

A map of Texas divided into 11 judicial districts. The districts are numbered 1 through 10, with District 11 being the unnumbered area in the far west. District 6 is shaded with diagonal lines. The counties within each district are labeled as follows:

- District 1:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 2:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 3:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 4:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 5:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 6:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 7:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 8:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 9:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 10:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.
- District 11:** Harris, Dallas, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton, Tarrant, Cooke, Karrant, Rockwall, Kaufman, Ellis, Johnson, Denton.

DESIGN TRAFFIC DATA (BENTON PARKWAY)		
DESIGN YEAR	-----	2026
2006 ADT	-----	8290
2026 ADT	-----	12435
2026 DHV	-----	1368
DIRECTIONAL DISTRIBUTION	--	0.60
TRUCKS	-----	1%
DESIGN SPEED	-----	40 MPH

A circular professional engineer seal for the State of Arkansas. The text inside the seal reads: "STATE OF ARKANSAS", "REGISTERED PROFESSIONAL ENGINEER", and "No. 3917". The name "FRANK VOZEL" is written along the bottom inner edge of the circle. A large, stylized signature "Frank Vozel" is written across the seal, overlapping the text.

P.E. JOB 061039
NON-PART.



LOCATION	BRIDGE ENDS		BRIDGE LENGTH	CLEAR ROADWAY WIDTH	BRIDGE NUMBER
	STATION	STATION			
HWY. 35 OVER U.P.R.R.	311+34.94	313+07.06	172'-11/2"	50'-0"	07087
HWY. 183 OVER DEPOT CREEK	323+63.93	324+88.07	124'-15/8"	50'-0"	07088
HWY. 35 OVER DEPOT CREEK	113+37.85	115+90.15	252'-35/8"	52'-0"	07089
BENTON PARKWAY OVER U.P.R.R. & SIDELL ROAD	124+94.54	127+04.50	209'-11 1/2"	39'-0"	04896

HWY. 35 RAILROAD
OVERPASS (BENTON) (S)
SALINE COUNTY
T
N ROUTES 35 & 183 SECTIONS 1 & 1
F.A.P. STPH-STPO-STPS-RHE-9035(13)
& HPP2-1771(1)

JOB 061039

R 15 W

T S

STA. 99+30
HWY. 35
STPS-RHE-9035

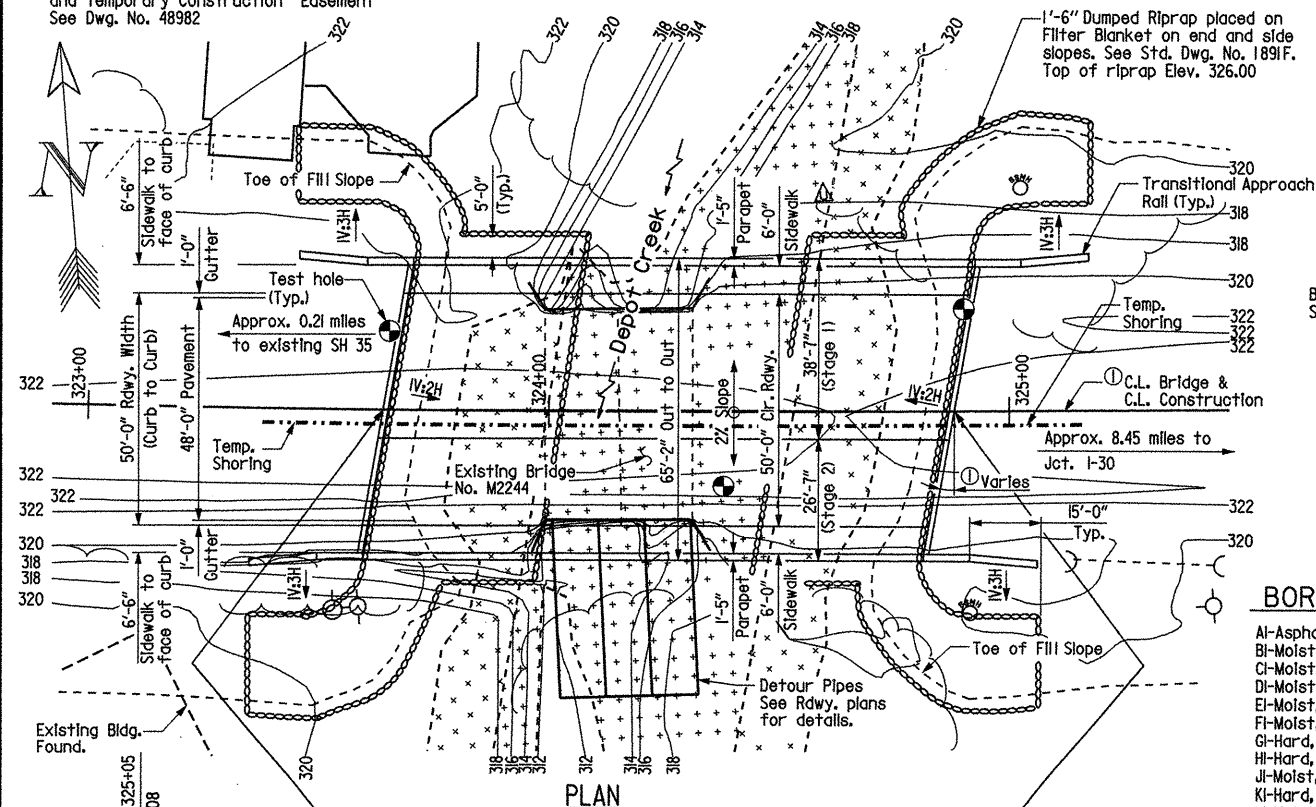
STA. 99+30 BEGIN CONST.
HWY. 35 STPH-STPO-
STPS-RHE-9035(13)

F. A. P. HPP2-1771 (1)								
GROSS	LENGTH	OF	PROJECT	2192.75	FEET	OR	0.415	MILES
NET	LENGTH	OF	ROADWAY	1982.79	FEET	OR	0.375	MILES
NET	LENGTH	OF	BRIDGES	209.96	FEET	OR	0.040	MILES
NET	LENGTH	OF	PROJECT	2192.75	FEET	OR	0.415	MILES

GROSS LENGTH OF PROJECT	6931.95	FEET OR	1.313 MILES
NET LENGTH OF ROADWAY	6173.43	FEET OR	1.169 MILES
NET LENGTH OF BRIDGES	758.52	FEET OR	0.144 MILES
NET LENGTH OF PROJECT	6931.95	FEET OR	1.313 MILES

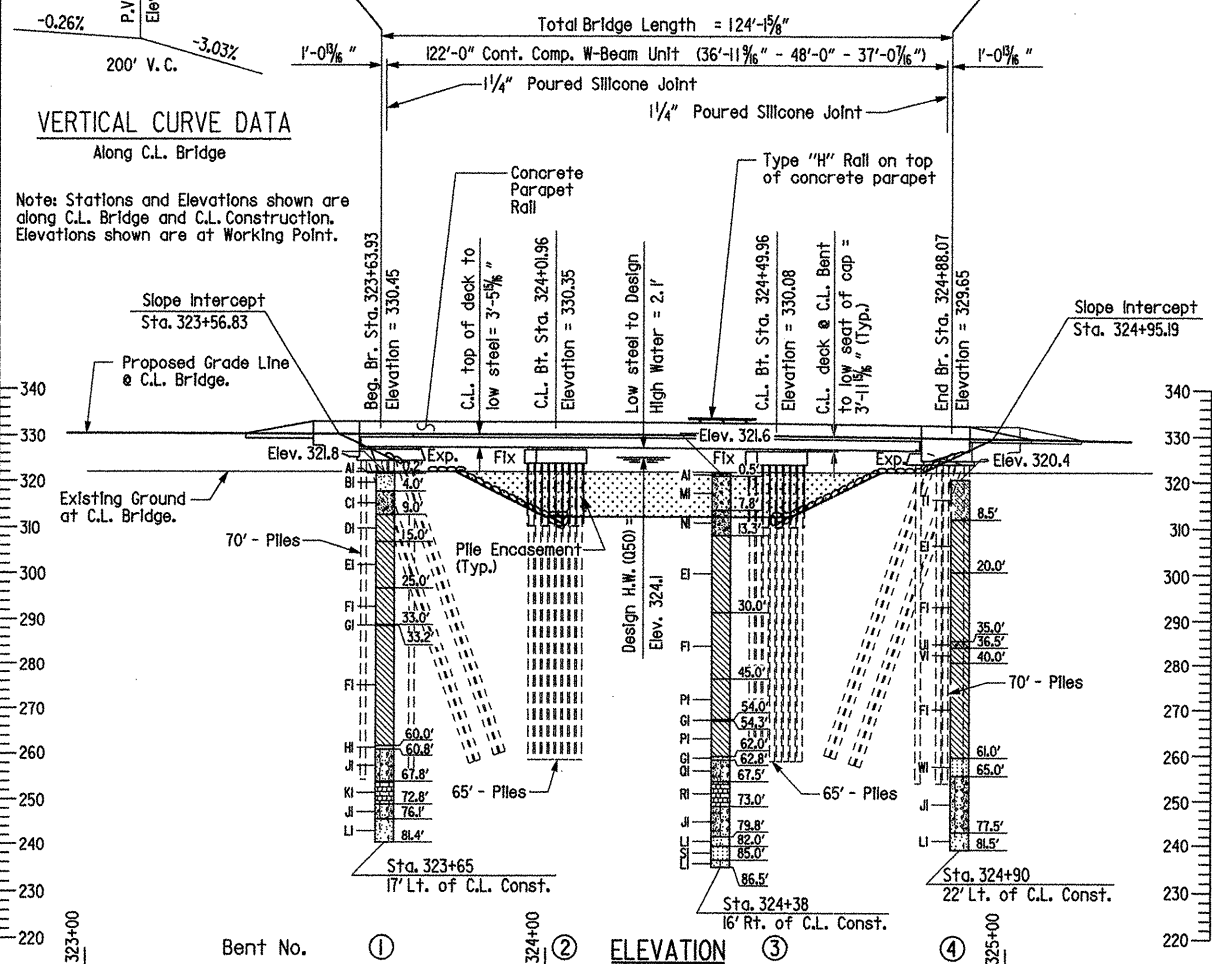
MID POINT OF PROJECT
LAT. 34°33'26" N
LON. 92°34'12" W

Note: For Details of Channel Excavation
and Temporary Construction Easement
See Dwg. No. 48982



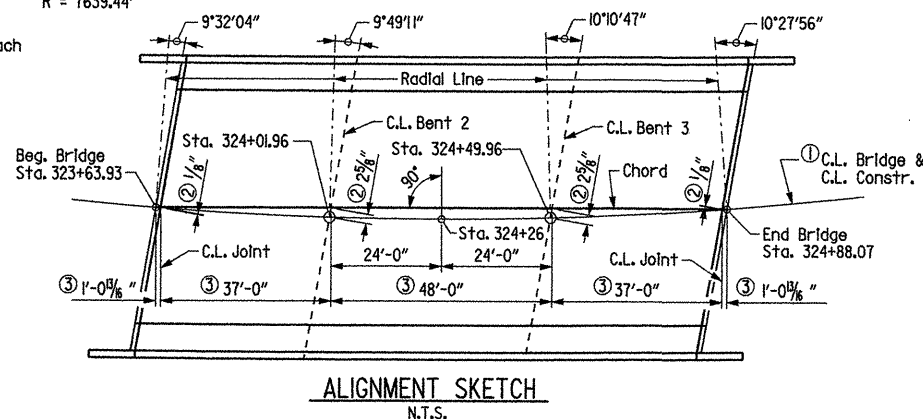
Along C.L. Bridge

Note: Stations and Elevations shown are along C.L. Bridge and C.L. Construction. Elevations shown are at Working Point.



P.I. = 323+75.00
P.C. = 322+48.94
P.T. = 325+01.04
 $\Delta = 1^\circ 53' 26.78''$ Lt.
D = $0^\circ 45' 00''$
T = 126.06'
L = 252.10'
R = 7639.44'

- ① Note: C.L. Bridge and C.L. Const. are on a 00°45'00" curve left. All Benits are skewed as shown from C.L. Const. and 0° to a Chord drawn from Beginning of Bridge to End of Bridge at C.L. Bridge. Deck, Sidewalks, and Parapets shall be placed concentric to C.L. Bridge. Beams shall be placed parallel to Chord.
- ② Dimension is from C.L. Bridge to Chord along C.L. Bent or C.L. Joint.
- ③ Dimension is Along Chord.



AI-Asphalt Pavement
 BI-Molst, Loose, Gray Sand
 CI-Molst, Loose, Gray Sand with Gravel and Asphalt Fragments with Clay Seams
 DI-Molst, Stiff, Dark Gray Clay (Blocky) with some Light Gray Sand Lenses
 EI-Molst, Stiff, Dark Gray Clay (Blocky)
 FI-Molst, Very Stiff, Dark Gray Clay (Blocky)
 GI-Hard, Brown Sandstone
 HI-Hard, Brown Sandstone Cap
 JI-Molst, Very Dense, Light Gray Carbonate Silty Sand with Cemented Sand Seams and Limestone Fragments
 KI-Hard, Gray Limestone with Light Gray Carbonate Silty Sand Seams
 LI-Molst, Very Dense, Dark Gray Calcareous Silty Sand
 MI-Molst, Loose, Brown Sand with Gravel
 NI-Molst, Loose, Brown and Gray Sand with Gravel with Clay Seams
 PI-Molst, Very Stiff, Dark Gray Clay (Blocky) with some Gravel-sized Concretions
 QI-Molst, Very Dense, Light Gray Carbonate Silty Sand with Cemented Sand Seams, Limestone Fragments and some Clay
 RI-Hard, Gray Limestone
 SI-Hard, Gray Calcareous Sandstone
 TI-Molst, Very Loose, Brown Clayey Sand
 UI-Molst, Hard, Dark Gray Clay (Blocky) with Brown Sandstone Fragments
 VI-Molst, Hard, Dark Gray Clay (Blocky)
 WI-Hard, Brown Sandstone Cap with some Light Gray Carbonate Silty Sand Seams

NOTE: Groundwater table is present from ground level to 8.9' below existing ground surface.

Sta. 323+65 17' Lt. of C.L. Const.	Sta. 324+38 16' Rt. of C.L. Const.	Sta. 324+90 22' Lt. of C.L. Const.
4.5 - 5.5,N=6	9.3 - 10.3,N=7	4.0 - 5.0,N=2
9.5 - 10.5,N=13	14.3 - 15.3,N=11	9.0 - 10.0,N=9
15.5 - 16.5,N=11	20.5 - 21.5,N=5	15.5 - 16.5,N=2
20.5 - 21.5,N=15	25.5 - 26.5,N=14	20.5 - 21.5,N=16
25.5 - 26.5,N=21	30.5 - 31.5,N=6	25.5 - 26.5,N=17
30.5 - 31.5,N=20	35.5 - 36.5,N=16	30.5 - 31.5,N=26
35.5 - 36.5,N=33	40.5 - 41.5,N=29	35.5 - 36.5,N=37
40.5 - 41.5,N=20	45.5 - 46.5,N=21	40.5 - 41.5,N=30
45.5 - 46.5,N=19	50.5 - 51.5,N=18	45.5 - 46.5,N=23
50.5 - 51.5,N=20	55.5 - 56.5,N=9	50.5 - 51.5,N=24
55.5 - 56.5,N=23	60.5 - 61.5,N=24	55.5 - 56.5,N=25
60.0 - 60.4,N=60(5'')	65.0 - 65.3,N=60(4'')	60.5 - 61.2,N=70(9'')
65.0 - 65.0,N=60(0')	70.0 - 70.0,N=60(0')	65.0 - 65.3,N=60(4'')
75.0 - 75.4,N=60(0.5'')	75.5 - 75.9,N=60(5'')	70.0 - 70.4,N=60(0'')
80.5 - 81.4,N=76(5'')	80.5 - 81.5,N=44	75.5 - 75.8,N=60(4'')
	85.5 - 86.5,N=54	80.5 - 81.5,N=57

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	EXISTING WATER SURFACE ELEV. WITH BACKWATER	WATER SURFACE ELEVATION WITH BACKWATER	
				PLAN EMBANKMENT	* FUTURE EMBANKMENT
	YEARS	CFS	FEET	FEET	FEET
Design	50	6,752	325.6	324.1	325.2
Base	100	7,488	325.9	324.3	325.7
Extreme	500	9,537	326.7	325.2	326.6
Overtopping Plan	3	4,125	324.2	322.4	--
Overtopping Future	54	6,825	325.6	--	325.3

*Based on Future Construction of approach embankments to Elev. 324.8.
Drainage area = 4.7 square miles.
Historical H.W. Elev. = N/A

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.		061039	92	25
				07088	LAYOUT		48981	

BENCH MARK: Chiseled Square, 23.20' right of centerline roadway at Station 324+16.02 and Elevation 320.85

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, Section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (2004 edition with 2005 and 2006 Interims).

LIVE LOADING: HL-93

SEISMIC PERFORMANCE ZONE: I

MATERIALS AND STRENGTHS:	
Superstructure Concrete (Class S (AE))	f'c = 4,000 psi
Substructure Concrete (Class S)	f'c = 3,500 psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60)	fy = 60,000 psi
Structural Steel (AASHTO M270, Grade 36)	Fy = 36,000 psi
Structural Steel (AASHTO M270, Grade 50W)	Fy = 50,000 psi

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

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. The 6'-0" Sidewalk shall receive a broomed finish as specified for final finishing in subsection 802.19 for Class 6, Broomed Finish.

TEXTURED COATING FINISH: Class 3 Textured Coating Finish shall be applied to bridge surfaces as specified in SP Job 061039 "Textured Coating Finish" and in accordance with subsection 802.19(3). Textured Coating Finish shall not be applied on surfaces where Class 1 Protective Surface Treatment is applied.

SHORING: Temporary shoring may be required to allow construction of the bridge in stages while maintaining traffic and to accomplish channelization, see SP Job 061039 "Shoring".

STEEL PILING: Piling in bents 1 and 4 shall be HP12x53 and Piling in bents 2 and 3 shall be HP4x73. Piling shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and to a minimum penetration of 20' below natural ground. 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. Drive one 75' test pile in Bent 1 and one 70' test pile in Bent 3. On all piling, the Contractor shall use approved steel H-pile driving points.

PILE ENCASEMENT: Pile encasement for Bents 2 and 3 shall extend 3' into the ground and to the bottom of cap. See Drawing Number I4995A for additional information.

DETAIL DRAWINGS:	DRAWING NUMBER
End Bents	48984-48986 & 48989
Intermediate Bents	48987-48988
122' Cont. Comp. W-Beam Unit	48990-48996
Elastomeric Bearings	48997
Steel Piling	48995A

EXISTING REINFORCED CONCRETE BOX: Existing Bridge No. M2244 (log mile 0.21) is 46.0' wide and 33.0' long and consists of a triple 10'-0" x 7'-0" Reinforced Concrete Box Culvert.

REMOVAL AND SALVAGE: Existing Bridge No. M2244 shall be removed in accordance with Section 202. All material from the existing RC Box shall become the property of the Contractor. See Roadway Plans.

LAYOUT OF BRIDGE
HWY. 183 OVER DEPOT CREEK
HWY. 35 RAILROAD OVERPASS (BENTON) (S)
SALINE COUNTY

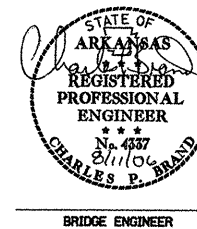
ROUTE 183 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JLB DATE: 1-11-06 FILE NAME: b061039x2-11.dgn

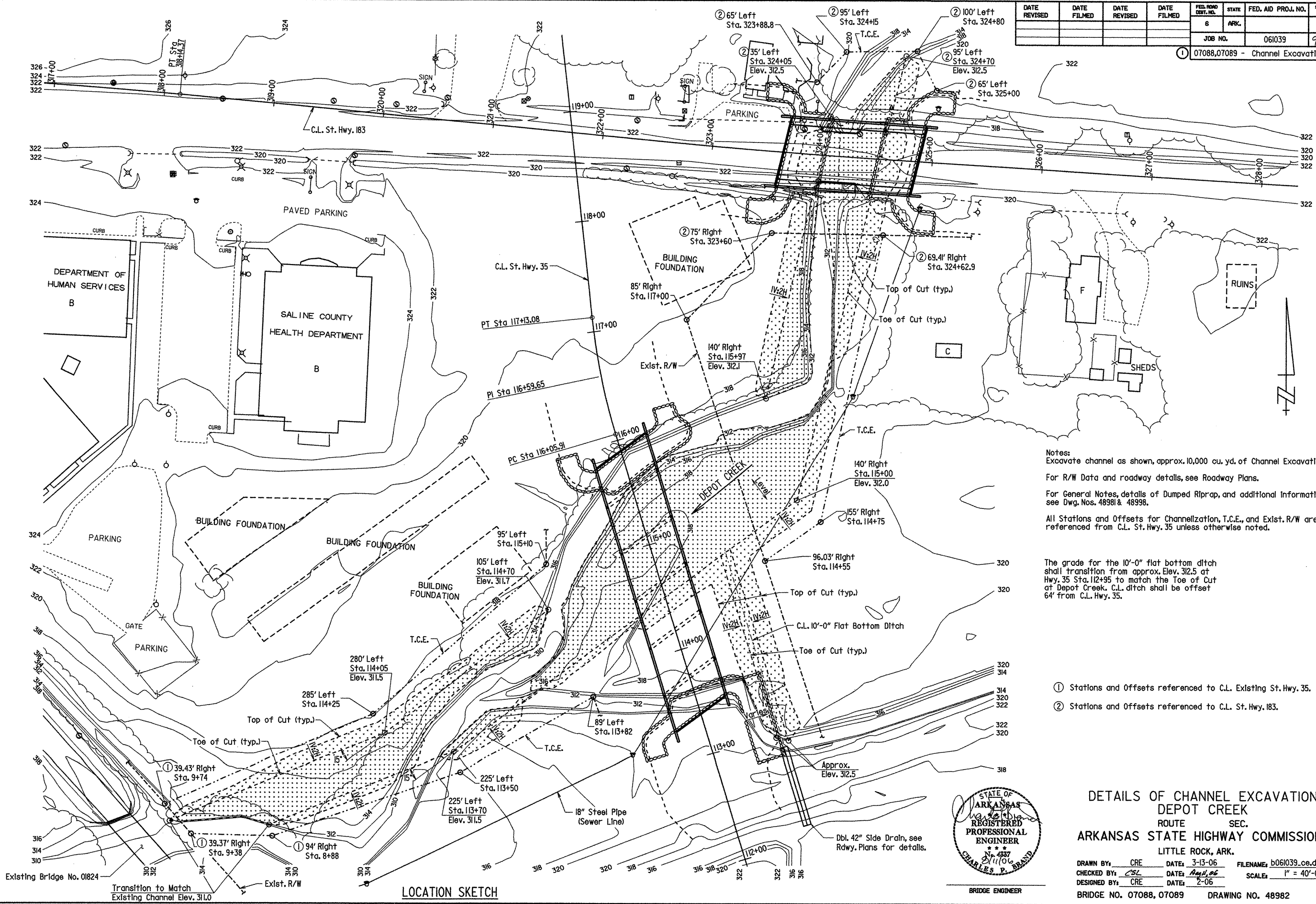
CHECKED BY: CSL DATE: Aug 14, 2006 SCALE: 1" = 20'-0"

DESIGNED BY: CRE DATE: 1-06 SCALE: 1" = 20' 0"

BRIDGE NO. 07088 DRAWING NO. 4898I



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.		061039	93	257
① 07088,07089 - Channel Excavation - 48982								



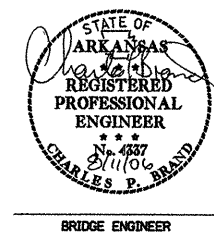
Notes:
 Excavate channel as shown, approx. 10,000 cu. yd. of Channel Excavation.
 For R/W Data and roadway details, see Roadway Plans.
 For General Notes, details of Dumped Riprap, and additional information, see Dwg. Nos. 48981 & 48998.
 All Stations and Offsets for Channelization, T.C.E., and Exist. R/W are referenced from C.L. St. Hwy. 35 unless otherwise noted.

The grade for the 10'-0" flat bottom ditch shall transition from approx. Elev. 312.5 at Hwy. 35 Sta. 112+95 to match the Toe of Cut at Depot Creek. C.L. ditch shall be offset 64' from C.L. Hwy. 35.

- ① Stations and Offsets referenced to C.L. Existing St. Hwy. 35.
- ② Stations and Offsets referenced to C.L. St. Hwy. 183.

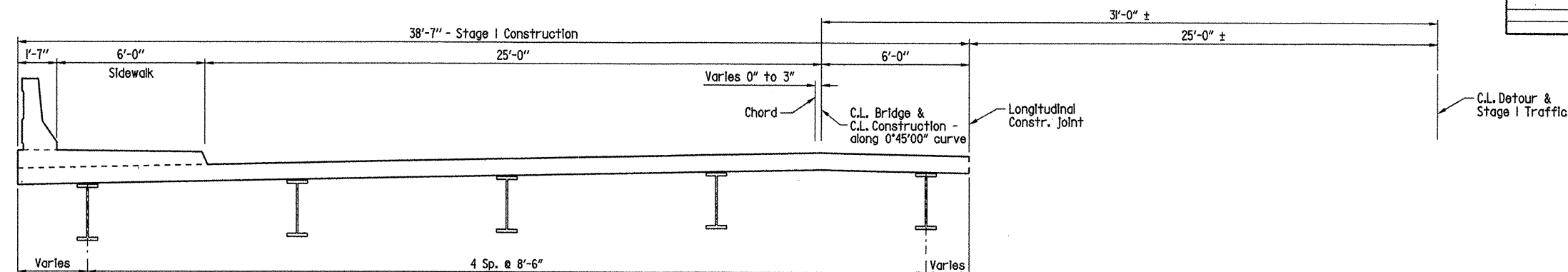
DETAILS OF CHANNEL EXCAVATION
 DEPOT CREEK
 ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: CRE DATE: 3-13-06 FILENAME: b061039_ce.dgn
 CHECKED BY: CSL DATE: April 06 SCALE: 1" = 40'-0"
 DESIGNED BY: CRE DATE: 2-06
 BRIDGE NO. 07088, 07089 DRAWING NO. 48982

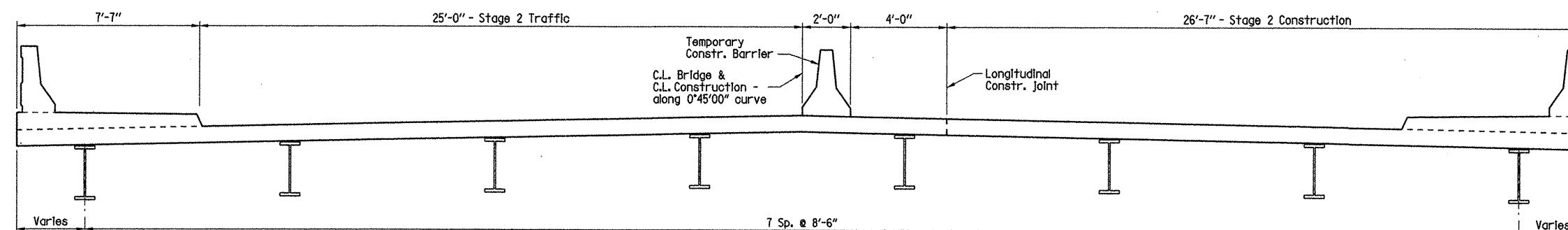


LOCATION SKETCH

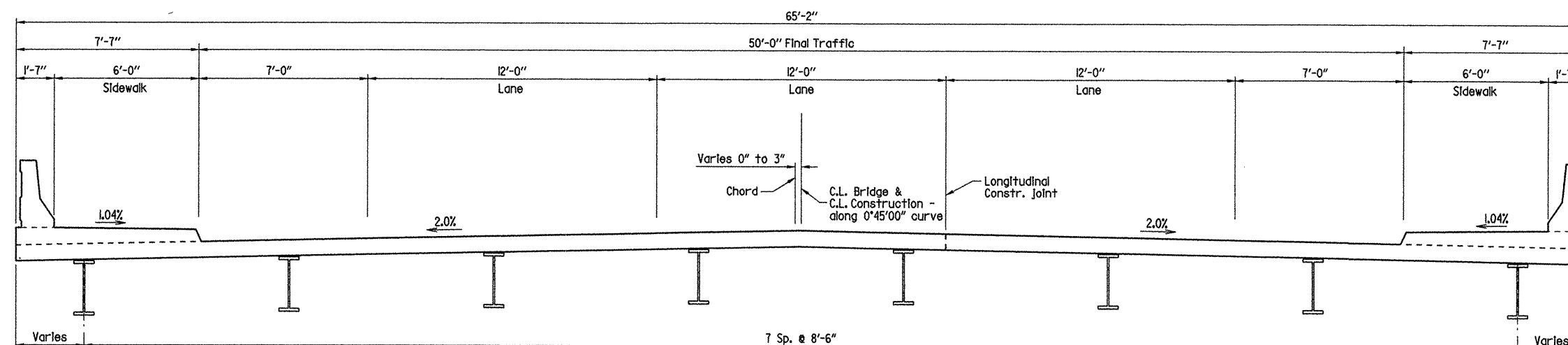
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061039	94	157
				07088	STAGE CONSTRUCTION			48983



STAGE 1
Looking Ahead



STAGE 2
Looking Ahead



FINAL
Looking Ahead

Notes:

Details which relate to Maintenance of Traffic are shown on bridge plans for information only. See Roadway plans for Maintenance of Traffic.

For Details of temporary barrier, see dwg. no. TC-4 and TC-5.

Sections showing Stage Construction are taken looking ahead.



BRIDGE ENGINEER

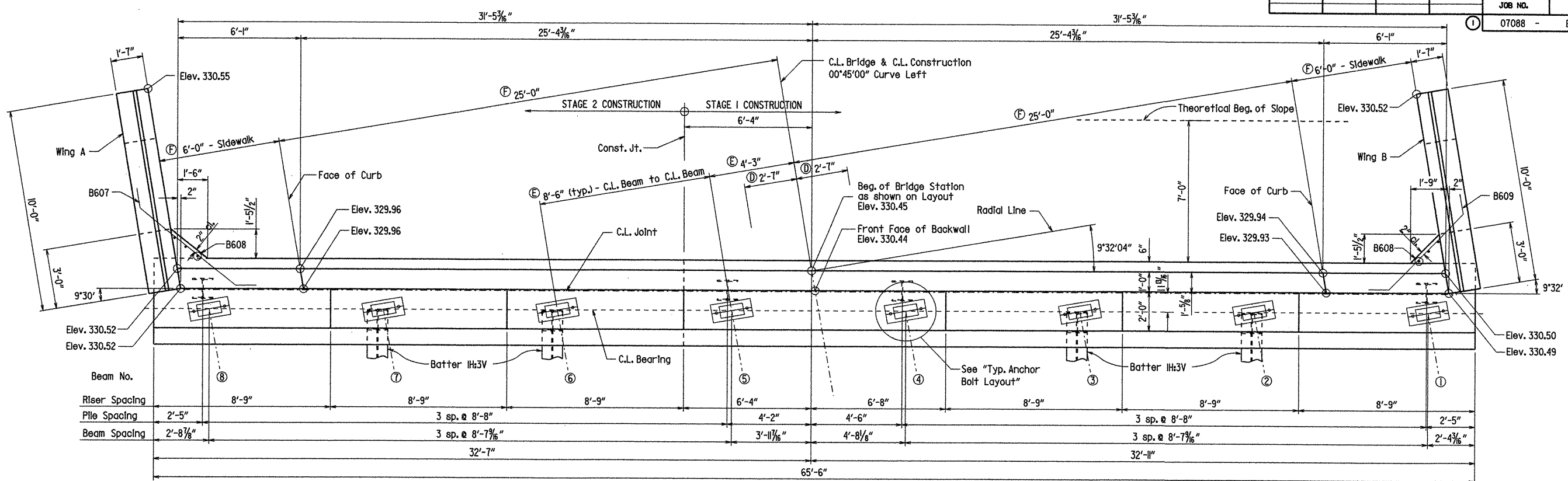
DETAILS OF STAGE CONSTRUCTION
HWY. 183 OVER DEPOT CREEK
HWY. 35 RAILROAD OVERPASS (BENTON) (S)
SALINE COUNTY

ROUTE 183 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CRE DATE: 02/17/06 FILENAME: b061039_so.dgn
CHECKED BY: CRE DATE: Aug 11, 06 SCALE: 3/8" = 1'-0"
DESIGNED BY: CRE DATE: 12/05
BRIDGE NO. 07088 DRAWING NO. 48983

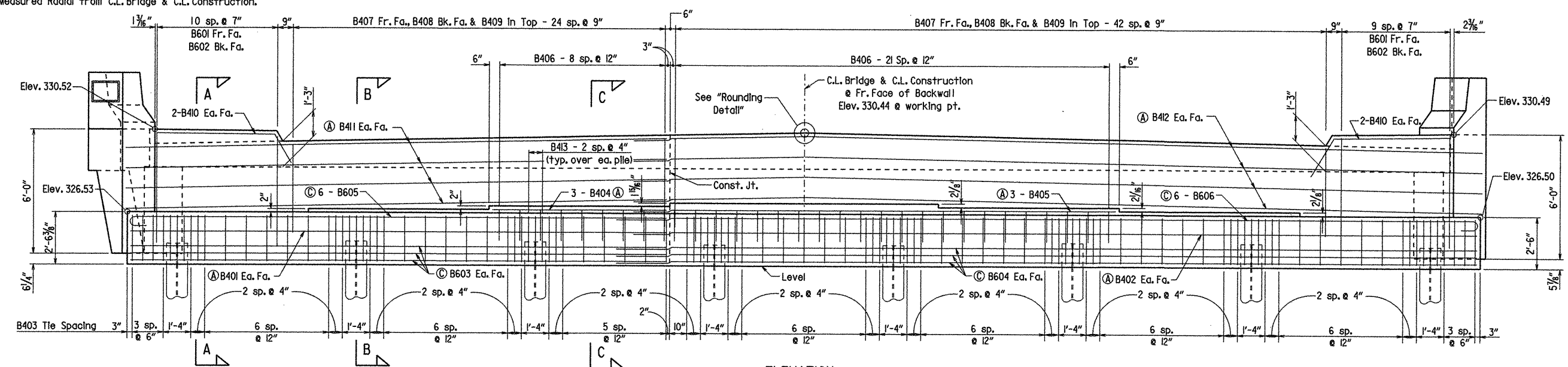
Note: Class I Protective Surface Treatment shall be applied to the top of the backwall.

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.		061039	95	257
				07088	-	END BENTS	-	48984



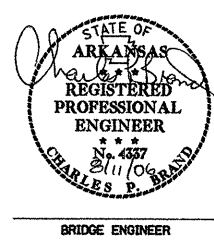
- (A) Lap #4 Bars 1'-9" (min.)
- (B) Lap #5 Bars 2'-2" (min.)
- (C) Lap #6 Bars 2'-7" (min.)
- (D) See "Rounding Detail," Dwg. No. 48986.
- (E) Measured perpendicular to Chord.
- (F) Measured Radial from C.L. Bridge & C.L. Construction.

PLAN
3/8" = 1'-0"



ELEVATION
(Looking Back)
3/8" = 1'-0"

Note: For general notes and details of wing and rail see Dwg. No. 48986

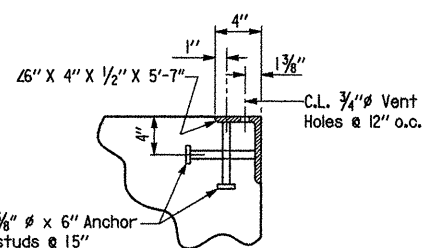


DETAILS OF BENT 1
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: DDD DATE: 6-23-06 FILENAME: b061039x2.bl.dgn
CHECKED BY: JWD DATE: 7-28-06 SCALE: 3/8" = 1'-0"
DESIGNED BY: CRE DATE: 6-08
BRIDGE NO. 07088 DRAWING NO. 48984

BAR LIST PER BENT

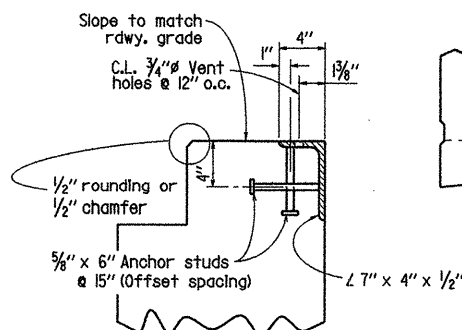
Mark	No. Req'd.	Length	Pln Dia.
B401	2	25'-11"	Str
B402	2	4'-0"	Str
B403	85	1'-11"	2"
B404	3	8'-5"	Str
B405	3	23'-6"	Str
B406	31	6'-0"	2"
B407	68	4'-6"	Str
B408	68	3'-3"	Str
B409	68	5'-8"	2"
B410	4	7'-1"	2"
B411	8	26'-2"	2"
B412	8	4'-4"	2"
B413	24	7'-6"	2"
B601	21	8'-11"	4 1/2"
B602	21	3'-6"	Str
B603	6	25'-11"	Str
B604	6	4'-10"	Str
B605	6	26'-7"	4 1/2"
B606	6	42'-6"	4 1/2"
B607	3	8'-0"	4 1/2"
B608	6	3'-9"	Str
B609	3	7'-1"	4 1/2"
R401	22	3'-9"	5"
R402	14	9'-8"	Str
W401	6	8'-1"	2"
W402	6	8'-5"	Str
W403-W407	2 ea.	4'-3" to 7'-10"	2"
W408-W412	2 ea.	4'-6" to 8'-2"	Str
W413	6	4'-1"	2"
W414	6	4'-5"	Str
W415	6	5'-6"	2"
W416	6	5'-0"	2"
W701	12	9'-8"	Str
W702	4	6'-6"	Str
W703	4	5'-8"	Str
W704	4	4'-10"	Str
W705	4	4'-0"	Str
W706	4	3'-2"	Str
W707	4	10'-6"	5 1/4"

Dimensions are out to out of bars.



Note: Concrete shall be hand packed under the joint armor in the sidewalk

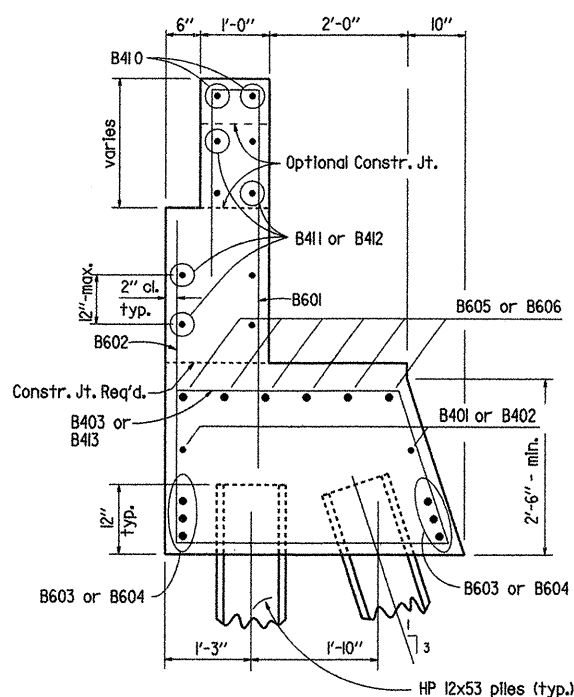
SECTION D-D
No Scale



Note: Concrete shall be hand packed under the joint armor.

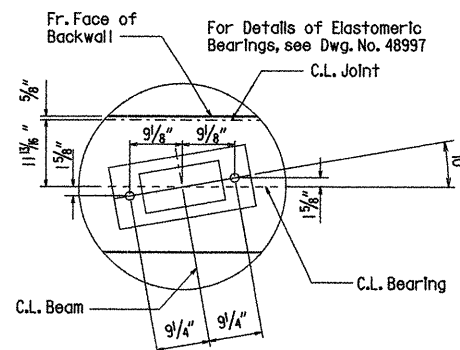
For joint details, see dwg. 48995

DETAIL X
1 1/2' = 1'-0"



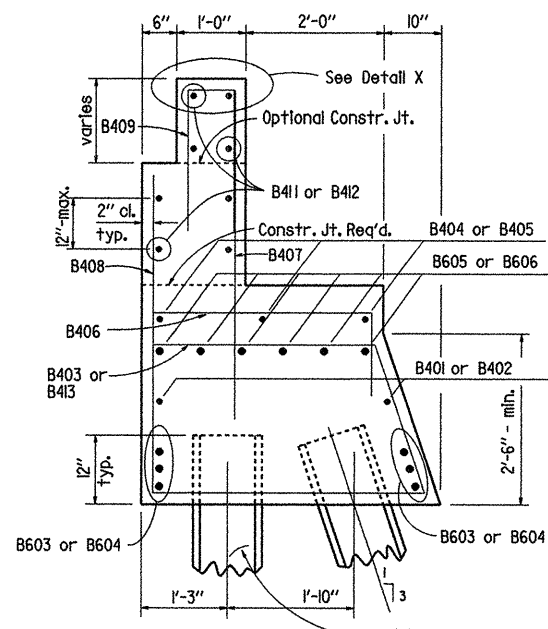
SECTION A-A (BENT 1 & BENT 4)

3/4" = 1'-0"



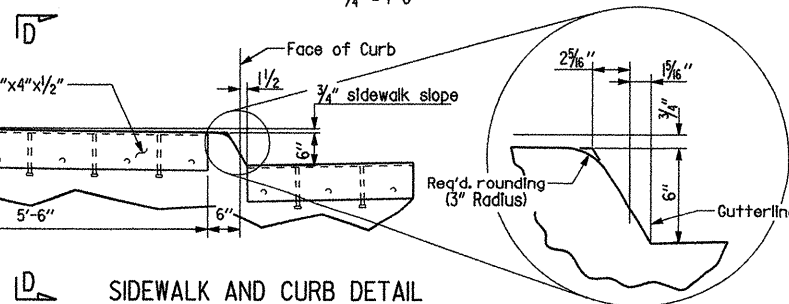
TYPICAL ANCHOR BOLT LAYOUT

NTS



SECTION C-C (BENT 1 & BENT 4)

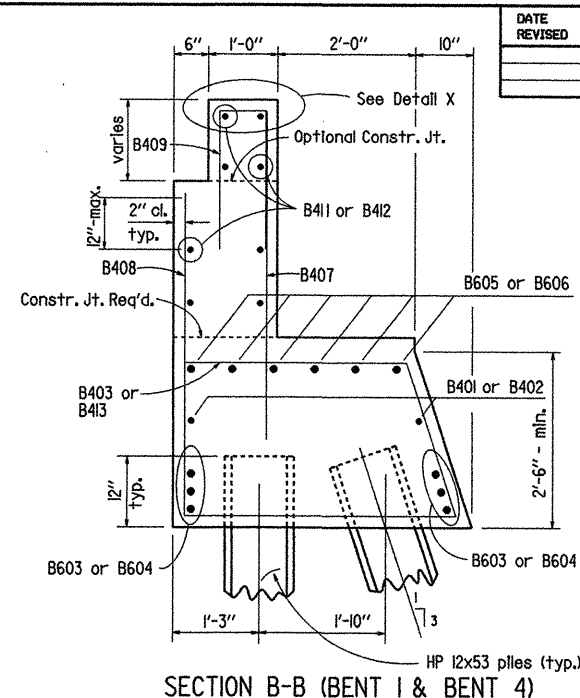
3/4" = 1'-0"



SIDEWALK AND CURB DETAIL

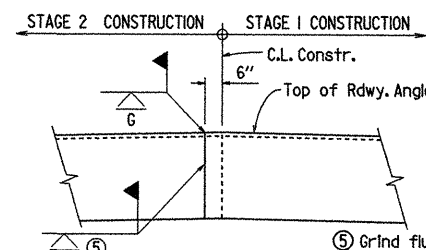
NTS

Note: View is perpendicular to centerline of bridge.



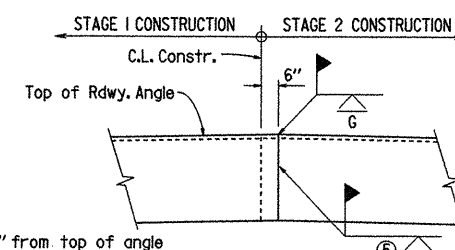
SECTION B-B (BENT 1 & BENT 4)

3/4" = 1'-0"



DETAIL OF WELD LOCATION
FOR EXPANSION DEVICE

Looking Back - Bent 1
NTS



DETAIL OF WELD LOCATION
FOR EXPANSION DEVICE

Looking Ahead - Bent 4
NTS

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 and all exposed corners to be chamfered 3/4" unless otherwise noted.

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

Structural steel in end bents shall be M270, Gr. 50W and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)".

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

No portion of the backwall shall be poured before the beams are in place. The portion of the backwall above the optional construction joint at the paving bracket shall not be placed until the deck pour has been made. See expansion device installation note on dwg. no 48995.

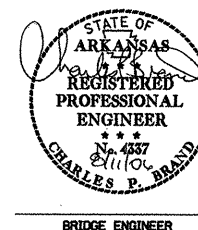
Special care shall be taken to properly and thoroughly consolidate the concrete in the vicinity of the expansion joint device in the backwall. See Section 802.09 (a)(3).

For additional information, see layout.

COMMON DETAILS OF BENTS 1 AND 4 HWY. 183 OVER DEPOT CREEK

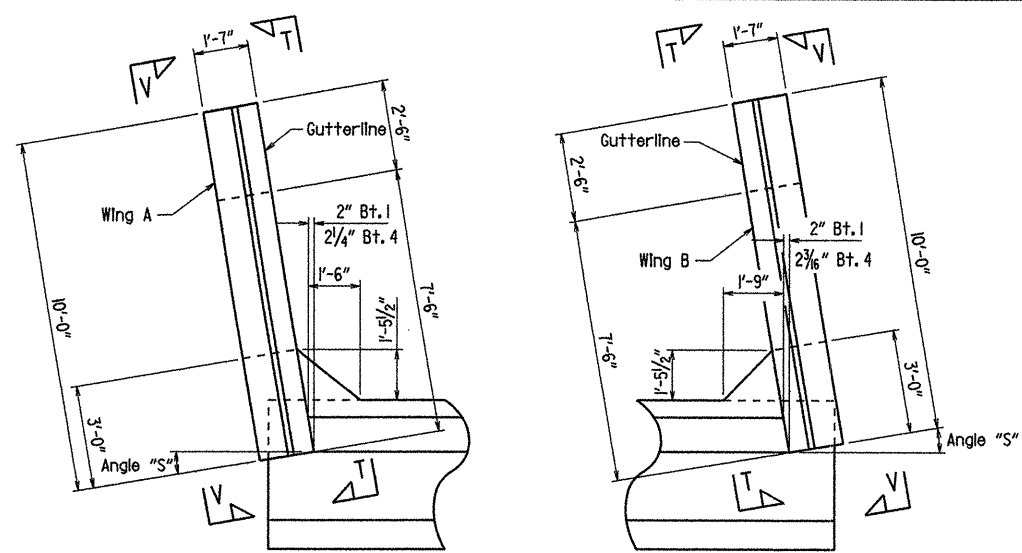
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: DDD DATE: 6-30-06 FILENAME: b061039x2.b5.dgn
CHECKED BY: JWD DATE: 7-31-06 SCALE: as noted
DESIGNED BY: CRE DATE: 6-18
BRIDGE NO. 07088 DRAWING NO. 48985

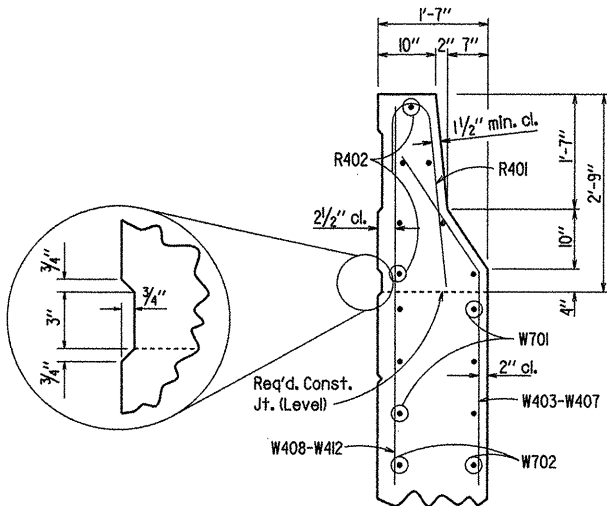


BRIDGE ENGINEER

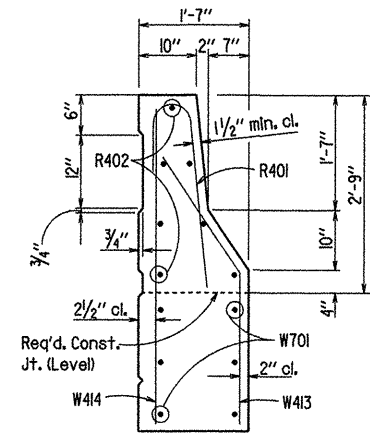
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061039	97	257
				07088 - WING & RAIL	- 48986			



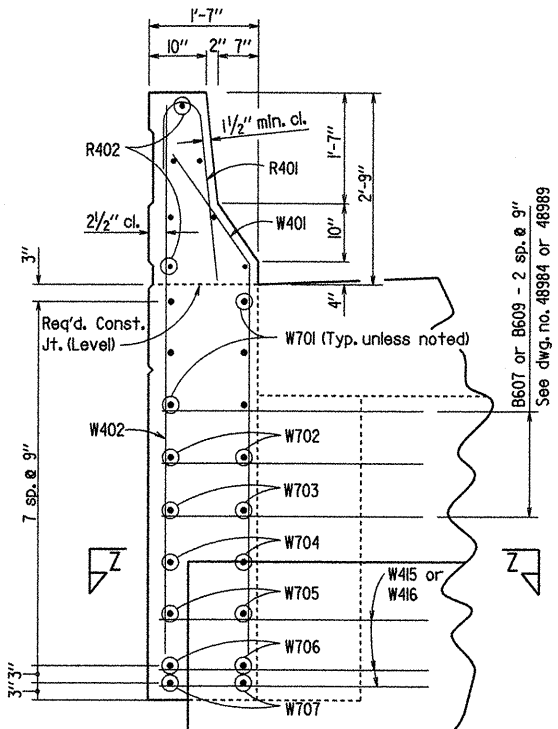
PLAN of RAIL
Scale: 3/8" = 1'-0"



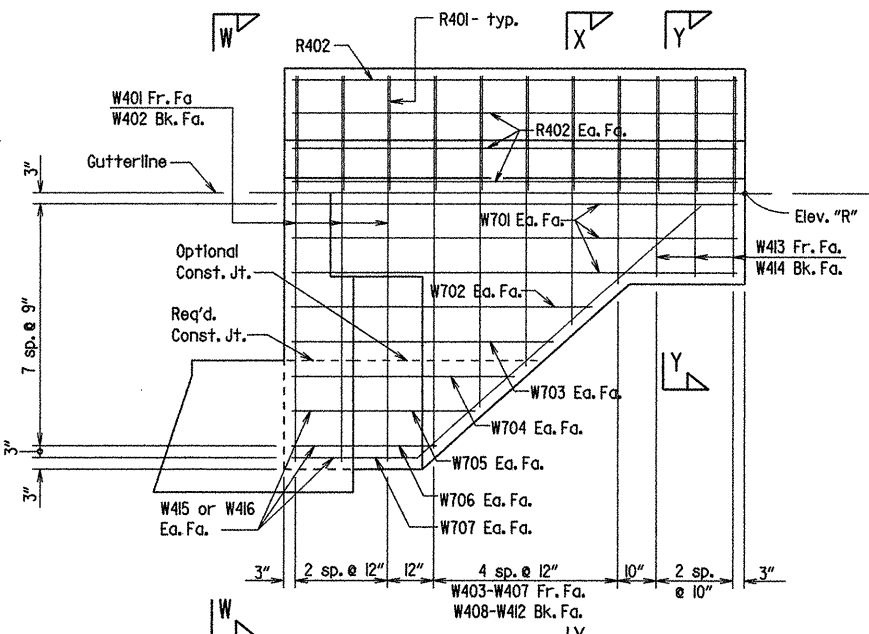
SECTION X-X
3/4" = 1'-0"



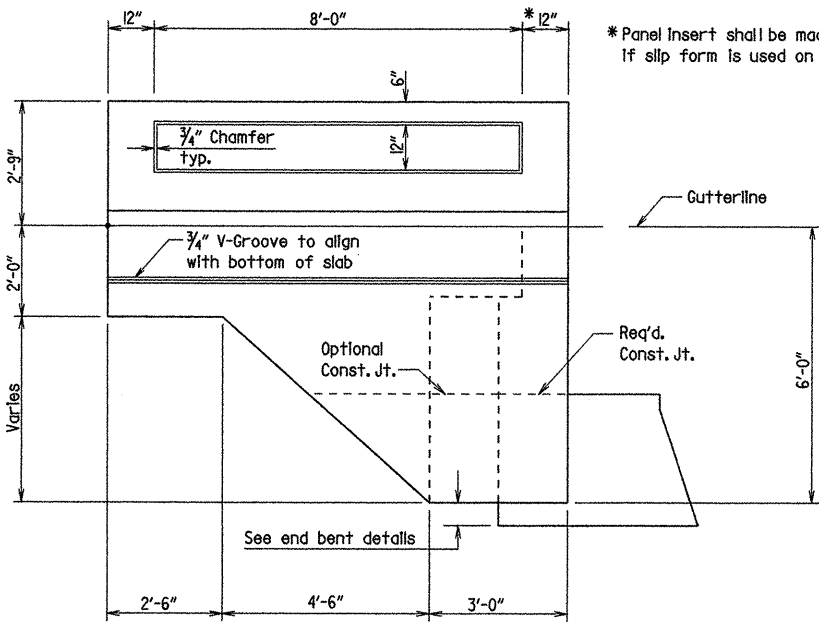
SECTION Y-Y
3/4" = 1'-0"



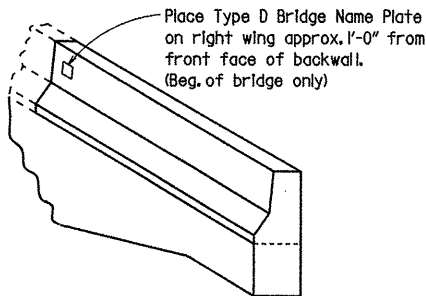
VIEW W-W
3/4" = 1'-0"



VIEW T-T
Scale: 1/2" = 1'-0"



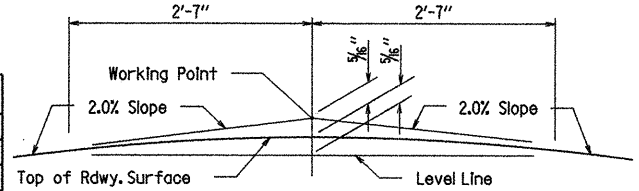
VIEW V-V
Scale: 1/2" = 1'-0"



THREE DIMENSIONAL VIEW OF RAIL
N.T.S.

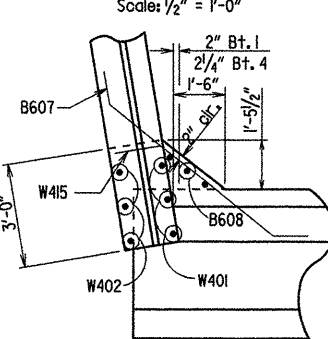
TABLE OF VARIABLES

Wing Location	Elev. "R"	Angle "S"
Bent 1 Wing A	330.55	9°30'
Bent 1 Wing B	330.52	9°32'
Bent 4 Wing A	329.49	10°32'
Bent 4 Wing B	329.66	10°25'



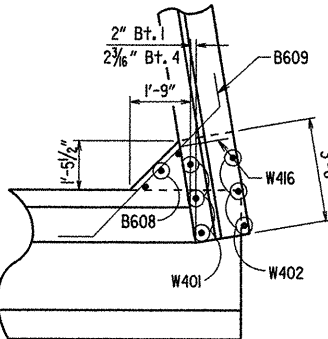
NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAILS
N.T.S.



Wing A

SECTION Z-Z
3/8" = 1'-0"



Wing B



BRIDGE ENGINEER

DETAILS OF WING & RAIL
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: DDD DATE: 6-23-06 FILENAME: b061039x2_w.dgn
CHECKED BY: JWD DATE: 7-28-06 SCALE: as noted
DESIGNED BY: CPE DATE: 6-06
BRIDGE NO. 07088 DRAWING NO. 48986

This detailed plan view illustrates the bridge deck layout, divided into two construction stages. The total length is 65'-0", with Stage 1 Construction measuring 39'-0" and Stage 2 Construction measuring 26'-0". The layout includes a centerline (C.L.) beam, piles, and various structural details.

Key Dimensions and Spacing:

- C.L. Beam Spacing:** 2'-3 1/2", 8'-7 1/16", 8'-7 1/16", 8'-7 1/16", 4'-6 3/8", 4'-1 3/8", 8'-7 1/16", 8'-7 1/16", 8'-7 1/16", 2'-3 1/2".
- Piling Spacing:** 2'-2", 8'-8", 8'-8", 8'-8", 4'-6 5/8", 4'-1 3/8", 8'-8", 8'-8", 8'-8", 2'-2".
- Riser Spacing:** 8'-8", 8'-8", 8'-8", 6'-8 5/8", 6'-3 3/8", 8'-8", 8'-8", 8'-8".

Structural Details and Annotations:

- Cap & Bearing:** Indicated for the piles.
- Chord:** A structural member connecting the piles.
- Radial Line:** A line extending from the centerline to the pile.
- Construction Joint:** A joint between the two construction stages.
- Bent Sta as shown on Layout:** A reference point for the bridge structure.
- Q Bridge & Q Construction along 0°45'00" Curve Lt.:** A note indicating the bridge's orientation and construction details.
- Typical Anchor Bolt Layout:** A reference to a standard layout for the anchor bolts.
- Dimensions:** Various dimensions are provided, including 3'-0", 1'-6", 1'-6", 10' (typ.), 25/8", 6'-3 3/8", 9' 49' 11", and 8'-6" (typ.).

Elev. 326.36

B402 - 2 sp. @ 6" Over Each Pile (typ.)

6-B401

2-B403

2 1/8"

6"

B406 - 12 sp @ 12"

Construction Joint

5-B405

1'-9" Min. Lap Splice (#4 Bars)

2'-7" Min. Lap Splice (#6 Bars)

2-B404

6-B603

2"

Level

2-B602

2-B604

B401 Tie Spacing

3"

2 eq sp

1'-1"

2 sp @ 6"

5 eq. sp.

2 sp @ 6"

1'-1"

2 sp @ 6"

5 eq. sp.

2 sp @ 6"

1'-1"

2 sp @ 6"

5 eq. sp.

2 sp @ 6"

1'-1 1/2"

2 sp @ 6"

5 eq. sp.

2 sp @ 6"

1'-1"

2 sp @ 6"

5 eq. sp.

2 sp @ 6"

1'-1"

2 sp @ 6"

5 eq. sp.

2 sp @ 6"

1'-1"

2 eq sp

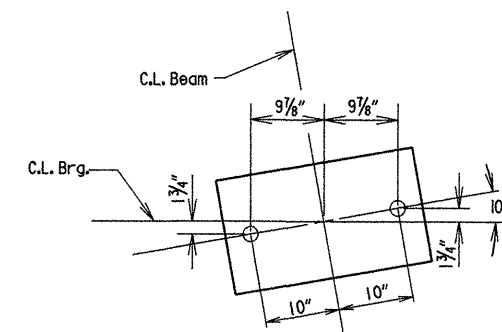
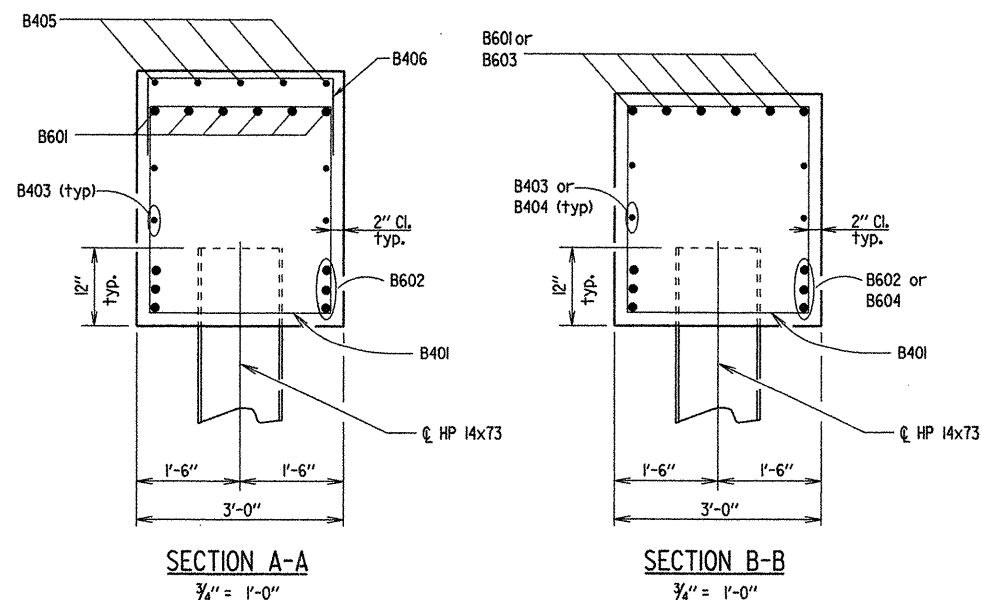
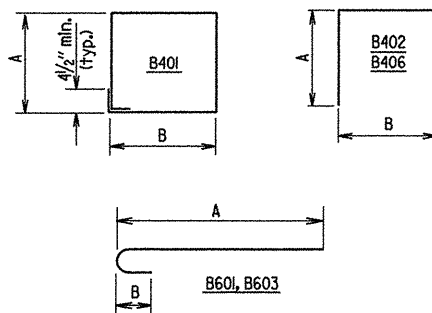
3"

ELEVATION - LOOKING AHEAD

ELEVATION - LOOKING AHEAD

Mark	No. Req'd.	Length	A	B	Pin Dia.
B401	77	12'-0"	3'-2"	2'-8"	2"
B402	24	8'-10"	3'-2"	2'-8"	2"
B403	4	40'-9"	-	-	Str.
B404	4	25'-8"	-	-	Str.
B405	5	12'-8"	-	-	Str.
B406	13	5'-8"	1'-7"	2'-8"	2"
B601	6	42'-3"	41'-7"	6"	4½"
B602	6	41'-7"	-	-	Str.
B603	6	26'-4"	25'-8"	6"	4½"
B604	6	25'-8"	-	-	Str.

Bending Diagrams
(Dimensions are out to out of bars.)



Note: For Details of Elastomeric Bearing,
See Dwg. No. 48997.

TYPICAL ANCHOR BOLT LAYOUT
NOT TO SCALE

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners to be chamfered $\frac{3}{4}$ " unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53 Grade 60.

If anchor bolts are drilled into cap, top reinforcing bars shall be properly placed to avoid damage.

For additional information, see Layout.

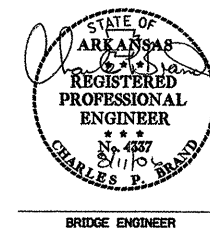
DETAILS OF BENT NO. 2
HWY. 183 OVER DEPOT CREEK

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CSL DATE: 7/7/06 FILENAME: b061039x2_b2.dgn
CHECKED BY: DHP DATE: 8-11-06 SCALE: 3/8" = 1'-0" or
DESIGNED BY: CHE DATE: 6-06 as noted

BRIDGE NO. 07088 DRAWING NO. 48987



Plan view of bridge construction showing stages 1 and 2. The diagram includes dimensions for beam spacing, piling spacing, and riser spacing. Key labels include "Bent Sta as shown on Layout", "Construction Joint", and "Radial Line".

Dimensions and labels:

- Overall length: 65'-0"
- Stage 1 Construction: 39'-0"
- Stage 2 Construction: 26'-0"
- Labels: "Bent Sta as shown on Layout", "Construction Joint", "Radial Line", "Chord", "C.L. Beam Spacing", "Piling Spacing", "Riser Spacing", "See 'Typical Anchor Bolt Layout'", "Cap & Bearing", "Bridge & Construction along 0°45'00" Curve Lt.", "Beam (typ.)", "8'-6" (Typ.)", "10' 10' 47"
- Dimensions: 3'-0", 1'-6", 1'-6", 2'-3 1/2", 8'-7 1/8", 8'-7 1/8", 8'-7 1/8", 4'-6 3/8", 4'-1 3/8", 8'-7 1/8", 8'-7 1/8", 8'-7 1/8", 2'-3 1/2", 2'-2", 8'-8", 8'-8", 8'-8", 8'-8", 4'-6 5/8", 4'-1 3/8", 8'-8", 8'-8", 8'-8", 8'-8", 2'-2", 8'-8"

Elev. 326.06

B402 - 2 sp. @ 6" Over Each Pile (typ.)

6-B601

2-B403

6"

B406 - 12 sp @ 12"

6"

1'-9" Min. Lap Splice (#4 Bars)

2'-7" Min. Lap Splice (#6 Bars)

Construction Joint

5-B405

2-B404

6-B603

2 3/8"

2 3/8"

2 1/4"

1 5/8"

1 7/8"

3'-6"

Level

2-B602

2-B604

B401 Tie Spacing

3" 2 eq sp 1'-11" 2 sp @ 6" 5 eq. sp. 2 sp @ 6" 1'-11" 2 sp @ 6" 5 eq. sp. 2 sp @ 6" 1'-11" 2 sp @ 6" 5 eq. sp. 2 sp @ 6" 1'-10 1/2" 2 sp @ 6" 5 eq. sp. 2 sp @ 6" 1'-11" 2 sp @ 6" 5 eq. sp. 2 sp @ 6" 1'-11" 2 sp @ 6" 5 eq. sp. 2 sp @ 6" 1'-11" 2 eq sp 3"

A

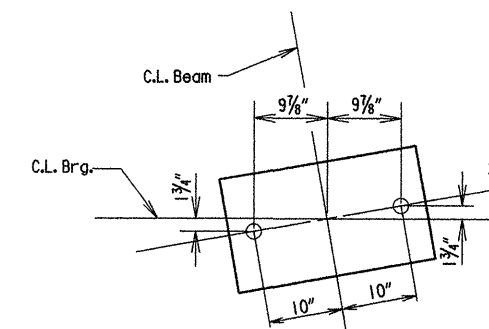
ELEVATION - LOOKING AHEAD

B

Mark	No. Req'd.	Length	A	B	Pin Dia.
B401	77	12'-0"	3'-2"	2'-8"	2"
B402	24	8'-10"	3'-2"	2'-8"	2"
B403	4	40'-9"	-	-	Str.
B404	4	25'-8"	-	-	Str.
B405	5	12'-8"	-	-	Str.
B406	13	5'-8"	1'-7"	2'-8"	2"
B601	6	42'-3"	41'-7"	6"	4 1/2"
B602	6	41'-7"	-	-	Str.
B603	6	26'-4"	25'-8"	6"	4 1/2"
B604	6	25'-8"	-	-	Str.

Figure 1 illustrates the dimensions of the test specimens. The specimens are labeled B401, B402, B406, and B601, B603. The dimensions are defined as follows:

- Height (A):** The vertical dimension of the specimens.
- Width (B):** The horizontal dimension of the specimens.
- Thickness:** The B401 specimen has a thickness of $4\frac{1}{2}$ inch min. (typ.).
- Notch:** A small notch is present at the bottom left corner of the B401, B402, and B406 specimens.
- Side View:** The B601, B603 specimen is shown in a side view, indicating a long, thin profile with a semi-circular notch at one end.



TYPICAL ANCHOR BOLT LAYOUT
NOT TO SCALE

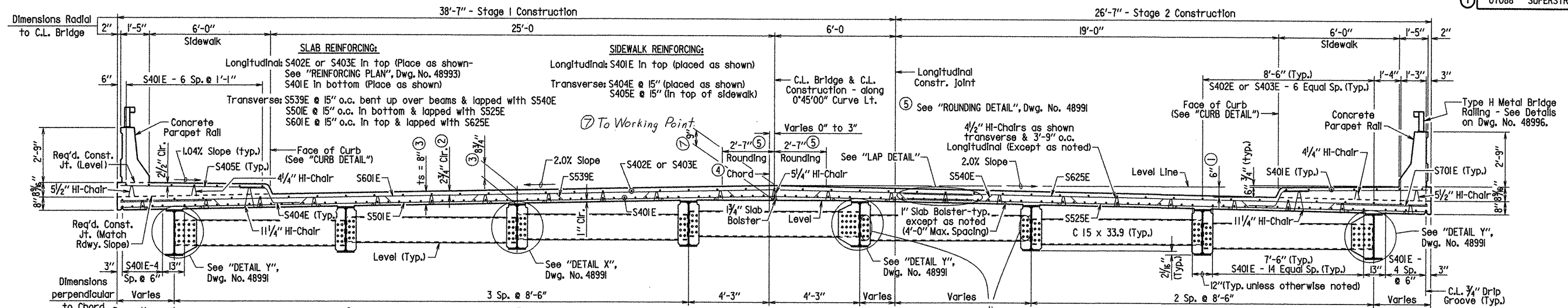
DRAWN BY: CSL DATE: 7/7/06 FILENAME: b061039x2_b3.dgn
 CHECKED BY: DHP DATE: 8-11-06 SCALE: 3/8" = 1'-0" or
 DESIGNED BY: CRE DATE: 6-06 as noted
 BRIDGE NO. 07088 DRAWING NO. 48988

Notes: Class I Protective Surface Treatment shall be applied to the Roadway and Sidewalk Surface. Class 3 Textured Coating Finish shall be applied to all areas as specified in Special Provision Job 061039 "Textured Coating Finish".

Notes: At Contractor's option, in lieu of providing Bar S539E & S540E, one #5 epoxy coated bar top and bottom may be substituted. Payment for Reinforcing will be based on the Weight of bar S539E & S540E. Bars in top and bottom mat shall be Epoxy coated.

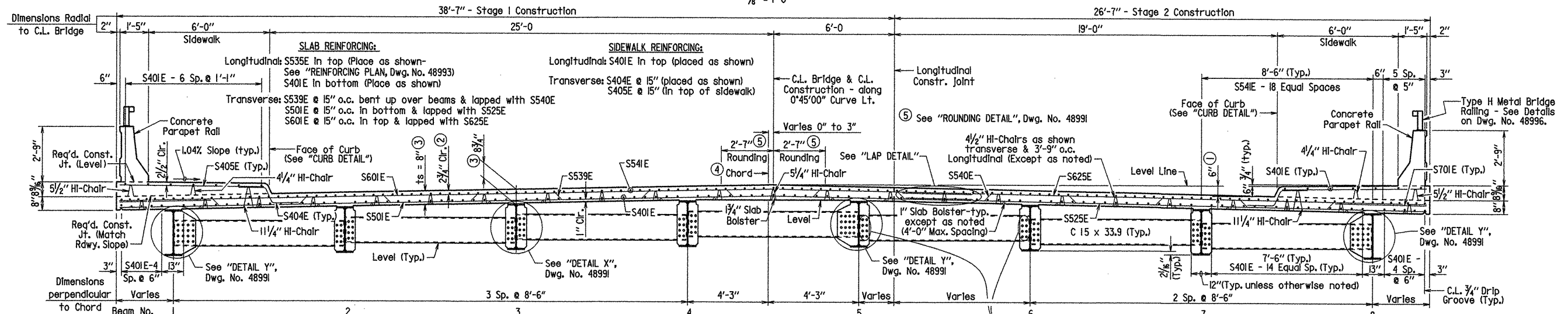
Notes: The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class (S) Concrete.

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.		061039	101	257
				07088		SUPERSTRUCTURE DETAILS		48990



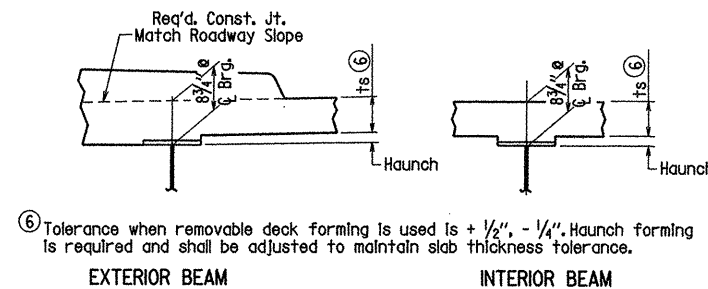
TYPICAL ROADWAY SECTION NEAR MID-SPAN

LOOKING AHEAD
3/8" = 1'-0"



TYPICAL ROADWAY SECTION AT INTERMEDIATE BENTS

LOOKING AHEAD
3/8" = 1'-0"



EXTERIOR BEAM

INTERIOR BEAM

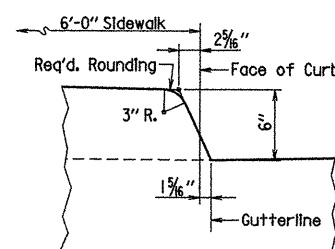
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 1 1/4". No increase in concrete and structural steel quantities will be made to maintain tolerances.

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

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

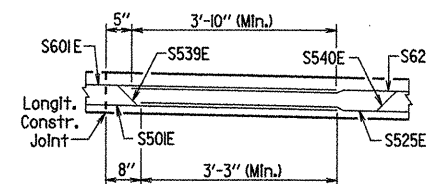
No Scale

Notes: ts = Slab thickening as shown in "TYPICAL ROADWAY SECTION NEAR MID-SPAN" and "TYPICAL ROADWAY SECTION AT INTERMEDIATE BENTS".



CURB DETAIL

No Scale



LAP DETAIL

No Scale

- Working Point to Gutterline, see "ROUNDING DETAIL", Dwg. No. 48991.
- Tolerance: Minus = 1/4"
Plus = The amount of slab thickening used to meet slab thickness tolerance - see "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE".
- See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE".
- Chord is drawn from Beginning of Bridge to End of Bridge at C.L. Bridge.

Notes: Deck, Sidewalks, Parapet, and longitudinal reinforcing steel shall be placed on curves concentric with C.L. Bridge. All transverse reinforcing steel shall be placed on radial lines and shall be measured along C.L. Bridge. Beams shall be placed parallel to Chord.

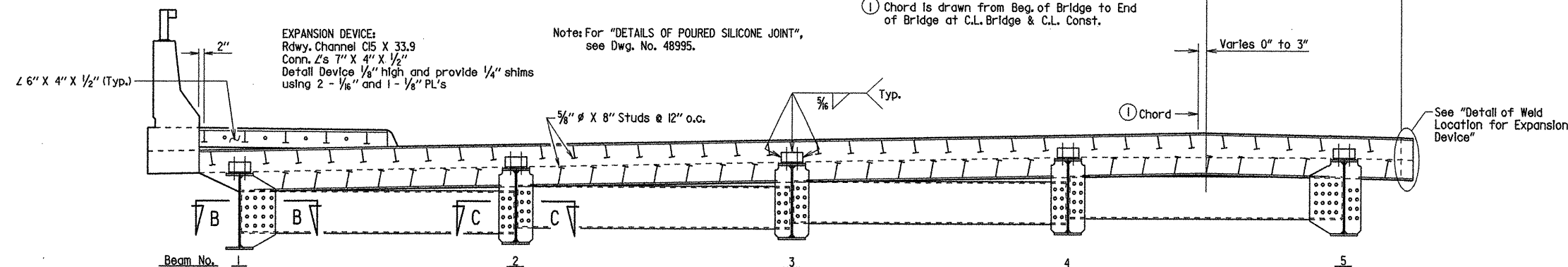


BRIDGE ENGINEER

SHEET 1 OF 7
DETAILS OF 122'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

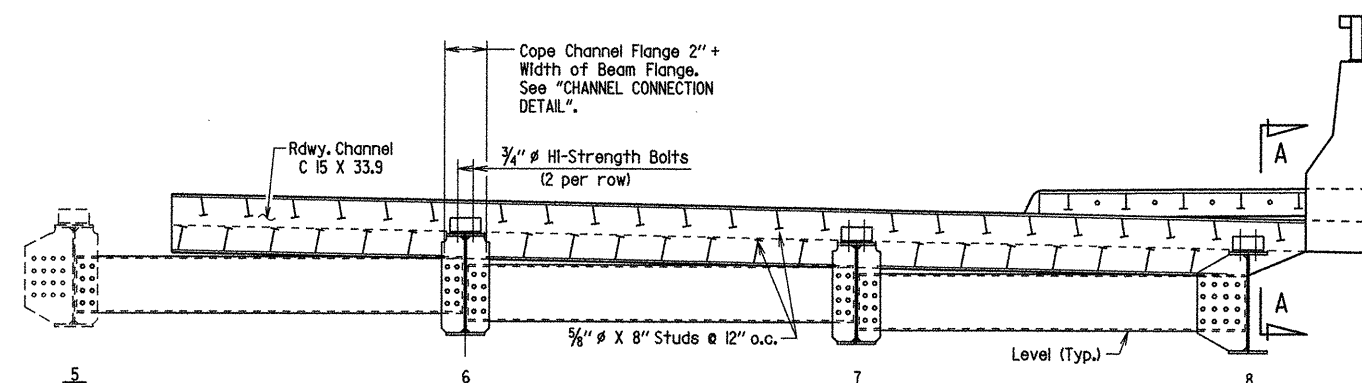
DRAWN BY: MJT DATE: 05/25/06 FILENAME: b061039x2.sl.dgn
CHECKED BY: CRE DATE: 8-10-06 SCALE: AS NOTED
DESIGNED BY: CRE DATE: 3-06
BRIDGE NO. 07088 DRAWING NO. 48990

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.		061039	102	257
				07088	SUPERSTRUCTURE DETAILS		48991	



TYPICAL ROADWAY SECTION AT JOINT - STAGE 1

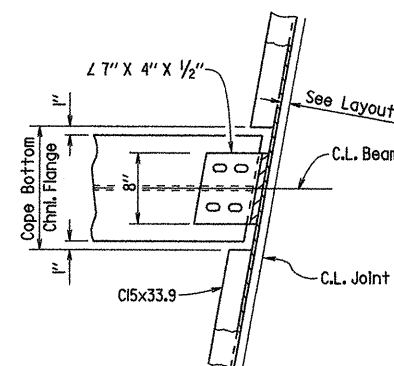
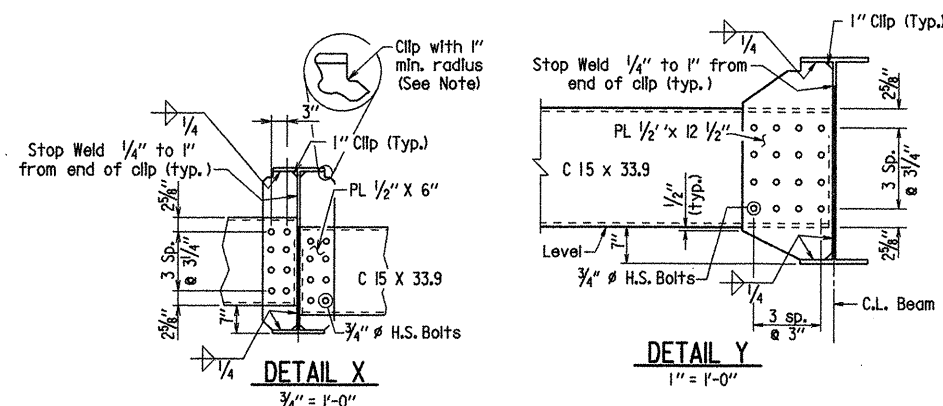
BENT 4 - LOOKING AHEAD (BENT 1 SIMILAR)
1/2" = 1'-0"



TYPICAL ROADWAY SECTION AT JOINT - STAGE 2

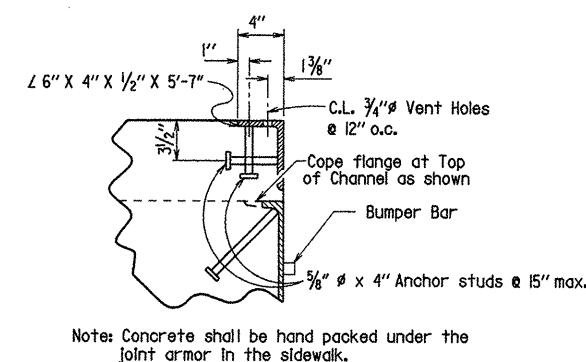
BENT 4 - LOOKING AHEAD (BENT 1 SIMILAR)
1/2" = 1'-0"

Note: If permanent steel deck forms are used,
the fabricator shall clip the plate as necessary
to accommodate the deck form support.



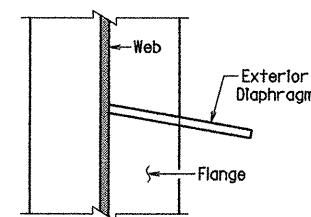
CHANNEL CONNECTION DETAIL

No Scale



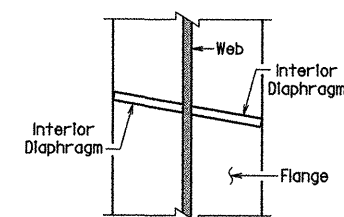
SECTION A-A

No Scale



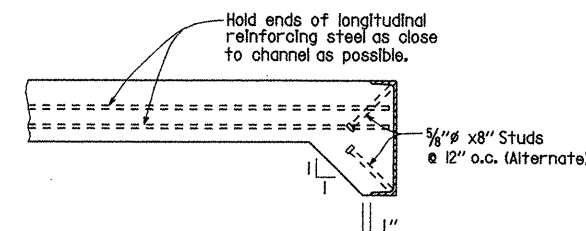
SECTION B-B

BEAMS 1 & 8
No Scale



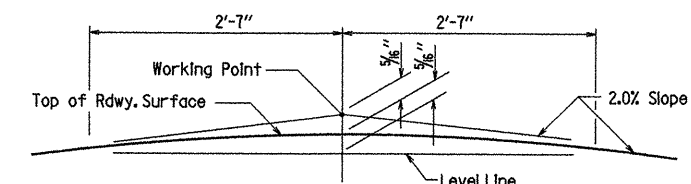
SECTION C-C

BEAMS 2-7
No Scale



ANCHOR DETAILS

No Scale

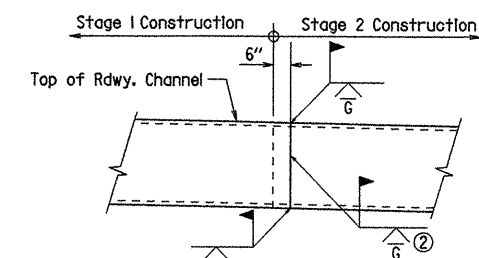


NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

No Scale

GENERAL NOTES



② Grind flush 3" from top of Rdwy. Channel.

DETAIL OF WELD LOCATION FOR EXPANSION DEVICE

Looking Ahead
No Scale

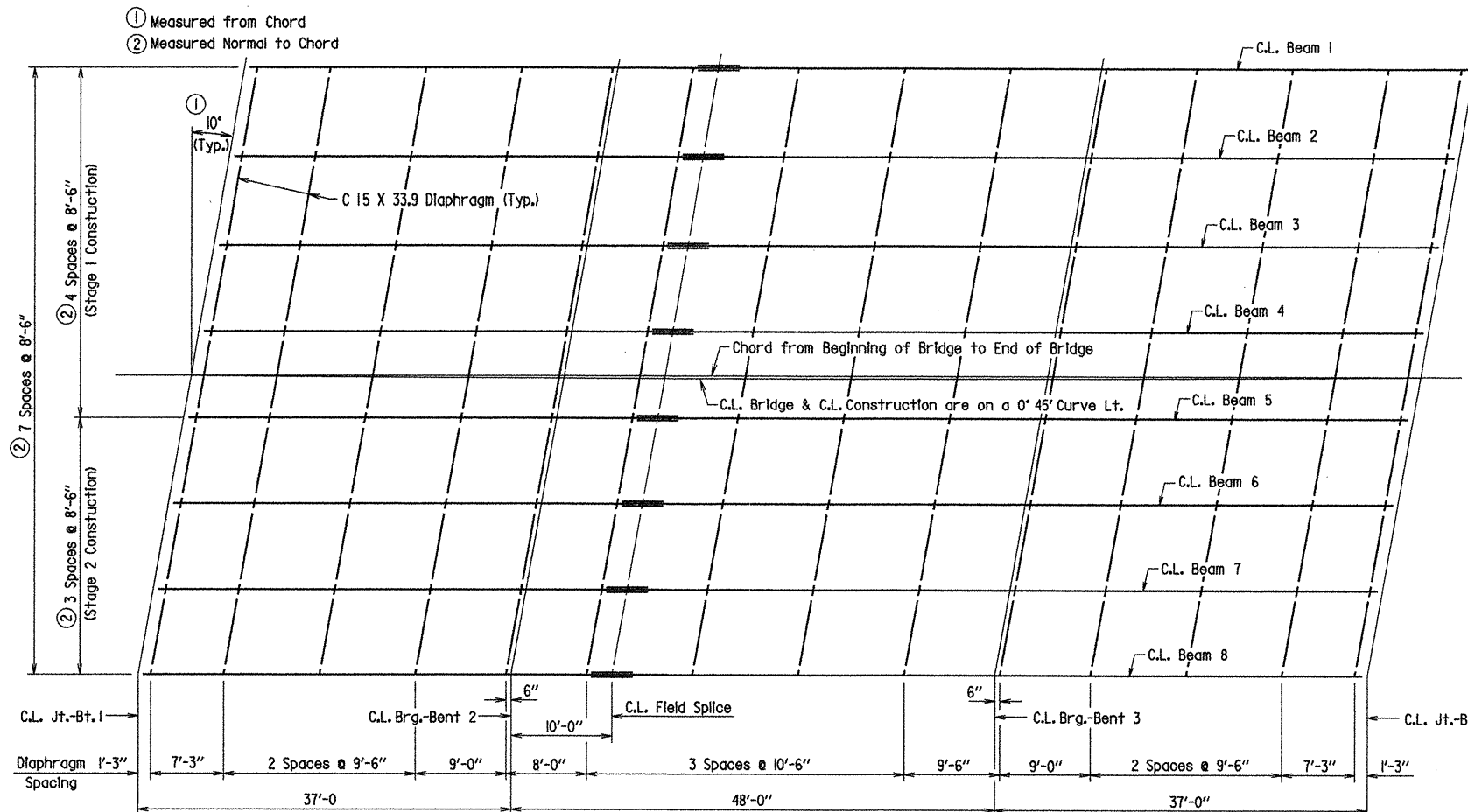


BRIDGE ENGINEER

SHEET 2 OF 7
DETAILS OF 122'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

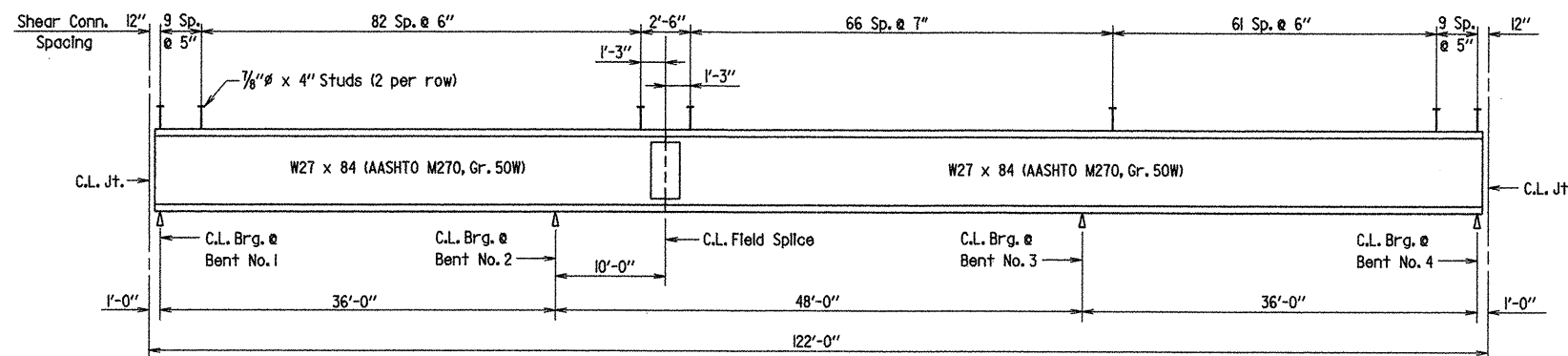
DRAWN BY: MJT DATE: 05/30/06 FILENAME: b061039x2.sl.dgn
CHECKED BY: CRE DATE: 8-10-06 SCALE: AS NOTED
DESIGNED BY: CRE DATE: 3-06
BRIDGE NO. 07088 DRAWING NO. 48991

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.		061039	103	257
				07088	SUPERSTRUCTURE DETAILS		48992	



FRAMING PLAN
1/2" = 1'-0"

Note: Bolted field splices may be eliminated or shop welds substituted with the approval of the Engineer. Payment will be made on the basis of the splices shown.

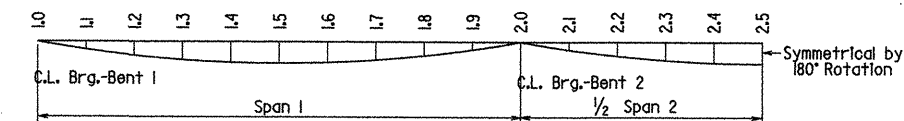


BEAM ELEVATION
NTS

Note: Bents are skewed 10° to a Chord drawn from Beginning of Bridge to End of Bridge at C.L. Bridge. Beams are parallel to the Chord.

DEAD LOAD DEFLECTIONS (INCHES)

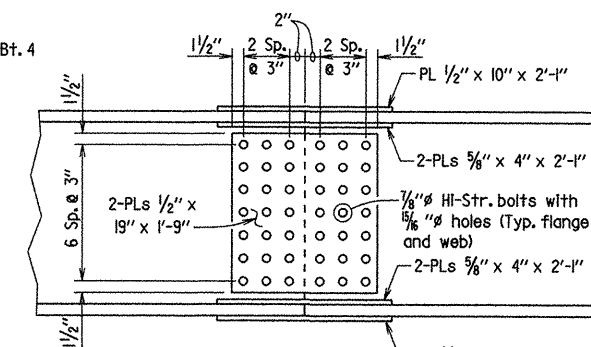
Span Point	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
All Beams																
Structural Steel	0.000	0.007	0.013	0.017	0.018	0.017	0.014	0.009	0.004	0.001	0.000	0.006	0.017	0.028	0.036	0.039
Structural Steel & Slab	0.000	0.060	0.110	0.142	0.154	0.144	0.116	0.076	0.034	0.003	0.000	0.057	0.151	0.245	0.312	0.336
Structural Steel, Slab, Sidewalk & Parapet	0.000	0.067	0.122	0.158	0.171	0.160	0.129	0.084	0.038	0.003	0.000	0.063	0.167	0.272	0.346	0.373



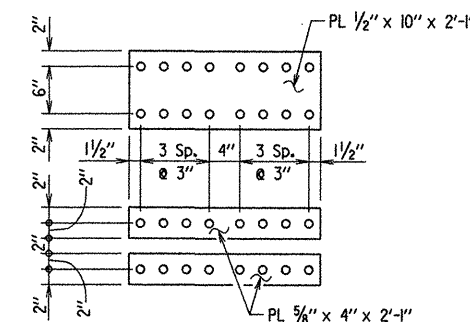
DEAD LOAD DEFLECTION DIAGRAM
No Scale

Note: Camber for Dead Load Deflection plus Vertical curve +/- 1/4" Tolerance.

Deflections shown are along C.L. Beam from a chord from C.L. Bearing to C.L. Bearing. Vertical curve corrections are not included. Tabular values shown may require an adjustment for cross-slope to chorded beams to achieve proper camber.



WEB SPlice

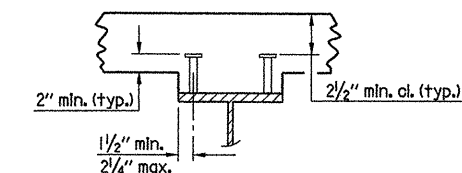


FLANGE SPlice

Note: All splice plates to be AASHTO M270, Gr. 50W.

DETAILS OF FIELD SPlice

Scale: 1" = 1'-0"



Stud Shear Connectors shown shall be 7/8" x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4" studs may be used in place of the 7/8" studs shown, at the ratio of 1.361-3/4" studs in place of one 7/8" stud. 7/8" studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

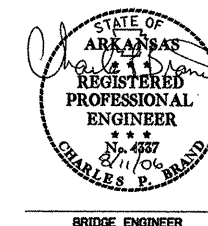
SHEAR CONNECTOR DETAIL

No Scale

TABLE FOR WELD

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"	3/8"	

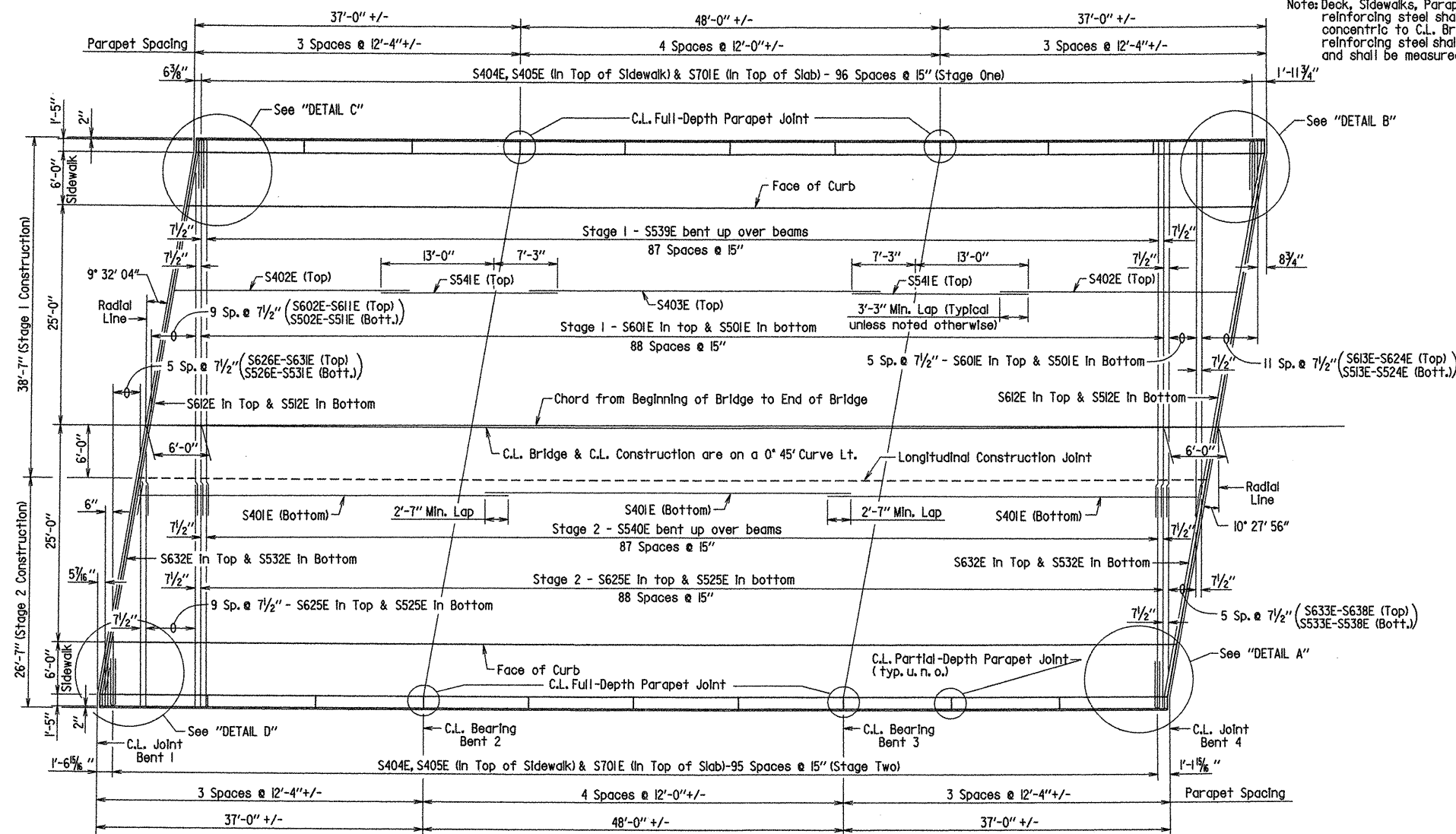
Note: When a fillet weld size, as shown on the plans, is larger than the minimum, the First Pass shall be that specified for minimum size of fillet weld.



BRIDGE ENGINEER

SHEET 3 OF 7
DETAILS OF 122'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

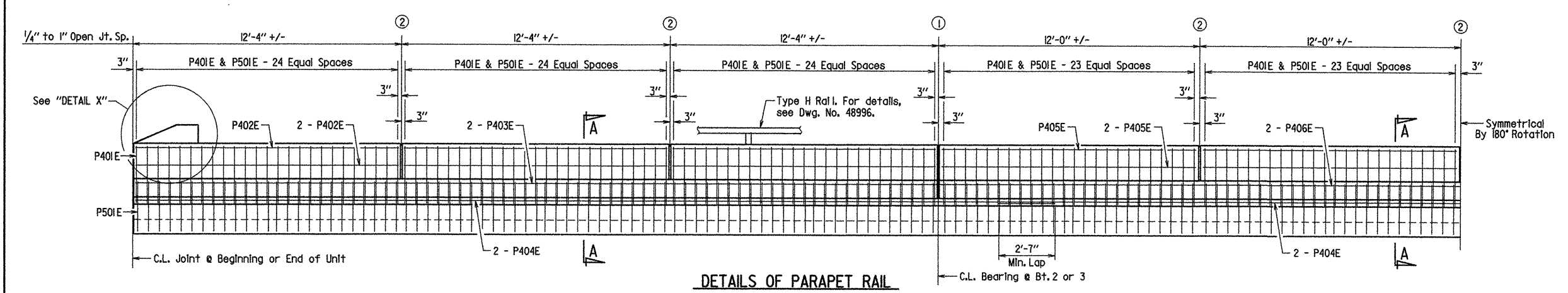
DRAWN BY: MJT DATE: 06/01/06 FILENAME: b061039x2.sldgn
CHECKED BY: CRE DATE: 8-10-06 SCALE: AS NOTED
DESIGNED BY: CRE DATE: 3-06
BRIDGE NO. 07088 DRAWING NO. 48992



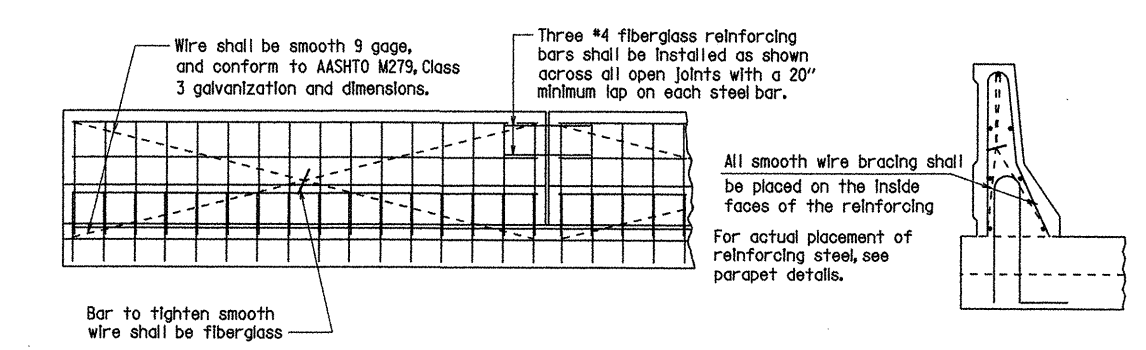
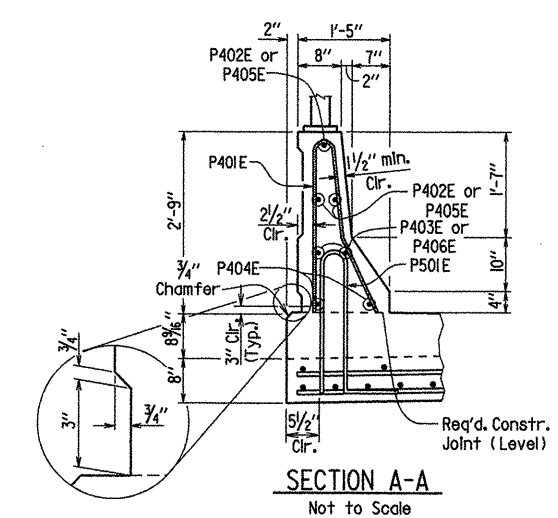
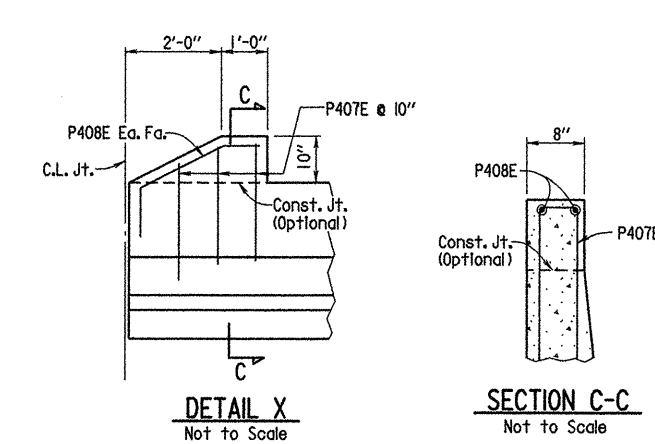
Note: Deck, Sidewalks, Parapet, and longitudinal reinforcing steel shall be placed on curves concentric to C.L. Bridge. All transverse reinforcing steel shall be placed on radial lines and shall be measured along C.L. Bridge.

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.		061039	105	257
				07088	SUPERSTRUCTURE DETAILS		48994	

- ① Full-Depth Parapet Joint (1/4" to 1" Max.) as shown in "REINFORCING PLAN", Dwg. No. 48993. Stop 4" from Top of Sidewalk.
- ② Partial-Depth Parapet Joint (1/4" to 1" Max.) as shown in "REINFORCING PLAN", Dwg. No. 48993. Stop 1'-2" from Top of Sidewalk.



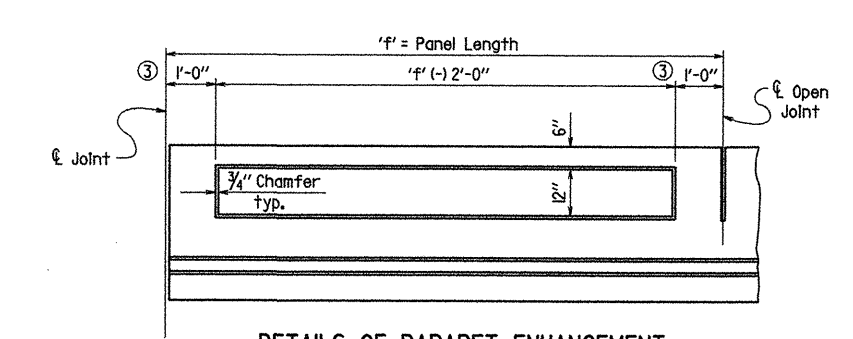
DETAILS OF PARAPET RAIL



All panels shall be braced as required to prevent racking. All open joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

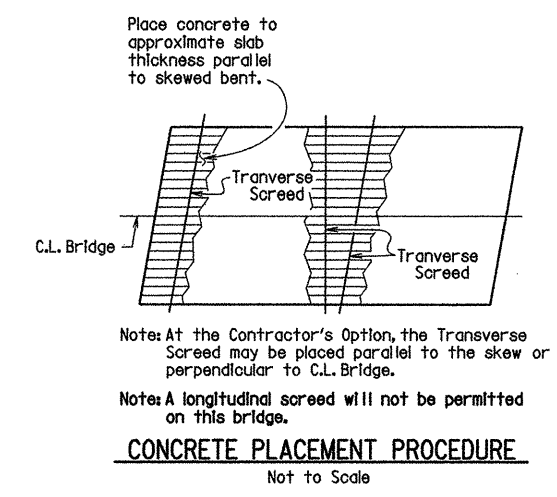
The extruded parapet shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture.

DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL
No Scale

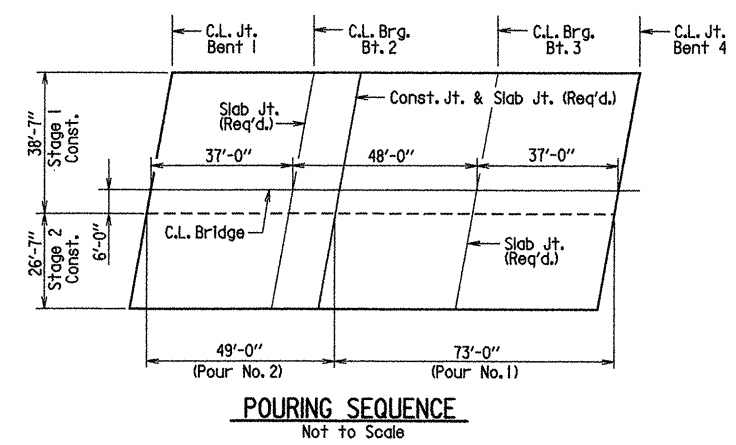


DETAILS OF PARAPET ENHANCEMENT
Not to Scale

③ Panel inset may be made continuous if slip forms are used.

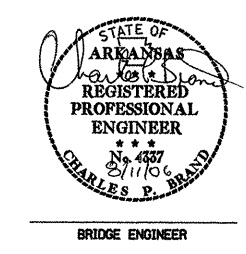


CONCRETE PLACEMENT PROCEDURE
Not to Scale



POURING SEQUENCE
Not to Scale

NOTES: Pour (1) must be placed before Pour (2) can be placed. 72 hours shall elapse between a deck pour and a sidewalk pour. 72 hours shall elapse between a sidewalk pour and a parapet pour. 72 hours shall elapse between the end of a pour and the start of an adjacent pour. Any railing or sidewalk pours made before the entire slab unit has been placed must be approved by the Engineer. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequences shown.



SHEET 5 OF 7
DETAILS OF 122'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 06/01/06 FILENAME: b061039x2.sldgn
CHECKED BY: CRE DATE: 8-10-06 SCALE: 3/4" = 1'-0"
DESIGNED BY: CRE DATE: 3-06 OR AS NOTED
BRIDGE NO. 07088 DRAWING NO. 48994

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 Edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (2004 Edition with 2005 & 2006 Interims).

LIVE LOADING: HL-93

MATERIALS AND STRENGTHS:

Concrete: All concrete shall be Class S(AE) with a minimum 28 day strength $f'_c = 4000$ psi.

Reinforcing Steel: Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (Yield Strength = 60,000 psi.).

Structural Steel: Structural steel shall conform to AASHTO M270, Gr. 50W ($F_y = 50,000$ psi.) or AASHTO M270 Gr. 36 ($F_y = 36,000$ psi.).

STRUCTURAL STEEL:

All Structural Steel shall be AASHTO M270, Gr. 50W unless otherwise noted. All structural steel shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)". Structural Steel completely embedded in concrete may be AASHTO M270, Gr. 36. AASHTO M270, Gr. 50W steel shall not be painted. All exposed surfaces shall be cleaned in accordance with subsection 807.84(e) unless noted otherwise.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

Beams including web and flange splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr. 50W)".

Flange splice plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

Drawings show general features of design only. Shop drawings shall be made in accordance with subsection 807.04, submitted, and approval secured before fabrication is begun.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with the recommendations of the manufacturer.

All beams shall be blocked in their true position in the shop. Beams shall be blocked with webs horizontal and as specified in subsection 807.54(b)(1). The camber, length of sections, distance between bearings, and opening of joints shall be measured with the beams in their true position and this information shall become part of the permanent record of this job. The component parts shall be match marked in this assembly and those marks shall be shown on the erection diagram. All beam dimensions are based on a temperature of 60 degrees F. A tolerance of $\frac{1}{4}$ " (plus or minus) allowed for camber.

Field connections shall be bolted with high-strength bolts. Bolts shall be $\frac{3}{4}$ " ϕ , except as noted, and open holes shall be $\frac{5}{16}$ " ϕ unless otherwise noted. Holes for $\frac{3}{4}$ " ϕ bolts may be $\frac{5}{8}$ " ϕ if a washer is supplied for use under both the nut and the head of the bolt. Bolt spacing shall be $2\frac{1}{2}$ " for $\frac{3}{4}$ " ϕ bolts. For field splices, bolts shall be $\frac{1}{2}$ " ϕ bolts. Open holes shall be $\frac{5}{16}$ " ϕ . Bolt spacing shall be 3" for $\frac{1}{2}$ " ϕ bolts. Bolts shall be placed with heads on the outside face of the exterior beam web and on the bottom of the beam flanges.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If the Contractor or erector should want to make additional welds, whether temporary or permanent, he shall submit detailed drawings with a formal request to the Engineer for approval. All welding shall conform to subsection 807.26.

Diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with subsection 807.71 prior to pouring the deck unless otherwise noted.

Bearings shall be seated in accordance with subsection 807.66. This work and material will not be paid for directly but will be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr. 50W)".

REINFORCING STEEL:

The reinforcing steel shall be accurately located in the forms and firmly held in place by steel wire supports, sufficient in size and number, to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item "Epoxy Coated Reinforcing Steel-Bridge (Grade 60)".

CONCRETE:

All concrete shall be Class S(AE) with a minimum 28 day compressive strength $f'_c = 4000$ psi. Concrete shall be poured in the dry and all exposed corners to be chamfered $\frac{3}{4}$ " unless otherwise noted.

Concrete in bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The concrete deck shall be given a Tine Finish in accordance with subsection 802.19 for Class 5, Tined Bridge Roadway Surface Finish. The sidewalk shall receive a Broomed Finish as specified for final finishing in subsection 802.19 for Class 6, Broomed Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. Use of a longitudinal screed will not be allowed at this bridge location.

A minimum of 72 hours shall elapse between completion of the bridge deck slab and the pouring of the sidewalk and a minimum of 72 hours shall elapse between completion of the sidewalk and the pouring of the parapet railing. Any railing pours made before the entire slab has been placed and cured must be approved by the Engineer.

LOAD DISTRIBUTION:

Dead Load:

A. To W-Beam

Interior Beam
850 plf + wt. of beam
+ wt. of diaphragm

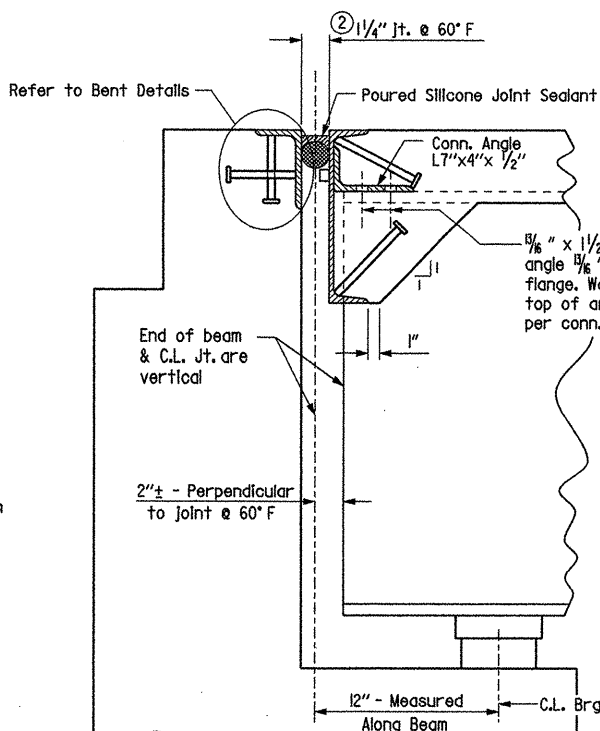
Exterior Beam
708 plf + wt. of beam
+ wt. of diaphragm

B. To Composite Beam

419 plf ①

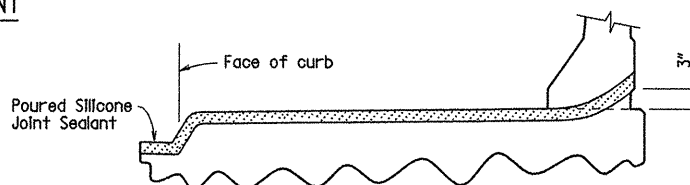
419 plf ①

① Includes 146 plf future wearing surface



JOINT AT END BENT

NTS



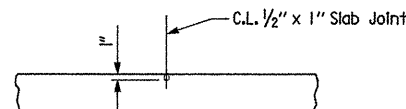
JOINT SEAL PLACEMENT AT SIDEWALK & PARAPET

NTS

Use $\frac{1}{2}$ " x 1" Type 3, 4, or 6 Joint Sealer. See subsections 501.02 (h) and 501.05 (j). Backer Rod filler will not be required. Joint sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. This joint shall be formed. Seal must be gray or other color similar to concrete.

LONGITUDINAL CONSTRUCTION JOINT DETAIL

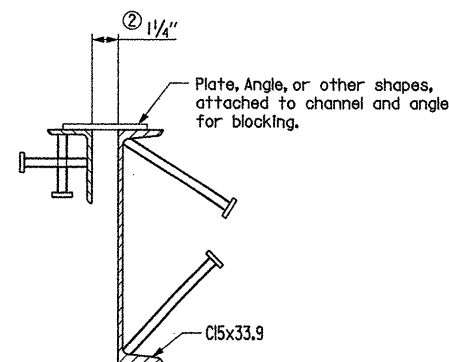
No Scale



SLAB JOINT DETAIL

No Scale

Use Type 3, 4, or 6 Joint Sealer. See subsections 501.02 (h) and 501.05 (j). Backer Rod filler will not be required. Joint sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab joints shall extend to the outside edge of the deck slab. Slab joints shall be installed before the sidewalk and parapet railing are poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. No joint sealer shall be placed on the deck slab under the sidewalk area. The joint sealer shall extend across the deck slab (gutterline to gutterline) and across the top of the sidewalk. Slab joints shall align with parapet open joints.



Note: Each expansion joint device shall be blocked in the Shop by the Fabricator to $\frac{1}{4}$ ", and the blocking details shall be shown on the Shop Drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

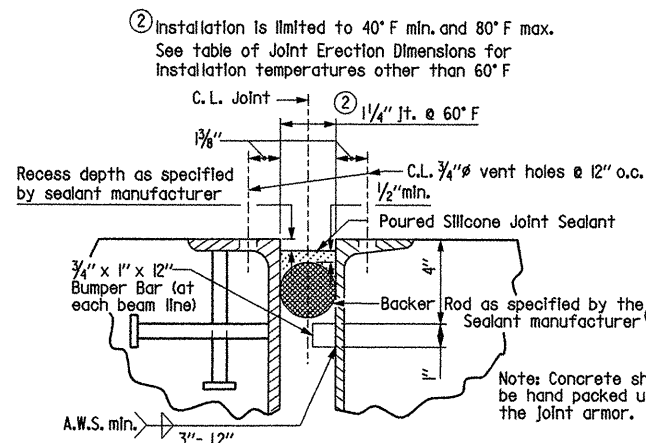
DETAILS FOR BLOCKING
EXPANSION JOINT DEVICE

NTS

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.		061039	106	257
				①	07088	SUPERSTRUCTURE DETAILS	48995	

JOINT ERECTION DIMENSIONS

② Width perpendicular to joint at 24 hour average temperature of:			
Bent No.	40° F	60° F	80° F
1	$1\frac{3}{8}$ "	$1\frac{1}{4}$ "	$1\frac{1}{8}$ "
4	$1\frac{3}{8}$ "	$1\frac{1}{4}$ "	$1\frac{1}{8}$ "



DETAIL OF POURED SILICONE JOINT

NTS

③ BACKER ROD NOTE:

Use an appropriately sized backer rod at the depth shown in the manufacturer's literature based on the joint width at the time of sealing.

Backer rods shall be extended beyond length of poured joint in Stage 1 so that the two pieces can be properly joined together prior to installing sealant for Stage 2.

Except as noted, do not install more backer rod than can be sealed the same day.

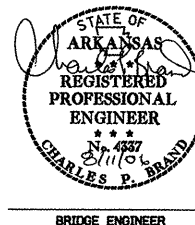
The contractor shall verify separation of the backer rod from the joint material after the joint material has set.

EXPANSION DEVICE INSTALLATION

The Contractor may elect to install the expansion device using one of the following two alternatives:

1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted for temperature, and the backwall constructed.

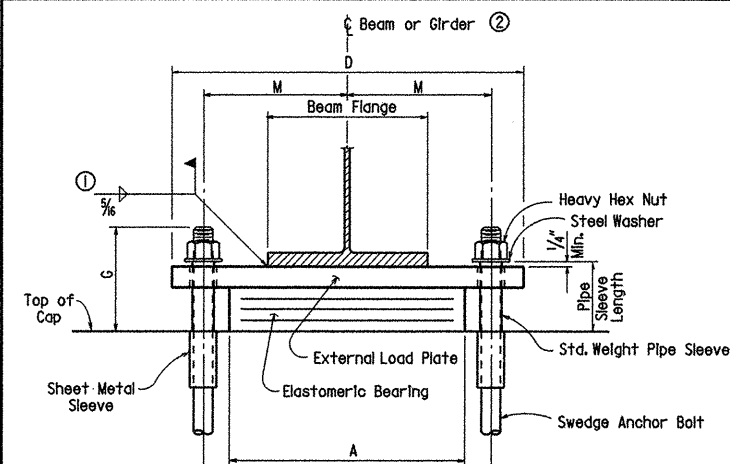
2) The backwall shall be poured to the optional construction joint after beams are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature.



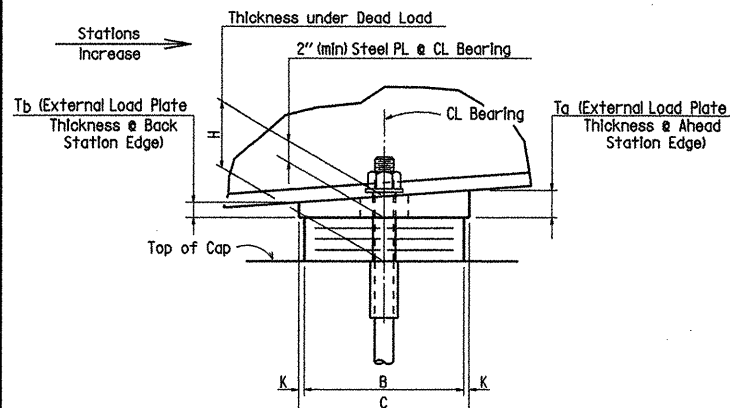
SHEET 6 OF 7
DETAILS OF 122'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 06/01/06 FILENAME: b061039x2.sldgn
CHECKED BY: CRE DATE: 8-10-06 SCALE: AS NOTED
DESIGNED BY: CRE DATE: 3-06
BRIDGE NO. 07088 DRAWING NO. 48995

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.		061039	108	257
				07088	ELASTO. BRGS.			48997



FRONT VIEW - AT BENT NOS. 1-4



SIDE VIEW - AT BENT NOS. 1-4

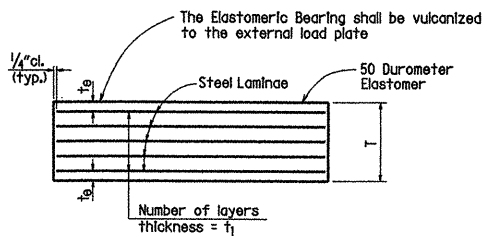
- 1) Care shall be taken to ensure that the external load plate is in full and complete contact with the beam or girder flange before welding begins.
- 2) Centerline Beam or Girder shall align with centerline bearing.

Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the girder will be allowed only when: 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40° F and 80° F; and 2) the slots in the external load plate are positioned to center on the anchor bolts; and 3) no horizontal deformation of the elastomeric pad is evident. If welding at other temperatures is required, the Engineer will provide adjustment data.

TABLE OF FABRICATOR VARIABLES

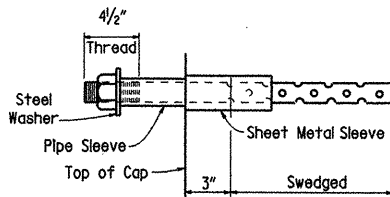
BRIDGE NO.	LOCATION			BEARING TYPE	NO. of BEARINGS EACH BENT	*MAXIMUM DESIGN LOAD (KIPS)	G	H	ELASTOMERIC PAD							EXTERNAL LOAD PLATE										ANCHOR BOLT					
	BENT NO(S).	UNIT	BEAM NO.						A	B	N	t ₁	t ₂	NO. & THICKNESS OF STEEL LAMINAE	T	C	D	E	F	K	M	T _a	T _b	ANCHOR BOLT		PIPE SLEEVE SIZE (ø x L)	SHEET METAL SLEEVE SIZE (ø x L)	STEEL WASHER SIZE (O.D.)			
																								(ø x L)	GRADE						
07088	1	122'	1-4, 6-8	Exp.	8	74	8"	5 1/8"	14"	10"	4	1/2"	5 1/8"	5 @ 12 Ga.	3 1/8"	11"	24"	3 1/2"	2 1/4"	1/2"	9 1/4"	1.99"	2.01"	1 1/2"ø x 26"	55	1 1/2"ø x 5 1/2"	3"ø x 10 1/2"	3"			
	1	122'	5	Exp.	8	74	8"	5 1/8"	14"	10"	4	1/2"	5 1/8"	5 @ 12 Ga.	3 1/8"	11"	24"	3 1/2"	2 1/4"	1/2"	9 1/4"	2.04"	2.06"	1 1/2"ø x 26"	55	1 1/2"ø x 5 1/2"	3"ø x 10 1/2"	3"			
	2	122'	1-4, 6-8	Fix.	8	155	9 1/4"	5 1/8"	14 1/2"	14 1/2"	5	1/2"	5 1/8"	6 @ 12 Ga.	3 3/4"	15 1/2"	26 1/2"	3 1/8"	3 1/8"	1/2"	10"	1.98"	2.02"	2 1/4"ø x 35"	55	2 1/2"ø x 6"	4"ø x 10 1/2"	4"			
	2	122'	5	Fix.	8	155	9 1/4"	5 1/8"	14 1/2"	14 1/2"	5	1/2"	5 1/8"	6 @ 12 Ga.	3 3/4"	15 1/2"	26 1/2"	3 1/8"	3 1/8"	1/2"	10"	2.13"	2.17"	2 1/4"ø x 35"	55	2 1/2"ø x 6"	4"ø x 10 1/2"	4"			
	3	122'	1-4, 6-8	Fix.	8	155	9 1/4"	5 1/8"	14 1/2"	14 1/2"	5	1/2"	5 1/8"	6 @ 12 Ga.	3 3/4"	15 1/2"	26 1/2"	3 1/8"	3 1/8"	1/2"	10"	1.94"	2.06"	2 1/4"ø x 35"	55	2 1/2"ø x 6"	4"ø x 10 1/2"	4"			
	3	122'	5	Fix.	8	155	9 1/4"	5 1/8"	14 1/2"	14 1/2"	5	1/2"	5 1/8"	6 @ 12 Ga.	3 3/4"	15 1/2"	26 1/2"	3 1/8"	3 1/8"	1/2"	10"	2.19"	2.31"	2 1/4"ø x 35"	55	2 1/2"ø x 6"	4"ø x 10 1/2"	4"			
	4	122'	1-4, 6-8	Exp.	8	74	8"	5 1/8"	14"	10"	4	1/2"	5 1/8"	5 @ 12 Ga.	3 1/8"	11"	24"	3 1/2"	2 1/4"	1/2"	9 1/4"	1.92"	2.08"	1 1/2"ø x 26"	55	1 1/2"ø x 5 1/2"	3"ø x 10 1/2"	3"			
	4	122'	5	Exp.	8	74	8"	5 1/8"	14"	10"	4	1/2"	5 1/8"	5 @ 12 Ga.	3 1/8"	11"	24"	3 1/2"	2 1/4"	1/2"	9 1/4"	2.21"	2.37"	1 1/2"ø x 26"	55	1 1/2"ø x 5 1/2"	3"ø x 10 1/2"	3"			

* Maximum Design Load = Service I Limit State



t₂ = thickness of elastomer cover on top and bottom of pad
t₁ = thickness of elastomer between steel laminae
N = number of elastomer layers of thickness t₁

ELASTOMERIC BEARING



ANCHOR BOLT DETAIL

NOTE: Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Galvanized Sheet Metal Sleeves will not be required.

If Anchor Bolts are to be drilled and grouted in place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of Structural Steel, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the masonry. Bolts placed in drilled holes shall be accurately set and fixed using a QPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized Sheet Metal Sleeves will not be paid for directly, but will be considered subsidiary to the item "Structural Steel in Beam Spans (M 270, Gr. 50W)."

GENERAL NOTES

Elastomeric Bearings shall conform to Special Provision Job 061039 "Elastomeric Bearings" and Section 808 and shall be paid for at the unit price bid for "Elastomeric Bearings." Long-duration testing of random lot samples specified in subsection 808.05 is not required.

External load plates shall conform to AASHTO M 270, Grade 50W. Pipe sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or AASHTO M 298, Class 50.

External load plates shall be completely fabricated (including bevel and bolt holes) and shall be cleaned before vulcanizing to the elastomeric bearing. Surfaces in contact with the elastomeric bearing shall be cleaned in accordance with subsection 808.03. Other surfaces shall be blast cleaned in accordance with subsection 807.84(e) for unpainted weathering steel.

Anchor Bolts, Washers and Nuts shall conform to subsection 807.07. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Pipe Sleeves, Anchor Bolts, Washers and Nuts shall be paid for at the unit price bid for "Structural Steel in Beam Spans (M270, Gr.50W)". External load plates will not be measured or paid for separately but will be considered included in the unit bid price for "Elastomeric Bearings".

Tabular Data by : CRE Date: 6-1-06
Checked by : *CSL* Date: *July 26, 2006*
Designed by : CRE Date: 6-06



BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS
HWY. 183 OVER DEPOT CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CRE DATE: 2-09-05 FILENAME: b061039x2_el.dgn
CHECKED BY: *CSL* DATE: 2-11-05 SCALE: No Scale
DESIGNED BY: *Std.* DATE: _____
BRIDGE NO. 07088 DRAWING NO. 48997