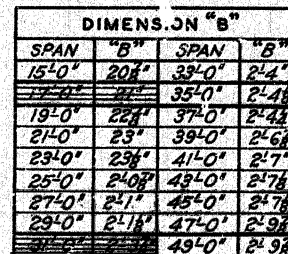
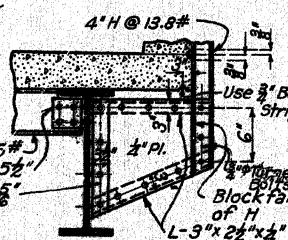


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	N.C.	NR554A (1025V-98)	19		



Note: Stream banks under ends of bridge shall be excavated to a depth of 2'-0" below bottoms of beams within the maximum horizontal limits of 4'-0" outside of curb lines and will be paid for at unit price bid for roadway excavation.

[illegible]

**GENERAL NOTES:**

All concrete to be 1:2:3½ mix, Class "X"  
Exposed edges to be beveled ¾" where no other bevel is noted.  
All timber shall be creosoted and shall be either "Dense Longleaf" or  
or "Shortleaf Structural Square Edge and Sound Southern Yellow Pine"  
or "Close Grained Select Structural Douglas Fir of the West Coast Region"

All timber rough-sawn except as noted in timber bill for caps. Slight variations in sawing to be in accordance with grading rules. All treated timber to be cut to lengths, shaped and bored as shown before treating. Backing planks are all billed 6" long and are to be fitted and cut in the field. Payment will be based on quantities of material in finished structure.

Field holes for drift pins shall be field bored  $\frac{1}{2}$ " unless otherwise noted, all other field holes in timber shall be field bored  $\frac{3}{4}$ ". When bolts with countersunk heads are indicated on plans, cut washers shall be used under heads. O.G. washers shall be used under heads of all other bolts and under nuts of all bolts.

Cost of substructure hardware to be included in price bid for timber in place. I-Beams with fastenings, spacers, handrail, handrail posts with fastenings, clip angles, and cap plate on end bents with fastenings, will be paid for as structural steel.

Cost of metallic edge moulding will be included in price bid for concrete.  
Detail shop drawings shall be submitted to the State Highway Department  
in duplicate and shall be approved before steel is fabricated.

Where rubber compound is specified on plans for use in partition and expansion joints, the premoulded joint shall be securely stitched to one face of concrete with copper wire.

Paint: Shop, prime. Field, contact surfaces or bolted field connections only coat red lead and surfaces inaccessible after erection three coats of red lead. No other paint to be applied by contractor. Red lead required shall be furnished by the contractor. See Special Provisions.

See Special Provisions in regard to permissible beam substitutions and basis of payment.  
Protection caps to be placed on heads of all piles of pile bents in accordance

Rivets  $\frac{3}{8}$ " holes  $\frac{1}{2}$ ", except in handrail where rivets shall be  $\frac{5}{8}$ " holes  $\frac{3}{4}$ ". Field connections for handrail channels shall be  $\frac{5}{8}$ " button head bolts and for connection of rail to railposts shall be  $\frac{5}{8}$ " bolts, holes  $\frac{1}{2}$ ".

All other field connections shall be  $\frac{3}{4}$ " machine bolts,  $\frac{1}{2}$ " holes, except where  $\frac{3}{4}$ " turned bolts are called for in connections of railposts to brackets and in beam connections. Holes for  $\frac{3}{4}$ " turned bolts to be subpunched and

Dardelet bolts or equal may be substituted if desired for all button head, machine, or turned bolts in all bolted field connections except expansion joints. Bar supports and spacers will be required for reinforcing steel in

**BRIDGE OVER WALNUT FORK**

STATE ROAD FROM ROUTE U.S.169 TO ROUTE 5H  
FINISHED ABOUT 3.5 MILES SE OF STANBERRY  
(1835)

PROJECT NO. **NR354A** (SE) STA. **58+27** FINISHED

**GENTRY** COUNTY

SUBMITTED BY 08/R. Jay DATE 9/20/34  
 APPROVED BY J.H. Cutler DATE 9/20/34

CHIEF ENGINEER

FA

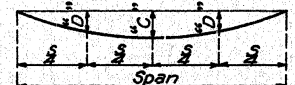
T-195

T6 3-9-34

SPAN	PER PLANS		PERMISSIBLE SUBSTITUTIONS					
	CARNegie BEAMS		STANDARD I-BMS.		BETHLEHEM BMS.			
	Inside	Outside	Inside	Outside	Inside	Outside	Inside	Outside
15'-0"	14" @ 30"	14" @ 30"	12" @ 40.8"	12" @ 35"	14" @ 30"	14" @ 30"	14" @ 30"	14" @ 30"
17'-0"	14" @ 34"	14" @ 34"	15" @ 42.9"	15" @ 42.9"	14" @ 34"	14" @ 34"	14" @ 34"	14" @ 34"
19'-0"	16" @ 36"	16" @ 36"	15" @ 42.9"	15" @ 42.9"	16" @ 36"	16" @ 36"	16" @ 36"	16" @ 36"
21'-0"	16" @ 40"	16" @ 40"	15" @ 50"	15" @ 45"	16" @ 40"	16" @ 40"	16" @ 40"	16" @ 40"
23'-0"	16" @ 45"	16" @ 45"	18" @ 54.7"	18" @ 54.7"	16" @ 45"	16" @ 45"	16" @ 45"	16" @ 45"
25'-0"	18" @ 47"	18" @ 47"	18" @ 54.7"	18" @ 54.7"	18" @ 47"	18" @ 47"	18" @ 47"	18" @ 47"
27'-0"	18" @ 50"	18" @ 50"	18" @ 60"	18" @ 54.7"	18" @ 50"	18" @ 50"	18" @ 50"	18" @ 50"
29'-0"	18" @ 55"	18" @ 55"	20" @ 65.4"	20" @ 65.4"	18" @ 55"	18" @ 55"	18" @ 55"	18" @ 55"
31'-0"	21" @ 53"	21" @ 53"	20" @ 65.4"	20" @ 65.4"	21" @ 53"	21" @ 53"	21" @ 53"	21" @ 53"
33'-0"	21" @ 53"	21" @ 53"	20" @ 75"	20" @ 70"	21" @ 53"	21" @ 53"	21" @ 53"	21" @ 53"
35'-0"	21" @ 53"	21" @ 53"	20" @ 75"	20" @ 75"	21" @ 53"	21" @ 53"	21" @ 53"	21" @ 53"
37'-0"	21" @ 73"	21" @ 73"	20" @ 81.4"	20" @ 81.4"	21" @ 73"	21" @ 73"	21" @ 73"	21" @ 73"
39'-0"	24" @ 74"	24" @ 74"	24" @ 79.9"	24" @ 79.9"	24" @ 74"	24" @ 74"	24" @ 74"	24" @ 74"
41'-0"	24" @ 80"	24" @ 80"	24" @ 85.9"	24" @ 79.9"	24" @ 80"	24" @ 80"	24" @ 80"	24" @ 80"
43'-0"	24" @ 87"	24" @ 80"	24" @ 100"	24" @ 90"	24" @ 87"	24" @ 80"	24" @ 80"	24" @ 80"
45'-0"	24" @ 87"	24" @ 87"	24" @ 105.9"	24" @ 100"	24" @ 87"	24" @ 87"	24" @ 87"	24" @ 87"
47'-0"	27" @ 91"	27" @ 91"	24" @ 105.9"	24" @ 105.9"	27" @ 91"	27" @ 91"	27" @ 91"	27" @ 91"
49'-0"	27" @ 91"	27" @ 91"	24" @ 115"	24" @ 105.9"	27" @ 91"	27" @ 91"	27" @ 91"	27" @ 91"

FINAL QUAN	ESTIMATED QUANTITIES			
	ITEM	SUPERSTR	SUBSTR	TOTAL
41	Bridge Excavation Class 1 Cu. Yds.		50	50
-	Bridge Excavation Class 2 Cu. Yds.			
-	Concrete 1:2:4 mix "B" Cu. Yds.			
60.6	Concrete 1:2:3 1/2 mix "X" Cu. Yds.	60.6		60.6
53920	Fabricated Structural Steel Lbs.	52500		52500
15290	Reinforcing Steel Lbs.	15290		15290
590	Crescanted Timber Piles Lin. Ft.		600	600
33	Crescanted Timber Pile Cut-offs Lin. Ft.		20	20
2660	Crescanted Timber F.B.M.		2660	2660

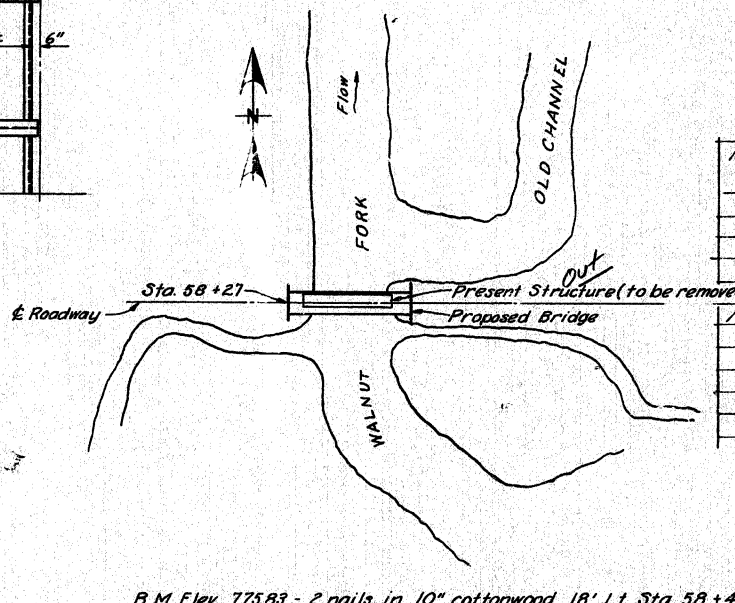
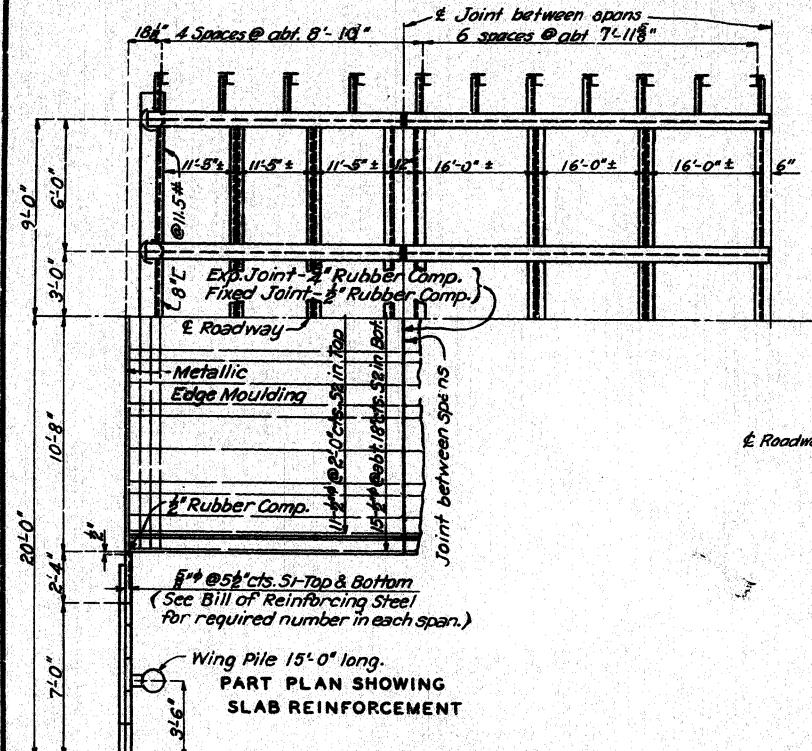
*Note: Bridge excavation will be allowed for all bents within horizontal limits shown and noted on these design plans, sheet # 2. This excavation will be computed from existing ground line to bottom end of 6"x6" backing supports for end bents and to bottom of sway bracing for interior bents. All bridge excavation will be paid for as Class I Bridge Excavation.*



*Note: Floor slab to be brought to grade and dead load deflection taken care of by increasing slab thickness. Depth of slab above and below surface of curb to be kept uniform and bottom surface of slab warped to top beam and outside beam to obtain required thickness at beam. Payment will be allowed for additional concrete required for thickening slab. This additional concrete is included in "Estimated Quantities."*

## PART ELEVATION

### DEFLECTION DIAGRAM



### LOCATION SKETCH

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

Sheet No. 1 of 2

F.A.

**T 6**

3-9-34



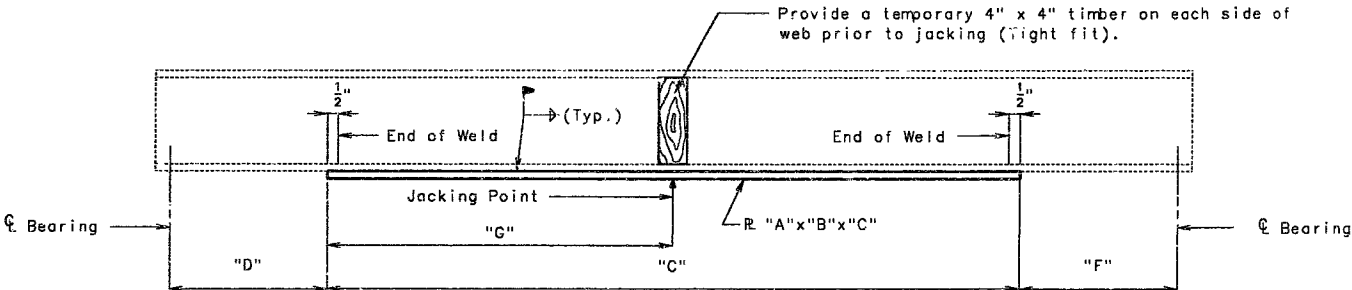


MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

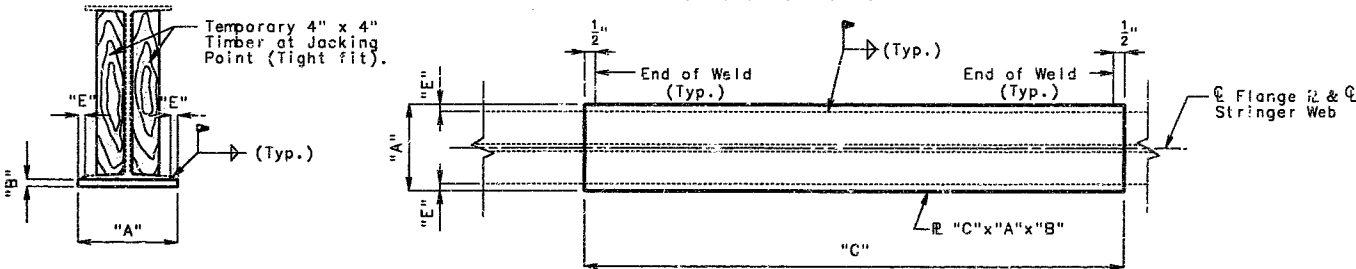
STATE	PROJ. NO.	SHEET NO.
MO.	J150677	4
SEC/SUR 9	TWP 62N RGE 32W	

General Notes:

- Design Specifications:  
A.A.S.H.T.O. 1992
- Design Loading:  
1993 Missouri Posting Load: (H20 & 3S2)  
No Future Wearing Surface
- Design Unit Stresses:  
Structural Carbon Steel fy=36,000 psi. (New Steel)  
Existing Steel fy=30,000 psi.  
Working stress Design based on 68% fy. (Existing)
- Paint:  
Calcium Sulfonate (2 coats)(See Special Provisions).
- Old and New Work:  
Outline of old work is indicated by light dashed lines.  
Heavy lines indicate new work.
- Dimensions:  
Longitudinal dimensions are based on the original design plans.
- Traffic:  
Maintain one lane of traffic during construction, (See Roadway Traffic Control Plans).
- Stringer Support:  
All existing stringers in the span being strengthened shall be raised simultaneously \* at jacking point and supported during welding of new steel plates.  
The temporary supports must be capable of safely supporting a service load of approximately \*\* tons per stringer. (Factor of safety not included) (See Special Provisions).



TYPICAL ELEVATION OF STRINGER  
SPAN (1-2) (2-3) & (3-4)



SECTION THRU STRINGER

DETAIL OF FLANGE R

ESTIMATED QUANTITIES		
ITEM		TOTAL
Strengthening Existing Stringers	Lump Sum	1

TABLE OF DIMENSIONS									
Stringer Location		Dimensions							
		"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
Exterior	Span (2-3)	12"	1"	21'-3"	13'-4 1/4"	1"	13'-4 1/4"	10'-7 1/2"	11 1/8"
Interior	Span (2-3)	12"	1"	21'-3"	13'-4 1/4"	1"	13'-4 1/4"	10'-7 1/2"	11 1/8"
Exterior	Span (1-2)&(3-4)	10"	1"	16'-6"	9'-3"	7 1/8"	9'-3"	7'-9"	9 1/8"
Interior	Span (1-2)&(3-4)	10"	1"	16'-6"	9'-3"	7 1/8"	9'-3"	7'-9"	9 1/8"

DESIGNED: DEC. 1993  
DETAILED: DEC. 1993  
CHECKED: DEC. 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 1 OF 1

DATE 1/25/94

REPAIRS TO BRIDGE OVER WALNUT FORK  
STATE ROAD FROM DARLINGTON WEST TO RTE. 169  
ABOUT 1.2 MILES E. OF RTE. 169  
PROJECT NO. J150677 STA. 58+27.00  
JOB NO. J150677 RTE. E  
GENTRY COUNTY

STD.
STD.
T01951