FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No	TOTAL SHEETS
6	ARK.	141-3	1925	1	6

P. Remove Crk. in Co. Hwy. 64 DR # 239

STATE OF ARKANSAS

STATE HIGHWAY DEPARTMENT

PLAN OF PROPOSED BRIDGE OVER POINT REMOVE CREEK

CONWAY COUNTY.

3½ MILES WEST OF MORRILLTON, STATE HIGHWAY No. 64.

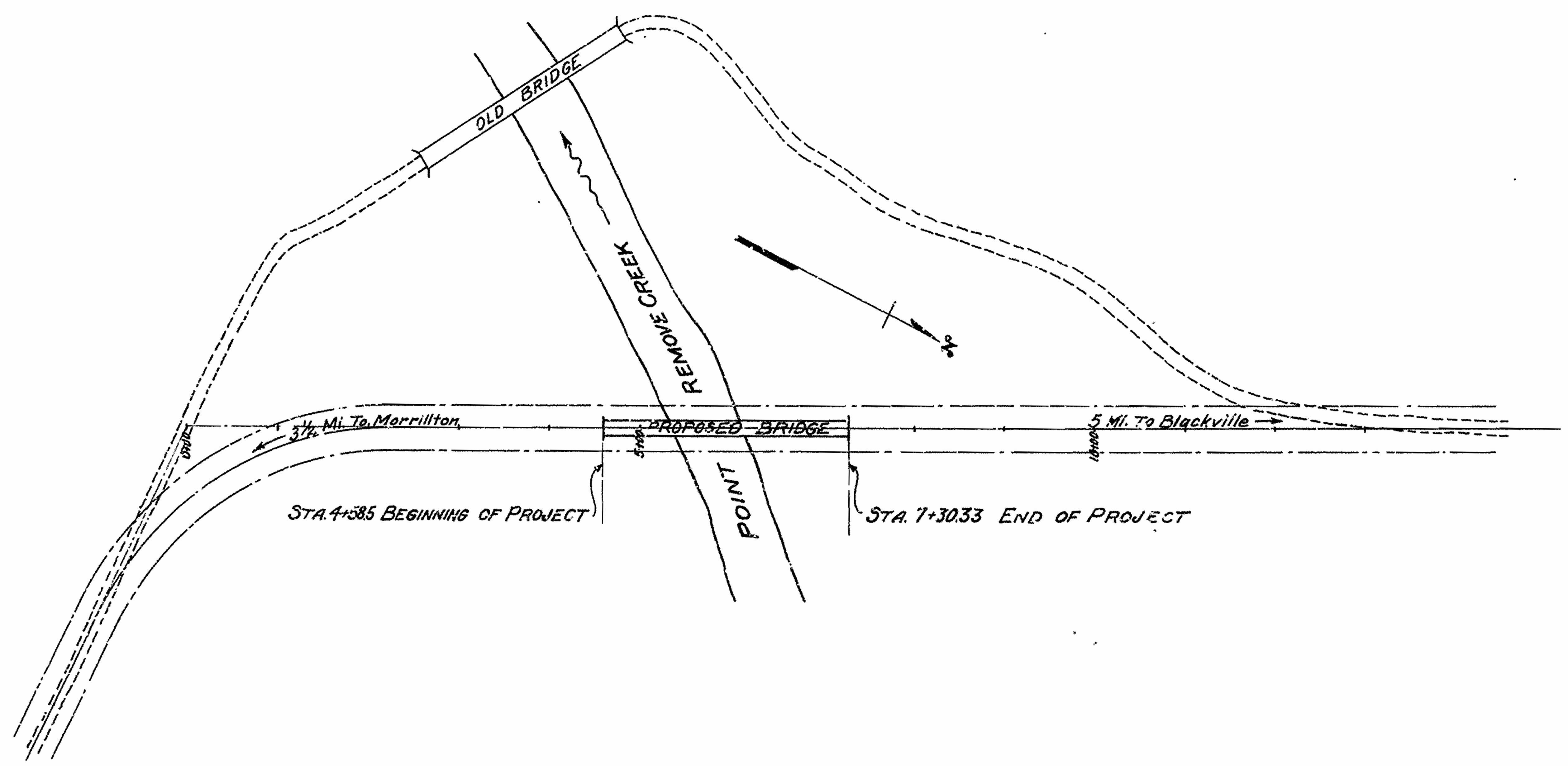
FEDERAL AID PROJECT No. 141-B

INDEX OF SHEETS

QUANTITIES

Item			
Item No. 13	Dry Excavation for Structures	644.0	Cu.Yd's.
" " 13	Wet " " "	389.0	" "
" " 54	Concrete, Class "A" (1:2:4 Mix.)	333.4	" "
" " 54	" " "S" (1:2:3 Mix.)	215.9	" "
" " 55	Reinforcing Steel.	53,104.0	Lbs.
" " 56	Structural "	115,950.0	"
" " 66	Untreated Timber Piling.	2,280.0	Lin.Ft.
" " 74	Concrete Railing for Structure	316.0	" "

Specifications approved by Chief, Bureau of Public Roads September 28, 19[illegible], and adopted by State Highway Commission May 30, 1925.



LAYOUT

Scale: 1" = 100'-0"

GROSS LENGTH OF PROJECT = 271.83 FT. = .051 MILES.
NET LENGTH OF PROJECT = 271.83 FT. = .051 MILES.

RECOMMENDED FOR APPROVAL
[redacted]
STATE HIGHWAY BRIDGE ENGINEER.

APPROVED
[redacted]
COMMISSIONER, - STATE LANDS, HIGHWAYS AND IMPROVEMENTS

APPROVED
[redacted]
STATE HIGHWAY ENGINEER

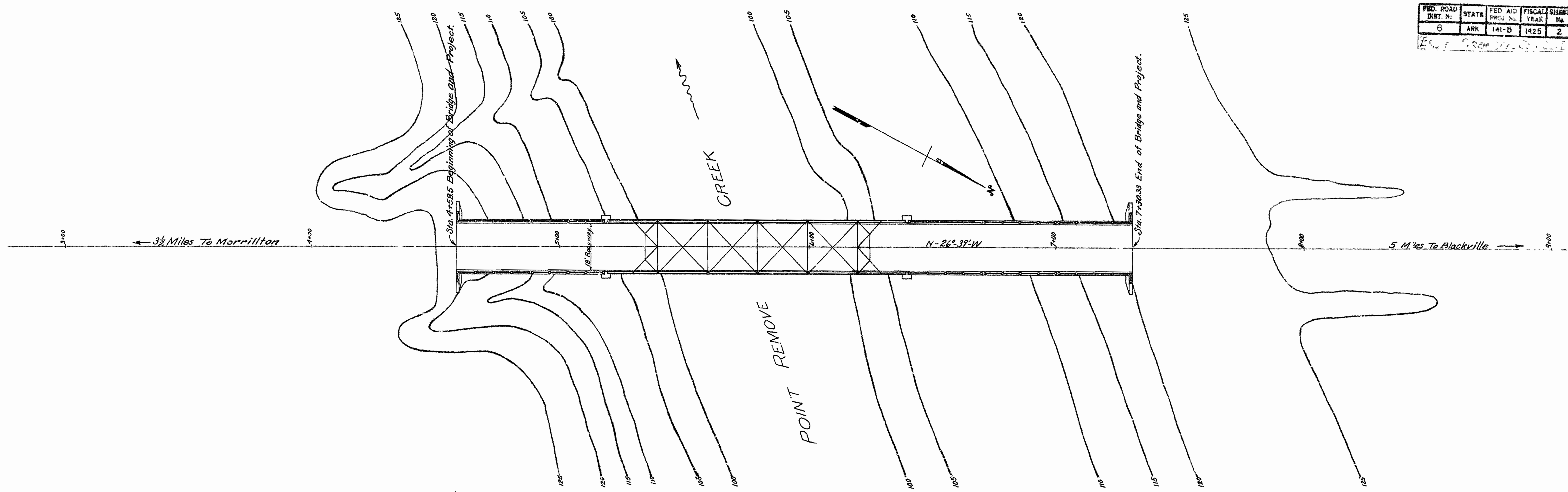
RECOMMENDED FOR APPROVAL
[redacted]
DISTRICT ENGINEER - U. S. BUREAU OF PUBLIC ROADS

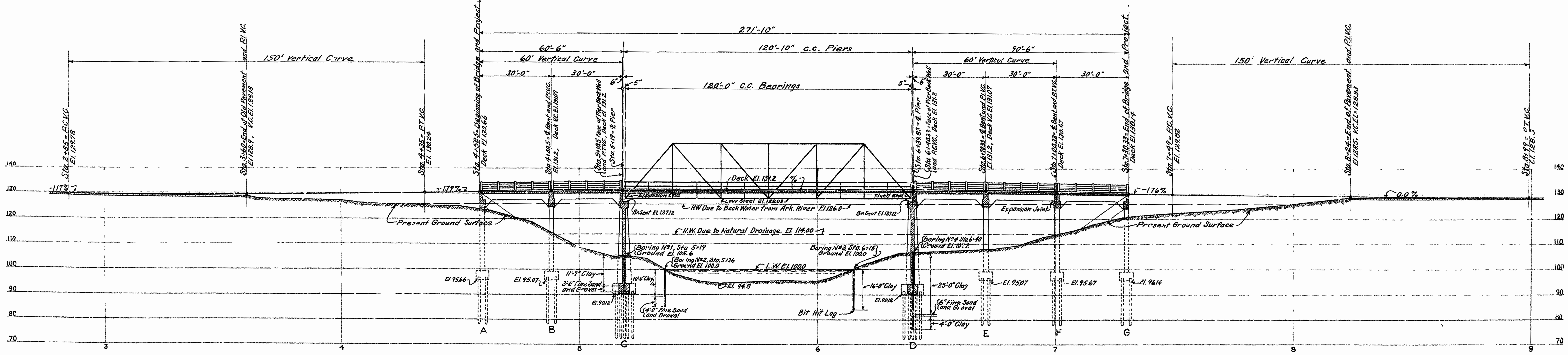
RECOMMENDED FOR APPROVAL
[redacted]
CHIEF ENGINEER - U. S. BUREAU OF PUBLIC ROADS

APPROVED
[redacted]
DIRECTOR - U. S. BUREAU OF PUBLIC ROADS

B ... No. 239

FED. ROAD DIST. No	STATE	FED AID PROJ No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK	141-B	1925	2	6





ARKANSAS STATE HIGHWAY DEPARTMENT

LAYOUT

BRIDGE OVER

POINT REMOVE CREEK

3½ MILES WEST OF MORRILLTON, CONWAY CO. STATE HWY. No 64

FEDERAL AID PROJECT No 141-B

LITTLE ROCK, ARK.

JUNE 1926.

FED. ROAD DIST.	STATE	FED. AID PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	141-B	1925	4	6

Sta 4+38℄ Deck El ℄ Rdwy 130.66

Sta 4+88℄ Deck El ℄ Rdwy 131.07

℄ Pier C Sta 5+19℄ ℄ Shoe of 120' truss Deck El ℄ Rdwy. 131.20

30'-0" 30'-0"

Exp joint Exp joint

3" gas pipe drain

"ae" ⅝"ϕ @ 14" "af" ⅝"ϕ @ 14" "ag" ⅝"ϕ @ 14"

"Sah" ½"ϕ as shown

stirrup spacing same as other span

Girder steel same as other span

Slab steel same thru-out approach.

17-½"ϕ long. bars "Sah" as shown
⅝"ϕ @ 14" "Sae" bent up in curb bot. slab
⅝"ϕ @ 14" "Saf" bent up over girders
⅝"ϕ @ 14" "Sag" hooked at ends top slab

SECTION CC

SECTION A-A

BENT A

BENT B

SEC. B-B

FOOTING PIER C

PIER C

TOP VIEW OF PIER

Note: All concrete to be poured in the dry.

ARKANSAS STATE HIGHWAY DEPARTMENT

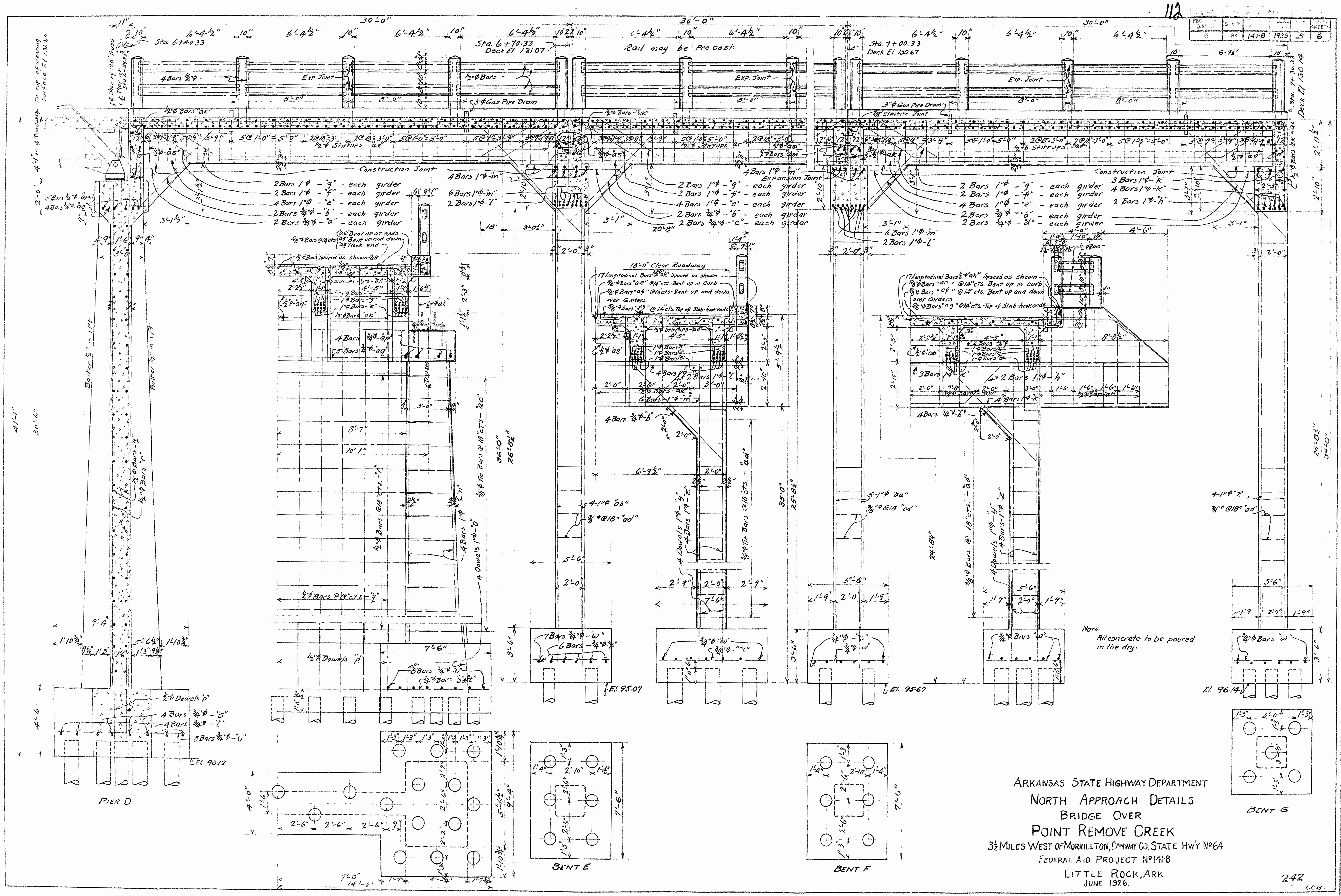
SOUTH APPROACH DETAILS BRIDGE OVER POINT REMOVE CREEK

3½ MILES WEST OF MORRILTON, CONWAY CO. STATE HWY Nº 64

FEDERAL AID PROJECT Nº 141-B

LITTLE ROCK, ARK.
JUNE, 1926

241 R.A.



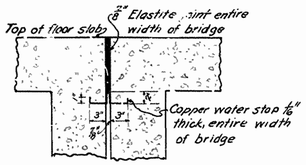
112
FED. DIST. 6 | ARK. | 141-B | 1925 | 5 | 6
Rail may be Pre cast.
Sta. 6+40.33
Sta. 6+70.33 Deck El. 131.07
Sta. 7+00.33 Deck El. 130.67
Exp. Joint
3" ϕ Gas Pipe Drain
1/8" Elastite Joint
Construction Joint
Expansion Joint
18'-0" Clear Roadway
Note: All concrete to be poured in the dry.
PIER D
BENT E
BENT F
BENT G
ARKANSAS STATE HIGHWAY DEPARTMENT
NORTH APPROACH DETAILS
BRIDGE OVER
POINT REMOVE CREEK
3½ MILES WEST OF MORRILLTON, CONWAY CO. STATE HWY No 64
FEDERAL AID PROJECT No 141-B
LITTLE ROCK, ARK.
JUNE 1926.
242
L.C.B.

FED. ROAD DIST. No.	STATE	FED AID PROJ No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.	141-B	1925	6	6

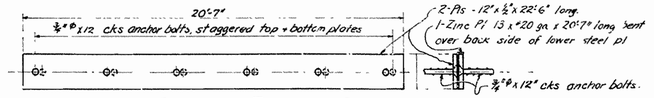
REINFORCING STEEL FOR APPROACHES

NORTH APPROACH & PIER						SOUTH APPROACH & PIER					
Bar	No.	Size	Length	Str. or Sp.	Location	Bar	No.	Size	Length	Str. or Sp.	Location.
Na	8	⅜"ø	4'-3½"	Bk.	Girder brackets Pier D.	Sa	8	⅜"ø	4'-3½"	Bk.	Girder brackets Pier C.
Nb	64	½"ø	9'-0"	St.	Girder & cross beam brackets	Sb	48	½"ø	9'-0"	St.	Girder & Cross beam brackets.
Nc	8	⅜"ø	7'-6½"	Bk	Girder bracket Bent E.	Sc	8	⅜"ø	7'-6½"	Bk.	Girder bracket Bent B.
Nd	16	⅜"ø	5'-0½"	Bk.	" " Bent F & G.	Sd	8	⅜"ø	5'-0½"	Bk.	" " Bent A.
Ne	48	1"ø	29'-8"	St.	Bottom girders.	Se	32	1"ø	29'-8"	St.	Bottom girders.
Nf	24	1"ø	32'-6"	Bk.	" " .	Sf	16	1"ø	32'-6"	Bk.	" " .
Ng	24	1"ø	29'-6"	Bk.	" " .	Sg	16	1"ø	29'-6"	Bk.	" " .
Nh	2	1"ø	36'-6"	Bk.	Cross beam Bent G.	Sh	2	1"ø	36'-6"	Bk.	Cross beam Bent A.
Nk	7	1"ø	34'-6"	St.	" " " " top & bot.	Sk	7	1"ø	34'-6"	St.	" " " " top & bot.
Nl	4	1"ø	22'-2"	Bk.	Cross beam Bents E & F.	Sl	2	1"ø	22'-2"	Bk.	Cross beam Bent B.
Nm	20	1"ø	20'-2"	St.	" " " " top & bot.	Sm	10	1"ø	20'-2"	St.	" " " " top & bot.
Nn	16	1"ø	17'-9"	St.	Shaft Pier D.	Sn	16	1"ø	17'-9"	St.	Shaft Pier C.
No	8	1"ø	7'-0"	St.	Dowels Pier D.	So	8	1"ø	7'-0"	St.	Dowels Pier C.
Np	22	½"ø	5'-3"	St.	" web wall Pier D	Sp	22	½"ø	5'-3"	St.	" web wall Pier C.
Nq	44	½"ø	17'-3"	St.	Vert. web wall " " .	Sq	44	½"ø	17'-3"	St.	Vert. " " " " .
Nr	40	½"ø	21'-0"	St.	Hor. " " " " .	Sr	40	½"ø	21'-0"	St.	Hor. " " " " .
Ns	4	⅜"ø	28'-4"	St.	Bottom footing Pier D.	Ss	4	⅜"ø	28'-4"	St.	Bottom footing Pier C.
Nt	9	⅜"ø	7'-0"	St.	" " " " .	St	8	⅜"ø	7'-0"	St.	" " " " .
Nu	16	⅜"ø	9'-0"	St.	" " " " .	Su	16	⅜"ø	9'-0"	St.	" " " " .
Nw	52	⅜"ø	5'-2"	St.	Bottom footings Bents E F & G.	Sw	38	⅜"ø	5'-2"	St.	Bottom footings Bents A & B
Nx	24	⅜"ø	7'-2"	St.	" " " E & F.	Sx	12	⅜"ø	7'-2"	St.	" " Bent B
Ny	24	1"ø	5'-0"	St.	Dowels footings Bents E & G.	Sy	16	1"ø	5'-0"	St.	Dowels footings Bents A & B.
Nz	8	1"ø	27'-3"	St.	Vert. columns Bent G.	Sz	8	1"ø	28'-3"	St.	Vert. columns Bent A.
Naa	8	1"ø	28'-3"	St.	" " " F.	Saa	8	1"ø	29'-3"	St.	" " " B.
Nab	8	1"ø	29'-3"	St.	" " " E						
Nac	40	⅜"ø	13'-1" av.	Bk.	Hoops shaft Pier D.	Sac	40	⅜"ø	15'-1" av.	Bk.	Hoops shaft Pier C.
Nad	106	⅜"ø	7'-9"	Bk.	Col. hoops Bents E F & G.	Sad	72	⅜"ø	7'-9"	Bk.	Col. hoops Bents A & B.
Nae	78	⅜"ø	22'-9"	Bk.	Bottom floor slab	Sae	53	⅜"ø	22'-9"	Bk.	Bottom floor slab.
Naf	77	⅜"ø	21'-2"	Bk.	" " " .	Saf	52	⅜"ø	21'-2"	Bk.	" " " .
Nag	78	⅜"ø	21'-4½"	Bk.	Top " " .	Sag	53	⅜"ø	21'-4½"	Bk.	Top " " .
Nah	51	½"ø	29'-8"	St.	Long. in floor slab & curb	Sah	34	½"ø	29'-8"	St.	Long. in floor slab & curb.
Nak	70	½"ø	5'-9"	St.	Vert. web wall over bents & pier	Sak	36	½"ø	5'-9"	St.	Vert. web wall over bents & pier
Nal	40	½"ø	6'-0"	St.	" " " " " .	Sal	32	½"ø	6'-0"	St.	" " " " " .
Nam	14	½"ø	2'-7"	St.	" " " " Exp. joint.						
Nan	4	½"ø	3'-3"	St.	" " " " " " .						
Nao	2	½"ø	31'-8"	St.	Hor. " " " Bent G.	Sao	2	½"ø	31'-8"	St.	Hor. " " " Bent A.
Nap	5	⅝"ø	23'-4"	St.	Cap Pier D.	Sap	5	⅝"ø	23'-4"	St.	Cap Pier C.
Naq	8	⅝"ø	3'-5"	St.	" " .	Saq	8	⅝"ø	3'-5"	St.	" " .
Nar	372	½"ø	6'-6½"	Bk.	Girder stirrups.	Sar	248	½"ø	6'-6½"	Bk.	Girder stirrups.
Nas	12	½"ø	20'-4"	St.	Hor. web wall over Bent D E & F	Sas	8	½"ø	20'-4"	St.	Hor. web wall over Bents B & C.

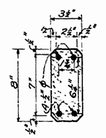
Note:
Handrail steel not included above.



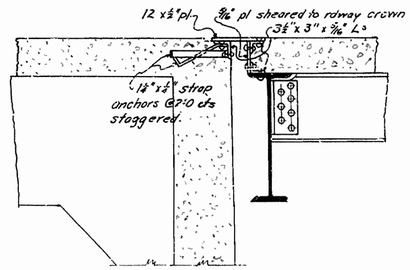
DETAIL OF COPPER WATER STOP AT EXPANSION JOINT.



DETAIL OF EXPANSION DEVICE OVER BENT F

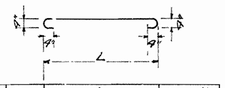


SECTION THRU HAND RAIL MEMBER.



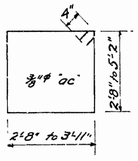
DETAIL OF EXPANSION DEVICE OVER PIER C

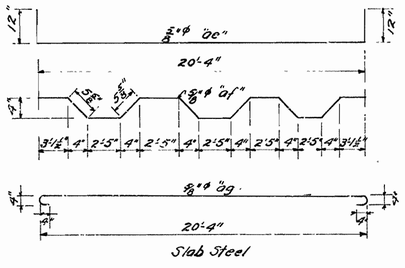
Note:
Expansion devices over Bent F & Pier C to be paid for as Structural Steel



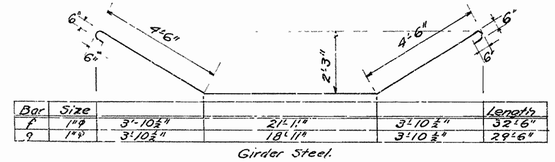
Bar	Size	L	Length
a	⅜"ø	3'-3"	4'-3½"
c	½"ø	6'-6"	7'-6½"
d	½"ø	4'-10"	5'-0½"

Haunch Steel



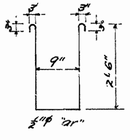


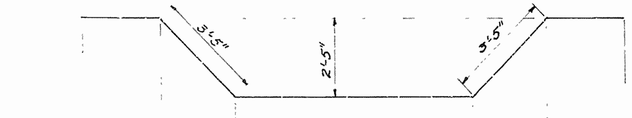
Slab Steel



Bar	Size				Length
P	1"ø	3'-10½"	2'-1"	3'-10½"	32'-6"
Q	1"ø	3'-10½"	18'-1"	3'-10½"	29'-6"

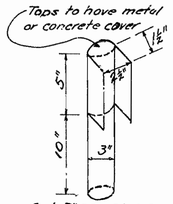
Girder Steel.





Bar	Size						Length
R	1"ø	11'-3"	2'-5"	7'-2"	2'-5"	11'-3"	36'-6"
S	1"ø	4'-1"	2'-5"	7'-2"	2'-5"	4'-1"	22'-2"

Cross Beam Steel



Cut 3" gas pipe and open to 2½".
DETAIL OF DRAIN FORM

DESIGN DATA: (APPROACH)
Concentrated load - 2-15 Ton trucks.
Uniform live load - 125 #□'
Impact allowance - 25% of live load.
Steel in tension - 16,000 #□"
Concrete in compression - 650 #□"

SPECIFICATIONS: (APPROACH)
Chamfer all exposed corners ¾" unless otherwise noted.
Concrete hand rail to be 1:3 mix Max. agg. ½"
All concrete below top of pier and bent caps to be Class "A" 1:2:4 mix. Max. agg. 1½"
All concrete above top of pier and bent caps, except handrail, to be Class "S" 1:2:3 mix. Max agg. 1"
All concrete to be poured in the dry.

ARKANSAS STATE HIGHWAY DEPARTMENT
APPROACH MISC. DETAILS
BRIDGE OVER
POINT REMOVE CREEK
3½ MILES WEST OF MORRILLTON, CONWAY CO. STATE HWY No 64.
FEDERAL AID PROJECT No 141-B.
LITTLE ROCK, ARK.
JUNE 1926.

243
R.A.

FED. ROAD PROJ. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
G	ARK.				

PORTAL

STRUT

PARTIAL SECTION

EXPANSION END

FIXED END

LATERAL HANGER

EXPANSION DEVICE FOR ADJACENT CONCRETE SPANS

EXPANSION DEVICE FOR MULTIPLE SPANS

NOTE:- This drawing is general only, shop drawings must be made in compliance with specifications and must be submitted and approved before fabrication begins.

ESTIMATED QUANTITIES

Structural Steel	111,100 lbs.
Reinforcing Steel	7,520 lbs.
Class 'S' Concrete	567 Cu Yds.

INT. FLOOR BEAMS

D.L.M. = $\frac{1}{8}$ x 2528 x 20.17² = 128,500#
L.L.M. = 8.58 x 25800 - 6 = 12900 = 144,000
Impact - 30% = 43,200
Total = 315,700#

$\frac{315,700 \times 12}{13000}$ = 291.0 = Reqd. Sec. Mod.

Use 24"-110.0# Is - Sec. Mod. = 239.1

STRINGERS

D.L.M. $\frac{5}{8}$ x 44 x 20² = 20,700#
L.L.M. $\frac{1}{2}$ x 9050 x 20 = 45,200#
Impact 30% = 13,600#
Total = 79,500#

$\frac{79500 \times 12}{16000}$ = 59.6 Sec. Mod. Req'd.

Use 15"-42.9# Is Sec Mod. 58.9

DESIGNED	N.B.G.
TRACED	C.J.P.
CHECKED	N.B.G.
REVISIONS	2-28-27 Rd.

SPECIFICATIONS

Live Load:- Uniform - 76 lbs per square foot of Roadway
Concentrated:- 2-15 Ton Trucks as shown

14'-0" — 6,000# Axle Loads — 24,000# — 6'-0"

Impact = $\frac{100\ S}{L + 300}$

Unit Stresses:- See Arkansas Highway Department Specifications
Rivets:- $\frac{3}{4}$" diam.
Open Holes:- $\frac{13}{16}$" diam.
All field connections riveted. Rivet holes in tension members are to be so spaced that not more than one hole is deducted from area of cross-section of each angle at point of maximum stress.
Paint:- One coat red lead and raw linseed oil
Field Paint:- Two coats of different colors as approved by the engineer
Batten plates:- Spaced not over 3'-0" C. to C. on tension members
Concrete: Floor slab to be Class "S" Concrete. 1" extra thickness has been added for wear.

STANDARD PLAN

120-FT. STEEL HIGHWAY BRIDGE
18' ROADWAY — CONC. FLOOR

ARKANSAS HIGHWAY DEPARTMENT
LITTLE ROCK, ARK.

Approved:- _____ Chairman, Arkansas State Highway Commission

By:- _____ State Highway Engineer

March 1924

Recommended for Approval:- _____ State Highway Bridge Engineer

State Standard No. F-712-A

K-65