

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.		004938	101	247
				07058	LAYOUT			47931

** Install Bridge End Terminal as shown. Eliminate or modify approach curb sections to fit bridge end terminal. Payment for eliminating or modifying these curbs shall be considered subsidiary to Approach Gutters (Type B).

GENERAL NOTES

BENCH MARK: 8" Spike, 120.48' Rt. of Sta. 213+55.77, Elev. 1509.98.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2003 edition) with applicable supplemental specifications and special provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO Standard Specification for Highway Bridges, (2002 Edition) & AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (2003 Edition).

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) $f_y = 60,000$ psi
Structural Steel (AASHTO M270, Gr. 36) $F_y = 36,000$ psi
Structural Steel (AASHTO M270, Gr. 50W) $F_y = 50,000$ psi

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

PILING: All piling shall be HP12 x 53 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 medium hard shale on the boring legend. Lengths shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the specifications. Piles in end bents are to be driven after embankment to bottom of cap is in place. On all piles the Contractor shall use approved Steel H-Pile Driving Points. Actual pile lengths to be determined in the field.

FOOTINGS: Footings for Bents 2 and 3 shall be set a minimum of 1'-6" into material designated as "DI" on the boring legend with a minimum cover above top of footing of 2'-0". Foundations for footing shall be prepared in accordance with Section 80L04. 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 surface of rock.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

DETAIL DRAWINGS:
165'-0" Cont. Comp. W-Beam Unit
End Bents
Int. Bents
Elastomeric Bearings
Steel Piling
Type B Approach Gutters

DRAWING NO.
47935 - 47940
47932, 47933
47934
47941
4995A
2016B

EXISTING BRIDGE: The existing four-span bridge, no. A1429, (L.M. 6.83) is 140' long and 31.5' wide and consists of a concrete superstructure supported by a concrete substructure.

REMOVAL AND SALVAGE: The existing bridge, no. A1429, 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 temporary bridge approximately 44' upstream from centerline of the proposed bridge with a minimum deck elevation of 1505.00. See Roadway Plans for actual detour grade and alignment. The temporary bridge shall be a minimum of 125' long with a minimum roadway width of 24' and a minimum live load capacity of H15. See Section 603 of the Standard Specifications and drawing numbers 2465 - 2467 for standard temporary bridge details. A timber deck is not 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.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

HORIZONTAL CURVE DATA

P.L. = Sta. 216+14.48
 $\Delta = 35^\circ 43' 25.87''$ Lt.
 $D = 3^\circ 30' 00.00''$
 $T = 527.54'$
 $L = 1020.68'$

BORING LEGEND

DI-Medium Hard, Dark Gray Shale with Gray Sandstone Seams
M1-Wet, Medium Dense, Brown Sand with Clay Seams and Gravel
N1-Hard, Gray Sandstone
P1-Soft to Medium Hard, Dark Gray Weathered Shale
O1-Wet, Stiff, Brown Sandy, Silty Clay
R1-Wet, Hard, Brown Sandy, Silty Clay with Gravel and Cobbles
S1-Moist, Stiff, Gray and Brown Sandy, Silty Clay with Gravel
T1-Soft to Medium Hard, Gray and Brown Weathered Shale

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	*NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEV. WITH BACKWATER
	YEARS	CFS	FEET	FEET
Design	50	4,720	1503.8	1505.3
Base	100	5,730	1504.5	1506.3
Extreme	500	6,830	1504.7	1508.1
Overtopping	> 500	NA	NA	NA

*Unconstricted water surface without structure or roadway approaches.
Drainage area = 5.9 square miles.
Historical H.W. Elev. = 1509.7

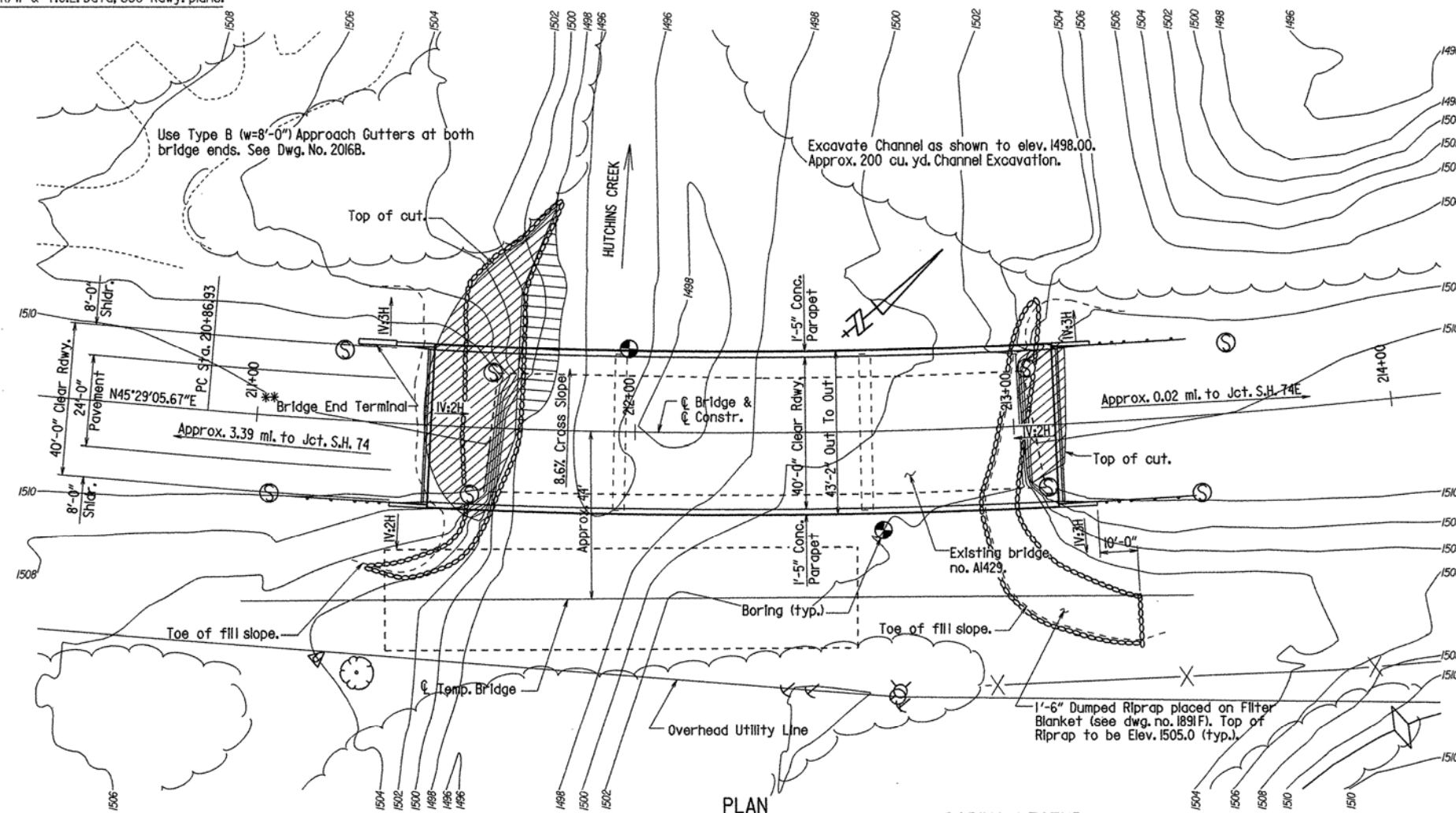
"N" VALUES

***Sta. 211+98 - 22' Left of Center Line

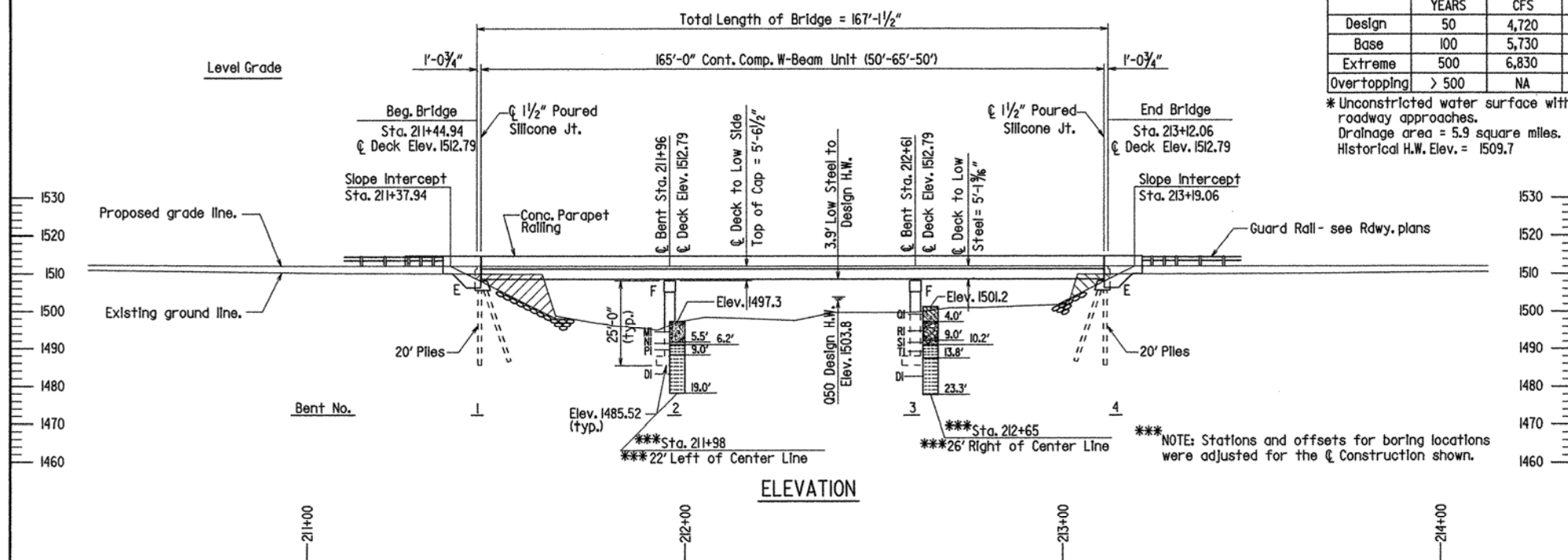
***Sta. 212+65 - 26' Right of Center Line
4.5 - 5.5, N=56
9.5 - 10.5, N=15

NOTE: Longitudinal lines are concentric to C Bridge. Bents are constructed on radial lines.

PLAN



ELEVATION



LAYOUT OF BRIDGE OVER
HUTCHINS CREEK
WEST FORK - SOUTH
(BRS. & APPRS.) (S)
WASHINGTON COUNTY
ROUTE 71 SEC. 16
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: K.W.Y. DATE: 6-14-04 FILENAME: b004938x2.LI
CHECKED BY: CAS DATE: 9-05 SCALE: 1" = 20'
DESIGNED BY: K.W.Y. DATE: 4-04
BRIDGE NO. 07058 DRAWING NO. 47931