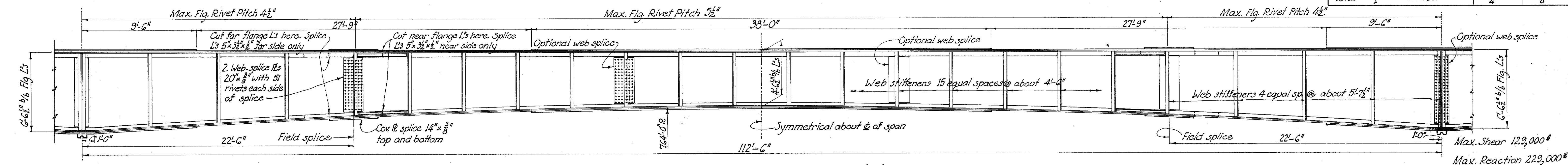
DECK PLACING PROCEDURE:—In placing deck concrete the portions over the piers, between construction joints, shall be placed after the concrete in adjacent spans is in place. Concrete above curb construction joints shall not be poured until all deck concrete below these joints is in place.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES				
GENERAL PLAN & ELEVATION— NOTES — ESTIMATED QUANTITIES BRIDGE NO. DE-42-20 OVER SCIOTO RIVER DELAWARE COUNTY SECTION E-2 (Pt)				
F-513(16)				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
BFG	BFG	Adt.	Adt.	Adt.
				DATE
				6-7-45
				REVISION
				12-26-45
				2-19-46
				2-20-46
				6-5-46

DELAWARE COUNTY
S. H. 241 SEC. E-2 (Pt.) & D (Pt.)
S. H. 911 SEC. G (Pt.)
S. H. 558 SEC. C (Pt.)

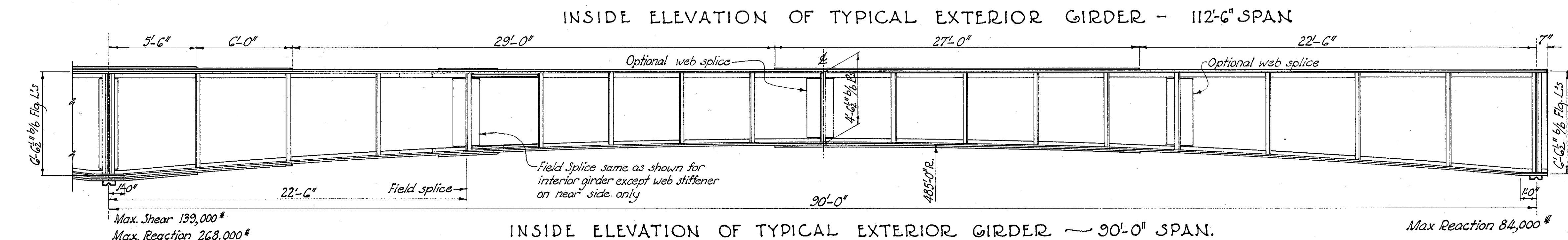
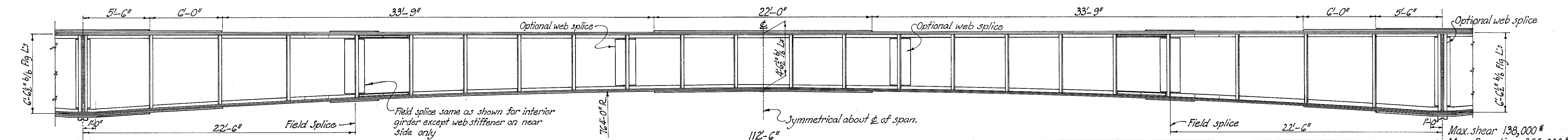
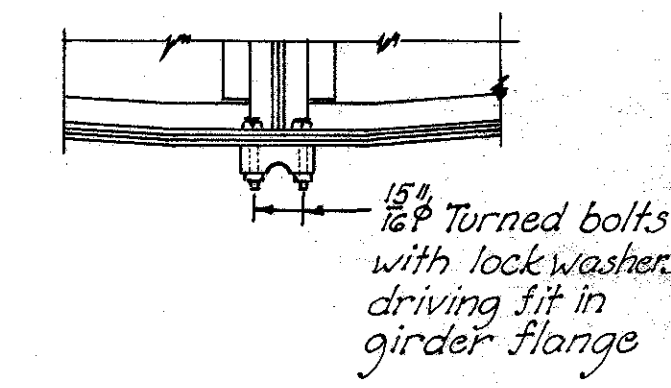


PRE-CAMBER DIAGRAM FOR GIRDERS			
Deflection due to weight of steel	Dimen. A	Dimen. B	Dimen. C
Deflection due to remaining D.L.			
Total required camber			



INTERIOR GIRDER DATA

Web Plate $\frac{7}{16}$ " thick
4 Flange Angles $6 \times 4 \times \frac{3}{8}$ "
2 Cover Plates $14 \times \frac{3}{8}$ "
Full length of girder for both 90'-0" and 112'-6" spans
Additional $14 \times \frac{3}{8}$ " cover plates where shown.
Web stiffeners at abutments $4 \times 5 \times \frac{3}{8}$ " on fills.
Web stiffeners at piers $4 \times 5 \times \frac{3}{8}$ " on fills.
Intermediate web stiffeners $2 \times 5 \times \frac{3}{8}$ " crimped except at web splices.



EXTERIOR GIRDER DATA

Web Plate $\frac{7}{16}$ " thick
4 Flange Angles $6 \times 4 \times \frac{3}{8}$ "
2 Cover Plates $14 \times \frac{3}{8}$ "
Full length of girder for both 90'-0" and 112'-6" spans
Additional $14 \times \frac{3}{8}$ " cover plates where shown.
Web stiffeners at abutments $4 \times 5 \times \frac{3}{8}$ " on fills.
Web stiffeners at piers $4 \times 5 \times \frac{3}{8}$ " and 2 bars $5 \times \frac{3}{8}$ " on fills.
Intermediate web stiffeners $1 \times 5 \times \frac{3}{8}$ " on interior side, crimped except at web splices.
Web stiffener spacing same as shown for interior girder.
Web splices same as shown for interior girder.
Flange rivet pitch same as for interior girder.

All rivets shall be $\frac{7}{8}$ " ϕ unless otherwise shown.
For additional notes see Sheet No. 154

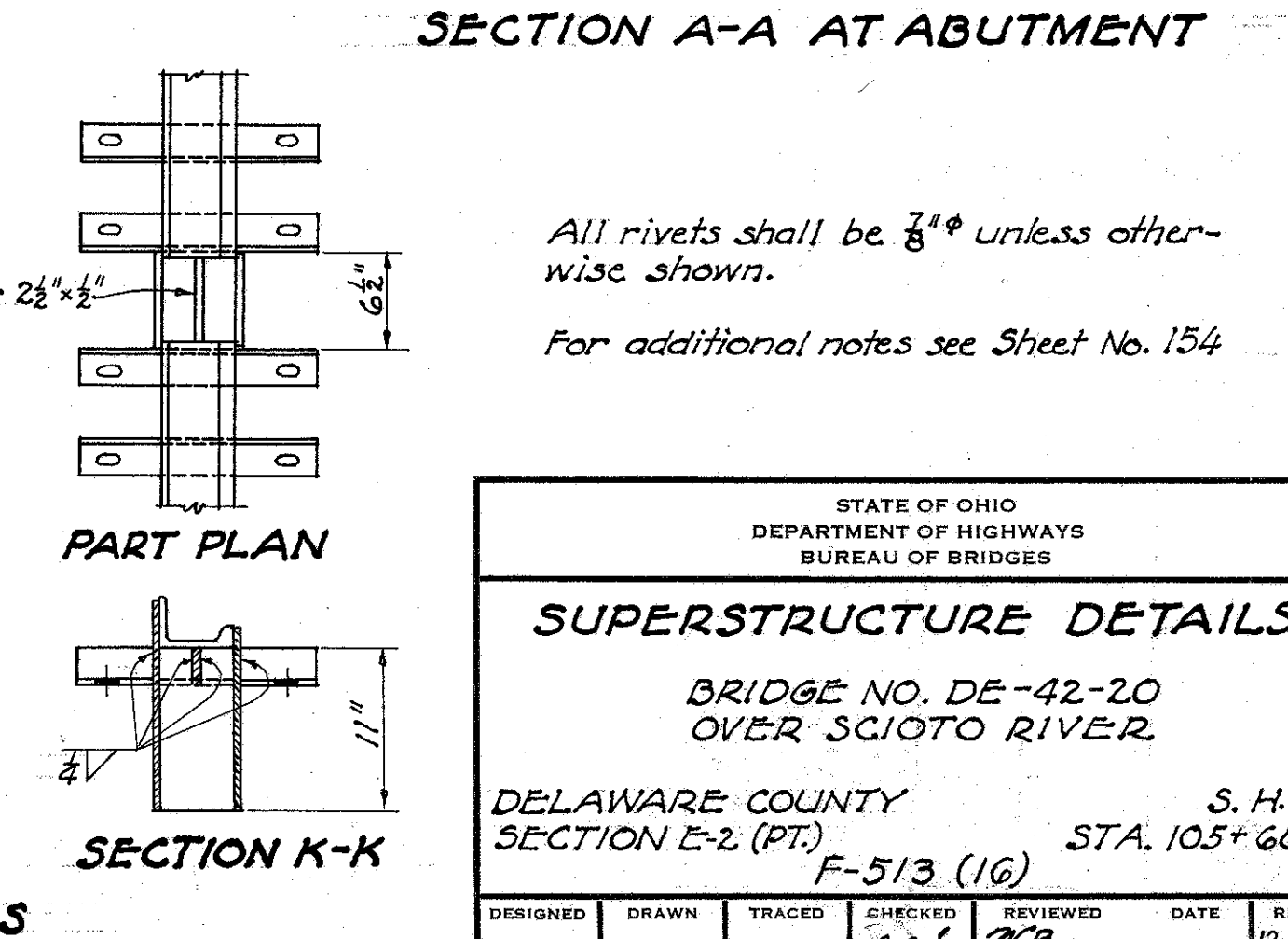
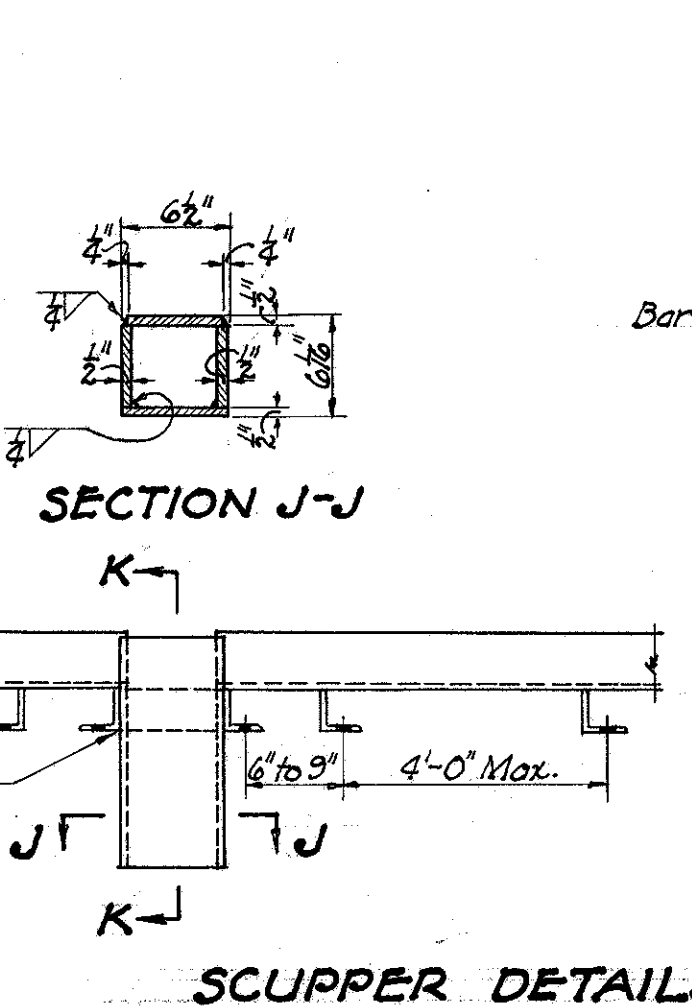
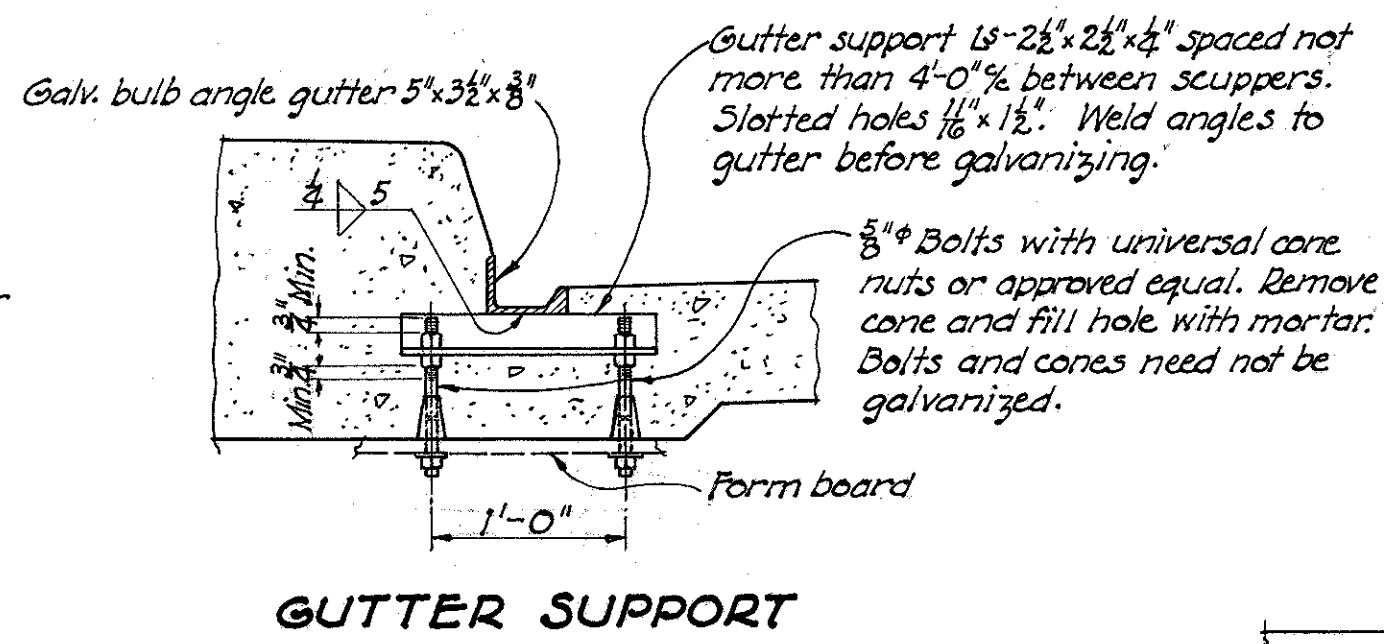
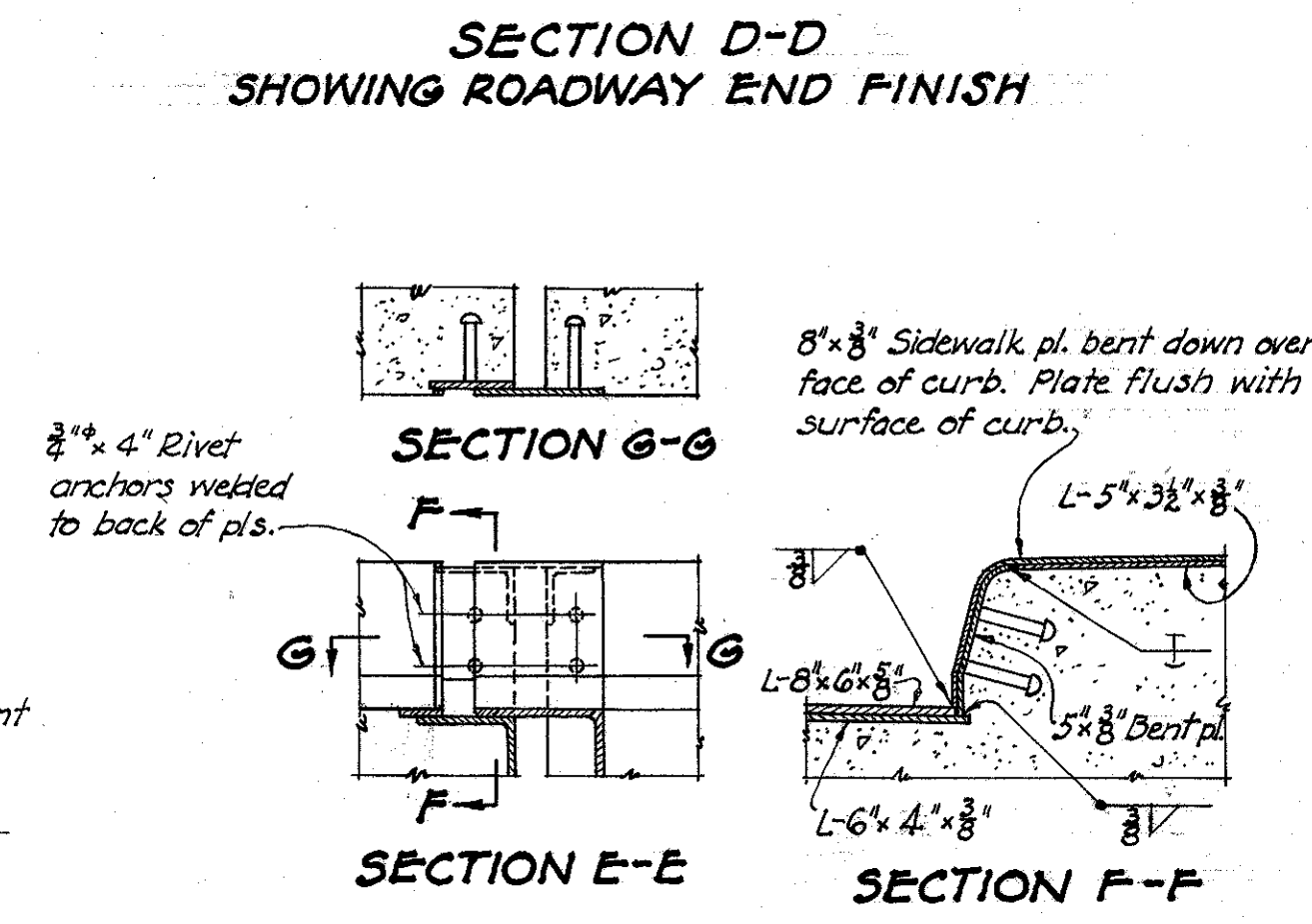
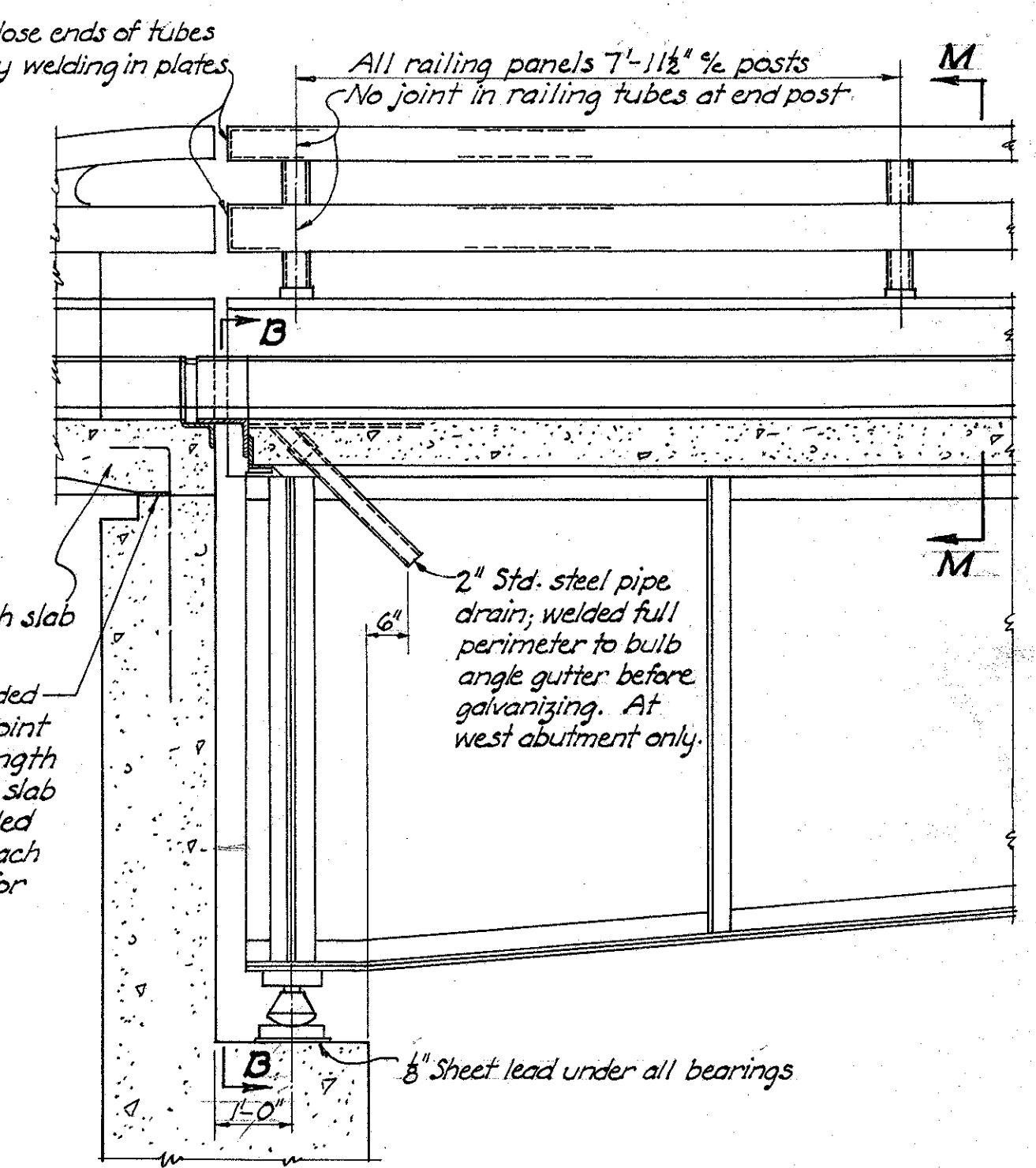
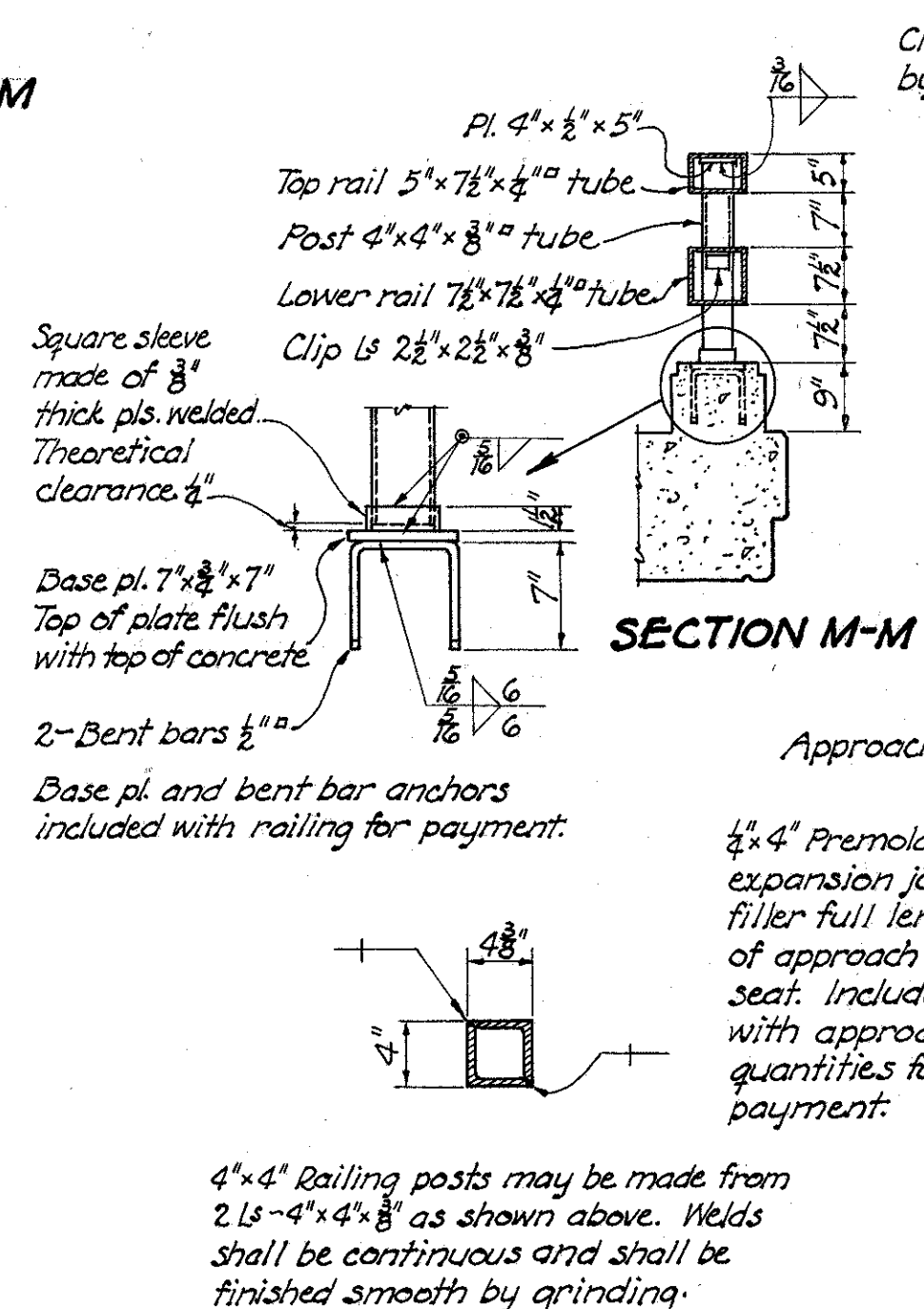
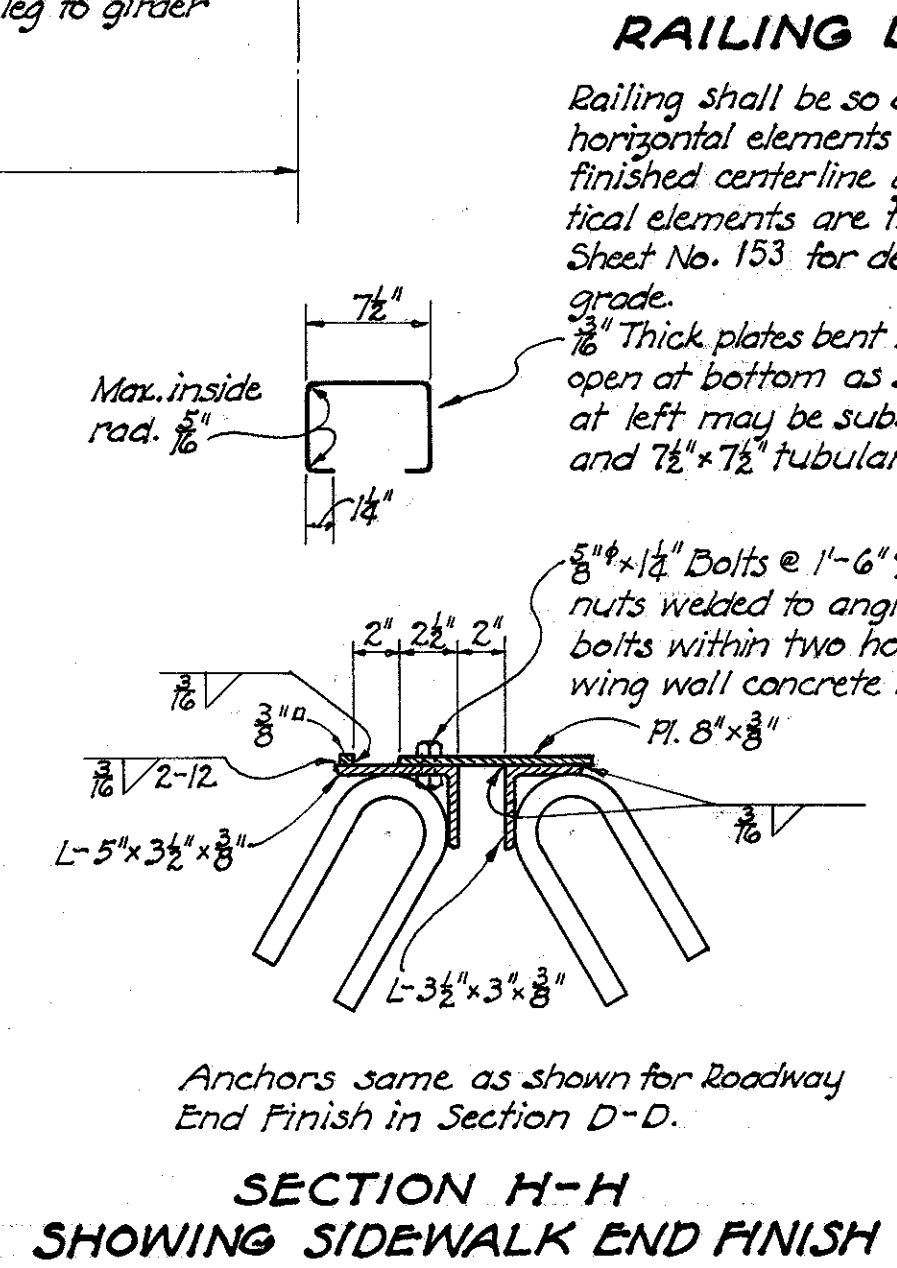
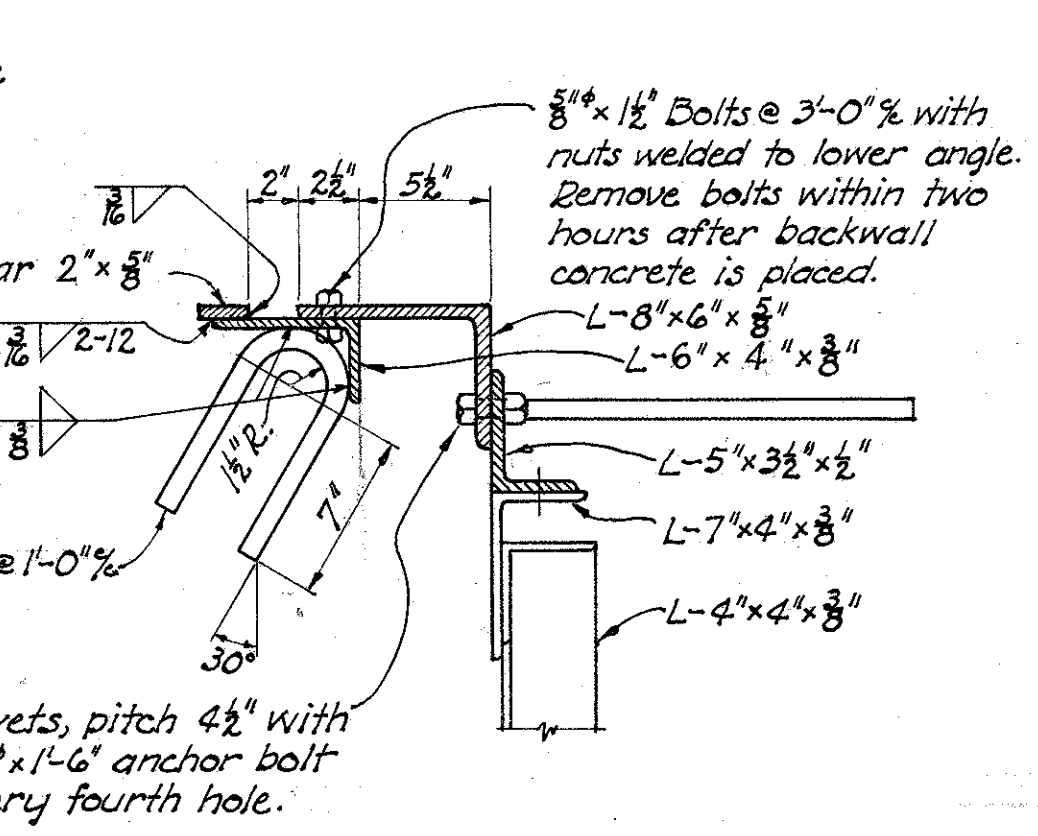
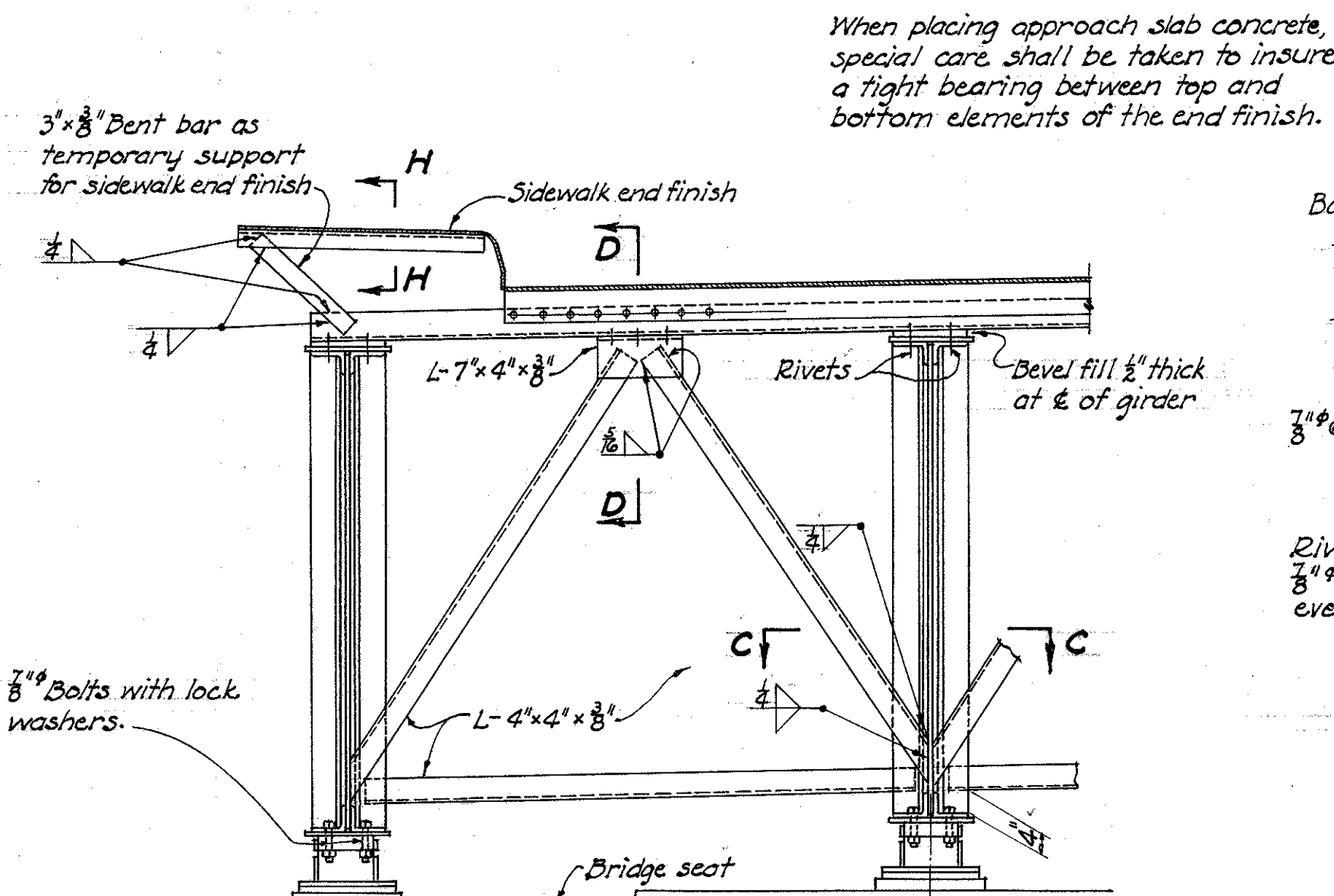
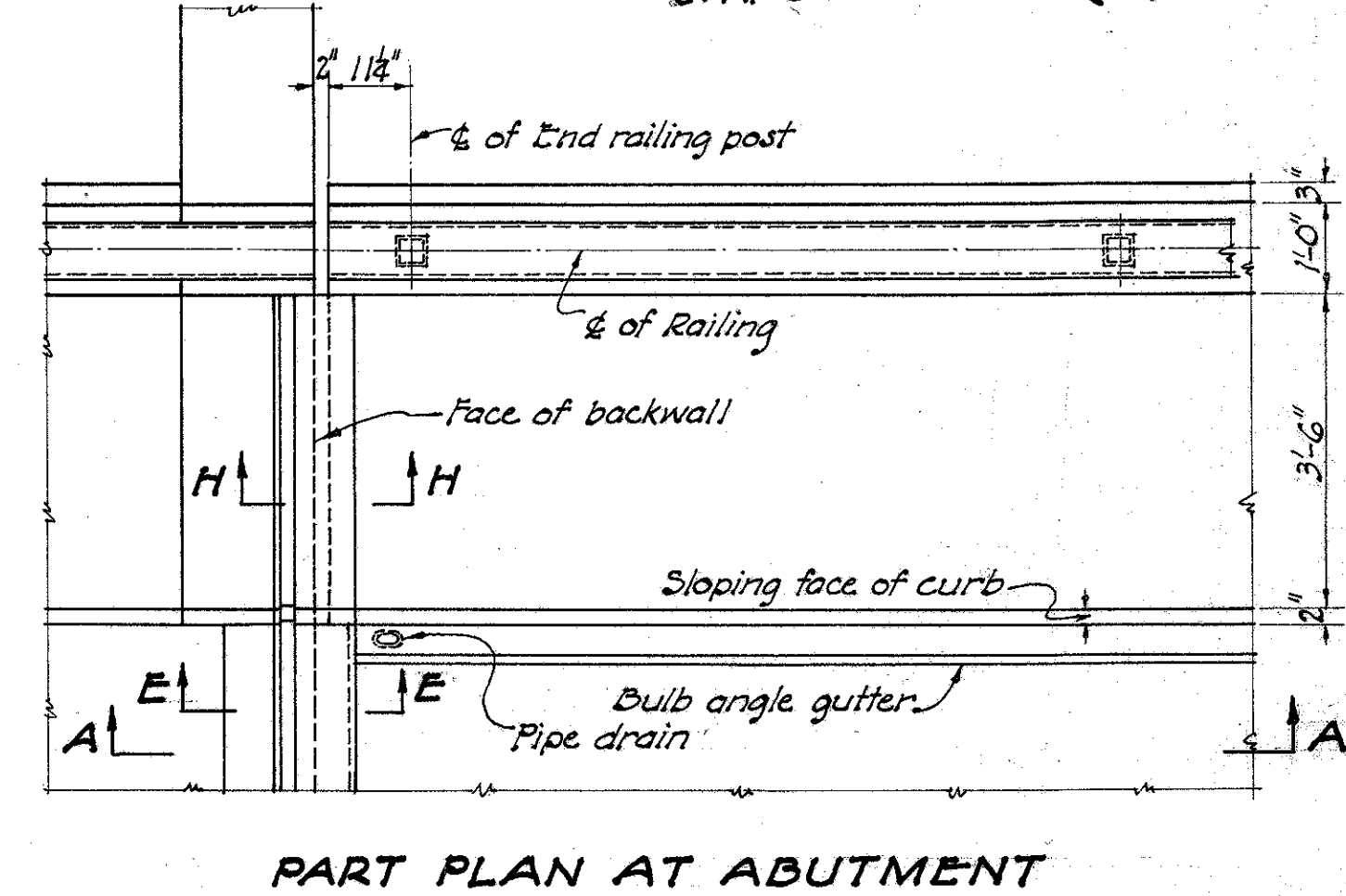
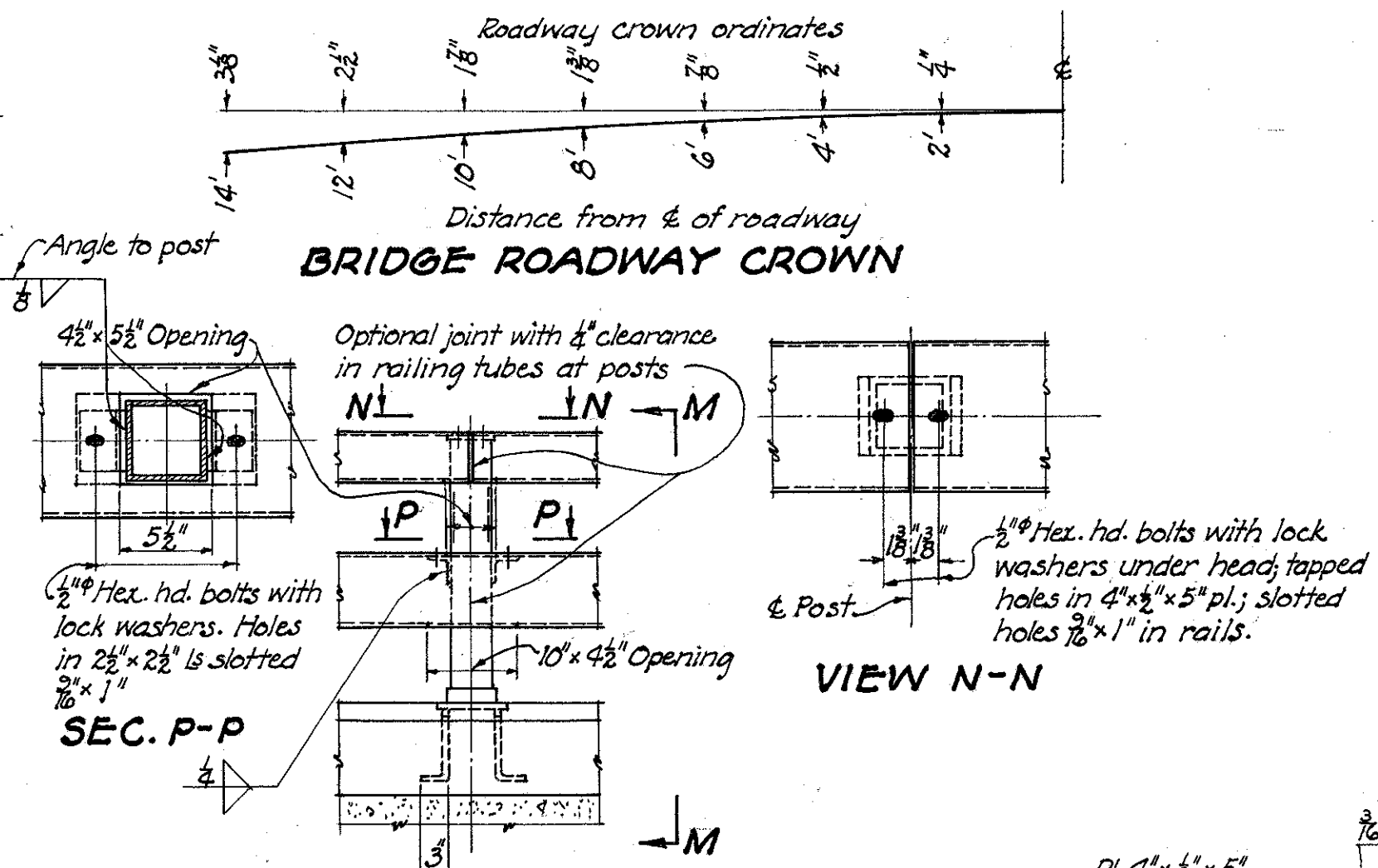
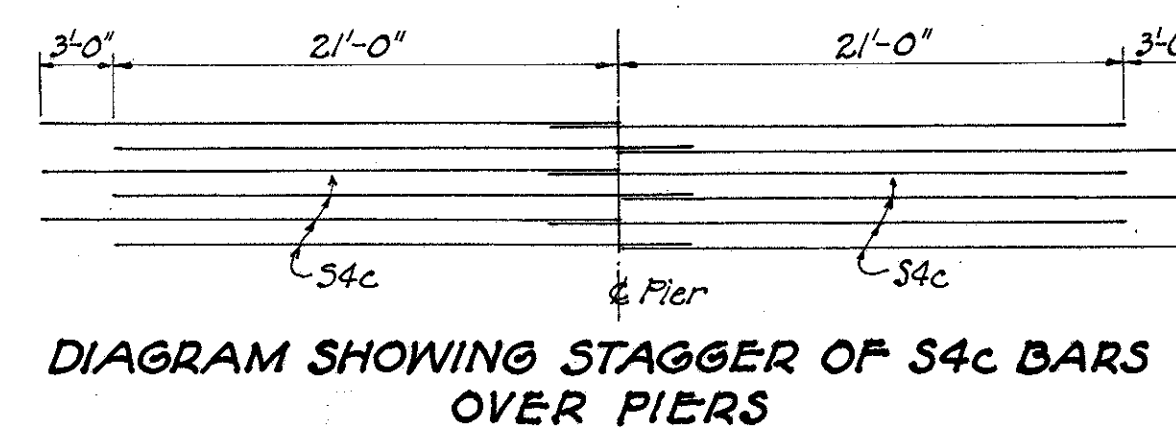
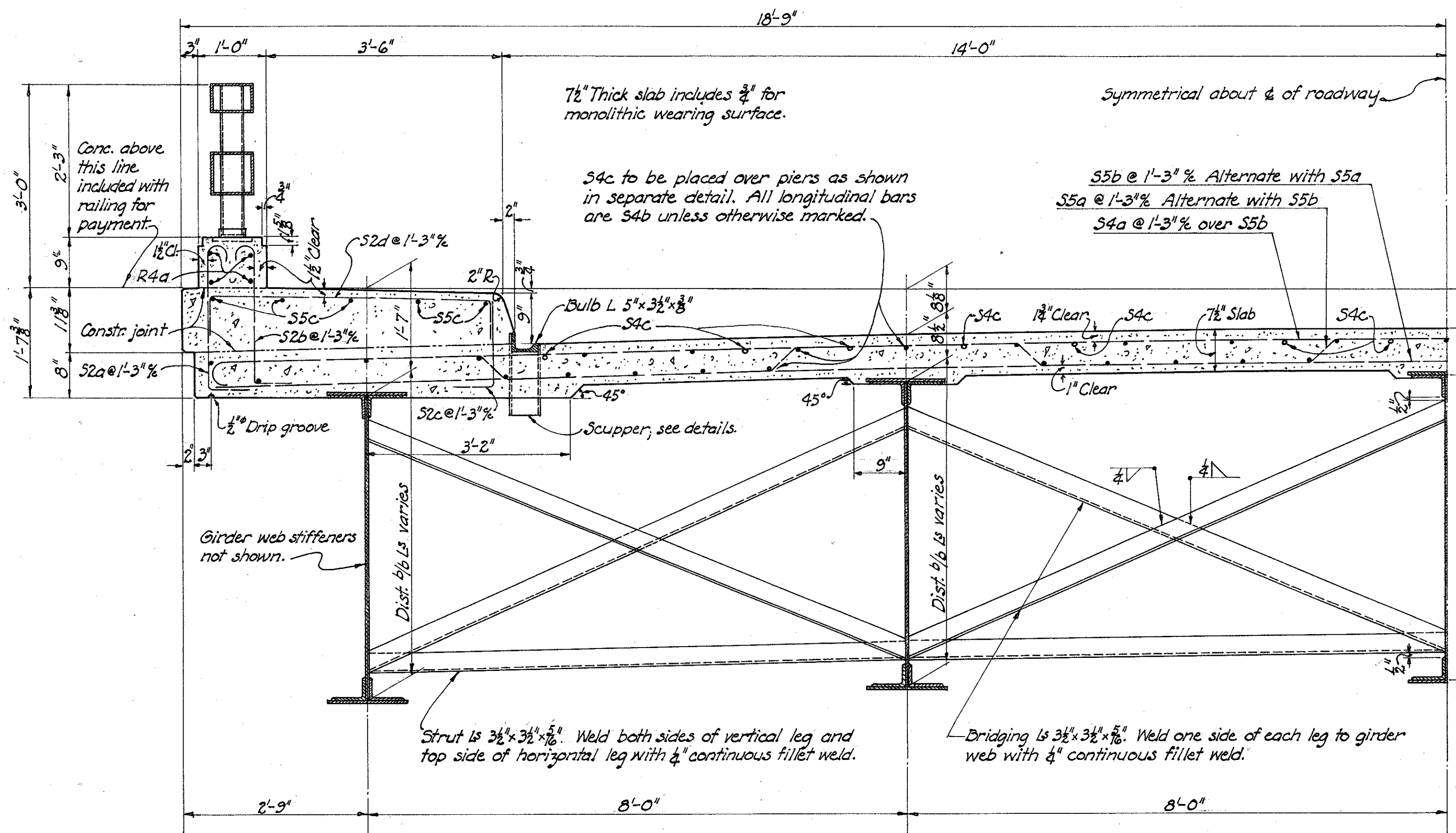
GIRDER DETAILS

BRIDGE NO. DE-42-20
OVER
SCIOTO RIVER

DELAWARE COUNTY S. H. 241
SEC. E-2 (Pt.) F-513 (16) Sta. 105 + 68.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BFG	BFG	W.B.	W.B.	W.B.	6-7-45	6-8-46

DELAWARE COUNTY
S. H. 241 SEC. D (PT.) & E₂ (PT.)
S. H. 511 SEC. G (PT.)
S. H. 558 SEC. C (PT.)



STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. DE-42-20 OVER SCIOTO RIVER					
DELAWARE COUNTY			S. H. 241		
SECTION E-2 (PT.)			STA. 105+68.75		
F-513 (16)					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
BFG	BFG	J.E.P.	B.D.	W.H.C.	6-7-45
					12-26-45 6-3-46

DELAWARE COUNTY
S. H. 241 SEC. D (PT.) E-2 (PT.)
S. H. 911 SEC. G (PT.)

S.H. 558 SEC. C (PT.)

REINFORCING STEEL LIST					
Mark	Size	No.	Length	Weight	Shp.
SUPERSTRUCTURE					
S5a	3/8"	415	39'-0"	24310	Bt.
S5b	3/8"	415	36'-9"	22907	Str.
S5c	3/8"	150	37'-6"	8449	Str.
S4a	3/8"	415	36'-9"	15907	Str.
S4b	3/8"	675	37'-0"	26049	Str.
S4c	3/8"	112	23'-9"	2774	Str.
S2a	1/2"	830	3'-3"	1802	Bt.
S2b	1/2"	830	3'-3"	1802	Bt.
S2c	1/2"	830	2'-0"	1109	Bt.
S2d	1/2"	830	5'-3"	2911	Bt.
R4a	3/8"	120	37'-0"	*	Str.
PIER NO. 1					
P4a	3/8"	30	4'-3"	133	Bt.
P4b	3/8"	18	36'-0"	676	Str.
P4c	3/8"	30	18'-3"	571	Str.
P4g	3/8"	2	10'-6"	22	Bt.
P4h	3/8"	2	10'-9"	22	Bt.
P4i	3/8"	2	10'-9"	22	Bt.
P4j	3/8"	2	11'-0"	23	Bt.
P4k	3/8"	2	11'-3"	23	Bt.
P4l	3/8"	2	11'-3"	23	Bt.
P4m	3/8"	2	11'-6"	24	Bt.
P4n	3/8"	2	11'-6"	24	Bt.
P4o	3/8"	2	11'-9"	25	Bt.
P4s	3/8"	6	3'-6"	34	Str.
P4t	3/8"	4	8'-9"	37	Bt.
P4u	3/8"	4	7'-6"	31	Str.
P2a	1/2"	30	4'-6"	90	Bt.
PIER NO. 2					
P4a	3/8"	30	4'-3"	133	Bt.
P4b	3/8"	20	36'-0"	750	Str.
P4d	3/8"	30	20'-9"	649	Str.
P4g	3/8"	2	10'-6"	22	Bt.
P4h	3/8"	2	10'-9"	22	Bt.
P4i	3/8"	2	10'-9"	22	Bt.
P4j	3/8"	2	11'-0"	23	Bt.
P4k	3/8"	2	11'-3"	23	Bt.
P4l	3/8"	2	11'-3"	23	Bt.
P4m	3/8"	2	11'-6"	24	Bt.
P4n	3/8"	2	11'-6"	24	Bt.
P4o	3/8"	2	11'-9"	25	Bt.
P4p	3/8"	2	11'-9"	25	Bt.
P4s	3/8"	6	3'-6"	34	Str.
P4t	3/8"	4	8'-9"	37	Bt.
P4u	3/8"	4	7'-6"	31	Str.
P2a	1/2"	30	4'-6"	90	Bt.
PIER NO. 3					
P4a	3/8"	30	4'-3"	133	Bt.
P4b	3/8"	24	36'-0"	903	Str.
P4f	3/8"	30	24'-6"	767	Str.
P4g	3/8"	2	10'-6"	22	Bt.
P4h	3/8"	2	10'-9"	22	Bt.
P4i	3/8"	2	10'-9"	22	Bt.
P4j	3/8"	2	11'-0"	23	Bt.
P4k	3/8"	2	11'-3"	23	Bt.
P4l	3/8"	2	11'-3"	23	Bt.
P4m	3/8"	2	11'-6"	24	Bt.
P4n	3/8"	2	11'-6"	24	Bt.
P4o	3/8"	2	11'-9"	25	Bt.
P4p	3/8"	2	11'-9"	25	Bt.
P4q	3/8"	2	12'-0"	25	Bt.
P4r	3/8"	2	12'-3"	26	Bt.
P4s	3/8"	6	3'-6"	34	Str.
P4t	3/8"	4	8'-9"	37	Bt.
P4u	3/8"	4	7'-6"	31	Str.
P2a	1/2"	30	4'-6"	90	Bt.
PIER NO. 4					
P4a	3/8"	30	4'-3"	133	Bt.
P4b	3/8"	24	36'-0"	903	Str.
P4f	3/8"	30	24'-6"	767	Str.
P4g	3/8"	2	10'-6"	22	Bt.
P4h	3/8"	2	10'-9"	22	Bt.
P4i	3/8"	2	10'-9"	22	Bt.
P4j	3/8"	2	11'-0"	23	Bt.
P4k	3/8"	2	11'-3"	23	Bt.
P4l	3/8"	2	11'-3"	23	Bt.
P4m	3/8"	2	11'-6"	24	Bt.
P4n	3/8"	2	11'-6"	24	Bt.
P4o	3/8"	2	11'-9"	25	Bt.
P4p	3/8"	2	11'-9"	25	Bt.
P4q	3/8"	2	12'-0"	25	Bt.
P4r	3/8"	2	12'-3"	26	Bt.
P4s	3/8"	6	3'-6"	34	Str.
P4t	3/8"	4	8'-9"	37	Bt.
P4u	3/8"	4	7'-6"	31	Str.
P2a	1/2"	30	4'-6"	90	Bt.
WEST ABUTMENT					
A8a	1"	14	14'-0"	666	Str.
A7a	1"	4	39'-0"	417	Bt.
A7b	1"	12	36'-6"	1169	Str.
A5a	3/8"	45	5'-0"	338	Str.
A5b	3/8"	36	15'-6"	838	Str.
A5c	3/8"	9	11'-0"	149	Str.
A5i	3/8"	24	11'-3"	406	Bt.
A5j	3/8"	28	19'-0"	799	Bt.
A5k	3/8"	8	22'-6"	270	Bt.
A4a	3/8"	6	12'-6"	78	Str.
A4b	3/8"	12	29'-9"	372	Str.
A4c	3/8"	4	27'-0"	113	Str.
A4d	3/8"	8	8'-3"	69	Str.
A4e	3/8"	8	11'-6"	96	Str.
A4f	3/8"	12	13'-3"	166	Str.
A4g	3/8"	8	15'-0"	125	Str.
A4h	3/8"	14	4'-0"	58	Bt.
A4i	3/8"	10	3'-3"	34	Bt.
A4j	3/8"	6	5'-0"	31	Bt.
A4k	3/8"	27	9'-3"	260	Bt.
A4l	3/8"	3	11'-0"	34	Bt.
A4m	3/8"	3	12'-6"	39	Bt.
A4n	3/8"	3	14'-3"	45	Bt.
A4o	3/8"	3	16'-0"	50	Bt.
A4p	3/8"	3	17'-6"	55	Bt.
A4q	3/8"	3	19'-0"	59	Bt.
A4r	3/8"	3	20'-6"	64	Bt.
A4s	3/8"	6	15'-0"	94	Str.
A2a	1/2"	4	4'-9"	13	Bt.
A2b	1/2"	30	5'-0"	100	Bt.
REPLACEMENT STEEL					
RE8	1"	1	8'-0"	27	Str.
RE7	1"	1	8'-0"	21	Str.
RE5	3/8"	3	7'-0"	32	Str.
RE4	3/8"	3	6'-6"	20	Str.
RE2	1/2"	1	6'-0"	4	Str.

REINFORCING STEEL LIST					
Mark	Size	No.	Length	Weight	Shp.
PIER NO. 3					
P4a	3/8"	30	4'-3"	133	Bt.
P4b	3/8"	22	36'-0"	826	Str.
P4e	3/8"	30	23'-0"	720	Str.
P4g	3/8"	2	10'-6"	22	Bt.
P4h	3/8"	2	10'-9"	22	Bt.
P4i	3/8"	2	10'-9"	22	Bt.
P4j	3/8"	2	11'-0"	23	Bt.
P4k	3/8"	2	11'-3"	23	Bt.
P4l	3/8"	2	11'-3"	23	Bt.
P4m	3/8"	2	11'-6"	24	Bt.
P4n	3/8"	2	11'-6"	24	Bt.
P4o	3/8"	2	11'-9"	25	Bt.
P4p	3/8"	2	11'-9"	25	Bt.
P4q	3/8"	2	12'-0"	25	Bt.
P4s	3/8"	6	3'-6"	34	Str.
P4t	3/8"	4	8'-9"	37	Bt.
P4u	3/8"	4	7'-6"	31	Str.
P2a	1/2"	30	4'-6"	90	Bt.
PIER NO. 4					
P4a	3/8"	30	4'-3"	133	Bt.
P4b	3/8"	24	36'-0"	903	Str.
P4f	3/8"	30	24'-6"	767	Str.
P4g	3/8"	2	10'-6"	22	Bt.
P4h	3/8"	2	10'-9"	22	Bt.
P4i	3/8"	2	10'-9"	22	Bt.
P4j	3/8"	2	11'-0"	23	Bt.
P4k	3/8"	2	11'-3"	23	Bt.
P4l	3/8"	2	11'-3"	23	Bt.
P4m	3/8"	2	11'-6"	24	Bt.
P4n	3/8"	2	11'-6"	24	Bt.
P4o	3/8"	2	11'-9"	25	Bt.
P4p	3/8"	2	11'-9"	25	Bt.
P4q	3/8"	2	12'-0"	25	Bt.
P4r	3/8"	2	12'-3"	26	Bt.
P4s	3/8"	6	3'-6"	34	Str.
P4t	3/8"	4	8'-9"	37	Bt.
P4u	3/8"	4	7'-6"	31	Str.
P2a	1/2"	30	4'-6"	90	Bt.
WEST ABUTMENT					
A8a	1"	14	14'-0"	666	Str.
A7a	1"	4	39'-0"	417	Bt.
A7b	1"	12	36'-6"	1169	Str.
A5a	3/8"	45	5'-0"	338	Str.
A5b	3/8"	36	15'-6"	838	Str.
A5c	3/8"	9	11'-0"	149	Str.
A5i	3/8"	24	11'-3"	406	Bt.
A5j	3/8"	28	19'-0"	799	Bt.
A5k	3/8"	8	22'-6"	270	Bt.
A4a	3/8"	6	12'-6"	78	Str.
A4b	3/8"	12	29'-9"	372	Str.
A4c	3/8"	4	27'-0"	113	Str.
A4d	3/8"	8	8'-3"	69	Str.
A4e	3/8"	8	11'-6"	96	Str.
A4f	3/8"	12	13'-3"	166	Str.
A4g	3/8"	8	15'-0"	125	Str.
A4h	3/8"	14	4'-0"	58	Bt.
A4i	3/8"	10	3'-3"	34	Bt.
A4j	3/8"	6	5'-0"	31	Bt.
A4k	3/8"	18	9'-3"	174	Bt.
A4l	3/8"	3	11'-0"	34	Bt.
REINFORCING STEEL LIST					
Mark	Size	No.	Length	Weight	Shp.
BENDING DIAGRAM					
PIER NO. 3					
BENDING DIAGRAM					
PIER NO. 4					
BENDING DIAGRAM					
WEST ABUTMENT					
BENDING DIAGRAM					
EAST ABUTMENT					
BENDING DIAGRAM					
REPLACEMENT STEEL					
BENDING DIAGRAM					

REINFORCING STEEL LIST					
Mark	Size	No.	Length	Weight	Shp.
WEST ABUTMENT (CONT'D.)					
A4m	5/8"	3	12'-6"	39	Bt.
A4n	5/8"	3	14'-3"	45	Bt.
A4o	5/8"	3	16'-0"	50	Bt.
A4s	5/8"	6	15'-0"	94	Str.
A2a	1/2"	4	4'-9"	13	Bt.
A2b	1/2"	30	5'-0"	100	Bt.
EAST ABUTMENT					
A8a	1"	14	14'-0"	666	Str.
A7a	1"	4	39'-0"	417	Bt.
A7b	1"	12	36'-6"	1169	Str.
A5a	3/8"	51	5'-0"	383	Str.
A5i	3/8"	24	11'-3"	406	Bt.
A5j	3/8"	28	19'-0"	799	Bt.
A5k	3/8"	8	22'-6"	270	Bt.
A5p	3/8"	42	21'-6"	1356	Str.
A5q	3/8"	9	17'-3"	233	Str.
A4a	5/8"	6	12'-6"	78	Str.
A4b	5/8"	12	29'-9"	372	Str.
A4c	5/8"	4	27'-9"	113	Str.
A4d	5/8"	8	8'-3"	69	Str.
A4e	5/8"	8	11'-6"	96	Str.
A4f	5/8"	12	13'-3"	166	Str.
A4g	5/8"	8	15'-0"	125	Str.
A4h	5/8"	14	4'-0"	58	Bt.
A4i	5/8"	10	3'-3"	34	Bt.
A4j	5/8"	6	5'-0"	31	Bt.
A4k	5/8"	27	9'-3"	260	Bt.
A4l	5/8"	3	11'-0"	34	Bt.
A4m	5/8"	3	12'-6"	39	Bt.
A4n	5/8"	3	14'-3"	45	Bt.
A4o	5/8"	3	16'-0"	50	Bt.
A4p	5/8"	3	17'-6"	55	Bt.
A4q	5/8"	3	19'-0"	59	Bt.
A4r	5/8"	3	20'-6"	64	Bt.
A4s	5/8"	6	15'-0"	94	Str.
A2a	1/2"	4	4'-9"	13	Bt.
A2b	1/2"	30	5'-0"	100	Bt.
REPLACEMENT STEEL					
RE8	1"	1	8'-0"	27	Str.
RE7	1"	1	8'-0"	21	Str.
RE5	3/8"	3	7'-0"	32	Str.
RE4	5/8"	3	6'-6"	20	Str.
RE2	1/2"	1	6'-0"	4	Str.