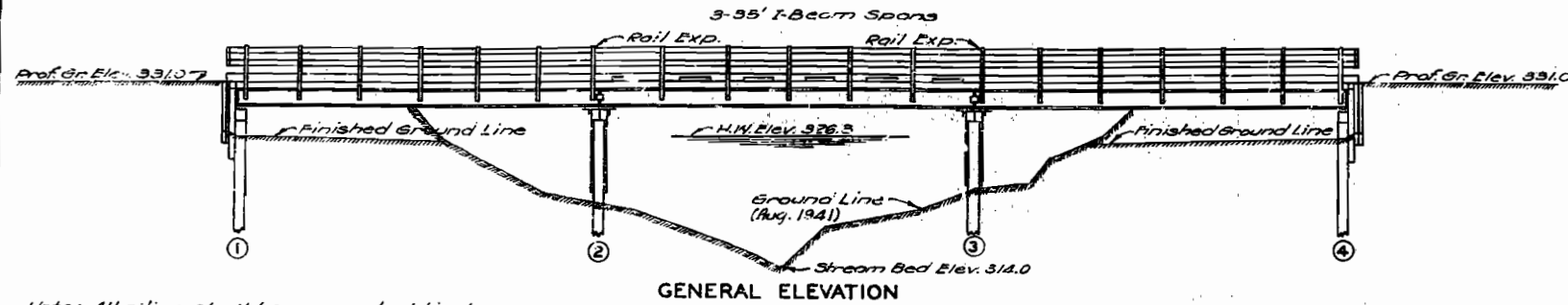


MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	MO.	3134- (17) (SH)	1945	14	

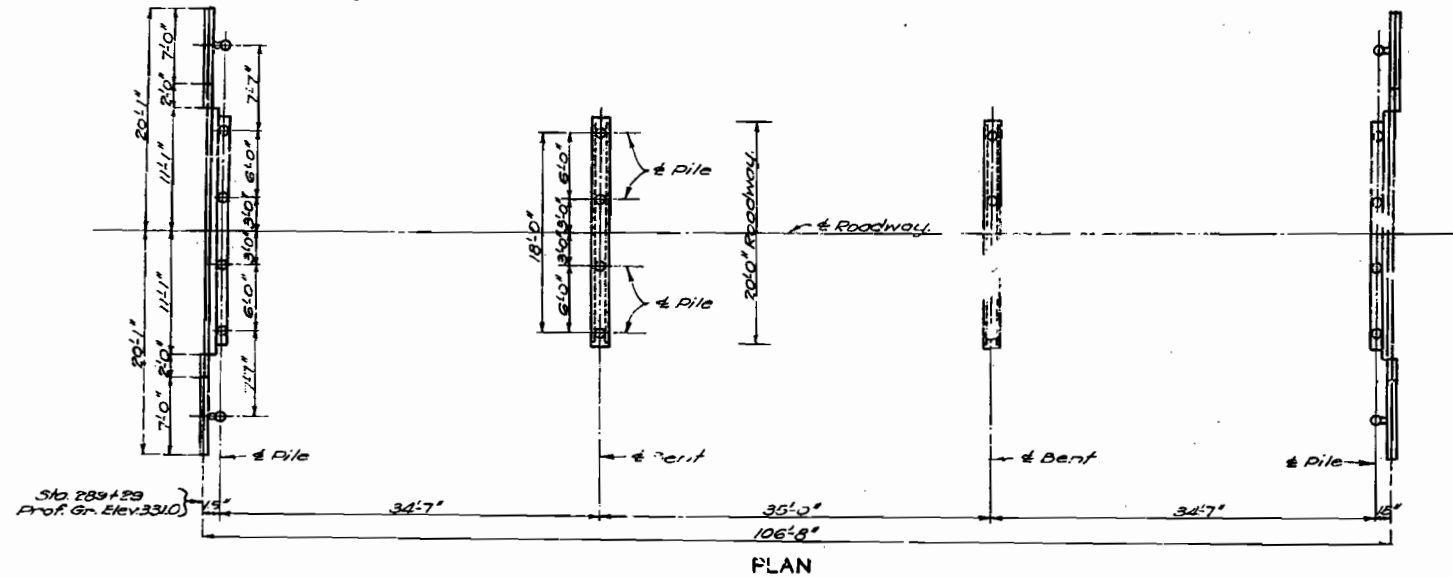


Note: All piling shall be creosoted timber.
Estimated quantities shown on plans are based on the following lengths: 16 @ 50'-0" and 4 @ 15'-0". These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration will be determined by the Engineer during driving. See notes below.
All wing pile shall be driven to full penetration of lengths given on plans. All other p. s shall be driven to sustain a load of at least 2c ton per pile and with tips to at least Elev. 296.0.

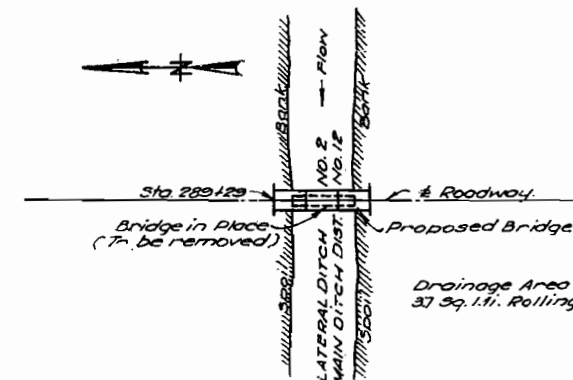
Note: Excavation of all existing materials under bridge shall be made to not less than 3' below bottom of steel and not less than 4' outside of curb lines. Payment for this excavation outside of limits of excavation for structure will be made of unit contract price for roadway excavation.

COMPLETE BILL OF REINFORCING STEEL				
Mark	No.	Size	Length	Location
Superstructure				
S1	214	1 1/2"	21'-9"	"
S2	167	1 1/2"	23'-9"	"
S3	160	1 1/2"	19'-0"	"
S4	80	1 1/2"	18'-5"	"
C1	182	3/4"	2'-9"	Curbs
C2	24	3/4"	19'-3"	"
C3	12	3/4"	19'-0"	"

ESTIMATED QUANTITIES			
Item	Superstr.	Substr.	Total
Class I Excavation for Structures Curb		110	110
Class B Concrete Curb	51.5		51.5
Reinforcing Steel Lbs.	9200		9200
Structural Steel Lbs.	45100		45100
Creosoted Timber F.B.M.		3020	3020
Creosoted Pile in Place Lin. Ft.		652	652
Creosoted Pile cut-off Lin. Ft.		208	208



Note: No test piles are to be driven and the Contractor may proceed to order piles to the lengths indicated on plans without further authorization by the Engineer.
As the pile driving proceeds, the Engineer may at his election require the Contractor to cut off a designated length from the tip end of the piles before they are driven. All such lengths cut from pile tips will be included for payment as pile cut-offs.



LOCATION SKETCH

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1941.
Loading H40, A.A.S.H.O.
Class B Concrete Stress 1000 #/sq.
Reinforcing Steel Stress 18,000 #/sq.
Structural Steel Stress 18,000 #/sq.
Creosoted Timber 1,600 #/sq.
Rivets 3/4", Nuts 3/4" except in handrail where rivets shall be 5/8" and holes 1 1/8". Field connections for handrail channels shall be 5/8" button head bolts and for connections of rail to rail posts shall be 3/8" machine bolts, holes 1/2". All other field connections riveted except as noted. Washers shall be used under nuts of all machine & turned bolts.
All timber shall be creosoted and shall be 1600 # F Douglas Fir of the west coast region or either longleaf or shortleaf 1600 # Southern Yellow Pine.
All timber shall be rough full sawn except as noted in timber bill for pile caps.
All timber shall be cut to billed lengths and shapes and shall be bored as shown before treating. All backing plank are billed 6" long and are to be recut and fitted in the field.
Paint: Shop none. Field, contact surfaces of bolted field connections one coat of red lead and surfaces inaccessible after erection 3 coats of red lead. No other paint to be applied by the contractor. Payment for cleaning and painting will be included in unit price bid for structural steel.
Where joint filler is specified on plans it shall conform with the requirements for Premoulded Material Filler as given in Section 35-19A (1) of the Standard Specifications.

B.M. Elev. 331.29 N.I.R. 18" Bl. Oak 75' Lt. Sta. 289+05

BRIDGE OVER LATERAL NO. 2 - MAIN D.D. NO. 12

STATE ROAD FROM ROUTE SJ SOUTH TO ROUTE 53
ABOUT 4.5 MILES N.W. OF CAMPBELL
PROJECT NO. S134- (17) (SH) STA. 289+29
DUNKLIN COUNTY

SUBMITTED BY J.W. Qualow DATE 3/9/1945
APPROVED BY C.W. Brown DATE 3/9/1945
BRIDGE ENGINEER
CHIEF ENGINEER

STD.C-110R3

X-586

Drawn Jan. 1945 by C.S.A.
Traced Feb. 1945 by H.C.
Checked Feb. 1945 by G.F.K.

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

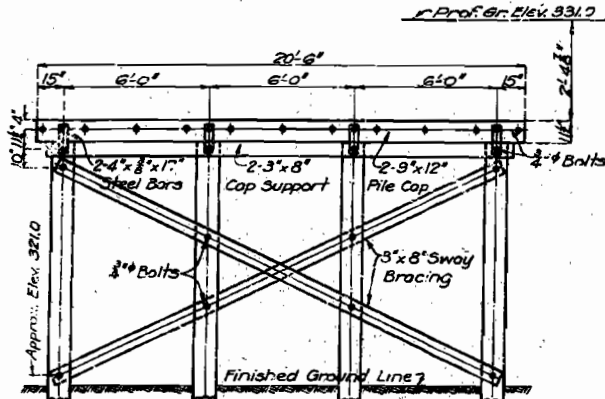
Sheet No. 1 of 3.

SEE FINAL PLANS DRAWN LINES

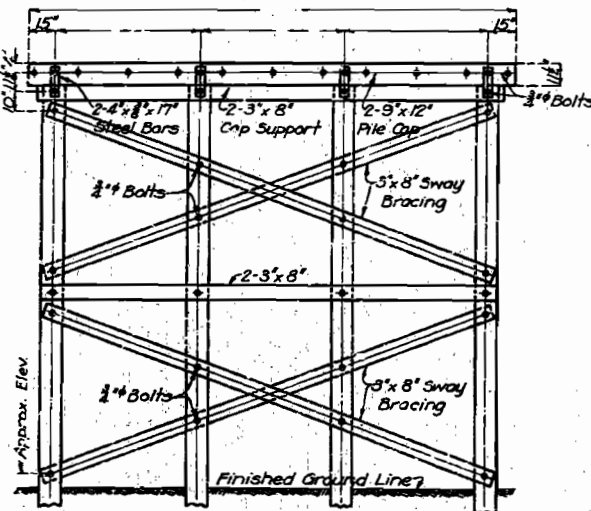
266

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. A.D. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	384 (S.H.)	19		



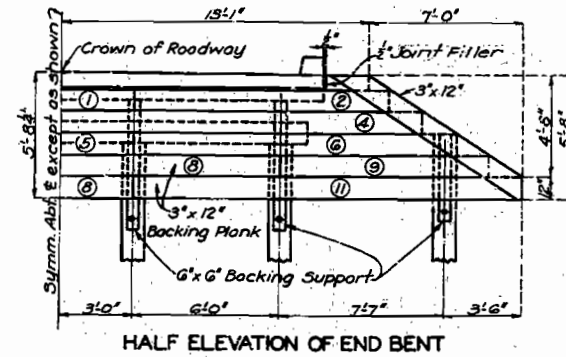
DETAIL OF INTERIOR BENT NO. 2 & 3. REQUIRING SINGLE BRACING



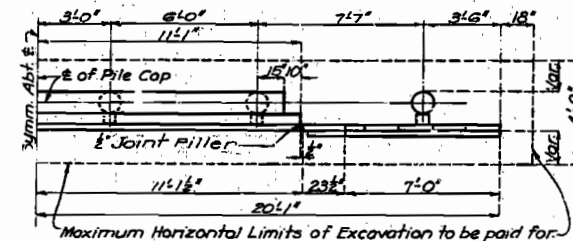
DETAIL OF INTERIOR BENT NO. REQUIRING DOUBLE BRACING

Note: Excavation will be allowed for interior bents within the maximum horizontal limits of 4'-9" in width and 23'-6" in length. All 4" x 8" x 17" bars required for attaching pile cap to pile cap supports are to be considered substructure hardware and will be included in price bid for timber in place.

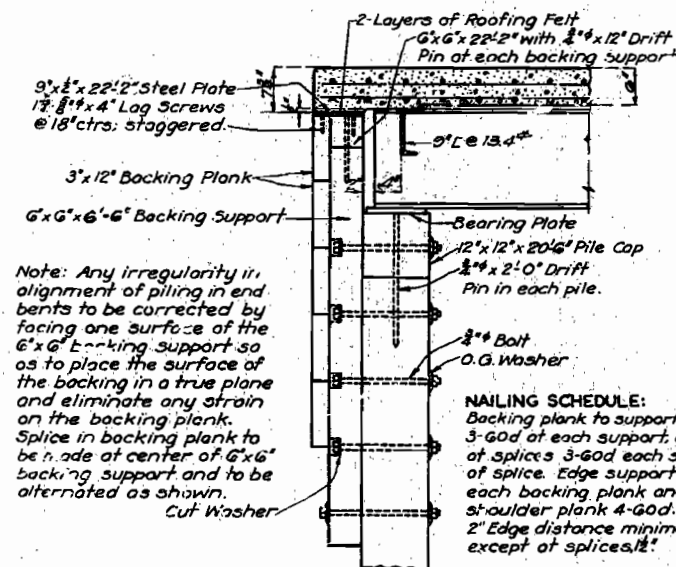
PILE CUT-OFF ELEVATIONS			
BENT No. 1 & 4	CUT-OFF Elev.	BENT No. 2 & 3	CUT-OFF Elev.
1 (Bearing Piles)	327.64	Bearing Pile	327.63
1 (Wing Piles)	328.3		



HALF ELEVATION OF END BENT



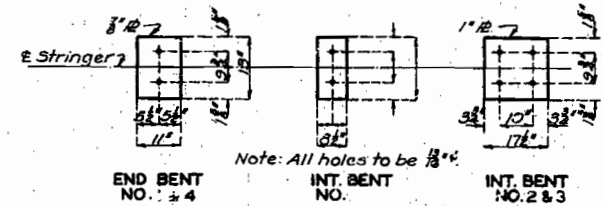
HALF PLAN OF END BENT



SECTION THRU END BENT AT E. ROADWAY



CAP PLATE AT END BENT

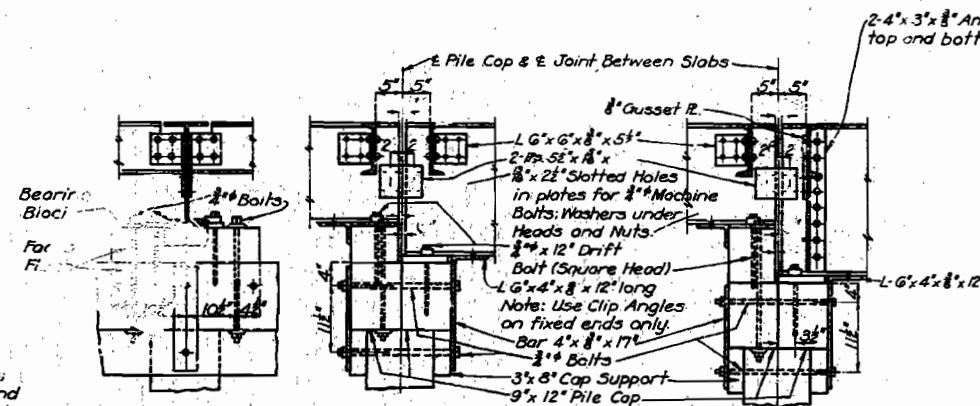


DETAILS OF BEARING PLATES

Note: All bearing plates shall be straightened to plane surfaces.

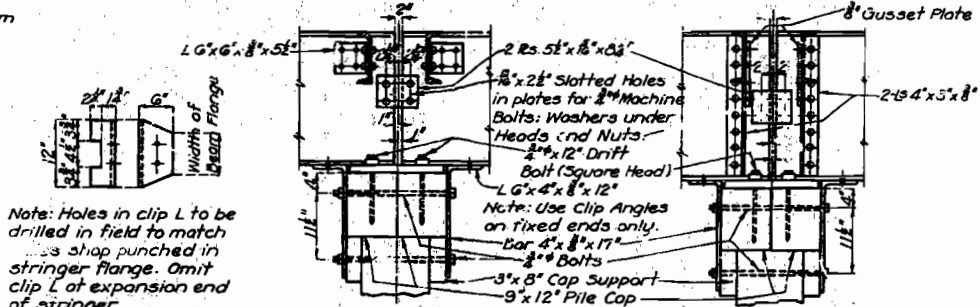
SUBSTRUCTURE TIMBER BILL					Shoring and Boring Sketches	
Piece	No.	Size	Length	Remarks		
Backing Plank	1	3" x 12"	175'	Cut to length		
	2	3" x 12"	115'			
	3	3" x 12"	185'			
	4	3" x 12"	194'			
	5	3" x 12"	202'			
	6	3" x 12"	142'			
	7	3" x 12"	164'			
	8	3" x 12"	186'			
	9	3" x 12"	115'			
	10	3" x 12"	175'			
Shoulder Plank	1	3" x 8"	23'			
Edge Support	2	3" x 12"	10' 6"	Cut to length & shape		
Backing Support	4	6" x 6"	6' 6"			
Backing Support	2	6" x 6"	4' 0"			
Backing Support Cap	1	6" x 6"	22' 2"	Cut to length		
Pile Cap	1	12" x 12"	20' 6"			
Pile Cap	4	9" x 12"	20' 6"	Cut to length		
Cap Support	4	3" x 8"	20' 0"			
Bracing	4	3" x 8"	19' 3"			
Bearing Block	4	3" x 8"	19' 3"			

Note: Pile caps to be classified as Beams and Stringers. All other timber to be classified as Joists and Plank. * 525 to exact depth of 118'.



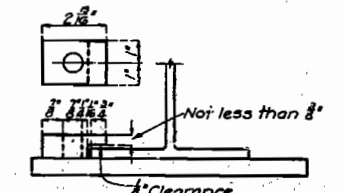
SPANS REQUIRING 14" TO 24" STRINGERS
INTERIOR BENTS FOR UNEQUAL DEPTH STRINGERS

ONE SPAN REQUIRING 27" STRINGER



SPANS REQUIRING 14" TO 24" STRINGERS
INTERIOR BENTS FOR EQUAL DEPTH STRINGERS

Note: Pile caps 12" x 18" may be substituted for 2' x 9" x 12" pile caps shown.



Note: Cast iron clamps used on bearing plates to have 1/8" clearance at flange of beam to allow for expansion. All clamps to have 3/4" cored holes. Use two clamps only on each I-beam at end bents.

DETAILS OF FLANGE CLAMP

BRIDGE OVER LATERAL NO. 2 - MAIN D.D. NO. 12

STATE ROAD FROM ROUTE SJ SOUTH TO ROUTE 53
ABOUT 4.5 MILES N.W. OF CAMPBELL
PROJECT NO. 134- (1) (SH) STA. 289+29

DUNKLIN COUNTY

NO CONSTRUCTION CHANGES

X-586

Sheet No. 2 of 3

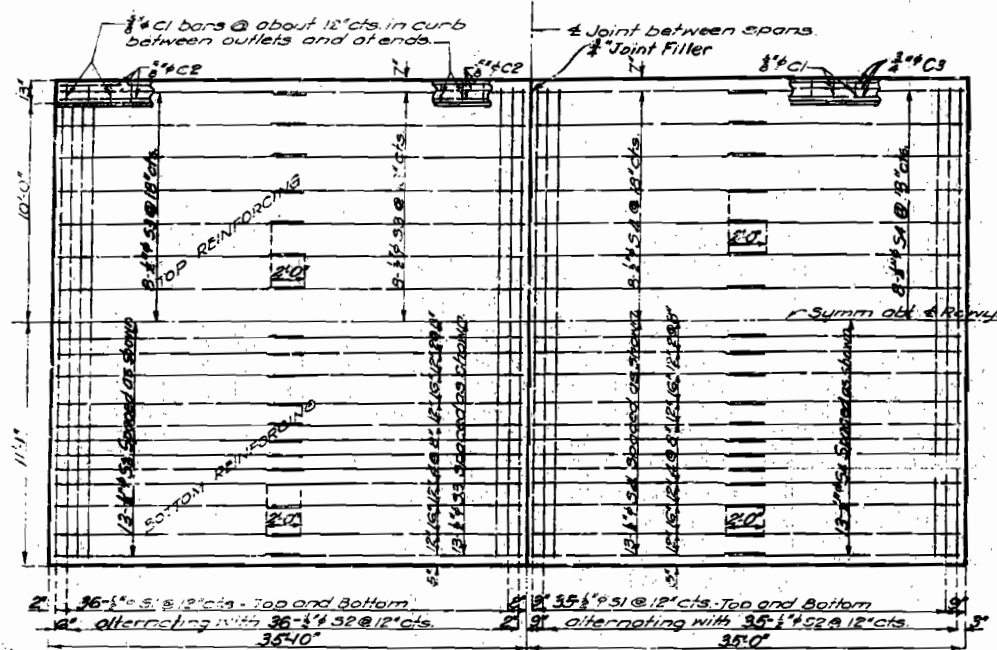
Note: This drawing is not to scale. Follow dimensions.

Drawn Dec. 1938 by T.H.M.
Traced Dec. 1938 by G.W. Assembled Jan. 1945 by C.S.A.-H.C.
Checked Mar. 1939 by N.W.R. Checked Feb. 1945 by A.H.K.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	3134- (1) (SH)	19		

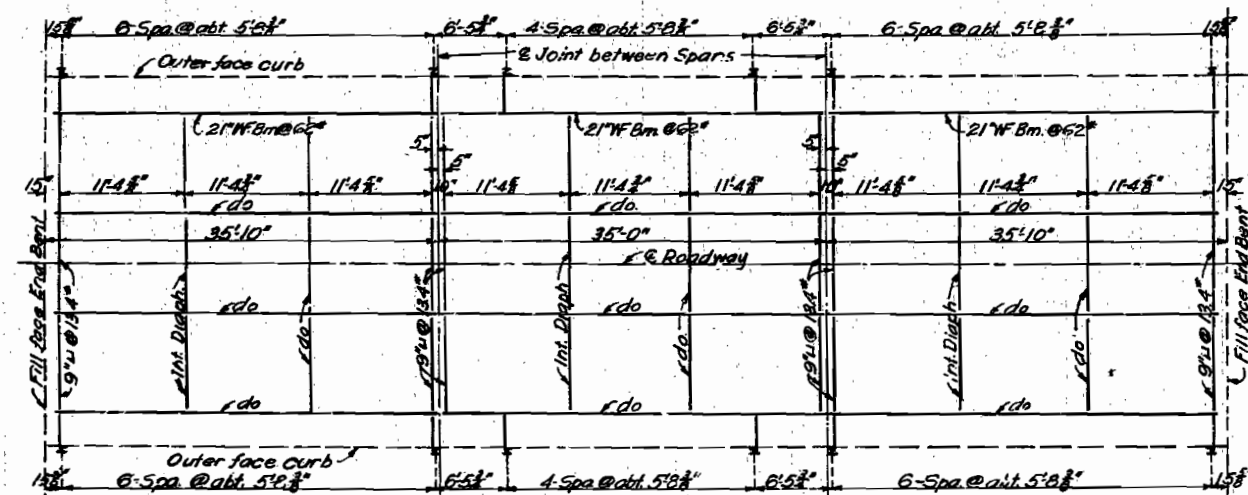
43



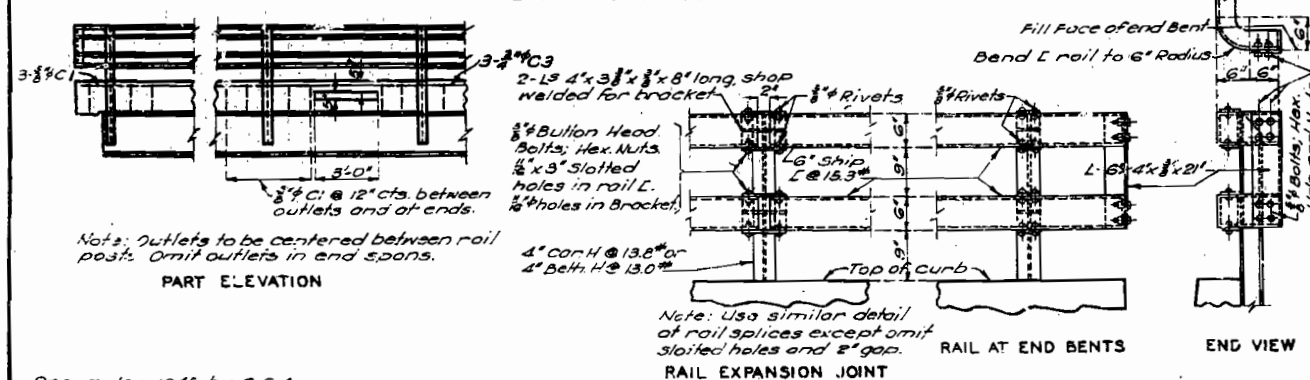
SPAN (1-2) & (4-3)

SPAN (2-3)

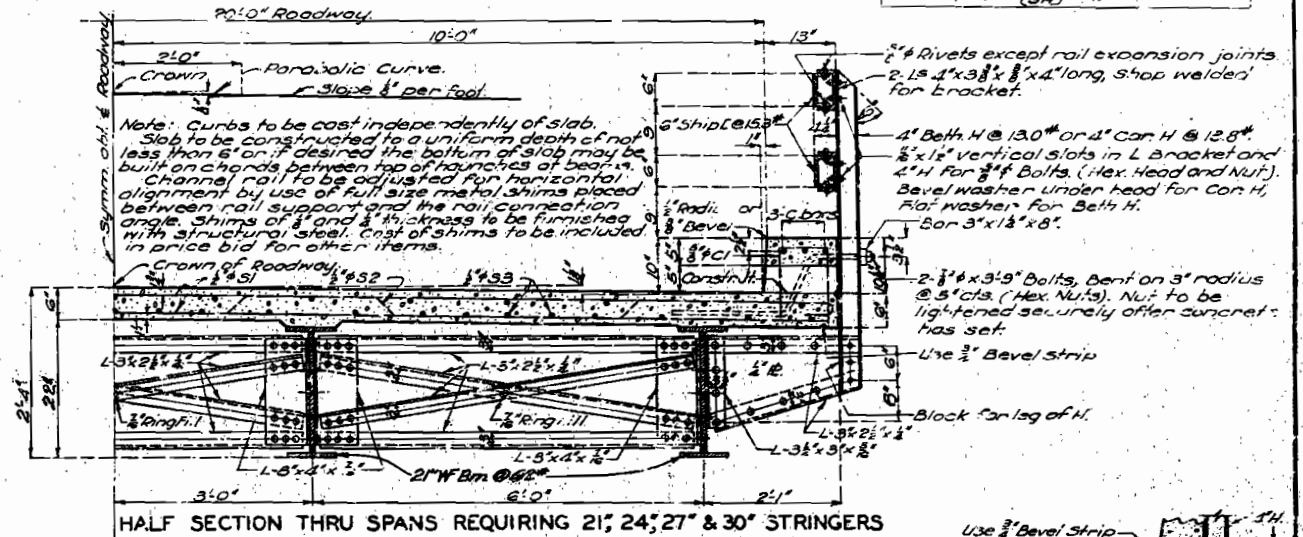
PLAN OF SLAB SHOWING REINFORCING



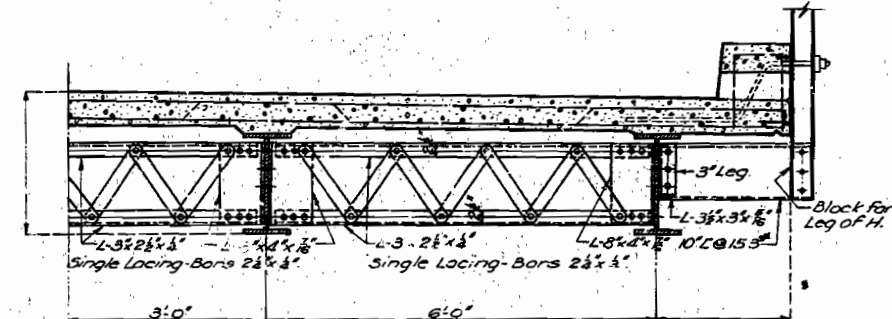
PLAN OF STRUCTURAL STEEL



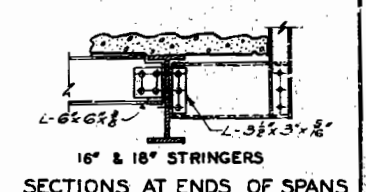
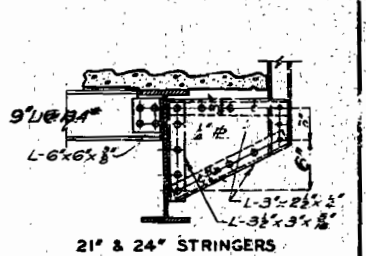
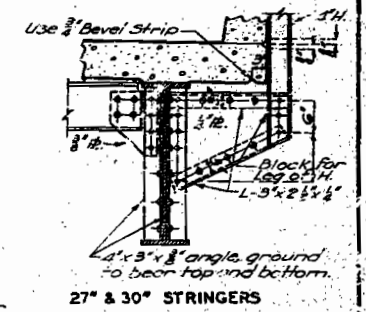
Drawn Jan. 1945 by C.S.A.
Traced Jan. 1945 by H.C.
Checked Feb. 1945 by A.H.K.



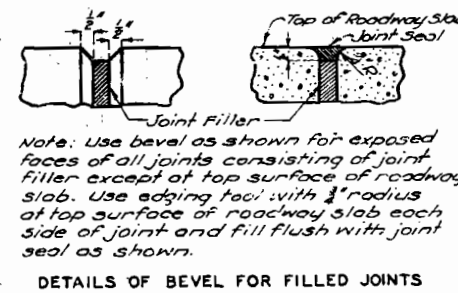
HALF SECTION THRU SPANS REQUIRING 21" 24" 27" & 30" STRINGERS



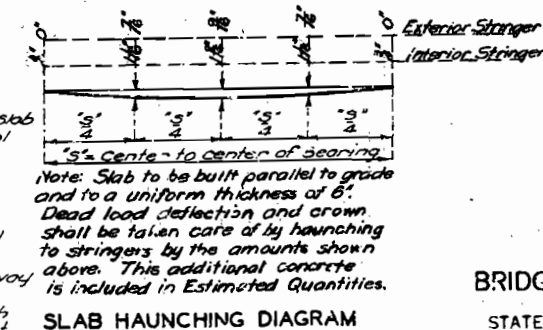
HALF SECTION THRU SPANS REQUIRING 14" 16" & 18" STRINGERS



SECTIONS AT ENDS OF SPANS



DETAILS OF BEVEL FOR FILLED JOINTS



SLAB HAUNCHING DIAGRAM

BRIDGE OVER LATERAL NO.2-MAIN D.D. NO.12

STATE ROAD FROM ROUTE 53 SOUTH TO ROUTE 53
ABOUT 4.5 MILES N.W. OF CAMPBELL
PROJECT NO. 3134- (1) (SH) STA 289+29

DUNKLIN COUNTY

NO CONSTRUCTION CHANGES

X-586

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

Sheet No. 3 of 3

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	3134- (SH)	19		

FINAL PLANS

COMPLETE BILL OF REINFORCING STEEL					
Mark	No.	Size	Length	Location	Bending Sketches
Superstructure					
S1	212	1/2"	21'-9"	Sloab	
S2	107	1/2"	23'-9"	"	
S3	160	1/2"	19'-0"	"	
S4	80	1/2"	18'-6"	"	
Curbs					
C1	182	3/4"	2'-9"	Curbs	
C2	24	3/4"	19'-3"	"	
C3	12	3/4"	19'-0"	"	

FINAL QUANTITIES			
Item	Superstr.	Substr.	Total
Class I Excavation for Structures Cuts		117.0	117.0
Class B Concrete Cuts	51.5		51.5
Reinforcing Steel Lbs.	9200		9200
Structural Steel Lbs.	1534.0		1534.0
Creosoted Timber F.B.M.	3040		3040
Creosoted Pile in Place Lin. Ft.	578		578
Creosoted Pile cut-off Lin. Ft.	282		282

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1941.
 Loading H10, A.A.S.H.O.
 Class B Concrete Stress 1000 #/sq.
 Reinforcing Steel Stress 18,000 #/sq.
 Structural Steel Stress 18,000 #/sq.
 Creosoted Timber 1,600 #/sq.
 Rivets 3/4" Holes 1/2" except in handrail where rivets shall be 5/8" and holes 1/2". Field connections for handrail channels shall be 3/4" button head bolts and for connections of rail to rail posts shall be 3/4" machine bolts, holes 1/2". All other field connections riveted except as noted. Washers shall be used under nuts of all machine & turned bolts.
 All timber shall be creosoted and shall be 1600 #/sq. Douglas Fir of the west coast region or either longleaf or shortleaf 1600 #/sq. Southern Yellow Pine.
 All timber shall be rough full sawn except as noted in timber bill for pile caps.
 All timber shall be cut to billed lengths and shapes and shall be bored as shown before treating. All backing plank are billed 6" long and are to be recut and fitted in the field.
 Paint: Shop, none; Field, contact surfaces of bolted field connections one coat of red lead and surfaces inaccessible after erection 3 coats of red lead. No other paint to be applied by the contractor. Payment for cleaning and painting will be included in unit price bid for structural steel.
 Where joint filler is specified on plans it shall conform with the requirements for Pre-molded Material Filler as given in section 38-19A (1) of the Standard Specifications.

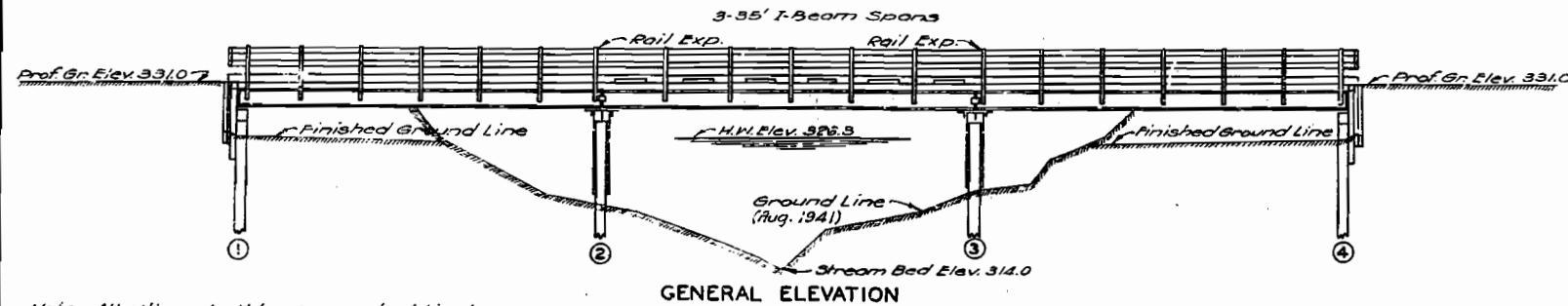
B.M. Elev. 331.29 N. I. R. 18" Bl. Oak 75' L. Sta. 289+05

BRIDGE OVER LATERAL NO. 2-MAIN D.D. NO. 12

STATE ROAD FROM ROUTE SJ SOUTH TO ROUTE 53
 ABOUT 4.5 MILES N.W. OF CAMPBELL
 PROJECT NO. S134- (1) (SH) STA. 289+29
 DUNKLIN COUNTY

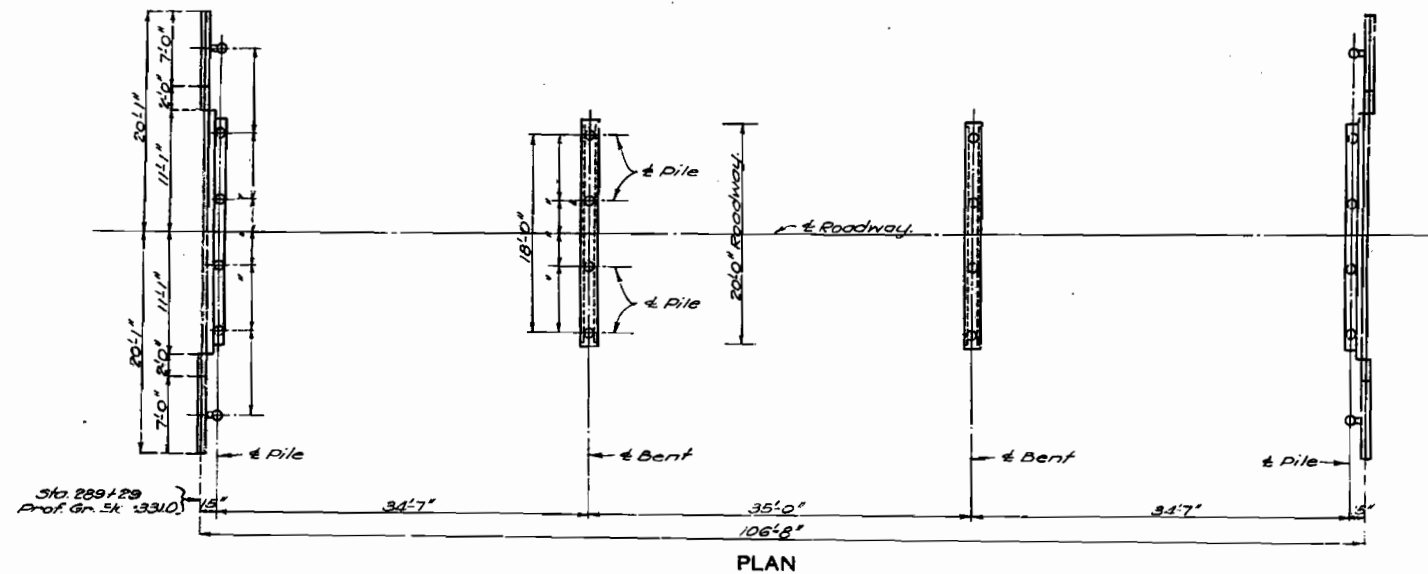
SUBMITTED BY T.W. Enlow DATE 3/9/1945
 APPROVED BY C.W. Brown DATE 3/9/1945
 BRIDGE ENGINEER CHIEF ENGINEER

STD.C-110R3
 X-586

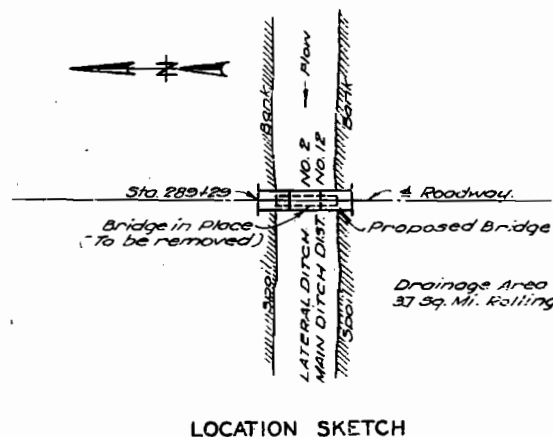


Note: All piling shall be creosoted timber.
 Estimated quantities shown on plans are based on the following lengths; 16 @ 50'0" and 4 @ 15'0". These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration will be determined by the Engineer during driving. See notes below.
 All wing pile shall be driven to full penetration of lengths given on plans. All other pile shall be driven to sustain a load of at least 20 tons per pile and with tips to at least Elev. 296.0.

Note: Excavation of all existing materials under bridge shall be made to not less than 3' below bottom of steel and not less than 4' outside of curb lines. Payment for this excavation outside of limits of excavation for structure will be made of unit contract price for roadway excavation.



Note: No test piles are to be driven and the Contractor may proceed to order piles to the lengths indicated on plans without further authorization by the Engineer.
 As the pile driving proceeds, the Engineer may of his election require the Contractor to cut off a designated length from the tip end of the piles before they are driven. All such lengths cut from pile tips will be included for payment as pile cut-offs.



LOCATION SKETCH

Drawn Jan. 1945 by C.S.A.
 Traced Feb. 1945 by H.C.
 Checked Feb. 1945 by G.F.K.

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

Sheet No. 1A of 1.

FINAL PLANS