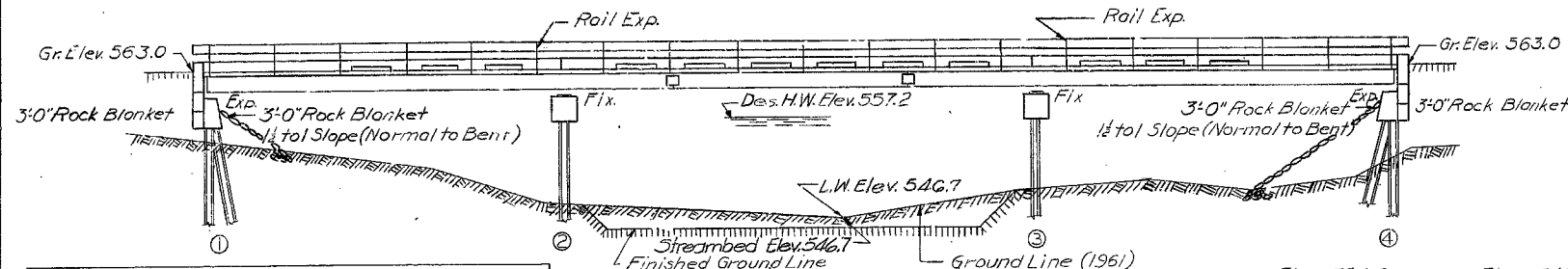


MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	4	

(40'-52'-40') Cont. I-Beam Spans



PILE DATA				
Bent No.	1	2	3	4
Pile Type & Size	10BP42	10BP42	10BP42	10BP42
Number	4	5	5	4
Approximate Length Ft.	55	55	55	55
Plan Bearing	30	30	30	30
Min. Required Bearing Tons	19	29	29	19
Min. Penetration (Pile Tip Elev.)	525.0	525.0	525.0	525.0
Hammer	Power	Power	Power	Power
See Standard Specifications 52.2.6				

GENERAL ELEVATION

Note: All piles shall be driven to the minimum penetrations noted and to not less than the Plan Bearing unless excessive lengths are required to obtain Plan Bearing in which cases the engineer will authorize lesser capacities, but in no cases below Minimum Required Bearing.

Elev. 554.6
Yellow Clay & Bldrs.
Elev. 543.6
Yellow
Sand & Clay,
& Boulders
Elev. 492.6

Elev. 548.7
Sand & Gravel
Elev. 533.7
Yellow Sandy Clay,
few small Bldrs.
Elev. 510.7
Yellow Sandy Clay
& Heavy Bldrs.
Elev. 490.7

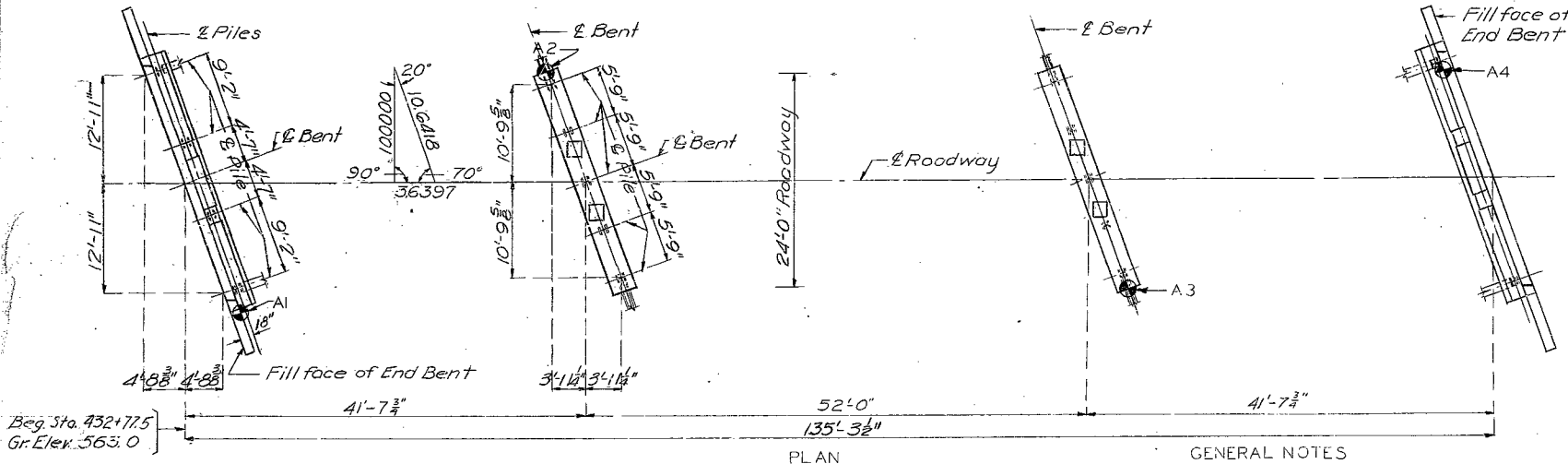
Elev. 549.8
Sand & Gravel
Elev. 534.8
Yellow Sandy Clay,
few small Bldrs.
Elev. 511.8
Yellow Sandy Clay
& Heavy Bldrs.
Elev. 481.4

Elev. 552.1
Gravel
Elev. 540.1
Yellow Sandy Clay
Elev. 534.9
Boulders
Elev. 534.1
Sandy Clay & Bldrs.
Elev. 515.7
Boulders
Elev. 513.2
Yellow Sandy
Clay & Bldrs.
Elev. 494.0

LOG OF SOUNDINGS

Note: Soundings taken with auger and marked thus on "Plan".

Note: Cost of any required excavation for bridge will be included in price bid for other items.



GENERAL NOTES

Design Specifications AASHO.-1961
Loading H15-44 (Lane)
Structural Steel Stress (A31M-A36-62T) 20,000 psi.
Reinforcing Steel Stress 20,000 psi.
Concrete, Class B Stress 1,200 psi.
Concrete, Class B1 Stress 1,500 psi.
Superstructure concrete shall be Class B1.
Substructure concrete shall be Class B or Class B1, except payment will be on the basis of Class B.
Fabricated structural steel shall be A31M-A36-62T, except as noted. Payment will be made as Fabricated Structural Carbon Steel.
See Standard Specifications 55.3.13 for qualification of welding operators.
Field connections, High Strength Bolts 3/4", holes 1 1/8" except as otherwise noted.
See Sheet No. 7 and Special Provisions for requirements permitting optional use of remain-in-place forms.
Paint: shop; none; field, none by contractor except as noted in Standard Specification 55.4.10.2.
Where Joint filler is specified on the Plans, it shall conform to Standard Specifications 1572.5.

COMPLETE BILL OF REINFORCING STEEL					BENDING SKETCHES & CUTTING DIAGRAMS	
NO.	SIZE	LENGTH	MARK	LOCATION		
End Bents No. 1 & 4						
16	#6	33'-0"	H1	Beam		
4	#6	31'-0"	H2	"		
4	#6	29'-3"	H3	Backwall		
12	#6	7'-0"	H4	Wing		
4	#4	29'-3"	H5	Backwall		
8	#6	10'-0"	T1	Wing	18-S5CUT 36	4-V2 CUT 8
8	#6	8'-9"	T2	"		
62	#4	11'-3"	U1	Beam		
13	#4	3'-6"	U2	"		
120	#4	3'-6"	V1	Backwall		
8	#4	8'-0"	V2	Wing		
4	#4	6'-0"	V3	"		
Int. Bents No. 2 & 3						
16	#6	28'-0"	G1	Beam		
4	#6	25'-9"	G2	"		
16	#4	3'-6"	U2	"		
56	#4	9'-9"	U3	"		
Superstructure						
12	#6	22'-0"	C1	Curb		
200	#5	4'-0"	C2	"		
12	#6	27'-0"	C3	"		
12	#6	21'-6"	C4	"		
502	#5	27'-3"	S1	Slab		
140	#4	28'-3"	S2	"		
140	#5	28'-6"	S3	"		
54	#5	16'-0"	S4	"		
36	#5	28'-3"	S5	"		
2	#4	29'-0"	S6	"		
					C2-U2	G1-H1
						T1-T2

ESTIMATED QUANTITIES

Item	Substr.	Superstr.	Total
Steel Piles in Place	Lin. Ft. 936		936
Steel Piles Cut-off	Lin. Ft. 54		54
Class B Concrete	Cu. Yd. 39.6		39.6
Class B1 Concrete	Cu. Yd.	90.0	90.0
Reinforcing Steel	Lbs. 3660	25180	28840
Fabricated Structural Carbon Steel	Lbs.	53410	53410

Note: Weight of bolts (Steel to steel) is included in weight of Fabricated Structural Carbon Steel on the basis of the following weights per 100 bolts - 3/8" 40", 1/2" 65", 5/8" 95", 1" 135".

B.M. Elev. 558.07 Nail in root 16" P. Oak 45' Lt. Sta. 432+75 (U.S.G.S. DATUM).

BRIDGE OVER TENMILE CREEK

STATE ROAD FROM ROUTE 21 NORTH OF GRANDIN E.&N. TO RTE. 60
ABOUT 22.0 MILES N.W. OF POPLAR BLUFF
PROJECT NO. S-1053(4) (SB) STA. 432+77.5

CARTER

COUNTY

SUBMITTED BY: D.B. Gentry DATE: 1/15/63
APPROVED BY: M.J. Smith DATE: 1/15/63

STD. 54.00

R-240

SEE FINAL PLANS FOR LINES

No. 90.1 Revised Feb. 1962

Beg. Station 432+77.5
Drainage Area 25.8 Sq. mi. (Lt. Hilly)
LOCATION SKETCH

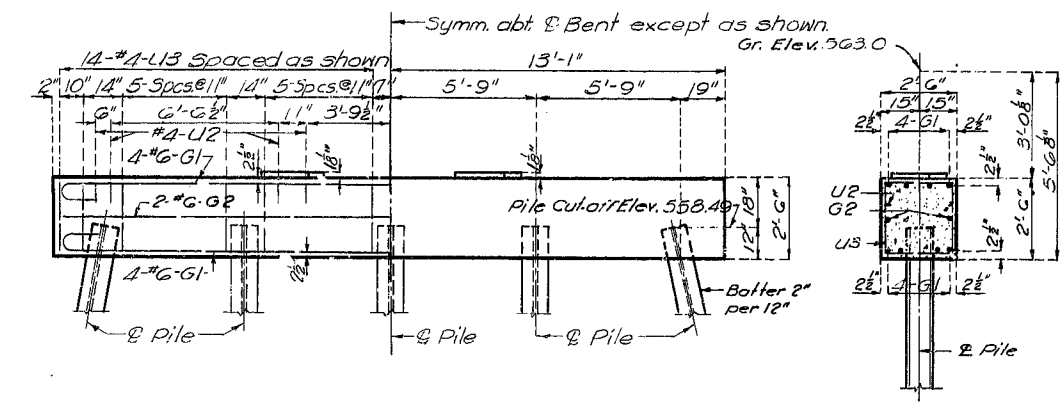
Designed Feb. 1962 by Livingston
Drawn OCT 1962 by GUSHWA & WEAVER
Checked Dec 1962 by Storelett

ROCK BLANKET SKETCHES

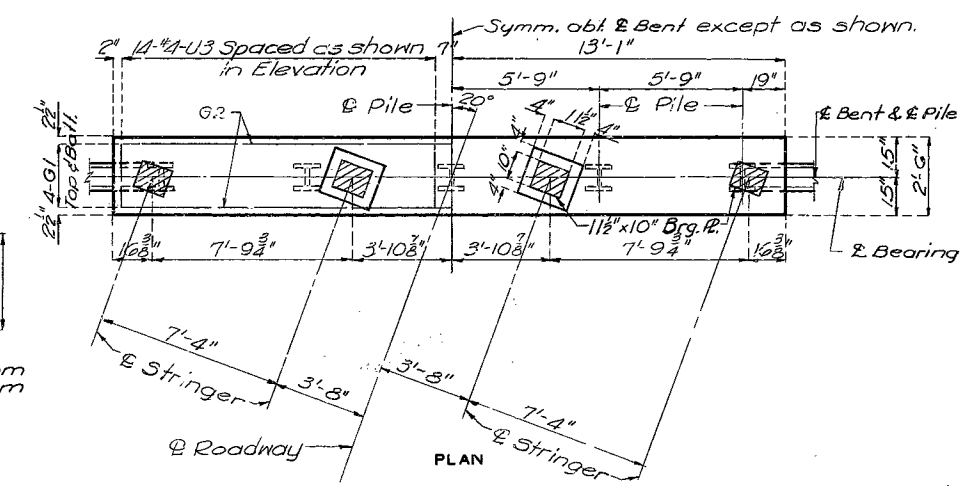
Note: This drawing is not to scale. Follow dimensions.

904

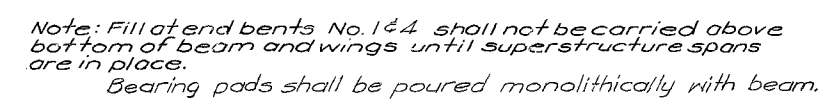
No. 9.1	Revised
JUNE 1961	MAR. 15, 1962



SECTION AT E



DETAILS OF INTERMEDIATE BENTS NO. 2 & 3



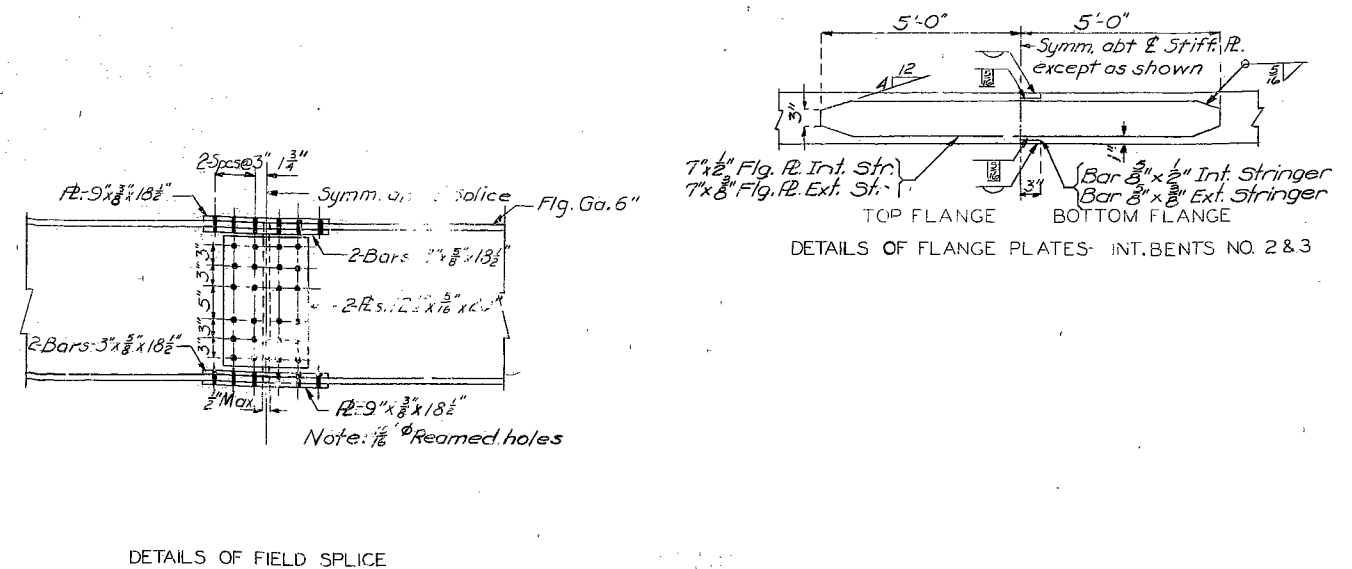
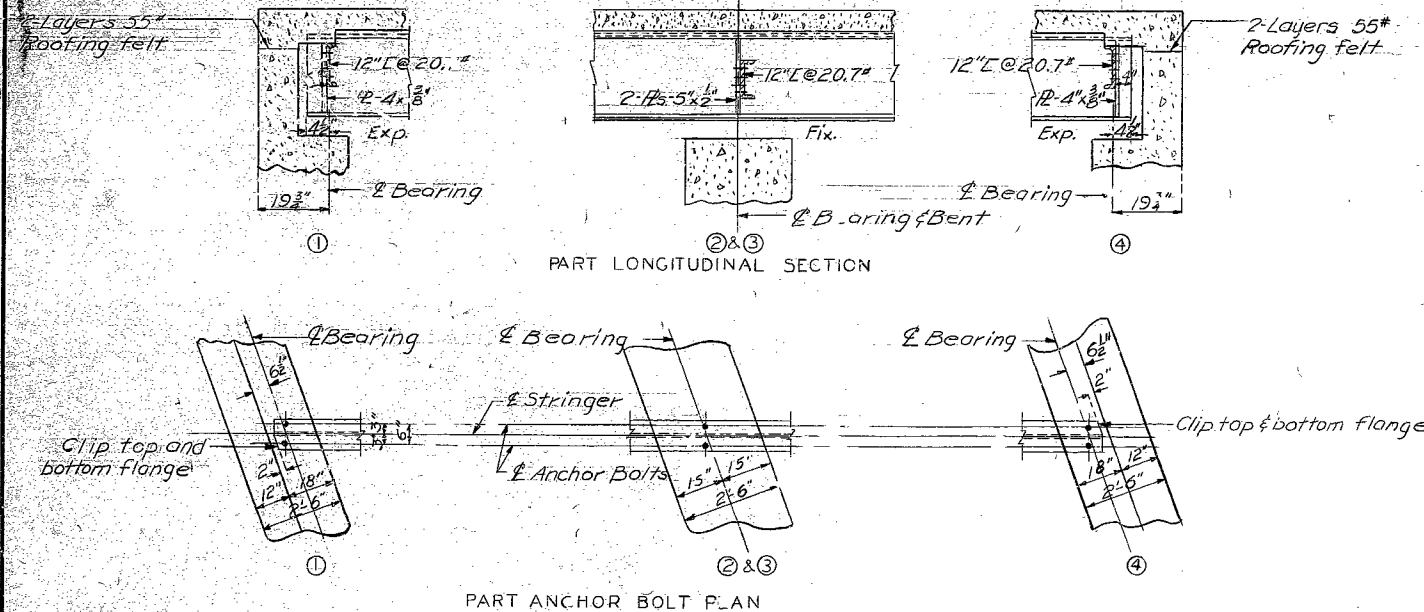
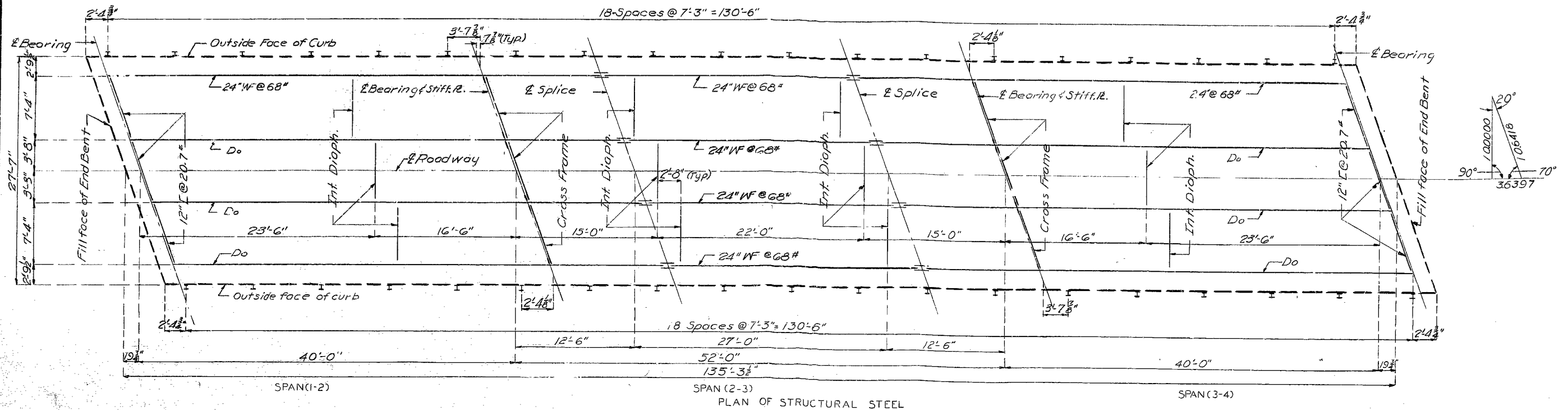
DETAILS OF END BENTS NO. 1 & 4

Sheet No. 2 of 7.

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MISSOURI STATE HIGHWAY DEPARTMENT

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



BRIDGE OVER TENMILE CREEK
 STATE ROAD FROM ROUTE 21 NORTH OF GRANDIN E.&N. TO RTE. 60
 ABOUT 22.0 MILES N. W. OF POPLAR BLUFF
 PROJECT NO. S-1053 (4) (SB) STA. 432+77.5
 CARTER COUNTY

Drawn OCT. 1962 by GUSHWA - WEAVER
 Checked Dec 1962 by Storslett

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

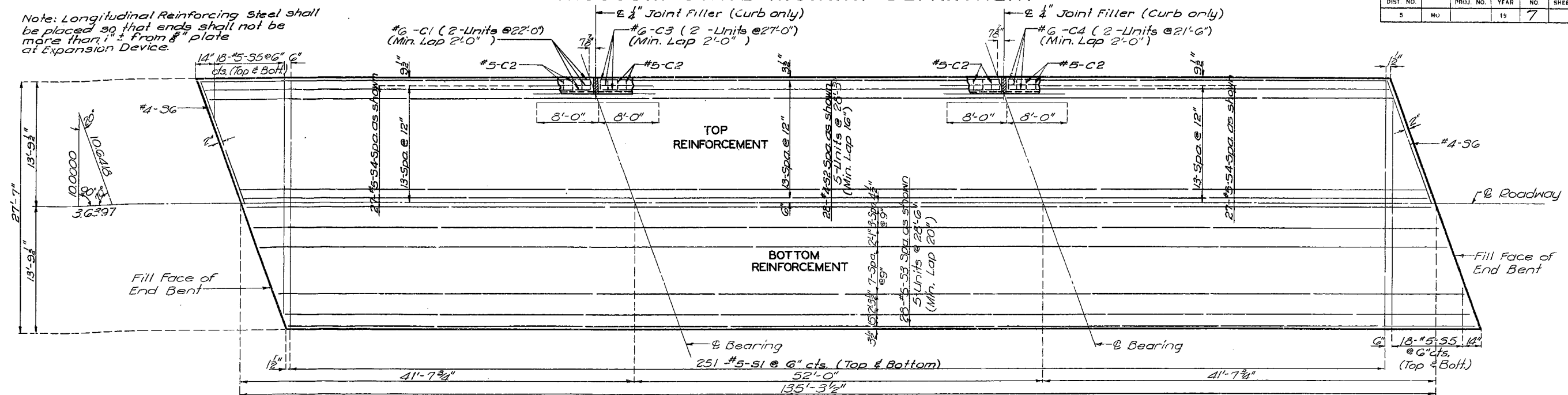
Sheet No. 3 of 7

R-240

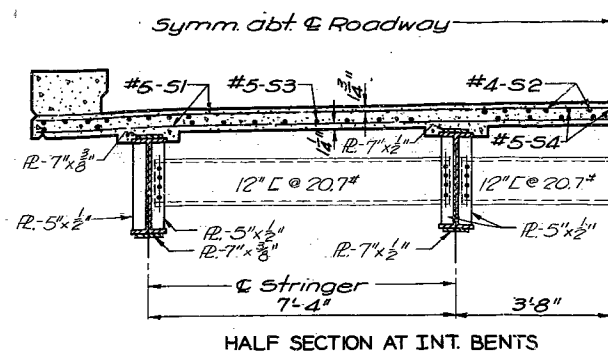
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO		19	7	

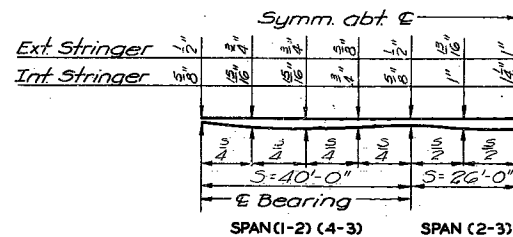
Note: Longitudinal Reinforcing Steel shall be placed so that ends shall not be more than 1" from 8" plate at Expansion Device.



PLAN OF SLAB SHOWING REINFORCEMENT

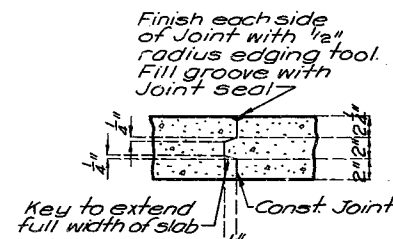


HALF SECTION AT INT. BENTS

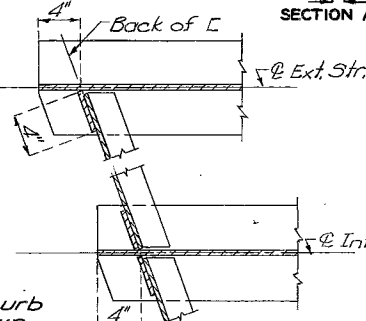


SLAB HAUNCHING DIAGRAM

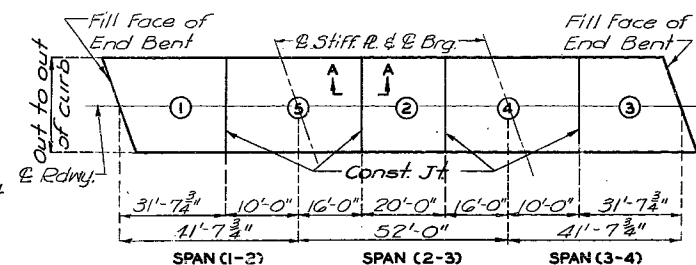
Note: The slab shall be built parallel to grade and to a minimum thickness of 6 1/4". Dead load deflection (11 % due to weight of structural steel) and vertical curves (if any) shall be taken care of by haunching to the top of stringer by the dimensions shown. The additional concrete (flange, flange plates, splice plates, etc. excluded) is included in Estimated Quantities.



SECTION A-A



PLAN LOCATING END DIAPHRAGMS



Basic Sequence	Sequence of Pours				
	Direction				
Alternate "A" Pours	1	2	3	4	5
Alternate "B" Pours	1	5+2	4+3	2 to End Bent	
Alternate "C" Pours	1+5+2	4+3	2 to End Bent	1+5+2+4+3	End Bent to End Bent

Note: The contractor shall observe the basic pouring sequence unless he can demonstrate to the satisfaction of the engineer that he is equipped to pour and satisfactorily finish the roadway slabs at a rate of not less than 30 cubic yards per hour and can maintain this rate throughout the alternate pour he elects to use.

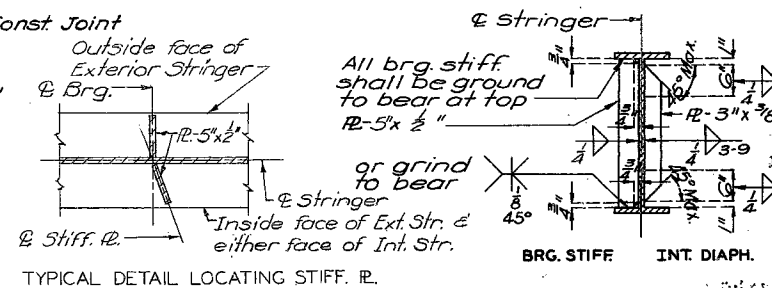
SLAB POURING SEQUENCE

BRIDGE OVER TENMILE CREEK

STATE ROAD FROM ROUTE 21 NORTH OF GRANDIN E. & N. TO RTE. 60
ABOUT 22.0 MILES N W OF POPLAR BLUFF
PROJECT NO. S-1053(4) (SB) STA. 432+77.5

CARTER COUNTY

R-240



WELDING DETAILS

Sheet No. 4 of 7

NO CONSTRUCTION CHANGES

50

Revised
Oct. 1962
No. 4124.12

Drawn NOV. 1962 by WEAVER
Checked Dec. 1962 by STORS/LETT

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

5

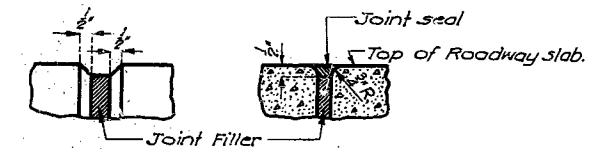
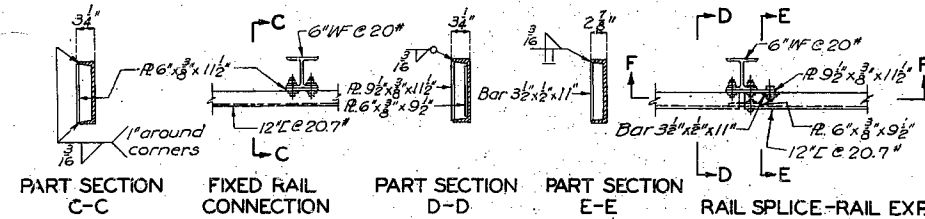


Note: Outlets to be centered between rail posts.
For location of outlets if any, see sheet No. 1
of design plans.
C2 bars in curb to be spaced at abt. 12" cts.
from end post to end post on bridges having
no outlets.

[illegible]

GENERAL NOTES:

PLAN OF RAIL AT END BENTS NO. 1 & 4



Note: Use bevel as shown for exposed faces of all filled joints except at top surface of roadway slab. Use edging tool with $\frac{3}{4}$ " radius at top surface of roadway slab each side of joint and fill flush with joint seal as shown.

DETAILS OF BEVEL FOR FILLED JOINTS

BRIDGE OVER TENMILE CREEK

STATE ROAD FROM ROUTE 21 NORTH OF GRANDIN E. & N. TO RTE. 60
ABOUT 22.0 MILES N.W. OF POPLAR BLUFF
PROJECT NO. S-1053(4) (SB) STA. 432+77.5

CARTER

COUNTY

FINISHED

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Sheet No. 6 of 7

NO CONSTRUCTION CHANGES

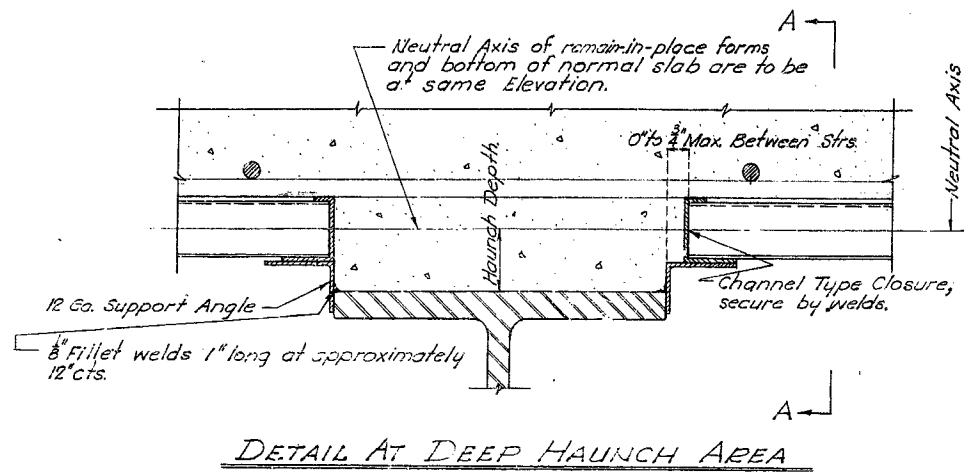
Note: This drawing is not to scale. Follow dimensions.

Drawn Oct. 1962 by GUSHWA & KNAUP
Checked NOV. 1962 by STORSLETT

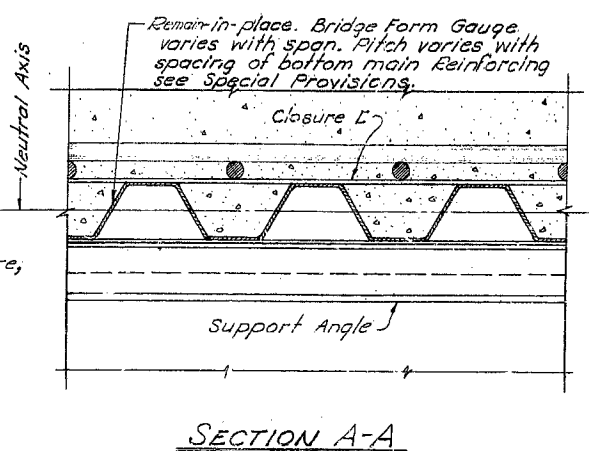
No. 1.3	Revised
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MISSOURI STATE HIGHWAY DEPARTMENT

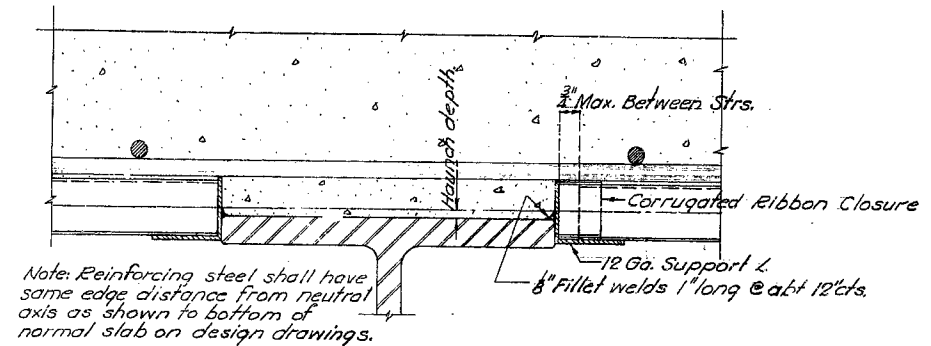
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO		19	10	



DETAIL AT DEEP HAUNCH AREA

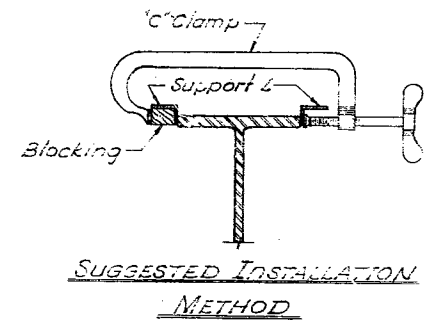


SECTION A-A

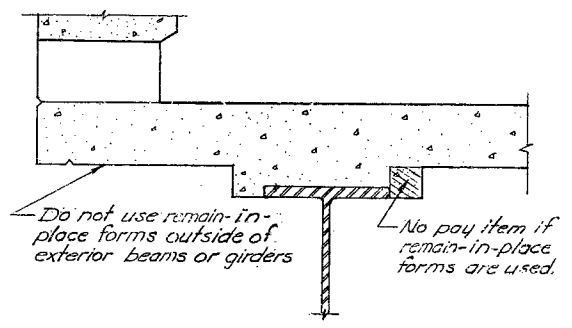


DETAIL AT SHALLOW HAUNCH AREA

Note: Reinforcing steel shall have same edge distance from neutral axis as shown to bottom of normal slab on design drawings.



SUGGESTED INSTALLATION METHOD



DETAIL AT EXTERIOR STRINGER

Payment will be made for Class B1 Concrete in place in the roadway slabs, on the basis of thickness specified on plans. No payment will be made for any excess thickness of slab used, or for any concrete in portions of haunches omitted because of the use of remain-in-place forms.

GENERAL NOTES:
 Remain-in-place form sheets shall be welded to the supporting member at each end with a 1/2" minimum diameter plug weld at each side lap and at center of sheet, prior to construction traffic. End supports shall be welded as shown on drawing prior to placing of sheets.
 Calcium chloride (or any admixture containing chloride salts) shall not be used in the concrete used with galvanized remain-in-place forms.
 Align form sheets transversely across bridge in order that continuous reinforcing bars shall be correctly oriented with respect to the corrugations across the various form spans.

PERMISSIBLE ALTERNATE FORMS

DETAILS OF REMAIN-IN-PLACE FORMS

BRIDGE OVER TENMILE CREEK
 STATE ROAD FROM ROUTE 21 NORTH OF GRANDIN E. & N. TO RTE. 60
 ABOUT 22.0 MILES N.W. OF POPLAR BLUFF
 PROJECT NO. S-1053(4) (SB) STA. 432+77.5
 CARTER COUNTY

Drawn Mar. 1962 by LONGDEN
 Checked Apr. 1962 by DULLE

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

Sheet No. 7 of 7.

NO CONSTRUCTION CHANGES

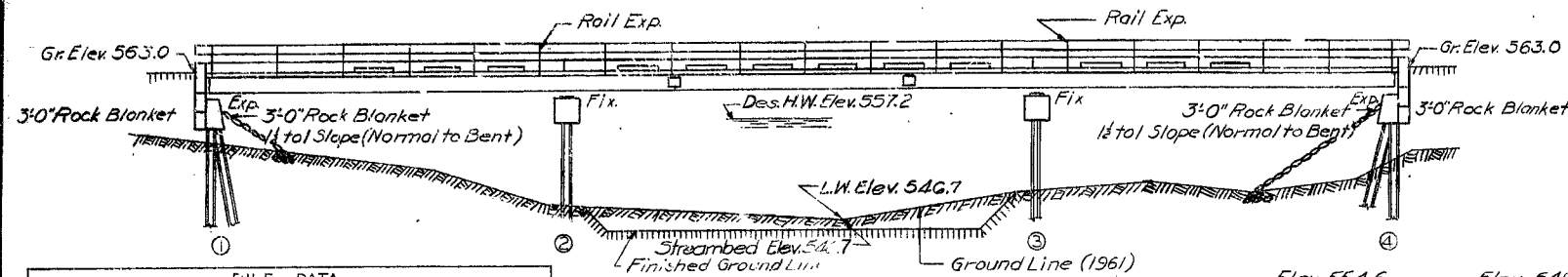
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MISSOURI STATE HIGHWAY DEPARTMENT

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

(40'-52'-40') Cont. T-Beam Spans

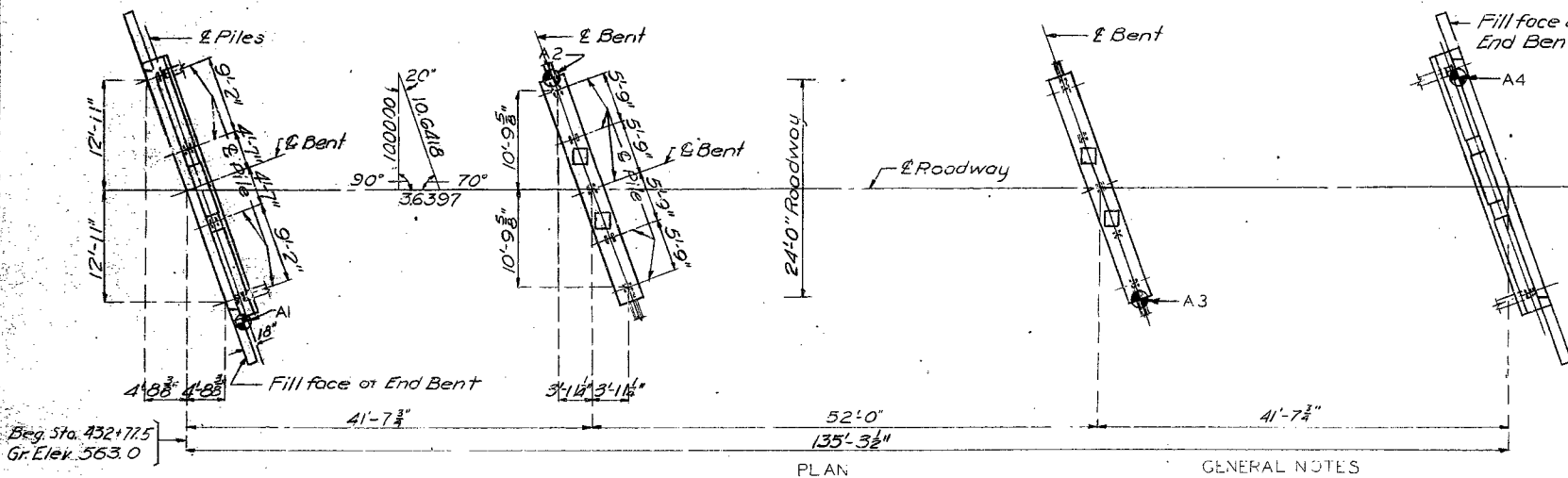


PILE DATA				
Bent No.	1	2	3	4
Pile Type & Size	10BP42	10BP42	10BP42	10BP42
Number	4	5	5	4
Approximate Length Ft.	55	55	55	55
Plan Bearing Tons	30	30	30	30
Min. Required Bearing Tons	19	23	29	19
Min. Penetration (Pile Tip Elev.)	523.0	525.0	525.0	525.0
Hammer	Power	Power	Power	Power

GENERAL ELEVATION

Note: All piles driven to the minimum penetrations noted and to not less than the Plan bearing unless excessive lengths are required to obtain Plan Bearing in which cases the engineer authorize lesser capacities, but in no cases below Minimum Required Bearing.

LOG OF SOUNDINGS	
A1	Elev. 554.6 Yellow Clay & Bldrs. Elev. 543.6 Yellow Sand & Clay, & Boulders Elev. 492.6
A2	Elev. 548.7 Sand & Gravel Elev. 533.7 Yellow Sandy Clay, few small Bldrs. Elev. 510.7 Yellow Sandy Clay & Heavy Bldrs. Elev. 490.7
A3	Elev. 549.8 Sand & Gravel Elev. 534.8 Yellow Sandy Clay, few small Bldrs. Elev. 511.8 Yellow Sandy Clay & Heavy Bldrs. Elev. 481.4
A4	Elev. 552.1 Gravel Elev. 540.1 Yellow Sandy Clay Elev. 534.9 Boulders Elev. 534.1 Sandy Clay & Bldrs. Elev. 515.7 Boulders Elev. 513.7 Yellow Sandy Clay & Bldrs. Elev. 494.0



GENERAL NOTES

Design Specifications AASHO.-1961
Loading H15-44(1 Lane)
Structural Steel Stress (ASTM-A36-G2T) 20,000 psi.
Reinforcing Steel Stress 20,000 psi.
Concrete, Class B Stress 1,200 psi.
Concrete, Class B1 Stress 1,600 psi.
Superstructure concrete Class B1.
Substructure concrete Class B or Class B1, except payment will be on the basis of Class B.
Fabricated structural steel ASTM-A36-G2T, except as noted. Payment will be made as Fabricated Structural Carbon Steel.
See Standard Specifications 55.3.13 for qualification of welding operators.
Field connections, High Strength Bolts 7/8\"/>

COMPLETE BILL OF REINFORCING STEEL				
NO.	SIZE	LENGTH	MARK	LOCATION
End Bents No. 1 & 4				
16	#6	33'-0"	H1	Beam
4	#6	31'-0"	H2	"
4	#6	28'-3"	H3	Backwall
12	#6	7'-0"	H4	Wing
4	#4	29'-3"	H5	Backwall
8	#6	10'-0"	T1	Wing
8	#6	8'-9"	T2	"
62	#4	11'-3"	U1	Beam
16	#4	3'-6"	U2	"
120	#4	3'-6"	V1	Backwall
8	#4	8'-6"	V2	Wing
4	#4	6'-6"	V3	"
Int. Bents No. 2 & 3				
16	#6	28'-0"	G1	Beam
4	#6	25'-9"	G2	"
16	#4	3'-6"	U2	"
56	#4	9'-9"	U3	"
Superstructure				
12	#6	22'-0"	C1	Curb
200	#5	4'-0"	C2	"
12	#6	27'-0"	C3	"
12	#6	21'-6"	C4	"
502	#5	27'-3"	S1	Slab
140	#4	28'-3"	S2	"
140	#5	28'-6"	S3	"
54	#5	16'-0"	S4	"
36	#5	28'-3"	S5	"
2	#4	29'-0"	S6	"

QUANTITIES

Item	Substr.	Superstr.	Total
Steel Piles in Place	Lin. Ft.	804	804
Steel Piles Cut-off	Lin. Ft.	186	186
Class B Concrete	Cu. Yd.	39.6	39.6
Class B1 Concrete	Cu. Yd.	90.0	90.0
Reinforcing Steel	Lbs	1660	25180
Fabricated Structural Carbon Steel	Lbs	53370	53370

Note: Weight of bolts (Steel to steel) is included in weight of Fabricated Structural Carbon Steel on the basis of the following weights per 100 bolts - 3/8" 40", 7/8" 65", 1" 95", 1 1/8" 135".

B.M. Elev. 557.77
#44-I-A Nail in R 24" P.O. 90' Lt. Sta. 432+50

BRIDGE OVER TENMILE CREEK

STATE ROAD FROM ROUTE 21 NORTH OF GRANDIN E.&N. TO RTE. 60
ABOUT 22.0 MILES N.W. OF POPLAR BLUFF
PROJECT NO. S-1053(4) (SB) STA. 432+77.5

CARTER COUNTY FINISHED

SUBMITTED BY D.B. Jensen DATE 1/15/63
APPROVED BY M.J. Miller DATE 1/15/63

STD. 54.00
R-240

FINAL PLANS

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

Sheet No. 1A of 1