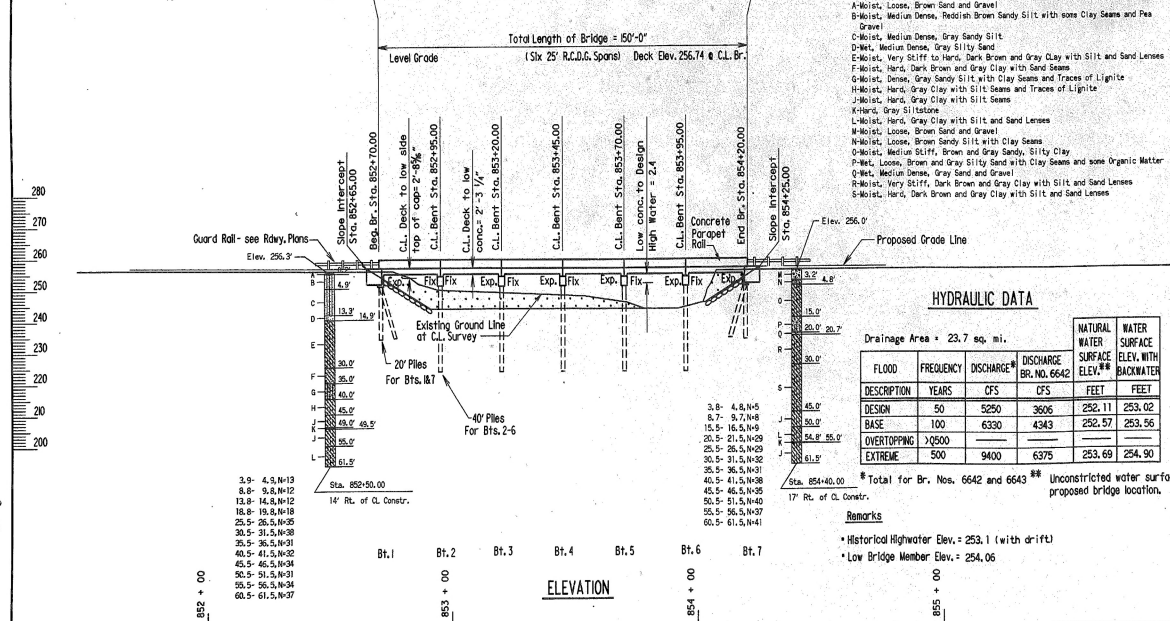
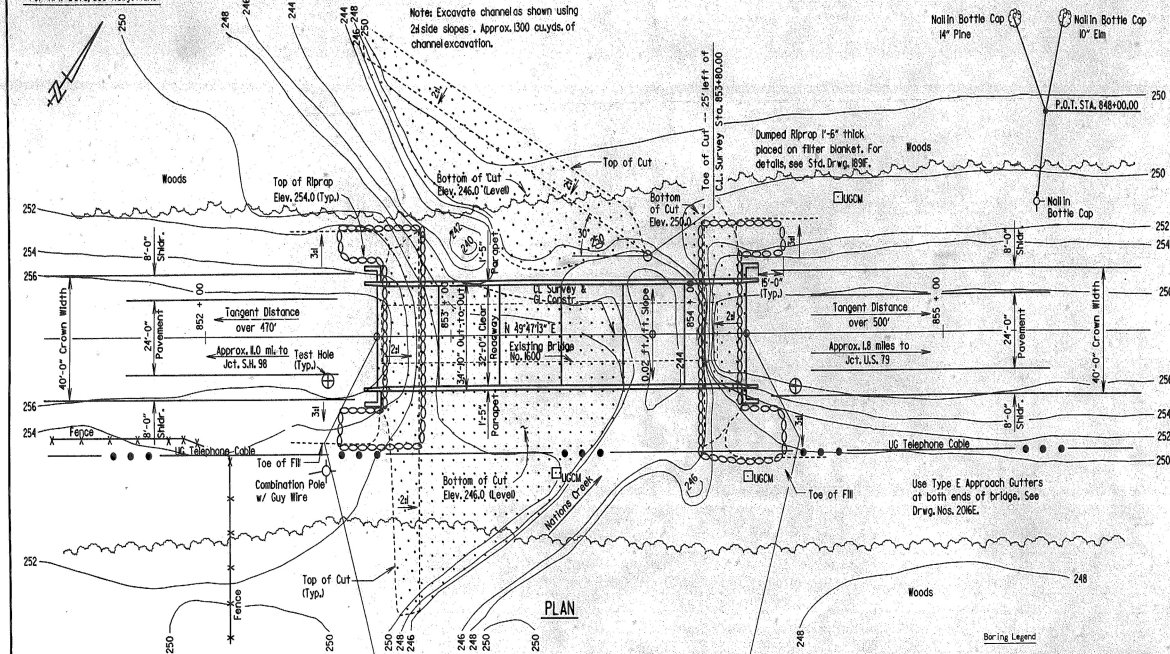


For R/W Data, see Rwy. Plans

Notes: Excavate channels shown using 2:1 side slopes. Approx. 1300 cu yds. of channel excavation.



**HYDRAULIC DATA**

Drainage Area = 23.7 sq. mi.

FLOOD DESCRIPTION	FREQUENCY YEARS	DISCHARGE CFS	DISCHARGE BR. NO. 6642 CFS	NATURAL WATER SURFACE ELEV. WITH BACKWATER FEET	WATER SURFACE ELEV. WITH BACKWATER FEET
DESIGN	100	5250	3606	252.11	253.02
BASE	100	6330	4343	252.57	253.56
OVERTOPPING	>9500				
EXTREME	500	9400	6375	253.69	254.90

\* Total for Br. Nos. 6642 and 6643 \*\* Unrestricted water surface elev. at proposed bridge location.

DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6642	ARK.	07004	13	49

**GENERAL NOTES**

BENCH MARK: Nail in the side of a combination pole, 42' Rt. of C.L. Survey Sta. 852+49.00, Elevation 251.85.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1993 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1992 with current interim specifications.

LIVE LOADING: HS20 METHOD OF DESIGN: Load Factor

SEISMIC PERFORMANCE CATEGORY: A

**MATERIALS AND STRENGTHS:**

Superstructure Concrete (Class S/AE)  $f'c = 4,000$  psi

Substructure Concrete (Class S)  $f'c = 3,500$  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.

**CONCRETE PILING:** Piling for Bents 1 and 7 shall be 16" octagonal or 14" square precast concrete and shall be driven to a minimum safe bearing capacity of 44 tons per pile. Piling shapes shall not be mixed. Piling in Bents 2 through 6 shall be 18" square precast concrete and shall be driven to a minimum safe bearing capacity of 55 tons per pile. All piling shall be driven with an approved air, steam, or diesel hammer. Piling in end bents shall be driven after embankment to bottom of cap is in place. Piling shall have a minimum penetration of 20'. Actual lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Drive one #2 test pile in Bent 2 and one #2 test pile in Bent 5.

**BRIDGE DECK:** The concrete bridge deck shall be given a fine 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:**

DETAIL DRAWINGS	DRAWING NO.
End Bents	37109
Intermediate Bents	37110
25'-0" R.C.D.G. Spans	37111
Concrete Piling	2389
Type E Approach Gutters	2016E
Temporary Bridge Structure	2421, 2422, 2423, 2424

**EXISTING BRIDGE:** The existing bridge No. 1600 (log mile 16.15) is 20' wide and 135' long and consists of a timber superstructure supported by a concrete substructure.

**REMOVAL AND SALVAGE:** The existing bridge (No. 1600) 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.

**TEMPORARY BRIDGE:** Construct a 124' long temporary bridge approximately 60' downstream. The temporary bridge shall have a minimum roadway width of 24', a minimum live load capacity of H15 and a minimum deck elevation of 256.0'. The temporary bridge shall consist of 4-31' spans and shall be placed as shown on the location sketch. See section 603 of the Standard Specifications. See drawing numbers 2421 - 2424 for standard temporary bridge details. A concrete deck will be required for this detour site. Therefore, the details of timber decking shown on drawing nos. 2421-2424 will not be allowed. If timber piling and pine timber are used on this temporary bridge structure, the materials shall be treated with a preservative according to the standard specifications. See roadway plans for actual detour grade and alignment.

**SHEET 1 OF 2**  
**LAYOUT OF**  
**BRIDGE OVER NATIONS CREEK**  
**COLUMBIA COUNTY**

ROUTE 19 SEC. 1  
**ARKANSAS STATE HIGHWAY COMMISSION**  
LITTLE ROCK, ARK.

DRAWN BY: JAC DATE: 1-10-95  
CHECKED BY: JAC DATE: 2-10-95  
DESIGNED BY: JAC DATE: 2-10-95  
BRIDGE NO. 6642 DRAWING NO. 37106



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FILE NO. 301.10	DATE	FED. AD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARC.		18	49
				JOB NO.		070041	18	49

6642 & 6643 SPAN DETAILS 3711

# BAR LIST (EACH SPAN)

Mark	No. Req'd.	Length	Pin Dia.	Banding Diagrams
S401	71	24'-8"	Str.	<p>Notes: Dimensions are out to out of bars.</p>
S402	8	32'-6"	Str.	
S403- S420	4 of each	var. 5'-2" to 5'-10"	2"	
S421	33	4'-4"	2"	
S501	21	35'-2"	3"	
S502	132	5'-6"	2 1/2"	
S503	22	34'-6"	Str.	
S601	22	34'-6"	Str.	
S602	9	32'-6"	Str.	
S603	40	5'-5"	Str.	
G901	16	24'-8"	Str.	<p>Notes: Dimensions are out to out of bars.</p>
G902	8	24'-8"	Str.	
R401	10	5'-2"	2"	
R402	2	5'-5"	2"	
R403	2	5'-2"	2"	
R404	2	4'-11"	2"	
R405	2	4'-8"	2"	
R406	2	4'-5"	2"	
R407	12	9'-6"	Str.	
R408	10	3'-8"	2"	
R409	10	4'-9"	Str.	<p>Notes: For additional Banding Diagrams, see Drwg. No. 3712</p>
R410	10	3'-9"	2"	
R411	40	6'-4"	2"	
R412	40	5'-6"	2"	
R413	24	9'-6"	Str.	
R414	28	5'-10"	2"	
R415	28	3'-2"	2"	
R416	16	12'-1"	Str.	
R601	16	4'-9"	Str.	
R602	6	5'-0"	Str.	
R603	20	12'-11"	Str.	<p>Notes: For additional Banding Diagrams, see Drwg. No. 3712</p>
R701	8	7'-0"	5/4"	
R702	8	7'-0"	5/4"	
R703	8	7'-0"	5/4"	

## GENERAL NOTES

All concrete to be Class (SAB). All exposed corners to be chamfered 3/4" unless otherwise noted.

The concrete in the girders, end diaphragms, and deck shall be placed in one continuous pour for the interior spans. The concrete in the girders, end diaphragms, deck, and wings shall be placed in one continuous pour for the end spans.

Reinforcing steel to be ASTM A615 Grade 60. Bar supports for reinforcing bars will not be paid for directly, but shall be considered subsidiary to the item "Reinforcing Steel."

Elastomeric pad, Type 2 joint filler, Type 6 poured Jt. (see section 501.03(h) & 501.04(j) of the Standard Specifications) shall be used for the full width and length of the bearing.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1993 edition, with applicable Special Provisions and Supplemental Specifications.

Design Specifications: AASHTO Standard Specifications for Highway Bridges, 1992 edition, with current interim specifications.

Design Live Loadings: HS20 Method of Design: Load Factor

Dead Load: L540 \*ft. \* includes 152 \*ft future wearing surface.

Live Load: 1.5 wheels + impact.

Materials and Strengths: Class (SAB) Concrete f'c = 4,000 psi. Reinforcing Steel Grade 60 Fy = 60,000 psi.

## DETAILS OF STANDARD 25'-0" R.C. DECK GIRDER SPANS 32'-0" C.L. ROADWAY ROUTE 19 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: M.H. DATE: 7-95  
CHECKED BY: C.B. DATE: DEC. 95  
DESIGNED BY: M.H. DATE: DEC. 95

BRIDGE NO. 6642 & 6643 DRAWING NO. 3711

