

At the Contractor's option preboring or other methods as approved by the Engineer may be used to facilitate pile installation thru the aggregate base course (Class 7) material at these locations. Preboring or other methods used for installation of piles where rock fill is used for embankment construction will not be paid for separately but shall be included in Item "Steel Piling HP 12x63."

Notes: For R/W Data and Guard Rail Details, see Roadway Plans

Note: Type Special Approach Cutters (W = 8'-0") will be used at Beginning of Bridge.

Place 1'-6" Dumped Riprap on Filter Blanket, Top of Riprap to be Elev. 1090.0.

8.80 Miles to Cleburne County Line

Tangent Distance = 473.71'

CL. Bridge & CL. Construction

1'-5" Parapet Rail

40'-0" Clear Roadway

43'-2" Out-to-Out

N. 54° 26' 31" W.

Little Raccoon Creek

MATCHLINE - SEE SHEET 2 OF 2

PLAN

1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000

Proposed Grade Line
e C.L. Construction

Slope Intercept
Sta. 540+02.00
Elevation 1000.36

Existing Ground Line
e C.L. Construction

74' Piles

68' Piles

Exp.

52'-0"

14' Piles

Elev. 1038.29

14'-1"

250'-0" Continuous Composite Plate Girder Unit

C.L. 2 1/4" Neoprene Strip Seal
W/4" Movement Rating

(125'-125')

C.L. Bent
Sta. 544+53.00
Elevation 1095.57

Concrete Parapet Wall

C.L. Deck to Low
Seat of Cap-6'-4 1/2"

4" Finger Joint

C.L. Bent
Sta. 542+78.00
Elevation 1095.58

Exp.

75'-6"

18' Piles

Elev. 1013.55

389'-0" Continuous Composite Plate Girder Unit

(125'-139'-125')

C.L. Deck to Low
Seat of Cap-6'-6 1/8"

C.L. Bent
Sta. 544+03.00
Elevation 1095.27

Exp.

86'-0"

10' Piles

Elev. 1003.74

Low Steel to Design H.W. 73' 16"

1

Design H.W. 1050 Elev. 1005.81

76'-6"

19' Piles

Elev. 1016.10

C.L. Bent
Sta. 545+42.00
Elevation 1095.4

2

2

5

Bent No. 1

2

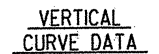
3

4

5

Note: Stations and elevations are shown along C.L. Bridge. Elevations shown are at working point.

- ① Low Steel Elevation
@ Sta. 543+30
- ② Single Fixed Bearing
at Matchline



DRAWN BY: MJT/LJB DATE: 09/11 FILENAME: BR5016X1.L1.DGN
 CHECKED BY: JGT DATE: 8/26/11 SCALE: 1" = 30'-0"
 DESIGNED BY: DBS DATE: 06/11



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						R50116	81	223
				JOB NO.				
				07231	LAYOUT			52426

GENERAL NOTES

BENCH MARK: BM 903, CFS, 434.96 Rt. of Sta. 540+06.57, Elev. 1074.37
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 Fifth Edition (2010) with 2010 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
Reinforcing Steel (AASHTO M 31 or M 53, Gr. 60) $f_y = 60,000$ psi
Structural Steel (AASHTO M 270, Gr. 50W) $F_y = 50,000$ psi
Structural Steel (AASHTO M 270, Gr. 36) $F_y = 36,000$ psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.
PILING: Piling in Bent 1 shall be HP12 X 63 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 115 tons per pile after embankment to bottom of cap is in place. Piling in Bent 8 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 after embankment to bottom of cap is in place. Piling in Bents 2 through 7 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. All Piling shall be driven into the material designated as Shale or Sandstone on the boring legend and piling in Bents 2 thru 7 shall have a minimum penetration of 8' below bottom of footings. Lengths shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the specifications. On all piles the Contractor shall use steel H-Pile driving points. Test Piles are not required but may be driven for the Contractor's information in accordance with subsection 805.08(g).

PREBORING: All Piling in Bents 2 and 4 shall be prebored a minimum of 3 ft. into shale or sandstone or a maximum of 8' below bottom of footings if rock is not encountered. After driving, prebored holes in rock shall be backfilled with Class S Concrete to top of rock. All remaining void spaces shall be backfilled as specified in Subsection 805.08. Prebored holes shall have a minimum diameter of 18". The Contractor shall be responsible for keeping prebored holes free of debris prior to backfilling, which may require the use of temporary casings or other methods. Preboring, backfill, and any required casings shall be considered included in the item "Preboring".

FOOTINGS: Footings shall be set at or below the elevations shown on the Plans and as directed by the Engineer. Bent 8 footing shall be set a minimum of 2 feet into material designated as Sandstone on the boring legend. The top of all footings shall be set a minimum of 2 feet below natural or excavated ground line. Foundations for footings shall be prepared in accordance with subsection 801.04. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of the rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock. Excavations shall be backfilled to the level of surrounding ground in accordance with Subsection 801.08.

BRIDGE DECKS: The concrete bridge decks 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 62428, 62429 & 62440, 62441
Intermediate Bents 62430, 62431
250'-0" Cont. Comp. Plate Girder Unit 62442, 62447
389'-0" Cont. Comp. Plate Girder Unit 62448, 62452
Elastomeric Bearings 62454
Steel Piling 14995A
Type 1 & 2 Special Approach Gutters 62455

EXISTING STRUCTURES: Structure No. X0332 (Log Mile 8.68) is a double barrel concrete box culvert approximately 25' long and 93' wide. Structure No. X0333 (Log Mile 8.80) is a triple barrel concrete box culvert approximately 38' long and 93' wide. Both structures are located approximately 930' upstream from the proposed bridge.

REMOVAL AND SALVAGE: After the new bridge is open to traffic, existing Structures X0332 (Site. No. 1) and X0333 (Site No. 2) shall be removed in accordance with Section 202. See Roadway Plans.

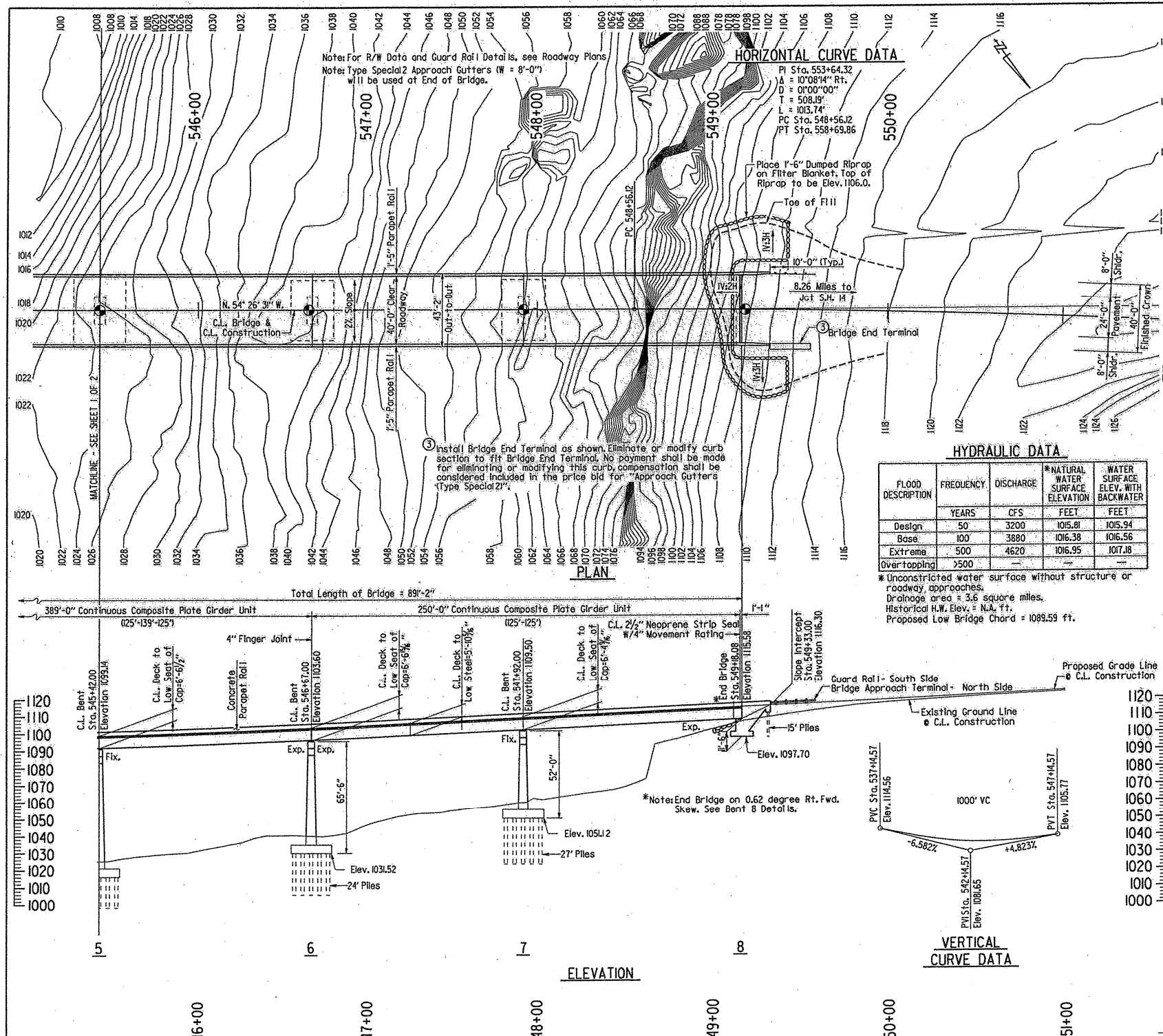
MAINTENANCE OF TRAFFIC: For details of maintenance of traffic, see Roadway Plans.

SHEET 2 OF 2
LAYOUT OF BRIDGE OVER
LITTLE RACCOON CREEK
LITTLE RACCOON CREEK-COVE PRONG CREEK (S)
STONE COUNTY
ROUTE 5 SEC. 16

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: MJT/LJB DATE: 09/11/11 FILENAME: BR5016X1.L1.DGN
CHECKED BY: JCB DATE: 8/26/11 SCALE: 1" = 30'-0"
DESIGNED BY: DBS DATE: 06/11



① Tolerance: Minus = $\frac{1}{4}$ "
 Plus: Equal to amount of slab thickening used
 to meet slab thickness tolerance - See
 "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE
 WHEN REMOVABLE DECK FORMING IS USED."

③ Working Point to Gutterline

④ Width varies between PC and Bent 8

⑤ C.L. Girder and C.L. Bridge do not align at end of bridge

Material Thickness Of Thicker Part Joined (Inches)	Minimum Size Of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" Inclusive	1/4"	
Over 3/4"	5/16"	

NOTE: Working Point matches Theoretical Roadway Grade.

Figure 1: Typical Connection Detail. This technical drawing shows a cross-section of a steel beam-to-column connection. A C.L. Girder is connected to a C.L. Joint. The connection uses a Conn. Angle (L 8" X 4" X 1/2") and Rdwy. Channel (C15x33.9). Dimensions include 8" for the angle leg, 12" for the channel depth, and 1/2" for the flange thickness. The connection is labeled "Copa Bottom" and "Chin. Flange".

SHEET 1 OF 6
DETAILS OF 250'-0" CONTINUOUS
COMPOSITE PLATE GIRDER UNITS
LITTLE RACCOON CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MRE DATE: 8/05/11 FILENAME: BR5016X1.SLDGN
CHECKED BY: JGT DATE: 8/06/11 SCALE: 1/2" = 1'-0" or as noted
DESIGNED BY: DRS DATE: 08/11

[illegible]

Expansion Device
Rdwy. Channel - C15x33.9
Conn. 2's 8"x4"x 1/2"x8"
Detail Device 1/8" high & provide 1/4"
shims using 2- 1/8" & 1- 1/8" PLS

3/4" dia. Htr. bolts

5/16" x 8" studs
@ 12" o.c.

Cope Channel Flange 2" +/-
Width of Girder Flange.
See "CHANNEL CONNECTION
DETAIL"

Extrusion for Neoprene
Strip Seal Joint
See Dwg. No. 52447

C.I. Bridge and
C.I. Constr.

2'-6"

5/16" x 7/8" Typ.

TYPICAL ROADWAY SECTION
(LOOKING AHEAD)
Scale: 1/2" = 1'-0"

NOTE: t_s = slab thickness as shown in "Typical Roadway Section"

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Notes:

Notes:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance : Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus $1\frac{3}{4}$ ". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 14991 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

BENT 1 (LOOKING AHEAD)
BENT 8 (LOOKING BACK)
(See Dwg. No. 52448 for Expansion
Device at Bents 3 and 6)

3'-6"

2 3/4"

1 1/4"

2 3/4"

1 1/4"

1" Clr.

See Framing Plan
for Plate sizes

3/4" ϕ H.S.
Bolts (Typ.)

6"

6" X 3 1/2" X 1/2"

6" X 3 1/2" X 3/2" X 5/16"

Match Roadway Slope

Match Roadway Slope

Typ.

CROSS-FRAME CONNECTION DETAIL @ JOINTS

