

ELEVATION OF SOIL BORINGS

BORING LEGEND

- A1-Moist, Medium Stiff, Dark Brown and Reddish Brown Clay with some Organic Matter and Trace of Gravel (Sandstone Fragments)
 B1-Moist, Medium Dense, Light Brown Clayey Sand
 C1-Moist, Medium Dense, Light Gray Silty Sand
 D1-Wet, Medium Dense, Light Brown Silty Sand
 E1-LIMESTONE - Gray, Slightly Weathered, Soft
 F1-Moist, Very Stiff, Dark Gray Clay with some Calcareous Seams
 G1-Moist, Hard, Light Gray Clay with Silty Seams
 H1-Moist, Very Hard, Light Gray Silty Clay
 J1-Moist, Very Dense, Light Gray Sand with some Silty Clay Seams
 K1-Moist, Very Dense, Light Gray Sand
 L1-SANDSTONE - Light Gray, Poorly-Cemented
 M1-SANDSTONE - Light Gray, Very Thick Bedded, Poorly-Cemented, with Slight Dip
 N1-SHALE WITH OCCASIONAL QUARTZ PARTINGS - Dark Gray, Highly Weathered, Medium Hard, with Steep Dip
 P1-Moist, Stiff, Dark Brown Clay with Gravel and Organic Matter
 Q1-Moist, Stiff, Reddish Brown and Gray Silty Sand
 R1-Moist, Medium Dense, Brown Sand
 S1-Moist, Loose, Light Gray Sand
 T1-Wet, Medium Dense, Light Brown and Gray Sand
 U1-Wet, Very Dense, Light Brown and Gray Sand
 V1-SANDSTONE - Brown, Cemented
 W1-Moist, Very Hard, Light Gray Clay
 X1-Moist, Hard, Light Gray Clay
 Y1-Moist, Very Hard, Dark Gray Clay
 Z1-SHALE - Gray, Highly Weathered, Medium Hard, with Moderate Dip and some Slickensides
 A2-SHALE - Gray, Laminated, Weathered, Medium Hard, with Moderate Dip
 C2-SHALE - Dark Gray, Laminated, Weathered, Medium Hard, with Moderate Dip
 D2-SHALE - Gray and Reddish Brown, Laminated, Weathered, Medium Hard, with Moderate Dip
 E2-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard, with Moderate Dip
 F2-Moist, Soft, Brown and Gray Clay with Organic Matter
 G2-Moist, Medium Dense, Brown and Gray Sand with Gravel (Sandstone Fragments) and Clay
 H2-Moist, Hard, Gray Sandy Clay with Gravel (Sandstone Fragments)
 J2-Moist, Very Hard, Light Gray Clay
 K2-Moist, Very Stiff, Light Gray Clay with some Organic Matter
 L2-Moist, Hard, Dark Gray Clay
 M2-SHALE - Dark Gray, Weathered, Medium Hard
 N2-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard, with Slight Dip
 P2-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Hard, with Moderate Dip
 Q2-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Hard, with Moderate Dip and some Slickensides
 R2-Moist, Stiff, Reddish Brown and Gray Clay with Iron Nodules
 S2-Moist, Very Hard, Dark Brown and Gray Clay with Gravel (Sandstone Fragments) and Cobbles
 T2-Sandstone Cobbles
 U2-Wet, Dense, Light Brown Sand with Trace of Gravel
 V2-Moist, Very Stiff, Dark Gray Clay with Shells
 W2-Moist, Very Hard, Light Gray Silty Clay with Shells
 X2-Moist, Hard, Light Gray Silty Clay
 Y2-Moist, Very Hard, Gray Sandy Clay with Gravel (Sandstone Fragments) and Cobbles
 Z2-SANDSTONE - Gray, Poorly-Cemented
 A3-Moist, Very Hard, Dark Gray Clay with Gravel (Brown Poorly-Cemented Sandstone Fragments)
 B3-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Slightly Calcareous, Medium Hard, with Steep Dip
 C3-NOVACULITE - Gray, Thick Bedded, Hard, with Slight Dip
 D3-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard, with Steep Dip
 E3-SANDSTONE - Gray, Medium Bedded, Cemented, with Slight Dip
 F3-Asphalt Pavement (6")
 G3-Base Course (12")
 H3-Moist, Medium Stiff, Dark Brown and Gray Sandy Clay with Gravel (Sandstone Fragments)
 J3-Moist, Medium Dense, Gray and Brown Silty, Clayey Sand with Organic Matter (Wood)
 K3-Moist, Loose, Gray and Brown Clayey Sand
 L3-Wet, Medium Dense, Gray and Brown Silty Sand
 M3-Wet, Medium Dense, Brown and Gray Silty Sand with some Clay
 N3-Moist, Medium Dense, Gray Sand with Clay
 P3-Moist, Hard, Dark Gray Clay with Highly Weathered Shale
 Q3-Moist, Very Hard, Gray Clay
 R3-Moist, Hard, Gray Clay
 S3-SHALE - Dark Gray, Highly Weathered, Medium Hard
 T3-SHALE - Dark Gray, Laminated, Weathered, Medium Hard, with Slight Dip

"N" VALUES

Sta. 110+95 - 2' Rt. of C.L. of Constr.	Sta. 111+80 - C.L. of Constr.	Sta. 115+00 - C.L. of Constr.
3.9 - 4.9, N=7	2.5 - 3.5, N=15	4.6 - 5.6, N=4
8.9 - 9.9, N=17	6.0 - 7.0, N=13	9.6 - 10.6, N=30
15.5 - 16.5, N=19	7.5 - 8.5, N=19	14.6 - 15.6, N=46
20.5 - 21.5, N=29	9.0 - 10.0, N=10	19.6 - 20.6, N=66
25.5 - 26.5, N=27	14.5 - 15.5, N=26	24.6 - 25.6, N=38
30.5 - 31.5, N=50	19.5 - 20.5, N=16	29.6 - 30.6, N=28
35.5 - 36.3, N=100 (10')	24.5 - 24.6, N=60 (1')	34.6 - 35.6, N=51
40.5 - 41.5, N=89	29.5 - 30.5, N=62	39.6 - 40.4, N=102 (10')
45.5 - 46.5, N=89	34.5 - 35.5, N=60	44.6 - 45.4, N=120 (10')
50.0 - 50.4, N=60 (5')	40.5 - 41.5, N=42	49.6 - 49.8, N=60 (3')
55.5 - 56.5, N=100	45.5 - 46.3, N=93 (10')	54.6 - 55.0, N=60 (5')
60.0 - 60.1, N=30 (1')	55.5 - 55.9, N=60 (5')	60.0 - 60.3, N=60 (4')
65.0 - 65.0, N=10 (1.01')	65.5 - 65.8, N=60 (4')	65.0 - 65.2, N=60 (3')
70.0 - 70.2, N=60 (2')	70.5 - 70.8, N=60 (3')	
75.0 - 75.0, N=60 (1.01')		
80.0 - 80.1, N=60 (1')		
85.0 - 85.0, N=60 (1.01')		
90.0 - 94.0, N=95		

Sta. 116+30 - 15' Lt. of C.L. of Constr.	Sta. 117+40 - 24' Rt. of C.L. of Constr.
5.3 - 6.3, N=12	7.2 - 8.2, N=5
10.3 - 11.2, N=100 (11')	10.7 - 11.7, N=7
15.5 - 16.5, N=37	14.2 - 15.2, N=12
20.5 - 21.5, N=25	17.7 - 18.7, N=22
25.5 - 26.5, N=56	19.2 - 20.2, N=20
30.5 - 31.5, N=95	20.2 - 20.3, N=60 (1')
35.5 - 36.5, N=39	22.2 - 23.2, N=28
40.5 - 40.8, N=60 (4')	23.7 - 24.7, N=56
45.5 - 46.2, N=100 (9')	29.7 - 30.7, N=51
50.5 - 51.5, N=100	35.5 - 36.5, N=96
55.5 - 58.8, N=28 (4')	40.5 - 41.5, N=103
60.0 - 60.3, N=60 (4')	45.5 - 46.5, N=37
	50.5 - 51.5, N=56
	55.5 - 56.5, N=102
	60.5 - 61.0, N=60 (6')
	65.0 - 65.3, N=60 (5')
	70.5 - 70.8, N=60 (4')



SHEET 2 OF 3
 LAYOUT OF BRIDGE OVER
 UNION PACIFIC RR & S. RICE ST.
 UNION PACIFIC RR STR. & APPRS.
 (ROOSEVELT RD.) (LR) (S)
 PULASKI COUNTY
 ROUTE 70 SEC. 12
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: JYP DATE: 12-31-12 FILENAME: B061277.L1.dgn
 CHECKED BY: JYP DATE: 8/1/13 SCALE: 1" = 30'-0"
 DESIGNED BY: JYP DATE: 12-12
 BRIDGE NO. 07284 DRAWING NO. 54040

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.		061277	57	160
						07284	LAYOUT	5404

GENERAL NOTES:

BENCH MARK: $\frac{3}{8}$ " Rebar with 2" Cap, 7.56' Lt. of C.L. Construction Sta. 119+66.80, Elev. = 271.75.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 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 LRFD Bridge Design Specifications, Sixth Edition (2012).

LIVE LOADING: HL93

SEISMIC PERFORMANCE ZONE: 2

MATERIALS AND STRENGTHS

Class 5(AE) Concrete (superstructure) $f'_c = 4,000$ psi
Class 5 Concrete (substructure) $f'_c = 3,500$ psi
Reinforcing Steel (Gr. 60, AASHTO M31 or M332, Type A) $f_y = 60,000$ 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.

STEEL PILING: All Piling shall be HP 14x89 (Grade 50) and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 160 tons per pile. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with Section 805. The Contractor shall use approved steel H-Pile driving points on all piles.

Piling at Bent 1 shall be driven after embankment to bottom of cap is in place and to a minimum penetration of 10' below natural ground.

Piling at Bents 2 thru 5 shall be driven to a minimum penetration of 10' below bottom of footing.

Piling at Bent 6 shall be driven after embankment to bottom of cap is in place and to a minimum penetration of 10' below bottom of undercut. Pile casings are required for all piling in Bent 6 within the MSE wall reinforcement zone. Casings shall be installed during backfill of undercut areas and embankment construction and shall extend from bottom of undercut to bottom of cap. Pile casing material shall be of sufficient strength to retain its original form free from harmful distortions after compaction of the fill material surrounding it. The minimum inside diameter of the casing shall be 20". Piles within the MSE wall reinforcement zone shall be driven through the open casings after embankment to bottom of cap is in place. After driving is completed, the pile casing shall be backfilled with approved non-shrink grout or other approved material in a single continuous operation to completely fill voids. Pile casings and backfill will not be paid for directly but shall be considered subsidiary to the item "Steel Piling (HP 14x89)".

Preboring or water jetting may be required to achieve minimum pile penetration. Preboring or water jetting shall cease once the minimum tip elevation is achieved. Any cost associated with achieving the minimum pile penetration shall be included in the item "Steel Piling (HP 14x89)".

FOOTINGS: Footings at Bents 2 thru 5 shall be set a minimum of 2' below natural ground or at the elevations shown on the plans, whichever is lower. Foundations for footings shall be prepared in accordance with subsection 801.04. Excavation shall be backfilled and compacted to the level of the existing ground in accordance with subsection 801.08.

BRIDGE DECK: The concrete bridge deck, except sidewalks, shall be given a fine finish as specified for final finishing in subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Sidewalks shall be given a Class 6 Broomed Finish.

DETAIL DRAWINGS: DRAWING NO.
End Bents 54043, 54044, 54050, 54051
Int. Bents 54045-54049
Steel Piling 55020
Elastomeric Bearings 54052
400'-0" Continuous Plate Girder Unit 54053-54058
260'-0" Continuous Plate Girder Unit 54053-54055, 54059-54060
Deck Drains 54061
Combination Bridge Rail 54062-54064
Ornamental Fence 54065
Type Special Approach Slab 54066

EXISTING BRIDGE: Existing Bridge No. 0180 (L.M. 5.57) is 48.0' wide and 560' long and consists of reinforced concrete deck girder approach spans and steel-beam main spans supported by steel and concrete columns on spread footings.

REMOVAL AND SALVAGE: After the new bridge is open to traffic, existing Bridge No. 0180 shall be removed in accordance with Section 205. All material from the existing bridge, including additional shoring, shall become the property of the Contractor. The existing beams have a lead paint coating system.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	*NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEV. WITH BACKWATER
	YEARS	CFS	FEET	FEET
Design	50	1,300	256.3	256.6
Base	100	1,500	256.6	256.9
Extreme	500	2,000	257.3	257.6
Overtopping	>500	-	-	-

*Unconstricted water surface without structure or roadway approaches.

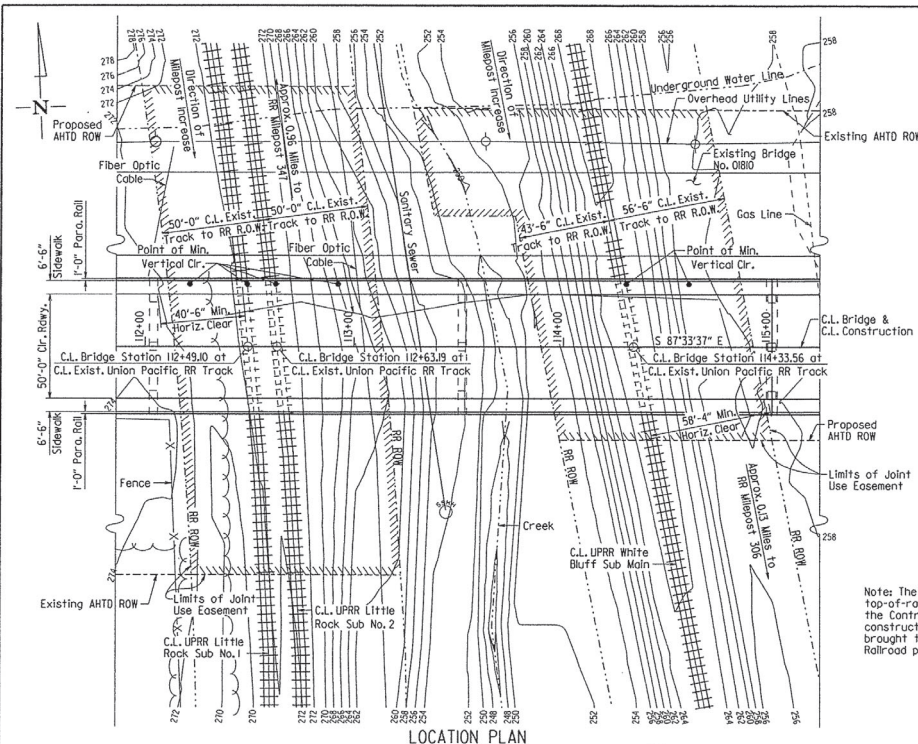
0100 backwater elevation for existing structure = 256.9
Proposed Low Bridge Chord Elev. = 280.54

Drainage area = 1.0 square miles
Historical R.W. Elev. = N/A



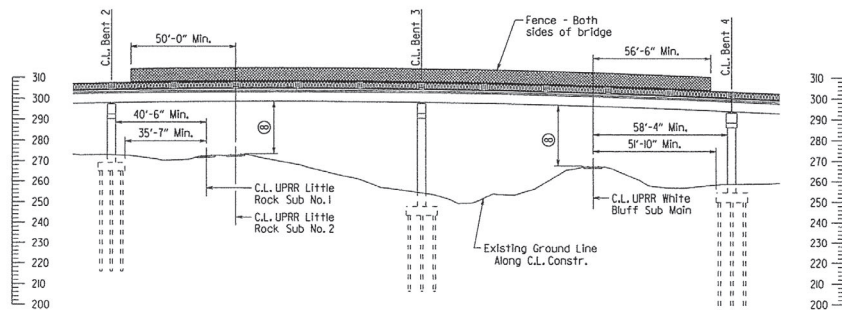
BRIDGE ENGINEER

SHEET 3 OF 3
LAYOUT OF BRIDGE OVER
UNION PACIFIC RR & S. RICE ST.
UNION PACIFIC RR STR. & APPRS.
(ROOSEVELT RD.) (LR) (S)
PULASKI COUNTY
ROUTE 70 SEC. 12
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: JYP DATE: 12-9-12 FILENAME: b061277.Lt.dgn
CHECKED BY: EWM DATE: 1/24/14 SCALE: 1" = 30'-0"
DESIGNED BY: JNP DATE: 12-12
BRIDGE NO. 07284 DRAWING NO. 54041



LOCATION PLAN

Notes:
Existing bents located less than 25' from C.L. Track shall be removed to a depth of 6 feet below base of rail. Excavation will be required a minimum of 8 feet from C.L. Track.
Existing bents located 25' or greater from C.L. Track shall be removed to at least 3 feet below final grade or at least 2 feet below base of rail, whichever is lower, unless otherwise specified by the Railroad.



SECTION NORMAL TO TRACK
(Looking In Direction of Milepost Decrease)

Note: All permanent clearances shall be verified before project closing.

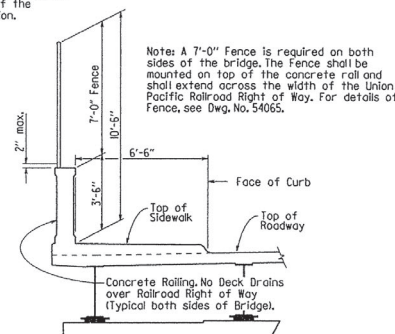
TOP OF RAIL ELEVATIONS

(Stations increase with Milepost Increase)

UPRR Little Rock Sub No.1			UPRR Little Rock Sub No.2			UPRR White Bluff Sub Main		
Station	Elevation Right Rail	Elevation Left Rail	Station	Elevation Right Rail	Elevation Left Rail	Station	Elevation Right Rail	Elevation Left Rail
0+00	281.54	281.54	0+00	281.24	281.22	0+00	277.47	277.45
1+00	280.62	280.60	1+00	280.32	280.31	1+00	276.57	276.54
2+00	279.64	279.63	2+00	279.38	279.39	2+00	275.68	275.67
3+00	278.67	278.66	3+00	278.41	278.40	3+00	274.85	274.84
4+00	277.62	277.61	4+00	277.44	277.44	4+00	273.98	273.96
5+00	276.51	276.53	5+00	276.54	276.54	5+00	273.08	273.07
6+00	275.52	275.56	6+00	275.77	275.76	6+00	272.46	272.44
7+00	274.77	274.82	7+00	275.55	275.21	7+00	271.05	271.04
8+00	274.06	274.22	8+00	274.58	274.74	8+00	270.20	270.19
9+00	273.38	273.66	9+00	274.01	274.25	9+00	269.20	269.19
10+00	272.77	273.19	10+00	273.46	273.81	10+00	268.85	268.82
①10+40.06	272.58		③10+41.98	273.23		⑤10+42.37	267.74	
②10+41.58		273.01	④10+42.21		273.59	⑥10+41.91		267.72
11+00	272.32	272.75	11+00	272.90	273.30	11+00	267.17	267.16
12+00	271.93	272.37	12+00	272.32	272.74	12+00	266.20	266.17
13+00	271.42	271.86	13+00	271.69	272.12	13+00	265.20	265.18
14+00	270.71	271.17	14+00	271.03	271.45	14+00	264.31	264.30
15+00	269.92	270.38	15+00	270.38	270.81	15+00	263.50	263.50
16+00	269.22	269.65	16+00	269.76	270.17	16+00	262.82	262.83
17+00	268.57	269.01	17+00	269.55	269.96	17+00	262.25	262.25
18+00	267.98	268.44	18+00	268.93	269.36	18+00	261.74	261.75
19+00	267.57	268.01	19+00	268.89	269.30	19+00	261.29	261.31
20+00	267.22	267.64	20+00	267.32	267.76	20+00	260.87	260.85

- ① Intersection at C.L. Constr. Sta. 12+65.62
- ② Intersection at C.L. Constr. Sta. 12+51.58
- ③ Intersection at C.L. Constr. Sta. 12+60.73
- ④ Intersection at C.L. Constr. Sta. 12+65.64
- ⑤ Intersection at C.L. Constr. Sta. 14+30.05
- ⑥ Intersection at C.L. Constr. Sta. 14+36.08

Note: The elevations of the existing top-of-rail profile shall be verified by the Contractor prior to beginning construction. Any discrepancies shall be brought to the attention of the Railroad prior to construction.



TYPICAL SECTION
No Scale

⑧ Min. Vertical Clearance			
TRACK	AT RAIL	25' FROM C.L. TRACK	32' FROM C.L. TRACK
UPRR Little Rock Sub No.1	24'-4"	24'-5"	N/A
UPRR Little Rock Sub No.2	23'-10"	23'-11"	23'-11"
UPRR White Bluff Sub Main	27'-5"	26'-8"	26'-5"

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.		061277	38	160
				07284	LAYOUT		54042	

GENERAL NOTES

All demolitions within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's demolition requirements.

Erection over the Railroad's right-of-way shall be designed to cause no interruption to the Railroad's operation. Erection over the Railroad's track shall be developed such that it enables the track(s) to remain open to traffic per the Railroad's requirements.

The Contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.

Railroad requirements do not allow work within 50 feet of track centerline when a train passes the work site and all personnel must clear the area within 25 feet of the track centerline and secure all equipment when trains are present.

Existing drainage patterns will be maintained. The proposed bridge structure will not significantly change the quantity and/or characteristic of the flow in the Railroad's ditches and/or drainage structure.

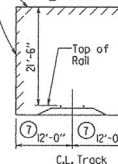
Closed Parapet Rolling No Deck Drains over Railroad Right of Way - Typical on both sides of Bridge.

"The State shall not plow ice, snow or sleet over the sides of the structure. In consideration of this practice, the Carrier waives its request for the State to attach splash boards to sides of the structure." This statement is in the State-Railroad Agreement.

Construction shall comply with the requirements noted in Job 061277 Special Provision "Insurance, Construction, and Flagging Requirements on Railroad Property (UPRR)".

No construction activities or other obstructions may be placed within these limits.

① Measured normal to track.



NOTE: No excavation permitted within 12' of C.L. track for construction of new bridge.

MINIMUM CONSTRUCTION CLEARANCES

No Scale

EXHIBIT A
LAYOUT OF BRIDGE OVER
UNION PACIFIC RAILROAD & S. RICE ST.
UNION PACIFIC RR STR. & APPRS.
(ROOSEVELT RD.) (LR) (S)
PULASKI COUNTY

ROUTE 70 SEC. 12
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12-31-12 FILENAME: 061277_exa.dgn
CHECKED BY: EAV DATE: 01/13/13 SCALE: 1" = 30'-0" or as noted
DESIGNED BY: JYP DATE: 12-12-12
BRIDGE NO. 07284 DRAWING NO. 54042



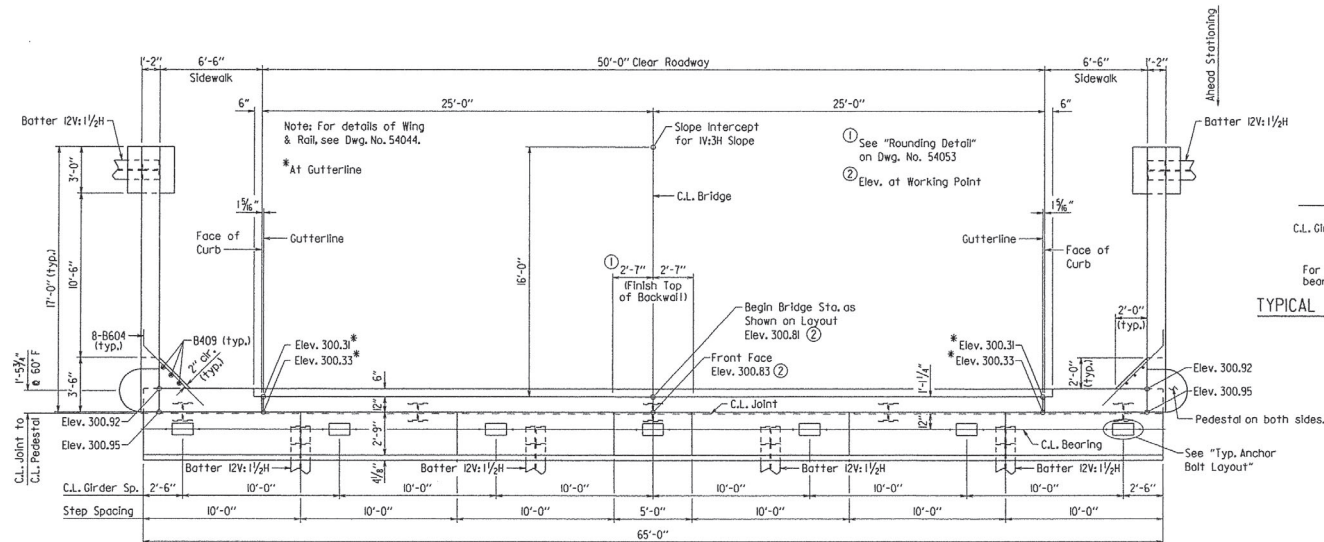
BRIDGE ENGINEER

NOTE: Class I Protective Surface Treatment shall be applied to the top of the backwall, sidewalk, and to the roadway face and top of the rails.

NOTE: Wings and rails are constructed on curves concentric to C.L. Bridge.

NOTE: For Bar List and General Notes, see Dwg. No. 54044.

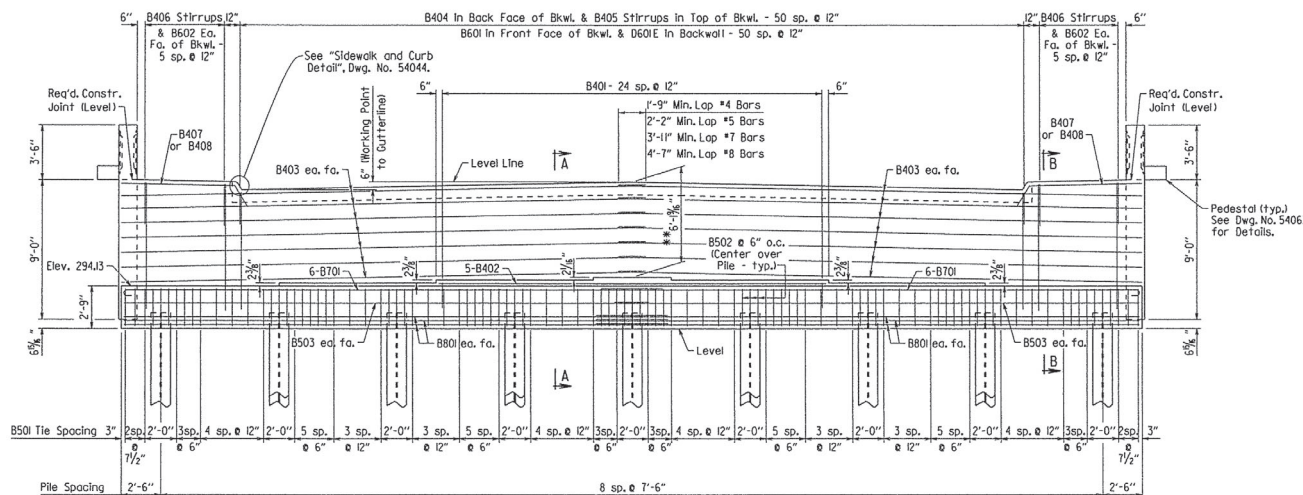
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061277	59	160
						END BENTS	-	54043



PLAN OF BENT 1

1/4" = 1'-0"

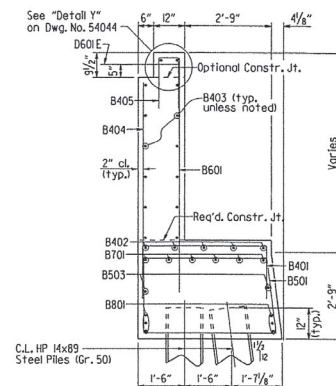
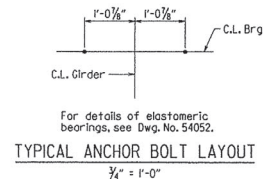
**Measured to Working Point at front face of backwall



ELEVATION OF BENT 1

Looking Back

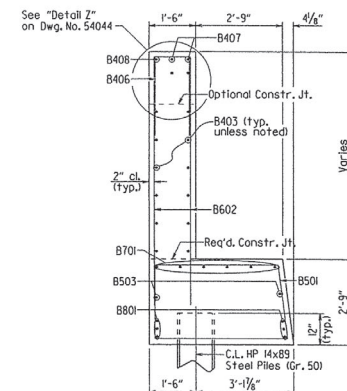
1/4" = 1'-0"



SECTION A-A

1/2" = 1'-0"

NOTE: The Backwall above the required construction joint shall not be poured until the beams are in place. Backwall may be placed prior to placing the adjacent concrete deck only if the optional backwall construction joint is used. See Dwg. No. 54055, "Expansion Device Installation at End Bents", for additional information.



SECTION B-B

1/2" = 1'-0"

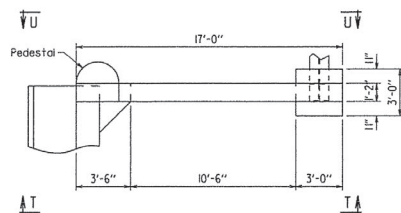
SHEET 1 OF 2 DETAILS OF END BENT 1

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

DESIGNED BY: JYP DATE: 4-1-13
CHECKED BY: KWS DATE: 8/14/13
DESIGNED BY: JJP DATE: 2-13
BRIDGE NO. 07284 DRAWING NO. 54043

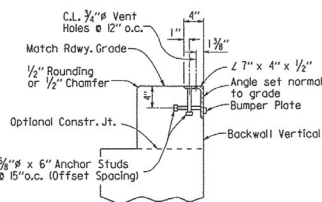


BRIDGE ENGINEER



PLAN OF WING & RAIL

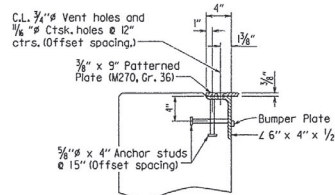
1/4" = 1'-0"



DETAIL Y

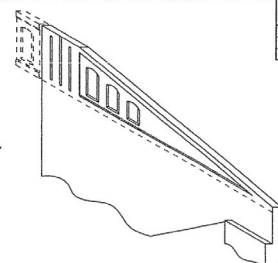
No Scale

NOTES:
Concrete shall be hand packed under joint armor in the backwall.
For additional joint details, see Dwg. No. 54055.



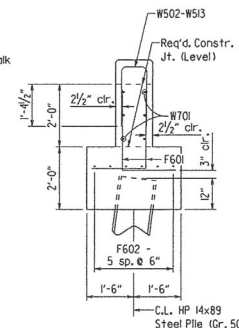
DETAIL Z

No Scale



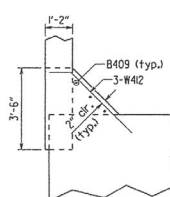
THREE DIMENSIONAL VIEW OF RAIL

No Scale



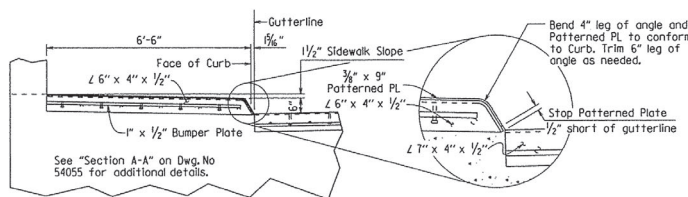
SECTION W-W

1/2" = 1'-0"



SECTION X-X

1/2" = 1'-0"



SIDEWALK AND CURB DETAIL

No Scale

GENERAL NOTES
All concrete (except the rail and pedestal) 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 1/4" unless otherwise noted.

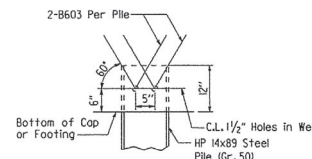
All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M39 or M322, Type A, with mill test reports.

Structural steel in end bents shall be AASHTO M 270, Grade 50 unless otherwise noted and shall be paid for as "STRUCTURAL STEEL IN PLATE GIRDER SPANS (M 270, GR. 50W)". See additional requirements for cleaning and painting on Dwg. No. 54055.

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

All piling shall be Grade 50.

For additional information, see Layout.



DETAIL AT PILE TIP

No Scale

** Tie or wedge this reinforcing to bear at top of holes.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FULL ROW NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	061277	60	160

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams
B401	25	7'-1"	2"	
B402	5	24'-8"	Str.	
B403	28	33'-5"	Str.	
B404	51	6'-4"	Str.	
B405	51	4'-8"	2"	
B406	12	6'-6"	2"	
B407	4	8'-8"	2"	
B408	2	8'-2"	2"	
B409	6	8'-3"	Str.	
B501	74	13'-6"	2 1/2"	
B502	27	8'-7"	2 1/2"	
B503	4	33'-7"	Str.	
B601	51	7'-7"	Str.	
B602	24	8'-2"	Str.	
B603	22	2'-11"	4 1/2"	
B604	12	6'-5"	4 1/2"	
B701	12	35'-2"	5 1/4"	
B801	12	34'-8"	Str.	
D601E	51	5'-9"	4 1/2"	
F601	24	4'-1"	4 1/2"	
F602	12	2'-8"	Str.	
W401	16	8'-7"	Str.	
W402-W411	4 each	8'-0" to 2'-2"	Str.	
W412	6	4'-7"	2"	
W501	44	4'-7"	2 1/2"	
W502-W513	2 each	3'-9" to 6'-3"	2 1/2"	
W701	12	16'-8"	Str.	
W702	4	12'-9"	Str.	
W703	4	11'-7"	Str.	
W704	4	10'-6"	Str.	
W705	4	9'-4"	Str.	
W706	4	8'-3"	Str.	
W707	4	7'-1"	Str.	
W708	4	6'-0"	Str.	
W709	4	4'-10"	Str.	
W710	4	16'-9"	5 1/4"	

(Dimensions are out to out of bars.)

NOTE: Bars with an "E" suffix shall be epoxy coated.

SHEET 2 OF 2 DETAILS OF END BENT 1

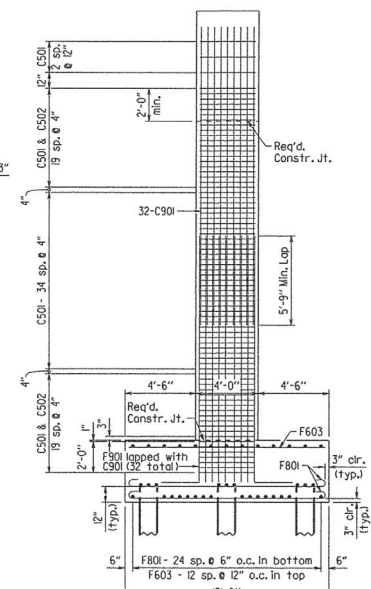
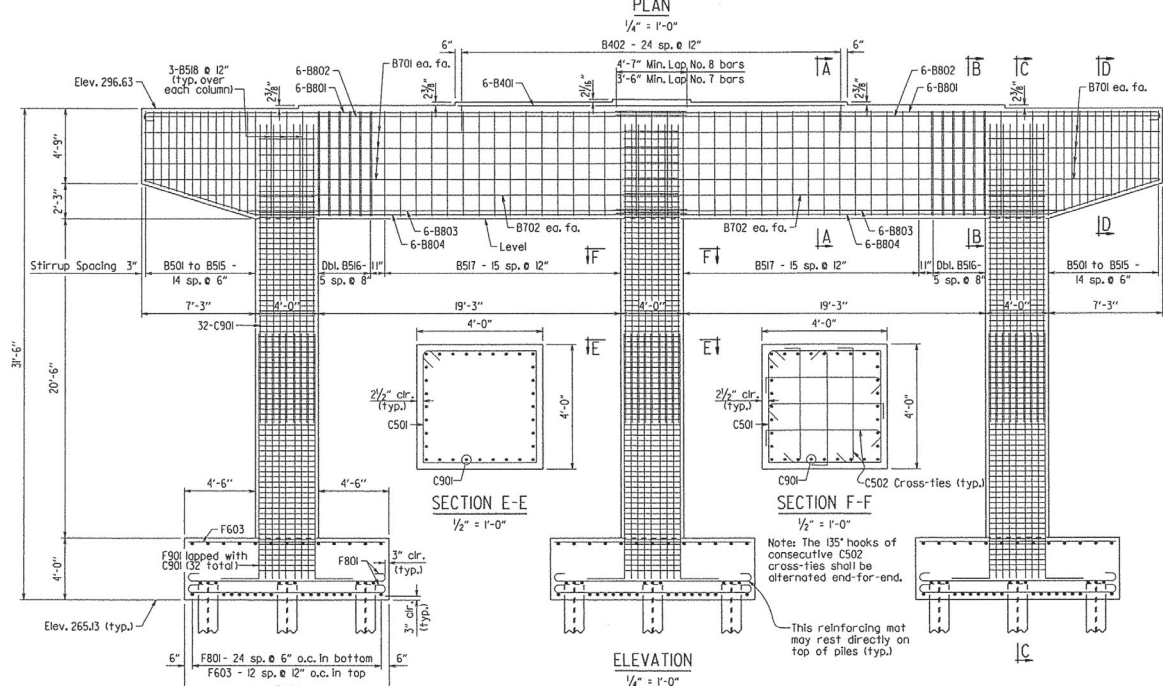
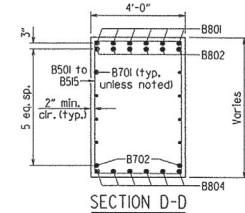
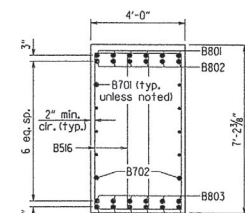
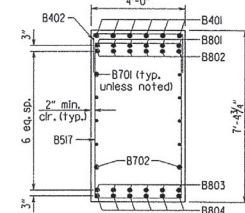
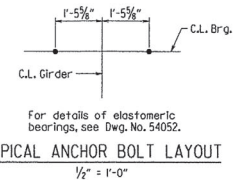
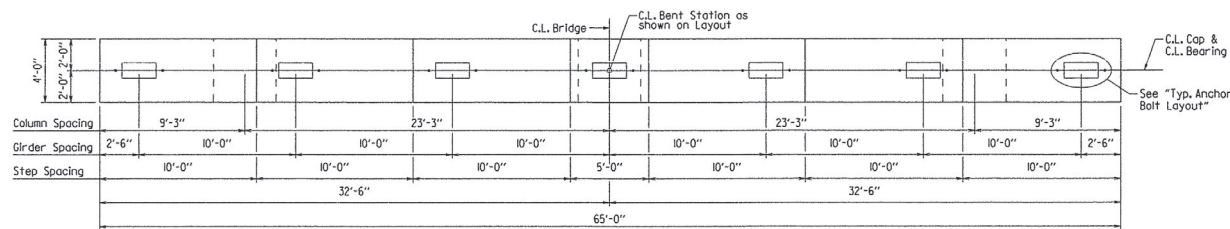
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DESIGNED BY: JYP DATE: 4-1-13 FILENAME: B061277-bl.dgn
CHECKED BY: JYP DATE: 5/2/13 SCALE: As Noted
DESIGNED BY: JYP DATE: 5-2-13
BRIDGE NO. 07284 DRAWING NO. 54044

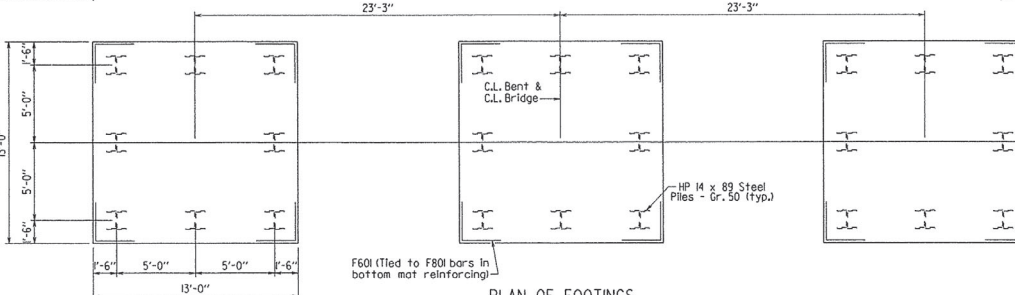
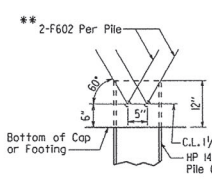


BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	061277	61	160
				JOB NO.		BENT 2		- 54045



NOTES: Reinforcing for columns and footings are typical.

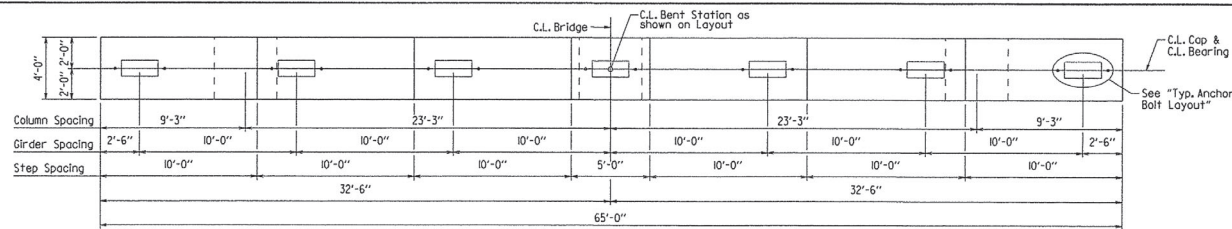


NOTE: For General Notes and Bar List see Dwg. No. 54049.

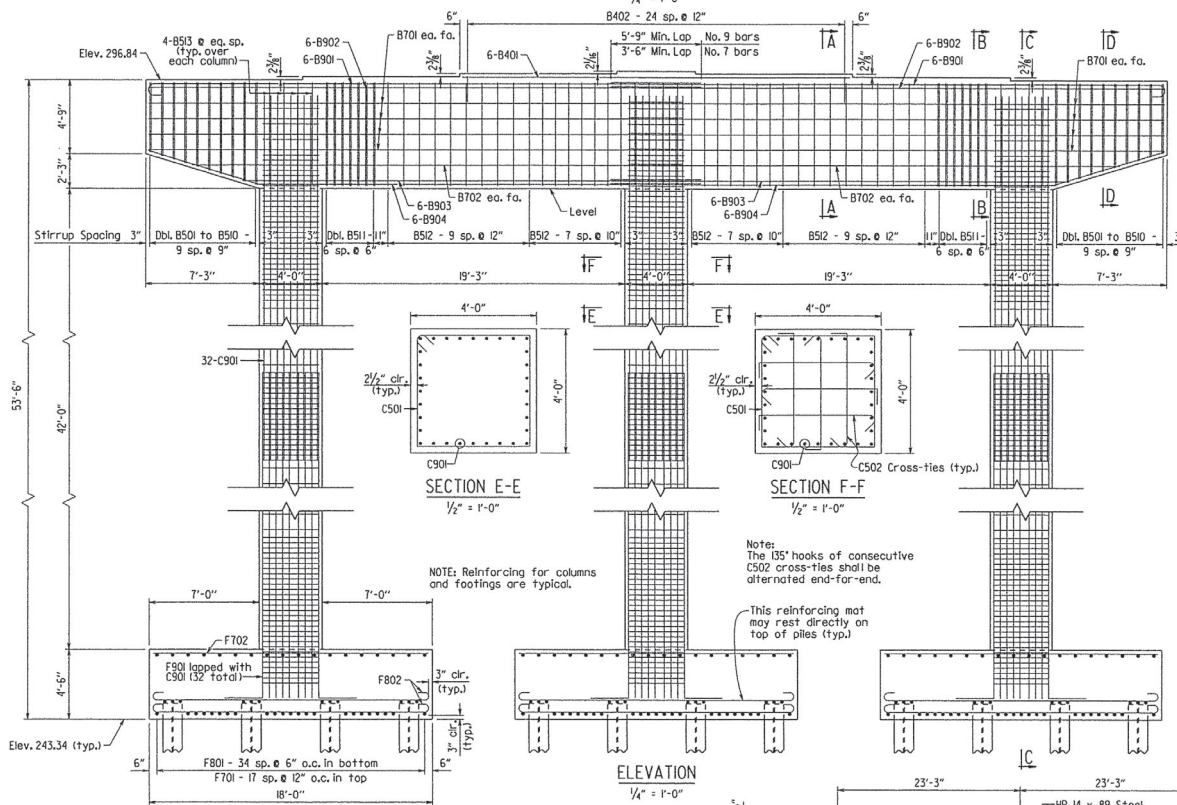
DETAILS OF BENT 2
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 3-22-13 FILENAME: D061277.b2.dgn
CHECKED BY: WLY DATE: 8/1/13 SCALE: As Noted
DESIGNED BY: JNP DATE: 2-13
BRIDGE NO. 07284 DRAWING NO. 54045

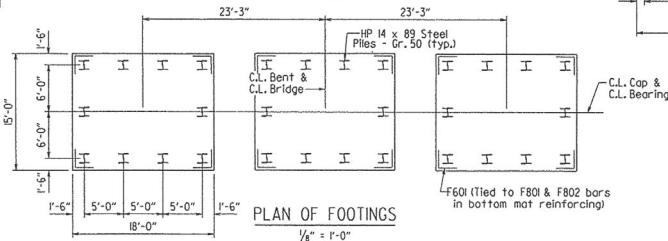
PRINT DATE: 8/1/2013



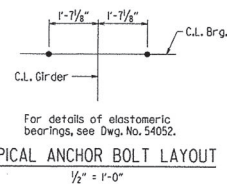
PLAN
1/4" = 1'-0"



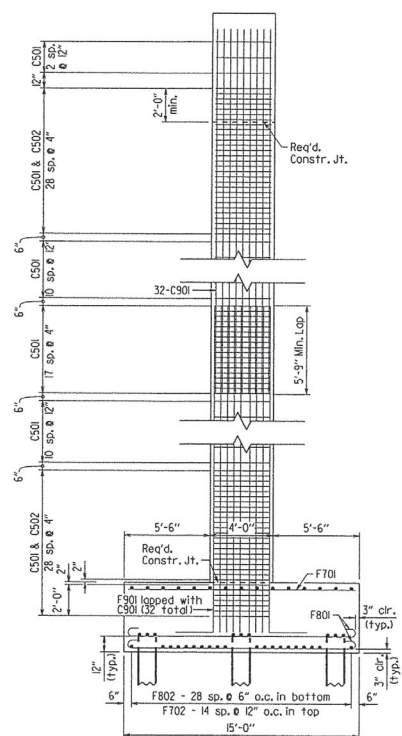
ELEVATION
1/4" = 1'-0"



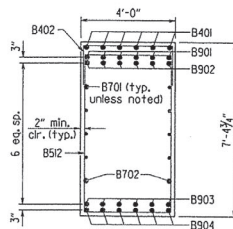
PLAN OF FOOTINGS
1/8" = 1'-0"



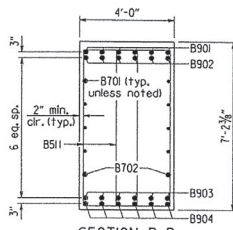
TYPICAL ANCHOR BOLT LAYOUT
1/2" = 1'-0"



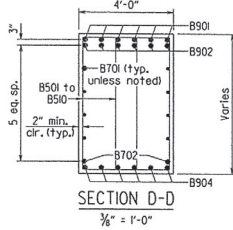
SECTION C-C
1/4" = 1'-0"



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



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

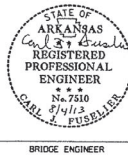


SECTION D-D
3/8" = 1'-0"

NOTE: For General Notes and Bar List see Dwg. No. 54049.

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.		061277	62	160
							1	
						07284 - BENT 3		54046

DETAILS OF BENT 3
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: JYP DATE: 3-26-13
CHECKED BY: JYP DATE: 8/1/13
DESIGNED BY: JYP DATE: 2-13
BRIDGE NO. 07284 DRAWING NO. 54046



BRIDGE ENGINEER

5'-2"
1'-7"
2'-11"
2'-11"

C.L. Bridge

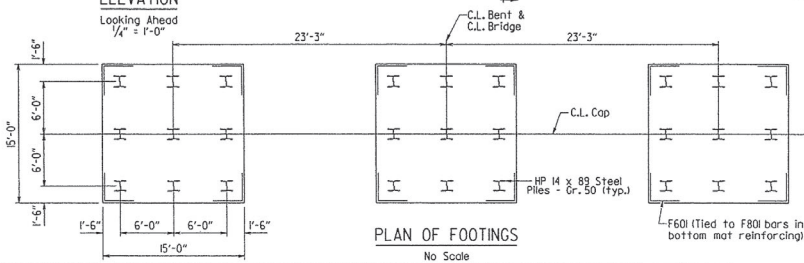
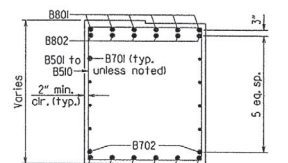
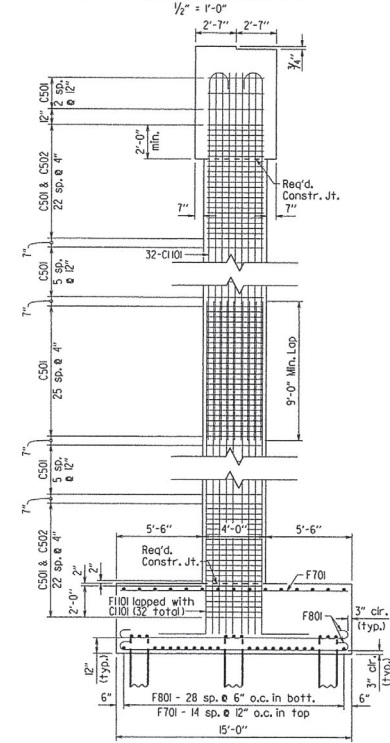
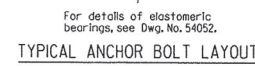
C.L. Bent Station as shown on Layout

C.L. Cap

C.L. Bearing

See Typ. Anchor Bolt Layout

Dimension Type	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	Segment 9	Segment 10	Total
Column Spacing	9'-3"	10'-0"	10'-0"	23'-3"	10'-0"	10'-0"	23'-3"	10'-0"	10'-0"	9'-3"	165'-0"
Girder Spacing	2'-6"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	2'-6"	100'-0"
Step Spacing	10'-0"	10'-0"	10'-0"	5'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	100'-0"
Sub-Total	32'-6"			65'-0"			32'-6"				



STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 7510
8/4/13
CARL J. FUSELIER

DETAILS OF BENT 4

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 3-27-13 FILENAME: b061277-b2.dgn

CHECKED BY: VWJ DATE: 3/26/13 SCALE: As Noted

DESIGNED BY: JYP DATE: 2-13

BRIDGE NO. 07284 DRAWING NO. 54047

4'-0"

2'-0" 2'-0"

C.I. Bridge

C.I. Bent Station as shown on Layout

C.I. Cap & C.I. Bearing

See "Typ. Anchor Bolt Layout"

Column Spacing

9'-3"

23'-3"

9'-3"

Girder Spacing

2'-6"

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

2'-6"

Step Spacing

10'-0"

10'-0"

10'-0"

5'-0"

10'-0"

10'-0"

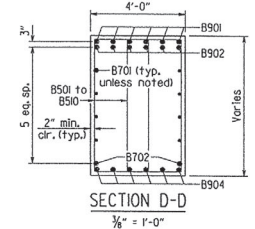
10'-0"

10'-0"

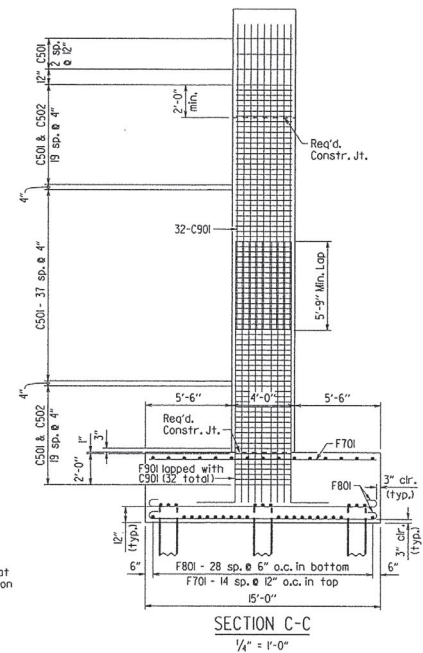
32'-6"

65'-0"

Diagram showing the centerline of the girder (C.L. Girder) and the centerline of the bridge (C.L. Brg.) with dimensions 1'-5 5/8" and 1'-5 5/8".

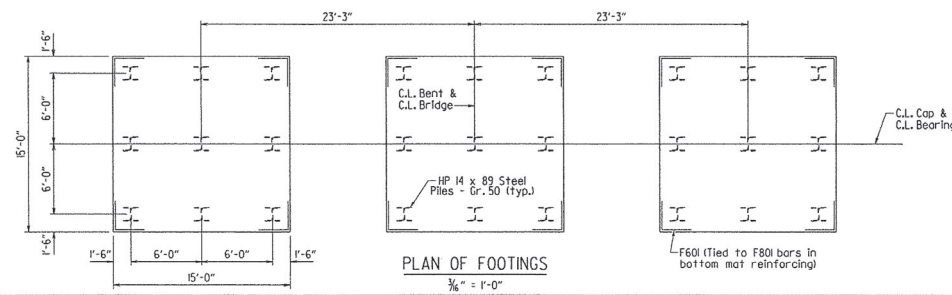


DRAWN BY: JYP DATE: 3-27-13 FILENAME: b061277-b2.dgn
CHECKED BY: Kwy DATE: 8/1/13 SCALE: As Noted
DESIGNED BY: JYP DATE: 2-13
BRIDGE NO. 07284 DRAWING NO. 54048



SECTION C-C
1/4" = 1'-0"

NOTE: For General Notes and Bar List see Dwg. No. 54049.



PLAN OF FOOTINGS

STATE OF
ARKANSAS
Carl J. Puselier
REGISTERED
PROFESSIONAL
ENGINEER
No. 7510
8/4/13
CARL J. PUSELIER

BRIDGE ENGINEER

NOTE: Reinforcing for columns and footings are typical.

Note: For "Detail at Pile Tip",
see Dwg. No. 54045.

PRINT DATE: 8/1/2013

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.		061277	65	160
						07284 - INT. BENTS		54049

BAR LIST BENT 2

Mark	No. Req'd.	Length	A	B	Pin Dia.
B401	6	24'-8"			Str.
B402	25	6'-10"	3'-8"	1'-8"	2"
B501- B515	2 each	16'-9" to 21'-1"	3'-8"	4'-5 1/2" to 6'-7 1/2"	2 1/2"
B516	24	18'-6"	2'-4"	6'-8"	2 1/2"
B517	32	21'-2"	3'-8"	6'-8"	2 1/2"
B518	9	16'-10"	3'-8"	6'-8"	2 1/2"
B701	16	34'-1"			Str.
B702	4	31'-4"			Str.
B801	12	35'-7"	34'-8"	8"	6"
B802	12	34'-8"			Str.
B803	12	28'-8"			Str.
B904	12	34'-11"	27'-6"	7'-5"	6"
C501	234	15'-0"	3'-7"		3 3/4"
C502	720	4'-5"	3'-7"	6"	2 1/2"
C901	96	19'-2"			Str.
F601	12	4'-10"	2'-6"	2'-6"	4 1/2"
F602	48	2'-11"	1'-6"		4 1/2"
F603	78	12'-6"			Str.
F801	150	14'-4"	12'-6"	8"	6"
F901	96	17'-5"	16'-0"	1'-8"	9"

Bending Diagrams

(Dimensions are out to out of bars.)

BAR LIST BENT 3

Mark	No. Req'd.	Length	A	B	Pin Dia.
B401	6	24'-8"			Str.
B402	25	6'-10"	3'-8"	1'-8"	2"
B501- B510	4 each	16'-9" to 20'-11"	3'-8"	4'-5 1/2" to 6'-8 1/2"	2 1/2"
B511	28	18'-6"	2'-4"	6'-8"	2 1/2"
B512	34	21'-2"	3'-8"	6'-8"	2 1/2"
B513	12	16'-10"	3'-8"	6'-8"	2 1/2"
B701	16	34'-1"			Str.
B702	4	31'-4"			Str.
B901	12	36'-6"	35'-3"	10"	9"
B902	12	35'-3"			Str.
B903	12	29'-3"			Str.
B904	12	35'-7"	28'-2"	7'-5"	9"
C501	303	15'-0"	3'-7"		3 3/4"
C502	1044	4'-5"	3'-7"	6"	3 3/4"
C901	96	29'-11"			Str.
F601	12	4'-10"	2'-6"	2'-6"	4 1/2"
F602	60	2'-11"	1'-6"		4 1/2"
F701	54	14'-6"			Str.
F702	45	17'-6"			Str.
F801	105	16'-4"	14'-6"	8"	6"
F802	87	19'-4"	17'-6"	8"	6"
F901	96	28'-8"	27'-3"	1'-8"	9"

Bending Diagrams

(Dimensions are out to out of bars.)

BAR LIST BENT 4

Mark	No. Req'd.	Length	A	B	Pin Dia.
B401	6	24'-8"			Str.
B402	25	8'-0"	4'-10"	1'-8"	2"
B501- B510	2 each	19'-1" to 23'-3"	4'-10"	4'-5 1/2" to 6'-8 1/2"	2 1/2"
B511	54	23'-6"	4'-10"	6'-8"	2 1/2"
B512	12	18'-0"	4'-10"	6'-8"	2 1/2"
B701	16	34'-1"			Str.
B702	4	31'-4"			Str.
B801	12	35'-7"	34'-8"	8"	6"
B802	12	34'-8"			Str.
B803	12	28'-8"			Str.
B804	12	34'-11"	27'-6"	7'-5"	6"
C501	261	15'-0"	3'-7"		3 3/4"
C502	828	4'-5"	3'-7"	6"	3 3/4"
C1101	96	27'-0"	25'-6"	12 1/2"	11 1/4"
F601	12	4'-10"	2'-6"	2'-6"	4 1/2"
F602	54	2'-11"	1'-6"		4 1/2"
F701	90	14'-6"			Str.
F801	174	16'-4"	14'-6"	8"	6"
F1101	96	25'-0"	23'-4"	2'-0"	11 1/4"

Bending Diagrams

(Dimensions are out to out of bars.)

BAR LIST BENT 5

Mark	No. Req'd.	Length	A	B	Pin Dia.
B401	6	24'-8"			Str.
B402	25	6'-10"	3'-8"	1'-8"	2"
B501- B510	4 each	16'-9" to 20'-11"	3'-8"	4'-5 1/2" to 6'-8 1/2"	2 1/2"
B511	28	18'-6"	2'-4"	6'-8"	2 1/2"
B512	34	21'-2"	3'-8"	6'-8"	2 1/2"
B513	12	16'-10"	3'-8"	6'-8"	2 1/2"
B701	16	34'-1"			Str.
B702	4	31'-4"			Str.
B901	12	36'-6"	35'-3"	10"	9"
B902	12	35'-3"			Str.
B903	12	29'-3"			Str.
B904	12	35'-7"	28'-2"	7'-5"	9"
C501	243	15'-0"	3'-7"		3 3/4"
C502	720	4'-5"	3'-7"	6"	3 3/4"
C901	96	19'-8"			Str.
F601	12	4'-10"	2'-6"	2'-6"	4 1/2"
F602	54	2'-11"	1'-6"		4 1/2"
F701	90	14'-6"			Str.
F801	174	16'-4"	14'-6"	8"	6"
F901	96	18'-5"	17'-0"	1'-8"	9"

Bending Diagrams

(Dimensions are out to out of bars.)

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 be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

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

For additional information, see Layout.



COMMON DETAILS OF INTERMEDIATE BENTS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 3-27-13 FILENAME: b061277_b2.dgn
CHECKED BY: KWH DATE: 8/15/13 SCALE: As Noted
DESIGNED BY: JYP DATE: 2-13

BRIDGE NO. 07284

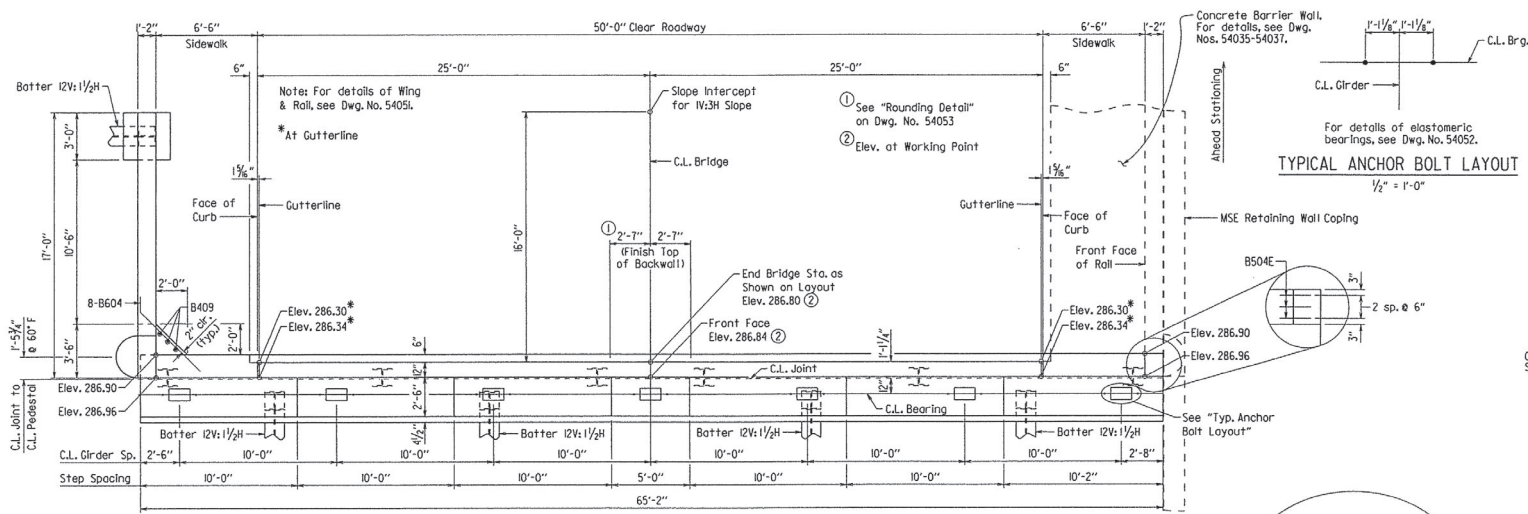
DRAWING NO. 54049

NOTE: Class I Protective Surface Treatment shall be applied to the top of the backwall, sidewalk, and to the roadway face and top of the rails.

NOTE: Wing and rail are constructed on curves concentric to C.L. Bridge.

NOTE: For Bar List and General Notes, see Dwg. No. 54051.

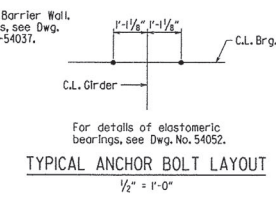
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061277	66	160
				07284 -		END BENTS	-	54050



PLAN OF BENT 6

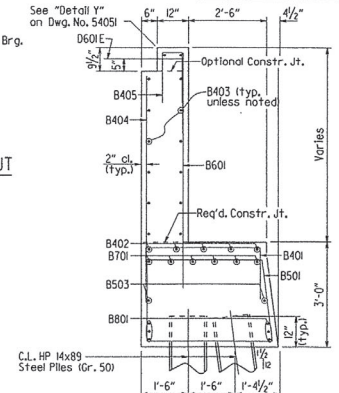
1/4" = 1'-0"

**Measured to Working Point at front face of backwall



TYPICAL ANCHOR BOLT LAYOUT

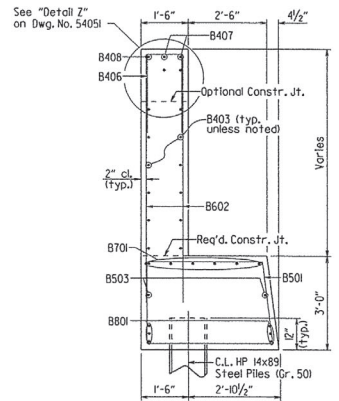
1/2" = 1'-0"



SECTION A-A

1/2" = 1'-0"

NOTE: The Backwall above the required construction joint shall not be poured until the beams are in place. Backwall may be placed prior to placing the adjacent concrete deck only if the optional backwall construction joint is used. See Dwg. No. 54055, "Expansion Device Installation at End Bents", for additional information.



SECTION B-B

1/2" = 1'-0"

SHEET 1 OF 2
DETAILS OF END BENT 6

ROUTE SEC.
ARIZONA STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: JYP DATE: 4-1-13 FILENAME: b061277-bl.dgn
CHECKED BY: JYP DATE: 8/1/13 SCALE: As Noted
DESIGNED BY: JYP DATE: 2-13
BRIDGE NO. 07284 DRAWING NO. 54050

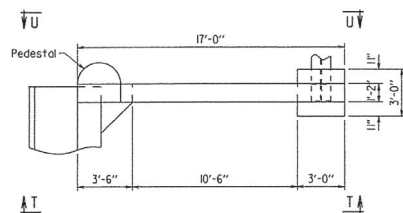


BRIDGE ENGINEER

ELEVATION OF BENT 6

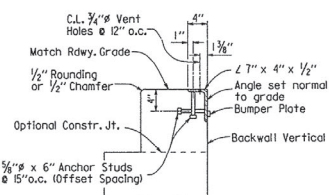
Looking Ahead
1/4" = 1'-0"

PRINT DATE: 8/1/2013



PLAN OF WING & RAIL

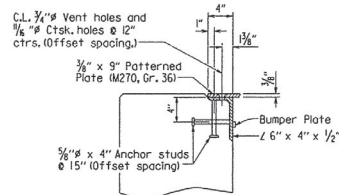
1/4" = 1'-0"



DETAIL Y

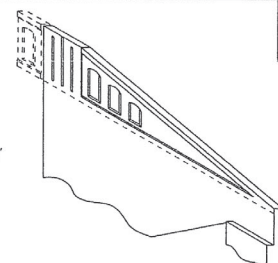
No Scale

NOTES:
Concrete shall be hand
poked under joint armor
in the backwall.
For additional joint
details, see Dwg. No. 54055.



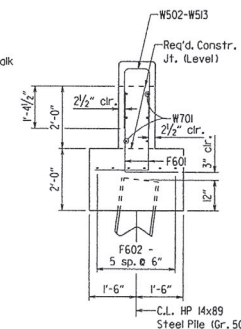
DETAIL Z

No Scale



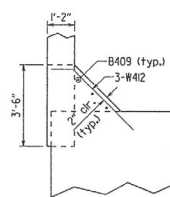
THREE DIMENSIONAL VIEW OF RAIL

No Scale



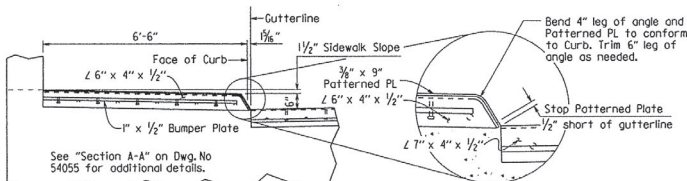
SECTION W-W

1/2" = 1'-0"



SECTION X-X

1/2" = 1'-0"



SIDEWALK AND CURB DETAIL

No Scale

GENERAL NOTES

All concrete (except the rail and pedestal) 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.

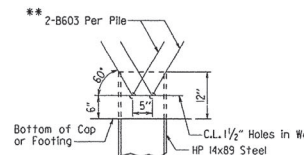
All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

Structural steel in end bents shall be AASHTO M 270, Grade 50 unless otherwise noted and shall be paid for as "STRUCTURAL STEEL IN PLATE ORDER SPANS (M 270, GR. 50W)". See additional requirements for cleaning and painting on Dwg. No. 54055.

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

All piling shall be Grade 50.

For additional information, see Layout.



DETAIL AT PILE TIP

No Scale

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.		061277	67	160
						07284	END BENTS	- 54051

BAR LIST

Mark	No.	Length	Pin Dia.	Bending Diagrams
B401	25	7'-1"	2"	
B402	5	24'-8"	Str.	
B403	28	33'-5"	Str.	
B404	51	6'-4"	Str.	
B405	51	4'-8"	2"	
B406	14	6'-6"	2"	
B407	4	8'-8"	2"	
B408	2	8'-2"	2"	
B409	3	8'-3"	Str.	
B410E	14	3'-1"	Str.	
B501	76	13'-6"	2 1/2"	
B502	30	8'-10"	2 1/2"	
B503	4	33'-7"	Str.	
B504E	4	4'-2"	2 1/2"	
B601	51	7'-1"	Str.	
B602	28	8'-2"	Str.	
B603	22	2'-11"	4 1/2"	
B604	8	6'-5"	4 1/2"	
B701	12	35'-3"	5/4"	
B801	12	34'-9"	Str.	
D601E	51	5'-9"	4 1/2"	
F601	12	4'-1"	4 1/2"	
F602	6	2'-8"	Str.	
W401	8	8'-7"	Str.	
W402-W411	2 each	8'-0" to 2'-2"	Str.	
W412	3	4'-7"	2"	
W501	22	4'-7"	2 1/2"	
W502-W513	1 each	3'-9" to 6'-3"	2 1/2"	
W701	6	16'-8"	Str.	
W702	2	12'-9"	Str.	
W703	2	11'-7"	Str.	
W704	2	10'-6"	Str.	
W705	2	9'-4"	Str.	
W706	2	8'-3"	Str.	
W707	2	7'-1"	Str.	
W708	2	6'-0"	Str.	
W709	2	4'-10"	Str.	
W710	2	16'-9"	5/4"	

(Dimensions are out to out of bars.)

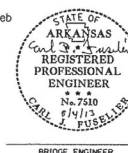
NOTE: Bars with an "E" suffix shall be epoxy coated.

SHEET 2 OF 2 DETAILS OF END BENT 6

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DESIGNED BY: JYP DATE: 4-1-13 FILENAME: b061277-bl.dgn
CHECKED BY: JYP DATE: 4/6/13 SCALE: As Noted
DESIGNED BY: JYP DATE: 2-13
BRIDGE NO. 07284 DRAWING NO. 54051



BRIDGE ENGINEER



- [illegible]

PLAN VIEW

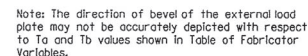
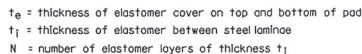


Diagram illustrating a pipe sleeve repair. The assembly includes a Steel Washer, a Pipe Sleeve, and a Sheet Metal Sleeve. The Pipe Sleeve is shown with a 4 1/2" Thread and a 3" length. The Sheet Metal Sleeve is shown with a 3" length and a Swaged end.

ANCHOR BOLT DETAIL



ELASTOMERIC BEARING

TABLE OF FABRICATOR VARIABLES

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.		061277	68	160
				(1) 07284	Elasto. Bearings	54052		

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 epoxy prior to pouring of concrete. After pouring of concrete, the sleeves or reaction 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 DPL 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 Plate Girder Spans (M 270, Gr. 50M)".

GENERAL NOTES

Elastomeric Bearings shall conform to Section 808 of the Standard Specifications and shall be paid for at the unit price bid for "Elastomeric Bearings".

External load plates and shear blocks 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 with shear blocks shall be completely fabricated (including bevel, bolt holes and all shop welding) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface 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(b) for painted steel and 807.84(c) for unpainted Grade 50W steel.

Anchor Bolts, Washers and Nuts shall conform to subsection 807.07 of the Standard Specifications. 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 Plate Girder Spans (M270, Gr. 50W)." _____

Bearings shall be seated in accordance with subsection 808.08. This work and materials are considered as subsidiary to the item "Elastomeric Bearings" and will not be paid for directly.



DETAILS OF ELASTOMERIC BEARINGS WITH SHEAR BLOCKS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: <u>ACP</u>	DATE: <u>03-25-13</u>	FILENAME: <u>b061277_el.dgn</u>
CHECKED BY: <u>JYP</u>	DATE: <u>8-2-13</u>	SCALE: <u>NONE</u>

BRIDGE NO. 07284 DRAWING NO. 54052

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.	061277	69 160
							07284 - COMMON - 54053	

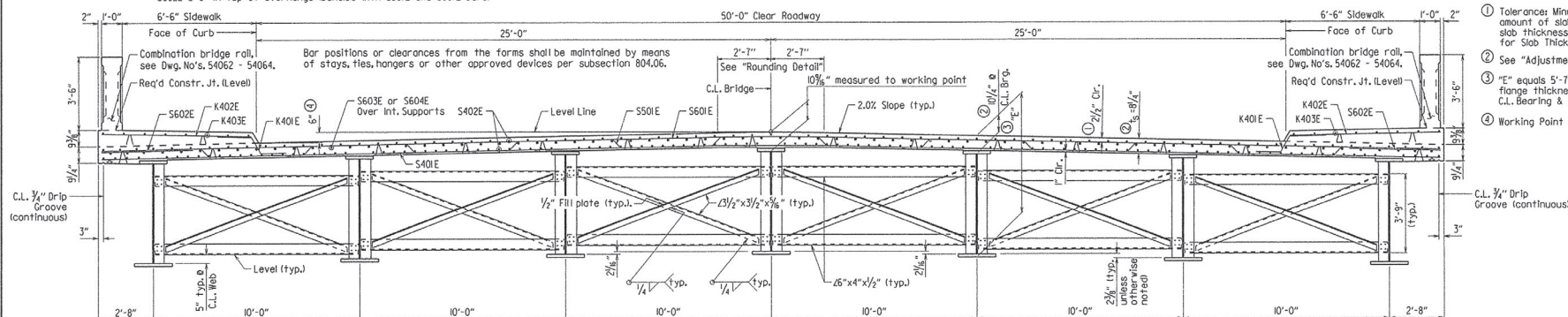
Slab Reinforcing

Longitudinal: S402E as shown
S603E or S604E as shown, see "Reinforcing Plan & Slab Pouring Sequence" on Dwg. No's. 54058 and 54060.

Transverse: S501E @ 12" o.c. bent up over beams
S601E @ 12" o.c. in top, S401E @ 12" o.c. in bottom
S602E @ 6" in top of overhangs (bundled with S501E and S601E bars)

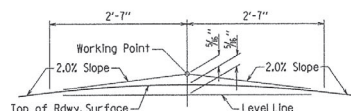
NOTE: At the Contractor's option, in lieu of providing bars S501E, one epoxy coated #5 bar top and bottom may be substituted for each bar. Payment for reinforcing will be based on the weight of bars S501E.

NOTE: Class I Protective Surface Treatment shall be applied to the Roadway and Sidewalk Surface and to the Roadway Face & Top of the Concrete Bridge Rail.



TYPICAL ROADWAY SECTION

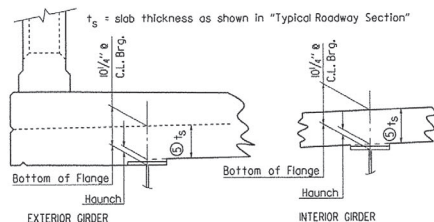
1/8" = 1'-0"



NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

NTS



EXTERIOR GIRDER

INTERIOR GIRDER

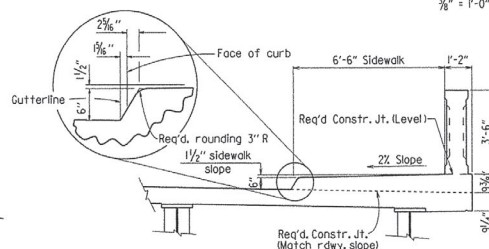
⑤ Tolerance when removable deck forming is used is + 1/2", - 1/4". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

NTS

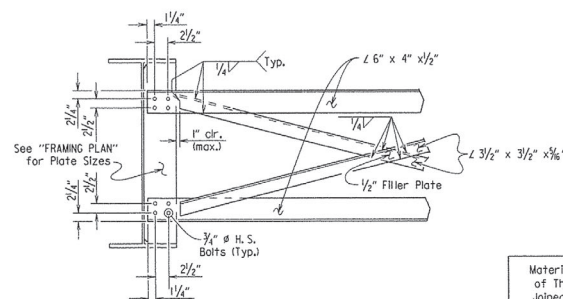
NOTES:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum occurs when top flange contacts bottom reinforcing steel; Maximum = top flange thickness plus 1/4". No increase in concrete and structural steel quantities will be made to maintain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

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.



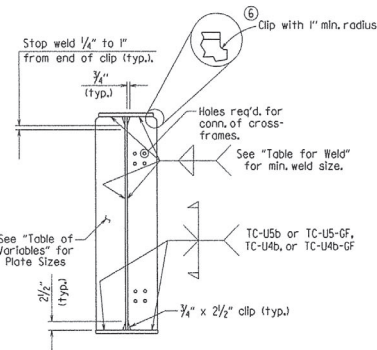
SIDEWALK & CURB DETAIL

1/2" = 1'-0"



TYPICAL CROSSFRAME CONNECTION

NTS



NOTE: Bearing stiffeners shall be vertical in final position.

BEARING STIFFENER DETAILS

NTS

TABLE OF VARIABLES

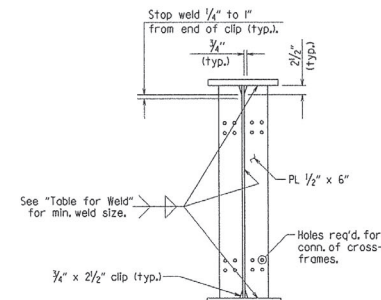
Bent No(s).	1	2	3	4 Ahead & 6	4 Back & 5
Plate Size	6 7/8" x 3/8"	10 1/8" x 3/8"	11 1/8" x 1 1/8"	7 1/8" x 1/8"	9 1/8" x 1/8"

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"	Be
Over 3/4"	3/8"	Used

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.

⑥ If permanent steel bridge deck forms are used, the fabricator shall clip plate as necessary to accommodate the deck form supports.



CROSS-FRAME CONNECTION DETAIL

NTS



BRIDGE ENGINEER

SHEET 1 OF 3
DETAILS COMMON TO
PLATE GIRDER UNITS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

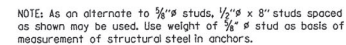
DRAWN BY: ACP DATE: 02/15/13 FILENAME: 061277_sl.dgn
CHECKED BY: JSP DATE: 11/28/14 SCALE: 3/8" = 1'-0"
DESIGNED BY: JHP DATE: 11/13
BRIDGE NO. 07284 DRAWING NO. 54053



Bent No.	Movement Rating	"A" Width Perpendicular to Joint at 24 Hour Average Temperature* Of:			"B" Perpendicular to Joint at 60°F
		40°F	60°F	80°F	
1	4"	2 3/4"	2 1/2"	2 1/4"	2 1/2" ±
4	4"	3 3/8"	2 7/8"	2 3/8"	2 3/8" ±
6	4"	2 1/2"	2 1/2"	2 3/8"	2 1/2" ±

* The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.

The temperature limitations recommended by the joint seal Manufacturer shall be observed. The seal shall be installed only when the ambient air temperature is a minimum of 40°F and rising.

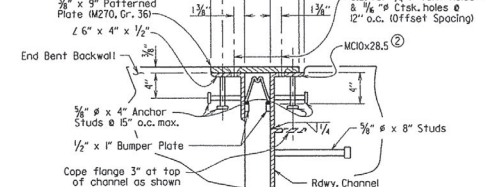


DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

- ① Ctsk. $\frac{1}{8}$ " σ holes in $\frac{3}{8}$ " Patterned Plate. Top 4" leg of angles for ASTM A449 $\frac{3}{8}$ " σ screws @ 12" o.c. Install screws in the shop and ship as a unit. Screws on the span side to be removed. Screws on backwall side to remain in place after erection. See "EXPANSION DEVICE INSTALLATION AT END BENTS".

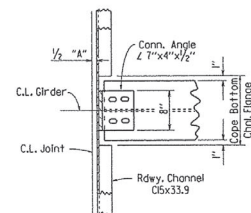
- ② Trim web as needed and clip bottom flange of MC10x28.5.

- ③ Dimensions shown @ 60°F
Vent = 2" Patterned

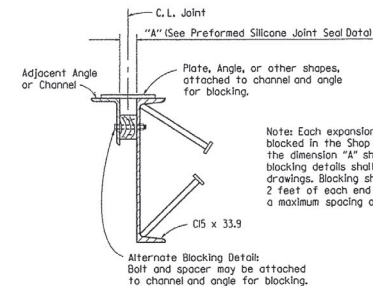


NOTE: Concrete shall be hand packed under the joint armor in the sidewalk.
For additional details of Expansion Device at Sidewalk, see Dwg. No. 54054.

SECTION A-A



CHANNEL CONNECTION DETAIL



DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

EXPANSION DEVICE INSTALLATION AT END BENTS:

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 girders 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. Before commencing the backwall concrete, the blocking shall be removed, and the opening adjusted for temperature and grade.
- 2) The backwall shall be poured to the optional construction joint after girders 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 and grade.

EXPANSION DEVICE INSTALLATION AT INTERIOR BENTS:

After all girders on each side of the joint are erected the blocked expansion device shall be installed and adjusted for grade. Deck concrete shall be placed for the entire unit or span on one side of the joint before deck concrete on the other side is placed. Connection bolts for the first side to have deck concrete placed shall be completely bolted. Bolts on the other side shall be loosely installed so that thermal and rotational movements will not be restricted during concrete placement on the first side.

Connection bolts on the second side shall remain loose until the concrete pour adjacent to the joint is to be placed. Immediately prior to pouring the span concrete on the second side, the blocking shall be removed, the joint adjusted for temperature and grade, and the connection bolts tightened.

GENERAL NOTES FOR PREFORMED SILICONE JOINT SEAL:

The joint seal shall provide for the movement rating(s) shown in the "PREFORMED SILICONE JOINT SEAL DATA" table. The joint seal shall be capable of sealing the deck surface and barrier rail to prevent moisture and other contaminants from descending through the joint.

Surfaces of the structural steel in the roadway and sidewalk joint armor not completely embedded in concrete and the patterned plate shall be cleaned in accordance with subsection 801.8(4)(b) and shop painted with a QPL approved inorganic zinc-rich primer with a concrete gray color. No finish system shall be applied. The Contractor shall repair any damage to the primer at his expense and to the satisfaction of the Engineer prior to installation of the joint seal. Painting will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M270, Gr. 50W)".

The preformed silicone joint seal shall be paid for in accordance with Special Provision Job 061277 "Preformed Silicone Joint Seal".

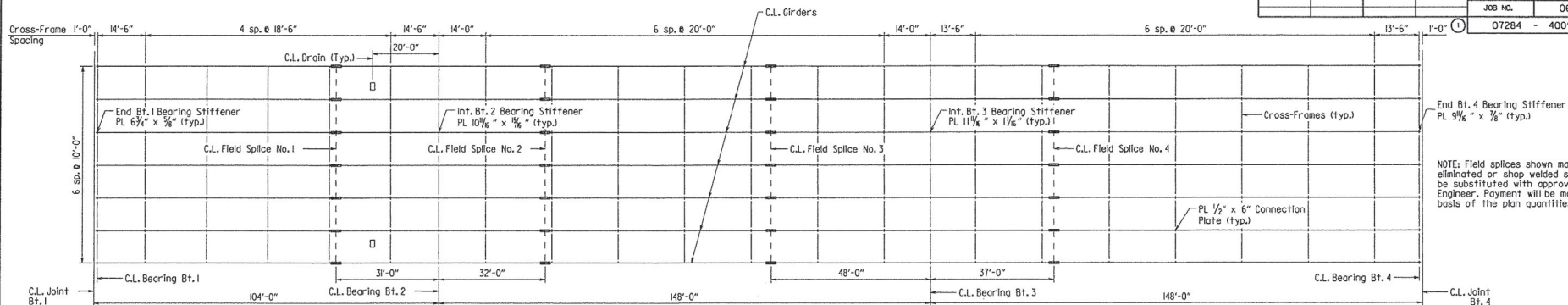
SHEET 3 OF 3
DETAILS COMMON TO
PLATE GIRDER UNITS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

DRAWN BY: ACP DATE: 02/20/13 FILENAME: b061277_sl.dgn
CHECKED BY: JJP DATE: 3-2-13 SCALE: No Scale

DESIGNED BY: J47 DATE: 1-13
BRIDGE NO. 07284 DRAWING NO. 54055

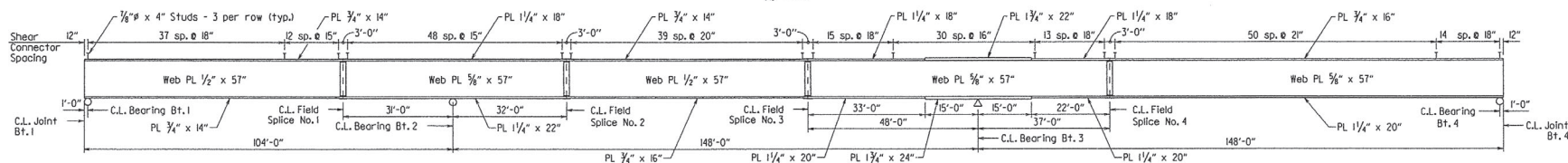
STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 7510
CARL J. FUSELIER
BRIDGE ENGINEER

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.		061277	72	160
						07284 - 400' UNIT		54056



FRAMING PLAN

NOTE: Field splices shown may be eliminated or shop welded splices may be substituted with approval of the Engineer. Payment will be made on the basis of the plan quantities.

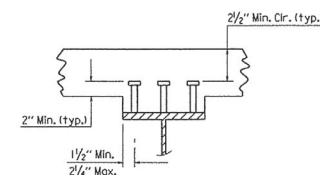


TYP. GIRDER ELEVATION

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

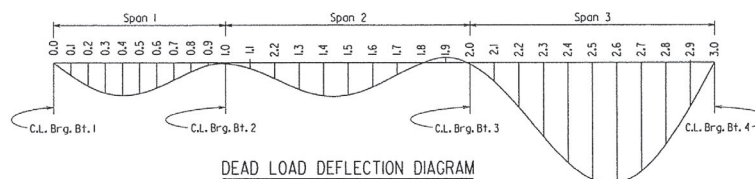
Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet + Sidewalk	
		Exterior Girder	Interior Girder	Exterior Girder	Interior Girder	Exterior Girder	Interior Girder
1	0.0	0.000	0.000	0.000	0.000	0.000	0.000
	0.1	0.089	0.096	0.490	0.622	0.629	0.673
	0.2	0.164	0.176	0.896	1.136	1.150	1.230
	0.3	0.213	0.229	1.158	1.469	1.486	1.590
	0.4	0.232	0.250	1.250	1.584	1.603	1.714
	0.5	0.220	0.237	1.171	1.483	1.500	1.605
	0.6	0.183	0.196	0.951	1.204	1.216	1.302
	0.7	0.128	0.137	0.650	0.822	0.827	0.887
	0.8	0.070	0.075	0.346	0.437	0.435	0.470
	0.9	0.023	0.024	0.105	0.131	0.127	0.139
2	1.0	0.000	0.000	0.000	0.000	0.000	0.000
	1.1	0.030	0.032	0.178	0.227	0.255	0.256
	1.2	0.098	0.106	0.575	0.733	0.800	0.818
	1.3	0.166	0.180	0.995	1.271	1.373	1.443
	1.4	0.199	0.217	1.243	1.590	1.715	1.767
	1.5	0.181	0.199	1.204	1.544	1.677	1.722
	1.6	0.115	0.129	0.883	1.140	1.262	1.283
	1.7	0.026	0.033	0.406	0.534	0.627	0.619
	1.8	-0.048	-0.048	-0.028	-0.019	0.033	0.006
	1.9	-0.068	-0.071	-0.215	-0.262	-0.247	-0.273
3	2.0	0.000	0.000	0.000	0.000	0.000	0.000
	2.1	0.169	0.178	0.665	0.827	0.851	0.896
	2.2	0.414	0.436	1.684	2.099	2.167	2.277
	2.3	0.684	0.721	2.843	3.550	3.658	3.851
	2.4	0.917	0.968	3.865	4.830	4.967	5.236
	2.5	1.062	1.122	4.518	5.650	5.799	6.122
	2.6	1.087	1.149	4.654	5.822	5.967	6.305
	2.7	0.978	1.034	4.207	5.265	5.390	5.700
	2.8	0.742	0.784	3.199	4.004	4.096	4.334
	2.9	0.401	0.424	1.733	2.170	2.218	2.349
	3.0	0.000	0.000	0.000	0.000	0.000	0.000

Note: All web and flange plates shall be AASHTO M270, Gr. 50W steel.



Stud Shear Connectors shown shall be 3/8" x 4" automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/8" studs may be used in place of the 1/2" studs shown at the ratio of 1.36:1-3/4" studs in place of one 1/2" stud. 3/8" studs will be used as the basis for measurement of structural steel in shear connectors.

SHEAR CONNECTOR DETAIL



DEAD LOAD DEFLECTION DIAGRAM

NOTE: Camber for Dead Load Deflection plus vertical curve +/- 1/4" tolerance. Deflections shown are along C.L. Girder from a chord from C.L. Bearing to C.L. Bearing. Negative sign (-) indicates point above chord. Vertical curve corrections not included.

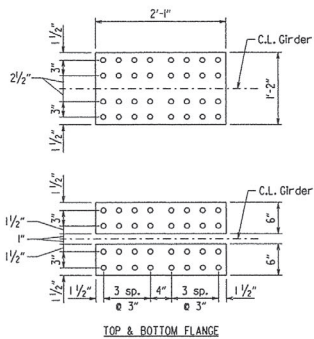


BRIDGE ENGINEER

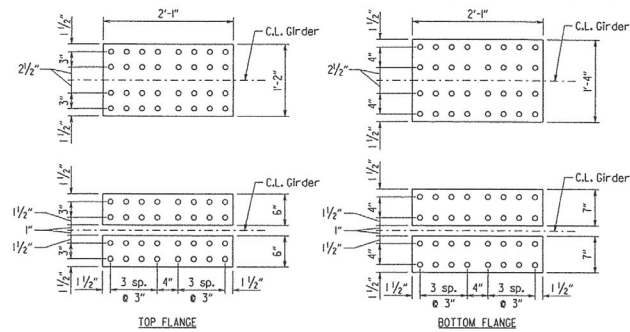
SHEET 1 OF 3
DETAILS OF 400'-0''
CONTINUOUS PLATE GIRDER UNIT
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: ACP DATE: 02/15/13 FILENAME: b061277-sl.dgn
CHECKED BY: JSP DATE: 8-2-13 SCALE: As Shown
DESIGNED BY: JSP DATE: 1-13
BRIDGE NO. 07284 DRAWING NO. 54056

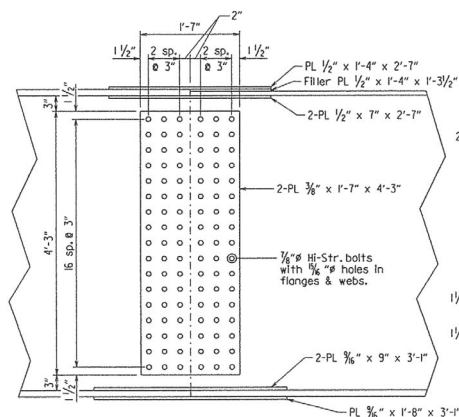
① 07284 - 400' UNIT - 54057



DETAILS OF FIELD SPLICE NO. 1

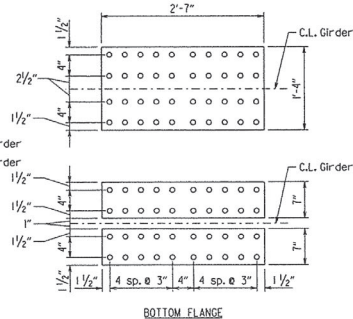


DETAILS OF FIELD SPLICE NO. 2



DETAILS OF FIELD SPLICE NO. 4

NOTE: All field splice bolts shall be $\frac{7}{8}$ " ϕ Hi-strength bolts.
All holes for splice bolts shall be $\frac{5}{16}$ " ϕ .
All field splice plates shall be AASHTO M270, Gr. 50W steel.



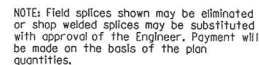
DETAILS OF FIELD SPLICE NO. 3

FIELD SPLICE AT UNEQUAL BOTTOM FLANGE WIDTHS

NTS

DRAWN BY: ACP DATE: 04/09/13 FILENAME: b061277_sl.dgn
CHECKED BY: JJP DATE: 8-2-13 SCALE: 1" = 1'-0"
DESIGNED BY: JJP DATE: 1-13
BRIDGE NO. 07284 DRAWING NO. 54057

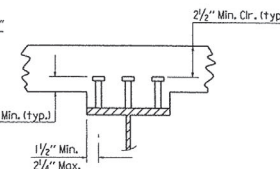
07284	-	260' UNIT	-	54059
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NT:

FRAMING PLAN
 $\frac{1}{8}'' = 1'-0''$

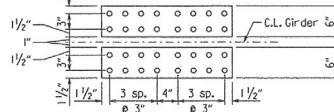
Note: All web and flange plates shall be AASHTO M270, Gr. 50W steel.



NTS

Stud Shear Connectors shown shall be $\frac{7}{8}$ " ϕ x 4" automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. $\frac{7}{8}$ " ϕ studs may be used in place of the $\frac{7}{8}$ " ϕ studs shown at the ratio of 1.361- $\frac{7}{8}$ " ϕ studs in place on one $\frac{7}{8}$ " ϕ stud. $\frac{7}{8}$ " ϕ studs will be used as the basis for measurement of structural steel in shear connectors.

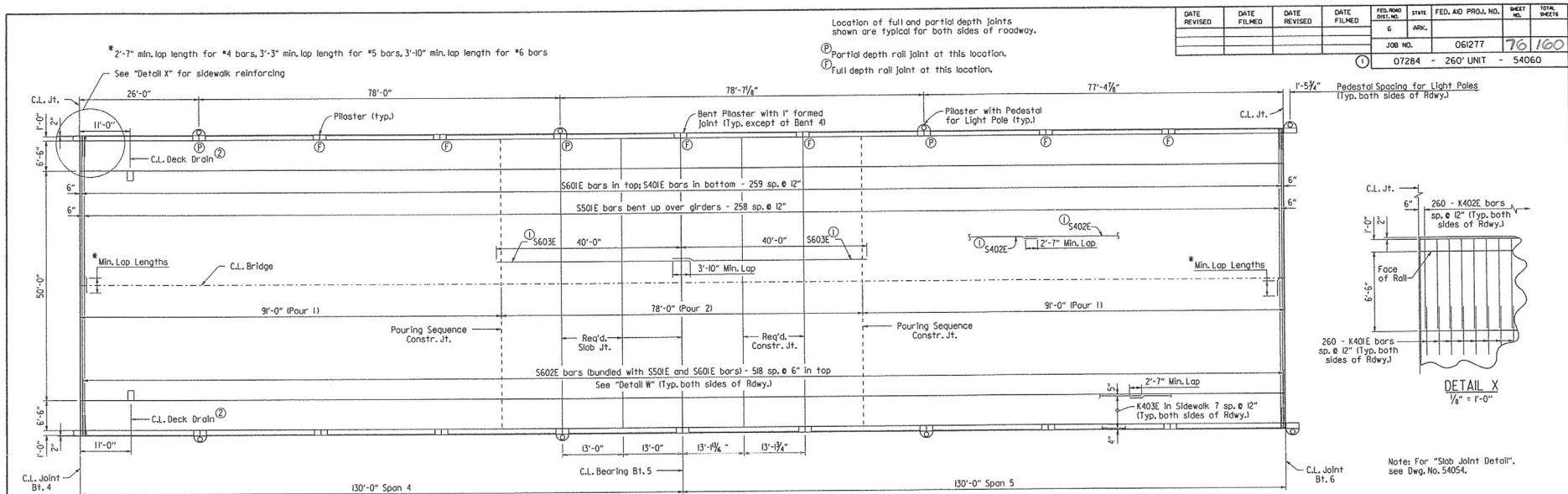
NT


$$I'' = I' - Q'$$


SHEET 1 OF 2
DETAILS OF 260'-0"
CONTINUOUS PLATE GIRDER UNIT
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: ACP DATE: 02/20/13 FILENAME: b061277_sl.dgn
CHECKED BY: JJP DATE: 3-2-13 SCALE: As Shown
DESIGNED BY: JJP DATE: 1-13
BRIDGE NO. 07284 DRAWING NO. 54059

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				G	ARK.			
				JOB NO.		061277	76	160
				(1) 07284 - 260' UNIT - 54060				



REINFORCING PLAN AND SLAB POURING SEQUENCE

 $\frac{1}{2}'' = 1'-0''$

- ① Place reinforcing as shown in "Typical Roadway Section", see Dwg. No. 54053.
② For Details of Deck Drain, see Dwg. No. 54061.

Pouring Sequence Notes:

Pouring Sequence Notes:
 Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pour (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between adjacent pours.

A minimum of 7 days shall elapse after the completion of the entire slab unit before pouring the sidewalk. A minimum of 72 hours shall elapse between completion of the sidewalk and the pouring of the bridge rolling.

The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
S401E	520	33'-0"	Str.	<p>Dimensions are out to out of bars.</p> <p>5'-0" 5'-0" 5'-0" 5'-0" 4'-2"</p> <p>2 1/2" 1 1/2"</p> <p>③ 1/2" Over tolerance. No Under tolerance.</p> <p>S501E</p> <p>C.L. Bridge</p>
S402E	1,323	39'-4"	Str.	
S501E	98	34'-11"	3"	
S601E	520	34'-5"	Str.	
S602E	1,038	4'-10"	Str.	
S603E	144	4'-11"	Str.	
K401E	520	6'-6"	2"	<p>3'-0" 3'-0"</p> <p>1/4" 1/2"</p> <p>③ 1/2" Over tolerance. No Under tolerance.</p> <p>K401E</p>
K402E	520	7'-2"	Str.	
K403E	112	39'-4"	Str.	
X401E	16	4'-0"	Str.	<p>Bars designated with an "E" are epoxy coated.</p>
X402E	16	5'-6"	Str.	
X601E	16	5'-6"	Str.	

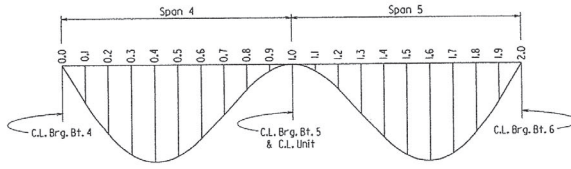
For bridge rail and pedestal details and reinforcing, see Dwg. Nos. 54062-54064.

** See "Details of Deck Drains" on Dwg. No. 54061.

HALF TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

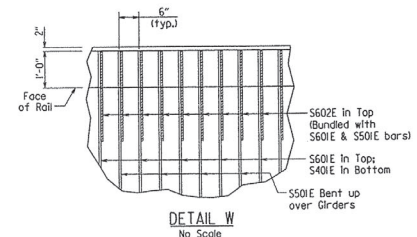
Span	Point of Deflection	Structural Steel		Structural Steel S/Iob		Structural Steel + S/Iob + Parapet + Sidewalk	
		Exterior Beam	Interior Beam	Exterior Beam	Interior Beam	Exterior Beam	Interior Beam
4	0.0	0.000	0.000	0.000	0.000	0.000	0.000
	0.1	0.201	0.24	0.993	1.254	1.279	1.359
	0.2	0.367	0.392	1.817	2.294	2.34	2.487
	0.3	0.476	0.509	2.355	2.973	3.038	3.225
	0.4	0.56	0.551	2.547	3.26	3.292	3.49
	0.5	0.485	0.518	2.392	3.019	3.100	3.281
	0.6	0.395	0.422	1.943	2.452	2.528	2.668
	0.7	0.268	0.286	1.311	1.654	1.715	1.804
	0.8	0.136	0.145	0.659	0.832	0.869	0.930
	0.9	0.037	0.039	0.177	0.223	0.236	0.245
1.0	0.000	0.000	0.000	0.000	0.000	0.000	

— Symmetrical about C.L. unit



DEAD LOAD DEFLECTION DIAGRAM

NOTE: Camber for Dead Load Deflection plus vertical curve $\pm 1/4"$ tolerance.
Deflections shown are along C.L. Girder from a chord from C.L. Bearing to C.L. Bearing.
Negative sign (-) indicates point above chord. Vertical curve corrections not included.



DETAIL W

No Scale

SHEET 2 OF 2
DETAILS OF 260'-0"
CONTINUOUS PLATE GIRDER UNIT
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

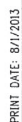
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 BRIDGE NO. 07284 DRAWING NO. 54060

PRINT DATE: 8/26/2013

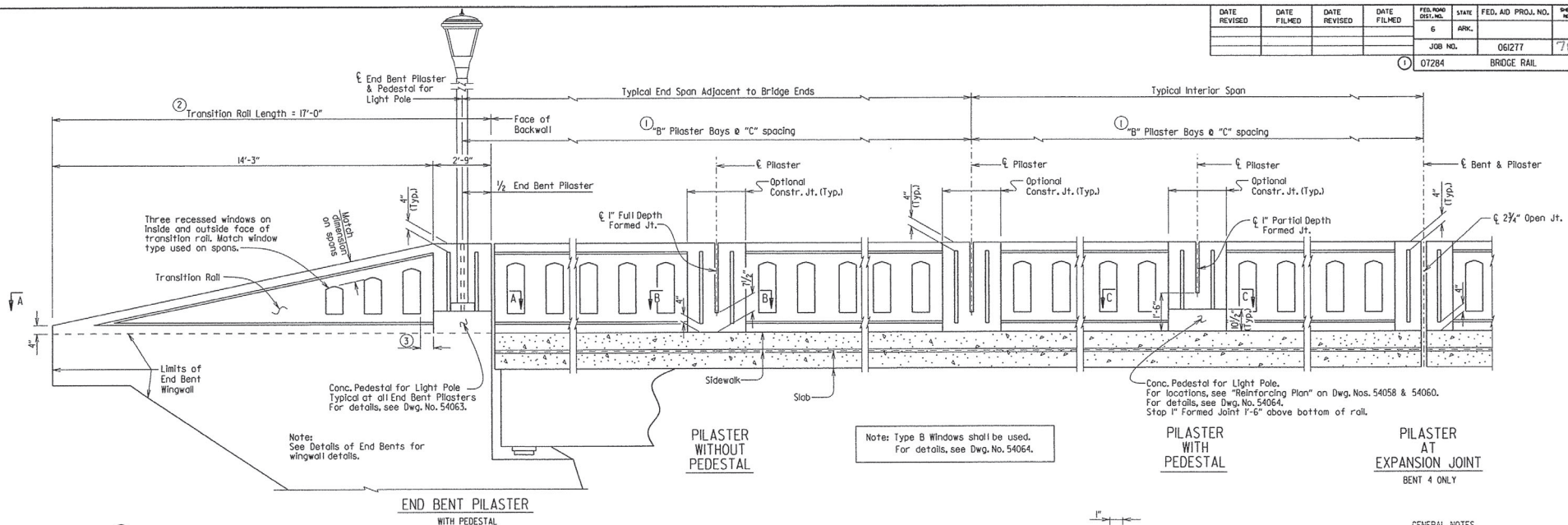
STATE OF
ARKANSAS
Carl J. Fuselier
REGISTERED
PROFESSIONAL
ENGINEER

No. 7510
8/4/13
CARL J. FUSELIER

All additional Reinforcing Steel placed around deck drains shall be epoxy-coated and shall be paid for at the unit price bid for "Epoxy Coated Reinforcing Steel (Grade 60)".



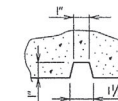
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				6	ARK.			
				JOB NO.		061277	78	160
				07284		BRIDGE RAIL		54062



- ① See "Table of Variables" on Dwg. No. 54064.
- ② Eliminate Transition Roll on Right Side of End Bent 6 (Looking Ahead). See Dwg. No. 54050.
- ③ Match spacing to first window in adjacent span.
- ④ See "Elevation Showing Typical Reinforcing Placement", on Dwg. No. 54063.
- ⑤ See Dwg. No. 54064 for locations of Bar 5XXE.
- ⑥ RS07E bars shall not be placed at pilasters with pedestals.

EXTERIOR ELEVATION OF RAIL

Not to Scale



DETAIL A

GENERAL NOTES

All concrete for bridge and transition rolling shall be Class S(AE) with a minimum 28 day compressive strength $f'_c = 4,000$ psi.

At the Contractor's option a Class 3 finish in lieu of a Class 2 Rubbed finish may be applied to all exposed surfaces of railing and pedestals in accordance with Special Provision Job 06I277 "Finishing Concrete Surfaces."

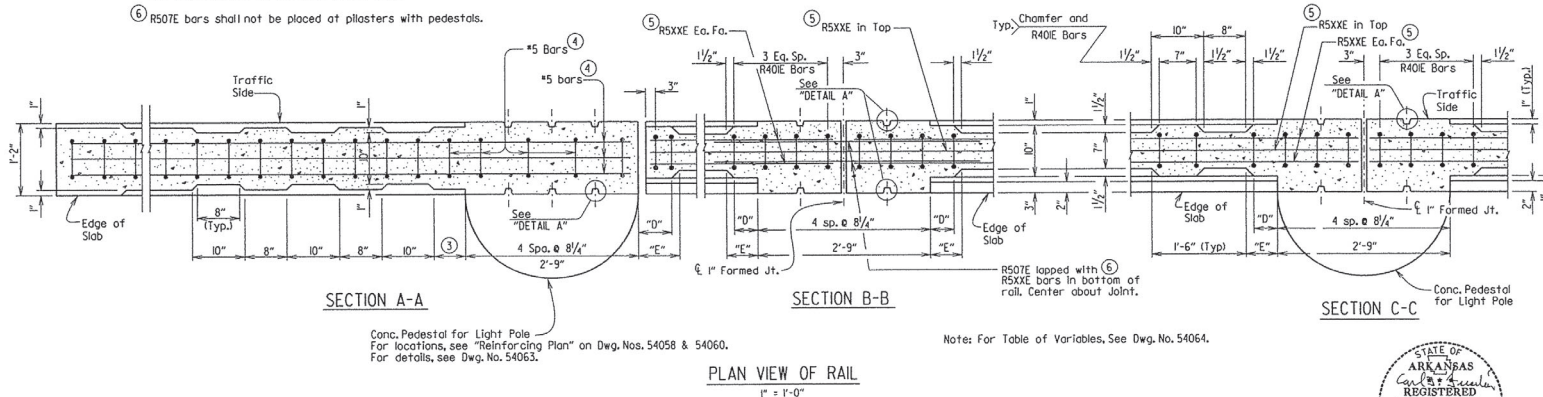
All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Reinforcing steel that interferes with pull boxes installed in pilasters shall be cut off 2" shy of pull box. Epoxy coating of cut bars shall be repaired in accordance with subsection 804.05. No additional payment will be made for this work.

Working drawings showing span number, span pilaster and pedestal locations, number of windows between pilasters and spacing to first window shall be submitted to the Engineer for approval prior to pouring roiling.

For additional details of conduit and pull boxes, see Lighting Details.

This rail is designed for a TL-2 test level.



Note: For Table of Variables, See Dwg. No. 54064.

SHEET 1 OF 3

DETAILS OF

COMBINATION BRIDGE RAIL

ROOSEVELT ROAD

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

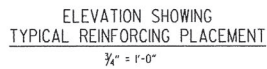
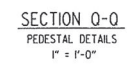
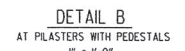
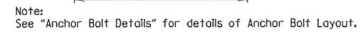
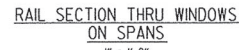
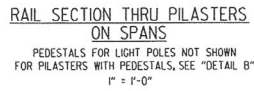
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BRIDGE NO. 07284 DRAWING NO. 54062

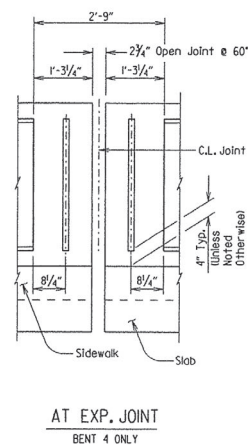
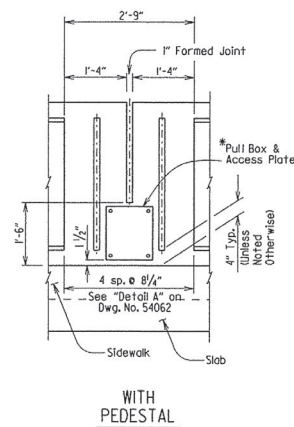
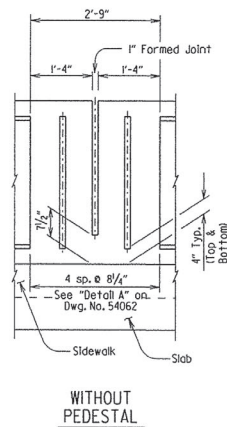
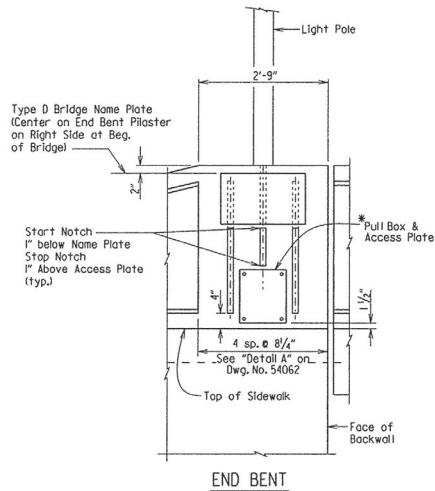
PRINT DATE: 8/1/2013

Note:
For details not shown, See "Roll Section
Thru Pilasters on Spans".



STATE OF
ARKANSAS
Carl J. Pusellier
REGISTERED
PROFESSIONAL
ENGINEER
No. 7510
8/4/13
CARL J. PUSELLIER
BRIDGE ENGINEER

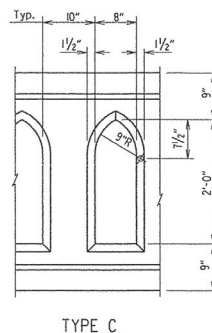
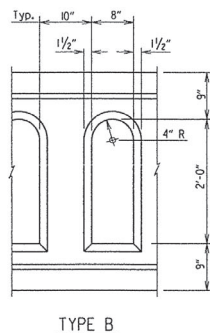
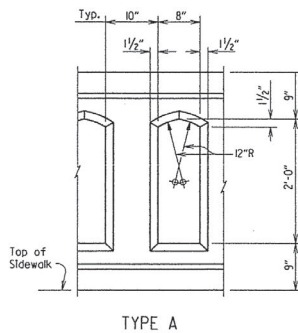
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 BRIDGE NO. 07284 DRAWING NO. 54063



* See Lighting Details

INTERIOR ELEVATION OF PILASTERS

3/4" = 1'-0"



RECESSED WINDOW TYPES

Not to Scale

Notes:
Dimensions shown are for recessed windows on bridge spans.
See "Section A-A" on Dwg. No. 54062 for window dimensions on transition rolls.

Some window type shall be used at all locations.

BAR R5XXE LOCATIONS

Bay Length	No. of Bays	R5XXE Bar
24'-9 1/8"	2	R502E
26'-4 1/8"	6	R503E
29'-7 1/8"	20	R504E
26'-0"	10	R505E
26'-3 3/8"	8	R506E
24'-8 3/8"	2	R502E

** First and Last Pilaster Bays.
Bay length shown measured to end of slab.

Mark	No. Req'd.	Length	A	B	Pin Dia.
R40E	1800	7'-10"	6"	3'-3"	2"
R50E	1758	5'-4"	6"	1'-11"	2 1/2"
R502E	28	24'-4"	—	—	Str.
R503E	42	26'-0"	—	—	Str.
R504E	140	29'-2"	—	—	Str.
R505E	70	25'-7"	—	—	Str.
R506E	56	25'-10"	—	—	Str.
R507E	60	4'-9"	—	—	Str.
R508E	3	16'-11"	—	—	2 1/2"
R509E	6	7'-2"	—	—	Str.
R510E	6	11'-6"	—	—	Str.
R511E	6	15'-10"	—	—	Str.
R512E	12	8'-2"	7"	3'-3"	2 1/2"
R513E - R528E	3 Ea.	4'-8" to 8'-0"	7"	1'-6" to 3'-2"	2 1/2"
P40E	68	1'-9"	—	—	Str.
P402E	68	2'-0"	—	—	Str.
P403E	34	2'-4"	—	—	Str.
P404E	34	1'-10"	—	—	Str.
P501E	28	6'-8"	2'-4"	3'-4 1/2"	2 1/2"
P502E	6	6'-8"	2'-4"	3'-4 1/2"	2 1/2"
W501	See Abutment Details				
W502	See Abutment Details				
W513	See Abutment Details				

Notes:
Bars with "E" suffix shall be epoxy-coated.

Bar List includes Reinforcing Steel for rolls, pilasters and pedestals on bridge spans and for transition rolls, on end bents, except as noted.

TABLE OF VARIABLES

Span No.	"B"	"C"	No. of Windows Per Bay	Window Type	"D"	"E"
1	4	26'-4 1/8"	15	B	10 3/8"	11 1/8"
2	5	29'-7 1/8"	17	B	11 3/8"	1'-1 1/8"
3	5	29'-7 1/8"	17	B	11 3/8"	1'-1 1/8"
4	5	26'-0"	15	B	8"	9 1/2"
5	5	26'-3 3/8"	15	B	9 3/4"	11 1/4"

TABLE OF QUANTITIES

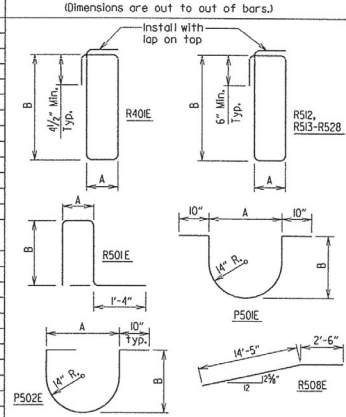
(FOR INFORMATION ONLY)

Item 802	Item 804
Class "S1AEI" Concrete - Bridge	Epoxy Coated Reinforcing Steel (Grade 60)
Cu. Yd.	Lb.
147.50	30,170

BAR LIST

Bending Diagrams

(Dimensions are out to out of bars.)



SHEET 3 OF 3

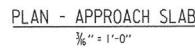
DETAILS OF COMBINATION BRIDGE RAIL ROOSEVELT ROAD

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

DRAWN BY: AHS. DATE: 3/15/13 FILENAME: b06277.rldgn
CHECKED BY: KWH. DATE: 8/1/13 SCALE: As Noted
DESIGNED BY: KWH. DATE: 7/1/13
BRIDGE NO. 07284 DRAWING NO. 54064



07284	TYPE SPECIAL APPROACH SLAB	54066
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24'-6"

2"

2"x 1/2" Poured JT Sealer (Type 3 or 4) as per Subsection 50L02 (h) (2). Backer Rod not required.

6"

1'-6"

S401 or S402 bars

2'-0"

S501 bars

S403 ties sp. @ 12" o.c.

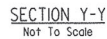
S401 or S402 bars

S403 ties sp. @ 12" o.c.

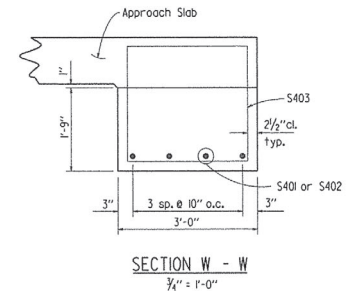
S401 or S402 bars

SECTION X-X

$\frac{3}{8}" = 1'-0"$



DRAWN BY: ACP DATE: 06-04-13 FILENAME: b061277.os.dgn
 CHECKED BY: JNP DATE: 1-28-14 SCALE: AS NOTED
 DESIGNED BY: STD DATE: —
 BRIDGE NO. 07284 DRAWING NO. 54066



Approach Slabs will be measured and paid for in accordance with Section 504 of the Standard Specifications.