

Note: For R/W Data & Guard Rails, see ROWY Plans.

Note: Use Type B1 Approach Gutters at both ends of Bridge. For Details, see Div. Nos. 2016B & 2017.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	3979	23 82
							0346 LAYOUT	30719

GENERAL NOTES

BENCH MARK: Chiseled "X" top of wheelwall, painted white; 12.4' rt. of centerline Sta. 556 + 06.52, Elevation 248.76.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department, Standard Specifications for Highway Construction, 1988 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1983 with current Interim specifications.

LIVE LOADINGS: HS20 METHOD OF DESIGN: Load Factor

MATERIALS AND STRENGTHS:
Class S (AEC) Concrete (superstructure) $f'c = 4,000$ psi
Class S Concrete (substructure) $f'c = 3,500$ psi
Reinforcing Steel (A615 or A617, GR. 60) $F_y = 60,000$ psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

STEEL PILING: Piling shall be HP10x42 and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 55 tons per pile and to a minimum penetration of 15' below natural ground. Piling in end bents shall be driven after embankment to bottom of cap. It is in place. Lengths of end bent piling shown are assumed for estimating quantities only. Actual lengths are to be determined in the field. Drive one (1) test pile in Bent No. 2.

PILE ENCASEMENT: Pile encasement for Bents 2 and 3 shall extend 3' into the ground and to the bottom of cap or column. See Drawing Number 14995A for additional information.

BRIDGE DECK: The concrete bridge deck shall be given a trow finish as specified for final finishing in subsection 802.20 for Class 5 Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Boiled linseed oil treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

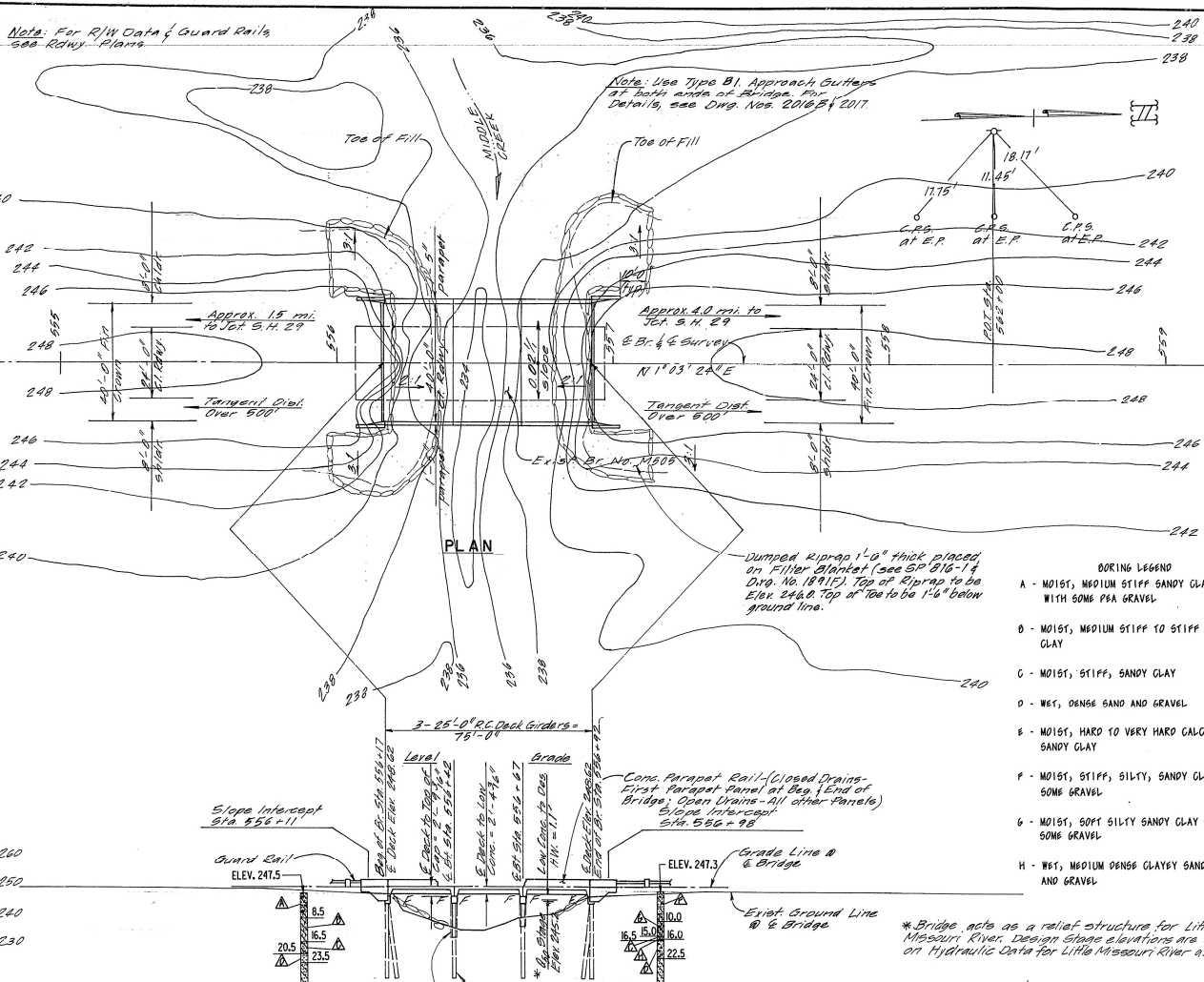
DETAIL DRAWINGS: Bents 25'-0" RCDG Spans
DRAWING NO. 30721
30722 & 30723

EXISTING BRIDGE: The existing bridge No. M505 is 24' wide and 90' long (16 spans) and consists of a precast concrete superstructure supported by timber pile bents with concrete caps.

REMOVAL AND SALVAGE: The existing bridge (M505) shall be removed in accordance with section 205 of the Standard Specifications. All material from the existing bridge shall become the property of the contractor.

MAINTENANCE OF TRAFFIC: For maintenance of traffic, see Roadway Plans.

Predrilling may be required to obtain minimum pile penetration. Size and depth of predrilling shall be approved by the engineer. Any cost for predrilling shall be included in the cost for steel piling.



- BORING LEGEND**
- A - MOIST, MEDIUM STIFF SANDY CLAY WITH SOME FINE GRAVEL
 - B - MOIST, MEDIUM STIFF TO STIFF SILTY CLAY
 - C - MOIST, STIFF, SANDY CLAY
 - D - WET, DENSE SAND AND GRAVEL
 - E - MOIST, HARD TO VERY HARD CALCAREOUS SANDY CLAY
 - F - MOIST, STIFF, SILTY, SANDY CLAY WITH SOME GRAVEL
 - G - MOIST, SOFT SILTY SANDY CLAY WITH SOME GRAVEL
 - H - WET, MEDIUM DENSE CLAYEY SAND AND GRAVEL

* Bridge acts as a relief structure for Little Missouri River. Design stage elevations are based on Hydraulic Data for Little Missouri River as shown below.

HYDRAULIC DATA FOR LITTLE MISSOURI RIVER

DRAINAGE AREA = 713 SQ. MI.

Frequency	Discharge c.f.s.	Normal Water Surface Elevation	Water Surface Elevation with Backwater Future Embankment	Plan Embankment
Design Flood	050	53.980	245.2	247.3
Basic Flood	000	63.535	245.8	247.4
Overtopping Flood	029	47,000		246.4
Overtopping Flood	035	68,000	248.6	

* BASIC FLOOD

Q100 = 240 CFS
NW 5. Elev. = 238.2

Sta. 555+87, 20' rt. of C.
5.5-6.5, N=7; 10.5-11.5, N=6;
15.5-16.5, N=5; 20.5-21.5, N=59
25.5-26.5, N=60+;
30.5-31.5, N=60+; 35.5-36.5, N=60+;
40.5-41.5, N=60+; 45.5-46.5, N=60+;
50.5-51.5, N=60+

Sta. 557+46, 20' Lt. of C.
5.5-6.5, N=7; 10.5-11.5, N=4;
15.5-16.5, N=25; 20.5-21.5, N=42;
25.5-26.5, N=60+; 30.5-31.5, N=52;
35.5-36.5, N=60+; 40.5-41.5, N=60+;
45.5-46.5, N=60+; 50.5-51.5, N=60

DESIGN FLOOD

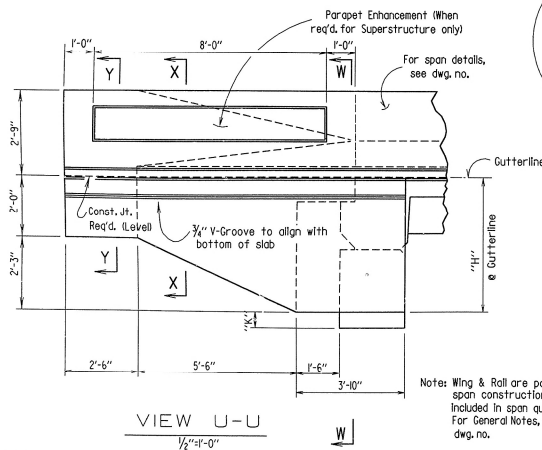
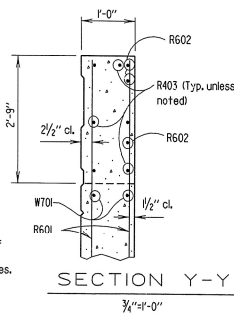
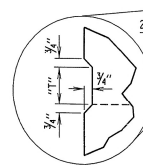
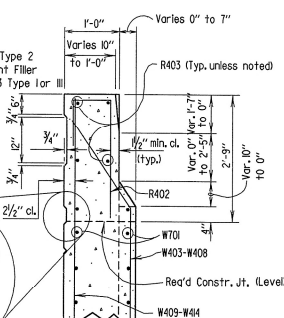
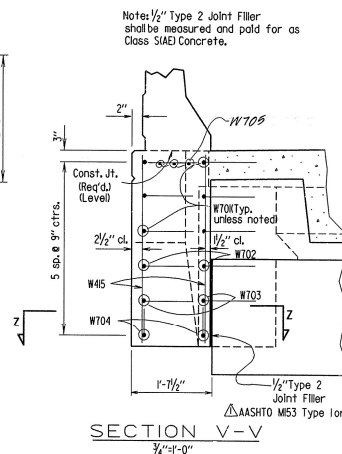
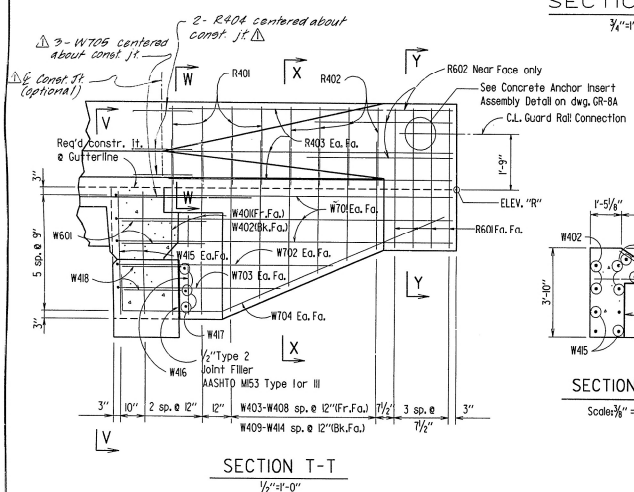
* Q100 = 190 CFS
NW 6. Elev. = 237.7

BENT NO.

ELEVATION

D.A. = 0.4 sq. mi.

ALT. NO. 1
LAYOUT OF BRIDGE OVER
MIDDLE CREEK
PIKE CO. LINE-HWY. 29 BRS. & APPRS.
NEVADA COUNTY
ROUTE 19 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: *[Signature]* DATE: 5-1-87
CHECKED BY: *[Signature]* DATE: 7-15-88
DESIGNED BY: GVA DATE: 5-1-87
BRIDGE NO. 6346 DRAWING NO. 30719



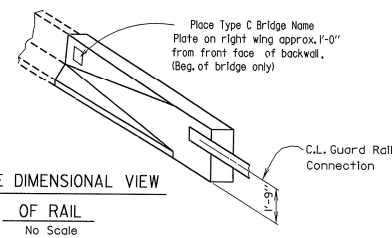
MARK	NO. REQ'D.	LENGTH	A	B	PIN DI
R401	8	3'-11"			2"
R402	8	4'-0"			2"
R403	12	9'-8"			Str.
R601	16	4'-5"			Str.
R602	6	5'-0"			Str.
<i>R404</i>	<i>12</i>	<i>4'-0"</i>			<i>6 1/2"</i>
W401	4	5'-6"	4'-4"	1'-2"	2"
W402	4	6'-8"			Str.
W403- W408	2 of each	Var. 3'-4" to 5'-5"	Var. 2'-2" to 4'-3"	1'-2"	2"
W409- W44	2 of each	Var. 4'-5" to 6'-7"			Str.
W45	8	3'-11"			Str.
W46	8	3'-4"			Str.
W417	6	2'-7"			Str.
W48	4	1'-10"			Str.
W501	4	7'-5"	6'-11"	1'-0"	<i>4 1/2"</i>
W701- W702	12	12'-6"	11'-6"	1'-2"	<i>5 1/2"</i>
W702	4	8'-6"	7'-6"	1'-2"	<i>5 1/2"</i>
W703	4	6'-8"	5'-8"	1'-2"	<i>5 1/2"</i>
W704	4	12'-6"			<i>5 1/2"</i>
<i>W709</i>	<i>6</i>	<i>6'-0"</i>			<i>6 1/2"</i>

BENDING DIAGRAMS

The diagrams illustrate various pipe bend configurations with the following dimensions and labels:

- Top Left:** A 90° bend with a 6" horizontal radius, 1'-0" vertical offset, and a 1/2" offset. The bend is labeled **R40I**.
- Top Right:** A 90° bend with a 7" horizontal radius, 1'-0" vertical offset, and a 2'-6 1/2" offset. The bend is labeled **R402**.
- Middle Left:** A 90° bend with a 12" radius, 3/8" offset, and a horizontal dimension **A**. The bend is labeled **W40I, W403-W408**.
- Middle Right:** A 90° bend with a 12" radius, 3/8" offset, and a horizontal dimension of 8'-0". The bend is labeled **W70I**.
- Bottom Left:** A 90° bend with a 12" radius, 3/8" offset, and dimensions **A** and **B**. The bend is labeled **W70I, W702, W703**.
- Bottom Right:** A 90° bend with a 12" radius, 3/8" offset, and a horizontal dimension **A**. The bend is labeled **W60I**.

Dimensions are out to out of bars.

TABLE OF VARIABLES

			Elev. "R"	"H"	"K"	"T"	
Br. No. 6346	Bent No. 1	Wing A	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
		Wing B	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
	Bent No. 10	Wing A	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
		Wing B	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
Br. No. 6346	Bent No. 1	Wing A	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
		Wing B	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
	Bent No. 4	Wing A	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
		Wing B	248.22	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
Br. No. 6347	Bent No. 1	Wing A	251.72	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
		Wing B	251.72	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
	Bent No. 18	Wing A	251.72	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	
		Wing B	251.72	4'-3"	7 $\frac{3}{8}$ "	3 $\frac{5}{8}$ "	

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RPOD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
5-12-90	3-14-90			6	ARK.			
				JOB NO.		3979	27	82
				(1)	6345, 6346, 6347 STD. WING 30723			

Note: Concrete Insert Anchor Assembly will not be paid for directly, but will be considered subsidiary to the item of Class (IAE) Concrete.

Note: For details of guard rail connections, see Drwg. No. GR-8 & GR-8A.

ALT. NO. 1
STANDARD DETAILS
FOR WING AND RAIL

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

ALTERED BY: EJK DATE: 8-15-89
CHECKED BY: _____ DATE: _____
DESIGNED BY: STD. DATE: _____
SCALE: As Shown
SHEET NO. 6345-6346.6347 DRAWING NO. 30723

£JK£553,1,550,3001,03979XXXX,W11,3979