

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.		040487	82	200
				07154	LAYOUT		50593	

GENERAL NOTES

BENCH MARK: BM 913- Chiseled sq. corner of bridge, 0.81' Lt. of Sta. 289+82.74, Elev. 406.91.

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

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications Fourth Edition, 2007, with 2008 interim specifications.

LIVE LOADING: HL-93

SEISMIC ZONE: 1

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Class S Concrete (substructure)	f'c = 3,500 psi
Class S Concrete (Prestressed Girders)	f'c = 6,000 psi
Reinforcing Steel (AASHTO M 31 or M 53, Gr. 60)	fy = 60,000 psi
Structural Steel (AASHTO M 270, Gr. 50W)	Fy = 50,000 psi
Structural Steel (AASHTO M 270, Gr. 36)	Fy = 36,000 psi

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

STEEL PILING: Piling in End Bents 1 and 6 shall be HP12x53 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 or Sandstone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after embankment to bottom of cap is in place.

DRILLED SHAFTS: Foundations for intermediate bents shall consist of Rock Socketed Drilled Shafts. All drilled shafts shall be founded a minimum of 8 feet into Medium Hard Shale or Sandstone. No adjustments in Plan Tip Elevation shall be made without prior approval from the Engineer. Methods of construction of the drilled shafts shall be in accordance with SP Job 040487 "Drilled Shaft Foundations (Rock Socketed)". Any casing used as a means for construction of the drilled shafts, such as to prevent caving, to exclude groundwater, or to provide shoring shall not extend below top of rock. The Contractor must obtain approval from the Engineer for any deviation from this requirement.

CROSSHOLE SONIC LOGGING: Nondestructive testing shall be performed on each drilled shaft in accordance with Special Provision Job No. 040487 "Nondestructive Testing of Drilled Shafts".

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:

End Bents	DRAWING NO. 50595-50597
Intermediate Bents	50598
350' Prestressed Conc. Girder Unit	50599-50605
Elastomeric Bearings	50606
Steel Piling	14995A
Type B Approach Gutters	2016B

EXISTING BRIDGE: Existing Bridge No. 00349 is 341.4' in length and 31' wide and is comprised of 5 - 30' RCDG approach spans supported on concrete column bents and two 95' Concrete Deck Arch spans. Centerline of existing bridge is located approximately 17.5' downstream of the proposed roadway centerline.

REMOVAL AND SALVAGE: After Stage I construction of the new bridge is open to traffic, existing Bridge No. 00349 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 except the bridge name plate which shall remain the property of AHTD.

TEMPORARY SHORING: Temporary Shoring may be required for maintenance of traffic at bridge ends during Stage I Construction.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

- BORING LEGEND**
- AI-Moist, Medium Stiff, Brown and Gray Sandy Clay
 - BI-Moist, Soft, Brown and Gray Sandy Clay
 - CI-SANDSTONE - Gray, Thin Bedded, Cemented, with Slight Dip
 - DI-SHALE WITH FREQUENT SANDSTONE SEAMS - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip
 - EI-Moist, Soft, Brown Sandy Clay
 - FI-Moist to Wet, Hard, Brown Clay with Gravel(Sandstone and Shale Fragments)
 - GI-SHALE - Gray and Brown, Highly Weathered, Soft
 - HI-SANDSTONE WITH FREQUENT SHALE SEAMS - Gray, Thin Bedded, Cemented, with Slight Dip
 - JI-SHALE WITH FREQUENT SANDSTONE SEAMS AND LAYERS - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip
 - KI-Wet, Loose, Brown Sand with Clay and Gravel(Sandstone Fragments)
 - LI-SANDSTONE WITH FREQUENT SHALE SEAMS - Gray, Cemented, with Slight Dip
 - MI-Moist, Loose, Brown Clayey Sand
 - NI-Moist, Loose, Brown Clayey Sand with Gravel(Sandstone Fragments) and some Organic Matter
 - PI-Moist, Very Soft, Gray Sandy Clay with Occasional Organic Matter Seams
 - QI-Moist, Soft, Brown Clay with Sand
 - RI-SHALE - Gray, Weathered, Medium Hard
 - SI-Moist, Medium Stiff, Brown Sandy Clay with Trace of Organic Matter
 - TI-Moist, Very Stiff, Brown Sandy Clay with Gravel(Sandstone Fragments)
 - UI-ALTERNATING SHALE AND SANDSTONE SEAMS - Dark Gray, Laminated, Weathered, Medium Hard, with Slight Dip (Shale); Gray, Laminated, Cemented (Sandstone)
 - VI-ALTERNATING SHALE AND SANDSTONE SEAMS - Dark Gray, Laminated, Medium Hard, with Slight Dip (Shale); Gray, Laminated, Cemented (Sandstone)

HYDRAULIC DATA

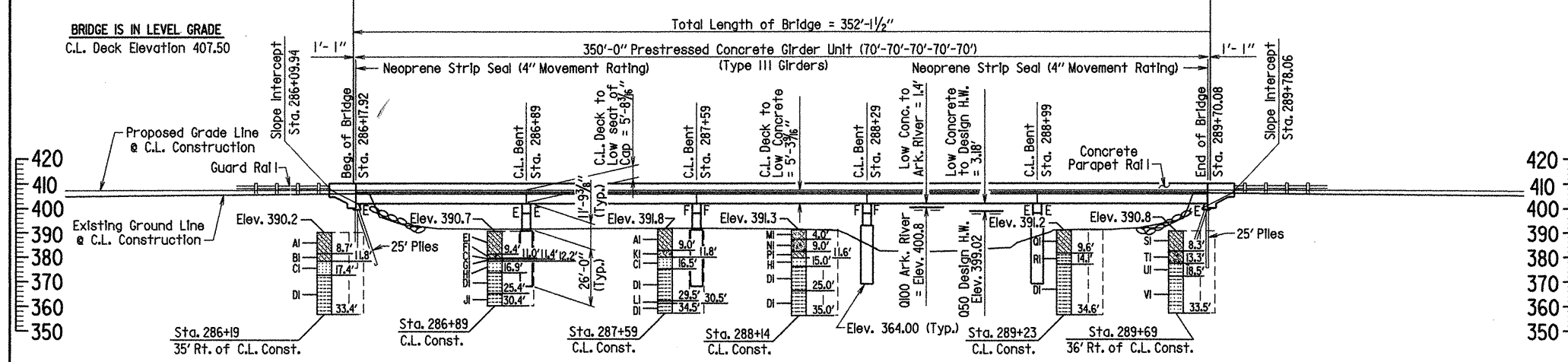
FLOOD DESCRIPTION	FREQUENCY YEARS	DISCHARGE CFS	*NATURAL WATER SURFACE ELEVATION FEET	WATER SURFACE ELEV. WITH BACKWATER FEET	ARKANSAS RIVER BACKWATER ELEV. FEET
Design	50	18500	399.02	400.53	398.6
Base	100	22400	399.90	401.66	400.8
Extreme	500	26700	400.80	404.10	404.7
Overtopping	>500	---	---	---	---

* Unconstricted water surface without structure or roadway approaches.

Drainage area = 105.0 square miles.

Historical H.W. Elev. = 397.21 ft.

Note: The backwater elevations from the Arkansas River were taken from stages at River Mile 288.7.



Note: The bottoms of all Drilled Shafts shall be set at or below the Elevations shown.

"N" VALUES

Sta. 286+19 - 35' Rt. of C.L. Const.		Sta. 286+89 - C.L. Const.		Sta. 287+59 - C.L. Const.		Sta. 288+14 - C.L. Const.		Sta. 289+23 - C.L. Const.		Sta. 289+69 - 36' Rt. of C.L. Const.	
4.2-	5.2, N=5	4.9-	5.9, N=3	4.5-	5.5, N=5	4.5-	5.5, N=8	5.1-	6.1, N=3	3.8-	4.8, N=7
9.2-	10.2, N=4	9.9-	10.9, N=38	9.5-	10.5, N=10	9.5-	10.5, N=1	10.1-	10.5, N=60(5)	8.8-	9.8, N=24
										13.8-	14.5, N=115(10)

SHEET 1 OF 2
LAYOUT OF BRIDGE OVER
VACHE GRASSE CREEK
HWY. 255-HWY. 96 (S)
SEBASTIAN COUNTY
ROUTE 22 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.



DRAWN BY: MJT DATE: 08/21/08 FILENAME: B040487X.LLDGN
CHECKED BY: JGT DATE: 9/14/09 SCALE: 1" = 30'-0"
DESIGNED BY: DBS DATE: 06/08
BRIDGE NO. 07154 DRAWING NO. 50593