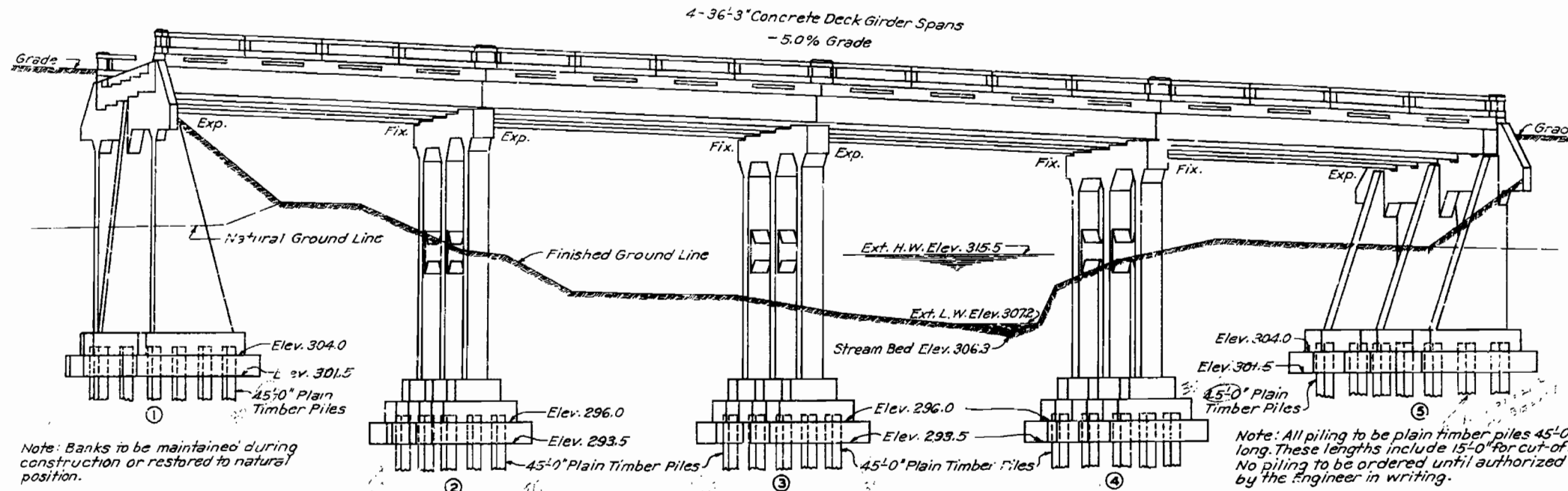
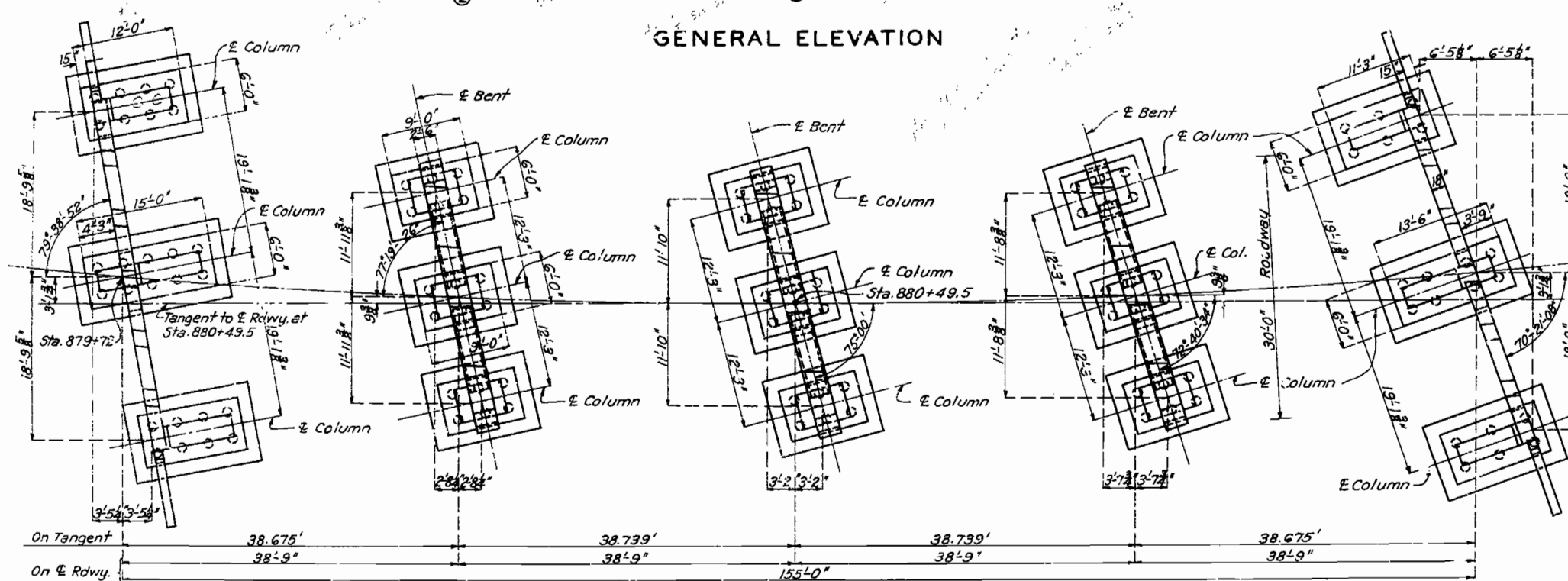


# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	W.R.R. 179B	1933	1	1



GENERAL ELEVATION



PLAN

ITEM	SUPERSTR.	SUBSTR.	TOTAL
Excavation Class 1	456.5	450	450
Excavation Class 2	15.7	790	790
Concrete 1:2:3 mix, Class "A"	15.7		15.7
Concrete 1:2:4 mix, Class "B"	264.5	297.9	297.9
Concrete 1:2:3 mix, Class "X"	264.5		264.5
Phosphor Bronze Brg. Pls (Flange) (8"x17") 20 Sets of 5 Plates each			
Reinforcing Steel	67170	20540	87710
Plain Timber Piles		3000	3000
Plain Timber Pile Cut-offs		1500	1500
Concrete 1:2:4 Mix, Class "B" (Seal Courses) Cu. Yds.		167.5	167.5

Note: Bridge Excavation above Elev. 309.0 to be paid for as Class 1 Bridge Excavation. Bridge Excavation below Elev. 309.0 to be paid for as Class 2 Bridge Excavation. Bar supports and spacers will be required for reinforcing steel in superstructure. See Std. C-110R and Special Provisions. Note: This drawing is not to scale. Follow dimensions.

## BILL OF REINFORCING STEEL - SUPERSTR.

No.	Size	Length	Mark	Location	No.	Size	Length	Mark	Location	Cuts & Bends
24	1/2"	11x0"	R1	Rail	32	1/2"	40x6"	B13	Gir. #2-#3	
128	1/2"	9"	R2	"	16	1/2"	41x0"	B14	" #4	
112	1/2"	7x6"	R3	Subpost	16	1/2"	42x9"	B15	" #2-#3	
40	1/2"	3x9"	R4	Post	8	1/2"	42x9"	B16	" #4	
1456	3/8"	18"	R5	Baluster	16	1/2"	42x9"	B17	" #2-#3	
40	1/2"	8x9"	R6	Rail	8	1/2"	42x9"	B18	" #4	
12	1/2"	2x3"	R7	Post	16	1/2"	33x3"	B19	" #2-#3	
28	1/2"	2x0"	R8	Rail	8	1/2"	33x9"	B20	" #4	
8	1/2"	1x6"	R9	"	10	3/8"	8x3"	W4	Web	
4	1/2"	1x6"	R10	"	16	3/8"	5x6"	W5	"	
8	1/2"	8x3"	R11	"	12	3/8"	5x0"	S14	Slab	
12	1/2"	8x3"	R12	"						
4	1/2"	10x9"	R13	"						
18	3/8"	21x0"	C1	Curb						
128	3/8"	12"	C2	"						
6	3/8"	22x0"	C3	"						
6	3/8"	21x3"	C4	"						
18	3/8"	23x6"	C5	"						
38	3/8"	34x3"	S1	Slab						
88	3/8"	32x9"	S2	"						
90	3/8"	35x0"	S3	"						
32	3/8"	22x6"	S4	"						
32	3/8"	22x6"	S5	"						
64	3/8"	6x0"	S6	"						
80	3/8"	20x6"	S7	"						
20	3/8"	43x0"	S8	"						
20	3/8"	39x0"	S9	"						
24	3/8"	42x0"	S10	"						
24	3/8"	37x9"	S11	"						
8	3/8"	6x0"	S12	"						
40	3/8"	7x3"	S13	"						
16	3/8"	30x9"	W1	Webs						
12	3/8"	9x0"	W2	"						
8	3/8"	29x9"	W3	"						
396	3/8"	8x0"	B1	Girders						
16	3/8"	20x6"	B2	"						
16	3/8"	20x6"	B3	"						
48	3/8"	20x3"	B4	"						
16	3/8"	40x3"	B5	Girder #1						
16	3/8"	41x6"	B6	" #5						
8	3/8"	41x9"	B7	" #1						
8	3/8"	42x3"	B8	" #5						
8	3/8"	41x9"	B9	" #1						
8	3/8"	42x9"	B10	" #5						

Note: Dimensions of bars are given along centerline and are for computed lengths. Reinforcing bars 1/2" or over in diameter, which are bent to an angle greater than 45°, shall be of structural grade. This bill of reinforcing steel is not complete. For bill of substructure reinforcing steel see Sheet No. 2 of 6.

## GENERAL NOTES:

Concrete in handrail to be 1:2:3 mix, Class "A". Concrete in slab, curbs and girders to be 1:2:3 mix, Class "X". All other concrete to be 1:2:4 mix, Class "B". Exposed edges to be beveled 3" where no other bevel is noted. Floor slab shall be constructed full width at one operation. No longitudinal construction joints will be permitted. Transverse construction joint may be used near middle of span. Where rubber compound is specified on plans for use in partition and expansion joints, the premoolded joint shall be securely stitched to the face of concrete with copper wire. Two name plates type "A" as shown on Std. S918R to be furnished and placed by contractor. Cost of name plates to be included in price bid for other items. Only sufficient camber to be used in construction to insure against settlement below lines given as finished grade. No permanent camber required in finished spans. Piling for End Bent No. 1 to be driven to sustain a load of 25 ton per pile. All other piles to be driven to sustain a load of 20 ton per pile. Bridge excavation in accordance with Section 1 of Standard Specifications issued April 1, 1930, except that quantities paid for will be computed on extreme low water level. Existing ground line is shown this elevation, and that horizontal limits will be based on footings proper and not on seal courses. Estimated quantities for Class "B" concrete include concrete in seal courses to maximum horizontal limits of 18" outside of neat lines of footings proper. See Special Provisions. In case seal courses are omitted during construction by authority of the Engineer, the bottoms of footings are to be built to elevations shown on these design plans for footings proper. Concrete shall be proportioned by the weight proportioning method. See Special Provisions.

## BRIDGE OVER DEXTER CREEK

STATE ROAD THRU DEXTER  
ABOUT 0.5 MILE SOUTH OF DEXTER  
PROJ. NO. N.R.M. 179B (U.S. 60) STA. 879 + 72

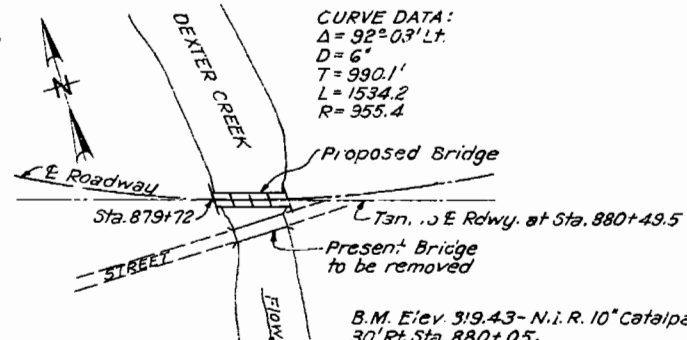
## STODDARD COUNTY

SUBMITTED BY *M.R. Lark* DATE 9/29/33  
APPROVED BY *J.H. Cutler* DATE 9/29/33

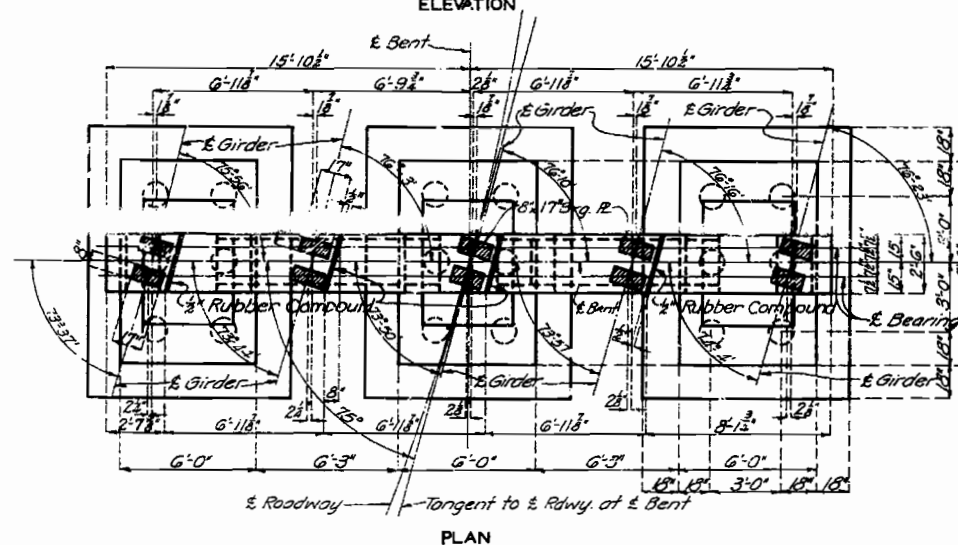
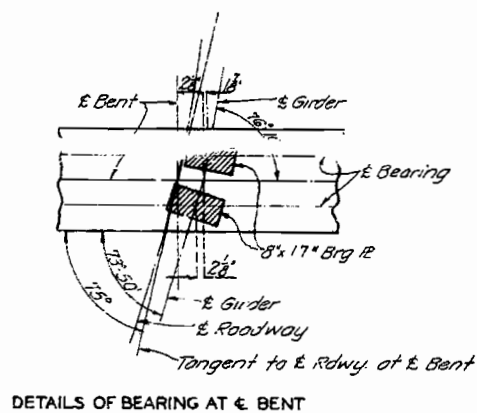
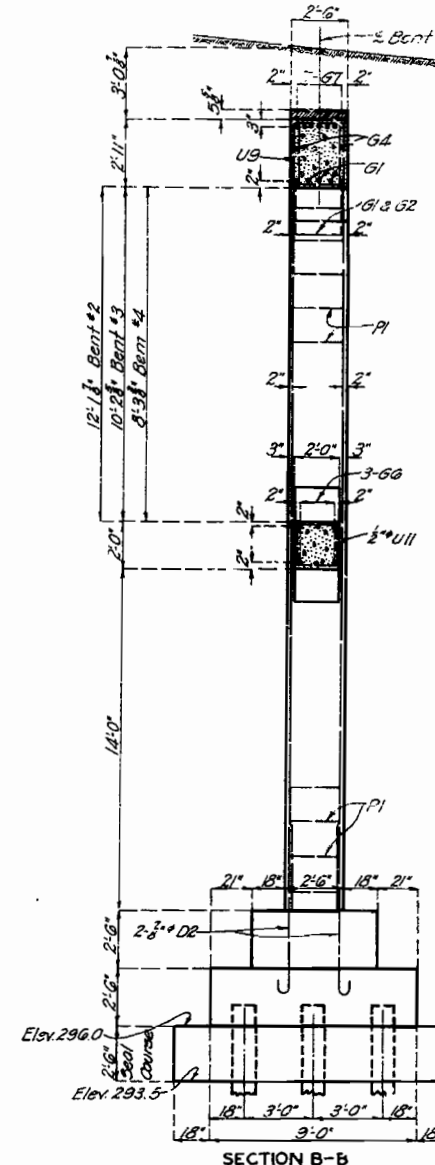
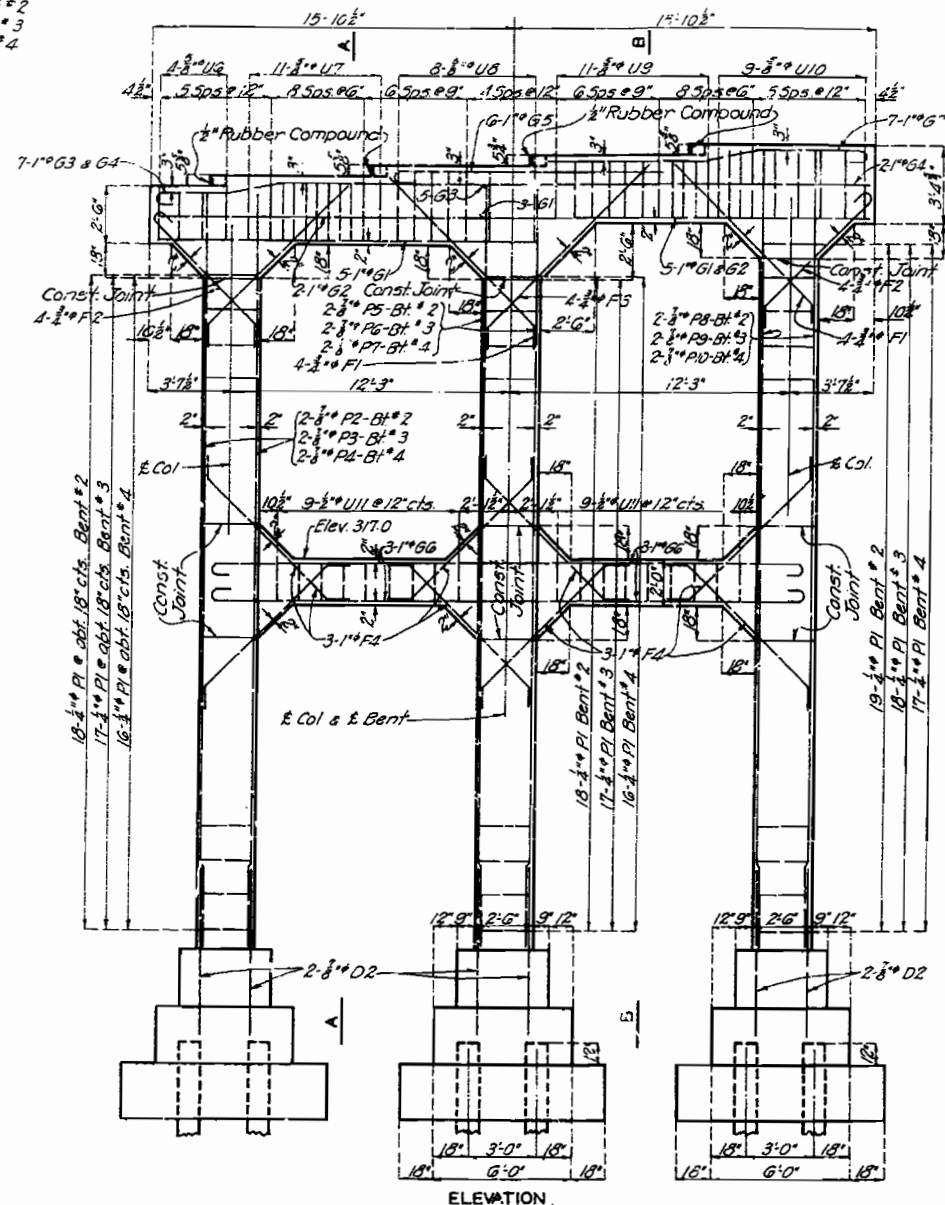
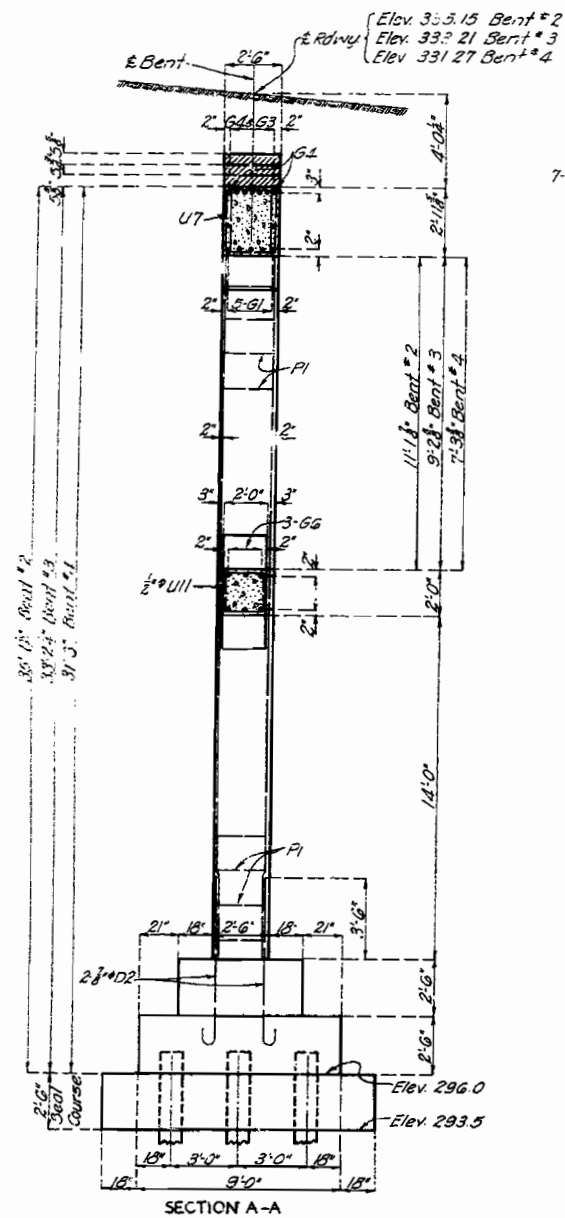
STD. C-110R  
STD. S-918R  
K-31

Drawn May 1933 By R.H.S.  
Traced June 1933 By R.J.G.  
Checked June 1933 By H.D.

## LOCATION SKETCH



FED. ROAD DIST NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	NRNT198 (U560)	19		



Note: Space back and front of bearing plates and space between top of bent and bottom of girder webs to be left open to depth of plates.

# BILL OF REINFORCING STEEL - SUBSTRUCTURE

No.	Size	Length	Mark	Location
<b>Bents No. 1 &amp; 5</b>				
36	3/4"	5'-3"	D1	Footings
26	3/4"	9'-9"	F1	Haunch
6	3/4"	11'-0"	F3	"
16	3/4"	15'-6"	H1	Wing
3	3/4"	27'-3"	H2	"
2	3/4"	29'-3"	H3	Beam
20	1/2"	21'-3"	H4	"
8	3/4"	21'-3"	H5	"
12	1/2"	15'-0"	H6	"
4	3/4"	16'-0"	H7	"
18	3/4"	21'-3"	H9	"
6	3/4"	10'-6"	H9	"
4	3/4"	25'-6"	H10	"
2	3/4"	40'-3"	H11	"
6	3/4"	23'-6"	T1	Wing
6	3/4"	36'-0"	T2	"
4	3/4"	17'-6"	T3	"
4	3/4"	15'-6"	T4	"
6	3/4"	9'-3"	T5	"
5	3/4"	10'-9"	V1	"
5	3/4"	7'-9"	V2	"
6	3/4"	25'-9"	V3	Col. Bt.*1
6	3/4"	26'-9"	V4	"
6	3/4"	27'-9"	V5	"
6	3/4"	18'-0"	V6	Col. Bt.*5
6	3/4"	19'-0"	V7	"
6	3/4"	19'-9"	V8	"
26	3/4"	11'-3"	U1	Beam
12	3/4"	9'-6"	U2	"
7	3/4"	12'-0"	U3	"
5	3/4"	11'-0"	U4	"
14	3/4"	10'-0"	U5	"
14	3/4"	10'-3"	U12	"
7	3/4"	12'-0"	U13	"
12	3/4"	9'-6"	U14	"
5	3/4"	11'-0"	U15	"

<b>Bents No. 2, 3 &amp; 4</b>				
36	3/4"	8'-3"	D2	Footings
36	3/4"	9'-9"	F1	Haunch
24	3/4"	8'-6"	F2	"
12	3/4"	11'-3"	F3	"
72	1/2"	9'-9"	F4	"
24	1/2"	17'-0"	G1	Beam
6	1/2"	31'-6"	G2	"
15	1/2"	14'-9"	G3	"
6	1/2"	32'-3"	G4	"
18	1/2"	12'-9"	G5	"
18	1/2"	28'-6"	G6	Tie Beam
21	1/2"	15'-0"	G7	Beam
156	3/8"	10'-0"	P1	Columns
4	3/8"	29'-6"	P2	Col. Bt.*2
4	3/8"	27'-6"	P3	"
4	3/8"	25'-6"	P4	"
4	3/8"	30'-3"	P5	Col. Bt.*2
4	3/8"	28'-6"	P6	"
4	3/8"	26'-6"	P7	"
4	3/8"	31'-3"	P8	Col. Bt.*2
4	3/8"	29'-3"	P9	"
4	3/8"	27'-6"	P10	"
12	3/8"	10'-0"	U6	Beam
33	3/8"	11'-0"	U7	"
24	3/8"	12'-0"	U8	"
33	3/8"	10'-9"	U9	"
27	3/8"	11'-9"	U10	"
54	3/8"	8'-0"	U11	"

## Bending Sketches & Cutting Diagrams

The figure contains several diagrams illustrating the bending and cutting of reinforcing steel bars for the substructure. The diagrams are organized as follows:

- Top Left:** Diagrams for bent bars D1 (3'-11 1/2"), D2 (6'-11 1/2"), G5 (11'-5 1/2"), and H6 (2'-2").
- Top Right:** Diagrams for bent bars 3-H2 CUT 3 BARS, T1-T2, and 5-V1 CUT 5 BARS.
- Middle Left:** Diagrams for bent bars 2-H3 CUT 2 BARS, T3-T4, and 5-V2 CUT 5 BARS.
- Middle Right:** Diagrams for bent bars F1-F3-F5, G6, and G7.
- Bottom Left:** Diagrams for bent bars P1-P10 and U1-U15.
- Bottom Right:** Diagrams for bent bars P1-P10 and U1-U15.

Note: Above Bill of Reinforcing Steel is not complete. See Sheet No. 1 for Reinforcing Steel in Superstructure.

Dimensions given are along E & of bars and are for computed lengths. Reinforcing bars 3/8" & over in diameter, which are bent to an angle greater than 90°, shall be of structural grade.

## BRIDGE OVER DEXTER CREEK

STATE ROAD THRU DEXTER

ABOUT 0.5 MILE SOUTH OF DEXTER

PROJ. NO. N.R.M.179B (I, S.60) STA. 879+72

STODDARD COUNTY

F.A.

F.A.

K-31

Drawn May 1933 by P.H.S  
Traced May 1933 by G.W.  
Checked June 1933 by H.D.

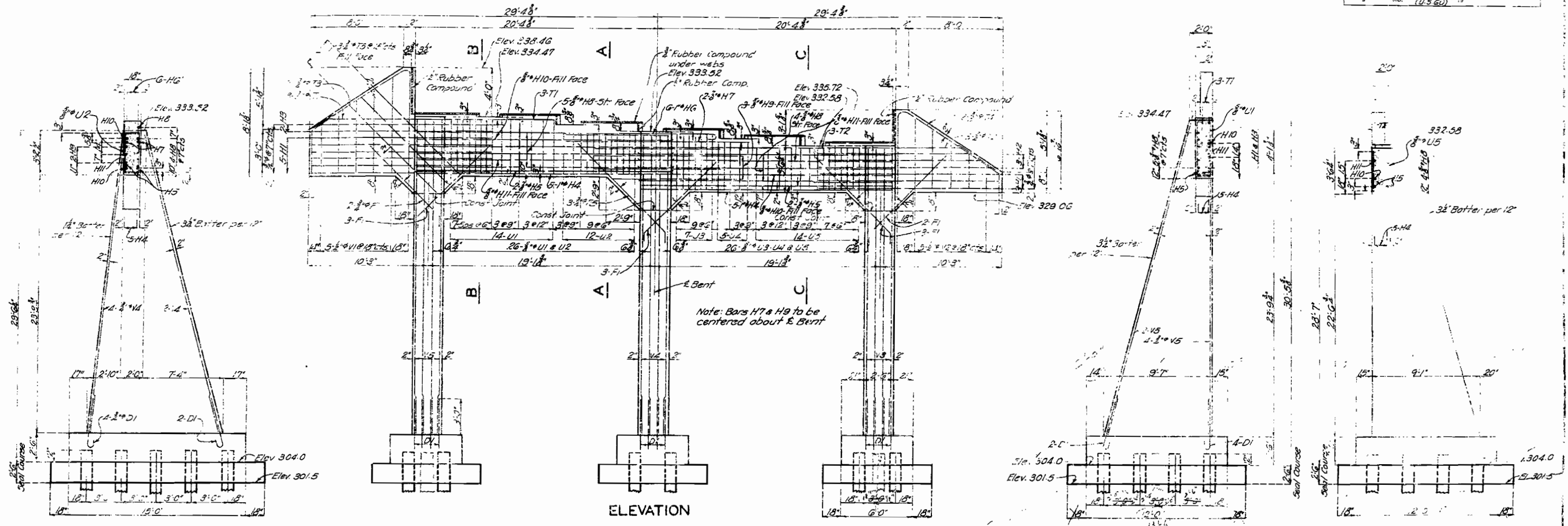
Note: This drawing is not to scale.  
Follow dimensions.

Sheet No. 2 of 6.

F.A.

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	N.R.M. 179B	19	19	
		(U.S. 60)			

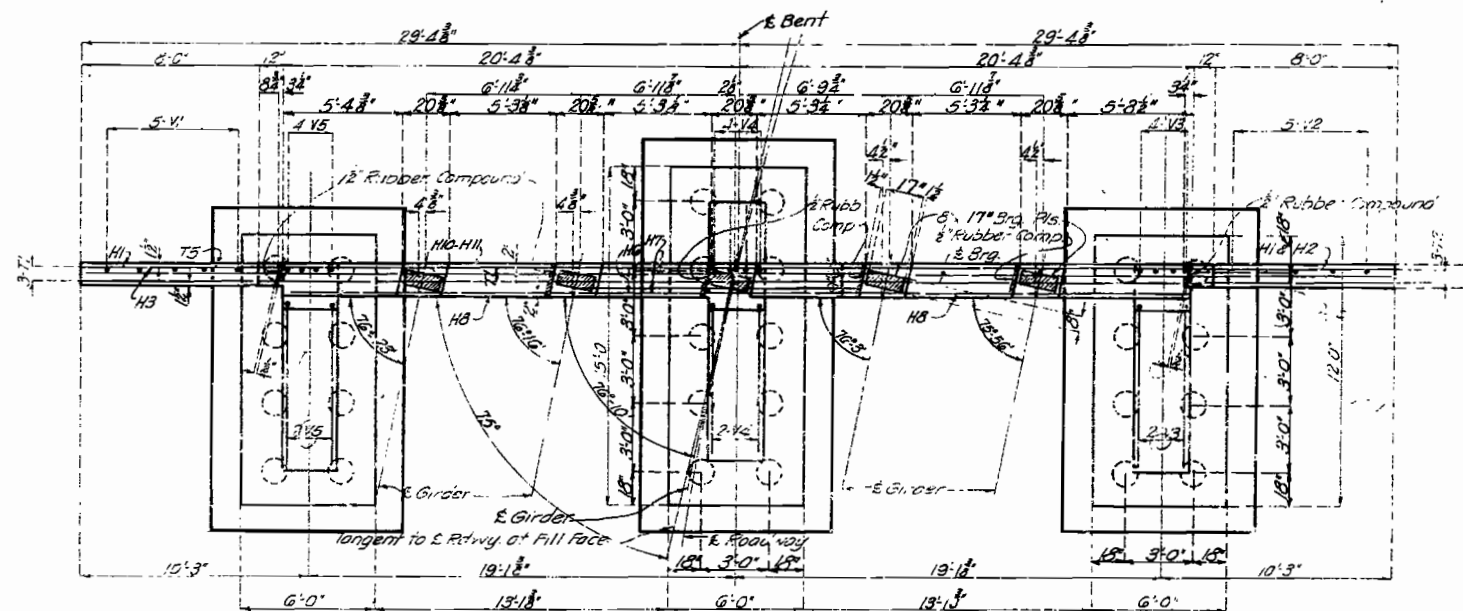


SECTION A-A

SECTION B-B

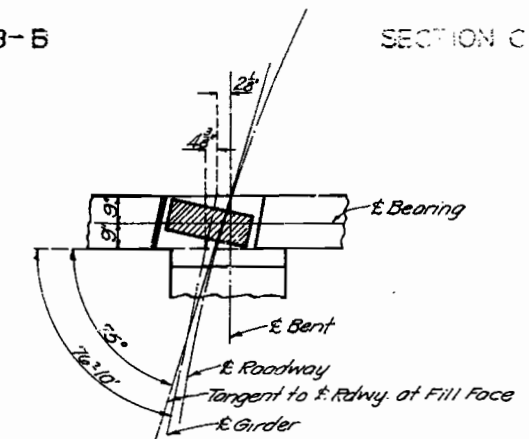
SECTION C-C

Note: Space back and front and deck slab showing details of bent down to depth of pier.



PLAN

Note: This drawing is not to scale. Follow dimensions.



DETAILS OF BEARING AT BENT

## BRIDGE OVER DEXTER CREEK

STATE ROAD THRU DEXTER

ABOUT 0.5 MILE SOUTH OF DEXTER

PROJ. NO. N.R.M. 179B (U.S. 60) STA. 879+72

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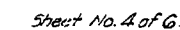
K-31

Drawn May 1933 by P.H.S.  
Traced May 1933 by G.W.  
Checked June 1933 by H.D.

DETAILS OF END BENT NO. 1

Sheet No. 3 of 5

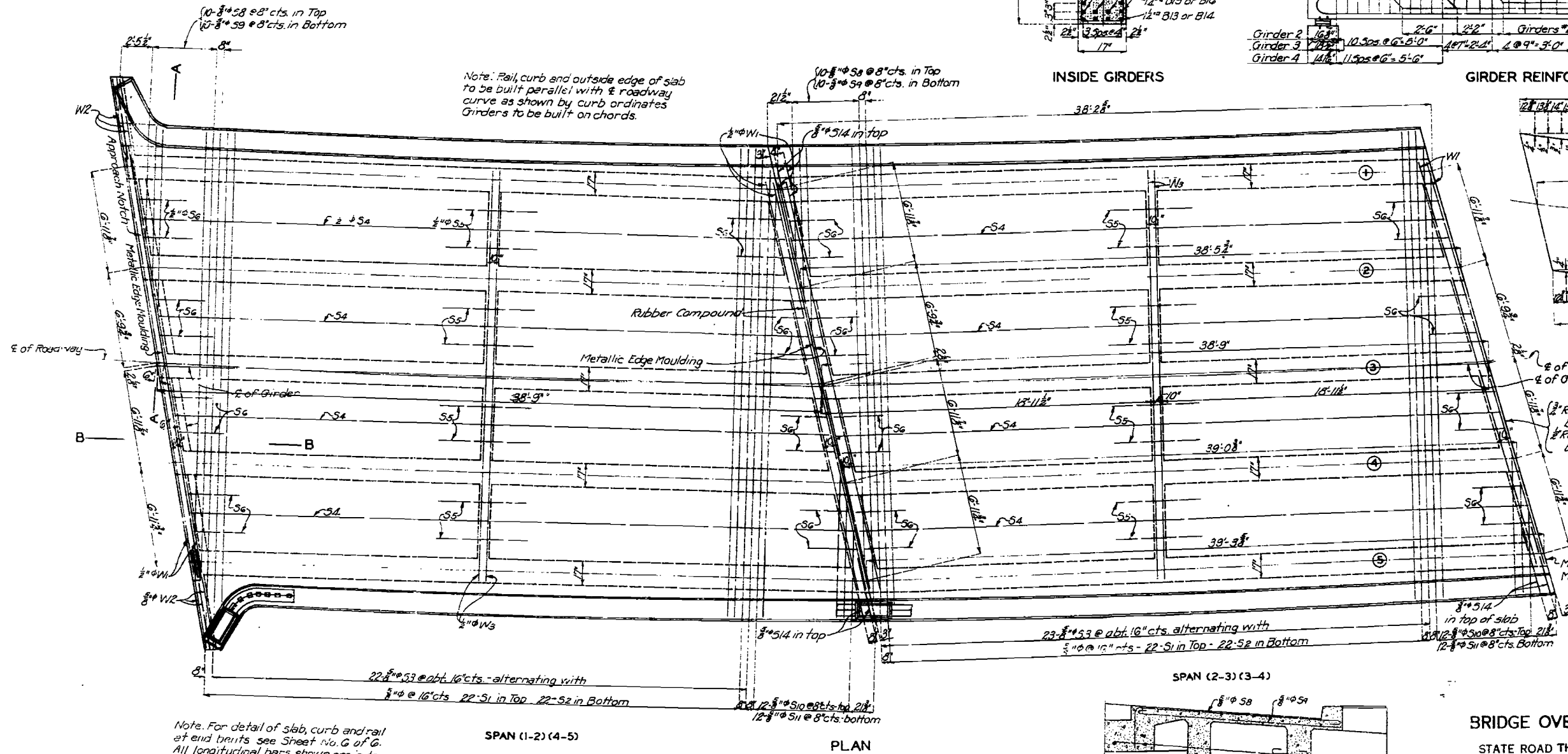
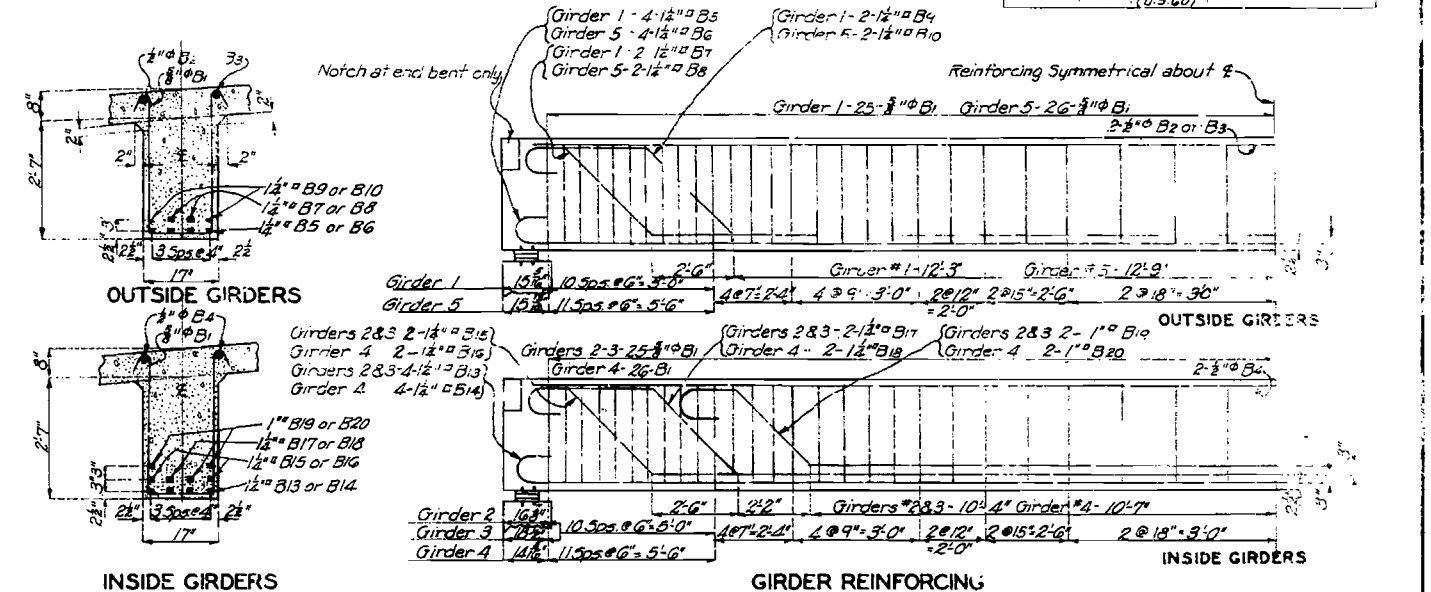
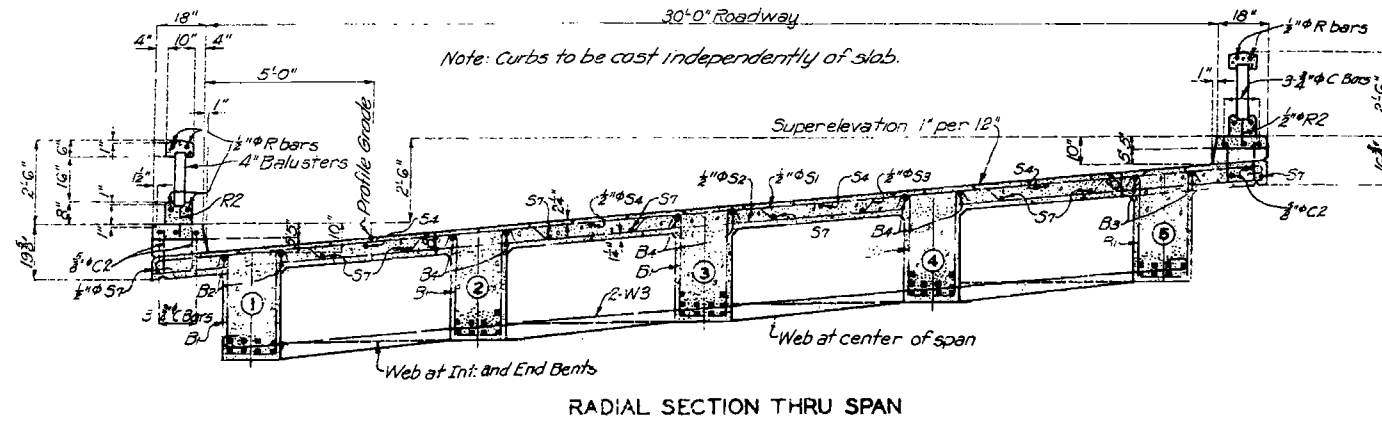
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5	MO.	N.R. 1798 (U.S. 60)	19		





# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	N.R.M. 179B (U.S. 60)	19		



## BRIDGE OVER DEXTER CREEK

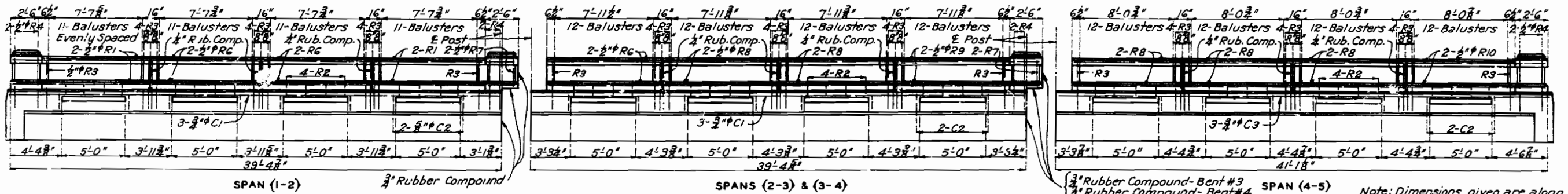
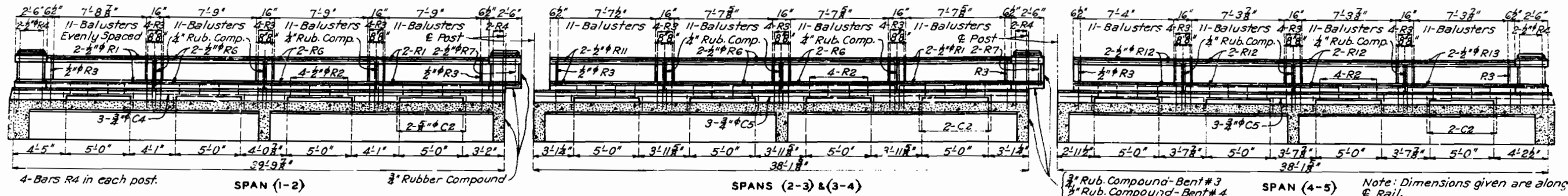
STATE ROAD THRU DEXTER  
ABOUT 0.5 MILE SOUTH OF DEXTER  
PROJ. NO. N.R.M. 179B (U.S. 60) STA. 879+72  
STODDARD COUNTY

F.A.

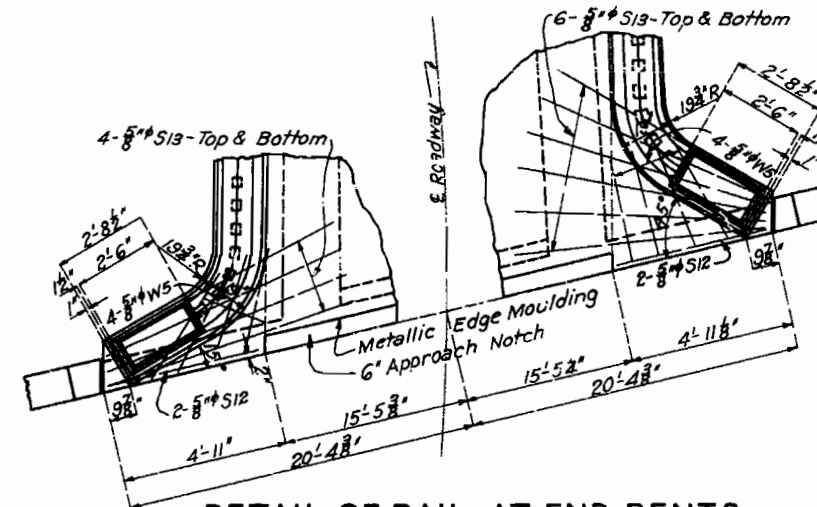
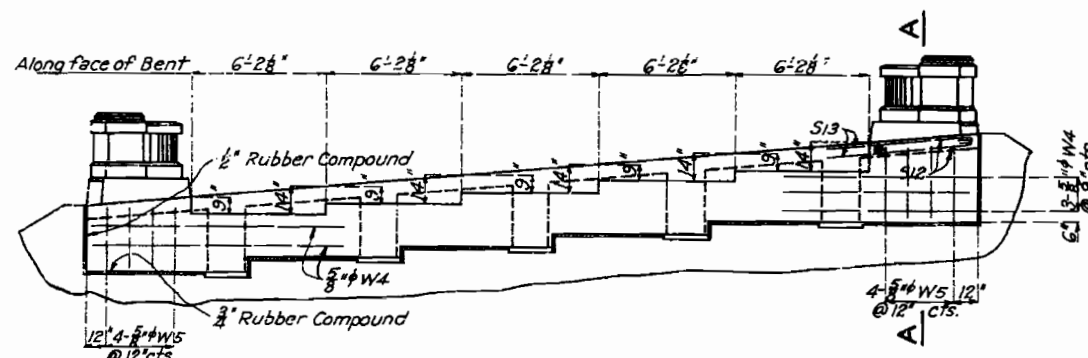
K-31

# MISSOURI STATE HIGHWAY DEPARTMENT

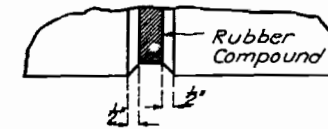
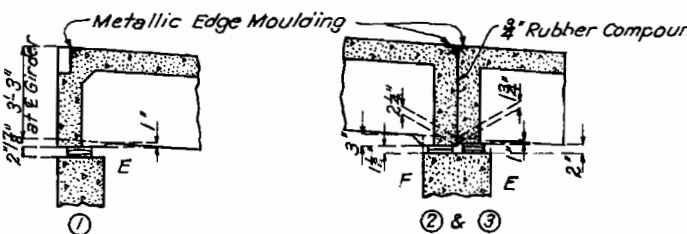
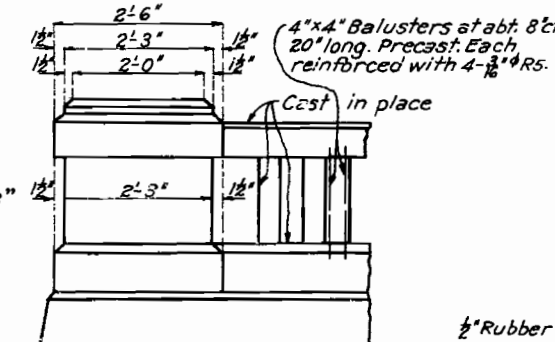
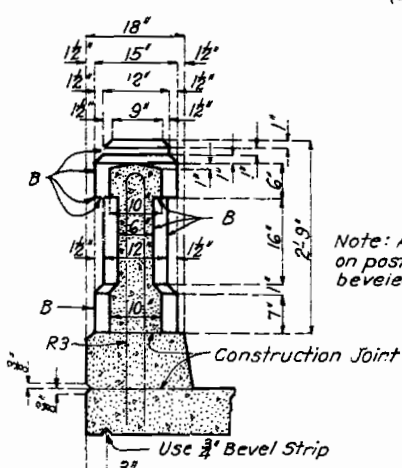
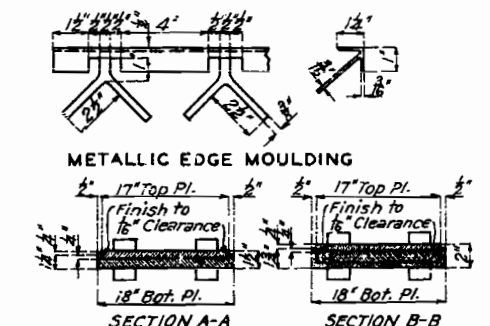
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	1799	19	6	



## DEVELOPED ELEVATION OF OUTSIDE RAIL

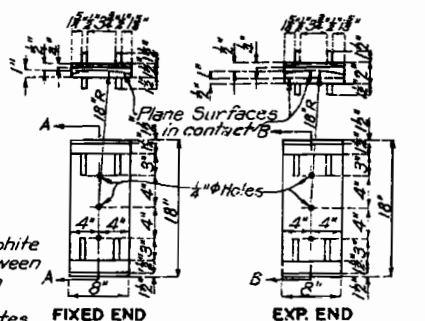


Note: Cost of metallic edge moulding to be included in unit bid price for concrete.



## SECTION A-A

Note: A mixture of graphite and oil to be placed between plates before placing in concrete. 3" holes in bottom plates only.



**PHOSPHOR BRONZE BEARING PLATES**  
Note: 20 Sets of 5 Plates each required. Each set consisting of 1 top plate and 1 bottom plate for fixed end, 1 top plate, 1 float plate and 1 bottom plate for expansion end.

## BRIDGE OVER DEXTER CREEK

STATE ROAD THRU TER  
ABOUT 0.5 MILE SOUTH OF DEXTER  
PROJ. NO. N.R.M. 1799 (U.S. 60) STA. 879 + 72  
STODDARD COUNTY

F.A.

K-31

Drawn May 1933 by P.H.S. - R.J.G.  
Traced June 1933 by R.J.G.  
Checked June 1933 by H.D.

Note: Rail, top of posts, curbs, slab and bottom of slab, and girders to be built parallel to grade. Post, subposts and balusters to be vertical.  
A mixture of graphite and oil to be placed between bearing plates before placing in concrete. All bearings to be horizontal.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 6.