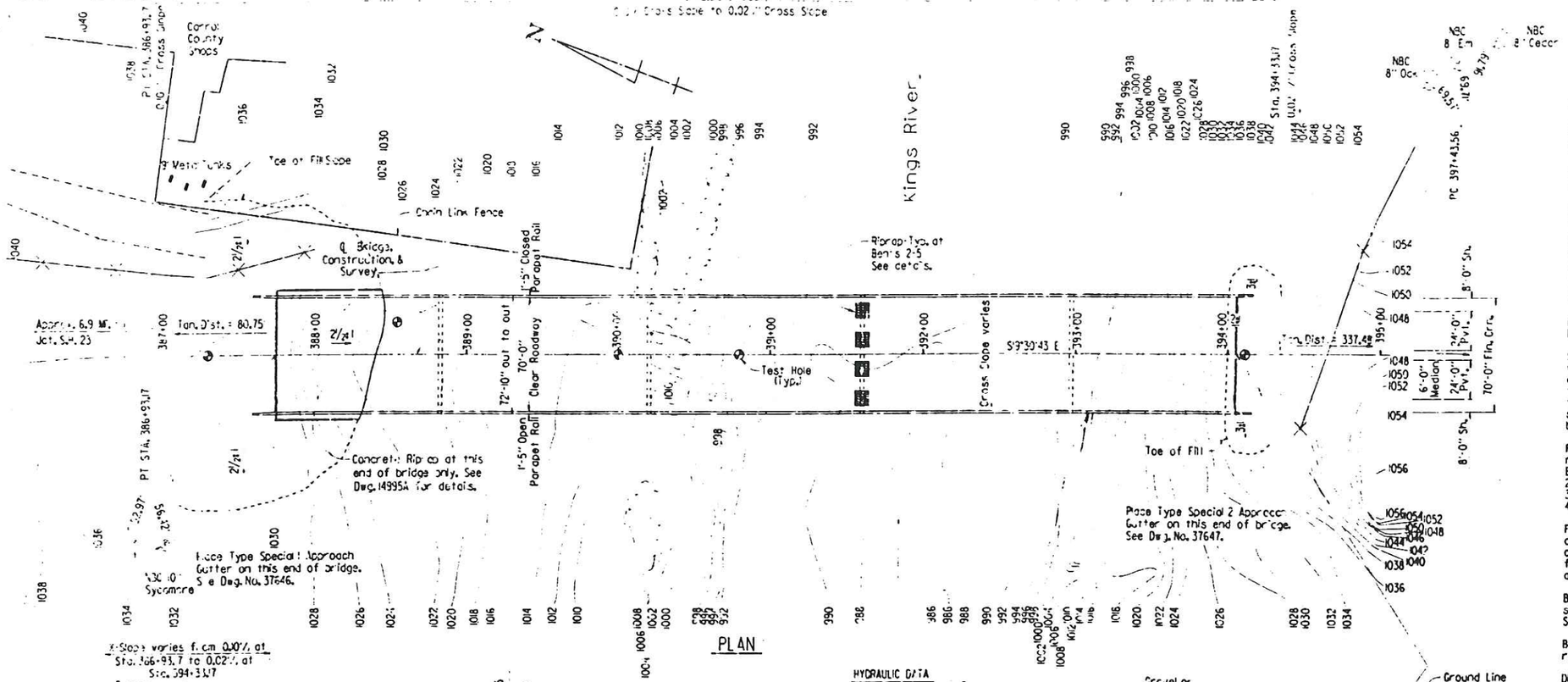
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		00985	34	124
				06670 - LAYOUT - 37629				

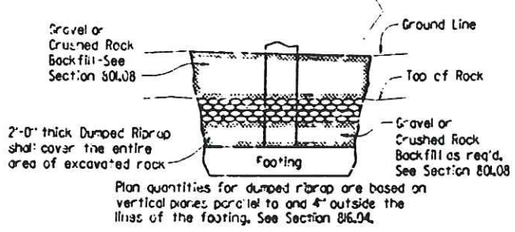


HYDRAULIC DATA

Drainage Area = 52.4 M.²

	Frequency	Discharge c.f.s.	*Natural Water Surface Elevation	Water Surface Elev. with Backwater
Design Flood	0.0	66,950	1017.3	1017.4
Basic Flood	0100	77,040	1019.5	1019.6
Extreme Flood	0500	107,000	1024.8	1024.9
Overtopping Flood	> 0500	--	—	—

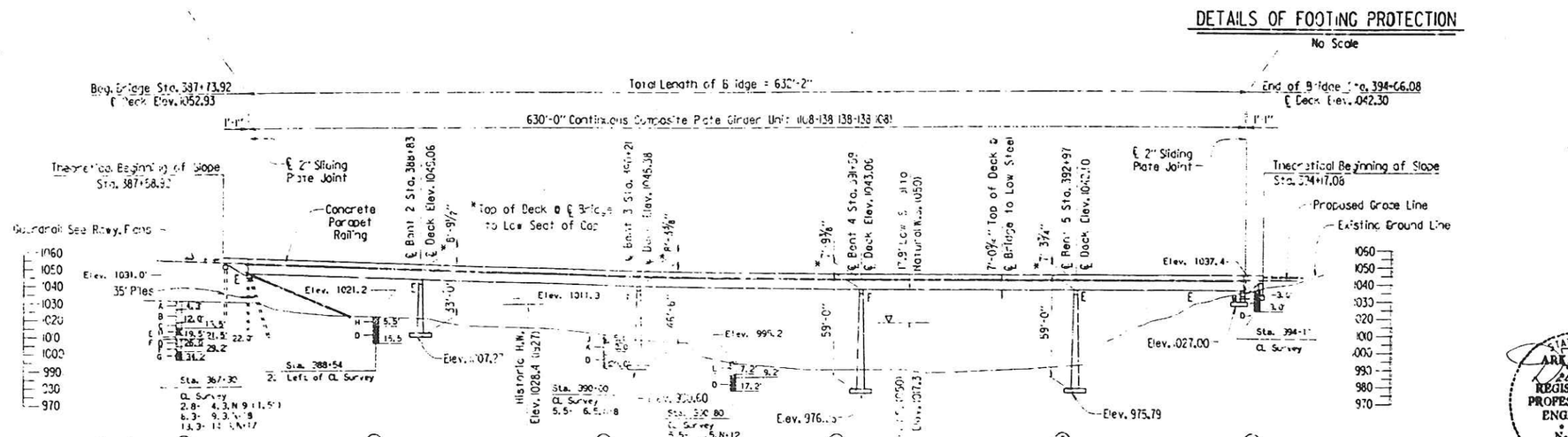
* Unconstricted water surface without structure or roadway approaches.



Plan quantities for dumped riprap are based on vertical planes parallel to and 4' outside the lines of the footing. See Section 816.04.

DETAILS OF FOOTING PROTECTION

No Scale



GENERAL NOTES

BENCH MARKS: CPS in 30" Sycamore, 55' left of ℄ Survey, Sta. 390+40, Elev. 1004.82.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (1996 edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition) with current interim specifications.

LIVE LOADING: HS20 METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi.
Class S Concrete (substructure)	f'c = 3,500 psi.
Reinforcing Steel (AASHTO M31 or M53, GR. 60)	fy = 60,000 psi.
Structural Steel (AASHTO M270, Gr. 50W)	Fy = 50,000 psi.
Structural Steel (AASHTO M270, Gr. 36)	Fy = 36000 psi.

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

STEEL PILING: Piling in Bents 1 shall be HP 12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into the material designated as dolomite on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cutoff and build-up in accordance with the standard specifications. Piles in end bent to be driven after embankment to bottom of cap is in place.

FOOTINGS: Bottom of footings for Bents 2 - 6 shall be set a minimum depth into material designated as dolomite on the boring legend.

Bent No.	Min. Depth	Bent No.	Min. Depth
2	5'-0"	5	6'-0"
3	5'-6"	6	2'-0"
4	6'-0"		

Foundations for footings shall be prepared in accordance with section 801.04 of the Standard Specifications. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in subsection 802.9 for Class S Tined Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Class I Protective Surface Treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

DETAIL DRAWINGS:	DRAWING NOS.
End Bents	37630-37633
Intermediate Bents	37634-37637
630'-0" Continuous Composite Plate Girder Unit	37638-37643
Elastomeric Bearings	37644-37645
Permanent Steel Bridge Deck Forms	14999
Concrete Riprap	14995A
Steel Piling	14995A
Type C Bridge Name Plate	2389A
Embankment Construction	1888A
Computing Excavation for Structures	1891F
Type Special 1 Approach Gutter	37646
Type Special 2 Approach Gutter	37647

EXISTING BRIDGE: The existing bridge No. 1309 (log mile 7.53) is 20' wide and 432' long and consists of a concrete superstructure supported by a concrete substructure. The existing bridge is located approximately 900 feet downstream from the proposed new bridge.

REMOVAL AND SALVAGE: After the entire job is completed, the existing bridge (No. 1309) 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.

Boring Legend

A-Moist, Stiff, Reddish Brown Cherty Clay
B-Moist, Very Stiff, Brown Cherty Clay
C-Moist, Very Stiff, Reddish Brown and Gray Cherty Clay
D-Hard, Gray Dolomite
E-Soil-filled Cavity
F-Hard, Gray Fractured Dolomite
G-Hard, Gray Dolomite with some Fractured Seams
H-Moist, Stiff, Brown Sandy, Silty Clay
J-Moist, Medium Stiff, Brown Sandy, Silty Clay with Gravel and Cobbles
K-Moist, Medium Stiff, Brown Sandy, Silty Clay
L-Moist to Wet, Medium Dense Brown Sand and Cherty Gravel
M-Moist, Stiff, Brown Sandy, Silty Clay with Gravel, Cobbles, & Boulders

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 3143 1-17-97 DALE F. LOE

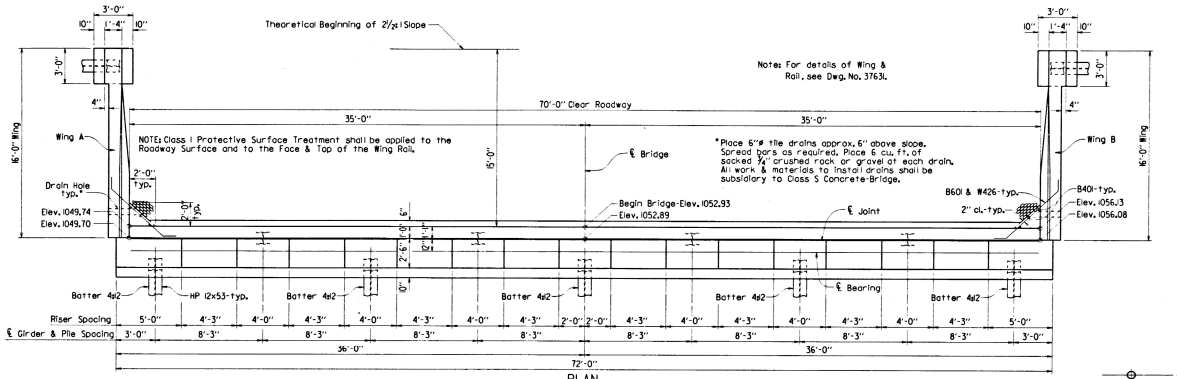
BRIDGE ENGINEER

LAYOUT OF BRIDGE OVER KINGS RIVER
KINGS RIVER STR. - HWY. 143 (S)
CARROLL COUNTY
ROUTE 62 SEC. 4
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: EKP DATE: 2/26/93
CHECKED BY: CJF DATE: 1-16-97 SCALE: 1" = 40'
DESIGNED BY: DFL DATE: 2-26-97
BRIDGE NO. 06670 DRAWING NO. 37629

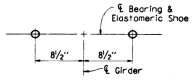
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6 MAR 97				6	ARK.			
				JOB NO.		009815	35	124

06670 - BENT NO. 1 - 37630



PLAN

Scales: ¼" = 1'-0"



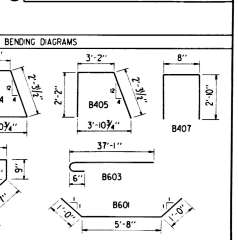
TYP. ANCHOR BOLT LAYOUT

No Scale

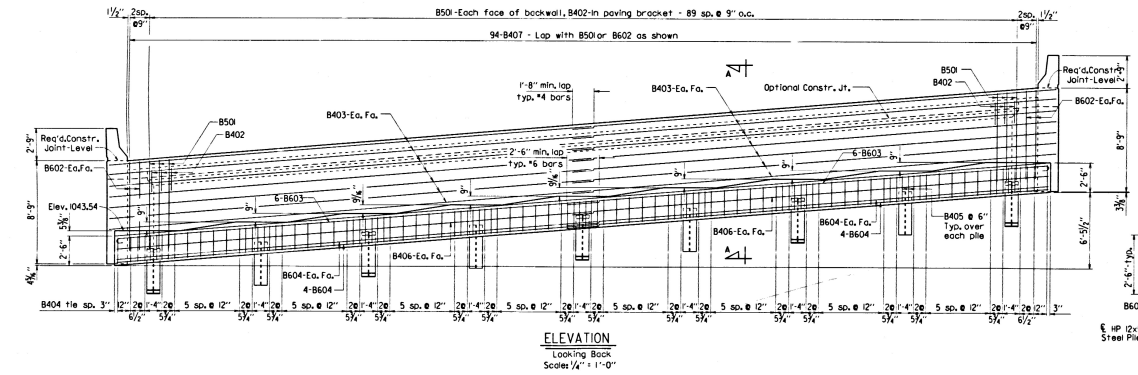
BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
B401	6	7'-7"	Str.
B402	90	3'-11"	2"
B403	28	37'-4"	Str.
B404	88	11'-11"	2"
B405	18	7'-6"	2"
B406	4	36'-9"	Str.
B407	94	6'-2"	2"
B501	180	7'-7"	Str.
B601	18	7'-8"	4½"
B602	8	7'-10"	Str.
B603	12	37'-9"	4½"
B604	12	37'-1"	Str.
See other Bar List for Wing Reinf.			

BENDING DIAGRAMS



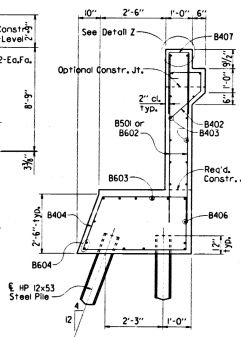
Dimensions are out to out of bars.



ELEVATION

Looking Back

Scales: ¼" = 1'-0"



SECTION A-A

Scales: ½" = 1'-0"

GENERAL NOTES

All concrete shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi. Concrete shall be poured in the dry. All exposed corners to be chamfered ¾" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (yield strength = 60,000 psi).

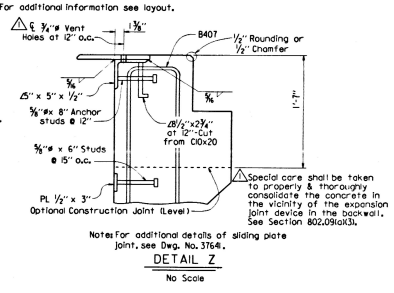
All structural steel shall be AASHTO M270, Gr. 50W. Structural steel in backwall shall be paid for as "Structural Steel in Plate Girder Spans (M270, Gr. 50W)".

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves. See Dwg. No. 37644.

Avoid having heavy construction equipment behind backwall until Pour (1) on end span has been completed. Wings below rolling must be poured before backfill is placed behind backwall. Backwall above optional construction joint shall not be poured until all concrete for entire continuous unit has cured.

All piles shall be driven to a minimum safe bearing capacity of 70 tons per pile.

For additional information see layout.



Note: For additional details of sliding plate joint, see Dwg. No. 37641.

DETAIL Z

No Scale

△ Revised vent holes and note KDH 6 MAR 97

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 3168 DALE F. LOE

BRIDGE ENGINEER

DETAILS OF BENT NO. 1
KINGS RIVER

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: NOV 93
CHECKED BY: DHP DATE: 1-16-97 SCALE: AS NOTED
DESIGNED BY: EKM DATE: 3-93
BRIDGE NO. 06670 DRAWING NO. 37630

B9815.BI

MAR 20 1997

D C B A 0 A B C D

TAMERAN