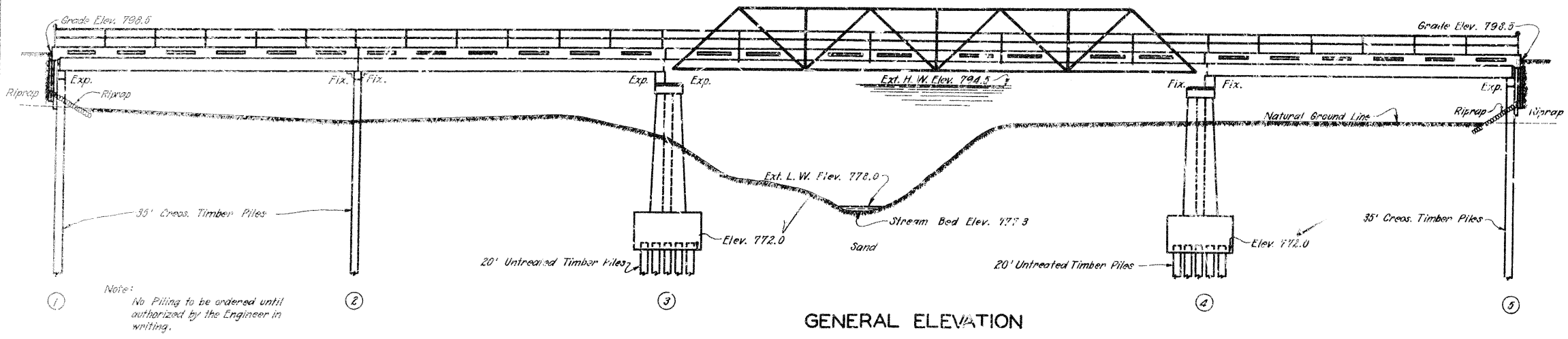


MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	200	1927	11	11

1-Standard Superstructure S 870



BILL OF REINFORCING STEEL

NO.	SIZE	LENGTH	MARK	LOCATION
-----	------	--------	------	----------

BENDING SKETCHES

1 Beam Spans

317	3/8" φ	21'-3"	S ₁	Slab
88	3/8" φ	21'-6"	S ₂	"
44	3/8" φ	22'-0"	S ₃	"
16	3/8" φ	22'-0"	S ₄	Curb
16	3/8" φ	21'-5"	S ₅	"
16	3/8" φ	22'-9"	S ₆	"
144	3/8" φ	12"	C ₁	"

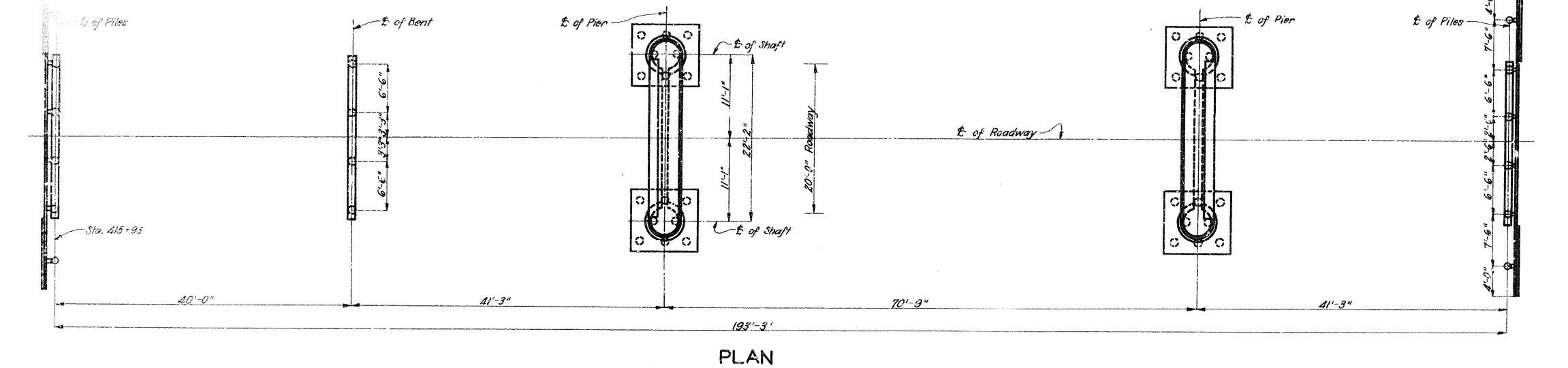
Steel Truss Span

21	3/8" φ	4'-0"	S ₇	Slab
----	--------	-------	----------------	------

Piers

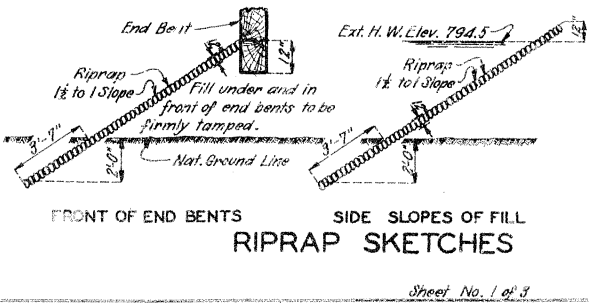
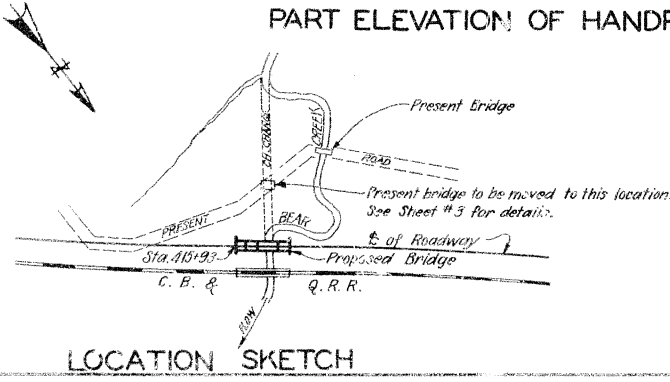
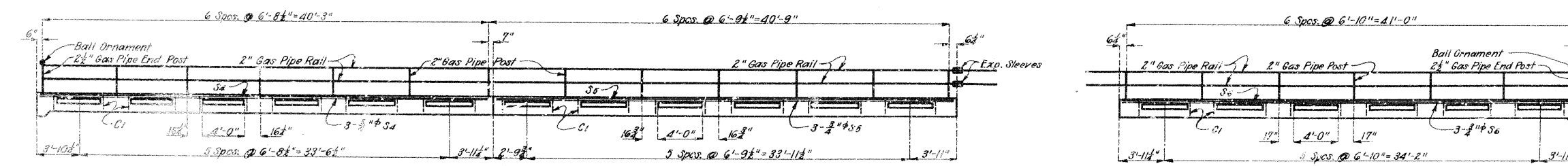
32	1" φ	8'-3"	D ₂	Footling
6	1" φ	24'-0"	H ₇	Web
28	3/8" φ	24'-0"	H ₈	"
8	1" φ	22'-3"	H ₉	Cap
4	3/8" φ	20'-0"	H ₁₀	"
44	3/8" φ	17'-0"	V ₆	Web
32	1" φ	17'-3"	V ₇	Col.
40	3/8" φ	3'-0"	P ₄	Cap
40	3/8" φ	7'-9"	P ₅	"
40	3/8" φ	7'-3"	P ₆	"

57



ESTIMATED QUANTITIES			
ITEM		SUPERSTR.	SUBSTR. TOTAL
Excavation	Cu. Yds.		308
Untreated Timber Piles	Lin. Ft.		640
Untreated Timber Pile Cu.	Lin. Ft.		96
Creos. Timber Piles	Lin. Ft.		650
Creos. Timber Pile Cut-Offs	Lin. Ft.		66
Concrete 1-2-3 1/2 Mix	Cu. Yds.	99.7	99.7
Concrete 1-2-4 Mix	Cu. Yds.		130.0
Rein. Steel	Lbs.	15580	370
Fabricated Struc. Steel	Lbs.	124,590	237.5
Cast Steel	Lbs.	800	800
Gas Pipe Rail	Lin. Ft.	880	880
Creos. Timber	Lin. Ft.	3760	3760

GENERAL NOTES:-
Concrete in superstructure to be 1-2-3 1/2 Mix.
Concrete in substructure to be 1-2-4 Mix.
Exposed edges to be beveled 1/2" where no other bevel is noted.
Piles to be driven to sustain a load of 20 tons per pile.
For Expansion Joint at Pier No. 3 see Std. S 818
Expansion devices required;
1 Exp. device EM1
1 Exp. device EM2
16 Brackets 1b
For details of joint at Pier No. 4 see Sheet No. 3
Paint:- Shop, One coat of linseed oil. Contact surfaces to be painted one coat of red lead. Inaccessible surfaces to be painted three coats of red lead.
Field: Three coats of paint as furnished by the Missouri State Highway Department.
First coat - red lead.
Second coat - sublimed blue lead.
Third coat - lead carbonate.
2 Name plates Type B as shown on Std. S 818 to be furnished and placed by the contractor. Cost of name plates included in price bid for other items.
All timber to be dense yellow pine creosoted.
B.M. Elev. 791.31 Spike in 20" Walnut Stump 10' L. Sta. 415+93



BRIDGE OVER BEAR CREEK

STATE ROAD FROM GENTRY TO GRANT CITY
ABOUT 2 MILES WEST OF GENTRY
PROJECT NO. R 20-S 6 STA. 415+93

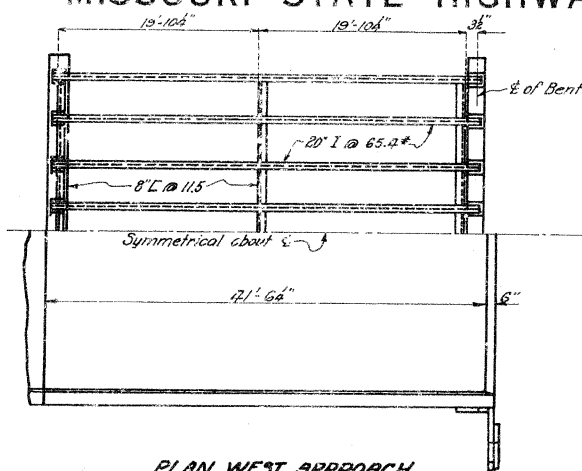
GENTRY COUNTY

SUBMITTED BY *D. W. Gentry* DATE Feb. 11, 1927
PASSED BY *J. S. Gentry* DATE 2/11/27
APPROVED BY *J. S. Gentry* DATE 2/11/27

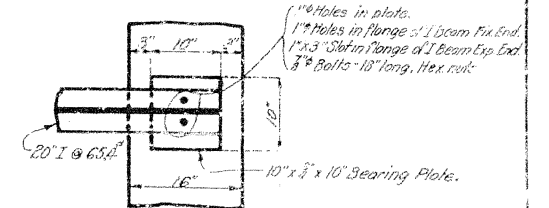
STANDARD S 818
STANDARD S 8
STANDARD S 18
H 551

Drawn Feb. 1927 By N.W.R. and H.E.C.
Traced Feb. 1927 By H.E.C.
Checked Feb. 1927 By J.T.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	R-29-36	19	112	

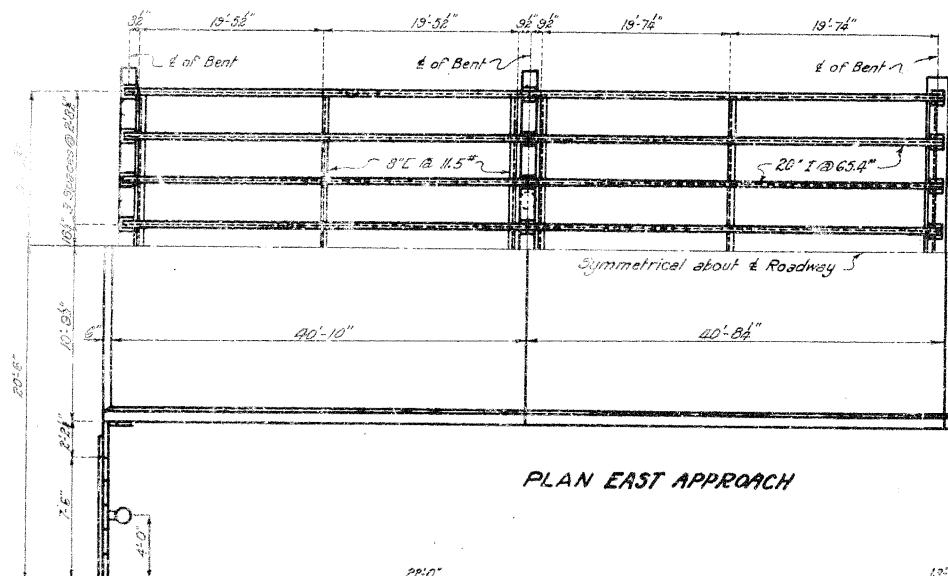


A hand-drawn sketch of a rectangular object, possibly a piece of material or a component. The top half is a plain rectangle, while the bottom half is filled with a stippled or dotted pattern. A dimension line at the bottom indicates a width of 16 inches.

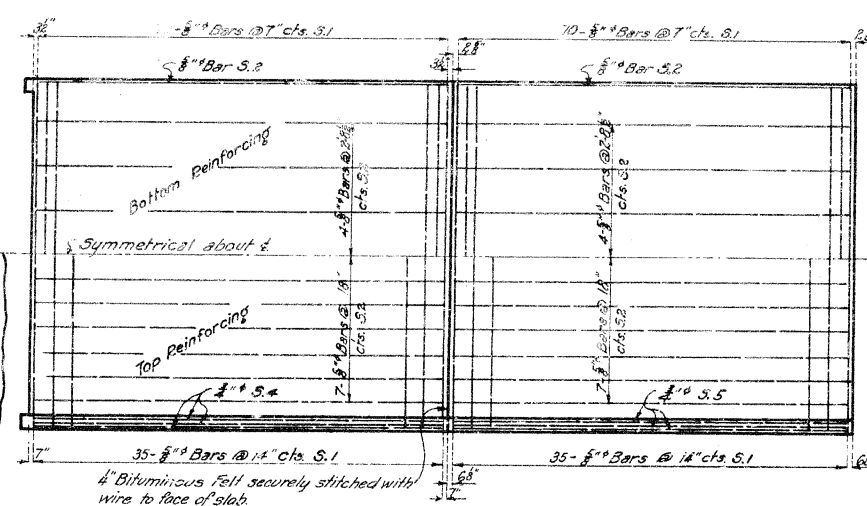


PLAN SHOWING REINFORCING

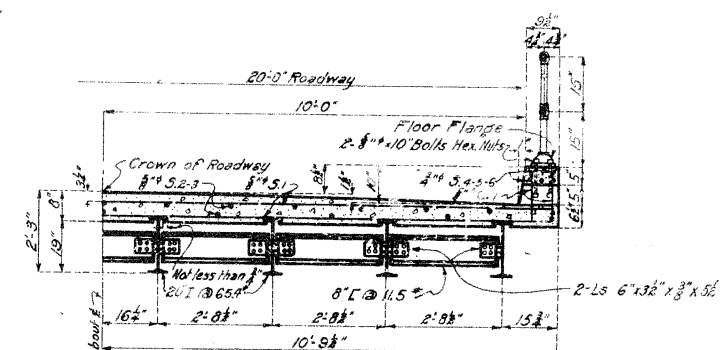
PLAN WEST APPROACH



PLAN EAST APPROACH

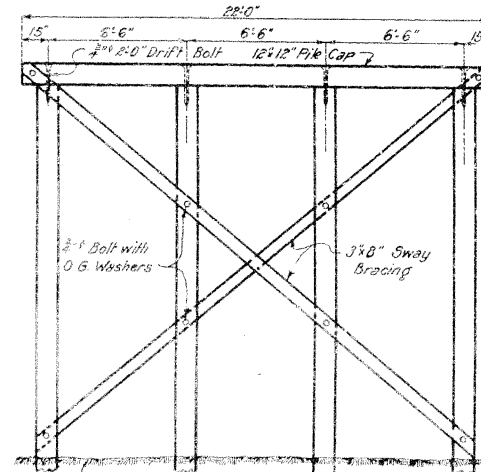


PLAN SHOWING REINFORCING

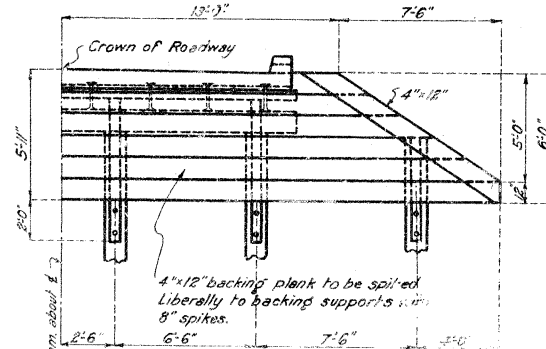


HALF SECTION THRU SPAN

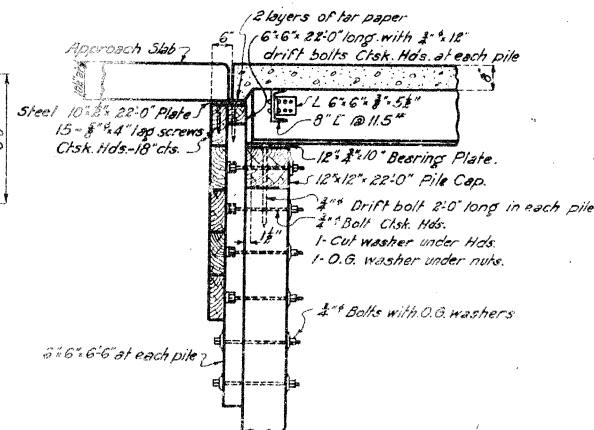
Note:- Top of channel separators at ends of each I beam span to be flush with bottom of floor slab as shown in section thru end bent at 4.
Bottom of concrete floor to be 1" below top of beam.



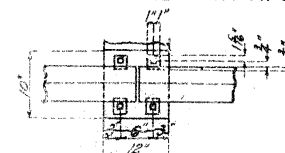
DETAIL OF INTERIOR BENT



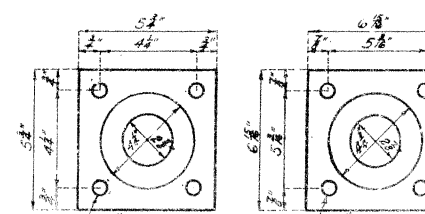
HALF ELEVATION OF END BENTS



SECTION
THRU END BENT AT 4

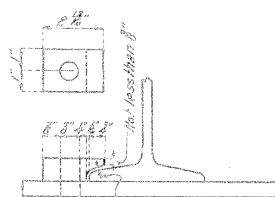


PLA

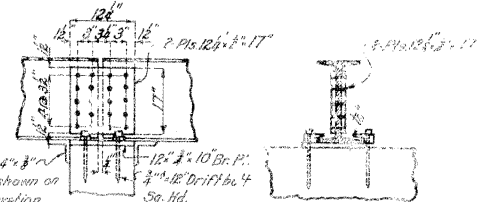


FOR INTERMEDIATE POSTS FOR END POSTS
DETAILS OF FLOOR FLANGES

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



DETAILS OF FLANGE CLAMP



SECTION

Cast iron clamps used on bearing plates to have 1/2" clearance at flange of beam to allow for expansion. All clamps to have 5/8" bored holes. Use two clamps only on each beam at pile caps on end bents.

DETAILS OF BEARING ON PILE CAP

Sheet No. 2 of 3

Ass'd Feb. 1927 By A.E.K. & F.C.I.
Checked Feb. 1927 By J.I.
Drawn Jan. 1926 By A.E.K.
Checked Jan. 1926 By J.A.J.

BRIDGE OVER BEAR CREEK

STATE ROAD FROM GENTRY TO GRANT CITY

ABOUT 2 MILES WEST OF GENTRY

PROJECT NO. R.29 - S.6

STA. 415 + 93

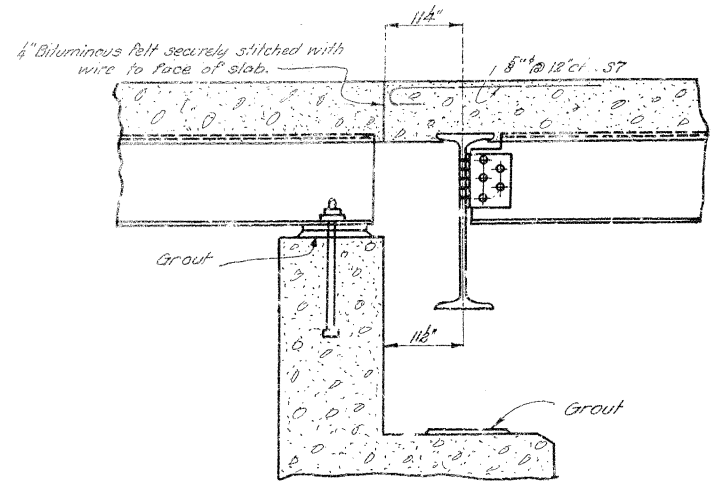
GENTRY COUNTY

Submitted By H. W. Enlow Date Feb. 11, 1927
Acting Bridge Engineer
Passed By W. C. Enlow Date 2/16/27
Assistant to Chief Engineer
Approved By J. H. Miller Date 2/16/27
Chief Engineer

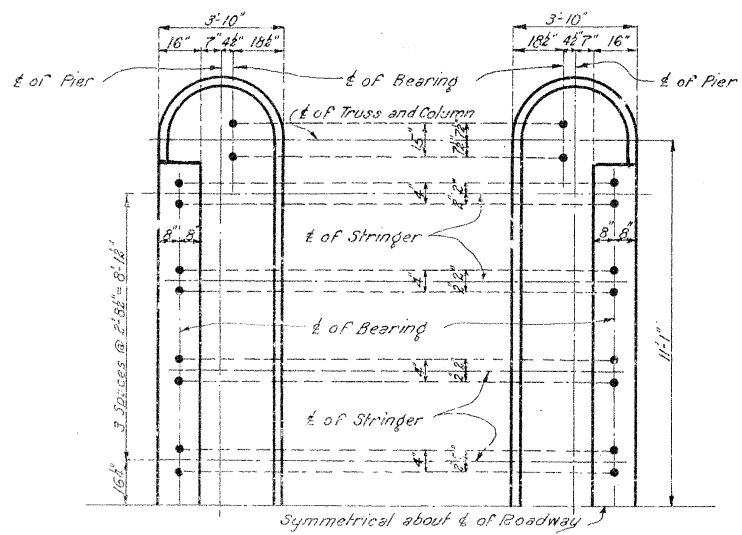
STD. 5818
STD. 58
STD. 518
H 551

MISSOURI STATE HIGHWAY DEPARTMENT

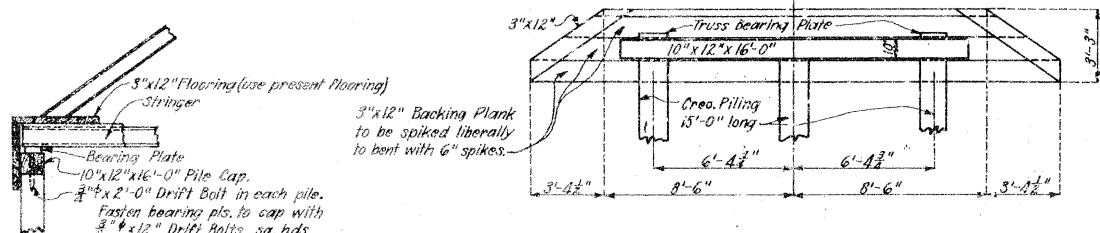
PROJ. NO.	STATE	FED. AID	FISC. YEAR	SHEET NO.	TOTAL SHEETS
5	Mo.	R29-S1	19	11	2



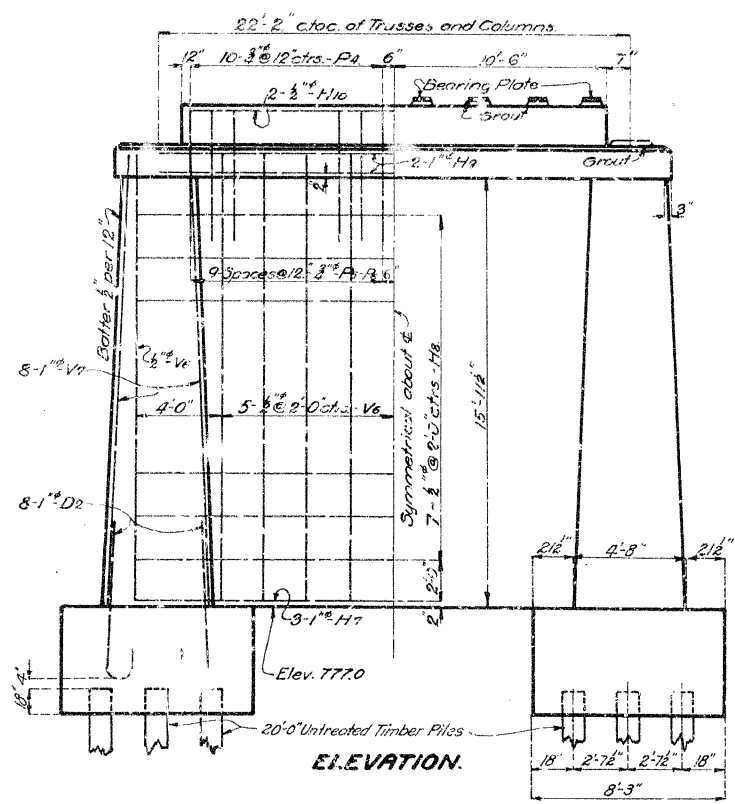
DETAILS OF JOINT AT PIER NO. 4



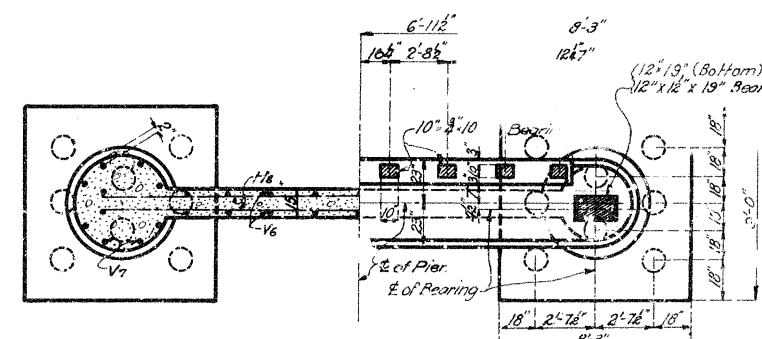
HALF ANCHOR BOLT PLAN



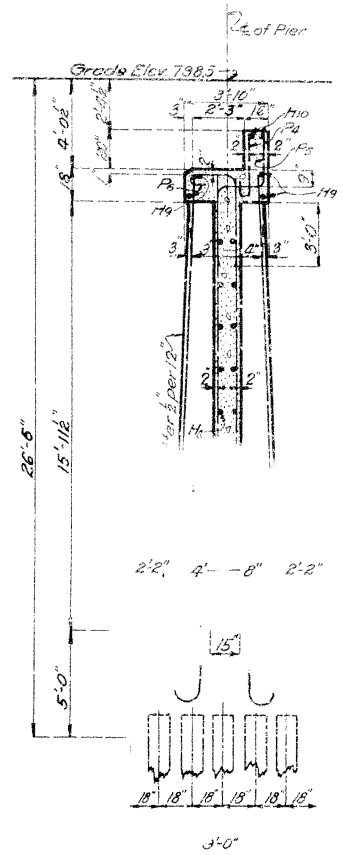
SUBSTRUCTURE DETAILS FOR OLD BRIDGE AT NEW LOCATION
(SEE LOCATION SKETCH)



ELEVATION.



HALF HORIZONTAL SECTION HALF PLAN
DETAILS OF PIERS NOS. 3 & 4



SE

Note: This drawing is not to scale, follow dimensions.

BRIDGE OVER BEAR CREEK
STATE ROAD FROM GENTRY TO GRANT CITY
ABOUT 2 MI. W. OF GENTRY
PROJECT NO. R29-S6 STA. 415+93
GENTRY COUNTY

Submitted by *W. W. Gussow* Date *Feb. 11, 1927*
Acting Bridge Engineer
Passed by *J. J. Gentry* Date *Feb. 11, 1927*
Assistant to Chief Engineer
Approved by *J. J. Gentry* Date *Feb. 11, 1927*
Chief Engineer

STO. 3818
STO. 58
STO. 518
H551

Sheet # 3 of 3

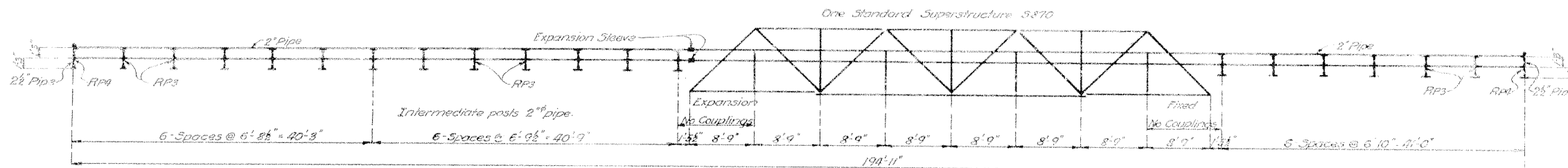
I-Beams Piers.

54

Reassembled Feb. 1927 By F.C.L.-A.F.K.
Checked Feb. 1927 By J.J.
Drawn Feb. 1925 By J.J.
Checked Feb. 1925 By J.J.

MISSOURI STATE HIGHWAY DEPARTMENT

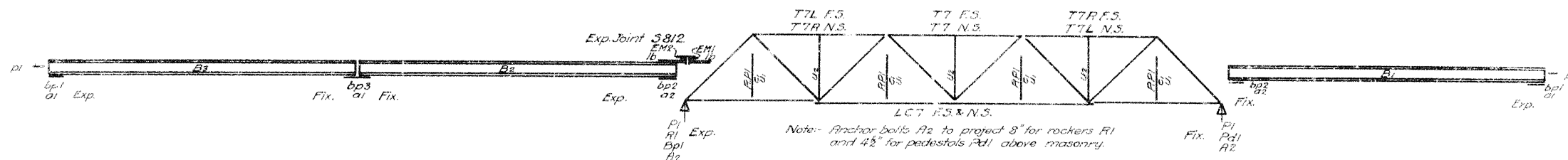
DESIGN NO.	DATE	BY	CHECKED	APPROVED	REVISIONS
5	NOV 1927	J. J. ILP	J. J. ILP	J. J. ILP	



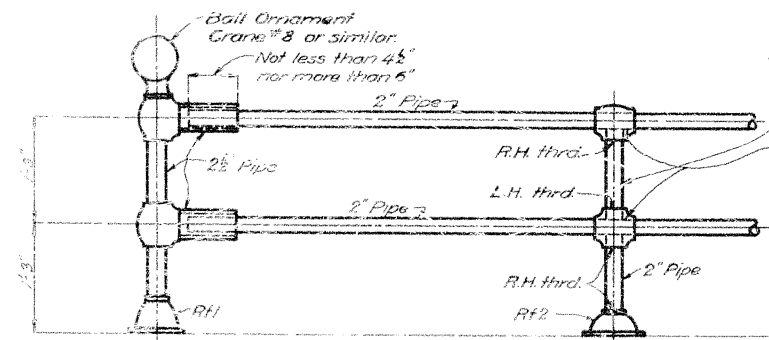
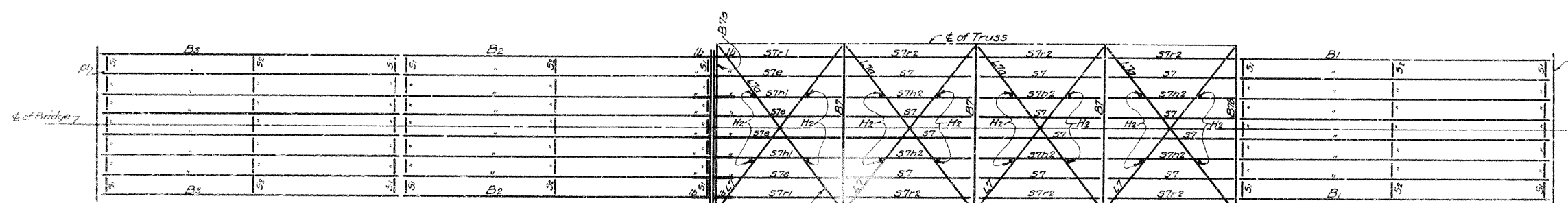
Note: - Couplings to miss rail posts at least one foot.

MAKE 2 LINES OF RAILING AS SHOWN. NK R1
MATERIAL REQUIRED:-
4- End posts RP4.
36- Intermediate posts RP3.
4- Expansion sleeves EX.
160- 3/4" x 10" Bolts, hex heads.
160- Cut washers for 3/4" bolts.
780- Lin. ft. 2" W.I. pipe, random lengths, (ship 800 ft.)

Erector Note:- Place expansion sleeves vertically above each other, and make expansion joints in same place on railing on both sides of roadway.



Note:- Anchor bolts R2 to project 8" for rockers R1 and 4 1/2" for pedestals R41 above masonry.



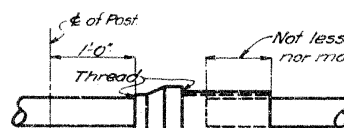
MAKE 4 END POSTS RP4.
ASSEMBLE IN SHOP
MATERIAL FOR ONE POST:-
2- 2 1/2" Tees.
2- 2 1/2" x 10" pipe, threaded 2 ends.
2- 2 1/2" x 9" pipe, threaded 1 end.
1- Bolt Ornament.
1- 2 1/2" Floor Flange Rf1.

MAKE 36 INTERMEDIATE POSTS RP3.
ASSEMBLE IN SHOP
MATERIAL FOR ONE POST:-
1- 2" Tee.
1- 2" Cross, R & L.H. Thread.
1- 2" x 1' 0 1/2" pipe, Thread 2 ends.
1- 2" x 1 1/4" pipe, Thread 2 ends.
1- 2" Floor Flange Rf2.

DETAILS OF RAIL POSTS RP3 & RP4.

Cut upper section to exact length. Allow additional threads each end to secure tight bearing. Bring to tight bearing after erection by turning this section of post. Ream fittings to permit passage of pipe. - Snug fit.

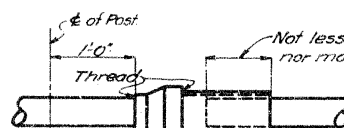
Lower section of post to be cut to exact length to give firm bearing against horizontal pipe. All tightening after erection to be done with top section of post.



MAKE 4 EXPANSION SLEEVES EX
MATERIAL REQUIRED:-
4- Reducers 2 1/2" x 2"
4- 2 1/2" pipe nipples 9" long.

DETAIL OF EXPANSION SLEEVES.

ERECTION DIAGRAMS.

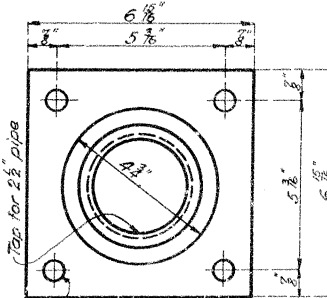


MAKE 4 EXPANSION SLEEVES EX
MATERIAL REQUIRED:-
4- Reducers 2 1/2" x 2"
4- 2 1/2" pipe nipples 9" long.

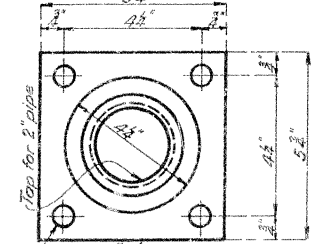
DETAIL OF EXPANSION SLEEVES.

GENERAL NOTES.

All couplings to be threaded. All fittings to be ball pattern, threaded malleable castings except as noted. See design drawings for anchor bolt plan. Shop paint: One coat of linseed oil.



Drill 1/8" Holes
4- FLOOR FLANGES- Rf1. Crane #7 or similar



Drill 1/8" Holes
35- FLOOR FLANGES- Rf2. Crane #1 or similar

DETAILS OF FLOOR FLANGES.

QUANTITIES PAID FOR BY MO.S.H. DEPT.		
ITEMS	STR. STL.	CAST. STL.
Trusses	23,320	
Beams & Stringers	27,900	
Laterals, Posts & Bolts	1,470	
Expansion Joints	2120	
Rockers & Pedestals	210	80.1
Total Steel (Lbs.)	55,220	80.1
Pipe Railing (Lin. Ft.)		880

Note:- Above weights do not include weight of approaches.

BRIDGE OVER BEAR CREEK

STATE ROAD FROM GENTRY TO GRANT CITY
ABOUT 2 MILES WEST OF GENTRY
PROJECT NO. R29-SG STA. 413+93

GENTRY COUNTY

SUBMITTED BY J. J. ILP DATE 11/19/27
CHECKED BY J. J. ILP DATE 11/19/27
APPROVED BY J. J. ILP DATE 11/19/27

STD.S812
STD.S870
STD.S808
H 551